

WISCONSIN EMERGENCY MEDICAL SERVICES COMMUNICATIONS PLAN



Department of Health Services
Division of Public Health
Office of Preparedness and Emergency Health Care
Wisconsin Emergency Medical Services Section
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FORWARD

The Wisconsin Emergency Medical Services (EMS) Communications Plan is a communications guide for EMS providers. This plan provides requirements for local EMS systems to assure that a statewide communication plan is in place to address daily needs as well as large-scale multi-casualty situations. The plan was originally created in 2002 with input from an ad hoc committee attached to the EMS Advisory Board. Subsequent versions of the plan were adopted as changes in rules and communication technologies occurred.

This current plan blends the original information and guidance with the new interoperability planning and other technical documents released by the Governor-appointed Interoperability Committee (IC).

The document is intended to serve four purposes:

- Provide an overview of EMS communications.
- Provide specific information on EMS communications in Wisconsin. Serve as a "user's manual" for providers in creating and maintaining their EMS communications.
- Provide an update to current EMS providers on new communication channels and technologies.

The first section provides general information on what is involved in communications between pre-hospital health care providers, emergency medical technicians (EMTs), first responders, and the other entities with whom they need to communicate on a regular basis. This includes communications with hospitals, other EMS providers, and public safety agencies.

The second section addresses specific information about EMS in Wisconsin. It includes an overview of how communication occurs, the radio channels, and Federal Communications Commission (FCC) rules that apply to Wisconsin EMS service providers.

The third section is a guide to EMS service providers about the laws and provider requirements that govern EMS communications. This section includes information on required radio channels, recommended equipment needs, and a set of questions for providers to consider in setting up their communication system.

The fourth section will describe and define new emerging communications technologies and strategies in Wisconsin and the impact that these will have for the Wisconsin EMS system.

Questions about this document or EMS communications should be sent to:

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Table of Contents

NEW ADDITIONS AND CHANGES FOR THE 2019 EMS COMMUNICATIONS PLAN	5
GLOSSARY	6
SECTION 1 – COMMUNICATION SYSTEM COMPONENTS	10
1.0 Introduction – System Components.....	10
1.1 Public Access to EMS after Discovery of a Medical Emergency.....	11
1.2 Dispatch and Coordination of EMS Response	11
1.3 Medical Control Communications	12
1.4 Interagency Communications (for resource and disaster coordination)	12
1.5 Education for Users.....	12
SECTION 2 – STATE EMS COMMUNICATIONS PLAN	13
2.0 Administrative Overview – State Authority.....	13
2.1 Public Access to EMS after Discovery of a Medical Emergency	14
2.2 Dispatch and Coordination of Response	14
2.3 Medical Control Communications	14
2.4 Interagency Communications (for resource and disaster coordination)	15
2.5 Ambulance Licensure and Frequency Authorization.....	16
2.6 Frequencies and Tones for EMS Communications	16
2.7 FCC License Requirements.....	19
SECTION 3 – LOCAL PROVIDER AND SYSTEM STANDARDS	21
3.0 Overview and Laws.....	21
3.1 EMS Provider Requirements – Radio Frequency Capabilities	21
3.2 EMS Equipment Needs and Requirements.....	22
3.3 Considerations in Setting Up Your Communication Systems and Purchasing Equipment.....	22
SECTION 4 – EMERGING TECHNOLOGIES	25
4.0 ESInet, GIS, and NG911 implementation.....	25
4.1 Using an Incident Radio Communications Plan (ICS 205).....	28
APPENDIX A: DETAILED TABLE OF EMS COMMUNICATIONS CHANNELS	29
APPENDIX B: WISCONSIN VHF MUTUAL AID CHANNELS: WISCONSIN STATEWIDE VHF PUBLIC SAFETY COMMON FREQUENCY CHART	31

APPENDIX C: WISCONSIN HEALTHCARE EMERGENCY PREPAREDNESS PROGRAM REGIONAL STAFF CONTACT LIST33

APPENDIX D: SUGGESTED PRIORITY FOR EMS CHANNEL PROGRAMMING35

APPENDIX E: WISCONSIN HOSPITAL TONES FOR EMS B 155.340 AND EMS A 155.400 CHANNELS0

APPENDIX F: EMS AND OTHER MUTUAL AID CHANNEL USE4

APPENDIX G: WISCOM OVERVIEW.....0

APPENDIX H: WISCOM LOCAL HOSPITAL / EMS TALK GROUPS1

APPENDIX I: WISCOM EMS TALK GROUP PLAN6

NEW ADDITIONS AND CHANGES FOR THE 2019 EMS COMMUNICATIONS PLAN

UPDATES TO AIR MEDICAL AND MUTUAL AID COMMUNICATION AND COORDINATION:

- SECTION 2:
 - 2.4 Interagency Communications
 - Intercept and Air Medical
 - 2.6 Frequencies and Tones for EMS Communications
- SECTION 3: 3.1 EMS Provider Requirements
- APPENDIX D

UPDATES TO THE HEALTHCARE EMERGENCY READINESS COALITION (HERC) REGIONAL CONTACT INFORMATION:

APPENDIX C:

- Updated staff information for HERC Coordinator, EMS Coordinator, or EMS Section staff
- WISCOM SME contact information
- One WISCOM SME per HERC Region
- WISCOM Point of contact for hospital staff

UPDATES AND ADDITIONS:

APPENDIX E, APPENDIX H:

- New hospitals added, hospital names updated with recent changes
- Old hospital local EMS WISCOM talk group alias vs new talk group alias comparison
- Pp. 8, 20, 21 Strong recommendation of P25 compliance when purchasing equipment.

EMERGING COMMUNICATIONS TECHNOLOGIES:

SECTION 4:

- 4.1 ESInet
 - FirstNet
 - Next Generation 9-1-1
- 4.2 Communications planning ICS205

GLOSSARY

9-1-1: A three-digit emergency telephone number accepted and promulgated by the telephone industry as the nationwide emergency number.

9-1-1 Enhanced: A three-digit emergency telephone number that has additional features such as automatic phone number identification and automatic location identification.

Advanced life support or ALS: Means use, by appropriately trained and licensed personnel, in prehospital and interfacility emergency care and transportation of patients, of the medical knowledge, skills, and techniques included in the department-approved training required for licensure of emergency medical technicians-intermediate under Wis. Admin. Code ch. DHS 111 or emergency medical technicians-paramedic under Wis. Admin. Code ch. DHS 112 and which are not included in basic life support.

Base station: An item of fixed radio hardware consisting of a transmitter and a receiver.

Basic life support or BLS: Means emergency medical care that is rendered to a sick, disabled, or injured individual, based on signs, symptoms, or complaints, prior to the individual's hospitalization or while transporting the individual between health care facilities and that is limited to use of the knowledge, skills, and techniques received from training under Wis. Stat. § 256.15 and Wis. Admin. Code ch. DHS 110 as a condition for being issued an EMT-basic license.

Call sign: Federal Communications Commission assigned identifying letters and numbers used for identification of a radio station, transmitter, or transmission.

Communications system: A collection of individual communications networks, transmission systems, relay stations, control and base stations, capable of interconnection and interoperations that are designed to form an integral whole. The individual components must serve a common purpose, be technically compatible, employ common procedures, respond to control, and operate in unison.

Continuous tone-controlled squelch system (CTCSS): A system in which radio receiver(s) are equipped with a tone-responsive device that allows audio signals to appear at the receiver audio output only when a carrier modulated with a specific tone is received. The tone must be continuously present for continuous audio output. CTCSS functions are sometimes referred to by various trade names, such as Private Line or PL (Motorola Communications & Electronics), Channel Guard or CG (General Electric Mobile Radio Department), or Tone Call Guard or TCG (E.F. Johnson).

Coverage area: In a radio communications system, the geographic area where reliable communications exist, usually expressed in terms of miles extending radially from a fixed radio station.

CPR: Cardiopulmonary resuscitation. An emergency procedure that combines chest compressions, often with artificial ventilation, to manually preserve brain function and profusion.

Direct dispatch method: A system in which all 9-1-1 call answering and radio dispatching is performed by the personnel at the public safety answering point.

Emergency medical dispatch center: Any agency that routinely accepts calls for EMS dispatcher assistance from the public and/or that dispatches prehospital emergency medical personnel and equipment to such requests.

Emergency medical dispatcher (EMD): A trained public safety telecommunicator with additional training and specific emergency medical knowledge essential for the efficient management of emergency medical communications.

Emergency medical service (EMS): Services used in responding to the perceived individual need for immediate medical care in order to prevent loss of life or aggravation of physiological or psychological illness or injury.

Emergency Medical Technician-Basic (EMT-B): An individual who is licensed by the Department of Health Services to administer basic life support and to properly handle and transport sick, disabled or injured individuals.

ESInet: Emergency Services IP-based network, a standards-based “network of networks”.

Federal Communications Commission (FCC): A board of commissioners appointed by the president under the Communications Act of 1934 to formulate rules and regulations and to authorize use of radio communications. The FCC regulates all communications in the U.S. by radio or wireline, including television, telephone, radio, facsimile, and cable systems.

Fire Ground: A series of VHF radio channels that are designated statewide for use as on-scene tactical communications for fire, rescue, EMS, and MABAS operations.

FirstNet: First Responder Network Authority

Emergency Medical Responder (EMR): A person who provides emergency medical care to a sick, disabled, or injured individual prior to the arrival of an ambulance.

Frequency: The number of cycles, repetitions, or oscillations of a periodic process completed during a unit of time. The frequency of waves in the electromagnetic spectrum (radio waves) is designated in hertz, kilohertz, or megahertz (Hz, KHz, or MHz). One hertz is equivalent to one cycle per second.

Frequency coordination: The cooperative selection and allocation of radio frequencies such that all systems can operate with minimum interference.

IFERN: Interagency Fire Emergency Radio Network, formerly WISTAC 1.

Intercept: The transfer of care of a patient between an ambulance and an air medical provider or ALS provider that can provide a higher level of medical care.

IC (Interoperability Council): A council appointed by the governor to address the public safety communications interoperability issues in our state and to develop a solution.

MABAS (Mutual Aid Box Alarm System): A method developed for mutual aid and communications support during incidents requiring a large, multi-agency response.

Med Pair: The 10 MED Pair channels are designated for EMT-intermediate and paramedic care. The MED channels are dedicated to communications among ambulance and hospital personnel directing patient care prior to arrival at the hospital at a paramedic and intermediate level. The channel is for emergency medical care/telemetry and should be limited to this purpose. A secondary use for air medical dispatch is acceptable if it does not interfere with the ability to communicate to provide patient care.

MARC: Mutual Aid Radio Channels (MARC 1, 2, 3, and 4) are statewide interoperability frequencies. Used for communications between public safety agencies and providers. The MARC1 channel operates as a repeater pair for temporary or portable repeater use during an event.

Medical control or online medical control: Voice communicated medical direction from a physician to EMT personnel to assist in the care provided by EMT personnel in the field.

Mobile station: A two-way radio station in the mobile service intended to be used while in motion or during halts at unspecified points.

Narrow Banding: The effort underway by the FCC in 2012 that developed more VHF channels for public safety communications. Narrow band channels are 12.5 KHz. in width. All public safety radios must comply with narrow banding regulations by the end of 2012.

P25 or Project 25: Project 25 (P25) is the standard for the design and manufacture of interoperable, digital, two-way wireless. STRONGLY RECOMMENDED AS EQUIPMENT IS REPLACED.

Paging: A one-way communications service from a base station to mobile or fixed receivers that provides signaling or information transfer by means such as tone, tone-voice, tactile, optical readout, etc.

Pre-arrival Instructions: Instructions given by the dispatcher to the caller to assist the caller in keeping the patient from injuring him/herself further and to give the caller life-saving information and/or instruction to potentially aid a patient in a life-threatening situation prior to the arrival of medically trained professionals.

Private Line (PL): Motorola's trademarked name for its continuous, tone-controlled squelch system, CTCSS. DPL, or digital PL, which uses a burst of digital information rather than a continuous tone.

PSAP (Public Safety Answering Point or Public Safety Access Point): A 9-1-1 call center responsible for receiving calls from the public for emergency assistance from law enforcement, fire, or emergency medical help.

Radio: The transmission and reception of signals by means of electromagnetic waves without a connection wire.

Regional EMS system: An emergency medical services area (trade, catchment, market, patient flow, geographic, or governmental) that provides essentially all of the definitive emergency medical care for all emergencies and for the most critically ill and injured patients within the area.

Repeater: A base station radio that receives radio transmissions from weaker mobile and portable radios and simultaneously re-transmits the communications over a much larger area. This method uses two separate channels or frequencies, unlike simplex; see below.

Simplex: Radio communications that use the same frequency to both transmit and receive.

Tactical: Communications that take place over short distances, often at the scene of an incident involving public safety responders. These communications are usually operations based.

