



# Cellular

NYS EMERGENCY CALL LOCATOR PARTNERSHIP

*enhanced 911 for cellular phones*



THE NEW YORK STATE

## Wireless Enhanced 911 Project:

## Lessons Learned

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# Wireless Enhanced 911 Project:

## Lessons Learned

### T A B L E O F C O N T E N T S

#### Executive Summary

Background	.1
Barriers	.2
Solutions	.2
Lessons Learned	.2

#### I. Introduction

Purpose of Report	.3
Need for Wireless Enhanced 911(WE-911)	.3
FCC Mandates	.4
Automatic Crash Notification Initiatives	.5
New York State Emergency Call Locator Partnership Project	.5

#### II. History Of WE-911 Implementation In New York State

Barriers	.6
Medical Community Issues	.7
Financial Barriers	.7
Political Barriers	.8
Technological Barriers	.9

#### III. Impact of NYS Emergency Call Locator Partnership Project

Strategies and Tactics	.11
Results	.13

#### IV. Lessons Learned

Technology is not the major barrier to deployment of WE-911	.16
The primary requirement is getting stakeholders together and agreeing on an implementation strategy	.16
Step 1: Identify the key stakeholders	.16
Step 2: Get the stakeholders engaged	.16
Step 3: Keep the stakeholders engaged	.17
It is helpful to create a variety of vehicles and layers for stakeholder involvement	.17
Stakeholder conferences are a useful means of engaging a wide representation of relevant stakeholders	.18
It is important to be very clear about the role and limits of an Advisory Committee	.19
Having a credible third party that can provide strong, committed leadership is critical	.19
The medical community is ideally poised to play the credible third party leadership role	.19
It is important to be flexible and adapt to changing situations	.20
Public education can be tricky	.21
Strong media relations are necessary	.22
Legislative affairs require the support of an expert	.22
Stakeholder needs must be anticipated	.22
County PSAPs require financial support to enable WE-911	.23
Technological issues won't hinder implementation but may slow progress	.23
Information-sharing will accelerate county readiness	.24
Routine input from outside observers will maintain focus	.24

Summary	.25
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# Executive Summary

## Background

1

Enhanced 911 (E-911) service is the backbone of the emergency communications system in this country. When citizens are in need of an emergency response due to injury, illness, fire or crime, they can dial 911 from their wire-line telephone and know that the emergency dispatcher taking their call will automatically receive their name, address and phone number. This enhanced 911 system has been shown to reduce response times of police, fire and EMS services in times of crisis even if the caller is unable to communicate.

The majority of the United States today is covered by 911 service. Emergency response agencies have come to rely on E-911 service to help them save lives. Unfortunately, the rapid proliferation of wireless phones has resulted in a steady erosion of the E-911 system. Wireless phones do not currently provide emergency dispatchers with automated caller location or identification information. This has led to dramatic and detrimental outcomes for some users who were unable to describe where they were or were physically unable to communicate. While most of wireless phone subscribers purchased their phones for safety reasons, few realize that E-911 service is not available to them.<sup>1</sup>

As the number of wireless phone subscribers increase, so does the percentage of 911 calls received from wireless phones.<sup>2</sup> Current trends show that by the year 2004, the majority of 911 calls will come from wireless phones.<sup>2</sup> If systematic improvements aren't made soon, the life-saving capabilities of our emergency communications system will be severely limited.

In September 1999, the Department of Emergency Medicine at SUNY Upstate Medical University in Syracuse, New York, was awarded a three-year grant from the US Department of Transportation's National Highway Traffic Safety Administration (NHTSA) and Intelligent Transportation Systems (ITS) Joint program office, to facilitate the development of a wireless enhanced 911 (WE-911) implementation guide for New York State (NYS). Further, NHTSA hoped to determine whether the application of a medical leadership approach would help to resolve barriers to implementation within New York.

Early in the project, key stakeholders were gathered to define barriers to implementation, identify key resources and develop strategies that use resources to overcome implementation barriers. At their first meeting, this group of stakeholders formed the New York State Emergency Call Locator Partnership, a coalition of interested stakeholders dedicated to resolving key issues in New York. Driven by the altruistic dictum, "consider first the well being of the patient," the partnership rallies to a common theme, "We all agree to do what is best for current or potential victims of injury, illness, fire or crime"

## Barriers

Key barriers to implementation were identified including wireless 911 call routing, funding for necessary systems upgrades and closest car concept. Secondary issues included lack of universal Public Safety Answering Point (PSAP) readiness, confidentiality, technological compatibility, political issues and legislative issues. The three key issues—call routing, funding and closest car concept—were so closely intertwined that stakeholder groups had difficulty resolving them individually. Pre-existing tensions further distanced the stakeholder groups and delayed progress toward workable resolutions.

Funding for technological upgrades remains the most pressing barrier in New York. Legislation is required to change the flow of wireless surcharge funds so that county PSAPs may make use of it.

2

## Solutions

Key to resolving existing tensions was the introduction of the medical leadership model and the objective viewpoint that it provided. The focus on the patient as the most important stakeholder worked to dedicate collective energies toward the greater good. Within a few months, stakeholders had negotiated agreements that would resolve closest car and routing issues.

The majority of counties are moving forward with hardware and software upgrades despite the lack of financial support. Most of these have declared readiness for wireless 911 data. Project staff have identified two alternative funding sources and have shared these with the county PSAP administrators in an effort to expedite PSAP readiness across the state. Additional grant money was secured to facilitate implementation for one county and to create a model that could be emulated by the others.

## Lessons Learned

The task of identifying barriers and resolutions toward a working WE-911 system has provided several important lessons. The most important of these involve the stakeholders: gathering all stakeholders to develop an implementation strategy is a primary requirement; persistent focus on stakeholder needs and motivations is necessary to keep them engaged in the process; even minor changes in protocols will have a significant effect on the stakeholders.

Success, if defined as universal stakeholder sign-off on a statewide implementation plan, is not dependent on resolving technological barriers, but rather, on resolving institutional barriers. In this case the institutional barriers were identified by the introduction of an objective third party. The medical model of leadership using the patient as the primary concern was an effective means of breaking down institutional barriers.

Several other lessons learned identify the need to develop and clearly define the role of an advisory committee, carefully time public education, establish strong media relations, remain flexible enough to adapt to changing situations, seek routine input from outside observers, and secure the support of an expert in legislative affairs.

The full document contains detailed discussions of the topics addressed in this summary. The reader is encouraged to read the document to gain a full understanding of the project.

# I. Introduction

## Purpose of Report

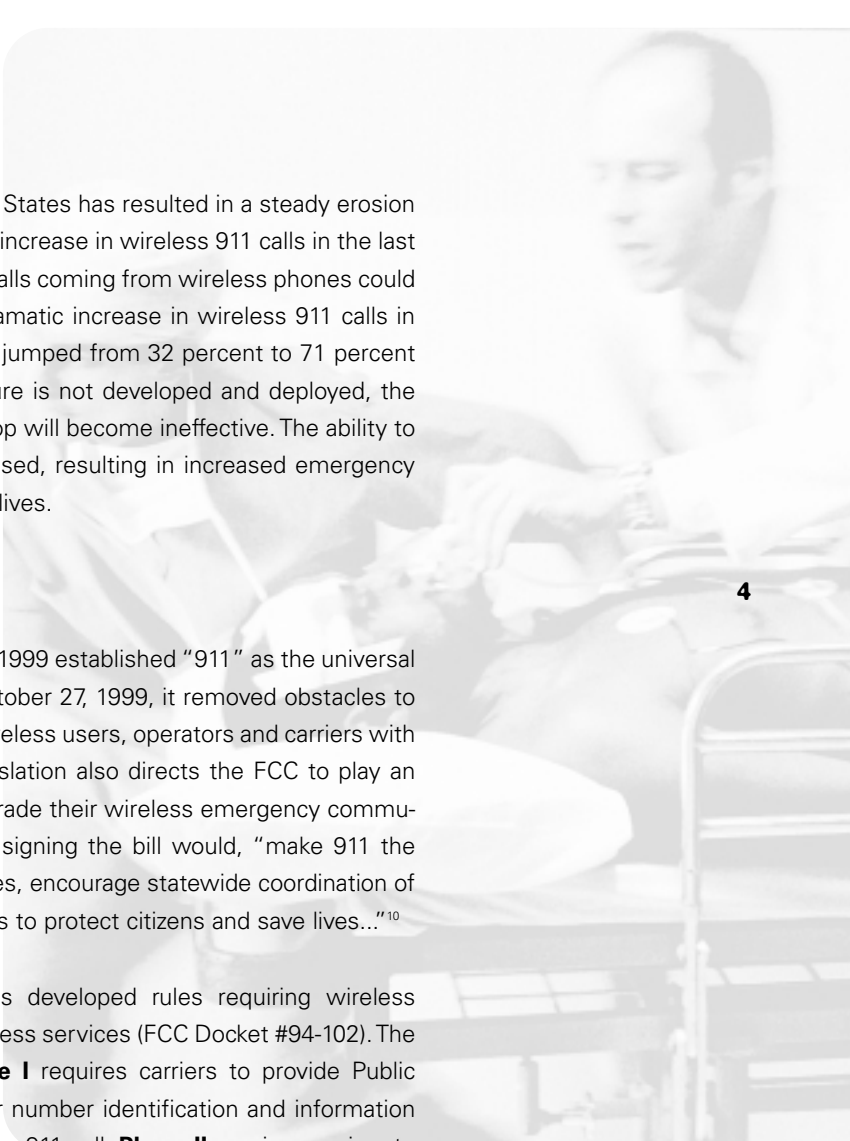
The purpose of this document is to report on the New York State Emergency Call Locator Partnership Project—what it is, why it was established, what the goals were for the project, what has been accomplished and what has been learned. By describing our experiences—both what has worked well and what we would do differently—we hope to make the process smoother for other state and local organizations in developing and implementing (WE-911) systems.

