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EMS Providers and Exception From Informed Consent Research: Benefits, Ethics, and Community Consultation

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Abstract

As attention to, and motivation for, EMS-related research continues to grow, particularly exception from informed consent (EFIC) research, it is important to understand the thoughts, beliefs, and experiences of EMS providers who are actively engaged in the research.

Study Objective—We explored the attitudes, beliefs, and experiences of EMS providers regarding their involvement in prehospital emergency research, particularly EFIC research.

Method—Using a qualitative design, 24 participants were interviewed including Nationally Registered Paramedics and Virginia certified Emergency Medical Technicians employed at Richmond Ambulance Authority, the participating EMS agency. At the time of our interviews, the EMS agency was involved in an exception from informed consent trial. Transcribed interview data were coded and analyzed for themes. Findings were presented back to the EMS agency for validation.

Results—Overall, there appeared to be support for prehospital emergency research. Participants viewed research as necessary for the advancement of the field of EMS. Improvement in patient care was identified as one of the most important benefits. A number of ethical considerations were identified: individual risk versus public good and consent. EMS providers in our study were open to working with EMS researchers throughout the community consultation and public disclosure process.

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Declaration Of Interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

Conclusions—EMS providers in our study value research and are willing to participate in studies. Support for research was balanced with concerns and challenges regarding the role of providers in the research process.

Introduction

The size, scope, and sophistication of Emergency Medical Services (EMS) in the United States have expanded significantly over the past 50 years.¹ While the field of EMS has rapidly evolved and expanded over the past five decades, the evidence base to support such EMS-related practices has been, and continues to be, sparse.¹ It is well documented that EMS has operated without an adequate scientific basis to support many of its most standard practices,^{1–5} and, consequently, has largely relied on “tradition,”² “convention,”² and “reasonable assumptions governing care”⁶ to guide and shape its practices.

In the interest of establishing a strong, evidence-based foundation for prehospital emergency care, a number of efforts have been made over the past decade to bolster support for, and development of, a national prehospital emergency research agenda: the 1996 *EMS Agenda for the Future*,¹ the 2001 *National EMS Research Agenda*,⁷ the *National EMS Research Agenda* implementation symposium in 2002,⁸ and the 2005 *National EMS Research Strategic Plan*.⁹ Cumulatively, these reports have served to raise awareness of the need for greater EMS research, identify barriers to performing such research, and initiate the process of building a foundation and infrastructure for future EMS research.

EMS research poses unique challenges involving emergent situations, in often uncontrolled settings, utilizing highly trained clinical professionals who are usually not trained researchers. Obtaining informed consent is an example of a challenge to conducting research in this area. In EMS research conducted outside of the hospital, obtaining informed consent may not always be possible because the potential participant is often incapable of making an informed decision and it is logistically impossible to contact a legally authorized representative for permission when faced with narrow time constraints for emergent care. Research done in this type of setting is known as Exception from Informed Consent (EFIC) research and must meet strict criteria, and requires additional institutional review board review and oversight as outlined in the November 1996, federal regulation 21 CFR 50.24,¹⁰ also known as the Final Rule.

As EMS-related research continues to grow, it will be important to understand the thoughts, beliefs, and experiences of those who will be personally involved in the research experience – namely the EMS providers. We sought to explore the attitudes, beliefs, and experiences of EMS providers regarding emergency research done in a prehospital emergency setting. Due to the limited literature in this area, we chose to conduct in-depth interviews with providers to explore qualitatively the experiences of EMS providers in research. At the time of our interviews, the participating EMS agency was involved in a multi-site EFIC trial. Our study explored EMS providers’ research experiences in general, as well as specifically regarding participation in an on-going EFIC trial.

Methods

Study design

We selected a qualitative research design using semi-structured interviews to allow for an exploration of attitudes, beliefs, and experiences of EMS providers regarding their involvement in prehospital emergency research, particularly exception from informed consent research. This study was approved by the Institutional Review Board at Virginia Commonwealth University, Richmond, Virginia.

