**VIRGINIA BEACH**

**EMERGENCY MEDICAL SERVICES**

**DEPARTMENT**

# COMMUNICATIONS MANUAL

(Last updated 18 September 2018)

## Table of Contents

# 1  PURPOSE

In general, the manner in which an organization handles its radio traffic is a measure of its efficiency and the attitude of its members.

This manual is a policy-level document that describes approved communications procedures in the Virginia Beach EMS Department. It provides the consistent foundation for radio discipline that the Department has determined will contribute to the efficient execution of its mission.

The practices and procedures described in this manual will promote accurate, brief, and rapid transmission of essential information while conserving air time for other users. The alternative can result in confusion, embarrassment, delays, and jeopardized safety.

# 2  INTRODUCTION

The City of Virginia Beach is fortunate to own and operate an advanced, multiplexed, computerized, durable, trunked radio system that is strategically engineered to include many tactical capabilities, redundancies, and safety features. Although the system is designed to be reliable and user-friendly even in challenging and austere conditions, its proper operation requires training and discipline. It is a tactical group communications tool, and this makes it more complex to use than everyday items such as land-line telephones, consumer walkie-talkies, and mobile phones.

Members should strive to become proficient at public safety radio communications through a combination of experience and familiarity with this manual.

# 3  AUTHORITY

The EMS Chief and the Director of the Virginia Beach Emergency Communications & Citizen Services (ECCS) Department, as supervised by the Deputy City Manager of Public Safety, have joint authority over many aspects of the city's radio system. The EMS Chief has authority over EMS-specific radio practices and EMS Department radio users, including the volunteer rescue squads and their members.

This manual's content and publication were authorized by the EMS Chief.

# 4  TRAINING

The Department devotes a portion of each BLS Academy to training members on radio technology, radio operations, radio protocols, the specific configuration of Virginia Beach's radio system, Computer Aided Dispatch (CAD), Mobile Data Terminal (MDT) operation, etc, based on this manual and other material.

The Department also provides training on changes to the radio system configuration and approved practices as needed during annual update programs, and via continuing education and various internally-produced publications and media.

# 5  OPERATIONS – GENERAL

Several rules of good radio discipline and efficiency hold true regardless of the industry, technology, or specific radio configuration involved. These include:

- Listen before transmitting to make certain the channel is clear.

- Organize your thoughts before transmitting.

- Keep all transmissions brief and to the point.

- When transmitting, turn down the volume, or muffle, other nearby radios tuned to the same channel. Failure to do so can result in feedback. Depending on the technology, feedback can manifest itself as loud tones or as echoing, either of which can interfere with your message.

- Make sure you fully depress the mic for two (2) full seconds before starting to talk. This allows time for the electronics and any "handshaking" or network set-up to stabilize.

- Hold the microphone close to, but not touching, your mouth.

- Speak "across" the surface of the microphone, not directly into it, so that puffs of air (such as the "p" in "puff") won't cause distortion.

- Talk at a conversational level. Do not shout.

- Speak distinctly and pronounce words carefully. Speak at moderate speed using conversational tone of voice with natural emphasis and rhythm. Messages should be spoken in phrases, not one word at a time.

- From a cold start, different radios require varying amounts of warm-up or boot-up time. Be aware of this and allow time for the transceiver to become ready before attempting to transmit.

- During all radio operations, remain calm.

- Pronunciation of numerals should be clear and distinct.

- If misunderstandings could occur, use of the spelling alphabet is recommended. (See section 9.2↓.)

# 6  OPERATIONS – PROFESSIONAL

The following rules of radio discipline apply in public safety settings:

- Since efficient and effective task-oriented communications are paramount in the public safety setting, being concise and precise is highly valued. Politeness is implied. Transmitting phrases that only serve the purpose of politeness is <u>discouraged</u>, because it wastes valuable air time and tends to suggest that you are buying time to figure out what you really need to say. For instance:

| WRONG: | *"Yes ma'am, would you mind marking us Available from Leigh please?"* |
|--------|----------------------------------------------------------------------|
| RIGHT: | *"Available from Leigh."* |

- Use official titles and authorized call signs in all transmissions. For instance, *"Zone Medic 2 to Ambulance 121, park just ahead of my car"* is preferred, but as a last resort, *"Chief 7 to EMT Harris, report to the Command Post"* is acceptable.

- Identify yourself when beginning each distinct exchange, and when acknowledging a hail.

- Avoid the use of "10-signals" other than "*10-4*" for EMS communications. When appropriate, use approved key words and phrases. Otherwise, use plain English.

- When announcing that you are "*Enroute*" or "*Available*", and when answering a hail, it is often very valuable to announce your location. See section 7.7.2↓ / **KEY CONCEPTS** / *Common Operating Picture*. For example:

  *Ambulance 1420P to Virginia Beach, Enroute* **from 264 and Birdneck**

  ...or...

| Speaker | Message |
|---|---|
| Virginia Beach: | *Virginia Beach to Ambulance 1620P* |
| Ambulance 1620P: | *Ambulance 1620P,* **Little Neck & Kings Grant** |

- Any user, when unable to reply as requested to a calling unit, should respond "*Stand by*" to let the caller know to expect a delay before getting a definitive response. It is discourteous and disruptive to keep a calling unit waiting without advising them to stand by.

- When you receive a message that has an impact on your subsequent actions or status, you should acknowledge by summarizing the subsequent actions or status that you will take or assume. This helps prevent critical mistakes from going unnoticed. For instance, if Engine 12 makes the following transmission...

  **(Slightly garbled)** *Engine 12 to the Ambulance coming to Ithaca Court, come through the gate to the back of the house, and bring your EZ-IO.*

  ...then consider the following response:

| AMBIGUOUS: | *10-4* | (Who made this transmission? Did they understand the entire message? Only the speaker knows, and any mistake can easily go undetected.) |
|---|---|---|
| OPTIMAL: | *Ambulance 522, copy through the gate to the back with our EZ-IO* | (Now we know that 522 is speaking, and they clearly understand Engine 12's entire message.) |

- Explaining that you are having trouble with your MDT wastes valuable air time and is <u>discouraged</u>. Just say your new status. For example:

| WRONG: | *Ambulance 121, Virginia Beach, we're still having MDT issues, can you show us Transporting to Independence?* |
|---|---|
| RIGHT: | *Ambulance 121, Virginia Beach, Transporting to Independence* |

- Keep in mind that Communications Officers are required to take breaks, so you may be speaking to one dispatcher one minute, and a different dispatcher the next. For this reason, be willing to provide additional context for your messages if requested.

