

**Statement
of the
American Hospital Association
before the
Federal Communications Commission's
Joint Advisory Committee on
Communications Capabilities of Emergency Medical and Public Health Care Facilities**

January 24, 2008

The American Hospital Association (AHA), on behalf of its nearly 5,000 member hospitals, health care systems, and other health care organizations, and its 37,000 individual members, presents the following comments to help inform the Federal Communications Commission regarding current successes, challenges and needs in emergency health care communications. The AHA is intensely interested in the work of the Commission's Joint Advisory Committee on Communications Capabilities of Emergency Medical and Public Health Care Facilities (JAC), and is hopeful that this committee can help channel federal involvement in health care and emergency medical communications in a productive way. The need for coordinated and effective emergency medical and health care communication has never been greater. Our comments first describe the current challenges, assessing where improvement is needed, and then offer suggestions on how the JAC's recommendations can help achieve these important goals.

It is crucial that the JAC recommend policies that will produce a roadmap for the creation of a single standard for the capture and exchange of health care information and completion of the deployment of broadband and wireless networks nationwide. It also is vital that federal policies ensure the interoperability of emergency and medical communications systems and provide for the ongoing maintenance and upgrading of mandated new technology.

CURRENT CHALLENGES

There are a number of critical areas where emergency medical and public health care providers' communications capabilities could be improved. These fall into four broad categories. First, emergency medical and public health care providers' collection and exchange of information fails to live up to the promise of today's technology. Second, the nation's broadband and wireless communications infrastructure remains underdeveloped, especially in rural areas. Third, there is inadequate support for ongoing communications and technology needs. Finally,



the crucial goal of an interoperable public safety communications system has yet to be realized. Each of these issues is discussed in detail below.

Coordinated creation, transmission and exchange of patient data collected in Electronic Health Record (EHR) systems has the potential to improve medical care considerably, as well as save money and time. Research has shown that certain kinds of information technology – such as computerized physician order-entry, computerized decision support systems and bar-coding for medication administration – can limit errors, improve care and increase efficiency. Coordinated creation, transmission and exchange of data will have other benefits as well, such as allowing public health authorities to monitor the incidence of disease in real time to rapidly identify and respond to biological attacks or pandemic illnesses.

Implementation of these technologies has been hampered by several factors. Chief among these is the lack of a national plan for health care communications, including a single, set of standards for information capture and exchange. The single standard should be able to be used in emergency as well as routine patient care, and to be used by all caregivers – including Emergency Medical Services (EMS) personnel; firefighters; doctors; nurses; diagnostic staff, including radiologists; other staff; and outpatient caregivers. For example, in order to exchange information in a timely and useful manner, ambulance data systems need to be integrated with hospital systems, and laboratory information systems need to be integrated with pharmacy systems and the patient's health record. Similarly, uniform standards will facilitate the use of telemedicine, which can bring medical resources to bear remotely in rural areas, and facilitate consultation between urban and suburban/rural health care facilities. The need for standardization extends to the types of information that are collected, the way in which information is expressed and captured, and the protocols through which it is exchanged.

The problem is exacerbated by the fact that some of the data included in an EHR will not be in alphanumeric form – including image files, X-rays, photographs or EKG tracings. Such data could be saved in multiple formats. Thus, these issues should be addressed in a non-proprietary fashion as a national standard is developed.

While federal authorities – including the Departments of Health and Human Services and Homeland Security and the Centers for Disease Control and Prevention – have certified a wide array of different technology standards for a range of purposes, none of these has emerged as a single set of standards that can be used by caregivers throughout the care process and in different environments. As a result, none of these standards will effectively fulfill the promise of clinical data exchange across a nationwide network.

Moreover, the multiplicity of standards is itself a problem because it increases costs. The systems required to fulfill the promise of electronic data exchange are very costly, and any health care provider that makes such an investment today risks having to invest in duplicative systems to communicate with other health care providers, EMS systems or payer entities. A health care provider investing in modern health information systems today also risks seeing that investment go to waste if a different national standard is adopted. In this way, the lack of a national standard delays the adoption of health information technology and the exchange of health information for patients, caregivers and other public safety personnel.

Due to the several streams of federal funding currently available for community preparedness, hospitals are forced to deal with multiple communications and data systems that are incompatible, proprietary, complex to operate and costly. In some states, hospitals and other health care programs are being pressed to operate and/or maintain as many as five or more computer applications to satisfy grant requirements, frequently without any additional funding to support the effort or requirement. This includes such things as the Health Alert Network, HAvBed bed- and facility-status reporting programs, evacuee and disaster patient tracking software, resource and grant asset tracking software, and Crisis Information Management System systems such as WebEOC. It also could include public health disease reporting systems, outbreak management systems and syndromic surveillance systems.