Setting

This study was conducted with the Richmond Ambulance Authority (RAA), a High Performance Emergency Medical Service (HPEMS) system that operates under System Status Management methodology, located in Richmond, Virginia. Richmond has a geographical area of 62.2 square miles and a population of approximately 200,000 residents,¹¹ swelling to nearly 1,000,000 people during the work week. RAA has over 1,550 emergency transports per 10,000 population, making RAA one of the busiest HPEMS in the nation.¹² RAA has participated in multiple research studies (both independently and in collaboration with Virginia Commonwealth University), including past participation in EFIC studies such as PolyHEME®. During the time of our interviews, RAA was actively engaged in a multi-site EFIC trial testing the effectiveness of two standard medications for a specific condition in an out-of-hospital setting.

Population

A purposive sample of 24 participants was interviewed. EMS providers invited to participate in the study included Nationally Registered Paramedics and Virginia certified Emergency Medical Technicians (EMTs) employed (full or part time) at RAA. The EFIC trial that was being conducted at the time required input from EMS providers that worked in the field, as well as in the communication center and field operations/field training, and each were represented in the participants interviewed. Nineteen of the 24 (79%) participants were EMS providers (EMTs and Paramedics) for five or greater years, and a majority of participants (n=14; 58.4%) had been employees of the participating agency for four or greater years, with seven (29.2%) participants having been with the agency for six or more years. Participant demographics are shown in Table 1. In order to assure confidentiality of responses, the experience and time with the agency were blocked to allow multiple respondents in each category.

Interview Guide Development

A semi-structured interview guide was developed based upon review of the literature and following discussions with key informants, such as administrative staff, at RAA. Administrative and medical leadership for RAA were consulted regarding the proposed study. They provided key insider information regarding research at the organization, the ongoing EFIC trial including training and logistics for that trial, and assisted with logistics of the interviews. The guide was revised accordingly as key informants provided feedback to clarify questions and suggested probes to delve deeper into the participants' experiences with EFIC research.

Interview Logistics

In preparation for the study, investigators and leadership from RAA met to discuss the purpose and logistics of the study. Suggestions from RAA were crucial in determining how to most effectively carry out the logistics of the interviews. Fliers with interview information were posted around the agency and e-mails containing similar information were sent to agency EMS providers. Interviews were scheduled over various days and times in an effort to be available for all interested providers working all shifts. Participants opted in to the study and informed consent was obtained from each participant. A PhD level senior researcher (C.R.) and a master level research assistant (A.P.E.) conducted the interviews at the agency between December 2009 and May 2010.

The length of interviews ranged from thirty minutes to two hours with the majority of interviews lasting approximately one hour. Providers received \$25 for their participation. All interviews were audio recorded and transcribed verbatim. Twenty percent of the transcripts

were randomly selected for verification by comparing the transcribed data with the audio recording. Interviews continued until the interview team believed saturation was reached. Saturation in qualitative research means that no new themes are emerging from the interviews, thus sample size has been reached.¹³ One challenge was reaching participants at a convenient time to conduct the interviews. Two interviews were interrupted and rescheduled due to work duties. Several participants came in on their day off or came into work early to participate in the interviews.

Data Analysis

A multi-disciplinary team of six project staff coded the transcripts using QSR International's NVivo 8.¹⁴ Four staff organized into two teams of two, read three transcripts, identified themes, met for consensus (i.e., agree on themes), and created the codebook based on themes. A meeting with all coders was then held to familiarize each coder with the codebook. Two coders were randomly assigned to each of the interviews to ensure that coding pairs differed across the interviews. Each transcript was coded independently and then assigned pairs met to reach consensus on their coding. Completed coding was consolidated into one NVivo database for analysis. Following preliminary analysis of interview data, member checking was conducted with the Clinical Service Committee (consisting of providers, clinical administrators, and the Medical Director) at RAA.

