Dispatch and Proper Use of Radio Communications

by Paula Weiler

EMT Objectives

After reading this article, the EMT will be able to:

- Recognize the importance of established state-wide radio frequencies for communications.
- Review the differences in Dispatch Centers and the role of OETS in establishing requirements for, and certification of, Dispatch Centers and Public Safety Telecommunicators.
- Understand how Emergency Medical 9-1-1 calls are handled and the Emergency Medical Dispatch process, including use of the Emergency Medical Guide Cards.
- Recognize accepted radio etiquette, including proper use of the radio and microphone and how to provide understandable transmissions.
- List the information to be transmitted by the Dispatch Center to EMS for efficient and safe response to emergencies, and information the Dispatch Center may need from EMS.
- Keep radio communications HIPAA compliant.
- Recognize the effects of stress on PSTs in contributing to PTSD and the need for CISD.
- Recognize how JerseyNet broadband technology will aid NJ Emergency Responders.

Introduction

All Emergency Responders – police, fire and EMS – require a reliable method of communication between themselves and the Dispatch Center. For decades, two-way radio has been the standard. Radio is dependable, easy to use, and allows for rapid transmission of information and rapid response between the various Public Safety agencies. Even with a growing use of cell phones between emergency responder agencies, New Jersey still lists radio as the standard means of communication for all EMS Responders and Hospitals; the *State of New Jersey EMS Communications Plan* specifies the radio communications to be used between EMS responders, dispatch centers and hospital HEAR radios.

The plan requires a minimum of four frequencies which must be programmed in all ambulance radios, and which are still checked during inspections by both the EMSCNJ and the NJ DOH/OEMS. These four frequencies are:

1. **JEMS 1** - local dispatch frequency; this is the primary channel used to communicate to the local dispatch center, regardless of frequency band;
2. **JEMS 2** - 155.340 MHz; ambulance to hospital ER frequency (HEAR);
3. **JEMS 3** - 155.280 MHz; statewide EMS Coordination;

4. **JEMS 4** - 153.785 MHz; same as SPEN 4, statewide mobile public safety coordination (EMS, Police and Fire).

Even though many hospital ERs are requesting cell phone call-in instead of using the HEAR radio, the JEMS plan still specifies HEAR radio capabilities between hospital and ambulance. The entire *JEMS Communication Plan* can be found at: http://njsfac.net/mobilization/JEMSPLAN.pdf.

> *Even though many hospital ERs are requesting cell phone call-in, the JEMS plan still specifies HEAR radio capabilities.*

Dispatch Centers

When emergency calls come in, the dispatchers at the Dispatch Center will provide the initial information to the responding units, monitor their progress and perform safety checks as needed, and provide additional relevant information as it becomes available. Additional resources may be requested by the responding units and will also be dispatched.

In NJ, the Office of Emergency Telecommunications Services (OETS) is the authority for 9-1-1 and Dispatch Centers. OETS is part of the Office of Information Technology. Information

for OETS can be found at: http://www.nj.gov/911/

OETS sets the standards for Dispatch Centers and establishes the requirements for Public Safety Telecommunicators (PSTs), which includes dispatchers and call-takers. All of the Dispatch Facilities in NJ – whether a County or Regional Center or a local Police Department Dispatch Facility – must comply with the technical and operational standards specified by OETS and by regulations. All answering points/dispatch centers fall into one of the following categories:

1. Public Safety Answering Point (PSAP) – a facility where 9-1-1 calls are received:
   a. A Primary PSAP is where 9-1-1 calls are routed directly to this facility.
   b. A Secondary PSAP is where 9-1-1 calls are transferred from a Primary PSAP.
2. Public Safety Dispatch Point (PSDP) - a facility which provides dispatch services for one or more public safety agencies (Police, Fire, EMS and others).

All PSAPs or PSDPs should have the following minimum equipment:

1. 9-1-1 terminal;

2. Ability to conference and transfer calls to other PSAPs/PSDPs/public telephones;
3. ANI/ALI displays:
   a. ANI - Automatic Number Identification which displays the caller's phone number,
   b. ALI - Automatic Location Identification which displays the caller's telephone number, address and supplementary information such as the primary Police, Fire EMS agencies in the caller's jurisdiction;
4. Instant playback voice recorder for 9-1-1 calls;
5. Uninterruptible power supply (UPS);
6. Logging recorders (which time-date stamps the time and disposition of all 9-1-1 calls) in addition to keeping records (or printing) records of all 9-1-1 calls received;
7. TTY devices which can communicate with deaf or mute callers, and which can display the conversation and produce a hard copy;
8. Sufficient number of PSTs to answer all 9-1-1 calls within 10 seconds, except that 10% of the calls received during the average busiest hour of the day must be answered within 20 seconds.

In addition, if the PSAP is also a PSDP, logging recorders will be available for all radio channels and other public safety emergency telephone lines.