## Need for Wireless Enhanced 911 (WE-911)

The emergency communications system in the United States saves lives every day. In most areas of the United States, people have access to 911 service from their landline phones. Ninety-six percent of US jurisdictions and 97% of the population are covered by 911 service.<sup>2,3,4</sup> Enhanced 911 features automatically provide emergency call takers with the location of callers and their callback numbers. This lets dispatchers quickly begin an emergency response, even if callers are unable to communicate where they are or what their emergencies are.<sup>6</sup>

When 911 calls are made from wireless phones, the call taker does not automatically receive the location of the caller or their callback number.<sup>5,6</sup> While most subscribers purchase wireless phones primarily for safety reasons, few realize that enhanced 911 service is not available to them.<sup>1</sup> Twenty-five percent of 911 calls received from wireless phones are from people who are not able to describe their locations to emergency dispatchers. That equates to 2,875,000 of the total 115,000,000 wireless 911 calls made in the year 2000.<sup>5,7</sup>

**These calls require extensive time, effort, and personnel to identify the callers' locations, often over-taxing the resources of the emergency dispatch center.** They create delays in response time that can mean the difference between life and death. National studies have shown that receiving definitive (surgical) care within the first hour after a serious traumatic injury (e.g., car crash) is critical to the survival rate of the victim. The Golden Hour concept, first described by Dr. R. Adams Cowley, begins with the Platinum Ten Minutes wherein, for most EMS systems, EMS crews must arrive on the scene, treat critical life threats and begin transport of the victim to an appropriately staffed medical facility.<sup>7</sup> Studies have also shown that in the case of people with sudden cardiac arrest—a major cause of death in the United States—every minute without defibrillation decreases the odds of survival by 10 percent.<sup>5</sup> These examples clearly illustrate that any delay in the dispatch of emergency services (police, fire, EMS) has the potential to be life threatening.



The rapid proliferation of wireless phones in the United States has resulted in a steady erosion of the enhanced 911 system. There has been a ten-fold increase in wireless 911 calls in the last ten years. In the next five years the percentage of 911 calls coming from wireless phones could eclipse 70%.<sup>16</sup> Tarrant County, Texas experienced a dramatic increase in wireless 911 calls in December of 2000 when the wireless 911 call volume jumped from 32 percent to 71 percent in one month.<sup>9</sup> If a wireless enhanced 911 infrastructure is not developed and deployed, the enhanced 911 system that has taken 30 years to develop will become ineffective. The ability to locate people automatically will be severely compromised, resulting in increased emergency response times and the potential for increased loss of lives.

## FCC Mandates

The Wireless Communications and Public Safety Act of 1999 established “911” as the universal number for all emergency calls. Signed into law on October 27, 1999, it removed obstacles to the use of wireless location information by providing wireless users, operators and carriers with liability parity to relevant wire-line state laws. The legislation also directs the FCC to play an active role in supporting states to develop plans to upgrade their wireless emergency communications systems.<sup>10</sup> President Bill Clinton stated that signing the bill would, “make 911 the universal number for wireless as well as wire-line phones, encourage statewide coordination of the efforts of public safety and law enforcement officials to protect citizens and save lives...”<sup>10</sup>

The Federal Communications Commission (FCC) has developed rules requiring wireless carriers and manufacturers to implement E-911 for wireless services (FCC Docket #94-102). The FCC mandates implementation in two phases. **Phase I** requires carriers to provide Public Safety Answering Points (PSAPs) with automatic caller number identification and information on the location of the cell site or base station receiving a 911 call. **Phase II** requires carriers to provide more precise Automatic Location Identification (ALI), either through handset-based or network-based technologies.<sup>5,11,12,13,14</sup>

Wireless carriers, required to comply with FCC Phase I and Phase II Mandates, have cited a number of barriers to implementation. These include costly implementation and lack of PSAP readiness to receive the data in a useable format. Initially, several of the Wireless Carriers filed for waivers from the October 1st, 2001 implementation deadline. The FCC has stated that it will consider requests for extensions on an individual basis. FCC has imposed penalties, including fines, on companies that failed to demonstrate significant efforts to comply with the rules or to propose a reasonable alternative schedule.<sup>5,11,12,13,14</sup>

After the World Trade Center attacks of September 11, 2001, makeshift tower sites were established around the disaster site. These towers were used to triangulate cell phone signals from within the rubble. This tactic was widely successful and showed the utility of terrestrial location technology.

In order to make a valid request for E-911 service from the wireless carriers, a PSAP must be capable of receiving and utilizing the information provided by the carrier. Many PSAPs do not have the technology to begin handling location data nor do they have the ability to pay for new software and equipment upgrades. Similarly, many PSAPs are in the process of completing or have completed technologic upgrades necessary for phase I and phase II compliance. It is the responsibility of the carriers to provide the data to the PSAPs in a useable format. Preparing for

this responsibility is a daunting task considering the nation's 5,500 primary PSAPs outnumber the carriers by a wide margin. Systems compatibility issues are paramount to the functionality of an enhanced wireless 911 system that will serve all the PSAPs in the nation.

### **Automatic Crash Notification Initiatives**

The automotive and communications industries are moving ahead in developing automatic crash notification (ACN) systems that cannot only pinpoint the location of a crash, but also can call for help and relay valuable information about the crash occurrence. By the start of 2001, one million vehicles were equipped with ACN systems, such as GM's OnStar, or Mercedes-Benz's Telematics system, and it is estimated that, by 2005, there will be five million vehicles equipped with ACN systems. These "smart" cars have the potential to give emergency dispatchers much better information on the probability and severity of injuries. These in-vehicle systems will be able to send information on what speed the car was traveling, whether or not there was a rollover, whether seatbelts were being worn, and whether there is a fire in the car. Passive restraint systems in automobiles often mask external signs of injury. Therefore, the extra information provided by ACN systems may be valuable in determining which emergency response resources are most appropriately deployed for individual crash scenes.

Many ACN calls, like GM's OnStar, are currently routed to the manufacturer's call center which, in turn must call the local 911 center. As discussed earlier, the extra time this process takes could be detrimental to the health of the accident victims. To maximize emergency response, ACN and WE-911 initiatives need to be linked together. Industry efforts need to be coordinated with government and medical community efforts in order to realize the technology's potential. A functional WE-911 infrastructure is necessary to facilitate the convergence of ACN and WE-911 initiatives.

### **New York State Emergency Call Locator Partnership Project**

In September 1999, the Department of Emergency Medicine at SUNY Upstate Medical University in Syracuse, New York, was awarded a three-year grant from the US Department of Transportation's National Highway Traffic Safety Administration (NHTSA) and Intelligent Transportation Systems (ITS) Joint Program Office to facilitate the development of a WE-911 implementation guide for New York State. The purpose of the grant is to provide an implementation guide for New York and a "lessons learned guide" that is transferable to other states.

