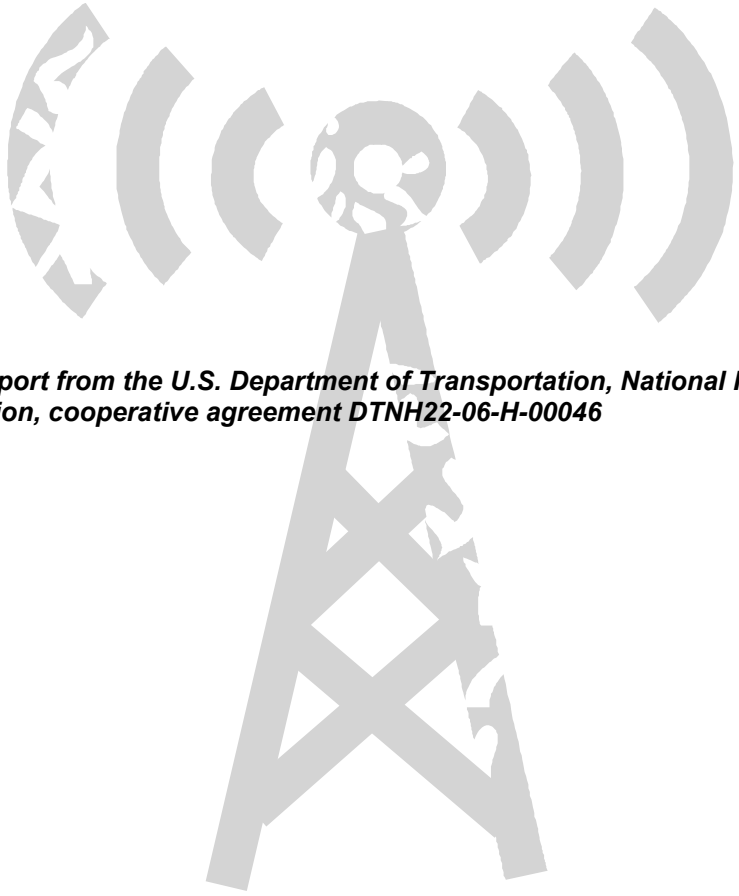
NASEMSO Monograph
December 2008

The Status of State EMS Office Involvement in Emergency Medical Services Communications



Produced with support from the U.S. Department of Transportation, National Highway Traffic Safety Administration, cooperative agreement DTNH22-06-H-00046

National Association of State Emergency Medical Services Officials

201 Park Washington Court • Falls Church, VA 22046-4527 • Phone: 703-538-1799 • Fax: 703-241-5603

Attribution

This report was prepared for the National Association of State Emergency Medical Services Officials by Stephen Hise of Hises, Inc.

Additional copies of this monograph are available for $60 from NASEMSO headquarters by contacting NASEMSO Executive Assistant Sharon Kelly, info@nasemso.org or 703-538-1799 extension 2.

NASEMSO members receive one complimentary copy, and state EMS offices receive up to **five** copies as part of their member benefits. Members receive a **50%** discount off additional copies. Other titles are also available.

Table of Contents

Attribution Page i

Letter from NASEMSO President Steven Blessing Page iii

Introduction and Background Page 1

Aggregated Data Page 5

Access, Dispatch or Communications Issues the States would Like to see Addressed Page 12

State Communications Systems Narratives Page 13

Appendices

- Survey Instrument Page 17
- List of States Participating in 2008 Communications Project Page 19
- List of NASEMSO Communications Committee Members Page 20

National Association of State EMS Officials
201 Park Washington Court ♦ Falls Church, VA 22046-4527 ♦ www.nasemso.org
703-538-1799 ♦ fax: 703-241-5603 ♦ info@nasemso.org

December 15, 2008

Greetings,

On behalf of the National Association of State Emergency Medical Services Officials, I am pleased to present our latest monograph, "The Status of State EMS Office Involvement in Emergency Medical Services Communications."

NASEMSO recently conducted a nationwide survey of State EMS Directors to ascertain the status of EMS communications capabilities, oversight and development. Communication technologies are central to the efficient coordination and delivery of Emergency Medical Services in everyday operation and in mass casualty and domestic preparedness endeavors.

We believe an understanding of the current status of these systems is essential to effective planning and better understanding of both the challenges and opportunities facing EMS.

This monograph represents extensive work over the past year in instrument design, information gathering and data analysis. We are pleased that 50 of the eligible 56 jurisdictions participated in this project. This translates to an overall response rate of 89%. Because of this high response rate, our confidence in the findings is also high.

