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## "ICE" AWARENESS AMONG LOCAL EMS PERSONNEL

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### "ICE" AWARENESS AMONG LOCAL EMS PERSONNEL

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Capstone
Presented to the Faculty of The University of Texas Graduate School
of Biomedical Sciences at Galveston
in Partial Fulfillment
of the Requirements
for the Degree of

Master of Public Health

Approved by the Supervisory Committee

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> August 2008 Galveston, Texas

Key words: ICE, In Case of Emergency, Cell Phone, Emergency Contact, Emergency Medical Services, Diffusion of Innovations

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# **Dedication**

For Stunt Flounder, Tookiehead, and Aloe Marshmallow

## **ACKNOWLEDGEMENTS**

The author would like to express his appreciation to Dr. Sheryl Bishop, Ph.D., Dr. Gary L. Kesling, Ph.D., M.B.A., and Dr. Jerry Baskerville, M.D., FACEP for their encouragement and assistance in completing this capstone project. Many thanks also go out to all the rescue personnel who took time to share their opinions, and their supervisors who made it possible.

#### "ICE" AWARENESS AMONG LOCAL EMS PERSONNEL

<b>Publication</b>	No.

Jon Michael Riccitello, M.D.C.M., M.P.H. The University of Texas Graduate School of Biomedical Sciences at Galveston, 2008

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'ICE' stands for 'in case of emergency.' The ICE concept is simply to have people program their emergency contact information into their cell phone contact list under the acronym 'ICE.' In this way rescuers on a scene can, if necessary, use the victim's own phone to call for needed information or consent. But even if members of the public program their phones accordingly, the concept has no value if EMS providers do not utilize it. The purpose of this research project was to survey local EMS providers about their awareness, attitudes and usage of the ICE concept. After a brief presentation about the ICE program, a single-page anonymous survey was distributed to Galveston County EMS personnel during their periodic in-service training meetings. The survey asked each rescuer about his or her familiarity and experience with the ICE concept. Opinions about its utility were sought in a neutral manner. The data were collated and analyzed for trends. Overall, roughly half of rescuers surveyed were familiar with ICE, and almost all had positive attitudes towards using it in the field. Contrary to the intuitive sense that a "high-tech" procedure would appeal more to the young, ICE was significantly more wellreceived by older and more experienced rescuers. However, only one third of the personnel who knew of ICE had it programmed into their own cell phones, and fewer than 10% had ever utilized it on an emergency call. This discrepancy illustrates the gap between knowledge and action with respect to health behaviors as described by Diffusion of Innovations Theory. Only when ICE becomes an accepted standard, much like the medic alert bracelet, will the necessary collaboration between the public and EMS providers be established. The broader purpose of this study was to restart the conversation about ICE, either positive or negative, among service providers by putting forth the example from our small corner of the world. Once a consensus about the utility of ICE is reached among rescue personnel nationwide, a more informed choice can be made about whether or not it is worthwhile to further promote the concept to the public.

## **TABLE OF CONTENTS**

	Page
Acknowledgements	iv
Abstract	v
Table of Contents	vi
List of Tables.	vii
List of Figures.	viii
Chapter 1: Introduction	1
Chapter 2: Theory	4
Chapter 3: Methods	7
Chapter 4: Results	11
Chapter 5: Discussion	18
Chapter 6: Conclusion.	20
Appendix A – Sample "Spam" E-Mail	21
Appendix B – Sample Survey Form	22
References	23

## LIST OF TABLES

		Page
Table 1:	Product Attributes of a Successful Innovation	6
Table 2:	Galveston County EMS Agencies	9

## LIST OF FIGURES

		Page
Figure 1:	Rescuer Attitudes Regarding Public Use of ICE	12
Figure 2:	Rescuer Attitudes Regarding Using ICE in the Field	13
Figure 3:	Mean Usage Attitude Likert Score by Experience Level	14
Figure 4:	Mean Usage Attitude Likert Score by Age	15
Figure 5:	Mean Usage Attitude Likert Score by Service Provider	16
Figure 6:	Percentage of Respondents Indicating ICE is	17

#### **CHAPTER 1: INTRODUCTION**

A major determinant of public health is the quality of an area's pre-hospital services. Emergency medical technicians, paramedics and firefighters working or volunteering for these local agencies respond to virtually all 911 calls for emergency medical help. A care provider never knows what he or she may find upon arrival at a scene. It could be anything from an elderly person feeling "weak and dizzy" to a complicated mass casualty incident. Often the victims that EMS services are called upon to assist are unresponsive or confused due to their medical problem or injury. In these cases the rescuer cannot obtain a good history. They must gather whatever information is available from circumstances and witnesses, if any, at the scene. Often the person's identification is available in the form of a driver's license or credit card in a wallet or purse, and in some cases persons with medical conditions carry or wear alerting tags. But often sufficient information to provide optimum treatment is not available.