Emergency calls come in to the Dispatch Center by enhanced 9-1-1 voice calls, by TTY/TDD (Teletype Telephone/Telecommunication Device for the Deaf), and *Text to 9-1-1* (at least one Dispatch Center in each county has the equipment to handle *Text to 9-1-1).*

> *All incoming 9-1-1 calls are answered the same way: '9-1-1, where is your emergency?' If no one responds, a TTY/TDD query is sent. If there is still no response, the local PD is dispatched.*

All incoming 9-1-1 calls are answered the same way: *"9-1-1, where is your emergency?"* When the 9-1-1 voice call comes in from a hard line the ANI/ALI display resembles the screen shot in *Figure 1:* the phone number is displayed along with the name of the person (or business) that phone is registered to along with the address. The display also shows the primary police, fire and EMS agencies for that physical location. This display shows a 9-1-1 call from a *Stop & Shop* with the store name and address, the store's phone number and the primary emergency agencies along with their phone numbers. If no one responds to the voice prompt above, a TTY/TDD query is sent (for a hard line only). If there is still no response, the local PD is dispatched to the address to investigate.

When the 9-1-1 call comes in from a cell phone, the ANI/ALI screen display resembles the screen shot in *Figure 2:* the cell phone

Figure 1:

ANI/ALI Display: 911 Hard Line

```
Request ALI    Refresh ALI    Release Call    Answer

201-555-1212   10:17:49 02/10/17
STOP & SHOP SUPERMARKETS
000665         AMERICAN LEGION
                   DR

TEANECK TWP              NJ

      FLR       BUSN

PILOT # 201- 555-1213   ESN
TEANECK PD
TEANECK PD 201       837-2600
TEANECK FD 201       837-2085
TEANECK AMB 201      837-2600
         LEC VERIZ
```

Figure 2:

ANI/ALI Display: 911 Cell Call

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Request ALI    Refresh ALI    Release Call    Answer