Talk group: A term given to assigned groups on a trunked radio system. Unlike a conventional radio that assigns users a certain frequency, a trunk system takes a number of frequencies allocated to the system. Then the control channel coordinates the system so talk groups can share these frequencies seamlessly.

Tone code: A specified character of transmitted tone signals required to effect a particular selection or function.

Telecommunicator Assisted CPR: The ability of a PSAP to deliver CPR instruction via telephone when appropriate to non-trained 9-1-1 callers.

Trunking: A digital technology that forms “talk groups” instead of channels on computer controlled communications systems and infrastructures. The chief advantage is a greatly increased loading capacity on the system.

Ultra-High Frequency (UHF): Frequencies between 300 and 3000 MHz.

Very High Frequency (VHF): Frequencies between 30 and 3000 MHz.

VOIP or ROIP: Voice over Internet Protocol (IP) or Radio over IP. This is a method of transmitting and receiving voice communications, either telephony or radio frequency (RF), over the internet to achieve interoperability between noncompatible systems.

VTAC or VCALL: These are a series of VHF radio channels that are designated within the nationwide interoperability plan for use as on-scene, tactical communications channels for any public safety interagency tactical communications use.

WISCOM: The Wisconsin Interoperable System for Communications (WISCOM) is a shared statewide VHF trunked communications system that public safety personnel in communities across the state will use to communicate during a major disaster, large-scale incident, or in day-to-day use.

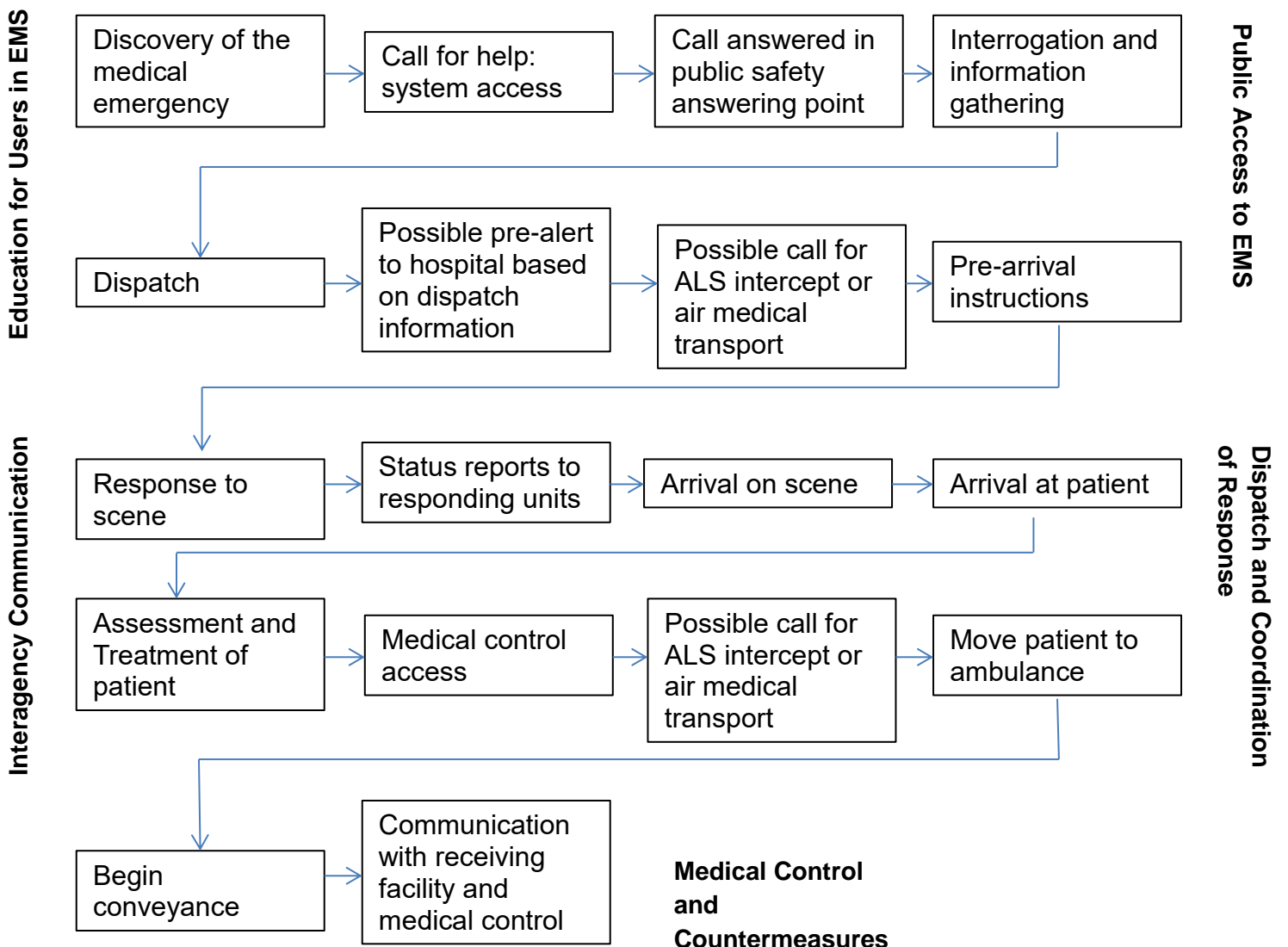
SECTION 1 – COMMUNICATION SYSTEM COMPONENTS

1.0 Introduction – System Components

An Emergency Medical Services (EMS) communication system must take into account many factors. The goal of being able to exchange key information for the EMS system to function is dependent on a system that takes into account five key components:

- Public access to EMS after discovery of a medical emergency
- Education for users
- Dispatch and coordination of response
- Interagency communication (for resource and disaster coordination)
- Medical control communications

Figure 1: Flow of Prehospital EMS Highlighting Role of Emergency Medical Communication



1.1 Public Access to EMS after Discovery of a Medical Emergency

An essential component of an EMS communications system during a medical emergency is public access to the three-digit public safety phone number 9-1-1. This is achieved through the use of 9-1-1 public safety answering points or PSAPs, which route all emergency calls to the appropriate agency. Enhanced 9-1-1 (E9-1-1) has the following additional features beyond the basic 9-1-1 system:

- Selective routing of the call to the appropriate center based on originating location;
- Automatic number identification (ANI) and automatic location identification (ALI) of the caller.

All Wisconsin counties are equipped for enhanced 9-1-1 operations.

Cellular telephone access to 9-1-1 is still problematic because enhanced 9-1-1 features are not functional without additional infrastructure. Quite often, the location of the caller and routing of the message to the appropriate EMS service are still dependent on spoken information from the caller, which may lead to delayed response times. The evolution of Next Generation 9-1-1 in Wisconsin will allow for a much more robust access system, using current digital technologies.

1.2 Dispatch and Coordination of EMS Response

After notification that a call has been received, the next component is to dispatch the appropriate EMS unit to the scene. There is a variety of dispatch methods in Wisconsin. Law enforcement agencies or agencies with combined law enforcement, fire, and EMS responsibilities provide the bulk of EMS communications. Many (approximately half) of the persons providing these services in Wisconsin have completed some type of formal training as an EMS communicator.

Central medical dispatch's primary function is service coordination. This includes: (1) access to EMS staff from the incident; (2) timely dispatch and coordination of EMS resources; (3) coordination with medical facilities; and (4) coordination with other public safety services.

Pre-arrival medical instructions are an important aspect of EMS communications. However, it may be difficult for a communicator in a multifunctional agency to provide pre-arrival instruction while simultaneously being responsible for other functions. The time and cost of training associated with the provision of medical instructions prior to the arrival of the ambulance require an additional commitment from the dispatch center that includes initial and continuing education and quality improvement activities. Because the provision of pre-arrival instructions constitutes indirect patient care, the Wisconsin EMS Board has recommended EMS dispatch centers use an emergency medical dispatch (EMD) system. Further, this EMD system should be approved and monitored by the dispatch center's medical director, and the telecommunicators using the system should be certified in its use.

Ambulance and field personnel should also be trained in the use of communication equipment. Training would include at least the following capabilities:

- The ability to use all the communication equipment for the ambulance.
- The ability to communicate accurate patient care reports.
- Use of new digital communication technologies and appropriate use of new mutual aid channels.

1.3 Medical Control Communications

Medical control communications provide field personnel with a direct link to relay information and receive medical advice from a hospital or other health care facility. In some cases, these communications might also include biomedical telemetry of EKG information directly to the facility while the patient is in route. Medical control communications have been accomplished primarily by radios in the past, but cellular telephones are being used in more cases today. (For cellular phone communication, see Section 3.3.)

The degree to which medical control communications are used varies by areas of the state. Factors that influence how much medical control communications are used include geographical factors and the degree to which standing orders (patient care protocols) are allowed by the ambulance service medical director.

1.4 Interagency Communications (for resource and disaster coordination)

There are a number of reasons why coordination of interagency communications is an important piece of the Wisconsin State EMS Communications Plan. Interagency communications are needed primarily for resource and disaster response coordination, to optimize the ability to communicate with other agencies when necessary, but avoid interference with other agencies when a response is specific to only one agency.

The need for interagency communications can be illustrated by the following list of possible communication paths:

- Hospital to hospital
- Ambulance to hospital
- Ambulance to ambulance
- Ambulance to dispatch
- Hospital to dispatch
- First responder team to medical control
- First responder team to ambulance
- First responder team to dispatch
- Helicopter to hospital
- Ambulance to helicopter
- Helicopter to dispatch
- Telemetry from ambulance
- Medical control to ambulance
- Communication between all public safety agencies

1.5 Education for Users

Communication system users need to be educated in each component of the system for it to work as efficiently as possible. In the case of EMS communications, knowledge of how and when to access the system and activate an EMS response is essential. Continued public education efforts are needed to help in this area.

SECTION 2 – STATE EMS COMMUNICATIONS PLAN

2.0 Administrative Overview – State Authority

Wisconsin Stat. § 256.08(4)(a) establishes the Wisconsin Department of Health Services (DHS) as the lead state agency for emergency medical services (EMS). Wisconsin Stat. § 256.08(4)(g) provides substantial authority for the promulgation of administrative rules to plan and implement guidelines for EMS systems and to provide technical assistance to local EMS agencies. Development and submission of an operational plan for each ambulance service, including a communications component, is an important part of the EMS licensing rules.

Additionally, statewide planning for coordinated use of radio frequencies for EMS communications is necessary so individual efforts do not become counterproductive to the system. The Federal Communications Commission (FCC) and Emergency Medical Radio Service (EMRS) rules require frequency coordination to comply with state EMS communications plans where they exist.

The DHS EMS Section currently provides limited assistance to Wisconsin EMS providers and agencies in applying for radio licensing and frequencies. FCC license applicants for EMRS frequencies submit a request for a letter of support to the State EMS Section describing their proposed application. If the proposal is in conformance with the state EMS communications plan, the Wisconsin EMS Section will provide a letter of support, which the applicant then submits to the national frequency coordinator.

Specific information on FCC license requirements and steps to follow in obtaining a license can be found in Section 2.7 of this guide, and also in Appendix F.

Goals for a State EMS Communications System - Five fundamental goals identified in the National EMS Directors Planning Guide for Emergency Medical Communications:*

1. EMS communication systems should meet the needs of emergency medical systems and nationally accepted standards of functional performance.
2. Local EMS communications should be compatible with, and should not interfere with, EMS communication systems in neighboring or adjacent areas and within the state or in other geographical areas.
3. Local EMS communications systems should be compatible with, and should not interfere with, other types of communication systems that are used by non-EMS agencies.
4. EMS communications should make maximum use of state and other common resources, where this approach is appropriate and cost-effective.
5. The Wisconsin EMS Section acts as the representative of local EMS systems in dealing with federal agencies and national organizations.

** Planning Emergency Medical Communications, National Assoc. of EMS Directors and National Highway Traffic Safety Administration, June 1995*

Taken together, these goals have the following implications for Wisconsin:

- Local services need to follow some minimum standards that ensure communications can occur.
- There is oversight of how communications occur on a regional and statewide basis to avoid conflicts and allow for interagency communications.

- Communication costs are high and resources must be shared to implement and maintain a communications system.
- The Wisconsin EMS Section must serve as a partner and communications conduit between federal agencies and local systems.

The following parts of Section 2 describe the key elements of the State EMS Communications Plan. The EMS communications system must provide the means by which emergency medical resources can be accessed, mobilized, managed, and coordinated in both day-to-day and disaster situations.

2.1 Public Access to EMS after Discovery of a Medical Emergency

The goal of the Wisconsin EMS communications system is to assure a system in which anyone should be able to summon help rapidly in an emergency situation whether for medical, police, fire, rescue, or other emergency need.

