

The Joint National EMS Leadership Conference



February 25, 2011

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
Framework for Next Generation 911 Deployment) PS Docket No. 10-255
)
Notice of Inquiry) FCC 10-200
)
Adopted/released December 21, 2010)

**COMMENTS OF THE JOINT NATIONAL EMS LEADERSHIP CONFERENCE
ON THE NOTICE OF INQUIRY FOR A FRAMEWORK FOR
NEXT GENERATION 9-1-1 DEPLOYMENT**

The Joint National Emergency Medical Services Leadership Conference (JNEMSLC) submits these comments in response to the Commission's Notice of Inquiry (NOI) seeking comment on a framework for Next Generation 9-1-1 (NG-9-1-1) Deployment.

The JNEMSLC consists of five national EMS associations whose members practice in, and in many cases lead, emergency medical care and transportation systems at the local, regional, state, and national levels in the United States. We are EMTs and paramedics, service chiefs and managers, emergency physicians, EMS educators, and system chiefs and regulators. As such, we are vitally interested in improving the speed with which the local EMS system receives information during a medical emergency that impacts the type and level of emergency care dispatched, the ultimate hospital destination selected, and the preparation of staff to diagnose and treat that patient when time is of the essence. We support the development of NG-9-1-1 capabilities to accomplish this.

Our Association defers to our colleague associations in public safety communications such as the Association of Public-Safety Communications Officials (APCO) and their more wide-ranging comments in response to this Docket as specialists in public safety dispatch and communications coordination. We also

support the joint comments submitted on this Docket by the International Association of Fire Chiefs, the International Association of Chiefs of Police, and the National Sheriffs Association. Our Association wishes to address specific points of the NOI and of NG-9-1-1 which pertain primarily to emergency medical clinical and operational concerns.

Generally, the concept of opening public safety answering points (PSAPs) to inflowing calls for assistance, or which provide information to more effectively respond to such calls, from other than traditional landline and wireless phone sources is beneficial if the flow can be managed effectively. Part of this management includes technology, protocols, and training at the PSAP end to sort the wheat from the chaff so that call-taking effectiveness is not reduced or overwhelmed. A second part is technology and education at the subscriber unit end to assure that callers/senders appropriately and effectively connect and transmit the required information for the given situation. We are concerned about the ability of alternative sources of seeking emergency medical services (EMS) to link callers/senders with established emergency medical dispatch (EMD) resources which help to assure that appropriate EMS resources are dispatched and that care advice is afforded the caller/sender before EMS arrives.

Further, we wish to caution that, especially in emergency medical calls, the distinction between "primary" and "secondary" forms of communication may be different than those suggested in the NOI. An advanced automatic crash notification (AACN) from a vehicle contains telemetry data that is required at the moment of initial dispatch, for instance, in order to send the appropriate mix of EMS responders to the scene. Vehicular telemetry cannot, therefore be considered as secondary communication as is suggested.

The following are comments, with regard to EMS concern or impact, on specific paragraphs as numbered in the NOI. **Paragraphs 32 through 38** seek comment on the potential for each of the following media types to be supported in the development and deployment of NG911 networks:

- Message-Based Text (Short Message Service or SMS);
- Real-Time Text (RTT);
- Still Images;
- Real-Time Video;
- Telemetry Data;
- Auxiliary Medical and other Personal Data.

Paragraphs 33 and 34, regarding text-based messages, describe technology for which the EMS community, we believe as a whole, would endorse to save minutes or more in time-dependent medical emergencies such as major trauma, stroke, and heart attack. A concern is the extent to which callers/senders can effectively communicate the nature of the emergency, and to which public safety telecommunicators (call-takers and dispatchers) can interact with callers/senders to determine the nature of the emergency and then issue pre-arrival EMD instructions to the callers/senders based on established EMD protocols. The FCC should encourage developing systems and wireless communications, communications hardware and software, and EMD system providers to address these issues.

On the caller/sender end, it is conceivable that canned time-dependent, emergency messages (including those of a medical, police or fire nature) could be packaged in subscriber unit communication software (such as emoticons and other canned messages now are) so that selecting an "emergency call" button or icon

would display "nature of emergency" options. Selecting "ambulance", "fire", "police", or "other" would display further detailed options. At any point in sending, if the caller/sender became unable to continue, the PSAP would have the most detailed emergency-type available for that emergency before sending responders.