- Avoid uncivil, abusive, derogatory, or sarcastic remarks or language. When faced with such a situation, maintain control. Do not attempt to retaliate, but proceed with the business at hand. In cases where corrective action is considered necessary, report the facts and circumstances up the chain of command.

- The job of maintaining "circuit discipline" always lies with the Communications Officer. It involves handling radio and telephone traffic proficiently, determining the order of and priority in which transmissions will be made, and directing and controlling the use of all channels. The Communications Officer will reserve the use of channels for emergency operations. Supervisors assist and direct the Communications Officer as appropriate for the situation.

- When a public safety unit must interrupt routine conversations to announce an unexpected danger or casualty, the unit should indicate that their message is URGENT. For example: "*Ambulance 420P to Command, URGENT, we have a firefighter in rehab who has lost consciousness*".

# 7  OPERATIONS – SYSTEM-SPECIFIC

Our main radio system is a UHF Hi band system that the City operates primarily under the legal framework of the Code of Federal Regulations Title 47 Part 90, with which all system users are also obligated to comply. The system is licensed in the Safety Of Life category as a "Public Safety / Spec Emerg" service. The system is colloquially referred to as the "800" system because the local channels utilize frequencies in the range of 806-866 megahertz.

# 7.1  OVERVIEW OF CHANNELS

**"EMS COMMAND"** is the name of the system's primary EMS channel. Communications Officers dispatch cases by voice on this channel. EMS and Fire units responding to routine cases also use this channel to communicate with the dispatcher and with each other.

**Tactical ("tac") channels** are assigned to cases involving the response of a large number of units, extensive inter-unit coordination, or special circumstances.

**Hospital channels** are encrypted channels designated for conversations between field units and hospital emergency departments.

**Talk-around channels** provide limited and short-range functionality for use in areas where full-feature signal coverage is weak or absent (such as deep inside a large structure or tunnel), or all units are operating in close proximity, or there is unusually high demand for tac channels (such as during citywide severe weather operations). Using a talk-around channel effectively converts your advanced, multiplexed, computerized, trunked radio – with all its redundancies and safety features – into a glorified consumer walkie-talkie.

The system provides the following lesser-used resources:

- Channels used by neighboring jurisdictions. Virginia Beach units would use these channels when responding into those jurisdictions for mutual or automatic aid.

- Channels used by other Virginia Beach departments and by the school system. In rare situations, these would allow units from different organizational units to operate together.

- ORION[1] channels intended for regional inter-governmental use as assigned by the ORION Coordination Center.

- NIFOG[2] channels intended for nationwide interoperability and national mutual aid as assigned by the FCC.

---

[1]Overlay Regional Inter-Operability Network
[2]National Interoperability Field Operations Guide

## 7.2  HAILING PROTOCOL

"Hailing" is the act of calling another unit to attract the other unit's attention. The approved hailing protocol for all emergency services in Virginia Beach and its neighboring jurisdictions is:

> **State your own call sign first, followed by the call sign of the unit you are hailing.**

You may separate the two call signs with the word "*to*". For example, Ambulance 120 would say the following to get the dispatcher's attention:

> *Ambulance 120, Virginia Beach*

...or...

> *Ambulance 120 to Virginia Beach*

Failure to comply with this hailing protocol can cause significant confusion, service delays, and safety problems.

If your message is short, you may append it to your hail. For instance:

> *Ambulance 1721P, Virginia Beach, we're Available*

When doing this, make sure your message is acknowledged.

## 7.3  DISPATCH OF RESOURCES - GENERAL

When the Public Safety Answering Point (PSAP / 911 center) receives a report of an incident, Communications Officers categorize the incident according to Nature, Priority, and sometimes Modifying Circumstance, and they enter this information into the Computer Aided Dispatch (CAD) system. The CAD checks the categorization of the incident (and sometimes its specific location) against a pre-programmed assignment matrix to determine the types and quantities of resources that should be dispatched. The CAD examines which such resources are currently available. It computes the expected travel times for the available units based on their current locations (as reported by the GPS-based Automatic Resource Location [ARL] system). The travel time computations also take road closures and other factors into account. The CAD then recommends to the dispatcher which resources to assign to the case. The dispatcher alerts the recommended units using multiple methods, including electronic messaging and voice announcement.

The assignment matrix is developed jointly by the chiefs of the EMS and Fire departments, the Operational Medical Director, and/or their delegates. The assignment matrix is an index of predefined incident natures. An incident nature may be further broken down by priority, modifying circumstance, or special location. For each index entry, the matrix specifies the types and quantities of resources to be initially dispatched.

The assignment matrix is reviewed and optimized routinely, so this manual makes no attempt to capture all of its details.

Although the following list is not intended to be authoritative or comprehensive, it serves as an example of incident natures:

| | | | |
|---|---|---|---|
| AAIR: Aircraft crash | ABDO: Abdominal pain | ABOT: Accident involving a boat | ACBD: Accident involving a building |
| ACBI: Accident involving a bicycle | ACMC: Accident motorcycle | ACPE: Accident pedestrian | ACPI: Accident with injury |
| ACPN: Accident pin | ACWA: Accident in water | ALLR: Allergic reaction | AMPU: Amputation |
| ANSH: Anaphylactic shock | ASTA: Airport alert | BACK: Back pain | BITE: Animal bite |
| BLED: Bleeding | BREA: Breathing difficulty | BTDS: Boat in distress | BURN: Burn |
| CARD: Cardiac | CHOK: Choking | COLD: Cold exposure | CRED: Cardiac arrest |
| DIAB: Diabetic | DRIP: Drowning in pool | DRWN: Drowning | EXPN: Explosion |
| FALL: Fall | FIRE: Assist Fire | FRAC: Fracture | GNWD: Gunshot wound |
| HEAD: Headache | HEAT: Heat exposure | INJY: Injury | LIFT: Lift assist |
| MAID: Mutual aid | MATY: Maternity | MEDA: Medical alarm | MNTL: Mental |
| OVDO: Overdose | POIS: Poisoning | RAPE: Rape | SEIZ: Seizure |
| SICK: Illness | STAB: Stabbing | STRO: Stroke | SUIC: Suicide |
| TRAN: Interfacility transport | UNCO: Unconscious | UNRQ: Unknown request for rescue | |

The priority scheme used for EMS operations is as follows:

| Priority 1 | High/emergency |
| --- | --- |
| Priority 2 | Medium/urgent |
| Priority 3 | Low/routine |

Generally, getting resources to higher priority incidents takes precedence over getting them to lower priority incidents, and managing this is a responsibility shared primarily by dispatchers and field supervisors. Both Communications Officers and field supervisors are authorized to upgrade an incident's priority based on comments. Field supervisors are also authorized to downgrade an incident's priority based on comments.