In the interest of using resources wisely, some hospitals have begun to default to simpler, “legacy” systems, such as HAM radio and earlier generations of hospital emergency radio networks, which tend to be ubiquitous, non-proprietary, inexpensive and easy to operate (for emergency back-up, redundant communications). While such resourcefulness is inevitable under the current circumstances, it works against the ultimate goals of interoperability, expanded capability and capacity for growth.ⁱ

In general, first responders and health care providers lack adequate communications *capacity* in cases of emergency.ⁱⁱ Health care providers face capacity problems on both fixed and wireless networks in both urban and rural environments. The problem is most acute, however, in rural areas. The promise of communications technology for emergency response and health care needs cannot be met until communications infrastructure is fully built out in rural areas. Too many rural first responders and hospitals lack access to broadband and other forms of high-speed Internet communications.ⁱⁱⁱ Commercial wireless networks also remain underdeveloped in rural areas, and the expanding use of the Personal Communications Service spectrum in the 1.9 GHz range by these services requires a high density of transmission towers that are not economically viable in areas of lower utilization and less attractive cost-to-return ratios.

Health care and emergency networks also could be improved. In rural areas, the predominate frequencies used are still VHF (in the 155 MHz band), and much of it is analog. The lack of channel congestion and VHF’s better propagation characteristics in rural areas have reinforced the use of this spectrum over the years. In suburban and many mid-sized communities, health care providers and first responders usually use a mix of VHF and UHF systems, with some 800 MHz-trunked systems that are now 10-15 years old and, again, predominantly analog. UHF tends to propagate efficiently in high-density suburban and urban settings, and the availability of additional channels has given users greater capacity. In larger urban areas, one is likely to find a mix of UHF and 800 MHz systems, and some may be newer systems using evolving digital technologies, often based on proprietary coding schema. Propagation within urban structures and infrastructures is a significant challenge, frequently requires the extensive use of special technologies, and was one of the major problems faced by public safety personnel on September 11, 2001.

In addition, the crucial goal of *interoperability* remains out of reach. More than six years after the tragedies of September 11, 2001 brought into sharp relief the need of EMS personnel, hospitals, police, firefighters and other first responders to communicate in times of emergency, interoperability remains a work in progress.^{iv} This is further complicated by growing divergence in band use and technologies, many of which are proprietary. To date, efforts to address

interoperability often utilize cross-patching features in electronic dispatch consoles or “black-box” interface units. These solutions are usually geographically specific and locally operated. It remains the exception rather than the rule for one public health or safety asset to move from one region or community to another and cross-communicate seamlessly with its peers.

ACHIEVING THE GOALS

The AHA strongly supports the growing focus on the use of health information technology in improving patient safety and quality in our hospitals. Communications capabilities are increasingly important to hospitals’ and other health care providers’ mission, both in emergency situations and ordinary, day-to-day business. Having identified the problems above, the prescription for reform is relatively clear. Accomplishing the goals will not be easy, however, and will require active participation of all stakeholders, including all affected federal agencies as well as all hospitals and other health care providers.

While hospitals have been pioneers in harnessing information technology to improve patient care, quality and efficiency, the challenge now is to extend its use and integrate it into the routine care processes in all hospitals, big and small, in both rural and urban areas, as well as other health care settings. In order to do so, federal leadership is needed. The first and most fundamental objective will be establishing a single national standard for the capture and transmission of patient data. The AHA therefore urges the JAC to recommend a medical information standard that:

- meets the needs of all health care stakeholders;
- is based on a non-proprietary system with an underpinning of simplicity;
- retrieves data in an automated way, without the need for manual re-entry of information;
- avoids redundant data requests; and
- ensures data security and privacy.

The creation of a universal standard will require the extensive involvement of all stakeholders. Indeed, the existing multiplicity of standards has resulted from the failure of each existing standard to meet the needs of one or more relevant information users in the health care process and the proprietary nature of the information technology developed today.

In the context of clinical data exchange, standards harmonization efforts are currently being led by the American National Standards Institute’s Healthcare Information Technology Standards Panel (HITSP). The HITSP process is federally funded and consists of over 200 stakeholders, including the AHA. While it is addressing clinical data capture and exchange, the HITSP process does not address telecommunications media, frequency usage or interoperability issues that fall outside of the health care realm. Thus, there remains a need for a process that will lead to a unified and cohesive set of standards.

The JAC is in a unique position to recognize and recommend that the emergency communications component of health care should not be treated as a separate problem; instead, it should be included as part of the broader effort to create health information technology interoperability. Early recognition of this issue will help ensure that, when standards are selected, they will allow seamless communication between hospitals and other agencies that share not only information but responsibility toward a community in times of need. At the same time, the JAC's recommendations must acknowledge that technology is a tool for improving the quality and safety of care, not a goal in itself. As noted above, health communications and information systems must ultimately be simple and affordable. They must not require extensive training and re-training in order for all hospital personnel to use them. To control costs and ensure adaptability in the future, they should not rely on proprietary software or hardware solutions.