Results

A theme was defined by the research team as any idea emerging from three or more different interviews. We have concentrated the findings into the following key themes: EMS provider perceptions of the benefits and concerns of prehospital emergency research, ethical considerations, and community consultation and public disclosure. Illustrative quotes to support each theme are presented in Tables 2 through 4.

Key Theme: Benefits of Prehospital Emergency Research

Participants unanimously expressed support for prehospital emergency research; however, the perceived benefits of prehospital emergency research varied. Benefits included advancement of the field of prehospital emergency care, improvement in patient care, and personal benefits (i.e., advancing skills of individual EMS providers through involvement in studies).

Advancement of the Field of Prehospital Emergency Care: Necessary to “Move Forward”—Commonly used words to describe emergency research in an out-of-hospital setting included “critical” and “necessary” for the field of prehospital emergency care to grow and “move forward.” Participants expressed the importance of and need for research to be conducted in a prehospital emergency context.

Improved Patient Care—Participants saw improved patient care as a major benefit of prehospital emergency research. This includes both an improvement in the ability of providers to save lives, as well as provide a level of care that will better stabilize patients in the field, leading to improved patient outcomes.

Personal Benefits—Pride in the field of EMS was the most commonly referred to personal benefit associated with engaging in prehospital emergency research. Participants expressed excitement in being a part of “ground breaking” research and the recognition that their participation in research has the ability to affect national standards. Some participants saw engagement in research as an opportunity to grow in their practice skills.

Participants varied in their views regarding career development and its association with participation in research. Some participants noted that participating in research at RAA was expected, and, therefore, not associated with career advancement opportunities within the agency. A few participants considered participation in research as a possible opportunity for career advancement in an outside agency not regularly engaged in research. A few participants expressed interest in a greater level of involvement in research (such as in protocol development, analysis, and/or supervision) at RAA as a way to transition out of years spent in the field. Some expressed already having a particular research question in mind. Others shared that participation in research did support their own career development goals.

Benefits Balanced with Concern—Although all voiced support for emergency research in a prehospital setting, there were concerns regarding the role of providers in the implementation of a research protocol, including added stress and extra time requirements. Another concern expressed speaks to the potential liability of an EMS provider in implementing a study protocol. From the perspective of a provider, there appeared to be some concern regarding the level to which providers are liable for any mishap that may occur while implementing an *experimental* (research) protocol. Participants holding administrative positions within the agency expressed “genuine concern [for] liability.”

Key Theme: Ethical Considerations

Individual Patient Risk versus Public Good—While this issue of individual versus public good arose in many interviews, perspectives varied.

Implied Consent and Informed Consent—Of the many areas discussed during the interviews, implied versus informed consent raised the most complex and divergent opinions regarding its role in prehospital emergency research, particularly EFIC research. Responses ranged from seeing little to no reason for the use of informed consent to viewing informed consent as an important component in respecting a patient’s autonomy.

Some participants believed the same principle of implied consent that guides the work of providers during standard practice extends to cover the work of providers during the implementation of an experimental protocol; others saw little difference between a standard practice protocol and an experimental protocol, viewing both as offering help to a patient. Conversely, some participants believed in the importance of informed consent because it is “what most people expect,” however, they acknowledged that in EFIC research it is challenging to uphold this expectation.

Key Theme: Community Consultation and Public Disclosure

When asked the question, “How would you conduct a community consultation for Richmond,” participants seemed to have trouble responding to the question. It appeared the definition and purpose of community consultation for EFIC trials was not clear to most participants that were interviewed. Following a brief explanation of community consultation by the interviewer, however, participants demonstrated their understanding of the process by identifying and discussing a number of standard strategies (i.e. media, bus placards, public meetings) (as shown in Table 4). Also, innovative ideas including roles EMS could play in community consultation and public disclosure were introduced (also shown in Table 4).

Discussion

Overall, there appeared to be support for prehospital emergency research. This finding is consistent with other nation-wide studies that have reported EMS provider support for

prehospital emergency research.^{6,15} Participants in our study expressed the importance of prehospital emergency research in moving forward and advancing the field of EMS. Improved patient care was seen as another major benefit of research conducted in a prehospital emergency setting.

