



International Association of Fire Chiefs

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**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
International Comparison and Consumer Survey)	GN Docket No. 09-47
Requirements in the Broadband Data Improvement Act)	
)	
A National Broadband Plan for Our Future)	GN Docket No. 09-51
)	
Inquiry Concerning the Deployment of Advanced)	
Telecommunications Capability to All Americans in a)	
Reasonable and Timely Fashion, and Possible Steps to)	GN Docket No. 09-137
Accelerate Such Deployment Pursuant to Section 706)	
of the Telecommunications Act of 1996, as Amended)	
by the Broadband Data Improvement Act)	
)	
Rural Health Care Support Mechanism)	WC Docket No. 02-60

**COMMENTS OF THE INTERNATIONAL ASSOCIATION OF FIRE CHIEFS –
NBP PUBLIC NOTICE #17**

Introduction and Summary

The International Association of Fire Chiefs (IAFC) submits these comments in response to the Federal Communications Commission's (FCC) November 12th, 2009, request seeking comment on the Health Care Delivery Elements of National Broadband Plan (NBP Public Notice #17).

The IAFC is an active member of the Public Safety Spectrum Trust (PSST), which is the FCC's selected Public Safety Broadband Licensee (PSBL). We are providing these comments – consistent with comments previously filed by the PSST – to clarify the needs of emergency medical responders as addressed in the Public Notice.

Emergency Medical Responders continue to be the first line of health care in the United States, and technology is furthering this effort. Being able to transmit and receive audio, video, and data in the field is critical to the Responder, and ultimately, it will save time in life-threatening situations. Moreover, saving lives is the Responder's primary focus. With the current focus on health care as a whole, discussions are occurring today across the country about how to implement programs such as "Community Paramedics" that would provide tertiary care without having to bring the patient into a fixed-care facility, thus potentially reducing facility loading and overall health care costs. However, these types of programs will not be able to exist without an efficient and effective communications system that can be had with a national broadband plan. Whether the Responder is located in an

urban or rural environment, the need is the same, and being able to utilize a national broadband network will only enhance the Responder's ability to provide a higher level of care to the community they serve.

NBP Public Notice #17 seeks comments on six separate sections of specific questions: IT Infrastructure to Support Healthcare Delivery, Connectivity Requirements to Support Health IT Applications, Health IT Value Capture & Use Cases, Health IT Use Drivers & Barriers, Data Security in Health IT, and Universal Service Rural Health Care Support Mechanism and Rural Health Care Pilot Program. The IAFC will address the questions as they relate to the Emergency Medical Responder, and all questions posed may not be addressed if we do not have a response. The IAFC encourages the Commission to consult with other professional organizations that represent the remaining six disciplines listed in Category 1, and to consider any comments filed by the PSST and the National Association of State EMS Officials (NASEMSO) as they relate to this Public Notice.

1. IT Infrastructure to Support Healthcare Delivery.

- i. What internet connectivity types (dsl, cable, fiber-to-the-premise, wireless, etc.) and speeds (in mbps) support each of the above delivery settings across the U.S.? What percentage of each delivery setting is served by each type and speed of connectivity?**

Answer: In our response we do not address fixed facility wireline broadband issues that are more appropriately understood by organizations like the American Hospital Association (AHA) and others. As Emergency Medical Responders, the primary means of Internet connectivity in the field is currently via a commercial wireless system. Depending on the Responder's location, this can be a significant challenge if there is not sufficient infrastructure in place. While this can be most challenging in rural areas, urban areas experience some of the same problems depending on the infrastructure the commercial carrier has in place. As there are a number of commercial carriers that have no requirements to provide service for public safety, the inconsistency in wireless coverage allows for a less than desirable communications system that can be unreliable or incapable of serving the needs of the Responder. While the Responder has the opportunity to utilize other systems as listed, once in a fixed facility, wireless is the primary means of connectivity from the field.

- ii. How might internet connectivity vary by delivery setting size or location (rural versus urban)? What are other contributing factors to variations in delivery setting connectivity?**

Answer: As described in the previous question, internet connectivity varies greatly by region (urban to suburban to rural), and in some cases, does not exist at all currently. This is due to the commercial carriers' ability to build out systems where there is a lack of subscribers or infrastructure. Additionally, depending on the carrier, even if the basic infrastructure is in place, the system may be incapable of handling high transmission rates or high data amounts. As there is no current standard for providing wireless capability for public safety, commercial carriers have built systems based on their needs. Public safety has simply "latched on" to these systems after the fact, and is now trying to work with these carriers to obtain reliable service. This reliability also serves as a contributing factor along with the cost to access these systems. There are a number of Responders who "work" for volunteer agencies that simply cannot afford the recurring costs to access commercial wireless systems.

- iv. What criteria does a delivery setting use to determine sufficient connectivity levels in terms of peak and average transmission rates, guaranteed, minimum bandwidth, latency, jitter, reliability, etc? What is the marginal value of improving IT**

infrastructure based on the previous criteria?

Answer: Responders simply want the technology to work. If the technology is unable to connect to or experiences significant difficulty in maintaining a connection via a wireless system, then it is virtually worthless. The Responder is not concerned with how it works, just that it works.

- v. **What issues might exist in transiting multiple networks in ensuring the quality of service parameters identified in (iv)?**

Answer: Unless the Responder has equipment that will transit multiple networks, connectivity will be unstable. Even in today's environment, existing wireless devices can lose connectivity while transiting towers within the same system. If you add in additional systems – again without any defined public safety standards – the ability to transit systems will be almost impossible based on the proprietary systems currently in place. This serves as a perfect example on why the standard of Long Term Evolution (LTE) technology needs to be implemented.

2. Connectivity Requirements to Support Health IT Applications.

- viii. **Are current commercial communication networks adequate for deploying the application in question broadly across the country? If not, what are specific examples of the ways in which current networks are inadequate? How could current networks be improved to make them adequate, and at what cost?**

Answer: While current commercial networks are available, there are many areas of the country that have either limited or no service. This is especially true in rural areas far from urban/suburban corridors where infrastructure and subscriber base is minimal. Commercial carriers have not provided seamless coast-to coast coverage due to the cost of providing this service and build out of infrastructure. At this point, cost is prohibitive to improving these networks, but future public/private partnerships with the 700 MHz broadband spectrum may improve these systems.

4. Health IT Use Drivers & Barriers

- c. **What are the primary drivers and barriers to adoption across delivery settings for each application type:**
- i. Electronic health records**
 - ii. Real time video for Telehealth consultations and diagnoses**
 - iii. Remote patient monitoring systems**
 - iv. Mobile and other portable remote monitoring systems**
 - v. Other applications that enable or cause advanced healthcare delivery**

Answer: Primary drivers for Responder in the five listed areas include improved patient care abilities due to the ability to access patient electronic health records; and being able to transmit field observations in real-time to a receiving facility that will allow that facility to develop a plan of care prior to patient arrival, including vital signs, heart rhythms, portable x-rays and ultrasounds. The receiving facility could, in turn, relay additional care instructions to the Responder based on this real time data. As technology continues to improve in all aspects of health care, this will continue to serve as a driver for these types of applications. Barriers for this adoption include cost, lack of reliability, lack of perceived value, lack of infrastructure, training that may be

required to utilize the technology and systems, and the lack of available technology in rural areas.

The IAFC has no further comments to offer on any of the remaining questions.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jeff D Johnson". The signature is fluid and cursive, with the first name "Jeff" and last name "Johnson" clearly distinguishable.

Chief Jeffrey D. Johnson, EFO, CFO, MIFireE
President and Chairman of the Board

December 4, 2009