We hope you will find the monograph useful in furthering the ongoing development of emergency medical services systems locally and nationally.

Sincerely,

Steven Blessing
President, NASEMSO

Introduction and Background

In 1966, the National Academy of Sciences/National Research Council (NAS/NRC) published a landmark white paper entitled Accidental Death and Disability: The Neglected Disease of Modern Society. This report described the status of emergency medical services as they existed at the time and made specific recommendations toward the improvements needed in emergency care in the nation.

At the time the historic report was prepared, about half the ambulance service in the country was provided by funeral homes, using hearse-style vehicles and few ambulances had radio communications equipment of any kind. In pertinent part, the report stated:

> *"It is important to recognize that major accidents, including disasters, provoke community response not only of first aid workers, ambulances, and hospital emergency departments but also authorities concerned with traffic, fire, security, utilities, civil defense, and others, and that communications facilities involve functions pertinent to each responding agency. Although these facilities must be designed for specific needs, they must be sufficiently flexible to ensure rapid and efficient cross communication, with medical components necessary to emergency care. It would be a mistake, therefore, for those concerned with the medical aspects of the problem to plan strictly medical response systems in parallel with or in isolation from the transportation and communication networks upon which they should be based."*

The prescience of this report is still striking. Not only was the need for communication noted, but the need for interoperability and the pitfalls of communications systems developed without interoperability were foretold. It was not until the terror attacks of 9-11 that the failure of communications interoperability came to national attention.

Many of the technical aspects of communications, including frequency assignment falls within the jurisdiction of the Federal Communications Commission; however, each of the states and territories has a government agency (herein referred to as an EMS office) responsible for the regulation and general oversight of emergency medical systems. The exact nature and extent of state EMS office involvement in the multiple issues associated with communications varies widely by jurisdiction. This monograph undertakes to describe the current status of the involvement of state EMS offices with EMS communications capabilities, oversight and development.

The purpose of this endeavor is neither to judge nor to rank the various EMS systems. Neither is it the intent to provide specific recommendations; but rather to contribute to a fuller understanding of what is,

so that both the challenges and opportunities of future system development can be better appreciated. This information is intended to illustrate the degree of difference and similarity existent between the EMS systems with the hope that clearer understanding will constructively guide future decision-making.

To support this undertaking, a survey instrument[1] was developed and approved by the NASEMSO Communications Committee[2].

Of the 56 entities eligible to report in this study, 50 (89%) did so. This is a significant improvement over the response rate from 2001 (the last time the NASEMSO produced a monograph on communications). In the 2001 survey, only 32 of 56 (57% of eligible entities) responded.

The survey pool includes the EMS Offices of all fifty states, the US territories of American Samoa, Guam, Puerto Rico, the US Virgin Islands and the District of Columbia. A complete list of those offices that participated in the survey is included in the appendix.

[1] A copy of the survey instrument is included in the appendix.
[2] A list of NASEMSO Communications Committee members is included in the appendix

1. Aggregated Data

A. EMS Dispatch

I. Utilization of frequency bands by Local EMS

The survey instrument asked respondents to identify the percentage of services in their jurisdictions that use Low Band, VHF, UHF, 800MHz or "Other" for EMS dispatching.

Low Band:

A total of five jurisdictions (10% of respondents) reported the use of Low Band frequencies by emergency medical services for the purpose of dispatching. Of these states, the percent of services using Low Band averaged 10.8%. The highest utilization reported was 18%. The lowest utilization reported was 5%.

VHF:

A total of twenty-eight jurisdictions (56% of respondents) reported the use of VHF frequencies by emergency medical services for the purpose of dispatching. Of these states, the percent of services using VHF averaged 71.8%. The highest utilization reported was 100%. The lowest utilization reported was 10%.

UHF:

A total of twenty-one jurisdictions (42% of respondents) reported the use of UHF frequencies by emergency medical services for the purpose of dispatching. Of these states, the percent of services using UHF averaged 19.4%. The highest utilization reported was 100%. The lowest utilization reported was 1%.

800 MHz:

A total of 22 jurisdictions (44% of respondents) reported the use of 800 MHz frequencies by emergency medical services for the purpose of dispatching. Of these states, the percent of services using 800 MHz averaged 26.9%. The highest utilization reported was 100%. The lowest utilization reported was 1%.

Other:

A total of four jurisdictions (8% of respondents) reported the use of other frequencies in use by emergency medical services for the purpose of dispatching. Of these states, the percent of services using other frequencies averaged 26.5%. The highest utilization reported was 100%. The lowest utilization reported was 1%.

