

DESIRABLE DEVIATIONS IN MEDICAL DECISION MAKING  
IN THE PRE-HOSPITAL SETTING:  
A FUZZY-TRACE THEORY APPROACH

A Thesis

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## ABSTRACT

Introduction: Decision-making is a critical aspect of emergency medical treatment in the pre-hospital setting, from patient triage during a mass casualty incident to determining when an advanced directive should be executed. Use of protocols has become the standard for ensuring that the best possible care is provided to patients by emergency medical services (EMS). Studies on EMS protocols – including those by Frazier and Cannon (1974) on underdiagnosed myocardial infarction, Pozen (1977) on Electrocardiogram (EKG) transmissions to Emergency Departments, and Ruppert (1999) on the determination of breathlessness of a simulated patient – have shown that protocols improve patient outcomes. However, none of these studies has examined how pre-hospital providers make medical decisions and what information they use.

The purpose of this current study is to determine the relative importance of gist (qualitative) versus verbatim (quantitative) representations in EMS decision-making. Prior researchers have assumed that accurate verbatim representations of protocols would have a greater contribution to how decisions are made. However, recent studies of the hospital setting showed that reliance on gist representations increases with expertise (Reyna & Lloyd, 2006). Although these settings are not identical, they share similarities that would suggest that reliance on gist representations would also increase in EMS providers with higher levels of experience. Thus, we hypothesize that use of gist (as opposed to verbatim) representations would be highest among the most experienced providers.

Method: The study was administered to 217 pre-hospital care providers (68.7% male) via an anonymous online survey. First, participants were given seven medical case scenarios in which

they had to evaluate a patient's clinical presentation and answer questions about how they would treat that patient, followed by questions regarding how the decision was made, and their confidence in that decision. Participants then self-reported their use of gist and verbatim representations when providing treatment in real situations to patients both in general and in one of six categories (Minor Trauma, Major Trauma, Cardiac, Respiratory, Allergic Reaction and Unresponsive); a relative gist index was calculated from these responses. Third, participants were asked to correctly recognize the presented symptoms from the medical case scenarios from lists that included gist-consistent distractors. Finally, participants provided their EMS background/experience, demographic information, and completed the Cognitive Reflection Test (CRT; Frederick 2005).

Results: In a medical case study with a desirable deviation from protocol, those who chose the gist-based response had a higher average certification level than those who chose the verbatim-based response. Consistent results were found with a similar case study, in that those who chose the desirably deviating treatment had a higher relative gist index score than those who chose the protocol-based answer. Additionally, there was a negative correlation between the verbatim questions and the level of experience, showing that as experience increased, use of verbatim traces decreased. Last, the CRT score negatively correlated with provider's experience level.

Discussion: Results support the hypothesis that use of gist representations increases with both experience and expertise level in the pre-hospital setting, consistent with fuzzy-trace theory. Given the nature of EMS training, which is mostly composed of brief classroom and practical sessions undertaken by many individuals with little to no medical experience, it is not surprising

that, initially, there may be limited gist representations to draw from, resulting in reliance on verbatim representations. Over time, one would expect this to shift based on how cognitively active the EMS provider is. Currently, EMS re-training and evaluation are almost entirely verbatim-based which provide an assessment inconsistent with how experienced providers operate in the field, namely, by using gist. Opportunities for improving EMS training and continuing education are discussed.

## BIOGRAPHICAL SKETCH

Andrew Lazar attended Cornell University starting the Fall of 2006 and graduated with a Bachelor's of Science in Applied Economics and Management. At the start of his time at Cornell, Andrew was a student in the College of Engineering studying Operations Research and Information Engineering. At the start of his fourth semester, he completed an internal transfer into the College of Agriculture and Life Sciences and began studying Applied Economics and Management (AEM). He completed his degree in AEM with a specialization in entrepreneurship.

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This focus on health continued into graduate school, where Andrew began working with Dr. Valerie Reyna at Cornell University in her Laboratory for Rational Decision Making. In Dr. Reyna's laboratory, Andrew worked with the Adolescent Wellness Team and completed research on decision making of Emergency Medical Technicians and Paramedics in the pre-hospital setting. Andrew is using this research to complete his Master's Thesis.

Upon completion of his Master's Thesis and upon receiving his Master's Degree from Cornell University, Andrew will continue his studies in the medical field by attending Weill Cornell Medical College to complete his medical education.

To my mom, Rebecca, and my dad, Eliot

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## LIST OF ABBREVIATIONS

- AED: Automated External Defibrillator
- ALS: Advanced Life Support
- BLS: Basic Life Support
- ED: Emergency Department
- EKG: Electrocardiogram
- EMS: Emergency Medical Services
- EMT: Emergency Medical Technician
- FTT: Fuzzy-Trace Theory
- MCI: Mass Casualty Incident

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## **Introduction**

### **Background**

Decision making is a critical aspect of emergency medical treatment in the pre-hospital setting. These decisions range from patient triage during a mass casualty incident (MCI) to determining when an advance directive should be executed in the field. Relatively little has been written on the various factors that influence these decisions, particularly the contribution of memory. The need to understand how these decisions are made is becoming increasingly important as the imperative to minimize variation of patient care, thereby improving quality and patient safety, extends from the traditional inpatient setting to pre-hospital emergency care.

The science of quality in healthcare dates back to the work of Ernest Codman in the early part of the 20<sup>th</sup> century. Codman (1916) wrote about Massachusetts hospitals and discussed various types of surgical errors, specifically highlighting errors in judgment. He also suggested that the volume of procedures performed, by an individual surgeon or hospital, correlated with surgical outcomes. In 1966, Avedis Donabedian, credited by some as the father of the modern era of healthcare quality, described three additional categories of quality measures.

Structural Measures- These are binary and tabulated as yes/no. Examples include board certification for physicians, center of excellence designations for hospitals, and Joint Commission Accreditation.

Process Measures- These relate to whether practitioners, or the institution, did or did not perform certain components of care which have been correlated to better outcomes. Examples would include whether a patient with chest pain was given aspirin in the emergency room, or if a patient was provided with discharge instructions.

Outcomes Measures- These directly describe how the patient did. Survival, return to work, and neurologic or cognitive function following head injury are examples of outcome measures. Outcome measures, while seemingly most important, are actually the most difficult to interpret. Most outcome data today, comes from administrative and coding data utilized by providers and healthcare institutions for reimbursement purposes; these pose several problems. First, the information depends on a staff member converting narrative text into numerical code, according to very strict governmental rules. Two patients, with identical clinical situations, may be coded differently depending on the exact terminology used by the practitioner. Another challenge is how to compare populations. For example if hospital A has an annual mortality of five percent for heart attack (Myocardial Infarction; MI) patients, and hospital B has an annual mortality of 10 percent, one would conclude that hospital A does a better job caring for these patients. Our opinion might change if we learned that hospital A's average age of their MI patients was 55 and hospital B's was 75. Experts in the field of healthcare quality have developed methods known as risk adjustment and severity adjustment to compare unlike populations (Cohen et al, 2009).

In 1999, the Institute of Medicine published a landmark monograph entitled, "To Err is Human." The report suggested that as many as 98,000 deaths in the U.S. each year may be attributed to medical errors (Kohn et al., 2000). Although "To Err is Human" focused specifically on patient safety issues, the report catalyzed what has become an intense focus on quality and safety in health care (Crossing the Quality Chasm, 2001). This focus clearly extends to our nation's EMS system and experts in the field are seeking new approaches to assure safety and quality in the pre-hospital setting.

With the central importance of safety and quality in health care, it is essential to understand medical services in the pre-hospital setting as well as the application and use of memory and decision-making theories. With a strong foundation of this knowledge, they will be applied to the Emergency Medical Services, which is discussed in the current study.

## **EMS Overview**

While there are a number of certifications for pre-hospital providers, there are essentially two levels. The first level is Basic Life Support (BLS), which is generally provided by Emergency Medical Technicians (EMTs). BLS care includes triage, patient assessment, basic airway management, CPR and, in most states, use of an automated external defibrillator (AED). EMTs are trained to control bleeding, immobilize fractures and package patients for transport. The number and type of medications that EMTs can administer in the field vary from state to state in the U.S., however many permit the administration of oxygen, aspirin, albuterol, epinephrine via auto-injector, glucose and nitroglycerin. Along with the use of medications, the exact scope of practice of EMTs varies from state to state. While there is a National Registry exam, certification is at the state level with providers' ability to transfer certification between states being highly variable (EMT Resources, 2010). The second level of care is Advanced Life Support (ALS) which is typically provided by Advanced EMT- Paramedics (AEMT-P) but can include EMT-Critical Care technicians or similar certification levels depending on the state. In addition to the skills of Basic Life Support level, paramedics can insert intravenous lines, administer drugs, employ manual defibrillation to treat cardiac dysrhythmias as well as perform endotracheal intubation. In New York (where the majority of this study was conducted), there are intermediate levels of certification as well.



Much of the care provided by pre-hospital providers (EMTs and Paramedics) is based on written protocols, which may be statewide or regional. Specific diagnostic and treatment activities are grouped under standing orders, which can be performed without consulting a physician, or medical control orders for which a physician's permission is required. The majority of BLS treatment is provided under standing orders, whereas Advanced Life Support has multiple treatments that fall under either standing orders or medical control orders.

Despite the apparent prescriptiveness of pre-hospital care, there is considerable room for provider judgment. First, although the initial assessment of a patient usually follows a standard template, EMTs and Paramedics must interpret the history provided by the patient, often in stressful and chaotic situations quite different from a physician's office or a hospital bed. Pressure from bystanders and other public safety personnel, for example, police, may encourage immediate evacuation of the patient from the scene, although this may not be the most appropriate course of action (Pozen, 1977). For example in cases of suspected cervical spine injury, in an otherwise stable patient, immobilization of the spine is the correct treatment rather than rapid transport of a non-stabilized patient. Physical examination findings must be rapidly obtained and interpreted. The pre-hospital provider must then make a determination as to which protocol or algorithm should be followed. Many cycles of the following processes occur: clinical interpretation, creating a treatment decision, providing that treatment via intervention and then having another clinical interpretation. These processes occur in the relatively short interval that begins when one arrives on scene until they hand off the patient to the Emergency Department (ED) staff. Finally, decisions regarding the transport destination are frequently based on field judgment as to the patient's most critical clinical problem(s) and the capability of the facility to address this issue(s). During extended length transports to specialty centers,

ambulance crews frequently have to decide whether to abort the original plan and bring the patient to the nearest 911 receiving facility, even if it does not have the capability to provide the specialty care required.

The judgment and decision making of pre-hospital providers has been questioned since the formalization of training requirements and development of protocols decades ago. A 1974 study of diagnostic judgment of EMTs in New Haven, Connecticut estimated that 41% of patients with myocardial infarction (MI) were “underdiagnosed” (Cannon, Frazier, 1974). In the late 1970s, Pozen and colleagues studied close to 2,000 patients who were transported by advanced EMS personnel in Baltimore County. Cardiac Rescue Technicians made a clinical decision to transmit EKG tracings in 182 cases (9.4%). Subsequent review of the presenting history and physical examination findings by cardiologists at the receiving hospitals revealed that an additional 113 patients should have had their EKGs transmitted. In fact, there was a higher rate of heart attack (MI) in the cohort whose EKGs were not transmitted, but should have been, than in the group whose EKGs were transmitted (Pozen, 1977). Ruppert et al. (1999) studied the diagnostic accuracy of EMS personnel in determining breathlessness, a basic assessment and clinical judgment routinely made by EMS providers. In a controlled laboratory environment, they found that in over 10 percent of cases the determination was incorrect.

As discussed earlier, EMS care is highly protocolized. Numerous studies have demonstrated the strong link between adherence to protocol and patient outcome. Garza et al. (2009) demonstrated improved survival in patients who experienced Out-of-Hospital cardiac arrest by adopting a modified CPR protocol. Salerno et al. (1991) studied 1246 emergency ambulance runs and found that in 16% of cases there were deviations from the applicable protocol. 5.5% of these patients experienced complications directly related to the protocol

deviations. Extrapolating from the most recently available N.Y.S data (2005), of the 286,743 advanced life support calls, protocol deviations could result in as many as 2,523 serious complications (NYS Bureau of EMS, Statistical Data).

In a large urban EMS system, Katz and Falk (2001) studied 108 consecutive patients who were intubated in the field. This procedure consists of visualizing the vocal cords using a laryngoscope and then inserting a plastic tube (Endotracheal tube) through the vocal cords into the trachea which is then attached to a squeezable bag (ambu-bag) allowing the paramedic to breathe for the patient. Since the tube can easily slip into the esophagus, a variety of confirmatory techniques are recommended, which depend upon provider judgment and knowledge, including adherence to protocol. In this prospective, observational study, ER physicians determined the placement of the ET tube in the field and found that 25% of the tubes were not properly positioned. Of these patients, 48% died in the Emergency Room (Katz and Falk, 2001). The findings suggest that either confirmatory protocols were not followed or clinical judgment was faulty.

In order to minimize practice variation, increase adherence to clinical protocols, and improve outcomes, memory aids such as checklists have become widely employed in healthcare (Haynes et al., 2009). Initially these were paper forms used at the beginning of a procedure, or preprinted order sheets. As hospitals and physicians convert to electronic medical record systems, these checklists have been embedded in the electronic record, often with forcing functions so that providers cannot skip over them. Unfortunately, the very nature of pre-hospital care by EMS providers, does not lend itself to the use of checklists. EMTs and paramedics must make split second decisions, almost always in unfamiliar environments and frequently at a distance from their vehicles. In fact, the recording of vital clinical data is often delayed until the

completion of the call, in contrast to the hospital setting where data collection is either automated or where support staff including nurses and technicians record it contemporaneously. It seems clear that memory is especially important in pre-hospital care, both in practitioner recollection and recall of proper clinical care as well as in utilizing accurate clinical data for decision making.

### **Fuzzy-Trace Theory**

With the clear importance of memory and decision making in the treatment of patients in the pre-hospital setting, Fuzzy-Trace Theory (FTT) was used to help explain and hypothesize how these decisions are made and the basis behind them. However, it is first important to understand the basic principles behind fuzzy-trace theory and the aspects of storing, interpreting and retrieving knowledge and representations.

Fuzzy-trace theory is a dual process theory in which there are two types of mental representations of stored knowledge and/or values. These two categories of representations are gist, a qualitative understanding of the deeper meaning of an event, and verbatim, a quantitative representation of the specific details of an event. When an individual learns information or knowledge, it is transformed into gist and verbatim representations in parallel (Reyna, 2011). When analyzing the two types of representations, it is helpful to understand that both gist and verbatim carry meanings similar to their use in everyday language. However, both gist and verbatim representations are not only applicable to general verbal details; instead they also include specific details from charts, graphs, numbers, etc (Reyna, 2008). These qualitative and quantitative interpretations of events have been shown to provide the basis for how stored knowledge is interpreted and retrieved. This is extremely important in all medical environments because providers must be able to interpret their findings of a specific patient and then

incorporate information from protocols, knowledge of diseases and their treatment into their care for each patient.

These representations also are a large factor in how information disseminated by physicians is interpreted by patients. This is shown in Reyna (2008) by the example of a 49-year-old woman who is trying to gauge and understand her risk of breast cancer by using the Breast Cancer Risk Estimation Tool made available by the National Cancer Institute Web site (<http://www.cancer.gov/bcrisktool/>). In this example, the woman completes the risk assessment and we will assume that she finds out her risk of breast cancer is 20.7%. The importance of this risk that she receives can elicit a number of different reactions all based on gist representations. After learning this information, the woman can interpret her risk numerically, as 20.7% or can say, “this is not good, I have a high risk,” or “my risk is higher than that of my sister’s.” The different interpretations above represent verbatim (“20.7%”) and gist traces (“not good;” “higher risk”), which are encoded simultaneously. In addition to parallel encoding of verbatim and gist representations, it is important to note that the two different gist interpretations given in that example are two of the many that are possible. Fuzzy-trace theory has found that individuals create multiple gist representations of knowledge learned or values (Reyna, in press). These gist representations will also vary between individuals because gist is subjective in nature. This subjectivity can be influenced by cultural beliefs, previous knowledge, or life experiences. The differences in interpretation can be seen by two different perspectives. The first is illustrated by a woman who sees her risk of 20.7% as being very high considering that the normal average risk is 12.2%. However, that same risk may be viewed as low when compared to the risk of the woman’s sister whose is 26.9%. These different gist representations lead to individuals retrieving different information about an event and help determine one’s rationale or reason for

decisions made. Considering the clear connection between gist representations and decision making, having a thorough understanding of what contributes to the decision making process is vital.

In addition to the various perspectives that gist representations can be based off of, there can be multiple interpretations of the same rote details depending on the situation in which they are encoded. This can be seen by taking a risk percentage, similar to the one identified in the breast cancer example above, and placing it in different scenarios. For example, if someone was advised that they had a 15% chance of an imminent myocardial infarction (heart attack) or 15% chance of breast cancer, they would be quite alarmed because this risk is viewed as a high risk of a potentially serious ailment. However, the same 15% risk, when put in the context of rain, seems like a low probability. These three situations help prove that it is important to not only understand the specific content, in this case the numerical value of 15%, as well as the context of that content, medical ailment or rain, so that one can have a true understanding of what the knowledge means (Reyna, in press).

Although verbatim representations are important, it has been shown that individuals show preferences towards using simple gist traces for decision-making. This inclination towards gist is to the more stable aspect of gist as well as the thought necessary to process an experience. Reyna and Brainerd (2011) determined that gist representations are more stable than verbatim ones and although gist is more fuzzy and less precise, the representations themselves are less likely to be subject to interference. Another major factor causing preference of gist lies in that gist representations are more intuitive and unconscious. Verbatim representations on the other hand require thought and precise processing of specific details. With increased stability and

decreased effort needed, gist representations are thought to play a larger role in the decision making processes in comparison to verbatim representations (Reyna, 2011).

This reliance on gist representations increases with age as well as experience and expertise. In experiments conducted by Reyna and Kiernan (1994, 1995), children's ability to recall and use both gist and verbatim representations were studied and the use of gist increases with age (adults were also studied using the same materials). Similarly, it has been found that gist interpretations increase as experience increases, this is because the increase in knowledge and experience help progress interpretation and lead to individuals having stronger abilities to connect the dots between situations and gather the deeper meaning (Reyna, 2011). This has been specifically investigated in the realm of emergency department physicians and dermatologists. When faced with determining the treatment and disposition of patients with risk of imminent myocardial infarction (MI), known as heart attacks, physicians with more specialized knowledge, such as highly trained cardiologists, and extensive years of experience considered less dimensions when treating the patient. On the contrary, less experienced and specialized emergency medicine physicians used more dimensions, when trying to treat patients. In addition to the Emergency Room, similar findings were found with dermatologists. Similarly, experienced physicians focused on the size changes of skin lesions whereas, less experienced ones used more dimensions like size and pigmentation (Reyna, 2008). This decrease in dimensions used by physicians represents a reliance on gist traces because the more experienced physicians are using fewer dimensions. With these gist representations, experienced physicians are able to gather a patient's risks and the severity of their ailment. Since it has been shown that with development verbatim thinking decreases and there is a shift towards gist-based thinking, it

is believed that higher orders of gist-based decision making should be encouraged and facilitated in medical environments (Reyna, 2011).

Following the storage of knowledge and the creation of gist and verbatim representations of that knowledge, retrieval of these representations are necessary at the appropriate times. It is important to note, however, that there is variability in retrieval depending on the situation. This is shown by the classic Asian Disease Framing Problem (Tversky & Kahneman, 1981). Subjects are briefed on a specific and deadly disease and told that the disease will affect 600 people who are expected to die from the serious ailment. However, subjects are advised that there are two possible treatment options which are used to fight the disease. Two different groups are then presented with different treatment options for the same problem. The first group, known as the gain-frame, is advised that they can either 1) save 200 people with absolute (100%) certainty or 2) take a chance and try to save 600 people with a 1/3 probability, with a 2/3 probability of saving no one. The second group, known as the loss-frame, is advised that they can either 3) have 400 people die with absolute (100%) certainty or 4) take a chance with of 600 people dying with a 2/3 probability, with a 1/3 probability of nobody dying.

Despite the large number of numerical (quantitative) values given in this experiment, studies have shown that most subjects actually convert the numerical values into simple qualitative representations, like “some versus none” (Reyna & Brainerd, 1991, 2011). Thus, after interpretation and the creation of representations, most of the decisions come down to the opportunity to save some people with absolute (100%) certainty or save some people with the chance of saving no one (Reyna & Casillas, 2009). It is important to note that despite the different words used in the gain (“save”) and loss (“die”) frame, the numerical values of people



that survive and die are equivalent in all scenarios (200 saved = 1/3 of 600 saved; 400 die = 2/3 of 600 die).

Once the Asian Disease problem is simplified down to saving some with 100% certainty or saving some with the chance of saving no one, it is important to understand that each individual's decision is based on their personal values, otherwise there would be no preference towards either of the possible treatment options. Of these values, it is determined from individual responses that most people value human life. This value for human life creates the different responses seen in the gain and loss frames. In the gain frame, subjects have the option of saving some people versus potentially saving none and thus they subscribe to the sure option so as to not take a risk with saving people's lives. However, in the loss frame, the word "die" replaced the word "save." With this simple change, individuals who value human life had to choose between the option where people die for sure or people have a chance of not dying. With the question framed in this manner, subjects face the moral value of not sentencing people to absolute certainty of death and thus they instead choose the risky option because there is a chance that people won't die. These different results, which depend on the framing of the scenario, show that there is a difference in how knowledge and values are retrieved depending on how the information is phrased or displayed (Reyna, 1991; Reyna & Casillas, 2009). This problem displays "task variability", defined by performance shifts when the initial or underlying scenario or task remains the same (Reyna & Brainerd, 1994; Reyna, Lloyd & Brainerd, 2003). This variance in retrieval of values depending on the context and framing of tasks are problems, has large implications into the medical field. In medicine, patient histories and the details surrounding a specific event can very often be portrayed in a large number of different ways. It

is important for providers to take this information and be able to retrieve the same values and knowledge for a wide variety of different frames so they can properly treat all patients.

One of the final aspects of processing information, once an individual has stored knowledge, created multiple gist and one verbatim representation of that knowledge for memory and retrieved those representations at the appropriate times, is the affect of inhibition. Inhibition itself differs from knowledge, representations and retrieval in that it is not tied to specific content or information. Nonetheless, inhibition has an important role in the processing of information in that it blocks out sources of interference, which act to block retrieval of specific representations. Interference can occur in the form of multiple competing gist representations and can lead one to use an incorrect representation (Reyna & Brainerd, 1994, 2011).

For example, if a pre-hospital care provider is called to a family member or friend's home for a medical emergency. Emotion will most likely play a major factor and has the potential to cloud judgment. In this example, although the provider may be inclined to follow the representation that seems most reasonable, emotion may in fact be interfering and blocking out the representation of the treatment that is actually best. While trying to understand interference, it is important to understand that both gist and verbatim representations are subject to interference, but gist representations are less susceptible because they are more stable than verbatim traces.

Despite increased stability, the multiple gist representations that are created can interfere with one another. This is shown by the example of treating for a family member above. If a provider is basing their treatment decisions off of multiple gist representations of the scenario at hand, they may compete and block each other out. With a solid understanding of interference and the impact that it can have, inhibition helps to prevent interference from occurring (Reyna &

Casillas, 2009). In the scenario above, inhibition can block out the gist representation of, “this is someone I care for,” and instead ensure that the provider focuses on the gist of, “this person is sick,” and, “this person needs [xxx] treatment”. By inhibiting the first representation, the provider is able to stay focused, use the second and third representations and provide the patient with the proper treatment, despite the high level of emotion. It is important to know that inhibition isn’t an innate characteristic but something that develops through childhood, adolescence and adulthood (Reyna & Casillas, 2009).

The elements of fuzzy-trace theory, specifically gist and verbatim memory have been shown to have a demonstrable impact in medical decision making by physicians (Reyna & Lloyd, 2006). They found significant differences in decisions made by studying subjects in comparison with guidelines. Little has been written about the impact of fuzzy trace theory on clinical decision making by emergency medical services personnel. Despite this, one might speculate that there is a greater contribution of verbatim memory to clinical decision making by EMTs and Paramedics given the highly protocolized nature of emergency medical services (EMS) care in the field. However, studies have shown that clinical judgment, primarily experiential, rather than strict adherence to protocol, may be the dominant factor in certain clinical situations in the pre-hospital environment. Newgard et al. (2011) distinguished between decision making in trauma cases and non-trauma activations. In a study of a four county regional trauma system, they found that proximity to the receiving hospital and preferences of the patient and family were the major factors in transport decisions. However in trauma calls, judgment decisions by EMS personnel were noted in 36% of cases, and were the “sole criterion in 23%” (Newgard, 2011). They concluded that pre-hospital triage during trauma calls is predominantly determined by judgment of EMS personnel on scene. Furthermore, given the

diverse organization of EMS services in the United States, specifically the contrast between paid (career) personnel versus volunteers, there may be differential contributions of gist and verbatim memory based on other underlying factors.

### **False Memory**

When considering fuzzy trace theory, it is important to include the potential role that false memory may play in Emergency Medical Services. While gist and verbatim memory are determinants of the rationale for decisions given a particular clinical presentation, false memory may impact these decisions by distorting the clinical facts that drive medical judgment. Given the rapidity by which clinical facts are obtained, and treatment decisions are made in the field, it is reasonable to hypothesize that the phenomenon of false memory is not uncommon in the EMS setting. While this study is intended to demonstrate that false memory is a significant factor in EMS, future studies will be required to further elucidate the exact points in patient flow at which it occurs. These points include false memory affecting the EMS provider's independent decision making, false memory in transfer of information to medical control physicians while still at the scene and transfer of information to Emergency Department staff in the hospital. The last is crucial since this information often significantly affects subsequent hospital care (Flomenbaum, 2011). These memory problems can also be related to speaking with the patient's family or bystanders (Source-monitoring Effect) or false information received from the patient depending on specific cues provided by the responder (Gist-Verbatim Independence Effect), among others (Reyna & Lloyd, 1997).

Despite the fact that most EMS calls are of extremely short duration, Roediger and McDermott (1995) demonstrated that humans can forget information even over short time

periods of learning. In one experiment, they measured subjects' recall from lists of twelve words. Their results show that words presented in the middle of the list were recalled approximately 50% less. Roediger and McDermott's study built on work done by Deese in 1959 and from their experiments, DRM lists were created. DRM lists are based on an omitted word. The list contains the most popular associates of that word, e.g. if the omitted word is "chair", a DRM list would contain; "table, sit, legs, seat, soft, desk, arm, sofa, wood, cushion, rest and stool." These DRM lists have potential similarities to the types of symptoms that patients present with in the pre-hospital setting. With experience, pre-hospital providers see many similar patients and begin to align certain signs and symptoms with certain ailments. As EMTs and Paramedics determine the signs, symptoms and clinical history of a given patient, it seems likely that false memory may result in a belief that certain clinical findings are present when they actually are not. In many instances, the presence or absence of a particular finding in the presence of others may significantly change the diagnosis. For example, asthma is common in a young patient with difficulty breathing. The presence of wheezing is confirmatory clinical evidence. The false memory of wheezing in a patient who, in reality, does not exhibit it will lead to clinicians being misled. The similarities between the hypothesis that false memory occurs in the EMS setting and the results of experiments with DRM lists, lies in the underlying similarity of sign/symptom lists and word lists. Of note, Roediger and McDermott found the omitted word to be recalled 40% of the time which was about equal to the least recalled words that were actually presented.

In addition to exploring the possibility that pre-hospital providers falsely recall that certain signs/symptoms were present, there is also the potential that providers falsely remember certain patient information due to inadvertent suggestions from other pre-hospital providers or

ED staff when care is transferred. This power of suggestion is extremely prevalent in legal and investigative circumstances, demonstrated by articles regarding experimenter suggestion, interviewer bias, and child suggestibility (Schooler, 1998; Bruck & Ceci, 1997; Brainerd, Reyna & Ceci, 2008). Bruck and Ceci (1997) describe how subtle either intentional or unintentional cues can be to communicate bias from an interviewer to an interviewee. Although interviews and interrogations often take place in stressful and less than ideal environments, similar environments can be found in EMS, especially when a patient has sustained a major traumatic injury. At these scenes, emotion, stress and anxiety are high. Similar emotions are often caused by the interrogative Reid technique, which works to weaken a suspect's resistance and has been shown to potentially lead to false memories and/or false confessions (Kassin & Gudjonsson, 2004; Gudjonsson & Pearse, 2011).

Despite the large difference between pre-hospital care and police interrogations/interviews, emotional similarities may potentially exist between EMTs/Paramedics and interviewees. Interestingly, not all field situations are viewed similarly by EMS providers. Although not well studied, EMS experts suggest that trauma calls, particularly involving motor vehicle rollovers, are among the most stressful, while medical calls such as difficulty breathing tend to be viewed as more routine. Clearly, cardiac arrest calls and any call involving children result in higher rates of provider arousal (Ribaud, 2011). Given the impact of arousal on false memory, it would be reasonable to hypothesize that different types of EMS calls may be associated with different degrees of false memory.

The study of memory in EMS settings is crucial to understanding factors that influence adherence to protocols, medical decision making and clinical judgment. As data becomes available on practice variation by EMS providers, it is likely that considerable opportunity for

enhancement of quality and patient safety will be identified. These opportunities will need to be incorporated into emergency medical services' training curricula as well as continuing education programs.

### **Current study**

The goals of the present study were to determine the relative importance of gist versus verbatim representations as the basis for clinical decision making by EMTs and Paramedics, using structured responses to case scenarios. In addition, the study attempted to determine the degree of false memory that occurs in the pre-hospital setting and whether this is affected by the type of call. The study also attempted to correlate the degree to which each type of memory is associated with “correct” decision making in knowledge-only scenarios and associated with desirable deviations in conflict (gist and verbatim) scenarios. A convenience sample of EMS personnel from several agencies which provide emergency ambulance or first responder services was asked to participate in a case-based survey, in which they were presented with clinical scenarios representing distinct disciplines within pre-hospital care, e.g. trauma, medical illness, etc. Subjects were asked questions regarding pre-hospital care which were answered by multiple choice responses. Subjects were then asked for the basis of their decision, the choices correlating with gist and verbatim memory. At the completion of the cases, subjects were queried about presenting signs and symptoms of each case thereby assessing the degree of false memory penetration. Ultimately, the overall degree of gist versus verbatim memory was assessed with sub-analyses based on multiple factors including level of training e.g. EMT versus paramedic, career versus volunteer, rural versus urban location, provider gender and provider experience, etc. In addition, selection of answer choices which reflect desirable deviations from

protocols or rote protocol based details will be correlated with the type of memory identified as the basis for the clinical decision.

## **Methods**

### **Participants**

The initial pilot program of this survey included fifteen participants which included members of the community who have no medical background. Following the pilot program, the survey was distributed to Emergency Medical Technicians (EMTs), Paramedics, Fire Department personnel and other civilians who provide pre-hospital medical treatment.

Participants were drawn from several EMS/Fire/Rescue agencies including but not limited to:

- 1) Bangs Ambulance Inc. (Ithaca, NY)- Paid ambulance service that provides 911 and interfacility transport services in rural and suburban upstate New York.
- 2) Cayuga Heights Fire Department (Cayuga Heights, NY)- Volunteer fire department and ALS first response in a small, suburban community in upstate New York.
- 3) Cornell University EMS (Ithaca, NY)- Collegiate, student run, volunteer first response agency providing 911 and event standby services for a college campus in upstate New York.
- 4) Dix Hills Fire Department (Dix Hills, NY)- Volunteer fire department and ALS/BLS transport in a suburban community in metropolitan New York.
- 5) Dryden Ambulance (Dryden, NY)- Combination paid ALS and volunteer BLS that provides 911 transport services in rural and suburban upstate New York.
- 6) Groton Ambulance (Groton, NY)- Combination paid ALS and volunteer BLS that provides 911 transport services in rural and suburban upstate New York.



- 7) Harpur's Ferry Volunteer Ambulance (Binghamton, NY)- Collegiate, student run, volunteer ambulance service providing 911 and event standby services at the ALS level for a college campus in upstate New York.
- 8) Irvington Volunteer Ambulance Corps (Irvington, NY)- Volunteer BLS that provides 911 transport services in suburban areas just outside of metropolitan New York.
- 9) Matawan First Aid Squad (Matawan, NJ)- Volunteer First Aid squad that provides 911 BLS transport services to a suburban community in New Jersey.
- 10) New York Presbyterian EMS (New York, NY)- Academic medical center based ambulance service providing 911 and interfacility transport services in the inner city of metropolitan New York.
- 11) Slaterville Ambulance (Slaterville, NY)- Volunteer ALS/BLS that provides 911 transport services in rural and suburban upstate New York.
- 12) Trumansburg Ambulance (Trumansburg, NY)- Combination paid ALS and volunteer BLS that provides 911 transport services in rural and suburban upstate New York.
- 13) Westport EMS (Westport, CT)- Volunteer ALS/BLS providing emergency transport in suburban Connecticut.

Agency leaderships were initially contacted and asked to invite their members to participate in an on-line case based exercise. Information regarding the survey was dispersed electronically and the Qualtrics-based survey URL was included in the e-mail dissemination. Since participation in the study was voluntary, it was perceived that the initial response rate would be lower than 50% of active members from each agency contacted. For this reason, the study used a snowball procedure to obtain more participants; participants were encouraged to forward on the initial

survey e-mail to friends, family and colleagues that work in emergency services. Although a snowball procedure doesn't provide a random sample of participants, higher quantities of subjects would help increase power.

Demographic data included questions pertaining to participants' clinical certification, ranging from no prior experience or certifications to EMT-Basic to Paramedic. Subjects were queried regarding the number of years that the participant has spent as a pre-hospital medical provider as well as the length of time at their current level of certification. Participants also provided information about the type of EMS agency that they either volunteer or are paid by. Other data included the types of communities that providers serve: rural, suburban or urban (city) and the time of day that participants normally work or volunteer at.

As of June 1<sup>st</sup>, 2012, 309 surveys were started and 217 of those surveys were completed in full; the remaining 92 surveys included participants who answered few to none of the medical questions in the survey and answered none of the demographic questions. Due to the lack of data, responses from their submissions were not incorporated into any of the results or demographic breakdown provided in this document.

Of the 217 pre-hospital care providers who were administered the survey, 149 (68.3%) were male and 68 (31.2%) were female. Participants varied in age ranging from 18 to 69 years old, with the average age being 34.96 years with a standard deviation of 14.48 years. 194 (89.0%) participants identified themselves as white, while 20 (9.2%) participants identified themselves as one of a number of ethnic groups (detailed frequency data is found in Appendix B), while 4 (1.8%) participants chose to not answer the question. 207 (95.0%) participants identified themselves as not of Hispanic, Latino, or Spanish origin; with six (2.9%) participants identifying themselves as of Hispanic, Latino or Spanish origins and five (2.3%) participants

chose not to provide this information. Last, participants were asked to provide information regarding their highest level of education. 58 (26.6%) participants listed a high school education or equivalent as their highest education, while 83 (38.1%) stated that they had a Bachelor's degree. For more detailed results, refer to Table B.5 in the Appendix.

In regards to EMS-specific information, participants were asked to provide a number of different details regarding their experience and personal demographic information in relation to EMS. Participants had a wide array of certification levels from having no medical or EMS experience up through being a Critical Care Paramedic, however the two most selected answers were participants being certified as Emergency Medical Technician- Basics (EMT-B; 133, 61.0%) and Paramedics (AEMT-P; 51, 23.4%). Refer to Table B.6 for more detailed certification breakdowns. Participants were also asked to identify the state in which they have a current EMS certification. The majority of participants in this experiment were from the Northeast (including New York, Pennsylvania, New Jersey and Connecticut), however there were a few members who held certifications from other states such as Colorado, Illinois, Michigan, and California. Overall, the subjects who participated in this survey held certifications in one of 19 different states or Canada.

Along with providing information about the certification type and where they received it, participants were asked to both subjectively rank their experience on a seven point Likert scale (None at all, Very Low, Low, Medium, High, Very High, The Highest Level (Expert)) and objectively using specific numbers of years. These two methods were used to rank experience in EMS overall and at their current certification level. The average level of experience at any certification level was 10.4 years with a range from no experience to 42 years. The average level of experience at the current certification level was 7.95 years with a range from no experience to

39 years. On the seven point Likert scale, the majority of participants chose medium (26.1%, 28.4%), high (30.3%, 28.9%) or very high (22.5%, 21.6%) for their experience level at both current and any certification level.

Participants were then asked to provide details about the type of service they provide care for as well as the type of area they are a provider in. 41 (18.8%) of the participants identified themselves as providers who are employed (in a paid position) by an EMS/Rescue or Ambulance Agency only. 124 (56.8%) participants identified themselves as volunteer members of an EMS/Rescue or Ambulance agency only. 42 (19.3%) participants identified themselves as both employed and a volunteer for an EMS/Rescue or Ambulance Agency. 11 (5.0%) participants stated that they were not employed by or don't volunteer at an EMS/Rescue or Ambulance Agency.

When asked about the type of area that each participant's agency serves, 64 (29.4%) stated they provided service in an urban area, 111 (50.9%) stated suburban, and 37 (17.0%) stated rural. When asked about the hours that each participant normally works or volunteers, 47 (21.6%) stated they worked in the daytime usually, 17 (7.8%) stated they worked evenings, 47 (21.6%) stated they worked night or overnight hours. Despite the three choices, many participants (101, 46.3%) stated that they did not have a set schedule.

## **Materials**

Materials used in this research included an Institutional Review Board (IRB) approved (#0906000040), internet-based survey, composed of six parts. The survey was submitted and approved by the Cornell University IRB prior to implementation and dissemination. Informed consent was obtained and all subjects were notified that their identities would remain

anonymous, and that no personally identifiable demographic data would be requested. However, non-identifiable demographic data was obtained in order to complete the analysis and provide thorough data. A copy of the informed consent form that each subject was provided can be found on the first page of Appendix A.

*Part 1- Medical Case Based Scenarios (Verbatim and Gist)*

Part 1 of the study instrument consisted of seven (7) typical EMS call scenarios. At the end of each scenario, subjects were asked to answer 1-2 clinically based questions requiring clinical decision-making by the EMS provider (total of nine treatment questions). Each clinical question was followed by a standardized question querying the subject as to the rationale for the decision made in the clinical question. The rationale question had five possible answer choices, two of which suggest that the rationale was based on gist representations; two other choices suggest that the rationale was based on verbatim representations. The fifth choice was labeled “Other” and gave the subject the opportunity to fill in their own rationale. Lastly, participants were asked to consider their confidence level of the initial treatment that they chose. Confidence level was measured via a sliding percentage scale from 0% (No Confidence at all) to 100% (Completely Confident) with the middle percentage of 50% representing a confidence level that is as likely as not. In total, there were nine sets of questions including a treatment, a decision rationale and a confidence question. These sets of questions were divided into two subsets with six of the nine sets testing specific knowledge of protocols and are referred to as “Control Scenarios” whereas the final three sets of questions created an environment where participants had to decide between a desirable deviation from the protocol (gist-based answer), a verbatim representation of the

protocol or a distracter answer(s). These last three sets of questions are referred to as “Conflict Scenarios.”

It should be noted that the order of scenarios was randomized to prevent any of the resulting data from becoming confounded. However, the order of the questions in each scenario remained the same from participant to participant (scenario, treatment decision, rationale, confidence).

Of these seven overall scenarios (total of nine question sets), five were simple single patient scenarios with a single treatment question followed by the decision and confidence question. In the two remaining scenarios, one had two treatment questions each with corresponding decision and confidence questions. The two treatment questions had a specific order as participants were prompted that they should select the answer for the second treatment that would normally be the next step in treatment after the first. In the second of the non-simple scenarios, participants were given a brief scene description and then descriptions of two different patients involved in the scene. Both patients’ treatment questions were followed by decision and confidence questions.

With the simple and more complex scenarios in place, there were two subsets of questions, control and conflict, as previously discussed. The control scenarios were based solely on a participant’s knowledge of the protocols and the patient; treatment questions had a single correct answer with three distracter answer choices. The conflict scenarios had a gist-based answer, which refers to a desirable deviation from the protocol in that it would provide proper care for the patient, 1-2 verbatim-based answers which represent what most protocols outline without any interpretation of the specific patient’s condition, and the remaining 1-2 answers were distracters. For example, in Scenario 7, the gist answer is, “Clean and irrigate the patient’s

wounds and then bandage them after checking your SpO2 probe,” because the more experienced providers should know to treat the patient’s presentation and not what equipment states. In this scenario, the patient showed signs of adequate circulation and oxygenation through good color and warm skin. The verbatim answer is, “Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM,” because this represents a provider treating exactly as the protocols state, when signs of low oxygenation (the reading of the pulse oximeter) are present, high flow oxygen should be administered. The remaining two answers, “Have the patient lie on the ground and treat for shock,” and, “Fully immobilize the patient to a long backboard,” are distracter answers since they are treatments that aren’t specifically related to the patient’s scenario. The other two conflict scenarios followed similar patterns for gist, verbatim and distracter answer choices and are labeled in Table 13.

### *Part 2- General Verbatim and Gist Condition Questions*

Following the case scenarios, subjects were asked a series of questions to determine their rationale for care in real clinical situations in the following categories: Major trauma, Minor Trauma, Cardiac, Respiratory, Allergic Reactions, and Unresponsive patients. Each clinical situation type was followed by a number of questions regarding the participant’s decision making behavior when dealing with these types of situations in real life. A sample question is, “I use written protocols by referencing protocol books while providing care.” For each of the decision making behavior questions, subjects were given a five point Likert scale representing how often the action reflected by the statement was utilized by the provider when dealing with the type of patient included in the section’s instructions. The possible answers on the scale included: Never, Rarely, Sometimes, Often and Always. The question also attempts to identify

the importance of “gist” or “verbatim” memory to the subject during his/her clinical decision-making. Each decision making behavior question is indicative of the use of either a verbatim or gist representation. For each patient category, there were two (2) verbatim questions and four (4) gist questions. These scores were reported separately and then compiled and summed into composite variables discussed in the results section.

It should be noted that the order of each medical-domain group of questions in this section was randomized to prevent any of the resulting data from becoming confounded, however the order of the questions within each group remained the same from participant to participant. Refer to Appendix A for the full set of questions included in this section.

On completion of the six (6) general types of patients, participants completed eight (8) questions which were similar to the questions above but are related to their general beliefs when providing care to any type of patient. These questions were ranked with the same five point Likert Scale and provide information regarding their general decision making process while providing care in terms of both “verbatim” and “gist” memory. Of the eight general questions, three were verbatim-based and five were gist-based. These questions were analyzed in a similar manner to the more specific patient-type questions presented above.

### *Part 3- Determination of False Memory*

At the completion of the clinical scenarios and clinical situation questions, subjects were asked to recognize clinical facts from each of the case scenarios presented in the first part of the survey. These facts were signs, symptoms or elements of the patient’s medical history. Signs are observations made by the medical provider such as respiratory distress, sweating or cyanosis (bluish- tinged skin color). Symptoms are facts elicited from the patient such as, “I am short of



breath.” Elements of the patient’s medical history include information explicitly stated by the patient in the scenario. Subjects were presented with a list of signs, symptoms and/or elements of medical history, and asked to check each one that they remember being mentioned in the previously shown scenario. Each question included five possible answers; between one and five of the choices from the referenced scenario were true statements. The choices included actual elements of the case scenarios as well as information not provided in the scenario, which is consistent with the general gist of the patient and information not provided that is unrelated to the general gist of the patient. During each of the recognition questions, subjects did not have the ability to refer back to the initial scenario and needed to try and recognize as many true statements as possible. There was one question in this section per patient scenario (a total of seven questions).

It should be noted that the questions in this section were randomized to prevent any of the resulting data from becoming confounded due to order.

#### *Part 4- Emergency Medical Services Background Information*

This section of the survey provided the participant with the opportunity to list information about themselves including their certification level, state of certification, level of EMS experience, type of agency that they are a member and/or are employed by, the type of area that they provide care in and the time of day that they normally work/volunteer.

A participant’s level of experience was determined using four different questions. Participants were asked to indicate their own belief of their experience both at their current certification and at any certification level on a seven point likert scale. The seven point scale was composed of the values: “None at all, Very Low, Low, Medium, High, Very High, the

Highest Level (Expert).” The remaining two methods of determining experience were based on participants inputting the number of years that they have provided medical treatment both at their current certification level and at any certification level. These four methods provided a basis for both subjective and objective levels of experience.

The information collected provided data to analyze whether the level of certification, years of experience, and type and location of service provided affect the decisions made.

#### *Part 5- Demographic Information*

Similar to part 4 of the survey, participants completed five questions describing their age, race, origin, gender and level of education.

#### *Part 6- Cognitive Reflection Test (CRT)*

The final three survey questions were taken from Shane Frederick’s Cognitive Reflection Test (CRT; 2005). For example, “A bat and a ball cost \$1.10 in total. The bat costs \$1.00 more than the ball. How much does the ball cost? (in cents).” Frederick (2005) discusses the use of the CRT to determine how individuals answer questions, namely whether they answer with what initially comes to mind, in this case \$0.10, or if they have patience and are able to report the correct answer, in this case \$0.05. These two methods of answering the CRT are exemplified by “System 1” and “System 2” processes. Frederick (2005) and Stanovich and West (2000) discuss how System 1 represents processes which are done almost instantaneously and require little conscious thought, for example recognizing the face of a friend in a classroom. On the other hand, System 2 represents more of a conscious level of thought which requires one to dedicate thinking, effort and concentration. Frederick (2005) goes on to discuss how subjects taking the

CRT who answer with the predicted intuitive answer are using System 1 as opposed to those who have cognitive inhibition and answer CRT correctly use System 2. These two systems each present similarities to Fuzzy Trace Theory in that System 1 is similar to gist memory and System 2 to verbatim memory. Although not identical, the comparison between System 1 and 2, and gist and verbatim representations, respectively, allows CRT data to be evaluated as a secondary method to determine how subjects make decisions in instances outside of the pre-hospital realm. The data from the three questions included in the CRT was analyzed individually and summed as a composite variable. Data from the participants who provided the intuitive answer was also analyzed.

## **Procedure**

As stated in the “Participants” section, specific EMS/Fire/Rescue agencies were contacted by the investigator and permission was requested through an officer or leader of the department to distribute the survey to their members or employees. The participants enrolled in the study voluntarily and anonymously. Some departments or agencies may have provided their members with credit for Continuing Medical Education (CMEs), however the hours were not connected with the investigators of the survey. Participants received a secure link to the web-based survey administered through Qualtrics Web Survey Tool via Cornell University. Each subject was asked to read and affirm that they understood the different aspects, risks and any consequences of the study via an official consent form. The consent form also contained contact information for the investigator, Cornell’s Institutional Review Board, and Ethicspoint, an anonymous complaint hotline. Upon completion of the survey, participants received a confirmation message that their survey was complete.

## **Results**

Upon completion of the testing period, the data gathered from each participant's survey was analyzed in a number of sections and then between each section. The sections were analyzed in the order that the parts of the survey were presented in the methods. The first analysis that was completed for each of the sections included checking the general frequency values for every question to determine if participants showed any significant results when conditions were varied. Following the frequency results, depending on the type of variable, categorical, ordinal, or continuous, analyses of variance (ANOVA), correlations and/or repeated measures analyses were completed. The main results from this study are based on repeated measures ANOVAs found in Tables 1-8. The additional values and data discussed can be found in Appendices B, C, D, E, and F. Scales of variables were also calculated and then placed within calculations against other variables against scales. Additionally, variables from different parts of the survey were then compared. Below the results are discussed in full and in the order that the sections appear in the survey itself, which is found in Appendix A.

### **Medical Case-Based Scenarios**

#### *Treatment Questions*

In this first part of the survey, participants were asked to make treatment decisions based on a medical case scenario they were given. As discussed in Methods, participants were given nine sets of treatment questions to complete, with the six control scenarios being based straight off of protocol knowledge, while the last three sets provided participants with a conflict scenario. Overall, participants showed strong knowledge of protocols by selecting the proper answer

choice a majority of the time. In Table C.1, the frequency that participants chose each answer is shown for each of the six knowledge scenarios. The correct treatment answer for each question is highlighted. Of the six questions, the question with the lowest number of participants selecting the correct answer was Scenario 1- Treatment 2 with 72.2% of participants selecting the correct answer, while the highest proportion of correct answers was Scenario 5- Patient 1 with 96.8%. The four remaining scenarios had 88.5%, 79.4%, 84.4%, and 88.5% of participants getting the correct answer. These percentages show that providers who completed this survey show strong knowledge for the protocols on a single case by case basis.

Each provider's score among all six scenarios was also analyzed to determine the number of questions out of the six that they got right. Table C.2 shows the number of questions that participants got correct. The results show that almost half of all participants (46.8%) got all six knowledge treatment questions correct and only 7.5% got three or less questions right (worse than half of the questions correct). The mean of questions out of six correct was 5.09 with a standard deviation of 1.04.

With these results showing such high numbers of correct responses both across all scenarios and for each individual scenario, it is clear that when participants weren't forced to make decisions between protocol-based answers (verbatim) or answers that indicate desirable deviations from protocols (gist) and they are given only one correct, verbatim answer out of the four possible choices, they are able to discern the correct treatment. This creates an interesting setting to analyze the results of the conflict scenarios.

In general, a large number of the participants selected the gist-based answer in the three conflict scenarios. The frequency for each answer choice selected for the conflict scenarios is shown in Table C.3. In the first conflict scenario (Scenario 5- Patient 2), 62.4% of participants

selected the gist answer choice while 37.1% of participants selected one of two verbatim choices. The second conflict scenario followed a similar pattern with 69.3% of providers selecting the gist based answer and 29.4% of the providers selecting the verbatim answer. The final conflict scenario had roughly equivalent breakdowns of gist and verbatim answers chosen with 47.2% and 42.2%, respectively.

Similar to the six knowledge scenarios, each participant's answers for all three questions were summed into a gist and a verbatim score. Each participant's sum was out of three and reflected the number of times the participant selected a gist or verbatim answer during the three scenarios. The breakdown of participants who chose the gist treatment option for the scenarios is shown in Table C.4, with 19.8% choosing the gist answer for each of the three conflict scenarios. The mean number of gist answers chosen was 1.79 with a standard deviation of 0.81. A histogram of gist answer sum frequency is shown in Figure G.4. The breakdown of participants who chose a verbatim treatment option is shown in Table C.5, with only 3.7% choosing a verbatim answer for each of the three conflict scenarios. The mean number of verbatim answers chosen was 1.09 with a standard deviation of 0.82. A histogram of verbatim answer sums frequency is shown in Figure G.5. As shown by Table C.4 and C.5, there was a higher number of participants who showed patterns of selecting multiple gist answers as well as a higher number of gist answers chosen overall. This data reflects the idea that when required to choose between a gist answer which reflects a desirable deviation from protocol and a verbatim answer, a large number of providers show preference towards the gist.

With a solid foundation of the knowledge of participants as well as their general tendency to use gist and verbatim based answers, it was then analyzed what types of EMS demographic information if any plays a factor in how participants selected their answers. Thus, a repeated

measures analysis of variance (rmANOVA) was completed comparing the average mean of those selecting the six verbatim answers in the control scenarios versus the average mean of those selecting the three verbatim answers in the conflict scenarios; means were used to ensure equal weighting values between the six scenarios and the three scenarios. Gender, highest education level and highest certification level were used as between subject factors after finding significant correlations between the verbatim average in the conflict scenarios and highest education and highest certification level.

In these analyses, highest certification was grouped into three levels due to some of the certifications having low n numbers. For this reason, certifications were grouped based on general standards of EMS in the United States. The first group was Minimal Certification and included those with no certification, a CPR certification or a Certified First Responder certification. All three certifications were grouped together because even though they are standard certifications recognized in EMS they do not meet BLS or ALS standards. However, once the three levels were grouped, the n-value was still low. With a low n-value and these participants not meeting minimum EMS requirements to be in charge of an ambulance, they were not included in the analysis. The second group was BLS providers which include EMT-Basics, the national standard for BLS, and EMT- Intermediates. Although EMT-Is are technically a level of care above EMT-Bs, they are not nationally recognized in every state and exist only in certain areas and they do not meet the standards of ALS providers. For this reason, EMT-Is are often viewed as BLS providers and were thus grouped in this manner. The third and final group is composed of ALS providers including EMT- Critical Care (EMT-CCs), Paramedics and Critical Care (CC) Paramedics. Although national standards for ALS are based around Paramedics, EMT-CCs and CC Paramedics are also viewed as ALS providers. Highest

education level was also grouped into three levels including, High School or Associate's Degree, Bachelor's or Nursing Degree (RN, PA, or NP), and Graduate or Physician's Degree (MD, DO, etc.). The test of within- subjects effect's results of the rmANOVA are found in Table 1 and show significant interactions with Scenarios (Control vs. Conflict; sig = 0.000), Scenario with Highest Certification Level (sig = 0.008), and Scenario and Highest Education Group (sig = 0.032).

Upon closer analysis of the significance between scenario (control and conflict) means, found in Table 2, there is a significant difference between the percent of participants that selected the verbatim answer in the control scenarios (0.859) and the conflict scenarios (0.383). As discussed earlier, these results show similar findings to the analysis of general frequencies with the addition of showing that the difference is significant.

The second group of significant results was found in the interaction of scenario with highest certification level (BLS or ALS) found in Table 3. This interaction shows that overall, BLS and ALS providers showed little difference in selecting the verbatim answer in the control scenarios, however ALS providers showed significantly lower level of selecting the verbatim answer than BLS providers in the conflict scenarios. The mean value of ALS providers in choosing the verbatim answer in the conflict scenarios is 0.320 with a standard error of 0.042, while the mean value for BLS providers in conflict scenarios is 0.446 with a standard error of 0.027. This significant difference shows that BLS and ALS providers show an insignificant difference in general knowledge of the protocols (control scenarios), but when given a scenario that causes them to choose between a statement representing a rote view of the protocol or a desirable deviation from the protocol, ALS providers show decreased uses of verbatim



processing. This finding supports previous data that more experience and more highly trained providers use less verbatim when making decisions (Reyna & Lloyd, 2006).

Additionally, there was a significant interaction between scenario and highest education level shown in Table 4. This interaction shows that all education groups (High School or Associate's, Bachelor's or Nursing, and Graduate or Physician) showed no major differences in mean values for selecting the verbatim answer in the control scenarios. However, Graduate and Physicians had a significantly higher mean (0.484, standard error = 0.053) than those with High School/Associate's (0.331, standard error = 0.041) or Bachelor's/Nursing degrees (0.334, standard error = 0.032). This increase in use of verbatim answer choices in those with the highest education level is contrary to standard views of fuzzy-trace theory, which indicates that as education increases verbatim level normally decreases.

With these data showing interesting results that are contrary to normal beliefs of education (and gist versus verbatim), a second repeated measures ANOVA was completed and shown in Tables 5-8. This second repeated measures (rm) ANOVA followed similar analysis procedures as the first rmANOVA, except that highest education was regrouped into Nursing/Medicine (RN, NP, PA, MD, DO, etc.) degrees versus all other levels of education. Despite a small n-value of participants with Nursing and Medicine degrees ( $n = 12$ ), significant interactions were found between scenarios; scenario and highest education level; and scenario, highest education level and highest certification level.

Similar to the rmANOVA discussed previously (Table 1), there was a significant difference between mean values of participants who selected the verbatim answer in the control and conflict scenario, with means equaling 0.790 (standard error = 0.032) and 0.399 (standard error = 0.49), respectively. A full set of estimate values can be found in Table 6. These

differences show that there was a significant drop in the number of participants who selected the verbatim response in the conflict scenarios. Just as in the first rmANOVA, this shows that when participants were put in a position where the verbatim answer choice may not be the best possible treatment for the patient, many participants moved away from the rote interpretation of the protocol.

Table 7 shows the second significant interaction which was between scenario and highest education level. In this analysis, highest education level was broken into two groups as discussed above. One group was composed of participants with a medical education outside of EMS including Nursing or Physician degrees and the second group was composed of all other participants without a medical education outside of EMS. In the table, it can be seen that for both education groups use of the verbatim answer decreases as one moves from the control to the conflict scenarios. Those with medical degrees had a significantly lower mean (0.722, standard error = 0.062) for selecting the verbatim (correct answer) in the control scenario when compared with participants with no medical education (0.859, standard error = 0.015). This finding is extremely interesting and contradictory to the idea that those with a more extensive medical education would know the treatment protocols better than those with less extensive medical educations. A possible explanation for these results could lie in the quantity of EMS that each participant does each year, however these values were not collected in this study.

Last, there was a significant interaction between scenario, highest certification and highest education level, which is shown in table 8. In this interaction, all BLS providers and ALS providers with no medical education showed relatively consistent means for selecting the verbatim (correct answer) in the control scenarios. However, ALS providers with a Nursing/Physician degree showed dramatically lower means of selecting the correct answer in

control scenarios with a mean of 0.583, standard error = 0.106. Also, all BLS providers and ALS providers with no medical education showed significant decreases in selecting the verbatim answer in the conflict scenarios when compared to control scenarios. This finding, which is consistent with the first rmANOVA and general fuzzy-trace theory, is not found in the ALS provider with a Nursing/Physician degree. Instead, this group showed no significant difference in the mean of those who selected the verbatim response in the control and the conflict scenarios. These significant differences reflect the idea that ALS providers with additional Nursing/Physician degrees know the protocols less than all BLS providers, and ALS providers with no additional medical education. These results also contradict general fuzzy-trace theory which would indicate that having additional education with higher levels of certification would lead to greater knowledge of protocols and less use of verbatim responses in conflict scenario. One possible explanation for this is the small number of pre-hospital providers with additional medical education, who are not reflective of the general population of providers with similar certification and education levels.

After analyzing the repeated measures ANOVAs, the mean number of participants who selected the correct answer for each of the control scenarios along with the gist and verbatim answer for the conflict scenarios was examined. The specific means for each treatment question can be found in Table C.7. There was no statistical significance between grouped certifications for the six knowledge treatment questions. In Scenario 5- patient 2, ALS providers chose the first verbatim answer less than BLS providers with means of 0.18 and 0.28, respectively. ALS providers chose the gist answer more than BLS providers. However, the difference in means was not significant. There was a significant difference between BLS and ALS providers for the gist answer of Scenario 6 with the means being 0.61 and 0.85, respectively ( $F = 13.206$ ,  $p =$

0.00). The verbatim answer for Scenario 6 also showed significant difference between BLS and ALS with means being 0.37 and 0.14, respectively ( $F = 13.491$ ,  $p = 0.00$ ). Scenario 7 showed ALS providers using gist more than BLS providers and verbatim less than BLS providers in trend, however the data was not significantly different. All of these trends, both the significant and insignificant ones, provide evidence of increased gist and decreased verbatim in higher certified providers, who are viewed as having more expertise.

### *Decision Questions*

Following each of the treatment questions in the nine scenarios, participants were asked to determine how they decided that the treatment chosen was the correct one. These nine questions (one decision question per scenario) allowed participants to meta-cognitively select the rationale for the decision they chose. As discussed in the methods, all nine decision questions had the same five possible answer choices which were composed of two verbatim answers, two gist and one other with the ability to fill in another reason. When analyzing the frequency values of the number of participants, who selected each of the five possible answer choices for each of the nine questions, there was a clear change in verbatim and gist reasoning between the control medical case scenarios and the conflict scenarios. As seen in Tables C.34-35, the frequency of the choice, “Based on specific memory for National/State/Local Protocols,” a verbatim reasoning, decreased by about 15-20% from control to conflict scenarios. For example, 73.3% of the participants selected this as the basis for their treatment for Scenario 3, however the use of this basis dropped to 52.3% for Scenario 5- Patient 2. Along with this decrease in verbatim, the gist reasoning, “Past experience with a similar patient,” was used more often in the conflict scenarios. For example, Scenario 3 had a frequency of 11.5% and Scenario 5- Patient 2

was 26.1%. Table C.36 shows the combined frequency and percent values for the sums of the two verbatim reasons and the two gist reasons. This increase in gist rationale for treatment agrees with the idea that in the six control scenarios the questions were intended to get participants to use verbatim knowledge of protocols to make decisions. In the conflict scenarios, however, participants had treatment options that elicited them to make more of a subjective decision between a verbatim treatment that reflected the protocols and a gist treatment that reflected a desirable deviation from the protocols, potentially leading to positive patient outcomes.

One additional result of importance is the increase in frequency that participants selected “Other” as their rationale for the treatment answer in Scenario 7. This increase in “other” corresponds with Scenario 7 having a significantly lower value of verbatim meta-cognition in comparison to the other two conflict scenarios. The major rationale that was manually entered in the “other” response that was used to decide on treatment was related to the accuracy of the pulse oximetry probe which gave a low value. Although many reasons listed reflect either gist or verbatim rationale, they were kept in the other category due to uncertainty of the participant’s exact reasoning.

### *Confidence Intervals*

Last, participants were asked to select their confidence, on a scale from 0%-100%, that the treatment selected was the correct one for the specific scenario. Table C.38 lists descriptive statistics for the confidence for each of the nine scenarios. The table shows that there is no major trend or difference between control and conflict scenarios as there was in the decision basis questions.

Confidence levels were then analyzed to determine if highest level of certification plays a factor in the level of confidence. The mean values of the confidence ratings for the six control case scenarios in terms of the highest certification level showed a significant difference between EMT-Basics and Paramedics for five of six scenarios. In those scenarios, EMT-Bs showed lower levels of confidence in comparison to Paramedics. For example, in Scenario 2 EMT-Basics mean confidence rating was 89.40, while the mean for Paramedics was 97.47. This difference in confidence in knowledge scenarios shows agreement with more specialized or certified individuals having higher confidence in the decisions that they make. The same trend was found in the three conflict scenarios with statistically significant differences showing EMT-B confidence being lower than that of Paramedics. Full means values are listed in Table C.39.

Along with comparing confidence ratings to highest certification, similar means analyses were completed between experience level and confidence. Table C.41 shows the means values of confidence for each level of experience at current certification (scale-based). Throughout all nine scenarios, the values show a general trend of increasing confidence as experience increases up the scale. There are a few caveats where confidence levels are out of place for one of the seven levels of experience but these values were not significant. Similar trending values were found in means values of confidence for each level of experience at any certification (scale-based). The values, found in Table C.43 also show general trending of increased confidence as experience level increases up the scale.

In general, the results found from analyses including confidence values shows that confidence increases both as experience increases on a subjective scale at a participant's current certification or at any certification. It also shows that confidence was significantly higher for ALS providers in comparison to BLS providers.

## **Gist and Verbatim Condition Questions**

### *Individual Statement Responses*

Following the medical case scenarios, participants were asked to indicate their agreement to six different statements in the context of six different scenarios. These six scenarios were: Major Trauma, Minor Trauma, Cardiac, Respiratory, Allergic Reaction and Unresponsive. A participant's agreement was ranked on a five point likert scale. This aspect of the survey was included to gather information on how participants believe they actually treat patients in the field. As previously discussed, each of the six conditions contained the same six questions with four being gist and two being verbatim. Of the six questions, three are based on what the provider actually uses or refers to when treating a patient and the second three are based on what the provider believes leads to positive patient outcomes. Each set of three questions has one verbatim and two gist questions and one question in each of the two sets of three mirror each other. Table D.1-D.6 shows the frequency and percent data for the six different conditions and the six questions. The frequency data shows consistent patterns for all six conditions. First, the verbatim question, "I use written protocols by referencing protocol books while providing care," showed high frequencies of being used "Never". For all six conditions between 35-50% of participants stated that they never followed this statement. As the frequency of use of the statement increased up the Likert Scale, fewer providers agreed with the statement. The opposite results were indicated for the four gist-based questions, showing minimal participants (less than 5%) stating that they never followed a statement, such as, "I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone." The frequency of agreement with the statement generally increased up the Likert Scale with the highest percent of participants stating that they "often"

followed the gist statement. Last, the second verbatim statement, “Referring to written protocol books while on scene with a patient, results in positive patient outcomes,” showed results that differed in pattern from the first verbatim statement. For this statement, the highest number of participants selected that they followed the verbatim statement “sometimes”. There was also a far fewer number of participants who selected that they never followed this statement in comparison to the first verbatim statement. This data alludes to the idea that participants find using protocol books to be positive factors when treating patients. Although it appears that they believe this idea works in theory, it isn’t used in practice (symbolized by the first verbatim statement). This difference in theory and practice could be due to a large number of factors including the high stress and short patient times that exist in EMS. After considering the general trends of each of the six questions, it is important to note that there were no major differences in frequency of each statement and agreement level of each participant across each of the six conditions.

Finally, participants had to answer eight similar gist and verbatim questions regarding their treatment and care in general. The eight questions included similar statements to the six conditions but there were five gist and three verbatim questions. The frequencies for the eight questions are found in Table D.7. Similar to the six conditions, a large number (37.2%) of participants stated that they never followed verbatim statements like, “I carry a protocol book on my person when providing treatment to a patient.” Participants also showed similar results with the five gist questions in comparison to the six conditions in that between 45-60% of participants selected that they “often” followed each of the gist statements. These results again show that participants understand that they use more gist-based processing to treat patients in real life rather than verbatim ones.



Although the questions for the six conditions and the general statements had theoretical bases for whether they were gist or verbatim, Tables D.8-D.14 include correlations of each of the questions of the different groupings with one another. These correlations help demonstrate if any of the questions show similar results to the other questions. In the six conditions, a Pearson Correlation showed that the four gist questions showed strong positive correlations with one another and the two verbatim questions also showed strong positive correlations with one another. R-values for the correlations between the gist questions or the verbatim questions was in the range of 0.50 to 0.70, with minimal p values. There were a few cases of the verbatim statement, “Referring to written protocol books while on scene with a patient, results in positive patient outcomes,” showing positive correlations to gist statements. However, the r-values in these cases were generally around 0.15. Similar results were found in the set of eight general questions. The five gist based statements showed positively correlated results with one another and the three verbatim statements positively correlated with one another as well. As was the case with the six conditions, there were two correlations between the same verbatim statement and two different gist statements that showed significant but weaker results. These statements were based around what participants viewed as activities by the provider that lead to positive patient outcome, so despite being gist and verbatim, the three statements have some similarity in structure to one another possibly leading to the positive correlation.

### *Gist and Verbatim Scales*

With positive correlations between gist and verbatim questions, a few scales were created and then analyzed. Table D.15 shows a factor analysis of the 36 condition gist and verbatim statements and five different factors loaded. The five factors appear to be based around the

specific question in each of the six conditions with the two gist statements, “Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients,” and, “Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients,” loading into one factor. The other four statements generally loaded into four different factors, one per question. These results show similarities between the same question in each of the different conditions. Upon completion of the factor analysis, the scales were created based on gist and verbatim statements. A gist total and a verbatim total were calculated by summing the values of all the gist questions or of all the verbatim questions for each of the six conditions. The gist sums had ranges of 4.00 to 20.00 since there were five possible choices on a Likert scale that was interpreted numerically to range from 1.00 to 5.00 per question. Following similar calculations, the verbatim sums per condition ranged from 2.00 to 10.00. Then each of the six gist totals were summed to create an overall gist scale and the six verbatim totals were summed to create an overall verbatim scale. The overall gist scale ranged from 24.00 to 120.00, while the overall verbatim scale ranged from 12.00 to 60.00. Last, the overall verbatim scale was subtracted from the overall gist scale to yield a Relative Gist Index (RGI), which reflects how a participant relatively uses gist to make decisions. The RGI ranged from -36.00 to 108.00. An additional six scales were created similar to the RGI but on a condition basis. These scales were calculated by subtracting the specific condition verbatim scale from the same condition’s gist scale. These six condition total scales ranged from -6.00 to 18.00. The means and standard deviation for the RGI and the six gist sums and six verbatim sums can be seen in Table D.16. The results show that the six gist scale means were relatively similar to one another at around

14.00. The six verbatim scale means were also relatively similar to one another at around 5.00. The mean RGI for all participants was 56.16.

The correlations of verbatim scales with highest certification, experience at any certification and current certification (in years) showed that the verbatim scales negatively correlated with experience and certification, though not all correlations were significant. The verbatim scales for both major trauma and minor trauma showed significant negative correlations with experience at both current and any certification level (in years). The major trauma verbatim scale was correlated to experience at any certification with an  $r = -0.16$  ( $p = 0.022$ ) and with experience at current certification with an  $r = -0.16$  ( $p = 0.018$ ). The minor trauma verbatim scale showed similar correlation with  $r = -0.16$  ( $p = 0.021$ ) and  $-0.18$  ( $p = 0.009$ ) for values with experience at any certification and current certification, respectively. The full set of correlation values are found in Table D.23. This table also shows that experience (in years) and highest certification level showed strong positive correlation with one another.

The correlations of gist scales with highest certification and experience at any certification and current certification (in years) showed less consistent results. All gist scales were positively correlated with experience at current certification (in years) however, no results were statistically significant. The gist scales showed mixed results when correlated with experience at any certification level. Results showed half of the scales with positive  $r$ -values and the other half with negative  $r$ -values; however, none of the values was significant. Last, the minor trauma and allergic reaction gist scales showed significant negative correlations with highest certification level with  $r$ -values of  $-0.14$  ( $p = 0.043$ ) and  $-0.14$  ( $p = 0.038$ ), respectively. These values contradict the hypothesis that gist processing increasing with certification.

### *Relative Gist Index (RGI)*

Relative Gist Index (RGI) had a wide range with a skewed distribution to the left (tail end) as seen in the histogram found in Figure G.39. Correlations were then completed with each of the gist, verbatim and overall condition scales found in Table D.25. The results showed significant positive correlations between RGI and both gist and overall condition scales. They also showed significant negative correlations with the six verbatim scales. These results agree with the method in which RGI was calculated since the verbatim scales were subtracted from the gist scales. The same table shows correlation values for RGI and EMS and general demographic information. These results showed that the RGI was significantly correlated with highest level of education with an  $r$ -value = 0.18,  $p$  = 0.013. RGI was not related to any of the other descriptive variables. Of note, RGI was similar between male and female participants. Also, RGI was similar among participants who practice in urban, suburban or rural settings. The RGI appears to decrease with EMS certification level. However, this was not statistically significant. Conversely, RGI appeared to increase with increasing experience at current certification, but similarly, this did not reach statistical significance.

### **Responder Memory Based Questions**

In the third part of the survey, participants were asked to answer memory questions in regards to the seven medical scenarios. These memory questions listed five signs and symptoms and asked participants to recall which signs and symptoms were specifically presented in the scenario shown earlier and which weren't. Tables E.1-E.7 list the general number of times that each sign or symptom was selected as a true answer choice. In addition to simple frequencies, a scenario correct score was calculated for each of the seven scenarios. This score was calculated

by adding up the number of actually presented signs or symptoms that each participant selected. In Scenarios 1, 2, 3, 4, 6, and 7, there were two actually presented signs or symptoms and there were three for Scenario 5. Table E.8 represents the percent of participants with each correct score for each scenario.

A total scenario score was also calculated by giving each possible answer a value of one if chosen and zero if not chosen. The incorrect answers were summed and then subtracted from the sum of the correct answers. For Scenarios 1, 2, 3, 4, 6 and 7 the scenario scores had a possible range of -3 to 2, while Scenario 5 had a possible range of -2 to 3. In general, each scenario showed good results of memory recall, however there were clear false memories and also signs/symptoms that were forgotten during the survey and not recalled during the memory question. In scenario 1, only 25.2% of the participants were able to correctly remember the two right answers and determine that the other three were false answers. Of note, 50.2% of the participants had a scenario score = 1 meaning they were able to properly differentiate four of the five answers. Scenario 5 and 6 showed similar results of a large number of participants getting one of the five choices wrong. However, scenarios 2, 3, and 7 showed that a majority of participants correctly got all five answers choices right. Full scenario score data is found in Tables E.9-E.10.

Each scenario's total memory score was also placed in a correlation analysis with confidence, other memory scores, and EMS and personal demographic information. The correlation data for memory scores and confidence are found in Table E.11. The only significant results from the correlation were between Scenario 5 Memory score and Scenario 5- patient 2 confidence value which had an r-value = -0.14, p=0.046. All other values were not statistically significant and had a wide array of both positive and negative values. Table E.12 shows a

correlation of memory scores against one another. The results show a large number of significant positive correlations between each scenario's score, showing general trends that participants were consistent in their scores from scenario to scenario. Table E.13 shows the correlation of memory scores with general EMS and personal demographic information. Scenario 5 showed a negative correlation ( $r = -0.17$ ,  $p = 0.015$ ) with highest certification level. Although no other scenario scores showed significant results, scenario 5 showed that memory of signs and symptoms decreased as certification increases. Similar results were found with the correlations with experience at current and any certification (in years). However, both sets of experience (in years) showed stronger negative correlations and scenarios 2, 4 and 7 all showed significant results. Memory also appears to be negatively correlated with highest level of education found in scenario 2 and 5. These results indicate that as experience and knowledge increase memory for specific details (signs and symptoms) decrease.

### **Cognitive Reflection Test (CRT)**

The final aspect of the survey was based on Frederick's (2005) Cognitive Reflection Test. The test, as previously mentioned, has three basic word-based math questions, which all have an intuitive answer and a different but correct answer. Table E.1 shows the frequency and percent values for each of the three questions for participants who inputted the correct answer, the intuitive but wrong answer, or another wrong answer. Question 1 showed high levels of participants selecting the intuitive but wrong answer (56.0%). Questions 2 and 3 showed values of 38.1% and 26.6%, respectively, of participants selecting the intuitive answer. The following number of participants selected the correct answer for each of the three questions with values being 38.5%, 44.5% and 56.0%, in order.

The scores for each of the three CRT questions were then converted into a binary value with correct answers being equal to one and incorrect, whether intuitive or not, were valued with zero. The binary value for each of the three questions was summed to create a total CRT Score. The total CRT Score and the individual binary scores were correlated with one another, RGI, and EMS and personal demographics. The individual and total CRT score showed strong positive correlations with each other as seen in Table F.2.

In terms of EMS demographics, there were several significant correlations. Type of area serviced showed negative correlations with CRT Question 3. This means that CRT 3 was negatively correlated as service area became more rural. Thus, higher scores on CRT 3 were found in those in who provide care in urban environments. CRT 1 was found to negatively correlate with being a paid provider but positively correlated with being a volunteer provider with r-values = -0.16 ( $p = 0.020$ ) and 0.20 ( $p = 0.003$ ), respectively. Experience was also negatively correlated with CRT values. All four methods of measuring experience showed significant negative correlations to one or more of the CRT questions. This same result is found with the correlation of CRT Question 1 with highest certification level with an r-value= -0.20,  $p=0.003$ . Similarly, CRT Question 1 was also negatively correlated with age.

## **Discussion**

In any medical environment, every decision made by a healthcare provider has a major impact on the person they are treating, whether it is to admit a patient to the hospital, to suggest a patient undergoes major surgery or even treating a small traumatic injury outside of the hospital setting. For every medical scenario, the provider's reasoning and decision making has a clear impact on the treatment they provide, which can change a patient's final outcome. This indicates

how important understanding decision making of healthcare providers is. Reyna and Lloyd (2006) have already examined the reasoning and decision making of emergency room physicians and found dramatic results when analyzing physicians' triage decision in the context of fuzzy-trace theory. It was found that the two representations of fuzzy-trace theory, gist and verbatim, are major factors depending on specific characteristics of the individual healthcare provider. These interesting results in the ER setting have led to further studies in which fuzzy-trace theory was used to examine other medical environments. It is for this reason as well as the lack of prior research in the Emergency Medical Services field that the current study was conducted with pre-hospital healthcare providers.

After 217 pre-hospital providers completed the medical decision making and memory survey found in Appendix A, three specific goals were used to outline basic analyses. First, it was aimed at determining the relative amount of gist and verbatim-based processing used by providers in different decision-making situations. The second aim was to determine what specific provider attributes, both in their personal life as well as in relation to their status as a pre-hospital provider, affect their use of gist and verbatim. Last, we aimed to determine if EMS providers show problems in recollection and recall of patient signs and symptoms and what potential personal or EMS attributes affect that memory.

The first set of analyses focused on gist and verbatim use. It must be stated initially that providers showed high knowledge of the protocols in knowledge (control) based scenarios, which provided an interesting contrast to when they were faced with conflict scenarios. When faced with conflict scenarios, a high number of participants across all demographics selected gist based answers. This high number of participants using gist (and a low number using verbatim) leads to the interesting idea that despite the highly protocolized nature of EMS, providers are in



fact relying on fuzzy representations of the protocols (and of previous patients) to treat current/future patients. This idea was confirmed across the survey as participants reported that they followed gist based statements more frequently than verbatim statements. The only contradiction to this was found with the self perception, decision rationale questions for each of the nine medical case scenarios. In the knowledge (control) scenarios, participants indicated in high numbers that they used specific memory of protocols to make the treatment decision. This variance from the rest of the survey results could be a factor of participants own beliefs of their expectations. In general, EMS providers are taught to follow protocols and despite the anonymity of the survey, this may have affected the results of these decision questions.

With the general understanding that participants used gist representations more than verbatim ones, certification level and education level along with other provider demographics were directly compared to relative use of verbatim in treatment questions, decision rationale questions, and memory questions. Results showed that certification (when grouped by certification level) showed decreased verbatim levels in ALS providers over BLS ones. This decrease in the level of verbatim processing was only apparent in conflict scenarios for which providers were forced to make the decision between a verbatim representation of the protocol and a gist response which represented a desirable deviation from the protocol. This response pattern corresponds to a higher use of gist processing in ALS providers.

Additionally, comparisons of scenarios and highest education level showed that those with the highest education level, graduate and physician degrees, had increased verbatim uses in the conflict scenario when compared with those of lower education levels. It should be noted that the majority of participants in this high education group held non-clinical advanced degrees such as PhD and Masters Degrees. This change was only apparent in the conflict scenario and

not the control scenario. This represents that all participants had strong verbatim knowledge in control settings but when given a choice between a verbatim, gist or distracter responses, the number of verbatim answer choices selected increased. These findings are contrary to previous research and hypotheses based in fuzzy-trace theory, since participants with more education outside of EMS used more verbatim processing in treatment scenarios.

Despite increased use of gist by higher certified participants, the memory test showed that memory of signs or symptoms of a patient decreased as experience, certification and education level increased. Despite these results, no major deficit in treating individuals was found in the medical case scenarios by the more experienced providers and although it does not necessarily impact actual treatment, more experienced and certified providers showed higher levels of confidence in their treatment decisions. A possible explanation for this finding lies in the idea that with increased gist processing fewer specific details are used in making treatment decisions. Although gist processing is beneficial in EMS due to the rapidly changing environment, providers must still be able to recall and recognize specific signs and/or symptoms so that they can relay the information onto providers in the hospital.

The findings from this survey indicate there are differences in use of gist and verbatim processing depending on specific provider characteristics and in general. However, some scenarios showed no significant or conflicting results. These findings could be alleviated by completing a second study in the field which has a specific survey for ALS providers and a separate one for BLS providers. One of the reasons for this is that ALS and BLS providers have different protocols. This finding arose with Scenario 6 when it was determined that the gist answer could actually be a verbatim treatment depending on the ALS protocols of each specific area. This possibility of one treatment answer being gist for BLS providers and verbatim for

ALS providers has the potential to confound data and for this reason having different surveys may alleviate these issues. Also, ALS providers have a larger number of protocols and medications that they are able to use and administer and with this expansion of possible treatment, there is the potential for larger differences in individual opinion and interpretation of a protocol.

Despite these possible concerns that could be alleviated with a second study, important results were found that help show that experience doesn't necessarily change how a provider makes a decision in EMS. With these results, there are important implications for the future of pre-hospital care, however this study is only a preliminary set of findings and further data must be collected and analyzed to continue to help make positive changes in EMS to ensure the best possible treatment and outcome of all patients in the field.

Table 1

*Repeated Measures ANOVA of Treatment Answer (Verbatim Response) Average of Control and Conflict Scenarios with Highest Certification (BLS or ALS), Highest Education (High School/Associates, Bachelors/Nursing, Graduate/Physician) and Gender*

| Source   | Type III Sum of Squares | df  | Mean Square | F       | Sig. |
|--|-------------------------|-----|-------------|---------|------|
| Scenario   | 13.141                  | 1   | 13.141      | 289.541 | .000 |
| Scenario * Highest Certification (BLS/ALS)                                   | .321                    | 1   | .321        | 7.078   | .008 |
| Scenario * Gender  | .012                    | 1   | .012        | .256    | .614 |
| Scenario * Highest Education Level   | .317                    | 2   | .158        | 3.491   | .032 |
| Scenario * Highest Certification (BLS/ALS)* Gender                           | .017                    | 1   | .017        | .384    | .536 |
| Scenario * Highest Certification (BLS/ALS)* Highest Education Level          | .012                    | 2   | .006        | .136    | .873 |
| Scenario * Gender * Highest Education Level                                  | .023                    | 2   | .012        | .257    | .774 |
| Scenario * Highest Certification (BLS/ALS)* Gender * Highest Education Level | .027                    | 2   | .014        | .303    | .739 |
| Error(Scenario)  | 8.850                   | 195 | .045        |         |      |

Table 2

*Estimated Marginal Means Values from the Repeated Measures ANOVA (Table 1) of Scenario*

### Estimates

| Scenario | Mean | Std. Error | 95% Confidence Interval |             |
|----------|------|------------|-------------------------|-------------|
|          |      |            | Lower Bound             | Upper Bound |
| 1        | .859 | .016       | .828                    | .891        |
| 2        | .383 | .025       | .334                    | .432        |

### Pairwise Comparisons

| (I) Scenario | (J) Scenario | Mean Difference (I-J) | Std. Error | Sig. <sup>a</sup> | 95% Confidence Interval for Difference <sup>a</sup> |             |
|--------------|--------------|-----------------------|------------|-------------------|---|-------------|
|              |              |                       |            |                   | Lower Bound   | Upper Bound |
| 1            | 2            | .476*                 | .028       | .000              | .421  | .532        |
| 2            | 1            | -.476*                | .028       | .000              | -.532   | -.421       |

Based on estimated marginal means

\*. The mean difference is significant at the .05 level.

a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Table 3

*Estimated Marginal Means Values from the Repeated Measures ANOVA (Table 1) of the*

*Interaction of Scenario and Highest Certification Level (BLS or ALS)*

| Highest Certification<br>(BLS or ALS)             | Scenario | Mean | Std. Error | 95% Confidence Interval |             |
|---|----------|------|------------|-------------------------|-------------|
|   |          |      |            | Lower Bound             | Upper Bound |
| Basic Life Support (EMT-B, EMT-I)                 | 1        | .848 | .017       | .813                    | .882        |
|   | 2        | .446 | .027       | .392                    | .499        |
| Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 1        | .871 | .027       | .818                    | .923        |
|   | 2        | .320 | .042       | .238                    | .402        |

Table 4

*Estimated Marginal Means Values from the Repeated Measures ANOVA (Table 1) of the Interaction of Scenario and Highest Education Level (High School/Associates, Bachelors/Nursing, Graduate/Physician)*

| Highest Education Level (Group)                 | Scenario | Mean | Std. Error | 95% Confidence Interval |             |
|---|----------|------|------------|-------------------------|-------------|
|   |          |      |            | Lower Bound             | Upper Bound |
| High School or Associate's Degree               | 1        | .881 | .027       | .828                    | .933        |
|   | 2        | .331 | .041       | .249                    | .413        |
| Bachelor's or Nursing Degree (RN, NP, PA, etc.) | 1        | .854 | .021       | .813                    | .894        |
|   | 2        | .334 | .032       | .270                    | .397        |
| Graduate or Physician Degree (MD, DO, etc.)     | 1        | .843 | .034       | .776                    | .910        |
|   | 2        | .484 | .053       | .379                    | .588        |

Table 5

*Repeated Measures ANOVA of Treatment Answer (Verbatim Response) Average of Control and Conflict Scenarios with Highest Certification (BLS or ALS), Highest Education (Medical: Nursing or Physician versus All Others) and Gender*

| Source  | Type III Sum of Squares | df  | Mean Square | F      | Sig. |
|---|-------------------------|-----|-------------|--------|------|
| Scenario  | 2.282                   | 1   | 2.282       | 50.500 | .000 |
| Scenario * Highest Certification (BLS/ALS)  | .043                    | 1   | .043        | .942   | .333 |
| Scenario * Gender   | .000                    | 1   | .000        | .002   | .968 |
| Scenario * Highest Education Level (MD/RN)  | .213                    | 1   | .213        | 4.706  | .031 |
| Scenario * Highest Certification (BLS/ALS) * Gender                                   | .018                    | 1   | .018        | .402   | .527 |
| Scenario * Highest Certification (BLS/ALS) * Highest Education Level (MD/RN)          | .272                    | 1   | .272        | 6.027  | .015 |
| Scenario * Gender * Highest Education Level (MD/RN)                                   | .000                    | 1   | .000        | .004   | .951 |
| Scenario * Highest Certification (BLS/ALS) * Gender * Highest Education Level (MD/RN) | .043                    | 1   | .043        | .957   | .329 |
| Error(Scenario)   | 9.039                   | 200 | .045        |        |      |



Table 6

*Estimated Marginal Means Values from the Repeated Measures ANOVA (Table 5) of Scenario*

### Estimates

| Scenario | Mean | Std. Error | 95% Confidence Interval |             |
|----------|------|------------|-------------------------|-------------|
|          |      |            | Lower Bound             | Upper Bound |
| 1        | .790 | .032       | .728                    | .853        |
| 2        | .399 | .049       | .301                    | .496        |

### Pairwise Comparisons

| (I) Scenario | (J) Scenario | Mean Difference (I-J) | Std. Error | Sig. <sup>a</sup> | 95% Confidence Interval for Difference <sup>a</sup> |             |
|--------------|--------------|-----------------------|------------|-------------------|---|-------------|
|              |              |                       |            |                   | Lower Bound   | Upper Bound |
| 1            | 2            | .392*                 | .055       | .000              | .283  | .501        |
| 2            | 1            | -.392*                | .055       | .000              | -.501   | -.283       |

Based on estimated marginal means

\*. The mean difference is significant at the .05 level.

a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Table 7

*Estimated Marginal Means Values from the Repeated Measures ANOVA (Table 5) of the Interaction of Scenario and Highest Education Level (Medical: Nursing or Physician versus All Others)*

| Highest Education Level                      | Scenario | Mean | Std. Error | 95% Confidence Interval |             |
|--|----------|------|------------|-------------------------|-------------|
|  |          |      |            | Lower Bound             | Upper Bound |
| Not Medical Education                        | 1        | .859 | .015       | .829                    | .888        |
|  | 2        | .347 | .023       | .301                    | .393        |
| Medical Education (MD, DO, RN, NP, PA, etc.) | 1        | .722 | .062       | .600                    | .844        |
|  | 2        | .450 | .096       | .261                    | .639        |

Table 8

*Estimated Marginal Means Values from the Repeated Measures ANOVA (Table 5) of the Interaction of Scenario and Highest Education Level (Medical: Nursing or Physician versus All Others) and Highest Certification Level (BLS or ALS)*

| Highest Certification (BLS or ALS)                | Highest Education Level                      | Scenario | Mean | Std. Error | 95% Confidence Interval |             |
|---|--|----------|------|------------|-------------------------|-------------|
|   |  |          |      |            | Lower Bound             | Upper Bound |
| Basic Life Support (EMT-B, EMT-I)                 | Not Medical Education                        | 1        | .849 | .016       | .818                    | .881        |
|   |  | 2        | .419 | .025       | .371                    | .468        |
|   | Medical Education (MD, DO, RN, NP, PA, etc.) | 1        | .861 | .063       | .736                    | .986        |
|   |  | 2        | .400 | .098       | .206                    | .594        |
| Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | Not Medical Education                        | 1        | .868 | .025       | .818                    | .918        |
|   |  | 2        | .275 | .039       | .197                    | .352        |
|   | Medical Education (MD, DO, RN, NP, PA, etc.) | 1        | .583 | .106       | .374                    | .793        |
|   |  | 2        | .500 | .165       | .175                    | .825        |

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# **Appendix A**

## **Pre-Hospital Care Survey**



## **Consent**

You are invited to participate in a research study of medical decision making and memory. You were selected as a possible participant because you are 18 years of age or older and can understand and respond to a questionnaire written in English. Please read this form carefully and ask any questions you may have before agreeing to take part in the study.

**What the study is about:** The purpose of this study is to understand how people make medical decisions regarding pre-hospital treatment in the Emergency Medical Service system and how their memory impacts care.

**What we will ask you to do:** If you agree to be in this study, we will ask you to do the following: Respond to a written questionnaire about how you would treat various patients (as well as provide background information). The questionnaire usually takes about 30 minutes to complete (although some people may take longer).

**Risks and Benefits:** We do not anticipate any risks for you participating in this study other than those encountered in day-to-day life.