The ICE program could be invaluable in many such cases. It was conceived in April 2005 by Bob Brotchie, a paramedic from the United Kingdom. ICE stands for "In Case of Emergency," and the concept is simply to have members of the public program their emergency contact information into their cell phones' contact lists under the acronym "ICE." Using this standardized approach, rescuers would have a way to access the information when trying to assist an unresponsive victim. Having a way to reach an emergency contact would also be helpful to hospital personnel later in the chain of care, especially if the rescuers were too busy to look up the information during transport.

If this practice were to come into widespread acceptance the benefits could be substantial. As of October 2006 there were about 224 million cell phones in use in the United States.<sup>2</sup> The nation's population reached 300 million at around the same time. Even given that a few people might own multiple units, this still implies about two of every three people in the country now carry a cell phone. Of course ICE is not a foolproof system – a phone may become damaged or separated from its owner during an accident. Also, some people use a keypad lock on their phone to prevent inadvertent or

unauthorized use, and some handsets are too complex to be able to intuitively access the owner's contact list. But in many cases this simple, cost free act could provide vital information at a critical time.

The program received widespread public press and promotion in the summer of 2005 after it was found to be very useful in the chaotic aftermath of the London train bombings. Newspapers, magazines, television news programs and websites all presented the idea to the public. At the time the National Association of Emergency Medical Technicians endorsed the concept. However since then it has received only sporadic media attention. Although many health departments also endorse the idea, there are no efforts to actively promote it. In fact the Greater Harris County Health Department recently decided to forgo promoting ICE in favor of a program to emphasize that the 911 system is for emergency use only (telephone communication, December 2006). This author, having an interest in the topic, has noted it spontaneously brought to his own attention from outside sources about three times in the last two years in various ways. One occurrence was a "spam" e-mail received from his parents, who did not know of the existence of this project, in September 2007 (see Appendix I).

As mentioned earlier, the ICE concept has appeared numerous times in the popular press. However there is very little scientific literature on this topic. The Journal of Emergency Medical Services ran a pro vs. con opinion piece in 2005 which gives a good snapshot of rescuer attitudes toward the subject. The medic writing the "pro" section reported having been asked the same question this study seeks to answer- if he "or any other EMS provider will actually look for an ICE listing" when responding to a call.<sup>3</sup> Even though he was writing in favor of the concept, he still had concerns. "Time on scene is best spent taking care of the patient – leave looking through the electronic devices to law enforcement or folks at the hospital." The main argument against the program presented by the "con" author was the possible danger to rescuers from booby trapped phones being scattered about the site of a terrorist mass casualty incident. Even though most calls are for more mundane events such as chest pain or a motor vehicle

accident, this medic was concerned that once the habit was picked up it would become so ingrained as to still be a danger during the scenario of concern.

The only scientific study undertaken on this topic was by McKenna, Triner, Little and Dunn of the Albany Medical Center in New York. Their results were presented at the American College of Emergency Physician's meeting and an abstract was published in the supplement to the October 2006 Annals of Emergency Medicine. They conducted interviews in their emergency department asking patients about their knowledge of the ICE concept. In addition, they asked patients if they would be willing to program their phones accordingly (if not already done), and offered to add ICE to the patient's cell phones themselves if the patients were agreeable. Of the 423 patients who participated, 285 had cell phones. Seventy-six had heard of the ICE concept, and nine already had ICE programmed. One hundred twenty-nine patients agreed to program ICE into their phones or allowed a research team member to do so for them.