Generally, the assignment matrix calls for the following foundational assignments:

| Priority 1 incident: | 1 fire first-response unit (engine, ladder, or rescue), 1 ambulance, 1 zone medic (if ambulance is BLS) |
| --- | --- |
| Priority 2 incident: | 1 ambulance |

Incidents with specifics natures, modifying conditions, or special locations may be assigned either fewer or – more commonly – more resources. A few examples are:

- Accidents on an Interstate highway get *two* fire first-response units (usually one from either direction), plus a tac channel.

- Priority 1 incidents at a medical facility with a doctor present may not get a fire first-response unit.

- A cardiac arrest may get *two* zone medics and a field supervisor. Police will be dispatched on their channel.

- An airport alert gets up to *three* ambulances, a field supervisor, and a tac channel.

- A drowning in open water gets a field supervisor, EMS and fire marine resources, a tac channel.

Field supervisors and dispatchers are authorized to add more units to the initial assignment if justified by special circumstances, as long as they notify responding units of the change and provide the justification. The responding EMS unit(s) shall have authority to request additional

equipment if, in their judgment, it's prudent to do so. The EMS Field Supervisor has the authority to modify these requests.

Once the incident command system has been established at a scene, the incident commander will coordinate all resource requests for that event.

# 7.4  DISPATCH OF RESOURCES - SPECIFIC SITUATIONS

Vehicle and machinery entrapments

Any time a patient cannot be accessed or safely removed from a vehicle, machinery, or collapse incident, an "Entrapment" shall be declared. This can be accomplished based on 911-caller information or an evaluation by on scene personnel.

Possible fatality incidents

On-scene units should have Communications notify the Police Department if it is discovered that a patient is suffering from potentially life-threatening injuries. This will allow the police to initiate any associated investigations. This consideration includes all trauma or criminal events including vehicle crashes, industrial accidents, assaults, neglect, etc.

Marine incidents

An EMS field supervisor should make sure that the Marine Rescue Team (MRT) is assigned to any water-related incident where there is a life threat, or need for recovery of victims. For cases that simply involve a disabled boat, the EMS Field Supervisor or MRT supervisor will determine whether it is appropriate for MRT personnel to respond, and notify Communications of any changes in response.

# 7.5  ATTENTION TONES

Two kinds of audio tones have special meanings when transmitted on the EMS COMMAND channel. In each case, units should pay attention to the message that follows the audio tone.

## 7.5.1  Alert tone

Communications may transmit an alert tone (long beep) to:

- Signal the beginning of the dispatch process (see section 7.7.2↓)

- Get the attention of a unit that has not been answering hails

## 7.5.2  Warble tones

Communications may transmit a "warble tone" (high-low-high-low, etc) to alert units that an important announcement follows. Reasons for such an announcement include, but are not limited to:

- Weather warnings

- Safety of personnel

- Ability of hospitals to receive patients

- Road closures affecting responses and transports

- Issues affecting ECCS infrastructure (CAD problems, phone problems, etc)

- Instructions related to major incidents or special events

- Temporary alteration of normal operating conditions

# 7.6  KEY WORDS AND PHRASES

To condense and standardize voice radio communications, the following key words and phrases should be used whenever appropriate.

| Key word or phrase | Meaning |
|---|---|
| *10-4* | Message received, I will comply. (Note, it's better practice to summarize your understanding of the message you just heard. For instance, "*Copy the apartment number is 202*". |
| *OK* | |
| *COPY* | |
| *RECEIVED* | |
| *10-22* | Police. (This 10-code is allowable if you do not want to make it obvious you are referring to the police.) |
| *MAYDAY* | I/we need help! (Make sure to identify yourself and state your exact location.) |

| CALL COMMUNICATIONS CODE ONE | Did you press your radio's mayday button intentionally? Are you in distress? |
|---|---|
| CODE ONE ERROR | I pressed my radio's mayday button accidentally. I am not in distress. |
| ASCERTAIN | Find out, determine |
| ACKNOWLEDGE | Let me know you have heard me and have received any message I may have sent. |
| ADVISE | Give this message to _____, or Provide me with the information I need. |
| APPROACHING _____ | I am moving and getting close to _____. |
| AVAILABLE AT/FROM _____ | Ready for a new assignment, and my current location is _____. |
| UNAVAILABLE<br><br>OUT OF SERVICE | I am no longer available for an assignment even though I am remaining logged into the CAD. (Also say the nature of your unavailability: SPECIAL ASSIGNMENT, MANPOWER, MECHANICAL, FUEL, etc) |
| CANCEL | Stop responding, you are no longer needed. |
| _____ CAN HANDLE | _____ is/are the only unit needed on this incident. All other units can cancel. |
| CLEAR THE AIR | Please announce "*THE AIR IS RESTRICTED*" because I have a message of paramount importance involving an emergency where life or personal injury is at risk. |
| THE AIR IS RESTRICTED | Maximize your use of the MDT for status changes and messages until the dispatcher announces "*RESUME NORMAL AIR*". |
| RESUME NORMAL AIR | The air is no longer restricted. It is no longer necessary to strictly maximize your use of the MDT. You may make voice transmissions according to the normal rules outlined in this document. |
| ABANDON THE SCENE | Leave the area immediately, you are in danger! |
| PATIENT DECEASED | The patient has died. |
| CARDIAC ARREST | The patient is not breathing and has no pulse. Resuscitation is in progress. If not already assigned, we need additional resources appropriate for a cardiac arrest. |
| CONVERSION | A pulse has been restored to our cardiac arrest patient, and we need the current time documented in the case comments. |