The entire state has access to the 9-1-1 system. E9-1-1 (enhanced 9-1-1) coverage is available in all counties. Work is underway to equip PSAPs with the ability to receive 9-1-1 texting. The 9-1-1 system is the recommended means of accessing the EMS system for medical emergencies.

2.2 Dispatch and Coordination of Response

There are a variety of dispatch methods in Wisconsin. Law enforcement agencies or agencies with combined law enforcement, fire, and EMS responsibilities provide the bulk of EMS communications. Many of the persons providing these services in Wisconsin have completed some type of formal training as an EMS communicator.

The communication center's primary function is service coordination. This includes: (1) access to EMS from the incident; (2) dispatch and coordination of EMS resources; (3) coordination with medical facilities; and (4) coordination with other public safety agencies. Recent emphasis on National Incident Management System (NIMS) compliance will assist communications and coordination at large events.

The Wisconsin EMS Board has recommended that EMS dispatch centers use an Emergency Medical Dispatch (EMD) system. Further, this EMD system should be approved and monitored by the dispatch center's medical director and the telecommunicators using the system should be certified in its use.

2.3 Medical Control Communications

The EMS communications system must provide EMS field personnel (Advanced and Basic Life Support) with a channel for communication that permits the exchange of vital medical information between EMS responders and medical control and the receiving medical facility (if different from medical control). This channel can be provided through a variety of mechanisms (radio frequencies and cell phones) and may be dependent on local needs and resources.

Although patient care protocols may be executed by standing orders, contact with medical control is still needed or required for certain procedures or conditions. When to contact medical control is determined

by the ambulance service medical director and approved by the Wisconsin EMS Section as part of the service's operational plan required under Wis. Admin. Code § DHS 110.35.

The ability to communicate with medical control is a requirement for all ambulance services. The ability to talk with medical control from the patient's side is an additional requirement at the EMT- intermediate and EMT-paramedic levels.

2.4 Interagency Communications (for Resource and Disaster Coordination)

EMS communication systems should provide a means of communication to enable medical and logistical coordination between EMS field personnel, emergency department personnel, and other agencies. Additionally, regional or statewide coordination may be necessary based on the EMS operational plan submitted by the provider to the Wisconsin EMS Section. Below are several examples:

Local Coordination: The EMS communications system must have the capability to communicate between agencies using mobile and portable radios. EMS communication systems should be able to describe their communications capability with mutual aid responding units when an emergency requires a multiple EMS agency vehicle response.

Regional Coordination: EMS agencies should establish resource coordination (e.g., first responder, ambulance, and other EMS resources) to ensure that the highest level of care required is available to the patient. The EMS communications system should provide for coordination of EMS resources. EMS agencies should consider their role in large-scale disasters and anticipate the need for interagency communications. Preplanning with local emergency management agencies is an important aspect of interoperability for agencies' communication systems.

Intercept and Air Medical: The local ambulance service must be able to describe how communications take place for ambulance intercepts and air medical transports.

- This includes a means of communication between units once they are dispatched and the ability to communicate to arrange for the transfer of patient care.
- In the case of air medical transports, this includes a means of communication between air and ground units once they are dispatched. The recommended channel for air medical communications with ground units while the air medical unit is on the way to the landing zone is MARC 2 or EMS C. Other channel options may be considered for MARC 2 and EMS C air medical use in the future due to possible interference with MARC 1 use during a large event. (See Sections 2.6 and 3.1 for more information.)

Backup Communications: The concept of back-up communications is to provide redundancies in case of equipment failure during disaster scenarios. Concerning EMS communications specifically, the concept of back-up communications as applied to base station or other fixed radio equipment means they must provide the following capabilities:

- Enable dispatch and response communications to continue despite outage of the primary dispatch and response radio base station.
- Enable local medical coordination communications to continue despite outage of the primary base hospital.
- Minimize the need for additional, widespread training and maintain needed flow of EMS personnel.

A communications failure plan must include provisions for these critical functions:

- Medical control
- Dispatch
- Interagency coordination

The requirement for each ambulance service to have four basic frequencies creates a mechanism for back-up communications. (More detailed information on the required frequencies can be found in Section 2.6.)

Telephone Interconnection: Cellular phones may be used as a primary communications method for ambulance service providers. However, because of some of their limitations, cellular phones cannot take the place of required radio equipment and frequencies. (A more detailed list of the pros and cons of cellular phone vs. radio use can be found in Section 3.3.) Communication during interfacility transport is one area in which cell phones may have an advantage over radios because cell phone use avoids the need to program separate radio channels for large numbers of hospitals. EMS providers may also wish to provide telephone interconnection capability with specialty information and treatment centers (i.e., poison center, burn centers) that may have statewide contact numbers.

2.5 Ambulance Licensure and Frequency Authorization

State approval for an EMS service provider license includes authorization for the ambulance service provider to operate on all EMS frequencies as part of the State FCC license. Ambulance providers have permission to use EMS frequencies as outlined and approved as part of their required operational plan.

2.6 Frequencies and Tones for EMS Communications

Standard EMS channels are 155.340, 155.400, 155.280, MARC 1, MARC 2, and Med Pairs. All EMS transport providers must have the capability to communicate on all these channels except for the Med Pairs and 155.280. Services that do not currently have this capability must add it when purchasing new equipment or when they reprogram equipment. The above requirement applies regardless of which technology or communications system is used locally.

DHS recommends all EMS services have the capability to communicate on 155.340, 155.400, 155.280, and the MARC channels. Use of these frequencies should be coordinated with the local ambulance provider and other related agencies.

There may be existing local systems that will be exceptions to the normal use of these frequencies as explained below. These exceptions should be taken into consideration in terms of how they may affect other agencies and when planning for county and regional communications needs.

Other channel options may be considered for MARC 2 and EMS C air medical use in the future due to possible interference with MARC 1 use during a large event. (See section 3.1 for more information.)

EMS B (formerly State EMS channel) (155.340): Dedicated to Basic Life Support (BLS) and Advanced Life Support (ALS) communications with a primary purpose of communications between emergency medical field personnel and hospital personnel directing patient care prior to arrival at the hospital. A secondary

purpose is on-scene medical coordination for mobile-to-mobile medical communications. This second use should be reserved as a last resort, after first attempting to use alternate frequencies (local, 155.280, and MARC, in that order). The 155.340 channel is for emergency medical care and should be limited to this purpose.

All ambulances licensed in Wisconsin are required to have the capability to communicate with their receiving hospitals and medical control hospitals on 155.340. All hospitals are also required to have the capability to communicate on this channel so ambulances from any area can make contact with the facility. This can be accomplished through direct 155.340 communications or through a patch from a central dispatch center.

EMS A (formerly State ALS channel) (155.400): Dedicated to communications among ambulance and hospital personnel directing patient care prior to arrival at the hospital while using advanced life support skills. The primary and secondary use of this frequency should be for any ALS communications. This channel is for emergency medical care and should be limited to this purpose. Proper use includes communications for ALS intercepts and air medical contact.

EMS C (formerly State Coordination channel) (155.280): The primary purpose of 155.280 is for communications between hospitals; it provides a backup to the public telephone system, particularly in times of disaster. A secondary purpose is for coordination of landing zone operations for air medical providers, or for interagency EMS field coordination for disasters. This frequency is optional for hospitals that have other means of inter-hospital communication.

Hospital Tones and Codes: Each hospital in Wisconsin is assigned a CTCSS tone or PL (private line). These tones are coordinated to allow communications with just the needed hospital and not with other local facilities. Tones for EMS B, EMS A, and EMS C are the same for any given facility. A digital code, D156, is also assigned for statewide mutual aid use to allow multiple users and agencies access at the same time. This applies to all three channels—EMS B, EMS A, and EMS C. Providers and hospitals are urged to program accordingly at their next opportunity. (See Appendix D for this list.)

Mutual Aid Radio Channels: MARC 1 (151.280/153.845), MARC 2 (151.280), MARC 3 (formerly WISTAC 2, 154.010), MARC 4 (formerly WISTAC 3, 154.130): The Mutual Aid Radio Channels (MARC 1, 2, 3, and 4) are statewide interoperability channels. These channels are to be used for communications between public safety agencies and providers of any discipline. Note that MARC 1 is configured for wide area repeater usage. (See Appendix B for information on the MARC plan.)

IFERN (formerly WISTAC 1) (154.265): This channel is for any EMS, fire, or rescue use in mutual aid operations and for on-scene tactical use. This channel is part of the MABAS system, and is often used for MABAS dispatch functions.

UHF MED Pairs: The 10 MED channels are designated for EMT-intermediate and paramedic care. The MED channels are dedicated to communications among ambulance and hospital personnel directing patient care prior to arrival at the hospital at a paramedic and intermediate level. The channel is for emergency medical care/telemetry and should be limited to this purpose. A secondary use for air medical dispatch is acceptable if it does not interfere with the ability to communicate to provide patient care.

UHF Med Pairs Table

Med Mobile Receive channel frequencies	Med Mobile Transmit channel frequencies
Med 1 463.000	Med 1 468.000
Med 2 463.025	Med 2 468.025
Med 3 463.050	Med 3 468.050
Med 4 463.075	Med 4 468.075
Med 5 463.100	Med 5 468.100
Med 6 463.125	Med 6 468.125
Med 7 463.150	Med 7 468.150
Med 8 463.175	Med 8 468.175
Med 9 462.950	Med 9 467.950
Med 10 462.975	Med 10 467.975

Med 9 and Med 10 are used primarily for dispatch. Note that these 10 pairs of channels are configured for repeater usage. The Med Pair channels need to be coordinated in a geographical area. A requesting provider will normally be approved for Med Pairs 1-8, but normal use is usually limited to either Med Pairs 1-4 or Med Pairs 5-8. Use of these frequencies must be coordinated by the state EMS communications coordinator in conjunction with the dispatch center and ambulance services in the area of requested use.

Trunking Systems (800 MHz/VHF/UHF): Trunking systems are being used more frequently, especially in urban areas, due to the loading, traffic, and management advantages that this technology offers. The WISCOM VHF trunked communications system is being implemented statewide for public safety use. These systems are generally all-discipline in nature, and can be used for ambulance communications between ambulance providers and hospitals. However, because ambulances need to be able to communicate with any hospital in the state, the required VHF channels still apply as an adjunct to communication.

Air Medical Frequency Recommendations: Local providers must be able to describe how communication takes place for air medical transports. This includes a means of communication between air and ground units once they are dispatched. Often, the air provider cannot land unless a communications link is established with on-scene responders on the ground. The recommended channel for air medical communications on the way to the landing zone is MARC 2. There are several reasons for using MARC 2:

- MARC 2 is a universal public safety frequency that can be used by all landing zone personnel (first responders, EMTs, fire, and law enforcement).
- Designating MARC 2 as the standard frequency will avoid confusion in searching for the frequency to hook up the air and ground units.
- Designating MARC 2 will also avoid the inappropriate use of other frequencies that should be left open for other communication.

Keep in mind, however, that during a mass casualty event, the MARC 1 repeater system, if available, may be activated. The use of MARC 2 by in-flight aircraft could interfere with the MARC 1 repeater system due to the increased transmit range an aircraft would have on MARC 2, which is also the input frequency of the MARC 1 repeater. This is why other channel options may be considered for MARC 2 and EMS C air medical use in the future. (See section 3.1 for more information.)

An alternative frequency choice for air medical communications would be EMS C (155.280). Regional plans should have the flexibility to use this option if it is a more practical frequency than MARC.

Use of any other channels must be documented in the air medical provider's operational plan, which also must address that these other channels are in addition to the required channels.

2.7 FCC License Requirements

Overview of regulations: The Federal Communications Commission (FCC) regulates all radio communications within the United States. Radio communications are controlled by requiring licensure of all radio transmitters. FCC rules govern who is eligible to license a transmitter and the specific frequencies and equipment configurations allowed for each frequency or service group. (A copy of FCC rules can be obtained from <http://wireless.fcc.gov>.)

Prior to operating a radio transmitter, the provider must obtain a license from the FCC. A license can be obtained by completing Form 601, "FCC Application for Wireless Telecommunications Bureau Radio Service Authorization." Frequency concurrence for the license application is obtained by contacting the EMS Communications Coordinator at the Wisconsin Emergency Medical Services Section, 608-266-1568. (See Appendix G for further details.)

EMS service providers and hospitals are required to obtain an FCC license for operating a base station (fixed location radio) and for mobile radios that are not covered by another license. Mobile and portable units operating on all frequencies can legally use a frequency through any of the following licenses:

- Holding their own FCC license.
- Hospital license from medical control hospital.
- County-wide license.
- Statewide license.