Similarly, on the public safety telecommunicator end (for those responsible for EMD), dispatch software short-cuts for transmitting EMD-based pre-arrival instructions should be encouraged.

Paragraph 35, regarding still images, describes technology used by EMS professionals for decades to improve written and verbal communications with emergency department (ED) staff by handing photos to them along with the patient. Pictures of a vehicle crash scene or other injury scene, with mechanisms of injury clearly visible, enhance the understanding of the ED staff about underlying conditions which may be present. These capabilities have evolved from Polaroid film to digital cameras, but are still found throughout EMS. Similarly, the ability for EMS to have such images before arriving on the scene of a car crash or other injury producing event, would be instructive as to the EMS resources needed (e.g. additional ambulances, helicopter, or extrication) and possibly dangers present and the best route of approach.

While these would be *secondary forms of communication*, for them to be of use they would need to be received from the dispatch center at dispatch or en route to the scene of the emergency.

Paragraph 36 describes the use of real-time video. The use of real-time video to enhance response would have the same advantages as those described above for still images, but with the enhancement that video can provide of detail of the scene. It also bears the same caveat as still-images that it must be received at point of dispatch or en route to be useful. Further, video from fixed site traffic and law enforcement camera systems should be integrated into NG-9-1-1 centers to allow their images to be similarly fed to responders for the same reasons as described in Paragraph 35

The use of video to send patient images from the scene or ambulance to a physician consultant/medical director, or to other responders is considered a very likely part of the EMS and community paramedicine pictures in the near future, especially in rural areas. The need for NG-9-1-1 being involved in these systems is less clear. To the degree that video feeds from a scene would need to be passed from EMS to other responders en route to the scene, these capabilities would either allow direct responder to responder communication, or possibly might require NG-9-1-1 mediation in the same way that video sent by the public would be passed through to responders as described above.

These all represent *secondary forms of communication*.

Paragraph 37 concerns the receipt and mediation of telemetry data. Physiometric telemetry data for emergency patients outside of hospitals is usually collected and mediated by EMS responders at the scene. Increasingly, however, patients are conducting everyday life with monitors implanted or attachable by the patient and monitored by health monitoring centers, their physicians, or both. Typically, when these monitors signal an emergency, it results in a call to

9-1-1 from the monitoring center. What is lost in translation to EMS responders may be valuable physiometric data which may help them prepare to treat a specific condition and to bring appropriate equipment in from their vehicle to do so, and/or to request dispatch of additional resources (e.g. advanced life support). In the NG-9-1-1 framework, consideration of receiving and forwarding such data while responders are en route must be made.

Where receipt of such data supplements a *primary communication* of emergency assistance required (i.e. through another monitoring center which verbally or otherwise makes the emergency call to 9-1-1 and then forwards a data stream or report), then such data is a *secondary communication*. Should implantable or wearable monitors function to alert 9-1-1 centers of an emergency directly, they become *primary forms of communication* and their integration into the PSAP system must be exquisitely planned.

Vehicular telemetry considerations in the form of advanced automatic crash notification (AACN) data rebroadcasting, and “just in time training” through reference material rebroadcasting are important considerations in NG-9-1-1 planning. The former is a *primary form of communication*, while the latter is a *secondary form of communication*.

AACN has the potential to significantly reduce death and disability in rural car crashes by eliminating the time now required to “discover” that the crash has occurred, the time required to determine the physical location of the crash, the required to determine the severity of injuries involved and, therefore, the time now required to respond to a crash and determine that specialty response (e.g. extrication, air-medical evacuation) is needed. To take optimum advantage of these potential time savings, the AACN data should be simultaneously transmitted to all potential responders, and hospital and specialty care facilities that have requested to be notified of crashes exceeding a certain severity in a specific geographic area. In addition, certain crash data needs to be automatically assessed and resulting information transmitted to responders and facilities based on the assessment. For example, speed/rollover/ impact-vector data may be among data used to determine the severity of the crash and result in automatic dispatch of air-medical and other specialty responders and notification of trauma centers (see model representation of responder situational awareness display in diagram 1). Other vehicle data such as vehicle type and year/speed/rollover/impact-vector could be used to send an electronic vehicle access manual to responding extrication crews with diagrams and methods for best accessing patients and avoiding hazards in that vehicle (see model in diagram 2).