There are no direct benefits to participating other than the possibility that some people may gain greater insight into their own thinking and decision making. Indirect benefits to participation include contribution to scientific knowledge, which the investigator hopes will ultimately improve risk communication and healthy decision making.

**Compensation:** You may earn extra credit if you are taking a class that offers credit for research studies. The class instructor will assign credit according to class policy.

**Taking part is voluntary:** Taking part in this study is completely voluntary. You may skip any questions that you do not want to answer. If you decide not to take part or to skip some of the questions, it will not affect your current or future relationship with Cornell University. If you decide to take part, you are free to withdraw at anytime. You are free to stop at any time for any reason.

**Your answers will be confidential:** The records of this study will be kept private. In any sort of report we make public, we will not include any information that will make it reasonably possible to identify you. Research records will be kept in a locked file or office, and on computers used for data storage and analysis; only the researchers or other authorized individuals will have access to the records. Your data may also be used for educational purposes such as teaching, publications, and/or presentations and may be viewed by students, other trainees, and professional colleagues.

**If you have questions:** The researcher(s) conducting this study is Dr. Valerie Reyna. Please ask any questions you have now. If you have questions later, you may contact the investigator by telephone at (607) 254-1172; by email at [vr53@cornell.edu](mailto:vr53@cornell.edu); and by mail at Department of Human Development, MVR B44, Cornell University, Ithaca, NY 14853. If you have any questions or concerns regarding your rights as a subject in this study, you may contact the Institutional Review Board at 607-255-5138, or access their website at <http://www.irb.cornell.edu/>. You may also report your concerns or complaints anonymously through Ethicspoint ([www.hotline.cornell.edu](http://www.hotline.cornell.edu)) or by calling toll free at 1-866-293-3077. Ethicspoint is an independent organization that serves as a liaison between the University and the person bringing the complaint so that anonymity can be ensured.

**Statement of Consent:** I have read the above information, and have received answers to any questions I asked. I consent to take part in the study. Please select an option below:

- I am 18 years or older and I agree to participate in this study.
- I do not agree to participate in this study.

## Pre-Hospital Care Treatment Survey

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Survey ID

|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|

Today's Date \_\_\_\_ / \_\_\_\_ / \_\_\_\_

### **Pre-Hospital Treatment Scenarios...**

**Please use the following scenario to answer questions 1-6 (it is better to guess than to leave them blank).**

Your crew is dispatched to a 28-year-old male who fell from the second floor of his residence and has extreme pain in his right leg. Upon arrival on the scene, you find a 28-year-old male, conscious, alert and oriented to person, place and time, lying on the floor complaining of extreme pain, 10/10, in the area of his right femur. After exposing the right thigh, there is a noticeable closed deformity to the mid-shaft area of the patient's right femur. You complete a rapid trauma exam with no other findings, your patient's blood pressure is 112/72, he has a heart rate of 110, and respirations of 20. The patient denies head/neck/back pain, loss of consciousness, shortness of breath, and chest pain. The patient states he is a bit dizzy and nauseated, but states he has not vomited.

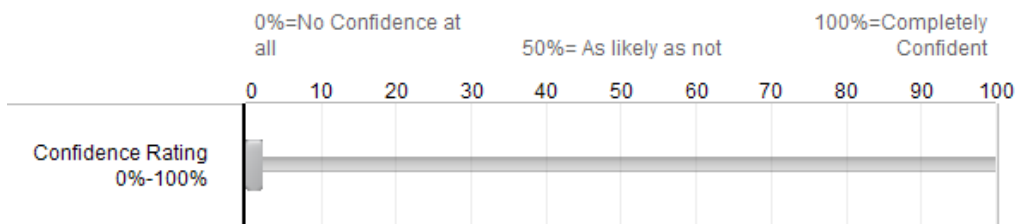
**1. After obtaining the information above, what is your next step in your treatment?**

- Apply cervical immobilization, and two long, padded board splints to the patient's right leg
- Apply cervical immobilization and a traction splint (splint which pulls traction on the patient's leg) to the patient's right leg
- Fully immobilize the patient on a long backboard with a cervical collar
- Assist the patient to the stretcher (in your ambulance or that of your transporting agency) and transfer him to the ambulance in a semi-fowler's position (sitting up slightly)

**2. How did you decide what treatment to use in question 1? Please check the BEST answer only.**

- Based on specific memory for National/State/Local Protocols
- Past experience with a similar patient
- A recent continuing medical education instruction
- You aren't sure why, but you know it was correct
- Other (Please fill in): \_\_\_\_\_

**3. How confident are you that your treatment in question 1 was the correct one? (Move the slider to the percentage that corresponds with your confidence level)**



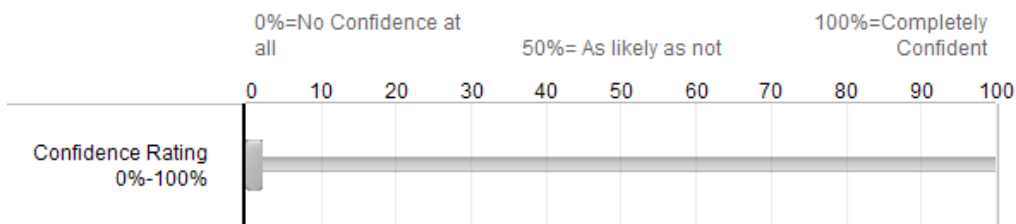
**4. After completing the treatment chosen in question 1, what is your next step of treatment for this patient?**

- Fully immobilize the patient on a long backboard with a cervical collar
- Administer 324mg of non-enteric aspirin (uncoated aspirin) to assist your patient with pain
- Apply a cold pack to the injured area
- Immediately transport the patient to the hospital

5. How did you decide what treatment to use in question 4? Please check the BEST answer only.

- Based on specific memory for National/State/Local Protocols
- Past experience with a similar patient
- A recent continuing medical education instruction
- You aren't sure why, but you know it was correct
- Other (Please fill in): \_\_\_\_\_

6. How confident are you that your treatment in question 4 was the correct one? (Move the slider to the percentage that corresponds with your confidence level)



**Please use the following scenario to answer questions 7-9 (it is better to guess than to leave them blank).**

Your crew is dispatched to a 64-year-old female who is complaining of chest pain. Upon arrival, you find a 64-year-old female patient, alert and oriented to person, place and time, complaining of crushing chest pain in the area of her left breast. The patient states that she has a history of insulin-dependent diabetes, and has an insulin pump on her waist. The patient denies any allergies. She states that she has eaten normally today, and she checked her blood sugar and confirmed that it was within normal limits. The patient states that this has never happened before and she is extremely nervous and afraid for her life. The patient is cool and diaphoretic (sweaty), with a heart rate of 122, respirations of 18, and a blood pressure of 122/58. The patient is complaining of some difficulty breathing and nausea, but denies any vomiting.

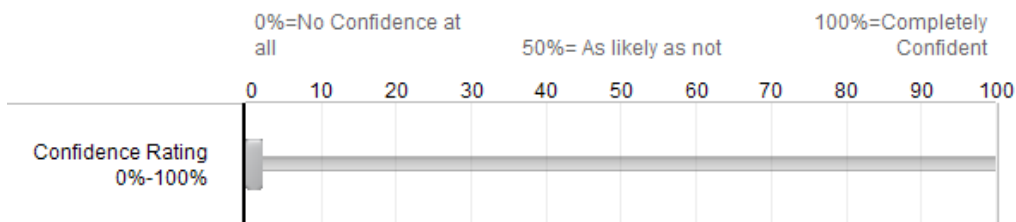
**7. After obtaining the information above, what is your next step in your treatment?**

- Have the patient lie on the ground and treat for shock
- Place the patient on oxygen via nasal cannula at 4 LPM (Liters per Minute)
- Ensure that the patient is transported without further treatment
- If it is prescribed and/or available, administer aspirin and nitroglycerin, a medication to treat chronic chest pain, as per your local protocol

**8. How did you decide what treatment to use in question 7? Please check the BEST answer only.**

- Based on specific memory for National/State/Local Protocols
- Past experience with a similar patient
- A recent continuing medical education instruction
- You aren't sure why, but you know it was correct
- Other (Please fill in): \_\_\_\_\_

**9. How confident are you that your treatment in question 7 was the correct one? (Move the slider to the percentage that corresponds with your confidence level)**



**Please use the following scenario to answer questions 10-12 (it is better to guess than to leave them blank).**

Your crew is dispatched to a 25-year-old female who is complaining of difficulty breathing. Upon arrival, you find a 25-year-old female, alert and oriented to person, place and time, tripodding (leaning over) and gasping for breath. The patient states that she thinks she was stung by a bee and has a severe allergy to bee stings. The patient states that she has been prescribed an Epi-Pen but forgot it at home today. The patient has wheezes in the upper portion of both lungs, and upon inspection, you notice that her tongue is swollen and that she has hives and rashes on her arms and legs. The patient states that she has a lump in her throat and it's very difficult to breath; she also feels like the room is spinning. After evaluation you find that her heart rate is 108 and weak, blood pressure is 104/74, and she is breathing at 22 times per minute.

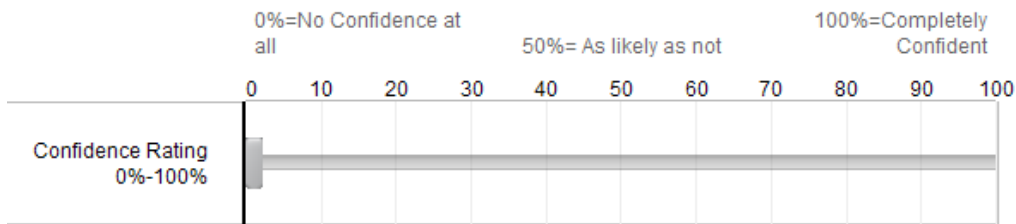
**10. After obtaining the information above, what is the most important method of treatment?**

- Have the patient lie on the ground and treat for shock
- Administer epinephrine as per local protocol
- Place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM
- Check the patient's oxygen saturation if available

**11. How did you decide what treatment to use in question 10? Please check the BEST answer only.**

- Based on specific memory for National/State/Local Protocols
- Past experience with a similar patient
- A recent continuing medical education instruction
- You aren't sure why, but you know it was correct
- Other (Please fill in): \_\_\_\_\_

**12. How confident are you that your treatment in question 10 was the correct one? (Move the slider to the percentage that corresponds with your confidence level)**



**Please use the following scenario to answer questions 13-15 (it is better to guess than to leave them blank).**

Your crew is dispatched to a 14-year-old male with burns to the hands. Upon arrival, your crew finds a 14-year-old male, conscious, alert and oriented to person, place and time, who states that he pulled a pot off the stove and burned his hands. The patient states that his hands hurt 7 out of 10 (pain scale) in some places and not at all in others. The patient denies getting burned on the face or chest and states that he luckily kept the boiling water on just his palms and fingers. The patient denies nausea, dizziness, difficulty breathing and chest pain. Upon inspection, you visualize red, puffy skin, as well as blistering, and some white and black spots on the patient's palms. After evaluation, you find that his lung sounds are clear and equal, respirations are 18 and non-labored, heart rate of 100, blood pressure of 112/74.

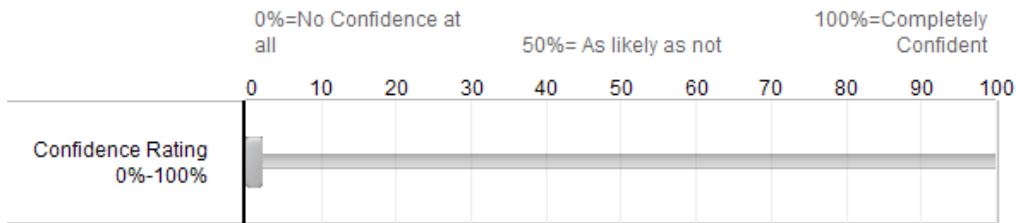
**13. After obtaining the information above, what is your next step in your treatment?**

- Wrap the patient's hands with dry, sterile dressings, placing dressings between each digit
- Ensure that the patient is transported without further treatment
- Have the patient lie on the ground and treat for shock
- Wrap the outside of the patient's hands with dry, sterile dressings and place a cold pack on each hand

**14. How did you decide what treatment to use in question 13? Please check the BEST answer only.**

- Based on specific memory for National/State/Local Protocols
- Past experience with a similar patient
- A recent continuing medical education instruction
- You aren't sure why, but you know it was correct
- Other (Please fill in): \_\_\_\_\_

**15. How confident are you that your treatment in question 13 was the correct one? (Move the slider to the percentage that corresponds with your confidence level)**



**Please use the following scenario to answer questions 16-21 (it is better to guess than to leave them blank).**

**Scene Description:**

Your crew is dispatched to a 1 car motor vehicle collision, reports of a rollover. Upon arrival, you find a four-door sedan right side up (on its wheels) with two patients inside. Law enforcement on scene states that bystanders and the driver state that the vehicle swerved off the road and rolled approximately four times. After inspecting the car, you notice deformities to the roof, and to the passenger and driver sides; there was no airbag deployment.

**Patient #1:**

Patient #1 is the male passenger of the vehicle and is in his 30s. He is unresponsive to painful or verbal stimuli lying in the back of the vehicle. You receive information stating that this patient was in the front seat but was not wearing a seatbelt. The patient has a laceration to his head that is actively bleeding and a deformity to his right forearm. The patient's pupils are equal and reactive to light. The patient's vital signs are blood pressure 180/100, heart rate is weak and thready at 72, and respirations are shallow at 6 times per minute.



**Patient #2**

Patient #2 is the driver of the vehicle and is a 34-year-old male, who is conscious, alert and oriented to person, place and time. The patient states that an animal came out in the road and he attempted to swerve to avoid it when the vehicle went off the roadway and rolled over multiple times. The patient states that he was wearing his seat belt and he is extremely worried about his friend who was not wearing a seatbelt. The patient states that he only has some pain in his neck and back. The patient rates the pain as 6/10 and states that it is a non-radiating, dull pain. As you continue to care for the patient, he becomes more visibly distraught, is breathing more rapidly and states that he is having trouble catching his breath. The patient denies hitting his head, and there is no evidence of spidering of the windshield. The patient denies chest pain or loss of consciousness. The patient denies pressure or pain where his seatbelt was and there is no bruising in the area. The patient's lung sounds are clear and equal, pupils are equal and reactive, vital signs are: blood pressure 142/98, heart rate of 92, strong and regular and respirations of 28 and rapid. The patient denies any complaints besides neck/back pain, feeling extremely emotional and having issues catching his breath.

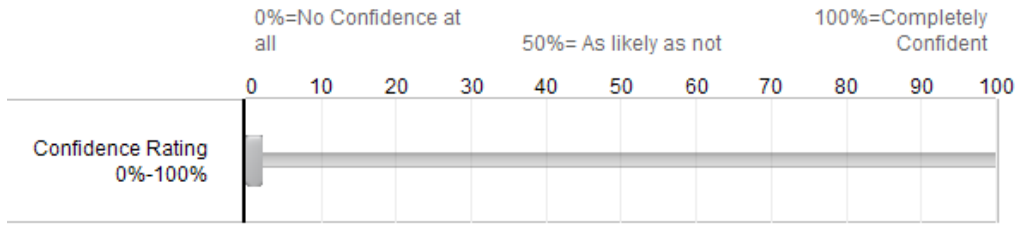
**16. After obtaining the information above about Patient #1, what is your most important method of treatment after removing the patient from the vehicle via rapid extrication?**

- Provide manual respirations via Bag-Valve Mask (BVM) at a rate of 1 respiration per 5-6 seconds.
- Place sterile dressings over the small laceration on the patient's head
- Place the patient in a Kendrick's Extrication Device (KED), a device for immobilizing the torso only
- Splint the patient's right forearm using padded board splints

**17. How did you decide what treatment to use in question 16 for patient #1? Please check the BEST answer only.**

- Based on specific memory for National/State/Local Protocols
- Past experience with a similar patient
- A recent continuing medical education instruction
- You aren't sure why, but you know it was correct
- Other (Please fill in): \_\_\_\_\_

**How confident are you that your treatment in question 16 for patient #1 was the correct one?** (Move the slider to the percentage that corresponds with your confidence level)



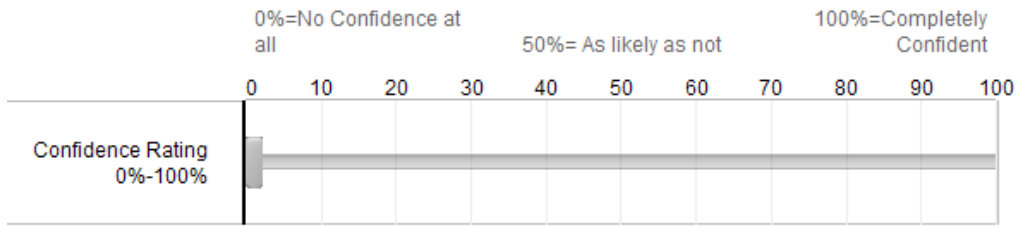
**18. After obtaining the information above about Patient #2, what is your next step in treatment?**

- Coach the patient's breathing and then place the patient in a Kendrick's Extrication Device (KED), a device for immobilizing a person's torso only, and then remove them from the vehicle on a long backboard
- Place the patient on oxygen via non-rebreather (oxygen mask) at 12 LPM
- Remove the patient from the vehicle via rapid extrication and place the patient on a long backboard
- Allow the patient to walk to the ambulance, despite the patient being amicable to any treatment you believe is medically necessary

**19. How did you decide what treatment to use in question 19 for patient #2? Please check the BEST answer only.**

- Based on specific memory for National/State/Local Protocols
- Past experience with a similar patient
- A recent continuing medical education instruction
- You aren't sure why, but you know it was correct
- Other (Please fill in): \_\_\_\_\_

**20. How confident are you that your treatment in question 19 for patient #2 was the correct one?**  
(Move the slider to the percentage that corresponds with your confidence level)



**Please use the following scenario to answer questions 22-24 (it is better to guess than to leave them blank).**

Your crew is dispatched to a 33-year-old female, unconscious. Upon arrival, you find a 33-year-old female, lying on the ground, conscious but not alert to person, place or time. Bystanders state that five minutes ago, the patient just slumped over and was lowered to the ground by another bystander. They don't believe that the patient sustained any trauma but they don't have any information on the patient's medical history, allergies or medications. After assessing the patient and doing a rapid trauma exam, you find no abnormal finding but notice that the patient has what appears to be an insulin pump on her waist. You attempt to question the patient who is talking to you and able to swallow, but she is not making sense. The patient's skin is cool and clammy, and her blood pressure is 112/74, her pulse is 118, and her respirations are 20. Your crew places the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM (Liters per minute). After a few minutes with the oxygen, there is no major change in the patient's mental status.

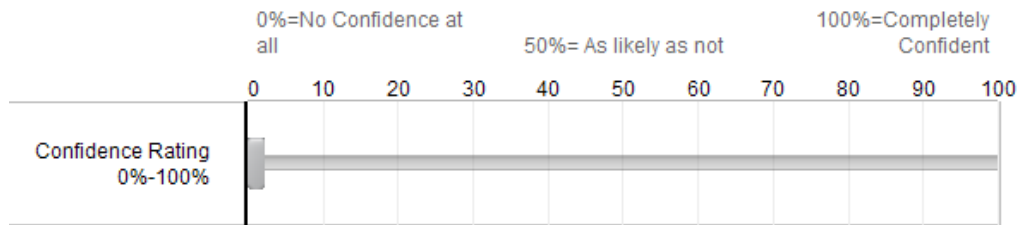
**21. After obtaining the information above, what is your next step in your treatment?**

- Assuming it is available, test the patient's BGL (Blood glucose level) with a glucometer
- Administer one tube of oral glucose
- Check the patient's oxygen saturation if available
- Have the patient lie on the ground and treat for shock

**22. How did you decide what treatment to use in question 22? Please check the BEST answer only.**

- Based on specific memory for National/State/Local Protocols
- Past experience with a similar patient
- A recent continuing medical education instruction
- You aren't sure why, but you know it was correct
- Other (Please fill in): \_\_\_\_\_

**23. How confident are you that your treatment in question 22 was the correct one? (Move the slider to the percentage that corresponds with your confidence level)**



**Please use the following scenario to answer questions 25-27 (it is better to guess than to leave them blank).**

Your crew is dispatched to a 12 -year-old female who fell off her bike. Upon arrival, you find a 12-year-old female, alert and oriented to person, place and time, sitting on the ground outside of her residence stating that she fell off her bike and hurt her arm. The patient's mother is on scene and states that she does not wish for her daughter to be transported. The patient has visible lacerations (cuts) and abrasions (scratches) to both of her arms and palms but the bleeding is controlled. The patient states that she was riding her bike when she lost control and fell off. During the fall, the patient states that she attempted to brace herself using her hands. The patient was wearing a helmet but denies hitting her head, she denies head/neck/back pain, shortness of breath or chest pain. The patient denies any abnormal activity recently and states that she feels fine besides the injuries to her hands and arms. After evaluation, you find that the patient's skin is warm and pink, her pupils are equal and reactive, respirations are 18, heart rate is 120 beats per minute, blood pressure of 108/78, oxygen saturation (SpO<sub>2</sub>) of 81%.

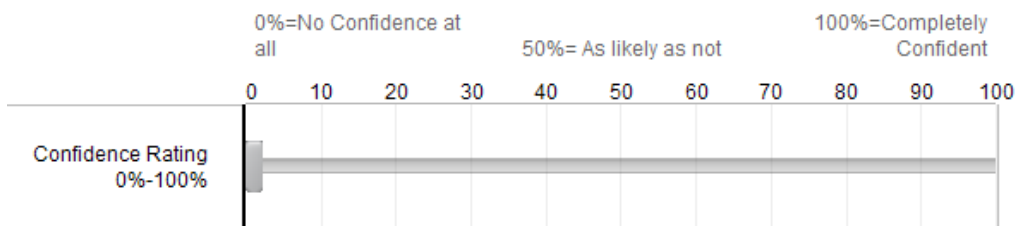
**24. After obtaining the information above, what is the most important method of treatment?**

- Have the patient lie on the ground and treat for shock
- Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM
- Clean and irrigate the patient's wounds and then bandage them after checking your SpO<sub>2</sub> probe
- Fully immobilize the patient to a long backboard

**25. How did you decide what treatment to use in question 25? Please check the BEST answer only.**

- Based on specific memory for National/State/Local Protocols
- Past experience with a similar patient
- A recent continuing medical education instruction
- You aren't sure why, but you know it was correct
- Other (Please fill in): \_\_\_\_\_

**26. How confident are you that your treatment in question 25 was the correct one? (Move the slider to the percentage that corresponds with your confidence level)**



Answer the following questions with the answer that best fits your opinion regarding patients' who suffer from MAJOR TRAUMATIC injuries. Please note that all responses are anonymous and it is better to guess than to leave any question blank. If you have no experience providing treatment to patients with this type of condition, answer with your best guess of how you would treat the patient.

|  | Never | Rarely | Sometimes | Often | Always |
|--|-------|--------|-----------|-------|--------|
| <b>27. I use written protocols by referencing protocol books while providing care.</b>   |       |        |           |       |        |
| <b>28. I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone.</b> |       |        |           |       |        |
| <b>29. I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.</b>                        |       |        |           |       |        |
| <b>30. Referring to written protocol books while on scene with a patient, results in positive patient outcomes.</b>  |       |        |           |       |        |
| <b>31. Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.</b>       |       |        |           |       |        |
| <b>32. Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.</b>          |       |        |           |       |        |

**Answer the following questions with the answer that best fits your opinion regarding patients' who suffer from MINOR TRAUMATIC injuries. Please note that all responses are anonymous and it is better to guess than to leave any question blank. If you have no experience providing treatment to patients with this type of condition, answer with your best guess of how you would treat the patient.**

|  | Never | Rarely | Sometimes | Often | Always |
|--|-------|--------|-----------|-------|--------|
| <b>33. I use written protocols by referencing protocol books while providing care.</b>   |       |        |           |       |        |
| <b>34. I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone.</b> |       |        |           |       |        |
| <b>35. I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.</b>                        |       |        |           |       |        |
| <b>36. Referring to written protocol books while on scene with a patient, results in positive patient outcomes.</b>  |       |        |           |       |        |
| <b>37. Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.</b>       |       |        |           |       |        |
| <b>38. Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.</b>          |       |        |           |       |        |

**Answer the following questions with the answer that best fits your opinion regarding patients' who suffer from CHEST PAIN or CARDIAC COMPLAINT. Please note that all responses are anonymous and it is better to guess than to leave any question blank. If you have no experience providing treatment to patients with this type of condition, answer with your best guess of how you would treat the patient.**

|  | <b>Never</b> | <b>Rarely</b> | <b>Sometimes</b> | <b>Often</b> | <b>Always</b> |
|--|--------------|---------------|------------------|--------------|---------------|
| <b>39. I use written protocols by referencing protocol books while providing care.</b>   |              |               |                  |              |               |
| <b>40. I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone.</b> |              |               |                  |              |               |
| <b>41. I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.</b>                        |              |               |                  |              |               |
| <b>42. Referring to written protocol books while on scene with a patient, results in positive patient outcomes.</b>  |              |               |                  |              |               |
| <b>43. Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.</b>       |              |               |                  |              |               |
| <b>44. Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.</b>          |              |               |                  |              |               |



Answer the following questions with the answer that best fits your opinion regarding patients' who suffer from **SHORTNESS OF BREATH/DIFFICULTY BREATHING**. Please note that all responses are anonymous and it is better to guess than to leave any question blank. If you have no experience providing treatment to patients with this type of condition, answer with your best guess of how you would treat the patient.

|   | Never | Rarely | Sometimes | Often | Always |
|---|-------|--------|-----------|-------|--------|
| 45. I use written protocols by referencing protocol books while providing care.   |       |        |           |       |        |
| 46. I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. |       |        |           |       |        |
| 47. I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.                        |       |        |           |       |        |
| 48. Referring to written protocol books while on scene with a patient, results in positive patient outcomes.  |       |        |           |       |        |
| 49. Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.       |       |        |           |       |        |
| 50. Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.          |       |        |           |       |        |

Answer the following questions with the answer that best fits your opinion regarding patients' who suffer from an ALLERGIC REACTION (ANAPHALAXIS). Please note that all responses are anonymous and it is better to guess than to leave any question blank. If you have no experience providing treatment to patients with this type of condition, answer with your best guess of how you would treat the patient.

|   | Never | Rarely | Sometimes | Often | Always |
|---|-------|--------|-----------|-------|--------|
| 51. I use written protocols by referencing protocol books while providing care.   |       |        |           |       |        |
| 52. I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. |       |        |           |       |        |
| 53. I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.                        |       |        |           |       |        |
| 54. Referring to written protocol books while on scene with a patient, results in positive patient outcomes.  |       |        |           |       |        |
| 55. Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.       |       |        |           |       |        |
| 56. Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.          |       |        |           |       |        |

**Answer the following questions with the answer that best fits your opinion regarding patients' who are UNRESPONSIVE/UNCONSCIOUS. Please note that all responses are anonymous and it is better to guess than to leave any question blank. If you have no experience providing treatment to patients with this type of condition, answer with your best guess of how you would treat the patient.**

|  | <b>Never</b> | <b>Rarely</b> | <b>Sometimes</b> | <b>Often</b> | <b>Always</b> |
|--|--------------|---------------|------------------|--------------|---------------|
| <b>57. I use written protocols by referencing protocol books while providing care.</b>   |              |               |                  |              |               |
| <b>58. I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone.</b> |              |               |                  |              |               |
| <b>59. I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.</b>                        |              |               |                  |              |               |
| <b>60. Referring to written protocol books while on scene with a patient, results in positive patient outcomes.</b>  |              |               |                  |              |               |
| <b>61. Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.</b>       |              |               |                  |              |               |
| <b>62. Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.</b>          |              |               |                  |              |               |

Please note that all responses are anonymous and it is better to guess than to leave any question blank. If you have no experience providing treatment to patients, answer with your best guess of how you would treat a patient.

In general, I believe that ...

|  | Never | Rarely | Sometimes | Often | Always |
|--|-------|--------|-----------|-------|--------|
| <b>63. I base my treatment off of my memory of local protocols</b>   |       |        |           |       |        |
| <b>64. I carry a protocol book on my person when providing treatment to a patient.</b>   |       |        |           |       |        |
| <b>65. I refer to a protocol book while on scene with a patient when providing care.</b>   |       |        |           |       |        |
| <b>66. I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone.</b> |       |        |           |       |        |
| <b>67. I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.</b>                        |       |        |           |       |        |
| <b>68. Referring to written protocol books while on scene with a patient, results in positive patient outcomes.</b>  |       |        |           |       |        |
| <b>69. Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.</b>       |       |        |           |       |        |
| <b>70. Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.</b>          |       |        |           |       |        |

## **Patient Symptoms from Treatment Scenarios...**

**Think back to the patient scenarios provided at the beginning of this survey and answer the following questions (it is better to guess than to leave them blank)...**

**71. Recall the 25-year-old female patient complaining of difficulty breathing. Select all symptoms that you recall the patient presented with:**

- Wheezes present upon obtaining lung sounds
- History of asthma
- Patient complaining of tingling and/or weakness in her fingers and hands
- Patient was tripodding (leaning over gasping for breath)
- Oxygen saturation reading of 90%

**72. Recall the 33-year-old female patient who was initially dispatched as unresponsive, but was conscious not alert upon arrival. Select all symptoms that you recall the patient presented with:**

- Past history of diabetes
- Low blood glucose (sugar) level
- Blood pressure lower than 100 systolic
- Cool and clammy skin
- Has an insulin pump on her waist

**73. Recall the 28-year-old male patient who fell from the second floor complaining of leg pain. Select all symptoms that you recall the patient presented with:**

- 10/10, extreme pain in his upper leg
- Rotation of the ankle of the injured leg
- Stable (no signs of fractures) pelvis and ankle
- Mild back pain
- Dizziness

**74. Recall the 14-year-old male patient with burns to his hands. Select all symptoms that you recall the patient presented with:**

- Consistent pain throughout his hands
- Red, puffy skin with blisters
- Difficulty breathing/shortness of breathe
- Dizziness/nausea
- Elevated heart rate (~100 beat per minute)

**75. Recall the 64-year-old female patient complaining of chest pain. Select all symptoms that you recall the patient presented with:**

- Crushing chest pain
- Pain radiating to the left arm and neck
- Past medical history of diabetes
- Has a pacemaker
- Patient took aspirin

**76. Recall the 34-year-old male patient who was driving his vehicle when rolled his car multiple times. Select all symptoms/signs that you recall the patient/scenario presented with:**

- Unreactive or sluggish pupils
- Elevated blood pressure (Systolic greater than 140)
- Neck and back pain
- Difficulty breathing
- Spidering of the windshield glass

**77. Recall the 12-year-old female patient who fell off her bike and injured her arms. Select all symptoms that you recall the patient presented with:**

- Abrasions and Lacerations to her hands
- Difficulty walking
- Difficulty breathing
- Warm and pink skin
- Abrasions and Lacerations to her knees

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### **Your Emergency Medical Services Background...**

**78. What is your highest certification level?**

- I have no EMS/medical experience/certifications
- CPR/AED for the Professional Rescuer (or equivalent)
- Certified First Responder (CFR)
- Emergency Medical Technician- Basic (EMT-B)
- Emergency Medical Technician- Intermediate (EMT-I)
- Advanced Emergency Medical Technician- Critical Care (AEMT-CC)
- Advanced Emergency Medical Technician- Paramedic (AEMT-P)
- Critical Care Paramedic (AEMT-P CC)

**79. From what state is your certification?**

- I have no certifications
- New York
- New Jersey
- Pennsylvania
- Connecticut
- Other: (Please fill in) \_\_\_\_\_

**80. How long have you been providing medical treatment in the pre-hospital setting (at any certification level)?**

- Never
- Years: (Please fill in number of years) \_\_\_\_\_

**81. How long have you been providing medical treatment in the pre-hospital setting (at any certification level)**

- None at All
- Very Low
- Low
- Medium
- High
- Very High
- The Highest Level (Expert)

**82. How long have you been providing medical treatment in the pre-hospital setting at your current certification level?**

- Never
- Years: (Please fill in number of years) \_\_\_\_\_

**83. How long have you been providing medical treatment in the pre-hospital setting at your current certification level?**

- None at All
- Very Low
- Low
- Medium
- High
- Very High
- The Highest Level (Expert)



**84. Are you employed by an EMS/Rescue or Ambulance Agency (paid position)?**

Yes

No

**85. Are you a member of a volunteer EMS/Rescue or Ambulance Agency?**

Yes

No

**86. In your opinion, what type of area does your agency service?**

Urban (City)

Suburban

Rural

Not applicable

**87. In your opinion, what time of day do you normally work or volunteer in EMS?**

Daytime Hours

Evening Hours

Night/Overnight Hours

I don't have a set schedule

I don't work or volunteer in EMS

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## About Me...

### 88. What gender are you?

- Male
- Female
- Other

### 89. Are you of Hispanic, Latino, or Spanish origin?

- No, not of Hispanic, Latino, or Spanish origin
- Yes, Mexican, Mexican American, Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, Spanish (Spain)
- Yes, Central American (Fill In): \_\_\_\_\_
- Yes, South American (Fill In): \_\_\_\_\_

### 90. Select the group that best describes you:

- White
- Black/ African American
- Asian    Indian    Chinese    Filipino    Japanese    Korean    Vietnamese
- Other Asian (Please fill in) : \_\_\_\_\_
- Native American/ American Indian/ Alaskan Native (fill in Tribe): \_\_\_\_\_
- Native Hawaiian or Other Pacific Islander
- Mixed Ethnicity (example: Chicano and Native American) (Please fill in): \_\_\_\_\_
- Other (Please fill in): \_\_\_\_\_

**91. How old are you?**

\_ \_ \_

**92. What is your highest level of education?**

- Less than a High School Degree or equivalent
- High School Degree or Equivalent
- Associate's Degree
- Bachelor's Degree
- Registered Nurse (RN), Nurse Practitioner (NP), Physician Assistant (PA), etc.
- Graduate/Professional Degree
- Physician (MD, DO, etc.)

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**Give your best answer to the following 3 questions. It is better to guess than to leave them blank:**

- 93. A bat and a ball cost \$1.10 in total. The bat costs \$1.00 more than the ball. How much does the ball cost? (in cents)**
- 94. If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets? (in minutes)**
- 95. In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake? (in days)**

## **Appendix B**

### **Participant Demographics**

Table B.1

*Gender Frequency Data*

|        | <b>Frequency (n)</b> | <b>Percent</b> |
|--------|----------------------|----------------|
| Male   | 149                  | 68.7           |
| Female | 68                   | 31.3           |

Table B.2

*Participant Age Data*

|                | <b>How old are you?<br/>(In Years)</b> |
|----------------|--|
| Mean           | 34.96                                  |
| Median         | 30.00                                  |
| Mode           | 20.00                                  |
| Std. Deviation | 14.48                                  |
| Minimum        | 18                                     |
| Maximum        | 69                                     |

Table B.3

*Ethnic Identification Frequency Data*

| <b>Ethnicity</b>  | <b>Frequency (n)</b> | <b>Percent</b> |
|---|----------------------|----------------|
| White   | 194                  | 90.7           |
| Black/ African American   | 1                    | 0.5            |
| Asian (Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)     | 10                   | 4.7            |
| Mixed Ethnicity (example: Chicano and Native American) (See Below): | 4                    | 1.9            |
| Other (See Below):  | 5                    | 2.3            |

## Ethnicities entered Manually (n):

- Dominican (1)
- European American (1)
- Italian/Armenian (1)
- Latino (1)
- Multi-racial (1)
- Puerto Rican (1)
- White and Asian (1)
- Greek/Indian/Italian (1)

Table B.4

*Hispanic, Latino or Spanish Identification Frequency Data*

| <b>Latino Identification</b>                   | <b>Frequency (n)</b> | <b>Percent</b> |
|--|----------------------|----------------|
| No, not of Hispanic, Latino, or Spanish origin | 207                  | 97.2           |
| Yes, Mexican, Mexican American, Chicano        | 1                    | .5             |
| Yes, Puerto Rican                              | 3                    | 1.4            |
| Yes, Cuban                                     | 1                    | .5             |
| Yes, South American (See Below):               | 1                    | .5             |

Latino Identification entered Manually (n):

- Ecuador (1)



Table B.5

*Highest Level of Education Frequency Data*

|   | <b>Frequency (n)</b> | <b>Percent</b> |
|---|----------------------|----------------|
| High School Degree or Equivalent  | 58                   | 26.7           |
| Associate's Degree  | 22                   | 10.1           |
| Bachelor's Degree   | 83                   | 38.2           |
| Registered Nurse (RN),<br>Nurse Practitioner (NP),<br>Physician Assistant (PA),<br>etc. | 9                    | 4.1            |
| Graduate/Professional Degree  | 42                   | 19.4           |
| Physician (MD, DO, etc.)  | 3                    | 1.4            |

Table B.6

*Highest EMS Certification Frequency Data*

|  | <b>Frequency (n)</b> | <b>Percent</b> |
|--|----------------------|----------------|
| I have no EMS/medical experience/certifications                | 1                    | .5             |
| CPR/AED for the Professional Rescuer (or equivalent)           | 5                    | 2.3            |
| Certified First Responder (CFR)                                | 1                    | .5             |
| Emergency Medical Technician- Basic (EMT-B)                    | 133                  | 61.3           |
| Emergency Medical Technician- Intermediate (EMT-I)             | 4                    | 1.8            |
| Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15                   | 6.9            |
| Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51                   | 23.5           |
| Critical Care Paramedic (AEMT-P CC)                            | 7                    | 3.2            |

Table B.7

*State of Certification Frequency Data*

|                          | <b>Frequency (n)</b> | <b>Percent</b> |
|--------------------------|----------------------|----------------|
| I have no certifications | 3                    | 1.4            |
| New York                 | 137                  | 62.8           |
| New Jersey               | 30                   | 13.8           |
| Pennsylvania             | 8                    | 3.7            |
| Connecticut              | 5                    | 2.3            |
| Other (See Below)        | 35                   | 16.1           |

**State of Certification (entered manually) (n):**

- California (2)
- Canada (2)
- Colorado (2)
- Illinois (1)
- Maine (2)
- Maryland (2)
- Massachusetts (3)
- Michigan (1)
- National Registry EMT (NREMT) (2)
- New Hampshire (1)
- North Carolina (1)
- Ohio (2)
- Oregon (1)
- South Carolina (2)
- Texas (2)
- Virginia (1)
- West Virginia (2)
- Multiple States of Certifications (6)

Table B.8

*EMS Demographic Frequency Data*

|                                  | <b>Frequency (n)</b> | <b>Percent</b> |
|----------------------------------|----------------------|----------------|
| Type of Service Provided         |                      |                |
| Volunteer Provider (Only)        | 124                  | 57.1           |
| Volunteer and Employed Provider  | 42                   | 19.4           |
| Employed Provider (Only)         | 41                   | 18.9           |
| Not a Volunteer nor Employed     | 10                   | 4.6            |
| Type of Area Served              |                      |                |
| Not Applicable                   | 6                    | 2.8            |
| Rural                            | 64                   | 29.4           |
| Suburban                         | 111                  | 50.9           |
| Urban                            | 37                   | 17.0           |
| Type of Shift Normally Worked    |                      |                |
| I don't work or volunteer in EMS | 6                    | 2.8            |
| Daytime Hours                    | 47                   | 21.6           |
| Evening Hours                    | 17                   | 7.8            |
| Night/Overnight Hours            | 47                   | 21.6           |
| I don't have a set schedule      | 101                  | 46.3           |

Table B.9

*Experience Level at Current and Any Certification (Based on 7-point Likert Scale)*

|                               | <b>Current Certification Level</b> |                | <b>Any Certification Level</b> |                |
|-------------------------------|------------------------------------|----------------|--------------------------------|----------------|
|                               | <b>Frequency (n)</b>               | <b>Percent</b> | <b>Frequency (n)</b>           | <b>Percent</b> |
| None At All                   | 4                                  | 1.8            | 2                              | .9             |
| Very Low                      | 9                                  | 4.1            | 7                              | 3.2            |
| Low                           | 17                                 | 7.8            | 17                             | 7.8            |
| Medium                        | 62                                 | 28.4           | 57                             | 26.1           |
| High                          | 63                                 | 28.9           | 66                             | 30.3           |
| Very High                     | 47                                 | 21.6           | 49                             | 22.5           |
| The Highest<br>Level (Expert) | 16                                 | 7.3            | 20                             | 9.2            |

Table B.10

*Experience Level (in years)*

|                | <b>Current<br/>Certification Level</b> | <b>Any Certification<br/>Level</b> |
|----------------|--|------------------------------------|
| Mean           | 7.99                                   | 10.38                              |
| Median         | 4.00                                   | 6.00                               |
| Mode           | 1.00                                   | 4.00                               |
| Std. Deviation | 8.33                                   | 9.54                               |
| Minimum        | 0                                      | 1                                  |
| Maximum        | 39                                     | 42                                 |

Table B.11

*Correlation of Experience at any certification level and at current certification (both in years and on a scale)*

|  |  | How experienced are you at providing medical treatment in the pre-hospital setting (at any certification level) (Scale) | How long have you been providing medical treatment in the pre-hospital setting at any certification level (in years)? | How long have you been providing medical treatment in the pre-hospital setting at your current certification level (in years)? | How experienced are you at providing medical treatment in the pre-hospital setting (at your current certification level) (Scale) |
|--|--|---|---|--|--|
| How experienced are you at providing medical treatment in the pre-hospital setting (at any certification level) (Scale)          | Pearson Correlation<br>Sig. (2-tailed) | 1   |   |  |  |
|  | N                                      | 218   |   |  |  |
| How long have you been providing medical treatment in the pre-hospital setting at any certification level (in years)?            | Pearson Correlation<br>Sig. (2-tailed) | .550**  | 1   |  |  |
|  | N                                      | 215   | 215   |  |  |
| How long have you been providing medical treatment in the pre-hospital setting at your current certification level (in years)?   | Pearson Correlation<br>Sig. (2-tailed) | .483**  | .917**  | 1  |  |
|  | N                                      | 214   | 213   | 214  |  |
| How experienced are you at providing medical treatment in the pre-hospital setting (at your current certification level) (Scale) | Pearson Correlation<br>Sig. (2-tailed) | .893**  | .500**  | .532**   | 1  |
|  | N                                      | 218   | 215   | 214  | 218  |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table B.12

*Highest Certification Level (Minimal, BLS or ALS) of Participants with Nursing/Physician*

*Degrees*

|   | <b>Frequency (n)</b> | <b>Percent</b> |
|---|----------------------|----------------|
| Minimal Certification (None, CPR, CFR)            | 1                    | 8.3            |
| Basic Life Support (EMT-B, EMT-I)                 | 8                    | 66.7           |
| Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 3                    | 25.0           |
| Total   | 12                   | 100.0          |



Table B.13

*Years of Experience at Current Certification and at Any Certification for Participants with Nursing and Physician Degrees*

| Years of Experience | Current Certification Level |         | Any Certification Level |         |
|---------------------|-----------------------------|---------|-------------------------|---------|
|                     | Frequency (n)               | Percent | Frequency (n)           | Percent |
| 0-5 Years           | 6                           | 50.0    | 5                       | 41.7    |
| 6-10 Years          | 1                           | 8.3     | 2                       | 16.7    |
| 11-15 Years         | 2                           | 16.7    | 1                       | 8.3     |
| 16-20 Years         | 1                           | 8.3     | 2                       | 16.7    |
| 21-25 Years         | 1                           | 8.3     | 1                       | 8.3     |
| 26-30 Years         | 1                           | 8.3     | 1                       | 8.3     |

# **Appendix C**

## **Medical Case-Based Scenarios**

Table C.1

*Medical Case Scenario Treatment Frequency Data (Knowledge Control Scenarios)*

| <b>Treatment Option</b>  | <b>Frequency (n)</b> | <b>Percent</b> |
|--|----------------------|----------------|
| <b>Scenario 1: Treatment 1</b>   |                      |                |
| Apply cervical immobilization, and two long, padded board splints to the patient's right leg.  | 7                    | 3.2            |
| Apply cervical immobilization and a traction splint (splint which pulls traction on the patient's leg) to the patient's right leg.   | 193                  | 88.5           |
| Fully immobilize the patient on a long backboard with a cervical collar.   | 17                   | 7.8            |
| Assist the patient to the stretcher (in your ambulance or that of your transporting agency) and transfer him to the ambulance in a semi-fowler's position (sitting up slightly). | 1                    | .5             |
| <b>Scenario 1: Treatment 2</b>   |                      |                |
| Fully immobilize the patient on a long backboard with a cervical collar.   | 156                  | 72.2           |
| Administer 324mg of non-enteric aspirin to assist your patient with pain.  | 2                    | 0.9            |
| Apply a cold pack to the injured area.   | 3                    | 1.4            |
| Immediately transport the patient to the hospital.   | 55                   | 25.5           |
| <b>Scenario 2</b>  |                      |                |
| Have the patient lie on the ground and treat for shock.  | 2                    | .9             |
| Place the patient on oxygen via nasal cannula at 4 LPM (Liters per Minute).  | 40                   | 18.3           |
| Ensure that the patient is transported without further treatment.  | 3                    | 1.4            |
| If it is prescribed and/or available, administer aspirin and nitroglycerin, a medication to treat chronic chest pain, as per your local protocol.                                | 173                  | 79.4           |
| <b>Scenario 3</b>  |                      |                |
| Have the patient lie on the ground and treat for shock.  | 0                    | 0              |
| Administer epinephrine as per local protocol.  | 184                  | 84.4           |
| Place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.  | 32                   | 14.7           |
| Check the patient's oxygen saturation if available.  | 2                    | .9             |

Table C.1 (continued)

| <b>Treatment Option</b>   | <b>Frequency (n)</b> | <b>Percent</b> |
|---|----------------------|----------------|
| <b>Scenario 4</b>   |                      |                |
| Wrap the patient's hands with dry, sterile dressings, placing dressings between each digit.             | 193                  | 88.5           |
| Ensure that the patient is transported without further treatment.                                       | 1                    | .5             |
| Have the patient lie on the ground and treat for shock.   | 1                    | .5             |
| Wrap the outside of the patient's hands with dry, sterile dressings and place a cold pack on each hand. | 23                   | 10.6           |
| <b>Scenario 5: Patient 1</b>  |                      |                |
| Provide manual respirations via Bag-Valve Mask (BVM) at a rate of 1 respiration per 5-6 seconds.        | 211                  | 96.8           |
| Place sterile dressings over the small laceration on the patient's head.                                | 1                    | .5             |
| Place the patient in a Kendrick's Extrication Device (KED), a device for immobilizing the torso only.   | 5                    | 2.3            |
| Splint the patient's right forearm using padded board splints.  | 1                    | .5             |

Table C.2

*Correct Answers to Treatment Questions (Knowledge Control Scenarios; Score out of 6)*

| <b>Treatment Scenario Questions Correct</b> | <b>Frequency (n)</b> | <b>Percent</b> |
|---|----------------------|----------------|
| 0   | 1                    | .5             |
| 1   | 0                    | 0              |
| 2   | 1                    | .5             |
| 3   | 14                   | 6.5            |
| 4   | 45                   | 20.8           |
| 5   | 54                   | 25.0           |
| 6   | 101                  | 46.8           |

Table C.3

*Medical Case Scenario Frequency Data (Gist versus Verbatim Conflict Scenarios)*

| <b>Treatment Option</b>  | <b>Gist vs.<br/>Verbatim</b> | <b>Frequency (n)</b> | <b>Percent</b> |
|--|------------------------------|----------------------|----------------|
| Scenario 5: Patient 2  |                              |                      |                |
| Coach the patient's breathing and then place the patient in a Kendrick's Extrication Device (KED), a device for immobilizing a person's torso only, and then remove them from the vehicle on a long backboard. | Gist                         | 136                  | 62.4           |
| Place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.  | Verbatim                     | 53                   | 24.3           |
| Remove the patient from the vehicle via rapid extrication and place the patient on a long backboard.   | Verbatim                     | 28                   | 12.8           |
| Allow the patient to walk to the ambulance, despite the patient being amicable to any treatment you believe is medically necessary.  | Distracter                   | 1                    | .5             |
| Scenario 6   |                              |                      |                |
| Assuming it is available, test the patient's BGL (Blood glucose level) with a glucometer.  | Gist                         | 151                  | 69.3           |
| Administer one tube of oral glucose.   | Verbatim                     | 64                   | 29.4           |
| Check the patient's oxygen saturation if available.  | Distracter                   | 1                    | .5             |
| Have the patient lie on the ground and treat for shock.  | Distracter                   | 2                    | .9             |
| Scenario 7   |                              |                      |                |
| Have the patient lie on the ground and treat for shock.  | Distracter                   | 12                   | 5.5            |
| Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.  | Verbatim                     | 92                   | 42.2           |
| Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe.  | Gist                         | 103                  | 47.2           |
| Fully immobilize the patient to a long backboard.  | Distracter                   | 10                   | 4.6            |

Table C.4

*Number of Gist Answers Chosen in Conflict Medical Case Scenario (Out of 3 Scenarios)*

| <b>Gist Answers Selected</b> | <b>Frequency (n)</b> | <b>Percent</b> |
|------------------------------|----------------------|----------------|
| 0                            | 9                    | 4.1            |
| 1                            | 71                   | 32.7           |
| 2                            | 94                   | 43.3           |
| 3                            | 43                   | 19.8           |

Table C.5

*Number of Verbatim Answers Chosen in Conflict Medical Case Scenario (Out of 3 Scenarios)*

| <b>Verbatim Answers Selected</b> | <b>Frequency (n)</b> | <b>Percent</b> |
|----------------------------------|----------------------|----------------|
| 0                                | 55                   | 25.3           |
| 1                                | 95                   | 43.8           |
| 2                                | 59                   | 27.2           |
| 3                                | 8                    | 3.7            |



Table C.6

*Means Estimates of Medical Case Scenario Treatment Answers with Provider's Highest Level of Certification*

|   |  | N           | Mean        | Std. Deviation | Std. Error  | 95% Confidence Interval for Mean |             |
|---|--|-------------|-------------|----------------|-------------|----------------------------------|-------------|
|   |  |             |             |                |             | Lower Bound                      | Upper Bound |
| <b>Scenario 1- Treatment 1 (Correct Answer)</b> | I have no EMS/medical experience/certifications                | 1           | 0.00        | .              | .           | .                                | .           |
|   | CPR/AED for the Professional Rescuer (or equivalent)           | 5           | 1.00        | 0.00           | 0.00        | 1.00                             | 1.00        |
|   | Certified First Responder (CFR)                                | 1           | 1.00        | .              | .           | .                                | .           |
|   | Emergency Medical Technician- Basic (EMT-B)                    | 133         | 0.89        | 0.31           | 0.03        | 0.84                             | 0.95        |
|   | Emergency Medical Technician- Intermediate (EMT-I)             | 4           | 0.75        | 0.50           | 0.25        | -0.05                            | 1.55        |
|   | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15          | 0.87        | 0.35           | 0.09        | 0.67                             | 1.06        |
|   | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51          | 0.88        | 0.33           | 0.05        | 0.79                             | 0.97        |
|   | Critical Care Paramedic (AEMT-P CC)                            | 7           | 0.86        | 0.38           | 0.14        | 0.51                             | 1.21        |
| <b>Total</b>                                    | <b>217</b>   | <b>0.88</b> | <b>0.32</b> | <b>0.02</b>    | <b>0.84</b> | <b>0.93</b>                      |             |
| <b>Scenario 1- Treatment 2 (Correct Answer)</b> | I have no EMS/medical experience/certifications                | 1           | 0.00        | .              | .           | .                                | .           |
|   | CPR/AED for the Professional Rescuer (or equivalent)           | 3           | 1.00        | 0.00           | 0.00        | 1.00                             | 1.00        |
|   | Certified First Responder (CFR)                                | 1           | 1.00        | .              | .           | .                                | .           |
|   | Emergency Medical Technician- Basic (EMT-B)                    | 133         | 0.71        | 0.46           | 0.04        | 0.63                             | 0.79        |
|   | Emergency Medical Technician- Intermediate (EMT-I)             | 4           | 0.75        | 0.50           | 0.25        | -0.05                            | 1.55        |
|   | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15          | 0.80        | 0.41           | 0.11        | 0.57                             | 1.03        |
|   | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51          | 0.73        | 0.45           | 0.06        | 0.60                             | 0.85        |
|   | Critical Care Paramedic (AEMT-P CC)                            | 7           | 0.71        | 0.49           | 0.18        | 0.26                             | 1.17        |
| <b>Total</b>                                    | <b>215</b>   | <b>0.72</b> | <b>0.45</b> | <b>0.03</b>    | <b>0.66</b> | <b>0.78</b>                      |             |
| <b>Scenario 2 (Correct Answer)</b>              | I have no EMS/medical experience/certifications                | 1           | 1.00        | .              | .           | .                                | .           |
|   | CPR/AED for the Professional Rescuer (or equivalent)           | 5           | 1.00        | 0.00           | 0.00        | 1.00                             | 1.00        |
|   | Certified First Responder (CFR)                                | 1           | 1.00        | .              | .           | .                                | .           |
|   | Emergency Medical Technician- Basic (EMT-B)                    | 133         | 0.78        | 0.41           | 0.04        | 0.71                             | 0.85        |
|   | Emergency Medical Technician- Intermediate (EMT-I)             | 4           | 1.00        | 0.00           | 0.00        | 1.00                             | 1.00        |
|   | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15          | 0.67        | 0.49           | 0.13        | 0.40                             | 0.94        |
|   | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51          | 0.80        | 0.40           | 0.06        | 0.69                             | 0.92        |
|   | Critical Care Paramedic (AEMT-P CC)                            | 7           | 0.88        | 0.38           | 0.14        | 0.51                             | 1.21        |
| <b>Total</b>                                    | <b>217</b>   | <b>0.79</b> | <b>0.41</b> | <b>0.03</b>    | <b>0.74</b> | <b>0.85</b>                      |             |

Table C.6 (Continued)

|   |  | N   | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             |
|---|--|-----|------|----------------|------------|----------------------------------|-------------|
|   |  |     |      |                |            | Lower Bound                      | Upper Bound |
| <b>Scenario 3<br/>(Correct Answer)</b>                | I have no EMS/medical experience/certifications                | 1   | 1.00 | .              | .          | .                                | .           |
|   | CPR/AED for the Professional Rescuer (or equivalent)           | 5   | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Certified First Responder (CFR)                                | 1   | 1.00 | .              | .          | .                                | .           |
|   | Emergency Medical Technician- Basic (EMT-B)                    | 133 | 0.84 | 0.37           | 0.03       | 0.78                             | 0.90        |
|   | Emergency Medical Technician- Intermediate (EMT-I)             | 4   | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15  | 0.80 | 0.41           | 0.11       | 0.57                             | 1.03        |
|   | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51  | 0.84 | 0.37           | 0.05       | 0.74                             | 0.95        |
|   | Critical Care Paramedic (AEMT-P CC)                            | 7   | 0.71 | 0.49           | 0.18       | 0.26                             | 1.17        |
|   | Total  | 217 | 0.84 | 0.36           | 0.03       | 0.79                             | 0.89        |
| <b>Scenario 4<br/>(Correct Answer)</b>                | I have no EMS/medical experience/certifications                | 1   | 1.00 | .              | .          | .                                | .           |
|   | CPR/AED for the Professional Rescuer (or equivalent)           | 5   | 0.80 | 0.45           | 0.20       | 0.24                             | 1.36        |
|   | Certified First Responder (CFR)                                | 1   | 0.00 | .              | .          | .                                | .           |
|   | Emergency Medical Technician- Basic (EMT-B)                    | 133 | 0.89 | 0.32           | 0.03       | 0.83                             | 0.94        |
|   | Emergency Medical Technician- Intermediate (EMT-I)             | 4   | 0.75 | 0.50           | 0.25       | -0.05                            | 1.55        |
|   | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15  | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51  | 0.88 | 0.33           | 0.05       | 0.79                             | 0.97        |
|   | Critical Care Paramedic (AEMT-P CC)                            | 7   | 0.86 | 0.38           | 0.14       | 0.51                             | 1.21        |
|   | Total  | 217 | 0.88 | 0.32           | 0.02       | 0.84                             | 0.93        |
| <b>Scenario 5-<br/>Patient 1<br/>(Correct Answer)</b> | I have no EMS/medical experience/certifications                | 1   | 1.00 | .              | .          | .                                | .           |
|   | CPR/AED for the Professional Rescuer (or equivalent)           | 5   | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Certified First Responder (CFR)                                | 1   | 0.00 | .              | .          | .                                | .           |
|   | Emergency Medical Technician- Basic (EMT-B)                    | 133 | 0.96 | 0.19           | 0.02       | 0.93                             | 1.00        |
|   | Emergency Medical Technician- Intermediate (EMT-I)             | 4   | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15  | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51  | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Critical Care Paramedic (AEMT-P CC)                            | 7   | 0.86 | 0.38           | 0.14       | 0.51                             | 1.21        |
|   | Total  | 217 | 0.97 | 0.18           | 0.01       | 0.94                             | 0.99        |

Table C.6 (Continued)

|   |  | N   | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             |
|---|--|-----|------|----------------|------------|----------------------------------|-------------|
|   |  |     |      |                |            | Lower Bound                      | Upper Bound |
| <b>Scenario 5-<br/>Patient 2<br/>(Gist<br/>Answer)</b>            | I have no EMS/medical experience/certifications                | 1   | 0.00 | .              | .          | .                                | .           |
|   | CPR/AED for the Professional Rescuer (or equivalent)           | 5   | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Certified First Responder (CFR)                                | 1   | 1.00 | .              | .          | .                                | .           |
|   | Emergency Medical Technician- Basic (EMT-B)                    | 133 | 0.59 | 0.49           | 0.04       | 0.50                             | 0.67        |
|   | Emergency Medical Technician- Intermediate (EMT-I)             | 4   | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15  | 0.73 | 0.46           | 0.12       | 0.48                             | 0.99        |
|   | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51  | 0.71 | 0.46           | 0.06       | 0.58                             | 0.84        |
|   | Critical Care Paramedic (AEMT-P CC)                            | 7   | 0.14 | 0.38           | 0.14       | -0.21                            | 0.49        |
|   | Total  | 217 | 0.63 | 0.48           | 0.03       | 0.56                             | 0.69        |
| <b>Scenario 5-<br/>Patient 2<br/>(Verbatim<br/>Answer<br/>#1)</b> | I have no EMS/medical experience/certifications                | 1   | 0.00 | .              | .          | .                                | .           |
|   | CPR/AED for the Professional Rescuer (or equivalent)           | 5   | 0.00 | 0.00           | 0.00       | 0.00                             | 0.00        |
|   | Certified First Responder (CFR)                                | 1   | 0.00 | .              | .          | .                                | .           |
|   | Emergency Medical Technician- Basic (EMT-B)                    | 133 | 0.29 | 0.46           | 0.04       | 0.21                             | 0.37        |
|   | Emergency Medical Technician- Intermediate (EMT-I)             | 4   | 0.00 | 0.00           | 0.00       | 0.00                             | 0.00        |
|   | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15  | 0.07 | 0.26           | 0.07       | -0.08                            | 0.21        |
|   | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51  | 0.18 | 0.39           | 0.05       | 0.07                             | 0.28        |
|   | Critical Care Paramedic (AEMT-P CC)                            | 7   | 0.43 | 0.53           | 0.20       | -0.07                            | 0.92        |
|   | Total  | 217 | 0.24 | 0.43           | 0.03       | 0.18                             | 0.30        |
| <b>Scenario 5-<br/>Patient 2<br/>(Verbatim<br/>Answer<br/>#2)</b> | I have no EMS/medical experience/certifications                | 1   | 1.00 | .              | .          | .                                | .           |
|   | CPR/AED for the Professional Rescuer (or equivalent)           | 5   | 0.00 | 0.00           | 0.00       | 0.00                             | 0.00        |
|   | Certified First Responder (CFR)                                | 1   | 0.00 | .              | .          | .                                | .           |
|   | Emergency Medical Technician- Basic (EMT-B)                    | 133 | 0.12 | 0.33           | 0.03       | 0.06                             | 0.18        |
|   | Emergency Medical Technician- Intermediate (EMT-I)             | 4   | 0.00 | 0.00           | 0.00       | 0.00                             | 0.00        |
|   | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15  | 0.20 | 0.41           | 0.11       | -0.03                            | 0.43        |
|   | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51  | 0.12 | 0.33           | 0.05       | 0.03                             | 0.21        |
|   | Critical Care Paramedic (AEMT-P CC)                            | 7   | 0.29 | 0.49           | 0.18       | -0.17                            | 0.74        |
|   | Total  | 217 | 0.13 | 0.34           | 0.02       | 0.08                             | 0.17        |

Table C.6 (Continued)

|   |  | N   | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             |
|---|--|-----|------|----------------|------------|----------------------------------|-------------|
|   |  |     |      |                |            | Lower Bound                      | Upper Bound |
| <b>Scenario 6<br/>(Gist Answer)</b>     | I have no EMS/medical experience/certifications                | 1   | 1.00 | .              | .          | .                                | .           |
|   | CPR/AED for the Professional Rescuer (or equivalent)           | 5   | 0.80 | 0.45           | 0.20       | 0.24                             | 1.36        |
|   | Certified First Responder (CFR)                                | 1   | 0.00 | .              | .          | .                                | .           |
|   | Emergency Medical Technician- Basic (EMT-B)                    | 133 | 0.61 | 0.49           | 0.04       | 0.53                             | 0.69        |
|   | Emergency Medical Technician- Intermediate (EMT-I)             | 4   | 0.75 | 0.50           | 0.25       | -0.05                            | 1.55        |
|   | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15  | 0.80 | 0.41           | 0.11       | 0.57                             | 1.03        |
|   | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51  | 0.86 | 0.35           | 0.05       | 0.77                             | 0.96        |
|   | Critical Care Paramedic (AEMT-P CC)                            | 7   | 0.86 | 0.38           | 0.14       | 0.51                             | 1.21        |
|   | Total  | 217 | 0.70 | 0.46           | 0.03       | 0.63                             | 0.76        |
| <b>Scenario 6<br/>(Verbatim Answer)</b> | I have no EMS/medical experience/certifications                | 1   | 0.00 | .              | .          | .                                | .           |
|   | CPR/AED for the Professional Rescuer (or equivalent)           | 5   | 0.20 | 0.45           | 0.20       | -0.36                            | 0.76        |
|   | Certified First Responder (CFR)                                | 1   | 1.00 | .              | .          | .                                | .           |
|   | Emergency Medical Technician- Basic (EMT-B)                    | 133 | 0.38 | 0.49           | 0.04       | 0.29                             | 0.46        |
|   | Emergency Medical Technician- Intermediate (EMT-I)             | 4   | 0.25 | 0.50           | 0.25       | -0.55                            | 1.05        |
|   | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15  | 0.20 | 0.41           | 0.11       | -0.03                            | 0.43        |
|   | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51  | 0.14 | 0.35           | 0.05       | 0.04                             | 0.24        |
|   | Critical Care Paramedic (AEMT-P CC)                            | 7   | 0.00 | 0.00           | 0.00       | 0.00                             | 0.00        |
|   | Total  | 217 | 0.29 | 0.45           | 0.03       | 0.23                             | 0.35        |

Table C.6 (Continued)

|   |  | N   | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             |
|---|--|-----|------|----------------|------------|----------------------------------|-------------|
|   |  |     |      |                |            | Lower Bound                      | Upper Bound |
| <b>Scenario 7<br/>(Gist Answer)</b>     | I have no EMS/medical experience/certifications                | 1   | 1.00 | .              | .          | .                                | .           |
|   | CPR/AED for the Professional Rescuer (or equivalent)           | 5   | 0.60 | 0.55           | 0.24       | -0.08                            | 1.28        |
|   | Certified First Responder (CFR)                                | 1   | 1.00 | .              | .          | .                                | .           |
|   | Emergency Medical Technician- Basic (EMT-B)                    | 133 | 0.44 | 0.50           | 0.04       | 0.36                             | 0.53        |
|   | Emergency Medical Technician- Intermediate (EMT-I)             | 4   | 0.50 | 0.58           | 0.29       | -0.42                            | 1.42        |
|   | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15  | 0.40 | 0.51           | 0.13       | 0.12                             | 0.68        |
|   | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 50  | 0.52 | 0.50           | 0.07       | 0.38                             | 0.66        |
|   | Critical Care Paramedic (AEMT-P CC)                            | 7   | 0.57 | 0.53           | 0.20       | 0.08                             | 1.07        |
|   | Total  | 216 | 0.47 | 0.50           | 0.03       | 0.41                             | 0.54        |
| <b>Scenario 7<br/>(Verbatim Answer)</b> | I have no EMS/medical experience/certifications                | 1   | 0.00 | .              | .          | .                                | .           |
|   | CPR/AED for the Professional Rescuer (or equivalent)           | 5   | 0.40 | 0.55           | 0.24       | -0.28                            | 1.08        |
|   | Certified First Responder (CFR)                                | 1   | 0.00 | .              | .          | .                                | .           |
|   | Emergency Medical Technician- Basic (EMT-B)                    | 133 | 0.46 | 0.50           | 0.04       | 0.37                             | 0.54        |
|   | Emergency Medical Technician- Intermediate (EMT-I)             | 4   | 0.50 | 0.58           | 0.29       | -0.42                            | 1.42        |
|   | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15  | 0.60 | 0.51           | 0.13       | 0.32                             | 0.88        |
|   | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 50  | 0.34 | 0.48           | 0.07       | 0.20                             | 0.48        |
|   | Critical Care Paramedic (AEMT-P CC)                            | 7   | 0.14 | 0.38           | 0.14       | -0.21                            | 0.49        |
|   | Total  | 216 | 0.43 | 0.50           | 0.03       | 0.36                             | 0.49        |

Table C.7

*Means Estimates of Medical Case Scenario Answers with Provider's Highest Level of Certification (Grouped into Categories)*

|   |   | N   | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             |
|---|---|-----|------|----------------|------------|----------------------------------|-------------|
|   |   |     |      |                |            | Lower Bound                      | Upper Bound |
| <b>Scenario 1-<br/>Treatment 1<br/>(Correct Answer)</b> | Basic Life Support (EMT-B, EMT-I)                 | 137 | 0.89 | 0.31           | 0.03       | 0.84                             | 0.94        |
|   | Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 73  | 0.88 | 0.33           | 0.04       | 0.80                             | 0.95        |
|   | Total   | 210 | 0.89 | 0.32           | 0.02       | 0.84                             | 0.93        |
| <b>Scenario 1-<br/>Treatment 2<br/>(Correct Answer)</b> | Basic Life Support (EMT-B, EMT-I)                 | 137 | 0.71 | 0.46           | 0.04       | 0.63                             | 0.79        |
|   | Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 73  | 0.74 | 0.44           | 0.05       | 0.64                             | 0.84        |
|   | Total   | 210 | 0.72 | 0.45           | 0.03       | 0.66                             | 0.78        |
| <b>Scenario 2<br/>(Correct Answer)</b>                  | Basic Life Support (EMT-B, EMT-I)                 | 137 | 0.79 | 0.41           | 0.04       | 0.72                             | 0.86        |
|   | Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 73  | 0.78 | 0.42           | 0.05       | 0.68                             | 0.88        |
|   | Total   | 210 | 0.79 | 0.41           | 0.03       | 0.73                             | 0.84        |
| <b>Scenario 3<br/>(Correct Answer)</b>                  | Basic Life Support (EMT-B, EMT-I)                 | 137 | 0.85 | 0.36           | 0.03       | 0.79                             | 0.91        |
|   | Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 73  | 0.82 | 0.39           | 0.05       | 0.73                             | 0.91        |
|   | Total   | 210 | 0.84 | 0.37           | 0.03       | 0.79                             | 0.89        |
| <b>Scenario 4<br/>(Correct Answer)</b>                  | Basic Life Support (EMT-B, EMT-I)                 | 137 | 0.88 | 0.32           | 0.03       | 0.83                             | 0.94        |
|   | Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 73  | 0.90 | 0.30           | 0.04       | 0.83                             | 0.97        |
|   | Total   | 210 | 0.89 | 0.31           | 0.02       | 0.85                             | 0.93        |
| <b>Scenario 5-<br/>Patient 1<br/>(Correct Answer)</b>   | Basic Life Support (EMT-B, EMT-I)                 | 137 | 0.96 | 0.19           | 0.02       | 0.93                             | 1.00        |
|   | Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 73  | 0.99 | 0.12           | 0.01       | 0.96                             | 1.01        |
|   | Total   | 210 | 0.97 | 0.17           | 0.01       | 0.95                             | 0.99        |

Table C.7 (Continued)

|   |   | N   | Mean | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|---|---|-----|------|-------------------|---------------|-------------------------------------|----------------|
|   |   |     |      |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| <b>Scenario 5-<br/>Patient 2<br/>(Gist<br/>Answer)</b>        | Basic Life Support<br>(EMT-B, EMT-I)                    | 137 | 0.60 | 0.49              | 0.04          | 0.52                                | 0.68           |
|   | Advanced Life Support<br>(AEMT-CC, AEMT-P,<br>AEMT-PCC) | 73  | 0.66 | 0.48              | 0.06          | 0.55                                | 0.77           |
|   | Total   | 210 | 0.62 | 0.49              | 0.03          | 0.55                                | 0.69           |
| <b>Scenario 5-<br/>Patient 2<br/>(Verbatim<br/>Answer #1)</b> | Basic Life Support<br>(EMT-B, EMT-I)                    | 137 | 0.28 | 0.45              | 0.04          | 0.21                                | 0.36           |
|   | Advanced Life Support<br>(AEMT-CC, AEMT-P,<br>AEMT-PCC) | 73  | 0.18 | 0.39              | 0.05          | 0.09                                | 0.27           |
|   | Total   | 210 | 0.25 | 0.43              | 0.03          | 0.19                                | 0.31           |
| <b>Scenario 5-<br/>Patient 2<br/>(Verbatim<br/>Answer #2)</b> | Basic Life Support<br>(EMT-B, EMT-I)                    | 137 | 0.12 | 0.32              | 0.03          | 0.06                                | 0.17           |
|   | Advanced Life Support<br>(AEMT-CC, AEMT-P,<br>AEMT-PCC) | 73  | 0.15 | 0.36              | 0.04          | 0.07                                | 0.23           |
|   | Total   | 210 | 0.13 | 0.34              | 0.02          | 0.08                                | 0.17           |
| <b>Scenario 6<br/>(Gist<br/>Answer)</b>                       | Basic Life Support<br>(EMT-B, EMT-I)                    | 137 | 0.61 | 0.49              | 0.04          | 0.53                                | 0.70           |
|   | Advanced Life Support<br>(AEMT-CC, AEMT-P,<br>AEMT-PCC) | 73  | 0.85 | 0.36              | 0.04          | 0.77                                | 0.93           |
|   | Total   | 210 | 0.70 | 0.46              | 0.03          | 0.63                                | 0.76           |
| <b>Scenario 6<br/>(Verbatim<br/>Answer)</b>                   | Basic Life Support<br>(EMT-B, EMT-I)                    | 137 | 0.37 | 0.49              | 0.04          | 0.29                                | 0.45           |
|   | Advanced Life Support<br>(AEMT-CC, AEMT-P,<br>AEMT-PCC) | 73  | 0.14 | 0.35              | 0.04          | 0.06                                | 0.22           |
|   | Total   | 210 | 0.29 | 0.46              | 0.03          | 0.23                                | 0.35           |
| <b>Scenario 7<br/>(Gist<br/>Answer)</b>                       | Basic Life Support<br>(EMT-B, EMT-I)                    | 137 | 0.45 | 0.50              | 0.04          | 0.36                                | 0.53           |
|   | Advanced Life Support<br>(AEMT-CC, AEMT-P,<br>AEMT-PCC) | 72  | 0.50 | 0.50              | 0.06          | 0.38                                | 0.62           |
|   | Total   | 209 | 0.46 | 0.50              | 0.04          | 0.40                                | 0.53           |
| <b>Scenario 7<br/>(Verbatim<br/>Answer)</b>                   | Basic Life Support<br>(EMT-B, EMT-I)                    | 137 | 0.46 | 0.50              | 0.04          | 0.38                                | 0.54           |
|   | Advanced Life Support<br>(AEMT-CC, AEMT-P,<br>AEMT-PCC) | 72  | 0.38 | 0.49              | 0.06          | 0.26                                | 0.49           |
|   | Total   | 209 | 0.43 | 0.50              | 0.03          | 0.36                                | 0.50           |

Table C.8

*Means Estimates of Medical Case Scenario Answers with Provider's Experience at their Current Certification Level (Scale-Based)*

|   |                            | N   | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             |
|---|----------------------------|-----|------|----------------|------------|----------------------------------|-------------|
|   |                            |     |      |                |            | Lower Bound                      | Upper Bound |
| <b>Scenario 1-<br/>Treatment 1<br/>(Correct<br/>Answer)</b> | None At All                | 4   | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Very Low                   | 9   | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Low                        | 17  | 0.82 | 0.39           | 0.10       | 0.62                             | 1.03        |
|   | Medium                     | 62  | 0.90 | 0.30           | 0.04       | 0.83                             | 0.98        |
|   | High                       | 63  | 0.84 | 0.37           | 0.05       | 0.75                             | 0.93        |
|   | Very High                  | 47  | 0.89 | 0.31           | 0.05       | 0.80                             | 0.99        |
|   | The Highest Level (Expert) | 16  | 0.94 | 0.25           | 0.06       | 0.80                             | 1.07        |
|   | Total                      | 218 | 0.89 | 0.32           | 0.02       | 0.84                             | 0.93        |
| <b>Scenario 1-<br/>Treatment 2<br/>(Correct<br/>Answer)</b> | None At All                | 3   | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Very Low                   | 9   | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Low                        | 17  | 0.53 | 0.51           | 0.13       | 0.26                             | 0.79        |
|   | Medium                     | 61  | 0.62 | 0.49           | 0.06       | 0.50                             | 0.75        |
|   | High                       | 63  | 0.73 | 0.45           | 0.06       | 0.62                             | 0.84        |
|   | Very High                  | 47  | 0.85 | 0.36           | 0.05       | 0.75                             | 0.96        |
|   | The Highest Level (Expert) | 16  | 0.69 | 0.48           | 0.12       | 0.43                             | 0.94        |
|   | Total                      | 216 | 0.72 | 0.45           | 0.03       | 0.66                             | 0.78        |
| <b>Scenario 2<br/>(Correct<br/>Answer)</b>                  | None At All                | 4   | 0.75 | 0.50           | 0.25       | -0.05                            | 1.55        |
|   | Very Low                   | 9   | 0.67 | 0.50           | 0.17       | 0.28                             | 1.05        |
|   | Low                        | 17  | 0.88 | 0.33           | 0.08       | 0.71                             | 1.05        |
|   | Medium                     | 62  | 0.74 | 0.44           | 0.06       | 0.63                             | 0.85        |
|   | High                       | 63  | 0.84 | 0.37           | 0.05       | 0.75                             | 0.93        |
|   | Very High                  | 47  | 0.81 | 0.40           | 0.06       | 0.69                             | 0.93        |
|   | The Highest Level (Expert) | 16  | 0.75 | 0.45           | 0.11       | 0.51                             | 0.99        |
|   | Total                      | 218 | 0.79 | 0.41           | 0.03       | 0.74                             | 0.85        |
| <b>Scenario 3<br/>(Correct<br/>Answer)</b>                  | None At All                | 4   | 0.75 | 0.50           | 0.25       | -0.05                            | 1.55        |
|   | Very Low                   | 9   | 0.78 | 0.44           | 0.15       | 0.44                             | 1.12        |
|   | Low                        | 17  | 0.82 | 0.39           | 0.10       | 0.62                             | 1.03        |
|   | Medium                     | 62  | 0.87 | 0.34           | 0.04       | 0.79                             | 0.96        |
|   | High                       | 63  | 0.90 | 0.30           | 0.04       | 0.83                             | 0.98        |
|   | Very High                  | 47  | 0.85 | 0.36           | 0.05       | 0.75                             | 0.96        |
|   | The Highest Level (Expert) | 16  | 0.56 | 0.51           | 0.13       | 0.29                             | 0.84        |
|   | Total                      | 218 | 0.84 | 0.36           | 0.02       | 0.80                             | 0.89        |



Table C.8 (continued)

|   |                            | N   | Mean | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|---|----------------------------|-----|------|-------------------|---------------|-------------------------------------|----------------|
|   |                            |     |      |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| <b>Scenario 4<br/>(Correct<br/>Answer)</b>                    | None At All                | 4   | 0.50 | 0.58              | 0.29          | -0.42                               | 1.42           |
|   | Very Low                   | 9   | 1.00 | 0.00              | 0.00          | 1.00                                | 1.00           |
|   | Low                        | 17  | 1.00 | 0.00              | 0.00          | 1.00                                | 1.00           |
|   | Medium                     | 62  | 0.90 | 0.30              | 0.04          | 0.83                                | 0.98           |
|   | High                       | 63  | 0.81 | 0.40              | 0.05          | 0.71                                | 0.91           |
|   | Very High                  | 47  | 0.91 | 0.28              | 0.04          | 0.83                                | 1.00           |
|   | The Highest Level (Expert) | 16  | 0.94 | 0.25              | 0.06          | 0.80                                | 1.07           |
|   | Total                      | 218 | 0.89 | 0.32              | 0.02          | 0.84                                | 0.93           |
| <b>Scenario 5<br/>(Correct<br/>Answer)</b>                    | None At All                | 4   | 1.00 | 0.00              | 0.00          | 1.00                                | 1.00           |
|   | Very Low                   | 9   | 0.89 | 0.33              | 0.11          | 0.63                                | 1.15           |
|   | Low                        | 17  | 1.00 | 0.00              | 0.00          | 1.00                                | 1.00           |
|   | Medium                     | 62  | 0.97 | 0.18              | 0.02          | 0.92                                | 1.01           |
|   | High                       | 63  | 0.98 | 0.13              | 0.02          | 0.95                                | 1.02           |
|   | Very High                  | 47  | 0.96 | 0.20              | 0.03          | 0.90                                | 1.02           |
|   | The Highest Level (Expert) | 16  | 0.94 | 0.25              | 0.06          | 0.80                                | 1.07           |
|   | Total                      | 218 | 0.97 | 0.18              | 0.01          | 0.94                                | 0.99           |
| <b>Scenario 5-<br/>Patient 2<br/>(Gist<br/>Answer)</b>        | None At All                | 4   | 1.00 | 0.00              | 0.00          | 1.00                                | 1.00           |
|   | Very Low                   | 9   | 0.67 | 0.50              | 0.17          | 0.28                                | 1.05           |
|   | Low                        | 17  | 0.71 | 0.47              | 0.11          | 0.46                                | 0.95           |
|   | Medium                     | 62  | 0.60 | 0.49              | 0.06          | 0.47                                | 0.72           |
|   | High                       | 63  | 0.73 | 0.45              | 0.06          | 0.62                                | 0.84           |
|   | Very High                  | 47  | 0.53 | 0.50              | 0.07          | 0.38                                | 0.68           |
|   | The Highest Level (Expert) | 16  | 0.38 | 0.50              | 0.13          | 0.11                                | 0.64           |
|   | Total                      | 218 | 0.62 | 0.49              | 0.03          | 0.56                                | 0.69           |
| <b>Scenario 5-<br/>Patient 2<br/>(Verbatim<br/>Answer #1)</b> | None At All                | 4   | 0.00 | 0.00              | 0.00          | 0.00                                | 0.00           |
|   | Very Low                   | 9   | 0.33 | 0.50              | 0.17          | -0.05                               | 0.72           |
|   | Low                        | 17  | 0.29 | 0.47              | 0.11          | 0.05                                | 0.54           |
|   | Medium                     | 62  | 0.26 | 0.44              | 0.06          | 0.15                                | 0.37           |
|   | High                       | 63  | 0.17 | 0.38              | 0.05          | 0.08                                | 0.27           |
|   | Very High                  | 47  | 0.32 | 0.47              | 0.07          | 0.18                                | 0.46           |
|   | The Highest Level (Expert) | 16  | 0.19 | 0.40              | 0.10          | -0.03                               | 0.40           |
|   | Total                      | 218 | 0.24 | 0.43              | 0.03          | 0.19                                | 0.30           |

Table C.8 (Continued)

|   |                            | N   | Mean | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|---|----------------------------|-----|------|-------------------|---------------|-------------------------------------|----------------|
|   |                            |     |      |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| <b>Scenario 5-<br/>Patient 2<br/>(Verbatim<br/>Answer #2)</b> | None At All                | 4   | 0.00 | 0.00              | 0.00          | 0.00                                | 0.00           |
|   | Very Low                   | 9   | 0.00 | 0.00              | 0.00          | 0.00                                | 0.00           |
|   | Low                        | 17  | 0.00 | 0.00              | 0.00          | 0.00                                | 0.00           |
|   | Medium                     | 62  | 0.15 | 0.36              | 0.05          | 0.06                                | 0.24           |
|   | High                       | 63  | 0.10 | 0.30              | 0.04          | 0.02                                | 0.17           |
|   | Very High                  | 47  | 0.15 | 0.36              | 0.05          | 0.04                                | 0.25           |
|   | The Highest Level (Expert) | 16  | 0.38 | 0.50              | 0.13          | 0.11                                | 0.64           |
|   | Total                      | 218 | 0.13 | 0.34              | 0.02          | 0.08                                | 0.17           |
| <b>Scenario 6<br/>(Gist<br/>Answer)</b>                       | None At All                | 4   | 0.75 | 0.50              | 0.25          | -0.05                               | 1.55           |
|   | Very Low                   | 9   | 0.78 | 0.44              | 0.15          | 0.44                                | 1.12           |
|   | Low                        | 17  | 0.76 | 0.44              | 0.11          | 0.54                                | 0.99           |
|   | Medium                     | 62  | 0.68 | 0.47              | 0.06          | 0.56                                | 0.80           |
|   | High                       | 63  | 0.63 | 0.49              | 0.06          | 0.51                                | 0.76           |
|   | Very High                  | 47  | 0.74 | 0.44              | 0.06          | 0.62                                | 0.87           |
|   | The Highest Level (Expert) | 16  | 0.69 | 0.48              | 0.12          | 0.43                                | 0.94           |
|   | Total                      | 218 | 0.69 | 0.46              | 0.03          | 0.63                                | 0.75           |
| <b>Scenario 6<br/>(Verbatim<br/>Answer)</b>                   | None At All                | 4   | 0.25 | 0.50              | 0.25          | -0.55                               | 1.05           |
|   | Very Low                   | 9   | 0.22 | 0.44              | 0.15          | -0.12                               | 0.56           |
|   | Low                        | 17  | 0.24 | 0.44              | 0.11          | 0.01                                | 0.46           |
|   | Medium                     | 62  | 0.29 | 0.46              | 0.06          | 0.17                                | 0.41           |
|   | High                       | 63  | 0.37 | 0.49              | 0.06          | 0.24                                | 0.49           |
|   | Very High                  | 47  | 0.26 | 0.44              | 0.06          | 0.13                                | 0.38           |
|   | The Highest Level (Expert) | 16  | 0.25 | 0.45              | 0.11          | 0.01                                | 0.49           |
|   | Total                      | 218 | 0.29 | 0.46              | 0.03          | 0.23                                | 0.35           |
| <b>Scenario 7<br/>(Gist<br/>Answer)</b>                       | None At All                | 4   | 0.50 | 0.58              | 0.29          | -0.42                               | 1.42           |
|   | Very Low                   | 9   | 0.56 | 0.53              | 0.18          | 0.15                                | 0.96           |
|   | Low                        | 17  | 0.35 | 0.49              | 0.12          | 0.10                                | 0.61           |
|   | Medium                     | 62  | 0.52 | 0.50              | 0.06          | 0.39                                | 0.64           |
|   | High                       | 63  | 0.43 | 0.50              | 0.06          | 0.30                                | 0.55           |
|   | Very High                  | 46  | 0.52 | 0.51              | 0.07          | 0.37                                | 0.67           |
|   | The Highest Level (Expert) | 16  | 0.44 | 0.51              | 0.13          | 0.16                                | 0.71           |
|   | Total                      | 217 | 0.47 | 0.50              | 0.03          | 0.41                                | 0.54           |
| <b>Scenario 7<br/>(Verbatim<br/>Answer)</b>                   | None At All                | 4   | 0.00 | 0.00              | 0.00          | 0.00                                | 0.00           |
|   | Very Low                   | 9   | 0.00 | 0.00              | 0.00          | 0.00                                | 0.00           |
|   | Low                        | 17  | 0.00 | 0.00              | 0.00          | 0.00                                | 0.00           |
|   | Medium                     | 62  | 0.15 | 0.36              | 0.05          | 0.06                                | 0.24           |
|   | High                       | 63  | 0.10 | 0.30              | 0.04          | 0.02                                | 0.17           |
|   | Very High                  | 46  | 0.15 | 0.36              | 0.05          | 0.04                                | 0.25           |
|   | The Highest Level (Expert) | 16  | 0.38 | 0.50              | 0.13          | 0.11                                | 0.64           |
|   | Total                      | 217 | 0.13 | 0.34              | 0.02          | 0.08                                | 0.17           |

Table C.9

*Pairwise Comparison of Medical Case Scenario Answers with Provider's Experience at their*

*Current Certification Level (Scale-Based)*

| Dependent Variable  | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|---|---|---|-----------------------|------------|-------|-------------------------|-------------|
|   |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 1-<br/>Treatment 1<br/>(Correct<br/>Answer)</b> | None At All   | Very Low  | 0.00                  | 0.19       | 1.00  | -0.38                   | 0.38        |
|   |   | Low   | 0.18                  | 0.18       | 0.32  | -0.17                   | 0.53        |
|   |   | Medium  | 0.10                  | 0.17       | 0.56  | -0.23                   | 0.42        |
|   |   | High  | 0.16                  | 0.17       | 0.34  | -0.17                   | 0.48        |
|   |   | Very High   | 0.11                  | 0.17       | 0.53  | -0.22                   | 0.44        |
|   |   | The Highest Level (Expert)                            | 0.06                  | 0.18       | 0.73  | -0.29                   | 0.42        |
|   | Very Low  | None At All   | 0.00                  | 0.19       | 1.00  | -0.38                   | 0.38        |
|   |   | Low   | 0.18                  | 0.13       | 0.18  | -0.08                   | 0.44        |
|   |   | Medium  | 0.10                  | 0.11       | 0.40  | -0.13                   | 0.32        |
|   |   | High  | 0.16                  | 0.11       | 0.17  | -0.07                   | 0.38        |
|   |   | Very High   | 0.11                  | 0.12       | 0.36  | -0.12                   | 0.34        |
|   |   | The Highest Level (Expert)                            | 0.06                  | 0.13       | 0.64  | -0.20                   | 0.33        |
|   | Low   | None At All   | -0.18                 | 0.18       | 0.32  | -0.53                   | 0.17        |
|   |   | Very Low  | -0.18                 | 0.13       | 0.18  | -0.44                   | 0.08        |
|   |   | Medium  | -0.08                 | 0.09       | 0.37  | -0.25                   | 0.09        |
|   |   | High  | -0.02                 | 0.09       | 0.84  | -0.19                   | 0.16        |
|   |   | Very High   | -0.07                 | 0.09       | 0.44  | -0.25                   | 0.11        |
|   |   | The Highest Level (Expert)                            | -0.11                 | 0.11       | 0.31  | -0.33                   | 0.11        |
|   | Medium  | None At All   | -0.10                 | 0.17       | 0.56  | -0.42                   | 0.23        |
|   |   | Very Low  | -0.10                 | 0.11       | 0.40  | -0.32                   | 0.13        |
|   |   | Low   | 0.08                  | 0.09       | 0.37  | -0.09                   | 0.25        |
|   |   | High  | 0.06                  | 0.06       | 0.28  | -0.05                   | 0.18        |
|   |   | Very High   | 0.01                  | 0.06       | 0.88  | -0.11                   | 0.13        |
|   |   | The Highest Level (Expert)                            | -0.03                 | 0.09       | 0.70  | -0.21                   | 0.14        |
|   | High  | None At All   | -0.16                 | 0.17       | 0.34  | -0.48                   | 0.17        |
|   |   | Very Low  | -0.16                 | 0.11       | 0.17  | -0.38                   | 0.07        |
|   |   | Low   | 0.02                  | 0.09       | 0.84  | -0.16                   | 0.19        |
|   |   | Medium  | -0.06                 | 0.06       | 0.28  | -0.18                   | 0.05        |
|   |   | Very High   | -0.05                 | 0.06       | 0.40  | -0.17                   | 0.07        |
|   |   | The Highest Level (Expert)                            | -0.10                 | 0.09       | 0.29  | -0.27                   | 0.08        |
| Very High   | None At All   | -0.11   | 0.17                  | 0.53       | -0.44 | 0.22                    |             |
|   | Very Low  | -0.11   | 0.12                  | 0.36       | -0.34 | 0.12                    |             |
|   | Low   | 0.07  | 0.09                  | 0.44       | -0.11 | 0.25                    |             |
|   | Medium  | -0.01   | 0.06                  | 0.88       | -0.13 | 0.11                    |             |
|   | High  | 0.05  | 0.06                  | 0.40       | -0.07 | 0.17                    |             |
|   | The Highest Level (Expert)                            | -0.04   | 0.09                  | 0.64       | -0.23 | 0.14                    |             |
| The Highest Level (Expert)                                  | None At All   | -0.06   | 0.18                  | 0.73       | -0.42 | 0.29                    |             |
|   | Very Low  | -0.06   | 0.13                  | 0.64       | -0.33 | 0.20                    |             |
|   | Low   | 0.11  | 0.11                  | 0.31       | -0.11 | 0.33                    |             |
|   | Medium  | 0.03  | 0.09                  | 0.70       | -0.14 | 0.21                    |             |
|   | High  | 0.10  | 0.09                  | 0.29       | -0.08 | 0.27                    |             |
|   | Very High   | 0.04  | 0.09                  | 0.64       | -0.14 | 0.23                    |             |