EMS transport and first responder services that are licensed by the state have permission to use the required EMS channels (EMS B 155.340, EMS A 155.400, MARC 1 and MARC 2) in mobile and portable radios, as well as EMS C 155.280. MARC 1 usage, however, may need to be coordinated with local agencies. The authorization to use these channels is part of approval for the provider license and applies to all mobile and portable radios, but does not apply to base (fixed) stations. In cases where the hospital uses additional frequencies, EMS mobile and portable radios can operate with authorization under a hospital's license. Providers can contact those hospitals with which they routinely communicate and request authorization under their license.

Providers requiring an FCC license should do the following:

1. When applying for a Public Safety Pool frequency that was formerly included in the EMRS (this includes EMS B 155.340, EMS A 155.400, EMS C 155.280, and the Med channels), first request a letter of support from the Wisconsin EMS Section. This request should include the following information:
 - That the applicant provides ongoing basic or advanced life support (if applying for 155.280, 155.340, 155.400, or the Med channels).
 - That the application is in conformance with the State's EMS Communications Plan.
2. File FCC Form 601 and the letter of support from the Wisconsin EMS Section with the national frequency coordinator. Contact the EMS Communications Coordinator for further details regarding this process:

State EMS Communications Coordinator
Office of Preparedness and Emergency Health Care
Wisconsin EMS Section
PO Box 2659
Madison, WI 53701
Phone number: 608-266-1568
dhsemssmail@dhs.wisconsin.gov

SECTION 3 – LOCAL PROVIDER AND SYSTEM STANDARDS

The system requirements defined in Section 3 will be part of each Provider’s EMS operational plan submitted to the Wisconsin EMS Section for ambulance provider license approval. See EMS website for more info on ops plans

3.0 Overview and Laws

There are required operational plan and tactical elements for every EMS license level. The references to EMS communications in Wis. Admin. Code ch. DHS 110 are as follows:

- **DHS 110.04 (76):** “Wisconsin Emergency Medical Services Communications Plan” means the written plan for emergency medical services communications throughout the state that specifies what communication equipment is required on all ambulances.
- **DHS 110.34 (12):** Maintain a communications system that allows communication between medical control and EMS personnel and complies with the Wisconsin EMS Communications Plan.
- **DHS 110.44 (10):** Description of onsite communications between the event manager, event staff, dispatch, and 9-1-1 dispatch.
- **DHS 110.44 (11):** Explanation of how medical control will be contacted for onsite medical direction at the patient location.

There are also requirements in Wis. Admin. Code ch. TRANS 309 for the communications equipment in an ambulance. The two specific requirements are as follows:

- **TRANS 309.18 (1):** Each ambulance shall have a permanently mounted radio to contact the emergency department of the hospital it serves. There shall be a microphone and speaker permanently mounted in the patient compartment. The radio shall comply with Wis. Admin. Code ch. DHS 110.
- **TRANS 309.18 (2):** Each ambulance service provider operating ambulances staffed either wholly or partially with EMTs practicing advance skills shall have remote two-way communications for personnel when they are away from the ambulance.

3.1 EMS Provider Requirements – Radio Frequency Capabilities

EMS Providers: As described in section 2.6, standard EMS frequencies are EMS B, EMS A, EMS C, MARC 1, MARC 2 and Med Pair channels. All EMS providers must have the capability to communicate on all these channels except for the Med Pairs and 155.280 (EMS C). Services that do not currently have this capability must add it when purchasing new equipment or when they reprogram equipment as part of an upgrade in level of care. It is recommended that all first responder services have the capability to communicate on 155.340, 155.400, 155.280 and the MARC channels. Use of these frequencies should be coordinated with the local ambulance provider and other related agencies to avoid congestion on these frequencies.

See Appendix A and Appendix B for a detailed table of EMS communications and mutual aid frequencies. More information on EMS frequencies can be found in Section 2.6.

3.2 EMS Equipment Needs and Requirements

Ambulance - Must have a primary and back-up means of communication. Must have a VHF radio with the following specifications:

- VHF radio with the four required frequencies. P25 IS STRONGLY RECOMMENDED.
- PL, local, or statewide - Must have PL tones for local hospitals, hospitals in adjacent counties, and hospitals for which you routinely do emergency transports. Providers do not need to have PL tones for all hospitals in the state; the statewide D156 code should be programmed for mutual aid operations. Interfacility transports can be done by cell phone or WISCOM on the appropriate talk group.
- Required radio in patient compartment.
- 25-100 watts depending on what is appropriate for the area served. Higher power is recommended for rural services with large coverage areas or services that have unique radio coverage issues.

Hospital - Must have a VHF radio with EMS B (155.340). EMS A (155.400) and EMS C (155.280) are optional, but recommended for ALS communications and coordination. Local and statewide PL codes should be programmed. See “Hospital Tones and Codes” in Section 2.6 for further details. The ability to operate on, or at least monitor, other local public safety channels should be considered, although this may take coordination with other agencies. The ability to monitor the local EMS/fire paging channel will provide lead time for the emergency department in case of a mass event. An emergency department phone number for ambulance contact is also recommended. P25 IS STRONGLY RECOMMENDED.

Narrowband Requirements - On January 1, 2013, EMS radio systems operating in the 150-512 MHz radio bands should have ceased operations using 25 kHz efficiency technology and begun operations using 12.5 kHz efficiency technology. This deadline is the result of an FCC effort that began almost two decades ago to ensure more efficient use of the spectrum and greater spectrum access for public safety and non-public safety users. Migration to 12.5 kHz efficiency technology has allowed the creation of additional channel capacity within the same radio spectrum, and support more users.

3.3 Considerations in Setting Up Your Communication Systems and Purchasing Equipment

These are questions you need to consider in completing the communications component of your EMS operational plan. Although not all of these questions must be addressed in the operational plan, they should all be considered as you set up your communications system.

Dispatch Considerations

1. How do citizens access EMS?
 - E9-1-1
 - 9-1-1
 - Wireless E9-1-1
 - NG 9-1-1
2. How are you dispatched?
 - Radio/pager
 - Telephone
 - Mobile data terminal
3. Who does your dispatching?

- Law enforcement County public safety
 - Other _____
4. Are your dispatchers trained to give pre-arrival instructions?
- If yes, what system or method to provide consistency is in use? If yes, who provides medical direction for the dispatch agency?
 - If no, do your dispatchers provide CPR instructions to the 9-1-1 caller?

Response Considerations

1. What is your communication link to other public safety agencies such as law enforcement and fire departments (method/frequency)?
2. Do you have intercept agreements with ALS? If yes, how do you communicate with them (method/frequency)?
3. Do you use air medical for transports? If yes, how do you communicate with them (method/frequency)? **MARC 2 is recommended**
4. Do you have telecommunications ability with your first responders? If yes, how do you communicate with them (method/frequency)?
5. If you provide service for special events outside your primary service area, what is the method of contact with the local provider, hospital, dispatch center, and medical control for special events?
6. If you provide service for interfacility transports outside your primary service area, what is the method of contact with the receiving hospital and medical control during transport?

Medical Control Considerations

1. Describe method(s) for contact with medical control:
 - 155.400
 - 155.340
 - Med Pairs
 - Cell phone
 - WISCOM
 - Other _____
2. What is the method to contact the receiving hospital during interfacility transports if it is different from method to contact medical control?
3. If applicable, what is your method for data transmission?

Communications Equipment Considerations

1. How large is your coverage area, and will your equipment cover that entire area? How did you test your coverage area to determine the extent of communications coverage?
2. Are there any unique geographical characteristics that may affect communications coverage? (Such as forests, hills, buildings, etc.)
3. Did you consider both daily needs and “worst case scenarios” in determining your communication needs, including a back-up means of communication?
4. What frequencies and codes do you need programmed into your radio, in addition to the four required frequencies?
 - Local hospital tones
 - Regional hospital tones
 - Statewide code

- Dispatch frequency
- Med Pairs
- IFERN, MARC 3, MARC 4
- Others _____

Radio vs. Cellular Phone Use

Pros and Cons for Radio vs. Cellular phone use:

<p>PROS – Two-way radio communication</p> <ul style="list-style-type: none"> • Local control • Paging • Monitor other agencies • Broadcast capabilities • Multi-channel • Direct contact on talk-around channels • Once in place, ongoing costs are minimal • Priority access 	<p>CONS – Two-way radio communication</p> <ul style="list-style-type: none"> • Cost of implementation and operation • Communications can be monitored • Coverage area dependent on related equipment (towers, etc.) • Cannot provide telemetry • Interference from other users
<p>PROS – Cellular phone</p> <ul style="list-style-type: none"> • Good voice quality in strong cell area • Large number of available channels • Communications are not monitored • Can provide limited telemetry • Access to translation services 	<p>CONS – Cellular phone</p> <ul style="list-style-type: none"> • Dependent on location and availability of cell tower • Can only talk to one location (cannot broadcast) • Cell system will be overloaded in a disaster • Cannot interrupt an ongoing conversation • Vulnerable to availability of an open phone line • Battery life • Beyond local system control

SECTION 4– EMERGING TECHNOLOGIES

This section will describe and define new communications technologies and the positive impact that will be realized by the EMS system.

4.0 ESInet, GIS, and NG911 implementation

ESInet, GIS, and NG911 Implementation and the impact to EMS: The existing 9-1-1 infrastructure in much of the United States is utilizing outdated technologies. Next Generation 9-1-1 or NG911 is an initiative to update existing 9-1-1 infrastructure into an Internet Protocol (IP) network known as an Emergency Services IP-based network (ESInet) that will interconnect 9-1-1 centers, improve location information of emergency callers, and enable media and text messages to be sent from citizens to telecommunicators. According to the National Emergency Number Association (NENA), an ESInet is defined as a standards-based “network of networks” that is designed with a high level of redundancy and resiliency to ensure that the network can continue to operate (deliver 9-1-1 calls) even if some of the circuits or end points are no longer functioning. NG911 cannot be deployed and operate without an ESInet.

Another important element to NG911 is Geographic Information System (GIS) data. In NG911, GIS is used to validate the location of emergency calls and to route the emergency calls to the correct 9-1-1 center. To accomplish this, the preparation and ongoing maintenance of GIS data for use in NG911 begins at the local level and must be accurate, standardized, timely, and complete. At the state level, local GIS data layers must be collected and integrated into standardized database structures for inclusion into the NG911 system. A coordinated statewide approach to developing GIS data and services needed by the NG911 system will yield significant cost savings and statewide standardization of data.

According to the National 911 Program, housed within the National Highway Traffic Safety Administration’s Office of Emergency Medical Services, there are a number of benefits that NG911 will bring to the EMS community including:¹

- **Improved location accuracy** in order to reach citizens sooner to ultimately improve outcomes and save lives.
- **Continuity of patient data** by increasing access to more detailed patient medical history and integrating medical data with 9-1-1 call data.
- **Multi-agency interoperability** for natural disasters and other large-scale emergencies by protecting against call overload at 9-1-1 centers and allowing for better communication with first responders.
- **Accurate pre-arrival data** that gives responders access to time-sensitive patient health data and incident information before arriving to a scene.
- **Better crash data** through technology like vehicle telematics that can notify 9-1-1 when a crash **has occurred and provide** important data like location, airbag deployment, etc.

¹ “Next Generation 911 for Leaders in EMS”, National 911 Program Office, 2018.

https://www.911.gov/pdf/National_911_Program_NG911_Guide_for_Leaders_in_EMS.pdf

- **Increasing EMS provider safety** with more critical data from the incident before arriving to better plan for response and provide for more situational awareness.

General description of FirstNet: The First Responder Network Authority (FirstNet) was established by Congress in the Middle Class Tax Relief and Job Creation Act of 2012 to create and implement the nation's first Nationwide Public Safety Broadband Network (NPSBN) dedicated to public safety and first responders. In March 2017, FirstNet Authority chose AT&T as their commercial partner through a competitive bidding process to build out the NPSBN in each state and territory and begin selling FirstNet services. AT&T will also receive \$7 billion over the life of the 25-year contract, part of which will be used to improve network coverage throughout Wisconsin.

Some of the benefits of FirstNet include priority and preemptive access to the network during times of congestion, device applications specific to public safety, and high-speed data services. FirstNet will provide priority access and improved coverage, so the EMS community can provide the best prehospital care possible. FirstNet can help with:²

- Transmitting images in real time from new diagnostic tools, such as ultrasound and CT.
- Exchange of real-time audio/video feeds with hospitals and physicians while on the scene and during transport.
- Sending sensitive patient data securely.
- Using patient tracking and bed management software for real-time monitoring.