□*WRLS PH 2*
973- 555-1212    12:16:50 02/05/17
AT&T MOBILITY
00906          PALISADE
                   AVE  N

NORTH BERGEN TWP            XX
+040.809306 -074.001696
UNC: 0000036 090%         WPH2

ESRD  # 201- 555-1213    ESN
BRGN CO PD
CLIFFSIDE PARK PD 201  945-3600
EDGEWATER PD 201       943-2200
FORT LEE PD 201        461-8000
         LEC ATTMO
```

number is displayed along with the name of the cell carrier. The address could be the cell tower the signal bounced off (usually Phase 1 cell phones) or a more accurate address for Phase 2 cell phones. This display shows a Phase 2 phone with a *Confidence Factor* of 36 meters and a *Confidence Percentage* of 90% (meaning the information displayed is 90% confident that the caller is located 36 meters from the displayed address). These two pieces of information are displayed under latitude/longitude. Depending on the software, the designation of COF and COP may or may not appear. Again, this display shows the primary police, fire and EMS agencies for that physical location and their contact numbers. Cell phones can be re-bid (Refresh ALI or Request ALI) to attempt to get more accurate or detailed information on the location of the cell phone *if:*

1. The call comes into the Dispatch Center displaying "No ALI" or "No Record Found";
2. The call comes into the Dispatch Center with Phase 1 information only (this includes callback number and tower location only);
3. The caller is traveling and you need updated information about his/her location;

Figure 3:

TTY/TDD Call Messaging
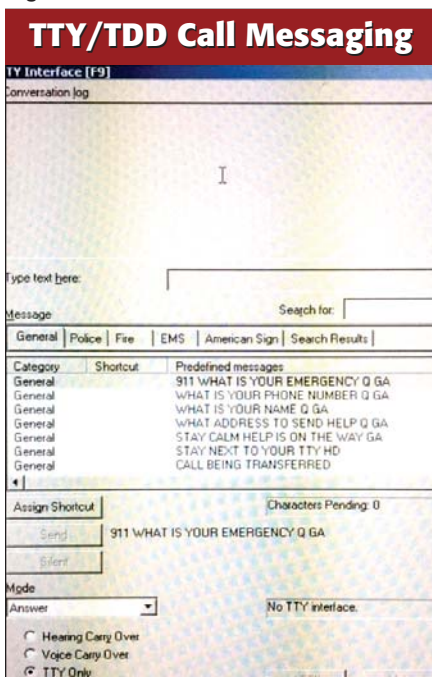
4. If the COF is poor and you need to try to obtain a more accurate location (i.e. the COF is 0 or very high).

Re-bids only work while the call is still active.

TTY/TDD calls have several pre-programmed phrases the PST can select to quickly transmit to the caller, or the PST can type out a message similar to typing an e-mail or a text. The caller's information is sent back the same way. *(See Figure 3.)* NENA (National Emergency Number Association) has prepared a document about TTY/ TDD communications which can be found at:

https://c.ymcdn.com/sites/www.nena .org/resource/resmgr/Standards/NE NA_56-004.1_TTY_TDD.pdf

Text To 9-1-1

Text to 9-1-1 is designed to be used if the caller is in a situation when a voice call is not possible or practical, yet an emergency services response is needed. *Text to 9-1-1* can be accessed by just sending a text to 9-1-1 using a cell phone or other device; the emergency call is handled just as if it is a text message between phones. *Text to 9-1-1* should be used when the caller:

1. Has an emergency that requires assistance from police, fire or EMS;
2. Has a speech or hearing impairment; it is recommended that the caller inform 9-1-1 that he/she is speech or hearing impaired so that dispatch can inform responders;
3. Is in a situation where speaking may cause him/her harm, such as a break-in or domestic violence situation. The caller should remember to silence the phone so that the sound of 9-1-1 replying does not give him/her away;
4. Is dealing with peer pressure. For example he/she may be with a group and some of the members are doing something dangerous or illegal;
5. Cannot make a voice call because there is no cell phone service, but a data service may be able to send a text message.

ANI/ALI information is not available when using *Text to 9-1-1* so the caller must provide the location as quickly as possible. Re-bidding will

not work with *Text to 9-1-1*. More information is available about *Text to 9-1-1* at: http://tech.nj.gov/911/ index.shtml.

Anatomy Of An Emergency Call

When a 9-1-1 call comes in to a Dispatch Center, the PST answers the call with *"9-1-1, where is your emergency?"* The PST must quickly determine three items:

> *When a 9-1-1 call comes in, the PST must quickly determine: where is the emergency, what is the emergency, who is calling and call-back info.*

- Where is the emergency,
- What is the emergency,
- Who is calling and confirm call-back information. Depending on the nature of the emergency call, and where the call is received, the process will vary. Regional/County Dispatch Centers will receive 9-1-1 calls for municipalities they directly dispatch, and will also receive 9-1-1 calls for municipalities they do not dispatch. Regional Dispatch Centers are contracted to receive 9-1-1 calls for secondary PSAPs so the trained PSTs can handle the information gathering, and handle the EMD responsibilities utilizing the EMD Guide Cards.

Many smaller Dispatch Centers contract with larger Dispatch Centers to save money; this way they do not have to purchase new equipment to upgrade as changes are made in the 9-1-1 technology, and they do not have to spend money training their PSTs in Emergency Medical Dispatch.

Sometimes the 9-1-1 call will hit a cell tower in an adjoining municipal-

ity or Dispatch region and will then be sent to a different PSAP than where the call is emanating from. Once the initial information is determined the call is transferred to the Secondary (Local) PSAP for dispatch. Computer Aided Dispatch (CAD) records are generated, and are updated with all information which is transmitted while the call is in progress. When the call is completed, the disposition is noted and the CAD record is time-stamped and closed.