#### **CHAPTER 2: THEORY**

The adoption of a new product or idea by the general public falls under the theory of Diffusion of Innovations (DOI). Originally developed with respect to the dissemination of new agricultural techniques, it has since been applied to many other fields. The theory was fully laid out in 1962 by Everett M. Rogers, and his text on the subject is currently in its fourth edition.<sup>5</sup> With respect to public health, experience has shown that the most effective interventions are those that require no action by the public at large. Water fluoridation is a case in point. The public receives the benefit passively. Health behaviors that require more effort, such as changing one's diet or getting a screening test such as colonoscopy, are much harder to implement. First the appropriate knowledge must be disseminated, and then the individual must be convinced to implement the change. How to effectively promote an intervention and overcome the seemingly inherent "health inertia" of the populace is currently a hot topic of research. Diffusion of Innovations can be thought of as "the process by which a behavior or technology makes its way into a population and is (or is not) adopted." The common use of medic alert tags can be seen as a successful example of diffusion of innovations applied to the emergency medical field.

According to DOI theory, the process can be thought of as occurring in five stages: innovation development, dissemination, adoption, implementation and maintenance. For the ICE concept, it is clear that the first stage is complete. However the ICE example shows us that stages do not necessarily occur one at a time. As we will see later, ICE is already being used in the field even though its dissemination is incomplete. The tasks of dissemination, adoption and implementation each have their own barriers, and it is impossible to say at this time which is the most limiting. However by surveying rescuer awareness, a measure of the success of dissemination to the EMS community thus far can be taken. Additionally, a check of rescuer attitudes regarding the idea may help foretell any problems with adoption and a check on the proportion of rescuers (who already know about ICE) using it the field may shed light on implementation.

In the case of ICE, there are two additional barriers to widespread implementation. First, in order for it to work it must be accepted and implemented by two separate groups- the public and the rescuers who come to assist. In this way it is akin to the previously mentioned medic alert tags. Having the emergency contact information programmed into the cell phone is pointless if no one is going to look for it, as alluded to in the opinion piece discussed above.

Second, there are competing technologies. Recently there was a program called "Vial of Life." The idea was to have people with health conditions store a packet containing medical information in or on their freezer, and EMS personnel were trained to check this location for it before transporting a patient from home. There are also at least two companies promoting the use of flash memory devices ("thumb-drives") to store one's medical history. This is essentially a high-tech medic alert tag that can give the emergency physician immediate access to an electronic version of the patient's entire medical record. While all of these sound feasible, it is possible to have an overload of good ideas, such that no single one becomes standard practice. One must remember that rescuers at the scene of an emergency often have limited time and must prioritize tasks. The attitudes of emergency personnel regarding the usefulness of ICE, in the context of all their other duties, are key to its adoption. Therefore it only makes sense to gauge their opinion before deciding whether ICE should be promoted further. Table 1 lists certain "product attributes" which need to be maximized in order for a new innovation to be successful.<sup>6</sup> The ICE concept would generally seem to score well on most of these measures, with respect to both the general public and the EMS community. The deciding factor for a rescuer is likely whether or not the information sought is worth the time and effort necessary to obtain it.

**Table 1 – Product Attributes of a Successful Innovation** 

Attribute	Description	
Relative Advantage	Is the innovation better than previous options?	
Compatibility	Does the innovation fit with the intended user?	
Complexity	Is the innovation easy to use?	
Trialability	Can it be tried out before committing to it?	
Observability	Are the results easy to measure?	
Impact on Social Relations	Is the innovation disruptive to people's daily lives?	
Reversibility	Can it be discontinued easily?	
Communicability	Can it be understood clearly and easily by all users?	
Time	Does it take too long to implement?	
Risk and Uncertainty level	Is there a minimum amount of risk involved?	
Commitment	Can it be done without a large investment of resources?	
Modifiability	Can it be changed over time to fit updated needs?	

Adapted from (6)

#### **CHAPTER 3: METHODS**

A survey was conducted to determine awareness, use and attitudes toward the ICE concept among eighteen EMS agencies in Galveston County, Texas. Private corporate fire departments working for the various oil refineries in Texas City were not included. Because it was anonymous, voluntary, and did not deal with sensitive personal issues, the study qualified for an exception to the Institutional Review Board requirements of the University of Texas Medical Branch. A copy of the survey form used is shown in Appendix II. Surveys were conducted between February and June of 2008. Emergency service providers generally conduct periodic in-service training on a weekly or monthly basis. Local agencies were contacted in order to determine when their upcoming sessions were being held. Upon receiving permission from the cognizant officer, surveys were conducted before the start of their meeting.

