including cellular phones, laptops, IP phones, and a variety of networks including wireless, traditional telephones, broadband, and satellite. EMS responders with legacy access devices and those with new multi-network access devices capable of utilizing any available IP-based access networks can communicate with each other. The power of the IP-based networks approach helps enable first responders to have the flexibility and tools they need for effective response and, most importantly, allows public safety agencies to extend and modernize their existing radio networks so they work together with other existing and future communications networks and devices.

For emergency managers, being able to interchangeably link systems helps to unify command and control – making it more flexible by enabling dispatchers and incident commanders to manage operations from one or more locations.

Reliance on IP-based communications also provides more options for rapid response for deployment or restoration. For example, in the aftermath of 9/11, Katrina, and other disasters, wireless and wired IP networks have been quickly deployed to enable both voice and data communications. For example, when the I-35 bridge collapsed in Minneapolis, the developer of the municipal Minneapolis Wi-Fi network, only one-sixth deployed at the time, quickly enabled unfettered access for data and VoIP transmissions – which proved particularly valuable as traditional communications networks in the city were overwhelmed.[70]

Reliance on IP networks and IP gateways also enables investments in networks to be shared across a broader range of stakeholders, and reduces costs by capitalizing on existing communications investments and avoids unnecessary upgrades to existing radio networks.

C. IP CAN MAKE THE DIFFERENCE FOR NETWORK SURVIVABILITY.

IP Networks can be especially advantageous in an emergency.

Few other industries face an equivalent need to maintain 24 hour, 7 days a week, 365 days a year service with absolutely no tolerance of downtime. But those companies that do, often rely upon more survivable IP networking technologies.

IP networks, designed by the Defense Department to withstand a nuclear attack, have some inherent advantages over traditional communications systems in an emergency. The transformation to decentralized broadband networks with multiple paths between any two points and the Internet's packet communications protocol enhanced network capabilities, eliminate many single points of failure, and enables the network to automatically and efficiently work around failures. In a disaster, communications systems have collapsed as a result of the emergency event itself.

[70] *See* Carol Wilson, Muni Wi-Fi Boosted by Post-Disaster Performance, Telephony Online (Aug. 9, 2007) (*available at http://telephonyonline.com/home/news/muni_wifi_minneapolis_080907/*).

However by utilizing common IP networks, systems can often be run over any available IP network.

Communications redundancy is critical not just in time of major disasters but because anything from a blizzard to a construction accident can disrupt communications.

Hospitals need confidence in a crisis and the ability to continue working regardless of the circumstances. In the post-Katrina, post-September 11th world, more and more businesses and hospitals are turning to next generation network technologies to ensure that their enterprises are sustainable through periods of significant interruption caused by a disaster or any other unforeseen event. The significant impact from each hour of downtime due to a flu pandemic, hurricane, terrorist attack, or other catastrophic disaster could lead to disastrous consequences.

Enabling continuity of service and remote access.

In the event of another major disaster or quarantine, hospital workers may need to communicate from more geographically-dispersed locations. In its Katrina Order, the FCC directed its Public Safety and Homeland Security Bureau to continue to "work with the Nation's health care" ... "communities to include, in their business continuity planning, robust emergency communication plans that ensure that these entities will be able to function during emergencies such as an influenza pandemic. Such emergencies could result in sudden and significant shortages of personnel, changes in communications traffic, possible disruptions to communications networks (i.e., due to increased telecommuting by the nation's workforce and society in general during an influenza pandemic), and lack of manpower to immediately repair affected communications networks."

Hospitals need communications continuity plans, enabling basic voice and data to resume as quickly as possible after a major outage or attack. Such remote access is often enabled by IP technology. The ability to maximize the efficiency of the network, to guarantee minimum levels of availability, enable remote access using IP VPNs, and utilize any alternative and available IP network may be essential in such an emergency.

In the event of a major 9/11 type attack, anthrax attack or flu-pandemic, offices could be inaccessible but employees will still need to communicate. Workers with access to broadband could still work using IP VPNs and broadband-enabled nomadic VoIP phones, and could immediately work from home or other broadband-enabled locations. By disconnecting voice from the underlying infrastructure, nomadic interconnected VoIP allows displaced workers to utilize their existing work phone number from any broadband-enabled location.[71]

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[71] In southern Florida, not only does the state emergency management agency utilize VoIP for its disaster needs, but small businesses in Florida too have turned to nomadic VoIP because when phone lines go down in a hurricane, small businesses can maintain communications with clients with their existing work number simply by plugging their phone

The White House flu pandemic plan, for example, suggests every business have a plan in place to allow employees to work from home. However, one in four Americans say they likely would lose their job or business if they had to stay at home for seven to 10 days in a severe flu pandemic.72 Broadband is an essential ingredient in enabling people to continue to work from home – especially if they needed to care for someone sick at home or as a means to quarantine.

The use of IP VPNs – which can provide secure remote access -- is a critical enabler. Already, 32% of enterprise networks in the health care sector are utilizing IP VPNs – a number projected to continue to grow.73 Continued uptake of IP VPN technology not only promotes worker mobility, it is also essential to protecting the security of data traversing networks, and connecting hospitals to each other in broader health networks.

Avoiding unanticipated traffic spikes in an emergency

Congestion is not limited to your local highway at rush hour. Broadband networks can become congested too. Utilizing network management technologies can lessen congestion on broadband networks, just like traffic lights help prevent gridlock. While network congestion happens every day, it tends to be limited in scope and short in duration and thus less likely to impact real-time IP communications. On the other hand an unanticipated spike in traffic due to an extraordinary situation such as a breaking news event or the failure of a critical network element can increasingly lead to events with longer duration and broader scope of impact.