If the emergency call is for police response, the Dispatch Center will notify the responding police officers by radio of the location and nature of the call. If the emergency call is for fire response, the Dispatch Center will notify the appropriate fire department by radio of the location and nature of the call.

If the emergency call is for EMS response, the Dispatch Center will answer the 9-1-1 call and once it is determined to be a medical assistance call, the PST will determine the nature and severity of the medical incident. The PST will coordinate and dispatch the appropriate EMS resources, and will give **Emergency Medical Dispatch** (EMD) assistance using the locally approved EMDPRS (EMD Protocol Reference System, which are the EMD Guide Cards in NJ).

> *The PST will coordinate and dispatch the appropriate EMS resources, and will give EMD assistance using the EMD Protocol Reference System.*

As with the police and fire dispatch, the EMS crew will acknowledge the dispatch and should repeat the address back to ensure they have the correct location. This will be time-stamped by the dispatcher. When EMS arrives on scene they will notify Dispatch that they are on scene, and the dispatcher will acknowledge their

Figure 4:
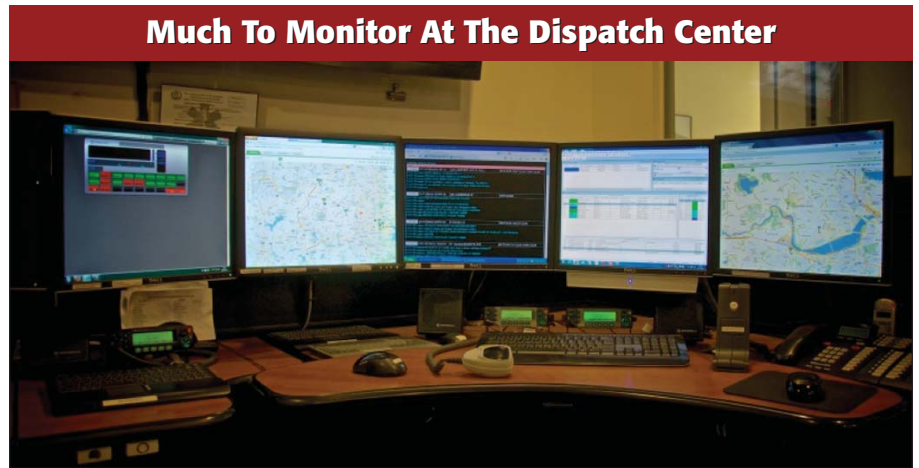
Much To Monitor At The Dispatch Center

arrival on scene and time-stamp the transmission. If EMS is on scene for a long period of time (again this time period is determined by the agency's SOPs) the dispatcher will call the EMS crew over the radio to ensure they are safe and all is in order.

When the patient is ready to transport, and is loaded on the ambulance EMS will call in via radio to the dispatcher and provide transport information; this is echoed by the dispatcher and time-stamped again. Some EMS systems will provide starting and ending mileage to Dispatch.

Once the ambulance arrives safely at the hospital, Dispatch will be notified again and the transmission is time-stamped. When the ambulance leaves the hospital, Dispatch will again be notified and the transmission time-stamped, and when the ambulance arrives back at the station Dispatch will once again be notified.

If clean-up/decon of the ambulance is needed, Dispatch will be advised and will be notified again when the ambulance is ready to go back into service. If ALS has been dis-

patched, this information is also noted in the CAD details. If the patient refuses medical care, and/or transport, this is also noted in the CAD details.

All phone calls into and out of the Dispatch Center are recorded, and all radio transmissions for all agencies in the Dispatch Center that are contacted by radio are recorded.

What Really Happens At The Dispatch Center?

PSTs sit at consoles with multiple computers, telephones and radio consoles. Depending on the Dispatch Center they work in there may be anywhere from four to six or more screens to monitor, multiple radio channels to listen to, and the ever present telephone system. *(See Figure 4.)* PSTs are trained as 9-1-1 call-takers, and if the Dispatch Center handles Emergency Medical Dispatch then PSTs are also trained in EMD. If the PST is only a 9-1-1 call-taker (and does not provide radio dispatch) then the radio equipment is not set up at that console. Even though there may be

only six screens, there are many more programs that have to be monitored.

If the telephone system is computerized then one computer is dedicated to the telephones. If the radios are computerized then one computer is dedicated to the radios. A third (or maybe even a fourth computer) has multiple screens connected and controls the CAD program, the mapping program, CJIS program (Criminal Justice Information System), NCIC (National Crime Information Center), NLETS (National Law Enforcement Telecommunication System), NJLETS (NJ Law Enforcement Telecommuni-

> **The Dispatch Center's radio system can select one or more frequencies for active listening, and divert non-active frequencies to a secondary speaker.**

cation System), NJ MVC (NJ Motor Vehicle Commission), AOCTELE (Administrative Office of the Courts – NJ Criminal and Traffic Violations System), CJIS Messenger (transmits hits and confirms information on stolen vehicles or property, missing persons, wanted persons), *InfoCop* (a state-controlled program which searches NCIC, AOCTELE and MVC records, has detailed Haz-Mat response information, messaging system between multiple law enforcement agencies, and more).

Other active programs include an instant radio/telephone recorder playback system, various databases containing personnel, response protocols, emergency phone contact lists, schedules, business properties, school systems and more, and an e-mail program.

The telephone system includes a 9-1-1 program with ANI/ALI displays, emergency contact numbers, work phones and cell phones for law enforcement, fire department, and EMS personnel, and phone numbers for the schools, facilities and busi-