Unknown:

A total of fifteen jurisdictions (30% of respondents) reported the use of frequencies by at least some emergency medical services for the purpose of dispatching was unknown. Of these states, the percent of services for which dispatch frequencies are unknown averaged 62.7%. The highest unknown utilization reported was 100%. The lowest unknown utilization reported was 1%.

II. Geographic Percent of Coverage by Reliable Dispatch Communications

The survey instrument requested information on the geographic percent of the respondents' states or territories that are covered by reliable dispatch communications systems. Seventy-three percent of the respondents to this item indicated knowledge of the geographic percentage of dispatch radio coverage in their jurisdictions; twenty-seven percent of the respondents did not know the percent of geographic coverage.

For the cohort in which the percent of geographic coverage was known by the respondents, 30% reported coverage of 100%, compared to 18% in 2001. Geographic coverage of less than 100%, but greater than 76% was reported by 61% of the cohort, compared to 68% in 2001. Only 9% of the cohort indicated geographic coverage of 75% or less compared to 14% in 2001.

These data show some significant improvement in geographic coverage of radio dispatch services between 2001 and 2008.

III. Ability of the State EMS Office to Determine Dispatch Communications Problems

Respondents were asked to verify whether their EMS Office has a process to determine the existence of the specific communications problem areas in their respective jurisdictions. The specific communications problems listed in the survey were:

- **Interference/Noise** – 24% of respondents indicated they have a process in place to determine the existence of this type of problem.
- **Poor Coverage/Dead Spots** – 32% of respondents indicated they have a process in place to determine the existence of this type of problem.
- **Radio Traffic Congestion** – 24% of respondents indicated they have a process in place to determine the existence of this type of problem.
- **Lack of Interoperability** – 36% of respondents indicated they have a process in place to determine the existence of this type of problem.

- **Too Few Frequencies** – 26% of respondents indicated they have a process in place to determine the existence of this type of problem.
- **Aging/Outmoded Equipment** – 26% of respondents indicated they have a process in place to determine the existence of this type of problem.
- **Other Problems** – 6% of respondents indicated they have a process in place to determine the existence of this type of problem.

IV. Emergency Medical Dispatch Data

Emergency Medical Dispatcher training is specifically designed to qualify dispatch personnel to elicit appropriate information from persons calling for emergency medical services, dispatching appropriate EMS resources to the scene, and in some instances providing pre-arrival medical instructions to callers.

The survey asked whether each State or territory currently certifies or licenses Emergency Medical Dispatchers. Only 9 states (18%) indicated their agency is the licensure or certification authority for Emergency Medical Dispatchers, even though the certification is recognized or known by the EMS offices to exist in 16 states.

In the cohort of states with EMD, the average percent of calls handled by an Emergency Medical Dispatcher is 71%. Twelve of these states were able to provide information on the percent of emergency calls in which pre-arrival instructions were provided. For this subgroup, the average percent of calls in which pre-arrival instructions were provided was 79%.

The survey asked if there a state law or rule/regulation that requires the use of an Emergency Medical Dispatcher for calls requesting EMS. Only 20% of respondents indicated the presence of such a legal requirement.

B. Medical Communications – Hospital Arrival and Notification

I. Frequency Usage for Medical Communications

The survey instrument asked respondents to identify the percentage of services in their jurisdictions that use Low Band, VHF, UHF, 800MHz or "Other" for medical communications.

Low Band:

A total of one jurisdiction (2% of respondents) reported the use of Low Band frequencies by emergency medical services for the purpose of medical communications. This respondent indicated 74% of services used Low Band for these purposes.

VHF:

A total of fourteen jurisdictions (28% of respondents) reported the use of VHF frequencies by emergency medical services for the purpose of medical communications. Of these states, the percent of services using VHF averaged 65%. The highest utilization reported was 100%. The lowest utilization reported was 10%.

UHF:

A total of eight jurisdictions (16% of respondents) reported the use of UHF frequencies by emergency medical services for the purpose of medical communications. Of these states, the percent of services using UHF averaged 53%. The highest utilization reported was 100%. The lowest utilization reported was 5%.

UHF MED Channels:

A total of 10 jurisdictions (20% of respondents) reported the use of UHF MED Channel frequencies by emergency medical services for the purpose of medical communications. Of these states, the percent of services using UHF MED Channel frequencies averaged 40%. The highest utilization reported was 98%. The lowest utilization reported was 3%.