Before distributing the form, a brief presentation was given. The ICE concept was explained, and it was emphasized that the purpose of the survey was to gather honest opinions about the idea to see whether or not it should be promoted to the public. The fact that the survey was anonymous and voluntary was conferred. Rescuers were also reassured that because ICE is not currently standard of care, there was no reason to worry if they had never heard of it before. An informational paragraph was also available to read at the top of the survey form. Participants filled out the surveys and handed them back when complete. The whole process typically took about five to ten minutes at each location.

Surveys asked for non-identifying demographic information with regard to age, sex and experience. Because there is a great deal overlap between volunteer and professional rescuers, and because the definitions of each can vary greatly, this categorization was not attempted. There is also a great deal of overlap between emergency medical response and firefighting functions, especially in the smaller volunteer agencies. Therefore all agencies except those firefighting agencies with a corresponding EMS service were surveyed (for example, Galveston Fire Department was not included because of the existence of a separate EMS organization).

Following the demographics section, the form asked if they had ever heard of the ICE concept before becoming aware of the survey. For the assessment of awareness of the ICE program, high-experience and low-experience rescuer groups were analyzed in addition to the entire combined cohort. High-experience rescuers were defined as those with greater than 20 years of firefighting experience, or greater than 10 years of combined EMT/paramedic experience. The standard was set higher for firefighters since that job typically entails less direct patient care. Low-experience rescuers were defined as those with 2 years or less in any capacity (unless the combined EMT and paramedic time was greater than 2 years). This would generally mean that they became rescuers after the concerted publicity campaign about ICE that occurred in 2005. Certification as an RN was considered equivalent to paramedic. Some respondents placed marks rather numbers in the spaces that asked for years of experience, meaning their experience level could not be assessed. These personnel were not included in the high or low experience groups, but were retained in the total cohort assessment.

Rescuers were also asked if they already had ICE programmed into their personal cell phones. This served to measure how good they thought the idea was before specifically queried about it, the assumption being those who really liked the concept would have already implemented it for themselves.

The number of calls they had serviced recently and of those how many might ICE have been useful on was asked. Next their actual experiences using the ICE concept, if any, were assessed. The final three questions measured attitudes towards the idea. Likert scales were used to determine their feelings about whether the public should program their phones accordingly, and more importantly if they could see themselves checking phones for ICE while on-scene or during transport. The final question asked at which part of the chain of care they felt ICE was most appropriate.

The EMS agencies involved are detailed in Table 2. Fourteen of the eighteen services targeted were successfully surveyed. The four volunteer fire departments operating on the Bolivar Peninsula held training together and were surveyed simultaneously. They are grouped together for the purposes of analysis. The four

**Table 2 – Galveston County EMS Agencies** 

Agency Name	Approximate Roster	Number Surveyed
Bacliff VFD	12	NONE
Bayou Vista VFD	13	4
Dickinson VFD	33	11
Friendswood VFD	90	16
Galveston EMS	96	22
Hitchcock VFD	35	NONE
Jamaica Beach VFD	35	15
Kemah Fire Dept.	17	10
La Marque Fire Dept.	18	NONE
League City VFD	100	NONE
Combined Peninsular VFD's *	30	16
San Leon VFD	26	14
Santa Fe Fire & Rescue	100	32
Texas City Fire Dept.	76	11
Tiki Island VFD	35	12
TOTAL	716	163

<sup>\*</sup> Note this is the combined result for the four Bolviar Peninsula agencies (Crystal Beach VFD, Gilchrist VFD, High Island VFD and Port Bolivar VFD) that were conducting combined training when surveyed.

agencies not surveyed were missed due to either inability to contact the cognizant officer despite numerous attempts, no upcoming training scheduled or schedule conflicts, or the crew having been dispatched to an emergency call at the time arranged to give the survey (in the case of Hitchcock VFD, this occurred twice). No service refused to participate. No crewmembers specifically declined to take the survey. The number of surveys gathered from each location reflects the amount of fire or EMS certified personnel present for training at the time of the survey visit.

Roster sizes for each agency are approximate, usually obtained by verbal report from the person in charge of the meeting, or in the case of services not surveyed, verbal report of a member answering the telephone. Four medics from Petroleum Helicopters International (PHI), an air ambulance service that operates in the Galveston area, were also surveyed when the opportunity arose. They happened to be giving training to the Texas City Fire Department when that agency was surveyed. Their responses are included in the overall results, but not in the assessment of what proportion of Galveston area EMS personnel were surveyed. The flight medics are also all assumed to be highly experienced rescuers, whether or not their years of service were quantified on the survey form.