For example:

- In December 2006, a 7.1-magnitude earthquake off the coast of Taiwan cut a major undersea cable. The resultant re-routing of network traffic jammed the other Internet traffic routes throughout much of Asia resulting in Internet service for millions that was painfully slow or non-existent.[74]
- Sometimes network congestion can happen because of a major news or sporting event. For example during basketball playoffs, the NCAA March Madness on Demand website generates more than 19 million video streams over several days resulting in one of the largest live Internet events ever.[75] Some believe this single Internet streaming event, could over-extend the Internet

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into any working broadband connection – or booting up a laptop in a Starbucks and be back in business. "VoIP provides small business with a defense against hurricane damage", June 12 2006, Sun-Sentinel

[72] "One in Four Say They'd Lose Job or Business if They Had to Stay Home in a Pandemic", by Charles Hoskinson OCT. 27, 2006

[73] http://www.instat.com/abstract.asp?id=224&SKU=IN0603082DDHC

[74] http://www.breitbart.com/article.php?id=061227100430.q1satn81&show_article=1

[75] In 2006 web site organizers planned for 80gbps in traffic while in 2007 they are planning for 160gbps http://www.xchangemag.com/hotnews/73h984212.html

and slow necessary business applications to a crawl -- essentially crippling the network.[76] Even a rock concert can stretch the bounds of Internet traffic.[77]

- With less warning, Internet traffic would also spike in the wake of a terrorist attack, flu pandemic, or other natural emergency that suddenly causes millions of people to turn to the Internet. For example, industry executives warn that, in the event of a bird flu outbreak, "the demand for communication will soar," and the Internet's ability to handle that surge is "definitely the most vulnerable part of the equation."[78]

While congestion could impact communications over the open Internet, managed networks help ensure communications reliability. Whatever the cause of traffic congestion, managed networks and traffic prioritization can help maximize the likelihood that all traffic will be delivered and that time-sensitive applications will operate in a satisfactory manner despite unusual network conditions. As networks grow in importance, it is critical to enable innovative network technologies that maximize the likelihood that mission critical applications won't be impacted by congestion. Managed IP networks, where traffic is separated from the general Internet infrastructure, help to better assure that capacity is available for critical applications when that capacity is required.

Managed networks can also enable emergency traffic to be prioritized through the network. In the same way that cars move to the side to allow an ambulance to get through more quickly in an emergency, technologies like "differential services" can help speed network traffic in an emergency by giving it preferential treatment.

Likewise, there are a number of priority communication services which, although underutilized, could nonetheless be beneficial in an emergency.[79] The Government Emergency Telecommunications Service (GETS) can provide EMS, 9-1-1 and medical workers priority access to the switches that route telephone calls when telephone networks become congested. Similarly for wireless networks, the Wireless Priority Service (WPS) is an optional feature that can be added to regular cellular service to provide priority communications for key personnel during disasters. If communications networks go down, pre-enrollment in the Telecommunications Service Priority

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[76] Could March Madness cripple the network? By Andrew R. Hickey, News Writer, 15 Mar 2006, http://searchnetworking.techtarget.com/originalContent/0,289142,sid7_gci1173125,00.html

[77] Exceeding any other online event, the Live Earth one-day global concert packed the Internet with 9 million video streams -- http://www.reuters.com/article/internetNews/idUSN0724055520070707

[78] Patrick Thibodeau, Flu pandemic could choke Internet, requiring usage restrictions, ComputerWorld, Feb. 12, 2007 (http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=9011125) (quoting Renate Noone, vice president of professional services at SunGard's Availability Services unit, and Bernard O'Neill, vice president and chief network officer at Prudential Financial Inc.).

[79] See http://www.txregionalcouncil.org/ep/GETS-WPS-TSPProgramSummaries.pdf

(TSP) program helps ensure that the telecommunications service provider restores the TSP services on a priority basis before it restores any non-TSP services.

The role of satellite in survivable communications.

There is also a need to increase redundancy in mobile networks. The first 24-48 hours after an emergency are critical in the world of first responders. During an emergency, traditional tower based wireless communications infrastructure and equipment can be destroyed or damaged – as was the case during Katrina. However, it is also a time when the need for mobility and communication is at a peak. Emergency medical personnel and first responders must be in constant contact with their coordinator, hospitals, police, fire, and each other.

In its Katrina order, the FCC directed its Public Safety and Homeland Security Bureau to continue to *"educate and encourage the ability of health care providers to employ a plurality of communications systems (e.g., land mobile relay systems, satellite communications, and/or high frequency communications) on premises, outside of their facility, and facility-to-facility.*[80]*"*

Health care providers must have access to communications tools that can survive the incident itself, especially because there is no time to set up new infrastructure at each new location in an emergency. Satellite technologies can be a critical adjunct during the search and rescue period. Satellite networks can provide seamless voice and data communications without relying on terrestrial infrastructure. Satellite handsets also offer the mobility of standard wireless handsets, and some networks also offer data capability.

Furthermore, satellite networks can interconnect with other existing communications networks, including wireless, wireline, terrestrial CMRS networks and public safety networks. There are currently two satellite operators offering 2-way radio (PTT) over satellite that can be cross banded to terrestrial CMRS (ESMR) networks and public safety land mobile radio (LMR) networks. These attributes can make satellite technologies ideal for use in the 24-48 hours immediately following a disaster as well for day-to-day public safety use where coverage by other technologies is a challenge. At least three satellite companies are working towards future networks that will provide seamless satellite/cellular (MSS/ATC) capability contained within the form factor of today's wireless handsets.

Similarly, JAC heard that one and two-way paging services, which also often utilize satellite capabilities, are a cost-effective and reliable choice for health care organizations, and are necessary in a disaster situation.[81]

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[80] Paragraph 9, Katrina Independent Panel report, Federal Register / Vol. 72, No. 132 / Wednesday, published July 11, 2007

[81] USA Mobility indicates that, *"paging technology has also proven to be more survivable and reliable during and after crisis situations. Two examples of this are during 9/11 and Hurricane Katrina, when landline and cellular networks became overloaded and unusable, paging networks continued to deliver reliable performance to its large user bases in both the healthcare industry as well as the government and first-responder sectors."* At http://www.fcc.gov/pshs/docs/advisory/jac/pdf/usa-mobility-wireless.pdf

4. ACHIEVING THE POSSIBILITY OF IP.

A. INVESTMENTS CAN BE MINIMIZED, AND CAPABILITIES MAXIMIZED, BY RELYING ON OFF-THE-SHELF TECHNOLOGIES.

There are key similarities between the type of IP networks that hospitals and EMS providers need and what other sectors have utilized to improve capabilities, track customer data, provide mobility, enable interoperability, converge voice and data, and protect privacy. Other sectors like banking and finance have lowered costs and improved capability through heavy investments in managed IP networks, commercial wireless services, and off-the-shelf technologies to meet their needs. The opportunity to exploit the latest commercially available technologies to provide emergency agencies with better control and capability is just as significant for health care and EMS.