| | |
|---|---|
| *CHECK YOUR MIC* | Check your radio gear, because you keep transmitting a signal and blocking the channel without saying a message. |
| *CONFIRM* | Tell me with certainty whether what I'm saying is or is not correct. |
| *CORRECTION* | I misspoke. The correct information is... |
| *CONFIRMED ENTRAPMENT* | Heavy-duty resources will be required to extricate a patient. |
| *EXTRICATION COMPLETE* | The patient has been rescued, removed, or disentangled from an entrapment, and we need the current time documented in the case comments. |
| *DRIVER ONLY* | This unit has a fully-qualified driver, but lacks other personnel required to log on as a full crew. |
| *ENROUTE FROM _____*<br><br>*RESPONDING FROM _____* | I/we are on the way to the assigned location from our current location, which is _____. |
| *LOCATION?*<br><br>*WHERE ARE YOU?* | What is your location? |
| *MAKE ME A CASE FOR _____* | I was not dispatched to an incident, but I have come upon, or have been approached by, a patient with (or complaining of) _____. (Also state your location, and whether you CAN HANDLE the situation by yourself, or you need other units.) |
| *NEED A LEAD-IN FROM _____* | I'm having trouble figuring out how to get to the address. Please give me directions from my current location, which is _____. |
| *NO FURTHER* | There are no additional details, or That's all I needed to know. |
| *_____ NOT NEEDED* | The _____ resource or assistance is no longer necessary and should be canceled, released, or discontinued. |
| *OFF DUTY* | My unit is no longer staffed for calls. |
| *ON DUTY* | I/we are staffed and available for calls. |
| *ON SCENE* | We have arrived at the location of the incident. |
| *ON THE RAMP FROM _____ TO _____* | The location is on the **ramp** of a limited-access highway, specifically the ramp from _____ to _____. |

| *PERMISSION TO _____?* | I would like to _____, is this ok with you? (The response will be "*GRANTED*" or "*NEGATIVE*".) |
| --- | --- |
| *POSSIBLE R.S.I.* | Our patient may need Rapid Sequence Induction. Make sure we have two ALS providers and an EMS Field Supervisor assigned to this case. |
| *POST IN/AT _____* | Head to the area of _____ and wait for an assignment there until further advised. |
| *PUT NIGHTINGALE ON STANDBY* | We need Communications to notify Nightingale that we may be requesting them so that they can prepare to launch. |
| *LAUNCH NIGHTINGALE* | We need Communications to notify Nightingale that their immediate response is requested. |
| *REFERENCE _____* | With respect to _____, or In regards to _____ |
| *REPEAT* | Send your message again, I did not copy all or part of it. |
| *REPORT TO _____* | Head to the specified location. |
| *SLOW YOUR RESPONSE* | Continue in, but deactivate your emergency lights & siren and obey normal traffic rules. |
| *STAGING AT _____* | Our response to the scene is almost complete, but for safety reasons we are going no further than _____ until we're advised that the scene is safe. |
| *STAND BY* | I will re-contact you when I'm ready to continue our conversation. You may attend to other things until then. (Hint: Always say "*STAND BY*" instead of just not answering.) |
| *TRANSPORTING TO _____* | We are on the way to _____ hospital with our patient. |
| *ARRIVING _____* | We have reached _____ hospital with our patient. |
| *UNABLE TO LOCATE* | Despite searching appropriately, I/we have not been able to find the reported incident. (Also state your new status, ie "*We're AVAILABLE*".) |
| *UNIT CALLING?* <br> *LAST UNIT?* | Whoever was just calling me, please re-identify yourself and transmit your message. |
| *URGENT* | I have an unexpected danger or casualty to report. |
| *VERIFY* | Make sure a piece of information is correct. |
| *YES I AM* | |

| *YES WE ARE* | An answer in the affirmative. |
| *YES IT IS* | |
| *THAT IS CORRECT* | |
| *NO I'M NOT* | An answer in the negative. |
| *NO WE ARE NOT* | |
| *NO IT IS NOT* | |
| *YOU'RE UNREADABLE* | I did not understand you because there is a problem with your radio signal that you need to troubleshoot. |
| *WHAT'S YOUR ETA?* | How long will it take you to get here? (Since this is hard to estimate, you may answer by simply stating your location.) |

There are also some specific **words and phrases you should avoid** on our system:

| CLEAR | Ambiguous: Are you canceling yourself? Are you canceling someone else? Are you saying you have received a message? Are you saying the scene is or is not safe? |
| DISREGARD | Ambiguous: Are you telling me to ignore what you just said? Are you telling me to CANCEL? |
| ROGER | Use 10-4, OK, COPY, or RECEIVED. |
| OVER | These key words are appropriate on noisy radio channels, but the audio quality on our system is usually so high that these are unnecessary. |
| OUT | |

# 7.7  PHASES OF ACTIVITY

## 7.7.1  AVAILABILITY PHASE

**Remaining attentive**

From the moment you go ON DUTY (usually by logging into the CAD via your MDT) to the moment you go OFF DUTY (usually by logging out of the CAD via the MDT), you must make sure that Communications has some way to get your immediate attention. The following methods of being alerted are acceptable:

- Monitor the primary EMS channel (even when distractions are present)

- Be within sight and sound of the MDT you logged into

- Be in the station you are running out of (with the station alarm system properly configured to alert your unit)

- Carry an instantaneous paging system with you[3,4]

Using at least two of these methods simultaneously (if available) provides redundancy and is strongly recommended.

To the extent that portable radios are provided for on-duty personnel, such personnel are expected to carry such portables on their person, unless bunked down to sleep. If compliance with this expectation presents a challenge, notify an EMS Field Supervisor.

### Unit designators

An ambulance whose crew includes a released EMT-Intermediate or a released Paramedic must be logged into the CAD using the "P" suffix on the unit designator. For example, "A120P".

An ambulance staffed with a driver, but without a full crew, must use the CAD's *Edit Capabilities* feature to indicate that they are DRIVER ONLY. Although the CAD will not recommend a DRIVER ONLY unit for initial assignment, an EMS Field Supervisor or the dispatcher may assign the unit to an incident anyway, either to act as a first-response unit, or to "marry up" with a Zone Medic or other unit to form a full crew. A DRIVER ONLY unit may request approval from an EMS Field Supervisor to respond to an incident for either of these reasons. The DRIVER ONLY "capability" may not be used by an otherwise full crew as a way to avoid being recommended for initial assignments.

### Posting

As conditions dictate, an EMS Field Supervisor may post an EMS unit at a strategic location. Units who feel that their posting assignment is no longer advantageous may request an EMS Field Supervisor to release them from posting.