Statistical analyses were performed with significance set at 0.05. Comparison of high-experience and low-experience rescuer awareness of ICE was conducted with a Fisher's chi square 2x2 contingency table. Ordinal rank data of the Likert scores for attitudes about whether rescuers should use of ICE in the field (but not whether the public should put ICE on their phones) were compared with regard to experience and age using the Mann-Whitney U and Kruskal-Wallis tests respectively.

#### **CHAPTER 4: RESULTS**

As mentioned above, fourteen of eighteen area agencies were surveyed. Overall 167 survey forms were completed. Excluding the four PHI responses, 163 Galveston area EMS personnel were surveyed. This was out of an approximate population of 716 rescuers. Therefore the survey had an overall penetration of 22.8%. Of the fourteen services that were visited, 29.6% of their crewmembers were present at training and participated in the survey. Participants ranged in age from 16 to 76 years old, the average age was 37.6 years, with a standard deviation of 14.1 years.

Out of 166 responders who answered the question, 51.2% indicated they had previously heard about of the ICE concept. When split by rescuer experience level, the high experience group was significantly more aware of ICE (59.2% of n = 49 responses) than the low experience one (38.3% of n = 47 responses) by Fisher's exact test (p = 0.045). Of the 84 personnel who had heard of ICE and also answered the question about their own personal phone, exactly one third of them had made the effort to program it accordingly. A few respondents also made write-in entries to indicate that while it was not on their phone, they knew of someone else who had done so.

The question asking how many calls the rescuer had been to in the last thirty days was answered somewhat inconsistently. Some crews put down the number of calls the service had registered in the previous month, while others did as intended and estimated the number of scenes they had actually been called out to individually. The question about how many of those calls could ICE have been useful for was also sometimes answered with unquantifiable data such as "many" or "all." Therefore the proportion of service runs where ICE might be valuable was unable to be estimated as intended. However 62 of the surveys indicated they had been to at least one call where ICE might have been useful. Therefore 37.1% of rescuers surveyed reported they had an opportunity to use ICE within the last month

Twelve rescuers (7.2% of all rescuers, 14.1% of those who knew about the ICE concept) reported that they had actually used ICE in the field over the full course of their career. Two-thirds of those fell into the high-experience category. Quantified numbers

of attempted ICE calls ranged from one to eight. Six of the ICE users reported having gathered useful information during every attempt. One rescuer got good results in two out three calls, another found it useful on two out of six tries, and one other person tried using it once without success. Three rescuers did not sufficiently quantify their experiences to be able to report them in detail.

Attitudes toward the ICE concept were assessed from each crewmember. There was a uniformly enthusiastic response toward having the public program their cell phones accordingly, with the majority of respondents indicating they felt everyone should do so. Only one person felt it was a bad idea (see Figure 1).

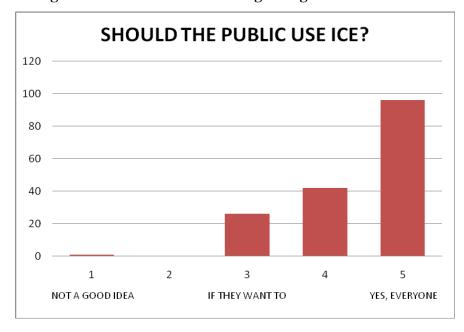


Figure 1 – Rescuer Attitudes Regarding Public Use of ICE

A similarly positive result was obtained regarding whether they could see themselves utilizing it in the field. Almost half agreed with checking for ICE if it were convenient to do so. This is a reasonable response given the crewmember may have other very high priority tasks to complete during the course of rescue and transport (extrication, control of bleeding, etc.). Most of the remainder had even more positive feelings, with only a few having a negative outlook (see Figure 2).