nesses in the jurisdictions serviced by the Dispatch Center. The radio system can select one or more frequencies for active listening, and divert the non-active frequencies to a secondary speaker. Some Dispatch Centers use headsets for radio dispatch, and some work with handsets or with microphones and speakers. Radio frequencies to be monitored are police dispatch, fire dispatch, EMS dispatch, SPEN (State Police Emergency Network), Haz-Mat, transportation, school radio, and more.

With all of these radios to monitor and phones to answer, sometimes a radio transmission can get overlooked or missed. Remember to transmit your status to the Dispatch Center even if your transmission is not answered as all transmissions get recorded and can be played back.

Sounds easy, doesn't it? Dispatchers go through approximately two weeks of classroom training to become certified, but once employed they must go through many months of on-the-job training to learn proper techniques and the correct way to provide information quickly and effectively. Good dispatching involves not only providing good information **clearly** but also involves listening to what callers and/or the field units are saying.

Many times this is harder than you might think because this could possibly be the worst moment of the caller's life! They may have just been in an accident; they may be very sick and need assistance, or a family member may be having a medical emergency; their loved one may have been found unresponsive and may have died; they may feel threatened by someone near them.

They may be screaming hysterically and the Dispatcher must gain control of the conversation and calm the caller down. The Dispatcher has to get the caller's exact location, their phone number and name (if possible) and the nature of the problem. Then the Dispatcher has to get EMS / PD / FD on the radio to respond to the scene, provide pre-arrival instructions to the caller, update the emergency responders, and type legibly and accurately into the CAD the entire time!

Emergency Medical Dispatch

If the 9-1-1 call is a Medical Emergency call, the Dispatcher will make the determination to select the appropriate Emergency Medical Dispatch (EMD) Guide Card. These Guide Cards exist for all conceivable types of Medical calls, and are grouped into four categories: Trauma, Medical, Time/Life Critical and Miscellaneous. There is an Index listing all of the 43 card types *(see Figure 5)*.

As can be seen, just about every type of emergency is covered. The

Figure 5:

-continued from page 12
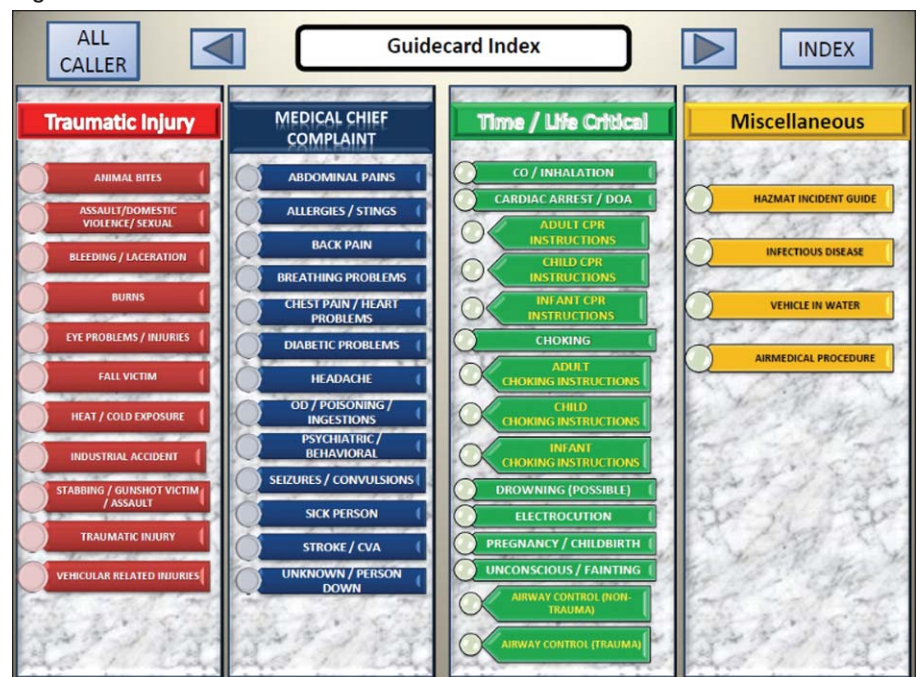
electronic Guide cards are in PDF format and when each medical response type is clicked, the cards will open to that particular medical problem. The Fall Victim Guide Card is displayed in *Figure 6.* As you can see there are four sections to each Guide Card – the first section prompts the EMD to ask specific questions; the answers to these questions assist the EMD in determining the criticality of the patient. When this information is transmitted to the responding EMS agency they can begin to determine the criticality of the medical response.

The second section provides dispatch prompts so the EMD can determine if only BLS is needed, or if simultaneous ALS dispatch is necessary. If the patient is actively bleeding, clicking on the bleeding/laceration button will take the EMD to the Guide Card which provides instructions to control the bleeding.

The third section provides the Pre-Arrival Instructions the EMD should be giving the caller to begin care of the patient. The fourth section provides additional prompts to the EMD – if life threats need to be corrected with CPR or airway control instructions. By clicking on the Helicopter icon the guidelines for helicopter response are described and contact information is provided.

> **When dispatching for a medical call, the responding BLS or ALS unit(s) will need to know the Minimum Data Set, which consists of the four W's and the H.**

The EMD Guide Cards are also available in card format, which fits into a flip holder with the card titles showing on the tabs. Both formats of the EMD Guide Cards can be found

Figure 6:

online: www.nj.gov/911/home/high-lights/emdguidecards.html. The EMD Guide Cards are updated periodically.

If ALS is needed, one of the ALS Dispatch Centers are contacted, such as MICCOM, REMCS or MONOC. They will ask for the same information that was transmitted to the BLS agency. The ALS unit which is dispatched will call in to the Dispatch Center to advise they are responding.

When dispatching for a medical call, the responding BLS or ALS unit(s) will need to know the *Minimum Data Set,* which consists of the four W's and the H – *where* did it happen; *what* happened; *how* did it happen; *who* did it happen to; and *when* did it happen. Additional information which is usually helpful will include the patient's age, medical history, medications, and how long the patient has been feeling ill. This additional data can be transmitted after the initial EMS Dispatch as updated information.

HIPAA and Dispatch

In 1996, the Health Insurance Portability and Accountability Act or the HIPAA was endorsed by the U.S. Congress. The HIPAA Privacy Rule –