---

[3]The EMS Department has identified the addition of a paging capability to the portable radios as a high-priority unmet need.
[4]The PhoenixG2 smartphone app, running in the background, properly configured to alert your unit, is acceptable for this.

## 7.7.2  DISPATCH PHASE

**KEY CONCEPTS**

*Common Operating Picture*

It's important for Communications and all on-air EMS personnel to be afforded a shared understanding of where units are located when they go Enroute or become Available. This is referred to as having a **Common Operating Picture**. It cannot be assumed that a unit is responding from its nominal or home station. For instance, when Ambulance 920 is assigned to an incident, it may find itself at any station, any hospital, or indeed anywhere else. The CAD has an integrated Automatic Resource Location (ARL) feature to help it find the closest available unit to an incident, but the system cannot account for factors such as closer crews that are just about to become available, closer crews that are responding to a lower priority incident, closer crews that are just about to log in, etc.

To account for these limitations, the following procedures have been established:

1.  Upon being dispatched, announce by voice that you are Enroute, and state your location. Also mark Enroute on the MDT as soon as possible. Examples:

    o  *"Ambulance 1429, Enroute **from the station"*** (This implies Station 14.)

    o  *"Ambulance 424P, Enroute **from Station 2"***

    o  *"Zone Medic 2, Enroute **from Princess Anne Hospital"***

2.  When becoming Available, announce by voice that you are Available, and state your location. Also mark Available on the MDT as soon as possible. Examples:

    o  *"Ambulance 925P, Available **at Holland & Rosemont"***

    o  *"Zone Medic 19, Available **from Bay Island"***

*Tight Dispatch Cycle*

The time between the announcement of an alarm and the assigned unit(s) marking Enroute should be kept to a minimum. The more time that elapses, the longer on-air personnel are

deprived of a Common Operating Picture, and the less efficient the system may become. For this reason, the EMS Department emphasizes the use of a **Tight Dispatch Cycle**.

"Enroute" in our system is defined as "heading toward the call regardless of the manner of movement". There is no need to wait until you are in your vehicle, or your motor has started, or the wheels are turning, or your MDT has booted up. It is acceptable to announce that you are Enroute the moment you take a step away from your seat or bed toward your vehicle.

In other words, the quicker the following example sequence occurs, the better:

| Speaker | Message |
|---|---|
| Virginia Beach: | *(Strikes alert tone), Ambulance 1621, Zone Medic 15, Breathing Difficulty, 1345 Split Branch Ct, Windsor Hill Condos, Priority 1, time 0929* |
| Ambulance 1621 (without delay): | *Ambulance 1621, Enroute from Leigh* |
| Zone Medic 15 (without delay): | *Zone Medic 15, Enroute from the station* |

If the above sequence occurs quickly, the following sequence can also occur quickly, and the patient receives the quickest possible response:

| Speaker | Message |
|---|---|
| Ambulance 520: | *Ambulance 520, Virginia Beach, we're Available on a refusal at Windsor Hills Place. We'll take Split Branch Ct.* |
| Virginia Beach: | *Ok, Ambulance 520, respond. Virginia Beach to Ambulance 1621, you can cancel.* |
| Ambulance 1621: | *Ambulance 1621, Available from Leigh* |

## ANNOUNCEMENT OF ALARMS

Alarms for all EMS incidents will be transmitted by electronic methods (station alarms, MDT, PhoenixG2 system, etc) as well as by voice. The dispatcher will use the following procedure when announcing an alarm by voice:

- Strike alert tone.
- Announce:
  - assigned units

- nature of emergency
- address
- subdivision and/or name of building or institution if available and applicable
- priority
- time

Once all assigned units have acknowledged the alarm (by announcing "*Enroute*" and/or marking Enroute via MDT), the dispatcher will announce pertinent details of the case. This may include patient age, gender, and any other information gleaned by the call-taker. Other case details may be included in the comments available via MDT.

## 7.7.3  RESPONSE PHASE

**STERILE COCKPIT**

The highest priority for the driver of an EMS vehicle during the response phase is to maneuver the vehicle safely. Another crew member, if available, should assist with the safe operation of the vehicle. A crew member in the passenger seat, if there is one, should do the following during the response phase:

- Make sure the headlights and emergency lights are on

- Assist with figuring out how to reach the scene of the incident

- Act as another set of eyes whenever possible – especially at intersections

- Be the MDT operator

- Keep your partner(s) advised of pertinent updates coming through on the MDT

- Manage radio communications

Personnel assigned to a case should pay special attention during their response to all voice transmissions and to updates that may come across the MDT. Keep in mind that you are responding as part of a team. The dispatcher and/or field units may hail you during your response to provide you with critical updates. Such updates may include:

- Guidance on how to reach the patient

- Patient status

- Resources needed from your unit upon your arrival

- Safety information

- Replacing you with a closer unit

- Canceling your response

**Conversation and activities unrelated to safely responding to the incident should be avoided. Because of the sterile cockpit rule, phone conversations are strongly discouraged during the response phase, and are strictly prohibited for drivers (including supervisors). If the conversation is important enough for a driver to say or hear during the response phase, it should be said on the appropriate radio channel.** See the Department's *Use Of Mobile Phone Policy*.

**LEAD-INS**

A unit having trouble figuring out how to reach the scene of the incident should not hesitate to advise that they NEED A LEAD-IN FROM their current location. In response, the unit should receive directions to the scene. For instance:

| Speaker | Message |
|---|---|
| Ambulance 1723: | *Ambulance 1723, Virginia Beach, we NEED A LEAD-IN FROM Dam Neck & General Booth.* |
| Virginia Beach: | *Head toward Indian River & Kempsville and advise when you're approaching that intersection.* |
| Ambulance 1723: | *Heading toward Indian River & Kempsville, we'll advise.* |
| (…) | |
| Ambulance 1723: | *Ambulance 1723, Virginia Beach, westbound on Indian River approaching Kempsville, NEED A LEAD-IN.* |
| Virginia Beach: | *Turn left on Kempsville, left on Stewart, 5547 is on the right.* |
| Ambulance 1723: | *Copy left on Kempsville, left on Stewart, 5547 on the right.* |

If another field unit offers to give you a lead-in, the parties should consider requesting a tac channel and conducting the lead-in there.

