

# “Medical Miranda”—Improved Emergency Medical Dispatch Information From Police Officers

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**Abbreviations:**

EMD = Emergency Medical Dispatch  
 EMS = Emergency Medical Service  
 SEND = Secondary Emergency Notification of Dispatch

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**Abstract**

**Introduction:** *Medical Miranda, also called Secondary Emergency Notification of Dispatch (SEND), is a low cost, effective, and welcome addition to emergency medical dispatching systems. The benefits are recognized by emergency medical dispatchers who receive feeder calls from associated public safety agencies that have trained both their field staff and call-takers in the Medical Miranda protocol.*

**Hypothesis:** *The dispatchers would be more satisfied with feeder agencies that used the SEND protocol.*

**Methods:** *A survey was conducted and analyzed, taking advantage of a situation in which two agencies (one used SEND) fed calls to the same communication center.*

**Results:** *Dispatchers were more satisfied with the information gained from the feeder agency that used the SEND protocol and believed that the officers and dispatchers of that agency had a far better understanding of the emergency medical dispatcher's needs.*

**Conclusions:** *When the emergency medical dispatcher does not talk directly with the reporting scene personnel or caller, Medical Miranda increases the usefulness of the information the dispatcher receives, helps the dispatcher better understand the reported medical emergency, and improves response appropriateness in emergency medical service (EMS) systems where responses routinely are prioritized.*

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**Introduction**

The evolution of the emergency medical dispatch (EMD) process started, and has continued to lead, a trend in emergency medical service (EMS) and public safety organizations towards greater standardization of patient evaluation and the more efficient relay of pertinent information.<sup>1–3</sup> These improvements in emergency medical dispatcher protocols and education allow the dispatcher to manage effectively the deployment of mobile EMS resources and to provide pre-arrival care for the patient. Since compliance to the protocol will lead to high reliability and consistency in response accuracy, specific and methodical training in the use of a formal dispatch protocol, and quality assurance processes that emphasize absolute compliance to the protocol have been central to this improvement.<sup>4–7</sup>

Once standardized medical priority dispatch protocols were in place and being followed, dispatchers had the tools and training to allow them to collect all the relevant information from a layperson caller. However, many EMD centers have reported difficulty in obtaining useful, reliable, or standardized information from professional callers such as physicians, nurses, security personnel, and law enforcement officers. When dealing with these professional callers, dispatchers may be unable to obtain the information they need in order to dispatch an appropriate response through correct application of the protocol. Better information was being obtained from untrained citizens than from the professional police officers, who were equipped with expensive radio equipment and speaking directly from the scene via a trained law enforcement telecommunicator.<sup>8</sup>

A number of reasons have been proposed for the failure of these professional callers to provide the necessary

information. The caller is removed from the information source. Also, there is resistance by professionals to be questioned regarding the various interrogational objectives required by medical dispatch protocol. However, the most likely explanation is that the professional caller often is unaware that the emergency medical dispatcher has matured into a trained professional who is applying a sophisticated and rigorously tested triage protocol. In the absence of this understanding, professional callers may expect the dispatcher simply to "send the paramedics," and, may view all the extra questioning as unnecessary and time wasting; however, simply "sending the paramedics" without appropriate triage information often results in an "overkill" response that can have dire system consequences.<sup>8,9</sup>

In 1984, a system to improve the amount and quality of medical dispatch data retrieved from on-scene police officers was started in Salt Lake City, Utah.<sup>8</sup> Police officers were to refer to standardized medical questions on a small, wallet-sized protocol card. The program immediately became known as "Medical Miranda," since the officers noted similarities between reading the medical protocol and reading a criminal suspect his or her Miranda "rights" before questioning or booking.<sup>10</sup> A formal name, Secondary Emergency Notification of Dispatch (SEND), subsequently was given to the process to increase its name recognition outside of the United States.

The first side of the Medical Miranda card instructs the officer to follow the "four commandments" of EMS: 1) to determine the chief complaint; 2) to determine the age of the patient (approximately); 3) to determine status of consciousness; 4) and, to determine the status of breathing. The second side lists additional questions relative to the priority symptoms of chest pain, severe bleeding, and the opinion of the officer of the need for a "hot" response. The Medical Miranda protocol makes the (valid) assumption that, by default, the feeder-system will obtain the exact location of the incident.