New York State is an ideal testing ground for identifying the institutional barriers to implementation of WE-911 and exploring alternative strategies for addressing these barriers. New York is a large state with a mix of urban, rural and suburban communities. Its counties are arrayed across a broad spectrum of readiness for WE-911. While some counties are preparing to declare readiness for WE-911, other counties have yet to institute wire-line 911. New York State also faces a wide variety of institutional, financial, and political barriers to WE-911 implementation that are representative of other states and counties in the nation.

By facilitating the development and implementation of WE-911 in New York State and documenting its efforts through reports such as this, the SUNY Upstate Medical University's Emergency Call Locator Partnership Project hopes to not only make WE-911 a reality for the citizens of New York, but also to shorten the learning curve and expedite the implementation of WE-911 throughout the country.





## II. History Of WE-911 Implementation in New York State

6

**New York State faces many institutional, financial, political and technological barriers to implementing WE-911.** Major barriers include divided responsibility for E-911, years of friction within and among stakeholder groups, insufficient funds for equipment upgrades required for WE-911, tension between stakeholder groups and state leadership over funding issues, and lack of accepting responsibility for implementation.

Implementation barriers identified to date have not been technological but rather institutional.

### Barriers

The vast majority of New York State is serviced by a variety of wireless carriers. Some rural portions of the state remain without wireless phone coverage. While Long Island and the counties of New York City use local dispatch centers to answer 911 calls, wireless 911 calls from the majority of New York State's land mass are routed to the New York State Police (NYSP). NYSP dispatch personnel screen the wireless 911 calls and route (transfer) them to the PSAP responsible for dispatching services to the area from which the call originated. This can result in critical time delays that could be detrimental to patient care.

Wireless 911 surcharge monies are assessed on every cell phone bill (\$.70 per bill per month) in New York. The surcharge monies are transferred to an account that does not provide funding to individual county PSAPs which are almost universally managed by County Sheriff departments. The New York State Government has chosen to dedicate this money to projects within the state other than WE-911 deployment.

The County Sheriffs and the New York State Sheriff's Association, citing time delays created by the routing plan, have argued that wireless 911 calls should be routed directly to the PSAP in the county of call origin. They further argue that the wireless surcharge monies should be used to support upgrades necessary for WE-911 service in those PSAPs. Further complicating this matter was the assertion of the NYS Wireless Carriers Association that the individual wireless carriers would require a percentage of the wireless surcharge monies to fund technologic upgrades needed for compliance with FCC mandates.

The wireless carriers are fearful of the routing calls to counties that have multiple PSAPs. Incorrect call routing in this circumstance would result in the same delays that the Sheriff's Association is trying to avoid. The wireless carriers have stated that they would prefer to route calls to counties wherein a single PSAP was designated in each county to receive WE-911 calls.

The NYSP voiced concern that some local PSAPs do not abide by a “closest car concept” or “mutual aid” protocol in the dispatching of emergency calls. NYSP are concerned that changes in call routing practices toward county based PSAPs could lead to the reduction of funding and staffing for the NYSP. From the onset of the project, the NYSP maintained that it would be willing to allow for routing of WE-911 calls to county PSAPs if written “closest car/mutual aid” protocols could be agreed upon with the NYS Sheriff’s Association. This would ensure adequate call volume for both agencies and the smaller municipal police agencies within the counties.

These three identified issues, call routing, closest car and NYS wireless surcharge money allocation, represent the heart of all disagreements between and amongst the representative stakeholder groups.

7

### **Medical Community Issues**

Physicians, nurses, EMS providers and others in the medical community can play an important leadership role in the development of a WE-911 implementation plan. It is a challenge, however, to get the medical community to go beyond the perception of “just another crash patient.” Emergency medical physicians and state EMS directors face many demands on their time. Many of them are unaware of the fact that the 911 system is being compromised by the increase in wireless 911 calls. There is a need to educate the medical community not only on the issues, but also on how it can move from a reactive (retrospective) to a proactive role and have a positive impact on WE-911 implementation.

### **Financial Barriers**

As mentioned earlier, a major concern in implementing WE-911 is the availability of funding for the necessary technology upgrades for local/county/state dispatch centers. Many PSAPs do not have sufficient funds to upgrade their equipment to take advantage of the wireless automatic number and locator features now being developed.

As indicated above, wireless phone subscribers pay a \$.70/month surcharge in New York State. This money has been used to pay for needs other than technology upgrades that would allow implementation of WE-911. Several of the stakeholder groups have argued that these funds should be applied to equipment upgrades at the county level. The counties would like access to these funds to upgrade as they prepare to declare readiness for Phase I and Phase II.

The FY 2002-2003 NYS budget addresses this issue with inclusion of the following WE-911 funding provisions:

\$20 million would be set aside from the existing \$.70 cellular surcharge to create a local assistance program. \$10 million of the available funding would be recurring and \$10 million would be “one-time” funding. Localities would receive a funding allocation based on a per capita distribution and would be able to receive grants or participate in a bonding program administered by the Dormitory Authority to reimburse eligible 911 expenses.

- Fifteen percent of the funding in the first year would be available to finance prior year costs for counties currently providing wireless service including: NYC, Nassau, Suffolk, Onondaga, Erie and Monroe.

- Funding would be available to reimburse "eligible wireless 911 service costs" which include installation and maintenance of equipment, hardware and software designed to meet the FCC enhanced wireless requirements which involve the ability to identify the location and identity of wireless callers.
- The program is designed to begin operation immediately. Interim funding eligibility decisions would be made by a three-person board with appointments by the Governor, Senate and Assembly. Once standards are promulgated, funding decisions will be made by the Department of State and the entire 13-person board will function as an appeals board.

### *Eligibility*

- Counties and municipalities currently operating wireless public safety answering points would be eligible to receive funding. Counties which do not currently provide wireless service and subsequently decide to participate would have to file a service plan and comply with certain minimum standards prior to receiving funding.

As of this writing it is unclear if the items listed above in the FY 2002-2003 budget will actually be funded.

The wireless carriers also want a share of the surcharge funds to pay for their equipment upgrades. In a suit brought by the wireless carriers in King County, Washington, the FCC ruled that wireless carriers are not entitled to cost recovery. However, that does not preclude the state from voluntarily providing this support. The carriers feel that state assistance is warranted to offset their implementation costs.

## **Political Barriers**

A coalition of stakeholders in New York State—including wireless carriers, law enforcement agencies, fire services, emergency medical services, and 911 coordinators—worked together to draft legislation to resolve the problems arising from the handling of wireless 911 calls. The bill (A.11379), which was passed in 2000 but vetoed by the Governor, authorized wireless 911 calls to be rerouted from state police dispatch centers to a county PSAP once voluntary accreditation was achieved through a "New York State 911 Commission" created by the legislation. The certification would declare that a county met certain minimum staffing and training standards established in the bill.

Governor Pataki vetoed the legislation citing the following:

1. The bill did not require certifying counties to implement a multi-agency "closest available car" protocol to ensure that the closest available emergency unit be dispatched to the scene, regardless of government affiliation;
2. The minimum staffing requirements set forth in the legislation were inadequate;
3. The bill's standards for training of dispatchers were vague, and

4. The New York State Board established by the legislation lacked any specific authority other than promulgation of advisory guidelines for wireless 911 emergency response. The board's membership also omitted certain stakeholders (e.g., the State Department of Transportation and the New York State Thruway Authority. )

Assembly Bill 11379 did not address the issue of "closest available car" protocol nor the Governor's concerns about the staffing and training requirements and the proposed 911 board's authority and membership. In vetoing the bill, the Governor directed the state Division of Criminal Justice Services (DCJS) to conduct an evaluation of the processing of wireless 911 calls in NYS and make recommendations on next steps, including the advisability of a legislative solution.

9

After a series of meetings with all interested stakeholders, the DCJS recommended legislation to create a statewide E911 Commission. The Commission would have responsibility for making routing determinations for cellular emergency calls, requiring adherence to mutual aid protocols (closest car concept), developing appropriate standards for education and training of 911 call takers and dispatchers and developing accreditation models for staffing and operation of PSAPs. The Commission would also promote the exchange of information among the PSAP community.