Table C.9 (continued)

| Dependent Variable  | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|---|---|---|-----------------------|------------|-------|-------------------------|-------------|
|   |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 1-<br/>Treatment 2<br/>(Correct<br/>Answer)</b> | None At All   | Very Low  | 0.00                  | 0.29       | 1.00  | -0.58                   | 0.58        |
|   |   | Low   | 0.47                  | 0.28       | 0.09  | -0.07                   | 1.01        |
|   |   | Medium  | 0.38                  | 0.26       | 0.15  | -0.14                   | 0.89        |
|   |   | High  | 0.27                  | 0.26       | 0.30  | -0.24                   | 0.78        |
|   |   | Very High   | 0.15                  | 0.26       | 0.57  | -0.37                   | 0.66        |
|   |   | The Highest Level (Expert)                            | 0.31                  | 0.28       | 0.26  | -0.23                   | 0.86        |
|   | Very Low  | None At All   | 0.00                  | 0.29       | 1.00  | -0.58                   | 0.58        |
|   |   | Low   | 0.47*                 | 0.18       | 0.01  | 0.11                    | 0.83        |
|   |   | Medium  | 0.38*                 | 0.16       | 0.02  | 0.07                    | 0.69        |
|   |   | High  | 0.27                  | 0.16       | 0.09  | -0.04                   | 0.58        |
|   |   | Very High   | 0.15                  | 0.16       | 0.35  | -0.17                   | 0.46        |
|   |   | The Highest Level (Expert)                            | 0.31                  | 0.18       | 0.09  | -0.05                   | 0.67        |
|   | Low   | None At All   | -0.47                 | 0.28       | 0.09  | -1.01                   | 0.07        |
|   |   | Very Low  | -0.47*                | 0.18       | 0.01  | -0.83                   | -0.11       |
|   |   | Medium  | -0.09                 | 0.12       | 0.44  | -0.33                   | 0.14        |
|   |   | High  | -0.20                 | 0.12       | 0.10  | -0.44                   | 0.04        |
|   |   | Very High   | -0.32*                | 0.12       | 0.01  | -0.57                   | -0.08       |
|   |   | The Highest Level (Expert)                            | -0.16                 | 0.15       | 0.30  | -0.46                   | 0.14        |
|   | Medium  | None At All   | -0.38                 | 0.26       | 0.15  | -0.89                   | 0.14        |
|   |   | Very Low  | -0.38*                | 0.16       | 0.02  | -0.69                   | -0.07       |
|   |   | Low   | 0.09                  | 0.12       | 0.44  | -0.14                   | 0.33        |
|   |   | High  | -0.11                 | 0.08       | 0.18  | -0.26                   | 0.05        |
|   |   | Very High   | -0.23*                | 0.09       | 0.01  | -0.40                   | -0.06       |
|   |   | The Highest Level (Expert)                            | -0.07                 | 0.12       | 0.60  | -0.31                   | 0.18        |
|   | High  | None At All   | -0.27                 | 0.26       | 0.30  | -0.78                   | 0.24        |
|   |   | Very Low  | -0.27                 | 0.16       | 0.09  | -0.58                   | 0.04        |
|   |   | Low   | 0.20                  | 0.12       | 0.10  | -0.04                   | 0.44        |
| Medium  |   | 0.11  | 0.08                  | 0.18       | -0.05 | 0.26                    |             |
| Very High   |   | -0.12   | 0.09                  | 0.16       | -0.29 | 0.05                    |             |
| The Highest Level (Expert)                                  |   | 0.04  | 0.12                  | 0.73       | -0.20 | 0.29                    |             |
| Very High   | None At All   | -0.15   | 0.26                  | 0.57       | -0.66 | 0.37                    |             |
|   | Very Low  | -0.15   | 0.16                  | 0.35       | -0.46 | 0.17                    |             |
|   | Low   | 0.32*   | 0.12                  | 0.01       | 0.08  | 0.57                    |             |
|   | Medium  | 0.23*   | 0.09                  | 0.01       | 0.06  | 0.40                    |             |
|   | High  | 0.12  | 0.09                  | 0.16       | -0.05 | 0.29                    |             |
|   | The Highest Level (Expert)                            | 0.16  | 0.13                  | 0.20       | -0.09 | 0.41                    |             |
| The Highest Level (Expert)                                  | None At All   | -0.31   | 0.28                  | 0.26       | -0.86 | 0.23                    |             |
|   | Very Low  | -0.31   | 0.18                  | 0.09       | -0.67 | 0.05                    |             |
|   | Low   | 0.16  | 0.15                  | 0.30       | -0.14 | 0.46                    |             |
|   | Medium  | 0.07  | 0.12                  | 0.60       | -0.18 | 0.31                    |             |
|   | High  | -0.04   | 0.12                  | 0.73       | -0.29 | 0.20                    |             |
|   | Very High   | -0.16   | 0.13                  | 0.20       | -0.41 | 0.09                    |             |

Table C.9 (Continued)

| Dependent Variable                     | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|--|---|---|-----------------------|------------|-------|-------------------------|-------------|
|  |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 2<br/>(Correct Answer)</b> | None At All   | Very Low  | 0.08                  | 0.25       | 0.73  | -0.40                   | 0.57        |
|  |   | Low   | -0.13                 | 0.23       | 0.56  | -0.58                   | 0.31        |
|  |   | Medium  | 0.01                  | 0.21       | 0.97  | -0.41                   | 0.42        |
|  |   | High  | -0.09                 | 0.21       | 0.67  | -0.51                   | 0.32        |
|  |   | Very High   | -0.06                 | 0.21       | 0.78  | -0.48                   | 0.36        |
|  |   | The Highest Level (Expert)                            | 0.00                  | 0.23       | 1.00  | -0.45                   | 0.45        |
|  | Very Low  | None At All   | -0.08                 | 0.25       | 0.73  | -0.57                   | 0.40        |
|  |   | Low   | -0.22                 | 0.17       | 0.20  | -0.55                   | 0.12        |
|  |   | Medium  | -0.08                 | 0.15       | 0.61  | -0.36                   | 0.21        |
|  |   | High  | -0.17                 | 0.15       | 0.23  | -0.46                   | 0.11        |
|  |   | Very High   | -0.14                 | 0.15       | 0.34  | -0.43                   | 0.15        |
|  |   | The Highest Level (Expert)                            | -0.08                 | 0.17       | 0.62  | -0.42                   | 0.25        |
|  | Low   | None At All   | 0.13                  | 0.23       | 0.56  | -0.31                   | 0.58        |
|  |   | Very Low  | 0.22                  | 0.17       | 0.20  | -0.12                   | 0.55        |
|  |   | Medium  | 0.14                  | 0.11       | 0.21  | -0.08                   | 0.36        |
|  |   | High  | 0.04                  | 0.11       | 0.71  | -0.18                   | 0.26        |
|  |   | Very High   | 0.07                  | 0.12       | 0.52  | -0.15                   | 0.30        |
|  |   | The Highest Level (Expert)                            | 0.13                  | 0.14       | 0.35  | -0.15                   | 0.41        |
|  | Medium  | None At All   | -0.01                 | 0.21       | 0.97  | -0.42                   | 0.41        |
|  |   | Very Low  | 0.08                  | 0.15       | 0.61  | -0.21                   | 0.36        |
|  |   | Low   | -0.14                 | 0.11       | 0.21  | -0.36                   | 0.08        |
|  |   | High  | -0.10                 | 0.07       | 0.18  | -0.24                   | 0.04        |
|  |   | Very High   | -0.07                 | 0.08       | 0.40  | -0.22                   | 0.09        |
|  |   | The Highest Level (Expert)                            | -0.01                 | 0.11       | 0.94  | -0.23                   | 0.22        |
|  | High  | None At All   | 0.09                  | 0.21       | 0.67  | -0.32                   | 0.51        |
|  |   | Very Low  | 0.17                  | 0.15       | 0.23  | -0.11                   | 0.46        |
|  |   | Low   | -0.04                 | 0.11       | 0.71  | -0.26                   | 0.18        |
|  |   | Medium  | 0.10                  | 0.07       | 0.18  | -0.04                   | 0.24        |
|  |   | Very High   | 0.03                  | 0.08       | 0.68  | -0.12                   | 0.19        |
|  |   | The Highest Level (Expert)                            | 0.09                  | 0.11       | 0.43  | -0.13                   | 0.32        |
| Very High                              | None At All   | 0.06  | 0.21                  | 0.78       | -0.36 | 0.48                    |             |
|  | Very Low  | 0.14  | 0.15                  | 0.34       | -0.15 | 0.43                    |             |
|  | Low   | -0.07   | 0.12                  | 0.52       | -0.30 | 0.15                    |             |
|  | Medium  | 0.07  | 0.08                  | 0.40       | -0.09 | 0.22                    |             |
|  | High  | -0.03   | 0.08                  | 0.68       | -0.19 | 0.12                    |             |
|  | The Highest Level (Expert)                            | 0.06  | 0.12                  | 0.62       | -0.17 | 0.29                    |             |
| The Highest Level (Expert)             | None At All   | 0.00  | 0.23                  | 1.00       | -0.45 | 0.45                    |             |
|  | Very Low  | 0.08  | 0.17                  | 0.62       | -0.25 | 0.42                    |             |
|  | Low   | -0.13   | 0.14                  | 0.35       | -0.41 | 0.15                    |             |
|  | Medium  | 0.01  | 0.11                  | 0.94       | -0.22 | 0.23                    |             |
|  | High  | -0.09   | 0.11                  | 0.43       | -0.32 | 0.13                    |             |
|  | Very High   | -0.06   | 0.12                  | 0.62       | -0.29 | 0.17                    |             |

Table C.9 (Continued)

| Dependent Variable                     | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|--|---|---|-----------------------|------------|-------|-------------------------|-------------|
|  |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 3<br/>(Correct Answer)</b> | None At All   | Very Low  | -0.03                 | 0.22       | 0.90  | -0.45                   | 0.40        |
|  |   | Low   | -0.07                 | 0.20       | 0.71  | -0.47                   | 0.32        |
|  |   | Medium  | -0.12                 | 0.18       | 0.51  | -0.49                   | 0.24        |
|  |   | High  | -0.15                 | 0.18       | 0.40  | -0.52                   | 0.21        |
|  |   | Very High   | -0.10                 | 0.19       | 0.59  | -0.47                   | 0.27        |
|  |   | The Highest Level (Expert)                            | 0.19                  | 0.20       | 0.35  | -0.21                   | 0.58        |
|  | Very Low  | None At All   | 0.03                  | 0.22       | 0.90  | -0.40                   | 0.45        |
|  |   | Low   | -0.05                 | 0.15       | 0.76  | -0.34                   | 0.25        |
|  |   | Medium  | -0.09                 | 0.13       | 0.47  | -0.35                   | 0.16        |
|  |   | High  | -0.13                 | 0.13       | 0.32  | -0.38                   | 0.12        |
|  |   | Very High   | -0.07                 | 0.13       | 0.57  | -0.33                   | 0.18        |
|  |   | The Highest Level (Expert)                            | 0.22                  | 0.15       | 0.15  | -0.08                   | 0.51        |
|  | Low   | None At All   | 0.07                  | 0.20       | 0.71  | -0.32                   | 0.47        |
|  |   | Very Low  | 0.05                  | 0.15       | 0.76  | -0.25                   | 0.34        |
|  |   | Medium  | -0.05                 | 0.10       | 0.63  | -0.24                   | 0.15        |
|  |   | High  | -0.08                 | 0.10       | 0.41  | -0.27                   | 0.11        |
|  |   | Very High   | -0.03                 | 0.10       | 0.79  | -0.23                   | 0.17        |
|  |   | The Highest Level (Expert)                            | 0.26*                 | 0.12       | 0.04  | 0.02                    | 0.51        |
|  | Medium  | None At All   | 0.12                  | 0.18       | 0.51  | -0.24                   | 0.49        |
|  |   | Very Low  | 0.09                  | 0.13       | 0.47  | -0.16                   | 0.35        |
|  |   | Low   | 0.05                  | 0.10       | 0.63  | -0.15                   | 0.24        |
|  |   | High  | -0.03                 | 0.06       | 0.60  | -0.16                   | 0.09        |
|  |   | Very High   | 0.02                  | 0.07       | 0.77  | -0.12                   | 0.16        |
|  |   | The Highest Level (Expert)                            | 0.31*                 | 0.10       | 0.00  | 0.11                    | 0.51        |
|  | High  | None At All   | 0.15                  | 0.18       | 0.40  | -0.21                   | 0.52        |
|  |   | Very Low  | 0.13                  | 0.13       | 0.32  | -0.12                   | 0.38        |
|  |   | Low   | 0.08                  | 0.10       | 0.41  | -0.11                   | 0.27        |
|  |   | Medium  | 0.03                  | 0.06       | 0.60  | -0.09                   | 0.16        |
|  |   | Very High   | 0.05                  | 0.07       | 0.44  | -0.08                   | 0.19        |
|  |   | The Highest Level (Expert)                            | 0.34*                 | 0.10       | 0.00  | 0.14                    | 0.54        |
| Very High                              | None At All   | 0.10  | 0.19                  | 0.59       | -0.27 | 0.47                    |             |
|  | Very Low  | 0.07  | 0.13                  | 0.57       | -0.18 | 0.33                    |             |
|  | Low   | 0.03  | 0.10                  | 0.79       | -0.17 | 0.23                    |             |
|  | Medium  | -0.02   | 0.07                  | 0.77       | -0.16 | 0.12                    |             |
|  | High  | -0.05   | 0.07                  | 0.44       | -0.19 | 0.08                    |             |
|  | The Highest Level (Expert)                            | 0.29*   | 0.10                  | 0.01       | 0.08  | 0.49                    |             |
| The Highest Level (Expert)             | None At All   | -0.19   | 0.20                  | 0.35       | -0.58 | 0.21                    |             |
|  | Very Low  | -0.22   | 0.15                  | 0.15       | -0.51 | 0.08                    |             |
|  | Low   | -0.26*  | 0.12                  | 0.04       | -0.51 | -0.02                   |             |
|  | Medium  | -0.31*  | 0.10                  | 0.00       | -0.51 | -0.11                   |             |
|  | High  | -0.34*  | 0.10                  | 0.00       | -0.54 | -0.14                   |             |
|  | Very High   | -0.29*  | 0.10                  | 0.01       | -0.49 | -0.08                   |             |

Table C.9 (Continued)

| Dependent Variable                     | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|--|---|---|-----------------------|------------|-------|-------------------------|-------------|
|  |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 4<br/>(Correct Answer)</b> | None At All   | Very Low  | -0.50*                | 0.19       | 0.01  | -0.87                   | -0.13       |
|  |   | Low   | -0.50*                | 0.17       | 0.01  | -0.84                   | -0.16       |
|  |   | Medium  | -0.40*                | 0.16       | 0.01  | -0.72                   | -0.08       |
|  |   | High  | -0.31                 | 0.16       | 0.06  | -0.63                   | 0.01        |
|  |   | Very High   | -0.41*                | 0.16       | 0.01  | -0.74                   | -0.09       |
|  |   | The Highest Level (Expert)                            | -0.44*                | 0.18       | 0.01  | -0.78                   | -0.09       |
|  | Very Low  | None At All   | 0.50*                 | 0.19       | 0.01  | 0.13                    | 0.87        |
|  |   | Low   | 0.00                  | 0.13       | 1.00  | -0.25                   | 0.25        |
|  |   | Medium  | 0.10                  | 0.11       | 0.39  | -0.12                   | 0.32        |
|  |   | High  | 0.19                  | 0.11       | 0.09  | -0.03                   | 0.41        |
|  |   | Very High   | 0.09                  | 0.11       | 0.46  | -0.14                   | 0.31        |
|  |   | The Highest Level (Expert)                            | 0.06                  | 0.13       | 0.63  | -0.20                   | 0.32        |
|  | Low   | None At All   | 0.50*                 | 0.17       | 0.01  | 0.16                    | 0.84        |
|  |   | Very Low  | 0.00                  | 0.13       | 1.00  | -0.25                   | 0.25        |
|  |   | Medium  | 0.10                  | 0.09       | 0.26  | -0.07                   | 0.27        |
|  |   | High  | 0.19*                 | 0.09       | 0.03  | 0.02                    | 0.36        |
|  |   | Very High   | 0.09                  | 0.09       | 0.34  | -0.09                   | 0.26        |
|  |   | The Highest Level (Expert)                            | 0.06                  | 0.11       | 0.57  | -0.15                   | 0.28        |
|  | Medium  | None At All   | 0.40*                 | 0.16       | 0.01  | 0.08                    | 0.72        |
|  |   | Very Low  | -0.10                 | 0.11       | 0.39  | -0.32                   | 0.12        |
|  |   | Low   | -0.10                 | 0.09       | 0.26  | -0.27                   | 0.07        |
|  |   | High  | 0.09                  | 0.06       | 0.10  | -0.02                   | 0.20        |
|  |   | Very High   | -0.01                 | 0.06       | 0.85  | -0.13                   | 0.11        |
|  |   | The Highest Level (Expert)                            | -0.03                 | 0.09       | 0.70  | -0.21                   | 0.14        |
|  | High  | None At All   | 0.31                  | 0.16       | 0.06  | -0.01                   | 0.63        |
|  |   | Very Low  | -0.19                 | 0.11       | 0.09  | -0.41                   | 0.03        |
|  |   | Low   | -0.19*                | 0.09       | 0.03  | -0.36                   | -0.02       |
|  |   | Medium  | -0.09                 | 0.06       | 0.10  | -0.20                   | 0.02        |
|  |   | Very High   | -0.11                 | 0.06       | 0.08  | -0.22                   | 0.01        |
|  |   | The Highest Level (Expert)                            | -0.13                 | 0.09       | 0.15  | -0.30                   | 0.05        |
| Very High                              | None At All   | 0.41*   | 0.16                  | 0.01       | 0.09  | 0.74                    |             |
|  | Very Low  | -0.09   | 0.11                  | 0.46       | -0.31 | 0.14                    |             |
|  | Low   | -0.09   | 0.09                  | 0.34       | -0.26 | 0.09                    |             |
|  | Medium  | 0.01  | 0.06                  | 0.85       | -0.11 | 0.13                    |             |
|  | High  | 0.11  | 0.06                  | 0.08       | -0.01 | 0.22                    |             |
|  | The Highest Level (Expert)                            | -0.02   | 0.09                  | 0.80       | -0.20 | 0.16                    |             |
| The Highest Level (Expert)             | None At All   | 0.44*   | 0.18                  | 0.01       | 0.09  | 0.78                    |             |
|  | Very Low  | -0.06   | 0.13                  | 0.63       | -0.32 | 0.20                    |             |
|  | Low   | -0.06   | 0.11                  | 0.57       | -0.28 | 0.15                    |             |
|  | Medium  | 0.03  | 0.09                  | 0.70       | -0.14 | 0.21                    |             |
|  | High  | 0.13  | 0.09                  | 0.15       | -0.05 | 0.30                    |             |
|  | Very High   | 0.02  | 0.09                  | 0.80       | -0.16 | 0.20                    |             |

Table C.9 (Continued)

| Dependent Variable                                    | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|---|---|---|-----------------------|------------|-------|-------------------------|-------------|
|   |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 5-<br/>Patient 1<br/>(Correct Answer)</b> | None At All   | Very Low  | 0.11                  | 0.11       | 0.30  | -0.10                   | 0.32        |
|   |   | Low   | 0.00                  | 0.10       | 1.00  | -0.19                   | 0.19        |
|   |   | Medium  | 0.03                  | 0.09       | 0.73  | -0.15                   | 0.21        |
|   |   | High  | 0.02                  | 0.09       | 0.86  | -0.16                   | 0.20        |
|   |   | Very High   | 0.04                  | 0.09       | 0.65  | -0.14                   | 0.23        |
|   |   | The Highest Level (Expert)                            | 0.06                  | 0.10       | 0.53  | -0.13                   | 0.26        |
|   | Very Low  | None At All   | -0.11                 | 0.11       | 0.30  | -0.32                   | 0.10        |
|   |   | Low   | -0.11                 | 0.07       | 0.13  | -0.26                   | 0.03        |
|   |   | Medium  | -0.08                 | 0.06       | 0.22  | -0.20                   | 0.05        |
|   |   | High  | -0.10                 | 0.06       | 0.13  | -0.22                   | 0.03        |
|   |   | Very High   | -0.07                 | 0.06       | 0.29  | -0.20                   | 0.06        |
|   |   | The Highest Level (Expert)                            | -0.05                 | 0.07       | 0.51  | -0.19                   | 0.10        |
|   | Low   | None At All   | 0.00                  | 0.10       | 1.00  | -0.19                   | 0.19        |
|   |   | Very Low  | 0.11                  | 0.07       | 0.13  | -0.03                   | 0.26        |
|   |   | Medium  | 0.03                  | 0.05       | 0.51  | -0.06                   | 0.13        |
|   |   | High  | 0.02                  | 0.05       | 0.74  | -0.08                   | 0.11        |
|   |   | Very High   | 0.04                  | 0.05       | 0.40  | -0.06                   | 0.14        |
|   |   | The Highest Level (Expert)                            | 0.06                  | 0.06       | 0.31  | -0.06                   | 0.18        |
|   | Medium  | None At All   | -0.03                 | 0.09       | 0.73  | -0.21                   | 0.15        |
|   |   | Very Low  | 0.08                  | 0.06       | 0.22  | -0.05                   | 0.20        |
|   |   | Low   | -0.03                 | 0.05       | 0.51  | -0.13                   | 0.06        |
|   |   | High  | -0.02                 | 0.03       | 0.61  | -0.08                   | 0.05        |
|   |   | Very High   | 0.01                  | 0.03       | 0.77  | -0.06                   | 0.08        |
|   |   | The Highest Level (Expert)                            | 0.03                  | 0.05       | 0.54  | -0.07                   | 0.13        |
|   | High  | None At All   | -0.02                 | 0.09       | 0.86  | -0.20                   | 0.16        |
|   |   | Very Low  | 0.10                  | 0.06       | 0.13  | -0.03                   | 0.22        |
|   |   | Low   | -0.02                 | 0.05       | 0.74  | -0.11                   | 0.08        |
|   |   | Medium  | 0.02                  | 0.03       | 0.61  | -0.05                   | 0.08        |
|   |   | Very High   | 0.03                  | 0.03       | 0.44  | -0.04                   | 0.09        |
|   |   | The Highest Level (Expert)                            | 0.05                  | 0.05       | 0.35  | -0.05                   | 0.14        |
| Very High   | None At All   | -0.04   | 0.09                  | 0.65       | -0.23 | 0.14                    |             |
|   | Very Low  | 0.07  | 0.06                  | 0.29       | -0.06 | 0.20                    |             |
|   | Low   | -0.04   | 0.05                  | 0.40       | -0.14 | 0.06                    |             |
|   | Medium  | -0.01   | 0.03                  | 0.77       | -0.08 | 0.06                    |             |
|   | High  | -0.03   | 0.03                  | 0.44       | -0.09 | 0.04                    |             |
|   | The Highest Level (Expert)                            | 0.02  | 0.05                  | 0.70       | -0.08 | 0.12                    |             |
| The Highest Level (Expert)                            | None At All   | -0.06   | 0.10                  | 0.53       | -0.26 | 0.13                    |             |
|   | Very Low  | 0.05  | 0.07                  | 0.51       | -0.10 | 0.19                    |             |
|   | Low   | -0.06   | 0.06                  | 0.31       | -0.18 | 0.06                    |             |
|   | Medium  | -0.03   | 0.05                  | 0.54       | -0.13 | 0.07                    |             |
|   | High  | -0.05   | 0.05                  | 0.35       | -0.14 | 0.05                    |             |
|   | Very High   | -0.02   | 0.05                  | 0.70       | -0.12 | 0.08                    |             |



Table C.9 (Continued)

| Dependent Variable                           | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|--|---|---|-----------------------|------------|-------|-------------------------|-------------|
|  |   |   |                       |            |       | Lower Bound             | Upper Bound |
| Scenario 5-<br>Patient 2<br>(Gist<br>Answer) | None At All   | Very Low  | 0.33                  | 0.29       | 0.25  | -0.23                   | 0.90        |
|  |   | Low   | 0.29                  | 0.27       | 0.27  | -0.23                   | 0.82        |
|  |   | Medium  | 0.40                  | 0.25       | 0.10  | -0.08                   | 0.89        |
|  |   | High  | 0.27                  | 0.25       | 0.28  | -0.22                   | 0.76        |
|  |   | Very High   | 0.47                  | 0.25       | 0.06  | -0.02                   | 0.96        |
|  |   | The Highest Level (Expert)                            | 0.63*                 | 0.27       | 0.02  | 0.10                    | 1.15        |
|  | Very Low  | None At All   | -0.33                 | 0.29       | 0.25  | -0.90                   | 0.23        |
|  |   | Low   | -0.04                 | 0.20       | 0.84  | -0.43                   | 0.35        |
|  |   | Medium  | 0.07                  | 0.17       | 0.68  | -0.27                   | 0.41        |
|  |   | High  | -0.06                 | 0.17       | 0.71  | -0.40                   | 0.27        |
|  |   | Very High   | 0.13                  | 0.17       | 0.44  | -0.21                   | 0.48        |
|  |   | The Highest Level (Expert)                            | 0.29                  | 0.20       | 0.15  | -0.10                   | 0.68        |
|  | Low   | None At All   | -0.29                 | 0.27       | 0.27  | -0.82                   | 0.23        |
|  |   | Very Low  | 0.04                  | 0.20       | 0.84  | -0.35                   | 0.43        |
|  |   | Medium  | 0.11                  | 0.13       | 0.41  | -0.15                   | 0.37        |
|  |   | High  | -0.02                 | 0.13       | 0.85  | -0.28                   | 0.23        |
|  |   | Very High   | 0.17                  | 0.14       | 0.20  | -0.09                   | 0.44        |
|  |   | The Highest Level (Expert)                            | 0.33*                 | 0.17       | 0.05  | 0.00                    | 0.66        |
|  | Medium  | None At All   | -0.40                 | 0.25       | 0.10  | -0.89                   | 0.08        |
|  |   | Very Low  | -0.07                 | 0.17       | 0.68  | -0.41                   | 0.27        |
|  |   | Low   | -0.11                 | 0.13       | 0.41  | -0.37                   | 0.15        |
|  |   | High  | -0.13                 | 0.09       | 0.12  | -0.30                   | 0.04        |
|  |   | Very High   | 0.06                  | 0.09       | 0.48  | -0.12                   | 0.25        |
|  |   | The Highest Level (Expert)                            | 0.22                  | 0.13       | 0.10  | -0.04                   | 0.49        |
|  | High  | None At All   | -0.27                 | 0.25       | 0.28  | -0.76                   | 0.22        |
|  |   | Very Low  | 0.06                  | 0.17       | 0.71  | -0.27                   | 0.40        |
|  |   | Low   | 0.02                  | 0.13       | 0.85  | -0.23                   | 0.28        |
|  |   | Medium  | 0.13                  | 0.09       | 0.12  | -0.04                   | 0.30        |
|  |   | Very High   | 0.20*                 | 0.09       | 0.03  | 0.02                    | 0.38        |
|  |   | The Highest Level (Expert)                            | 0.36*                 | 0.13       | 0.01  | 0.09                    | 0.62        |
| Very High                                    | None At All   | -0.47   | 0.25                  | 0.06       | -0.96 | 0.02                    |             |
|  | Very Low  | -0.13   | 0.17                  | 0.44       | -0.48 | 0.21                    |             |
|  | Low   | -0.17   | 0.14                  | 0.20       | -0.44 | 0.09                    |             |
|  | Medium  | -0.06   | 0.09                  | 0.48       | -0.25 | 0.12                    |             |
|  | High  | -0.20*  | 0.09                  | 0.03       | -0.38 | -0.02                   |             |
|  | The Highest Level (Expert)                            | 0.16  | 0.14                  | 0.26       | -0.12 | 0.43                    |             |
| The Highest Level (Expert)                   | None At All   | -0.63*  | 0.27                  | 0.02       | -1.15 | -0.10                   |             |
|  | Very Low  | -0.29   | 0.20                  | 0.15       | -0.68 | 0.10                    |             |
|  | Low   | -0.33*  | 0.17                  | 0.05       | -0.66 | 0.00                    |             |
|  | Medium  | -0.22   | 0.13                  | 0.10       | -0.49 | 0.04                    |             |
|  | High  | -0.36*  | 0.13                  | 0.01       | -0.62 | -0.09                   |             |
|  | Very High   | -0.16   | 0.14                  | 0.26       | -0.43 | 0.12                    |             |

Table C.9 (Continued)

| Dependent Variable                                  | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|---|---|---|-----------------------|------------|-------|-------------------------|-------------|
|   |   |   |                       |            |       | Lower Bound             | Upper Bound |
| Scenario 5-<br>Patient 2<br>(Verbatim<br>#1 Answer) | None At All   | Very Low  | -0.33                 | 0.26       | 0.20  | -0.84                   | 0.18        |
|   |   | Low   | -0.29                 | 0.24       | 0.22  | -0.77                   | 0.18        |
|   |   | Medium  | -0.26                 | 0.22       | 0.25  | -0.70                   | 0.18        |
|   |   | High  | -0.17                 | 0.22       | 0.43  | -0.61                   | 0.26        |
|   |   | Very High   | -0.32                 | 0.22       | 0.16  | -0.76                   | 0.12        |
|   |   | The Highest Level (Expert)                            | -0.19                 | 0.24       | 0.44  | -0.66                   | 0.29        |
|   | Very Low  | None At All   | 0.33                  | 0.26       | 0.20  | -0.18                   | 0.84        |
|   |   | Low   | 0.04                  | 0.18       | 0.83  | -0.31                   | 0.39        |
|   |   | Medium  | 0.08                  | 0.15       | 0.63  | -0.23                   | 0.38        |
|   |   | High  | 0.16                  | 0.15       | 0.30  | -0.14                   | 0.46        |
|   |   | Very High   | 0.01                  | 0.16       | 0.93  | -0.29                   | 0.32        |
|   |   | The Highest Level (Expert)                            | 0.15                  | 0.18       | 0.42  | -0.21                   | 0.50        |
|   | Low   | None At All   | 0.29                  | 0.24       | 0.22  | -0.18                   | 0.77        |
|   |   | Very Low  | -0.04                 | 0.18       | 0.83  | -0.39                   | 0.31        |
|   |   | Medium  | 0.04                  | 0.12       | 0.76  | -0.20                   | 0.27        |
|   |   | High  | 0.12                  | 0.12       | 0.31  | -0.11                   | 0.35        |
|   |   | Very High   | -0.03                 | 0.12       | 0.84  | -0.27                   | 0.22        |
|   |   | The Highest Level (Expert)                            | 0.11                  | 0.15       | 0.48  | -0.19                   | 0.40        |
|   | Medium  | None At All   | 0.26                  | 0.22       | 0.25  | -0.18                   | 0.70        |
|   |   | Very Low  | -0.08                 | 0.15       | 0.63  | -0.38                   | 0.23        |
|   |   | Low   | -0.04                 | 0.12       | 0.76  | -0.27                   | 0.20        |
|   |   | High  | 0.08                  | 0.08       | 0.28  | -0.07                   | 0.24        |
|   |   | Very High   | -0.06                 | 0.08       | 0.46  | -0.23                   | 0.10        |
|   |   | The Highest Level (Expert)                            | 0.07                  | 0.12       | 0.56  | -0.17                   | 0.31        |
|   | High  | None At All   | 0.17                  | 0.22       | 0.43  | -0.26                   | 0.61        |
|   |   | Very Low  | -0.16                 | 0.15       | 0.30  | -0.46                   | 0.14        |
|   |   | Low   | -0.12                 | 0.12       | 0.31  | -0.35                   | 0.11        |
|   |   | Medium  | -0.08                 | 0.08       | 0.28  | -0.24                   | 0.07        |
|   |   | Very High   | -0.14                 | 0.08       | 0.08  | -0.31                   | 0.02        |
|   |   | The Highest Level (Expert)                            | -0.01                 | 0.12       | 0.92  | -0.25                   | 0.22        |
| Very High   | None At All   | 0.32  | 0.22                  | 0.16       | -0.12 | 0.76                    |             |
|   | Very Low  | -0.01   | 0.16                  | 0.93       | -0.32 | 0.29                    |             |
|   | Low   | 0.03  | 0.12                  | 0.84       | -0.22 | 0.27                    |             |
|   | Medium  | 0.06  | 0.08                  | 0.46       | -0.10 | 0.23                    |             |
|   | High  | 0.14  | 0.08                  | 0.08       | -0.02 | 0.31                    |             |
|   | The Highest Level (Expert)                            | 0.13  | 0.12                  | 0.29       | -0.11 | 0.38                    |             |
| The Highest Level (Expert)                          | None At All   | 0.19  | 0.24                  | 0.44       | -0.29 | 0.66                    |             |
|   | Very Low  | -0.15   | 0.18                  | 0.42       | -0.50 | 0.21                    |             |
|   | Low   | -0.11   | 0.15                  | 0.48       | -0.40 | 0.19                    |             |
|   | Medium  | -0.07   | 0.12                  | 0.56       | -0.31 | 0.17                    |             |
|   | High  | 0.01  | 0.12                  | 0.92       | -0.22 | 0.25                    |             |
|   | Very High   | -0.13   | 0.12                  | 0.29       | -0.38 | 0.11                    |             |

Table C.9 (Continued)

| Dependent Variable                                  | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|---|---|---|-----------------------|------------|-------|-------------------------|-------------|
|   |   |   |                       |            |       | Lower Bound             | Upper Bound |
| Scenario 5-<br>Patient 2<br>(Verbatim<br>#2 Answer) | None At All   | Very Low  | 0.00                  | 0.20       | 1.00  | -0.39                   | 0.39        |
|   |   | Low   | 0.00                  | 0.18       | 1.00  | -0.36                   | 0.36        |
|   |   | Medium  | -0.15                 | 0.17       | 0.39  | -0.48                   | 0.19        |
|   |   | High  | -0.10                 | 0.17       | 0.58  | -0.43                   | 0.24        |
|   |   | Very High   | -0.15                 | 0.17       | 0.39  | -0.49                   | 0.19        |
|   |   | The Highest Level (Expert)                            | -0.38*                | 0.18       | 0.04  | -0.74                   | -0.01       |
|   | Very Low  | None At All   | 0.00                  | 0.20       | 1.00  | -0.39                   | 0.39        |
|   |   | Low   | 0.00                  | 0.14       | 1.00  | -0.27                   | 0.27        |
|   |   | Medium  | -0.15                 | 0.12       | 0.22  | -0.38                   | 0.09        |
|   |   | High  | -0.10                 | 0.12       | 0.42  | -0.33                   | 0.14        |
|   |   | Very High   | -0.15                 | 0.12       | 0.22  | -0.38                   | 0.09        |
|   |   | The Highest Level (Expert)                            | -0.38*                | 0.14       | 0.01  | -0.65                   | -0.10       |
|   | Low   | None At All   | 0.00                  | 0.18       | 1.00  | -0.36                   | 0.36        |
|   |   | Very Low  | 0.00                  | 0.14       | 1.00  | -0.27                   | 0.27        |
|   |   | Medium  | -0.15                 | 0.09       | 0.11  | -0.32                   | 0.03        |
|   |   | High  | -0.10                 | 0.09       | 0.29  | -0.27                   | 0.08        |
|   |   | Very High   | -0.15                 | 0.09       | 0.11  | -0.33                   | 0.03        |
|   |   | The Highest Level (Expert)                            | -0.38*                | 0.11       | 0.00  | -0.60                   | -0.15       |
|   | Medium  | None At All   | 0.15                  | 0.17       | 0.39  | -0.19                   | 0.48        |
|   |   | Very Low  | 0.15                  | 0.12       | 0.22  | -0.09                   | 0.38        |
|   |   | Low   | 0.15                  | 0.09       | 0.11  | -0.03                   | 0.32        |
|   |   | High  | 0.05                  | 0.06       | 0.40  | -0.07                   | 0.17        |
|   |   | Very High   | 0.00                  | 0.06       | 0.95  | -0.13                   | 0.12        |
|   |   | The Highest Level (Expert)                            | -0.23*                | 0.09       | 0.01  | -0.41                   | -0.05       |
|   | High  | None At All   | 0.10                  | 0.17       | 0.58  | -0.24                   | 0.43        |
|   |   | Very Low  | 0.10                  | 0.12       | 0.42  | -0.14                   | 0.33        |
|   |   | Low   | 0.10                  | 0.09       | 0.29  | -0.08                   | 0.27        |
|   |   | Medium  | -0.05                 | 0.06       | 0.40  | -0.17                   | 0.07        |
|   |   | Very High   | -0.05                 | 0.06       | 0.40  | -0.18                   | 0.07        |
|   |   | The Highest Level (Expert)                            | -0.28*                | 0.09       | 0.00  | -0.46                   | -0.10       |
| Very High   | None At All   | 0.15  | 0.17                  | 0.39       | -0.19 | 0.49                    |             |
|   | Very Low  | 0.15  | 0.12                  | 0.22       | -0.09 | 0.38                    |             |
|   | Low   | 0.15  | 0.09                  | 0.11       | -0.03 | 0.33                    |             |
|   | Medium  | 0.00  | 0.06                  | 0.95       | -0.12 | 0.13                    |             |
|   | High  | 0.05  | 0.06                  | 0.40       | -0.07 | 0.18                    |             |
|   | The Highest Level (Expert)                            | -0.23*  | 0.10                  | 0.02       | -0.41 | -0.04                   |             |
| The Highest Level (Expert)                          | None At All   | 0.38*   | 0.18                  | 0.04       | 0.01  | 0.74                    |             |
|   | Very Low  | 0.38*   | 0.14                  | 0.01       | 0.10  | 0.65                    |             |
|   | Low   | 0.38*   | 0.11                  | 0.00       | 0.15  | 0.60                    |             |
|   | Medium  | 0.23*   | 0.09                  | 0.01       | 0.05  | 0.41                    |             |
|   | High  | 0.28*   | 0.09                  | 0.00       | 0.10  | 0.46                    |             |
|   | Very High   | 0.23*   | 0.10                  | 0.02       | 0.04  | 0.41                    |             |

Table C.9 (Continued)

| Dependent Variable          | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|-----------------------------|---|---|-----------------------|------------|-------|-------------------------|-------------|
|                             |   |   |                       |            |       | Lower Bound             | Upper Bound |
| Scenario 6<br>(Gist Answer) | None At All   | Very Low  | -0.03                 | 0.28       | 0.92  | -0.58                   | 0.52        |
|                             |   | Low   | -0.01                 | 0.26       | 0.96  | -0.53                   | 0.50        |
|                             |   | Medium  | 0.07                  | 0.24       | 0.76  | -0.40                   | 0.55        |
|                             |   | High  | 0.12                  | 0.24       | 0.63  | -0.36                   | 0.59        |
|                             |   | Very High   | 0.01                  | 0.24       | 0.98  | -0.47                   | 0.48        |
|                             |   | The Highest Level (Expert)                            | 0.06                  | 0.26       | 0.81  | -0.45                   | 0.58        |
|                             | Very Low  | None At All   | 0.03                  | 0.28       | 0.92  | -0.52                   | 0.58        |
|                             |   | Low   | 0.01                  | 0.19       | 0.95  | -0.37                   | 0.39        |
|                             |   | Medium  | 0.10                  | 0.17       | 0.55  | -0.23                   | 0.43        |
|                             |   | High  | 0.14                  | 0.17       | 0.39  | -0.18                   | 0.47        |
|                             |   | Very High   | 0.03                  | 0.17       | 0.85  | -0.30                   | 0.37        |
|                             |   | The Highest Level (Expert)                            | 0.09                  | 0.19       | 0.64  | -0.29                   | 0.47        |
|                             | Low   | None At All   | 0.01                  | 0.26       | 0.96  | -0.50                   | 0.53        |
|                             |   | Very Low  | -0.01                 | 0.19       | 0.95  | -0.39                   | 0.37        |
|                             |   | Medium  | 0.09                  | 0.13       | 0.50  | -0.16                   | 0.34        |
|                             |   | High  | 0.13                  | 0.13       | 0.31  | -0.12                   | 0.38        |
|                             |   | Very High   | 0.02                  | 0.13       | 0.88  | -0.24                   | 0.28        |
|                             |   | The Highest Level (Expert)                            | 0.08                  | 0.16       | 0.64  | -0.24                   | 0.40        |
|                             | Medium  | None At All   | -0.07                 | 0.24       | 0.76  | -0.55                   | 0.40        |
|                             |   | Very Low  | -0.10                 | 0.17       | 0.55  | -0.43                   | 0.23        |
|                             |   | Low   | -0.09                 | 0.13       | 0.50  | -0.34                   | 0.16        |
|                             |   | High  | 0.04                  | 0.08       | 0.61  | -0.12                   | 0.21        |
|                             |   | Very High   | -0.07                 | 0.09       | 0.46  | -0.25                   | 0.11        |
|                             |   | The Highest Level (Expert)                            | -0.01                 | 0.13       | 0.94  | -0.27                   | 0.25        |
|                             | High  | None At All   | -0.12                 | 0.24       | 0.63  | -0.59                   | 0.36        |
|                             |   | Very Low  | -0.14                 | 0.17       | 0.39  | -0.47                   | 0.18        |
|                             |   | Low   | -0.13                 | 0.13       | 0.31  | -0.38                   | 0.12        |
|                             |   | Medium  | -0.04                 | 0.08       | 0.61  | -0.21                   | 0.12        |
|                             |   | Very High   | -0.11                 | 0.09       | 0.22  | -0.29                   | 0.07        |
|                             |   | The Highest Level (Expert)                            | -0.05                 | 0.13       | 0.69  | -0.31                   | 0.20        |
| Very High                   | None At All   | -0.01   | 0.24                  | 0.98       | -0.48 | 0.47                    |             |
|                             | Very Low  | -0.03   | 0.17                  | 0.85       | -0.37 | 0.30                    |             |
|                             | Low   | -0.02   | 0.13                  | 0.88       | -0.28 | 0.24                    |             |
|                             | Medium  | 0.07  | 0.09                  | 0.46       | -0.11 | 0.25                    |             |
|                             | High  | 0.11  | 0.09                  | 0.22       | -0.07 | 0.29                    |             |
|                             | The Highest Level (Expert)                            | 0.06  | 0.13                  | 0.67       | -0.21 | 0.32                    |             |
| The Highest Level (Expert)  | None At All   | -0.06   | 0.26                  | 0.81       | -0.58 | 0.45                    |             |
|                             | Very Low  | -0.09   | 0.19                  | 0.64       | -0.47 | 0.29                    |             |
|                             | Low   | -0.08   | 0.16                  | 0.64       | -0.40 | 0.24                    |             |
|                             | Medium  | 0.01  | 0.13                  | 0.94       | -0.25 | 0.27                    |             |
|                             | High  | 0.05  | 0.13                  | 0.69       | -0.20 | 0.31                    |             |
|                             | Very High   | -0.06   | 0.13                  | 0.67       | -0.32 | 0.21                    |             |

Table C.9 (Continued)

| Dependent Variable                          | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|---|---|---|-----------------------|------------|-------|-------------------------|-------------|
|   |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 6<br/>(Verbatim<br/>Answer)</b> | None At All   | Very Low  | 0.03                  | 0.28       | 0.92  | -0.52                   | 0.57        |
|   |   | Low   | 0.01                  | 0.26       | 0.95  | -0.49                   | 0.52        |
|   |   | Medium  | -0.04                 | 0.24       | 0.87  | -0.51                   | 0.43        |
|   |   | High  | -0.12                 | 0.24       | 0.63  | -0.58                   | 0.35        |
|   |   | Very High   | -0.01                 | 0.24       | 0.98  | -0.48                   | 0.47        |
|   |   | The Highest Level (Expert)                            | 0.00                  | 0.26       | 1.00  | -0.51                   | 0.51        |
|   | Very Low  | None At All   | -0.03                 | 0.28       | 0.92  | -0.57                   | 0.52        |
|   |   | Low   | -0.01                 | 0.19       | 0.95  | -0.39                   | 0.36        |
|   |   | Medium  | -0.07                 | 0.16       | 0.68  | -0.39                   | 0.26        |
|   |   | High  | -0.14                 | 0.16       | 0.39  | -0.47                   | 0.18        |
|   |   | Very High   | -0.03                 | 0.17       | 0.84  | -0.36                   | 0.30        |
|   |   | The Highest Level (Expert)                            | -0.03                 | 0.19       | 0.89  | -0.41                   | 0.35        |
|   | Low   | None At All   | -0.01                 | 0.26       | 0.95  | -0.52                   | 0.49        |
|   |   | Very Low  | 0.01                  | 0.19       | 0.95  | -0.36                   | 0.39        |
|   |   | Medium  | -0.06                 | 0.13       | 0.66  | -0.30                   | 0.19        |
|   |   | High  | -0.13                 | 0.13       | 0.30  | -0.38                   | 0.12        |
|   |   | Very High   | -0.02                 | 0.13       | 0.88  | -0.28                   | 0.24        |
|   |   | The Highest Level (Expert)                            | -0.01                 | 0.16       | 0.93  | -0.33                   | 0.30        |
|   | Medium  | None At All   | 0.04                  | 0.24       | 0.87  | -0.43                   | 0.51        |
|   |   | Very Low  | 0.07                  | 0.16       | 0.68  | -0.26                   | 0.39        |
|   |   | Low   | 0.06                  | 0.13       | 0.66  | -0.19                   | 0.30        |
|   |   | High  | -0.07                 | 0.08       | 0.37  | -0.24                   | 0.09        |
|   |   | Very High   | 0.04                  | 0.09       | 0.69  | -0.14                   | 0.21        |
|   |   | The Highest Level (Expert)                            | 0.04                  | 0.13       | 0.76  | -0.21                   | 0.29        |
|   | High  | None At All   | 0.12                  | 0.24       | 0.63  | -0.35                   | 0.58        |
|   |   | Very Low  | 0.14                  | 0.16       | 0.39  | -0.18                   | 0.47        |
|   |   | Low   | 0.13                  | 0.13       | 0.30  | -0.12                   | 0.38        |
|   |   | Medium  | 0.07                  | 0.08       | 0.37  | -0.09                   | 0.24        |
|   |   | Very High   | 0.11                  | 0.09       | 0.22  | -0.07                   | 0.28        |
|   |   | The Highest Level (Expert)                            | 0.12                  | 0.13       | 0.37  | -0.14                   | 0.37        |
| Very High                                   | None At All   | 0.01  | 0.24                  | 0.98       | -0.47 | 0.48                    |             |
|   | Very Low  | 0.03  | 0.17                  | 0.84       | -0.30 | 0.36                    |             |
|   | Low   | 0.02  | 0.13                  | 0.88       | -0.24 | 0.28                    |             |
|   | Medium  | -0.04   | 0.09                  | 0.69       | -0.21 | 0.14                    |             |
|   | High  | -0.11   | 0.09                  | 0.22       | -0.28 | 0.07                    |             |
|   | The Highest Level (Expert)                            | 0.01  | 0.13                  | 0.97       | -0.26 | 0.27                    |             |
| The Highest Level (Expert)                  | None At All   | 0.00  | 0.26                  | 1.00       | -0.51 | 0.51                    |             |
|   | Very Low  | 0.03  | 0.19                  | 0.89       | -0.35 | 0.41                    |             |
|   | Low   | 0.01  | 0.16                  | 0.93       | -0.30 | 0.33                    |             |
|   | Medium  | -0.04   | 0.13                  | 0.76       | -0.29 | 0.21                    |             |
|   | High  | -0.12   | 0.13                  | 0.37       | -0.37 | 0.14                    |             |
|   | Very High   | -0.01   | 0.13                  | 0.97       | -0.27 | 0.26                    |             |

Table C.9 (Continued)

| Dependent Variable          | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|-----------------------------|---|---|-----------------------|------------|-------|-------------------------|-------------|
|                             |   |   |                       |            |       | Lower Bound             | Upper Bound |
| Scenario 7<br>(Gist Answer) | None At All   | Very Low  | -0.06                 | 0.30       | 0.86  | -0.65                   | 0.54        |
|                             |   | Low   | 0.15                  | 0.28       | 0.60  | -0.41                   | 0.70        |
|                             |   | Medium  | -0.02                 | 0.26       | 0.95  | -0.53                   | 0.50        |
|                             |   | High  | 0.07                  | 0.26       | 0.78  | -0.44                   | 0.58        |
|                             |   | Very High   | -0.02                 | 0.26       | 0.93  | -0.54                   | 0.50        |
|                             |   | The Highest Level (Expert)                            | 0.06                  | 0.28       | 0.83  | -0.49                   | 0.62        |
|                             | Very Low  | None At All   | 0.06                  | 0.30       | 0.86  | -0.54                   | 0.65        |
|                             |   | Low   | 0.20                  | 0.21       | 0.33  | -0.21                   | 0.61        |
|                             |   | Medium  | 0.04                  | 0.18       | 0.83  | -0.32                   | 0.39        |
|                             |   | High  | 0.13                  | 0.18       | 0.48  | -0.23                   | 0.48        |
|                             |   | Very High   | 0.03                  | 0.18       | 0.85  | -0.33                   | 0.40        |
|                             |   | The Highest Level (Expert)                            | 0.12                  | 0.21       | 0.58  | -0.30                   | 0.53        |
|                             | Low   | None At All   | -0.15                 | 0.28       | 0.60  | -0.70                   | 0.41        |
|                             |   | Very Low  | -0.20                 | 0.21       | 0.33  | -0.61                   | 0.21        |
|                             |   | Medium  | -0.16                 | 0.14       | 0.24  | -0.44                   | 0.11        |
|                             |   | High  | -0.08                 | 0.14       | 0.58  | -0.35                   | 0.20        |
|                             |   | Very High   | -0.17                 | 0.14       | 0.24  | -0.45                   | 0.11        |
|                             |   | The Highest Level (Expert)                            | -0.08                 | 0.18       | 0.63  | -0.43                   | 0.26        |
|                             | Medium  | None At All   | 0.02                  | 0.26       | 0.95  | -0.50                   | 0.53        |
|                             |   | Very Low  | -0.04                 | 0.18       | 0.83  | -0.39                   | 0.32        |
|                             |   | Low   | 0.16                  | 0.14       | 0.24  | -0.11                   | 0.44        |
|                             |   | High  | 0.09                  | 0.09       | 0.33  | -0.09                   | 0.27        |
|                             |   | Very High   | -0.01                 | 0.10       | 0.95  | -0.20                   | 0.19        |
|                             |   | The Highest Level (Expert)                            | 0.08                  | 0.14       | 0.58  | -0.20                   | 0.36        |
|                             | High  | None At All   | -0.07                 | 0.26       | 0.78  | -0.58                   | 0.44        |
|                             |   | Very Low  | -0.13                 | 0.18       | 0.48  | -0.48                   | 0.23        |
|                             |   | Low   | 0.08                  | 0.14       | 0.58  | -0.20                   | 0.35        |
|                             |   | Medium  | -0.09                 | 0.09       | 0.33  | -0.27                   | 0.09        |
|                             |   | Very High   | -0.09                 | 0.10       | 0.34  | -0.29                   | 0.10        |
|                             |   | The Highest Level (Expert)                            | -0.01                 | 0.14       | 0.95  | -0.29                   | 0.27        |
| Very High                   | None At All   | 0.02  | 0.26                  | 0.93       | -0.50 | 0.54                    |             |
|                             | Very Low  | -0.03   | 0.18                  | 0.85       | -0.40 | 0.33                    |             |
|                             | Low   | 0.17  | 0.14                  | 0.24       | -0.11 | 0.45                    |             |
|                             | Medium  | 0.01  | 0.10                  | 0.95       | -0.19 | 0.20                    |             |
|                             | High  | 0.09  | 0.10                  | 0.34       | -0.10 | 0.29                    |             |
|                             | The Highest Level (Expert)                            | 0.08  | 0.15                  | 0.57       | -0.20 | 0.37                    |             |
| The Highest Level (Expert)  | None At All   | -0.06   | 0.28                  | 0.83       | -0.62 | 0.49                    |             |
|                             | Very Low  | -0.12   | 0.21                  | 0.58       | -0.53 | 0.30                    |             |
|                             | Low   | 0.08  | 0.18                  | 0.63       | -0.26 | 0.43                    |             |
|                             | Medium  | -0.08   | 0.14                  | 0.58       | -0.36 | 0.20                    |             |
|                             | High  | 0.01  | 0.14                  | 0.95       | -0.27 | 0.29                    |             |
|                             | Very High   | -0.08   | 0.15                  | 0.57       | -0.37 | 0.20                    |             |

Table C.9 (Continued)

| Dependent Variable                          | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|---|---|---|-----------------------|------------|-------|-------------------------|-------------|
|   |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 7<br/>(Verbatim<br/>Answer)</b> | None At All   | Very Low  | 0.06                  | 0.30       | 0.85  | -0.54                   | 0.65        |
|   |   | Low   | -0.03                 | 0.28       | 0.92  | -0.58                   | 0.52        |
|   |   | Medium  | 0.08                  | 0.26       | 0.76  | -0.43                   | 0.59        |
|   |   | High  | 0.04                  | 0.26       | 0.88  | -0.47                   | 0.55        |
|   |   | Very High   | 0.15                  | 0.26       | 0.56  | -0.36                   | 0.67        |
|   |   | The Highest Level (Expert)                            | 0.13                  | 0.28       | 0.66  | -0.43                   | 0.68        |
|   | Very Low  | None At All   | -0.06                 | 0.30       | 0.85  | -0.65                   | 0.54        |
|   |   | Low   | -0.08                 | 0.21       | 0.68  | -0.49                   | 0.32        |
|   |   | Medium  | 0.03                  | 0.18       | 0.89  | -0.33                   | 0.38        |
|   |   | High  | -0.02                 | 0.18       | 0.93  | -0.37                   | 0.34        |
|   |   | Very High   | 0.10                  | 0.18       | 0.60  | -0.26                   | 0.46        |
|   |   | The Highest Level (Expert)                            | 0.07                  | 0.21       | 0.74  | -0.34                   | 0.48        |
|   | Low   | None At All   | 0.03                  | 0.28       | 0.92  | -0.52                   | 0.58        |
|   |   | Very Low  | 0.08                  | 0.21       | 0.68  | -0.32                   | 0.49        |
|   |   | Medium  | 0.11                  | 0.14       | 0.42  | -0.16                   | 0.38        |
|   |   | High  | 0.07                  | 0.14       | 0.61  | -0.20                   | 0.34        |
|   |   | Very High   | 0.18                  | 0.14       | 0.20  | -0.10                   | 0.46        |
|   |   | The Highest Level (Expert)                            | 0.15                  | 0.17       | 0.38  | -0.19                   | 0.50        |
|   | Medium  | None At All   | -0.08                 | 0.26       | 0.76  | -0.59                   | 0.43        |
|   |   | Very Low  | -0.03                 | 0.18       | 0.89  | -0.38                   | 0.33        |
|   |   | Low   | -0.11                 | 0.14       | 0.42  | -0.38                   | 0.16        |
|   |   | High  | -0.04                 | 0.09       | 0.65  | -0.22                   | 0.14        |
|   |   | Very High   | 0.07                  | 0.10       | 0.46  | -0.12                   | 0.26        |
|   |   | The Highest Level (Expert)                            | 0.04                  | 0.14       | 0.75  | -0.23                   | 0.32        |
|   | High  | None At All   | -0.04                 | 0.26       | 0.88  | -0.55                   | 0.47        |
|   |   | Very Low  | 0.02                  | 0.18       | 0.93  | -0.34                   | 0.37        |
|   |   | Low   | -0.07                 | 0.14       | 0.61  | -0.34                   | 0.20        |
|   |   | Medium  | 0.04                  | 0.09       | 0.65  | -0.14                   | 0.22        |
|   |   | Very High   | 0.11                  | 0.10       | 0.25  | -0.08                   | 0.30        |
|   |   | The Highest Level (Expert)                            | 0.09                  | 0.14       | 0.54  | -0.19                   | 0.36        |
| Very High                                   | None At All   | -0.15   | 0.26                  | 0.56       | -0.67 | 0.36                    |             |
|   | Very Low  | -0.10   | 0.18                  | 0.60       | -0.46 | 0.26                    |             |
|   | Low   | -0.18   | 0.14                  | 0.20       | -0.46 | 0.10                    |             |
|   | Medium  | -0.07   | 0.10                  | 0.46       | -0.26 | 0.12                    |             |
|   | High  | -0.11   | 0.10                  | 0.25       | -0.30 | 0.08                    |             |
|   | The Highest Level (Expert)                            | -0.03   | 0.14                  | 0.85       | -0.31 | 0.26                    |             |
| The Highest Level (Expert)                  | None At All   | -0.13   | 0.28                  | 0.66       | -0.68 | 0.43                    |             |
|   | Very Low  | -0.07   | 0.21                  | 0.74       | -0.48 | 0.34                    |             |
|   | Low   | -0.15   | 0.17                  | 0.38       | -0.50 | 0.19                    |             |
|   | Medium  | -0.04   | 0.14                  | 0.75       | -0.32 | 0.23                    |             |
|   | High  | -0.09   | 0.14                  | 0.54       | -0.36 | 0.19                    |             |
|   | Very High   | 0.03  | 0.14                  | 0.85       | -0.26 | 0.31                    |             |

\*. The mean difference is significant at the 0.05 level.

Table C.10

*Means Estimates of Medical Case Scenario Answers with Provider's Experience at Any*

*Certification Level (Scale-Based)*

|   |                            | N   | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             |
|---|----------------------------|-----|------|----------------|------------|----------------------------------|-------------|
|   |                            |     |      |                |            | Lower Bound                      | Upper Bound |
| <b>Scenario 1-<br/>Treatment 1<br/>(Correct<br/>Answer)</b> | None At All                | 2   | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Very Low                   | 7   | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Low                        | 17  | 0.82 | 0.39           | 0.10       | 0.62                             | 1.03        |
|   | Medium                     | 57  | 0.93 | 0.26           | 0.03       | 0.86                             | 1.00        |
|   | High                       | 66  | 0.85 | 0.36           | 0.04       | 0.76                             | 0.94        |
|   | Very High                  | 49  | 0.88 | 0.33           | 0.05       | 0.78                             | 0.97        |
|   | The Highest Level (Expert) | 20  | 0.90 | 0.31           | 0.07       | 0.76                             | 1.04        |
|   | Total                      | 218 | 0.89 | 0.32           | 0.02       | 0.84                             | 0.93        |
| <b>Scenario 1-<br/>Treatment 2<br/>(Correct<br/>Answer)</b> | None At All                | 1   | 1.00 | .              | .          | .                                | .           |
|   | Very Low                   | 7   | 0.86 | 0.38           | 0.14       | 0.51                             | 1.21        |
|   | Low                        | 16  | 0.56 | 0.51           | 0.13       | 0.29                             | 0.84        |
|   | Medium                     | 57  | 0.67 | 0.48           | 0.06       | 0.54                             | 0.79        |
|   | High                       | 66  | 0.74 | 0.44           | 0.05       | 0.63                             | 0.85        |
|   | Very High                  | 49  | 0.82 | 0.39           | 0.06       | 0.70                             | 0.93        |
|   | The Highest Level (Expert) | 20  | 0.65 | 0.49           | 0.11       | 0.42                             | 0.88        |
|   | Total                      | 216 | 0.72 | 0.45           | 0.03       | 0.66                             | 0.78        |
| <b>Scenario 2<br/>(Correct<br/>Answer)</b>                  | None At All                | 2   | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Very Low                   | 7   | 0.71 | 0.49           | 0.18       | 0.26                             | 1.17        |
|   | Low                        | 17  | 0.82 | 0.39           | 0.10       | 0.62                             | 1.03        |
|   | Medium                     | 57  | 0.75 | 0.43           | 0.06       | 0.64                             | 0.87        |
|   | High                       | 66  | 0.85 | 0.36           | 0.04       | 0.76                             | 0.94        |
|   | Very High                  | 49  | 0.80 | 0.41           | 0.06       | 0.68                             | 0.91        |
|   | The Highest Level (Expert) | 20  | 0.70 | 0.47           | 0.11       | 0.48                             | 0.92        |
|   | Total                      | 218 | 0.79 | 0.41           | 0.03       | 0.74                             | 0.85        |
| <b>Scenario 3<br/>(Correct<br/>Answer)</b>                  | None At All                | 2   | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Very Low                   | 7   | 1.00 | 0.00           | 0.00       | 1.00                             | 1.00        |
|   | Low                        | 17  | 0.76 | 0.44           | 0.11       | 0.54                             | 0.99        |
|   | Medium                     | 57  | 0.79 | 0.41           | 0.05       | 0.68                             | 0.90        |
|   | High                       | 66  | 0.94 | 0.24           | 0.03       | 0.88                             | 1.00        |
|   | Very High                  | 49  | 0.90 | 0.31           | 0.04       | 0.81                             | 0.99        |
|   | The Highest Level (Expert) | 20  | 0.55 | 0.51           | 0.11       | 0.31                             | 0.79        |
|   | Total                      | 218 | 0.84 | 0.36           | 0.02       | 0.80                             | 0.89        |



Table C.10 (Continued)

|   |                            | N   | Mean | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|---|----------------------------|-----|------|-------------------|---------------|-------------------------------------|----------------|
|   |                            |     |      |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| <b>Scenario 4<br/>(Correct<br/>Answer)</b>                    | None At All                | 2   | 1.00 | 0.00              | 0.00          | 1.00                                | 1.00           |
|   | Very Low                   | 7   | 0.86 | 0.38              | 0.14          | 0.51                                | 1.21           |
|   | Low                        | 17  | 0.94 | 0.24              | 0.06          | 0.82                                | 1.07           |
|   | Medium                     | 57  | 0.89 | 0.31              | 0.04          | 0.81                                | 0.98           |
|   | High                       | 66  | 0.85 | 0.36              | 0.04          | 0.76                                | 0.94           |
|   | Very High                  | 49  | 0.88 | 0.33              | 0.05          | 0.78                                | 0.97           |
|   | The Highest Level (Expert) | 20  | 0.95 | 0.22              | 0.05          | 0.85                                | 1.05           |
|   | Total                      | 218 | 0.89 | 0.32              | 0.02          | 0.84                                | 0.93           |
| <b>Scenario 5<br/>(Correct<br/>Answer)</b>                    | None At All                | 2   | 1.00 | 0.00              | 0.00          | 1.00                                | 1.00           |
|   | Very Low                   | 7   | 0.86 | 0.38              | 0.14          | 0.51                                | 1.21           |
|   | Low                        | 17  | 1.00 | 0.00              | 0.00          | 1.00                                | 1.00           |
|   | Medium                     | 57  | 0.96 | 0.19              | 0.02          | 0.92                                | 1.01           |
|   | High                       | 66  | 0.98 | 0.12              | 0.02          | 0.95                                | 1.02           |
|   | Very High                  | 49  | 0.96 | 0.20              | 0.03          | 0.90                                | 1.02           |
|   | The Highest Level (Expert) | 20  | 0.95 | 0.22              | 0.05          | 0.85                                | 1.05           |
|   | Total                      | 218 | 0.97 | 0.18              | 0.01          | 0.94                                | 0.99           |
| <b>Scenario 5-<br/>Patient 2<br/>(Gist<br/>Answer)</b>        | None At All                | 2   | 1.00 | 0.00              | 0.00          | 1.00                                | 1.00           |
|   | Very Low                   | 7   | 0.43 | 0.53              | 0.20          | -0.07                               | 0.92           |
|   | Low                        | 17  | 0.76 | 0.44              | 0.11          | 0.54                                | 0.99           |
|   | Medium                     | 57  | 0.60 | 0.49              | 0.07          | 0.47                                | 0.73           |
|   | High                       | 66  | 0.71 | 0.46              | 0.06          | 0.60                                | 0.82           |
|   | Very High                  | 49  | 0.59 | 0.50              | 0.07          | 0.45                                | 0.73           |
|   | The Highest Level (Expert) | 20  | 0.40 | 0.50              | 0.11          | 0.16                                | 0.64           |
|   | Total                      | 218 | 0.62 | 0.49              | 0.03          | 0.56                                | 0.69           |
| <b>Scenario 5-<br/>Patient 2<br/>(Verbatim<br/>Answer #1)</b> | None At All                | 2   | 0.00 | 0.00              | 0.00          | 0.00                                | 0.00           |
|   | Very Low                   | 7   | 0.57 | 0.53              | 0.20          | 0.08                                | 1.07           |
|   | Low                        | 17  | 0.18 | 0.39              | 0.10          | -0.03                               | 0.38           |
|   | Medium                     | 57  | 0.28 | 0.45              | 0.06          | 0.16                                | 0.40           |
|   | High                       | 66  | 0.17 | 0.38              | 0.05          | 0.07                                | 0.26           |
|   | Very High                  | 49  | 0.31 | 0.47              | 0.07          | 0.17                                | 0.44           |
|   | The Highest Level (Expert) | 20  | 0.20 | 0.41              | 0.09          | 0.01                                | 0.39           |
|   | Total                      | 218 | 0.24 | 0.43              | 0.03          | 0.19                                | 0.30           |
| <b>Scenario 5-<br/>Patient 2<br/>(Verbatim<br/>Answer #2)</b> | None At All                | 2   | 0.00 | 0.00              | 0.00          | 0.00                                | 0.00           |
|   | Very Low                   | 7   | 0.00 | 0.00              | 0.00          | 0.00                                | 0.00           |
|   | Low                        | 17  | 0.06 | 0.24              | 0.06          | -0.07                               | 0.18           |
|   | Medium                     | 57  | 0.12 | 0.33              | 0.04          | 0.03                                | 0.21           |
|   | High                       | 66  | 0.12 | 0.33              | 0.04          | 0.04                                | 0.20           |
|   | Very High                  | 49  | 0.10 | 0.31              | 0.04          | 0.01                                | 0.19           |
|   | The Highest Level (Expert) | 20  | 0.35 | 0.49              | 0.11          | 0.12                                | 0.58           |
|   | Total                      | 218 | 0.13 | 0.34              | 0.02          | 0.08                                | 0.17           |

## C.10 (Continued)

|   |                            | N   | Mean | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|---|----------------------------|-----|------|-------------------|---------------|-------------------------------------|----------------|
|   |                            |     |      |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| <b>Scenario 6<br/>(Gist<br/>Answer)</b>     | None At All                | 2   | 0.50 | 0.71              | 0.50          | -5.85                               | 6.85           |
|   | Very Low                   | 7   | 0.86 | 0.38              | 0.14          | 0.51                                | 1.21           |
|   | Low                        | 17  | 0.76 | 0.44              | 0.11          | 0.54                                | 0.99           |
|   | Medium                     | 57  | 0.70 | 0.46              | 0.06          | 0.58                                | 0.82           |
|   | High                       | 66  | 0.62 | 0.49              | 0.06          | 0.50                                | 0.74           |
|   | Very High                  | 49  | 0.71 | 0.46              | 0.07          | 0.58                                | 0.85           |
|   | The Highest Level (Expert) | 20  | 0.75 | 0.44              | 0.10          | 0.54                                | 0.96           |
|   | Total                      | 218 | 0.69 | 0.46              | 0.03          | 0.63                                | 0.75           |
| <b>Scenario 6<br/>(Verbatim<br/>Answer)</b> | None At All                | 2   | 0.50 | 0.71              | 0.50          | -5.85                               | 6.85           |
|   | Very Low                   | 7   | 0.14 | 0.38              | 0.14          | -0.21                               | 0.49           |
|   | Low                        | 17  | 0.24 | 0.44              | 0.11          | 0.01                                | 0.46           |
|   | Medium                     | 57  | 0.26 | 0.44              | 0.06          | 0.15                                | 0.38           |
|   | High                       | 66  | 0.38 | 0.49              | 0.06          | 0.26                                | 0.50           |
|   | Very High                  | 49  | 0.29 | 0.46              | 0.07          | 0.15                                | 0.42           |
|   | The Highest Level (Expert) | 20  | 0.20 | 0.41              | 0.09          | 0.01                                | 0.39           |
|   | Total                      | 218 | 0.29 | 0.46              | 0.03          | 0.23                                | 0.35           |
| <b>Scenario 7<br/>(Gist<br/>Answer)</b>     | None At All                | 2   | 0.50 | 0.71              | 0.50          | -5.85                               | 6.85           |
|   | Very Low                   | 7   | 0.57 | 0.53              | 0.20          | 0.08                                | 1.07           |
|   | Low                        | 17  | 0.35 | 0.49              | 0.12          | 0.10                                | 0.61           |
|   | Medium                     | 57  | 0.44 | 0.50              | 0.07          | 0.31                                | 0.57           |
|   | High                       | 66  | 0.47 | 0.50              | 0.06          | 0.35                                | 0.59           |
|   | Very High                  | 48  | 0.52 | 0.50              | 0.07          | 0.37                                | 0.67           |
|   | The Highest Level (Expert) | 20  | 0.55 | 0.51              | 0.11          | 0.31                                | 0.79           |
|   | Total                      | 217 | 0.47 | 0.50              | 0.03          | 0.41                                | 0.54           |
| <b>Scenario 7<br/>(Verbatim<br/>Answer)</b> | None At All                | 2   | 0.50 | 0.71              | 0.50          | -5.85                               | 6.85           |
|   | Very Low                   | 7   | 0.43 | 0.53              | 0.20          | -0.07                               | 0.92           |
|   | Low                        | 17  | 0.53 | 0.51              | 0.12          | 0.26                                | 0.79           |
|   | Medium                     | 57  | 0.47 | 0.50              | 0.07          | 0.34                                | 0.61           |
|   | High                       | 66  | 0.44 | 0.50              | 0.06          | 0.32                                | 0.56           |
|   | Very High                  | 48  | 0.35 | 0.48              | 0.07          | 0.21                                | 0.49           |
|   | The Highest Level (Expert) | 20  | 0.30 | 0.47              | 0.11          | 0.08                                | 0.52           |
|   | Total                      | 217 | 0.42 | 0.50              | 0.03          | 0.36                                | 0.49           |

Table C.11

*Pairwise Comparison of Medical Case Scenario Answers with Provider's Experience at Any*

*Certification Level (Scale-Based)*

| Dependent Variable  | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|---|---|---|-----------------------|------------|-------|-------------------------|-------------|
|   |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 1-<br/>Treatment 1<br/>(Correct<br/>Answer)</b> | None At All   | Very Low  | 0.00                  | 0.26       | 1.00  | -0.51                   | 0.51        |
|   |   | Low   | 0.18                  | 0.24       | 0.46  | -0.30                   | 0.65        |
|   |   | Medium  | 0.07                  | 0.23       | 0.76  | -0.39                   | 0.53        |
|   |   | High  | 0.15                  | 0.23       | 0.51  | -0.30                   | 0.61        |
|   |   | Very High   | 0.12                  | 0.23       | 0.60  | -0.33                   | 0.58        |
|   |   | The Highest Level (Expert)                            | 0.10                  | 0.24       | 0.68  | -0.37                   | 0.57        |
|   | Very Low  | None At All   | 0.00                  | 0.26       | 1.00  | -0.51                   | 0.51        |
|   |   | Low   | 0.18                  | 0.14       | 0.22  | -0.11                   | 0.46        |
|   |   | Medium  | 0.07                  | 0.13       | 0.59  | -0.18                   | 0.32        |
|   |   | High  | 0.15                  | 0.13       | 0.24  | -0.10                   | 0.40        |
|   |   | Very High   | 0.12                  | 0.13       | 0.35  | -0.13                   | 0.38        |
|   |   | The Highest Level (Expert)                            | 0.10                  | 0.14       | 0.48  | -0.18                   | 0.38        |
|   | Low   | None At All   | -0.18                 | 0.24       | 0.46  | -0.65                   | 0.30        |
|   |   | Very Low  | -0.18                 | 0.14       | 0.22  | -0.46                   | 0.11        |
|   |   | Medium  | -0.11                 | 0.09       | 0.23  | -0.28                   | 0.07        |
|   |   | High  | -0.03                 | 0.09       | 0.78  | -0.20                   | 0.15        |
|   |   | Very High   | -0.05                 | 0.09       | 0.55  | -0.23                   | 0.12        |
|   |   | The Highest Level (Expert)                            | -0.08                 | 0.11       | 0.47  | -0.29                   | 0.13        |
|   | Medium  | None At All   | -0.07                 | 0.23       | 0.76  | -0.53                   | 0.39        |
|   |   | Very Low  | -0.07                 | 0.13       | 0.59  | -0.32                   | 0.18        |
|   |   | Low   | 0.11                  | 0.09       | 0.23  | -0.07                   | 0.28        |
|   |   | High  | 0.08                  | 0.06       | 0.16  | -0.03                   | 0.20        |
|   |   | Very High   | 0.05                  | 0.06       | 0.40  | -0.07                   | 0.18        |
|   |   | The Highest Level (Expert)                            | 0.03                  | 0.08       | 0.72  | -0.13                   | 0.19        |
|   | High  | None At All   | -0.15                 | 0.23       | 0.51  | -0.61                   | 0.30        |
|   |   | Very Low  | -0.15                 | 0.13       | 0.24  | -0.40                   | 0.10        |
|   |   | Low   | 0.03                  | 0.09       | 0.78  | -0.15                   | 0.20        |
|   |   | Medium  | -0.08                 | 0.06       | 0.16  | -0.20                   | 0.03        |
|   |   | Very High   | -0.03                 | 0.06       | 0.63  | -0.15                   | 0.09        |
|   |   | The Highest Level (Expert)                            | -0.05                 | 0.08       | 0.53  | -0.21                   | 0.11        |
| Very High   | None At All   | -0.12   | 0.23                  | 0.60       | -0.58 | 0.33                    |             |
|   | Very Low  | -0.12   | 0.13                  | 0.35       | -0.38 | 0.13                    |             |
|   | Low   | 0.05  | 0.09                  | 0.55       | -0.12 | 0.23                    |             |
|   | Medium  | -0.05   | 0.06                  | 0.40       | -0.18 | 0.07                    |             |
|   | High  | 0.03  | 0.06                  | 0.63       | -0.09 | 0.15                    |             |
|   | The Highest Level (Expert)                            | -0.02   | 0.09                  | 0.79       | -0.19 | 0.15                    |             |
| The Highest Level (Expert)                                  | None At All   | -0.10   | 0.24                  | 0.68       | -0.57 | 0.37                    |             |
|   | Very Low  | -0.10   | 0.14                  | 0.48       | -0.38 | 0.18                    |             |
|   | Low   | 0.08  | 0.11                  | 0.47       | -0.13 | 0.29                    |             |
|   | Medium  | -0.03   | 0.08                  | 0.72       | -0.19 | 0.13                    |             |
|   | High  | 0.05  | 0.08                  | 0.53       | -0.11 | 0.21                    |             |
|   | Very High   | 0.02  | 0.09                  | 0.79       | -0.15 | 0.19                    |             |

Table C.11 (Continued)

| Dependent Variable                     | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|--|---|---|-----------------------|------------|-------|-------------------------|-------------|
|  |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 2<br/>(Correct Answer)</b> | None At All   | Very Low  | 0.29                  | 0.33       | 0.38  | -0.36                   | 0.93        |
|  |   | Low   | 0.18                  | 0.30       | 0.56  | -0.42                   | 0.78        |
|  |   | Medium  | 0.25                  | 0.29       | 0.40  | -0.33                   | 0.82        |
|  |   | High  | 0.15                  | 0.29       | 0.61  | -0.43                   | 0.73        |
|  |   | Very High   | 0.20                  | 0.29       | 0.49  | -0.38                   | 0.78        |
|  |   | The Highest Level (Expert)                            | 0.30                  | 0.30       | 0.32  | -0.30                   | 0.90        |
|  | Very Low  | None At All   | -0.29                 | 0.33       | 0.38  | -0.93                   | 0.36        |
|  |   | Low   | -0.11                 | 0.18       | 0.55  | -0.47                   | 0.25        |
|  |   | Medium  | -0.04                 | 0.16       | 0.81  | -0.36                   | 0.28        |
|  |   | High  | -0.13                 | 0.16       | 0.41  | -0.45                   | 0.19        |
|  |   | Very High   | -0.08                 | 0.16       | 0.62  | -0.41                   | 0.24        |
|  |   | The Highest Level (Expert)                            | 0.01                  | 0.18       | 0.94  | -0.34                   | 0.37        |
|  | Low   | None At All   | -0.18                 | 0.30       | 0.56  | -0.78                   | 0.42        |
|  |   | Very Low  | 0.11                  | 0.18       | 0.55  | -0.25                   | 0.47        |
|  |   | Medium  | 0.07                  | 0.11       | 0.54  | -0.15                   | 0.29        |
|  |   | High  | -0.02                 | 0.11       | 0.82  | -0.24                   | 0.19        |
|  |   | Very High   | 0.03                  | 0.11       | 0.81  | -0.20                   | 0.25        |
|  |   | The Highest Level (Expert)                            | 0.12                  | 0.13       | 0.36  | -0.14                   | 0.39        |
|  | Medium  | None At All   | -0.25                 | 0.29       | 0.40  | -0.82                   | 0.33        |
|  |   | Very Low  | 0.04                  | 0.16       | 0.81  | -0.28                   | 0.36        |
|  |   | Low   | -0.07                 | 0.11       | 0.54  | -0.29                   | 0.15        |
|  |   | High  | -0.09                 | 0.07       | 0.20  | -0.24                   | 0.05        |
|  |   | Very High   | -0.04                 | 0.08       | 0.60  | -0.20                   | 0.12        |
|  |   | The Highest Level (Expert)                            | 0.05                  | 0.11       | 0.61  | -0.15                   | 0.26        |
|  | High  | None At All   | -0.15                 | 0.29       | 0.61  | -0.73                   | 0.43        |
|  |   | Very Low  | 0.13                  | 0.16       | 0.41  | -0.19                   | 0.45        |
|  |   | Low   | 0.02                  | 0.11       | 0.82  | -0.19                   | 0.24        |
|  |   | Medium  | 0.09                  | 0.07       | 0.20  | -0.05                   | 0.24        |
|  |   | Very High   | 0.05                  | 0.08       | 0.50  | -0.10                   | 0.20        |
|  |   | The Highest Level (Expert)                            | 0.15                  | 0.10       | 0.16  | -0.06                   | 0.35        |
| Very High                              | None At All   | -0.20   | 0.29                  | 0.49       | -0.78 | 0.38                    |             |
|  | Very Low  | 0.08  | 0.16                  | 0.62       | -0.24 | 0.41                    |             |
|  | Low   | -0.03   | 0.11                  | 0.81       | -0.25 | 0.20                    |             |
|  | Medium  | 0.04  | 0.08                  | 0.60       | -0.12 | 0.20                    |             |
|  | High  | -0.05   | 0.08                  | 0.50       | -0.20 | 0.10                    |             |
|  | The Highest Level (Expert)                            | 0.10  | 0.11                  | 0.38       | -0.12 | 0.31                    |             |
| The Highest Level (Expert)             | None At All   | -0.30   | 0.30                  | 0.32       | -0.90 | 0.30                    |             |
|  | Very Low  | -0.01   | 0.18                  | 0.94       | -0.37 | 0.34                    |             |
|  | Low   | -0.12   | 0.13                  | 0.36       | -0.39 | 0.14                    |             |
|  | Medium  | -0.05   | 0.11                  | 0.61       | -0.26 | 0.15                    |             |
|  | High  | -0.15   | 0.10                  | 0.16       | -0.35 | 0.06                    |             |
|  | Very High   | -0.10   | 0.11                  | 0.38       | -0.31 | 0.12                    |             |

Table C.11 (Continued)

| Dependent Variable                     | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|--|---|---|-----------------------|------------|-------|-------------------------|-------------|
|  |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 3<br/>(Correct Answer)</b> | None At All   | Very Low  | 0.00                  | 0.28       | 1.00  | -0.55                   | 0.55        |
|  |   | Low   | 0.24                  | 0.26       | 0.37  | -0.28                   | 0.75        |
|  |   | Medium  | 0.21                  | 0.25       | 0.40  | -0.28                   | 0.71        |
|  |   | High  | 0.06                  | 0.25       | 0.81  | -0.43                   | 0.55        |
|  |   | Very High   | 0.10                  | 0.25       | 0.69  | -0.39                   | 0.60        |
|  |   | The Highest Level (Expert)                            | 0.45                  | 0.26       | 0.08  | -0.06                   | 0.96        |
|  | Very Low  | None At All   | 0.00                  | 0.28       | 1.00  | -0.55                   | 0.55        |
|  |   | Low   | 0.24                  | 0.16       | 0.14  | -0.07                   | 0.54        |
|  |   | Medium  | 0.21                  | 0.14       | 0.13  | -0.07                   | 0.49        |
|  |   | High  | 0.06                  | 0.14       | 0.66  | -0.21                   | 0.33        |
|  |   | Very High   | 0.10                  | 0.14       | 0.47  | -0.18                   | 0.38        |
|  |   | The Highest Level (Expert)                            | 0.45*                 | 0.15       | 0.00  | 0.15                    | 0.75        |
|  | Low   | None At All   | -0.24                 | 0.26       | 0.37  | -0.75                   | 0.28        |
|  |   | Very Low  | -0.24                 | 0.16       | 0.14  | -0.54                   | 0.07        |
|  |   | Medium  | -0.02                 | 0.10       | 0.80  | -0.22                   | 0.17        |
|  |   | High  | -0.17                 | 0.09       | 0.07  | -0.36                   | 0.01        |
|  |   | Very High   | -0.13                 | 0.10       | 0.18  | -0.33                   | 0.06        |
|  |   | The Highest Level (Expert)                            | 0.21                  | 0.12       | 0.06  | -0.01                   | 0.44        |
|  | Medium  | None At All   | -0.21                 | 0.25       | 0.40  | -0.71                   | 0.28        |
|  |   | Very Low  | -0.21                 | 0.14       | 0.13  | -0.49                   | 0.07        |
|  |   | Low   | 0.02                  | 0.10       | 0.80  | -0.17                   | 0.22        |
|  |   | High  | -0.15*                | 0.06       | 0.02  | -0.27                   | -0.03       |
|  |   | Very High   | -0.11                 | 0.07       | 0.11  | -0.24                   | 0.03        |
|  |   | The Highest Level (Expert)                            | 0.24*                 | 0.09       | 0.01  | 0.06                    | 0.42        |
|  | High  | None At All   | -0.06                 | 0.25       | 0.81  | -0.55                   | 0.43        |
|  |   | Very Low  | -0.06                 | 0.14       | 0.66  | -0.33                   | 0.21        |
|  |   | Low   | 0.17                  | 0.09       | 0.07  | -0.01                   | 0.36        |
|  |   | Medium  | 0.15*                 | 0.06       | 0.02  | 0.03                    | 0.27        |
|  |   | Very High   | 0.04                  | 0.07       | 0.53  | -0.09                   | 0.17        |
|  |   | The Highest Level (Expert)                            | 0.39*                 | 0.09       | 0.00  | 0.21                    | 0.57        |
| Very High                              | None At All   | -0.10   | 0.25                  | 0.69       | -0.60 | 0.39                    |             |
|  | Very Low  | -0.10   | 0.14                  | 0.47       | -0.38 | 0.18                    |             |
|  | Low   | 0.13  | 0.10                  | 0.18       | -0.06 | 0.33                    |             |
|  | Medium  | 0.11  | 0.07                  | 0.11       | -0.03 | 0.24                    |             |
|  | High  | -0.04   | 0.07                  | 0.53       | -0.17 | 0.09                    |             |
|  | The Highest Level (Expert)                            | 0.35*   | 0.09                  | 0.00       | 0.17  | 0.53                    |             |
| The Highest Level (Expert)             | None At All   | -0.45   | 0.26                  | 0.08       | -0.96 | 0.06                    |             |
|  | Very Low  | -0.45*  | 0.15                  | 0.00       | -0.75 | -0.15                   |             |
|  | Low   | -0.21   | 0.12                  | 0.06       | -0.44 | 0.01                    |             |
|  | Medium  | -0.24*  | 0.09                  | 0.01       | -0.42 | -0.06                   |             |
|  | High  | -0.39*  | 0.09                  | 0.00       | -0.57 | -0.21                   |             |
|  | Very High   | -0.35*  | 0.09                  | 0.00       | -0.53 | -0.17                   |             |

Table C.11 (Continued)

| Dependent Variable                     | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|--|---|---|-----------------------|------------|-------|-------------------------|-------------|
|  |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 4<br/>(Correct Answer)</b> | None At All   | Very Low  | 0.14                  | 0.26       | 0.58  | -0.37                   | 0.65        |
|  |   | Low   | 0.06                  | 0.24       | 0.81  | -0.42                   | 0.53        |
|  |   | Medium  | 0.11                  | 0.23       | 0.65  | -0.35                   | 0.56        |
|  |   | High  | 0.15                  | 0.23       | 0.51  | -0.30                   | 0.61        |
|  |   | Very High   | 0.12                  | 0.23       | 0.60  | -0.34                   | 0.58        |
|  |   | The Highest Level (Expert)                            | 0.05                  | 0.24       | 0.83  | -0.42                   | 0.52        |
|  | Very Low  | None At All   | -0.14                 | 0.26       | 0.58  | -0.65                   | 0.37        |
|  |   | Low   | -0.08                 | 0.14       | 0.56  | -0.37                   | 0.20        |
|  |   | Medium  | -0.04                 | 0.13       | 0.77  | -0.29                   | 0.22        |
|  |   | High  | 0.01                  | 0.13       | 0.95  | -0.24                   | 0.26        |
|  |   | Very High   | -0.02                 | 0.13       | 0.88  | -0.28                   | 0.24        |
|  |   | The Highest Level (Expert)                            | -0.09                 | 0.14       | 0.51  | -0.37                   | 0.19        |
|  | Low   | None At All   | -0.06                 | 0.24       | 0.81  | -0.53                   | 0.42        |
|  |   | Very Low  | 0.08                  | 0.14       | 0.56  | -0.20                   | 0.37        |
|  |   | Medium  | 0.05                  | 0.09       | 0.60  | -0.13                   | 0.22        |
|  |   | High  | 0.09                  | 0.09       | 0.29  | -0.08                   | 0.27        |
|  |   | Very High   | 0.06                  | 0.09       | 0.48  | -0.12                   | 0.24        |
|  |   | The Highest Level (Expert)                            | -0.01                 | 0.11       | 0.93  | -0.22                   | 0.20        |
|  | Medium  | None At All   | -0.11                 | 0.23       | 0.65  | -0.56                   | 0.35        |
|  |   | Very Low  | 0.04                  | 0.13       | 0.77  | -0.22                   | 0.29        |
|  |   | Low   | -0.05                 | 0.09       | 0.60  | -0.22                   | 0.13        |
|  |   | High  | 0.05                  | 0.06       | 0.43  | -0.07                   | 0.16        |
|  |   | Very High   | 0.02                  | 0.06       | 0.78  | -0.11                   | 0.14        |
|  |   | The Highest Level (Expert)                            | -0.06                 | 0.08       | 0.51  | -0.22                   | 0.11        |
|  | High  | None At All   | -0.15                 | 0.23       | 0.51  | -0.61                   | 0.30        |
|  |   | Very Low  | -0.01                 | 0.13       | 0.95  | -0.26                   | 0.24        |
|  |   | Low   | -0.09                 | 0.09       | 0.29  | -0.27                   | 0.08        |
| Medium                                 |   | -0.05   | 0.06                  | 0.43       | -0.16 | 0.07                    |             |
| Very High                              |   | -0.03   | 0.06                  | 0.63       | -0.15 | 0.09                    |             |
| The Highest Level (Expert)             |   | -0.10   | 0.08                  | 0.22       | -0.26 | 0.06                    |             |
| Very High                              | None At All   | -0.12   | 0.23                  | 0.60       | -0.58 | 0.34                    |             |
|  | Very Low  | 0.02  | 0.13                  | 0.88       | -0.24 | 0.28                    |             |
|  | Low   | -0.06   | 0.09                  | 0.48       | -0.24 | 0.12                    |             |
|  | Medium  | -0.02   | 0.06                  | 0.78       | -0.14 | 0.11                    |             |
|  | High  | 0.03  | 0.06                  | 0.63       | -0.09 | 0.15                    |             |
|  | The Highest Level (Expert)                            | -0.07   | 0.09                  | 0.40       | -0.24 | 0.10                    |             |
| The Highest Level (Expert)             | None At All   | -0.05   | 0.24                  | 0.83       | -0.52 | 0.42                    |             |
|  | Very Low  | 0.09  | 0.14                  | 0.51       | -0.19 | 0.37                    |             |
|  | Low   | 0.01  | 0.11                  | 0.93       | -0.20 | 0.22                    |             |
|  | Medium  | 0.06  | 0.08                  | 0.51       | -0.11 | 0.22                    |             |
|  | High  | 0.10  | 0.08                  | 0.22       | -0.06 | 0.26                    |             |
|  | Very High   | 0.07  | 0.09                  | 0.40       | -0.10 | 0.24                    |             |