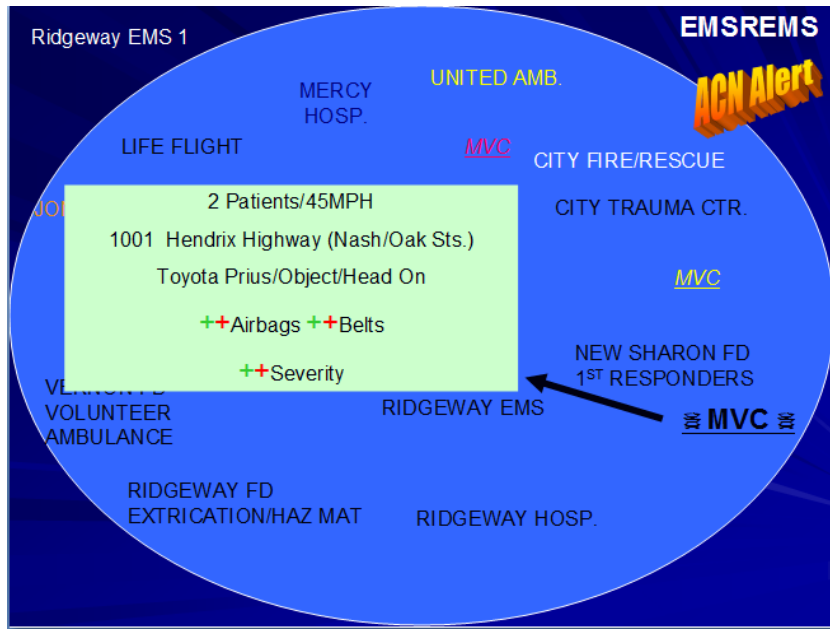


Diagram 1

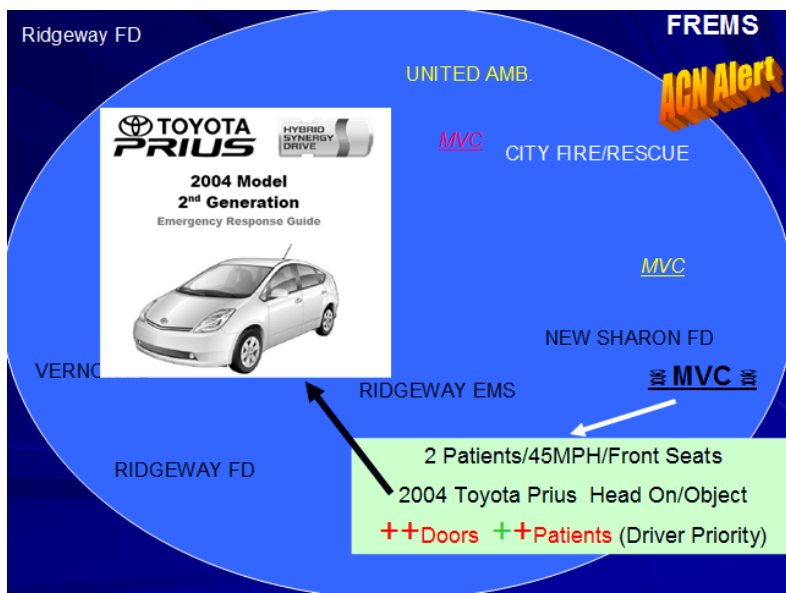


Diagram 2

Paragraph 38 describes "Auxiliary Medical and other Personal Data". For all events, sources of data, and methods of communicating such data, these are considered *secondary forms of communication* in the EMS community. Naturally of important interest to EMS providers to enhance their understanding of the underlying conditions and contributing history of the patient they are treating (especially where allergies or other contraindications to certain possible courses of treatment may be revealed) the sources of such data are now varied and may remain mixed into the foreseeable future.