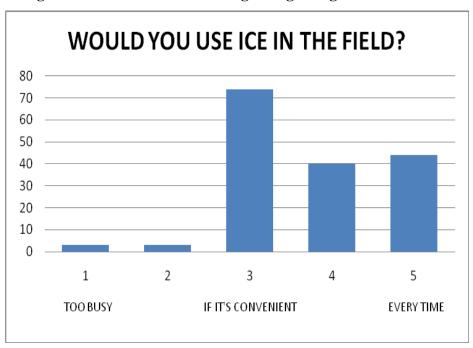


Figure 2 – Rescuer Attitudes Regarding Using ICE in the Field

The mean Likert score in Figure 2 above is 3.73. Attitudes toward the use of ICE in the field (but not whether the public should put ICE on their cell phones) were further analyzed with respect to rescuer experience and age. Low-experience rescuers have a lesser, but still generally approving mean score of 3.45. Highly experienced rescuers value the concept more, with a mean score of 3.94. The difference between low and high-experience groups is statistically significant using a Mann Whitney U test (p=0.015). Results are shown in Figure 3. Note that there is no mean rank for the overall average because the Mann-Whitney U compared only the low and high-experience cohorts.

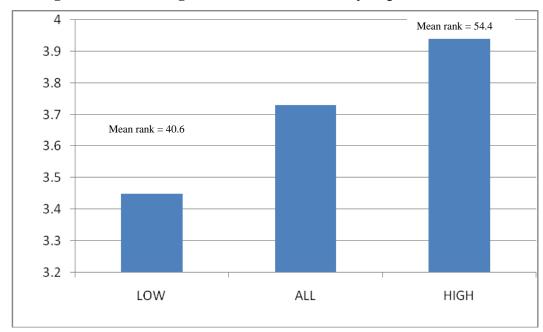


Figure 3 – Mean Usage Attitude Likert Score by Experience Level

Results by age are shown in Figure 4. There are statistically significant differences between age categories (KW H (4)=16.31, p=0.003). The height of each bar corresponds to the mean response on the question for each age group, while the mean ranks are noted above each bar. It is very interesting to note that the oldest age cohort has the most positive attitude toward using ICE in the field. When a Spearman's rank order correlation coefficient was performed (on the n=156 subjects who completed both age and field usage attitude Likert scores on their survey), a small significant positive relationship was found indicating that increased age was associated with more affirmative attitudes (rho = 0.223, p=0.005).

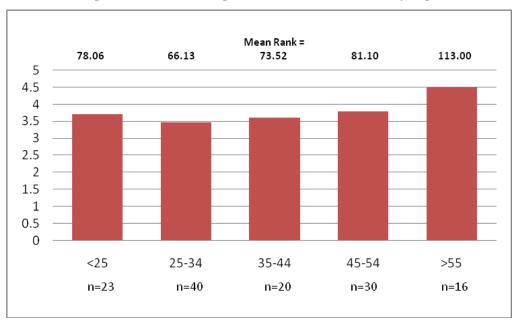


Figure 4 – Mean Usage Attitude Likert Score by Age

Differences between agencies were not significant (KW H (10)=14.48, p=0.152) at the obtained sample sizes. The data is portrayed in Figure 5, with mean field usage Likert scores once again represented by the height of the bar and mean ranks listed above each.

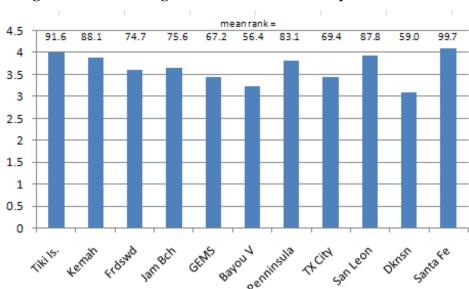
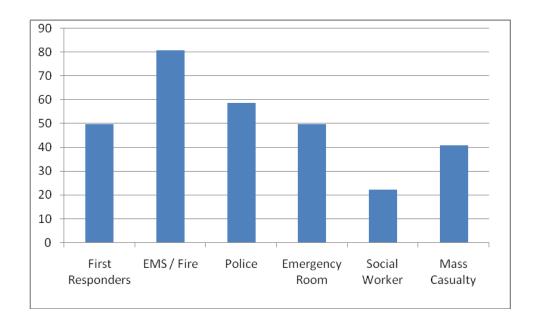


Figure 5 – Mean Usage Attitude Likert Score by Service Provider

Note that the four peninsula services are combined for analysis.

Lastly, respondents were queried on where in the chain of care they felt ICE might most appropriate. Responses varied widely, with 22 choosing every category, and others selecting only the police or social workers. Overall results are given in Figure 6. One can see that in general, EMS providers feel ICE is more useful at their own function than elsewhere.