Governor Pataki has submitted legislation incorporating the DCJS recommendations. Other legislators have also submitted bills on the issue. While Governor Pataki's bill does not address any funding streams, the FY 2002-2003 NYS Budget does. There are also provisions in the budget bill that address wireless call routing and the formation of a wireless-911 commission. Passage of either the Budget Bill or the Governor's Bill would resolve the key implementation barriers in New York.

The battle over the routing of WE-911 calls is being fought in the courts as well as the legislature. New York's Monroe County sued the state police and the wireless carrier, Nextel, to get Nextel to route its cellular calls to the county PSAP instead of the state police. Before the case went to trial, Nextel agreed to route calls directly to the Monroe County PSAP. Verizon Wireless sued the state and Otsego County to determine the legality of a county law requiring all wireless carriers in that area to direct cellular 911 calls to the Otsego County PSAP. In that case, the New York State Supreme Court ruled in summary judgement for Otsego County and directed Verizon and the NYSP to route wireless 911 calls originating in Otsego County to the County PSAP<sup>14</sup>

Wireless carriers are concerned that they will be required to route wireless calls to an unlimited number of PSAPs across the state. Some counties in New York for example, have multiple PSAPs for wire-line 911 calls. The carriers would like to limit the routing of wireless 911 calls to one PSAP per county thus simplifying the routing process, reducing the likelihood of error and reducing their costs. The carriers also feel that it is very inefficient and costly to determine routing by piecemeal county legislation or litigation.

### **Technological Barriers**

Individual counties in NYS lie along a broad spectrum of readiness for WE-911. Some counties are preparing to declare readiness for wireless 911 in the next few months. Some counties

have declared readiness and are negotiating with the wireless carriers for Phase I and Phase II service. Two counties have yet to establish wire-line 911 but are working to implement it within two years. One rural county with a low population doesn't have the projected financial support of wire-line 911 surcharge monies to implement wire-line 911 in the foreseeable future.

The position of the wireless carriers is that it would be easier and more cost effective to implement WE-911 requirements universally once all counties within the state are capable of receiving and utilizing the information. This would delay implementation significantly. It also seems to contradict the FCC mandates on Phase I and Phase II implementation.

There is much uncertainty when FCC compliance will occur. As mentioned earlier, the FCC could impose penalties, including fines, on companies that fail to demonstrate significant efforts to comply with the rules or to propose a reasonable alternative schedule. In some cases of non-compliance, fines and penalties have already been imposed by the FCC.



### III. The Impact Of New York State Emergency Call Locator Partnership Project


The NHTSA/ITS/SUNY Upstate Medical University WE-911 Project was established to address the barriers to WE-911 implementation that are identified above and, in doing so, create a model for other states to follow. This section outlines the strategies and activities we have utilized to address the barriers, the results we have achieved to date, and the goals and activities we have planned to address the challenges that remain.

#### Strategies and Tactics

As indicated above, there are many stakeholders with varying, and often conflicting, viewpoints about WE-911 implementation. No single party has total responsibility or ownership for implementation. There is also no formal mechanism to facilitate information sharing and discussion about the issues. As a result, our strategy has been to fill this void and play a leadership role in identifying key stakeholders, bringing them together, and helping them work through the barriers to WE-911 implementation. Stakeholders include law enforcement and fire protection agencies, emergency medical personnel, physicians, legislative staffers, transportation engineers, wireless communication industry representatives and others.

**The New York State Emergency Call Locator Partnership established forums for these stakeholders to come together and discuss common interests.** Biannual statewide stakeholder conferences, which we have organized and run have helped to educate and obtain input and support from a broad constituency. We have made sure that people are provided with a non-threatening, objective environment in which they can raise issues and discuss potential solutions. Current details about best practice models and new innovations have been provided at every opportunity. We have provided an opportunity for networking among stakeholders to allow them to better understand the various perspectives on an issue. At the same time, we have helped keep focus on the common interest that unites all the stakeholder groups—that “people are dying because we don’t know where they are.”

The basis of the Medical Community Leadership Approach is the assertion that physicians are excellent public policy advocates. In these days of capitation, reduced medical insurance reimbursement, ED overcrowding and EMS diversion, nursing shortages, and increased patient load and acuity, it is difficult to gain strong commitments of time and energy from physicians.



Therefore, obtaining strong support from physicians and physicians groups within the state and getting those physicians to the table to discuss or address pertinent issues has been problematic. The same can be said for professional nursing and EMS associations. The challenge is to educate physicians and other medical professionals on the significant impact this issue has on their patients and for them to have time to be important advocates for change.

The modern medical profession has grown to become more than the mere treatment of disease. Community based preventative measures are taking the forefront as physician lead programs emphasize the preventative and social aspects of health.<sup>16</sup> The public is increasingly interested in maintaining health and preventing disease and injury. General safety concerns, as well as a strong desire for preservation of lifestyle prompt the public to demand more from the health care system. Physicians and other medical professionals must treat each health issue in the context of increasing the health of society as a whole. Health initiatives must be proactive and not retrospective, encourage judicious use of resources and wise planning for the future.<sup>15</sup>

12

Physicians are viewed almost universally as community leaders. The public perceives the physician as a “breed apart” and this relative position of power allows the physician influence over public opinion. The public is daunted by the altruistic dictum that the physician will “Consider first the well being of the patient.”<sup>16</sup> This implication that the physician community has only the patient’s best interest in mind perpetuates their need to be more responsive to the health care needs of society as a whole.<sup>16</sup> The erosion of the E-911 system in this nation by wireless (non-enhanced) 911 calls is a major health care issue.

After the first stakeholders meeting we created an Advisory Committee made up of representatives of the key stakeholder groups to guide and support our efforts. The advisory committee contains administrative representatives from each of the key stakeholder groups. The roles of the committee are to develop strategies for completion of our mission, to facilitate communications between stakeholder groups, to act as a conduit of information, and to identify other stakeholder groups and gain their participation. The committee met every three months either by conference call or at face-to-face meetings sponsored by project funds.

The advisory committee has developed and adopted the following mission statement:

“To develop and deploy the infrastructure needed to maximize the effectiveness of wireless 911 emergency communications across New York State.”

The advisory committee has been instrumental in keeping key stakeholder groups focused on the higher goal. The adopted catch phrase of the committee is, “We all agree to do what is best for current or potential victims of injury, illness, fire, or crime.” Many heated debates between key stakeholders have been effectively circumvented by references to this statement. This has been pivotal in the success of this project.

We tried to keep this higher goal continually in the public eye through testimonies at public meetings and legislative hearings. We also conducted public education activities by providing lectures and presentations for such groups as NYS Mensa, The District Attorney’s Advisory Council, the NJ Traffic Safety Council, the ITS America conferences in NYS and Vermont, the National Association of EMT’s Annual Educational Conference, the National Association of Emergency Medical Services Physicians annual conference, The Life Savers annual conference and many others.

In addition to working with stakeholders at the statewide level, we focused some efforts on implementation at the county level. In particular, we helped Onondaga County secure funding for necessary technology upgrades to Phase I and Phase II readiness, from unused Fiscal Year 1999 U.S. Department of Transportation Intelligent Transportation System earmarked funds. The grant application was completed by project staff in conjunction with Onondaga County's Department of Emergency Communications (OCDEC).

This particular project was designed to provide a demonstration that implementation is feasible and practical. Onondaga County's upgrades could be emulated across the state as a model for implementation strategies and effectiveness. Further and perhaps more importantly, it provides other counties with alternative funding strategies (i.e. State and Federal Grants) that had not been modeled prior to the grant application.

This model has been shared with key legislative leaders and with other counties. Project staff have provided support to these efforts and have actively sought out other creative funding opportunities. These efforts have been well received by PSAP administrators across the state who have expressed great concern with trying to secure funding for Phase I and Phase II upgrades.

## **Results**

As a result of our efforts, there is increased awareness and a greater understanding of the issues regarding the deployment of WE-911, both in New York State and in other states.

Within New York State we helped to remove or reduce several institutional barriers to WE-911 implementation including friction among law enforcement agencies. In the beginning of our project, every discussion about wireless 911 regardless of the setting, led to heated verbal exchanges between the New York State Police and the New York State Sheriff's Association. The long history of confrontation between these two groups was a major barrier to WE-911 implementation. This has shifted dramatically. The State Police and Sheriff's Association have agreed to work more closely together. The two groups are now in agreement on most issues including closest car and routing. Written police agency mutual aid agreements have been signed for all counties in New York. Every county sheriff's department has agreed with state police on procedures for routing and closest car responsibility. These agreements have been implemented in several counties.