To implement Medical Miranda, a brief, formal orientation is presented to each officer, via a video presentation during the morning report or in-person didactic training, regarding the theory, the specifics, and the objectives of EMD. The orientation explains and illustrates how the information gathered through correct application of the Medical Miranda protocol allows for the correct resource response through the use of the EMD protocol by the dispatcher. All officers are issued Medical Miranda cards for at-scene reference. Likewise, all law enforcement dispatchers working remotely from the medical dispatch center, are given the same orientation and training to allow them to gather and pass on the Medical Miranda protocol information correctly.

### Methods

Following consolidation of two fire-based medical dispatch centers in the Salt Lake metropolitan area, there was a unique opportunity to evaluate possible differences in the information obtained from two external, law enforcement dispatch centers. Medical Miranda

(SEND) training had been provided to all patrol division personnel of the Salt Lake City Police Department (approximately 375 field officers) in the previous year, while the instructional program was not scheduled for the Salt Lake County Sheriff's Office (approximately 400 field officers) for several months. It was assumed that there was a general equivalency in previous medical training and general law enforcement experience between the two groups of law enforcement personnel. Any pronounced differences in the Fire Department's Central Dispatch emergency medical dispatchers' perceptions of the dispatch information collected from the two groups likely would be a consequence of the Medical Miranda protocol.

A brief study questionnaire was developed that asked the emergency medical dispatchers at Salt Lake Central Dispatch to indicate their perceptions of the level of understanding of the law enforcement personnel at the two centers. The questionnaire asked the dispatchers to indicate: 1) which of the two departments provided the more useful information; 2) which of the two departments' officers and dispatchers had the better apparent understanding of EMD; 3) their overall level of satisfaction with the two departments; and 4) whether they felt the "Medical Miranda" program had improved their interaction with the law enforcement agencies in Salt Lake City.

All 12 certified emergency medical dispatch employees of Salt Lake Central Dispatch were asked to complete a questionnaire. The answers for each of the five questions were tabulated. For one set of results (Question 4), the mean score and standard deviation for the overall dispatcher satisfaction with the two agencies we calculated, and then, compared these mean scores were compared using a two-tailed *t*-test.

### Results

Questionnaires were completed and returned by emergency medical dispatchers at the Central Dispatch by 11 of the 12 EMDs.

*Question 1.* "Do you receive better initial medical information from the City Police Dispatch or the County Sheriff Dispatch?" Nine Central Dispatch dispatchers reported that they received better initial medical information from City Police, one reported County Sheriff, and one was unsure.

*Question 2.* "Do the City Police dispatchers or County Sheriff dispatchers have the better apparent understanding of medical priority dispatch procedures?" Ten Central Dispatch dispatchers reported that the City Police dispatchers had the better apparent understanding of medical priority dispatch procedures, while only one reported that the County Sheriff dispatchers had the better apparent understanding.

*Question 3.* "Do the City Police officers or County Sheriff deputies have the better apparent understanding of medical priority dispatch procedures?" All of the

Central Dispatch dispatchers reported that the patrol officers of the City Police Department had better apparent understanding of medical priority dispatch procedures.

*Question 4.* "Please rate on a scale of one, being poor, to 10, being excellent, your level of satisfaction with emergency medical dispatch procedures in cases with City Police and County Sheriff." At the Central Dispatch, the average overall dispatcher satisfaction with medical dispatch-related interaction was 5.1 (standard deviation = 1.81) for City Police versus 2.4 (standard deviation = 1.21) for County Sheriff. The *t*-test confirmed the difference between the two average scores was significant statistically ( $p < 0.001$ ).

*Question 5.* "Has the 'Medical Miranda' program with the City Police Department been effective in improving their interaction with you?" Seven Central Dispatch dispatchers reported that the "Medical Miranda" program with the City Police was effective in improving understanding and interaction with them, two disagreed, and two were unsure.

### Discussion

Two different law enforcement agencies (City Police and County Sheriff) and their respective dispatchers requested emergency medical assistance through Central Dispatch in the Salt Lake metropolitan area. At the time of this study, City Police officers and their dispatchers, but not County Sheriff deputies and their dispatchers, had received training in Medical Miranda (SEND), a process designed to ensure emergency medical dispatchers obtain the information they need to apply the dispatch protocol correctly. The perceptions of the emergency medical dispatchers regarding the performances of the City Police and the County Sheriff who requested emergency medical assistance were compared. The results indicate that nine out of the 11 emergency medical dispatchers claimed they received better initial medical information from the City Police, 10 out of the 11 claimed the City Police dispatchers had a better understanding of EMD than the County Sheriff's dispatchers, and all claimed the City Police officers had a better understanding of EMD than did the County Sheriff deputies. The emergency medical dispatchers were approximately twice as satisfied with their interactions with the City Police as they were with their interactions with the County Sheriff, and seven out of the 11 dispatchers believed their increased satisfaction was a result of the Medical Miranda program.