Although asking for a lead-in should not be delayed, crews should think about the other resources they may have available to perform the navigation themselves. Lead-ins require a great deal of attention from the person giving the directions, and they use up a lot of valuable air time. The mapping system on your smartphone may be useful and familiar to you, and every unit should be carrying an official city-issued paper map book. As soon as you no longer need additional directions, you should advise that further lead-in is NOT NEEDED. Remember to advise the dispatcher that the tac channel, if assigned, can be released.

### TACTICAL ("TAC") CHANNELS

Tactical ("tac") channels are automatically assigned on some kinds of incidents, and may be specially requested on others. You are expected to listen carefully to find out if a tac channel is assigned to your incident. If so, the correct procedure is to <u>switch all your portable radios to the assigned tac channel</u> and leave them there for as long as you are assigned to the incident.

Communications or a responding officer may conduct a "roll call" on the tac channel at the beginning of the response phase. This is an important safety and accountability procedure, meant to ensure that all units have indeed switched their portable radios to the tac channel. When your unit is called during a roll call, simply identify yourself using your unit's call sign.

If you are joining a tac channel and no roll call is conducted, or the roll call is already over, wait until there is a gap in the radio traffic, then introduce yourself as in this example:

> *Ambulance 221 is on the tac.*

If no Incident Commander has been established yet, you should conduct all your communications on the tac channel, through the senior responding officer (EMS Field Supervisor or Fire Battalion Chief). Once an Incident Commander has been established, you should conduct all your communications on the tac channel, through "Command". It is the senior responding officer's or Incident Commander's responsibility to communicate with the dispatcher on the appropriate primary channel.

When you are no longer assigned to the case, be sure to switch all your portable radios back to the EMS Command channel.

## 7.7.4  ON SCENE PHASE

Units should mark themselves ON SCENE via MDT, but it is allowable to <u>also</u> mark ON SCENE by voice <u>if</u> it would be of significant value to other assigned units to hear the status change.

You are expected to have your portable radio on your person at all times when you are on scene of an incident. This is necessary for efficient and effective operations, as well as for safety.

If you are the first unit on scene, it may be appropriate to transmit a scene size-up report. If a tac channel has been assigned, transmit the scene size-up on the tac channel, otherwise transmit it on the EMS COMMAND channel. For example:

> *Ambulance 621P, On Scene. One vehicle on the left shoulder, against the Jersey barrier.*

Once you are on scene and have evaluated the situation, you may request any additional resources needed, or cancel any resources that are not needed. If you had switched to a tac channel, and you are canceling all other units and releasing the tac channel, remember to switch your portable back to the EMS COMMAND channel.

A crew that must split up should use the following call signs to communicate between themselves and other units (using Ambulance 621 as an example):

| Call sign | Description |
| --- | --- |
| *Ambulance 621* **Driver** | The person who last drove the unit |
| *Ambulance 621* **Alpha** | The AIC, or most senior person on the crew who was not the driver. "*AIC*" is also acceptable. |
| *Ambulance 621* **Bravo** | The next most senior person on the crew who was not the driver. "*Third*" is also acceptable. |

Special operations units may use variations on the above system. For instance, "*Rescue Boat 22 Coxswain*", "*Rescue Boat 22 Swimmer*", etc.

The tac channel rules described in the RESPONSE PHASE section also apply during the ON SCENE phase.

## 7.7.5  TRANSPORT PHASE

The following status changes should be made by MDT under all possible circumstances:

- TRANSPORTING TO the hospital
- ARRIVING at the hospital

For safety reasons, the person driving the ambulance should <u>not</u> attempt to conduct more complex communications via MDT. In this case, use voice instead.

If a tac channel was assigned to your incident, personnel on the ambulance may switch back to the EMS COMMAND channel after leaving the scene.

If you are attempting to rendezvous with another unit during the transport, request a tac channel from the dispatcher and conduct your rendezvous conversation there.

**The use of a phone by the driver of an ambulance transporting a patient is strictly prohibited in any mode.** See the Department's *Use Of Mobile Phone Policy*.

## SHUTTLING ZONE CARS TO THE HOSPITAL

The person driving the zone car to the hospital should use the MDT to mark the zone medic unit TRANSPORTING TO the hospital and ARRIVING at the hospital. Shuttling the zone car to the hospital must be done with the **emergency lights and siren off**, obeying all normal traffic rules.

The zone car should only follow – never pass – the ambulance on the way to the hospital. It's ok if the zone car loses sight of the ambulance.

The call sign for the person shuttling the zone car is flexible in our system. Examples of valid call signs include:

- "*ZONE MEDIC 9 CAR*"

- Title and last name (ie, "*EMT SIMMONS*")

Using one of these call signs may be necessary if the ambulance and the person shuttling the zone car must converse, or if the person shuttling the zone car comes upon an emergency incident and needs to report it to Communications.

## HOSPITAL NOTIFICATIONS AND CONSULTATIONS

The person driving the ambulance should be aware that the AIC may switch the main radio to a hospital channel. While the main radio is on the hospital channel, the driver should switch his or her portable radio to the EMS COMMAND channel. Otherwise other units may lose contact with the ambulance, and this can cause significant confusion.

Generally, it's a better idea to use the more powerful ambulance main radio instead of a portable radio to make hospital notifications and consultations. The weaker portable radio signal

has a hard time making it through the metal walls of the ambulance. It's especially important to use the main radio when communicating with hospitals across city lines, because your signal must reach the distant radio network of the city in which the hospital is located.

For more guidance about making hospital notifications and consultations, see the radio report guidelines in the Regional Medical Protocols manual.

# 7.8  HEAVY DEMAND

It is usually possible to prevent the saturation of a radio channel with voice traffic by shifting some of the conversations to tac channels. All units are authorized to request a tac channel from the dispatcher for this purpose. Sometimes a single incident may require multiple tac channels for this reason.

If a radio channel becomes momentarily saturated, or the dispatcher is so busy with other activities that immediate answers to radio calls are not practical, the dispatcher may advise "*All units STAND BY*". Units should then wait for the dispatcher to recognize units one at a time.

If the radio channel becomes persistently congested, and nonessential transmissions must be eliminated, or if a critical situation exists requiring immediate intervention, an EMS supervisor or incident commander may instruct the dispatcher to "*CLEAR THE AIR*". The dispatcher will then announce, "*Attention all units, THE AIR IS RESTRICTED*". The dispatcher may also restrict the air on the dispatcher's own initiative. Units must then maximize the use of the MDT (or even telephone) for status changes and messages until the dispatcher announces *"RESUME NORMAL AIR*" at the dispatcher's own initiative or at the request of an EMS field supervisor or incident commander.