The partnership staff was instrumental in this shift in that our presence at meetings was a calming factor and offered a "voice of reason" on several occasions. Our role in refocusing digressions back to the main issues at stake helped to quell most disagreements. We also provided the parties with helpful information, including a closest car concept model from Alabama and copies of fire and EMS mutual aid mandates from the NYS Department of Health. We effectively served as a clearinghouse of information for stakeholders.



The Advisory Committee has also changed dramatically since its inception. In the beginning, the committee was somewhat fractionated. While there are still some unspoken agendas among committee members, a much stronger sense of cooperation and commonality exists as evidenced by a joint presentation by the NYSP and the NYS Sheriff's Association representatives detailing written agreements on closest car/mutual aid at the May, 2001 stakeholder conference. The theme of cooperation continues to grow.

We had three major goals for the final year of our grant. First, we hoped to facilitate resolution of the financial barriers to WE-911 deployment. As mentioned earlier, considerable tension existed between stakeholders and NYS leadership over funding issues, in particular the use of the cellular 911 surcharge monies. To help address this issue, we examined the costs of attaining Phase I and Phase II readiness levels across NY State, by (1) collecting information from each county PSAP on its current state of readiness and the estimated financial resources needed to make readiness possible, and (2) compiling and analyzing the information and presenting our findings to key groups and individuals. By providing objective information, we hoped to help decision makers make more informed decisions about the best approach to assisting local PSAPs to meet the FCC mandate.

We feel strongly that our efforts to engage legislative and community leaders has provided the impetus for resolution of implementation barriers. By communicating and defining key issues to NYS leadership, on behalf of stakeholder groups, we were successful in bringing the WE-911 public health crisis to the forefront for many legislators who were then instrumental in developing changes in the NYS budget. The budget resolutions outlined below are dependent on completion of the normal budgeting process. As of this writing it is unclear if and when these items will take effect:

Assemblyman Bob Sweeney (D-Lindenhurst), Chairman of the Assembly Local Governments Committee, Assemblywoman RoAnn M. Destito, Chair of the Assembly Committee on Governmental Operations and Assemblyman David Koon announced today (May 16,2002) that the budget contained a new \$20 million Local Enhanced Wireless Program to increase public safety by improving the ability of emergency personnel to locate where a 911 cellular call originates.

Since 1991, New York State has imposed a monthly \$.70 surcharge on wireless telephone bills to enhance the implementation of an enhanced emergency telephone system for wireless telephone users, New York State has not yet implemented a wireless enhanced 911 system, and lags behind many other states. "Many people buy cell phones to use in case of an emergency," Assemblyman Sweeney said. "What they don't know is that right now in New York State if they can't tell us precisely where they are, we may not have the capability to find them. They assume that their cell phone will work the same as their traditional telephone line—they dial 911 and the call taker will know who they are and where they are calling from. This is the way it should work, and the new funding is dedicated to making that happen."

"This new funding will expedite the roll out of an enhanced wireless 911 emergency system as quickly as possible," said Sweeney.<sup>16</sup>

We began to develop standards for integrating Intelligent Transportation Systems (ITS) communications components into 911 dispatch center operations as part of our Onondaga County grant project. Legislative supporters of this particular project have already put us in contact with other counties who wish to form similar partnerships. Hopefully, we will be successful in obtaining financial resources to continue this assistance.

Our third goal was the development of a statewide implementation plan for WE-911. We worked with stakeholders to create a useful and doable plan that the majority of stakeholders could sign off on and commit to implement. The implementation plan outlines the necessary tasks to create a functional WE-911 system in NYS. Hopefully we included enough substance in the plan so that it can serve as a model for other states to use as they go forward in WE-911 implementation.



## IV. Lessons Learned

Following is a discussion of some of the lessons we have learned—both positive and negative—that we feel may be beneficial to other states as they move forward.

16

### **Technology is not the major barrier to the deployment of WE-911.**

While there are some technological barriers to WE-911 implementation, the private sector is already addressing these issues. Our experience is that the institutional barriers to implementation are often more difficult and more time consuming to address than the technological barriers. As outlined in Section 2, “History of WE-911 Implementation Barriers in New York State,” the issues within the state are not technological but rather institutional. The technology necessary to provide ANI and ALI data exists. The written agreements that are necessary to detail how the data is processed do not.

### **The primary requirement is getting stakeholders together and agreeing on an implementation strategy (“what” and “how”).**

Building a workable WE-911 infrastructure requires the involvement of many stakeholder groups with varying and often competing interests. These major stakeholder groups include: county government and county associations (e.g., county administrators, sheriffs); municipal associations; law enforcement agencies; emergency medical system (EMS) practitioners (EMS organizations, firefighters); the medical community (emergency physicians, trauma surgeons, cardiologists); public health and other non-profit organizations (e.g., American Heart Association); state organizations (e.g., state technology/telecommunications organization, state departments of transportation, public health); intelligent transportation system (ITS) organizations; highway authorities; politicians (state and local); and industry (e.g., wireless carriers, manufacturers, ITS technology providers) and others. We developed three steps to accomplish this:

- *Step # 1: Identify the Key Stakeholders*

The first step in building an effective WE-911 implementation strategy is to determine which of these stakeholder groups can help (or hinder) the implementation of WE-911 in your state/local area.

- *Step #2: Get The Stakeholders Engaged*

The second step is to ensure that these stakeholders are actively engaged in the process. We found it helpful to ask representatives of the relevant groups for names of individuals who

should be involved in our effort. Criteria used included identifying people who were interested and have shown passion about 911 issues. We also found it valuable to include a variety of perspectives within the stakeholder groups. For example, when dealing with industry it was important to get engineers' viewpoints as well as lawyers. Additionally, we sought out representatives who might not otherwise participate, such as the American Heart Association (AHA). The AHA, through their involvement, recognized the proliferation of wireless phones as a threat to the "Chain of Survival" concept. The first link in the "Chain of Survival" for out-of-hospital cardiac arrest and stroke is entry into the 911 systems.<sup>5</sup> Clearly, the erosion of the Wire-line 911 system was seen as detrimental to patients the AHA sought to protect.

It is necessary to canvas a large group in order to get a good response. For example, we built a list of 400 individuals in order to get 100 participants to a stakeholder conference. There is also a need to follow up with people to encourage participation, particularly at the beginning of the process.

- *Step #3: Keep The Stakeholders Engaged*

Keeping stakeholders engaged is critical. There was a lot of resistance, again particularly at the beginning before the benefits of cooperation were apparent. We thought that we needed to be prepared to address stakeholders' questions of "Why am I here? What's in it for me?" Instead we were surprised to be asked, "Why are you getting involved?" and "Why do you think you can help?" Almost universally, our initial contacts with stakeholders uncovered concern that our involvement in the WE-911 issue would derail any progress they had achieved to date. Few saw any benefit to medical community involvement and couldn't foresee how our "patient advocacy" stance would be a benefit.

We were forced to address this resistance as a major barrier to our involvement early in the process, and which we did not anticipate. We felt that this early resistance was a symptom of the friction and mistrust that existed between the stakeholder groups. Our solution to this dilemma was to offer our full support and ask, "What things can we do to help you the most?" and "Where are our efforts and resources best applied to support you?" Coupled with this we had to provide continuous reassurance that "we are here to help you make progress and not to set you back." Further, our persistence toward remaining "objective patient care advocates" and "neutral conduits of information" as part of the medical leadership approach, helped to settle the apprehensions of the stakeholders. The stakeholders involved held so much passion for their work on this issue that they were protective and defensive about our involvement. In retrospect, this stance should have been anticipated.

### **It is helpful to create a variety of vehicles and layers for stakeholder involvement.**

We started the process of involving stakeholders by holding a conference with 100 stakeholders representing 24 different groups. We selected a smaller advisory committee from that group to meet with project staff every three months. Starting with a large group of stakeholders helps get the word out to the right audiences. It provides an opportunity to educate a wide group of stakeholders and to gain input from a variety of perspectives. On the other hand, a smaller group such as an advisory committee, is more functional for problem solving and strategic planning. It is also easier to convene a smaller group. Large stakeholder meetings require an extensive amount of planning and preparation.