800 MHz:

A total of 14 jurisdictions (28% of respondents) reported the use of 800 MHz frequencies by emergency medical services for the purpose of medical communications. Of these states, the percent of services using 800 MHz averaged 26%. The highest utilization reported was 90%. The lowest utilization reported was 1%.

Cell Phones:

A total of 10 jurisdictions (20% of respondents) reported the use of cell phones by emergency medical services for the purpose of medical communications. Of these states, the percent of services using cell phones averaged 38%. The highest utilization reported was 100%. The lowest utilization reported was 1%.

Other Frequencies:

A total of one jurisdiction (1% of respondents) reported the use of other frequencies in use by emergency medical services for the purpose of medical communications. This respondent indicated 5% of services used other frequencies for these purposes.

Unknown:

A total of eighteen jurisdictions (36% of respondents) reported the frequencies used by at least some emergency medical services for the purpose of medical communications were unknown.

II. Ability of the State EMS Office to Determine Medical Communications Problems

Respondents were asked to verify whether their EMS Office has a process to determine the existence of the specific communications problem areas in their respective jurisdictions. The specific communications problems listed in the survey were:

- **Interference/Noise** – 24% of respondents indicated they have a process in place to determine the existence of this type of problem.
- **Poor Coverage/Dead Spots** – 30% of respondents indicated they have a process in place to determine the existence of this type of problem.
- **Radio Traffic Congestion** – 20% of respondents indicated they have a process in place to determine the existence of this type of problem.
- **Lack of Interoperability** – 32% of respondents indicated they have a process in place to determine the existence of this type of problem.
- **Too Few Frequencies** – 28% of respondents indicated they have a process in place to determine the existence of this type of problem.
- **Aging/Outmoded Equipment** – 26% of respondents indicated they have a process in place to determine the existence of this type of problem.
- **Other Problems** – 10% of respondents indicated they have a process in place to determine the existence of this type of problem.

III. EMS Use of EKG Telemetry

Of the respondents to this item, 68% indicated in the affirmative that EMS providers are sending EKG telemetry to hospitals; 8% reported it was unknown whether EKG telemetry was being sent by EMS providers to hospitals.

IV. Band Use for EKG Telemetry

The survey instrument asked respondents to identify the particular bands used by EMS services in their respective states or territories for the transmission of EKG telemetry to hospitals. Cell phones topped the

list, with seventeen states indicating known usage for this purpose. The next most commonly used frequency was UHF MED channels, with 9 states reporting usage. Seven states reported EKG telemetry was sent by EMS providers by means of other frequencies or means than those listed; six indicated reported usage of the 800 MHz frequency; five responded that VHF frequencies were used; UHF was cited by two respondents; and one respondent reported usage of the 2.4 GHz band.

None of the respondents indicated any usage of Low band, 700 MHz, or 4.9 GHz channels for sending EKG telemetry.

V. Positions on Use of Cell Phones for Medical Direction

It is widely though anecdotally known that EMS personnel sometimes make use of cell phones for purposes of establishing contact with medical control and direction authority. Cell phone coverage is much improved in recent years; and the technology, cost and convenience encourage utilization.

As technologic advances often far outpace regulatory accommodation, our survey asked respondents for their official agency positions on the use of cell phones for medical direction contact.

Eleven percent of the respondents to this item indicated that cell phone usage was regarded as an acceptable replacement for radio channels.

Seventy-five percent of the respondents indicated an official position that the use of cell phones is useful, but not considered a replacement for radio contact.

Only 2% of the respondents indicated that cell phones should not be used for medical direction; and eleven percent indicated their agency had no official position on the matter.

VI. Jurisdictional Level of Medical Direction

The survey asked respondents whether on-line/direct medical direction in their states is provided through local hospitals, Regional Medical Control Centers, Statewide Medical Control Centers, through another means, or if the means of medical direction access was unknown to the state EMS office.

Some respondents indicated multiple levels of medical direction availability. Medical direction at the local hospital level was cited by 89% of respondents. Medical direction through a Regional Medical Control Center was used according to 24% of respondents. Only 2% of respondents indicated use of a Statewide Medical Control Center; and 2% indicated the level of medical direction used by EMS providers was unknown. “Other” means of medical direction was identified by 13% of respondents.

VII. Extra-State Access to Medical Direction

Asked whether the state EMS office experienced complaints about obtaining medical direction when units go out of state, 72% report there had been no such complaints; 17% said there had been complaints; and 11% did not know.

C. State Communications Systems

Seventy-six percent (76%) of the respondents to this item indicated there is a system of public safety communications owned and operated by the state. Of those in this cohort, only 62% indicated that the State EMS office has access to that communications system.