While there was support for prehospital emergency research, the support was balanced with concerns and challenges regarding the role of providers in the implementation process. These concerns and challenges include the added stress of deviation from standard practices, extra time and work requirements, correct implementation of the protocol, and the potential to harm a patient in the intervention process. EMS providers are instrumental players in advancing the field of EMS. It is important that their concerns be addressed. Some participants noted that many of these concerns could be addressed with adequate time dedicated to discussion and training of EMS providers prior to implementation of the study, as well as ongoing training throughout the study. In addition to the concerns that were addressed, personal benefits of engagement in research, such as pride, broadened practitioner skills, and career advancement, also emerged from the data. For engagement in research to be a positive experience for EMS providers, strategically increasing personal benefits to outweigh concerns and challenges is crucial.

The ethical considerations expressed by participants bring to light interesting factors to consider when engaging EMS providers in prehospital emergency research. Many of the participants in our study expressed seeing little to no reason for informed consent in the prehospital emergency research process. This perspective does not appear to be an anomaly. More than half of respondents in Fox et al's survey believed that EMS research should be allowed without informed consent.⁶ Similarly, Schmidt et al found that 52.4% of respondents (Paramedics & EMTs) agreed with the statement that, "there are times when it is so important to learn about a new treatment that it would be okay to enroll patients in a study before they are able to consent."¹⁵

Consideration of the premise under which EMS providers provide medical care on a day-to-day basis may help explain this finding. EMS providers offer care based on an understanding of implied consent - the assumption that the unresponsive patient requiring emergency intervention would, if capable, consent to life-saving interventions. In fact, in most situations, a signature is only obtained from a patient when the patient is declining care or transport. Many participants in our study regarded experimental interventions as potentially life-saving interventions, similar to, if not better than, standard practices in the field; reasoning that as under the premise of implied consent, the unresponsive patient would, if capable, consent to life-saving interventions, even if experimental. Furthermore, in the on-going EFIC study that providers were engaged in during the time of our interviews, standard care was not being withheld, but, as one participant said, "we're just taking one step before it [original protocol] and then we will fall back on our original protocol if that [experimental protocol] doesn't work." Conversely, there were some providers that did believe in the importance of informed consent. While this reasoning may help explain views on informed consent, it may also point to a therapeutic misconception (the difficulty distinguishing standard clinical care versus research) usually referred to with clinical participants.¹⁶

In honor of the Belmont principle of respect for persons¹⁷ and adherence to federal regulation 45 CFR 46.116,¹⁸ it is important for EMS providers engaged in research to have knowledge of the concepts of implied consent and informed consent and an understanding of the difference between the two. While informed consent is not a prior obligatory component of EFIC research, it is still important for providers to be familiar with the concepts, as well

as have an understanding of the federal regulations that permit research to occur under such conditions.

Other ethical considerations that emerged during our interviews include consideration of individual risk versus public good. Generally, of the participants who talked about individual patient risk versus public good, many appeared to view potential individual patient risk as justifiable for the sake of the public good; however, there were various perspectives in support of this view. Having an in-depth understanding of such ethical issues may help providers understand why they are asked to carry out experimental protocols in specific ways. Furthermore, the integrity of a research study is dependent on the knowledge and practice of those involved in its implementation. The inclusion of a strong ethics component to the training involved in rolling out a new study may help providers feel more confident about their actions when implementing a research protocol, as well as uphold the integrity of the research study.