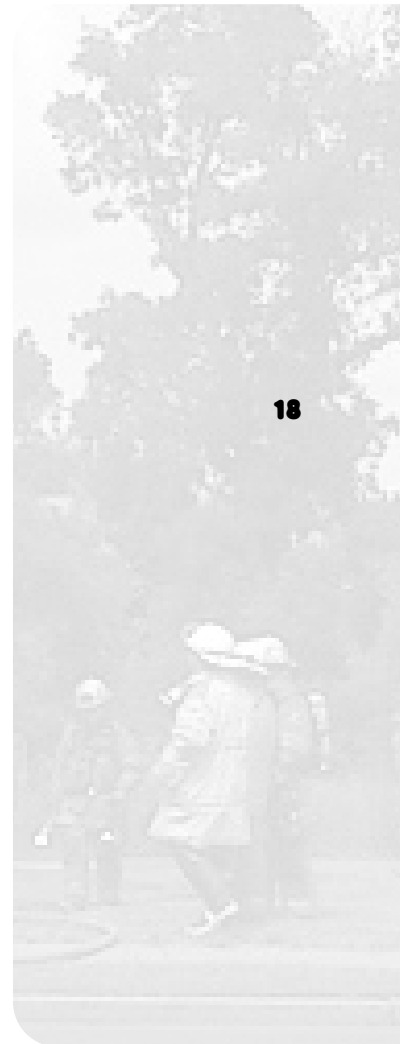
The Advisory Committee approach assumes that representatives of specific stakeholder groups will share information gained from meetings with their constituents. We learned that this was not always the case so it was important for us to continue to have large semi-annual meetings to ensure our message reached the largest number of rank and file members of the various organizations as possible. This promulgation of information is necessary to build and maintain the critical mass of people needed to bring about change.

**Stakeholder conferences are a useful means of engaging a wide representation of relevant stakeholders.**

We organized and conducted statewide stakeholder conferences biannually. We found these conferences to be an excellent way of making sure that people were informed about the issues. The conferences provided an opportunity for people to network with other stakeholders and to understand other stakeholders' perspectives on the issues.

Bringing a wide representation of stakeholders together in a large scale meeting was very valuable in getting groups focused on a common direction and in beginning to develop strategies and actions on how to reach common goals. Mediation or resolution of frictions, however, is not practical in this setting. Participants should focus on understanding each other's perspectives, not on settling differences. As facilitators of the process, we found it important to reassure participants that differences of opinion are inherent and necessary. It was important however to allow some issues to surface. For example, several items of importance between key law enforcement agencies surfaced during our meetings. Rather than quell these sometimes heated discussions, we allowed them to come to the forefront. This was necessary to allow other stakeholders to become aware of the issue. Stakeholders had to feel that they were in an environment that was objective and free of preconceived bias. It was important to continually remind our stakeholders that (1) all perceptions are fair, (2) all opinions are necessary and (3) all inputs are needed. Other lessons we learned about stakeholders conferences include:

- Successful meetings require that you spend a lot of time planning them. It is helpful to have a planning committee composed of a representative sample of stakeholders. This role was fulfilled by the Advisory Committee.
- Balance presentations with structured opportunities for input. Manage the energy of the meeting by varying the process and keeping the pace quick.
- More energy is generated if people focus on what success would look like versus what the problems are.
- Set up the meeting so that participants interact with people from different stakeholder groups.
- Conference and advisory committee comments stated within stakeholder meetings are specific to WE-911 activities but recognize there are many overlaps with other group dynamics.
- Expert facilitation is important.



**It is important to be very clear about the role and limits of an Advisory Committee.**

An advisory committee can be very helpful, but you must establish a clear-cut mission and role for the committee. For example, be clear about whether the group is to set policy or advise. If you are not explicit upfront about the role and responsibilities of the committee, the group may take on a life of its own and start to think of itself as having a separate mission from the project.

In establishing an advisory committee, look for people who carry a leadership role within the various stakeholder groups. The members of the committee are the conduits of information to the stakeholder group constituents. They must be well informed of the issues and well respected within their organizations. It is also useful to have a critical mass of members who share a focus on the broader public interest. The advisory committee should be small enough to function effectively, but large enough so that no key stakeholder group is excluded. Our group had 18 members representing key stakeholder groups as well as representation from DOT, ITS, NHTSA and a major area hospital.

**Having a credible third party that can provide strong, committed leadership is critical.**

A neutral party is needed to unify stakeholder groups. A neutral party can listen to what others have to say and not get emotionally invested. The neutral party can also continually refocus the dialogue on the primary goal—saving lives. We found that stating the primary goal at the right time helped diffuse tension and keep the group on task. The credible third party must be free of bias or financial obligation to any of the stakeholders.

**The medical community is ideally poised to play the credible third party leadership role.**

Our experience supports the efficacy of medical leadership as the appropriate third party. The medical community is in an ideal position to play a third party leadership role. While it has a vested interest in the outcome, the vested interest is patient care. It was difficult for stakeholders to argue against “we are here to protect the patient.”

As mentioned earlier there are challenges in getting the medical community engaged in the process. There may be a need to educate physicians on the crises facing the 911 system and to sell the opportunity for physicians and others in the EMS community to play a leadership role.

While the medical community is in an ideal position to lead the effort, leadership could come from a variety of sources including the state EMS or public health organization. The key is the organization’s credibility. **The leadership organization must be perceived as neutral and politically credible, must have knowledge of local and regional issues and a network of contacts. And, it must be willing to assume the role of leader.**

Physicians and other medical professionals are well suited to provide objective, patient advocacy without bias. A strong focus on patient advocacy, provided by the medical community, is difficult to contest in any setting. The focus on patient care issues and potential detriments to citizens in distress can be a very strong catalyst for systems changes. This is especially true



when applied to issues wherein institutional and philosophical differences prevent stakeholders from focusing on the larger issue at hand: public safety. Increased focus on the larger issue, safety, reduces the need to focus on smaller issues such as disharmony and mistrust. Concentration on the larger issue creates constancy of purpose, which in turn promulgates positive movement toward the common goal.

A major advantage of testing this model in New York State is its strong national medical leadership in emergency medicine. Our physician leadership, including our project principle investigator, our project medical director and the physician faculty at Upstate Medical University's Department of Emergency Medicine played a key role in accelerating the project goals and objectives. The facilitation, negotiation and mediation skills of our medical leadership became necessary early in the process as we met stakeholder groups for the first time. The obvious air of friction and mistrust among stakeholder groups had to be replaced with a common goal that would propel positive activity instead of perpetuating negativism.

### **It is important to be flexible and adapt to changing situations.**

While it's crucial to maintain a vision, there is a need to remain flexible in how to accomplish specific goals. The ideal is to stay energized and explore many options simultaneously. This was especially true when individual stakeholders and advisory committee members developed needs and action items that aren't anticipated. This happened on many fronts including a constituent survey, a PSAP accounting survey and the development of an implementation plan for one of the counties. Although none of these was an explicit objective for the project, each furthered the overall project goals.

There is also a need to acknowledge and learn from mistakes. We spent considerable efforts, for example, in trying to get constituent groups to fill out a survey on the barriers to WE-911 implementation. We had a very poor response. Therefore, we were initially hesitant when our Advisory Committee asked us to do another survey on the current state of readiness among county PSAPs. This time, however, we developed a simplified survey form. We followed up the written survey document with phone calls to each PSAP. Some Upstate Medical University resources were applied to this project as they relate to administration of the survey and data analysis. This resulted in a dramatic increase in responses over our first survey.

Another example of the unpredictable nature of this project centers around an unsuccessful attempt to demonstrate the feasibility of ACN technology. Stakeholders asked the project staff to stage a crash demonstration at a stakeholders meeting and demonstrate the feasibility of transmitting collision data to a local PSAP. The stakeholders felt that this would be a high media event which would gain a fair amount of public attention and support. A great deal of time and effort went into the preparation of the crash including site coordination, equipment coordination (i.e. cars for the crash and equipment to safely accelerate one into the other) EMS and Fire coverage, insurance coverage, safety barriers, transport of spectators to and from the site, technology support and scheduling of the event around a state conference. After completing the logistical planning for the event we were disappointed to find that the cost to transmit the data from the crash site to the PSAP via a third party far exceeded our financial resources. The demonstration was therefore canceled.



In retrospect, we could have done a better job in determining the total cost of the demonstration upfront. More importantly, we learned that we should have paused to determine the real benefit of this effort at that time in the project instead of just reacting to the request from the stakeholders.