LMR integration to FirstNet/MCPTT - Public safety Land Mobile Radio (LMR) systems provide mission critical communications for first responders and are considered essential to manage day-to-day agency operations and response to emergency incidents. More than 60,000 public safety agencies nationwide providing law enforcement, fire, and EMS services are served by some form of public safety LMR system which includes Push to Talk (PTT) voice communications. The Nationwide Public Safety Broadband Network (NPSBN) being implemented by FirstNet will be the first fully interoperable LTE network supporting data, voice, and video for all first responders in the U.S. One of the proposed new services is Mission Critical Push to Talk (MCPTT). The phrase "mission-critical push-to-talk" (MCPTT) refers to a PTT product functionality that meets the requirements of public safety mission-critical voice communication, which includes high availability/reliability, low latency, support for group calls and 1:1 calls, talker identification, device-to-device direct communications, emergency calling, clear audio quality, etc.³ These developments mean that public safety agencies may be conducting some communications on both LMR and LTE networks.⁴

² "FirstNet and Emergency Medical Services", https://firstnet.gov/sites/default/files/FN-EMS-ServicesFactsheet_180912.pdf

³ What is MCPTT- An Introduction, Page 2
https://kodiakptt.com/downloads/resources/What_Is_MCPTT_Kodiak-whitepaper-FINAL.pdf

⁴ Public Safety Land Mobile Radio(LMR) Interoperability with LTE Mission Critical Push to Talk, Page 2
http://npstc.org/download.jsp?tableId=37&column=217&id=4031&file=NPSTC_Public_Safety_LMR_LTE_IO_Report_20180108.pdf

The transition to widespread use of MCPTT is not expected to be immediate, with LMR systems continuing to be the primary technology for public safety voice communications for the foreseeable future. All PTT applications will need a way to interface with the agency's public safety radio system in order to exchange two-way traffic between the user's smartphone or tablet device and the LMR system. The two primary integration modes are via an Inter-RF Subsystem Interface (ISSI) or a conventional interface. The ISSI was originally developed to integrate two P25 radio systems. The PTT application vendors have leveraged this interface as a means of passing radio traffic between a P25 system and a PTT service by emulating the signaling provided by a P25 system to make the system think it is communicating with another Project 25 system. The primary benefit of an ISSI interface is that a larger number of talk groups can be passed from the system to the PTT service without additional equipment required for each talk group. In addition, an ISSI supports additional features such as unit IDs, emergency alarms, and encryption that are not available through other interfaces. One limitation of ISSI interfaces is that such interfaces only are available for trunked P25 systems.⁵

⁵ *The Case for Commercial PTT APPS in Public Safety-Mission Critical Communications*
<https://mcp911.com/pdf-links/public-safety-push-to-talk-apps/>

4.1 Using an Incident Radio Communications Plan (ICS 205)

An Incident Radio Communications Plan, commonly referred to as an ICS 205, provides responders with a list of predefined channels and their assigned function to use during real life dynamic incidents, pre-planned events, or exercises. The ICS 205 is normally prepared by a Communications Unit Leader (COML), who has extensive training and knowledge of the interoperable communications capabilities between various law, fire, and EMS responders who may be involved.

A pre-established ICS 205 will reduce, and possibly eliminate, initial communications confusion during an incident or event and is scalable to adapt to the communication needs of the incident or event. A pre-established ICS 205 for an agency, region, or event can identify interoperable channels by listing the channel name, talk group, and/or frequency for each channel's function and assignment. Some examples of the various functions include "Command Net," "Tactical Net," "Air-to-Ground Net," and "Logistics/Support Net." Some examples of assignments include "Landing Zone," "Medical Triage," and "Medical Transport." Assignments can also be a geographic location.

INCIDENT RADIO COMMUNICATIONS PLAN			Incident Name Jefferson Marsh Incident			Date/Time Prepared 04/19/18 1500			Operational Period Date/Time	
#	Function	Channel Name/Talkgroup	Assignment	RX Freq N or W	RX Tone/NAC	TX Freq N or W	TX Tone/NAC	Mode A, D or M	Remarks	
1	COMMAND	IFERN	In-Coming	154.2650 N	210.7	154.2650 N	210.7	A	To Div 118 & Staging	
2	FD COMMAND	EMCOM1	On-Scene	155.7750 N	103.5	158.7900 N	103.5	A	IC to Div 118 & Branches	
3										
4	FD Tactical	FG RED	NE Branch	153.8300 N	69.3	153.8300 N	69.3	A		
5	FD Tactical	FG WHITE	NW Branch	154.2800 N	74.4	154.2800 N	74.4	A		
6	FD Tactical	FG BLUE	SE Branch	154.2950 N	85.4	154.2950 N	85.4	A		
7	FD Tactical	FG GOLD	Branch	153.8375 N	91.5	153.8375 N	91	A		
8										
9	Air-Ground	FG BLACK	Air-Ground	154.2750 N	84.8	154.2750 N	84	A		
10										
11	EMS Tactical	EMS C	EMS Rehab	155.2800 N	D156	155.2800 N	D156	A		
12										
13	SPARE RPTR	MARC1		151.2800 N	136.5	153.8450 N	136.5	A		
14										
15	FD Tactical	MABAS1	MABAS Coord	WISCOM TRS				D	Badger Red	
SPECIAL INSTRUCTIONS										
Command Post located at: GALLITZ GRADING, W4546 HWY 18, JEFFERSON (.1 mile east of Christburg Rd)										
Staging located at: ?? Rehab located at: ??										
JEFFERSON FIRE STATION located at: 351 E Racine St										
SPECIAL INSTRUCTIONS										
XXX										
Prepared By (Communications Unit): Todd Lindert, COML (920) 210-0000 RADIO 4848										
Incident Location: USH 18 AT CHRISTBURG RD										
County: JEFFERSON State: WI Latitude: N Longitude: W										

Example

The convention calls for frequency lists to show four digits after the decimal place, followed by either an "N" or a "W", depending on whether the frequency is narrow or wide band. Mode refers to either "A" or "D" indicating analog or digital (e.g. Project 25) or "M" indicating mixed mode. All channels are shown as if programmed in a control station, mobile or portable radio. Repeater and base stations must be programmed with the Rx and Tx reversed.

APPENDIX A: DETAILED TABLE OF EMS COMMUNICATIONS CHANNELS

Channel Name	Frequency	Tone	Call Sign	Primary Use	Secondary Use
EMS B (Former State EMS) For local hospital and statewide use. EMS REQUIRED	155.340 (receive and transmit) LOCAL HOSPITAL USE 155.340 (receive and transmit) STATEWIDE MUTUAL AID	Varies (transmit) Varies (receive) See Appendix E D156 (transmit) None (receive)	KH4762	BLS and ALS contact with hospitals for medical care.	On-scene medical coordination from mobile to mobile (should be done on other channels, if possible).
EMS A (Former State ALS) For local hospital and statewide use. EMS REQUIRED	155.400 (receive and transmit) LOCAL HOSPITAL USE 155.400 (receive and transmit) STATEWIDE MUTUAL AID	Varies (transmit) Varies (receive) See Appendix E D156 (transmit) None (receive)	KH4762	ALS contact with hospitals for medical care.	This includes ALS contact for intercepts and air medical.
MARC1 MARC2 Mutual Aid Radio Channels EMS REQUIRED	151.280 (receive) 153.845 (transmit) 151.280 (receive and transmit)	136.5 (transmit) 136.5 (receive) 136.5 (transmit) 136.5 (receive)	WNPG812 WNPG812	Statewide interagency communications.	MARC 2 for landing zone coordination and air-scene communications.
IFERN (Former WISTAC1) MARC3 (Former WISTAC2) MARC4 (Former WISTAC3) More mutual aid channels	154.265 (receive and transmit) 154.010 (receive and transmit) 154.130 (receive and transmit)	210.7 (transmit) None (receive) 71.9 (transmit) 71.9 (receive) 82.5 (transmit) 82.5 (receive)	KO2099 KO2099 KO2099	Mutual aid for EMS/fire/ rescue, on-scene tactical. Usage for all three channels is restricted in some parts of the state. See plan text for further description.	Mutual aid for any discipline. IFERN receive tone of 210.7 may be required in the future as WISTAC1/IFERN transition is completed.
EMS C (Former State Coordination)	155.280 (receive and transmit)	D156 (transmit) D156 (receive)	KH4762	Communication between hospitals. Use may be limited due to non-EMS users.	Field coordination between public health agencies. Alternate for air medical.

MED1	463.000 (receive) 468.000 (transmit)	Transmit - Varies by hospital. See Appendix E	Varies by hospital	EMT-P and EMT-I to base for medical care.	Air-medical dispatch in some areas.
MED2	463.025 (receive) 468.025 (transmit)				
MED3	463.050 (receive) 468.050 (transmit)				
MED4	463.075 (receive) 468.075 (transmit)				
MED5	463.100 (receive) 468.100 (transmit)				
MED6	463.125 (receive) 468.125 (transmit)				
MED7	463.150 (receive) 468.150 (transmit)				
MED8	463.175 (receive) 468.175 (transmit)				
MED9	462.950 (receive) 467.950 (transmit)				
MED10 UHF Med Channels	462.975 (receive) 467.975 (transmit)				

APPENDIX B: WISCONSIN VHF MUTUAL AID CHANNELS: WISCONSIN STATEWIDE VHF PUBLIC SAFETY COMMON FREQUENCY CHART

MOBILE RX FREQ	RX TONE	MOBILE TX FREQ	TX TONE	STATE NAME	NATIONAL NAME	STATE CALLSIGN	PRIMARY USE
155.340	None	155.340	D156	EMS B	VMED28	KH4762	EMS BASIC STATEWIDE
155.340	None	155.340	See chart E	EMS B	VMED28	KH4762	EMS BASIC LOCAL
155.400	None	155.400	D156	EMS A	NONE	KH4762	EMS ALS STATEWIDE
155.400	None	155.400	See chart E	EMS A	NONE	KH4762	EMS ALS LOCAL
155.280	D156	155.280	D156	EMS C	NONE	KH4762	EMS COORD & HOSPITAL
151.280	136.5	153.845	136.5	MARC1	NONE	WNPG812	ALL
151.280	136.5	151.280	136.5	MARC2	NONE	WNPG812	ALL
154.010	71.9	154.010	71.9	MARC3	NONE	KO2099	ALL
154.130	82.5	154.130	82.5	MARC4	NONE	KO2099	ALL
156.000	136.5	156.000	136.5	WEM CAR	NONE	KGT483	EMERGENCY MANAGEMENT
155.475	156.7 OPTIONAL	155.475	156.7	VLAW31 FORMERLY WISPERN	VLAW31	KA6570	LAW
155.370	146.2 OPTIONAL	155.370	146.2	POINT	NONE	KA6570	LAW
154.265	210.7	154.265	210.7	IFERN	VFIRE22	KO2099	MUTUAL AID DISP. ON SCENE TACTICAL
153.830	69.3	153.830	69.3	FG RED	NONE	KO2099	FIRE OPS. ON SCENE TACTICAL
154.280	74.4	154.280	74.4	FG WHITE	VFIRE21	KO2099	FIRE OPS. ON SCENE TACTICAL
154.295	85.4	154.295	85.4	FG BLUE	VFIRE	KO2099	FIRE OPS. ON SCENE TACTICAL
153.8375	91.5	153.8375	91.5	FG GOLD	NONE	KO2099	FIRE OPS. ON SCENE TACTICAL

MOBILE RX FREQ	RX TONE	MOBILE TX FREQ	TX TONE	STATE NAME	NATIONAL NAME	STATE CALLSIGN	PRIMARY USE
154.2725	94.8	154.2725	94.8	FG BLACK	VFIRE24	KO2099	FIRE OPS. ON SCENE TACTICAL
154.2875	136.5	154.2875	136.5	FG GRAY	VFIRE25	KO2099	FIRE OPS. ON SCENE TACTICAL
154.3025	67.0	154.3025	67.0	IFERN2	VFIRE26	KO2099	FIRE OPS. ON SCENE TACTICAL
155.160	127.3	155.160	127.3	NATSAR	SAR	KO2099	SEARCH RESCUE
155.7525	156.7	155.7525	156.7	VCALL10	VCALL10	KO2099	ALL
151.1375	156.7	151.1375	156.7	VTAC11	VTAC11	KO2099	ALL
154.4525	156.7	154.4525	156.7	VTAC12	VTAC12	KO2099	ALL
158.7375	156.7	158.7375	156.7	VTAC13	1TAC22	KO2099	ALL
159.4725	156.7	159.4725	156.7	VTAC14	1TAC23	KO2099	ALL
151.1375	N293 OPTIONAL	151.1375	N293	VTAC11DG	NONE	KO2099	ALL
154.4525	N293 OPTIONAL	154.4525	N293	VTAC12DG	NONE	KO2099	ALL
158.7375	N293 OPTIONAL	158.7375	N293	VTAC13DG	NONE	KO2099	ALL
159.4725	N293 OPTIONAL	159.4725	N293	VTAC14DG	NONE	KO2099	ALL
151.1375	156.7	159.4725	136.5	VTAC36	NONE	KO2099	ALL
151.1375	N293 OPTIONAL	159.4725	N293	VTAC36DG	NONE	KO2099	ALL
155.3475	156.7	155.3475	156.7	NONE	VMED29	KH4762	EMS PORTABLE ONLY