We found that EMS providers are open to working with EMS researchers on the development and implementation of community consultation and public disclosure strategies. This collaboration could provide greater understanding of the community and integrate new strategies which may fulfill community consultation and public disclosure requirements as required by federal legislation 21 CFR 50.24. An added benefit is also in providing the opportunity for EMS providers to experience a greater level of involvement in the research process. One participant summed up the need for EMS provider involvement in the prehospital emergency research process this way:

I think you have to do more than just go to the community and say, “Hey, we’re participating in this research and this is what’s going on.” I think you have to truly build up a relationship between the community and the EMS system...if we can get out to the community and make them as proud of us as we are, then there’s a trust factor there...because when you have a community that says we have a world class EMS system, it’s one of the best in the country, all these things that we do, the good things that we do, and to them, I think research becomes normal. It’s what we do. It’s what we do to better people’s lives and help other agencies throughout the country as they follow what we do. And so I think there’s more trust and with more trust comes less suspicion...that’s just a relationship that has to be nurtured 24-7. Not just when something special is happening.

- Paramedic, RAA employee 4–5 years

Limitations

As with any research, there are limitations to this study. While a qualitative research design allowed us to explore the multiple viewpoints of EMS providers and gain an in-depth understanding regarding their attitudes, beliefs, and experiences with EMS research, the design does limit the generalizability of our study findings. Our findings are limited to one EMS agency. Logistically, the decentralized work force and rotating shift work of RAA presented challenges to scheduling interviews with EMS providers. While we were as flexible as possible, we still were not able to interview all interested providers. Also, participation in the interview was voluntary, so the viewpoints of providers who chose to participate, and were able to schedule a suitable appointment time to do so, may be different from those who did not participate. Most participants were established practitioners in the field of EMS and well established within RAA, thus, providing perspectives from experienced staff. Future studies of new and less experienced providers will be important to gain a fuller understanding of EMS providers’ attitudes, beliefs, and experiences regarding prehospital emergency research.

Conclusions

EMS providers are instrumental players in advancing the standards of care in the field of EMS. EMS providers in our study value research and are willing to participate in studies. While there was expressed support for prehospital emergency research, the support was balanced with concerns and challenges regarding the role of providers in the research process. EMS providers in our study were also open to working with EMS researchers throughout the community consultation and public disclosure process. This collaboration could provide greater understanding of the community and integrate new strategies, as well as provide an opportunity for EMS providers to experience a greater level of involvement in the research process. For engagement in research to be a positive experience for EMS providers, attention to strategically increasing personal benefits to outweigh concerns and challenges is crucial.

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Table 1**Participant Demographics**

	Number of participants (%)
Level of Provider Training	
Paramedic	14 (58.3)
EMT & actively pursuing Paramedic Registration	4 (16.7)
EMT	6 (25.0)
Role at the agency	
Field Supervisor	10 (41.7)
Field Training Officer	1 (4.2)
Communications Center	3 (12.5)
Field Supervisor & Field Training Officer	3 (12.5)
Field Supervisor & Communication Center	4 (16.7)
Field Training Officer & Communications Center	1 (4.2)
Administration	2 (8.3)
Years as an EMS Provider	
< 2	0 (0)
2 – 3	3 (12.5)
4 – 5	5 (20.8)
6+	16 (66.7)
Years at the agency	
< 2	3 (12.5)
2 – 3	7 (29.2)
4 – 5	7 (29.2)
6+	7 (29.2)