also called the *Standards for Privacy of Individually Identifiable Health Information* – went into effect on April 14, 2003. The HIPAA Privacy Rule provided the first nationally-recognizable regulations for the use/disclosure of an individual's health information. Essentially, the Privacy Rule defines how covered entities use individually-identifiable health information or the PHI (Personal Health Information). The penalties for non-compliance with HIPAA can be up to $250,000 and 10 years in prison.

Below are the three most common myths involving HIPAA compliance and Medical Dispatch, as explained by the law firm of Wolfberg, Wirth and Staffelbach (the full document *"HIPAA: The Intersection of Patient Privacy with Emergency Dispatch"* can be found at: brics.butlersheriff .org/wp-content/uploads/2010/03/ hipaa_ position.pdf)

● **Myth No. 1:** Dispatch Centers cannot give out any identifiable information over the radio.
  ● **Fact:** HIPAA doesn't prevent dispatch centers from communicating all information necessary for EMS response and treatment to EMS agencies. While patient names shouldn't be given out unless truly necessary, a dispatch center may transmit any information necessary to facilitate the EMS treatment of a patient.
● **Myth No. 2:** Ambulance services are violating HIPAA if they give patient information to the hospital over the radio.
  ● **Fact:** HIPAA permits any and all treatment-related disclosures of patient information between health care providers. Ambulances are freely permitted to give patient information to hospitals over the radio for treatment purposes.
● **Myth No. 3:** Dispatch Centers must convert all communications equipment to digital or institute new

privacy technologies so that people with scanners can no longer hear radio dispatches.

- **Fact:** HIPAA does not prohibit dispatch centers from communicating with ambulance services, which is necessary for response and patient treatment, even though everyone in "scanner-land" can listen in! These are called "incidental disclosures" under HIPAA, meaning they are legitimate disclosures with unavoidable side-effects, and are permissible under HIPAA.

Check with your own dispatch center to confirm their HIPAA policies.

Radio Use Techniques

When dispatched, the responding unit should acknowledge the dispatch and repeat the address to confirm the correct location. Before speaking, however, lift the microphone out of the metal clip and monitor the airwaves for a few seconds to ensure no one else is

> **Hold the microphone 1-2 inches away from your mouth; holding it too close garbles the transmission.**

talking, as frequencies may be shared by several agencies. Hold the microphone one-two inches (1-2″) away from your mouth to ensure a clear transmission; holding the microphone too close garbles the transmission. *(Figure 7)* Make sure that any other noise-generating items are turned off, or closed – such as sirens, radios (AM/FM/Sirius), air conditioning – and the windows are rolled up to minimize air and traffic noises.

Think of what you are going to say before you open your mouth to say it. If you gather your thoughts and organize your words, it will make sense. Speak clearly; don't mumble. Use as few words as possible. Wait to speak until you have been acknowledged by

Figure 7:

Holding The Microphone
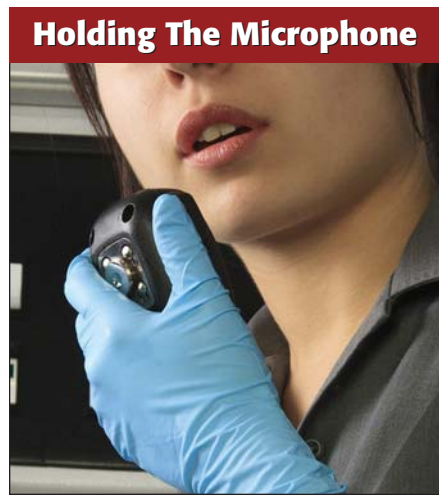
Dispatch – the usual procedure is to give your unit ID and then the unit ID for whom you are calling (e.g. *Communications to EMS123,* or *EMS42 to Dispatch).* Wait about one second before keying the microphone – digital systems have a delay. Some trainers suggest mentally saying the word 'hippopotamus' before speaking to ensure this delay. Do **not** use 10-Codes – per NIMS requirements *all* agencies are supposed to use plain English!

Remember – always tell Dispatch when you arrive on scene; always tell Dispatch when you leave the scene. Always tell Dispatch when you arrive at the hospital; always tell Dispatch when you are clear from the hospital. Some agencies get call number and time-stamps from Dispatch when they clear the hospital.

> **Do not use 10-Codes. Per NIMS requirements, all agences are supposed to use plain English.**

Sometimes Dispatch may not acknowledge your transmission – tell them anyway. All transmissions are recorded. Dispatch may not have heard you if:

- you keyed the microphone incorrectly;
- you did not wait to speak;
- you did not speak loud enough;
- another agency was transmitting on a different frequency;
- another agency was transmitting

Acronyms & Abbreviations

ALI – Automatic Location Identification

ALS – Advanced Life Support

ANI – Automatic Number Identification

AOCTELE – Administrative Office of the Courts – NJ Criminal and Traffic Violations System

BLS – Basic Life Support

CAD – Computer Aided Dispatch

CISD – Critical Incident Stress Debriefing

CJIS – Criminal Justice Information System, division of the FBI

CJIS Messenger – provides format for submitting and receiving transactions (messages) in HTML for information listed in the CJIS and NCIC databases