APPENDIX C: WISCONSIN HEALTH CARE EMERGENCY PREPAREDNESS PROGRAM REGIONAL STAFF CONTACT LIST

OPEHC* Director: Jeff Phillips jeff.phillips@dhs.wisconsin.gov 608-267-7178
Preparedness Director: David Rozell david.rozell@dhs.wisconsin.gov 608-267-3319
EMS Director: Mark Lockhart jonathan.lockhart@dhs.wisconsin.gov 608-261-6870

Region 1

HCC Coordinator: Aimee Wollman-Nesseth
aimee.wollmannesseth@dhs.wisconsin.gov 715-379-6664
RTAC Coordinator: Robert Goodland
Robert.Goodland@dhs.wisconsin.gov 715-215-0733
EMS Coordinator: Ray Lemke
ray.lemke@dhs.wisconsin.gov 608-267-9777
WISCOM SME: John Kruk jjkruk@gmail.com

Region 2

HCC Coordinator: Robert Deede
Robert.Deede@dhs.wisconsin.gov 715-360 6822
RTAC Coordinator: Mike Fraley
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EMS Coordinator: Ray Lemke
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WISCOM SME: Bert Nitzke nitzkebert@gmail.com

Region 3

HCC Coordinator: Chris Hohol
christopherM.Hohal@dhs.wisconsin.gov 920-427-2229
RTAC Coordinator: Dave Taylor
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EMS Coordinator: Ray Lemke
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WISCOM SME: Del Zuleger delzuleger@yahoo.com

Region 4

HCC Coordinator: Bill Klemp
Loren.klemp@dhs.wisconsin.gov 608-449-3711
RTAC Coordinator: Greg Breen
Greg.Breen@dhs.wisconsin.gov 608-792-3074
EMS Coordinator: Elizabeth Rybczyk
Elizabeth.rybczyk@dhs.wisconsin.gov 608-266-7089
WISCOM SME: Mike Foster: fostermd2013@gmail.com

Region 5

HCC Coordinator: Jennifer Behnke
jennifer.behnke@dhs.wisconsin.gov 920-277-7240
RTAC Coordinator: Dan Williams
DanielC.Williams@dhs.wisconsin.gov 608-576-1843
EMS Coordinator: Ela Rybczyk
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WISCOM SME: Bill Tyler Tylervw3212@gmail.com

Region 6

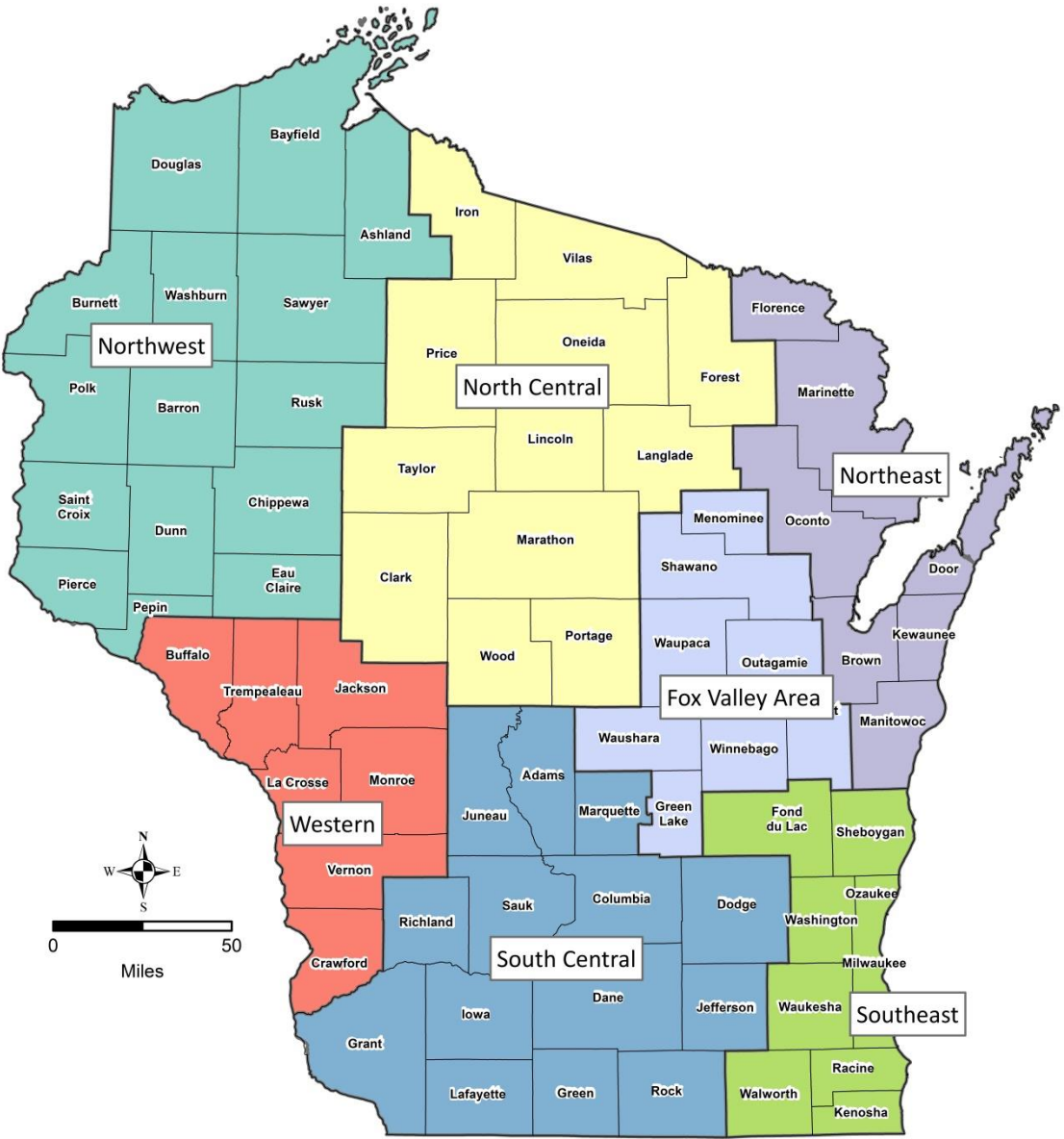
HCC Coordinator: Tracey Froiland
tracey.froiland@dhs.wisconsin.gov 920-427-2229
RTAC Coordinator: Jason Selwitschka
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EMS Coordinator: Mark Mandler
mark.mandler@dhs.wisconsin.gov 608-266-8853
WISCOM SME: Kevin Pullen kevin.pullen@thedacare.org

Region 7

HCC Coordinator: Evan Corbeil
evan.corbeil@dhs.wisconsin.gov 216-299-0696
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EMS Coordinator: Mark Mandler
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WISCOM SME: Steve Hansen steve.hansen@cityofracine.org

* Office of Preparedness and
Emergency Health Care

Wisconsin Healthcare Emergency Readiness Coalitions (HERC)



APPENDIX D: SUGGESTED PRIORITY FOR EMS CHANNEL PROGRAMMING

NOTE: Required VHF EMS channel programming indicated by asterisk.

PRIORITY	EMS	NOTES
1a	EMS B LOCAL A	Same as EMS B 155.340 MHz, PL tone for local hospital A
1b	EMS B LOCAL B	Same as EMS B 155.340 MHz, PL tone for local hospital B
1c	EMS B LOCAL C	Same as EMS B 155.340 MHz, PL tone for local hospital C
1d	EMS B LOCAL D	Same as EMS B 155.340 MHz, PL tone for local hospital D
2*	EMS B STATE*	Ambulance to hosp comms, alt for EMS tactical on scene
3*	MARC1*	Wide area mutual aid repeater channel, all discipline
4*	MARC2*	Medical aircraft LZ coordination, on-scene tactical
5a	EMS A LOCAL A	Same as EMS A 155.400 MHz, PL tone for local hospital A
5b	EMS A LOCAL B	Same as EMS A 155.400 MHz, PL tone for local hospital B
5c	EMS A LOCAL C	Same as EMS A 155.400 MHz, PL tone for local hospital C
5d	EMS A LOCAL D	Same as EMS A 155.400 MHz, PL tone for local hospital D
6*	EMS A STATE*	ALS to hospital, ALS intercept communications
7	MARC3	Fire rescue – EMS on-scene tactical communications
8	MARC4	Fire rescue – EMS on-scene tactical communications
9	IFERN	MABAS mutual aid base/mobile dispatch
10	EMS C	Hospital to hospital comms, alternate for air medical LZ
11	FG RED	MABAS fireground operations, on-scene tactical
12	FG WHITE	MABAS fireground operations, on-scene tactical
13	FG BLUE	MABAS fireground operations, on-scene tactical
14	VLAW31	Interagency comms only if directed by law enforcement
15	NATSAR	Coordination for public safety and search - rescue groups
16	WEM CAR	Emergency management on scene tactical incident comms
17	FG GOLD	MABAS fireground operations, on-scene tactical
18	FG BLACK	MABAS fireground operations, on-scene tactical
19	FG GRAY	MABAS fireground operations, on-scene tactical
20	IFERN2	Alternate MABAS mutual aid base/mobile dispatch
21	VCALL10	Public safety interagency calling channel, nationwide
22	VTAC11	Public safety interagency tactical communications
23	VTAC12	Public safety interagency tactical communications
24	VTAC13	Public safety interagency tactical communications
25	VTAC14	Public safety interagency tactical communications
26	VTAC36	Public safety interagency wide-area repeater on-scene comms

APPENDIX E: WISCONSIN HOSPITAL TONES FOR EMS B 155.340 AND EMS A 155.400 CHANNELS

CITY	HOSPITAL	TONE (hz)
Amery	Amery Medical Center	131.8
Antigo	Aspirus Langlade Hospital	88.5
Appleton	ThedaCare Medical Center Appleton	110.9
Appleton	St. Elizabeth Hospital - Appleton	107.2
Ashland	Memorial Medical Center	107.2
Baldwin	Baldwin Area Medical Center	82.5
Baraboo	St. Clare Hospital	100.0
Barron	Mayo Clinic Health Systems Barron	82.5
Beaver Dam	Beaver Dam Community Hospital	114.8
Beloit	Beloit Memorial Hospital	118.8
Berlin	ThedaCare Medical Center Berlin	91.5
Black River Falls	Black River Memorial Hospital	162.2
Bloomer	Mayo Clinic Health Systems Chippewa Valley	136.5
Boscobel	Boscobel Area Health Care	123.0
Brookfield	Wheaton Franciscan Healthcare Elmbrook	103.5
Burlington	Aurora Memorial Hospital of Burlington	110.9
Chilton	Calumet Medical Center	123.0
Chippewa Falls	St. Joseph's Hospital Chippewa Falls	114.8
Columbus	Columbus Community Hospital	136.5
Cudahy	Aurora St. Luke's South Shore Hospital	156.7
Cumberland	Cumberland Memorial Hospital	146.2
Darlington	Memorial Hospital of LaFayette County	114.8
Dodgeville	Upland Hills Health Center	206.5
Durand	Chippewa Valley Hospital	186.2
Eagle River	Ministry Eagle River Memorial Hospital	118.8
Eau Claire	Marshfield Clinic Eau Claire	71.9
Eau Claire	Mayo Clinic Health Systems Eau Claire	110.9
Eau Claire	Sacred Heart Hospital	110.9
Edgerton	Edgerton Hospital and Health Services	136.5
Elkhorn	Aurora Lakeland Medical Center	114.8
Fond du Lac	St. Agnes Hospital	97.4
Fort Atkinson	Fort Memorial Hospital / Fort Healthcare	97.4
Franklin	Wheaton Franciscan Healthcare Franklin	156.7