I. Services Provided by the State Communications System

State communications systems were reported to be used for medical direction purposes by 20% of this cohort. Dispatching any public safety service was cited as a use of the system by 46% of respondents. The most common use of these state-owned and operated resources was for purposes of emergency management, with 66% of the respondents identifying this use. Administrative communication was a purpose identified by 40% of respondents.

43% of the respondents indicated the state communications system was used for purposes other than those listed; and 9% indicated the purpose was unknown.

II. Executive Control of the State Communications System

The survey asked respondents to identify the agency charged with executive control of the State public safety communications system. In some instances, the executive control is shared between two agencies. Only two respondents identified the state EMS office as the agency with executive control for the state public communications system. The state police agency was identified by thirteen respondents; the state telecommunications office by eight; and, the state transportation department by only one respondent.

Thirteen respondents indicated “other” as the agency responsible for the state communications system. In some instances, these were other agencies, such as the state health department or state emergency management agency; and in other instances, “other” indicated a board, committee, or multi-agency group with oversight responsibility.

III. Narrow-Banding Awareness and Readiness

Ninety-one percent of the respondents to this item indicated awareness of the 2013 date which is the deadline for narrow-banding (re-farming below 512 MHz). Four percent were unaware of the deadline and four percent were unsure.

Forty percent of the state EMS offices that were aware of the deadline have in place a process to determine the readiness of EMS providers for narrow banding.

Seventy-one percent of respondents thought NASEMSO should develop an assistance package for state EMS offices to assist in narrow-banding. Nine percent opposed development of such a package by NASEMSO; and twenty percent were unsure.

D. General

I. Statewide EMS Communications Plans

Fifty-two percent of the respondents to this item indicated there is a currently used statewide EMS Communications Plan. This cohort was asked to identify how often the plan is updated:

Every 0 – 3 years (39% of respondents)
Every 4 – 6 years (13% of respondents)
Every 7 – 10 years (13% of respondents)
More than 10 years (22% of respondents)
Unknown (13% of respondents)
Thirty-eight percent of the respondents indicated the state communications plan is used to guide the process of FCC PM Channels in the issuance of IMSA letters. Thirty-one percent indicated the plan was not used for these purposes, and an equal percent indicated it was unknown whether the plan was used for these purposes.

Asked whether the state communications plan was used to guide the process of EMS Communications System development, 65% indicated the plan was used for these purposes; 19% indicated it was not; and, 15% were unsure.

II. Automatic Crash Notification Data Capture

An automatic crash notification system is designed to detect when the vehicle has been involved in a crash, and to automatically call for assistance (often through a third party, such as OnStar). This

technology can call for assistance when the occupants may not be able to do so, and can provide reliable vehicle location information. These systems are available only on some vehicles.

Because injuries from car crashes can be both severe and time-sensitive, it is thought these systems may be of great value in reducing morbidity and mortality from motor vehicle crashes. The actual impact of this technology on EMS dispatch is unknown. Our instrument asked respondents to identify whether they capture information on the number of EMS calls generated by automatic crash notification technology. Only one state (Utah) indicated they are currently collecting this information.

III. Mandates relating to Emergency Medical Dispatching

Seventy percent of the respondents indicated there is no state-mandated formal Emergency Medical Dispatch service available through 9-1-1 calls to Public Safety Answering Points.

Seventy-eight percent of the respondents indicated there is no state-mandated medical oversight of Emergency Medical Dispatching at Public Safety Answering Points.

2. Access, Dispatch, or Communications Issues the States Would Like to See Addressed

Fourteen states listed specific access, dispatch or communications issues they would like to see addressed. The following section contains the specific suggestions of these respondents.

Alaska
Radio subscriber costs and radio cost for P-25 compatible radios

Arkansas
Assistance with 2013 deadline for narrow-banding

Florida
Narrowbanding to 6.25 KHZ, get involved with interoperability between states (FEMA, RECC), federal grant funding and use of amateur radio in hospitals (required for future ASPR/DHS funding

Iowa
Help with narrow-banding requirements and guidance/recommendations on interoperabilty processes (best practices)

Kentucky
The development of clear channel national or regional EMS mutual aid frequencies on VHF and UHF as a part of the rebanding process - Determining whether EMS should move towards allowing cell phones to become the sole source of available radio communications - Develop stratgies on how to leverage funds from the Public Safety Interoperability Grant Program for state and local EMS agencies.

Massachusetts
Best practices for EMS communication centers

Nevada
Model legislative/rule language for mandating medical dispatch

Ohio
One agency suggested a study of benefits on the emerging technology that would allow text message access to 9-1-1 psaps.