COF – Confidence Factor, refers to distance (for cell phone locations)

COP – Confidence Percentage, refers to reliability of the signal location (see COF)

COW – Cell on Wheels

CPR – Cardiopulmonary Resuscitation

EMD – Emergency Medical Dispatch, can refer to the Call-takers or to the Guide Cards

EMDPRS – EMD Protocol Reference System, in NJ these are the EMD Guide Cards

FirstNet – First Responder Network Authority, a Broadband Network for Public Safety

HEAR – Hospital Emergency Ambulance Radio (JEMS 2)

HIPAA – the Health Insurance Portability and Accountability Act

Info-Cop – Information for Cops – NJ system that provides real-time access to local, state and federal crime databases from authorized computers

JEMS Communications Plan – Jersey Emergency Medical Services Plan - State of New Jersey EMS Communications Plan

JerseyNet – New Jersey's FirstNet system

MICCOM – Mobile Intensive Care Communications

Minimum Data Set (for EMD responses) - the four W's and the H (where, what, how, who, when)

MONOC – Monmouth Ocean Hospital Service Corporation

NCIC – National Crime Information Center, division of the FBI

NENA – National Emergency Number Association

NIMS – National Incident Management System

NJ MVC – NJ Motor Vehicle Commission

NJLETS – NJ Law Enforcement Telecommunication System

NLETS – National Law Enforcement Telecommunication System

NOC – Network Operations Center (in FirstNet/JerseyNet)

OETS – NJ Office of Emergency Telecommunications Services, part of the NJ Office of Information Technology

PHI – Personal Health Information

PSAP – Public Safety Answering Point

PSDP – Public Safety Dispatch Point

PST – Public Safety Telecommunicators (Dispatchers and Call-takers)

PTSD – Post-Traumatic Stress Disorder

REMCS – Regional Emergency Medical Communications System (for aeromedical dispatch)

SOP – Standard Operating Procedure/Protocols

SOW – System on Wheels

SPEN – State Police Emergency Network

TDD – Telecommunication Device for the Deaf

TTY – Teletype Telephone

UPS – Uninterruptible Power Supply

on your frequency;

- the Dispatcher was on the phone.

Foreign Language

There are times when English is not the primary language of the 9-1-1 caller. Sometimes we do not understand them and sometimes they do not understand us. Sometimes they do not speak English at all. Shouting louder into the telephone does **not** guarantee the caller will understand us. If the Dispatch Center services an area where more than five percent of the population is non-English speaking, the Dispatch Center will have access to a language/translating service. One example is AT&T which has a translation service with many languages available which is contracted to the Dispatch Center to provide translations as needed, and the service will be conferenced in to the 9-1-1 call.

Non-Emergency Calls

Not all calls to 9-1-1 are emergencies. It could be argued that we have been too efficient in educating the public to use 9-1-1; it gets used to report minor annoyances, or to seek information. People have called 9-1-1 when the newspaper delivery missed the front steps, when their dog ran off, and when a turkey was seen strutting around in the supermarket parking lot. People call 9-1-1 when their lights don't work, when a deer is spotted in their backyard (or walking down the street). People call 9-1-1 when they can't remember the name of a restaurant, when the drive-through at McDonalds forgets to give them their French fries.

The Dispatcher tries to explain that these are not emergency calls and the caller should attempt to contact their police department using the non-emergency local phone number. Sometimes, if the caller does not listen, all Dispatch can do is press a key on the phone console which plays a recording stating "This does not appear to be an emergency call – please call the 10-digit phone number for the agency you need" and then disconnect the call.

Stress, PTSD and CISD

Dispatchers are not physically on scene with the police, fire or EMS units they are dispatching. However they are still there with the emergency responders, working and listening. Dispatchers may be giving CPR instructions to family members until responders arrive and take over compressions. Dispatchers may hear shots fired during disputes or break-ins and

Continued

the caller may no longer be responding to their questions, whether due to injury or fear of being discovered. Dispatchers may hear screams from a child who cannot wake his mother up, or the cries of a woman who came home and found her spouse unresponsive on the floor – not breathing and pale or blue and cold to the touch.

Dispatchers still hear what is happening, and are subject to the same stresses the on-scene responders encounter. For these and many more reasons, Dispatchers are just as likely to develop PTSD as emergency responders who are on scene; perhaps more so as Dispatchers frequently are not told of the disposition of some of these calls so there is no closure.

Dispatchers may send police offi-cers to an altercation and cannot get them on the radio for a safety check after they have arrived on scene. Dispatchers may send fire personnel to an active building fire and not be able to get responses from all personnel after a Mayday call goes out. People may be injured, or even killed,