There are number of key reasons why other sectors of the economy have relied upon the rapid advancements of commercial technologies for their communications needs. Adopting and adapting commercially available technologies can generate significant economies of scale while making networks more dependable during crises. They can enable the emergency response community to focus on finding the best means for achieving goals (for example increasing mobility or convergence) rather than locking themselves into specific preconceived types of technologies.

As PCIA noted in its submission to JAC,[82] there are a variety of available communications infrastructure technologies, including wireline, wireless, WiMax and broadband services, which can be essential for health care providers, first responders, as well as to the public at large. They suggest that wireless capacity will need to grow to support data-intensive applications, and, therefore, network operators must increase capacity to handle the traffic demands of those networks. To do so, they suggest that Congress must create an investment climate that is hospitable to wireless investment, and policies that encourage broader and more reliable wireless infrastructure deployment.

Similarly in other comments received by JAC, ReFLEX indicated that many of the essential ingredients for mission critical high-risk communications systems – like comprehensive radio coverage, dependability, flexibility, functionality, and interoperability, throughput, and cost effectiveness – are often developed through experiences from general public subscribers for which public safety can benefit.[83]

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[82] See: http://www.fcc.gov/pshs/docs/advisory/jac/pdf/pcia-jac.pdf

[83] See http://www.fcc.gov/pshs/docs/advisory/jac/pdf/reflex-homeland.pdf

When hospitals are free to choose among many wireless and IP network competitors, prices drop and innovation rises. As HHS has put it, *"the federal government will provide a vision and a strategic direction for a national interoperable health care system, but will rely on a competitive technology industry, privately operated support services, and shared investments. The private sector must develop the market institutions to deliver the products and services. It can best ensure that health information technology products are implemented in ways that meet the varying needs of American health care across settings, cultures, and geographies. And only it can continue constant innovation and ensure that products are delivered on an affordable basis."*[84]

B. PROMISING PROJECTS ARE ALREADY UNDERWAY.

At the heart of this communications transition is a move to interoperable IP-based networks. These next generation IP-based networks are not merely speculative possibility, they are quickly becoming a reality.

- In the Washington D.C. region, the Capital Wireless Integrated Network (CapWIN) is a state-of-art wireless IP network integrating data, images and conferencing for linking EMS and first responders in the region.[85] It is said to be the first multi-state, inter-jurisdictional transportation and public safety integrated wireless network in the United States. The effort began when a suicide jumper on a bridge highlighted incompatible communications systems which prevented emergency personnel from different jurisdictions on the scene from being able to communicate with each other.[86] They had to send runners back and forth to carry messages between responders. Now, CapWIN provides a "communication bridge" allowing more effective multi-agency response to critical events. Medical, police, fire, and others can keep up with homeland security and emergency situations around the metro area by logging in from secure virtual private network clients on their PCs, personal digital assistants, wireless phones and police radios. To make it accessible using any Internet-connected device, they made extensive use of off-the-shelf technologies (like cellular

[84] HHS Fact Sheet--HIT Report At-A-Glance, July 21, 2004. http://www.hhs.gov/news/press/2004pres/20040721.html

[85] CapWIN is a state-of-art wireless integrated mobile data communications network being implemented to support federal, state, and local law enforcement, fire and emergency medical services (EMS), transportation, and other public safety agencies primarily in the Washington, DC Metropolitan area. See faq at: http://www.capwin.org/index.cfm?fuseaction=t2&ID=26

[86] "D.C. deploys wireless net for first responders" By Carolyn Duffy Marsan, Network World, 08/31/06 http://www.networkworld.com/research/2006/090406-sept11-first-responders-dc-wireless.html

broadband technologies), use IP-VPNs to connect agency networks together, and rely on open standards.[87]

- In Virginia, the COMLINC (Commonwealth's Link to Interoperable Communications) project leverages Voice over Internet Protocol (VoIP) technology to allow disparate radio systems, multiple agencies, from different jurisdictions, with incompatible radio equipment, to communicate within Virginia. When fully implemented, it will also use a state-wide MPLS IP network that will support an IP based Next Generation E-9-1-1 implementation, and other state public safety communication.[88]

- In Norway, St. Olav's Hospital used a robust IP network and wireless networks to convert its 11 building campus into one massive "hotspot" accessible by a variety of devices - transportation robots, laptops and telephones.[89] Data created by hospital equipment and patient monitoring devices, like the ECG can travel seamlessly from one instrument and be made available to user output devices. Software systems use the network for nurse calls, service ordering. They use VoIP, streaming video, and an IP network for all communication. And because it's a managed network, security features are built in. Patients are enjoying IP-based entertainment terminals in their rooms. It has not only reduced costs, but improved access to information, less duplication of effort, faster response times and shorter patient stays.

- The Maryland Institute of Emergency Medical Services System (MIEMSS), as cited in a recent Institute of Medicine EMS study, has a best practice communications center for the integration and coordination of EMS, hospital, public health and other related communications.[90] This statewide communications system not only performs these functions on a day to day basis but is capable of ramping up for major events. Similar statewide emergency medical communications coordination and integration centers operate now in Idaho and Alabama.

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[87] "CapWIN public-safety network plans new services" By Susan M. Menke http://www.gcn.com/online/vol1_no1/34915-1.html

[88] See http://www.ocp.virginia.gov/Initiatives/documents/Interop_Initiative_Overview_2007.ppt

[89] http://www.longwoods.com/product.php?productid=18495&cat=457

[90] "Emergency Medical Services at the Crossroads"; Institutes of Medicine; 2006; pp. 68-69.

- Tucson, Arizona, has deployed one of the nation's first video based EMS telemedicine systems in order to improve responsiveness and help save lives.[91] The system called ER-Link uses a wi-fi mesh network to send 12-lead patient telemetry data and real-time video to provide in-depth, information to the hospital in trauma situations before the patient arrives. The live video in the ambulance enables remote diagnosis and visual analysis by nurses and doctors at Tucson's University Medical Center.

The problem isn't that these solutions aren't being done somewhere; the problem is that these solutions aren't being done everywhere. Even when these promising projects are deployed, there is often no requirement for coordination between jurisdictions and no national solutions. As Secretary Chertoff explained at a May 8, 2006 Tactical Interoperable Communications Conference, *"the biggest barrier to interoperability is not technology [the challenge] has to do with, rather, human beings. It has to do with how do we get people to be able to use this equipment in a way that makes interoperability not just a theoretical possibility, or a technological possibility, but an actual, workable, day-to-day solution."*

The problem isn't that these solutions aren't being done somewhere, the problem is that these solutions aren't being done everywhere.