CITY	HOSPITAL	TONE (hz)
Friendship	Gunderson Moundview Hospital and Clinics	173.8
Grafton	Aurora Medical Center Grafton	127.3
Grantsburg	Burnett Medical Center	110.9
Green Bay	Aurora Baycare Medical Center	131.8
Green Bay	Bellin Memorial Hospital	192.8
Green Bay	St. Mary's Hospital Medical Center Green Bay	151.4
Green Bay	St. Vincent Hospital	173.8
Hartford	Aurora Medical Center Washington County	167.9
Hayward	Hayward Area Memorial Hospital	100.0
Hillsboro	Gunderson St. Joseph's Hospital	123.0
Hudson	Hudson Hospital and Clinics	167.9
Janesville	Mercy Hospital and Trauma Center	100.0
Janesville	Mercy Hospital and Trauma Center Emergency North	203.5
Janesville	St. Mary's Hospital Medical Center	141.3
Kenosha	Aurora Medical Center Kenosha	107.2
Kenosha	United Hospital System Kenosha	107.2
Keshena	Menominee Tribal Clinic	146.2
Kewaunee	St. Mary's Kewaunee Memorial Hospital	82.5
La Crosse	Gunderson Lutheran Medical Center	97.4
La Crosse	Mayo Clinic Health System Franciscan Healthcare	97.4
Ladysmith	Marshfield Medical Center – Ladysmith (Rusk County Mem)	118.8
Lake Geneva	Mercy Walworth Hospital Medical Center	114.8
Lancaster	Grant Regional Health Care	123.0
Madison	Meriter Hospital	167.9
Madison	St. Mary's Hospital Medical Center	167.9
Madison	University of Wisconsin Hosp and Clinics	167.9
Madison	UW Health at the American Center	229.1
Madison	Wm S. Middleton Memorial Veterans Admin	167.9
Manitowoc	Holy Family Memorial Medical Center	179.9
Marinette	Bay Area Medical Center	156.7
Marshfield	Marshfield Medical Center (Ministry Saint Joseph's Hospital)	82.5
Mauston	Mile Bluff Medical Center	82.5
Medford	Aspirus Medford Hospital	88.5
Menomonee Falls	Community Memorial Hospital	173.8
Menomonie	Mayo Clinic Health System Red Cedar	100.0
Mequon	Columbia St. Mary Ozaukee	206.5
Merrill	Ministry Good Samaritan Health Center	85.4
Milwaukee	Children's Hospital of Wisconsin	156.7
Milwaukee	Columbia St. Mary Milwaukee	156.7

CITY	HOSPITAL	TONE (hz)
Milwaukee	Aurora Sinai Medical Center	156.7
Milwaukee	Wheaton Franciscan St. Francis Hospital	156.7
Milwaukee	Wheaton Franciscan St Joseph	156.7
Milwaukee	Froedtert Hospital	156.7
Milwaukee	Columbia St. Mary's Hospital – Milwaukee Campus	156.7
Monroe	Monroe Clinic	114.8
Mukwonago	Prohealth Mukwonago	192.8
Neenah	ThedaCare Medical Center	141.3
Neillsville	Memorial Medical Center	85.4
New Berlin	Moorland Reserve Health Center	94.8
New London	ThedaCare Medical Center New London	100.0
New Richmond	Westfield Hospital	127.3
Oconomowoc	Oconomowoc Memorial Hospital	131.8
Oconto	Bellin Health Oconto Hospital	167.9
Oconto Falls	St Clare Hospital (Community Memorial Hospital)	103.5
Osceola	Osceola Medical Center	91.5
Oshkosh	Aurora Medical Center Oshkosh	131.8
Oshkosh	Mercy Medical Center	186.2
Osseo	Mayo Clinic Health System Oakridge	173.8
Park Falls	Flambeau Hospital	146.2
Platteville	Southwest Health Center	123.0
Pleasant Prairie	St Catherine Medical Center United Hospital System	107.2
Portage	Divine Savior Hospital	162.2
Prairie du Chien	Crossing Rivers Health (Prairie du Chien Memorial Hospital)	151.4
Prairie du Sac	Sauk Prairie Memorial Hospital	141.3
Racine	Wheaton Franciscan Healthcare - All Saints	229.1
Reedsburg	Reedsburg Area Medical Center	103.5
Rhineland	Ministry Saint Mary's Hospital	114.8
Rice Lake	Marshfield Medical Center – Rice Lake (Lakeview Med Center)	192.8
Richland Center	Richland Hospital, Inc.	118.8
Ripon	Ripon Medical Center	85.4
River Falls	River Falls Area Hospital	85.4
Shawano	ThedaCare Medical Center Shawano	127.3
Sheboygan	Aurora Sheboygan Memorial Medical Center	186.2
Sheboygan	St. Nicholas Hospital	146.2
Shell Lake	Indianhead Medical Center	123.0
Sparta	Mayo Clinic Health System Franciscan Sparta	156.7
Spooner	Spooner Health Systems	123.0
St. Croix Falls	St. Croix Regional Medical Center	203.5

CITY	HOSPITAL	TONE (hz)
Stanley	Ministry Our Lady of Victory Hospital	156.7
Stevens Point	Ministry Saint Michael's Hospital	206.5
Stoughton	Stoughton Hospital	91.5
Sturgeon Bay	Ministry Door County Medical Center	123.0
Summit	Aurora Medical Center Summit	162.2
Sun Prairie	St Mary's Emergency Department Sun Prairie	151.4
Superior	St. Mary's Hospital of Superior	151.4
Tomah	Tomah Memorial Hospital	156.7
Tomahawk	Sacred Heart Hospital Tomahawk	85.4
Two Rivers	Aurora Medical Center Manitowoc County	94.8
Viroqua	Vernon Memorial Hospital	131.8
Watertown	Watertown Memorial Hospital	88.5
Waukesha	Waukesha Memorial Hospital	141.3
Waupaca	ThedaCare Medical Center Waupaca Riverside Medical Center	203.5
Waupun	Agnesian Healthcare (Waupun Memorial Hospital)	71.9
Wauwatosa	Froedtert Memorial Hospital	156.7
Wauwatosa	Wisconsin Heart Hospital	156.7
Wausau	Aspirus Wausau Hospital	167.9
Weston	Ministry Saint Clare's Hospital	179.9
West Allis	Aurora West Allis Medical Center	156.7
West Bend	Froedtert Health St. Joseph's Hospital	94.8
Whitehall	Gunderson Tri-County Memorial Hospital	107.2
Wild Rose	ThedaCare Medical Center Wild Rose	110.9
Wisconsin Rapids	Aspirus Riverview Hospital	82.5
Woodruff	Howard Young Medical Center	114.8

APPENDIX F: EMS AND OTHER MUTUAL AID CHANNEL USE

AUTHORIZATION PROCEDURES AND OTHER NOTES

The use of mutual aid channels must be authorized. All two-way public safety radio use is controlled by the Federal Communications Commission (FCC).

Please refer to Appendix B of this document.

Authorization for the use of those channels covered by the FCC state license call sign KO2099 shown in Appendix B is obtained by making written request to:

James Westover, State Frequency Coordinator
Wisconsin State Patrol, Bureau of Support Services
4822 Madison Yards Way, 9th Floor South
Madison, WI 53707
Office: 608-709-0095
Cell: 608 512 3010
JamesL2.Westover@dot.wi.gov

Authorization for use of those EMS required channels covered by the FCC state license call signs KH4762 and WNPG812 shown in Appendix B is granted when the EMS service provider license is granted. Without the service provider license, channel usage may be obtained by making written request to:

State EMS Communications Coordinator
Office of Preparedness and Emergency Health Care
Wisconsin EMS Section
PO Box 2659
Madison, WI 53701
Phone number: 608-266-1568
dhsemssmail@dhs.wisconsin.gov

Except for the EMS channels, EMS A, EMS B, and EMS C, the use of mutual aid channels is granted for mobile or portable use only. Base station usage of EMS channels must be licensed by the hospital or provider. See Section 2.7 FCC License Requirements for further details.

All EMS service providers and hospitals in Wisconsin are encouraged to implement the statewide common EMS and mutual aid channels. Adopting the State EMS Communications Plan will foster further interoperability among all EMS responders in out-of-service area mutual aid situations and also foster communications between EMS and responders from other disciplines.

In some cases local assignments may conflict with the State EMS Communications Plan. It is highly desirable for these situations to be integrated into the state plan. The State Frequency Coordinator and EMS Communications Coordinator will work with those county and local EMS agencies affected to address these situations.

APPENDIX G: WISCOM OVERVIEW

WISCONSIN STATEWIDE VHF TRUNKING COMMUNICATIONS NETWORK FOR PUBLIC SAFETY RESPONDERS

Most local emergency responders communicate with responders from neighboring communities by programming their public safety radios with a small number of shared “mutual aid” channels. This approach works well for routine incidents but does not support emergency communications between agencies outside these established networks, resulting in communication failures when coordination is especially critical and time is of the essence.

The Wisconsin Interoperable System for Communications (WISCOM) is a shared system that first responders in communities across the state will use to communicate during a major disaster or large-scale incident. WISCOM will support up to four simultaneous conversation paths during an incident, dramatically increasing the current capacity available with statewide mutual aid channels and allowing responders from any area of the state to assist another community without losing communications capabilities.

The WISCOM backbone is complete, with additional towers being added to bolster coverage. With WISCOM, 95% of the state will have coverage using mobile public safety radios.

WISCOM HAS THE FOLLOWING ADVANTAGES:

- Leverages existing radio towers and other infrastructure, resulting in less initial cost.
- Does not use proprietary technology—it will be flexible—working with the wide variety of local systems currently operating in the state.
- Shares a statewide infrastructure that will result in long-term cost savings for everyone. Communities are already spending millions of dollars on systems that do not allow interoperability. As communities replace their aging local systems, they will be able to leverage the state backbone, sharing infrastructure costs and avoiding costly duplication of equipment. Communities can then build additional local coverage and capacity to meet their needs when they are ready.
- Will be managed by the WISCOM Committee, under the authority of the State Interoperability Council—including public safety executives from federal, tribal, state, county, and local law enforcement, fire, EMS, and emergency management disciplines—ensuring that the WISCOM project has input from a variety of potential users and meets the needs of the entire public safety community.

EMS agencies should consider establishing WISCOM capability to enhance interoperability and bolster communications.

APPENDIX H: WISCOM LOCAL HOSPITAL AND EMS TALK GROUPS

CITY	HOSPITAL	LOCAL EMS TALK GROUP	ORIGINAL HOSPITAL ALIAS (not current)	CURRENT HOSPITAL ALIAS
Amery	Amery Medical Center	4685	POHCARMC	AMERYRMC
Antigo	Aspirus Langlade Hospital	4650	LGHCLANH	ASPIRLAN
Appleton	ThedaCare Regional Medical Center Appleton	4679	OUHCAMC	THEDAAPP
Appleton	St Elizabeth Hospital	4680	OUHCSEH	STELIZAP
Ashland	Memorial Medical Center	4602	ALHCCMMC	MEMASHLN
Baldwin	Baldwin Area Medical Center	4700	SCHCBAMC	BLDWINMC
Baraboo	St Clare Hospital	4705	SAHCSC	STCLARBA
Barron	Mayo Clinic Health System-Northland Barron	4605	BNHCCMNB	MAYONORT
Beaver Dam	Beaver Dam Community Hospital	4640	DOHCBDCH	BVRDAMCH
Beloit	Beloit Memorial Hospital	4694	ROHCBMH	BLOITMEM
Berlin	ThedaCare Medical Center Berlin	4639	GLHCBMH	THEDABER
Black River Falls	Black River Memorial Hospital	4641	JAHCBRMH	BLRVRMEM
Bloomer	Mayo Clinic Health System Chippewa Valley	4613	CHHCVCV	MAYOCHPV
Boscobel	Boscobel Area Health Care	4635	GTHCBAHC	BOSCOAHC
Bowler	Stockbridge-Munsee Health & Wellness Center	4708	SHHCMSH	STOCKMUN
Brookfield	Wheaton Franciscan Healthcare - Elmbrook Mem Hosp	4724	WKHCCEMH	WFELMBRK
Burlington	Aurora Memorial Hospital Burlington	4690	RAHCAMHB	AURORBUR
Chilton	Calumet Medical Center	4612	CAHCCMC	CALUMED
Chippewa Falls	St Joseph's Hospital Chippewa Falls	4615	CHHCJSJH	STJOCHIP
Columbus	Columbus Community Hospital	4616	COHCCCH	COLUMBCH
Cudahy	Aurora St. Luke's South Shore Hospital	4661	MCHCASLS	AURORCUD
Cumberland	Cumberland Memorial Hospital	4603	BNHCCMH	CUMBERMH
Darlington	Memorial Hospital of Lafayette County	4649	LFHCMHLC	MEMHDAR
Dodgeville	Upland Hills Health	4625	IOHCUHH	UPHILLSH
Duluth, MN	Essentia St Mary's Duluth	4741		ESSENDUL
Duluth, MN	St Luke's Healthcare Duluth	4744		STLHCDUL
Durand	Chippewa Valley Hospital	4683	PEHCVH	CHIPPVLY
Eagle River	Ministry Eagle River Memorial Hospital	4715	VIHCERMH	MINIERVR
Eau Claire	Marshfield Clinic Eau Claire	4748		MARSHEAU
Eau Claire	Mayo Clinic Health System Eau Claire	4631	ECHCMCEC	MAYOEAC
Eau Claire	Sacred Heart Hospital	4632	EHCSSH	SACHRTEC
Eau Claire	Oak Leaf Surgical	4742		OAKLSURG
Edgerton	Edgerton Hospital and Health Services	4695	ROHCEHH	EDGERHS
Elkhorn	Aurora Lakeland Medical Center	4716	WWHCALMC	AURORELK
Fond du Lac	St Agnes Hospital	4634	FDHCSAH	STAGSFDL