Oklahoma
Best Practice

Rhode Island
EMS-specific guidance for utilization of interoperable comms; Guidance/toolkit for implementation of statewide EMD certification requirement for EMS dispatchers

Utah
The possibility for communications between contiguous states.

Vermont
Please continue to put the evolving federal communications activities into plain English.

Washington
Narrow banding and interoperable communications.

Wisconsin
List-serve or clearing house for those states in process of implementing a statewide EMD program

3. State Communications Systems Narratives

Thirty-two states provided narrative descriptions or comments relating to the structure of and frequencies used in EMS communications systems in the states. The following section lists each state that provided such narrative remarks and the complete remarks made by each respondent.

Alabama

"VHF-155.340 (HEAR), cell phones, Southern Linc"

Alaska

"Highly variable"

Arizona

"Combination of UHF, VHF and 800 MHz in urban areas. Cell phones used in areas with limited radio reception. Capability to trunk and transfer between UHF and VHF is progressing."

Arkansas

"Current EMS regulation requires all permitted ambulances to have the following frequencies: 155.235 MHz, 155.280 MHz., 155.340 MHz. Frequencies are checked yearly by the State EMS office when annual ambulance inspections are conducted. Approximately 5% of providers utilize 800 MHz system for private communication, however they still have the mandated VHF frequencies."

California

"EMS communications are provided by a variety of local public safety agencies (primarily fire) and private EMS providers. The communications system used by each of these entities is unique to their individual needs."

Colorado

"UHF med channels, 800 MHz, cell phones"

District of Columbia

"Primarily an 800MHz trunked system. DC FEMS is the primary user, along with all receving facilities."

Florida

"The primary radio system is usually determined at the county level (either 800MHz or UHF) but UHF MED channels are required in all cases. VHF is used for flight.

Georgia

"Most Urban systems are 800 or better. Most rural areas are UHF/VHF"

Iowa

"VHF Plan written in 1970s. State is currently writing interoperability plan for VHF, UHF, 700/800"

Indiana

"All EMS provider organizations shall be capable of 2 way communications with associated provider vehicles and shall be used exclusively for dispatch and tactical communications and apart from the Indiana Hospital Emerency Radio Network(IHERN). All EMS vehicles shall be equipped with 2 channels or talk- groups with 1 channel or talk -group used primarily for dispatch and tactical

communications and 1 channel or talk-group shall be 154.340 MHZ and have the proper tone equipment to operate on IHERN unless the provider organization vehicles and all the destination hospitals within the operational area of the provider organization have a system that is interoperable with the Indiana statewide wireless public safety voice and data communications system, per IAC 1-4-2"

Kansas

"Local decision. There is no structure."

Maryland

"911 centers some on 800 MHz trunk, and 150 VHF. The 24/7 statewide EMS comm. cntr EMRC uses 462 to 468 MHz. SYSCOM 44.74, Helimed with tone codes 47.66 for state police medevac operations"

Massachusetts

"We are primarily using CMED centers that control the 10 UHF channels."

Michigan

"All licensed EMS units and hospitals are equipped on two VHF frequencies; many also are equipped with local or statewide systems."

Mississippi

"High band is required by regulations for all vehicles. High band is the primary communication system used by most ambulance services for all operations and medical control. 800 MHz is used by a few services."

Montana

"Montana currently requires all services to have 4 EMS frequencies in their vehicle mobiles. They are all four VHF frequencies with one designated for ambulance to hospital and ambulance to ambulance calls. The other three are regional paging frequencies. Montana is heavily invested in conversion to a statewide, microwave, trunked P-25 system with will negate the need for specific frequencies as everything will be in groups and the actual frequencies the system is using will be unknown to the user."

Nebraska

"There is a mixture of low band, UHF, VHF and 700-800 MHz frequencies used in the state and most EMS services have the ability to use more than one."

Nevada

"Reno and Las Vegas use Med Channels for dispatch and medical control. Rural services use VHF (law enforcement) for dispatch and med channels for medical control"

New Mexico

"Statewide EMSCOM is a mountain top repeater and microwave system with 43 linking points. UHF 463.000 to 463.175 as unit to hospital channels and 462.950and 462.975 as dispatch channels."

North Carolina

"Primarly VHF direct to hospital, 155.340 MHz"

North Dakota

"Simple: Ambulances use 155.340 for communications with hospitals. They may have their own frequency that they use for dispatch or company business."

Ohio

"Varies by area. Some use 155.340 hear radio, some UHF med, some use cellular network."