[91] See http://www.tropos.com/pdf/success_stories/tropos_success_story_tucson.pdf and http://www.emsresponder.com/web/online/Top-EMS-News/Tucson-to-Launch-Ambulance-to-Hospital-Video-Conferencing/1$5561

IV. A PRESCRIPTION FOR PROGRESS: JAC'S KEY FINDINGS AND RECOMMENDATIONS

The U.S. is home to the best doctors, the most capable emergency medical workers, and the most-capable communications technologies and networks available in the world today. But, somehow, we have failed to marry our health and emergency medical systems with advances in communications and information technologies.

We can and must do better. The opportunity is potentially boundless. It is time policymakers and stakeholders get serious about modernizing these communications systems. These networks provide consumers, businesses, and government customers with end-to-end, real-time, reliable broadband connections that enable the transmission of bandwidth-intensive video and data applications. The attributes of these networks (speed, reliability, security, sophistication) should serve as the foundation of our nation's health care communications networks. By connecting health care providers via broadband, we begin the process of laying the foundation for a digitally integrated health care system. Such an outcome would enable the implementation of a vision that ensures every health care facility, 9-1-1 call center, and emergency responder is connected both with each other and to a vast array of life-saving information and expertise. It helps ensure that each patient receives the most appropriate care, at the optimal location, with the minimum delay.

Achieving this vision takes a major reorientation of government policy, as well as a fundamental paradigm shift as to how public safety and health providers approach their communications needs. Continuing the status quo is no longer an option. EMS, medical and public health care facilities cannot change the system on their own. A broad range of players have critical stakes in this transformation. But policymakers have an especially profound duty to provide the leadership, vision, strategic investments, and to illuminate the pathway forward. Lives can be saved, as can thousands of dollars per family.

In light of this opportunity and the recommendations we send to Congress, it is critical that we continue to foster an environment for innovation, investment, and market-based solutions. Ten years ago, it was difficult to conceive of the dizzying array of Internet-enabled communications technologies that are now at our doorstep, or the opportunities they would present for interoperability, health IT, or health transformation. These opportunities are now in-hand because there is a burgeoning marketplace driving innovation. Wireline and wireless networks are growing in sophistication, reliability, and speed. These networks can do for the health and public safety community what they have done for consumers, businesses, and governments – improve efficiency and effectiveness. It is therefore imperative that policymakers continue to adopt policies that allow

network innovation, and that this engine of opportunity continue forward. Our nation's readiness for the next disaster depends upon it.

Thus, to improve integration of communications systems used by emergency medical and public health care facilities with existing or future emergency communications networks, JAC is outlying several key findings, options, and recommendations.

Key Findings:

- Foster interoperable broadband networks, both wireline and wireless, that permit critical health-related information to be transmitted rapidly, reliably, and securely.
- Improve interoperability through better interagency coordination and the use of IP.
- Use mobile services and applications to create virtual hospitals at the scene of accidents, crimes, and disasters.
- Advance life-saving capabilities such as telemedicine, remote monitoring, and telecommuting by encouraging network and application innovation and deployment.

Key Recommendations:

1. **Encourage interoperable broadband networks**

The Committee recommends policymakers encourage the deployment of interoperable, standards-based broadband networks built on common and standardized Internet Protocols that can transmit bandwidth-intensive information such as video and graphics in a rapid, reliable, and secure manner. It is now abundantly clear that policymakers must set a new national goal of transitioning EMS, 9-1-1, and public health communications to broadband capable networks. Today's outdated, fragile, and often incompatible networks leave us ill-prepared to confront the disasters looming around the corner, or to take advantage of the quality of care and economic efficiency gains promised by IT modernization. Unless there is purposeful attention paid to communication infrastructure requirements and investments at the local, regional and national level, it is unlikely that piecemeal technology adoption will result in the connected and robust infrastructure necessary for survivable communications in a disaster, or even for day-to-day emergency care and patient monitorization.

These next generation networks should:

- Utilize commercially available IP-based managed networks
- Be capable of converging voice, video, data, and other applications over the same network
- Provide sufficient bandwidth for rich-media and telemedicine applications

- Provide rapid, reliable, and secure end-to-end connectivity to ensure the delivery of mission critical information
- Be capable of increasing bandwidth dynamically to meet surge capacity in the event of a disaster
- Be capable of prioritizing communications to ensure that bandwidth and key communications are available in a disaster
- Utilize standards-based off-the-shelf technologies

Specific initiatives:

a. Improve ability to transmit media-rich real-time patient data between emergency responder and the remote ER physician (e.g. multi-vital sign telemetry, interactive video, portable ultra-sound transmission) by expanding wireless public safety broadband availability.

b. Close the connectivity and coverage gaps in rural EMS by investing in the development of rural/frontier EMS communications systems to support community paramedicine and emergency communications needs. Encourage the use of off-the-shelf technology that could reduce the costs of deployment in rural areas.

c. Improve the safety, quality, and efficiency of hospital based emergency care by funding efforts to improve hospitals' broadband connectivity, improve communications interoperability with EMS systems, and expand telemedical connection to rural/frontier health facilities and community paramedicine providers.

d. Improve federal emergency response coordination by directing FEMA, DMAT, and CDC to utilize advanced communications capabilities and ensure immediate coordination with local and regional emergency communications capabilities.

e. Deploy $1 billion in Public Safety Interoperability Communication Grants. The Departments of Commerce and Homeland Security have allocated nearly $1 billion in grants to public safety agencies to deploy interoperable communications systems. The awards will help state and local first responders improve public safety communications during a natural or man-made disaster. However, interoperability must be ensured not just for police, fire and EMS, but for emergency rooms, trauma centers, public health offices and others in order to truly enable seamless communications in an emergency.

f. Improve funding for EMS providers. The JAC agrees with conference report language accompanying the Homeland Security Appropriations Bills for the past two years recommending that no less than ten percent of State Homeland Security Grants and the High Threat, High Density Urban Area Grants go to EMS providers. Adequate funding can help better train and equip responders to provide critical life-saving assistance

which is to include interoperable communications for emergency medical and health care providers.

g. Ensure Emergency Medical Services can survive a disaster's financial impact. Due to statutory ambiguities, reimbursement for ambulance providers and health care facilities have too often been reduced, delayed or denied, for legitimate and requested services provided by ambulance firms. Eliminating the ambiguities in the Stafford Act, as suggested in Appendix F, can help ensure rapid response and appropriate reimbursement. The JAC also agrees with the FCC's Independent Katrina Panel implementing the NSTAC's recommendation that telecommunications infrastructure providers should be afforded emergency responder status under the Stafford Act and that this designation should be incorporated into the National Response Framework and state and local emergency response plans.

h. Prioritize funding for the development of statewide emergency medical communications coordination and integration centers such as those operating in Maryland, Idaho and Alabama which serve to effectively coordinate all communications among EMS, hospital, public health and other related responders for both day-today and mass casualty events.