Hospitals will need federal financial assistance for technology deployment. Hospitals' ability to meet these investment challenges is compromised by the significant financial pressures facing hospitals. Today, 25 percent of hospitals operate at a loss – with Medicare and Medicaid underfunding being a key driver. On top of underfunding by government payers, hospitals face other financial pressures: labor costs continue to rise as hospitals increase wages to attract scarce workers; the number of uninsured patients also continues to grow, contributing to greater levels of uncompensated care; and hospitals face increasing costs for medical liability insurance, pharmaceuticals and medical supplies. With all these financial pressures, many hospitals have few reserves to overcome technology obstacles necessary to participate in communications and technology initiatives. Therefore, there should be adequate funding to provide hospitals “up front” support to implement systems, including costs for hardware, software, testing and technical assistance. In addition, there also must be a commitment to provide on-going financial support for longer-term maintenance of systems.

The Commission could specifically help with these needs by making minor changes to the rules and procedures within its traditional Universal Service Fund (USF) Rural Health Care program. Specifically, the Commission should provide support for internal connections within rural health care facilities, increase the discount percentage for Internet access, provide support for Voice over Internet Protocol (VoIP) services, and otherwise simplify and streamline the traditional USF Rural Health Care program.^v By providing support for internal connections within rural health care facilities, the USF program will be available to help rural hospitals, which are often least able to deploy expensive technological solutions, implement the equipment necessary to benefit from EHRs and data exchange. Increasing the discount percentage for Internet access and providing support for VoIP services will ensure that rural hospitals, too, can benefit from other technological advances available in urban areas. Streamlining the program will make such support more accessible to all, especially overworked rural hospital administrators.

Continued federal attention to national broadband deployment also is critical. Congress and all federal agencies concerned about emergency preparedness and health care communications should commit themselves financially to assisting with this monumental effort, which is on a par with the development of the interstate highway system in the 1960s. For its part, the Commission should, among other things, extend its Rural Health Care Universal Service Pilot Program to allow applications for additional projects in subsequent periods. While the 69 applications selected for the program surely will expand many rural health facilities' access to

broadband technology, there is likely to be much more work to be done. A second filing window (and subsequent filing windows) will allow other areas to benefit as well.^{vi}

Finally, and crucially, the Commission and other federal agencies must redouble their efforts to assist the nation's first responders and health care providers to implement a truly interoperable voice and data communications systems. The Commission's plan for a public safety licensee in the new 700 MHz band is a first step in this direction, but careful assessment of that initiative will be necessary to see whether it achieves the interoperability goal. Financial support almost certainly will be needed to enable first responders and hospitals to replace existing communications systems with interoperable, advanced technology, especially in rural and remote areas of the nation. Such technology should meet many of the same standards discussed above with regard to data capture and exchange – i.e., it should meet the needs of all health care stakeholders; be based on simple, non-proprietary technology; and ensure data security and privacy.

CONCLUSION

The JAC is uniquely positioned to provide Congress and the federal agencies with important information and recommendations to achieve the promise of emergency medical and public health care communications technology. At the federal level, the most important priorities are the establishment of a single standard for health information capture and exchange and completion of the deployment of broadband and wireless networks in rural areas. The JAC's recommendations should further these goals.

Respectfully submitted,

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ⁱ While such simpler systems lack modern capabilities, health care providers must remain able to use them as back-up systems in the event that more modern systems are unavailable as a result of natural disaster, sabotage or other failure.

ⁱⁱ Even in cases where communications capacity exists, there are no provisions to ensure that first responders and health care providers obtain needed access in emergency situations. In at least one case in the immediate aftermath of Hurricane Katrina, a hospital was unable to obtain needed satellite communications capacity because all such capacity had been reserved by news media. While reporting also is an important use of communications infrastructure, there is currently no way of ensuring that first responders and health care providers obtain their necessary share.

ⁱⁱⁱ The AHA commends the Commission's new universal service Pilot Program for its efforts to extend broadband infrastructure to rural health care providers. While the Commission's decision to expand this program will encompass a large number of infrastructure projects, there remains an enormous amount of work to be done.

^{iv} In this regard, the AHA applauds the Commission on its recent decision to grant a license in the new 700 MHz band to a public-safety licensee, and appreciates the opportunity to serve on the licensee's board. The AHA is hopeful that this new approach will help the nation reach the interoperability goal.

^v See Ex parte letter from Rick Pollack, Executive Vice President, AHA, to Marlene H. Dortch, FCC Secretary, WC Docket No. 02-60, dated May 24, 2007.

^{vi} Once the changes suggested in this and the prior paragraph are implemented in the Commission's Rural Health Care program, it may be necessary to re-assess the current \$400 million funding cap, or seek other federal funding for these critical needs.