South Carolina

"Primary VHF: 155-340, 155-220, 20% 800 MHz"

Tennessee

"The State EMS Division provides consultation, oversight and enforcement of telecommunication rules and regulations. Infrastructure and equipment is owned and operated by local government or private entities utilizing VHF, UHF and 800-MHz frequencies approved for use in their areas."

Utah

"800 MHZ & VHF 155.340 155.1785"

Vermont

"All agencies use 155.340 for ambulance to hospital communications. Volume is low and hospital separation makes this a workable arrangement. EMS is dispatched on a variety of mostly VHF with some UHF and one 800 MHz frequencies. All 9-1-1 calls are answered at a State operated PSAP or local PSAP that meets State established performance criteria. Most PSAPs do not do dispatch but do provide pre-arrival instructions. The PSAPs direct the call to the appropriate local dispatcher who uses whatever local dispatch frequency is appropriate. The system works OK except for occasional mutual aid problems where one dispatcher is unaware of the status of a surrounding agency due to operations on separate frequencies."

Virginia

"Agencies are dispatched on licensed frequencies of the Public Safety Answering Point or 9-1-1 dispatch center. All licensed EMS agencies have blanket licensure from the Commonwealth of Va. to access designated EMS mutual aid channels via portable and mobile (non-fixed facility) radio."

Washington

"Based upon previous answers in this survey, there is a hybrid mix of VHF, UHF and 800 mghz communications systems."

West Virginia

"VHF & UHF Medical Channels connected via microwave to 5 regional medical command centers. The state trauma & emergency care system maintains the tower sites, microwave connection backbone and medical base stations. Some areas are using the interoprable system form medical command and others are considering it. Cell phones are in widespread use in the southeastern portion of the state where there are no radio communications."

Wisconsin

"Local agencies are free to use local systems and platforms for pre-arrival communications and med control as long as they maintain compliance with the state communications plan. There are statewide dedicated channels and tones set aside for EMS and hospital use that can be used as well. Agencies and hospitals do not need to use these channels and tones but need to be operational on them."

Wyoming

"VHF wide band transitioning to Statewide VHF P 25 digital trunked system."

APPENDIX

Survey Instrument

List of Participating States

List of NASEMSO Communications Committee Members

NASEMSO Communications Survey Project

NAME:	STATE:

Section A. EMS Dispatch

1. For what percentage of services are these frequency bands being used for EMS *dispatching* in the State?

% Low Band **% VHF** **% UHF** **% 800 MHz** **% Unknown**

% Other (please specify:)

2. What percentage (geographically) of the State is covered by reliable *dispatch* radio communications systems?

% ☐ Unknown

3. Does your EMS Office have a process to determine the existence of the following communications problem areas in your state? (If so, check all that apply)

☐ Yes ☐ No interference/noise **☐ Yes ☐ No poor coverage/dead spots** **☐ Yes ☐ No radio traffic congestion**

☐ Yes ☐ No lack of interoperability **☐ Yes ☐ No too few frequencies** **☐ Yes ☐ No aging/outmoded equipment**

Other (please specify:)

4. Does the State currently certify or license Emergency Medical Dispatchers? ☐ Yes ☐ No

5. What percentage of calls for EMS are handled by an "Emergency Medical Dispatcher" (defined as state certified or licensed, or formally trained in an EMD program meeting national or state standards)? % ☐ Unknown

6. What percentage of life threatening calls get "pre-arrival instructions" (defined as instructions to the caller to provide treatment intervention)? % ☐ Unknown

7. Is there a law or rule/regulation that requires the use of an "Emergency Medical Dispatcher" (defined as above) for calls requesting EMS?

☐ Yes ☐ No

Section B. Medical Communications (Hospital Arrival Notification and Medical Direction)

1. What percentage of EMS services use these frequency bands for *medical communications* in the State?

% Low Band **% VHF** **% UHF**

% UHF MED Channels **% 800 MHz** **% Cell Phones**

☐ Unknown **☐ Other (specify:)**

2. Does your EMS Office have a process to determine the existence of the problems with *medical* radio communications radio systems in your state? Check all that apply

☐ interference/noise **☐ poor coverage/dead spots** **☐ radio traffic congestion**

☐ lack of interoperability **☐ too few frequencies** **☐ aging/outmoded equipment**

☐ Other (please specify:)

3. Are EMS providers in the State sending EKG telemetry to the hospitals? ☐ Yes ☐ No ☐ Unknown

If yes, what frequency band(s) is/are used to send EKG telemetry?