Table 2**Key Theme: Benefits of Prehospital Emergency Research**

Quote	Participant
Advancement of the Field of Pre-hospital Emergency Care	
I think it's a necessity. I think you have to research in order to move forward.	Paramedic, RAA employee 4–5 years
If the in-hospital study is the clean environment for research and the pre-hospital is the down and dirty environment for research, we can't take that clean information and apply it down and dirty. We have to know how it works down and dirty and the way that we're going to find that out is go out there and try it.	EMT, RAA employee 4–5 years
So research is critical, studies are critical.	Paramedic, RAA employee 6 or more years
It [research] has to be done. It is absolutely positively necessary. That's how progress is made.	EMT, RAA employee 2–3 years
You gotta go in the trenches if you want to figure out the best way this is going to work.	EMT, RAA employee 2–3 years
If this is something that is going to be a standard in the future, you've got to test it now and got to get the feedback on it because this might become the new standard, our new protocol.	Paramedic, RAA employee 4–5 years
I think the research for emergency medicine as a profession has actually taken a very good turn to data research and not anecdotal research, 'This worked for me last time on the street, let's do it again.'	Paramedic, RAA employee 6 or more years
Improved Patient Care	
So that's definitely your biggest benefit - saving lives and making a better outcome in the long run for the patients.	Paramedic, RAA employee 4–5 years
The more we learn, the better we can take care of patients.	Paramedic, RAA employee 6 or more years
...This [research] will get our patients better outcomes...	Paramedic, RAA employee 2–3 years
Personal Benefits	
Every time we participate in one of these studies, we give ourselves an opportunity to broaden our own personal practitioner horizons.	EMT, RAA employee 4–5 years
I'm all about it. Even if it means extra work...It definitely adds a lot more work...For me personally, I really like it because I get to learn a lot more since I am directly involved with every call.	Paramedic, RAA employee 6 or more years
And we get to participate in some ground-breaking stuff and I like that.	EMT, RAA employee 4–5 years
It's definitely nice to say you're on the leading edge, kind of have that chip on your shoulder, makes you feel a little higher up...	Paramedic, RAA employee 6 or more years
It's kind of part of my job...it's just more of a part of the day to day.	Paramedic, RAA employee 4–5 years
It doesn't fit into my career goals but it does make me feel good that at least what I am doing, or not doing, is bringing benefit to the patient.	Paramedic, RAA employee 6 or more years
If something, God forbid, ever happened and I had to go to another system, it's gonna look good on a resume. "Hey, I was part of Richmond EMS and the place was heading up...I've got experience in all this." ...a system I go to, "We're interested in thinking about cooling people down post and during cardiac arrest." "Hey, I've got 5 years of experience with that." So, I mean, it would help out, but actually make a big change? It probably wouldn't.	EMT, RAA employee 4–5 years
Benefits Balanced with Concern: Stress, Time Requirements and Liability	
[Research is a] good idea because things are always changing, but, for me personally, because I am such a new medic, it's very stressful.	Paramedic, RAA employee 2–3 years
I'm still trying to figure out how we do it [participant enrollment] without messing anything up, without hurting anybody, without losing information, and without wasting time.	Paramedic, RAA employee 2–3 years
When [the study] came out, I was like there is a possibility that we could directly, immediately harm somebody with it and I had some concerns about liability. If I give them [the treatment medications] in the wrong order or something like that, if the patient dies, am I held accountable?	Paramedic, RAA employee 6 or more years

Quote	Participant
I'm kind of a trusting person so I trust that [the university] and [EMS agency] have everything in place to protect us... It was a short-lived worry, but it was a worry.	Paramedic, RAA employee 6 or more years
I have a genuine concern [for] liability...I want to make sure our liability is limited. I want to be able to say, 'We stuck our neck out,' for lack of a better term, 'and did something that nobody else is doing.' We are good at that here. However, that risk can sometimes be greater than the possible benefit. That would be a definite concern – liability.	EMT, RAA employee 6 or more years, administrative role