Table C.11 (Continued)

| Dependent Variable  | (I) Experience at                      | (J) Experience at                      | Mean<br>Difference<br>(I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|---|--|--|-----------------------------|------------|-------|-------------------------|-------------|
|   | Current Certification<br>Level (Scale) | Current Certification<br>Level (Scale) |                             |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 5-<br/>Patient 1<br/>(Correct<br/>Answer)</b> | None At All                            | Very Low                               | 0.14                        | 0.14       | 0.32  | -0.14                   | 0.42        |
|   |  | Low                                    | 0.00                        | 0.13       | 1.00  | -0.26                   | 0.26        |
|   |  | Medium                                 | 0.04                        | 0.13       | 0.78  | -0.22                   | 0.29        |
|   |  | High                                   | 0.02                        | 0.13       | 0.91  | -0.24                   | 0.27        |
|   |  | Very High                              | 0.04                        | 0.13       | 0.75  | -0.21                   | 0.29        |
|   |  | The Highest Level<br>(Expert)          | 0.05                        | 0.13       | 0.70  | -0.21                   | 0.31        |
|   | Very Low                               | None At All                            | -0.14                       | 0.14       | 0.32  | -0.42                   | 0.14        |
|   |  | Low                                    | -0.14                       | 0.08       | 0.07  | -0.30                   | 0.01        |
|   |  | Medium                                 | -0.11                       | 0.07       | 0.13  | -0.25                   | 0.03        |
|   |  | High                                   | -0.13                       | 0.07       | 0.07  | -0.27                   | 0.01        |
|   |  | Very High                              | -0.10                       | 0.07       | 0.16  | -0.24                   | 0.04        |
|   |  | The Highest Level<br>(Expert)          | -0.09                       | 0.08       | 0.24  | -0.25                   | 0.06        |
|   | Low                                    | None At All                            | 0.00                        | 0.13       | 1.00  | -0.26                   | 0.26        |
|   |  | Very Low                               | 0.14                        | 0.08       | 0.07  | -0.01                   | 0.30        |
|   |  | Medium                                 | 0.04                        | 0.05       | 0.48  | -0.06                   | 0.13        |
|   |  | High                                   | 0.02                        | 0.05       | 0.75  | -0.08                   | 0.11        |
|   |  | Very High                              | 0.04                        | 0.05       | 0.42  | -0.06                   | 0.14        |
|   |  | The Highest Level<br>(Expert)          | 0.05                        | 0.06       | 0.39  | -0.07                   | 0.17        |
|   | Medium                                 | None At All                            | -0.04                       | 0.13       | 0.78  | -0.29                   | 0.22        |
|   |  | Very Low                               | 0.11                        | 0.07       | 0.13  | -0.03                   | 0.25        |
|   |  | Low                                    | -0.04                       | 0.05       | 0.48  | -0.13                   | 0.06        |
|   |  | High                                   | -0.02                       | 0.03       | 0.54  | -0.08                   | 0.04        |
|   |  | Very High                              | 0.01                        | 0.03       | 0.87  | -0.06                   | 0.07        |
|   |  | The Highest Level<br>(Expert)          | 0.01                        | 0.05       | 0.75  | -0.08                   | 0.11        |
|   | High                                   | None At All                            | -0.02                       | 0.13       | 0.91  | -0.27                   | 0.24        |
|   |  | Very Low                               | 0.13                        | 0.07       | 0.07  | -0.01                   | 0.27        |
|   |  | Low                                    | -0.02                       | 0.05       | 0.75  | -0.11                   | 0.08        |
| Medium  |  | 0.02                                   | 0.03                        | 0.54       | -0.04 | 0.08                    |             |
| Very High   |  | 0.03                                   | 0.03                        | 0.44       | -0.04 | 0.09                    |             |
| The Highest Level<br>(Expert)                             |  | 0.03                                   | 0.05                        | 0.44       | -0.05 | 0.12                    |             |
| Very High   | None At All                            | -0.04                                  | 0.13                        | 0.75       | -0.29 | 0.21                    |             |
|   | Very Low                               | 0.10                                   | 0.07                        | 0.16       | -0.04 | 0.24                    |             |
|   | Low                                    | -0.04                                  | 0.05                        | 0.42       | -0.14 | 0.06                    |             |
|   | Medium                                 | -0.01                                  | 0.03                        | 0.87       | -0.07 | 0.06                    |             |
|   | High                                   | -0.03                                  | 0.03                        | 0.44       | -0.09 | 0.04                    |             |
|   | The Highest Level<br>(Expert)          | 0.01                                   | 0.05                        | 0.85       | -0.08 | 0.10                    |             |
| The Highest Level<br>(Expert)                             | None At All                            | -0.05                                  | 0.13                        | 0.70       | -0.31 | 0.21                    |             |
|   | Very Low                               | 0.09                                   | 0.08                        | 0.24       | -0.06 | 0.25                    |             |
|   | Low                                    | -0.05                                  | 0.06                        | 0.39       | -0.17 | 0.07                    |             |
|   | Medium                                 | -0.01                                  | 0.05                        | 0.75       | -0.11 | 0.08                    |             |
|   | High                                   | -0.03                                  | 0.05                        | 0.44       | -0.12 | 0.05                    |             |
|   | Very High                              | -0.01                                  | 0.05                        | 0.85       | -0.10 | 0.08                    |             |

Table C.11 (Continued)

| Dependent Variable                                 | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|--|---|---|-----------------------|------------|-------|-------------------------|-------------|
|  |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 5-<br/>Patient 2 (Gist<br/>Answer)</b> | None At All   | Very Low  | 0.57                  | 0.39       | 0.14  | -0.19                   | 1.33        |
|  |   | Low   | 0.24                  | 0.36       | 0.51  | -0.47                   | 0.94        |
|  |   | Medium  | 0.40                  | 0.35       | 0.24  | -0.28                   | 1.08        |
|  |   | High  | 0.29                  | 0.34       | 0.41  | -0.39                   | 0.97        |
|  |   | Very High   | 0.41                  | 0.35       | 0.24  | -0.27                   | 1.09        |
|  |   | The Highest Level (Expert)                            | 0.60                  | 0.36       | 0.09  | -0.10                   | 1.30        |
|  | Very Low  | None At All   | -0.57                 | 0.39       | 0.14  | -1.33                   | 0.19        |
|  |   | Low   | -0.34                 | 0.22       | 0.12  | -0.76                   | 0.09        |
|  |   | Medium  | -0.17                 | 0.19       | 0.38  | -0.55                   | 0.21        |
|  |   | High  | -0.28                 | 0.19       | 0.14  | -0.66                   | 0.09        |
|  |   | Very High   | -0.16                 | 0.19       | 0.40  | -0.55                   | 0.22        |
|  |   | The Highest Level (Expert)                            | 0.03                  | 0.21       | 0.89  | -0.39                   | 0.44        |
|  | Low   | None At All   | -0.24                 | 0.36       | 0.51  | -0.94                   | 0.47        |
|  |   | Very Low  | 0.34                  | 0.22       | 0.12  | -0.09                   | 0.76        |
|  |   | Medium  | 0.17                  | 0.13       | 0.21  | -0.09                   | 0.43        |
|  |   | High  | 0.05                  | 0.13       | 0.69  | -0.20                   | 0.31        |
|  |   | Very High   | 0.17                  | 0.14       | 0.20  | -0.09                   | 0.44        |
|  |   | The Highest Level (Expert)                            | 0.37*                 | 0.16       | 0.02  | 0.05                    | 0.68        |
|  | Medium  | None At All   | -0.40                 | 0.35       | 0.24  | -1.08                   | 0.28        |
|  |   | Very Low  | 0.17                  | 0.19       | 0.38  | -0.21                   | 0.55        |
|  |   | Low   | -0.17                 | 0.13       | 0.21  | -0.43                   | 0.09        |
|  |   | High  | -0.12                 | 0.09       | 0.18  | -0.29                   | 0.06        |
|  |   | Very High   | 0.00                  | 0.09       | 0.96  | -0.18                   | 0.19        |
|  |   | The Highest Level (Expert)                            | 0.20                  | 0.12       | 0.12  | -0.05                   | 0.44        |
|  | High  | None At All   | -0.29                 | 0.34       | 0.41  | -0.97                   | 0.39        |
|  |   | Very Low  | 0.28                  | 0.19       | 0.14  | -0.09                   | 0.66        |
|  |   | Low   | -0.05                 | 0.13       | 0.69  | -0.31                   | 0.20        |
| Medium   |   | 0.12  | 0.09                  | 0.18       | -0.06 | 0.29                    |             |
| Very High  |   | 0.12  | 0.09                  | 0.19       | -0.06 | 0.30                    |             |
| The Highest Level (Expert)                         |   | 0.31*   | 0.12                  | 0.01       | 0.07  | 0.55                    |             |
| Very High  | None At All   | -0.41   | 0.35                  | 0.24       | -1.09 | 0.27                    |             |
|  | Very Low  | 0.16  | 0.19                  | 0.40       | -0.22 | 0.55                    |             |
|  | Low   | -0.17   | 0.14                  | 0.20       | -0.44 | 0.09                    |             |
|  | Medium  | 0.00  | 0.09                  | 0.96       | -0.19 | 0.18                    |             |
|  | High  | -0.12   | 0.09                  | 0.19       | -0.30 | 0.06                    |             |
|  | The Highest Level (Expert)                            | 0.19  | 0.13                  | 0.13       | -0.06 | 0.44                    |             |
| The Highest Level (Expert)                         | None At All   | -0.60   | 0.36                  | 0.09       | -1.30 | 0.10                    |             |
|  | Very Low  | -0.03   | 0.21                  | 0.89       | -0.44 | 0.39                    |             |
|  | Low   | -0.37*  | 0.16                  | 0.02       | -0.68 | -0.05                   |             |
|  | Medium  | -0.20   | 0.12                  | 0.12       | -0.44 | 0.05                    |             |
|  | High  | -0.31*  | 0.12                  | 0.01       | -0.55 | -0.07                   |             |
|  | Very High   | -0.19   | 0.13                  | 0.13       | -0.44 | 0.06                    |             |



Table C.11 (Continued)

| Dependent Variable                                  | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|---|---|---|-----------------------|------------|-------|-------------------------|-------------|
|   |   |   |                       |            |       | Lower Bound             | Upper Bound |
| Scenario 5-<br>Patient 2<br>(Verbatim #1<br>Answer) | None At All   | Very Low  | -0.57                 | 0.34       | 0.10  | -1.25                   | 0.10        |
|   |   | Low   | -0.18                 | 0.32       | 0.58  | -0.81                   | 0.45        |
|   |   | Medium  | -0.28                 | 0.31       | 0.36  | -0.89                   | 0.32        |
|   |   | High  | -0.17                 | 0.31       | 0.59  | -0.77                   | 0.44        |
|   |   | Very High   | -0.31                 | 0.31       | 0.32  | -0.91                   | 0.30        |
|   |   | The Highest Level (Expert)                            | -0.20                 | 0.32       | 0.53  | -0.82                   | 0.42        |
|   | Very Low  | None At All   | 0.57                  | 0.34       | 0.10  | -0.10                   | 1.25        |
|   |   | Low   | 0.39*                 | 0.19       | 0.04  | 0.02                    | 0.77        |
|   |   | Medium  | 0.29                  | 0.17       | 0.09  | -0.05                   | 0.63        |
|   |   | High  | 0.40*                 | 0.17       | 0.02  | 0.07                    | 0.74        |
|   |   | Very High   | 0.27                  | 0.17       | 0.13  | -0.07                   | 0.61        |
|   |   | The Highest Level (Expert)                            | 0.37*                 | 0.19       | 0.05  | 0.00                    | 0.74        |
|   | Low   | None At All   | 0.18                  | 0.32       | 0.58  | -0.45                   | 0.81        |
|   |   | Very Low  | -0.39*                | 0.19       | 0.04  | -0.77                   | -0.02       |
|   |   | Medium  | -0.10                 | 0.12       | 0.38  | -0.34                   | 0.13        |
|   |   | High  | 0.01                  | 0.12       | 0.93  | -0.22                   | 0.24        |
|   |   | Very High   | -0.13                 | 0.12       | 0.28  | -0.37                   | 0.11        |
|   |   | The Highest Level (Expert)                            | -0.02                 | 0.14       | 0.87  | -0.30                   | 0.25        |
|   | Medium  | None At All   | 0.28                  | 0.31       | 0.36  | -0.32                   | 0.89        |
|   |   | Very Low  | -0.29                 | 0.17       | 0.09  | -0.63                   | 0.05        |
|   |   | Low   | 0.10                  | 0.12       | 0.38  | -0.13                   | 0.34        |
|   |   | High  | 0.11                  | 0.08       | 0.14  | -0.04                   | 0.27        |
|   |   | Very High   | -0.03                 | 0.08       | 0.76  | -0.19                   | 0.14        |
|   |   | The Highest Level (Expert)                            | 0.08                  | 0.11       | 0.47  | -0.14                   | 0.30        |
|   | High  | None At All   | 0.17                  | 0.31       | 0.59  | -0.44                   | 0.77        |
|   |   | Very Low  | -0.40*                | 0.17       | 0.02  | -0.74                   | -0.07       |
|   |   | Low   | -0.01                 | 0.12       | 0.93  | -0.24                   | 0.22        |
| Medium  |   | -0.11   | 0.08                  | 0.14       | -0.27 | 0.04                    |             |
| Very High   |   | -0.14   | 0.08                  | 0.09       | -0.30 | 0.02                    |             |
| The Highest Level (Expert)                          |   | -0.03   | 0.11                  | 0.76       | -0.25 | 0.18                    |             |
| Very High   | None At All   | 0.31  | 0.31                  | 0.32       | -0.30 | 0.91                    |             |
|   | Very Low  | -0.27   | 0.17                  | 0.13       | -0.61 | 0.07                    |             |
|   | Low   | 0.13  | 0.12                  | 0.28       | -0.11 | 0.37                    |             |
|   | Medium  | 0.03  | 0.08                  | 0.76       | -0.14 | 0.19                    |             |
|   | High  | 0.14  | 0.08                  | 0.09       | -0.02 | 0.30                    |             |
|   | The Highest Level (Expert)                            | 0.11  | 0.11                  | 0.35       | -0.12 | 0.33                    |             |
| The Highest Level (Expert)                          | None At All   | 0.20  | 0.32                  | 0.53       | -0.42 | 0.82                    |             |
|   | Very Low  | -0.37*  | 0.19                  | 0.05       | -0.74 | 0.00                    |             |
|   | Low   | 0.02  | 0.14                  | 0.87       | -0.25 | 0.30                    |             |
|   | Medium  | -0.08   | 0.11                  | 0.47       | -0.30 | 0.14                    |             |
|   | High  | 0.03  | 0.11                  | 0.76       | -0.18 | 0.25                    |             |
|   | Very High   | -0.11   | 0.11                  | 0.35       | -0.33 | 0.12                    |             |

Table C.11 (Continued)

| Dependent Variable                                  | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|---|---|---|-----------------------|------------|-------|-------------------------|-------------|
|   |   |   |                       |            |       | Lower Bound             | Upper Bound |
| Scenario 5-<br>Patient 2<br>(Verbatim #2<br>Answer) | None At All   | Very Low  | 0.00                  | 0.27       | 1.00  | -0.52                   | 0.52        |
|   |   | Low   | -0.06                 | 0.25       | 0.81  | -0.55                   | 0.43        |
|   |   | Medium  | -0.12                 | 0.24       | 0.61  | -0.59                   | 0.35        |
|   |   | High  | -0.12                 | 0.24       | 0.61  | -0.59                   | 0.35        |
|   |   | Very High   | -0.10                 | 0.24       | 0.67  | -0.57                   | 0.37        |
|   |   | The Highest Level (Expert)                            | -0.35                 | 0.25       | 0.16  | -0.83                   | 0.13        |
|   | Very Low  | None At All   | 0.00                  | 0.27       | 1.00  | -0.52                   | 0.52        |
|   |   | Low   | -0.06                 | 0.15       | 0.69  | -0.35                   | 0.23        |
|   |   | Medium  | -0.12                 | 0.13       | 0.36  | -0.38                   | 0.14        |
|   |   | High  | -0.12                 | 0.13       | 0.36  | -0.38                   | 0.14        |
|   |   | Very High   | -0.10                 | 0.13       | 0.45  | -0.37                   | 0.16        |
|   |   | The Highest Level (Expert)                            | -0.35*                | 0.15       | 0.02  | -0.64                   | -0.06       |
|   | Low   | None At All   | 0.06                  | 0.25       | 0.81  | -0.43                   | 0.55        |
|   |   | Very Low  | 0.06                  | 0.15       | 0.69  | -0.23                   | 0.35        |
|   |   | Medium  | -0.06                 | 0.09       | 0.49  | -0.24                   | 0.12        |
|   |   | High  | -0.06                 | 0.09       | 0.49  | -0.24                   | 0.12        |
|   |   | Very High   | -0.04                 | 0.09       | 0.64  | -0.23                   | 0.14        |
|   |   | The Highest Level (Expert)                            | -0.29*                | 0.11       | 0.01  | -0.51                   | -0.08       |
|   | Medium  | None At All   | 0.12                  | 0.24       | 0.61  | -0.35                   | 0.59        |
|   |   | Very Low  | 0.12                  | 0.13       | 0.36  | -0.14                   | 0.38        |
|   |   | Low   | 0.06                  | 0.09       | 0.49  | -0.12                   | 0.24        |
|   |   | High  | 0.00                  | 0.06       | 0.98  | -0.12                   | 0.12        |
|   |   | Very High   | 0.02                  | 0.06       | 0.75  | -0.11                   | 0.15        |
|   |   | The Highest Level (Expert)                            | -0.23*                | 0.09       | 0.01  | -0.40                   | -0.06       |
|   | High  | None At All   | 0.12                  | 0.24       | 0.61  | -0.35                   | 0.59        |
|   |   | Very Low  | 0.12                  | 0.13       | 0.36  | -0.14                   | 0.38        |
|   |   | Low   | 0.06                  | 0.09       | 0.49  | -0.12                   | 0.24        |
| Medium  |   | 0.00  | 0.06                  | 0.98       | -0.12 | 0.12                    |             |
| Very High   |   | 0.02  | 0.06                  | 0.76       | -0.10 | 0.14                    |             |
| The Highest Level (Expert)                          |   | -0.23*  | 0.08                  | 0.01       | -0.40 | -0.06                   |             |
| Very High   | None At All   | 0.10  | 0.24                  | 0.67       | -0.37 | 0.57                    |             |
|   | Very Low  | 0.10  | 0.13                  | 0.45       | -0.16 | 0.37                    |             |
|   | Low   | 0.04  | 0.09                  | 0.64       | -0.14 | 0.23                    |             |
|   | Medium  | -0.02   | 0.06                  | 0.75       | -0.15 | 0.11                    |             |
|   | High  | -0.02   | 0.06                  | 0.76       | -0.14 | 0.10                    |             |
|   | The Highest Level (Expert)                            | -0.25*  | 0.09                  | 0.01       | -0.42 | -0.07                   |             |
| The Highest Level (Expert)                          | None At All   | 0.35  | 0.25                  | 0.16       | -0.13 | 0.83                    |             |
|   | Very Low  | 0.35*   | 0.15                  | 0.02       | 0.06  | 0.64                    |             |
|   | Low   | 0.29*   | 0.11                  | 0.01       | 0.08  | 0.51                    |             |
|   | Medium  | 0.23*   | 0.09                  | 0.01       | 0.06  | 0.40                    |             |
|   | High  | 0.23*   | 0.08                  | 0.01       | 0.06  | 0.40                    |             |
|   | Very High   | 0.25*   | 0.09                  | 0.01       | 0.07  | 0.42                    |             |

Table C.11 (Continued)

| Dependent Variable                      | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|---|---|---|-----------------------|------------|-------|-------------------------|-------------|
|   |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 6<br/>(Gist<br/>Answer)</b> | None At All   | Very Low  | -0.36                 | 0.37       | 0.34  | -1.09                   | 0.38        |
|   |   | Low   | -0.26                 | 0.35       | 0.45  | -0.95                   | 0.42        |
|   |   | Medium  | -0.20                 | 0.33       | 0.55  | -0.86                   | 0.46        |
|   |   | High  | -0.12                 | 0.33       | 0.72  | -0.78                   | 0.54        |
|   |   | Very High   | -0.21                 | 0.34       | 0.52  | -0.88                   | 0.45        |
|   |   | The Highest Level (Expert)                            | -0.25                 | 0.34       | 0.47  | -0.93                   | 0.43        |
|   | Very Low  | None At All   | 0.36                  | 0.37       | 0.34  | -0.38                   | 1.09        |
|   |   | Low   | 0.09                  | 0.21       | 0.66  | -0.32                   | 0.50        |
|   |   | Medium  | 0.16                  | 0.19       | 0.41  | -0.21                   | 0.52        |
|   |   | High  | 0.24                  | 0.18       | 0.20  | -0.13                   | 0.60        |
|   |   | Very High   | 0.14                  | 0.19       | 0.45  | -0.23                   | 0.51        |
|   |   | The Highest Level (Expert)                            | 0.11                  | 0.20       | 0.60  | -0.30                   | 0.51        |
|   | Low   | None At All   | 0.26                  | 0.35       | 0.45  | -0.42                   | 0.95        |
|   |   | Very Low  | -0.09                 | 0.21       | 0.66  | -0.50                   | 0.32        |
|   |   | Medium  | 0.06                  | 0.13       | 0.63  | -0.19                   | 0.32        |
|   |   | High  | 0.14                  | 0.13       | 0.26  | -0.11                   | 0.39        |
|   |   | Very High   | 0.05                  | 0.13       | 0.70  | -0.21                   | 0.31        |
|   |   | The Highest Level (Expert)                            | 0.01                  | 0.15       | 0.92  | -0.29                   | 0.32        |
|   | Medium  | None At All   | 0.20                  | 0.33       | 0.55  | -0.46                   | 0.86        |
|   |   | Very Low  | -0.16                 | 0.19       | 0.41  | -0.52                   | 0.21        |
|   |   | Low   | -0.06                 | 0.13       | 0.63  | -0.32                   | 0.19        |
|   |   | High  | 0.08                  | 0.08       | 0.34  | -0.09                   | 0.25        |
|   |   | Very High   | -0.01                 | 0.09       | 0.89  | -0.19                   | 0.17        |
|   |   | The Highest Level (Expert)                            | -0.05                 | 0.12       | 0.69  | -0.29                   | 0.19        |
|   | High  | None At All   | 0.12                  | 0.33       | 0.72  | -0.54                   | 0.78        |
|   |   | Very Low  | -0.24                 | 0.18       | 0.20  | -0.60                   | 0.13        |
|   |   | Low   | -0.14                 | 0.13       | 0.26  | -0.39                   | 0.11        |
|   |   | Medium  | -0.08                 | 0.08       | 0.34  | -0.25                   | 0.09        |
|   |   | Very High   | -0.09                 | 0.09       | 0.29  | -0.27                   | 0.08        |
| The Highest Level (Expert)              |   | -0.13   | 0.12                  | 0.28       | -0.36 | 0.11                    |             |
| Very High                               | None At All   | 0.21  | 0.34                  | 0.52       | -0.45 | 0.88                    |             |
|   | Very Low  | -0.14   | 0.19                  | 0.45       | -0.51 | 0.23                    |             |
|   | Low   | -0.05   | 0.13                  | 0.70       | -0.31 | 0.21                    |             |
|   | Medium  | 0.01  | 0.09                  | 0.89       | -0.17 | 0.19                    |             |
|   | High  | 0.09  | 0.09                  | 0.29       | -0.08 | 0.27                    |             |
|   | The Highest Level (Expert)                            | -0.04   | 0.12                  | 0.77       | -0.28 | 0.21                    |             |
| The Highest Level (Expert)              | None At All   | 0.25  | 0.34                  | 0.47       | -0.43 | 0.93                    |             |
|   | Very Low  | -0.11   | 0.20                  | 0.60       | -0.51 | 0.30                    |             |
|   | Low   | -0.01   | 0.15                  | 0.92       | -0.32 | 0.29                    |             |
|   | Medium  | 0.05  | 0.12                  | 0.69       | -0.19 | 0.29                    |             |
|   | High  | 0.13  | 0.12                  | 0.28       | -0.11 | 0.36                    |             |
|   | Very High   | 0.04  | 0.12                  | 0.77       | -0.21 | 0.28                    |             |

Table C.11 (Continued)

| Dependent Variable                          | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|---|---|---|-----------------------|------------|-------|-------------------------|-------------|
|   |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 6<br/>(Verbatim<br/>Answer)</b> | None At All   | Very Low  | 0.36                  | 0.37       | 0.33  | -0.37                   | 1.08        |
|   |   | Low   | 0.26                  | 0.34       | 0.44  | -0.41                   | 0.94        |
|   |   | Medium  | 0.24                  | 0.33       | 0.47  | -0.41                   | 0.89        |
|   |   | High  | 0.12                  | 0.33       | 0.71  | -0.53                   | 0.77        |
|   |   | Very High   | 0.21                  | 0.33       | 0.52  | -0.44                   | 0.87        |
|   |   | The Highest Level (Expert)                            | 0.30                  | 0.34       | 0.38  | -0.37                   | 0.97        |
|   | Very Low  | None At All   | -0.36                 | 0.37       | 0.33  | -1.08                   | 0.37        |
|   |   | Low   | -0.09                 | 0.21       | 0.65  | -0.50                   | 0.31        |
|   |   | Medium  | -0.12                 | 0.18       | 0.51  | -0.48                   | 0.24        |
|   |   | High  | -0.24                 | 0.18       | 0.20  | -0.59                   | 0.12        |
|   |   | Very High   | -0.14                 | 0.18       | 0.44  | -0.51                   | 0.22        |
|   |   | The Highest Level (Expert)                            | -0.06                 | 0.20       | 0.78  | -0.45                   | 0.34        |
|   | Low   | None At All   | -0.26                 | 0.34       | 0.44  | -0.94                   | 0.41        |
|   |   | Very Low  | 0.09                  | 0.21       | 0.65  | -0.31                   | 0.50        |
|   |   | Medium  | -0.03                 | 0.13       | 0.83  | -0.28                   | 0.22        |
|   |   | High  | -0.14                 | 0.12       | 0.25  | -0.39                   | 0.10        |
|   |   | Very High   | -0.05                 | 0.13       | 0.70  | -0.30                   | 0.20        |
|   |   | The Highest Level (Expert)                            | 0.04                  | 0.15       | 0.82  | -0.26                   | 0.33        |
|   | Medium  | None At All   | -0.24                 | 0.33       | 0.47  | -0.89                   | 0.41        |
|   |   | Very Low  | 0.12                  | 0.18       | 0.51  | -0.24                   | 0.48        |
|   |   | Low   | 0.03                  | 0.13       | 0.83  | -0.22                   | 0.28        |
|   |   | High  | -0.12                 | 0.08       | 0.16  | -0.28                   | 0.05        |
|   |   | Very High   | -0.02                 | 0.09       | 0.80  | -0.20                   | 0.15        |
|   |   | The Highest Level (Expert)                            | 0.06                  | 0.12       | 0.60  | -0.17                   | 0.30        |
|   | High  | None At All   | -0.12                 | 0.33       | 0.71  | -0.77                   | 0.53        |
|   |   | Very Low  | 0.24                  | 0.18       | 0.20  | -0.12                   | 0.59        |
|   |   | Low   | 0.14                  | 0.12       | 0.25  | -0.10                   | 0.39        |
| Medium                                      |   | 0.12  | 0.08                  | 0.16       | -0.05 | 0.28                    |             |
| Very High                                   |   | 0.09  | 0.09                  | 0.28       | -0.08 | 0.26                    |             |
| The Highest Level (Expert)                  |   | 0.18  | 0.12                  | 0.13       | -0.05 | 0.41                    |             |
| Very High                                   | None At All   | -0.21   | 0.33                  | 0.52       | -0.87 | 0.44                    |             |
|   | Very Low  | 0.14  | 0.18                  | 0.44       | -0.22 | 0.51                    |             |
|   | Low   | 0.05  | 0.13                  | 0.70       | -0.20 | 0.30                    |             |
|   | Medium  | 0.02  | 0.09                  | 0.80       | -0.15 | 0.20                    |             |
|   | High  | -0.09   | 0.09                  | 0.28       | -0.26 | 0.08                    |             |
|   | The Highest Level (Expert)                            | 0.09  | 0.12                  | 0.48       | -0.15 | 0.33                    |             |
| The Highest Level (Expert)                  | None At All   | -0.30   | 0.34                  | 0.38       | -0.97 | 0.37                    |             |
|   | Very Low  | 0.06  | 0.20                  | 0.78       | -0.34 | 0.45                    |             |
|   | Low   | -0.04   | 0.15                  | 0.82       | -0.33 | 0.26                    |             |
|   | Medium  | -0.06   | 0.12                  | 0.60       | -0.30 | 0.17                    |             |
|   | High  | -0.18   | 0.12                  | 0.13       | -0.41 | 0.05                    |             |
|   | Very High   | -0.09   | 0.12                  | 0.48       | -0.33 | 0.15                    |             |

Table C.11 (Continued)

| Dependent Variable                      | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|---|---|---|-----------------------|------------|-------|-------------------------|-------------|
|   |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 7<br/>(Gist<br/>Answer)</b> | None At All   | Very Low  | -0.07                 | 0.40       | 0.86  | -0.87                   | 0.73        |
|   |   | Low   | 0.15                  | 0.38       | 0.70  | -0.60                   | 0.89        |
|   |   | Medium  | 0.06                  | 0.36       | 0.87  | -0.65                   | 0.78        |
|   |   | High  | 0.03                  | 0.36       | 0.93  | -0.68                   | 0.74        |
|   |   | Very High   | -0.02                 | 0.36       | 0.95  | -0.74                   | 0.70        |
|   |   | The Highest Level (Expert)                            | -0.05                 | 0.37       | 0.89  | -0.79                   | 0.69        |
|   | Very Low  | None At All   | 0.07                  | 0.40       | 0.86  | -0.73                   | 0.87        |
|   |   | Low   | 0.22                  | 0.23       | 0.34  | -0.23                   | 0.67        |
|   |   | Medium  | 0.13                  | 0.20       | 0.51  | -0.27                   | 0.53        |
|   |   | High  | 0.10                  | 0.20       | 0.61  | -0.29                   | 0.50        |
|   |   | Very High   | 0.05                  | 0.20       | 0.81  | -0.35                   | 0.45        |
|   |   | The Highest Level (Expert)                            | 0.02                  | 0.22       | 0.92  | -0.42                   | 0.46        |
|   | Low   | None At All   | -0.15                 | 0.38       | 0.70  | -0.89                   | 0.60        |
|   |   | Very Low  | -0.22                 | 0.23       | 0.34  | -0.67                   | 0.23        |
|   |   | Medium  | -0.09                 | 0.14       | 0.54  | -0.36                   | 0.19        |
|   |   | High  | -0.12                 | 0.14       | 0.40  | -0.39                   | 0.15        |
|   |   | Very High   | -0.17                 | 0.14       | 0.24  | -0.45                   | 0.11        |
|   |   | The Highest Level (Expert)                            | -0.20                 | 0.17       | 0.24  | -0.53                   | 0.13        |
|   | Medium  | None At All   | -0.06                 | 0.36       | 0.87  | -0.78                   | 0.65        |
|   |   | Very Low  | -0.13                 | 0.20       | 0.51  | -0.53                   | 0.27        |
|   |   | Low   | 0.09                  | 0.14       | 0.54  | -0.19                   | 0.36        |
|   |   | High  | -0.03                 | 0.09       | 0.73  | -0.21                   | 0.15        |
|   |   | Very High   | -0.08                 | 0.10       | 0.41  | -0.28                   | 0.11        |
|   |   | The Highest Level (Expert)                            | -0.11                 | 0.13       | 0.40  | -0.37                   | 0.15        |
|   | High  | None At All   | -0.03                 | 0.36       | 0.93  | -0.74                   | 0.68        |
|   |   | Very Low  | -0.10                 | 0.20       | 0.61  | -0.50                   | 0.29        |
|   |   | Low   | 0.12                  | 0.14       | 0.40  | -0.15                   | 0.39        |
|   |   | Medium  | 0.03                  | 0.09       | 0.73  | -0.15                   | 0.21        |
|   |   | Very High   | -0.05                 | 0.10       | 0.59  | -0.24                   | 0.14        |
|   |   | The Highest Level (Expert)                            | -0.08                 | 0.13       | 0.53  | -0.33                   | 0.17        |
| Very High                               | None At All   | 0.02  | 0.36                  | 0.95       | -0.70 | 0.74                    |             |
|   | Very Low  | -0.05   | 0.20                  | 0.81       | -0.45 | 0.35                    |             |
|   | Low   | 0.17  | 0.14                  | 0.24       | -0.11 | 0.45                    |             |
|   | Medium  | 0.08  | 0.10                  | 0.41       | -0.11 | 0.28                    |             |
|   | High  | 0.05  | 0.10                  | 0.59       | -0.14 | 0.24                    |             |
|   | The Highest Level (Expert)                            | -0.03   | 0.13                  | 0.83       | -0.29 | 0.24                    |             |
| The Highest Level (Expert)              | None At All   | 0.05  | 0.37                  | 0.89       | -0.69 | 0.79                    |             |
|   | Very Low  | -0.02   | 0.22                  | 0.92       | -0.46 | 0.42                    |             |
|   | Low   | 0.20  | 0.17                  | 0.24       | -0.13 | 0.53                    |             |
|   | Medium  | 0.11  | 0.13                  | 0.40       | -0.15 | 0.37                    |             |
|   | High  | 0.08  | 0.13                  | 0.53       | -0.17 | 0.33                    |             |
|   | Very High   | 0.03  | 0.13                  | 0.83       | -0.24 | 0.29                    |             |

Table C.11 (Continued)

| Dependent Variable                      | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|---|---|---|-----------------------|------------|-------|-------------------------|-------------|
|   |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 7<br/>(Verbatim Answer)</b> | None At All   | Very Low  | 0.07                  | 0.40       | 0.86  | -0.72                   | 0.86        |
|   |   | Low   | -0.03                 | 0.37       | 0.94  | -0.76                   | 0.70        |
|   |   | Medium  | 0.03                  | 0.36       | 0.94  | -0.68                   | 0.73        |
|   |   | High  | 0.06                  | 0.36       | 0.87  | -0.64                   | 0.77        |
|   |   | Very High   | 0.15                  | 0.36       | 0.69  | -0.56                   | 0.85        |
|   |   | The Highest Level (Expert)                            | 0.20                  | 0.37       | 0.59  | -0.53                   | 0.93        |
|   | Very Low  | None At All   | -0.07                 | 0.40       | 0.86  | -0.86                   | 0.72        |
|   |   | Low   | -0.10                 | 0.22       | 0.65  | -0.54                   | 0.34        |
|   |   | Medium  | -0.05                 | 0.20       | 0.82  | -0.44                   | 0.35        |
|   |   | High  | -0.01                 | 0.20       | 0.96  | -0.40                   | 0.38        |
|   |   | Very High   | 0.07                  | 0.20       | 0.71  | -0.32                   | 0.47        |
|   |   | The Highest Level (Expert)                            | 0.13                  | 0.22       | 0.56  | -0.30                   | 0.56        |
|   | Low   | None At All   | 0.03                  | 0.37       | 0.94  | -0.70                   | 0.76        |
|   |   | Very Low  | 0.10                  | 0.22       | 0.65  | -0.34                   | 0.54        |
|   |   | Medium  | 0.06                  | 0.14       | 0.69  | -0.22                   | 0.33        |
|   |   | High  | 0.09                  | 0.14       | 0.51  | -0.18                   | 0.36        |
|   |   | Very High   | 0.18                  | 0.14       | 0.21  | -0.10                   | 0.45        |
|   |   | The Highest Level (Expert)                            | 0.23                  | 0.16       | 0.16  | -0.09                   | 0.55        |
|   | Medium  | None At All   | -0.03                 | 0.36       | 0.94  | -0.73                   | 0.68        |
|   |   | Very Low  | 0.05                  | 0.20       | 0.82  | -0.35                   | 0.44        |
|   |   | Low   | -0.06                 | 0.14       | 0.69  | -0.33                   | 0.22        |
|   |   | High  | 0.03                  | 0.09       | 0.70  | -0.14                   | 0.21        |
|   |   | Very High   | 0.12                  | 0.10       | 0.22  | -0.07                   | 0.31        |
|   |   | The Highest Level (Expert)                            | 0.17                  | 0.13       | 0.18  | -0.08                   | 0.43        |
|   | High  | None At All   | -0.06                 | 0.36       | 0.87  | -0.77                   | 0.64        |
|   |   | Very Low  | 0.01                  | 0.20       | 0.96  | -0.38                   | 0.40        |
|   |   | Low   | -0.09                 | 0.14       | 0.51  | -0.36                   | 0.18        |
| Medium                                  |   | -0.03   | 0.09                  | 0.70       | -0.21 | 0.14                    |             |
| Very High                               |   | 0.09  | 0.09                  | 0.37       | -0.10 | 0.27                    |             |
| The Highest Level (Expert)              |   | 0.14  | 0.13                  | 0.27       | -0.11 | 0.39                    |             |
| Very High                               | None At All   | -0.15   | 0.36                  | 0.69       | -0.85 | 0.56                    |             |
|   | Very Low  | -0.07   | 0.20                  | 0.71       | -0.47 | 0.32                    |             |
|   | Low   | -0.18   | 0.14                  | 0.21       | -0.45 | 0.10                    |             |
|   | Medium  | -0.12   | 0.10                  | 0.22       | -0.31 | 0.07                    |             |
|   | High  | -0.09   | 0.09                  | 0.37       | -0.27 | 0.10                    |             |
|   | The Highest Level (Expert)                            | 0.05  | 0.13                  | 0.68       | -0.21 | 0.32                    |             |
| The Highest Level (Expert)              | None At All   | -0.20   | 0.37                  | 0.59       | -0.93 | 0.53                    |             |
|   | Very Low  | -0.13   | 0.22                  | 0.56       | -0.56 | 0.30                    |             |
|   | Low   | -0.23   | 0.16                  | 0.16       | -0.55 | 0.09                    |             |
|   | Medium  | -0.17   | 0.13                  | 0.18       | -0.43 | 0.08                    |             |
|   | High  | -0.14   | 0.13                  | 0.27       | -0.39 | 0.11                    |             |
|   | Very High   | -0.05   | 0.13                  | 0.68       | -0.32 | 0.21                    |             |

\*. The mean difference is significant at the 0.05 level.

Table C.12

*Key of Highest Certification Values Converted into Numerical Values*

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| Numerical Value | Certification  |
|-----------------|--|
| 1               | No EMS/Medical experience/Certifications                       |
| 2               | CPR/AED for the Professional Rescuer (or equivalent)           |
| 3               | Certified First Responder (CFR)                                |
| 4               | Emergency Medical Technician- Basic (EMT-B)                    |
| 5               | Emergency Medical Technician- Intermediate (EMT- I)            |
| 6               | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) |
| 7               | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      |
| 8               | Critical Care Paramedic (AEMT-P CC)                            |

Table C.13

*Means Estimates of Scenario 5- Patient 2 (Conflict) Gist/Verbatim Answer Choices with Highest Certification Level (Numerical Values)*

|  | N   | Mean | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|--|-----|------|-------------------|---------------|-------------------------------------|----------------|
|  |     |      |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| Coach the patient's breathing and then place the patient in a Kendrick's Extrication Device (KED), a device for immobilizing a person's torso only, and then remove them from the vehicle on a long backboard. | 136 | 4.93 | 1.47              | 0.13          | 4.69                                | 5.18           |
| Place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.  | 52  | 4.79 | 1.41              | 0.20          | 4.40                                | 5.18           |
| Remove the patient from the vehicle via rapid extrication and place the patient on a long backboard.   | 28  | 5.04 | 1.69              | 0.32          | 4.38                                | 5.69           |
| Allow the patient to walk to the ambulance, despite the patient being amicable to any treatment you believe is medically necessary.  | 1   | 8.00 | .                 | .             | .                                   | .              |
| Total  | 217 | 4.93 | 1.49              | 0.10          | 4.73                                | 5.13           |



Table C.14

*Means Estimates of Scenario 6 (Conflict) Gist/Verbatim Answer Choices with Highest*

*Certification Level (Numerical Values)*

|   | N   | Mean | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|---|-----|------|-------------------|---------------|-------------------------------------|----------------|
|   |     |      |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| Assuming it is available, test the patient's BGL (Blood glucose level) with a glucometer. | 151 | 5.14 | 1.58              | 0.13          | 4.89                                | 5.39           |
| Administer one tube of oral glucose.  | 63  | 4.40 | 1.07              | 0.14          | 4.13                                | 4.67           |
| Check the patient's oxygen saturation if available.                                       | 1   | 4.00 | .                 | .             | .                                   | .              |
| Have the patient lie on the ground and treat for shock.                                   | 2   | 6.00 | 2.83              | 2.00          | -19.41                              | 31.41          |
| Total   | 217 | 4.93 | 1.49              | 0.10          | 4.73                                | 5.13           |

Table C.15

*Means Estimates of Scenario 7 (Conflict) Gist/Verbatim Answer Choices with Highest*

*Certification Level (Numerical Values)*

|   | N   | Mean | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|---|-----|------|-------------------|---------------|-------------------------------------|----------------|
|   |     |      |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| Have the patient lie on the ground and treat for shock.                                       | 12  | 5.00 | 1.48              | 0.43          | 4.06                                | 5.94           |
| Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 92  | 4.77 | 1.33              | 0.14          | 4.50                                | 5.05           |
| Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | 102 | 4.96 | 1.58              | 0.16          | 4.65                                | 5.27           |
| Fully immobilize the patient to a long backboard.   | 10  | 5.70 | 1.83              | 0.58          | 4.39                                | 7.01           |
| Total   | 216 | 4.92 | 1.49              | 0.10          | 4.72                                | 5.12           |

Table C.16

*Pairwise Comparison of Medical Case Scenario 7 Answers in Terms of Provider's Highest*

*Certification Level*

| (I) After obtaining the information above, what is the most important method of treatment?    | (J) After obtaining the information above, what is the most important method of treatment?    | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|---|---|-----------------------|------------|------|-------------------------|-------------|
|   |   |                       |            |      | Lower Bound             | Upper Bound |
| Have the patient lie on the ground and treat for shock.                                       | Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 0.23                  | 0.46       | 0.62 | -0.67                   | 1.13        |
|   | Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | 0.04                  | 0.45       | 0.93 | -0.85                   | 0.93        |
|   | Fully immobilize the patient to a long backboard.   | -0.70                 | 0.64       | 0.27 | -1.95                   | 0.55        |
| Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | Have the patient lie on the ground and treat for shock.                                       | -0.23                 | 0.46       | 0.62 | -1.13                   | 0.67        |
|   | Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | -0.19                 | 0.21       | 0.38 | -0.61                   | 0.23        |
|   | Fully immobilize the patient to a long backboard.   | -0.93                 | 0.49       | 0.06 | -1.90                   | 0.05        |
| Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | Have the patient lie on the ground and treat for shock.                                       | -0.04                 | 0.45       | 0.93 | -0.93                   | 0.85        |
|   | Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 0.19                  | 0.21       | 0.38 | -0.23                   | 0.61        |
|   | Fully immobilize the patient to a long backboard.   | -0.74                 | 0.49       | 0.13 | -1.71                   | 0.23        |
| Fully immobilize the patient to a long backboard.   | Have the patient lie on the ground and treat for shock.                                       | 0.70                  | 0.64       | 0.27 | -0.55                   | 1.95        |
|   | Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 0.93                  | 0.49       | 0.06 | -0.05                   | 1.90        |
|   | Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | 0.74                  | 0.49       | 0.13 | -0.23                   | 1.71        |

Table C.17

*Means Estimates of Scenario 5- Patient 2 (Conflict) Gist/Verbatim Answer Choices with Experience at Current Certification (Scale-Based)*

|  | N   | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             |
|--|-----|------|----------------|------------|----------------------------------|-------------|
|  |     |      |                |            | Lower Bound                      | Upper Bound |
| Coach the patient's breathing and then place the patient in a Kendrick's Extrication Device (KED), a device for immobilizing a person's torso only, and then remove them from the vehicle on a long backboard. | 136 | 4.57 | 1.30           | 0.11       | 4.35                             | 4.79        |
| Place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.  | 53  | 4.74 | 1.29           | 0.18       | 4.38                             | 5.09        |
| Remove the patient from the vehicle via rapid extrication and place the patient on a long backboard.   | 28  | 5.36 | 1.16           | 0.22       | 4.91                             | 5.81        |
| Allow the patient to walk to the ambulance, despite the patient being amicable to any treatment you believe is medically necessary.  | 1   | 7.00 | .              | .          | .                                | .           |
| Total  | 218 | 4.72 | 1.31           | 0.09       | 4.55                             | 4.90        |

Table C.18

*Means Estimates of Scenario 6 (Conflict) Gist/Verbatim Answer Choices with Experience at Current Certification (Scale-Based)*

|   | N   | Mean | Std.<br>Deviation | Std. Error | 95% Confidence Interval<br>for Mean |                |
|---|-----|------|-------------------|------------|-------------------------------------|----------------|
|   |     |      |                   |            | Lower<br>Bound                      | Upper<br>Bound |
| Assuming it is available, test the patient's BGL (Blood glucose level) with a glucometer. | 151 | 4.71 | 1.35              | 0.11       | 4.49                                | 4.92           |
| Administer one tube of oral glucose.  | 64  | 4.75 | 1.21              | 0.15       | 4.45                                | 5.05           |
| Check the patient's oxygen saturation if available.                                       | 1   | 4.00 | .                 | .          | .                                   | .              |
| Have the patient lie on the ground and treat for shock.                                   | 2   | 5.50 | 2.12              | 1.50       | -13.56                              | 24.56          |
| Total   | 218 | 4.72 | 1.31              | 0.09       | 4.55                                | 4.90           |

Table C.19

*Means Estimates of Scenario 7 (Conflict) Gist/Verbatim Answer Choices with Experience at Current Certification (Scale-Based)*

|   | N   | Mean | Std.<br>Deviation | Std. Error | 95% Confidence Interval<br>for Mean |                |
|---|-----|------|-------------------|------------|-------------------------------------|----------------|
|   |     |      |                   |            | Lower<br>Bound                      | Upper<br>Bound |
| Have the patient lie on the ground and treat for shock.                                       | 12  | 4.83 | 1.12              | 0.32       | 4.13                                | 5.54           |
| Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 92  | 4.61 | 1.31              | 0.14       | 4.34                                | 4.88           |
| Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | 103 | 4.72 | 1.32              | 0.13       | 4.46                                | 4.98           |
| Fully immobilize the patient to a long backboard.   | 10  | 5.60 | 1.17              | 0.37       | 4.76                                | 6.44           |
| Total   | 217 | 4.72 | 1.31              | 0.09       | 4.54                                | 4.89           |

Table C.20

*Pairwise Comparison of Medical Case Scenario 7 Answers in Terms of Provider's Experience**Level at their Current Certification (Scale-Based)*

| (I) After obtaining the information above, what is the most important method of treatment?    | (J) After obtaining the information above, what is the most important method of treatment?    | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|---|---|-----------------------|------------|------|-------------------------|-------------|
|   |   |                       |            |      | Lower Bound             | Upper Bound |
| Have the patient lie on the ground and treat for shock.                                       | Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 0.23                  | 0.40       | 0.57 | -0.56                   | 1.01        |
|   | Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | 0.12                  | 0.40       | 0.77 | -0.67                   | 0.90        |
|   | Fully immobilize the patient to a long backboard.   | -0.77                 | 0.56       | 0.17 | -1.86                   | 0.33        |
| Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | Have the patient lie on the ground and treat for shock.                                       | -0.23                 | 0.40       | 0.57 | -1.01                   | 0.56        |
|   | Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | -0.11                 | 0.19       | 0.56 | -0.48                   | 0.26        |
|   | Fully immobilize the patient to a long backboard.   | -0.99*                | 0.43       | 0.02 | -1.84                   | -0.14       |
| Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | Have the patient lie on the ground and treat for shock.                                       | -0.12                 | 0.40       | 0.77 | -0.90                   | 0.67        |
|   | Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 0.11                  | 0.19       | 0.56 | -0.26                   | 0.48        |
|   | Fully immobilize the patient to a long backboard.   | -0.88*                | 0.43       | 0.04 | -1.73                   | -0.03       |
| Fully immobilize the patient to a long backboard.   | Have the patient lie on the ground and treat for shock.                                       | 0.77                  | 0.56       | 0.17 | -0.33                   | 1.86        |
|   | Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 0.99*                 | 0.43       | 0.02 | 0.14                    | 1.84        |
|   | Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | 0.88*                 | 0.43       | 0.04 | 0.03                    | 1.73        |

\*. The mean difference is significant at the 0.05 level.

Table C.21

*Means Estimates of Scenario 5- Patient 2 (Conflict) Gist/Verbatim Answer Choices with Experience at Current Certification (in Years)*

|  | N   | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             |
|--|-----|-------|----------------|------------|----------------------------------|-------------|
|  |     |       |                |            | Lower Bound                      | Upper Bound |
| Coach the patient's breathing and then place the patient in a Kendrick's Extrication Device (KED), a device for immobilizing a person's torso only, and then remove them from the vehicle on a long backboard. | 132 | 7.54  | 8.39           | 0.73       | 6.09                             | 8.98        |
| Place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.  | 53  | 8.14  | 7.89           | 1.08       | 5.96                             | 10.31       |
| Remove the patient from the vehicle via rapid extrication and place the patient on a long backboard.   | 28  | 9.64  | 9.00           | 1.70       | 6.15                             | 13.13       |
| Allow the patient to walk to the ambulance, despite the patient being amicable to any treatment you believe is medically necessary.  | 1   | 13.00 | .              | .          | .                                | .           |
| Total  | 214 | 7.99  | 8.33           | 0.57       | 6.87                             | 9.11        |



Table C.22

*Means Estimates of Scenario 6 (Conflict) Gist/Verbatim Answer Choices with Experience at Current Certification (in Years)*

|   | N   | Mean | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|---|-----|------|-------------------|---------------|-------------------------------------|----------------|
|   |     |      |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| Assuming it is available, test the patient's BGL (Blood glucose level) with a glucometer. | 148 | 7.74 | 7.96              | 0.65          | 6.45                                | 9.04           |
| Administer one tube of oral glucose.  | 63  | 8.66 | 9.29              | 1.17          | 6.32                                | 11.00          |
| Check the patient's oxygen saturation if available.                                       | 1   | 4.00 | .                 | .             | .                                   | .              |
| Have the patient lie on the ground and treat for shock.                                   | 2   | 7.00 | 8.49              | 6.00          | -69.24                              | 83.24          |
| Total   | 214 | 7.99 | 8.33              | 0.57          | 6.87                                | 9.11           |

Table C.23

*Means Estimates of Scenario 7 (Conflict) Gist/Verbatim Answer Choices with Experience at Current Certification (in Years)*

|   | N   | Mean  | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|---|-----|-------|-------------------|---------------|-------------------------------------|----------------|
|   |     |       |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| Have the patient lie on the ground and treat for shock.                                       | 12  | 11.33 | 9.74              | 2.81          | 5.15                                | 17.52          |
| Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 89  | 7.48  | 8.10              | 0.86          | 5.77                                | 9.18           |
| Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | 102 | 7.68  | 8.16              | 0.81          | 6.08                                | 9.28           |
| Fully immobilize the patient to a long backboard.   | 10  | 12.25 | 9.79              | 3.10          | 5.25                                | 19.25          |
| Total   | 213 | 8.02  | 8.34              | 0.57          | 6.89                                | 9.14           |

Table C.24

*Pairwise Comparison of Medical Case Scenario 7 Answers in Terms of Provider's Experience*

*Level at their Current Certification (In Years)*

| (I) After obtaining the information above, what is the most important method of treatment?    | (J) After obtaining the information above, what is the most important method of treatment?    | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|---|---|-----------------------|------------|------|-------------------------|-------------|
|   |   |                       |            |      | Lower Bound             | Upper Bound |
| Have the patient lie on the ground and treat for shock.                                       | Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 3.86                  | 2.55       | 0.13 | -1.18                   | 8.89        |
|   | Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | 3.65                  | 2.53       | 0.15 | -1.34                   | 8.65        |
|   | Fully immobilize the patient to a long backboard.   | -0.92                 | 3.55       | 0.80 | -7.92                   | 6.09        |
| Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | Have the patient lie on the ground and treat for shock.                                       | -3.86                 | 2.55       | 0.13 | -8.89                   | 1.18        |
|   | Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | -0.20                 | 1.20       | 0.87 | -2.58                   | 2.17        |
|   | Fully immobilize the patient to a long backboard.   | -4.77                 | 2.77       | 0.09 | -10.23                  | 0.68        |
| Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | Have the patient lie on the ground and treat for shock.                                       | -3.65                 | 2.53       | 0.15 | -8.65                   | 1.34        |
|   | Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 0.20                  | 1.20       | 0.87 | -2.17                   | 2.58        |
|   | Fully immobilize the patient to a long backboard.   | -4.57                 | 2.75       | 0.10 | -9.99                   | 0.85        |
| Fully immobilize the patient to a long backboard.   | Have the patient lie on the ground and treat for shock.                                       | 0.92                  | 3.55       | 0.80 | -6.09                   | 7.92        |
|   | Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 4.77                  | 2.77       | 0.09 | -0.68                   | 10.23       |
|   | Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | 4.57                  | 2.75       | 0.10 | -0.85                   | 9.99        |

Table C.25

*Means Estimates of Scenario 5- Patient 2 (Conflict) Gist/Verbatim Answer Choices with Experience at Any Certification (Scale-Based)*

|  | N   | Mean | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|--|-----|------|-------------------|---------------|-------------------------------------|----------------|
|  |     |      |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| Coach the patient's breathing and then place the patient in a Kendrick's Extrication Device (KED), a device for immobilizing a person's torso only, and then remove them from the vehicle on a long backboard. | 136 | 4.76 | 1.21              | 0.10          | 4.56                                | 4.97           |
| Place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.  | 53  | 4.79 | 1.34              | 0.18          | 4.42                                | 5.16           |
| Remove the patient from the vehicle via rapid extrication and place the patient on a long backboard.   | 28  | 5.36 | 1.22              | 0.23          | 4.88                                | 5.83           |
| Allow the patient to walk to the ambulance, despite the patient being amicable to any treatment you believe is medically necessary.  | 1   | 7.00 | .                 | .             | .                                   | .              |
| Total  | 218 | 4.86 | 1.26              | 0.09          | 4.69                                | 5.03           |

Table C.26

*Means Estimates of Scenario 6 (Conflict) Gist/Verbatim Answer Choices with Experience at Any Certification (Scale-Based)*

|   | N   | Mean | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|---|-----|------|-------------------|---------------|-------------------------------------|----------------|
|   |     |      |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| Assuming it is available, test the patient's BGL (Blood glucose level) with a glucometer. | 151 | 4.85 | 1.30              | 0.11          | 4.64                                | 5.06           |
| Administer one tube of oral glucose.  | 64  | 4.88 | 1.16              | 0.15          | 4.58                                | 5.17           |
| Check the patient's oxygen saturation if available.                                       | 1   | 4.00 | .                 | .             | .                                   | .              |
| Have the patient lie on the ground and treat for shock.                                   | 2   | 5.50 | 2.12              | 1.50          | -13.56                              | 24.56          |
| Total   | 218 | 4.86 | 1.26              | 0.09          | 4.69                                | 5.03           |

Table C.27

*Means Estimates of Scenario 7 (Conflict) Gist/Verbatim Answer Choices with Experience at Any Certification (Scale-Based)*

|   | N   | Mean | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|---|-----|------|-------------------|---------------|-------------------------------------|----------------|
|   |     |      |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| Have the patient lie on the ground and treat for shock.                                       | 12  | 4.92 | 1.24              | 0.36          | 4.13                                | 5.70           |
| Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 92  | 4.68 | 1.23              | 0.13          | 4.43                                | 4.94           |
| Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | 103 | 4.94 | 1.29              | 0.13          | 4.69                                | 5.19           |
| Fully immobilize the patient to a long backboard.   | 10  | 5.40 | 1.17              | 0.37          | 4.56                                | 6.24           |
| Total   | 217 | 4.85 | 1.26              | 0.09          | 4.68                                | 5.02           |

Table C.28

*Pairwise Comparison of Medical Case Scenario 7 Answers in Terms of Provider's Experience*

*Level at their Any Certification (Scale-Based)*

| (I) After obtaining the information above, what is the most important method of treatment?    | (J) After obtaining the information above, what is the most important method of treatment?    | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|---|---|-----------------------|------------|------|-------------------------|-------------|
|   |   |                       |            |      | Lower Bound             | Upper Bound |
| Have the patient lie on the ground and treat for shock.                                       | Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 0.23                  | 0.39       | 0.55 | -0.53                   | 0.99        |
|   | Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | -0.03                 | 0.38       | 0.95 | -0.78                   | 0.73        |
|   | Fully immobilize the patient to a long backboard.   | -0.48                 | 0.54       | 0.37 | -1.54                   | 0.58        |
| Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | Have the patient lie on the ground and treat for shock.                                       | -0.23                 | 0.39       | 0.55 | -0.99                   | 0.53        |
|   | Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | -0.26                 | 0.18       | 0.16 | -0.61                   | 0.10        |
|   | Fully immobilize the patient to a long backboard.   | -0.72                 | 0.42       | 0.09 | -1.54                   | 0.11        |
| Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | Have the patient lie on the ground and treat for shock.                                       | 0.03                  | 0.38       | 0.95 | -0.73                   | 0.78        |
|   | Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 0.26                  | 0.18       | 0.16 | -0.10                   | 0.61        |
|   | Fully immobilize the patient to a long backboard.   | -0.46                 | 0.42       | 0.27 | -1.28                   | 0.36        |
| Fully immobilize the patient to a long backboard.   | Have the patient lie on the ground and treat for shock.                                       | 0.48                  | 0.54       | 0.37 | -0.58                   | 1.54        |
|   | Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 0.72                  | 0.42       | 0.09 | -0.11                   | 1.54        |
|   | Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | 0.46                  | 0.42       | 0.27 | -0.36                   | 1.28        |

Table C.29

*Means Estimates of Scenario 5- Patient 2 (Conflict) Gist/Verbatim Answer Choices with*

*Experience at Any Certification (in Years)*

|  | N   | Mean  | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|--|-----|-------|-------------------|---------------|-------------------------------------|----------------|
|  |     |       |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| Coach the patient's breathing and then place the patient in a Kendrick's Extrication Device (KED), a device for immobilizing a person's torso only, and then remove them from the vehicle on a long backboard. | 134 | 10.15 | 9.67              | 0.84          | 8.50                                | 11.80          |
| Place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.  | 52  | 10.01 | 8.98              | 1.25          | 7.51                                | 12.52          |
| Remove the patient from the vehicle via rapid extrication and place the patient on a long backboard.   | 28  | 11.98 | 10.22             | 1.93          | 8.02                                | 15.94          |
| Allow the patient to walk to the ambulance, despite the patient being amicable to any treatment you believe is medically necessary.  | 1   | 15.00 | .                 | .             | .                                   | .              |
| Total  | 215 | 10.38 | 9.54              | 0.65          | 9.10                                | 11.66          |



Table C.30

*Means Estimates Scenario 6 (Conflict) Gist/Verbatim Answer Choices with Experience at Any Certification (in Years)*

|   | N   | Mean  | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|---|-----|-------|-------------------|---------------|-------------------------------------|----------------|
|   |     |       |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| Assuming it is available, test the patient's BGL (Blood glucose level) with a glucometer. | 149 | 10.36 | 9.38              | 0.77          | 8.84                                | 11.88          |
| Administer one tube of oral glucose.  | 63  | 10.56 | 10.10             | 1.27          | 8.02                                | 13.11          |
| Check the patient's oxygen saturation if available.                                       | 1   | 6.00  | .                 | .             | .                                   | .              |
| Have the patient lie on the ground and treat for shock.                                   | 2   | 8.00  | 9.90              | 7.00          | -80.94                              | 96.94          |
| Total   | 215 | 10.38 | 9.54              | 0.65          | 9.10                                | 11.66          |

Table C.31

*Mean Estimates of Scenario 7 (Conflict) Gist/Verbatim Answer Choices with Experience at Any Certification (in Years)*

|   | N   | Mean  | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                |
|---|-----|-------|-------------------|---------------|-------------------------------------|----------------|
|   |     |       |                   |               | Lower<br>Bound                      | Upper<br>Bound |
| Have the patient lie on the ground and treat for shock.                                       | 12  | 14.50 | 10.98             | 3.17          | 7.52                                | 21.48          |
| Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 90  | 9.59  | 9.14              | 0.96          | 7.67                                | 11.50          |
| Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | 102 | 10.25 | 9.47              | 0.94          | 8.39                                | 12.11          |
| Fully immobilize the patient to a long backboard.   | 10  | 14.35 | 11.60             | 3.67          | 6.05                                | 22.65          |
| Total   | 214 | 10.40 | 9.55              | 0.65          | 9.12                                | 11.69          |

Table C.32

*Pairwise Comparison of Medical Case Scenario 7 Answers in Terms of Provider's Experience*

*Level at their Any Certification (In Years)*

| (I) After obtaining the information above, what is the most important method of treatment?    | (J) After obtaining the information above, what is the most important method of treatment?    | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|---|---|-----------------------|------------|------|-------------------------|-------------|
|   |   |                       |            |      | Lower Bound             | Upper Bound |
| Have the patient lie on the ground and treat for shock.                                       | Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 4.91                  | 2.93       | 0.10 | -0.86                   | 10.68       |
|   | Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | 4.25                  | 2.91       | 0.15 | -1.48                   | 9.97        |
|   | Fully immobilize the patient to a long backboard.   | 0.15                  | 4.08       | 0.97 | -7.88                   | 8.18        |
| Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | Have the patient lie on the ground and treat for shock.                                       | -4.91                 | 2.93       | 0.10 | -10.68                  | 0.86        |
|   | Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | -0.66                 | 1.38       | 0.63 | -3.38                   | 2.05        |
|   | Fully immobilize the patient to a long backboard.   | -4.76                 | 3.17       | 0.14 | -11.02                  | 1.49        |
| Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | Have the patient lie on the ground and treat for shock.                                       | -4.25                 | 2.91       | 0.15 | -9.97                   | 1.48        |
|   | Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 0.66                  | 1.38       | 0.63 | -2.05                   | 3.38        |
|   | Fully immobilize the patient to a long backboard.   | -4.10                 | 3.15       | 0.20 | -10.31                  | 2.12        |
| Fully immobilize the patient to a long backboard.   | Have the patient lie on the ground and treat for shock.                                       | -0.15                 | 4.08       | 0.97 | -8.18                   | 7.88        |
|   | Immediately place the patient on oxygen via non-rebreather (oxygen mask) at 15 LPM.           | 4.76                  | 3.17       | 0.14 | -1.49                   | 11.02       |
|   | Clean and irrigate the patient's wounds and then bandage them after checking your SpO2 probe. | 4.10                  | 3.15       | 0.20 | -2.12                   | 10.31       |

Table C.33

*Correlation of Medical Scenario Treatment Answer (Verbatim Response) Average of Control and Conflict Scenario with EMS and Personal Demographics*

|   |                     | Treatment Answer<br>(Verbatim Response)<br>Average of Control<br>Scenario | Treatment Answer<br>(Verbatim Response)<br>Average of Conflict<br>Scenario |
|---|---------------------|---|--|
| Treatment Answer (Verbatim Response) Average of Control Scenario  | Pearson Correlation | 1   | .104   |
|   | Sig. (2-tailed)     |   | .128   |
|   | N                   | 216   | 215  |
| Treatment Answer (Verbatim Response) Average of Conflict Scenario   | Pearson Correlation | .104  | 1  |
|   | Sig. (2-tailed)     | .128  |  |
|   | N                   | 215   | 217  |
| Highest Certification Level (BLS/ALS)   | Pearson Correlation | .013  | -.224**  |
|   | Sig. (2-tailed)     | .847  | .001   |
|   | N                   | 210   | 209  |
| How long have you been providing medical treatment in the pre-hospital setting at any certification level (In Years)          | Pearson Correlation | -.017   | -.014  |
|   | Sig. (2-tailed)     | .804  | .841   |
|   | N                   | 216   | 217  |
| How long have you been providing medical treatment in the pre-hospital setting at your current certification level (In Years) | Pearson Correlation | .018  | .046   |
|   | Sig. (2-tailed)     | .796  | .499   |
|   | N                   | 216   | 217  |
| Are you employed by an EMS/Rescue or Ambulance Agency (paid position)?  | Pearson Correlation | -.003   | .175**   |
|   | Sig. (2-tailed)     | .970  | .010   |
|   | N                   | 215   | 216  |
| Are you a member of a volunteer EMS/Rescue or Ambulance Agency?   | Pearson Correlation | -.092   | -.143*   |
|   | Sig. (2-tailed)     | .179  | .036   |
|   | N                   | 216   | 217  |

Table C.33 (Continued)

|   |                 | Treatment Answer<br>(Verbatim Response)<br>Average of Control<br>Scenario | Treatment Answer<br>(Verbatim Response)<br>Average of Conflict<br>Scenario |
|---|-----------------|---|--|
| In your opinion, what type of<br>area does your agency service?                   | Pearson         | .022  | -.042  |
|   | Correlation     |   |  |
|   | Sig. (2-tailed) | .751  | .536   |
|   | N               | 216   | 217  |
| In your opinion, what time of<br>day do you normally work or<br>volunteer in EMS? | Pearson         | -.020   | -.024  |
|   | Correlation     |   |  |
|   | Sig. (2-tailed) | .768  | .726   |
|   | N               | 216   | 217  |
| What gender are you?  | Pearson         | .049  | .078   |
|   | Correlation     |   |  |
|   | Sig. (2-tailed) | .475  | .252   |
|   | N               | 215   | 216  |
| How old are you? (In Years)   | Pearson         | -.076   | .044   |
|   | Correlation     |   |  |
|   | Sig. (2-tailed) | .273  | .529   |
|   | N               | 210   | 211  |
| What is your highest level of<br>education?                                       | Pearson         | -.094   | .159*  |
|   | Correlation     |   |  |
|   | Sig. (2-tailed) | .172  | .019   |
|   | N               | 215   | 216  |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Table C.34

*Medical Case Scenario Decision Making Question Frequency (n-value) Data*

|   | SC1.1 | SC1.2 | SC2 | SC3 | SC4 | SC5.1 | SC5.2 | SC6 | SC7 |
|---|-------|-------|-----|-----|-----|-------|-------|-----|-----|
| Based on specific memory for National/State/Local Protocols. (VERBATIM) | 157   | 150   | 152 | 159 | 137 | 158   | 114   | 118 | 74  |
| Past experience with a similar patient. (GIST)                          | 20    | 28    | 27  | 25  | 27  | 22    | 57    | 66  | 63  |
| A recent continuing medical education instruction. (VERBATIM)           | 9     | 4     | 11  | 10  | 18  | 10    | 8     | 7   | 7   |
| You aren't sure why, but you know it was correct. (GIST)                | 15    | 18    | 7   | 12  | 20  | 8     | 25    | 9   | 23  |
| Other: (Please fill in)   | 16    | 16    | 20  | 11  | 16  | 20    | 14    | 17  | 51  |
| Total   | 217   | 216   | 217 | 217 | 218 | 218   | 218   | 217 | 218 |

Key

- SC1.1= Scenario 1, Treatment 1
- SC1.2= Scenario 1, Treatment 2
- SC2= Scenario 2
- SC3= Scenario 3
- SC4= Scenario 4
- SC5.1= Scenario 5, Patient 1
- SC5.2= Scenario 5, Patient 2
- SC6= Scenario 6
- SC7= Scenario 7
- Grey Highlighting indicates Conflict Scenarios

Table C.35

*Medical Case Scenario Decision Making Question Frequency (Percentage) Data*

|   | SC1.1 | SC1.2 | SC2  | SC3  | SC4  | SC5.1 | SC5.2 | SC6  | SC7  |
|---|-------|-------|------|------|------|-------|-------|------|------|
| Based on specific memory for National/State/Local Protocols. (VERBATIM) | 72.4  | 69.4  | 70.0 | 73.3 | 62.8 | 72.5  | 52.3  | 54.4 | 33.9 |
| Past experience with a similar patient. (GIST)                          | 9.2   | 13.0  | 12.4 | 11.5 | 12.4 | 10.1  | 26.1  | 30.4 | 28.9 |
| A recent continuing medical education instruction. (VERBATIM)           | 4.1   | 1.9   | 5.1  | 4.6  | 8.3  | 4.6   | 3.7   | 3.2  | 3.2  |
| You aren't sure why, but you know it was correct. (GIST)                | 6.9   | 8.3   | 3.2  | 5.5  | 9.2  | 3.7   | 11.5  | 4.1  | 10.6 |
| Other: (Please fill in)   | 7.4   | 7.4   | 9.2  | 5.1  | 7.3  | 9.2   | 6.4   | 7.8  | 23.4 |

Key

- SC1.1= Scenario 1, Treatment 1
- SC1.2= Scenario 1, Treatment 2
- SC2= Scenario 2
- SC3= Scenario 3
- SC4= Scenario 4
- SC5.1= Scenario 5, Patient 1
- SC5.2= Scenario 5, Patient 2
- SC6= Scenario 6
- SC7= Scenario 7
- Grey Highlighting indicates Conflict Scenarios

Table C.36

*Medical Case Scenario Decision Making Question Frequency Data- Grouped into Verbatim and Gist*

|                       | SC1.1 | SC1.2 | SC2 | SC3 | SC4 | SC5.1 | SC5.2 | SC6 | SC7 |
|-----------------------|-------|-------|-----|-----|-----|-------|-------|-----|-----|
| Verbatim (Frequency)  | 166   | 154   | 163 | 169 | 155 | 168   | 122   | 125 | 81  |
| Verbatim (Percentage) | 76%   | 71%   | 75% | 78% | 71% | 77%   | 56%   | 58% | 37% |
| Gist (Frequency)      | 35    | 46    | 34  | 37  | 47  | 30    | 82    | 75  | 86  |
| Gist (Percentage)     | 16%   | 21%   | 16% | 17% | 22% | 14%   | 38%   | 35% | 39% |
| Other (Frequency)     | 16    | 16    | 20  | 11  | 16  | 20    | 14    | 17  | 51  |
| Other (Percentage)    | 7%    | 7%    | 9%  | 5%  | 7%  | 9%    | 6%    | 8%  | 23% |

Key

- SC1.1= Scenario 1, Treatment 1
- SC1.2= Scenario 1, Treatment 2
- SC2= Scenario 2
- SC3= Scenario 3
- SC4= Scenario 4
- SC5.1= Scenario 5, Patient 1
- SC5.2= Scenario 5, Patient 2
- SC6= Scenario 6
- SC7= Scenario 7
- Grey Highlighting indicates Conflict Scenarios



Table C.37

*Correlation of Medical Scenario Decision Rationale Answers (Verbatim Response) Average of Control and Conflict Scenarios with EMS and Personal Demographics*

|   |                     | Decision Rationale<br>(Verbatim Response) for<br>Control Scenarios | Decision Rationale<br>(Verbatim Response)<br>for Conflict Scenarios |
|---|---------------------|--|---|
| Decision Rationale (Verbatim Response) for Control Scenarios  | Pearson Correlation | 1  | .535**  |
|   | Sig. (2-tailed)     |  | .000  |
|   | N                   | 218  | 218   |
| Decision Rationale (Verbatim Response) for Conflict Scenarios   | Pearson Correlation | .535**   | 1   |
|   | Sig. (2-tailed)     | .000   |   |
|   | N                   | 218  | 218   |
| Highest Certification Level (BLS/ALS)   | Pearson Correlation | -.095  | -.003   |
|   | Sig. (2-tailed)     | .169   | .968  |
|   | N                   | 210  | 210   |
| How long have you been providing medical treatment in the pre-hospital setting at your any certification level (In Years)     | Pearson Correlation | -.136*   | -.107   |
|   | Sig. (2-tailed)     | .045   | .116  |
|   | N                   | 218  | 218   |
| How long have you been providing medical treatment in the pre-hospital setting at your current certification level (In Years) | Pearson Correlation | -.128  | -.076   |
|   | Sig. (2-tailed)     | .059   | .261  |
|   | N                   | 218  | 218   |
| Are you employed by an EMS/Rescue or Ambulance Agency (paid position)?  | Pearson Correlation | .122   | .140*   |
|   | Sig. (2-tailed)     | .073   | .039  |
|   | N                   | 217  | 217   |
| Are you a member of a volunteer EMS/Rescue or Ambulance Agency?   | Pearson Correlation | -.208**  | -.115   |
|   | Sig. (2-tailed)     | .002   | .091  |
|   | N                   | 218  | 218   |
| In your opinion, what type of area does your agency service?  | Pearson Correlation | .026   | .026  |
|   | Sig. (2-tailed)     | .706   | .701  |
|   | N                   | 218  | 218   |
| In your opinion, what time of day do you normally work or volunteer in EMS?   | Pearson Correlation | .053   | .017  |
|   | Sig. (2-tailed)     | .436   | .808  |
|   | N                   | 218  | 218   |
| What gender are you?  | Pearson Correlation | .051   | .098  |
|   | Sig. (2-tailed)     | .459   | .149  |
|   | N                   | 217  | 217   |
| Highest Education Level (Grouped)   | Pearson Correlation | .002   | .042  |
|   | Sig. (2-tailed)     | .980   | .543  |
|   | N                   | 217  | 217   |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Table C.38

*Medical Case Scenario Confidence Rating Frequency Data*

|                   | <b>Scenario 1-<br/>Treatment 1</b> | <b>Scenario 1-<br/>Treatment 2</b> | <b>Scenario 2</b> | <b>Scenario 3</b> | <b>Scenario 4</b> |
|-------------------|------------------------------------|------------------------------------|-------------------|-------------------|-------------------|
| Mean              | 87.01                              | 92.58                              | 89.95             | 94.45             | 89.81             |
| Median            | 90.00                              | 99.00                              | 95.00             | 100.00            | 95.00             |
| Mode              | 100.00                             | 100.00                             | 100.00            | 100.00            | 100.00            |
| Std.<br>Deviation | 14.33                              | 10.88                              | 12.91             | 10.29             | 13.22             |
| Minimum           | 30.00                              | 50.00                              | 41.00             | 49.00             | 48.00             |
| Maximum           | 100.00                             | 100.00                             | 100.00            | 100.00            | 100.00            |

|                   | <b>Scenario 5-<br/>Patient 1</b> | <b>Scenario 5-<br/>Patient 2</b> | <b>Scenario 6</b> | <b>Scenario 7</b> |
|-------------------|----------------------------------|----------------------------------|-------------------|-------------------|
| Mean              | 93.96                            | 91.47                            | 92.11             | 93.17             |
| Median            | 100.00                           | 98.00                            | 100.00            | 100.00            |
| Mode              | 100.00                           | 100.00                           | 100.00            | 100.00            |
| Std.<br>Deviation | 10.39                            | 12.78                            | 14.66             | 12.09             |
| Minimum           | 46.00                            | 24.00                            | 0.00              | 40.00             |
| Maximum           | 100.00                           | 100.00                           | 100.00            | 100.00            |

Table C.39

*Mean Estimates of Medical Case Scenario Confidence Ratings with Provider's Highest Level of Certification (Ungrouped)*

|  |  | N   | Mean   | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Min | Max |
|--|--|-----|--------|----------------|------------|----------------------------------|-------------|-----|-----|
|  |  |     |        |                |            | Lower Bound                      | Upper Bound |     |     |
| <b>Scenario 1-<br/>Treatment<br/>1</b> | I have no EMS/medical experience/certifications                | 1   | 99.00  | .              | .          | .                                | .           | 99  | 99  |
|  | CPR/AED for the Professional Rescuer (or equivalent)           | 4   | 96.25  | 2.50           | 1.25       | 92.27                            | 100.23      | 95  | 100 |
|  | Certified First Responder (CFR)                                | 1   | 100.00 | .              | .          | .                                | .           | 100 | 100 |
|  | Emergency Medical Technician- Basic (EMT-B)                    | 133 | 91.62  | 12.97          | 1.13       | 89.40                            | 93.85       | 40  | 100 |
|  | Emergency Medical Technician- Intermediate (EMT-I)             | 4   | 93.25  | 10.44          | 5.22       | 76.64                            | 109.86      | 78  | 100 |
|  | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15  | 93.73  | 12.93          | 3.34       | 86.57                            | 100.89      | 50  | 100 |
|  | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 50  | 95.76  | 10.46          | 1.48       | 92.79                            | 98.73       | 41  | 100 |
|  | Critical Care Paramedic (AEMT-P CC)                            | 7   | 98.14  | 4.91           | 1.86       | 93.60                            | 102.69      | 87  | 100 |
| <b>Total</b>                           |  | 215 | 93.13  | 12.11          | .83        | 91.51                            | 94.76       | 40  | 100 |
| <b>Scenario 1-<br/>Treatment<br/>2</b> | I have no EMS/medical experience/certifications                | 1   | 98.00  | .              | .          | .                                | .           | 98  | 98  |
|  | CPR/AED for the Professional Rescuer (or equivalent)           | 4   | 97.50  | 2.89           | 1.44       | 92.91                            | 102.09      | 95  | 100 |
|  | Certified First Responder (CFR)                                | 1   | 100.00 | .              | .          | .                                | .           | 100 | 100 |
|  | Emergency Medical Technician- Basic (EMT-B)                    | 133 | 91.20  | 12.56          | 1.09       | 89.05                            | 93.36       | 41  | 100 |
|  | Emergency Medical Technician- Intermediate (EMT-I)             | 4   | 87.75  | 22.54          | 11.27      | 51.88                            | 123.62      | 54  | 100 |
|  | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15  | 93.67  | 12.83          | 3.31       | 86.56                            | 100.77      | 50  | 100 |
|  | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51  | 92.92  | 20.43          | 2.86       | 87.17                            | 98.67       | 0   | 100 |
|  | Critical Care Paramedic (AEMT-P CC)                            | 7   | 96.29  | 6.37           | 2.41       | 90.39                            | 102.18      | 86  | 100 |
| <b>Total</b>                           |  | 216 | 92.07  | 14.69          | 1.00       | 90.10                            | 94.04       | 0   | 100 |

Table C.39 (Continued)

|                   |  | N          | Mean         | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                | Min       | Max        |
|-------------------|--|------------|--------------|-------------------|---------------|-------------------------------------|----------------|-----------|------------|
|                   |  |            |              |                   |               | Lower<br>Bound                      | Upper<br>Bound |           |            |
| <b>Scenario 2</b> | I have no EMS/medical experience/certifications                | 1          | 98.00        | .                 | .             | .                                   | .              | 98        | 98         |
|                   | CPR/AED for the Professional Rescuer (or equivalent)           | 5          | 88.40        | 12.86             | 5.75          | 72.44                               | 104.36         | 70        | 100        |
|                   | Certified First Responder (CFR)                                | 1          | 100.00       | .                 | .             | .                                   | .              | 100       | 100        |
|                   | Emergency Medical Technician- Basic (EMT-B)                    | 133        | 89.40        | 12.95             | 1.12          | 87.18                               | 91.62          | 40        | 100        |
|                   | Emergency Medical Technician- Intermediate (EMT-I)             | 4          | 77.75        | 36.35             | 18.18         | 19.90                               | 135.60         | 24        | 100        |
|                   | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15         | 89.60        | 14.73             | 3.80          | 81.44                               | 97.76          | 50        | 100        |
|                   | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51         | 97.47        | 5.93              | .83           | 95.80                               | 99.14          | 71        | 100        |
|                   | Critical Care Paramedic (AEMT-P CC)                            | 7          | 97.71        | 5.62              | 2.12          | 92.52                               | 102.91         | 85        | 100        |
|                   | <b>Total</b>   | <b>217</b> | <b>91.43</b> | <b>12.80</b>      | <b>.87</b>    | <b>89.72</b>                        | <b>93.14</b>   | <b>24</b> | <b>100</b> |
| <b>Scenario 3</b> | I have no EMS/medical experience/certifications                | 1          | 91.00        | .                 | .             | .                                   | .              | 91        | 91         |
|                   | CPR/AED for the Professional Rescuer (or equivalent)           | 5          | 94.60        | 8.41              | 3.76          | 84.15                               | 105.05         | 80        | 100        |
|                   | Certified First Responder (CFR)                                | 1          | 100.00       | .                 | .             | .                                   | .              | 100       | 100        |
|                   | Emergency Medical Technician- Basic (EMT-B)                    | 131        | 92.04        | 11.71             | 1.02          | 90.01                               | 94.06          | 46        | 100        |
|                   | Emergency Medical Technician- Intermediate (EMT-I)             | 4          | 99.75        | .50               | .25           | 98.95                               | 100.55         | 99        | 100        |
|                   | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15         | 93.73        | 12.91             | 3.33          | 86.58                               | 100.89         | 50        | 100        |
|                   | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51         | 97.53        | 4.88              | .68           | 96.16                               | 98.90          | 75        | 100        |
|                   | Critical Care Paramedic (AEMT-P CC)                            | 7          | 99.29        | 1.50              | .57           | 97.90                               | 100.67         | 96        | 100        |
|                   | <b>Total</b>   | <b>215</b> | <b>93.93</b> | <b>10.41</b>      | <b>.71</b>    | <b>92.53</b>                        | <b>95.33</b>   | <b>46</b> | <b>100</b> |

Table C.39 (Continued)

|                                  |  | N          | Mean         | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                | Min       | Max        |
|----------------------------------|--|------------|--------------|-------------------|---------------|-------------------------------------|----------------|-----------|------------|
|                                  |  |            |              |                   |               | Lower<br>Bound                      | Upper<br>Bound |           |            |
| <b>Scenario 4</b>                | I have no EMS/medical experience/certifications                | 1          | 98.00        | .                 | .             | .                                   | .              | 98        | 98         |
|                                  | CPR/AED for the Professional Rescuer (or equivalent)           | 5          | 89.80        | 6.34              | 2.84          | 81.93                               | 97.67          | 84        | 100        |
|                                  | Certified First Responder (CFR)                                | 1          | 100.00       | .                 | .             | .                                   | .              | 100       | 100        |
|                                  | Emergency Medical Technician- Basic (EMT-B)                    | 133        | 87.94        | 13.33             | 1.16          | 85.65                               | 90.23          | 50        | 100        |
|                                  | Emergency Medical Technician- Intermediate (EMT-I)             | 4          | 81.00        | 23.64             | 11.82         | 43.39                               | 118.61         | 48        | 100        |
|                                  | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15         | 90.47        | 14.06             | 3.63          | 82.68                               | 98.25          | 50        | 100        |
|                                  | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51         | 93.29        | 12.27             | 1.72          | 89.84                               | 96.75          | 49        | 100        |
|                                  | Critical Care Paramedic (AEMT-P CC)                            | 7          | 99.57        | .79               | .30           | 98.84                               | 100.30         | 98        | 100        |
|                                  | <b>Total</b>   | <b>217</b> | <b>89.77</b> | <b>13.23</b>      | <b>.90</b>    | <b>87.99</b>                        | <b>91.54</b>   | <b>48</b> | <b>100</b> |
| <b>Scenario 5-<br/>Patient 1</b> | I have no EMS/medical experience/certifications                | 1          | 99.00        | .                 | .             | .                                   | .              | 99        | 99         |
|                                  | CPR/AED for the Professional Rescuer (or equivalent)           | 5          | 88.00        | 15.25             | 6.82          | 69.07                               | 106.93         | 65        | 100        |
|                                  | Certified First Responder (CFR)                                | 1          | 91.00        | .                 | .             | .                                   | .              | 91        | 91         |
|                                  | Emergency Medical Technician- Basic (EMT-B)                    | 132        | 93.07        | 11.01             | .96           | 91.17                               | 94.96          | 49        | 100        |
|                                  | Emergency Medical Technician- Intermediate (EMT-I)             | 4          | 84.75        | 14.86             | 7.43          | 61.10                               | 108.40         | 70        | 99         |
|                                  | Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 15         | 94.07        | 12.93             | 3.34          | 86.91                               | 101.22         | 50        | 100        |
|                                  | Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 51         | 98.65        | 4.56              | .64           | 97.36                               | 99.93          | 70        | 100        |
|                                  | Critical Care Paramedic (AEMT-P CC)                            | 7          | 100.00       | .00               | .00           | 100.00                              | 100.00         | 100       | 100        |
|                                  | <b>Total</b>   | <b>216</b> | <b>94.43</b> | <b>10.31</b>      | <b>.70</b>    | <b>93.04</b>                        | <b>95.81</b>   | <b>49</b> | <b>100</b> |

Table C.39 (Continued)

|                                  |  | N   | Mean   | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                | Min | Max |
|----------------------------------|--|-----|--------|-------------------|---------------|-------------------------------------|----------------|-----|-----|
|                                  |  |     |        |                   |               | Lower<br>Bound                      | Upper<br>Bound |     |     |
| <b>Scenario 5-<br/>Patient 2</b> | I have no EMS/medical<br>experience/certifications                   | 1   | 97.00  | .                 | .             | .                                   | .              | 97  | 97  |
|                                  | CPR/AED for the<br>Professional Rescuer (or<br>equivalent)           | 5   | 77.00  | 18.91             | 8.46          | 53.52                               | 100.48         | 50  | 95  |
|                                  | Certified First Responder<br>(CFR)                                   | 1   | 91.00  | .                 | .             | .                                   | .              | 91  | 91  |
|                                  | Emergency Medical<br>Technician- Basic (EMT-B)                       | 133 | 87.96  | 13.29             | 1.15          | 85.68                               | 90.24          | 41  | 100 |
|                                  | Emergency Medical<br>Technician- Intermediate<br>(EMT-I)             | 4   | 81.75  | 13.33             | 6.66          | 60.55                               | 102.95         | 64  | 95  |
|                                  | Advanced Emergency<br>Medical Technician-<br>Critical Care (AEMT-CC) | 15  | 90.60  | 12.60             | 3.25          | 83.62                               | 97.58          | 50  | 100 |
|                                  | Advanced Emergency<br>Medical Technician-<br>Paramedic (AEMT-P)      | 51  | 95.43  | 9.79              | 1.37          | 92.68                               | 98.18          | 51  | 100 |
|                                  | Critical Care Paramedic<br>(AEMT-P CC)                               | 7   | 97.57  | 4.61              | 1.74          | 93.30                               | 101.84         | 88  | 100 |
| Total                            |  | 217 | 89.90  | 12.92             | .88           | 88.17                               | 91.63          | 41  | 100 |
| <b>Scenario 6</b>                | I have no EMS/medical<br>experience/certifications                   | 1   | 99.00  | .                 | .             | .                                   | .              | 99  | 99  |
|                                  | CPR/AED for the<br>Professional Rescuer (or<br>equivalent)           | 5   | 86.40  | 12.54             | 5.61          | 70.83                               | 101.97         | 70  | 100 |
|                                  | Certified First Responder<br>(CFR)                                   | 1   | 100.00 | .                 | .             | .                                   | .              | 100 | 100 |
|                                  | Emergency Medical<br>Technician- Basic (EMT-B)                       | 133 | 90.53  | 11.48             | 1.00          | 88.56                               | 92.49          | 50  | 100 |
|                                  | Emergency Medical<br>Technician- Intermediate<br>(EMT-I)             | 4   | 95.75  | 7.23              | 3.61          | 84.25                               | 107.25         | 85  | 100 |
|                                  | Advanced Emergency<br>Medical Technician-<br>Critical Care (AEMT-CC) | 15  | 89.87  | 15.51             | 4.00          | 81.28                               | 98.45          | 50  | 100 |
|                                  | Advanced Emergency<br>Medical Technician-<br>Paramedic (AEMT-P)      | 51  | 97.86  | 5.16              | .72           | 96.41                               | 99.31          | 75  | 100 |
|                                  | Critical Care Paramedic<br>(AEMT-P CC)                               | 7   | 98.43  | 3.74              | 1.41          | 94.97                               | 101.88         | 90  | 100 |
| Total                            |  | 217 | 92.54  | 10.89             | .74           | 91.09                               | 94.00          | 50  | 100 |