2. Improve interoperability through better <u>interagency coordination</u>

The Committee recommends Congress establish a federal interagency coordinating committee on emergency communications systems to establish strong, consistent national (federal) guidance, standards and direction to insure consistent development of compatible communication systems across the nation. Bridging today's balkanized communications systems requires strong federal leadership in supporting a comprehensive, coordinated approach to improving emergency communications. Continued fragmentation at the federal level is unacceptable.

- This Federal Interagency Committee on Emergency Communications Systems (FICECS) should be empowered to make guidance changes and include high-level participation from the Departments of Homeland Security, Health and Human Services, Transportation, Commerce, the Federal Communications Commission, and the Centers for Disease Control. It should be administered by the US Department of Homeland Security's Office of Interoperability and Compatibility and Office of Emergency Communications (USDHS OIC and OEC).

- To improve communications, the FICECS should be responsible for (a) ensuring coordination among Federal agencies involved across the full continuum of emergency communication planning, (b) establishing base-line communication benchmarks to which all systems must at a minimum achieve, (c) developing a coordinated strategy for migrating the

nation's EMS, 9-1-1, public safety and public health communications systems to IP-based interoperable networks, (d) developing strong, consistent, guidance to states and localities to ensure all systems are migrating toward the same common interoperable national framework, and (e) collecting data on the progress in order to map the deployment of compatible systems nationwide, and measure progress toward national interoperability performance goals.

- To ensure federal coordination is integrated with state and local efforts, the FICECS should be supported by a specially created advisory committee comprised of key stake holders including representatives of state, local, EMS, health facilities, public health, public safety, communication experts, and others. The advisory committee must be adequately funded to allow participants to be reimbursed for travel to meetings.

- DHS and other federal agencies should be encouraged to ensure that emergency medical personnel are treated as public safety personnel under the Stafford Act and other provisions, the same as fire fighters and law enforcement. In this context, the purpose is to enable emergency medical personnel and agencies to be protected and reimbursed for participation in disaster events.

3. **Enable consistent efforts through use of <u>common standards and federal grant guidance coordination</u>**

Ensuring seamless communications across emergency responder and public health communication systems takes better coordination and use of common standards and protocols.

The Committee recommends the federal government renew its commitment to develop, harmonize, and ensure widespread adoption of shared standards and protocols. Information and data can only be shared easily and securely between systems and agencies when they use widely accepted standards and protocols. Numerous studies have found that a key factor inhibiting the rate of adoption of new health care technologies is the lack of development of common health care IT standards. Only with common national standards can states and regions create systems with similar structure and compatible capabilities.

- Accelerate efforts to adopt electronic medical records and ensure their availability in a disaster by taking interim steps to identify a minimal set of uniform patient data and corresponding protocols for sharing data among all healthcare, emergency response and public safety institutions within a region during a time of declared disaster.

- Develop and deploy patient and bed tracking systems with nationally mandated information sharing provisions with adequate resources made available to states and regions to meet this critical need.

The Committee recommends federal and state agencies develop common criteria for all contracts and grants supporting emergency communications. Federal, state and local policymakers must work in a more coordinated manner to ensure existing and planned emergency communications systems are interoperable, use common networks, transition to broadband, and employ the same technical standards and communication protocols. The criteria should 1) embrace common technical standards, communication protocols, and data formats, 2) ensure interoperability between existing and future emergency communications systems -- including related software, peripheral and other associated systems, 3) make the transition to broadband networks capable of converging voice, video and data and enabling telemedicine applications, 4) integrate with state plans, 5) support both day-to-day and disaster activities, and 6) ensure regular training and testing of communications systems.

- This coordination should occur across the emergency communications chain – encompassing emergency medical systems, public safety, 9-1-1 PSAPs, hospital preparedness, emergent threat, and health alert networks.

- The federal interagency committee described above should include the leadership of all relevant funding programs and be empowered to enact program changes that ensure coordinated action.

4. **Advance capabilities through better network integration**

   a. ***The Committee recommends greater coordination, investment, and utilization of telemedicine technologies for both day-to-day and emergency response.*** Existing telemedicine networks and state health information systems can be essential components of a region's emergency communications and response systems. They can be critical for providing care at alternate care sites, delivering surge capacity in an emergency, enabling access to advanced specialists, and extending assistance from one state to another, yet telemedicine technologies are often underutilized, and unavailable for emergency response.

   b. ***The Committee recommends better coordination between existing systems to be able to share and analyze real-time data across systems and provide better communications during times of emergency.*** Public health, hospitals, community health centers, nursing homes, EMS and public safety all have critical roles to play in providing real-time threat information in order to protect the American public.

   c. ***The Committee recommends the Department of Homeland Security lead an effort to create and coordinate a geospatial Command and Coordination System, based on open enterprise architecture, to allow common patient and emergency vehicle tracking for better situational awareness for all Emergency Medical and Public Health Care Facilities.*** Emergency Medical and Health Care Facilities lack a 'common operating picture' for situational awareness and connectivity during mass casualty and disaster events. This system requires

development of an overarching governance group, sustainable funding for the core backbone by the Federal Government, and local participation for customizing their own unique interface requirements.