Figure 6 – Percentage of Respondents Indicating ICE is Appropriate at the Indicated Point in the Chain of Care



### **CHAPTER 5: DISCUSSION**

While the results seem to favor the ICE concept, a few study limitations must be considered. First and foremost, the survey only covers EMS agencies in Galveston County, and is therefore not generalizable nationwide. The results simply give a focused snapshot of our small corner of the world. ICE may be much more or less popular in other parts of the country.

Second, the surveys were presented exclusively during crew training. This was necessary to obtain access to the most personnel available at a mutually convenient time and minimize disruption to the services' operations. Personnel who regularly attend training tend to be more conscientious and enthusiastic, and therefore might be more receptive to new ideas. The amount of bias this may introduce cannot be determined without sampling a group of rescuers who do not tend to show up for training. However, this would be quite labor intensive as those persons would need to be tracked down individually, probably during each shift worked.

Also, the overall penetration of the survey was somewhat low, though actually better than initially anticipated. In addition to the "conscientious trainee" effect above, there might be other reasons the 22.8% of rescuers sampled are not representative of the remainder of the force. For example, at some operations duties are sometimes split between a full-time paid "day crew" and volunteers who cover evenings and weekends. Often the paid personnel do not attend the in-service meetings. This may indicate that the portion of each crew sampled (again, on average about 30% of the total roster) does not reflect the true experience level of the service as a whole because some of the core personnel who "do rescue" for a living are omitted.

Likewise, the four area agencies that could not be visited may have characteristics different from those that were surveyed, introducing additional unknown biases. In general, the League City Volunteer Fire Department has a size and composition similar to that of Santa Fe Fire and Rescue (about 75 volunteer personnel with 25 paid staff). Both services perform both fire and rescue functions from four stations. Similarly, Bacliff, La Marque and Hitchcock are all smaller, single station, predominantly fire operations with

compositions very much like Bayou Vista, Kemah and Tiki Island respectively. The overall average and range of experience levels between these "sister stations" may or may not be comparable, and each may have its own unique "culture."

Finally, simply being present and giving a talk and survey on a topic might be viewed as promoting it, no matter the statement beforehand that honest opinions regarding its utility were being sought. Attendees might feel obligated to give a favorable opinion of the issue in order to please the presenter or their training supervisors. This may bias the results to give a picture of rescuers being more willing to utilize ICE than they actually are.

A disconnect was noted between the generally widespread positive attitudes toward ICE, and the relatively few rescuers putting it on their own phones or actually using it in the field. It is uncertain whether this discrepancy results from the possible survey biases noted above, or from the "health behavior inertia" that is often found to be a barrier to the implementation phase of DOI theory. A later survey to ask rescuers who know of ICE but do not utilize it their reasoning might be warranted. It was puzzling to note that a few rescuers, who indicated they had never before heard of ICE, nevertheless indicated that they had it programmed into their own cell phones. This may indicate some confusion with the survey on the part of these four respondents.

#### **CHAPTER 6: CONCLUSIONS**

The figures show overall awareness of the ICE concept at 51%, indicating the job of dissemination, at least here in Galveston county, is about half done. It would seem adoption should be relatively smooth given the overall positive attitudes towards the concept. It was interesting to note that although one might assume that the younger, more "tech-savvy" medics would be most amenable to the idea, it was the older and more experienced rescuers that had better feelings about ICE. But as noted above, there was only a 14% implementation rate among those who are aware of the concept. And even those who had used ICE did so relatively few times, despite it having often provided good information per their self-reports. This indicates that there may be an impediment at the implementation stage, possibly task overload during rescue and transport. Despite EMS and fire personnel having more consistently indicated their own function as an appropriate time for ICE, actual use may have to wait until the patient arrives at the hospital when there is more time to gather information.

The broader purpose of this paper was to restart the conversation about ICE, either positive or negative, in order to decide once and for all whether the idea is worth pursuing. The simple act of conducting this study helped to raise awareness about ICE among local EMS providers (and thus improve dissemination). A paper describing this study will be submitted to the Journal of Emergency Medical Services (JEMS). Putting our results into a nationwide venue will further push the issue towards a consensus. Should the wider opinion be negative or mixed, it would be difficult for the concept to become the standard of care and it would therefore likely be best just to let the idea die a natural death. However, if the results of this study were to hold up nationwide, it would seem the ICE concept has value in rescue and/or hospital operations and should be promoted more aggressively. Once it were widely accepted, by both the EMS community and the general public, ICE would become the standard way to track down the loved ones of victims who are suddenly unable to speak for themselves.