Table 3**Key Theme: Ethical Consideration**

Quote	Participant
Individual Patient Risk versus Public Good	
It's a risk-benefit thing. Does it benefit the greater public good to do it this way [EFIC research]? And I personally think that it does. If we're gonna study something like not providing any care to these people, or dragging them by their hair to the hospital, or something like that, obviously not, but this is something that could potentially serve the greater public good.	Paramedic, RAA employee 4–5 years
But just like with everything good that we find, you know, there are things that can be harmful and what do you say to the people who are harmed by the new things that we try to do?.	Paramedic, RAA employee 4–5 years
...Risk can sometimes be greater than the possible benefit.	EMT, RAA employee 6 or more years
Is [research] wonderfully perfect? No. It's what needs to be done for us to move out of the dark ages.	Paramedic, RAA employee 4–5 years
Implied Consent and Informed Consent	
It's one of those grey areas, whereas it's a kind of implied consent where you know they would want us to do something to help....we are not withholding our original protocol, we're just taking one step before it and then we will fall back on our original protocol if that [experimental protocol] doesn't work.	Paramedic, RAA employee 4–5 years
But the fact is, in a study [like the EFIC study on-going during the time of our interviews], we would still be treating them [the patient] if the study weren't there. We would still be giving them 'A' medication even if the study were not there. And we aren't getting their consent for that anyway, we're getting implied consent.	Paramedic, RAA employee 4–5 years
I think you probably have a lot of medics out there that haven't even thought about informed consent and not that they don't care, but it's just not at the forefront of their....you know, their attitude is, we're doing something to save lives, this is a benefit to lots of people.	Paramedic, RAA employee 6 or more years
You can't always get consent from your patients that are unresponsive and don't have the mental capacity to say yes or no. But I think in terms of a lay person you're leaving out a really, really big part of what most people expect and that is to be informed and to give their permission and you don't get that in this particular research [EFIC research].	Paramedic, RAA employee 4–5 years

Table 4**Key Theme: Community Consultation And Public Disclosure**

Quote	Participant
Standard CC/PD Strategies	
...if we had had some forewarning on the ambulances so that when we were on a [condition being studied] patient, we could give them a pamphlet. "Hey, just so you know, this is coming up. We know you have [condition being studied], we know we come get you a lot. Just in case you don't read the paper or anything like that, here's a pamphlet on it and who to call if you have questions or anything like that."	Paramedic, RAA employee 6 years or more
I would involve the media and I think if you involve the media properly, you can a lot of times get free interest in this [the EFIC study].	Paramedic, RAA employee 6 or more years
...Buses are a very good way to get information out because buses go just about everywhere and the people that don't have cars are on the buses.	Paramedic, RAA employee 2–3 years
In this era, we have access to the internet...so the easiest way to me, and a cost effective way, is to set up a website...and you include that web address on everything you do...and put some kind of comment section in there [the website] and allow people to put their information in there and of course allow them to do it anonymously...people can go to the public library and get on their computer, they can get on their phone, there's very few people who do not have access to a computer anymore	Paramedic, RAA employee 2–3 years
Concerns and Challenges of Standard Strategies	
You have meetings, you have placards or fliers out there and I mean, do people even look at the placards when they get on the bus? If they do look at it and say, "[name of study]. What is that?" And then look at something else.	Paramedic, RAA employee 2–3 years
The meetings are great because I'm all in favor of being able to talk and ask questions, but then it's a question of whether or not people can get to the meetings.	Paramedic, RAA employee 4–5 years
The problem with that question [media blitz] is that it always boils down to money. And how could we do this? How could we afford to pay for it? Who's going to pay for it? What's the cost-benefit? Communication with people is expensive.	Paramedic, RAA employee 6 or more years
Even if a patient does see something on the bus and see something in the newspaper and see something on the news and sees a flier, it doesn't mean they are actively going to investigate what's going on. But if we happen to catch them one-on-one in the back of the ambulance, there's really no way they can ignore [us] ...	Paramedic, RAA employee 6 or more years
Innovative Strategies	
In a perfect world it would start with the family doctor.	Paramedic, RAA employee 4–5 years
Maybe a pamphlet insert for any [condition being studied] medication that's issued by a pharmacy.	Paramedic, RAA employee 4–5 years
....get the locations of each of our [condition being studied] calls for the last 24 months and do a mailer for those people.	Paramedic, RAA employee 4–5 years
Some of the housing authority people...could just put a note on the door [of the residents]	EMT, RAA employee 6 or more years
EMS Involvement	
[at a town hall style meeting]...they [EMS providers] will present not only the material you tell them to present, that must be presented per the IRB standards, but also can present to them [members of the community] what the general public will expect to see EMT doing in relation to this study. We can show them a sample call. That way people are not terrified when they see us.	Paramedic, RAA employee 4–5 years