Table C.39 (Continued)

|            |  | N     | Mean  | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                | Min | Max |
|------------|--|-------|-------|-------------------|---------------|-------------------------------------|----------------|-----|-----|
|            |  |       |       |                   |               | Lower<br>Bound                      | Upper<br>Bound |     |     |
| Scenario 7 | I have no EMS/medical<br>experience/certifications                   | 1     | 98.00 | .                 | .             | .                                   | .              | 98  | 98  |
|            | CPR/AED for the<br>Professional Rescuer (or<br>equivalent)           | 5     | 80.20 | 9.63              | 4.31          | 68.25                               | 92.15          | 66  | 90  |
|            | Certified First Responder<br>(CFR)                                   | 1     | 81.00 | .                 | .             | .                                   | .              | 81  | 81  |
|            | Emergency Medical<br>Technician- Basic (EMT-B)                       | 129   | 85.13 | 13.99             | 1.23          | 82.69                               | 87.57          | 30  | 100 |
|            | Emergency Medical<br>Technician- Intermediate<br>(EMT-I)             | 4     | 77.75 | 26.46             | 13.23         | 35.64                               | 119.86         | 40  | 100 |
|            | Advanced Emergency<br>Medical Technician-<br>Critical Care (AEMT-CC) | 15    | 88.60 | 14.41             | 3.72          | 80.62                               | 96.58          | 50  | 100 |
|            | Advanced Emergency<br>Medical Technician-<br>Paramedic (AEMT-P)      | 51    | 90.76 | 14.26             | 2.00          | 86.75                               | 94.77          | 35  | 100 |
|            | Critical Care Paramedic<br>(AEMT-P CC)                               | 7     | 98.57 | 3.36              | 1.27          | 95.46                               | 101.68         | 91  | 100 |
| Total      | 213  | 86.95 | 14.33 | .98               | 85.02         | 88.89                               | 30             | 100 |     |

Table C.40

*Means Estimates of Medical Case Scenario Confidence Ratings with Provider's Highest Level of Certification (Grouped)*

|                               |   | N   | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Min | Max |
|-------------------------------|---|-----|-------|----------------|------------|----------------------------------|-------------|-----|-----|
|                               |   |     |       |                |            | Lower Bound                      | Upper Bound |     |     |
| Scenario 1-<br>Treatment<br>1 | Basic Life Support (EMT-B, EMT-I)                 | 137 | 91.67 | 12.88          | 1.10       | 89.50                            | 93.85       | 40  | 100 |
|                               | Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 72  | 95.57 | 10.58          | 1.25       | 93.08                            | 98.06       | 41  | 100 |
|                               | Total   | 209 | 93.01 | 12.25          | 0.85       | 91.34                            | 94.69       | 40  | 100 |
| Scenario 1-<br>Treatment<br>2 | Basic Life Support (EMT-B, EMT-I)                 | 137 | 91.10 | 12.83          | 1.10       | 88.93                            | 93.27       | 41  | 100 |
|                               | Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 73  | 93.40 | 18.06          | 2.11       | 89.18                            | 97.61       | 0   | 100 |
|                               | Total   | 210 | 91.90 | 14.86          | 1.03       | 89.88                            | 93.92       | 0   | 100 |
| Scenario 3                    | Basic Life Support (EMT-B, EMT-I)                 | 135 | 92.27 | 11.61          | 1.00       | 90.29                            | 94.24       | 46  | 100 |
|                               | Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 73  | 96.92 | 7.21           | 0.84       | 95.23                            | 98.60       | 50  | 100 |
|                               | Total   | 208 | 93.90 | 10.51          | 0.73       | 92.46                            | 95.34       | 46  | 100 |
| Scenario 4                    | Basic Life Support (EMT-B, EMT-I)                 | 137 | 87.74 | 13.64          | 1.17       | 85.43                            | 90.04       | 48  | 100 |
|                               | Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 73  | 93.32 | 12.19          | 1.43       | 90.47                            | 96.16       | 49  | 100 |
|                               | Total   | 210 | 89.68 | 13.39          | 0.92       | 87.85                            | 91.50       | 48  | 100 |
| Scenario 5-<br>Patient 1      | Basic Life Support (EMT-B, EMT-I)                 | 136 | 92.82 | 11.16          | 0.96       | 90.93                            | 94.72       | 49  | 100 |
|                               | Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 73  | 97.84 | 7.13           | 0.83       | 96.17                            | 99.50       | 50  | 100 |
|                               | Total   | 209 | 94.57 | 10.21          | 0.71       | 93.18                            | 95.97       | 49  | 100 |



Table C.40 (Continued)

|                          |   | N   | Mean  | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                | Min | Max |
|--------------------------|---|-----|-------|-------------------|---------------|-------------------------------------|----------------|-----|-----|
|                          |   |     |       |                   |               | Lower<br>Bound                      | Upper<br>Bound |     |     |
| Scenario 5-<br>Patient 2 | Basic Life Support (EMT-B, EMT-I)                 | 137 | 87.78 | 13.29             | 1.14          | 85.54                               | 90.03          | 41  | 100 |
|                          | Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 73  | 94.64 | 10.19             | 1.19          | 92.27                               | 97.02          | 50  | 100 |
|                          | Total   | 210 | 90.17 | 12.70             | 0.88          | 88.44                               | 91.89          | 41  | 100 |
| Scenario 6               | Basic Life Support (EMT-B, EMT-I)                 | 137 | 90.68 | 11.39             | 0.97          | 88.75                               | 92.60          | 50  | 100 |
|                          | Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 73  | 96.27 | 8.78              | 1.03          | 94.22                               | 98.32          | 50  | 100 |
|                          | Total   | 210 | 92.62 | 10.87             | 0.75          | 91.15                               | 94.10          | 50  | 100 |
| Scenario 7               | Basic Life Support (EMT-B, EMT-I)                 | 133 | 84.91 | 14.40             | 1.25          | 82.44                               | 87.38          | 30  | 100 |
|                          | Advanced Life Support (AEMT-CC, AEMT-P, AEMT-PCC) | 73  | 91.07 | 13.76             | 1.61          | 87.86                               | 94.28          | 35  | 100 |
|                          | Total   | 206 | 87.09 | 14.45             | 1.01          | 85.11                               | 89.08          | 30  | 100 |

Table C.41

*Means Estimate of Medical Case Scenario Confidence Ratings with Provider's Experience at their Current Certification Level (Scale-Based)*

|                               |                            | 95% Confidence Interval for Mean |       |                |            |             |             |     |     |
|-------------------------------|----------------------------|----------------------------------|-------|----------------|------------|-------------|-------------|-----|-----|
|                               |                            | N                                | Mean  | Std. Deviation | Std. Error | Lower Bound | Upper Bound | Min | Max |
| Scenario 1-<br>Treatment<br>1 | None At All                | 4                                | 86.00 | 22.76          | 11.38      | 49.78       | 122.22      | 52  | 100 |
|                               | Very Low                   | 9                                | 85.44 | 18.85          | 6.28       | 70.96       | 99.93       | 50  | 100 |
|                               | Low                        | 17                               | 88.71 | 18.26          | 4.43       | 79.32       | 98.09       | 44  | 100 |
|                               | Medium                     | 61                               | 92.21 | 11.46          | 1.47       | 89.28       | 95.15       | 50  | 100 |
|                               | High                       | 63                               | 94.05 | 10.19          | 1.28       | 91.48       | 96.61       | 40  | 100 |
|                               | Very High                  | 46                               | 95.65 | 10.52          | 1.55       | 92.53       | 98.78       | 41  | 100 |
|                               | The Highest Level (Expert) | 16                               | 97.06 | 6.70           | 1.67       | 93.49       | 100.63      | 80  | 100 |
|                               | Total                      | 216                              | 93.17 | 12.09          | .82        | 91.55       | 94.79       | 40  | 100 |
| Scenario 1-<br>Treatment<br>2 | None At All                | 3                                | 84.67 | 22.37          | 12.91      | 29.10       | 140.23      | 59  | 100 |
|                               | Very Low                   | 9                                | 82.22 | 23.13          | 7.71       | 64.44       | 100.00      | 41  | 100 |
|                               | Low                        | 17                               | 83.94 | 16.41          | 3.98       | 75.51       | 92.38       | 51  | 100 |
|                               | Medium                     | 62                               | 89.45 | 17.16          | 2.18       | 85.09       | 93.81       | 0   | 100 |
|                               | High                       | 63                               | 95.13 | 7.16           | .90        | 93.32       | 96.93       | 60  | 100 |
|                               | Very High                  | 47                               | 95.06 | 15.46          | 2.26       | 90.52       | 99.60       | 0   | 100 |
|                               | The Highest Level (Expert) | 16                               | 97.44 | 6.63           | 1.66       | 93.90       | 100.97      | 80  | 100 |
|                               | Total                      | 217                              | 92.11 | 14.66          | 1.00       | 90.14       | 94.07       | 0   | 100 |
| Scenario 2                    | None At All                | 4                                | 87.25 | 16.03          | 8.01       | 61.74       | 112.76      | 64  | 100 |
|                               | Very Low                   | 9                                | 80.00 | 23.79          | 7.93       | 61.72       | 98.28       | 40  | 100 |
|                               | Low                        | 17                               | 83.88 | 13.88          | 3.37       | 76.75       | 91.02       | 51  | 100 |
|                               | Medium                     | 62                               | 87.48 | 14.91          | 1.89       | 83.70       | 91.27       | 24  | 100 |
|                               | High                       | 63                               | 93.25 | 9.45           | 1.19       | 90.87       | 95.63       | 50  | 100 |
|                               | Very High                  | 47                               | 97.49 | 5.86           | .85        | 95.77       | 99.21       | 70  | 100 |
|                               | The Highest Level (Expert) | 16                               | 97.75 | 6.56           | 1.64       | 94.26       | 101.24      | 75  | 100 |
|                               | Total                      | 218                              | 91.47 | 12.78          | .87        | 89.76       | 93.17       | 24  | 100 |
| Scenario 3                    | None At All                | 4                                | 89.50 | 19.69          | 9.84       | 58.17       | 120.83      | 60  | 100 |
|                               | Very Low                   | 9                                | 87.89 | 16.94          | 5.65       | 74.86       | 100.91      | 50  | 100 |
|                               | Low                        | 17                               | 84.76 | 15.56          | 3.77       | 76.76       | 92.77       | 46  | 100 |
|                               | Medium                     | 62                               | 92.44 | 10.11          | 1.28       | 89.87       | 95.00       | 50  | 100 |
|                               | High                       | 61                               | 94.85 | 8.07           | 1.03       | 92.79       | 96.92       | 60  | 100 |
|                               | Very High                  | 47                               | 98.19 | 7.13           | 1.04       | 96.10       | 100.29      | 53  | 100 |
|                               | The Highest Level (Expert) | 16                               | 98.31 | 3.77           | .94        | 96.30       | 100.32      | 87  | 100 |
|                               | Total                      | 216                              | 93.96 | 10.39          | .71        | 92.56       | 95.35       | 46  | 100 |

Table C.41 (Continued)

|                              |                            | 95% Confidence Interval for Mean |        |                |            |             |             |     |     |
|------------------------------|----------------------------|----------------------------------|--------|----------------|------------|-------------|-------------|-----|-----|
|                              |                            | N                                | Mean   | Std. Deviation | Std. Error | Lower Bound | Upper Bound | Min | Max |
| <b>Scenario 4</b>            | None At All                | 4                                | 83.25  | 20.71          | 10.36      | 50.30       | 116.20      | 53  | 100 |
|                              | Very Low                   | 9                                | 85.33  | 16.58          | 5.53       | 72.59       | 98.07       | 50  | 100 |
|                              | Low                        | 17                               | 78.88  | 13.23          | 3.21       | 72.08       | 85.69       | 50  | 100 |
|                              | Medium                     | 62                               | 88.73  | 13.34          | 1.69       | 85.34       | 92.11       | 48  | 100 |
|                              | High                       | 63                               | 89.11  | 12.66          | 1.59       | 85.92       | 92.30       | 49  | 100 |
|                              | Very High                  | 47                               | 96.74  | 5.88           | .86        | 95.02       | 98.47       | 81  | 100 |
|                              | The Highest Level (Expert) | 16                               | 92.19  | 17.19          | 4.30       | 83.03       | 101.35      | 50  | 100 |
|                              | Total                      | 218                              | 89.81  | 13.22          | .90        | 88.05       | 91.58       | 48  | 100 |
| <b>Scenario 5- Patient 1</b> | None At All                | 4                                | 98.00  | 4.00           | 2.00       | 91.64       | 104.36      | 92  | 100 |
|                              | Very Low                   | 9                                | 81.00  | 17.71          | 5.90       | 67.39       | 94.61       | 50  | 100 |
|                              | Low                        | 17                               | 85.29  | 13.03          | 3.16       | 78.60       | 91.99       | 65  | 100 |
|                              | Medium                     | 62                               | 93.13  | 11.59          | 1.47       | 90.19       | 96.07       | 49  | 100 |
|                              | High                       | 62                               | 95.40  | 7.98           | 1.01       | 93.38       | 97.43       | 59  | 100 |
|                              | Very High                  | 47                               | 98.64  | 4.54           | .66        | 97.31       | 99.97       | 73  | 100 |
|                              | The Highest Level (Expert) | 16                               | 100.00 | .00            | .00        | 100.00      | 100.00      | 100 | 100 |
|                              | Total                      | 217                              | 94.45  | 10.29          | .70        | 93.07       | 95.83       | 49  | 100 |
| <b>Scenario 5- Patient 2</b> | None At All                | 4                                | 72.50  | 25.98          | 12.99      | 31.16       | 113.84      | 50  | 95  |
|                              | Very Low                   | 9                                | 75.00  | 21.95          | 7.32       | 58.13       | 91.87       | 41  | 100 |
|                              | Low                        | 17                               | 82.47  | 14.03          | 3.40       | 75.26       | 89.68       | 61  | 100 |
|                              | Medium                     | 62                               | 86.66  | 12.63          | 1.60       | 83.45       | 89.87       | 50  | 100 |
|                              | High                       | 63                               | 91.41  | 10.86          | 1.37       | 88.68       | 94.15       | 51  | 100 |
|                              | Very High                  | 47                               | 96.68  | 5.39           | .79        | 95.10       | 98.26       | 81  | 100 |
|                              | The Highest Level (Expert) | 16                               | 97.81  | 6.57           | 1.64       | 94.31       | 101.32      | 75  | 100 |
|                              | Total                      | 218                              | 89.95  | 12.91          | .87        | 88.22       | 91.67       | 41  | 100 |
| <b>Scenario 6</b>            | None At All                | 4                                | 98.75  | 2.50           | 1.25       | 94.77       | 102.73      | 95  | 100 |
|                              | Very Low                   | 9                                | 85.33  | 17.13          | 5.71       | 72.16       | 98.50       | 50  | 100 |
|                              | Low                        | 17                               | 81.88  | 13.10          | 3.18       | 75.15       | 88.62       | 57  | 100 |
|                              | Medium                     | 62                               | 89.85  | 13.04          | 1.66       | 86.54       | 93.17       | 50  | 100 |
|                              | High                       | 63                               | 94.70  | 6.35           | .80        | 93.10       | 96.30       | 75  | 100 |
|                              | Very High                  | 47                               | 96.91  | 7.28           | 1.06       | 94.78       | 99.05       | 62  | 100 |
|                              | The Highest Level (Expert) | 16                               | 95.94  | 7.58           | 1.90       | 91.90       | 99.98       | 75  | 100 |
|                              | Total                      | 218                              | 92.58  | 10.88          | .74        | 91.13       | 94.03       | 50  | 100 |
| <b>Scenario 7</b>            | None At All                | 4                                | 80.00  | 9.13           | 4.56       | 65.47       | 94.53       | 70  | 90  |
|                              | Very Low                   | 9                                | 77.67  | 16.39          | 5.46       | 65.07       | 90.27       | 50  | 100 |
|                              | Low                        | 17                               | 80.53  | 16.05          | 3.89       | 72.28       | 88.78       | 50  | 100 |
|                              | Medium                     | 61                               | 85.36  | 14.53          | 1.86       | 81.64       | 89.08       | 30  | 100 |
|                              | High                       | 61                               | 87.38  | 14.30          | 1.83       | 83.71       | 91.04       | 32  | 100 |
|                              | Very High                  | 46                               | 92.20  | 10.21          | 1.51       | 89.16       | 95.23       | 50  | 100 |
|                              | The Highest Level (Expert) | 16                               | 90.94  | 16.74          | 4.18       | 82.02       | 99.86       | 35  | 100 |
|                              | Total                      | 214                              | 87.01  | 14.33          | .98        | 85.08       | 88.94       | 30  | 100 |

Table C.42

*Pairwise Comparison of Medical Case Scenario Confidence Ratings with Provider's Experience at Current Certification Level (Scale-Based)*

| Dependent Variable         | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|----------------------------|---|---|-----------------------|------------|-------|-------------------------|-------------|
|                            |   |   |                       |            |       | Lower Bound             | Upper Bound |
| Scenario 1-Treatment 1     | None At All   | Very Low  | 0.56                  | 7.16       | 0.94  | -13.57                  | 14.68       |
|                            |   | Low   | -2.71                 | 6.62       | 0.68  | -15.77                  | 10.35       |
|                            |   | Medium  | -6.21                 | 6.15       | 0.31  | -18.34                  | 5.92        |
|                            |   | High  | -8.05                 | 6.15       | 0.19  | -20.17                  | 4.07        |
|                            |   | Very High   | -9.65                 | 6.21       | 0.12  | -21.90                  | 2.60        |
|                            |   | The Highest Level (Expert)                            | -11.06                | 6.66       | 0.10  | -24.20                  | 2.07        |
|                            | Very Low  | None At All   | -0.56                 | 7.16       | 0.94  | -14.68                  | 13.57       |
|                            |   | Low   | -3.26                 | 4.91       | 0.51  | -12.95                  | 6.43        |
|                            |   | Medium  | -6.77                 | 4.26       | 0.11  | -15.16                  | 1.62        |
|                            |   | High  | -8.60*                | 4.25       | 0.04  | -16.98                  | -0.23       |
|                            |   | Very High   | -10.21*               | 4.34       | 0.02  | -18.77                  | -1.64       |
|                            |   | The Highest Level (Expert)                            | -11.62*               | 4.97       | 0.02  | -21.41                  | -1.83       |
|                            | Low   | None At All   | 2.71                  | 6.62       | 0.68  | -10.35                  | 15.77       |
|                            |   | Very Low  | 3.26                  | 4.91       | 0.51  | -6.43                   | 12.95       |
|                            |   | Medium  | -3.51                 | 3.27       | 0.29  | -9.95                   | 2.94        |
|                            |   | High  | -5.34                 | 3.26       | 0.10  | -11.76                  | 1.08        |
|                            |   | Very High   | -6.95*                | 3.38       | 0.04  | -13.62                  | -0.28       |
|                            |   | The Highest Level (Expert)                            | -8.36*                | 4.15       | 0.05  | -16.54                  | -0.17       |
|                            | Medium  | None At All   | 6.21                  | 6.15       | 0.31  | -5.92                   | 18.34       |
|                            |   | Very Low  | 6.77                  | 4.26       | 0.11  | -1.62                   | 15.16       |
|                            |   | Low   | 3.51                  | 3.27       | 0.29  | -2.94                   | 9.95        |
|                            |   | High  | -1.83                 | 2.14       | 0.39  | -6.06                   | 2.39        |
|                            |   | Very High   | -3.44                 | 2.33       | 0.14  | -8.03                   | 1.15        |
|                            |   | The Highest Level (Expert)                            | -4.85                 | 3.35       | 0.15  | -11.45                  | 1.75        |
|                            | High  | None At All   | 8.05                  | 6.15       | 0.19  | -4.07                   | 20.17       |
|                            |   | Very Low  | 8.60*                 | 4.25       | 0.04  | 0.23                    | 16.98       |
|                            |   | Low   | 5.34                  | 3.26       | 0.10  | -1.08                   | 11.76       |
|                            |   | Medium  | 1.83                  | 2.14       | 0.39  | -2.39                   | 6.06        |
| Very High                  |   | -1.60   | 2.31                  | 0.49       | -6.16 | 2.95                    |             |
| The Highest Level (Expert) |   | -3.01   | 3.34                  | 0.37       | -9.59 | 3.56                    |             |
| Very High                  | None At All   | 9.65  | 6.21                  | 0.12       | -2.60 | 21.90                   |             |
|                            | Very Low  | 10.21*  | 4.34                  | 0.02       | 1.64  | 18.77                   |             |
|                            | Low   | 6.95*   | 3.38                  | 0.04       | 0.28  | 13.62                   |             |
|                            | Medium  | 3.44  | 2.33                  | 0.14       | -1.15 | 8.03                    |             |
|                            | High  | 1.60  | 2.31                  | 0.49       | -2.95 | 6.16                    |             |
|                            | The Highest Level (Expert)                            | -1.41   | 3.46                  | 0.68       | -8.23 | 5.41                    |             |
| The Highest Level (Expert) | None At All   | 11.06   | 6.66                  | 0.10       | -2.07 | 24.20                   |             |
|                            | Very Low  | 11.62*  | 4.97                  | 0.02       | 1.83  | 21.41                   |             |
|                            | Low   | 8.36*   | 4.15                  | 0.05       | 0.17  | 16.54                   |             |
|                            | Medium  | 4.85  | 3.35                  | 0.15       | -1.75 | 11.45                   |             |
|                            | High  | 3.01  | 3.34                  | 0.37       | -3.56 | 9.59                    |             |
|                            | Very High   | 1.41  | 3.46                  | 0.68       | -5.41 | 8.23                    |             |

Table C.42 (Continued)

| Dependent Variable         | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.   | 95% Confidence Interval |             |
|----------------------------|---|---|-----------------------|------------|--------|-------------------------|-------------|
|                            |   |   |                       |            |        | Lower Bound             | Upper Bound |
| Scenario 1-<br>Treatment 2 | None At All   | Very Low  | 2.44                  | 9.47       | 0.80   | -16.23                  | 21.12       |
|                            |   | Low   | 0.73                  | 8.90       | 0.94   | -16.81                  | 18.27       |
|                            |   | Medium  | -4.78                 | 8.40       | 0.57   | -21.34                  | 11.77       |
|                            |   | High  | -10.46                | 8.40       | 0.21   | -27.01                  | 6.09        |
|                            |   | Very High   | -10.40                | 8.46       | 0.22   | -27.08                  | 6.28        |
|                            |   | The Highest Level (Expert)                            | -12.77                | 8.94       | 0.16   | -30.39                  | 4.85        |
|                            | Very Low  | None At All   | -2.44                 | 9.47       | 0.80   | -21.12                  | 16.23       |
|                            |   | Low   | -1.72                 | 5.86       | 0.77   | -13.27                  | 9.83        |
|                            |   | Medium  | -7.23                 | 5.07       | 0.16   | -17.22                  | 2.76        |
|                            |   | High  | -12.90*               | 5.06       | 0.01   | -22.89                  | -2.92       |
|                            |   | Very High   | -12.84*               | 5.17       | 0.01   | -23.03                  | -2.65       |
|                            |   | The Highest Level (Expert)                            | -15.22*               | 5.92       | 0.01   | -26.89                  | -3.54       |
|                            | Low   | None At All   | -0.73                 | 8.90       | 0.94   | -18.27                  | 16.81       |
|                            |   | Very Low  | 1.72                  | 5.86       | 0.77   | -9.83                   | 13.27       |
|                            |   | Medium  | -5.51                 | 3.89       | 0.16   | -13.18                  | 2.16        |
|                            |   | High  | -11.19*               | 3.88       | 0.00   | -18.84                  | -3.53       |
|                            |   | Very High   | -11.12*               | 4.02       | 0.01   | -19.05                  | -3.20       |
|                            |   | The Highest Level (Expert)                            | -13.50*               | 4.95       | 0.01   | -23.25                  | -3.74       |
|                            | Medium  | None At All   | 4.78                  | 8.40       | 0.57   | -11.77                  | 21.34       |
|                            |   | Very Low  | 7.23                  | 5.07       | 0.16   | -2.76                   | 17.22       |
|                            |   | Low   | 5.51                  | 3.89       | 0.16   | -2.16                   | 13.18       |
|                            |   | High  | -5.68*                | 2.54       | 0.03   | -10.69                  | -0.66       |
|                            |   | Very High   | -5.61*                | 2.75       | 0.04   | -11.03                  | -0.20       |
|                            |   | The Highest Level (Expert)                            | -7.99*                | 3.98       | 0.05   | -15.84                  | -0.13       |
|                            | High  | None At All   | 10.46                 | 8.40       | 0.21   | -6.09                   | 27.01       |
|                            |   | Very Low  | 12.90*                | 5.06       | 0.01   | 2.92                    | 22.89       |
|                            |   | Low   | 11.19*                | 3.88       | 0.00   | 3.53                    | 18.84       |
| Medium                     |   | 5.68*   | 2.54                  | 0.03       | 0.66   | 10.69                   |             |
| Very High                  |   | 0.06  | 2.74                  | 0.98       | -5.34  | 5.46                    |             |
| The Highest Level (Expert) |   | -2.31   | 3.98                  | 0.56       | -10.15 | 5.53                    |             |
| Very High                  | None At All   | 10.40   | 8.46                  | 0.22       | -6.28  | 27.08                   |             |
|                            | Very Low  | 12.84*  | 5.17                  | 0.01       | 2.65   | 23.03                   |             |
|                            | Low   | 11.12*  | 4.02                  | 0.01       | 3.20   | 19.05                   |             |
|                            | Medium  | 5.61*   | 2.75                  | 0.04       | 0.20   | 11.03                   |             |
|                            | High  | -0.06   | 2.74                  | 0.98       | -5.46  | 5.34                    |             |
|                            | The Highest Level (Expert)                            | -2.37   | 4.11                  | 0.56       | -10.48 | 5.73                    |             |
| The Highest Level (Expert) | None At All   | 12.77   | 8.94                  | 0.16       | -4.85  | 30.39                   |             |
|                            | Very Low  | 15.22*  | 5.92                  | 0.01       | 3.54   | 26.89                   |             |
|                            | Low   | 13.50*  | 4.95                  | 0.01       | 3.74   | 23.25                   |             |
|                            | Medium  | 7.99*   | 3.98                  | 0.05       | 0.13   | 15.84                   |             |
|                            | High  | 2.31  | 3.98                  | 0.56       | -5.53  | 10.15                   |             |
|                            | Very High   | 2.37  | 4.11                  | 0.56       | -5.73  | 10.48                   |             |

Table C.42 (Continued)

| Dependent Variable         | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|----------------------------|---|---|-----------------------|------------|-------|-------------------------|-------------|
|                            |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 2</b>          | None At All   | Very Low  | 7.25                  | 7.13       | 0.31  | -6.81                   | 21.31       |
|                            |   | Low   | 3.37                  | 6.59       | 0.61  | -9.63                   | 16.37       |
|                            |   | Medium  | -0.23                 | 6.12       | 0.97  | -12.30                  | 11.83       |
|                            |   | High  | -6.00                 | 6.12       | 0.33  | -18.06                  | 6.06        |
|                            |   | Very High   | -10.24                | 6.18       | 0.10  | -22.42                  | 1.94        |
|                            |   | The Highest Level (Expert)                            | -10.50                | 6.63       | 0.12  | -23.58                  | 2.58        |
|                            | Very Low  | None At All   | -7.25                 | 7.13       | 0.31  | -21.31                  | 6.81        |
|                            |   | Low   | -3.88                 | 4.89       | 0.43  | -13.52                  | 5.76        |
|                            |   | Medium  | -7.48                 | 4.23       | 0.08  | -15.83                  | 0.86        |
|                            |   | High  | -13.25*               | 4.23       | 0.00  | -21.59                  | -4.92       |
|                            |   | Very High   | -17.49*               | 4.32       | 0.00  | -26.00                  | -8.98       |
|                            |   | The Highest Level (Expert)                            | -17.75*               | 4.94       | 0.00  | -27.50                  | -8.00       |
|                            | Low   | None At All   | -3.37                 | 6.59       | 0.61  | -16.37                  | 9.63        |
|                            |   | Very Low  | 3.88                  | 4.89       | 0.43  | -5.76                   | 13.52       |
|                            |   | Medium  | -3.60                 | 3.25       | 0.27  | -10.01                  | 2.80        |
|                            |   | High  | -9.37*                | 3.24       | 0.00  | -15.76                  | -2.98       |
|                            |   | Very High   | -13.61*               | 3.36       | 0.00  | -20.23                  | -6.99       |
|                            |   | The Highest Level (Expert)                            | -13.87*               | 4.13       | 0.00  | -22.01                  | -5.72       |
|                            | Medium  | None At All   | 0.23                  | 6.12       | 0.97  | -11.83                  | 12.30       |
|                            |   | Very Low  | 7.48                  | 4.23       | 0.08  | -0.86                   | 15.83       |
|                            |   | Low   | 3.60                  | 3.25       | 0.27  | -2.80                   | 10.01       |
|                            |   | High  | -5.77*                | 2.12       | 0.01  | -9.95                   | -1.59       |
|                            |   | Very High   | -10.01*               | 2.29       | 0.00  | -14.53                  | -5.48       |
|                            |   | The Highest Level (Expert)                            | -10.27*               | 3.33       | 0.00  | -16.82                  | -3.71       |
|                            | High  | None At All   | 6.00                  | 6.12       | 0.33  | -6.06                   | 18.06       |
|                            |   | Very Low  | 13.25*                | 4.23       | 0.00  | 4.92                    | 21.59       |
|                            |   | Low   | 9.37*                 | 3.24       | 0.00  | 2.98                    | 15.76       |
|                            |   | Medium  | 5.77*                 | 2.12       | 0.01  | 1.59                    | 9.95        |
|                            |   | Very High   | -4.24                 | 2.29       | 0.07  | -8.74                   | 0.27        |
|                            |   | The Highest Level (Expert)                            | -4.50                 | 3.32       | 0.18  | -11.04                  | 2.05        |
| Very High                  | None At All   | 10.24   | 6.18                  | 0.10       | -1.94 | 22.42                   |             |
|                            | Very Low  | 17.49*  | 4.32                  | 0.00       | 8.98  | 26.00                   |             |
|                            | Low   | 13.61*  | 3.36                  | 0.00       | 6.99  | 20.23                   |             |
|                            | Medium  | 10.01*  | 2.29                  | 0.00       | 5.48  | 14.53                   |             |
|                            | High  | 4.24  | 2.29                  | 0.07       | -0.27 | 8.74                    |             |
|                            | The Highest Level (Expert)                            | -0.26   | 3.43                  | 0.94       | -7.03 | 6.51                    |             |
| The Highest Level (Expert) | None At All   | 10.50   | 6.63                  | 0.12       | -2.58 | 23.58                   |             |
|                            | Very Low  | 17.75*  | 4.94                  | 0.00       | 8.00  | 27.50                   |             |
|                            | Low   | 13.87*  | 4.13                  | 0.00       | 5.72  | 22.01                   |             |
|                            | Medium  | 10.27*  | 3.33                  | 0.00       | 3.71  | 16.82                   |             |
|                            | High  | 4.50  | 3.32                  | 0.18       | -2.05 | 11.04                   |             |
|                            | Very High   | 0.26  | 3.43                  | 0.94       | -6.51 | 7.03                    |             |

Table C.42 (Continued)

| Dependent Variable         | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|----------------------------|---|---|-----------------------|------------|-------|-------------------------|-------------|
|                            |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 3</b>          | None At All   | Very Low  | 1.61                  | 5.88       | 0.78  | -9.99                   | 13.21       |
|                            |   | Low   | 4.74                  | 5.44       | 0.39  | -5.99                   | 15.46       |
|                            |   | Medium  | -2.94                 | 5.05       | 0.56  | -12.89                  | 7.02        |
|                            |   | High  | -5.35                 | 5.05       | 0.29  | -15.31                  | 4.61        |
|                            |   | Very High   | -8.69                 | 5.10       | 0.09  | -18.74                  | 1.36        |
|                            |   | The Highest Level (Expert)                            | -8.81                 | 5.47       | 0.11  | -19.60                  | 1.98        |
|                            | Very Low  | None At All   | -1.61                 | 5.88       | 0.78  | -13.21                  | 9.99        |
|                            |   | Low   | 3.12                  | 4.04       | 0.44  | -4.83                   | 11.08       |
|                            |   | Medium  | -4.55                 | 3.49       | 0.19  | -11.43                  | 2.34        |
|                            |   | High  | -6.96*                | 3.50       | 0.05  | -13.85                  | -0.07       |
|                            |   | Very High   | -10.30*               | 3.56       | 0.00  | -17.32                  | -3.28       |
|                            |   | The Highest Level (Expert)                            | -10.42*               | 4.08       | 0.01  | -18.46                  | -2.38       |
|                            | Low   | None At All   | -4.74                 | 5.44       | 0.39  | -15.46                  | 5.99        |
|                            |   | Very Low  | -3.12                 | 4.04       | 0.44  | -11.08                  | 4.83        |
|                            |   | Medium  | -7.67*                | 2.68       | 0.01  | -12.95                  | -2.39       |
|                            |   | High  | -10.09*               | 2.68       | 0.00  | -15.38                  | -4.80       |
|                            |   | Very High   | -13.42*               | 2.77       | 0.00  | -18.89                  | -7.97       |
|                            |   | The Highest Level (Expert)                            | -13.55*               | 3.41       | 0.00  | -20.27                  | -6.83       |
|                            | Medium  | None At All   | 2.94                  | 5.05       | 0.56  | -7.02                   | 12.89       |
|                            |   | Very Low  | 4.55                  | 3.49       | 0.19  | -2.34                   | 11.43       |
|                            |   | Low   | 7.67*                 | 2.68       | 0.01  | 2.39                    | 12.95       |
|                            |   | High  | -2.42                 | 1.77       | 0.17  | -5.90                   | 1.06        |
|                            |   | Very High   | -5.76*                | 1.89       | 0.00  | -9.49                   | -2.02       |
|                            |   | The Highest Level (Expert)                            | -5.88*                | 2.74       | 0.03  | -11.29                  | -0.47       |
|                            | High  | None At All   | 5.35                  | 5.05       | 0.29  | -4.61                   | 15.31       |
|                            |   | Very Low  | 6.96*                 | 3.50       | 0.05  | 0.07                    | 13.85       |
|                            |   | Low   | 10.09*                | 2.68       | 0.00  | 4.80                    | 15.38       |
|                            |   | Medium  | 2.42                  | 1.77       | 0.17  | -1.06                   | 5.90        |
|                            |   | Very High   | -3.34                 | 1.90       | 0.08  | -7.08                   | 0.41        |
|                            |   | The Highest Level (Expert)                            | -3.46                 | 2.75       | 0.21  | -8.88                   | 1.96        |
| Very High                  | None At All   | 8.69  | 5.10                  | 0.09       | -1.36 | 18.74                   |             |
|                            | Very Low  | 10.30*  | 3.56                  | 0.00       | 3.28  | 17.32                   |             |
|                            | Low   | 13.43*  | 2.77                  | 0.00       | 7.97  | 18.89                   |             |
|                            | Medium  | 5.76*   | 1.89                  | 0.00       | 2.02  | 9.49                    |             |
|                            | High  | 3.34  | 1.90                  | 0.08       | -0.41 | 7.08                    |             |
|                            | The Highest Level (Expert)                            | -0.12   | 2.83                  | 0.97       | -5.71 | 5.46                    |             |
| The Highest Level (Expert) | None At All   | 8.81  | 5.47                  | 0.11       | -1.98 | 19.60                   |             |
|                            | Very Low  | 10.42*  | 4.08                  | 0.01       | 2.38  | 18.46                   |             |
|                            | Low   | 13.55*  | 3.41                  | 0.00       | 6.83  | 20.27                   |             |
|                            | Medium  | 5.88*   | 2.74                  | 0.03       | 0.47  | 11.29                   |             |
|                            | High  | 3.46  | 2.75                  | 0.21       | -1.96 | 8.88                    |             |
|                            | Very High   | 0.12  | 2.83                  | 0.97       | -5.46 | 5.71                    |             |

Table C.42 (Continued)

| Dependent Variable | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------|---|---|-----------------------|------------|------|-------------------------|-------------|
|                    |   |   |                       |            |      | Lower Bound             | Upper Bound |
| Scenario 4         | None At All   | Very Low  | -2.08                 | 7.53       | 0.78 | -16.92                  | 12.75       |
|                    |   | Low   | 4.37                  | 6.96       | 0.53 | -9.35                   | 18.09       |
|                    |   | Medium  | -5.48                 | 6.46       | 0.40 | -18.21                  | 7.26        |
|                    |   | High  | -5.86                 | 6.46       | 0.37 | -18.59                  | 6.87        |
|                    |   | Very High   | -13.49*               | 6.52       | 0.04 | -26.35                  | -0.64       |
|                    |   | The Highest Level (Expert)                            | -8.94                 | 7.00       | 0.20 | -22.74                  | 4.86        |
|                    | Very Low  | None At All   | 2.08                  | 7.53       | 0.78 | -12.75                  | 16.92       |
|                    |   | Low   | 6.45                  | 5.16       | 0.21 | -3.73                   | 16.63       |
|                    |   | Medium  | -3.39                 | 4.47       | 0.45 | -12.20                  | 5.41        |
|                    |   | High  | -3.78                 | 4.46       | 0.40 | -12.58                  | 5.02        |
|                    |   | Very High   | -11.41*               | 4.56       | 0.01 | -20.39                  | -2.43       |
|                    |   | The Highest Level (Expert)                            | -6.85                 | 5.22       | 0.19 | -17.14                  | 3.43        |
|                    | Low   | None At All   | -4.37                 | 6.96       | 0.53 | -18.09                  | 9.35        |
|                    |   | Very Low  | -6.45                 | 5.16       | 0.21 | -16.63                  | 3.73        |
|                    |   | Medium  | -9.84*                | 3.43       | 0.01 | -16.60                  | -3.08       |
|                    |   | High  | -10.23*               | 3.42       | 0.00 | -16.98                  | -3.48       |
|                    |   | Very High   | -17.86*               | 3.54       | 0.00 | -24.85                  | -10.87      |
|                    |   | The Highest Level (Expert)                            | -13.31*               | 4.36       | 0.00 | -21.91                  | -4.71       |
|                    | Medium  | None At All   | 5.48                  | 6.46       | 0.40 | -7.26                   | 18.21       |
|                    |   | Very Low  | 3.39                  | 4.47       | 0.45 | -5.41                   | 12.20       |
|                    |   | Low   | 9.84*                 | 3.43       | 0.01 | 3.08                    | 16.60       |
|                    |   | High  | -0.39                 | 2.24       | 0.86 | -4.80                   | 4.03        |
|                    |   | Very High   | -8.02*                | 2.42       | 0.00 | -12.79                  | -3.24       |
|                    |   | The Highest Level (Expert)                            | -3.46                 | 3.51       | 0.33 | -10.39                  | 3.46        |
|                    | High  | None At All   | 5.86                  | 6.46       | 0.37 | -6.87                   | 18.59       |
|                    |   | Very Low  | 3.78                  | 4.46       | 0.40 | -5.02                   | 12.58       |
|                    |   | Low   | 10.23*                | 3.42       | 0.00 | 3.48                    | 16.98       |
|                    |   | Medium  | 0.39                  | 2.24       | 0.86 | -4.03                   | 4.80        |
|                    |   | Very High   | -7.63*                | 2.41       | 0.00 | -12.39                  | -2.87       |
|                    |   | The Highest Level (Expert)                            | -3.08                 | 3.51       | 0.38 | -9.99                   | 3.84        |
|                    | Very High   | None At All   | 13.49*                | 6.52       | 0.04 | 0.64                    | 26.35       |
|                    |   | Very Low  | 11.41*                | 4.56       | 0.01 | 2.43                    | 20.39       |
|                    |   | Low   | 17.86*                | 3.54       | 0.00 | 10.87                   | 24.85       |
|                    |   | Medium  | 8.02*                 | 2.42       | 0.00 | 3.24                    | 12.79       |
|                    |   | High  | 7.63*                 | 2.41       | 0.00 | 2.87                    | 12.39       |
|                    |   | The Highest Level (Expert)                            | 4.56                  | 3.63       | 0.21 | -2.59                   | 11.70       |
|                    | The Highest Level (Expert)                            | None At All   | 8.94                  | 7.00       | 0.20 | -4.86                   | 22.74       |
|                    |   | Very Low  | 6.85                  | 5.22       | 0.19 | -3.43                   | 17.14       |
|                    |   | Low   | 13.31*                | 4.36       | 0.00 | 4.71                    | 21.91       |
|                    |   | Medium  | 3.46                  | 3.51       | 0.33 | -3.46                   | 10.39       |
|                    |   | High  | 3.08                  | 3.51       | 0.38 | -3.84                   | 9.99        |
|                    |   | Very High   | -4.56                 | 3.63       | 0.21 | -11.70                  | 2.59        |



Table C.42 (Continued)

| Dependent Variable         | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|----------------------------|---|---|-----------------------|------------|-------|-------------------------|-------------|
|                            |   |   |                       |            |       | Lower Bound             | Upper Bound |
| Scenario 5-<br>Patient 1   | None At All   | Very Low  | 17.00*                | 5.61       | 0.00  | 5.95                    | 28.05       |
|                            |   | Low   | 12.71*                | 5.19       | 0.02  | 2.48                    | 22.93       |
|                            |   | Medium  | 4.87                  | 4.81       | 0.31  | -4.62                   | 14.36       |
|                            |   | High  | 2.60                  | 4.81       | 0.59  | -6.89                   | 12.09       |
|                            |   | Very High   | -0.64                 | 4.86       | 0.90  | -10.22                  | 8.94        |
|                            |   | The Highest Level (Expert)                            | -2.00                 | 5.22       | 0.70  | -12.28                  | 8.28        |
|                            | Very Low  | None At All   | -17.00*               | 5.61       | 0.00  | -28.05                  | -5.95       |
|                            |   | Low   | -4.29                 | 3.85       | 0.27  | -11.88                  | 3.29        |
|                            |   | Medium  | -12.13*               | 3.33       | 0.00  | -18.69                  | -5.57       |
|                            |   | High  | -14.40*               | 3.33       | 0.00  | -20.97                  | -7.84       |
|                            |   | Very High   | -17.64*               | 3.40       | 0.00  | -24.33                  | -10.94      |
|                            |   | The Highest Level (Expert)                            | -19.00*               | 3.89       | 0.00  | -26.67                  | -11.33      |
|                            | Low   | None At All   | -12.71*               | 5.19       | 0.02  | -22.93                  | -2.48       |
|                            |   | Very Low  | 4.29                  | 3.85       | 0.27  | -3.29                   | 11.88       |
|                            |   | Medium  | -7.83*                | 2.55       | 0.00  | -12.87                  | -2.80       |
|                            |   | High  | -10.11*               | 2.55       | 0.00  | -15.15                  | -5.07       |
|                            |   | Very High   | -13.34*               | 2.64       | 0.00  | -18.55                  | -8.14       |
|                            |   | The Highest Level (Expert)                            | -14.71*               | 3.25       | 0.00  | -21.11                  | -8.30       |
|                            | Medium  | None At All   | -4.87                 | 4.81       | 0.31  | -14.36                  | 4.62        |
|                            |   | Very Low  | 12.13*                | 3.33       | 0.00  | 5.57                    | 18.69       |
|                            |   | Low   | 7.83*                 | 2.55       | 0.00  | 2.80                    | 12.87       |
|                            |   | High  | -2.27                 | 1.68       | 0.18  | -5.58                   | 1.03        |
|                            |   | Very High   | -5.51*                | 1.80       | 0.00  | -9.07                   | -1.95       |
|                            |   | The Highest Level (Expert)                            | -6.87*                | 2.62       | 0.01  | -12.03                  | -1.71       |
|                            | High  | None At All   | -2.60                 | 4.81       | 0.59  | -12.09                  | 6.89        |
|                            |   | Very Low  | 14.40*                | 3.33       | 0.00  | 7.84                    | 20.97       |
|                            |   | Low   | 10.11*                | 2.55       | 0.00  | 5.07                    | 15.15       |
|                            |   | Medium  | 2.27                  | 1.68       | 0.18  | -1.03                   | 5.58        |
|                            |   | Very High   | -3.24                 | 1.80       | 0.08  | -6.79                   | 0.32        |
| The Highest Level (Expert) |   | -4.60   | 2.62                  | 0.08       | -9.76 | 0.56                    |             |
| Very High                  | None At All   | 0.64  | 4.86                  | 0.90       | -8.94 | 10.22                   |             |
|                            | Very Low  | 17.64*  | 3.40                  | 0.00       | 10.94 | 24.33                   |             |
|                            | Low   | 13.34*  | 2.64                  | 0.00       | 8.14  | 18.55                   |             |
|                            | Medium  | 5.51*   | 1.80                  | 0.00       | 1.95  | 9.07                    |             |
|                            | High  | 3.24  | 1.80                  | 0.08       | -0.32 | 6.79                    |             |
|                            | The Highest Level (Expert)                            | -1.36   | 2.70                  | 0.62       | -6.69 | 3.96                    |             |
| The Highest Level (Expert) | None At All   | 2.00  | 5.22                  | 0.70       | -8.28 | 12.28                   |             |
|                            | Very Low  | 19.00*  | 3.89                  | 0.00       | 11.33 | 26.67                   |             |
|                            | Low   | 14.71*  | 3.25                  | 0.00       | 8.30  | 21.11                   |             |
|                            | Medium  | 6.87*   | 2.62                  | 0.01       | 1.71  | 12.03                   |             |
|                            | High  | 4.60  | 2.62                  | 0.08       | -0.56 | 9.76                    |             |
|                            | Very High   | 1.36  | 2.70                  | 0.62       | -3.96 | 6.69                    |             |

Table C.42 (Continued)

| Dependent Variable         | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|----------------------------|---|---|-----------------------|------------|-------|-------------------------|-------------|
|                            |   |   |                       |            |       | Lower Bound             | Upper Bound |
| Scenario 5-<br>Patient 2   | None At All   | Very Low  | -2.50                 | 6.93       | 0.72  | -16.16                  | 11.16       |
|                            |   | Low   | -9.97                 | 6.41       | 0.12  | -22.60                  | 2.66        |
|                            |   | Medium  | -14.16*               | 5.95       | 0.02  | -25.89                  | -2.43       |
|                            |   | High  | -18.91*               | 5.95       | 0.00  | -30.63                  | -7.19       |
|                            |   | Very High   | -24.18*               | 6.01       | 0.00  | -36.02                  | -12.34      |
|                            |   | The Highest Level (Expert)                            | -25.31*               | 6.45       | 0.00  | -38.02                  | -12.60      |
|                            | Very Low  | None At All   | 2.50                  | 6.93       | 0.72  | -11.16                  | 16.16       |
|                            |   | Low   | -7.47                 | 4.75       | 0.12  | -16.84                  | 1.90        |
|                            |   | Medium  | -11.66*               | 4.11       | 0.01  | -19.77                  | -3.55       |
|                            |   | High  | -16.41*               | 4.11       | 0.00  | -24.51                  | -8.31       |
|                            |   | Very High   | -21.68*               | 4.20       | 0.00  | -29.95                  | -13.41      |
|                            |   | The Highest Level (Expert)                            | -22.81*               | 4.80       | 0.00  | -32.28                  | -13.34      |
|                            | Low   | None At All   | 9.97                  | 6.41       | 0.12  | -2.66                   | 22.60       |
|                            |   | Very Low  | 7.47                  | 4.75       | 0.12  | -1.90                   | 16.84       |
|                            |   | Medium  | -4.19                 | 3.16       | 0.19  | -10.41                  | 2.03        |
|                            |   | High  | -8.94*                | 3.15       | 0.01  | -15.16                  | -2.73       |
|                            |   | Very High   | -14.21*               | 3.26       | 0.00  | -20.64                  | -7.78       |
|                            |   | The Highest Level (Expert)                            | -15.34*               | 4.02       | 0.00  | -23.26                  | -7.42       |
|                            | Medium  | None At All   | 14.16*                | 5.95       | 0.02  | 2.43                    | 25.89       |
|                            |   | Very Low  | 11.66*                | 4.11       | 0.01  | 3.55                    | 19.77       |
|                            |   | Low   | 4.19                  | 3.16       | 0.19  | -2.03                   | 10.41       |
|                            |   | High  | -4.75*                | 2.06       | 0.02  | -8.82                   | -0.68       |
|                            |   | Very High   | -10.02*               | 2.23       | 0.00  | -14.42                  | -5.62       |
|                            |   | The Highest Level (Expert)                            | -11.15*               | 3.23       | 0.00  | -17.53                  | -4.78       |
|                            | High  | None At All   | 18.91*                | 5.95       | 0.00  | 7.19                    | 30.63       |
|                            |   | Very Low  | 16.41*                | 4.11       | 0.00  | 8.31                    | 24.51       |
|                            |   | Low   | 8.94*                 | 3.15       | 0.01  | 2.73                    | 15.16       |
|                            |   | Medium  | 4.75*                 | 2.06       | 0.02  | 0.68                    | 8.82        |
|                            |   | Very High   | -5.27*                | 2.22       | 0.02  | -9.65                   | -0.89       |
|                            |   | The Highest Level (Expert)                            | -6.40*                | 3.23       | 0.05  | -12.76                  | -0.04       |
| Very High                  | None At All   | 24.18*  | 6.01                  | 0.00       | 12.34 | 36.02                   |             |
|                            | Very Low  | 21.68*  | 4.20                  | 0.00       | 13.41 | 29.95                   |             |
|                            | Low   | 14.21*  | 3.26                  | 0.00       | 7.78  | 20.64                   |             |
|                            | Medium  | 10.02*  | 2.23                  | 0.00       | 5.62  | 14.42                   |             |
|                            | High  | 5.27*   | 2.22                  | 0.02       | 0.89  | 9.65                    |             |
|                            | The Highest Level (Expert)                            | -1.13   | 3.34                  | 0.74       | -7.71 | 5.45                    |             |
| The Highest Level (Expert) | None At All   | 25.31*  | 6.45                  | 0.00       | 12.60 | 38.02                   |             |
|                            | Very Low  | 22.81*  | 4.80                  | 0.00       | 13.34 | 32.28                   |             |
|                            | Low   | 15.34*  | 4.02                  | 0.00       | 7.42  | 23.26                   |             |
|                            | Medium  | 11.15*  | 3.23                  | 0.00       | 4.78  | 17.53                   |             |
|                            | High  | 6.40*   | 3.23                  | 0.05       | 0.04  | 12.76                   |             |
|                            | Very High   | 1.13  | 3.34                  | 0.74       | -5.45 | 7.71                    |             |

Table C.42 (Continued)

| Dependent Variable         | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.   | 95% Confidence Interval |             |
|----------------------------|---|---|-----------------------|------------|--------|-------------------------|-------------|
|                            |   |   |                       |            |        | Lower Bound             | Upper Bound |
| Scenario 6                 | None At All   | Very Low  | 13.42*                | 6.04       | 0.03   | 1.52                    | 25.32       |
|                            |   | Low   | 16.87*                | 5.58       | 0.00   | 5.86                    | 27.87       |
|                            |   | Medium  | 8.90                  | 5.18       | 0.09   | -1.32                   | 19.11       |
|                            |   | High  | 4.05                  | 5.18       | 0.44   | -6.16                   | 14.26       |
|                            |   | Very High   | 1.84                  | 5.23       | 0.73   | -8.48                   | 12.15       |
|                            |   | The Highest Level (Expert)                            | 2.81                  | 5.62       | 0.62   | -8.26                   | 13.88       |
|                            | Very Low  | None At All   | -13.42*               | 6.04       | 0.03   | -25.32                  | -1.52       |
|                            |   | Low   | 3.45                  | 4.14       | 0.41   | -4.71                   | 11.61       |
|                            |   | Medium  | -4.52                 | 3.58       | 0.21   | -11.58                  | 2.54        |
|                            |   | High  | -9.37*                | 3.58       | 0.01   | -16.42                  | -2.31       |
|                            |   | Very High   | -11.58*               | 3.65       | 0.00   | -18.79                  | -4.38       |
|                            |   | The Highest Level (Expert)                            | -10.60*               | 4.19       | 0.01   | -18.85                  | -2.35       |
|                            | Low   | None At All   | -16.87*               | 5.58       | 0.00   | -27.87                  | -5.86       |
|                            |   | Very Low  | -3.45                 | 4.14       | 0.41   | -11.61                  | 4.71        |
|                            |   | Medium  | -7.97*                | 2.75       | 0.00   | -13.39                  | -2.55       |
|                            |   | High  | -12.82*               | 2.75       | 0.00   | -18.23                  | -7.40       |
|                            |   | Very High   | -15.03*               | 2.84       | 0.00   | -20.64                  | -9.43       |
|                            |   | The Highest Level (Expert)                            | -14.06*               | 3.50       | 0.00   | -20.95                  | -7.16       |
|                            | Medium  | None At All   | -8.90                 | 5.18       | 0.09   | -19.11                  | 1.32        |
|                            |   | Very Low  | 4.52                  | 3.58       | 0.21   | -2.54                   | 11.58       |
|                            |   | Low   | 7.97*                 | 2.75       | 0.00   | 2.55                    | 13.39       |
|                            |   | High  | -4.84*                | 1.80       | 0.01   | -8.39                   | -1.30       |
|                            |   | Very High   | -7.06*                | 1.94       | 0.00   | -10.89                  | -3.23       |
|                            |   | The Highest Level (Expert)                            | -6.08*                | 2.82       | 0.03   | -11.64                  | -0.53       |
|                            | High  | None At All   | -4.05                 | 5.18       | 0.44   | -14.26                  | 6.16        |
|                            |   | Very Low  | 9.37*                 | 3.58       | 0.01   | 2.31                    | 16.42       |
|                            |   | Low   | 12.82*                | 2.75       | 0.00   | 7.40                    | 18.23       |
|                            |   | Medium  | 4.84*                 | 1.80       | 0.01   | 1.30                    | 8.39        |
|                            |   | Very High   | -2.22                 | 1.94       | 0.25   | -6.03                   | 1.60        |
|                            |   | The Highest Level (Expert)                            | -1.24                 | 2.81       | 0.66   | -6.78                   | 4.30        |
| Very High                  | None At All   | -1.84   | 5.23                  | 0.73       | -12.15 | 8.48                    |             |
|                            | Very Low  | 11.58*  | 3.65                  | 0.00       | 4.38   | 18.79                   |             |
|                            | Low   | 15.03*  | 2.84                  | 0.00       | 9.43   | 20.64                   |             |
|                            | Medium  | 7.06*   | 1.94                  | 0.00       | 3.23   | 10.89                   |             |
|                            | High  | 2.22  | 1.94                  | 0.25       | -1.60  | 6.03                    |             |
|                            | The Highest Level (Expert)                            | 0.98  | 2.91                  | 0.74       | -4.75  | 6.71                    |             |
| The Highest Level (Expert) | None At All   | -2.81   | 5.62                  | 0.62       | -13.88 | 8.26                    |             |
|                            | Very Low  | 10.60*  | 4.19                  | 0.01       | 2.35   | 18.85                   |             |
|                            | Low   | 14.06*  | 3.50                  | 0.00       | 7.16   | 20.95                   |             |
|                            | Medium  | 6.08*   | 2.82                  | 0.03       | 0.53   | 11.64                   |             |
|                            | High  | 1.24  | 2.81                  | 0.66       | -4.30  | 6.78                    |             |
|                            | Very High   | -0.98   | 2.91                  | 0.74       | -6.71  | 4.75                    |             |

Table C.42 (Continued)

| Dependent Variable         | (I) Experience at Current Certification Level (Scale) | (J) Experience at Current Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|----------------------------|---|---|-----------------------|------------|-------|-------------------------|-------------|
|                            |   |   |                       |            |       | Lower Bound             | Upper Bound |
| <b>Scenario 7</b>          | None At All   | Very Low  | 2.33                  | 8.39       | 0.78  | -14.21                  | 18.87       |
|                            |   | Low   | -0.53                 | 7.76       | 0.95  | -15.83                  | 14.77       |
|                            |   | Medium  | -5.36                 | 7.21       | 0.46  | -19.57                  | 8.85        |
|                            |   | High  | -7.38                 | 7.21       | 0.31  | -21.58                  | 6.83        |
|                            |   | Very High   | -12.20                | 7.28       | 0.10  | -26.55                  | 2.15        |
|                            |   | The Highest Level (Expert)                            | -10.94                | 7.81       | 0.16  | -26.33                  | 4.45        |
|                            | Very Low  | None At All   | -2.33                 | 8.39       | 0.78  | -18.87                  | 14.21       |
|                            |   | Low   | -2.86                 | 5.76       | 0.62  | -14.21                  | 8.48        |
|                            |   | Medium  | -7.69                 | 4.99       | 0.12  | -17.52                  | 2.14        |
|                            |   | High  | -9.71                 | 4.99       | 0.05  | -19.54                  | 0.12        |
|                            |   | Very High   | -14.53*               | 5.09       | 0.01  | -24.56                  | -4.50       |
|                            |   | The Highest Level (Expert)                            | -13.27*               | 5.82       | 0.02  | -24.74                  | -1.80       |
|                            | Low   | None At All   | 0.53                  | 7.76       | 0.95  | -14.77                  | 15.83       |
|                            |   | Very Low  | 2.86                  | 5.76       | 0.62  | -8.48                   | 14.21       |
|                            |   | Medium  | -4.83                 | 3.83       | 0.21  | -12.38                  | 2.72        |
|                            |   | High  | -6.85                 | 3.83       | 0.08  | -14.40                  | 0.70        |
|                            |   | Very High   | -11.67*               | 3.96       | 0.00  | -19.48                  | -3.85       |
|                            |   | The Highest Level (Expert)                            | -10.41*               | 4.86       | 0.03  | -20.00                  | -0.82       |
|                            | Medium  | None At All   | 5.36                  | 7.21       | 0.46  | -8.85                   | 19.57       |
|                            |   | Very Low  | 7.69                  | 4.99       | 0.12  | -2.14                   | 17.52       |
|                            |   | Low   | 4.83                  | 3.83       | 0.21  | -2.72                   | 12.38       |
|                            |   | High  | -2.02                 | 2.53       | 0.43  | -7.00                   | 2.97        |
|                            |   | Very High   | -6.84*                | 2.73       | 0.01  | -12.21                  | -1.46       |
|                            |   | The Highest Level (Expert)                            | -5.58                 | 3.92       | 0.16  | -13.31                  | 2.15        |
|                            | High  | None At All   | 7.38                  | 7.21       | 0.31  | -6.83                   | 21.58       |
|                            |   | Very Low  | 9.71                  | 4.99       | 0.05  | -0.12                   | 19.54       |
|                            |   | Low   | 6.85                  | 3.83       | 0.08  | -0.70                   | 14.40       |
|                            |   | Medium  | 2.02                  | 2.53       | 0.43  | -2.97                   | 7.00        |
|                            |   | Very High   | -4.82                 | 2.73       | 0.08  | -10.19                  | 0.56        |
|                            |   | The Highest Level (Expert)                            | -3.56                 | 3.92       | 0.37  | -11.29                  | 4.17        |
| Very High                  | None At All   | 12.20   | 7.28                  | 0.10       | -2.15 | 26.55                   |             |
|                            | Very Low  | 14.53*  | 5.09                  | 0.01       | 4.50  | 24.56                   |             |
|                            | Low   | 11.67*  | 3.96                  | 0.00       | 3.85  | 19.48                   |             |
|                            | Medium  | 6.84*   | 2.73                  | 0.01       | 1.46  | 12.21                   |             |
|                            | High  | 4.82  | 2.73                  | 0.08       | -0.56 | 10.19                   |             |
|                            | The Highest Level (Expert)                            | 1.26  | 4.05                  | 0.76       | -6.73 | 9.25                    |             |
| The Highest Level (Expert) | None At All   | 10.94   | 7.81                  | 0.16       | -4.45 | 26.33                   |             |
|                            | Very Low  | 13.27*  | 5.82                  | 0.02       | 1.80  | 24.74                   |             |
|                            | Low   | 10.41*  | 4.86                  | 0.03       | 0.82  | 20.00                   |             |
|                            | Medium  | 5.58  | 3.92                  | 0.16       | -2.15 | 13.31                   |             |
|                            | High  | 3.56  | 3.92                  | 0.37       | -4.17 | 11.29                   |             |
|                            | Very High   | -1.26   | 4.05                  | 0.76       | -9.25 | 6.73                    |             |

\*. The mean difference is significant at the 0.05 level.

Table C.43

*Means Estimates of Medical Case Scenario Confidence Ratings with Provider's Experience at*

*Any Certification Level (Scale-Based)*

|                               |                               | N   | Mean   | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                | Min | Max |
|-------------------------------|-------------------------------|-----|--------|-------------------|---------------|-------------------------------------|----------------|-----|-----|
|                               |                               |     |        |                   |               | Lower<br>Bound                      | Upper<br>Bound |     |     |
| Scenario 1-<br>Treatment<br>1 | None At All                   | 2   | 76.00  | 33.94             | 24.00         | -228.95                             | 380.95         | 52  | 100 |
|                               | Very Low                      | 7   | 82.00  | 19.10             | 7.22          | 64.33                               | 99.67          | 50  | 100 |
|                               | Low                           | 16  | 88.94  | 18.90             | 4.73          | 78.86                               | 99.01          | 44  | 100 |
|                               | Medium                        | 57  | 90.91  | 12.04             | 1.60          | 87.72                               | 94.11          | 50  | 100 |
|                               | High                          | 66  | 94.47  | 9.57              | 1.18          | 92.12                               | 96.82          | 40  | 100 |
|                               | Very High                     | 48  | 96.06  | 10.26             | 1.48          | 93.08                               | 99.04          | 41  | 100 |
|                               | The Highest Level<br>(Expert) | 20  | 97.35  | 6.45              | 1.44          | 94.33                               | 100.37         | 80  | 100 |
|                               | Total                         | 216 | 93.17  | 12.09             | 0.82          | 91.55                               | 94.79          | 40  | 100 |
| Scenario 1-<br>Treatment<br>2 | None At All                   | 1   | 59.00  | .                 | .             | .                                   | .              | 59  | 59  |
|                               | Very Low                      | 7   | 78.43  | 23.92             | 9.04          | 56.30                               | 100.55         | 41  | 100 |
|                               | Low                           | 17  | 83.76  | 16.90             | 4.10          | 75.08                               | 92.45          | 51  | 100 |
|                               | Medium                        | 57  | 89.70  | 13.45             | 1.78          | 86.13                               | 93.27          | 50  | 100 |
|                               | High                          | 66  | 95.88  | 5.50              | 0.68          | 94.53                               | 97.23          | 75  | 100 |
|                               | Very High                     | 49  | 93.16  | 20.46             | 2.92          | 87.29                               | 99.04          | 0   | 100 |
|                               | The Highest Level<br>(Expert) | 20  | 97.45  | 6.39              | 1.43          | 94.46                               | 100.44         | 80  | 100 |
|                               | Total                         | 217 | 92.11  | 14.66             | 1.00          | 90.14                               | 94.07          | 0   | 100 |
| Scenario 2                    | None At All                   | 2   | 82.00  | 25.46             | 18.00         | -146.71                             | 310.71         | 64  | 100 |
|                               | Very Low                      | 7   | 72.71  | 22.98             | 8.69          | 51.46                               | 93.97          | 40  | 100 |
|                               | Low                           | 17  | 86.59  | 14.07             | 3.41          | 79.35                               | 93.82          | 51  | 100 |
|                               | Medium                        | 57  | 85.65  | 16.00             | 2.12          | 81.40                               | 89.89          | 24  | 100 |
|                               | High                          | 66  | 93.94  | 7.76              | 0.95          | 92.03                               | 95.85          | 70  | 100 |
|                               | Very High                     | 49  | 97.10  | 6.12              | 0.87          | 95.34                               | 98.86          | 70  | 100 |
|                               | The Highest Level<br>(Expert) | 20  | 97.75  | 6.09              | 1.36          | 94.90                               | 100.60         | 75  | 100 |
|                               | Total                         | 218 | 91.47  | 12.78             | 0.87          | 89.76                               | 93.17          | 24  | 100 |
| Scenario 3                    | None At All                   | 2   | 100.00 | 0.00              | 0.00          | 100.00                              | 100.00         | 100 | 100 |
|                               | Very Low                      | 7   | 82.86  | 17.44             | 6.59          | 66.73                               | 98.99          | 50  | 100 |
|                               | Low                           | 17  | 84.65  | 17.45             | 4.23          | 75.68                               | 93.62          | 46  | 100 |
|                               | Medium                        | 57  | 90.75  | 10.98             | 1.45          | 87.84                               | 93.67          | 50  | 100 |
|                               | High                          | 64  | 95.67  | 6.65              | 0.83          | 94.01                               | 97.33          | 75  | 100 |
|                               | Very High                     | 49  | 98.02  | 7.02              | 1.00          | 96.00                               | 100.04         | 53  | 100 |
|                               | The Highest Level<br>(Expert) | 20  | 98.85  | 2.76              | 0.62          | 97.56                               | 100.14         | 91  | 100 |
|                               | Total                         | 216 | 93.96  | 10.39             | 0.71          | 92.56                               | 95.35          | 46  | 100 |
| Scenario 4                    | None At All                   | 2   | 76.50  | 33.23             | 23.50         | -222.10                             | 375.10         | 53  | 100 |
|                               | Very Low                      | 7   | 80.14  | 15.63             | 5.91          | 65.69                               | 94.59          | 50  | 100 |
|                               | Low                           | 17  | 80.12  | 14.13             | 3.43          | 72.85                               | 87.38          | 50  | 100 |
|                               | Medium                        | 57  | 87.51  | 13.57             | 1.80          | 83.91                               | 91.11          | 48  | 100 |
|                               | High                          | 66  | 90.80  | 11.21             | 1.38          | 88.05                               | 93.56          | 52  | 100 |
|                               | Very High                     | 49  | 95.47  | 8.96              | 1.28          | 92.89                               | 98.04          | 49  | 100 |
|                               | The Highest Level<br>(Expert) | 20  | 92.20  | 16.51             | 3.69          | 84.47                               | 99.93          | 50  | 100 |
|                               | Total                         | 218 | 89.81  | 13.22             | 0.90          | 88.05                               | 91.58          | 48  | 100 |

Table C.43 (Continued)

|                          |                               | N   | Mean   | Std.<br>Deviation | Std.<br>Error | 95% Confidence<br>Interval for Mean |                | Min | Max |
|--------------------------|-------------------------------|-----|--------|-------------------|---------------|-------------------------------------|----------------|-----|-----|
|                          |                               |     |        |                   |               | Lower<br>Bound                      | Upper<br>Bound |     |     |
| Scenario 5-<br>Patient 1 | None At All                   | 2   | 96.00  | 5.66              | 4.00          | 45.18                               | 146.82         | 92  | 100 |
|                          | Very Low                      | 7   | 81.00  | 17.40             | 6.58          | 64.91                               | 97.09          | 50  | 100 |
|                          | Low                           | 17  | 85.47  | 14.23             | 3.45          | 78.15                               | 92.79          | 61  | 100 |
|                          | Medium                        | 57  | 91.42  | 12.80             | 1.70          | 88.02                               | 94.82          | 49  | 100 |
|                          | High                          | 65  | 95.95  | 6.81              | 0.85          | 94.27                               | 97.64          | 70  | 100 |
|                          | Very High                     | 49  | 98.71  | 4.15              | 0.59          | 97.52                               | 99.91          | 73  | 100 |
|                          | The Highest Level<br>(Expert) | 20  | 99.95  | 0.22              | 0.05          | 99.85                               | 100.05         | 99  | 100 |
|                          | Total                         | 217 | 94.45  | 10.29             | 0.70          | 93.07                               | 95.83          | 49  | 100 |
| Scenario 5-<br>Patient 2 | None At All                   | 2   | 50.00  | 0.00              | 0.00          | 50.00                               | 50.00          | 50  | 50  |
|                          | Very Low                      | 7   | 70.71  | 21.55             | 8.15          | 50.78                               | 90.65          | 41  | 100 |
|                          | Low                           | 17  | 82.06  | 14.65             | 3.55          | 74.53                               | 89.59          | 61  | 100 |
|                          | Medium                        | 57  | 86.12  | 12.91             | 1.71          | 82.70                               | 89.55          | 50  | 100 |
|                          | High                          | 66  | 91.50  | 9.41              | 1.16          | 89.19                               | 93.81          | 60  | 100 |
|                          | Very High                     | 49  | 96.39  | 8.11              | 1.16          | 94.06                               | 98.72          | 51  | 100 |
|                          | The Highest Level<br>(Expert) | 20  | 97.35  | 6.22              | 1.39          | 94.44                               | 100.26         | 75  | 100 |
|                          | Total                         | 218 | 89.95  | 12.91             | 0.87          | 88.22                               | 91.67          | 41  | 100 |
| Scenario 6               | None At All                   | 2   | 100.00 | 0.00              | 0.00          | 100.00                              | 100.00         | 100 | 100 |
|                          | Very Low                      | 7   | 81.43  | 18.18             | 6.87          | 64.61                               | 98.25          | 50  | 100 |
|                          | Low                           | 17  | 85.29  | 13.10             | 3.18          | 78.56                               | 92.03          | 57  | 100 |
|                          | Medium                        | 57  | 88.37  | 13.57             | 1.80          | 84.77                               | 91.97          | 50  | 100 |
|                          | High                          | 66  | 93.64  | 7.84              | 0.97          | 91.71                               | 95.56          | 62  | 100 |
|                          | Very High                     | 49  | 98.33  | 4.05              | 0.58          | 97.16                               | 99.49          | 80  | 100 |
|                          | The Highest Level<br>(Expert) | 20  | 96.35  | 7.15              | 1.60          | 93.00                               | 99.70          | 75  | 100 |
|                          | Total                         | 218 | 92.58  | 10.88             | 0.74          | 91.13                               | 94.03          | 50  | 100 |
| Scenario 7               | None At All                   | 2   | 72.50  | 3.54              | 2.50          | 40.73                               | 104.27         | 70  | 75  |
|                          | Very Low                      | 7   | 77.86  | 18.40             | 6.95          | 60.84                               | 94.87          | 50  | 100 |
|                          | Low                           | 17  | 78.65  | 15.70             | 3.81          | 70.57                               | 86.72          | 50  | 100 |
|                          | Medium                        | 56  | 84.30  | 14.46             | 1.93          | 80.43                               | 88.18          | 30  | 100 |
|                          | High                          | 64  | 87.20  | 14.11             | 1.76          | 83.68                               | 90.73          | 32  | 100 |
|                          | Very High                     | 48  | 92.25  | 9.94              | 1.43          | 89.36                               | 95.14          | 50  | 100 |
|                          | The Highest Level<br>(Expert) | 20  | 93.20  | 15.13             | 3.38          | 86.12                               | 100.28         | 35  | 100 |
|                          | Total                         | 214 | 87.01  | 14.33             | 0.98          | 85.08                               | 88.94          | 30  | 100 |

Table C.44

*Pairwise Comparison of Medical Case Scenario Confidence Ratings with Provider's Experience at Any Certification Level (Scale-Based)*

| Dependent Variable         | (I) Experience at Any Certification Level (Scale) | (J) Experience at Any Certification Level (Scale) | Mean             |            | Sig.  | 95% Confidence Interval |             |
|----------------------------|---|---|------------------|------------|-------|-------------------------|-------------|
|                            |   |   | Difference (I-J) | Std. Error |       | Lower Bound             | Upper Bound |
| Scenario 1-Treatment 1     | None At All                                       | Very Low  | -6.00            | 9.36       | 0.52  | -24.46                  | 12.46       |
|                            |   | Low   | -12.94           | 8.76       | 0.14  | -30.21                  | 4.33        |
|                            |   | Medium  | -14.91           | 8.40       | 0.08  | -31.48                  | 1.65        |
|                            |   | High  | -18.47*          | 8.38       | 0.03  | -35.00                  | -1.94       |
|                            |   | Very High   | -20.06*          | 8.43       | 0.02  | -36.68                  | -3.45       |
|                            |   | The Highest Level (Expert)                        | -21.35*          | 8.66       | 0.02  | -38.43                  | -4.27       |
|                            | Very Low  | None At All                                       | 6.00             | 9.36       | 0.52  | -12.46                  | 24.46       |
|                            |   | Low   | -6.94            | 5.29       | 0.19  | -17.37                  | 3.50        |
|                            |   | Medium  | -8.91            | 4.68       | 0.06  | -18.13                  | 0.31        |
|                            |   | High  | -12.47*          | 4.64       | 0.01  | -21.62                  | -3.32       |
|                            |   | Very High   | -14.06*          | 4.73       | 0.00  | -23.38                  | -4.75       |
|                            |   | The Highest Level (Expert)                        | -15.35*          | 5.13       | 0.00  | -25.46                  | -5.24       |
|                            | Low   | None At All                                       | 12.94            | 8.76       | 0.14  | -4.33                   | 30.21       |
|                            |   | Very Low  | 6.94             | 5.29       | 0.19  | -3.50                   | 17.37       |
|                            |   | Medium  | -1.97            | 3.30       | 0.55  | -8.49                   | 4.54        |
|                            |   | High  | -5.53            | 3.25       | 0.09  | -11.95                  | 0.88        |
|                            |   | Very High   | -7.13*           | 3.37       | 0.04  | -13.77                  | -0.48       |
|                            |   | The Highest Level (Expert)                        | -8.41*           | 3.92       | 0.03  | -16.14                  | -0.69       |
|                            | Medium  | None At All                                       | 14.91            | 8.40       | 0.08  | -1.65                   | 31.48       |
|                            |   | Very Low  | 8.91             | 4.68       | 0.06  | -0.31                   | 18.13       |
|                            |   | Low   | 1.97             | 3.30       | 0.55  | -4.54                   | 8.49        |
|                            |   | High  | -3.56            | 2.11       | 0.09  | -7.72                   | 0.61        |
|                            |   | Very High   | -5.15*           | 2.29       | 0.03  | -9.66                   | -0.64       |
|                            |   | The Highest Level (Expert)                        | -6.44*           | 3.04       | 0.04  | -12.42                  | -0.45       |
|                            | High  | None At All                                       | 18.47*           | 8.38       | 0.03  | 1.94                    | 35.00       |
|                            |   | Very Low  | 12.47*           | 4.64       | 0.01  | 3.32                    | 21.62       |
|                            |   | Low   | 5.53             | 3.25       | 0.09  | -0.88                   | 11.95       |
|                            |   | Medium  | 3.56             | 2.11       | 0.09  | -0.61                   | 7.72        |
|                            |   | Very High   | -1.59            | 2.22       | 0.47  | -5.96                   | 2.77        |
|                            |   | The Highest Level (Expert)                        | -2.88            | 2.98       | 0.34  | -8.76                   | 3.00        |
| Very High                  | None At All                                       | 20.06*  | 8.43             | 0.02       | 3.45  | 36.68                   |             |
|                            | Very Low  | 14.06*  | 4.73             | 0.00       | 4.75  | 23.38                   |             |
|                            | Low   | 7.13*   | 3.37             | 0.04       | 0.48  | 13.77                   |             |
|                            | Medium  | 5.15*   | 2.29             | 0.03       | 0.64  | 9.66                    |             |
|                            | High  | 1.59  | 2.22             | 0.47       | -2.77 | 5.96                    |             |
|                            | The Highest Level (Expert)                        | -1.29   | 3.11             | 0.68       | -7.42 | 4.84                    |             |
| The Highest Level (Expert) | None At All                                       | 21.35*  | 8.66             | 0.02       | 4.27  | 38.43                   |             |
|                            | Very Low  | 15.35*  | 5.13             | 0.00       | 5.24  | 25.46                   |             |
|                            | Low   | 8.41*   | 3.92             | 0.03       | 0.69  | 16.14                   |             |
|                            | Medium  | 6.44*   | 3.04             | 0.04       | 0.45  | 12.42                   |             |
|                            | High  | 2.88  | 2.98             | 0.34       | -3.00 | 8.76                    |             |
|                            | Very High   | 1.29  | 3.11             | 0.68       | -4.84 | 7.42                    |             |

Table C.44 (Continued)

| Dependent Variable | (I) Experience at Any Certification Level (Scale) | (J) Experience at Any Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------|---|---|-----------------------|------------|------|-------------------------|-------------|
|                    |   |   |                       |            |      | Lower Bound             | Upper Bound |
| Scenario 2         | None At All                                       | Very Low  | 9.29                  | 9.19       | 0.31 | -8.84                   | 27.41       |
|                    |   | Low   | -4.59                 | 8.57       | 0.59 | -21.48                  | 12.31       |
|                    |   | Medium  | -3.65                 | 8.25       | 0.66 | -19.91                  | 12.61       |
|                    |   | High  | -11.94                | 8.23       | 0.15 | -28.16                  | 4.28        |
|                    |   | Very High   | -15.10                | 8.27       | 0.07 | -31.41                  | 1.20        |
|                    |   | The Highest Level (Expert)                        | -15.75                | 8.50       | 0.07 | -32.51                  | 1.01        |
|                    | Very Low  | None At All                                       | -9.29                 | 9.19       | 0.31 | -27.41                  | 8.84        |
|                    |   | Low   | -13.87*               | 5.15       | 0.01 | -24.02                  | -3.72       |
|                    |   | Medium  | -12.93*               | 4.59       | 0.01 | -21.99                  | -3.88       |
|                    |   | High  | -21.23*               | 4.56       | 0.00 | -30.21                  | -12.24      |
|                    |   | Very High   | -24.39*               | 4.63       | 0.00 | -33.52                  | -15.26      |
|                    |   | The Highest Level (Expert)                        | -25.04*               | 5.04       | 0.00 | -34.96                  | -15.11      |
|                    | Low   | None At All                                       | 4.59                  | 8.57       | 0.59 | -12.31                  | 21.48       |
|                    |   | Very Low  | 13.87*                | 5.15       | 0.01 | 3.72                    | 24.02       |
|                    |   | Medium  | 0.94                  | 3.17       | 0.77 | -5.31                   | 7.18        |
|                    |   | High  | -7.35*                | 3.12       | 0.02 | -13.50                  | -1.20       |
|                    |   | Very High   | -10.51*               | 3.23       | 0.00 | -16.88                  | -4.15       |
|                    |   | The Highest Level (Expert)                        | -11.16*               | 3.78       | 0.00 | -18.62                  | -3.71       |
|                    | Medium  | None At All                                       | 3.65                  | 8.25       | 0.66 | -12.61                  | 19.91       |
|                    |   | Very Low  | 12.93*                | 4.59       | 0.01 | 3.88                    | 21.99       |
|                    |   | Low   | -0.94                 | 3.17       | 0.77 | -7.18                   | 5.31        |
|                    |   | High  | -8.29*                | 2.07       | 0.00 | -12.38                  | -4.20       |
|                    |   | Very High   | -11.45*               | 2.23       | 0.00 | -15.86                  | -7.05       |
|                    |   | The Highest Level (Expert)                        | -12.10*               | 2.98       | 0.00 | -17.97                  | -6.23       |
|                    | High  | None At All                                       | 11.94                 | 8.23       | 0.15 | -4.28                   | 28.16       |
|                    |   | Very Low  | 21.23*                | 4.56       | 0.00 | 12.24                   | 30.21       |
|                    |   | Low   | 7.35*                 | 3.12       | 0.02 | 1.20                    | 13.50       |
|                    |   | Medium  | 8.29*                 | 2.07       | 0.00 | 4.20                    | 12.38       |
|                    |   | Very High   | -3.16                 | 2.16       | 0.15 | -7.42                   | 1.10        |
|                    |   | The Highest Level (Expert)                        | -3.81                 | 2.93       | 0.19 | -9.58                   | 1.96        |
|                    | Very High   | None At All                                       | 15.10                 | 8.27       | 0.07 | -1.20                   | 31.41       |
|                    |   | Very Low  | 24.39*                | 4.63       | 0.00 | 15.26                   | 33.52       |
|                    |   | Low   | 10.51*                | 3.23       | 0.00 | 4.15                    | 16.88       |
|                    |   | Medium  | 11.45*                | 2.23       | 0.00 | 7.05                    | 15.86       |
|                    |   | High  | 3.16                  | 2.16       | 0.15 | -1.10                   | 7.42        |
|                    |   | The Highest Level (Expert)                        | -0.65                 | 3.04       | 0.83 | -6.65                   | 5.35        |
|                    | The Highest Level (Expert)                        | None At All                                       | 15.75                 | 8.50       | 0.07 | -1.01                   | 32.51       |
|                    |   | Very Low  | 25.04*                | 5.04       | 0.00 | 15.11                   | 34.96       |
|                    |   | Low   | 11.16*                | 3.78       | 0.00 | 3.71                    | 18.62       |
|                    |   | Medium  | 12.10*                | 2.98       | 0.00 | 6.23                    | 17.97       |
|                    |   | High  | 3.81                  | 2.93       | 0.19 | -1.96                   | 9.58        |
|                    |   | Very High   | 0.65                  | 3.04       | 0.83 | -5.35                   | 6.65        |



Table C.44 (Continued)

| Dependent Variable | (I) Experience at Any Certification Level (Scale) | (J) Experience at Any Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------|---|---|-----------------------|------------|------|-------------------------|-------------|
|                    |   |   |                       |            |      | Lower Bound             | Upper Bound |
| Scenario 3         | None At All                                       | Very Low  | 17.14286*             | 7.59       | 0.03 | 2.17                    | 32.11       |
|                    |   | Low   | 15.35*                | 7.08       | 0.03 | 1.40                    | 29.31       |
|                    |   | Medium  | 9.25                  | 6.81       | 0.18 | -4.18                   | 22.68       |
|                    |   | High  | 4.33                  | 6.80       | 0.53 | -9.08                   | 17.73       |
|                    |   | Very High   | 1.98                  | 6.83       | 0.77 | -11.49                  | 15.45       |
|                    |   | The Highest Level (Expert)                        | 1.15                  | 7.02       | 0.87 | -12.70                  | 15.00       |
|                    | Very Low  | None At All                                       | -17.14*               | 7.59       | 0.03 | -32.11                  | -2.17       |
|                    |   | Low   | -1.79                 | 4.25       | 0.67 | -10.17                  | 6.59        |
|                    |   | Medium  | -7.90*                | 3.79       | 0.04 | -15.37                  | -0.42       |
|                    |   | High  | -12.81*               | 3.77       | 0.00 | -20.25                  | -5.38       |
|                    |   | Very High   | -15.16*               | 3.83       | 0.00 | -22.71                  | -7.62       |
|                    |   | The Highest Level (Expert)                        | -15.99*               | 4.16       | 0.00 | -24.19                  | -7.79       |
|                    | Low   | None At All                                       | -15.35*               | 7.08       | 0.03 | -29.31                  | -1.40       |
|                    |   | Very Low  | 1.79                  | 4.25       | 0.67 | -6.59                   | 10.17       |
|                    |   | Medium  | -6.11*                | 2.62       | 0.02 | -11.27                  | -0.95       |
|                    |   | High  | -11.02*               | 2.58       | 0.00 | -16.12                  | -5.93       |
|                    |   | Very High   | -13.37*               | 2.67       | 0.00 | -18.63                  | -8.12       |
|                    |   | The Highest Level (Expert)                        | -14.20*               | 3.12       | 0.00 | -20.36                  | -8.04       |
|                    | Medium  | None At All                                       | -9.25                 | 6.81       | 0.18 | -22.68                  | 4.18        |
|                    |   | Very Low  | 7.90*                 | 3.79       | 0.04 | 0.42                    | 15.37       |
|                    |   | Low   | 6.11*                 | 2.62       | 0.02 | 0.95                    | 11.27       |
|                    |   | High  | -4.92*                | 1.72       | 0.01 | -8.32                   | -1.52       |
|                    |   | Very High   | -7.27*                | 1.84       | 0.00 | -10.90                  | -3.63       |
|                    |   | The Highest Level (Expert)                        | -8.10*                | 2.46       | 0.00 | -12.95                  | -3.24       |
|                    | High  | None At All                                       | -4.33                 | 6.80       | 0.53 | -17.73                  | 9.08        |
|                    |   | Very Low  | 12.81*                | 3.77       | 0.00 | 5.38                    | 20.25       |
|                    |   | Low   | 11.02*                | 2.58       | 0.00 | 5.93                    | 16.12       |
|                    |   | Medium  | 4.92*                 | 1.72       | 0.01 | 1.52                    | 8.32        |
|                    |   | Very High   | -2.35                 | 1.80       | 0.19 | -5.89                   | 1.20        |
|                    |   | The Highest Level (Expert)                        | -3.18                 | 2.43       | 0.19 | -7.96                   | 1.60        |
|                    | Very High   | None At All                                       | -1.98                 | 6.83       | 0.77 | -15.45                  | 11.49       |
|                    |   | Very Low  | 15.16*                | 3.83       | 0.00 | 7.62                    | 22.71       |
|                    |   | Low   | 13.37*                | 2.67       | 0.00 | 8.12                    | 18.63       |
|                    |   | Medium  | 7.27*                 | 1.84       | 0.00 | 3.63                    | 10.90       |
|                    |   | High  | 2.35                  | 1.80       | 0.19 | -1.20                   | 5.89        |
|                    |   | The Highest Level (Expert)                        | -0.83                 | 2.51       | 0.74 | -5.78                   | 4.12        |
|                    | The Highest Level (Expert)                        | None At All                                       | -1.15                 | 7.02       | 0.87 | -15.00                  | 12.70       |
|                    |   | Very Low  | 15.99*                | 4.16       | 0.00 | 7.79                    | 24.19       |
|                    |   | Low   | 14.20*                | 3.12       | 0.00 | 8.04                    | 20.36       |
|                    |   | Medium  | 8.10*                 | 2.46       | 0.00 | 3.24                    | 12.95       |
|                    |   | High  | 3.18                  | 2.43       | 0.19 | -1.60                   | 7.96        |
|                    |   | Very High   | 0.83                  | 2.51       | 0.74 | -4.12                   | 5.78        |

Table C.44 (Continued)

| Dependent Variable | (I) Experience at Any Certification Level (Scale) | (J) Experience at Any Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------|---|---|-----------------------|------------|------|-------------------------|-------------|
|                    |   |   |                       |            |      | Lower Bound             | Upper Bound |
| Scenario 4         | None At All                                       | Very Low  | -3.64                 | 10.07      | 0.72 | -23.49                  | 16.21       |
|                    |   | Low   | -3.62                 | 9.39       | 0.70 | -22.12                  | 14.89       |
|                    |   | Medium  | -11.01                | 9.04       | 0.22 | -28.82                  | 6.80        |
|                    |   | High  | -14.30                | 9.01       | 0.11 | -32.07                  | 3.47        |
|                    |   | Very High   | -18.97*               | 9.06       | 0.04 | -36.83                  | -1.11       |
|                    |   | The Highest Level (Expert)                        | -15.70                | 9.31       | 0.09 | -34.06                  | 2.66        |
|                    | Very Low  | None At All                                       | 3.64                  | 10.07      | 0.72 | -16.21                  | 23.49       |
|                    |   | Low   | 0.03                  | 5.64       | 1.00 | -11.09                  | 11.14       |
|                    |   | Medium  | -7.37                 | 5.03       | 0.15 | -17.28                  | 2.55        |
|                    |   | High  | -10.66*               | 4.99       | 0.03 | -20.50                  | -0.82       |
|                    |   | Very High   | -15.33*               | 5.07       | 0.00 | -25.33                  | -5.32       |
|                    |   | The Highest Level (Expert)                        | -12.06*               | 5.52       | 0.03 | -22.93                  | -1.18       |
|                    | Low   | None At All                                       | 3.62                  | 9.39       | 0.70 | -14.89                  | 22.12       |
|                    |   | Very Low  | -0.03                 | 5.64       | 1.00 | -11.14                  | 11.09       |
|                    |   | Medium  | -7.39*                | 3.47       | 0.03 | -14.23                  | -0.55       |
|                    |   | High  | -10.69*               | 3.42       | 0.00 | -17.42                  | -3.95       |
|                    |   | Very High   | -15.35*               | 3.54       | 0.00 | -22.32                  | -8.38       |
|                    |   | The Highest Level (Expert)                        | -12.08*               | 4.14       | 0.00 | -20.25                  | -3.92       |
|                    | Medium  | None At All                                       | 11.01                 | 9.04       | 0.22 | -6.80                   | 28.82       |
|                    |   | Very Low  | 7.37                  | 5.03       | 0.15 | -2.55                   | 17.28       |
|                    |   | Low   | 7.39*                 | 3.47       | 0.03 | 0.55                    | 14.23       |
|                    |   | High  | -3.29                 | 2.27       | 0.15 | -7.77                   | 1.18        |
|                    |   | Very High   | -7.96*                | 2.45       | 0.00 | -12.78                  | -3.14       |
|                    |   | The Highest Level (Expert)                        | -4.69                 | 3.26       | 0.15 | -11.13                  | 1.74        |
|                    | High  | None At All                                       | 14.30                 | 9.01       | 0.11 | -3.47                   | 32.07       |
|                    |   | Very Low  | 10.66*                | 4.99       | 0.03 | 0.82                    | 20.50       |
|                    |   | Low   | 10.69*                | 3.42       | 0.00 | 3.95                    | 17.42       |
|                    |   | Medium  | 3.29                  | 2.27       | 0.15 | -1.18                   | 7.77        |
|                    |   | Very High   | -4.67                 | 2.37       | 0.05 | -9.33                   | 0.00        |
|                    |   | The Highest Level (Expert)                        | -1.40                 | 3.21       | 0.66 | -7.72                   | 4.92        |
|                    | Very High   | None At All                                       | 18.97*                | 9.06       | 0.04 | 1.11                    | 36.83       |
|                    |   | Very Low  | 15.33*                | 5.07       | 0.00 | 5.32                    | 25.33       |
|                    |   | Low   | 15.35*                | 3.54       | 0.00 | 8.38                    | 22.32       |
|                    |   | Medium  | 7.96*                 | 2.45       | 0.00 | 3.14                    | 12.78       |
|                    |   | High  | 4.67                  | 2.37       | 0.05 | 0.00                    | 9.33        |
|                    |   | The Highest Level (Expert)                        | 3.27                  | 3.33       | 0.33 | -3.30                   | 9.84        |
|                    | The Highest Level (Expert)                        | None At All                                       | 15.70                 | 9.31       | 0.09 | -2.66                   | 34.06       |
|                    |   | Very Low  | 12.06*                | 5.52       | 0.03 | 1.18                    | 22.93       |
|                    |   | Low   | 12.08*                | 4.14       | 0.00 | 3.92                    | 20.25       |
|                    |   | Medium  | 4.69                  | 3.26       | 0.15 | -1.74                   | 11.13       |
|                    |   | High  | 1.40                  | 3.21       | 0.66 | -4.92                   | 7.72        |
|                    |   | Very High   | -3.27                 | 3.33       | 0.33 | -9.84                   | 3.30        |