5. Ensure that first responders, health care personnel, and patients have ubiquitous access to broadband services and applications by fostering a regulatory environment in which private sector companies build robust broadband networks and providing targeted funding

a. ***The Committee finds that ensuring every American has access to broadband throughout the country is an essential health care communications imperative.*** Home broadband access can unleash new health opportunities by enabling access to distant telemedicine applications, remote monitoring technologies, health information, and the ability of health care workers to work remotely in an emergency.

b. ***The Committee finds that ubiquitous broadband networks give first responders and health care professionals the ability to share information in a rapid, reliable, and secure manner, and, increasingly, in a mobile environment.*** The greater the access in the United States to broadband services, the more information and expertise can be shared. And the greater the availability of broadband services, the greater the opportunity for first responders and health care professional to access critical information in real-time. Mobile broadband services in particular present an opportunity extent broadband access to the scene of accidents, crimes, and disasters, helping to mitigate or prevent injury and death.

c. ***The Committee finds that, without an infusion of capital and the adoption of the same kinds of networking technologies that other enterprises have adopted, the health care sector will be ill-prepared for the next disaster and will miss out on the vast cost savings, and user benefits that the transition from analog to digital systems can deliver.*** As a primary provider of health care, the federal government itself is likely to be the single largest beneficiary, saving enormous amounts of money, by accelerating this transition to IT applications and IP networks. Thus the federal government should enhance the safety, quality, and efficiency of hospital-based emergency care by funding efforts to improve hospitals' broadband connectivity, improve communications interoperability with EMS systems, ensure dedicated funding for uncompensated hospital emergency care, and expand telemedical connection to rural/frontier health facilities and community paramedicine providers.

V. APPENDICES

A. List of Advisory Committee Members

B. Government Efforts Underway

C. Legislative Charge to the Committee

D. Related Reports and Publications

E. Public Comment

Appendix A: Advisory Committee Membership

Members of the Joint Advisory Committee

Jim Bugel
Assistant Vice President, Federal Regulatory
AT&T Services, Inc.
(Chairman, Joint Advisory Committee)

Michael J. Ackerman, Ph.D.
Assistant Director, High Performance Computing & Communications
National Library of Medicine, National Institute of Health

John F. Adams, Jr.
NCS Spectrum Manager/Senior Principal Systems Engineer
Raytheon Company

Curtis M. Bashford
Vice President, General Devices

Donna Bethea-Murphy
Vice President, Regulatory Engineering
Iridium Satellite, LLC

James A. Corry
Vice President, Government Solutions
Mobile Satellite Ventures, LP

Drew E. Dawson
Director, Office of Emergency Medical Services
National Highway Traffic Safety Administration
U.S. Department of Transportation

Steve J. Delahousey
National Vice President of Emergency Preparedness
Emergency Medical Services Corporation

Col. Terry J. Ebberts
Director, Office of Homeland Security & Public Safety
City of New Orleans, LA

Eric K. Griffin
Director, Office of Emergency Management
Lee County, North Carolina

Lisa Kaplowitz, MD, MSHA
Deputy Commissioner for Preparedness and Response
Virginia Department of Health

Richard J. Liekweg
Chief Executive Officer
University of California, San Diego, Medical Center

Jonathan D. Linkous
Executive Director
American Telemedicine Association
(Working Group Chairman, Public Health)

Kevin McGinnis
Program Advisor/Communications Technology Liaison
National Association of State EMS Officials
(Working Group Chairman, Emergency Health)

John F. Nagel
Director, IT & Internet Applications
American Messaging Services
American Association of Paging Carriers

Thomas S. Nesbitt, MD
Director, Center for Health and Technology
University of California, Davis, Health System

Virginia Pressler, MD
Executive Vice President, Strategic Business Development
Hawaii Pacific Health

Murad Raheem
Branch Chief, Electronics and Communications
Office of Assistant Secretary for Preparedness and Response
U.S. Department of Health and Human Services

R. Shawn Rogers
Director, Emergency Medical Services Director
Oklahoma State Department of Health

Mike Roskind
Acting Director, Office of Emergency Communications
Office of Cybersecurity & Communications
National Protection and Programs Directorate
U.S. Department of Homeland Security
(Working Group Chairman, Technology Integration)

Karen Sexton
Vice President & Chief Executive Officer for Hospitals and Clinics
University of Texas Medical Branch

Jim Traficant
Vice President of Healthcare Solutions
Harris Corporation

Carl C. VanCott
Communications Specialist
North Carolina Office of Emergency Medical Services

John S. Wilgis
Director, Emergency Management Services
Florida Hospital Association

Christopher K. Wuerker, MD
Medical Director, MedSTAR Transport
Washington Hospital Center

Appendix B: Government Efforts Underway

The Federal Government Has Already Made Great Strides:

While several government programs have made great strides in addressing key aspects of emergency communications for EMS and public health facilities, much of this work has been disconnected, fragmented, and often conflicting.

- **Creating a National Health Information Infrastructure that advances electronic health records.** On April 27, 2004, President Bush signed Executive Order 13335 and called for the widespread adoption of interoperable electronic health records (EHRs) within 10 years. It established a National Coordinator for Health Information Technology who in turn has developed a strategic 10-year plan[92] outlining steps to transform the delivery of health care by adopting EHRs and developing a National Health Information Infrastructure (NHII) to link such records nationwide.[93] EHR systems provide a doctor with real-time access to patient information, as well as a complete longitudinal record of care and can help provide capabilities if paper records get lost or are otherwise inaccessible in a disaster.

- **Deploying $1 billion in Public Safety Interoperability Communication Grants.** The Departments of Commerce and Homeland Security have allocated nearly $1 billion in grants to public safety agencies to deploy interoperable communications systems.[94] The awards will help state and local first responders improve public safety communications during a natural or man-made disaster.[95]

- **Creating a nationwide, interoperable broadband public safety communications network.** On July 31, 2007, the FCC (in its Second Report and Order revising the rules governing the 700 MHz band) re-designated ten megahertz of public safety spectrum for the purpose of establishing a nationwide, interoperable broadband public safety communications network. It also created a single nationwide license for

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[92] The National Health Information Network http://www.hhs.gov/healthit/onc/mission/

[93] See Presidential Executive Order at http://www.whitehouse.gov/news/releases/2004/04/20040427-4.html

[94] Section 3006 of the Deficit Reduction Act of 2005, Pub. L. No. 109-171, directed the Assistant Secretary for Communications and Information, in consultation with the Secretary of Homeland Security, to establish and administer a new $1 billion matching grant program to assist public safety agencies in the acquisition of, deployment of, or training for the use of interoperable communications systems that can utilize or enable utilization of reallocated public safety spectrum (700 MHz band) for radio communication.

[95] On September 30, 2007, the Public Safety Interoperable Communications (PSIC) Grant Program awarded $968,385,000 to fund interoperable communications projects from the 56 States and Territories. http://www.ntia.doc.gov/psic/

this spectrum – the Public Safety Broadband License.[96] This network will facilitate effective communications among first responders not just in emergencies, but as part of cooperative communications plans that will enable first responders from different disciplines, such as police, fire, and emergency medical services departments, and hospital emergency departments, and different jurisdictions to work together in emergency preparedness and response.

