

Direction and Motivation of Prehospital Personnel to Do Research: How to Do It Better

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The Emergency Medical Services Division of the Houston Fire Department was started in 1971 and operated independent of physician input until 1984, when the first medical director was hired. The first prehospital research project was begun in 1986. The medical director, Dr. Paul Pepe, spent the intervening two years learning and improving on the system before beginning any research projects. He tested skills, established protocols for better patient care, and generally upgraded the system. This required an extensive amount of work on the part of the medical director, not only in the office, but also on the streets of the city at all hours of the day and night. Not only did the medical director learn about his system and his personnel, but the EMS personnel learned about their medical director. This is a basis for establishing credibility as a leader.

In order to be a credible leader, the medical director must be perceived as a competent, enthusiastic, empathetic, inspirational, and sometimes aggressive person with a progressive attitude regarding good patient care. This can be achieved by a combination of time in the field, in the office, and in the classroom. The medical director should stay in touch with his/ her personnel, keep communication lines open in both directions, and be aware of important personal characteristics and crises which may be influencing the EMT's behaviors and decisions. In an ALS or tiered system, interest must be shown in all levels of responses, including basic "sick calls" and BLS level "routine" runs.

One behavior which the Medical Director should avoid is frequent appearances on "VIP" or high-profile media scenes, which gives the EMS personnel the impression of self-glorification or self-importance. Credit always should be given to the medic in the streets if at all possible. This builds a good relationship between the medical director and the field personnel which can influence personnel response to requests for assistance with field research.

Why do EMS personnel need to be motivated to do research? It must be realized that most prehospital research projects require EMS personnel to:

- 1) Increase their workload and the number of steps taken during emergent patient care;

- 2) Augment their mental workload by remembering inclusion and exclusion criteria, protocols, and new procedures;
- 3) Increase documentation and paper work load;
- 4) Increase their responsibility for proper protocol execution; and
- 5) Break from their traditional protocols, procedures, and practices.

So why *should* EMS personnel do research? The advancement of medical knowledge and science is not necessarily as important to the average EMT or paramedic as it is to the physician-researcher. However, the goal of improving patient care in some tangible way is more likely to motivate EMS personnel than attempting to answer some esoteric research question. Also, in a paramilitary EMS system, as many of them are, if *your* objective as a leader is to answer this research question, then *our* objective as your team is to assist you. For this reason, EMS research is done more easily in systems with paramilitary structure.

Also, EMS research is done more easily in systems with EMS supervisors. The supervisor provides more constant contact with the field personnel, and can give feedback to the field personnel and to the Medical Director. Questions that arise either can be answered by the supervisor or relayed back to the Medical Director, and a supervisors' presence on the scene can help assure adherence to protocols.

It is essential that these EMS supervisors have a positive image of the Medical Director and of the research project, as the supervisors' views will be passed down to their personnel. The Medical Director must pay close attention to the supervisors and cultivate these positive attitudes in order for prehospital research to be a success in his/her system.

The field personnel and supervisors are valuable team members, not just "gophers." The EMT should be made to feel a part of the team, and must have a clear understanding of the importance of the research project, not only to the Medical Director, but also to medical science and patient care. If the field personnel believe that the research merely is to further the Medical Director's career and to build up his/her ego and resume, the project is doomed. It is difficult

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World Association for Emergency and Disaster Medicine, Dr. Peter J.F. Baskett, President, Dept. of Anaesthesia, Frenchay Hospital, Bristol BS 16 1LE, United Kingdom.

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enough to adhere to a complicated protocol at 3:00 A.M. when the project obviously is important and relevant. The EMT will do his/her best if he/she feels the project will lead to better patient care. That is the prime motivation. Using a paramedic as co-author is not the answer. This may assure one person's cooperation, but it is not going to motivate others.

Finally, prehospital and emergent "informed" consent is a dilemma being discussed by many academic Emergency Medicine and EMS centers. Remember, informed consent is a new concept to most EMS personnel and will require even more extensive education and dissemination of information.

How to Begin a Prehospital Research Project

- A) A preliminary meeting should be held with the Medical Director, EMS supervisors, and any nursing or administrative personnel involved in the project. This meeting also should be open to field personnel. The agenda should include:
- 1) Explain the goal of the research project and the need for answers to the research question, along with how these answers may apply to future patient care;
 - 2) Allow authentic participation in implementation of these goals. Listen to your personnel and plan to use good suggestions. Don't just spoon-feed them with a protocol that you already have written;
 - 3) Encourage questions and concerns in the field execution of the research protocol;
 - 4) Explain how and why the research protocol will deviate from traditional practice;
 - 5) Do not send out a typed protocol and expect compliance! EMTs are people, not robots, and will need explanations and motivation to perform at their best; and
 - 6) Assess the probable impact of the research protocol on the EMT's workload and address this in your meetings and written communications. Make data collection forms as short and simple as possible (checklist). If the protocol and forms are complicated, reassure the personnel of the length of the study, emphasizing the limited time involved.
- B) Both for better patient care and better EMS-Emergency Department relations, notify and educate all receiving hospitals to reduce the stress on your EMS personnel. Blinded study drugs and unusual treatment protocols should be known to all receiving emergency physicians.
- C) It is best to demonstrate physically new equipment or procedures, at least to the EMS supervisors, who can then demonstrate them to their field personnel. Larger systems can use videotape instruction to reach a larger audience.
- D) On-scene assistance and supervision by research assistants, EMS supervisors, or the Medical Director is best in the early stages of complicated or controversial research projects.
- E) It is very important to schedule follow-up meetings between the supervisors, research assistants, and the Medical Director to discuss progress, consistency, and problems. These meetings should be open to interested field personnel.
- F) The Medical Director should spot-check the system occasionally by arriving on-scene unannounced to observe and further encourage the personnel.
- G) Periodic bulletins or newsletters are an excellent form of communication and commendation to update field personnel on who is doing what. Include congratulations for successes and thanks for compliance. These can be posted prominently as encouragement. The research protocol can be outlined in each bulletin to remind and reinforce compliance.
- The prehospital setting is an important venue for research. EMS personnel can and will collect excellent, reproducible data, but they must be motivated by a competent and credible leader.

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