Retrospective review of our planning efforts revealed that we would have gained little by this particular demonstration. The potential also existed for increased public expectations for services not yet available in the state. Our ability to demonstrate one crash event was not equivalent to a global ability to provide ACN services throughout the state. This miss-match of expectations vs. reality was potentially detrimental to our efforts to remain in good standing with all of our stakeholders.

### **Public education can be tricky.**

Increasing public awareness can create a momentum for action. Early in the process, we felt a strong urge to inform the public that their wireless phones are not the safety tools that they thought they were. We intended to cite examples for the public wherein wireless 911 calls had actually been detrimental because they couldn't be traced for number or location identification.

Our stakeholders and our advisory committee adamantly discouraged such a tactic citing a risk for dramatic increases in false wireless 911 calls. Law enforcement officials already face problems with growing numbers of school bomb-threats from home and pay telephones. They were concerned about what might occur if the public-at-large were informed of an inability to identify cellular call number and location.

There was also a risk of alienating some stakeholders. A charged public may have become angry and pointed fingers, which could have derailed the proactive engagement of key stakeholder and slowed down efforts. Therefore we spent a great deal of effort keeping the NYSP engaged with our efforts. The NYSP felt particularly worried that a public education campaign would invite undue criticism of their efforts.

While we have devoted considerable efforts to informing specific groups about the issues surrounding WE-911, we have not been aggressive in rallying people to action. This is because of the ambivalence about public education noted above and because of the timing of our efforts. Timing is critical. We have decided that we should wait to approach public education until the foundation for a working system is in place and implementation is underway.

Interestingly, the New York State Sheriff's Association held a series of press conferences in the second quarter of 2002 that were intended to inform the public that wireless surcharge monies weren't being used in New York State as intended and that reform was needed immediately. These press conferences preceded the release of an audit by NYS Comptroller H. Carl McCall which openly criticized the Governor and the NYSP for their usage of wireless surcharge monies for items other than WE-911 upgrades. These events were followed by a brief period of increased media activity but did not seem to stimulate a large public reaction.



### **Strong media relations are necessary.**

A great deal of effort was made to keep the news media apprised of our efforts toward wireless enhanced 911. Consistently though, the media failed to accurately portray the true nature of the problem we were trying to address. Despite written press releases and very careful monitoring by the marketing department at Upstate Medical University, the media failed to pay specific attention to the issues at hand.

One such example was a television news interview about the project. The project staff was interviewed at length about wireless 911 issues and then spent minimal time discussing automated collision notification issues. The media devoted the entire news segment to ACN and failed to mention the importance of our efforts toward WE- 911 issues.

**22**

Project staff was unable to successfully address this shortcoming. In retrospect it may have been helpful to include a respected member of the local or statewide media on the advisory committee. This would have more clearly detailed the passion the stakeholders felt for this issue and would have better enabled an accurate information stream to other members of the press.

### **Legislative affairs require the support of an expert.**

Project staff, working as agents of a federal program, were not available to lobby for or against any specific legislative initiatives, even in cases where legislation would further our project goals. NYS leadership may have viewed such activity as the federal government getting directly involved in NYS political affairs. As discussed throughout this document, it was imperative for project staff to remain objective /neutral in order to keep key stakeholder groups engaged. This need for neutrality and federal rules prohibited project staff from taking a stronger stance on key legislative issues.

Upstate Medical University has a legislative/community affairs division within the university. Any legislative affairs requests, such as requests to meet with specific legislative leaders had to be approved through this office. This ensured that the university's own legislative and community affairs activities were not supplanted by activities within individual departments of the university. The expertise of this department was a great benefit to project staff but sometimes caused delays in completing specific tasks. However, our legislative affairs representative was very skilled at establishing meetings with key leaders and served to accelerate their involvement. The involvement of persons experienced in legislative affairs and initiatives is infinitely important to the eventual success of these efforts.

### **Stakeholder needs must be anticipated.**

We found that industry-based stakeholder groups are generally more learned in legislative affairs than the medical community. Industry-based stakeholders were more conscious of maintaining their own financial stability than the project staff was mindful of. This is not to say that the industry stakeholders were wrong to be cautious of their financial security but rather that the project staff didn't always consider this a priority. Our idealistic goals didn't always coexist with the financial reality of some key stakeholder groups, particularly the wireless carriers. In retrospect, it would have been better to have anticipated this issue and to have agreed on some common ground with all such groups up front.

### **County PSAPs require financial support to enable WE-911.**

Individual county PSAPs face a difficult task in preparing to declare readiness in accordance with the FCC mandates. As detailed earlier, counties are required to dedicate large financial, technical (equipment) and personnel resources to this task. Steve Wisely, Commissioner of the Onondaga County Department of Emergency Communications, summarized his county's efforts by saying;

“Getting a PSAP ready for Phase I and Phase II without disruption of current service, is like replacing the engine of your car while driving down a busy freeway at 75 mph, without noticeable deceleration.” (Personal communication, Steven Wisely, Commissioner, Onondaga County Department of Emergency Communications)

It is also important to remember that PSAP administrators and county executives are very protective of their 911 systems and will not likely risk disruption of service for any reason. Alterations in the function of any PSAP will not be made without careful consideration and study. PSAP readiness however, appears to be a rate-limiting step as the actual transmission of WE-911 data is dependent on the PSAP being capable of receiving it.

The financial issues surrounding the WE-911 system in New York are detailed throughout this document. The resolutions to the NYS wireless surcharge issues require legislative activity that lies outside the responsibilities of the project staff. However, project staff was able to identify other sources of PSAP funding such as the Onondaga County/FHWA earmark grant and NYS Title 10. Stakeholders can't assume that one source of funding will answer all their needs. It is better to seek out several funding sources for PSAP equipment and software upgrades than to rely on just one. Key legislative leaders will be able to help identify other potential sources and every opportunity should be taken to apply for funding. Partnerships with other stakeholders that are willing and able to help secure such funding should be sought out at every opportunity.

Every potential funding template should be shared with all interested stakeholders.

### **Technological issues won't hinder implementation but may slow progress.**

Despite the collective best efforts of many agencies and organizations across the country, an enhanced wireless 911 system may never be as good as the wire-line 911 system. Although the technology exists to make the system work, there are several complicating factors that may detract from the effectiveness WE-911:

1. Wireless phones are being provided to the elderly and handicapped that are 911 enabled but are not registered with a wireless carrier. These phones will connect with an emergency dispatch center but will not provide enhanced call data. (ALI and ANI) Calls from these phones will make up the minority of the total call volume but will detract from the overall effectiveness of the 911 system.
2. There are one or more carriers that advertise a mobile phone that is only 911 capable. These phones come with a red distress button labeled "911" and can be used to contact a

dispatcher in an emergency. However, these phones are not registered phones and are not capable of accepting call-backs as they have no registered call back number. Items such as these could also detract from the effectiveness of the 911 system.

3. There is currently no means of getting the “Z” coordinate from wireless 911 calls. Emergency call centers will be able to get street addresses but will be unable to discern what floor a call originated from in a high-rise building. This limitation has the potential to delay responses to 911 calls and thereby negatively effect patient care.

More work is needed to resolve all of these key technical issues in the coming months.