- **Connecting potentially 6,000 predominantly rural health care facilities with broadband.** As part of its Rural Health Care Pilot Program, the FCC has dedicated more than 400 million dollars over 3 years to the construction of broadband networks for state-wide and regional healthcare networks reaching over 6,000 facilities in 42 states and 3 U.S. territories, most connected to a national broadband network.[97] Connecting health care providers plays a critical role in efforts to respond to disasters, natural and man-made. Participating health care organizations should, where feasible, provide public health officials with access to their broadband telehealth networks in times of public health emergencies.

- **Advancing a Next Generation 9-1-1 System Capable of Surviving a Disaster.** There are a variety of governmental efforts underway to modernize the nation's 9-1-1 network in order to make it more survivable in a disaster and to link it more directly with EMS and public health facilities. For example, the Department of Transportation has underway a Next generation 9-1-1 Coordination Initiative[98] which is providing approximately $11 million over 2.5 years to develop a plan for an Internet capable 9-1-1 network. Congress has also acted to provide $43.5 million for assisting public safety answering points with complying with FCC Phase II wireless E9-1-1 requirements[99] and has separately acted to provide advanced borrowing authority to speed up deployment of the money. Further, Congress is working to advance legislation that prevent the kind of 9-1-1 communication disaster that occurred during Katrina where thirty-eight 9-1-1 centers failed during the storm.[100]

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[96] July 2007 Second Report and Order - 22 FCC Rcd 15289

[97] FCC 07-198; WC Docket No. 02-60

[98] http://www.its.dot.gov/ng9-1-1/

[99] The Deficit Reduction Act of 2005 (P.L. 109-171) included a provision that would require $43.5 million in proceeds from the spectrum auction of the 700 MHz band – set to occur before the end of 2008 – be allocated to fund ENHANCE 9-1-1 Act grants. See also: 47 C.F.R. § 20.18.

[100] S. 428 and HR 3403 --the 9-1-1 Modernization and Public Safety Act of 2007 – both of which have passed by their respective Commerce committees, would amend the National Telecommunications and Information Administration Organization Act to require grants for migration to an IP-enabled emergency network. They

- **Promoting EMS and public safety communication interoperability.** The Department of Homeland Security (DHS) established the Office for Interoperability and Compatibility (OIC) and SAFECOM[101] in 2004 to strengthen and integrate interoperability and compatibility efforts in order to improve local, tribal, state, and Federal emergency preparedness and response. SAFECOM developed a Statement of Requirements for interoperable voice, data, video and multimedia communications which, for the first time, defines what it will take to achieve full interoperability and provides industry requirements against which to map their product capabilities.

- **Enabling Wireless Emergency Alerts.** Pursuant to the Warning, Alert and Response Network ("WARN") Act, the FCC recently commenced a rulemaking proceeding to facilitate the voluntary transmission of emergency alerts by commercial mobile service providers to their subscribers.[102] The Commission sought comment on the recommendations made by the Commercial Mobile Service Alert Advisory Committee for the delivery of wireless emergency alerts Such voluntary warnings could be especially helpful in mass casualty events.

- **Adopting Electronic Prescription standards.** The 2003 Medicare Modernization Act instructed the HHS Secretary to adopt electronic prescription standards and establish a Commission for Systemic Interoperability.

- **Improving Telehealth for Emergency Response.** In the closing days of the 109th Congress, the Senate and House passed S. 3678, the Pandemic and All-Hazards Preparedness Act which includes authorization for several telemedicine related initiatives. For example, language in the bill includes the establishment of pilot programs for multi-state networks of telehealth programs and charged HHS with exploring "Telehealth Enhancements for Emergency Response", including interconnecting on regional levels as well as interconnecting with regional health information networks, reducing legal barriers to multi-state networks, and integrating telemedicine into the National Disaster Medical System.[103]

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also require the E-9-1-1 Implementation Coordination Office to develop a national plan for migrating to a national IP-enabled emergency network.

[101] http://www.safecomprogram.gov

[102] The Commercial Mobile Alert System, Notice of Proposed Rulemaking, PS Docket No. 07-287 (released Dec. 14, 2007). The EDOCS link is: http://hraunfoss.fcc.gov/edocs_public/Query.do?numberFld=&numberFld2=&docket=07-287&dateFld=&docTitleDesc=.

[103] See bill text at: http://www.govtrack.us/congress/billtext.xpd?bill=s109-3678

- **Creating a national real-time hospital-bed tracking system to address a surge of patients during a mass casualty event.** The Department of Health and Human Services (HHS) is working to advance the National Hospital Available Beds for Emergencies and Disasters (HAvBED) System to create a national real-time hospital-bed tracking system to address a surge of patients during a mass casualty event.[104] Such a system aims to improve communications among hospitals with open beds during disasters.

- **Clinical Decision Support (CDS).** Clinical decision support systems can provide doctors with state-of-the-art medical knowledge at the point of care as well as real-time diagnostic and treatment recommendations. CDS systems help improve efficiency, for example, by reducing redundant lab tests. The Office of the National Coordinator of Health Information Technology (ONCHIT) within HHS has taken steps to advance CDS systems.[105]

- **Computerized Physician Order Entry (CPOE).** CPOE systems allow physicians and other providers to enter orders into a computer system – minimizing handwriting and other communication errors and potentially helping to reduce errors in drug prescribing and dosing.

- **Encouraging a Plurality of Communication Systems and business continuity planning among health care providers.** In its Katrina order, the FCC directed its Public Safety and Homeland Security Bureau to continue to "educate and encourage the ability of health care providers to employ a plurality of communications systems (e.g., land mobile relay systems, satellite communications, and/or high frequency communications) on premises, outside of their facility, and facility-to-facility.[106]" The FCC also directed the bureau to "work with the Nation's health care" … "communities to include, in their business continuity planning, robust emergency communication plans that ensure that these entities will be able to function during emergencies such as an influenza pandemic. Such emergencies could result in sudden and significant shortages of personnel, changes in communications traffic, possible disruptions to communications networks (i.e., due to increased telecommuting by the nation's workforce and society in general during an influenza pandemic), and lack of manpower to immediately repair affected communications

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[104] http://www.ahrq.gov/prep/havbed/

[105] http://www.amia.org/inside/initiatives/cds/cdswhitepaperforhhs-final2005-03-08.pdf

[106] Paragraph 9, Katrina Independent Panel report, Federal Register / Vol. 72, No. 132 / Wednesday, published July 11, 2007

networks." On November 11, 2007, the FCC and HHS hosted a Health Care Summit on Emergency Communications: Preparedness, Response and Recovery.