Table C.44 (Continued)

| Dependent Variable       | (I) Experience at Any Certification Level (Scale) | (J) Experience at Any Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------------|---|---|-----------------------|------------|------|-------------------------|-------------|
|                          |   |   |                       |            |      | Lower Bound             | Upper Bound |
| Scenario 5-<br>Patient 1 | None At All                                       | Very Low  | 15.00*                | 7.44       | 0.05 | 0.34                    | 29.66       |
|                          |   | Low   | 10.53                 | 6.93       | 0.13 | -3.14                   | 24.20       |
|                          |   | Medium  | 4.58                  | 6.67       | 0.49 | -8.57                   | 17.73       |
|                          |   | High  | 0.05                  | 6.66       | 0.99 | -13.08                  | 13.17       |
|                          |   | Very High   | -2.71                 | 6.69       | 0.69 | -15.90                  | 10.48       |
|                          |   | The Highest Level (Expert)                        | -3.95                 | 6.88       | 0.57 | -17.51                  | 9.61        |
|                          | Very Low  | None At All                                       | -15.00*               | 7.44       | 0.05 | -29.66                  | -0.34       |
|                          |   | Low   | -4.47                 | 4.17       | 0.28 | -12.68                  | 3.74        |
|                          |   | Medium  | -10.42*               | 3.71       | 0.01 | -17.74                  | -3.10       |
|                          |   | High  | -14.95*               | 3.69       | 0.00 | -22.23                  | -7.68       |
|                          |   | Very High   | -17.71*               | 3.75       | 0.00 | -25.10                  | -10.33      |
|                          |   | The Highest Level (Expert)                        | -18.95*               | 4.07       | 0.00 | -26.98                  | -10.92      |
|                          | Low   | None At All                                       | -10.53                | 6.93       | 0.13 | -24.20                  | 3.14        |
|                          |   | Very Low  | 4.47                  | 4.17       | 0.28 | -3.74                   | 12.68       |
|                          |   | Medium  | -5.95*                | 2.56       | 0.02 | -11.00                  | -0.90       |
|                          |   | High  | -10.48*               | 2.53       | 0.00 | -15.46                  | -5.50       |
|                          |   | Very High   | -13.24*               | 2.61       | 0.00 | -18.39                  | -8.10       |
|                          |   | The Highest Level (Expert)                        | -14.48*               | 3.06       | 0.00 | -20.51                  | -8.45       |
|                          | Medium  | None At All                                       | -4.58                 | 6.67       | 0.49 | -17.73                  | 8.57        |
|                          |   | Very Low  | 10.42*                | 3.71       | 0.01 | 3.10                    | 17.74       |
|                          |   | Low   | 5.95*                 | 2.56       | 0.02 | 0.90                    | 11.00       |
|                          |   | High  | -4.53*                | 1.68       | 0.01 | -7.85                   | -1.21       |
|                          |   | Very High   | -7.29*                | 1.81       | 0.00 | -10.86                  | -3.73       |
|                          |   | The Highest Level (Expert)                        | -8.53*                | 2.41       | 0.00 | -13.28                  | -3.78       |
|                          | High  | None At All                                       | -0.05                 | 6.66       | 0.99 | -13.17                  | 13.08       |
|                          |   | Very Low  | 14.95*                | 3.69       | 0.00 | 7.68                    | 22.23       |
|                          |   | Low   | 10.48*                | 2.53       | 0.00 | 5.50                    | 15.46       |
|                          |   | Medium  | 4.53*                 | 1.68       | 0.01 | 1.21                    | 7.85        |
|                          |   | Very High   | -2.76                 | 1.75       | 0.12 | -6.22                   | 0.70        |
|                          |   | The Highest Level (Expert)                        | -4.00                 | 2.37       | 0.09 | -8.67                   | 0.68        |
|                          | Very High   | None At All                                       | 2.71                  | 6.69       | 0.69 | -10.48                  | 15.90       |
|                          |   | Very Low  | 17.71*                | 3.75       | 0.00 | 10.33                   | 25.10       |
|                          |   | Low   | 13.24*                | 2.61       | 0.00 | 8.10                    | 18.39       |
|                          |   | Medium  | 7.29*                 | 1.81       | 0.00 | 3.73                    | 10.86       |
|                          |   | High  | 2.76                  | 1.75       | 0.12 | -0.70                   | 6.22        |
|                          |   | The Highest Level (Expert)                        | -1.24                 | 2.46       | 0.62 | -6.09                   | 3.62        |
|                          | The Highest Level (Expert)                        | None At All                                       | 3.95                  | 6.88       | 0.57 | -9.61                   | 17.51       |
|                          |   | Very Low  | 18.95*                | 4.07       | 0.00 | 10.92                   | 26.98       |
|                          |   | Low   | 14.48*                | 3.06       | 0.00 | 8.45                    | 20.51       |
|                          |   | Medium  | 8.53*                 | 2.41       | 0.00 | 3.78                    | 13.28       |
|                          |   | High  | 4.00                  | 2.37       | 0.09 | -0.68                   | 8.67        |
|                          |   | Very High   | 1.24                  | 2.46       | 0.62 | -3.62                   | 6.09        |

Table C.44 (Continued)

| Dependent Variable         | (I) Experience at Any Certification Level (Scale) | (J) Experience at Any Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|----------------------------|---|---|-----------------------|------------|-------|-------------------------|-------------|
|                            |   |   |                       |            |       | Lower Bound             | Upper Bound |
| Scenario 5-<br>Patient 2   | None At All                                       | Very Low  | -20.71*               | 8.76       | 0.02  | -37.99                  | -3.44       |
|                            |   | Low   | -32.06*               | 8.17       | 0.00  | -48.16                  | -15.95      |
|                            |   | Medium  | -36.12*               | 7.86       | 0.00  | -51.62                  | -20.62      |
|                            |   | High  | -41.50*               | 7.84       | 0.00  | -56.96                  | -26.04      |
|                            |   | Very High   | -46.39*               | 7.88       | 0.00  | -61.93                  | -30.85      |
|                            |   | The Highest Level (Expert)                        | -47.35*               | 8.11       | 0.00  | -63.33                  | -31.37      |
|                            | Very Low  | None At All                                       | 20.71*                | 8.76       | 0.02  | 3.44                    | 37.99       |
|                            |   | Low   | -11.34*               | 4.91       | 0.02  | -21.02                  | -1.67       |
|                            |   | Medium  | -15.41*               | 4.38       | 0.00  | -24.04                  | -6.78       |
|                            |   | High  | -20.79*               | 4.34       | 0.00  | -29.35                  | -12.22      |
|                            |   | Very High   | -25.67*               | 4.42       | 0.00  | -34.38                  | -16.97      |
|                            |   | The Highest Level (Expert)                        | -26.64*               | 4.80       | 0.00  | -36.10                  | -17.17      |
|                            | Low   | None At All                                       | 32.06*                | 8.17       | 0.00  | 15.95                   | 48.16       |
|                            |   | Very Low  | 11.34*                | 4.91       | 0.02  | 1.67                    | 21.02       |
|                            |   | Medium  | -4.06                 | 3.02       | 0.18  | -10.02                  | 1.89        |
|                            |   | High  | -9.44*                | 2.97       | 0.00  | -15.30                  | -3.58       |
|                            |   | Very High   | -14.33*               | 3.08       | 0.00  | -20.39                  | -8.26       |
|                            |   | The Highest Level (Expert)                        | -15.29*               | 3.61       | 0.00  | -22.40                  | -8.18       |
|                            | Medium  | None At All                                       | 36.12*                | 7.86       | 0.00  | 20.62                   | 51.62       |
|                            |   | Very Low  | 15.41*                | 4.38       | 0.00  | 6.78                    | 24.04       |
|                            |   | Low   | 4.06                  | 3.02       | 0.18  | -1.89                   | 10.02       |
|                            |   | High  | -5.38*                | 1.98       | 0.01  | -9.27                   | -1.48       |
|                            |   | Very High   | -10.26*               | 2.13       | 0.00  | -14.46                  | -6.07       |
|                            |   | The Highest Level (Expert)                        | -11.23*               | 2.84       | 0.00  | -16.83                  | -5.63       |
|                            | High  | None At All                                       | 41.50*                | 7.84       | 0.00  | 26.04                   | 56.96       |
|                            |   | Very Low  | 20.79*                | 4.34       | 0.00  | 12.22                   | 29.35       |
|                            |   | Low   | 9.44*                 | 2.97       | 0.00  | 3.58                    | 15.30       |
|                            |   | Medium  | 5.38*                 | 1.98       | 0.01  | 1.48                    | 9.27        |
|                            |   | Very High   | -4.89*                | 2.06       | 0.02  | -8.95                   | -0.83       |
|                            |   | The Highest Level (Expert)                        | -5.85*                | 2.79       | 0.04  | -11.35                  | -0.35       |
|                            | Very High   | None At All                                       | 46.39*                | 7.88       | 0.00  | 30.85                   | 61.93       |
|                            |   | Very Low  | 25.67*                | 4.42       | 0.00  | 16.97                   | 34.38       |
|                            |   | Low   | 14.33*                | 3.08       | 0.00  | 8.26                    | 20.39       |
| Medium                     |   | 10.26*  | 2.13                  | 0.00       | 6.07  | 14.46                   |             |
| High                       |   | 4.89*   | 2.06                  | 0.02       | 0.83  | 8.95                    |             |
| The Highest Level (Expert) |   | -0.96   | 2.90                  | 0.74       | -6.68 | 4.75                    |             |
| The Highest Level (Expert) | None At All                                       | 47.35*  | 8.11                  | 0.00       | 31.37 | 63.33                   |             |
|                            | Very Low  | 26.64*  | 4.80                  | 0.00       | 17.17 | 36.10                   |             |
|                            | Low   | 15.29*  | 3.61                  | 0.00       | 8.18  | 22.40                   |             |
|                            | Medium  | 11.23*  | 2.84                  | 0.00       | 5.63  | 16.83                   |             |
|                            | High  | 5.85*   | 2.79                  | 0.04       | 0.35  | 11.35                   |             |
|                            | Very High   | 0.96  | 2.90                  | 0.74       | -4.75 | 6.68                    |             |

Table C.44 (Continued)

| Dependent Variable | (I) Experience at Any Certification Level (Scale) | (J) Experience at Any Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------|---|---|-----------------------|------------|------|-------------------------|-------------|
|                    |   |   |                       |            |      | Lower Bound             | Upper Bound |
| Scenario 6         | None At All                                       | Very Low  | 18.57*                | 7.96       | 0.02 | 2.88                    | 34.26       |
|                    |   | Low   | 14.71*                | 7.42       | 0.05 | 0.08                    | 29.34       |
|                    |   | Medium  | 11.63                 | 7.14       | 0.11 | -2.45                   | 25.71       |
|                    |   | High  | 6.36                  | 7.13       | 0.37 | -7.68                   | 20.41       |
|                    |   | Very High   | 1.67                  | 7.16       | 0.82 | -12.44                  | 15.79       |
|                    |   | The Highest Level (Expert)                        | 3.65                  | 7.36       | 0.62 | -10.86                  | 18.16       |
|                    | Very Low  | None At All                                       | -18.57*               | 7.96       | 0.02 | -34.26                  | -2.88       |
|                    |   | Low   | -3.87                 | 4.46       | 0.39 | -12.65                  | 4.92        |
|                    |   | Medium  | -6.94                 | 3.98       | 0.08 | -14.78                  | 0.90        |
|                    |   | High  | -12.21*               | 3.95       | 0.00 | -19.99                  | -4.43       |
|                    |   | Very High   | -16.90*               | 4.01       | 0.00 | -24.81                  | -8.99       |
|                    |   | The Highest Level (Expert)                        | -14.92*               | 4.36       | 0.00 | -23.52                  | -6.33       |
|                    | Low   | None At All                                       | -14.71*               | 7.42       | 0.05 | -29.34                  | -0.08       |
|                    |   | Very Low  | 3.87                  | 4.46       | 0.39 | -4.92                   | 12.65       |
|                    |   | Medium  | -3.07                 | 2.74       | 0.26 | -8.48                   | 2.33        |
|                    |   | High  | -8.34*                | 2.70       | 0.00 | -13.67                  | -3.02       |
|                    |   | Very High   | -13.03*               | 2.79       | 0.00 | -18.54                  | -7.52       |
|                    |   | The Highest Level (Expert)                        | -11.06*               | 3.28       | 0.00 | -17.51                  | -4.60       |
|                    | Medium  | None At All                                       | -11.63                | 7.14       | 0.11 | -25.71                  | 2.45        |
|                    |   | Very Low  | 6.94                  | 3.98       | 0.08 | -0.90                   | 14.78       |
|                    |   | Low   | 3.07                  | 2.74       | 0.26 | -2.33                   | 8.48        |
|                    |   | High  | -5.27*                | 1.80       | 0.00 | -8.81                   | -1.73       |
|                    |   | Very High   | -9.96*                | 1.93       | 0.00 | -13.77                  | -6.15       |
|                    |   | The Highest Level (Expert)                        | -7.98*                | 2.58       | 0.00 | -13.07                  | -2.90       |
|                    | High  | None At All                                       | -6.36                 | 7.13       | 0.37 | -20.41                  | 7.68        |
|                    |   | Very Low  | 12.21*                | 3.95       | 0.00 | 4.43                    | 19.99       |
|                    |   | Low   | 8.34*                 | 2.70       | 0.00 | 3.02                    | 13.67       |
|                    |   | Medium  | 5.27*                 | 1.80       | 0.00 | 1.73                    | 8.81        |
|                    |   | Very High   | -4.69*                | 1.87       | 0.01 | -8.38                   | -1.00       |
|                    |   | The Highest Level (Expert)                        | -2.71                 | 2.53       | 0.29 | -7.71                   | 2.28        |
|                    | Very High   | None At All                                       | -1.67                 | 7.16       | 0.82 | -15.79                  | 12.44       |
|                    |   | Very Low  | 16.90*                | 4.01       | 0.00 | 8.99                    | 24.81       |
|                    |   | Low   | 13.03*                | 2.79       | 0.00 | 7.52                    | 18.54       |
|                    |   | Medium  | 9.96*                 | 1.93       | 0.00 | 6.15                    | 13.77       |
|                    |   | High  | 4.69*                 | 1.87       | 0.01 | 1.00                    | 8.38        |
|                    |   | The Highest Level (Expert)                        | 1.98                  | 2.63       | 0.45 | -3.22                   | 7.17        |
|                    | The Highest Level (Expert)                        | None At All                                       | -3.65                 | 7.36       | 0.62 | -18.16                  | 10.86       |
|                    |   | Very Low  | 14.92*                | 4.36       | 0.00 | 6.33                    | 23.52       |
|                    |   | Low   | 11.06*                | 3.28       | 0.00 | 4.60                    | 17.51       |
|                    |   | Medium  | 7.98*                 | 2.58       | 0.00 | 2.90                    | 13.07       |
|                    |   | High  | 2.71                  | 2.53       | 0.29 | -2.28                   | 7.71        |
|                    |   | Very High   | -1.98                 | 2.63       | 0.45 | -7.17                   | 3.22        |

Table C.44 (Continued)

| Dependent Variable         | (I) Experience at Any Certification Level (Scale) | (J) Experience at Any Certification Level (Scale) | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|----------------------------|---|---|-----------------------|------------|-------|-------------------------|-------------|
|                            |   |   |                       |            |       | Lower Bound             | Upper Bound |
| Scenario 7                 | None At All                                       | Very Low  | -5.36                 | 11.01      | 0.63  | -27.06                  | 16.34       |
|                            |   | Low   | -6.15                 | 10.26      | 0.55  | -26.38                  | 14.09       |
|                            |   | Medium  | -11.80                | 9.88       | 0.23  | -31.28                  | 7.67        |
|                            |   | High  | -14.70                | 9.86       | 0.14  | -34.14                  | 4.73        |
|                            |   | Very High   | -19.75*               | 9.91       | 0.05  | -39.28                  | -0.22       |
|                            |   | The Highest Level (Expert)                        | -20.70*               | 10.18      | 0.04  | -40.77                  | -0.63       |
|                            | Very Low  | None At All                                       | 5.36                  | 11.01      | 0.63  | -16.34                  | 27.06       |
|                            |   | Low   | -0.79                 | 6.17       | 0.90  | -12.95                  | 11.37       |
|                            |   | Medium  | -6.45                 | 5.50       | 0.24  | -17.30                  | 4.40        |
|                            |   | High  | -9.35                 | 5.47       | 0.09  | -20.12                  | 1.43        |
|                            |   | Very High   | -14.39*               | 5.55       | 0.01  | -25.34                  | -3.44       |
|                            |   | The Highest Level (Expert)                        | -15.34*               | 6.03       | 0.01  | -27.23                  | -3.46       |
|                            | Low   | None At All                                       | 6.15                  | 10.26      | 0.55  | -14.09                  | 26.38       |
|                            |   | Very Low  | 0.79                  | 6.17       | 0.90  | -11.37                  | 12.95       |
|                            |   | Medium  | -5.66                 | 3.80       | 0.14  | -13.15                  | 1.84        |
|                            |   | High  | -8.56*                | 3.75       | 0.02  | -15.94                  | -1.17       |
|                            |   | Very High   | -13.60*               | 3.87       | 0.00  | -21.24                  | -5.96       |
|                            |   | The Highest Level (Expert)                        | -14.55*               | 4.53       | 0.00  | -23.48                  | -5.62       |
|                            | Medium  | None At All                                       | 11.80                 | 9.88       | 0.23  | -7.67                   | 31.28       |
|                            |   | Very Low  | 6.45                  | 5.50       | 0.24  | -4.40                   | 17.30       |
|                            |   | Low   | 5.66                  | 3.80       | 0.14  | -1.84                   | 13.15       |
|                            |   | High  | -2.90                 | 2.51       | 0.25  | -7.85                   | 2.05        |
|                            |   | Very High   | -7.95*                | 2.70       | 0.00  | -13.27                  | -2.62       |
|                            |   | The Highest Level (Expert)                        | -8.90*                | 3.58       | 0.01  | -15.95                  | -1.85       |
|                            | High  | None At All                                       | 14.70                 | 9.86       | 0.14  | -4.73                   | 34.14       |
|                            |   | Very Low  | 9.35                  | 5.47       | 0.09  | -1.43                   | 20.12       |
|                            |   | Low   | 8.56*                 | 3.75       | 0.02  | 1.17                    | 15.94       |
|                            |   | Medium  | 2.90                  | 2.51       | 0.25  | -2.05                   | 7.85        |
|                            |   | Very High   | -5.05                 | 2.62       | 0.06  | -10.21                  | 0.12        |
|                            |   | The Highest Level (Expert)                        | -6.00                 | 3.52       | 0.09  | -12.93                  | 0.94        |
| Very High                  | None At All                                       | 19.75*  | 9.91                  | 0.05       | 0.22  | 39.28                   |             |
|                            | Very Low  | 14.39*  | 5.55                  | 0.01       | 3.44  | 25.34                   |             |
|                            | Low   | 13.60*  | 3.87                  | 0.00       | 5.96  | 21.24                   |             |
|                            | Medium  | 7.95*   | 2.70                  | 0.00       | 2.62  | 13.27                   |             |
|                            | High  | 5.05  | 2.62                  | 0.06       | -0.12 | 10.21                   |             |
|                            | The Highest Level (Expert)                        | -0.95   | 3.65                  | 0.80       | -8.15 | 6.25                    |             |
| The Highest Level (Expert) | None At All                                       | 20.70*  | 10.18                 | 0.04       | 0.63  | 40.77                   |             |
|                            | Very Low  | 15.34*  | 6.03                  | 0.01       | 3.46  | 27.23                   |             |
|                            | Low   | 14.55*  | 4.53                  | 0.00       | 5.62  | 23.48                   |             |
|                            | Medium  | 8.90*   | 3.58                  | 0.01       | 1.85  | 15.95                   |             |
|                            | High  | 6.00  | 3.52                  | 0.09       | -0.94 | 12.93                   |             |
|                            | Very High   | 0.95  | 3.65                  | 0.80       | -6.25 | 8.15                    |             |

\*. The mean difference is significant at the 0.05 level.

**Appendix D**

**Gist and Verbatim Based**

**Condition Questions**

Table D.1

*Gist and Verbatim Based Question Frequency- Major Trauma Condition*

|           | I use written protocols by referencing protocol books while providing care. |      | I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. |      | I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone. |      |
|-----------|---|------|---|------|--|------|
|           | Frequency   | %    | Frequency   | %    | Frequency  | %    |
| Never     | 98  | 45.4 | 8   | 3.7  | 7  | 3.2  |
| Rarely    | 54  | 25.0 | 23  | 10.6 | 25   | 11.6 |
| Sometimes | 34  | 15.7 | 62  | 28.7 | 60   | 27.8 |
| Often     | 18  | 8.3  | 92  | 42.6 | 102  | 47.2 |
| Always    | 12  | 5.6  | 31  | 14.4 | 22   | 10.2 |

|           | Referring to written protocol books while on scene with a patient, results in positive patient outcomes. |      | Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients. |      | Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients. |      |
|-----------|--|------|---|------|--|------|
|           | Frequency  | %    | Frequency   | %    | Frequency  | %    |
| Never     | 45   | 21.1 | 3   | 1.4  | 3  | 1.4  |
| Rarely    | 52   | 24.4 | 12  | 5.6  | 11   | 5.2  |
| Sometimes | 73   | 34.3 | 80  | 37.2 | 83   | 39.2 |
| Often     | 31   | 14.6 | 106   | 49.3 | 99   | 46.7 |
| Always    | 12   | 5.6  | 14  | 6.5  | 16   | 7.5  |



Table D.2

*Gist and Verbatim Based Question Frequency- Minor Trauma Condition*

|           | I use written protocols by referencing protocol books while providing care. |      | I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. |      | I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone. |      |
|-----------|---|------|---|------|--|------|
|           | Frequency   | %    | Frequency   | %    | Frequency  | %    |
| Never     | 105   | 49.1 | 5   | 2.3  | 3  | 1.4  |
| Rarely    | 55  | 25.7 | 23  | 10.7 | 24   | 11.1 |
| Sometimes | 28  | 13.1 | 58  | 27.0 | 59   | 27.3 |
| Often     | 15  | 7.0  | 97  | 45.1 | 103  | 47.7 |
| Always    | 11  | 5.1  | 32  | 14.9 | 27   | 12.5 |

|           | Referring to written protocol books while on scene with a patient, results in positive patient outcomes. |      | Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients. |      | Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients. |      |
|-----------|--|------|---|------|--|------|
|           | Frequency  | %    | Frequency   | %    | Frequency  | %    |
| Never     | 42   | 19.7 | 3   | 1.4  | 4  | 1.9  |
| Rarely    | 52   | 24.4 | 17  | 7.9  | 13   | 6.1  |
| Sometimes | 76   | 35.7 | 59  | 27.4 | 61   | 28.6 |
| Often     | 35   | 16.4 | 125   | 58.1 | 119  | 55.9 |
| Always    | 8  | 3.8  | 11  | 5.1  | 16   | 7.5  |

Table D.3

*Gist and Verbatim Based Question Frequency- Cardiac Condition*

|           | I use written protocols by referencing protocol books while providing care. |      | I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. |      | I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone. |      |
|-----------|---|------|---|------|--|------|
|           | Frequency   | %    | Frequency   | %    | Frequency  | %    |
| Never     | 74  | 34.4 | 8   | 3.7  | 8  | 3.7  |
| Rarely    | 54  | 25.1 | 18  | 8.4  | 25   | 11.6 |
| Sometimes | 42  | 19.5 | 66  | 30.7 | 64   | 29.8 |
| Often     | 25  | 11.6 | 99  | 46.0 | 101  | 47.0 |
| Always    | 20  | 9.3  | 24  | 11.2 | 17   | 7.9  |

|           | Referring to written protocol books while on scene with a patient, results in positive patient outcomes. |      | Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients. |      | Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients. |      |
|-----------|--|------|---|------|--|------|
|           | Frequency  | %    | Frequency   | %    | Frequency  | %    |
| Never     | 30   | 14.1 | 4   | 1.9  | 7  | 3.3  |
| Rarely    | 40   | 18.8 | 18  | 8.5  | 16   | 7.6  |
| Sometimes | 77   | 36.2 | 65  | 30.7 | 62   | 29.4 |
| Often     | 56   | 26.3 | 117   | 55.2 | 113  | 53.6 |
| Always    | 10   | 4.7  | 8   | 3.8  | 13   | 6.2  |

Table D.4

*Gist and Verbatim Based Question Frequency- Respiratory Condition*

|           | I use written protocols by referencing protocol books while providing care. |      | I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. |      | I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone. |      |
|-----------|---|------|---|------|--|------|
|           | Frequency   | %    | Frequency   | %    | Frequency  | %    |
| Never     | 77  | 35.5 | 5   | 2.3  | 6  | 2.8  |
| Rarely    | 62  | 28.6 | 17  | 7.9  | 19   | 8.8  |
| Sometimes | 39  | 18.0 | 67  | 31.2 | 72   | 33.3 |
| Often     | 28  | 12.9 | 101   | 47.0 | 99   | 45.8 |
| Always    | 11  | 5.1  | 25  | 11.6 | 20   | 9.3  |

|           | Referring to written protocol books while on scene with a patient, results in positive patient outcomes. |      | Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients. |      | Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients. |      |
|-----------|--|------|---|------|--|------|
|           | Frequency  | %    | Frequency   | %    | Frequency  | %    |
| Never     | 36   | 16.9 | 5   | 2.3  | 4  | 1.9  |
| Rarely    | 40   | 18.8 | 13  | 6.1  | 15   | 7.0  |
| Sometimes | 87   | 40.8 | 70  | 32.7 | 72   | 33.6 |
| Often     | 40   | 18.8 | 116   | 54.2 | 112  | 52.3 |
| Always    | 10   | 4.7  | 10  | 4.7  | 11   | 5.1  |

Table D.5

*Gist and Verbatim Based Question Frequency- Allergic Reaction Condition*

|           | I use written protocols by referencing protocol books while providing care. |      | I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. |      | I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone. |      |
|-----------|---|------|---|------|--|------|
|           | Frequency   | %    | Frequency   | %    | Frequency  | %    |
| Never     | 75  | 35.0 | 9   | 4.2  | 9  | 4.2  |
| Rarely    | 54  | 25.2 | 26  | 12.2 | 20   | 9.3  |
| Sometimes | 33  | 15.4 | 62  | 29.1 | 70   | 32.7 |
| Often     | 28  | 13.1 | 95  | 44.6 | 94   | 43.9 |
| Always    | 24  | 11.2 | 21  | 9.9  | 21   | 9.8  |

|           | Referring to written protocol books while on scene with a patient, results in positive patient outcomes. |      | Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients. |      | Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients. |      |
|-----------|--|------|---|------|--|------|
|           | Frequency  | %    | Frequency   | %    | Frequency  | %    |
| Never     | 36   | 17.0 | 5   | 2.3  | 6  | 2.8  |
| Rarely    | 41   | 19.3 | 14  | 6.6  | 12   | 5.7  |
| Sometimes | 71   | 33.5 | 70  | 32.9 | 72   | 34.0 |
| Often     | 54   | 25.5 | 114   | 53.5 | 109  | 51.4 |
| Always    | 10   | 4.7  | 10  | 4.7  | 13   | 6.1  |

Table D.6

*Gist and Verbatim Based Question Frequency- Unconscious/Unresponsive Condition*

|           | I use written protocols by referencing protocol books while providing care. |      | I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. |      | I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone. |      |
|-----------|---|------|---|------|--|------|
|           | Frequency   | %    | Frequency   | %    | Frequency  | %    |
| Never     | 92  | 42.4 | 5   | 2.3  | 6  | 2.8  |
| Rarely    | 53  | 24.4 | 22  | 10.1 | 27   | 12.5 |
| Sometimes | 33  | 15.2 | 59  | 27.1 | 67   | 31.0 |
| Often     | 25  | 11.5 | 100   | 45.9 | 94   | 43.5 |
| Always    | 14  | 6.5  | 32  | 14.7 | 22   | 10.2 |

|           | Referring to written protocol books while on scene with a patient, results in positive patient outcomes. |      | Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients. |      | Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients. |      |
|-----------|--|------|---|------|--|------|
|           | Frequency  | %    | Frequency   | %    | Frequency  | %    |
| Never     | 47   | 21.8 | 3   | 1.4  | 4  | 1.9  |
| Rarely    | 39   | 18.1 | 16  | 7.4  | 20   | 9.3  |
| Sometimes | 82   | 38.0 | 70  | 32.4 | 67   | 31.0 |
| Often     | 41   | 19.0 | 115   | 53.2 | 112  | 51.9 |
| Always    | 7  | 3.2  | 12  | 5.6  | 13   | 6.0  |

Table D.7

*Gist and Verbatim Based Question Frequency- General Condition*

|           | I base my treatment off of my memory of local protocols. |      | I carry a protocol book on my person when providing treatment to a patient. |      | I refer to a protocol book while on scene with a patient when providing care. |      | I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. |      |
|-----------|--|------|---|------|---|------|---|------|
|           | Frequency  | %    | Frequency   | %    | Frequency   | %    | Frequency   | %    |
| Never     | 4  | 1.9  | 80  | 37.2 | 84  | 39.1 | 5   | 2.3  |
| Rarely    | 5  | 2.3  | 38  | 17.7 | 86  | 40.0 | 14  | 6.5  |
| Sometimes | 24   | 11.1 | 25  | 11.6 | 33  | 15.3 | 59  | 27.3 |
| Often     | 123  | 56.9 | 26  | 12.1 | 10  | 4.7  | 106   | 49.1 |
| Always    | 60   | 27.8 | 46  | 21.4 | 2   | .9   | 32  | 14.8 |

|           | I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone. |      | Referring to written protocol books while on scene with a patient, results in positive patient outcomes. |      | Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients. |      | Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients. |      |
|-----------|--|------|--|------|---|------|--|------|
|           | Frequency  | %    | Frequency  | %    | Frequency   | %    | Frequency  | %    |
| Never     | 5  | 2.3  | 27   | 12.6 | 2   | .9   | 4  | 1.9  |
| Rarely    | 18   | 8.3  | 55   | 25.7 | 12  | 5.6  | 11   | 5.1  |
| Sometimes | 67   | 31.0 | 91   | 42.5 | 70  | 32.6 | 70   | 32.7 |
| Often     | 103  | 47.7 | 35   | 16.4 | 120   | 55.8 | 115  | 53.7 |
| Always    | 23   | 10.6 | 6  | 2.8  | 11  | 5.1  | 14   | 6.5  |

Table D.8

*Correlation of Gist and Verbatim Based Questions- Major Trauma Condition*

|   |                     | I use written protocols by referencing protocol books while providing care. | I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. | I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone. | Referring to written protocol books while on scene with a patient, results in positive patient outcomes. | Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients. | Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients. |
|---|---------------------|---|---|--|--|---|--|
| I use written protocols by referencing protocol books while providing care.   | Pearson Correlation | 1   |   |  |  |   |  |
|   | Sig. (2-tailed)     |   |   |  |  |   |  |
|   | N                   | 216   |   |  |  |   |  |
| I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. | Pearson Correlation | -.005   | 1   |  |  |   |  |
|   | Sig. (2-tailed)     | .943  |   |  |  |   |  |
|   | N                   | 216   | 216   |  |  |   |  |
| I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.                        | Pearson Correlation | .012  | .656**  | 1  |  |   |  |
|   | Sig. (2-tailed)     | .855  | .000  |  |  |   |  |
|   | N                   | 216   | 216   | 216  |  |   |  |
| Referring to written protocol books while on scene with a patient, results in positive patient outcomes.  | Pearson Correlation | .582**  | -.094   | -.057  | 1  |   |  |
|   | Sig. (2-tailed)     | .000  | .172  | .407   |  |   |  |
|   | N                   | 213   | 213   | 213  | 213  |   |  |
| Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.       | Pearson Correlation | .016  | .678**  | .570**   | .025   | 1   |  |
|   | Sig. (2-tailed)     | .815  | .000  | .000   | .719   |   |  |
|   | N                   | 215   | 215   | 215  | 213  | 215   |  |
| Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.          | Pearson Correlation | .031  | .543**  | .720**   | .066   | .761**  | 1  |
|   | Sig. (2-tailed)     | .649  | .000  | .000   | .342   | .000  |  |
|   | N                   | 212   | 212   | 212  | 211  | 212   | 212  |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

Table D.9

*Correlation of Gist and Verbatim Based Questions- Minor Trauma Condition*

|   |                     | I use written protocols by referencing protocol books while providing care. | I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. | I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone. | Referring to written protocol books while on scene with a patient, results in positive patient outcomes. | Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients. | Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients. |
|---|---------------------|---|---|--|--|---|--|
| I use written protocols by referencing protocol books while providing care.   | Pearson Correlation | 1   |   |  |  |   |  |
|   | Sig. (2-tailed)     |   |   |  |  |   |  |
|   | N                   | 214   |   |  |  |   |  |
| I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. | Pearson Correlation | -.054   | 1   |  |  |   |  |
|   | Sig. (2-tailed)     | .434  |   |  |  |   |  |
|   | N                   | 213   | 215   |  |  |   |  |
| I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.                        | Pearson Correlation | -.035   | .600**  | 1  |  |   |  |
|   | Sig. (2-tailed)     | .611  | .000  |  |  |   |  |
|   | N                   | 214   | 215   | 216  |  |   |  |
| Referring to written protocol books while on scene with a patient, results in positive patient outcomes.  | Pearson Correlation | .460**  | .010  | .000   | 1  |   |  |
|   | Sig. (2-tailed)     | .000  | .890  | .996   |  |   |  |
|   | N                   | 211   | 213   | 213  | 213  |   |  |
| Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.       | Pearson Correlation | .055  | .594**  | .479**   | .116   | 1   |  |
|   | Sig. (2-tailed)     | .428  | .000  | .000   | .092   |   |  |
|   | N                   | 213   | 214   | 215  | 213  | 215   |  |
| Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.          | Pearson Correlation | -.058   | .605**  | .604**   | .145*  | .75**   | 1  |
|   | Sig. (2-tailed)     | .402  | .000  | .000   | .034   | .00   |  |
|   | N                   | 211   | 212   | 213  | 212  | 213   | 213  |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).



Table D.10

*Correlation of Gist and Verbatim Based Questions- Cardiac Condition*

|   |                     | I use written protocols by referencing protocol books while providing care. | I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. | I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone. | Referring to written protocol books while on scene with a patient, results in positive patient outcomes. | Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients. | Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients. |
|---|---------------------|---|---|--|--|---|--|
| I use written protocols by referencing protocol books while providing care.   | Pearson Correlation | 1   |   |  |  |   |  |
|   | Sig. (2-tailed)     |   |   |  |  |   |  |
|   | N                   | 215   |   |  |  |   |  |
| I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. | Pearson Correlation | -.069   | 1   |  |  |   |  |
|   | Sig. (2-tailed)     | .315  |   |  |  |   |  |
|   | N                   | 215   | 215   |  |  |   |  |
| I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.                        | Pearson Correlation | -.035   | .602**  | 1  |  |   |  |
|   | Sig. (2-tailed)     | .611  | .000  |  |  |   |  |
|   | N                   | 215   | 215   | 215  |  |   |  |
| Referring to written protocol books while on scene with a patient, results in positive patient outcomes.  | Pearson Correlation | .563**  | -.011   | -.038  | 1  |   |  |
|   | Sig. (2-tailed)     | .000  | .879  | .579   |  |   |  |
|   | N                   | 213   | 213   | 213  | 213  |   |  |
| Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.       | Pearson Correlation | .077  | .658**  | .480**   | .104   | 1   |  |
|   | Sig. (2-tailed)     | .265  | .000  | .000   | .133   |   |  |
|   | N                   | 212   | 212   | 212  | 211  | 212   |  |
| Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.          | Pearson Correlation | .009  | .579**  | .686**   | .130   | .775**  | 1  |
|   | Sig. (2-tailed)     | .891  | .000  | .000   | .059   | .000  |  |
|   | N                   | 211   | 211   | 211  | 211  | 210   | 211  |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Table D.11

*Correlation of Gist and Verbatim Based Questions- Respiratory Condition*

|   |                     | I use written protocols by referencing protocol books while providing care. | I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. | I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone. | Referring to written protocol books while on scene with a patient, results in positive patient outcomes. | Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients. | Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients. |
|---|---------------------|---|---|--|--|---|--|
| I use written protocols by referencing protocol books while providing care.   | Pearson Correlation | 1   |   |  |  |   |  |
|   | Sig. (2-tailed)     |   |   |  |  |   |  |
|   | N                   | 217   |   |  |  |   |  |
| I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. | Pearson Correlation | .027  | 1   |  |  |   |  |
|   | Sig. (2-tailed)     | .693  |   |  |  |   |  |
|   | N                   | 215   | 215   |  |  |   |  |
| I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.                        | Pearson Correlation | .087  | .576**  | 1  |  |   |  |
|   | Sig. (2-tailed)     | .202  | .000  |  |  |   |  |
|   | N                   | 216   | 215   | 216  |  |   |  |
| Referring to written protocol books while on scene with a patient, results in positive patient outcomes.  | Pearson Correlation | .552**  | .053  | .072   | 1  |   |  |
|   | Sig. (2-tailed)     | .000  | .441  | .295   |  |   |  |
|   | N                   | 213   | 212   | 213  | 213  |   |  |
| Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.       | Pearson Correlation | .110  | .666**  | .567**   | .122   | 1   |  |
|   | Sig. (2-tailed)     | .107  | .000  | .000   | .076   |   |  |
|   | N                   | 214   | 213   | 214  | 212  | 214   |  |
| Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.          | Pearson Correlation | .105  | .508**  | .742**   | .082   | .714**  | 1  |
|   | Sig. (2-tailed)     | .127  | .000  | .000   | .231   | .000  |  |
|   | N                   | 214   | 213   | 214  | 213  | 213   | 214  |

\*\*. Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

Table D.12

*Correlation of Gist and Verbatim Based Questions- Allergic Reaction Condition*

|   |                     | I use written protocols by referencing protocol books while providing care. | I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. | I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone. | Referring to written protocol books while on scene with a patient, results in positive patient outcomes. | Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients. | Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients. |
|---|---------------------|---|---|--|--|---|--|
| I use written protocols by referencing protocol books while providing care.   | Pearson Correlation | 1   |   |  |  |   |  |
|   | Sig. (2-tailed)     |   |   |  |  |   |  |
|   | N                   | 214   |   |  |  |   |  |
| I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. | Pearson Correlation | -.047   | 1   |  |  |   |  |
|   | Sig. (2-tailed)     | .494  |   |  |  |   |  |
|   | N                   | 213   | 213   |  |  |   |  |
| I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.                        | Pearson Correlation | -.055   | .607**  | 1  |  |   |  |
|   | Sig. (2-tailed)     | .425  | .000  |  |  |   |  |
|   | N                   | 213   | 212   | 214  |  |   |  |
| Referring to written protocol books while on scene with a patient, results in positive patient outcomes.  | Pearson Correlation | .616**  | -.036   | -.045  | 1  |   |  |
|   | Sig. (2-tailed)     | .000  | .608  | .516   |  |   |  |
|   | N                   | 211   | 210   | 211  | 212  |   |  |
| Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.       | Pearson Correlation | -.003   | .630**  | .484**   | .096   | 1   |  |
|   | Sig. (2-tailed)     | .967  | .000  | .000   | .163   |   |  |
|   | N                   | 212   | 211   | 212  | 211  | 213   |  |
| Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.          | Pearson Correlation | -.012   | .386**  | .691**   | .057   | .663**  | 1  |
|   | Sig. (2-tailed)     | .862  | .000  | .000   | .410   | .000  |  |
|   | N                   | 211   | 210   | 211  | 211  | 211   | 212  |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

Table D.13

*Correlation of Gist and Verbatim Based Questions- Unconscious/Unresponsive Condition*

|   |                     | I use written protocols by referencing protocol books while providing care. | I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. | I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone. | Referring to written protocol books while on scene with a patient, results in positive patient outcomes. | Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients. | Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients. |
|---|---------------------|---|---|--|--|---|--|
| I use written protocols by referencing protocol books while providing care.   | Pearson Correlation | 1   |   |  |  |   |  |
|   | Sig. (2-tailed)     |   |   |  |  |   |  |
|   | N                   | 217   |   |  |  |   |  |
| I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. | Pearson Correlation | -.008   | 1   |  |  |   |  |
|   | Sig. (2-tailed)     | .906  |   |  |  |   |  |
|   | N                   | 217   | 218   |  |  |   |  |
| I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.                        | Pearson Correlation | -.060   | .691**  | 1  |  |   |  |
|   | Sig. (2-tailed)     | .379  | .000  |  |  |   |  |
|   | N                   | 215   | 216   | 216  |  |   |  |
| Referring to written protocol books while on scene with a patient, results in positive patient outcomes.  | Pearson Correlation | .512**  | .061  | .071   | 1  |   |  |
|   | Sig. (2-tailed)     | .000  | .372  | .298   |  |   |  |
|   | N                   | 215   | 216   | 214  | 216  |   |  |
| Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.       | Pearson Correlation | .027  | .725**  | .617**   | .150*  | 1   |  |
|   | Sig. (2-tailed)     | .696  | .000  | .000   | .028   |   |  |
|   | N                   | 215   | 216   | 214  | 215  | 216   |  |
| Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.          | Pearson Correlation | -.004   | .608**  | .731**   | .141*  | .832**  | 1  |
|   | Sig. (2-tailed)     | .953  | .000  | .000   | .038   | .000  |  |
|   | N                   | 215   | 216   | 214  | 216  | 215   | 216  |

\*\*. Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

Table D.14

*Correlation of Gist and Verbatim Based Questions- General Condition*

|   |                     | I base my<br>treatment off of<br>my memory of<br>local protocols | I carry a protocol<br>book on my<br>person when<br>providing<br>treatment to a<br>patient. | I refer to a<br>protocol book<br>while on scene<br>with a patient<br>when providing<br>care. | I refer to past<br>experiences with<br>similar patients<br>(based on memory<br>for the overall gist<br>rather than for<br>specific patients)<br>when determining<br>how to treat<br>someone. |
|---|---------------------|--|--|--|--|
| I base my treatment off of<br>my memory of local<br>protocols.  | Pearson Correlation | 1  |  |  |  |
|   | Sig. (2-tailed)     |  |  |  |  |
|   | N                   | 216  |  |  |  |
| I carry a protocol book on<br>my person when providing<br>treatment to a patient.   | Pearson Correlation | .018   | 1  |  |  |
|   | Sig. (2-tailed)     | .796   |  |  |  |
|   | N                   | 215  | 215  |  |  |
| I refer to a protocol book<br>while on scene with a<br>patient when providing<br>care.  | Pearson Correlation | -.041  | .592**   | 1  |  |
|   | Sig. (2-tailed)     | .548   | .000   |  |  |
|   | N                   | 215  | 214  | 215  |  |
| I refer to past experiences<br>with similar patients<br>(based on memory for the<br>overall gist rather than for<br>specific patients) when<br>determining how to treat<br>someone. | Pearson Correlation | .199**   | -.105  | -.076  | 1  |
|   | Sig. (2-tailed)     | .003   | .126   | .265   |  |
|   | N                   | 216  | 215  | 215  | 216  |
| I refer to past experiences<br>with similar patients<br>(based on specific<br>memories of specific<br>patients) when determining<br>how to treat someone.                           | Pearson Correlation | .173*  | -.062  | -.006  | .575**   |
|   | Sig. (2-tailed)     | .011   | .369   | .928   | .000   |
|   | N                   | 216  | 215  | 215  | 216  |
| Referring to written<br>protocol books while on<br>scene with a patient, results<br>in positive patient<br>outcomes.  | Pearson Correlation | .000   | .407**   | .545**   | .050   |
|   | Sig. (2-tailed)     | .996   | .000   | .000   | .463   |
|   | N                   | 214  | 213  | 213  | 214  |
| Referring to previous<br>experience with similar<br>patients (from memory of<br>the general gist of the<br>patient), results in positive<br>outcomes for current<br>patients.       | Pearson Correlation | .136*  | -.006  | -.021  | .663**   |
|   | Sig. (2-tailed)     | .047   | .931   | .761   | .000   |
|   | N                   | 215  | 214  | 214  | 215  |
| Referring to previous<br>experience with similar<br>patients (from specific<br>memories of specific<br>patients), results in positive<br>outcomes for current<br>patients.          | Pearson Correlation | .143*  | -.035  | .009   | .514**   |
|   | Sig. (2-tailed)     | .037   | .610   | .891   | .000   |
|   | N                   | 214  | 213  | 213  | 214  |

\*\*. Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

Table D.14 (Continued)

|   |   | I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone. | Referring to written protocol books while on scene with a patient, results in positive patient outcomes. | Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients. | Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients. |
|---|---|--|--|---|--|
| I base my treatment off of my memory of local protocols.  | Pearson Correlation<br>Sig. (2-tailed)<br>N |  |  |   |  |
| I carry a protocol book on my person when providing treatment to a patient.   | Pearson Correlation<br>Sig. (2-tailed)<br>N |  |  |   |  |
| I refer to a protocol book while on scene with a patient when providing care.   | Pearson Correlation<br>Sig. (2-tailed)<br>N |  |  |   |  |
| I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. | Pearson Correlation<br>Sig. (2-tailed)<br>N |  |  |   |  |
| I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.                        | Pearson Correlation<br>Sig. (2-tailed)<br>N | 1<br>216   |  |   |  |
| Referring to written protocol books while on scene with a patient, results in positive patient outcomes.  | Pearson Correlation<br>Sig. (2-tailed)<br>N | .037<br>.594<br>214  | 1<br>214   |   |  |
| Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.       | Pearson Correlation<br>Sig. (2-tailed)<br>N | .489**<br>.000<br>215  | .168*<br>.014<br>214   | 1<br>215  |  |
| Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.          | Pearson Correlation<br>Sig. (2-tailed)<br>N | .687**<br>.000<br>214  | .180**<br>.008<br>214  | .752**<br>.000<br>214   | 1<br>214   |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Table D.15

*Factor Analysis of Gist and Verbatim Based Condition Questions (Five Factors Loaded)*

|  | Component |      |      |   |   |
|--|-----------|------|------|---|---|
|  | 1         | 2    | 3    | 4 | 5 |
| Minor Trauma-Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.             | .776      |      |      |   |   |
| Minor Trauma-Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.                | .772      |      |      |   |   |
| Respiratory-Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.              | .760      |      |      |   |   |
| Cardiac-Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.                     | .745      | .498 |      |   |   |
| Cardiac-Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.                  | .739      |      |      |   |   |
| Unresponsive/Unconscious-Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.    | .710      | .498 |      |   |   |
| Allergic Reaction-Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.           | .707      | .508 |      |   |   |
| Unresponsive/Unconscious-Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients. | .702      |      |      |   |   |
| Allergic Reaction-Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.        | .694      |      |      |   |   |
| Respiratory-Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.                 | .686      | .533 |      |   |   |
| Major Trauma-Referring to previous experience with similar patients (from memory of the general gist of the patient), results in positive outcomes for current patients.             | .679      |      | .419 |   |   |
| Major Trauma-Referring to previous experience with similar patients (from specific memories of specific patients), results in positive outcomes for current patients.                | .672      | .498 |      |   |   |

Table D.15 (Continued)

|  | Component |      |      |      |   |
|--|-----------|------|------|------|---|
|  | 1         | 2    | 3    | 4    | 5 |
| Cardiac-I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.   |           | .815 |      |      |   |
| Respiratory-I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.                                     |           | .783 |      |      |   |
| Allergic Reaction-I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.                               |           | .722 |      |      |   |
| Unresponsive/Unconscious-I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.                        |           | .714 |      |      |   |
| Major Trauma-I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.                                    |           | .702 |      |      |   |
| Minor Trauma-I refer to past experiences with similar patients (based on specific memories of specific patients) when determining how to treat someone.                                    |           | .648 |      |      |   |
| Allergic Reaction-I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone.        |           |      | .788 |      |   |
| Cardiac-I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone.                  |           |      | .783 |      |   |
| Major Trauma-I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone.             |           |      | .783 |      |   |
| Respiratory-I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone.              |           |      | .766 |      |   |
| Minor Trauma-I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone.             |           |      | .753 |      |   |
| Unresponsive/Unconscious-I refer to past experiences with similar patients (based on memory for the overall gist rather than for specific patients) when determining how to treat someone. |           |      | .732 |      |   |
| Respiratory-I use written protocols by referencing protocol books while providing care.  |           |      |      | .897 |   |



Table D.15 (Continued)

|   | Component |   |   |      |      |
|---|-----------|---|---|------|------|
|   | 1         | 2 | 3 | 4    | 5    |
| Unresponsive/Unconscious-I use written protocols by referencing protocol books while providing care.                              |           |   |   | .894 |      |
| Cardiac-I use written protocols by referencing protocol books while providing care.   |           |   |   | .875 |      |
| Major Trauma-I use written protocols by referencing protocol books while providing care.  |           |   |   | .859 |      |
| Allergic Reaction-I use written protocols by referencing protocol books while providing care.                                     |           |   |   | .836 |      |
| Minor Trauma-I use written protocols by referencing protocol books while providing care.  |           |   |   | .829 |      |
| Cardiac-Referring to written protocol books while on scene with a patient, results in positive patient outcomes.                  |           |   |   |      | .854 |
| Unresponsive/Unconscious-Referring to written protocol books while on scene with a patient, results in positive patient outcomes. |           |   |   |      | .849 |
| Allergic Reaction-Referring to written protocol books while on scene with a patient, results in positive patient outcomes.        |           |   |   |      | .810 |
| Minor Trauma-Referring to written protocol books while on scene with a patient, results in positive patient outcomes.             |           |   |   |      | .802 |
| Respiratory-Referring to written protocol books while on scene with a patient, results in positive patient outcomes.              |           |   |   |      | .797 |
| Major Trauma-Referring to written protocol books while on scene with a patient, results in positive patient outcomes.             |           |   |   |      | .751 |
| Extraction Method: Principal Component Analysis.  |           |   |   |      |      |
| Rotation Method: Varimax with Kaiser Normalization.   |           |   |   |      |      |

Table D.16

*Gist and Verbatim Based Condition Composite Scores (Descriptive Statistics)*

|   | N   | Minimum | Maximum | Mean  | Std. Deviation |
|---|-----|---------|---------|-------|----------------|
| Major Trauma Condition Gist Score                 | 212 | 4.00    | 20.00   | 14.14 | 2.97           |
| Minor Trauma Condition Gist Score                 | 212 | 4.00    | 20.00   | 14.38 | 2.85           |
| Cardiac Condition Gist Score                      | 210 | 4.00    | 20.00   | 14.01 | 2.97           |
| Respiratory Condition Gist Score                  | 212 | 4.00    | 20.00   | 14.13 | 2.82           |
| Allergic Reaction Condition Gist Score            | 208 | 4.00    | 20.00   | 13.96 | 2.91           |
| Unresponsive/Unconscious Condition Gist Score     | 213 | 4.00    | 20.00   | 14.15 | 3.03           |
| Major Trauma Condition Verbatim Score             | 213 | 2.00    | 10.00   | 4.63  | 2.09           |
| Minor Trauma Condition Verbatim Score             | 211 | 2.00    | 10.00   | 4.55  | 1.93           |
| Cardiac Condition Verbatim Score                  | 213 | 2.00    | 10.00   | 5.26  | 2.13           |
| Respiratory Condition Verbatim Score              | 213 | 2.00    | 10.00   | 5.01  | 2.03           |
| Allergic Reaction Condition Verbatim Score        | 211 | 2.00    | 10.00   | 5.24  | 2.26           |
| Unresponsive/Unconscious Condition Verbatim Score | 215 | 2.00    | 10.00   | 4.80  | 2.07           |
| Relative Gist Index (RGI)                         | 191 | -2.00   | 108.00  | 56.16 | 19.45          |

Table D.17

*Intraclass Correlation Coefficient- Gist Versus Verbatim Composite Scores (Major Trauma Condition)*

|                  | Intraclass<br>Correlation <sup>b</sup> | 95% Confidence Interval |                | F Test with True Value 0 |     |     |      |
|------------------|--|-------------------------|----------------|--------------------------|-----|-----|------|
|                  |  | Lower<br>Bound          | Upper<br>Bound | Value                    | df1 | df2 | Sig  |
| Single Measures  | -.001 <sup>a</sup>                     | -.016                   | .019           | .987                     | 210 | 210 | .536 |
| Average Measures | -.002                                  | -.033                   | .037           | .987                     | 210 | 210 | .536 |

Two-way random effects model where both people effects and measures effects are random.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

Table D.18

*Intraclass Correlation Coefficient- Gist Versus Verbatim Composite Scores (Minor Trauma Condition)*

|                  | Intraclass<br>Correlation <sup>b</sup> | 95% Confidence Interval |                | F Test with True Value 0 |     |     |      |
|------------------|--|-------------------------|----------------|--------------------------|-----|-----|------|
|                  |  | Lower<br>Bound          | Upper<br>Bound | Value                    | df1 | df2 | Sig  |
| Single Measures  | .002 <sup>a</sup>                      | -.012                   | .020           | 1.041                    | 209 | 209 | .385 |
| Average Measures | .004                                   | -.024                   | .040           | 1.041                    | 209 | 209 | .385 |

Two-way random effects model where both people effects and measures effects are random.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

Table D.19

*Intraclass Correlation Coefficient- Gist Versus Verbatim Composite Scores (Cardiac Condition)*

|                  | Intraclass<br>Correlation <sup>b</sup> | 95% Confidence Interval |                | F Test with True Value 0 |     |     |      |
|------------------|--|-------------------------|----------------|--------------------------|-----|-----|------|
|                  |  | Lower<br>Bound          | Upper<br>Bound | Value                    | df1 | df2 | Sig  |
| Single Measures  | .002 <sup>a</sup>                      | -.016                   | .026           | 1.033                    | 209 | 209 | .408 |
| Average Measures | .005                                   | -.033                   | .050           | 1.033                    | 209 | 209 | .408 |

Two-way random effects model where both people effects and measures effects are random.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

Table D.20

*Intraclass Correlation Coefficient- Gist Versus Verbatim Composite Scores (Respiratory Condition)*

|                  | Intraclass<br>Correlation <sup>b</sup> | 95% Confidence Interval |                | F Test with True Value 0 |     |     |      |
|------------------|--|-------------------------|----------------|--------------------------|-----|-----|------|
|                  |  | Lower<br>Bound          | Upper<br>Bound | Value                    | df1 | df2 | Sig  |
| Single Measures  | .012 <sup>a</sup>                      | -.018                   | .050           | 1.211                    | 210 | 210 | .083 |
| Average Measures | .024                                   | -.036                   | .096           | 1.211                    | 210 | 210 | .083 |

Two-way random effects model where both people effects and measures effects are random.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

Table D.21

*Intraclass Correlation Coefficient- Gist Versus Verbatim Composite Scores (Allergic Reaction Condition)*

|                  | Intraclass<br>Correlation <sup>b</sup> | 95% Confidence Interval |                | F Test with True Value 0 |     |     |      |
|------------------|--|-------------------------|----------------|--------------------------|-----|-----|------|
|                  |  | Lower<br>Bound          | Upper<br>Bound | Value                    | df1 | df2 | Sig  |
| Single Measures  | -.003 <sup>a</sup>                     | -.023                   | .021           | .958                     | 206 | 206 | .620 |
| Average Measures | -.006                                  | -.047                   | .042           | .958                     | 206 | 206 | .620 |

Two-way random effects model where both people effects and measures effects are random.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

Table D.22

*Intraclass Correlation Coefficient- Gist Versus Verbatim Composite Scores*

*(Unresponsive/Unconscious Condition)*

|                  | Intraclass<br>Correlation <sup>b</sup> | 95% Confidence Interval |                | F Test with True Value 0 |     |     |      |
|------------------|--|-------------------------|----------------|--------------------------|-----|-----|------|
|                  |  | Lower<br>Bound          | Upper<br>Bound | Value                    | df1 | df2 | Sig  |
| Single Measures  | .007 <sup>a</sup>                      | -.015                   | .035           | 1.116                    | 211 | 211 | .213 |
| Average Measures | .014                                   | -.031                   | .068           | 1.116                    | 211 | 211 | .213 |

Two-way random effects model where both people effects and measures effects are random.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.



Table D.23

*Correlation of Verbatim Composite Scores with Highest Certification Level and Experience**Level at Any and Current Certification Level*

|  |                     | What is your highest certification level? | How long have you been providing medical treatment in the pre-hospital setting at any certification level (in years). | How long have you been providing medical treatment in the pre-hospital setting at your current certification level (in years). |
|--|---------------------|---|---|--|
| Sum of Major Trauma Verbatim Questions   | Pearson Correlation | -.039                                     | -.158*  | -.164*   |
|  | Sig. (2-tailed)     | .575                                      | .022  | .018   |
|  | N                   | 213                                       | 210   | 209  |
| Sum of Minor Trauma Verbatim Questions   | Pearson Correlation | -.024                                     | -.160*  | -.180**  |
|  | Sig. (2-tailed)     | .731                                      | .021  | .009   |
|  | N                   | 211                                       | 208   | 207  |
| Sum of Cardiac Verbatim Questions  | Pearson Correlation | .067                                      | -.054   | -.121  |
|  | Sig. (2-tailed)     | .331                                      | .433  | .082   |
|  | N                   | 213                                       | 210   | 209  |
| Sum of Respiratory Verbatim Questions  | Pearson Correlation | .089                                      | -.101   | -.134  |
|  | Sig. (2-tailed)     | .196                                      | .145  | .052   |
|  | N                   | 213                                       | 210   | 209  |
| Sum of Allergic Reaction Verbatim Questions  | Pearson Correlation | -.039                                     | -.102   | -.130  |
|  | Sig. (2-tailed)     | .569                                      | .142  | .061   |
|  | N                   | 211                                       | 208   | 207  |
| Sum of Unconscious/Unresponsive Verbatim Questions   | Pearson Correlation | .095                                      | -.098   | -.129  |
|  | Sig. (2-tailed)     | .164                                      | .154  | .062   |
|  | N                   | 215                                       | 213   | 211  |
| What is your highest certification level?  | Pearson Correlation | 1   | .456**  | .265**   |
|  | Sig. (2-tailed)     |   | .000  | .000   |
|  | N                   | 217                                       | 214   | 213  |
| How long have you been providing medical treatment in the pre-hospital setting at any certification level (in years).          | Pearson Correlation | .456**                                    | 1   | .917**   |
|  | Sig. (2-tailed)     | .000                                      |   | .000   |
|  | N                   | 214                                       | 215   | 213  |
| How long have you been providing medical treatment in the pre-hospital setting at your current certification level (in years). | Pearson Correlation | .265**                                    | .917**  | 1  |
|  | Sig. (2-tailed)     | .000                                      | .000  |  |
|  | N                   | 213                                       | 213   | 214  |

\*\*. Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

Table D.24

*Correlation of Gist Composite Scores with Highest Certification Level and Experience Level at Any and Current Certification Level*

|  |                     | What is your highest certification level? | How long have you been providing medical treatment in the pre-hospital setting at any certification level (in years). | How long have you been providing medical treatment in the pre-hospital setting at your current certification level (in years). |
|--|---------------------|---|---|--|
| Sum of Major Trauma Gist Questions   | Pearson Correlation | -.093                                     | .060  | .114   |
|  | Sig. (2-tailed)     | .179                                      | .385  | .101   |
|  | N                   | 212                                       | 209   | 208  |
| Sum of Minor Trauma Gist Questions   | Pearson Correlation | -.139*                                    | -.042   | .003   |
|  | Sig. (2-tailed)     | .043                                      | .541  | .969   |
|  | N                   | 212                                       | 209   | 208  |
| Sum of Cardiac Gist Questions  | Pearson Correlation | -.122                                     | .040  | .092   |
|  | Sig. (2-tailed)     | .078                                      | .572  | .188   |
|  | N                   | 210                                       | 207   | 206  |
| Sum of Respiratory Gist Questions  | Pearson Correlation | -.107                                     | -.012   | .014   |
|  | Sig. (2-tailed)     | .120                                      | .860  | .840   |
|  | N                   | 212                                       | 209   | 208  |
| Sum of Allergic Reaction Gist Questions  | Pearson Correlation | -.144*                                    | -.018   | .029   |
|  | Sig. (2-tailed)     | .038                                      | .800  | .684   |
|  | N                   | 208                                       | 205   | 204  |
| Sum of Unconscious/Unresponsive Gist Questions   | Pearson Correlation | -.036                                     | .027  | .041   |
|  | Sig. (2-tailed)     | .598                                      | .699  | .557   |
|  | N                   | 213                                       | 210   | 210  |
| What is your highest certification level?  | Pearson Correlation | 1   | .456**  | .265**   |
|  | Sig. (2-tailed)     |   | .000  | .000   |
|  | N                   | 217                                       | 214   | 213  |
| How long have you been providing medical treatment in the pre-hospital setting at any certification level (in years).          | Pearson Correlation | .456**                                    | 1   | .917**   |
|  | Sig. (2-tailed)     | .000                                      |   | .000   |
|  | N                   | 214                                       | 215   | 213  |
| How long have you been providing medical treatment in the pre-hospital setting at your current certification level (in years). | Pearson Correlation | .265**                                    | .917**  | 1  |
|  | Sig. (2-tailed)     | .000                                      | .000  |  |
|  | N                   | 213                                       | 213   | 214  |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Table D.25

*Correlation of Relative Gist Index (RGI) with Gist and Verbatim Condition Scales (Individual Gist and Verbatim Composite Scores, Overall Condition Score, Overall Gist Score, Overall Verbatim Score), EMS Demographics and Personal Demographics*

|   | Relative Gist Index |         |
|---|---------------------|---------|
| Relative Gist Index                           | Pearson Correlation | 1       |
|   | Sig. (2-tailed)     |         |
|   | N                   | 191     |
| Major Trauma Condition Gist Score             | Pearson Correlation | .745**  |
|   | Sig. (2-tailed)     | .000    |
|   | N                   | 191     |
| Minor Trauma Condition Gist Score             | Pearson Correlation | .687**  |
|   | Sig. (2-tailed)     | .000    |
|   | N                   | 191     |
| Cardiac Condition Gist Score                  | Pearson Correlation | .778**  |
|   | Sig. (2-tailed)     | .000    |
|   | N                   | 191     |
| Respiratory Condition Gist Score              | Pearson Correlation | .733**  |
|   | Sig. (2-tailed)     | .000    |
|   | N                   | 191     |
| Allergic Reaction Condition Gist Score        | Pearson Correlation | .744**  |
|   | Sig. (2-tailed)     | .000    |
|   | N                   | 191     |
| Unresponsive/Unconscious Condition Gist Score | Pearson Correlation | .714**  |
|   | Sig. (2-tailed)     | .000    |
|   | N                   | 191     |
| Major Trauma Condition Verbatim Score         | Pearson Correlation | -.520** |
|   | Sig. (2-tailed)     | .000    |
|   | N                   | 191     |
| Minor Trauma Condition Verbatim Score         | Pearson Correlation | -.527** |
|   | Sig. (2-tailed)     | .000    |
|   | N                   | 191     |
| Cardiac Condition Verbatim Score              | Pearson Correlation | -.470** |
|   | Sig. (2-tailed)     | .000    |
|   | N                   | 191     |

Table D.25 (Continued)

|   |                     | Relative Gist Index |
|---|---------------------|---------------------|
| Respiratory Condition Verbatim Score              | Pearson Correlation | -.476**             |
|   | Sig. (2-tailed)     | .000                |
|   | N                   | 191                 |
| Allergic Reaction Condition Verbatim Score        | Pearson Correlation | -.497**             |
|   | Sig. (2-tailed)     | .000                |
|   | N                   | 191                 |
| Unconscious/Unresponsive Condition Verbatim Score | Pearson Correlation | -.528**             |
|   | Sig. (2-tailed)     | .000                |
|   | N                   | 191                 |
| Major Trauma Condition Overall Score              | Pearson Correlation | .906**              |
|   | Sig. (2-tailed)     | .000                |
|   | N                   | 191                 |
| Minor Trauma Condition Overall Score              | Pearson Correlation | .875**              |
|   | Sig. (2-tailed)     | .000                |
|   | N                   | 191                 |
| Cardiac Condition Overall Score                   | Pearson Correlation | .927**              |
|   | Sig. (2-tailed)     | .000                |
|   | N                   | 191                 |
| Respiratory Condition Overall Score               | Pearson Correlation | .921**              |
|   | Sig. (2-tailed)     | .000                |
|   | N                   | 191                 |
| Allergic Reaction Condition Overall Score         | Pearson Correlation | .889**              |
|   | Sig. (2-tailed)     | .000                |
|   | N                   | 191                 |
| Unconscious/Unresponsive Condition Overall Score  | Pearson Correlation | .912**              |
|   | Sig. (2-tailed)     | .000                |
|   | N                   | 191                 |
| Overall Verbatim Score for All Conditions         | Pearson Correlation | -.555**             |
|   | Sig. (2-tailed)     | .000                |
|   | N                   | 191                 |
| Overall Gist Score for All Conditions             | Pearson Correlation | .814**              |
|   | Sig. (2-tailed)     | .000                |
|   | N                   | 191                 |
| What gender are you?                              | Pearson Correlation | -.056               |
|   | Sig. (2-tailed)     | .443                |
|   | N                   | 190                 |
| How old are you? (In Years)                       | Pearson Correlation | .099                |
|   | Sig. (2-tailed)     | .177                |
|   | N                   | 187                 |

Table D.25 (Continued)

|   |                     | Relative Gist Index |
|---|---------------------|---------------------|
| What is your highest level of education?  | Pearson Correlation | .180*               |
|   | Sig. (2-tailed)     | .013                |
|   | N                   | 190                 |
| What is your highest certification level?   | Pearson Correlation | -.119               |
|   | Sig. (2-tailed)     | .101                |
|   | N                   | 191                 |
| How long have you been providing medical treatment in the pre-hospital setting at any certification level (in Years)          | Pearson Correlation | .077                |
|   | Sig. (2-tailed)     | .290                |
|   | N                   | 189                 |
| How long have you been providing medical treatment in the pre-hospital setting at your current certification level (in Years) | Pearson Correlation | .131                |
|   | Sig. (2-tailed)     | .074                |
|   | N                   | 188                 |
| Are you employed by an EMS/Rescue or Ambulance Agency (paid position)?  | Pearson Correlation | .004                |
|   | Sig. (2-tailed)     | .956                |
|   | N                   | 190                 |
| Are you a member of a volunteer EMS/Rescue or Ambulance Agency?   | Pearson Correlation | .090                |
|   | Sig. (2-tailed)     | .215                |
|   | N                   | 191                 |
| In your opinion, what type of area does your agency service?  | Pearson Correlation | .007                |
|   | Sig. (2-tailed)     | .920                |
|   | N                   | 191                 |
| In your opinion, what time of day do you normally work or volunteer in EMS?   | Pearson Correlation | .059                |
|   | Sig. (2-tailed)     | .421                |
|   | N                   | 191                 |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Table D.26

*ANOVA of Relative Gist Index with Highest Certification Level*

**Descriptive Statistics**

Dependent Variable: Relative Gist Index

| What is your highest certification level?                      | Mean    | Std. Deviation | N   |
|--|---------|----------------|-----|
| I have no EMS/medical experience/certifications                | 70.0000 | .              | 1   |
| CPR/AED for the Professional Rescuer (or equivalent)           | 49.4000 | 7.12741        | 5   |
| Certified First Responder (CFR)                                | 60.0000 | .              | 1   |
| Emergency Medical Technician- Basic (EMT-B)                    | 58.2500 | 18.83238       | 116 |
| Emergency Medical Technician- Intermediate (EMT-I)             | 55.7500 | 19.82213       | 4   |
| Advanced Emergency Medical Technician- Critical Care (AEMT-CC) | 52.3636 | 20.36798       | 11  |
| Advanced Emergency Medical Technician- Paramedic (AEMT-P)      | 53.3750 | 21.85993       | 48  |
| Critical Care Paramedic (AEMT-P CC)                            | 46.4000 | 16.80179       | 5   |
| Total  | 56.1623 | 19.44682       | 191 |

**Tests of Between-Subjects Effects**

Dependent Variable: Relative Gist Index

| Source          | Type III Sum of Squares | df  | Mean Square | F       | Sig. |
|-----------------|-------------------------|-----|-------------|---------|------|
| Corrected Model | 1949.273 <sup>a</sup>   | 7   | 278.468     | .729    | .648 |
| Intercept       | 71652.945               | 1   | 71652.945   | 187.577 | .000 |
| HighCert        | 1949.273                | 7   | 278.468     | .729    | .648 |
| Error           | 69904.695               | 183 | 381.993     |         |      |
| Total           | 674307.000              | 191 |             |         |      |
| Corrected Total | 71853.969               | 190 |             |         |      |

a. R Squared = .027 (Adjusted R Squared = -.010)

Table D.27

*ANOVA of Relative Gist Index with Gender*

| <b>Descriptive Statistics</b>           |         |                |     |
|---|---------|----------------|-----|
| Dependent Variable: Relative Gist Index |         |                |     |
| What gender are you?                    | Mean    | Std. Deviation | N   |
| Male                                    | 56.8636 | 20.23970       | 132 |
| Female                                  | 54.5000 | 17.74602       | 58  |
| Total                                   | 56.1421 | 19.49619       | 190 |

| <b>Tests of Between-Subjects Effects</b> |                         |     |             |          |      |
|--|-------------------------|-----|-------------|----------|------|
| Dependent Variable: Relative Gist Index  |                         |     |             |          |      |
| Source                                   | Type III Sum of Squares | df  | Mean Square | F        | Sig. |
| Corrected Model                          | 225.118 <sup>a</sup>    | 1   | 225.118     | .591     | .443 |
| Intercept                                | 499729.665              | 1   | 499729.665  | 1311.882 | .000 |
| Gender                                   | 225.118                 | 1   | 225.118     | .591     | .443 |
| Error                                    | 71614.045               | 188 | 380.926     |          |      |
| Total                                    | 670707.000              | 190 |             |          |      |
| Corrected Total                          | 71839.163               | 189 |             |          |      |

a. R Squared = .003 (Adjusted R Squared = -.002)

Table D.28

*ANOVA of Relative Gist Index with Experience at Current Certification (Scale-Based)*

| <b>Descriptive Statistics</b>  |         |                |     |  |  |
|--|---------|----------------|-----|--|--|
| Dependent Variable: Relative Gist Index  |         |                |     |  |  |
| How experienced are you at providing medical treatment in the pre-hospital setting at your current certification (Scale-Based) | Mean    | Std. Deviation | N   |  |  |
| None At All  | 60.2500 | 14.70544       | 4   |  |  |
| Very Low   | 51.7500 | 27.43173       | 8   |  |  |
| Low  | 53.8000 | 12.63894       | 15  |  |  |
| Medium   | 55.6296 | 16.75157       | 54  |  |  |
| High   | 54.4107 | 19.82723       | 56  |  |  |
| Very High  | 60.2564 | 22.83893       | 39  |  |  |
| The Highest Level (Expert)   | 57.6000 | 21.05707       | 15  |  |  |
| Total  | 56.1623 | 19.44682       | 191 |  |  |

| <b>Tests of Between-Subjects Effects</b>    |                         |     |             |         |      |
|---|-------------------------|-----|-------------|---------|------|
| Dependent Variable: Relative Gist Index     |                         |     |             |         |      |
| Source                                      | Type III Sum of Squares | df  | Mean Square | F       | Sig. |
| Corrected Model                             | 1178.137 <sup>a</sup>   | 6   | 196.356     | .511    | .799 |
| Intercept                                   | 271757.918              | 1   | 271757.918  | 707.504 | .000 |
| Experience at Current Certification (Scale) | 1178.137                | 6   | 196.356     | .511    | .799 |
| Error                                       | 70675.832               | 184 | 384.108     |         |      |
| Total                                       | 674307.000              | 191 |             |         |      |
| Corrected Total                             | 71853.969               | 190 |             |         |      |

a. R Squared = .016 (Adjusted R Squared = -.016)



Table D.29

*ANOVA of Relative Gist Index with Experience at Any Certification (Scale-Based)*

| <b>Descriptive Statistics</b>   |         |                |     |
|---|---------|----------------|-----|
| Dependent Variable: Relative Gist Index   |         |                |     |
| How experienced are you at providing medical treatment in the pre-hospital setting (at any certification) (Scale-Based) | Mean    | Std. Deviation | N   |
| None At All   | 60.5000 | .70711         | 2   |
| Very Low  | 52.6667 | 19.50043       | 6   |
| Low   | 51.7333 | 20.04804       | 15  |
| Medium  | 54.8367 | 16.40801       | 49  |
| High  | 55.0333 | 20.15866       | 60  |
| Very High   | 62.9512 | 20.12828       | 41  |
| The Highest Level (Expert)  | 52.4444 | 22.37967       | 18  |
| Total   | 56.1623 | 19.44682       | 191 |

| <b>Tests of Between-Subjects Effects</b> |                         |     |             |         |      |
|--|-------------------------|-----|-------------|---------|------|
| Dependent Variable: Relative Gist Index  |                         |     |             |         |      |
| Source                                   | Type III Sum of Squares | df  | Mean Square | F       | Sig. |
| Corrected Model                          | 2706.228 <sup>a</sup>   | 6   | 451.038     | 1.200   | .308 |
| Intercept                                | 179018.744              | 1   | 179018.744  | 476.363 | .000 |
| Experience at Any Certification (Scale)  | 2706.228                | 6   | 451.038     | 1.200   | .308 |
| Error                                    | 69147.741               | 184 | 375.803     |         |      |
| Total                                    | 674307.000              | 191 |             |         |      |
| Corrected Total                          | 71853.969               | 190 |             |         |      |

a. R Squared = .038 (Adjusted R Squared = .006)

Table D.30

*ANOVA of Relative Gist Index with Service Area Type*

**Descriptive Statistics**

Dependent Variable: Relative Gist Index

| In your opinion, what type of area does your agency service? | Mean    | Std. Deviation | N   |
|--|---------|----------------|-----|
| Not applicable   | 44.3333 | 28.91828       | 6   |
| Urban (city)   | 57.8833 | 20.97867       | 60  |
| Suburban   | 56.0208 | 17.56311       | 96  |
| Rural  | 55.5172 | 20.15231       | 29  |
| Total  | 56.1623 | 19.44682       | 191 |

**Tests of Between-Subjects Effects**

Dependent Variable: Relative Gist Index

| Source          | Type III Sum of Squares | df  | Mean Square | F       | Sig. |
|-----------------|-------------------------|-----|-------------|---------|------|
| Corrected Model | 1031.252 <sup>a</sup>   | 3   | 343.751     | .908    | .438 |
| Intercept       | 200195.142              | 1   | 200195.142  | 528.594 | .000 |
| AreaTyp         | 1031.252                | 3   | 343.751     | .908    | .438 |
| Error           | 70822.716               | 187 | 378.731     |         |      |
| Total           | 674307.000              | 191 |             |         |      |
| Corrected Total | 71853.969               | 190 |             |         |      |

a. R Squared = .014 (Adjusted R Squared = -.001)

Table D.31

*ANOVA of Relative Gist Index with Medical Case Scenario Decision Making Gist Sum*

**Descriptive Statistics**

Dependent Variable: Relative Gist Index

| Case Scenario Decision Making Gist Sum | Mean   | Std. Error | 95% Confidence Interval |             |
|--|--------|------------|-------------------------|-------------|
|  |        |            | Lower Bound             | Upper Bound |
| 0                                      | 49.825 | 3.060      | 43.785                  | 55.865      |
| 1                                      | 51.652 | 2.854      | 46.020                  | 57.284      |
| 2                                      | 62.267 | 3.534      | 55.293                  | 69.240      |
| 3                                      | 62.556 | 3.725      | 55.204                  | 69.907      |
| 4                                      | 61.125 | 4.839      | 51.576                  | 70.674      |
| 5                                      | 52.900 | 6.121      | 40.821                  | 64.979      |
| 6                                      | 60.429 | 7.315      | 45.991                  | 74.866      |
| 7                                      | 53.000 | 19.355     | 14.803                  | 91.197      |
| 8                                      | 61.167 | 7.902      | 45.573                  | 76.761      |
| 9                                      | 53.333 | 11.174     | 31.280                  | 75.387      |

**Tests of Between-Subjects Effects**

Dependent Variable: Relative Gist Index

| Source                                 | Type III Sum of Squares | df  | Mean Square | F       | Sig. |
|--|-------------------------|-----|-------------|---------|------|
| Corrected Model                        | 5575.242 <sup>a</sup>   | 9   | 619.471     | 1.654   | .104 |
| Intercept                              | 167967.250              | 1   | 167967.250  | 448.384 | .000 |
| Case Scenario Decision Making Gist Sum | 5575.242                | 9   | 619.471     | 1.654   | .104 |
| Error                                  | 65930.607               | 176 | 374.606     |         |      |
| Total                                  | 657044.000              | 186 |             |         |      |
| Corrected Total                        | 71505.849               | 185 |             |         |      |

a. R Squared = .078 (Adjusted R Squared = .031)

Table D.32

*ANOVA of Relative Gist Index with Medical Case Scenario Decision Making Verbatim Sum*

| <b>Descriptive Statistics</b>              |         |                |     |
|--|---------|----------------|-----|
| Dependent Variable: Relative Gist Index    |         |                |     |
| Case Scenario Decision Making Verbatim Sum | Mean    | Std. Deviation | N   |
| 0  | 57.9000 | 15.80752       | 10  |
| 1  | 63.0000 | 19.03380       | 8   |
| 2  | 26.5000 | 3.53553        | 2   |
| 3  | 64.0769 | 11.57916       | 13  |
| 4  | 50.0000 | 15.62632       | 12  |
| 5  | 58.9444 | 20.78312       | 18  |
| 6  | 56.7742 | 17.15170       | 31  |
| 7  | 61.3030 | 17.02110       | 33  |
| 8  | 53.7500 | 24.37021       | 36  |
| 9  | 47.3043 | 21.01609       | 23  |
| Total                                      | 56.1075 | 19.66006       | 186 |

| <b>Tests of Between-Subjects Effects</b>   |                         |     |             |         |      |
|--|-------------------------|-----|-------------|---------|------|
| Dependent Variable: Relative Gist Index    |                         |     |             |         |      |
| Source                                     | Type III Sum of Squares | df  | Mean Square | F       | Sig. |
| Corrected Model                            | 6470.573 <sup>a</sup>   | 9   | 718.953     | 1.946   | .048 |
| Intercept                                  | 270900.327              | 1   | 270900.327  | 733.117 | .000 |
| Case Scenario Decision Making Verbatim Sum | 6470.573                | 9   | 718.953     | 1.946   | .048 |
| Error                                      | 65035.276               | 176 | 369.519     |         |      |
| Total                                      | 657044.000              | 186 |             |         |      |
| Corrected Total                            | 71505.849               | 185 |             |         |      |

a. R Squared = .090 (Adjusted R Squared = .044)

Table D.33

*Correlation of Relative Gist Index with Medical Case Scenario Decision Making Gist and Verbatim Sums*

|  |                     | Relative Gist Index (RGI) | Case Scenario Decision Making Gist Sum | Case Scenario Decision Making Verbatim Sum |
|--|---------------------|---------------------------|--|--|
| Relative Gist Index (RGI)                  | Pearson Correlation | 1                         |  |  |
|  | Sig. (2-tailed)     |                           |  |  |
|  | N                   | 191                       |  |  |
| Case Scenario Decision Making Gist Sum     | Pearson Correlation | .149*                     | 1                                      |  |
|  | Sig. (2-tailed)     | .043                      |  |  |
|  | N                   | 186                       | 212                                    |  |
| Case Scenario Decision Making Verbatim Sum | Pearson Correlation | -.106                     | -.734**                                | 1  |
|  | Sig. (2-tailed)     | .149                      | .000                                   |  |
|  | N                   | 186                       | 212                                    | 212  |

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

# **Appendix E**

## **Medical Case Scenario**

### **Memory Questions**

Table E.1

*Medical Case Scenario 1- Memory Frequency Data**(28- year-old male patient who fell from the Second Floor complaining of leg pain)*

|  | Type of Answer                          | Selected  |         | Not Selected |         |
|--|---|-----------|---------|--------------|---------|
|  |   | Frequency | Percent | Frequency    | Percent |
| <b>10/10, extreme pain in his upper leg</b>            | Correct                                 | 178       | 81.7    | 40           | 18.3    |
| <b>Rotation of the ankle of the injured leg</b>        | Wrong- Associated with Different Injury | 3         | 1.4     | 215          | 98.6    |
| <b>Stable (no signs of fractures) pelvis and ankle</b> | Gist Assumption from other Findings     | 42        | 19.3    | 176          | 80.7    |
| <b>Mild back pain</b>                                  | Wrong- False Inference                  | 13        | 6       | 205          | 94      |
| <b>Dizziness</b>                                       | Correct                                 | 87        | 39.9    | 131          | 60.1    |

Table E.2

*Medical Case Scenario 2- Memory Frequency Data**(64-year-old female patient complaining of chest pain)*

|  | Type of Answer                          | Selected  |         | Not Selected |         |
|--|---|-----------|---------|--------------|---------|
|  |   | Frequency | Percent | Frequency    | Percent |
| <b>Crushing chest pain</b>                     | Correct                                 | 174       | 79.8    | 44           | 20.2    |
| <b>Pain radiating to the left arm and neck</b> | Wrong- Gist<br>Consistent<br>Distracter | 29        | 13.3    | 189          | 86.7    |
| <b>Past medical history of diabetes</b>        | Correct                                 | 186       | 85.3    | 32           | 14.7    |
| <b>Has a pacemaker</b>                         | Wrong- Gist<br>Consistent<br>Distracter | 3         | 1.4     | 215          | 98.6    |
| <b>Patient took aspirin</b>                    | Wrong- Gist<br>Consistent<br>Distracter | 4         | 1.8     | 214          | 98.2    |



Table E.3

*Medical Case Scenario 3- Memory Frequency Data**(25-year-old female patient complaining of difficulty breathing)*

|   | Type of Answer                          | Selected  |         | Not Selected |         |
|---|---|-----------|---------|--------------|---------|
|   |   | Frequency | Percent | Frequency    | Percent |
| <b>Wheezes Present upon obtaining lung sounds</b>                               | Correct                                 | 145       | 66.5    | 73           | 33.5    |
| <b>History of asthma</b>  | Wrong- Gist<br>Consistent<br>Distracter | 11        | 5       | 207          | 95      |
| <b>Patient complaining of tingling and/or weakness in her fingers and hands</b> | Wrong- Gist<br>Consistent<br>Distracter | 16        | 7.3     | 202          | 92.7    |
| <b>Patient was tripodding (leaning over gasping for breath)</b>                 | Correct                                 | 202       | 92.7    | 16           | 7.3     |
| <b>Oxygen saturation reading of 90%</b>   | Wrong- No reading given                 | 6         | 2.8     | 212          | 97.2    |

Table E.4

*Medical Case Scenario 4- Memory Frequency Data**(14-year-old male patient with burns to his hands)*

|   | Type of Answer   | Selected  |         | Not Selected |         |
|---|--|-----------|---------|--------------|---------|
|   |  | Frequency | Percent | Frequency    | Percent |
| <b>Consistent pain throughout his hands</b>       | Wrong- Consistent with Burns but Opposite to Given Information | 37        | 17      | 181          | 83      |
| <b>Red, puffy skin with blisters</b>              | Correct  | 202       | 92.7    | 16           | 7.3     |
| <b>Difficulty breathing/shortness of breathe</b>  | Wrong- Consistent with Different Burns                         | 2         | 0.9     | 216          | 99.1    |
| <b>Dizziness/nausea</b>                           | Wrong- Symptom not given                                       | 33        | 15.1    | 185          | 84.9    |
| <b>Elevated heart rate (~100 beat per minute)</b> | Correct  | 133       | 61      | 85           | 39      |

Table E.5

*Medical Case Scenario 5- Memory Frequency Data**(34-year-old male patient who was driving his vehicle it rolled multiple times)*

|  | Type of Answer                          | Selected  |         | Not Selected |         |
|--|---|-----------|---------|--------------|---------|
|  |   | Frequency | Percent | Frequency    | Percent |
| <b>Unreactive or sluggish pupils</b>                       | Wrong- Gist Consistent with Head Trauma | 8         | 3.7     | 210          | 96.3    |
| <b>Elevated blood pressure (Systolic greater than 140)</b> | Correct                                 | 78        | 35.8    | 140          | 64.2    |
| <b>Neck and back pain</b>                                  | Correct                                 | 165       | 75.7    | 53           | 24.3    |
| <b>Difficulty breathing</b>                                | Correct                                 | 139       | 63.8    | 79           | 36.2    |
| <b>Spidering of the windshield glass</b>                   | Wrong- Fact not given                   | 17        | 7.8     | 201          | 92.2    |

Table E.6

*Medical Case Scenario 6- Memory Frequency Data*

*(33-year-old female patient who was initially dispatched as unresponsive, but was conscious, not alert upon arrival)*

|   | Type of Answer                      | Selected  |         | Not Selected |         |
|---|-------------------------------------|-----------|---------|--------------|---------|
|   |                                     | Frequency | Percent | Frequency    | Percent |
| <b>Past history of diabetes</b>               | Gist Assumption from other Findings | 129       | 59.2    | 89           | 40.8    |
| <b>Low blood glucose (sugar) level</b>        | Wrong- Fact not given               | 12        | 5.5     | 206          | 94.5    |
| <b>Blood pressure lower than 100 systolic</b> | Wrong                               | 11        | 5       | 207          | 95      |
| <b>Cool and clammy skin</b>                   | Correct                             | 139       | 63.8    | 79           | 36.2    |
| <b>Has an insulin pump on her waist</b>       | Correct                             | 197       | 90.4    | 21           | 9.6     |

Table E.7

*Medical Case Scenario 7- Memory Frequency Data**(12-year-old female patient who fell off her bike and injured her arms)*

|   | Type of Answer                      | Selected  |         | Not Selected |         |
|---|-------------------------------------|-----------|---------|--------------|---------|
|   |                                     | Frequency | Percent | Frequency    | Percent |
| <b>Abrasions and lacerations to her hands</b> | Correct                             | 210       | 96.3    | 8            | 3.7     |
| <b>Difficulty walking</b>                     | Wrong                               | 1         | 0.5     | 217          | 99.5    |
| <b>Difficulty breathing</b>                   | Wrong- False gist from SpO2 reading | 6         | 2.8     | 212          | 97.2    |
| <b>Warm and pink skin</b>                     | Correct                             | 160       | 73.4    | 58           | 26.6    |
| <b>Abrasions and lacerations to her knees</b> | Wrong- Different injury location    | 42        | 19.3    | 176          | 80.7    |

Table E.8

*Medical Case Scenario Memory Correct Score Data (Percentage)*

*Scenarios 1, 2, 3, 4, 6, and 7 had two possible signs or symptoms that were actually presented in the scenario. Scenario 5 had 3 possible signs or symptoms that were actually presented.*

|   | <b>Scenario<br/>1</b> | <b>Scenario<br/>2</b> | <b>Scenario<br/>3</b> | <b>Scenario<br/>4</b> | <b>Scenario<br/>5</b> | <b>Scenario<br/>6</b> | <b>Scenario<br/>7</b> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 0 | 10.6                  | 2.8                   | 3.2                   | 4.6                   | 3.7                   | 4.1                   | 2.3                   |
| 1 | 57.3                  | 29.4                  | 34.4                  | 37.2                  | 31.7                  | 37.6                  | 25.7                  |
| 2 | 32.1                  | 67.9                  | 62.4                  | 58.3                  | 50.5                  | 58.3                  | 72.0                  |
| 3 | -                     | -                     | -                     | -                     | 14.2                  | -                     | -                     |

Table E.9

*Medical Case Scenario Memory Total Score Data (Frequency)*

*Scenario 1, 2, 3, 4, 6, and 7 scored on a scale of -3 to 2 and Scenario 5 scored on a scale of -2 to 3. Scores were calculated by each of the five answer choices holding a value of 1 point if selected and 0 points if not selected. Total scores found by subtracting all wrong answer scores from total correct answer scores.*

|    | <b>Scenario<br/>1</b> | <b>Scenario<br/>2</b> | <b>Scenario<br/>3</b> | <b>Scenario<br/>4</b> | <b>Scenario<br/>5</b> | <b>Scenario<br/>6</b> | <b>Scenario<br/>7</b> |
|----|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| -2 | 2                     | -                     | 1                     | 1                     | -                     | 1                     | -                     |
| -1 | 9                     | 3                     | 4                     | 7                     | 3                     | 10                    | 3                     |
| 0  | 42                    | 22                    | 14                    | 31                    | 15                    | 61                    | 17                    |
| 1  | 110                   | 59                    | 78                    | 86                    | 68                    | 96                    | 72                    |
| 2  | 55                    | 134                   | 121                   | 93                    | 104                   | 50                    | 126                   |
| 3  | -                     | -                     | -                     | -                     | 28                    | -                     | -                     |

Table E.10

*Medical Case Scenario Memory Total Score Data (Percentage)*

*Scenario 1, 2, 3, 4, 6, and 7 scored on a scale of -3 to 2 and Scenario 5 scored on a scale of -2 to 3. Scores were calculated by each of the five answer choices holding a value of 1 point if selected and 0 points if not selected. Total scores found by subtracting all wrong answer scores from total correct answer scores.*

|    | <b>Scenario<br/>1</b> | <b>Scenario<br/>2</b> | <b>Scenario<br/>3</b> | <b>Scenario<br/>4</b> | <b>Scenario<br/>5</b> | <b>Scenario<br/>6</b> | <b>Scenario<br/>7</b> |
|----|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| -2 | .9                    | -                     | 0.5                   | 0.5                   | -                     | 0.5                   | -                     |
| -1 | 4.1                   | 1.4                   | 1.8                   | 3.2                   | 1.4                   | 4.6                   | 1.4                   |
| 0  | 19.3                  | 10.1                  | 6.4                   | 14.2                  | 6.9                   | 28                    | 7.8                   |
| 1  | 50.5                  | 27.1                  | 35.8                  | 39.4                  | 31.2                  | 44                    | 33                    |
| 2  | 25.2                  | 61.5                  | 55.5                  | 42.7                  | 47.7                  | 22.9                  | 57.8                  |
| 3  | -                     | -                     | -                     | -                     | 12.8                  | -                     | -                     |



Table E.11

*Correlation of Memory Question Scores with Confidence Rating Scores*

|                                   |                     | Relative Gist Index (RGI) | Memory Score Scenario 1 | Memory Score Scenario 2 | Memory Score Scenario 3 | Memory Score Scenario 4 | Memory Score Scenario 5 | Memory Score Scenario 6 | Memory Score Scenario 7 |
|-----------------------------------|---------------------|---------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Relative Gist Index               | Pearson Correlation | 1                         | .027                    | -.094                   | .072                    | -.040                   | .017                    | .114                    | -.024                   |
|                                   | Sig. (2-tailed)     |                           | .714                    | .194                    | .320                    | .587                    | .820                    | .115                    | .737                    |
|                                   | N                   | 191                       | 191                     | 191                     | 191                     | 191                     | 191                     | 191                     | 191                     |
| Scenario 1-Treatment 1 Confidence | Pearson Correlation | -.037                     | -.030                   | -.042                   | .035                    | .117                    | -.036                   | .098                    | .043                    |
|                                   | Sig. (2-tailed)     | .611                      | .661                    | .538                    | .608                    | .086                    | .599                    | .150                    | .526                    |
|                                   | N                   | 189                       | 216                     | 216                     | 216                     | 216                     | 216                     | 216                     | 216                     |
| Scenario 1-Treatment 2 Confidence | Pearson Correlation | -.078                     | -.130                   | -.108                   | -.100                   | -.001                   | .029                    | -.030                   | .039                    |
|                                   | Sig. (2-tailed)     | .283                      | .056                    | .113                    | .141                    | .988                    | .676                    | .655                    | .565                    |
|                                   | N                   | 190                       | 217                     | 217                     | 217                     | 217                     | 217                     | 217                     | 217                     |
| Scenario 2 Confidence             | Pearson Correlation | .040                      | .003                    | -.039                   | -.048                   | .040                    | .016                    | -.071                   | -.010                   |
|                                   | Sig. (2-tailed)     | .582                      | .964                    | .570                    | .481                    | .556                    | .812                    | .294                    | .879                    |
|                                   | N                   | 191                       | 218                     | 218                     | 218                     | 218                     | 218                     | 218                     | 218                     |
| Scenario 3 Confidence             | Pearson Correlation | .023                      | .028                    | -.069                   | .009                    | -.005                   | -.017                   | -.013                   | -.004                   |
|                                   | Sig. (2-tailed)     | .758                      | .686                    | .315                    | .900                    | .943                    | .803                    | .845                    | .950                    |
|                                   | N                   | 189                       | 216                     | 216                     | 216                     | 216                     | 216                     | 216                     | 216                     |
| Scenario 4 Confidence             | Pearson Correlation | .017                      | -.093                   | -.050                   | .015                    | .113                    | -.071                   | .115                    | .020                    |
|                                   | Sig. (2-tailed)     | .814                      | .173                    | .459                    | .824                    | .096                    | .294                    | .090                    | .774                    |
|                                   | N                   | 191                       | 218                     | 218                     | 218                     | 218                     | 218                     | 218                     | 218                     |
| Scenario 5-Patient 1 Confidence   | Pearson Correlation | .100                      | -.006                   | .102                    | .028                    | .080                    | .000                    | .075                    | .056                    |
|                                   | Sig. (2-tailed)     | .170                      | .928                    | .134                    | .680                    | .239                    | .998                    | .270                    | .410                    |
|                                   | N                   | 190                       | 217                     | 217                     | 217                     | 217                     | 217                     | 217                     | 217                     |
| Scenario 5-Patient 2 Confidence   | Pearson Correlation | .104                      | -.032                   | -.020                   | -.044                   | .087                    | -.136*                  | .066                    | .062                    |
|                                   | Sig. (2-tailed)     | .154                      | .643                    | .768                    | .514                    | .199                    | .046                    | .332                    | .362                    |
|                                   | N                   | 191                       | 218                     | 218                     | 218                     | 218                     | 218                     | 218                     | 218                     |
| Scenario 6 Confidence             | Pearson Correlation | .016                      | .044                    | -.058                   | .005                    | .035                    | -.057                   | -.052                   | .054                    |
|                                   | Sig. (2-tailed)     | .823                      | .519                    | .394                    | .943                    | .608                    | .399                    | .442                    | .431                    |
|                                   | N                   | 191                       | 218                     | 218                     | 218                     | 218                     | 218                     | 218                     | 218                     |
| Scenario 7 Confidence             | Pearson Correlation | .009                      | -.015                   | -.066                   | .015                    | .054                    | -.022                   | -.016                   | .012                    |
|                                   | Sig. (2-tailed)     | .898                      | .825                    | .336                    | .832                    | .435                    | .749                    | .817                    | .861                    |
|                                   | N                   | 188                       | 214                     | 214                     | 214                     | 214                     | 214                     | 214                     | 214                     |

Table E.12

*Correlation of Memory Question Scores (with one another)*

|                         |                     | Relative Gist Index (RGI) | Memory Score Scenario 1 | Memory Score Scenario 2 | Memory Score Scenario 3 | Memory Score Scenario 4 | Memory Score Scenario 5 | Memory Score Scenario 6 | Memory Score Scenario 7 |
|-------------------------|---------------------|---------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Memory Score Scenario 1 | Pearson Correlation | .027                      | 1                       |                         |                         |                         |                         |                         |                         |
|                         | Sig. (2-tailed)     | .714                      |                         |                         |                         |                         |                         |                         |                         |
|                         | N                   | 191                       | 218                     |                         |                         |                         |                         |                         |                         |
| Memory Score Scenario 2 | Pearson Correlation | -.094                     | .146*                   | 1                       |                         |                         |                         |                         |                         |
|                         | Sig. (2-tailed)     | .194                      | .031                    |                         |                         |                         |                         |                         |                         |
|                         | N                   | 191                       | 218                     | 218                     |                         |                         |                         |                         |                         |
| Memory Score Scenario 3 | Pearson Correlation | .072                      | .134*                   | .242**                  | 1                       |                         |                         |                         |                         |
|                         | Sig. (2-tailed)     | .320                      | .048                    | .000                    |                         |                         |                         |                         |                         |
|                         | N                   | 191                       | 218                     | 218                     | 218                     |                         |                         |                         |                         |
| Memory Score Scenario 4 | Pearson Correlation | -.040                     | .141*                   | .242**                  | .196**                  | 1                       |                         |                         |                         |
|                         | Sig. (2-tailed)     | .587                      | .038                    | .000                    | .004                    |                         |                         |                         |                         |
|                         | N                   | 191                       | 218                     | 218                     | 218                     | 218                     |                         |                         |                         |
| Memory Score Scenario 5 | Pearson Correlation | .017                      | .190**                  | .152*                   | .199**                  | .244**                  | 1                       |                         |                         |
|                         | Sig. (2-tailed)     | .820                      | .005                    | .025                    | .003                    | .000                    |                         |                         |                         |
|                         | N                   | 191                       | 218                     | 218                     | 218                     | 218                     | 218                     |                         |                         |
| Memory Score Scenario 6 | Pearson Correlation | .114                      | .054                    | .160*                   | .207**                  | .131                    | .082                    | 1                       |                         |
|                         | Sig. (2-tailed)     | .115                      | .425                    | .018                    | .002                    | .054                    | .228                    |                         |                         |
|                         | N                   | 191                       | 218                     | 218                     | 218                     | 218                     | 218                     | 218                     |                         |
| Memory Score Scenario 7 | Pearson Correlation | -.024                     | .057                    | .089                    | .193**                  | .124                    | .237**                  | .102                    | 1                       |
|                         | Sig. (2-tailed)     | .737                      | .403                    | .190                    | .004                    | .068                    | .000                    | .134                    |                         |
|                         | N                   | 191                       | 218                     | 218                     | 218                     | 218                     | 218                     | 218                     | 218                     |

a. Cannot be computed because at least one of the variables is constant.