☐ Low Band **☐ VHF** **☐ UHF**

☐ UHF MED Channels **☐ 700 MHz** **☐ 800 MHz**

☐ 2.4 GHz **☐ 4.9 GHz MHz** **☐ Cell Phones**

☐ Other (specify:)

4. How would you characterize the State's position on the use of Cell Phones for medical direction? Click here for choices

(If other than drop-down menu choice, please specify:)

5. On what basis is on-line/direct medical direction done in your state? (check all that apply)

☐ Local Hospital **☐ Regional Medical Control Center** **☐ Statewide Medical Control Center** **☐ Unknown**

☐ Other (Please explain:)

6. Has the state EMS office experienced complaints about obtaining medical directions when units go out of state?

☐ Yes ☐ No ☐ Unknown

7. Generally describe the structure of and frequencies used in EMS communications systems in your state:

Section C. State Communications System

1. Does the State own and operate a public safety communications system? ☐ Yes ☐ No

1.a. If yes, what services are provided by the public safety communications system?

☐ Medical Direction and hospital notification communications ☐ Dispatch (any public safety service) ☐ Emergency Management

☐ Administrative Communications ☐ Other (Please specify:) ☐ Unknown

1.b. Does the State EMS office share access to that system? ☐ Yes ☐ No

2. Who has executive control of that State public safety communications system?

☐ State EMS Agency ☐ State Police Agency ☐ State Telecommunications ☐ Unknown

☐ State Dept. of Transportation ☐ Other (Please specify:)

3. Is the state EMS office aware of the 2013 date which is the deadline for narrow-banding (re-farming below 512 MHz)? ☐ Yes ☐ No ☐ Unknown

3.a. Does the state EMS office have in place a process to determine the readiness of EMS providers for narrow banding (re-farming below 512 MHz)? ☐ Yes ☐ No ☐ Unknown

3.b. Should NASEMSO develop an assistance package for state EMS offices to assist in narrow-banding (re-farming below 512 MHz)? ☐ Yes ☐ No ☐ Unknown

Section D. General

1. Is there a currently used statewide EMS Communications Plan? ☐ Yes ☐ No ☐ Unknown

1. a. If there is a plan, how often is it updated? Click here for choices

1.b. If there is a plan, is it used to guide the process of FCC PM channels in the issuance of IMSA letters? ☐ Yes ☐ No ☐ Unknown

1.c. If there is a plan, is it used to guide the process of EMS Communications System development?

☐ Yes ☐ No ☐ Unknown

2. Does your state capture information on the number of EMS calls generated by automatic crash notification technology?

☐ Yes ☐ No ☐ Unknown

3. Are there any access, dispatch, or communications issues the State would like to see the NASEMSO Communications Committee address?

4. Is there state mandated formal Emergency Medical Dispatch service available through 9-1-1 calls to PSAPs?

☐ Yes ☐ No ☐ Unknown

5. Is there state mandated medical oversight of Emergency Medical Dispatching at PSAPs?

☐ Yes ☐ No ☐ Unknown

List of States and Territories Participating in the 2008 NASEMSO Communications Project

01	**Alabama**
02	**Alaska**
03	**American Samoa**
04	**Arizona**
05	**Arkansas**
06	**California**
07	**Colorado**
08	**Connecticut**
09	**Delaware**
10	**District of Columbia**
11	**Florida**
12	**Georgia**
13	**Idaho**
14	**Indiana**
15	**Iowa**
16	**Kansas**
17	**Kentucky**
18	**Maine**
19	**Maryland**
20	**Massachusetts**
21	**Michigan**
22	**Minnesota**
23	**Mississippi**
24	**Missouri**
25	**Montana**
26	**N. Mariana Islands**
27	**Nebraska**
28	**Nevada**
29	**New Hampshire**
30	**New Jersey**
31	**New Mexico**
32	**New York**
33	**North Carolina**
34	**North Dakota**
35	**Ohio**
36	**Oklahoma**
37	**Oregon**
38	**Pennsylvania**
39	**Rhode Island**
40	**South Carolina**
41	**South Dakota**
42	**Tennessee**
43	**Texas**
44	**Utah**
45	**Vermont**
46	**Virginia**
47	**Washington**
48	**West Virginia**
49	**Wisconsin**
50	**Wyoming**

Communications Committee Members

Shawn Rogers, OK, Chair

Brent Williams, MI

Tonya Hines, CA

Bonnie Sinz,CA

Carl Van Cott, NC

Paul Wittkamp, WI

Kevin McGinnis, Communications Technology Advisor