"*RESUME NORMAL AIR*" means that the air is no longer restricted. It is no longer necessary to strictly maximize your use of the MDT. You may make voice transmissions according to the normal rules outlined in this document.

# 7.9  DANGER

## 7.9.1  DISTRESS SIGNALS

If you are in immediate danger, there are two ways to declare that you are in distress:

1. Identify yourself, state your location, and announce "*MAYDAY*".

2. Press your radio's mayday button.

In an actual distress situation, it is best to do <u>both</u> if possible.

Unless your identity and location are known, help may have trouble finding you. Even if you have already marked ON SCENE, you should repeat that so there will be no doubt. For example:

> *Zone Medic 15, On Scene, MAYDAY, MAYDAY!*

...or...

> *Zone Medic 15, Bonney & Boggs, MAYDAY, MAYDAY!*

Saying "*MAYDAY*" by voice leaves no doubt that your distress signal is genuine, and lets the dispatcher know that there is no need to use the challenge-response protocol (see below).

Pressing your radio's mayday button activates an audio and visual alarm on the dispatcher's console and displays your radio's ID number there as well. It may also cause the radio system's control computer to give priority to the radio channel that you are on, and to your radio in particular. If you only press your radio's mayday button without announcing "*MAYDAY*" by voice, the dispatcher will initiate the below challenge-response protocol to determine if your distress signal is genuine.

## 7.9.2  MAYDAY BUTTON CHALLENGE-RESPONSE PROTOCOL

When the dispatcher is alerted that you have pressed your mayday button, but does not hear you say "*MAYDAY*", the dispatcher will hail you and announce the following "challenge" phrase:

> *CALL COMMUNICATIONS CODE ONE*

This "challenge" sounds like a command, but is actually a coded question. The dispatcher is trying to determine if you are actually in distress. Unless you give the correct cancellation response, Communications will send several police units to your location in emergency mode.

To cancel an accidental mayday button signal, transmit the following response, word-for-word:

*CODE ONE ERROR*

### 7.9.3  CANCELING A GENUINE DISTRESS SIGNAL

When the scene becomes completely safe, you can cancel a genuine distress signal by transmitting the following key phrase to the dispatcher:

*RESUME NORMAL AIR*

Radios whose mayday buttons were pressed may need to be reset. You can accomplish this by pressing and holding the mayday button for about 7 seconds, or by turning the radio off for about 30 seconds. If neither of these procedures work, contact a supervisor.

# 7.10  CONTINGENCIES

## 7.10.1  FAILSOFT MODE

If the 800 radio system loses its central control capability, it will no longer be able to operate as a computerized, multiplexed, trunked system. This just means it will fall back to operating in a simpler, feature-limited mode called "FAILSOFT". When in FAILSOFT mode, you will hear a medium-pitched tone every several seconds, and the display will flash the word "FAILSOFT". In FAILSOFT mode, you might experience interference from conversations that would normally be occurring on a separate channel – especially on the tac channels and the hospital channels. Switching operations on the scene of an incident from a tac channel to the talk-around channel might help alleviate this. The EMS COMMAND channel should remain well isolated, as usual.

When the system returns to full functionality, it will do so seamlessly.

## 7.10.2  COMPLETE PRIMARY SYSTEM FAILURE

In the unlikely event that the 800 system suffers a complete failure, instructions may be issued advising users to switch to other channels that connect to a different radio system (such as the ORION or NIFOG set of channels). If enough infrastructure (such as the repeater and electrical power system) has been lost, operations may have to fall back to pure line-of-sight functionality. For instance:

- All city radios feature talk-around capability. Talk-around channels (such as "FD/EMS TA" on the ""VB FIRE/EMS" zone) provide limited and short-range functionality. Units must be in close proximity in order to hear each other on these channels.

- Vehicle-mounted radios feature a set of conventional VHF channels, including VHF NIFOG channels, the Virginia Statewide EMS channels, and the Hospital Emergency Administrative Radio (HEAR) channels. Units must be in moderate proximity in order to hear each other on these channels. None of these channels are available on most portable radios, making them of very limited use.

Using a pure line-of-sight channel effectively converts your advanced, multiplexed, computerized, trunked radio – with all its redundancies and safety features – into a glorified consumer walkie-talkie. Units that are far apart may have to relay messages to each other.

## 7.10.3  SMARTPHONES

Smartphones and their networks evolve so quickly, and are already so robust, that their use in a contingency situation cannot be discounted. Smartphones can support not only one-on-one phone conversations, but also walkie-talkie-like experiences (such as with the Zello system). Smartphones and their networks depend on an extensive infrastructure remaining in good operating condition, however, so their suitability in a contingency situation is questionable. If a decision is made to migrate operations to involve smartphones, leadership will advise field personnel.

Apart from contingency conditions, the Department places significant restrictions on the use of cellular phones for incident-related operations. See the Department's *Use Of Mobile Phone Policy*.

# 7.11  MUTUAL AID

## 7.11.1  Gibbs Woods, North Carolina

Incidents in the Gibbs Woods section of Currituck County are treated as if the address were in Virginia Beach. No special communications are required between Virginia Beach field units and Currituck County.

## 7.11.2  Knotts Island

Incidents in Knotts Island reported to Virginia Beach are initially treated as if the address were in Virginia Beach (whether it is or not).

## 7.11.3  Elsewhere

The following procedure will be used upon receiving any other mutual aid request:

1. Communications will contact the EMS Field Supervisor to determine which units should be sent.

2. Communications will dispatch the mutual aid call on the Virginia Beach EMS COMMAND channel.

3. Use the Virginia Beach EMS COMMAND channel and the MDT to mark Enroute according to section 7.7.3↑.

4. Switch to the appropriate neighboring jurisdiction's primary channel and hail the dispatcher there. Preface your call sign with "Virginia Beach", and use the neighboring jurisdiction's name as its dispatcher's call sign. For example:

| Speaker | Message |
|---|---|
| Ambulance 222P: | *Virginia Beach Ambulance 222P to NORFOLK* |
| Norfolk: | *Virginia Beach Ambulance 222P, go ahead* |
| Ambulance 222P: | *We're Enroute to Military & Northampton from Haygood & Aragona* |

5. Monitor both the Virginia Beach EMS COMMAND channel and the neighboring jurisdiction's channel until entering the neighboring jurisdiction.