> **Dispatchers still hear what is happening, and are subject to the same stresses the on-scene responders encounter.**

and dispatchers cannot be sure if what they are hearing is a true calamity or simply equipment failure. For these reasons, if a CISD session is scheduled for an agency, the Dispatchers should always be considered and included in the session.

SOWs & COWs: JerseyNet To Prevent System Overload

New Jersey first responders should be aware of a deployable, wireless data network called *JerseyNet*, which is being built on a large spectrum for public safety that does not compete for bandwidth with commercial users. It is designed to operate during time of high demand (mass gathering events). *See the Sidebar on page 17 for more information on JerseyNet and its nationwide counterpart, FirstNet.*

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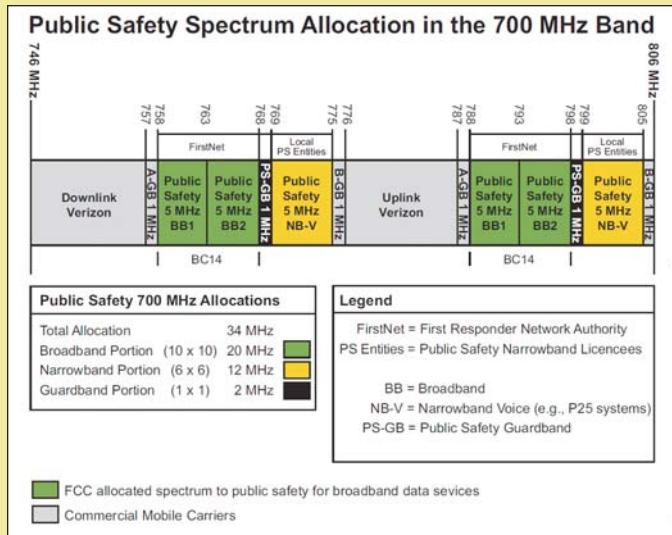
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JerseyNet Provides Secure Network For First Responders Only

In February 2012 a nationwide Interoperable Public Safety Communication Network was created based on a report issued by the 9/11 Commission. This system was called **FirstNet** (First Responder Network Authority) and its network is titled the **Nationwide Public Safety Broadband Network** (NPSBN). This

Public Safety Spectrum Allocation in the 700 MHz Band

Public Safety 700 MHz Allocations		Legend
Total Allocation	34 MHz	FirstNet = First Responder Network Authority
Broadband Portion (10 x 10)	20 MHz	PS Entities = Public Safety Narrowband Licencees
Narrowband Portion (6 x 6)	12 MHz	BB = Broadband
Guardband Portion (1 x 1)	2 MHz	NB-V = Narrowband Voice (e.g., P25 systems)
		PS-GB = Public Safety Guardband

FCC allocated spectrum to public safety for broadband data sevices

Commercial Mobile Carriers

network is designed for first responders only, and is secure and flexible (can handle over 100 incidents at the same time). It is designed to operate during time of high demand (mass gathering events) and to function where commercial networks cannot operate or do not exist. New Jersey established a network, called **JerseyNet**, and has so far received over $40 million to implement it. Public Safety agencies have been allocated frequencies in the 20MHz spectrum, with 700MHz narrowband frequencies available for LTE (Long-Term Evolution – *See chart above).*

JerseyNet provides satellite connectivity to the Internet and delivers voice, video and data communications as needed. JerseyNet is built on the MutualLink network, which is already in use in multiple Dispatch Centers across New Jersey and the United States.

JerseyNet was initially developed in three regions of New Jersey – in **Camden** (Bellmawr, Blackwood, Camden City, Cherry Hill, Lindenwold, Voorhees and Runnemede), **Atlantic City** (Absecon, Atlantic City and Pleasantville), and the **"Route 21 Corridor"** (Bloomfield, Clifton, Garfield, Lyndhurst, Montclair State University, Newark, North Arlington, Paterson, Nutley, Wallington and Morristown – *See map).* JerseyNet is designed to be deployed in regions which all report to a Network Operations Center (NOC), which will be the

Central Command and will monitor all deployable systems.

The deployable network resources will consist of one System on Wheels (SOW) and multiple Cells on Wheels (COW)s. The COWs need to have a SOW to make the network function. JerseyNet has 37 trailers – five SOWs and 32 COWs. The SOWs provide dedicated secure wireless coverage up to a five-mile range, and the COWs can extend this coverage up to an additional five miles. JerseyNet has SOWs which are also self-contained in vans or Tahoe SUVs *(see photo below),* so a trailer is not always needed.

To operate on the NPSBN, devices must be capable of operating on the spectrum licensed to FirstNet (Band Class 14). Several device manufacturers have begun producing Band Class 14 equipment, but the market for devices remains limited. In-vehicle devices, such as routers, modems, and mobile data computers, as well as portable devices such as smartphones and tablets, are increasingly advertised as compatible with Band Class 14. When planning for future device investments, consider that devices should offer multiple network connectivity options, such as compatibility with both commercial wireless providers and Band Class 14. Equipment should have multiple Ethernet or USB ports that can provide wireless connectivity for ancillary equipment such as cameras and computers. For more information about NPSBN visit: http://firstnet.gov/about/why.

JerseyNet has been successfully deployed at the Baltusrol PGA Championship tournament, the Miss America pageant, the Atlantic City Air Show and Beach Concert, the Far Hills Steeplechase and most recently during the Papal visit in Philadelphia.

Additional Information about JerseyNet can be found at: https://www.njhomeland-security.gov/jerseynet or at: www.njohsp.gov/jerseynet.

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