CITY	HOSPITAL	LOCAL EMS TALK GROUP	ORIGINAL HOSPITAL ALIAS (not current)	CURRENT HOSPITAL ALIAS
Fort Atkinson	Fort Memorial Hospital/Fort HealthCare	4642	JEHCFMH	FORTMEMH
Franklin	Wheaton Franciscan Healthcare Franklin	4669		WFFRANK
Friendship	Gunderson Moundview Hospital and Clinics	4601	ADHCMMH	MOUNDVWH
Grafton	Aurora Medical Center Grafton	4681	OZHCAMCG	AURORGRA
Grantsburg	Burnett Medical Center	4611	BTHCBMC	BURNETMC
Green Bay	Aurora BayCare Medical Center	4606	BRHCABMC	AURORAGB
Green Bay	Bellin Memorial Hospital	4607	BRHCBMH	BELLNGB
Green Bay	Bellin Psychiatric Center	4608	BRHCBPC	BELLNPSY
Green Bay	St Mary's Hospital Medical Center Green Bay	4609	BRHCSMH	STMRYGB
Green Bay	St Vincent Hospital	4610	BRHCSVH	STVINCGB
Greenfield	Post Acute Medical	4666	MCHCKHM	POSTAMED
Hartford	Aurora Medical Center Washington County	4720	WAHCAMCW	AURORHRT
Hayward	Hayward Area Memorial Hospital	4706	SWHCHAMH	HAYWAMH
Hillsboro	Gunderson St Joseph's Hospital	4713	VEHCSJHS	GUNDHILL
Hudson	Hudson Hospital and Clinics	4701	SCHCHHC	HUDSONHC
Janesville	Mercy Hospital and Trauma Center	4696	ROHCMHTC	MERCYJAN
Janesville	Mercy Hospital and Trauma Center Emergency North	4697	ROHCMHER	MERCYNOR
Janesville	St Mary's Janesville Hospital	4698	ROHCSMH	STMJANES
Kenosha	Aurora Medical Center Kenosha	4644	KEHCAMCK	AURORKEN
Kenosha	United Hospital System Kenosha	4645		UNITHKEN
La Crosse	Gundersen Lutheran Medical Center	4647	LCHCGLMC	GUNDLACR
La Crosse	Mayo Clinic Health System Franciscan Healthcare	4648	LCHCMFH	MAYOLACR
Ladysmith	Marshfield Med Cntr – Ladysmith (Rusk Cnty Mem Hosp)	4699	RUHCRMH	RUSKMEMH
Lake Geneva	Mercy Walworth Hospital and Medical Center	4717	WWHCWHMC	MERCYWAL
Lancaster	Grant Regional Health Center	4636	GTHCGRHC	GRANTRHC
Love's Park, IL	Mercy Health Riverside	4751		MRCYRIVR
Madison	Meriter Hospital	4619	DAHCMERH	MERITMAD
Madison	St Mary's Hospital Medical Center	4621	DAHCSMH	STMRYMAD
Madison	University of Wisconsin Hospital and Clinics	4623	DAHCUWHC	UWMAD
Madison	William S. Middleton Memorial Veterans Hospital	4624	DAHCVAMC	VAMEMMAD
Madison	UW Health at the American Center	4740	DAHCUWAC	UWAMCNTR
Manitowoc	Holy Family Memorial	4654	MTHCHFM	HOLYFAMH
Marinette	Bay Area Medical Center	4657	MRHCBAMC	BAYAREMC
Marshfield	Marshfield Medical Center	4735	WOHCSJH	MINISTJO
Mauston	Mile Bluff Medical Center	4643	JUHCMBM	MILBLFMC
Medford	Aspirus Medford Hospital	4711	TAHCMHC	ASPIRMED
Menomonee Falls	Community Memorial Hospital	4723	WKHCCMH	COMMHMFL

CITY	HOSPITAL	LOCAL EMS TALK GROUP	ORIGINAL HOSPITAL ALIAS (not current)	CURRENT HOSPITAL ALIAS
Menomonie	Mayo Clinic Health System Red Cedar	4630	DUHCMCRC	MAYOREDC
Mequon	Columbia - St Mary Ozaukee	4682	OZHCCSMO	STMRYMEQ
Merrill	Ministry Good Samaritan Health Center	4651	LIHCGSHC	MINIGSAM
Milwaukee	Aurora Sinai Medical Center	4659	MCHCASMC	AURORSIN
Milwaukee	Aurora St. Luke's Medical Center	4660	MCHCASLM	AURORSTL
Milwaukee	Children's Hospital of Wisconsin	4663	MCHCCHW	CHILDMIL
Milwaukee	Columbia - St Mary Milwaukee	4664	MCHCCSMM	STMRYMIL
Milwaukee	Froedtert Hospital	4665	MCHCFROH	FROEDMIL
Milwaukee	Milwaukee County Paramedic Base	4658	MCHCPB	PARABASE
Milwaukee	Wheaton Franciscan St. Joseph	4668		WFSTJOEM
Milwaukee	Wheaton Franciscan Healthcare St. Francis	4670		WFSTFRAN
Milwaukee	Clement J. Zablocki VA Medical Center	4745		ZABVAMIL
Monroe	Monroe Clinic	4638	GRHCMONC	MONROECL
Mukwonago	Prohealth Mukwonago	4739	WKHCPHM	PROHMUK
Neenah	Children's Hospital of Wisconsin Fox Valley	4732	WIHCCHW	CHILDFOX
Neenah	ThedaCare Regional Medical Center	4734	WIHCTCMC	THEDANEE
Neillsville	Memorial Medical Center Neillsville	4738	CLHCCMMC	MEMNEILS
New Berlin	Moorland Reserve Health Center	4743	WKHCMRHC	MOORREHC
New London	ThedaCare Medical Center New London	4729	WPHCNLFM	THEDANL
New Richmond	Westfields Hospital	4702	SCHCWESH	WESTFIEH
Oconomowoc	Oconomowoc Memorial Hospital	4725	WKHCOMH	OCONOMMH
Oconto	Bellin Health Oconto Hospital	4676	OCHCOHMC	BELLNOCO
Oconto Falls	St Clare Hospital (Community Memorial Hospital)	4675	OCHCCMH	STCLAROF
Osceola	Osceola Medical Center	4686	POHCOMC	OSCEOMC
Oshkosh	Aurora Medical Center Oshkosh	4731	WIHCAMCO	AUROROSH
Oshkosh	Mercy Medical Center	4733	WIHCMMC	MERCYOSH
Osseo	Mayo Clinic Health System Oakridge Osseo	4737	TRHCMOO	MAYOOAK
Park Falls	Flambeau Hospital	4689	PRHCFLAH	FLAMBHPF
Platteville	Southwest Health Center	4637	GTHCSWHC	STHWSTHC
Pleasant Prairie	St Catherine's Medical Center - United Hospital System	4646		STCATHPP
Portage	Divine Savior Healthcare	4617	COHCDSH	DIVSAVHC
Prairie du Chien	Crossing Rivers Health (Prairie du Chien Mem Hosp)	4618	CRHCPDCM	CROSRVRS
Prairie du Sac	Sauk Prairie Hospital	4704	SAHCSPMH	SAUKPRSH
Racine	Wheaton Franciscan All Saints	4691		WFALLST
Racine	Wheaton Franciscan All Saints Spring St	4692		WFALLSP
Reedsburg	Reedsburg Area Medical Center	4703	SAHCRAMC	REEDSAMC
Rhineland	St Mary's Hospital Rhineland	4678	ONHCSMIH	STMRHINE

CITY	HOSPITAL	LOCAL EMS TALK GROUP	ORIGINAL HOSPITAL ALIAS (not current)	CURRENT HOSPITAL ALIAS
Rice Lake	Marshfield Med Cntr - Rice Lake (Lakeview Med Cntr)	4604	BNHCLMC	LAKEVWMC
Richland Center	The Richland Hospital, Inc.	4693	RIHCRICH	RICHHOSP
Ripon	Ripon Medical Center	4633	FDHCRMC	RIPONMC
River Falls	River Falls Area Hospital	4684	PCHCRFAH	RVRFALSH
Rockford, IL	Mercy East Rockford	4746		MRCYREAS
Rockford, IL	Mercy West Rockford	4747		MRCYRWES
Rockton, IL	Mercy Health Rockton	4750		MRCYRCTN
Shawano	ThedaCare Medical Center Shawano	4707	SHHCSCMC	THEDASHA
Sheboygan	Aurora Sheboygan Memorial Medical Center	4709	SBHCASMM	AURORSHE
Sheboygan	St Nicholas Hospital	4710	SBHCSNH	STNICSHE
Shell Lake	Indianhead Medical Center	4718	WBHCCMC	INDHDMED
Sparta	Mayo Clinic Health System Franciscan Sparta	4672	MOHCMFS	MAYOSPAR
Spooner	Spooner Health System	4719	WBHCSHS	SPOONRHS
St. Croix Falls	St Croix Regional Medical Center	4687	POHCSCRM	STCROIXF
Stanley	Ministry Our Lady of Victory Hospital	4614	CHHCOLV	MINIOLV
Stevens Point	Ministry Saint Michael Hospital	4688	PTHCSMH	MINISTMI
Stevens Point	Aspirus Stevens Point Hospital	4749		ASPIRSTP
Stoughton	Stoughton Hospital	4622	DAHCSSTOH	STOUGHGH
Sturgeon Bay	Ministry Door County Medical Center	4628	DRHCDCMC	MINIDOOR
Summit	Aurora Medical Center Summit	4722	WKHCAMCS	AURORSUM
Sun Prairie	St Mary's Emergency Department Sun Prairie	4620	DAHCSMSP	STMSUNP
Superior	St Mary's Hospital of Superior	4629	DGHCSMHS	STMSUPR
Tomah	Tomah Memorial Hospital	4673	MOHCTMH	TOMAHMEM
Tomah	Tomah Veterans Affairs Medical Center	4674	MOHCVAMC	TOMAHVA
Tomahawk	Sacred Heart Hospital Tomahawk	4652	LIHCSHH	SACHRTTM
Two Rivers	Aurora Medical Center Manitowoc County	4653	MTHCAMCM	AURORTWR
Viroqua	Vernon Memorial Healthcare	4714	VEHCVMH	VERNMEMH
Watertown	Watertown Regional Medical Center	4626	DOHCWRMC	WATERRMCM
Waukesha	Rehabilitation Hospital of Wisconsin	4726	WKHCRHW	REHABHWI
Waukesha	Waukesha Memorial Hospital	4727		WAUKEMEM
Waupaca	ThedaCare Medical Center (Riverside Medical Center)	4728	WPHCRMC	THEDAWAU
Waupun	Agnesian Healthcare (Waupun Memorial Hospital)	4627	DOHCWMH	AGNEWAUP
Wausau	Aspirus Wausau Hospital	4655	MNHCAWH	ASPIRWAU
Wauwatosa	Aurora Psychiatric Hospital	4671	MCHCAPH	AURORPSY
Wauwatosa	Wheaton Franciscan Healthcare - The WI Heart Hosp	4667		WFWIHRTH
West Allis	Aurora West Allis Medical Center	4662	MCHCAWAM	AURORWA
West Bend	Froedtert Health, St. Joseph's Hospital	4721	WAHCFHSJ	STJOEHWB

CITY	HOSPITAL	LOCAL EMS TALK GROUP	ORIGINAL HOSPITAL ALIAS (not current)	CURRENT HOSPITAL ALIAS
Weston	Ministry Saint Clare's Hospital	4656	MNHCSCH	MINISTCL
Whitehall	Gunderson Tri County Memorial Hospital	4712	TRHCTCMH	GUNDWHIT
Wild Rose	ThedaCare Medical Center Wild Rose	4730	WSHCWRCM	THEDAWR
Wisconsin Rapids	Aspirus Riverview Hospital	4736	WOHCRHA	ASPIRRIV
Woodruff	Howard Young Medical Center	4677	ONHCHYMC	HOWYNGMC

APPENDIX I: WISCOM EMS TALK GROUP PLAN

Talk Group Name	Talk Group Alias	Talk Group Number
Hospital State EMS 1	HSEMS1	4951
Hospital State EMS 2	HSEMS2	4952
Hospital State EMS 3	HSEMS3	4953
Hospital State EMS 4	HSEMS4	4954
Hospital State EMS 5	HSEMS5	4955
Healthcare Coalition Region 1	HRCRD1	4971
Healthcare Coalition Region 2	HRCRD2	4972
Healthcare Coalition Region 3	HRCRD3	4973
Healthcare Coalition Region 4	HRCRD4	4974
Healthcare Coalition Region 5	HRCRD5	4975
Healthcare Coalition Region 6	HRCRD6	4976
Healthcare Coalition Region 7	HRCRD7	4977