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Table E.13

*Correlation of Memory Question Scores with EMS Demographic and Personal Demographic**Information*

|   |                     | Memory<br>Score<br>Scenario<br>1 | Memory<br>Score<br>Scenario<br>2 | Memory<br>Score<br>Scenario<br>3 | Memory<br>Score<br>Scenario<br>4 | Memory<br>Score<br>Scenario<br>5 | Memory<br>Score<br>Scenario<br>6 | Memory<br>Score<br>Scenario<br>7 |
|---|---------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| What is your highest certification level?   | Pearson Correlation | .086                             | -.022                            | .025                             | -.092                            | -.165*                           | .042                             | .042                             |
|   | Sig. (2-tailed)     | .205                             | .748                             | .711                             | .179                             | .015                             | .537                             | .536                             |
|   | N                   | 217                              | 217                              | 217                              | 217                              | 217                              | 217                              | 217                              |
| How long have you been providing medical treatment in the pre-hospital setting at any certification level (In Years)          | Pearson Correlation | .080                             | -.170*                           | -.029                            | -.137*                           | -.134                            | -.018                            | -.179**                          |
|   | Sig. (2-tailed)     | .245                             | .013                             | .675                             | .044                             | .050                             | .791                             | .009                             |
|   | N                   | 215                              | 215                              | 215                              | 215                              | 215                              | 215                              | 215                              |
| How long have you been providing medical treatment in the pre-hospital setting at your current certification level (In Years) | Pearson Correlation | .058                             | -.175*                           | -.030                            | -.148*                           | -.105                            | .007                             | -.171*                           |
|   | Sig. (2-tailed)     | .396                             | .010                             | .666                             | .030                             | .126                             | .913                             | .012                             |
|   | N                   | 214                              | 214                              | 214                              | 214                              | 214                              | 214                              | 214                              |
| Are you employed by an EMS/Rescue or Ambulance Agency (paid position)?  | Pearson Correlation | -.005                            | -.028                            | .017                             | -.007                            | -.054                            | .034                             | -.046                            |
|   | Sig. (2-tailed)     | .945                             | .682                             | .809                             | .921                             | .430                             | .621                             | .500                             |
|   | N                   | 217                              | 217                              | 217                              | 217                              | 217                              | 217                              | 217                              |
| Are you a member of a volunteer EMS/Rescue or Ambulance Agency?   | Pearson Correlation | -.047                            | -.084                            | -.001                            | .087                             | .092                             | -.065                            | .009                             |
|   | Sig. (2-tailed)     | .490                             | .216                             | .983                             | .201                             | .178                             | .337                             | .898                             |
|   | N                   | 218                              | 218                              | 218                              | 218                              | 218                              | 218                              | 218                              |
| What gender are you?  | Pearson Correlation | -.046                            | -.134*                           | .093                             | -.077                            | .144*                            | .055                             | -.004                            |
|   | Sig. (2-tailed)     | .498                             | .048                             | .171                             | .261                             | .034                             | .422                             | .954                             |
|   | N                   | 217                              | 217                              | 217                              | 217                              | 217                              | 217                              | 217                              |
| How old are you? (In Years)   | Pearson Correlation | .188**                           | -.150*                           | -.034                            | -.126                            | -.063                            | -.034                            | -.108                            |
|   | Sig. (2-tailed)     | .006                             | .029                             | .619                             | .066                             | .359                             | .622                             | .116                             |
|   | N                   | 212                              | 212                              | 212                              | 212                              | 212                              | 212                              | 212                              |
| What is your highest level of education?  | Pearson Correlation | -.015                            | -.147*                           | .026                             | -.083                            | -.167*                           | -.066                            | -.009                            |
|   | Sig. (2-tailed)     | .822                             | .031                             | .706                             | .223                             | .014                             | .331                             | .898                             |
|   | N                   | 217                              | 217                              | 217                              | 217                              | 217                              | 217                              | 217                              |

\* . Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table E.14

*Correlation of Medical Scenario Memory Answers Correct Score Average of Control and Conflict Scenarios with EMS and Personal Demographics*

|  |  | Memory Answers<br>Correct Score for<br>Control Scenarios | Memory Answers<br>Correct Score for<br>Conflict Scenarios |
|--|--|--|---|
| Memory Answers Correct<br>Score for Control Scenarios  | Pearson<br>Correlation<br>Sig. (2-tailed)<br>N | 1<br><br>218   | .439**<br><br>218   |
| Memory Answers Correct<br>Score for Conflict Scenarios   | Pearson<br>Correlation<br>Sig. (2-tailed)<br>N | .439**<br><br>218  | 1<br><br>218  |
| Highest Certification Level<br>(BLS/ALS)   | Pearson<br>Correlation<br>Sig. (2-tailed)<br>N | -.080<br><br>210   | -.079<br><br>210  |
| How long have you been<br>providing medical treatment<br>in the pre-hospital setting at<br>any certification level (in<br>years).          | Pearson<br>Correlation<br>Sig. (2-tailed)<br>N | .091<br><br>218  | .010<br><br>218   |
| How long have you been<br>providing medical treatment<br>in the pre-hospital setting at<br>your current certification<br>level (in years). | Pearson<br>Correlation<br>Sig. (2-tailed)<br>N | .049<br><br>218  | -.031<br><br>218  |
| Are you employed by an<br>EMS/Rescue or Ambulance<br>Agency (paid position)?   | Pearson<br>Correlation<br>Sig. (2-tailed)<br>N | .002<br><br>217  | .024<br><br>217   |

Table E.14 (Continued)

|   |                        | Memory Answers<br>Correct Score for<br>Control Scenarios | Memory Answers<br>Correct Score for<br>Conflict Scenarios |
|---|------------------------|--|---|
| Are you a member of a<br>volunteer EMS/Rescue or<br>Ambulance Agency?             | Pearson<br>Correlation | .031   | -.004   |
|   | Sig. (2-tailed)        | .651   | .949  |
|   | N                      | 218  | 218   |
| In your opinion, what type of<br>area does your agency<br>service?                | Pearson<br>Correlation | -.060  | -.112   |
|   | Sig. (2-tailed)        | .380   | .099  |
|   | N                      | 218  | 218   |
| In your opinion, what time of<br>day do you normally work or<br>volunteer in EMS? | Pearson<br>Correlation | .048   | .016  |
|   | Sig. (2-tailed)        | .479   | .816  |
|   | N                      | 218  | 218   |
| What gender are you?  | Pearson<br>Correlation | -.049  | .096  |
|   | Sig. (2-tailed)        | .471   | .157  |
|   | N                      | 217  | 217   |
| Highest Education Level<br>(Grouped)  | Pearson<br>Correlation | -.081  | -.145*  |
|   | Sig. (2-tailed)        | .234   | .033  |
|   | N                      | 217  | 217   |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

## **Appendix F**

### **Cognitive Reflection Test (CRT)**

Table F.1

*Cognitive Reflection Test (CRT) Frequency Data*

|                             | Question 1-<br>“A bat and a ball cost \$1.10 in total. The bat costs \$1.00 more than the ball. How much does the ball cost (in cents)? |         | Question 2-<br>“If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets (in minutes)? |         | Question 3-<br>“In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake (in days)? |         |
|-----------------------------|---|---------|---|---------|---|---------|
|                             | Frequency   | Percent | Frequency   | Percent | Frequency   | Percent |
| Incorrect (Not Intuitive)   | 12  | 5.5     | 38  | 17.4    | 38  | 17.4    |
| Correct                     | 84  | 38.5    | 97  | 44.5    | 122   | 56.0    |
| Incorrect (Intuitive Value) | 122   | 56.0    | 83  | 38.1    | 58  | 26.6    |

Table F.2

*Correlation of Cognitive Reflection Test (CRT) Questions with EMS Demographic and Personal Demographic Information*

|   |                     | CRT Total Score | CRT Question 1 | CRT Question 2 | CRT Question 3 |
|---|---------------------|-----------------|----------------|----------------|----------------|
| Relative Gist Index (RGI)   | Pearson Correlation | .029            | .061           | -.002          | .011           |
|   | Sig. (2-tailed)     | .688            | .399           | .975           | .881           |
|   | N                   | 191             | 191            | 191            | 191            |
| CRT Total Score   | Pearson Correlation | 1               | .782**         | .820**         | .799**         |
|   | Sig. (2-tailed)     |                 | .000           | .000           | .000           |
|   | N                   | 218             | 218            | 218            | 218            |
| CRT Question 1  | Pearson Correlation | .782**          | 1              | .467**         | .418**         |
|   | Sig. (2-tailed)     | .000            |                | .000           | .000           |
|   | N                   | 218             | 218            | 218            | 218            |
| CRT Question 2  | Pearson Correlation | .820**          | .467**         | 1              | .497**         |
|   | Sig. (2-tailed)     | .000            | .000           |                | .000           |
|   | N                   | 218             | 218            | 218            | 218            |
| CRT Question 3  | Pearson Correlation | .799**          | .418**         | .497**         | 1              |
|   | Sig. (2-tailed)     | .000            | .000           | .000           |                |
|   | N                   | 218             | 218            | 218            | 218            |
| Sum of Medical Case Scenario Decision Gist Questions                        | Pearson Correlation | -.027           | .004           | -.035          | -.034          |
|   | Sig. (2-tailed)     | .694            | .952           | .616           | .620           |
|   | N                   | 212             | 212            | 212            | 212            |
| Sum of Medical Case Scenario Decision Verbatim Questions                    | Pearson Correlation | .108            | .058           | .112           | .089           |
|   | Sig. (2-tailed)     | .117            | .402           | .103           | .198           |
|   | N                   | 212             | 212            | 212            | 212            |
| In your opinion, what type of area does your agency service?                | Pearson Correlation | -.088           | -.025          | -.033          | -.153*         |
|   | Sig. (2-tailed)     | .194            | .711           | .626           | .024           |
|   | N                   | 218             | 218            | 218            | 218            |
| In your opinion, what time of day do you normally work or volunteer in EMS? | Pearson Correlation | .042            | .072           | .061           | -.031          |
|   | Sig. (2-tailed)     | .536            | .289           | .370           | .646           |
|   | N                   | 218             | 218            | 218            | 218            |
| Are you a member of a volunteer EMS/Rescue or Ambulance Agency?             | Pearson Correlation | .102            | .200**         | .046           | .002           |
|   | Sig. (2-tailed)     | .132            | .003           | .497           | .974           |
|   | N                   | 218             | 218            | 218            | 218            |



Table F.2 (Continued)

|  |                     | CRT Total<br>Score | CRT Question<br>1 | CRT Question<br>2 | CRT<br>Question 3 |
|--|---------------------|--------------------|-------------------|-------------------|-------------------|
| Are you employed by an EMS/Rescue or Ambulance Agency (paid position)?   | Pearson Correlation | -.103              | -.158*            | -.059             | -.032             |
|  | Sig. (2-tailed)     | .129               | .020              | .386              | .641              |
|  | N                   | 217                | 217               | 217               | 217               |
| How long have you been providing medical treatment in the pre-hospital setting at your current certification level (in years). | Pearson Correlation | -.127              | -.226**           | .031              | -.113             |
|  | Sig. (2-tailed)     | .063               | .001              | .650              | .098              |
|  | N                   | 214                | 214               | 214               | 214               |
| How experienced are you at providing medical treatment in the pre-hospital setting (at your current certification) (Scale)     | Pearson Correlation | -.186**            | -.253**           | -.066             | -.131             |
|  | Sig. (2-tailed)     | .006               | .000              | .332              | .054              |
|  | N                   | 218                | 218               | 218               | 218               |
| How long have you been providing medical treatment in the pre-hospital setting at any certification level (in years).          | Pearson Correlation | -.162*             | -.267**           | .012              | -.136*            |
|  | Sig. (2-tailed)     | .018               | .000              | .858              | .046              |
|  | N                   | 215                | 215               | 215               | 215               |
| How experienced are you at providing medical treatment in the pre-hospital setting (at any certification). (Scale)             | Pearson Correlation | -.132              | -.225**           | -.016             | -.078             |
|  | Sig. (2-tailed)     | .051               | .001              | .812              | .250              |
|  | N                   | 218                | 218               | 218               | 218               |
| What is your highest certification level?  | Pearson Correlation | -.073              | -.203**           | .044              | -.019             |
|  | Sig. (2-tailed)     | .286               | .003              | .517              | .778              |
|  | N                   | 217                | 217               | 217               | 217               |
| How old are you? (In Years)  | Pearson Correlation | -.112              | -.209**           | .049              | -.113             |
|  | Sig. (2-tailed)     | .103               | .002              | .476              | .101              |
|  | N                   | 212                | 212               | 212               | 212               |
| What is your highest level of education?   | Pearson Correlation | .009               | -.020             | .013              | .027              |
|  | Sig. (2-tailed)     | .897               | .769              | .844              | .689              |
|  | N                   | 217                | 217               | 217               | 217               |
| What gender are you?   | Pearson Correlation | -.075              | -.007             | -.088             | -.085             |
|  | Sig. (2-tailed)     | .271               | .923              | .197              | .214              |
|  | N                   | 217                | 217               | 217               | 217               |

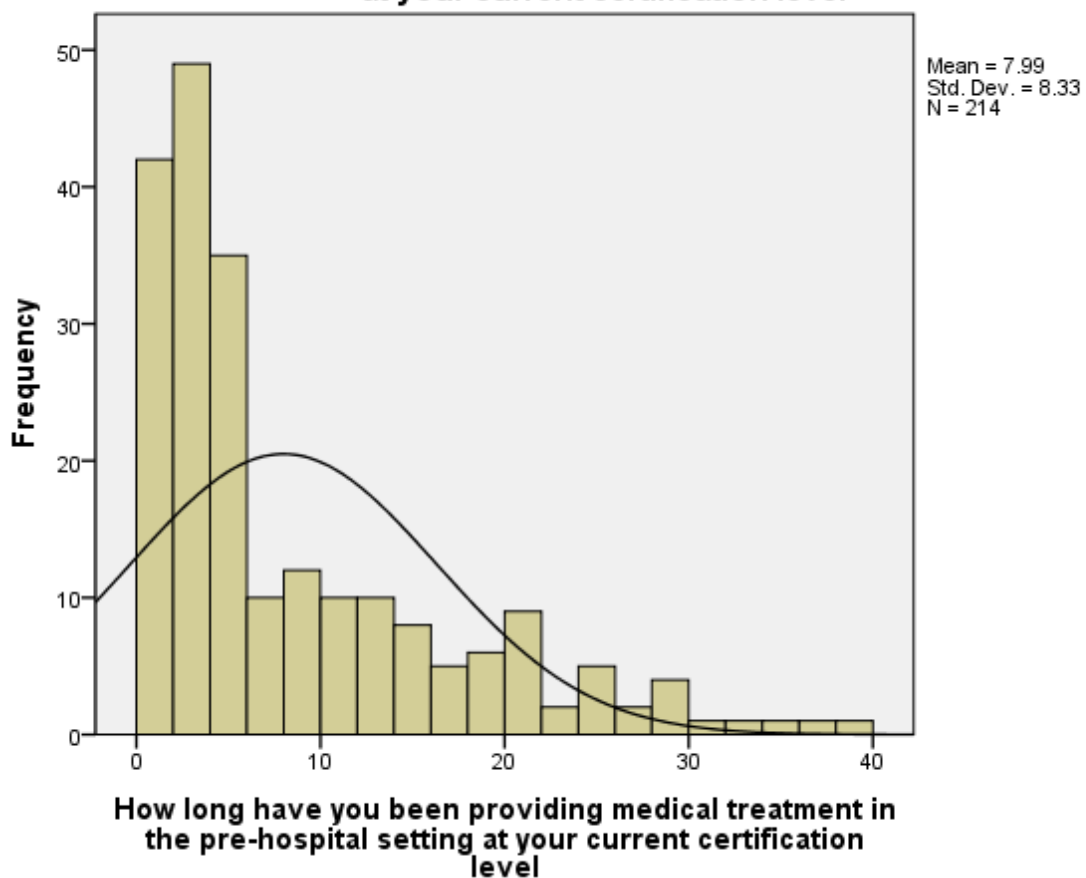
\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

# **Appendix G**

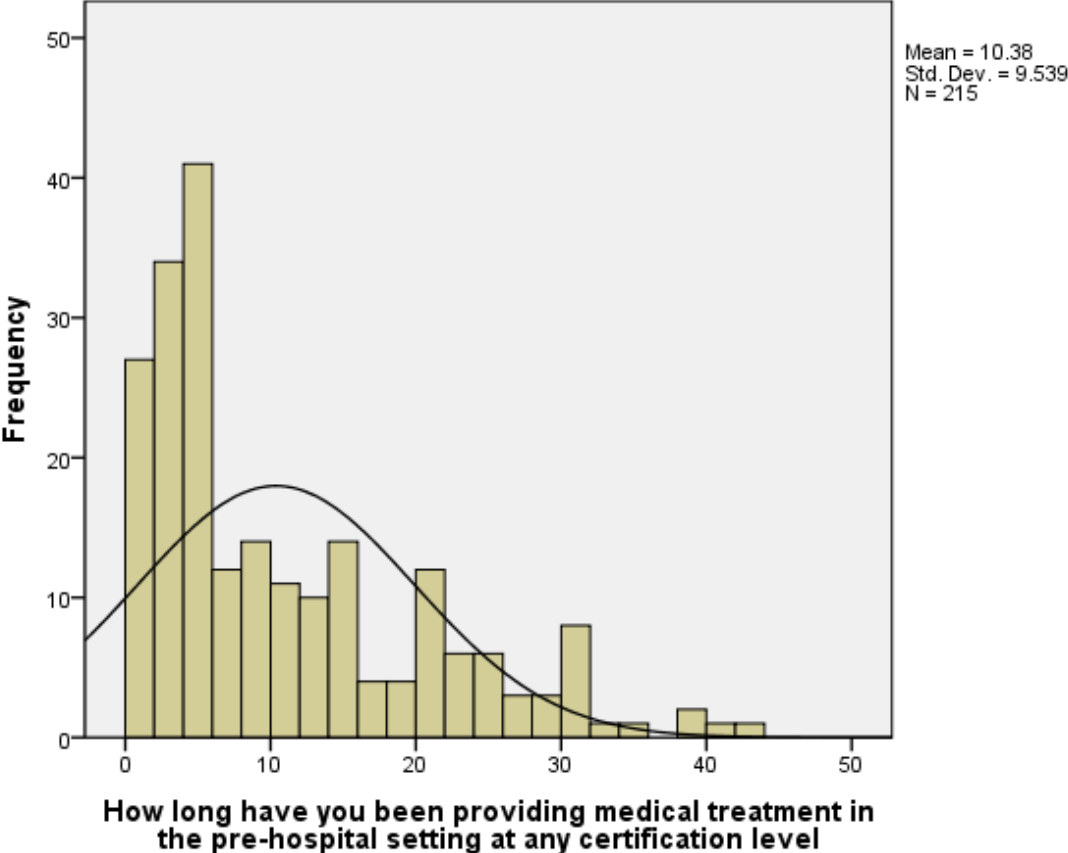
## **Figures**

**How long have you been providing medical treatment in the pre-hospital setting at your current certification level**



*Figure G.1.* Histogram of Experience Level at Current Certification (in years)

**How long have you been providing medical treatment in the pre-hospital setting at any certification level**



*Figure G.2.* Histogram of Experience Level at Any Certification (in years)

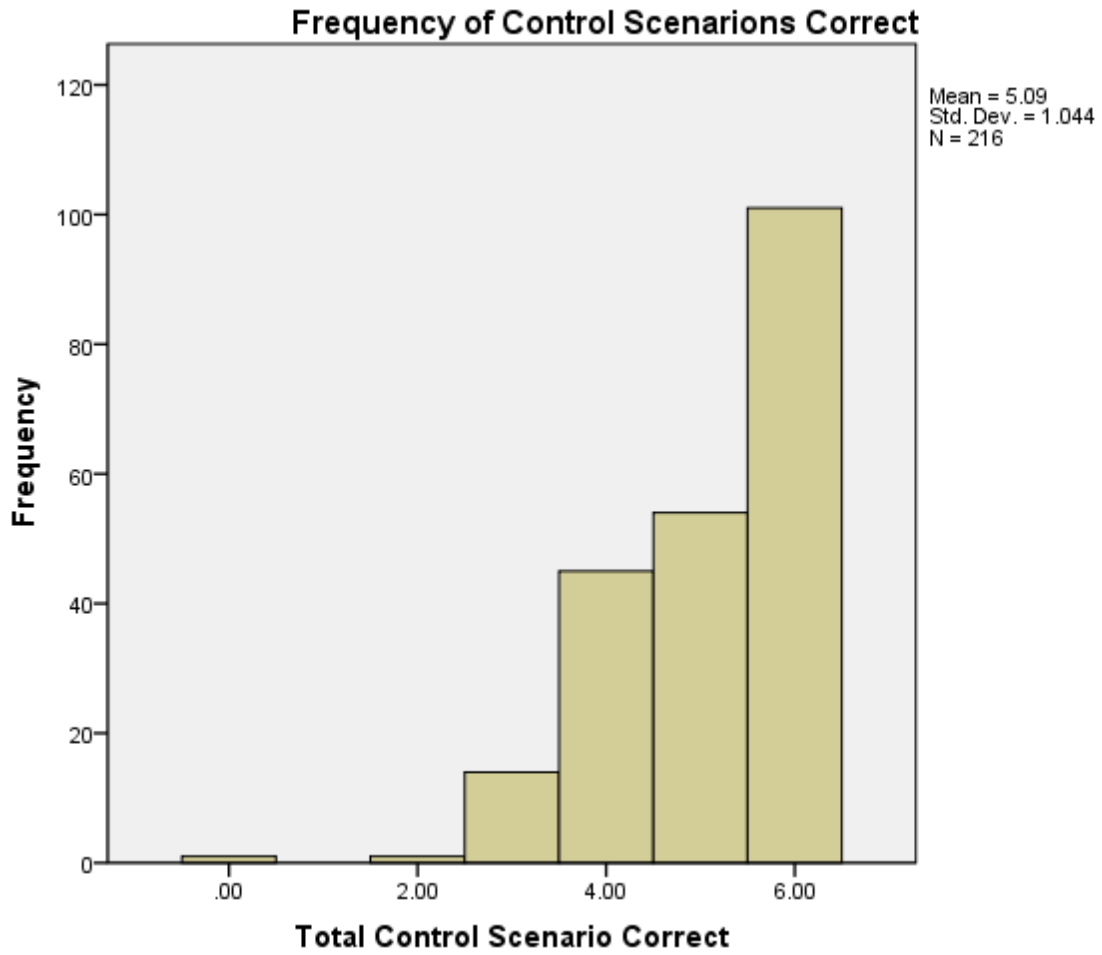
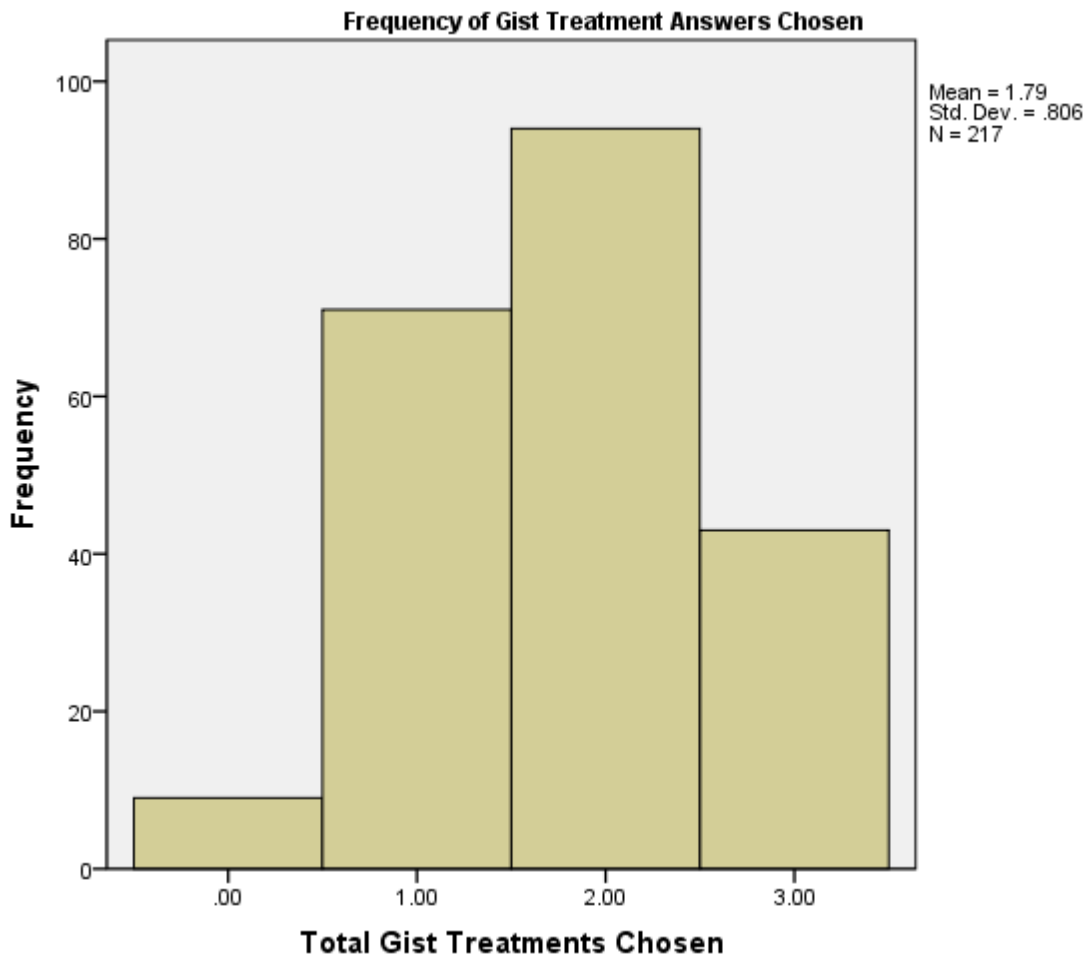
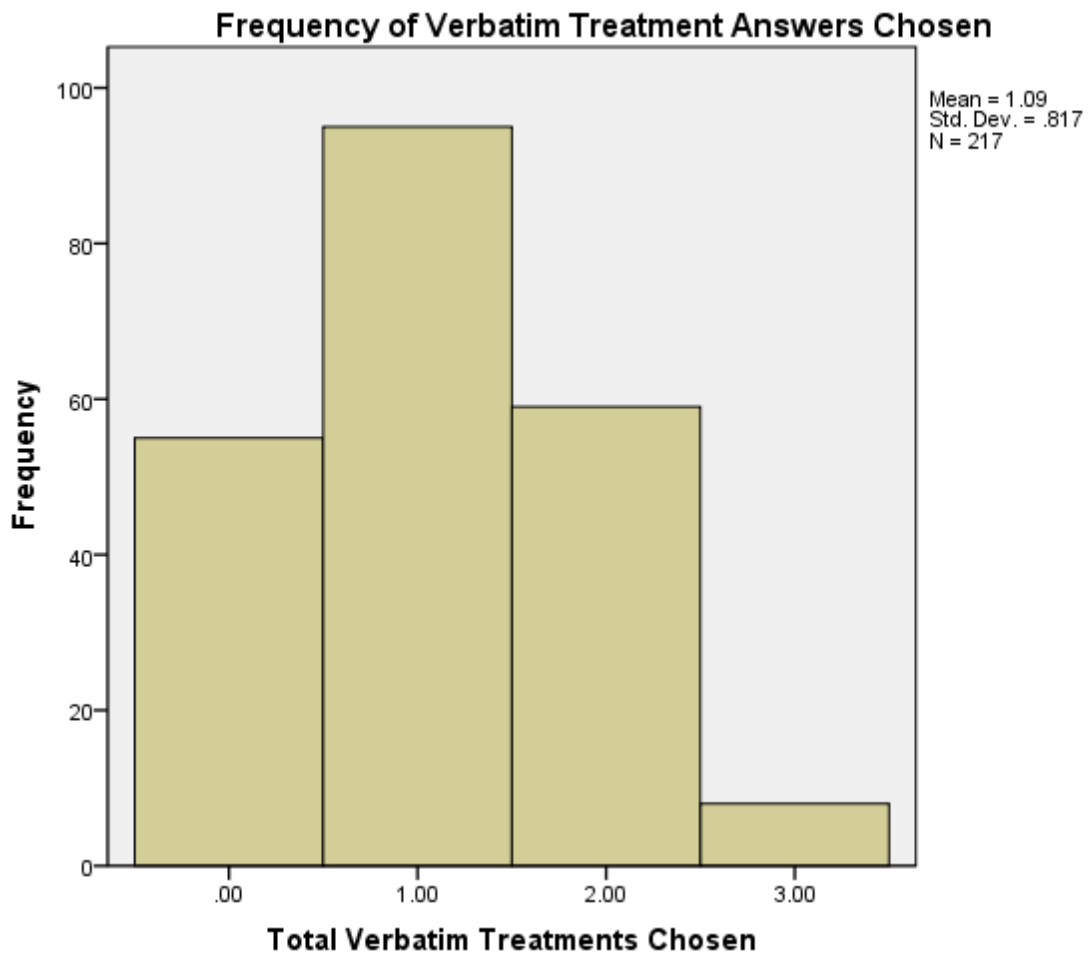


Figure G.3. Histogram of Sum of Knowledge Control Treatment Questions (Out of 6)



*Figure G.4.* Histogram of Gist Answers Chosen in Conflict Medical Case Scenario (Out of 3 Scenarios)



*Figure G.5.* Histogram of Verbatim Answers Chosen in Conflict Medical Case Scenario (Out of 3 Scenarios)

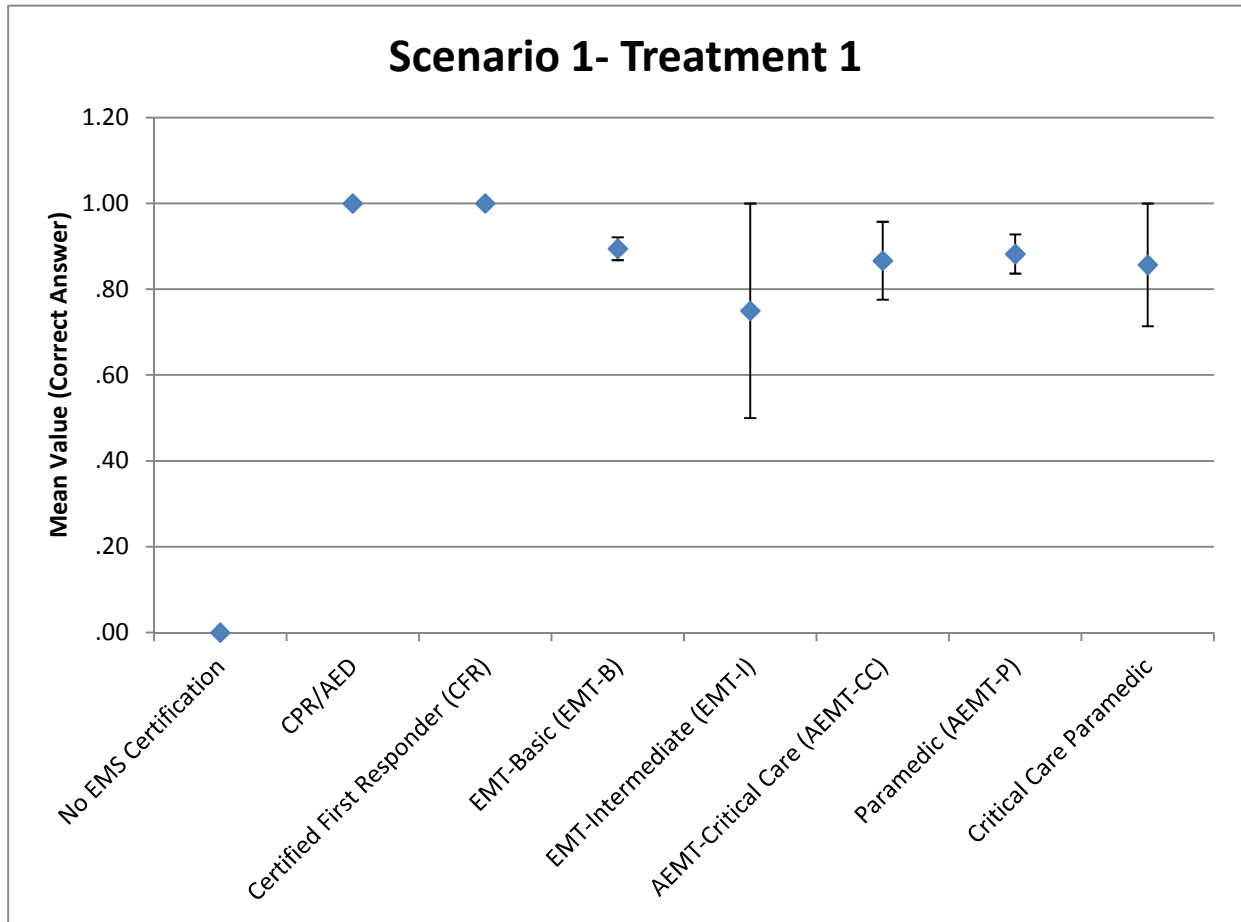


Figure G.6. Scatter Plot of the Mean of the Correct Answer for Scenario 1- Treatment 1 versus Certification Level (Ungrouped)



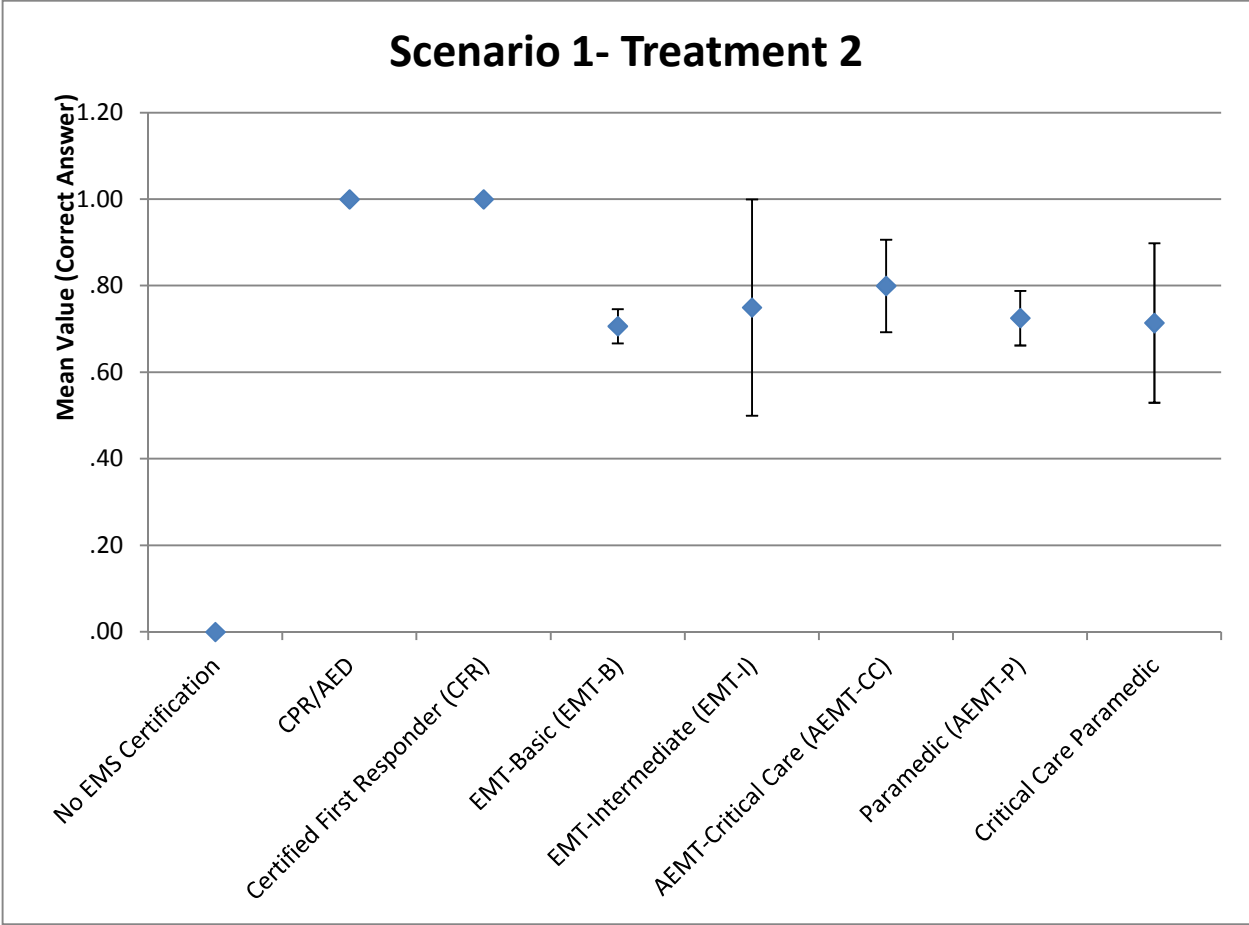


Figure G.7. Scatter Plot of the Mean of the Correct Answer for Scenario 1- Treatment 2 versus Certification Level (Ungrouped)

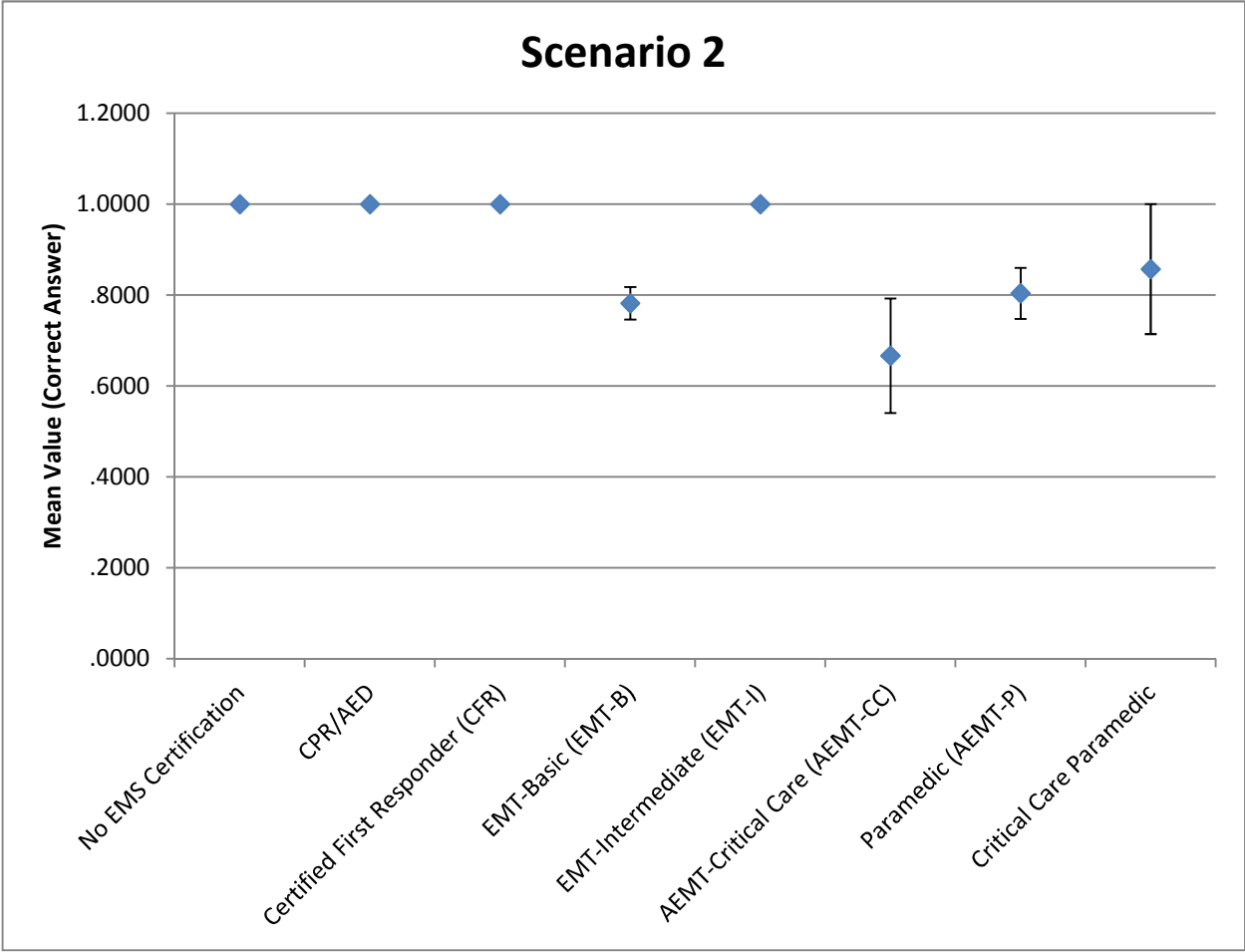


Figure G.8. Scatter Plot of the Mean of the Correct Answer for Scenario 2 versus Certification Level (Ungrouped)

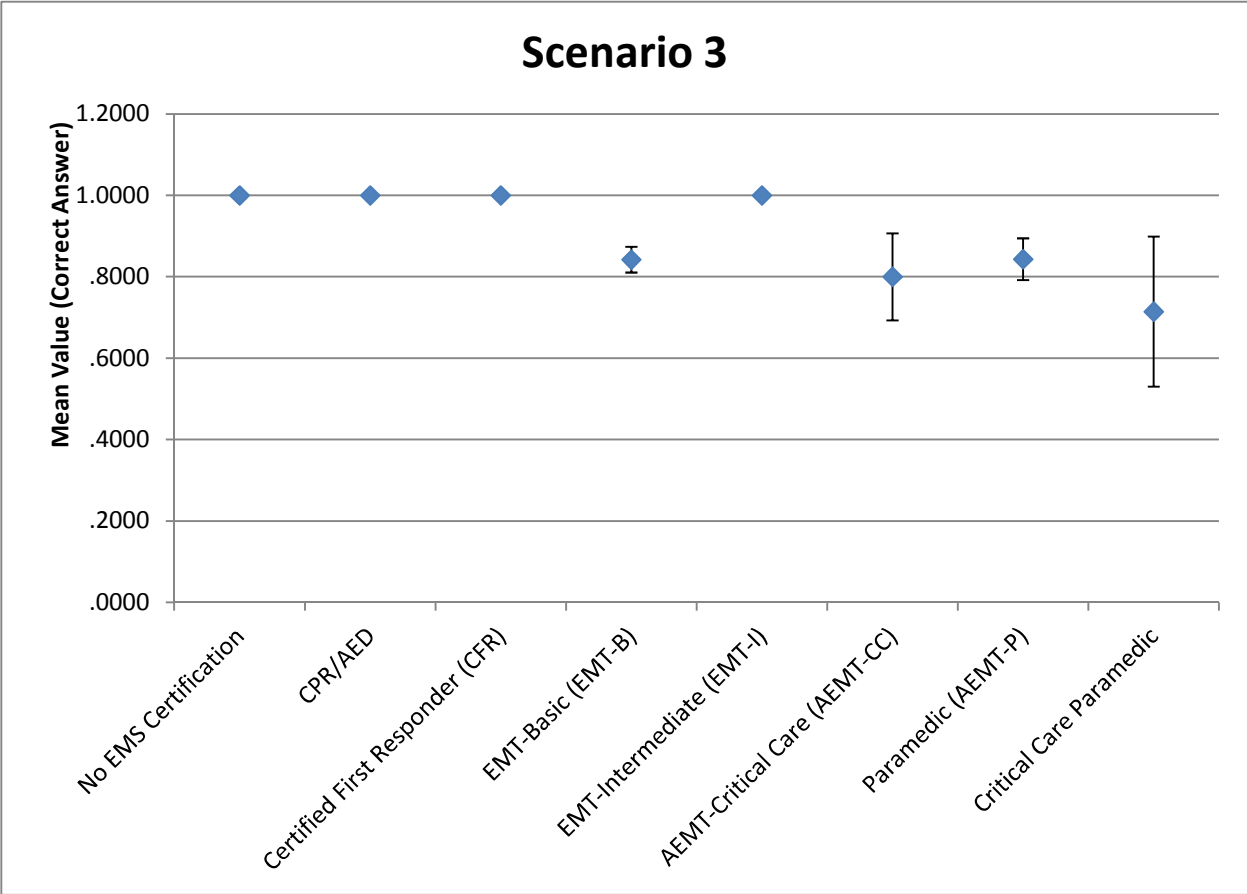


Figure G.9. Scatter Plot of the Mean of the Correct Answer for Scenario 3 versus Certification Level (Ungrouped)

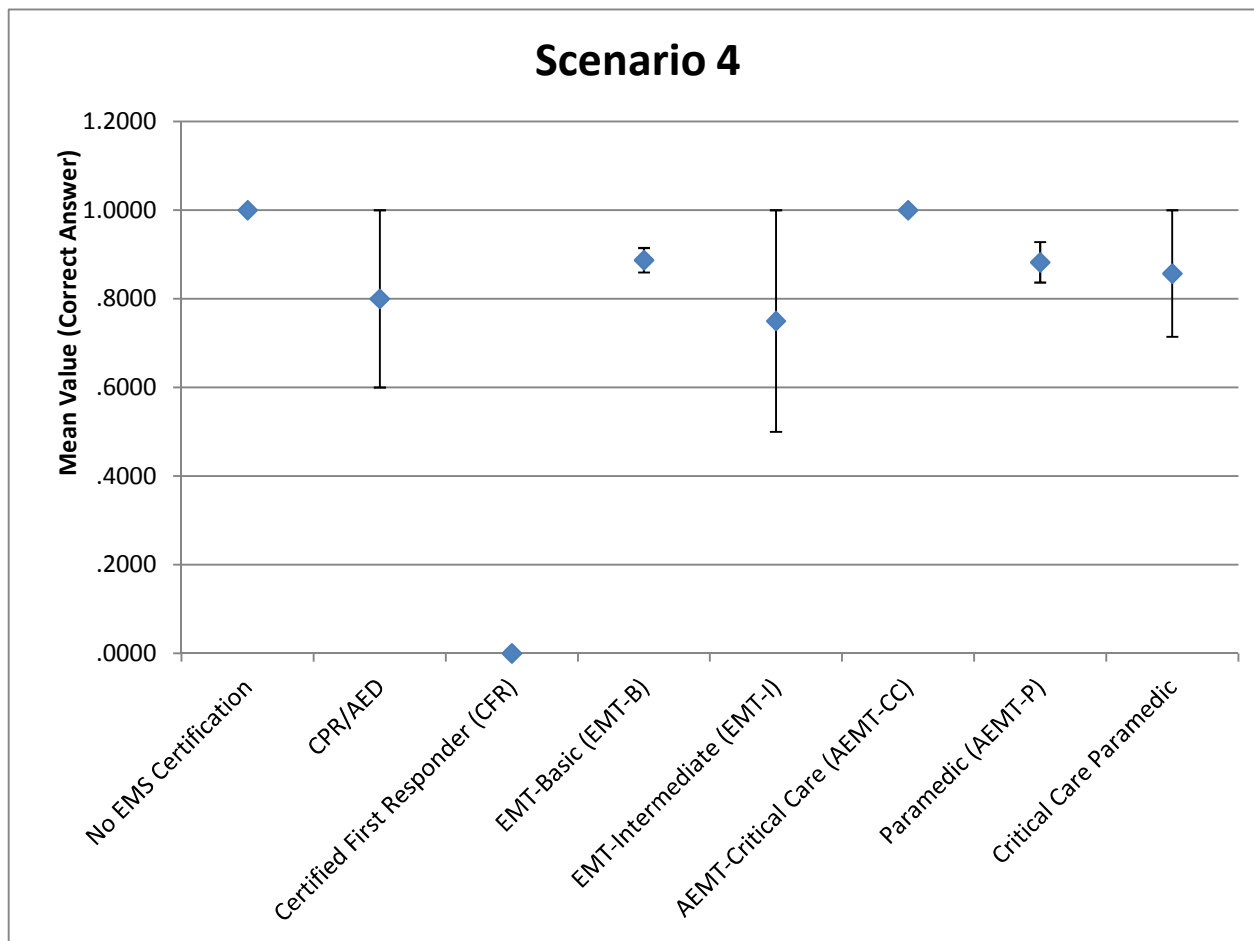


Figure G.10. Scatter Plot of the Mean of the Correct Answer for Scenario 4 versus Certification Level (Ungrouped)

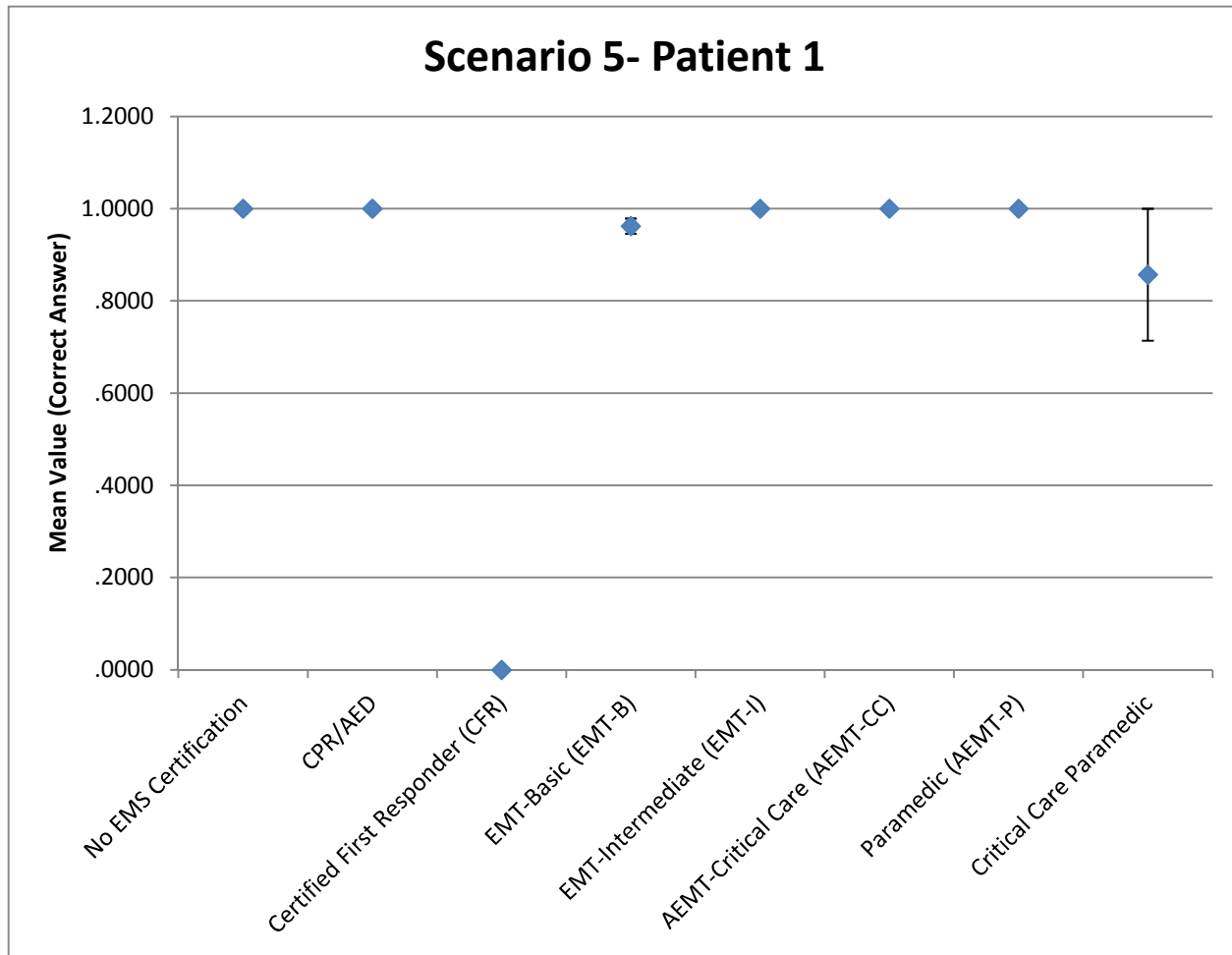


Figure G.11. Scatter Plot of the Mean of the Correct Answer for Scenario 5- Patient 1 versus Certification Level (Ungrouped)

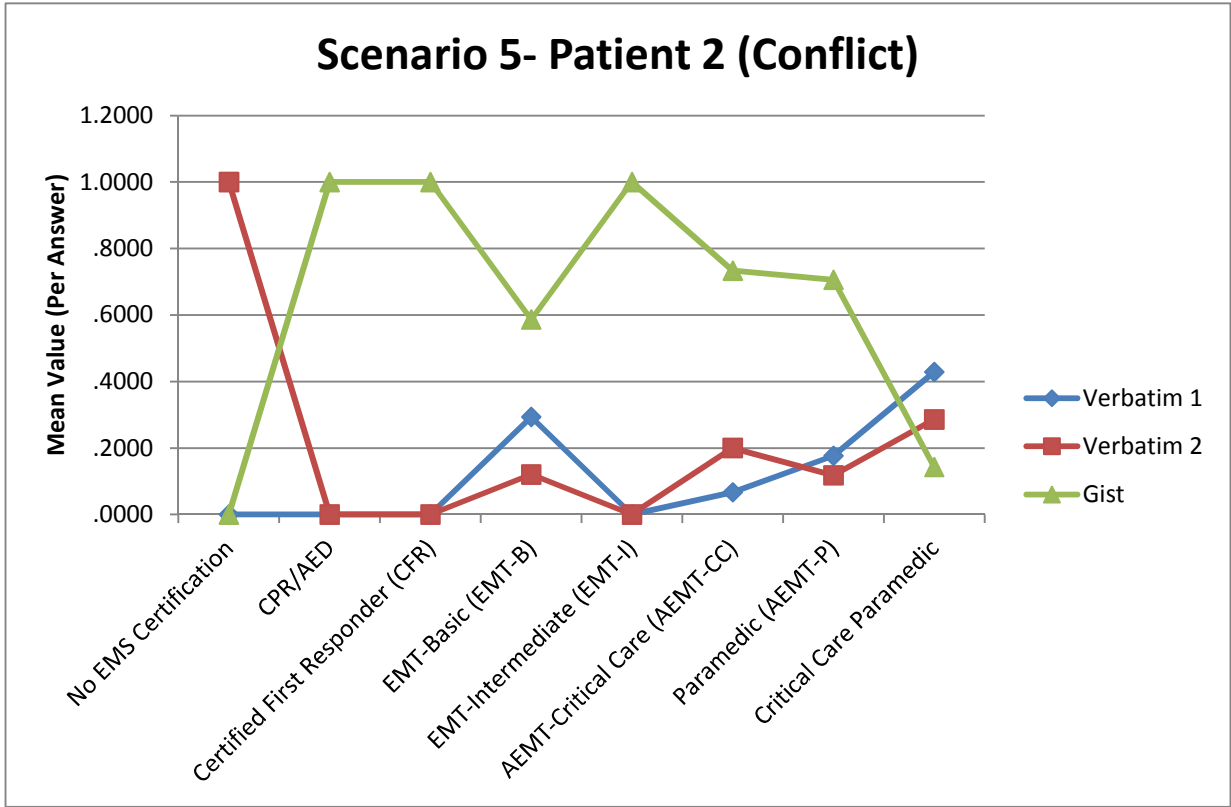


Figure G.12. Scatter Plot of the Mean of the Gist and Verbatim (#1 and #2) Answers for Scenario 5- Patient 2 versus Certification Level (Ungrouped)

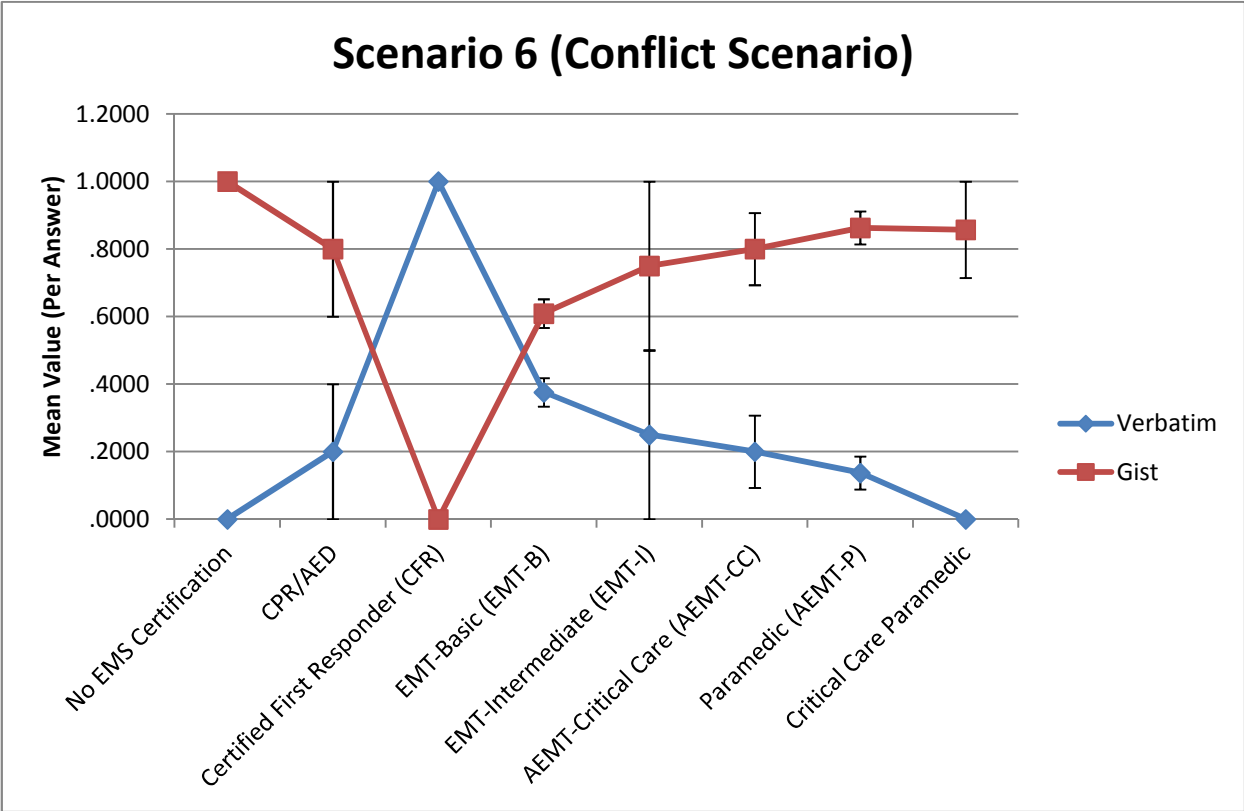


Figure G.13. Scatter Plot of the Mean of the Gist and Verbatim Answers for Scenario 6 versus Certification Level (Ungrouped)

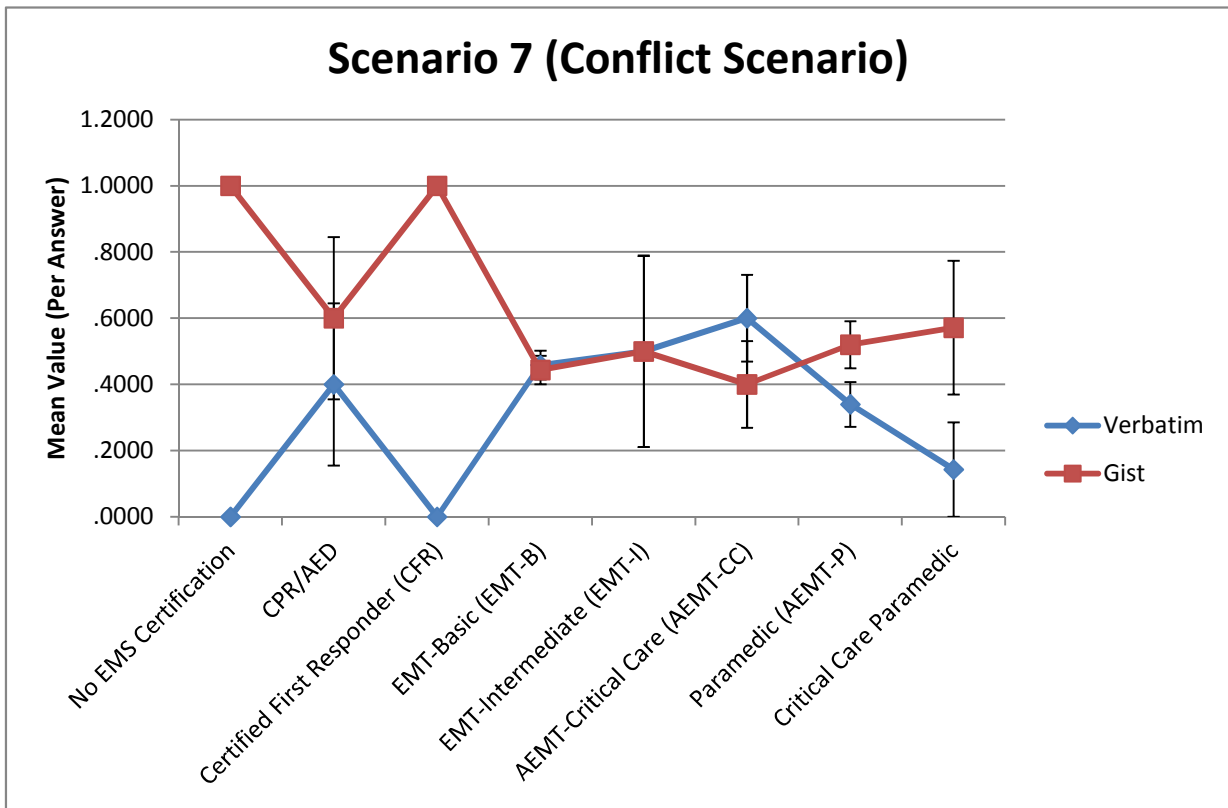


Figure G.14. Scatter Plot of the Mean of the Gist and Verbatim Answers for Scenario 7 versus Certification Level (Ungrouped)



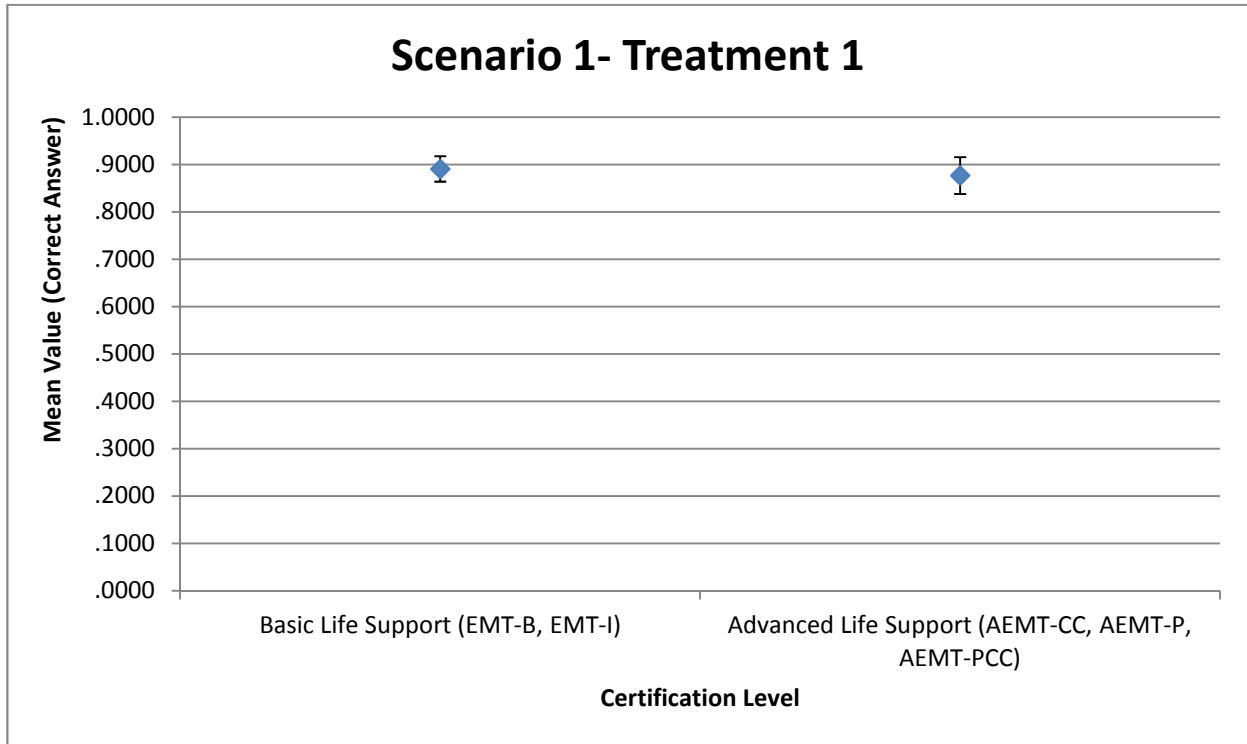


Figure G.15. Scatter Plot of the Mean of the Correct Answer for Scenario 1- Treatment 1 versus Certification Level (Grouped)

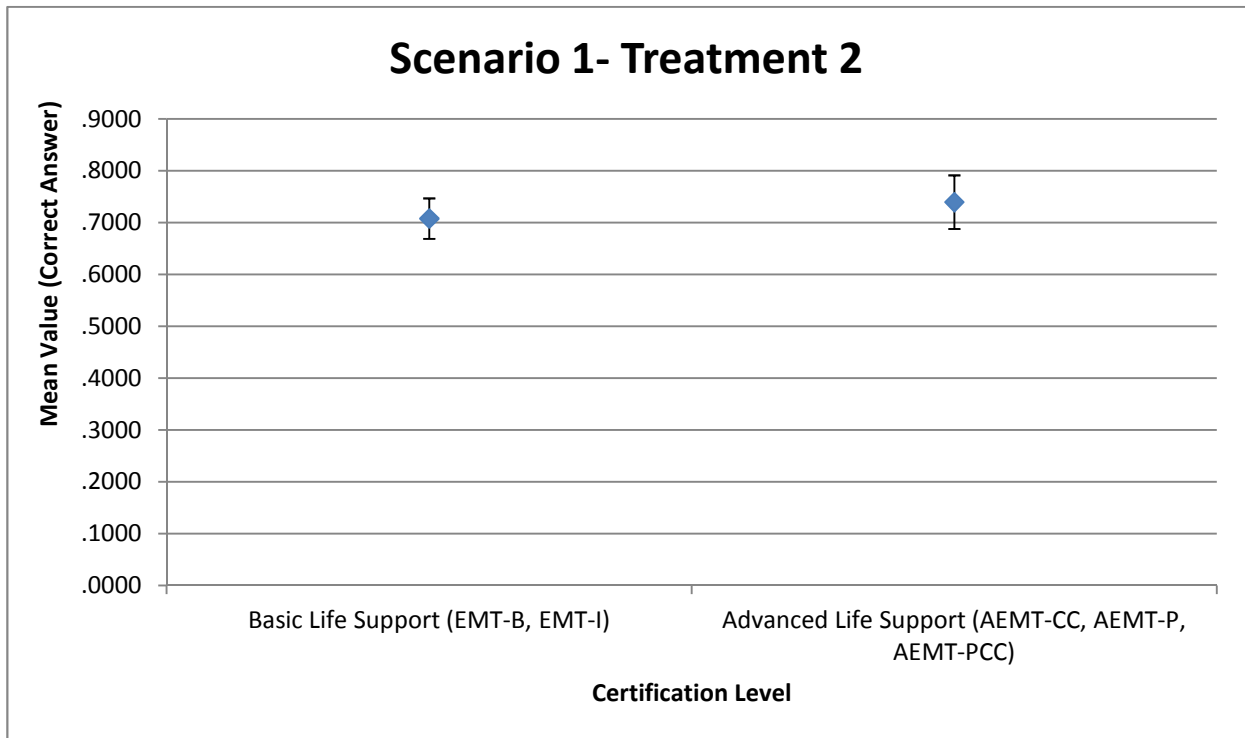


Figure G.16. Scatter Plot of the Mean of the Correct Answer for Scenario 1- Treatment 2 versus Certification Level (Grouped)

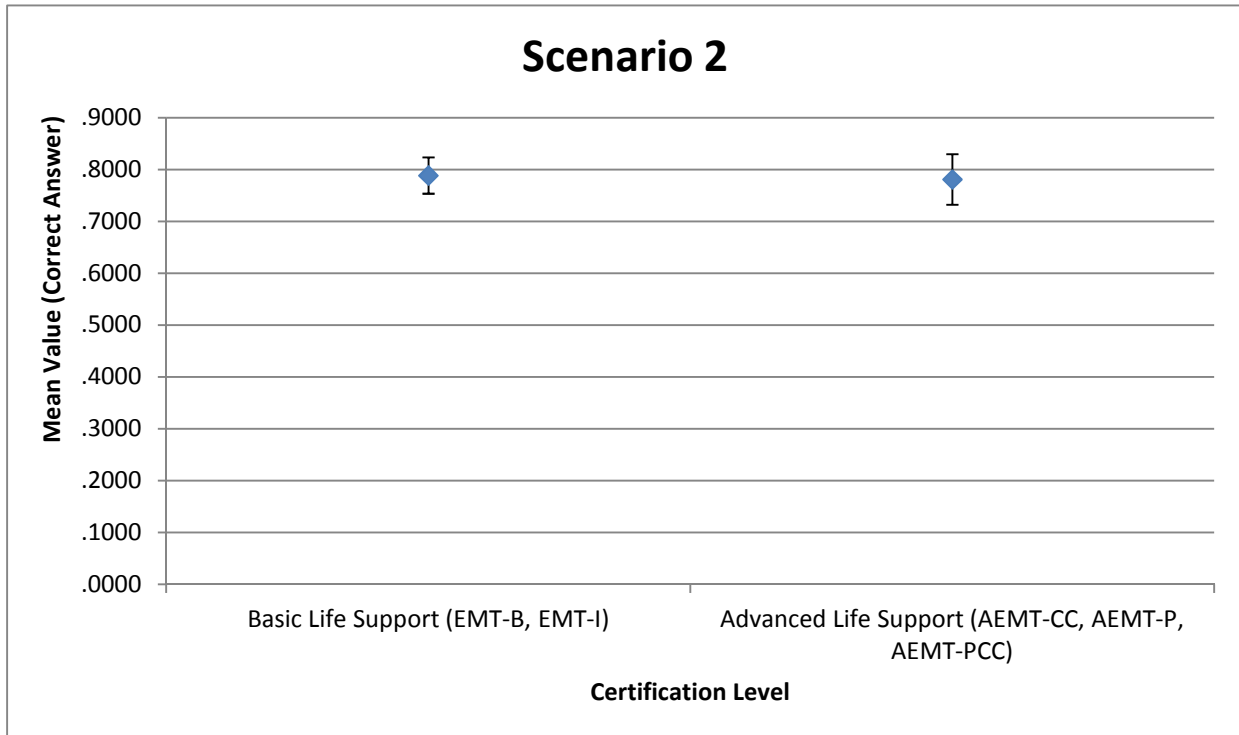


Figure G.17. Scatter Plot of the Mean of the Correct Answer for Scenario 2 versus Certification Level (Grouped)

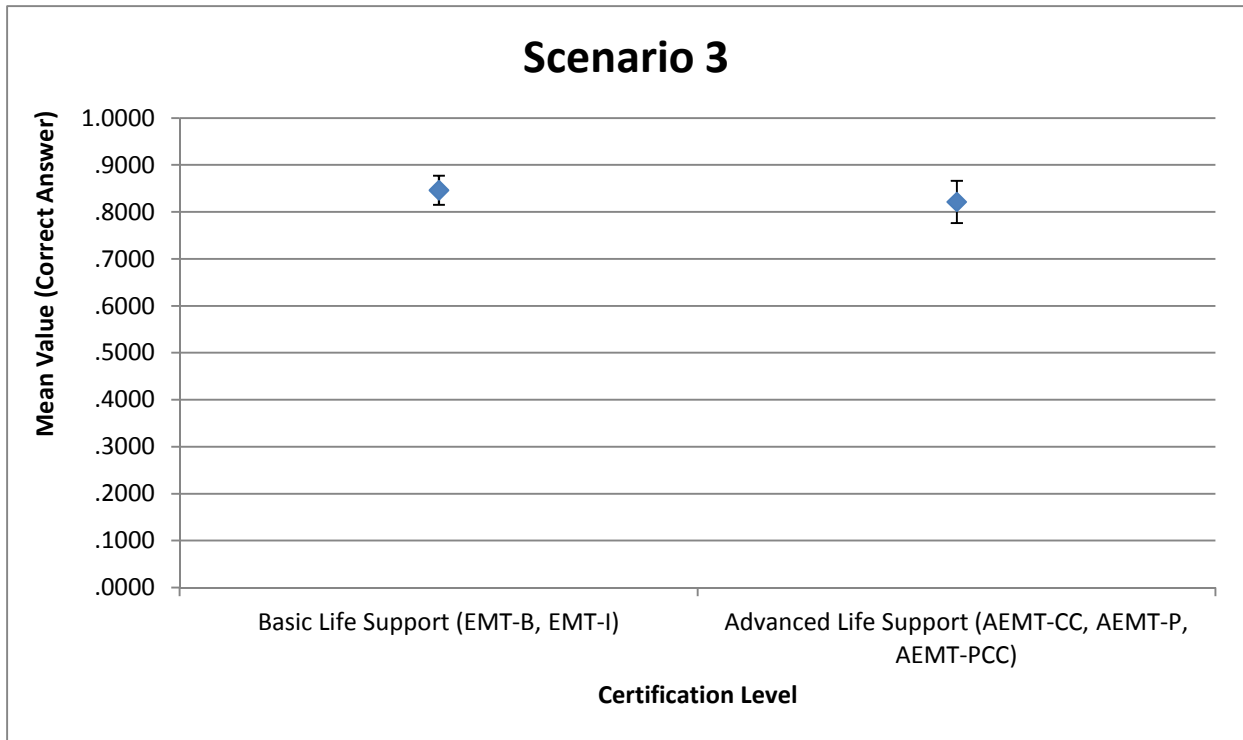


Figure G.18. Scatter Plot of the Mean of the Correct Answer for Scenario 3 versus Certification Level (Grouped)

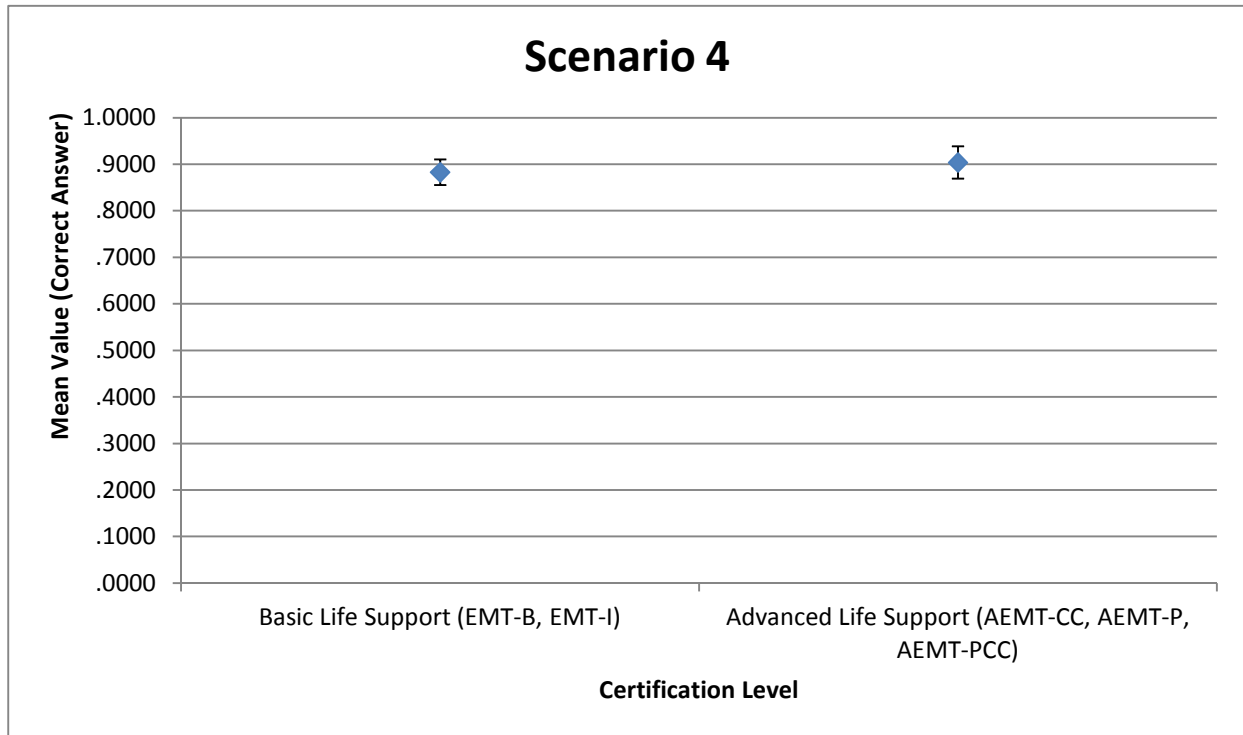


Figure G.19. Scatter Plot of the Mean of the Correct Answer for Scenario 4 versus Certification Level (Grouped)