Current practices in some EMS dispatch centers enable, as Paragraph 38 suggests, calls from certain calling locations to display medical information for residents at that location (along with warnings about hazards or previous emergency or other responses to that location). This practice may be helpful where

telecommunicators in the center have time to ascertain whether that data is current and matches the exact patient for whom the call was placed. However, there may be significant limitations with regard to accuracy and age of the data (updating same with the PSAP not being automatic and requiring work on the part of the patient; and specific information that is updated potentially suffering interpretation by a patient not having medical knowledge), liability of the center in relying on such data, and HIPAA implications that may apply, among others.

More likely, patient emergency data will come from wearable devices which may be scanned or from regional health data repositories supported by hospitals and medical care providers. In the former case, no 9-1-1 center would be involved, nor would it in the latter, for patients having an event in their own region (a method for EMS to directly access these repositories would likely be created). However, in cases where a patient is not in his own health care repository region, or in which access is centralized through, for instance, an EMD capable center, then it becomes a NG-9-1-1 concern to access and forward to responders on the scene such data.

In **Paragraph 39**, comment is sought on whether anticipated NG-9-1-1 media will be primary or secondary forms of communication. These have been indicated in italics in the preceding paragraphs on specific media. We call attention to the fact that certain telemetry data, where they constitute the initial 9-1-1 call for assistance (AACN and certain medical monitoring systems) are *primary forms of communication*.

We support the use of e-mail, SMS, RTT and other messaging as primary forms of communications as long as mechanisms such as those described in our general statement, above, are employed to make communications timely, accurate and without overwhelming communications centers.

We believe we have addressed what is being suggested in **Paragraph 47** in our preceding comments. As long as the medical information being shared is for the purpose of managing a patient's medical circumstance and is being shared among those required to provide timely treatment, designing a system which is HIPAA compliant should be workable. As detailed above, the need to have 9-1-1 centers involved in this process may not be necessary.

We have addressed most aspects of the EMS-related device initiated considerations of **Paragraph 58**. Most of these devices are now mediated by the providers of the AACN or medical monitoring systems involved, and emergencies detected result in voice calls to 9-1-1 centers. In the NG-9-1-1 setting, every possible way to pass actual data from these devices to responders en route to a call, which serve to more quickly and accurately enable them to safely manage the emergency and provide appropriate patient care, must be facilitated.

Paragraph 61, on Auxiliary Data, asks the following, much of which has been previously addressed (and on some questions we do not offer comment) :

- *How should the PSAP be informed about the availability of this data?*
It is up to affected disciplines to work at the local and national levels with public safety

communications officials to identify and integrate such data into everyday response capability.

- *What entity should associate this information with the call or message, such as the application service provider or a third party?*

In current EMS applications, this would come along with the call from the vehicular telemetry or medical telemetry application service provider and must be integrated for automatic pass through to responding EMS vehicles. Otherwise, we defer to APCO.

- *Since this auxiliary data may be considered part of the 911 call record and therefore subject to public disclosure, is there a need to protect the privacy of this data differently than the remainder of the call information?*

HIPAA compliance issues will need to be addressed.

We address one question within **Paragraph 75**:

- *How should we address concerns regarding private personal information that may be transmitted as part of an NG911 communication, for example, personal medical information that NG911 can provide to PSAPs and other third parties?*

From an EMS perspective, HIPAA compliance issues must be addressed with the Department of Health and Human Services (USDHHS).

And, finally, in **Paragraph 86**, on "Coordination":

- *How should the FCC coordinate with other federal agencies on issues related to the deployment of NG911, such as mobile health, telemedicine and disability access?*

In this particular EMS-related area, we recommend coordination with the US Department of Transportation/National Highway Traffic Safety Administration/Office of EMS (NG-9-1-1 Program) for general matters EMS and NG-9-1-1 coordination; the USDHHS/Centers for Medicare and Medicaid Policy for HIPAA considerations; the USDHHS Emergency Care Coordination Center; the Federal Interagency Committee on EMS; the US Department of Homeland Security/Office of Emergency Communications; and the Federal Emergency Communications Preparedness Center.

Thank you for your consideration of these comments.



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