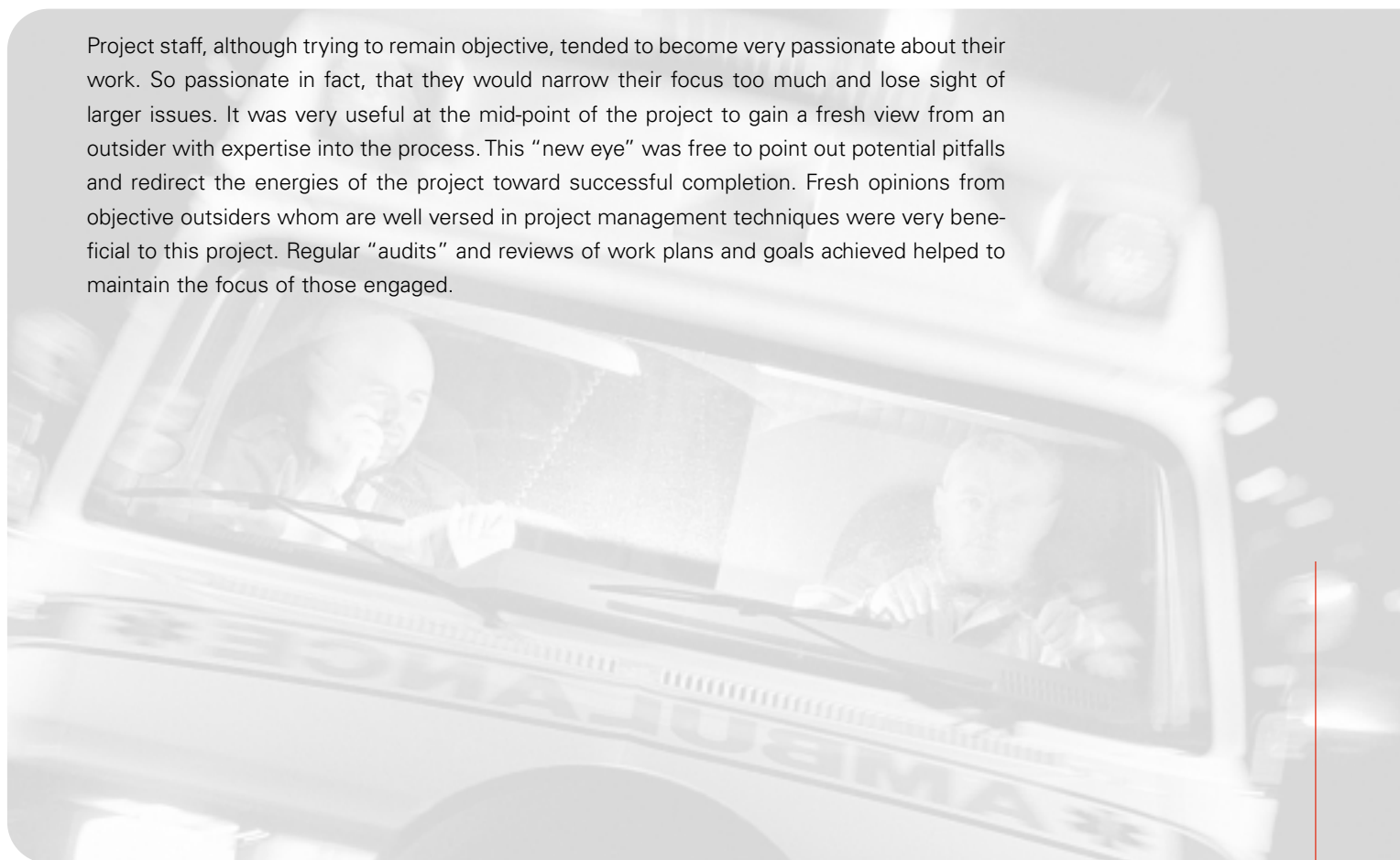
### **Information sharing may accelerate county readiness.**

**24**

We have learned that our role as a clearinghouse of information has served on several occasions to aid counties in their preparations for WE-911. For example, presentations to the NYS 911 Coordinators Association helped disseminate information about NYS Title 10, a valuable alternative funding source for many counties. Discussions in our stakeholder meetings about the litigation in Otsego County helped some counties to consider enacting similar legislation. Also, presentation of NYS EMS mutual aid plans by project staff helped accelerate similar agreements among the law enforcement community. Each of these items, once shared with all the stakeholders, helped individual counties prepare for implementation.

### **Routine input from outside observers will maintain focus.**

Project staff, although trying to remain objective, tended to become very passionate about their work. So passionate in fact, that they would narrow their focus too much and lose sight of larger issues. It was very useful at the mid-point of the project to gain a fresh view from an outsider with expertise into the process. This “new eye” was free to point out potential pitfalls and redirect the energies of the project toward successful completion. Fresh opinions from objective outsiders whom are well versed in project management techniques were very beneficial to this project. Regular “audits” and reviews of work plans and goals achieved helped to maintain the focus of those engaged.



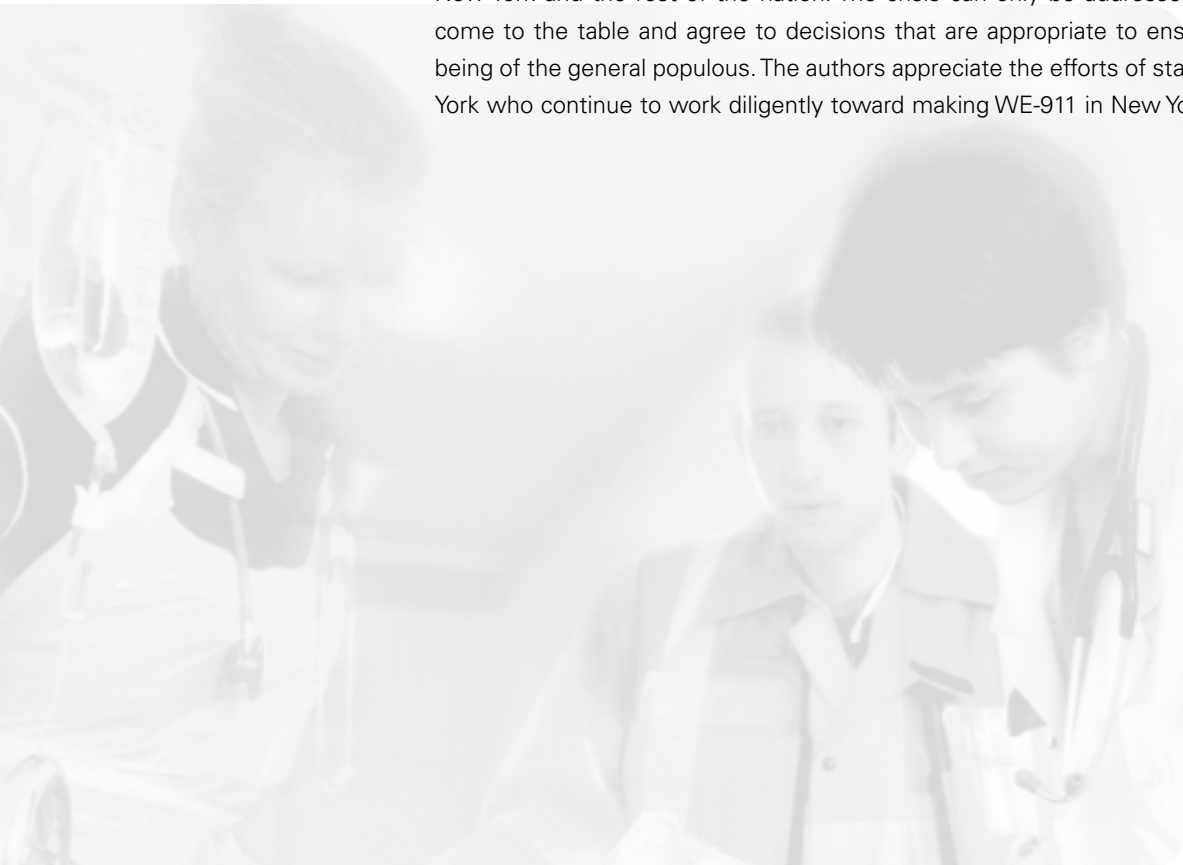
## Summary

25

The reader should be aware that as WE-911 implementation progresses, each state may experience implementation barriers unique to that state. Specific demographics, will in some way, dictate the implementation priorities for all regions of the country. Further, county PSAPs, wireless carriers, public safety agencies and other stakeholders have individual needs and issues that are impractical to detail in the scope of this document. However, the authors have outlined lessons learned from their interactions with various stakeholder groups within New York State. We believe these lessons are generalizable and transferable to other states.

The reader must also be aware that the resolutions to WE-911 implementation barriers in New York are complex and multifaceted. The intent of this document is not to assign responsibility for barriers and their resolutions, but rather to detail lessons learned through interactions with stakeholder groups. By the very nature of their work, stakeholder groups are sensitive to even minute changes in their policies and procedures. This “sensitivity” can sometimes be misunderstood or misinterpreted. The reader should remain aware that suggested resolutions must be carefully weighed and considered before system-altering changes can be introduced.

The continuing erosion of the Enhanced 911 infrastructure is a growing public health crisis for New York and the rest of the nation. The crisis can only be addressed if all the stakeholders come to the table and agree to decisions that are appropriate to ensure the safety and well being of the general populous. The authors appreciate the efforts of stakeholder groups in New York who continue to work diligently toward making WE-911 in New York a reality.



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# C911ular

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