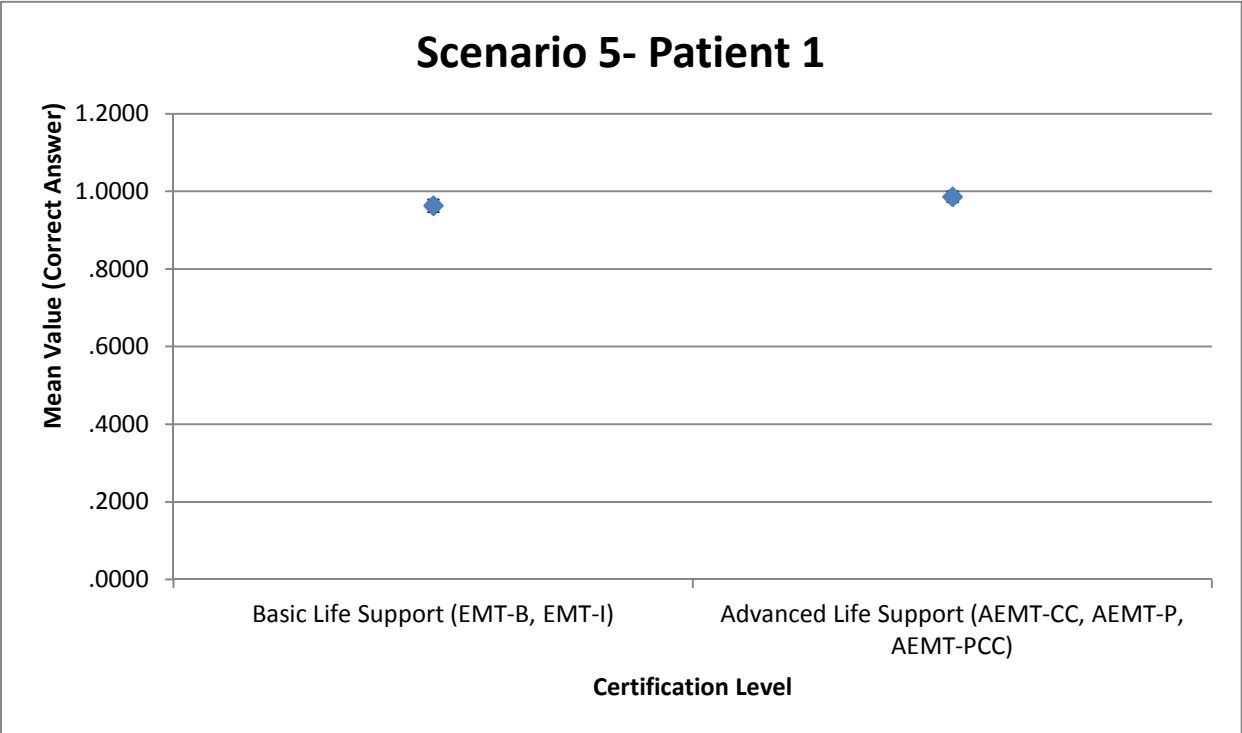


Figure G.20. Scatter Plot of the Mean of the Correct Answer for Scenario 5- Patient 1 versus Certification Level (Grouped)

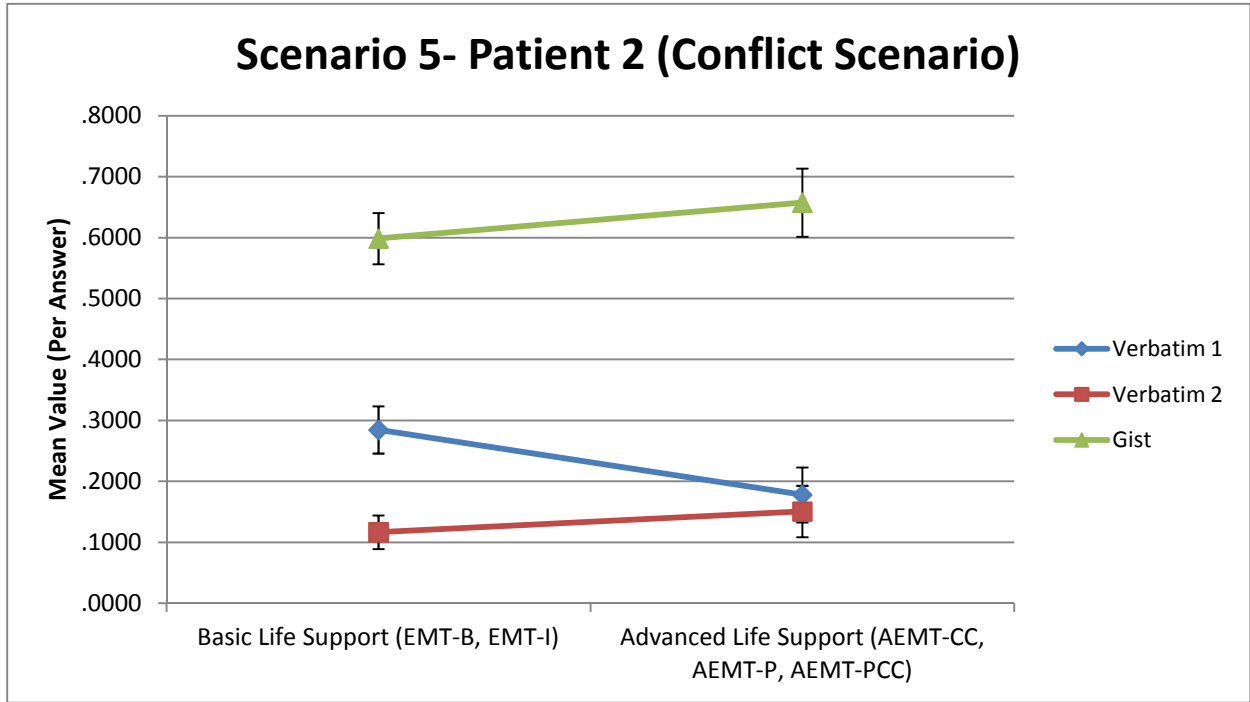


Figure G.21. Scatter Plot of the Mean of the Gist and Verbatim (#1 and #2) Answers for Scenario 5- Patient 2 versus Certification Level (Grouped)

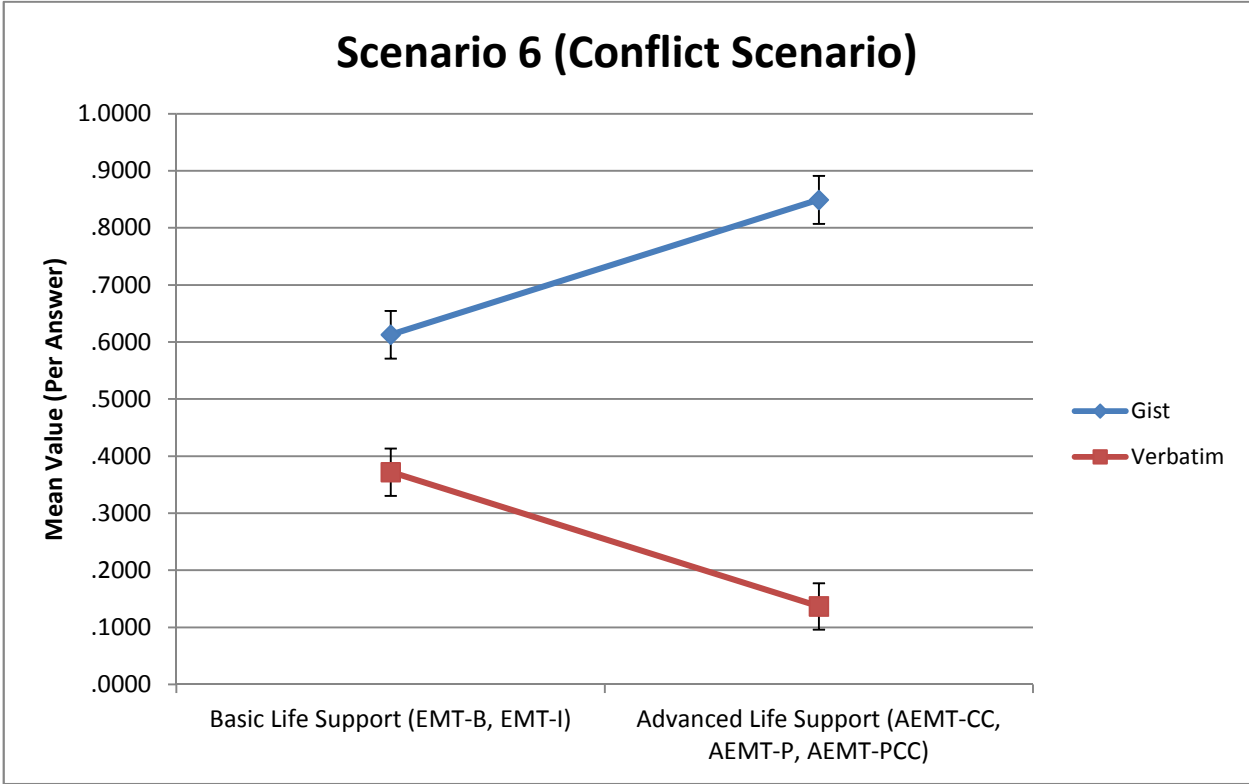


Figure G.22. Scatter Plot of the Mean of the Gist and Verbatim Answers for Scenario 6 versus Certification Level (Grouped)



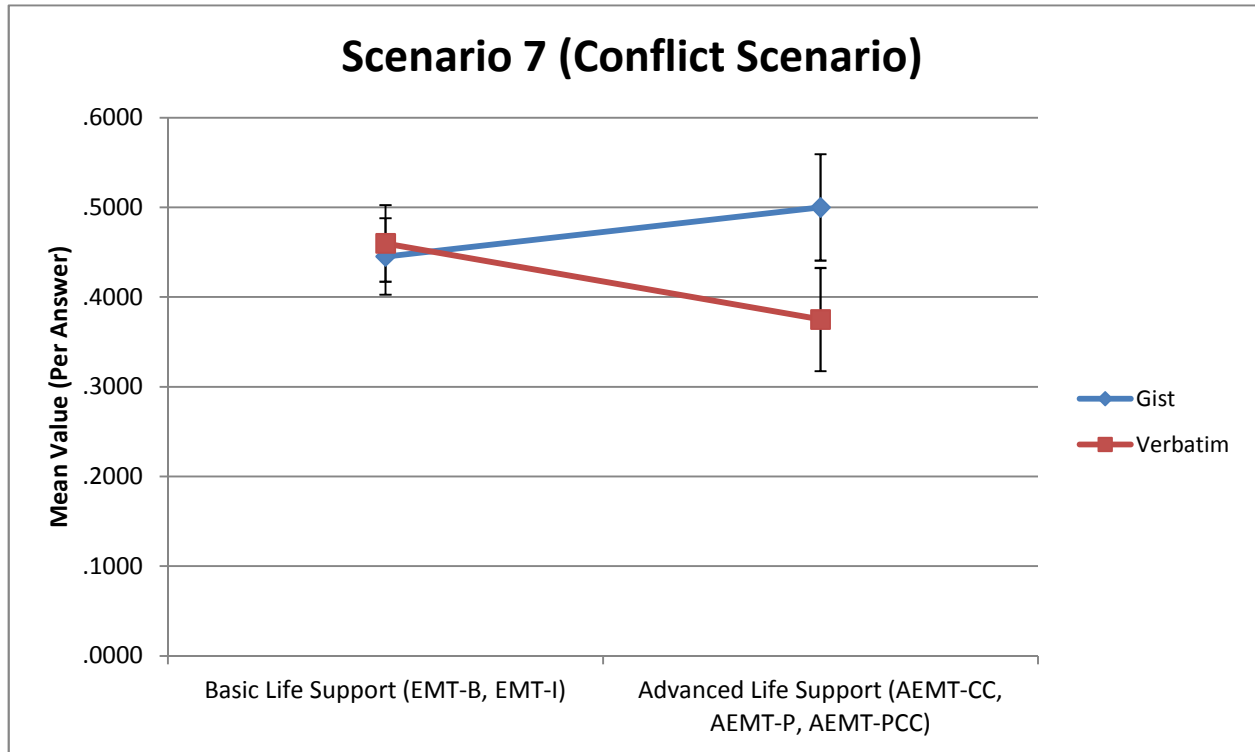
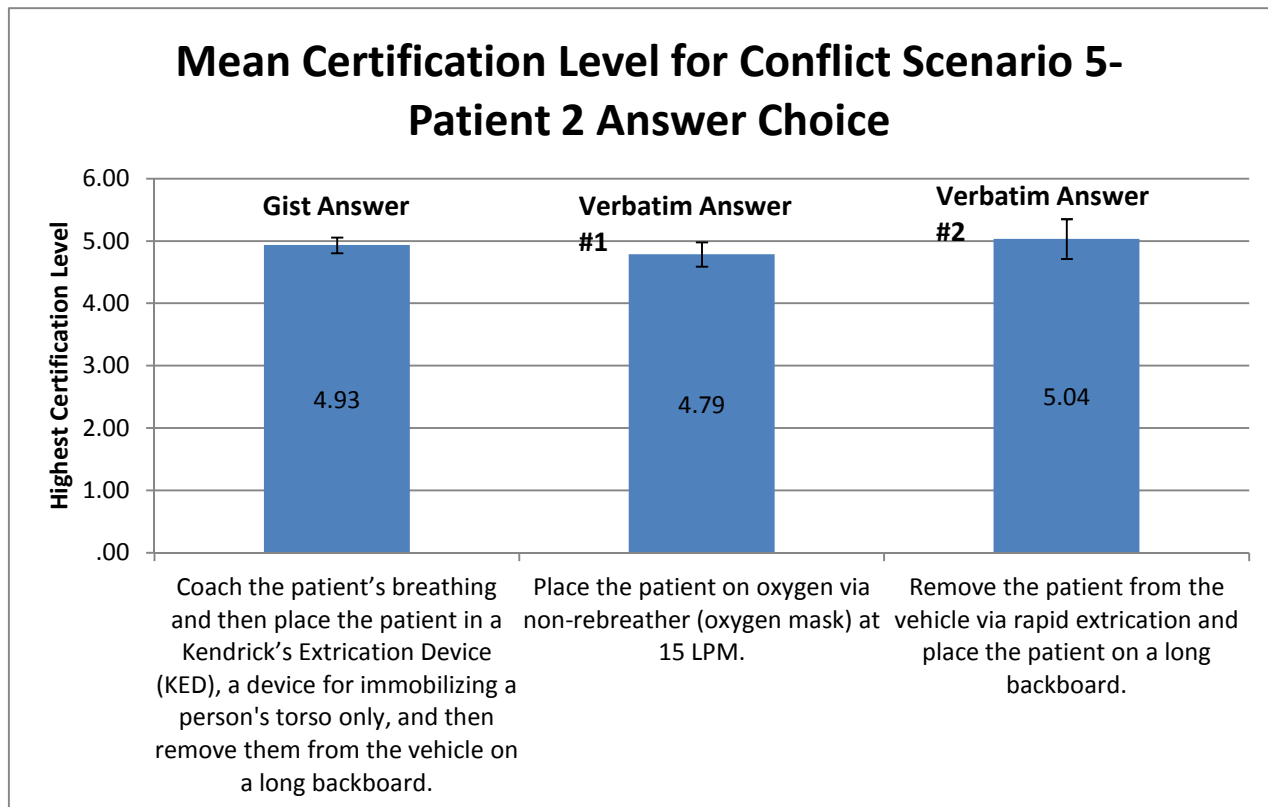
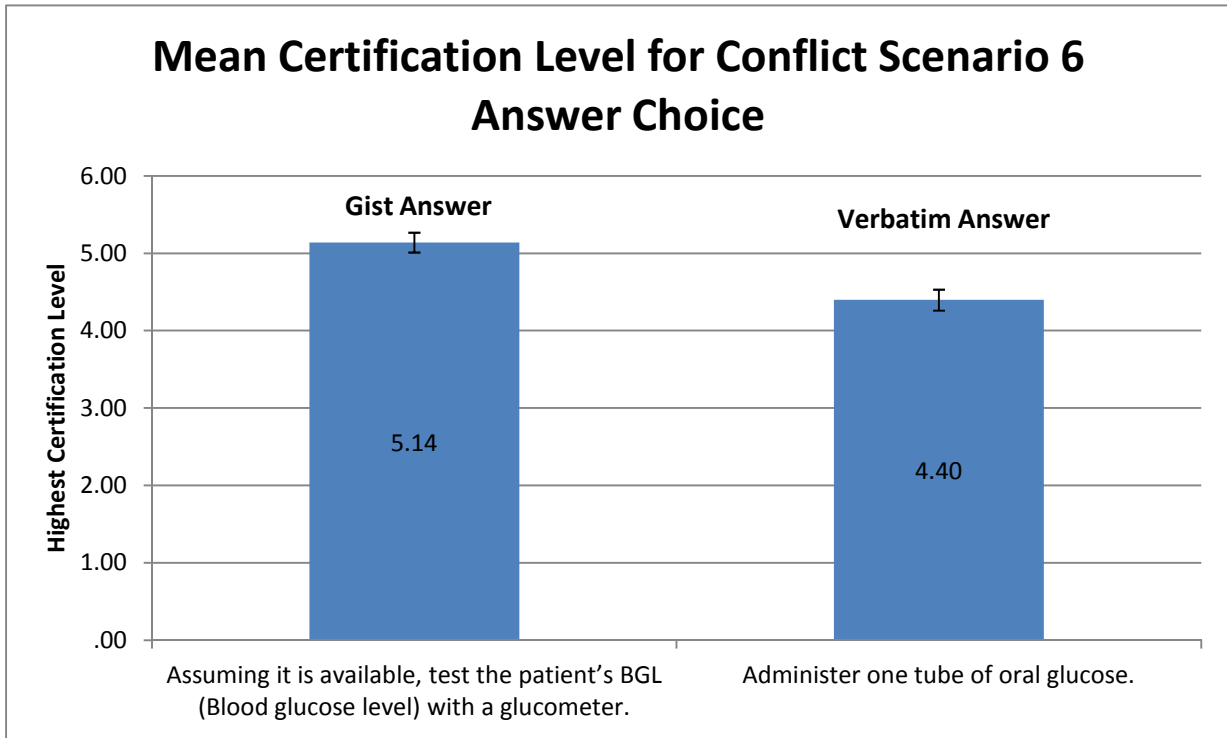


Figure G.23. Scatter Plot of the Mean of the Gist and Verbatim Answers for Scenario 7 versus Certification Level (Grouped)



*Figure G.24.* Bar Graph of the Mean (Numerical Value) of the Highest Certification Level for each of the Gist and Verbatim Answer Choices for Scenario 5- Patient 2



*Figure G.25.* Bar Graph of the Mean (Numerical Value) of the Highest Certification Level for each of the Gist and Verbatim Answer Choices for Scenario 6

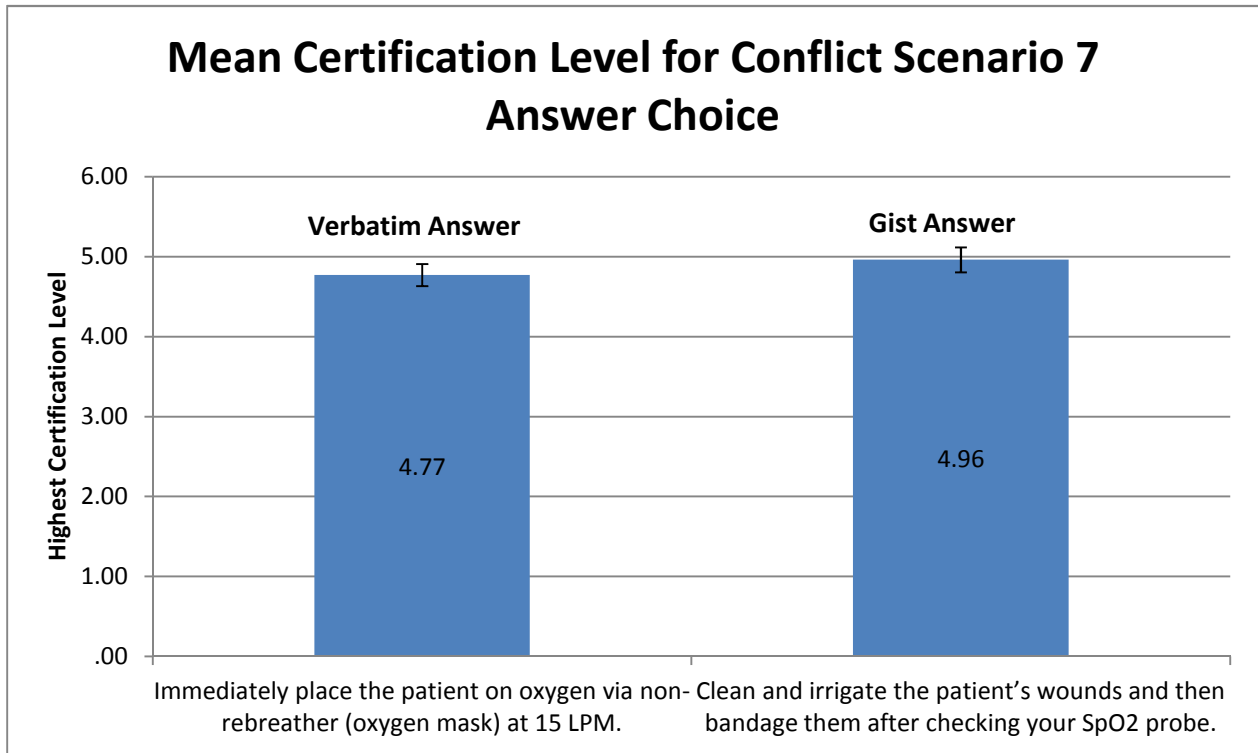


Figure G.26. Bar Graph of the Mean (Numerical Value) of the Highest Certification Level for each of the Gist and Verbatim Answer Choices for Scenario 7

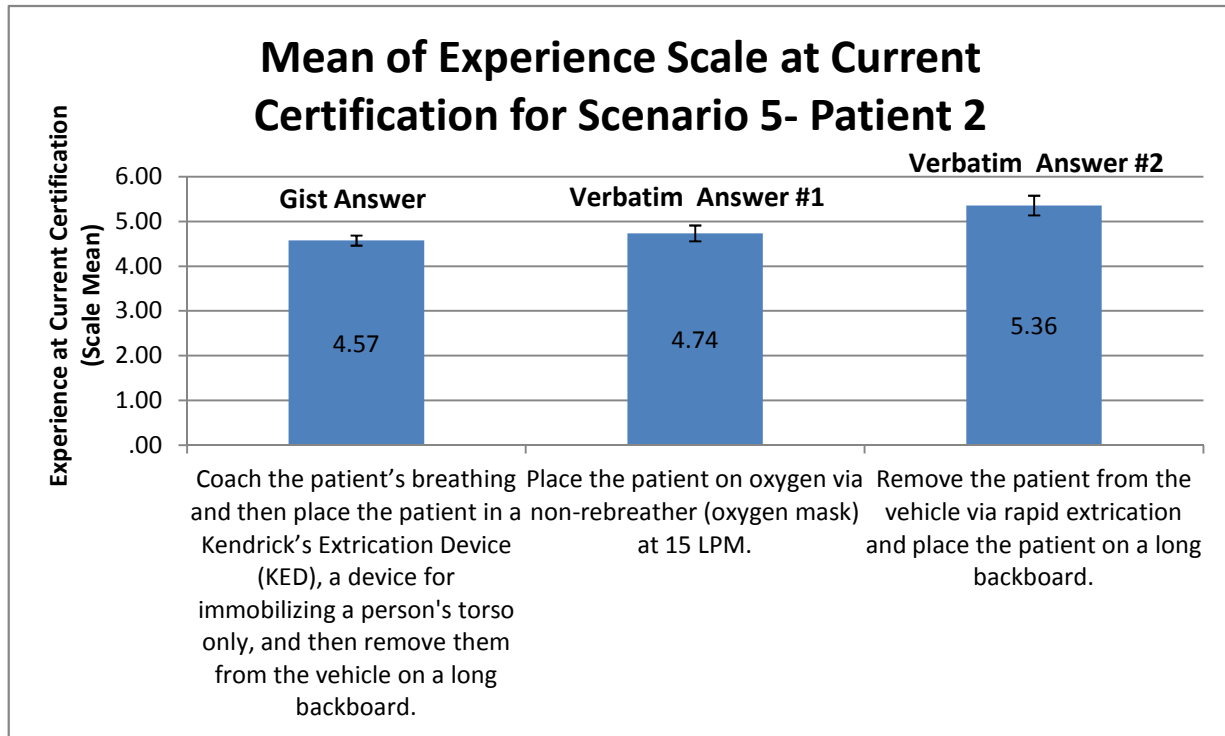
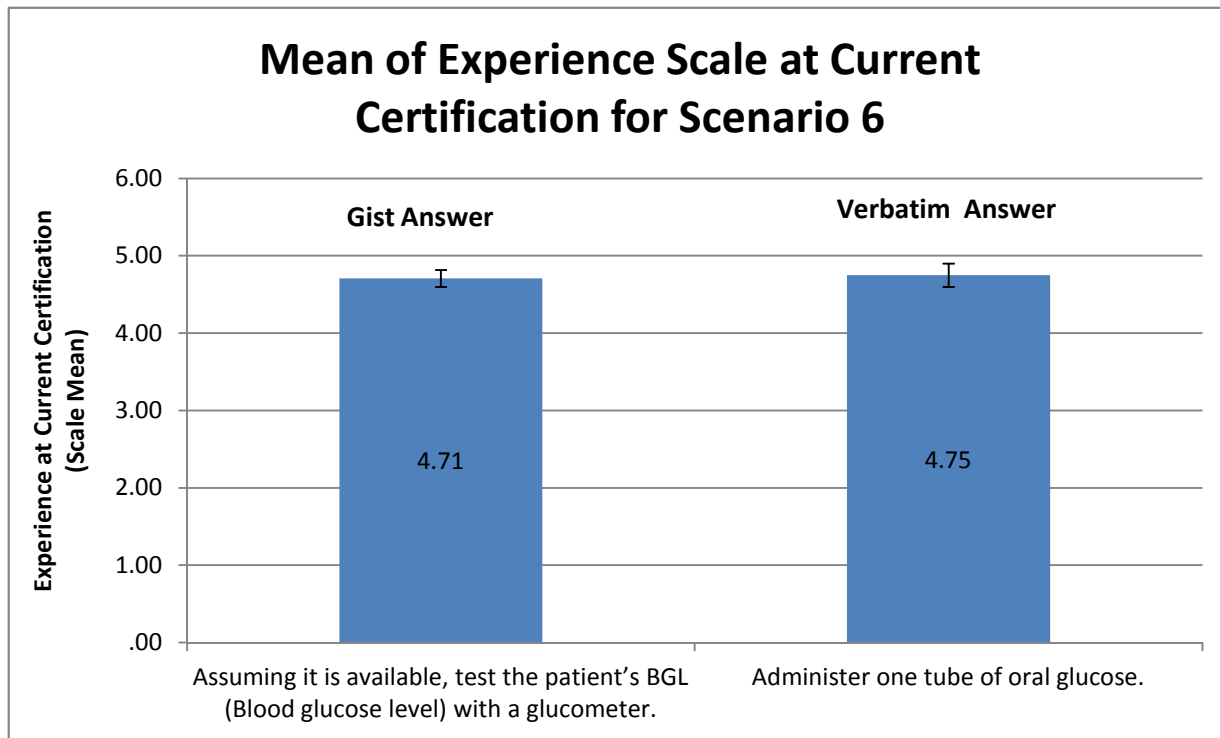
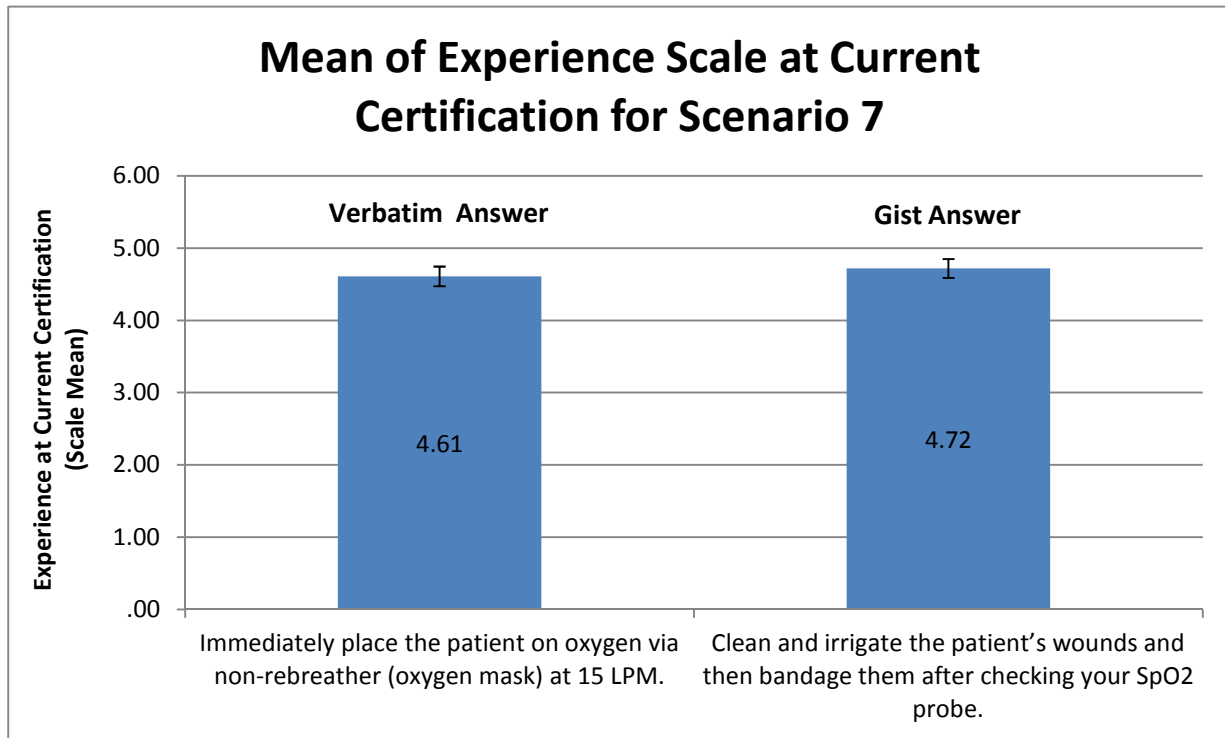


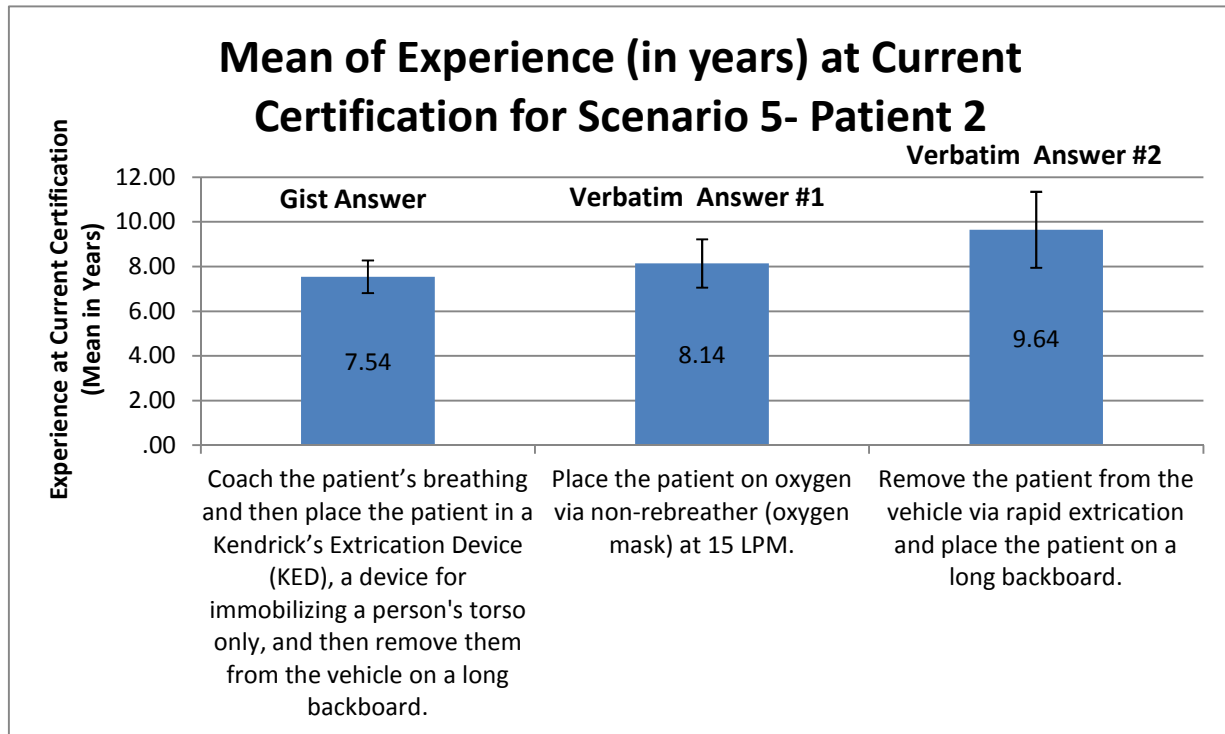
Figure G.27. Bar Graph of the Mean (Numerical Value) of the Experience Level at Current Certification (Scale-Based) for each of the Gist and Verbatim Answer Choices for Scenario 5- Patient 2



*Figure G.28.* Bar Graph of the Mean (Numerical Value) of the Experience Level at Current Certification (Scale-Based) for each of the Gist and Verbatim Answer Choices for Scenario 6

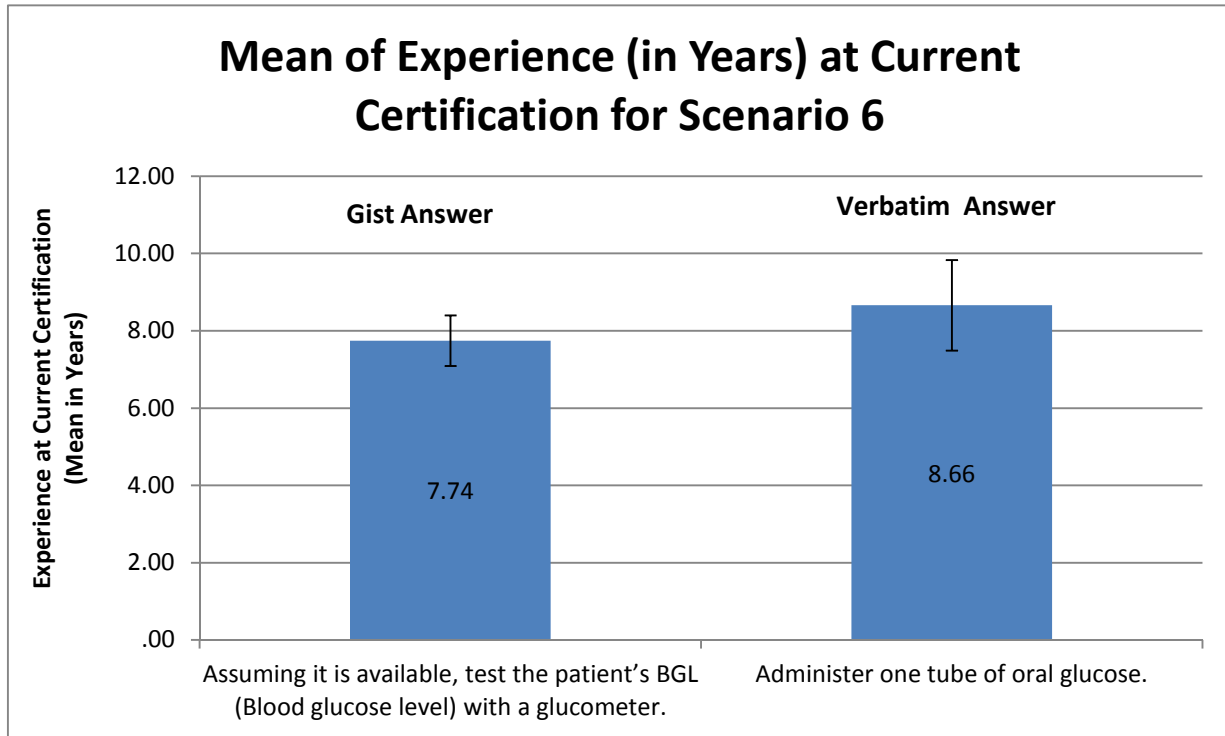


*Figure G.29.* Bar Graph of the Mean (Numerical Value) of the Experience Level at Current Certification (Scale-Based) for each of the Gist and Verbatim Answer Choices for Scenario 7

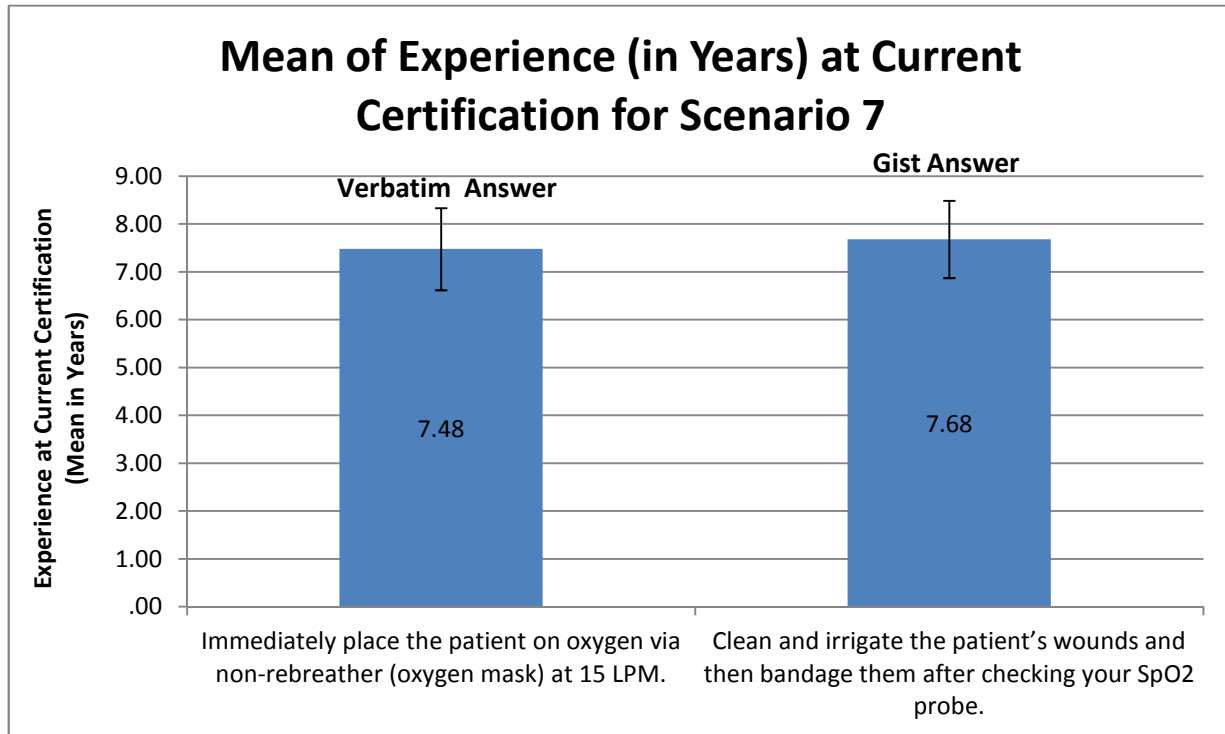


*Figure G.30.* Bar Graph of the Mean (Numerical Value) of the Experience Level at Current Certification (In Years) for each of the Gist and Verbatim Answer Choices for Scenario 5- Patient 2

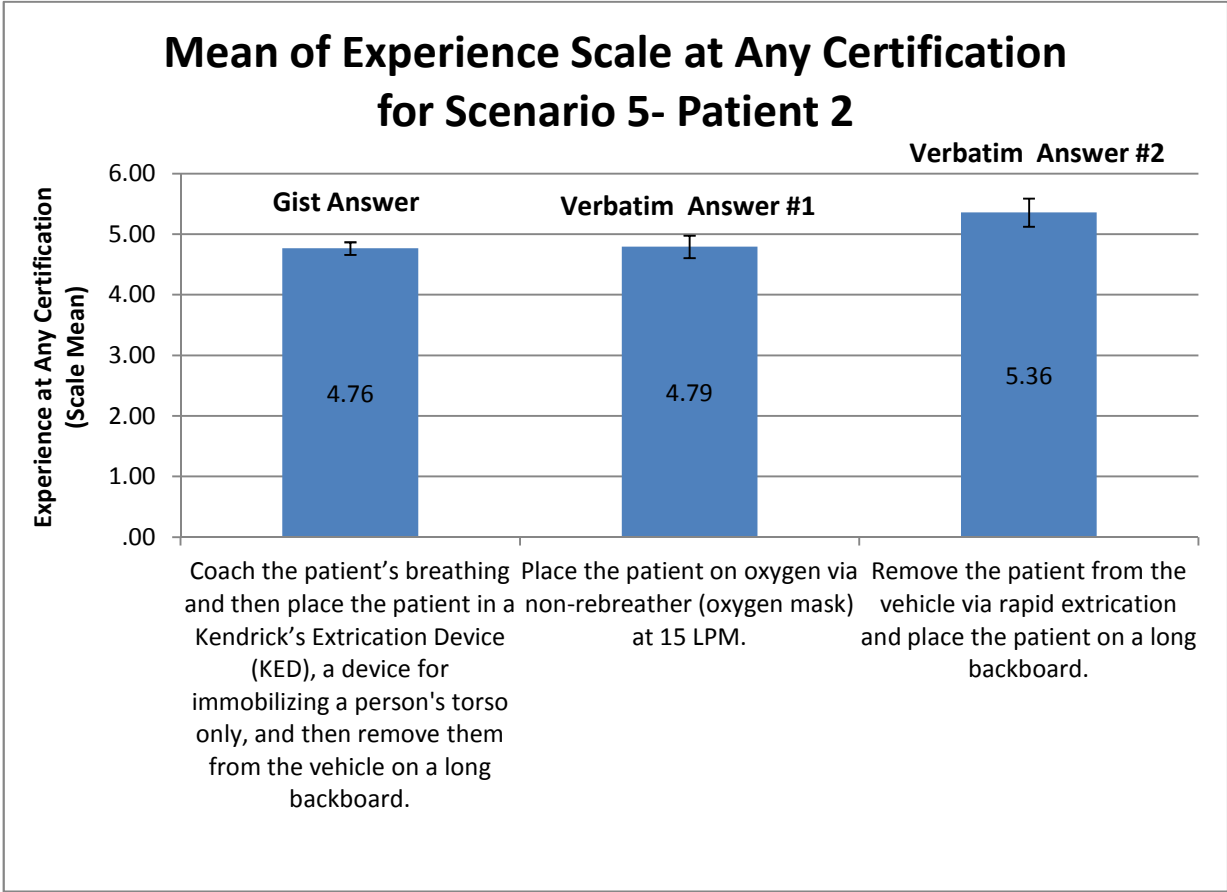




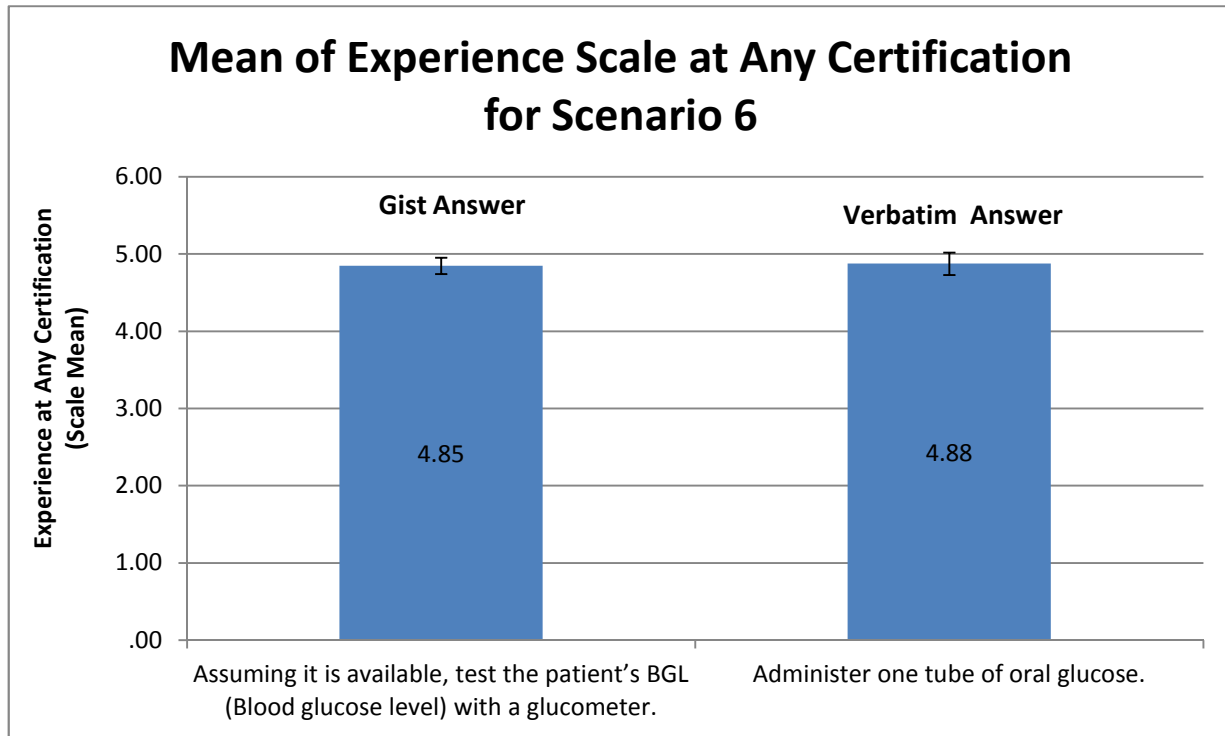
*Figure G.31.* Bar Graph of the Mean (Numerical Value) of the Experience Level at Current Certification (In Years) for each of the Gist and Verbatim Answer Choices for Scenario 6



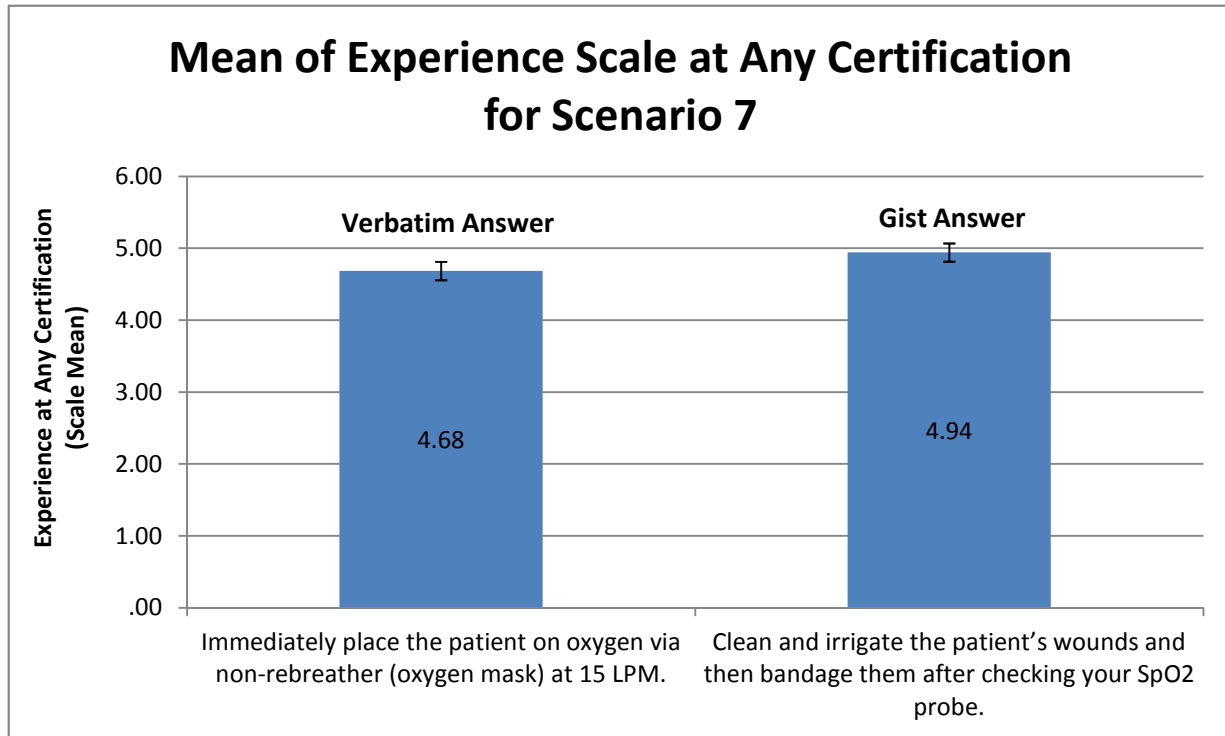
*Figure G.32.* Bar Graph of the Mean (Numerical Value) of the Experience Level at Current Certification (In Years) for each of the Gist and Verbatim Answer Choices for Scenario 7



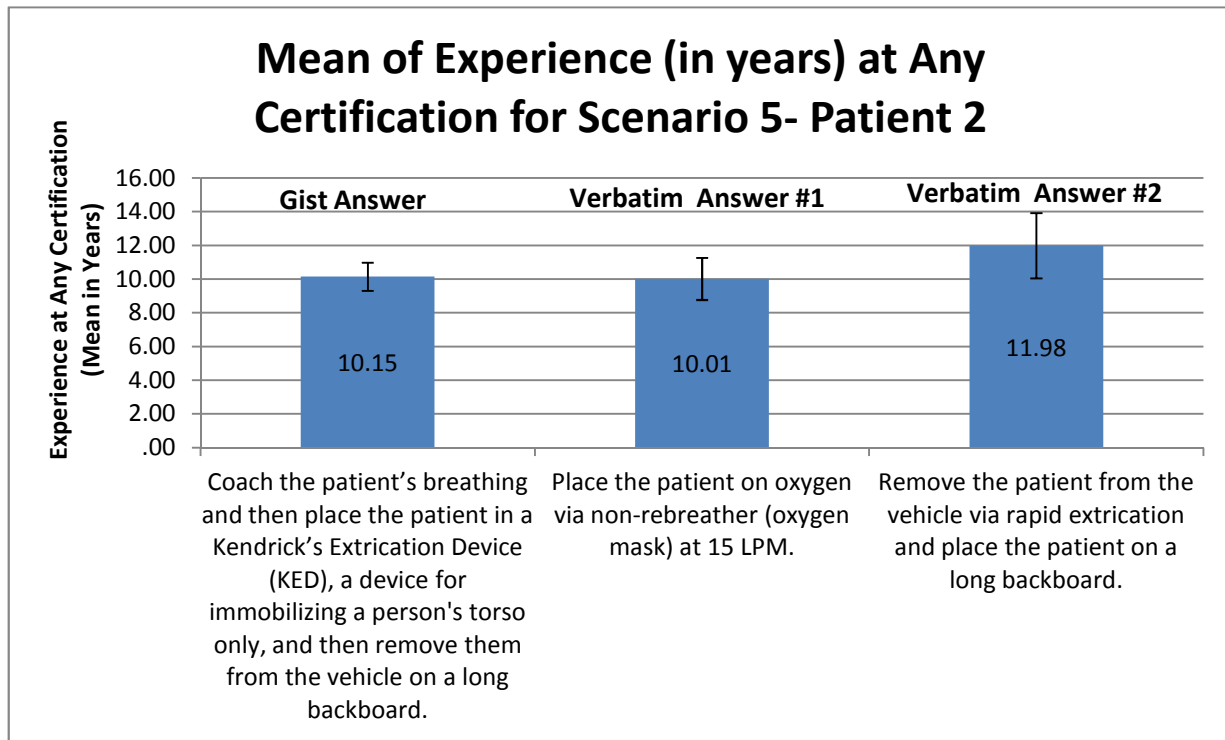
*Figure G.33.* Bar Graph of the Mean (Numerical Value) of the Experience Level at Any Certification (Scale-Based) for each of the Gist and Verbatim Answer Choices for Scenario 5- Patient 2



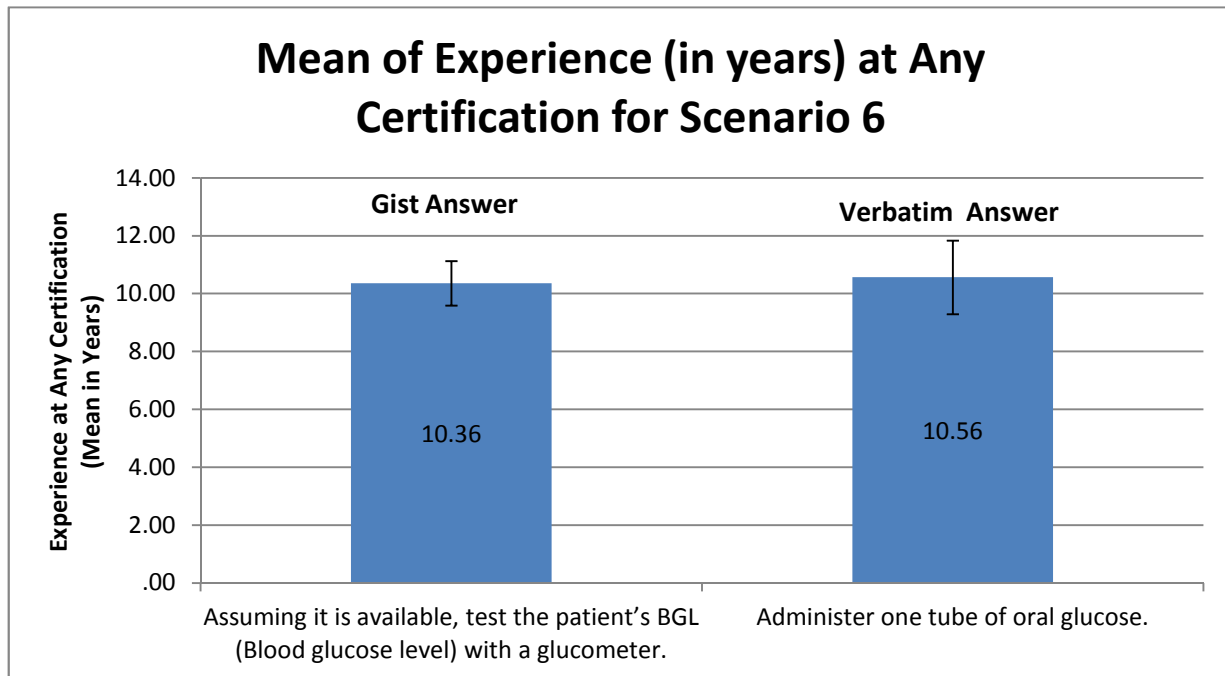
*Figure G.34.* Bar Graph of the Mean (Numerical Value) of the Experience Level at Any Certification (Scale-Based) for each of the Gist and Verbatim Answer Choices for Scenario 6



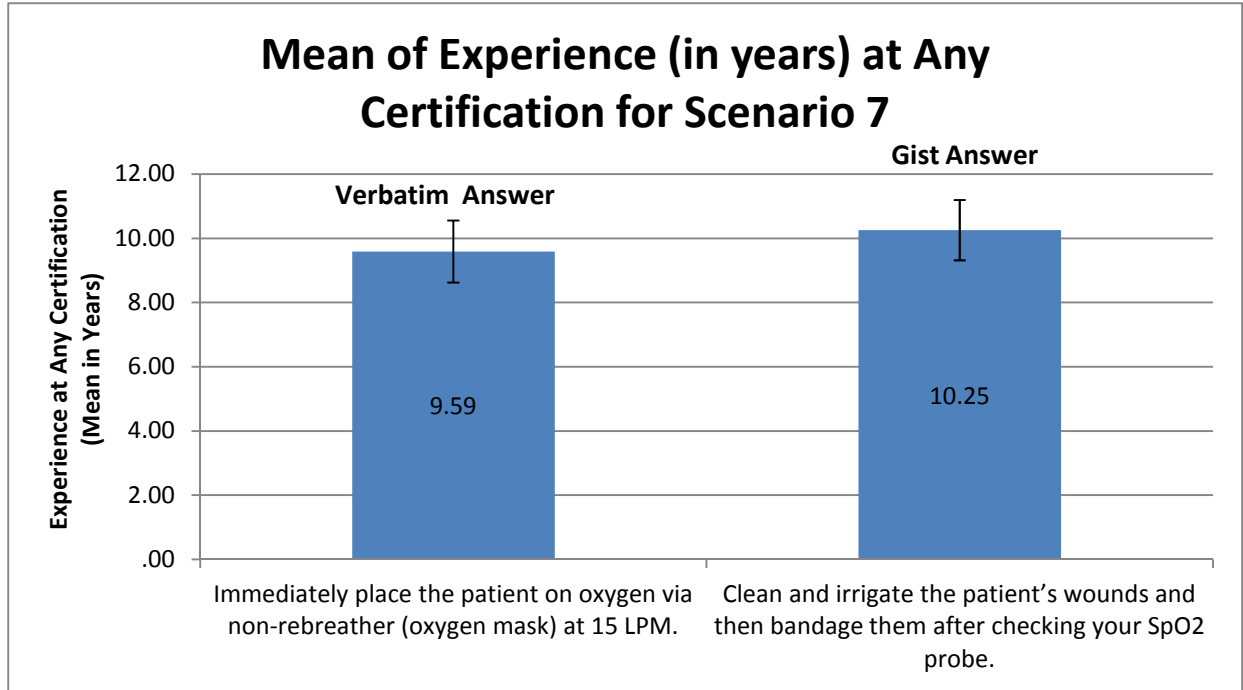
*Figure G.35.* Bar Graph of the Mean (Numerical Value) of the Experience Level at Any Certification (Scale-Based) for each of the Gist and Verbatim Answer Choices for Scenario 7



*Figure G.36.* Bar Graph of the Mean (Numerical Value) of the Experience Level at Any Certification (In Years) for each of the Gist and Verbatim Answer Choices for Scenario 5- Patient 2



*Figure G.37.* Bar Graph of the Mean (Numerical Value) of the Experience Level at Any Certification (In Years) for each of the Gist and Verbatim Answer Choices for Scenario 6



*Figure G.38.- Bar Graph of the Mean (Numerical Value) of the Experience Level at Any Certification (In Years) for each of the Gist and Verbatim Answer Choices for Scenario 7*



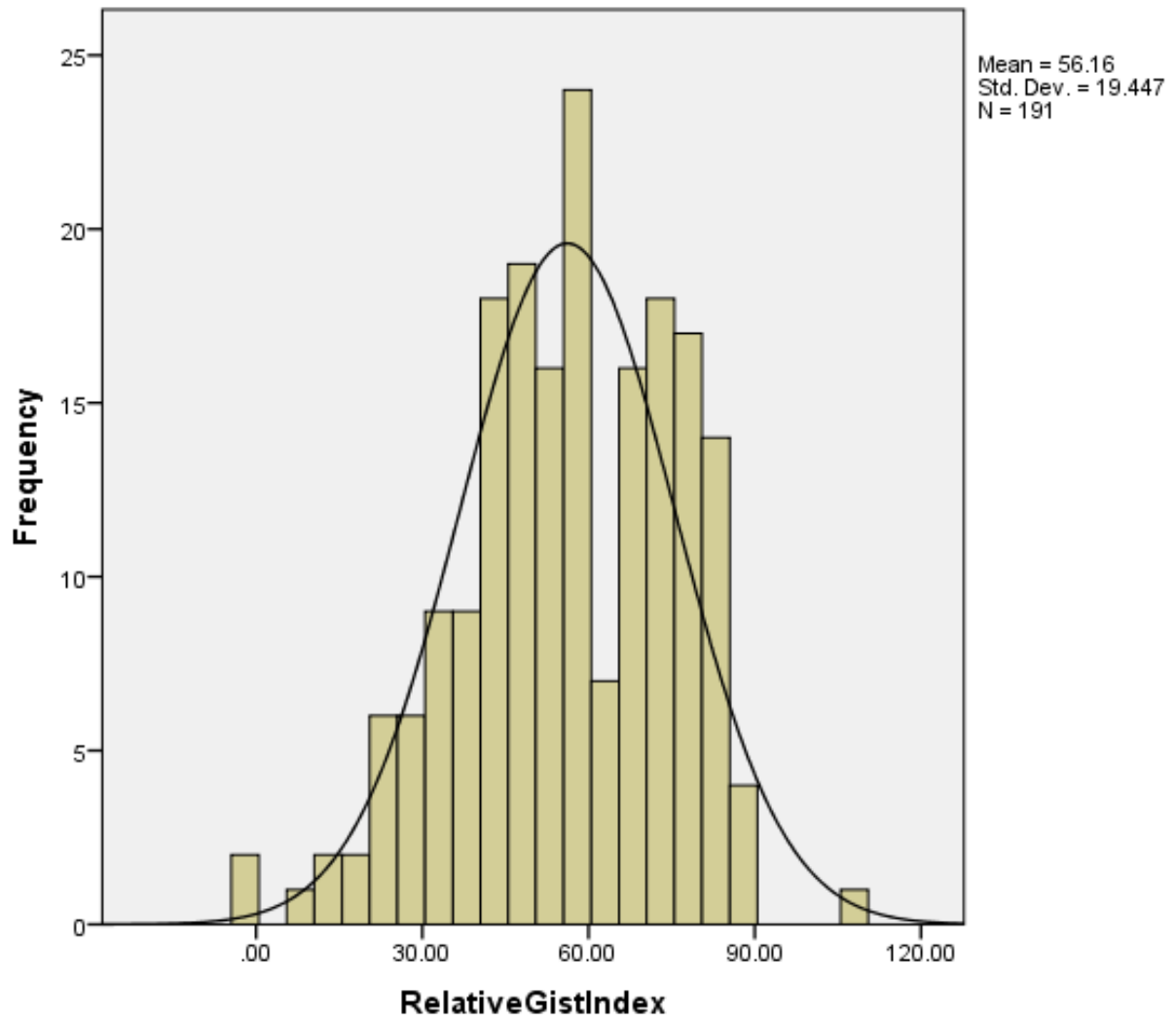
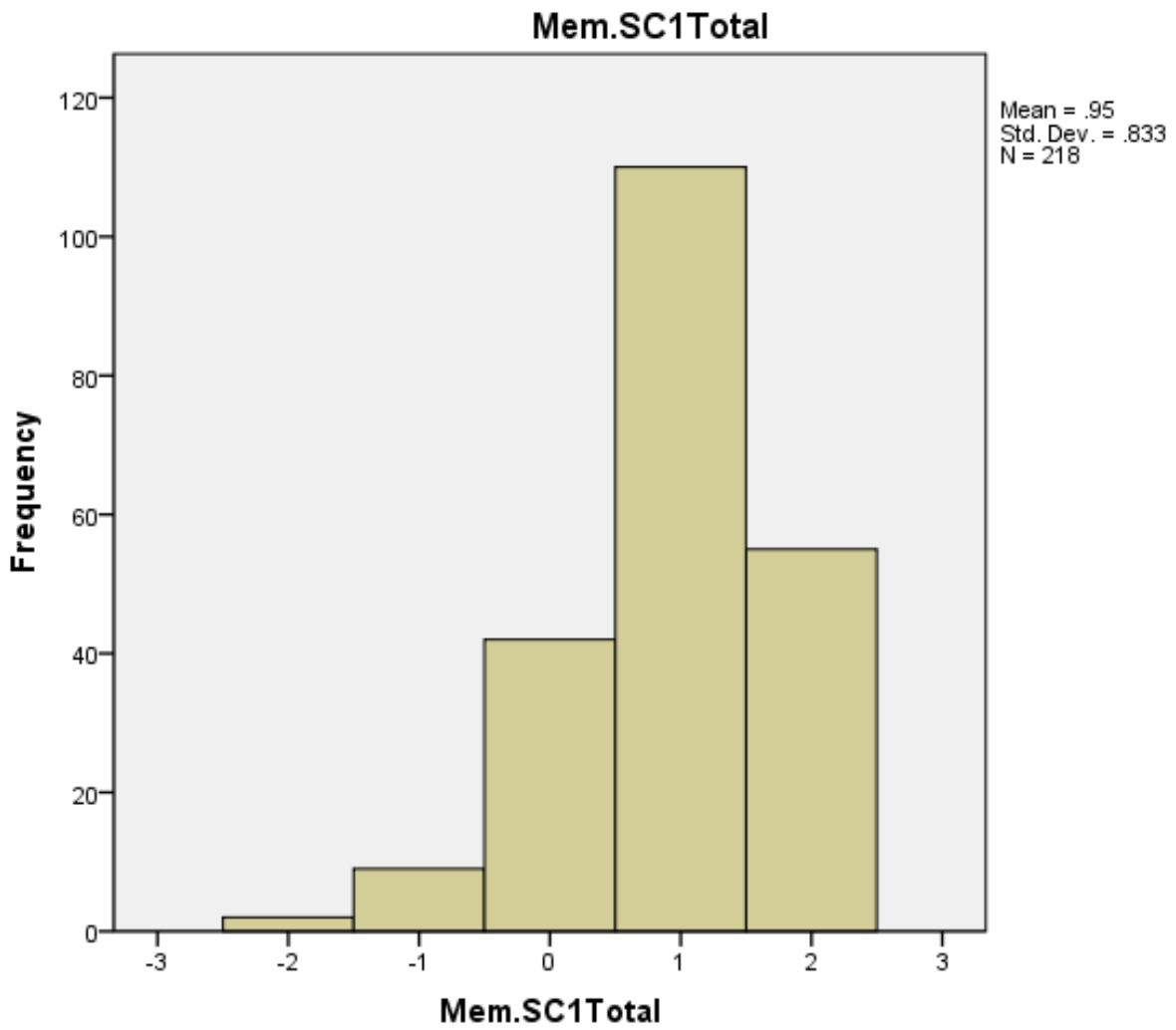
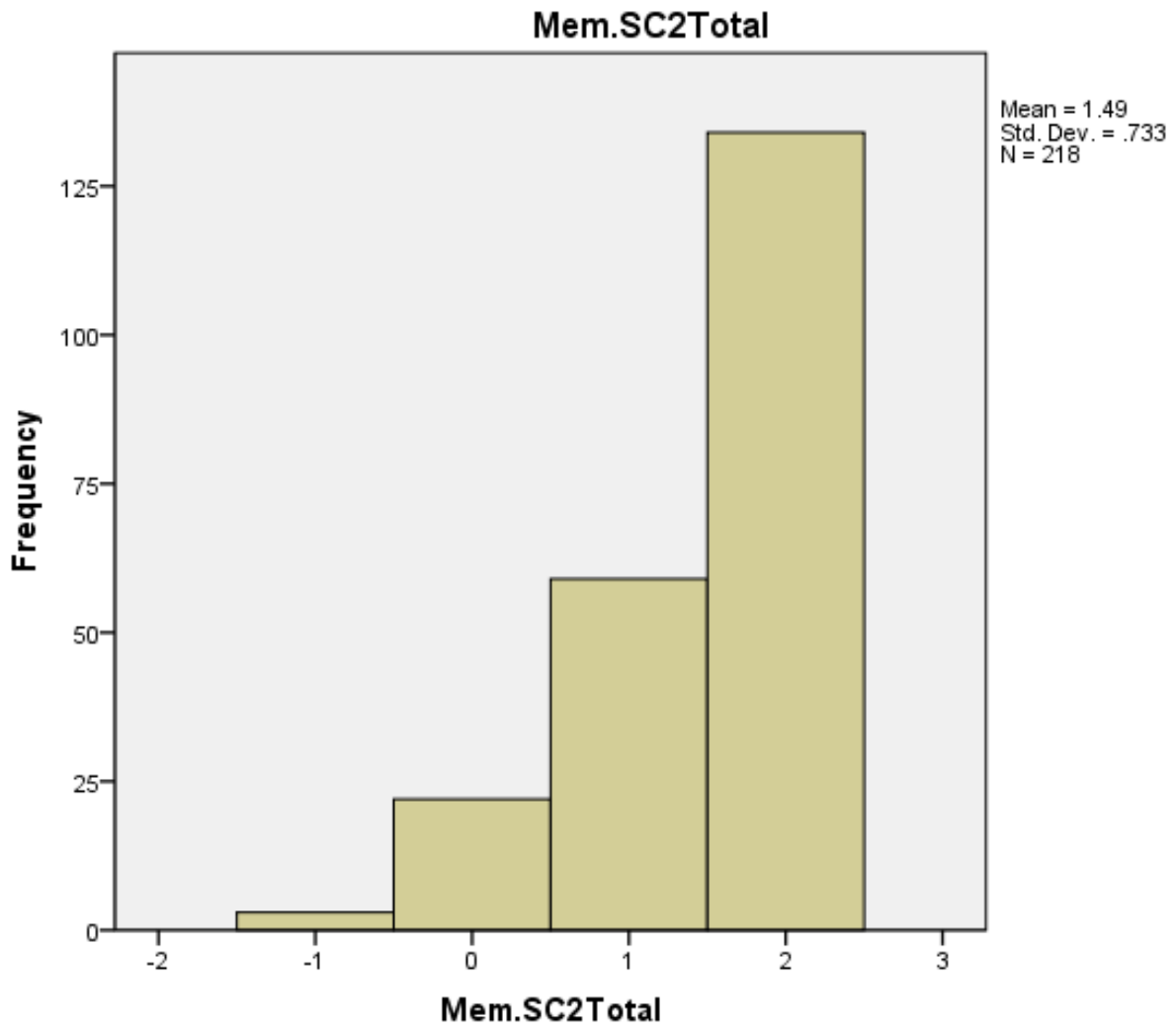


Figure G.39. Histogram of Relative Gist Index (RGI) (Frequency Data)

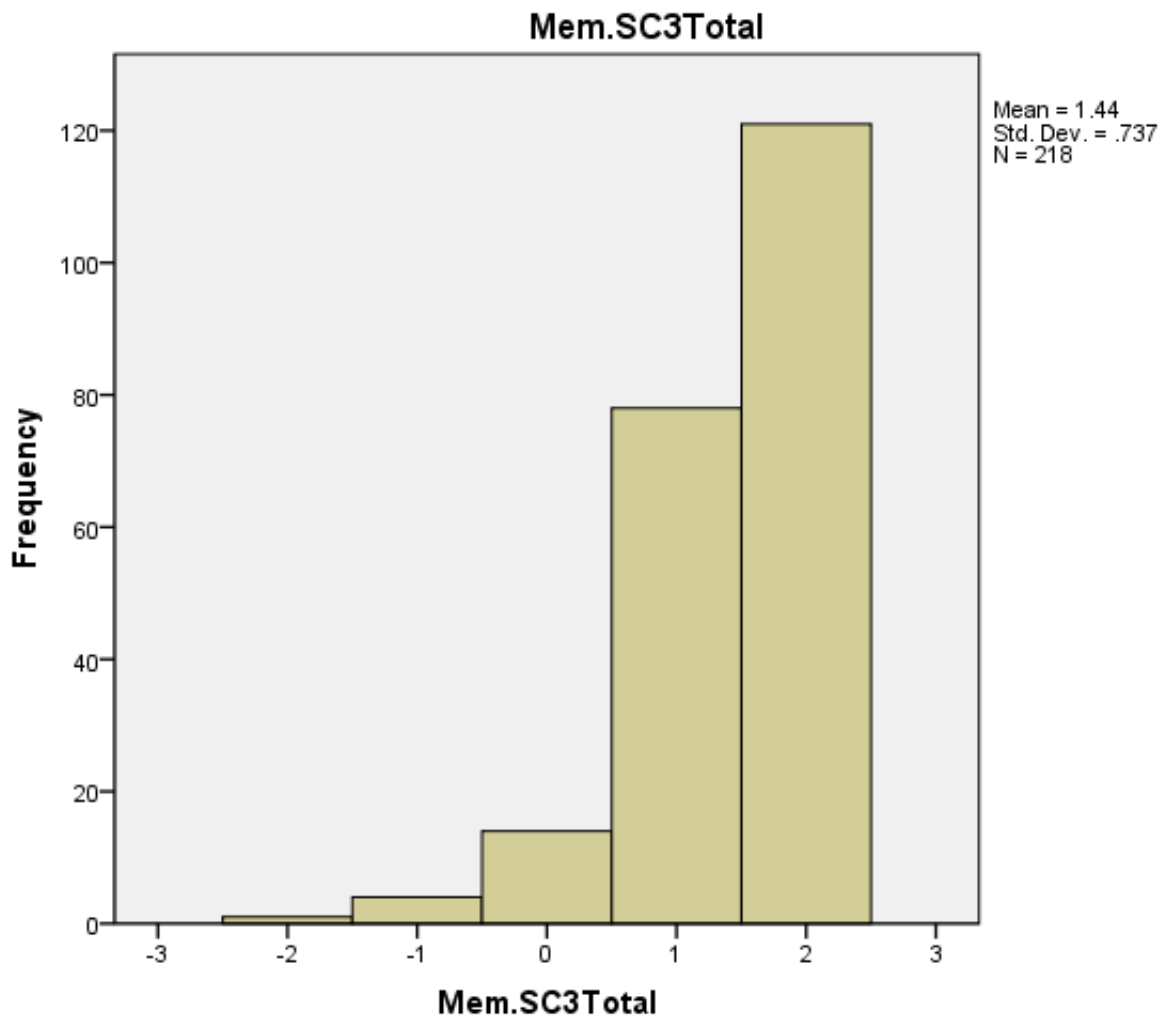


*Figure G.40.* Histogram of Medical Case Scenario 1-  
Memory Total Score



*Figure G.41.* Histogram of Medical Case Scenario 2-

Memory Total Score



*Figure G.42.* Histogram of Medical Case Scenario 3-

Memory Total Score

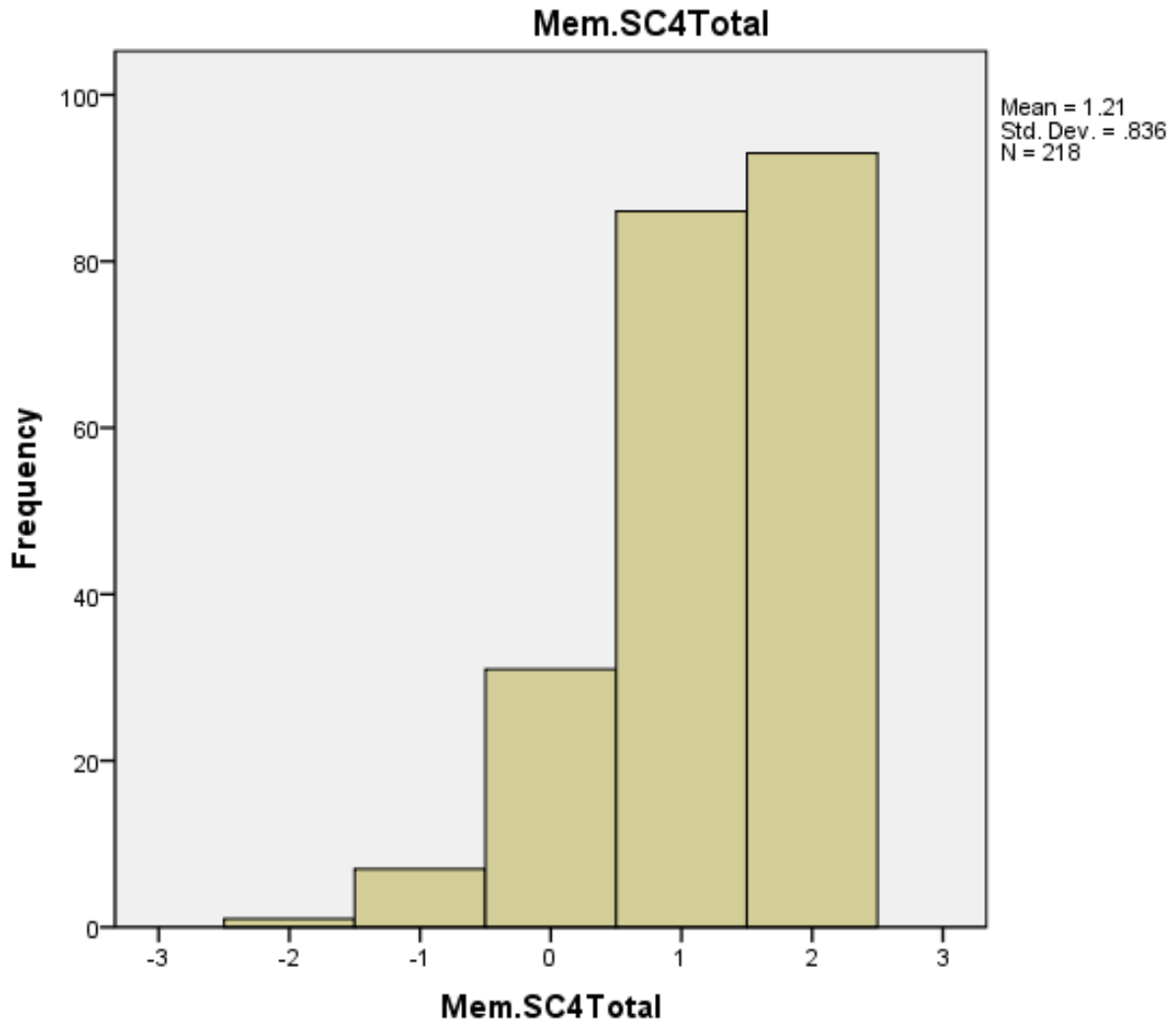


Figure G.43. Histogram of Medical Case Scenario 4-

Memory Total Score

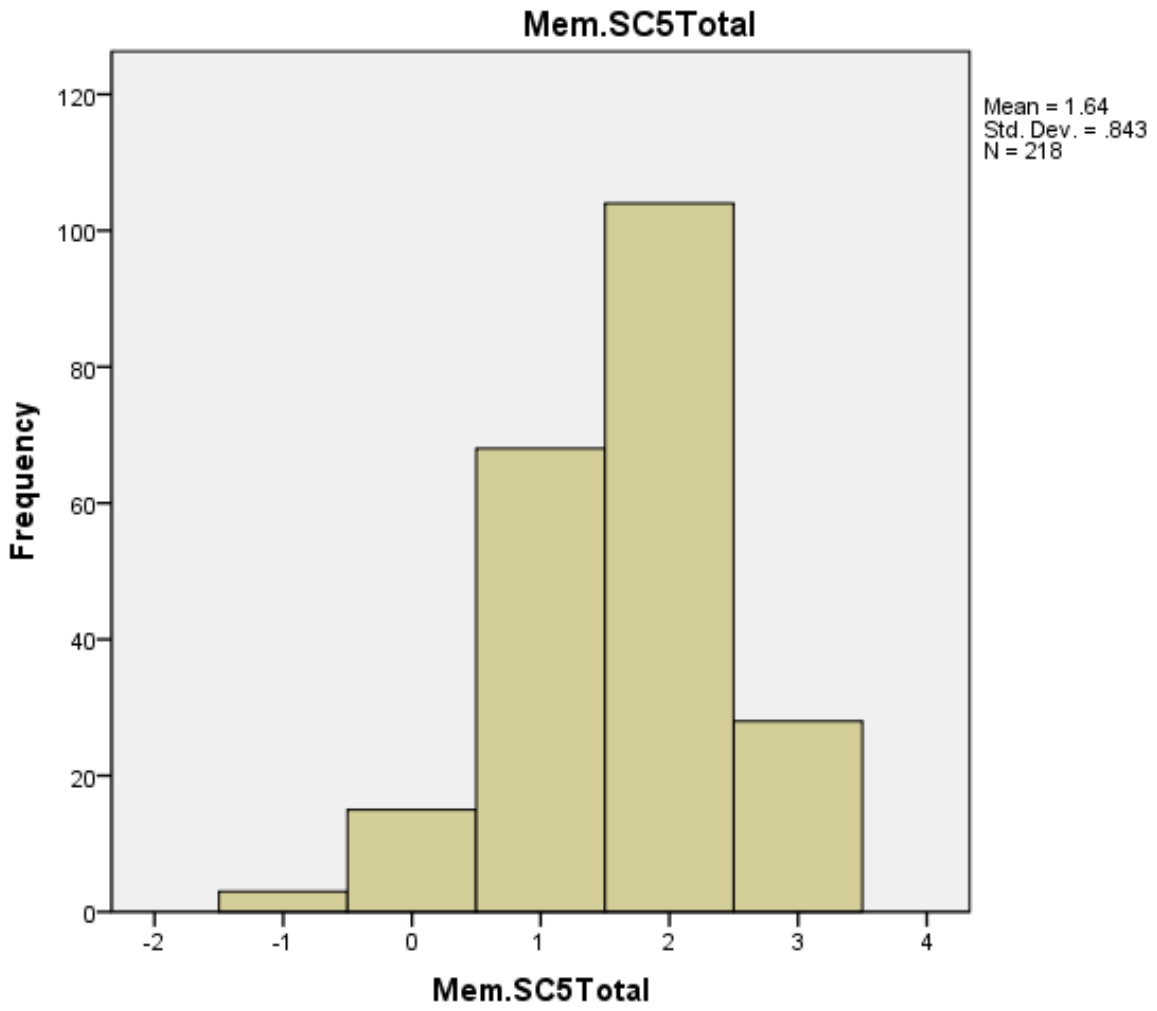
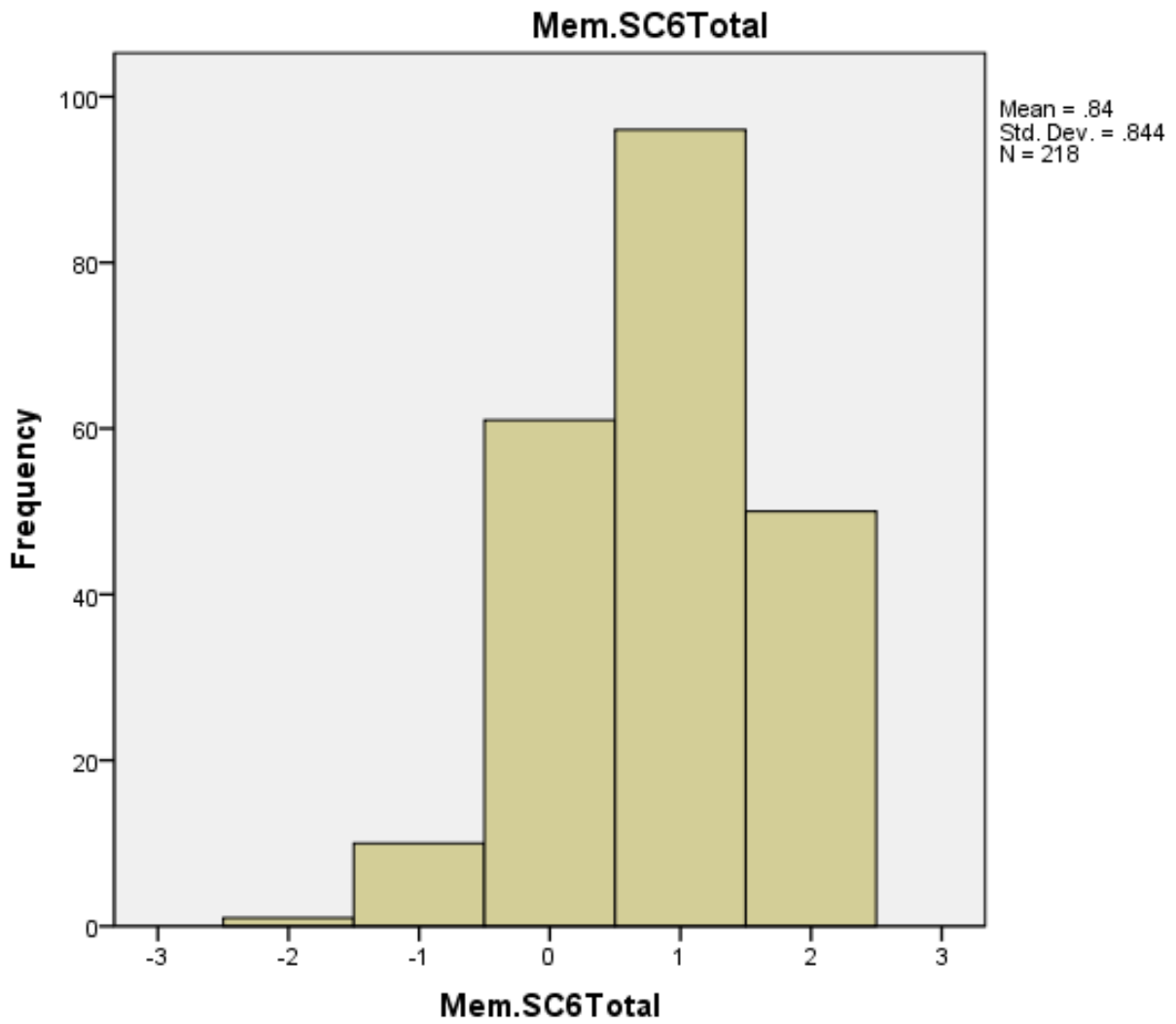
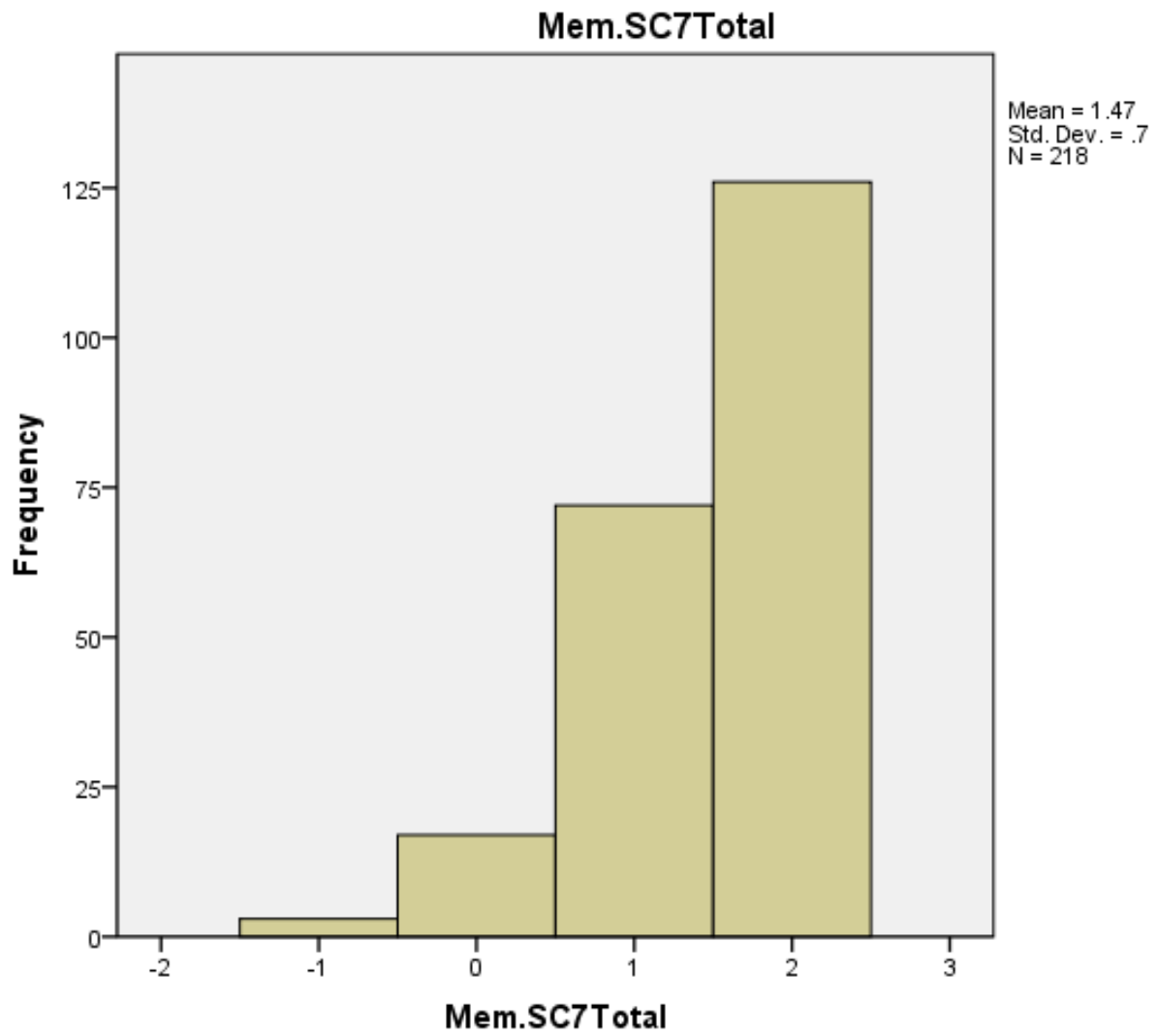


Figure G.44. Histogram of Medical Case Scenario 5-  
Memory Total Score



*Figure G.45.* Histogram of Medical Case Scenario 6-  
Memory Total Score



*Figure G.46.* Histogram of Medical Case Scenario 7-

Memory Total Score