6. The neighboring jurisdiction's dispatcher may instruct you to switch to another channel as needed. Switch all your portable radios to the specified channel.

7. Hospital channels in Hampton Roads cities are accessible in the same radio "zone" as the neighboring city's primary channel. Just turn the channel knob to switch to the hospital channel.

8. While assigned to a mutual aid case, treat the neighboring jurisdiction's dispatcher as your dispatcher. Use the same response, on scene, and transport phase radio procedures as you would in Virginia Beach.

9. Whether or not you may be assigned to more than one incident while you are rendering mutual aid to a neighboring jurisdiction depends on the situation. Coordinate with the following units as needed to make this determination:

    o The neighboring jurisdiction's dispatcher

    o The neighboring jurisdiction's incident commander (if there is one)

    o On strike team activations, your Strike Team Leader

    o Your Virginia Beach EMS Field Supervisor (possibly by telephone)

# 9  APPENDICES

## 9.1  CALL SIGNS

Note that two call signs in particular can mean different things in different contexts:

| Call sign | EMS meaning | Fire Department meaning |
|---|---|---|
| Rescue 1 | Ocean Park Volunteer Rescue Squad Inc. | Crash/technical rescue truck quartered at Station 3 (London Bridge) |
| Rescue 2 | Davis Corner Volunteer Rescue Squad Inc. | Crash/technical rescue truck quartered at Station 7 (Town Center) |

### 9.1.1  DISPATCHER

The dispatcher's call sign on the EMS COMMAND and tactical channels is "Virginia Beach".

## 9.1.2  STATIONS

An empty cell in the following chart means that the corresponding department does not have any dedicated space at the specified station.

| Name | Station designator | EMS call sign | Fire Dept call sign |
|---|---|---|---|
| Ocean Park | EMS Station 1 | Rescue 1 | |
| First Landing | Fire Station 1 | Rescue 22 | Company 1 |
| | EMS Station 22 | | |
| Davis Corner | Station 2 | Rescue 2 | Company 2 |
| London Bridge | Station 3 | Rescue 3 | Company 3 |
| Chesapeake Beach | Station 4 | Rescue 4 | Company 4 |
| Princess Anne Courthouse | Station 5 | Rescue 5 | Company 5 |
| Creeds | Station 6 | Rescue 6 | Company 6 |
| Town Center | Station 7 | | Company 7 |
| Great Neck | EMS Station 8 | Rescue 8 | |
| Oceana | Fire Station 8 | | Company 8 |
| Kempsville | Station 9 | Rescue 9 | Company 9 |
| Woodstock | Station 10 | Rescue 10 | Company 10 |
| Beach Borough | Station 11 | | Company 11 |
| Seatack | Station 12 | Rescue 12 | Company 12 |
| Blackwater | Station 13 | Rescue 13 | Company 13 |
| Virginia Beach | Station 14 | Rescue 14 | |
| Thalia | Station 15 | Rescue 15 | |
| Plaza | Station 16 | Rescue 16 | Company 16 |
| Sandbridge | Station 17 | Rescue 17 | Company 17 |

| Green Run | Station 18 | | Company 18 |
|---|---|---|---|
| Stumpy Lake | Station 19 | Rescue 19 | Company 19 |
| Little Neck | Station 20 | | Company 20 |
| Strawbridge | Station 21 | Rescue 21 | Company 21 |

## 9.1.3  RESPONSE AND COMMAND UNITS

| Call sign | Description |
| --- | --- |
| CAPTAIN + number | EMS Captain |
| EOC | Emergency Operations Center |
| [EMS] CHIEF 1 | Chief of EMS Department |
| [EMS] CHIEF 2 through 3 | Deputy Chief |
| [EMS] CHIEF 5 through 9 | Division Chief |
| [EMS] CHIEF 10 | Command Duty Officer |
| [EMS] CHIEF 11 through 19 | Brigade Chief |
| [EMS] CHIEF 20 through 39 | Assistant Chief |
| EMS 1 through 3 | Field Supervisor |
| EMS 17 | Sandbridge lifeguard supervisor paramedic |
| volunteer rescue squad number + 20 through 29 | Ambulance |
| volunteer rescue squad number + 50 | Squad Commander |
| volunteer rescue squad number + 51 | Assistant Squad Commander |
| volunteer rescue squad number + 52 through 69 | Other key volunteer rescue squad personnel |
| volunteer rescue squad number + 70 through 99 | EMT-Intermediate or Paramedic personnel |
| CART + number | UTV ambulance |
| LIFEGUARD CHIEF 1 | VBLS operations chief |
| LIFEGUARD CHIEF 2 through 3 | VBLS deputy chief |
| LIFEGUARD + number | VBLS lifeguard supervisor |
| MCI + station number | Mass Casualty Incident response truck |
| MD 1 | Operation Medical Director physician |
| MD + other number | Physician personnel |

| | |
|---|---|
| MEDIC + number | Paramedic personnel |
| NIGHTINGALE | Helicopter ambulance |
| SPEC OPS + number | Special operations officer |
| TAC MEDIC + number | SWAT Medic personnel |
| UTILITY + station number | Utility vehicle |
| ZONE MEDIC + station number | ALS intercept vehicle |

# 9.2  SPELLING ALPHABET

| Letter | Old US persistent | Modern international official |
|--------|-------------------|------------------------------|
| A | Adam | Alfa |
| B | Boy | Bravo |
| C | Charles | Charlie |
| D | David | Delta |
| E | Edward | Echo |
| F | Frank | Foxtrot |
| G | George | Golf |
| H | Henry | Hotel |
| I | Ida | India |
| J | John | Juliett |
| K | King | Kilo |
| L | Lincoln | Lima |
| M | Mary | Mike |
| N | Nora | November |
| O | Ocean | Oscar |
| P | Paul | Papa |
| Q | Queen | Quebec |
| R | Robert | Romeo |
| S | Sam | Sierra |
| T | Tom | Tango |
| U | Union | Uniform |
| V | Victor | Victor |

| W | William | Whiskey |
|---|---------|---------|
| X | X-ray | X-ray |
| Y | Young | Yankee |
| Z | Zebra | Zulu |

# 9.3  CHANNEL PLAN

The channel plan for Virginia Beach EMS radios is incorporated into this document by reference.