Therefore, it seems that in the program, training and use of the SEND is a positive for the accuracy of the information obtained from law enforcement professionals. There are several limitations to this study. No blinding could be achieved regarding the agencies involved. Furthermore, most emergency medical dispatchers at the Central Dispatch were aware that Medical Miranda had been introduced to the City Police, but not to the County Sheriff. The number of EMD personnel who completed

the questionnaire was limited by the size of the Central Dispatch, and no dispatcher-by-dispatcher or call-by-call analysis was possible within the scope of this work. Finally, unknown interagency biases unrelated to the study parameters could not be controlled, and may have resulted in skewing of the data. However, the data indicate that the Medical Miranda protocol results in dramatic improvements in the interactions between emergency medical dispatchers and law enforcement personnel.

These results did not surprise anyone who was involved with the Central Dispatch at this time. Emergency medical dispatchers had been voicing their frustration with allocating appropriate resources in response to incidents that professional law enforcement officers reported, and any cooperation by law enforcement personnel resulted in considerable improvements. In several implementations of the Medical Miranda process, similar results have been observed. However, what was surprising was that, in general, resistance to implementing even a simple program such as Medical Miranda came not from the law enforcement agencies but from the EMS agencies themselves. Believing the idea would be rejected, often the program never was presented formally to law enforcement management.

Experience with several Medical Miranda program implementations, including this study, has reinforced the belief that law enforcement management generally is willing to adopt such improvements in interactions between interagency communication centers, especially when the objectives of the program are explained clearly. Since law enforcement officers at the scene generally provide some sort of information to their dispatchers, professional police officers clearly would prefer to provide the "right" information, which allows the emergency medical dispatcher to allocate the correct resource responses, rather than the "wrong" information, which often results in costly depletion of EMS resources, and sometimes, dangerous "overkill" responses. A simple protocol and some minor retraining, rather than significant expenditure, is all that is required for law enforcement officers to provide the "right" information. Because the Medical Miranda process results in dramatic improvements in resource allocation with almost insignificant expenditure, it readily has been accepted.

The Medical Miranda process appears to be useful in any medical call-feeder system that has a predictable interaction with emergency medical dispatchers. While law enforcement generally is the most frequent professional requester of emergency medical assistance, extended care facilities (nursing homes and outpatient treatment facilities), associated public safety agencies (fire departments, security agencies, airport authorities, and specialized federal agents), military and coast guard units, automobile clubs (the American Automobile Association (AAA) in the United States, the Canadian Automobile Association (CAA) in Canada, and the Automobile Association (AA) and Royal Automobile Club (RAC) in the United Kingdom, and personal medical alarm notification companies could benefit from this process. Once Medical Miranda is established, it also is

important to establish a written, interagency policy for the initial education of new personnel within each agency using Medical Miranda. While primary responsibility rests with each agency, a routine, secondary follow-up by the EMS agency management will ensure the process continues. Because turnover of personnel, as well as advancement and retirement of management within Medical Miranda utilizing agencies, is an on-going reality, re-education and commitment of key leaders within these groups are essential.

### Conclusions

The past 20 years have seen the dramatic changes in emergency medical dispatch (EMD). The emergency medical dispatcher has changed from a telephone operator, who simply "sent the paramedics," to a highly trained professional, who uses increasingly sophisticated tools to allocate appropriate mobile EMS resources. Correct resource allocation by the emergency medical dispatcher leads to increased EMS agency efficiency,

decreased EMS agency expenditure and legal liability, and overall maximization of patient care. However, the dispatcher cannot allocate the appropriate resource response in the absence of appropriate information from the incident scene. As EMD protocols and processes continue to improve, providing the call-taker and dispatcher with appropriate information will become increasingly important. Educating personnel who regularly interact with any medical call-feeder system about the needs of EMD (and ultimately educating the public at large) will facilitate this information gathering process. Secondary Emergency Notification of Dispatch (SEND, also called Medical Miranda) is an important part of the cooperative interface between public safety and emergency medical service agencies.

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