### Appendix A – Sample "Spam" E-Mail

ICE campaign

"In Case of Emergency"

We all carry our mobile phones with names & numbers stored in its memory but nobody, other than ourselves, knows which of these numbers belong to our closest family or friends.

If we were to be involved in an accident or were taken ill, the people attending us would have our mobile phone but wouldn't know who to call. Yes, there are hundreds of numbers stored but which one is the contact person in case of an emergency? Hence this " ICE" (In Case of Emergency) Campaign The concept of "ICE" is catching on quickly. It is a method of contact during emergency situations As cell phones are carried by the majority of the population, all you need to do is store the number of a contact person or persons who should be contacted during emergency under the name "ICE" ( In Case Of Emergency). The idea was thought up by a paramedic who found that when he went to the scenes of accidents, there were always mobile phones with patients, but they didn't know which number to call. He therefore thought that it would be a good idea if there was a nationally recognized name for this purpose. In an emergency situation, Emergency Service personnel and hospital Staff would be able to quickly contact the right person by simply dialing the number you have stored as "ICE". Please forward this. It won't take too many "forwards" before everybody will know about this. It really could save your life, or put a loved one's mind at rest For more than one contact name simply enter ICE1, ICE2 and ICE3 etc. Be sure it's in your kid's cell phones also.....

A great idea that will make a difference!

Let's spread the concept of ICE by storing an ICE number in our Mobile phones today!

### Appendix B – Sample Survey Form

'ICE' stands for 'in case of emergency.' The ICE concept is to have people program their emergency contact information into their cell phone's contact list under the acronym 'ICE.' In this way rescuers on a scene can, if necessary, use the person's phone to call for needed information or consent. Of course it is not a foolproof system – a phone may become damaged or separated from its owner during an accident. Also, some people use a keypad lock on their phone to prevent inadvertent or unauthorized use. All phones are different, and finding the contact list on some may be difficult. However in many cases this simple, cost free act could provide vital information at a critical time.

The concept was thought up in 2004 by UK paramedic Bob Brotchie. It received widespread public press in July 2005 after it was found to be very useful in the chaotic aftermath of the London train bombings. It has been endorsed by NAEMT, but whether or not it is really catching on is still in question. The purpose of this survey is to find out. Please answer the questions below honestly so we can get a good idea of how well-known the ICE concept is among rescuers and if you find it useful. This questionnaire is completely anonymous and your participation is entirely voluntary. Thank you for your assistance.

Gender: M F	AGE:				
Years of Experience: E	MT:	Paramedic:	Firefigh	nter:	-
Before this year, did yo Do you use it on your o			pt?	YES YES	NO NO
Approximate number o On how many could IC	_	•	•	with cell	phone)?
Have you ever used ICl If yes, how many times How many times did do	?	ve useful?		itact? YI	ES NO
Should members of the	public ICI	E their cell phones?		propriate	number)
No, its not a good idea		If they want to		Yes, e	veryone should
1	2	3	4		5
How do you feel about Too busy w/ patient car	e	OK, if it's conven	ient		eck for it every time
1	2	3	4		5
I think the ICE concept	is most us	eful for: (circle or	ne or more	)	

Social workers Mass Casualties

ER personnel

First Responders

EMS/Fire Police

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### **VITA**

Jon Michael Riccitello was born 29 January 1970 in Niskayuna, New York. He graduated from Rampart High School, located in Colorado Springs, in 1987. He graduated from the University of Colorado in 1993 with a Bachelors of Science in Aerospace Engineering. He then served in the United States Navy as a nuclear submarine officer onboard the USS WYOMING. Upon leaving the Navy and following a course of post-baccalaureate premedical studies at the University of Vermont, he graduated from the McGill University Medical School. He is currently a resident in the combined internal medicine / aerospace medicine program at the University of Texas Medical Branch in Galveston, Texas. His pre-hospital care experiences include a dozen ski seasons as a volunteer or professional ski patroller, and one year of service as an Emergency Medical Technician (EMT) with the Colchester Rescue Squad in Vermont.

The author typed this Capstone.