Appendix C: Legislative Charge:

Legislative Charge:

Section 2201(c) of the Implementing Recommendations of the 9/11 Commission Act of 2007

(c) JOINT ADVISORY COMMITTEE ON COMMUNICATIONS CAPABILITIES OF EMERGENCY MEDICAL AND PUBLIC HEALTH CARE FACILITIES.

(1) **ESTABLISHMENT**—The Assistant Secretary of Commerce for Communications and Information and the Chairman of the Federal Communications Commission, in consultation with the Secretary of Homeland Security and the Secretary of Health and Human Services, shall establish a joint advisory committee to examine the communications capabilities and needs of emergency medical and public health care facilities. The joint advisory committee shall be composed of individuals with expertise in communications technologies and emergency medical and public health care, including representatives of Federal, State and local governments, industry and non-profit health organizations, and academia and educational institutions.

(2) **DUTIES**—The joint advisory committee shall:

(A) assess specific communications capabilities and needs of emergency medical and public health care facilities, including the improvement of basic voice, data, and broadband capabilities;

(B) assess options to accommodate growth of basic and emerging communications services used by emergency medical and public health care facilities;

(C) assess options to improve integration of communications systems used by emergency medical and public health care facilities with existing or future emergency communications networks; and

(D) report its findings to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Energy and Commerce, within 6 months after the date of enactment of this Act.

Appendix D: Related Reports and Publications

Related Reports and Publications

HIMSS COMCARE Emergency Health IT Project Plan (pdf)

Telecommunications and Public Health comments Submitted by Tom Nesbitt (doc)

Findings From North Carolina Needs Assessment and Gap Analysis in Support of The Joint Advisory Committee (pdf)
(November 19, 2007)

Developing Partnerships with Community Health Centers for Emergency Preparedness Planning (pdf)
Association of State and Territorial Health Officials (January 2007)

Regional Approaches to Hospital Preparedness (pdf)
Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science (2007)

Best Practice - State and Local Government Continuity of Operations Planning: Communications (pdf)
Department of Homeland Security, Lessons Learned Information Sharing

HHS Seeks FCC Help Improving Emergency Medical Communications (pdf)
COMMUNICATIONS DAILY (2 November 2007)

Historical Foundation for the Development of a National Health Information Highway for Emergency Response (doc)

NSTAC Report to the President on Emergency Communications and Interoperability: Executive Summary (pdf)
National Security Telecommunications Advisory Committee

Phone Lines and Life Lines:How New York Reestablished Contact on September 11, 2001 (pdf)
The Association of State and Territorial Health Officials

The Telemedicine Response to Homeland Safety and Security: Developing a National Network for Rapid and Effective Response For Emergency Medical Care (doc)
American Telemedicine Association

Overview of Communication Capabilities for The Healthcare Industry (pdf)
USA Mobility Wireless, Inc.

Appendix E: Public Comment

The committee would like to acknowledge the helpful and informative public comments it received, and provide links to this information:

USA Mobility Wireless, Inc

http://www.fcc.gov/pshs/docs/advisory/jac/pdf/usa-mobility-wireless.pdf

Wireless Messaging for Homeland Security

http://www.fcc.gov/pshs/docs/advisory/jac/pdf/wireless-messaging.pdf

The ReFLEX™ Advantage In Homeland Security

http://www.fcc.gov/pshs/docs/advisory/jac/pdf/reflex-homeland.pdf

Improved Alerting Solution for Public Safety

http://www.fcc.gov/pshs/docs/advisory/jac/pdf/improved-alert.pdf

PCIA / The Wireless Infrastructure Association

http://www.fcc.gov/pshs/docs/advisory/jac/pdf/pcia-jac.pdf

Syniverse Technologies

http://www.fcc.gov/pshs/docs/advisory/jac/pdf/syniverse-roaming.pdf

American Hospital Association

http://www.fcc.gov/pshs/docs/advisory/jac/pdf/comment-aha.pdf

Coco Communications

http://www.fcc.gov/pshs/docs/advisory/jac/pdf/comment-coco.pdf

SouthernLinc Wireless

http://www.fcc.gov/pshs/docs/advisory/jac/pdf/comment-southernlinc.pdf

Appendix F: Suggested Statutory Changes to the Stafford Act

Emergency medical services must also be able to survive a disaster's financial impact. Unfortunately, there have been cases where ambulance services have responded to local and regional disasters, only to find out after the fact that their costs cannot be reimbursed in the same way that other emergency responders or even garbage services can. The Stafford Act authorizes the payment of federal funds from FEMA to state and local governments to pay for the extraordinary costs, including interoperable communications, associated with a federally declared disaster. However, due to statutory ambiguities, reimbursement for ambulance providers and health care facilities have too often been reduced, delayed or denied, for legitimate and requested services provided by ambulance firms.

The Stafford Act provides examples of the types of "emergency work" that are eligible to be reimbursed through FEMA administered disaster relief funds. It should include "ambulance services" in the array of services described in the Act. While "debris removal" and "rescue services" are listed, "ambulance services" and "services provided by ambulance personnel" are not listed as examples. Rapid and early ambulance response is critical. So is eliminating ambiguities around their ability to financially survive a disaster when their services have been requested. The Act should clarify that all types of ambulance providers who are part of the local or state government's emergency response system may receive funding from FEMA or other disaster relief funds. The following legislative language can implement this suggested change.

The Robert T. Stafford Disaster and Emergency Assistance Act (42 U.S.C. 5150) Section 307 should be amended as follows:

* Strike out "reconstruction," and insert in lieu thereof

"reconstruction, ambulance services,"

The Robert T. Stafford Disaster and Emergency Assistance Act (42 U.S.C.5121 et seq.) should be amended to provide as follows:

* "No language in this chapter shall be construed to preclude the disbursement of any funds made available under this chapter as reasonable compensation to a private organization, firm, or individual for the provision of ambulance services pursuant to a contract or other agreement with a federal agency or state or local government unit, or in response to an emergency request for ambulance services in the event of a federally declared disaster in the absence of a contract or other agreement."