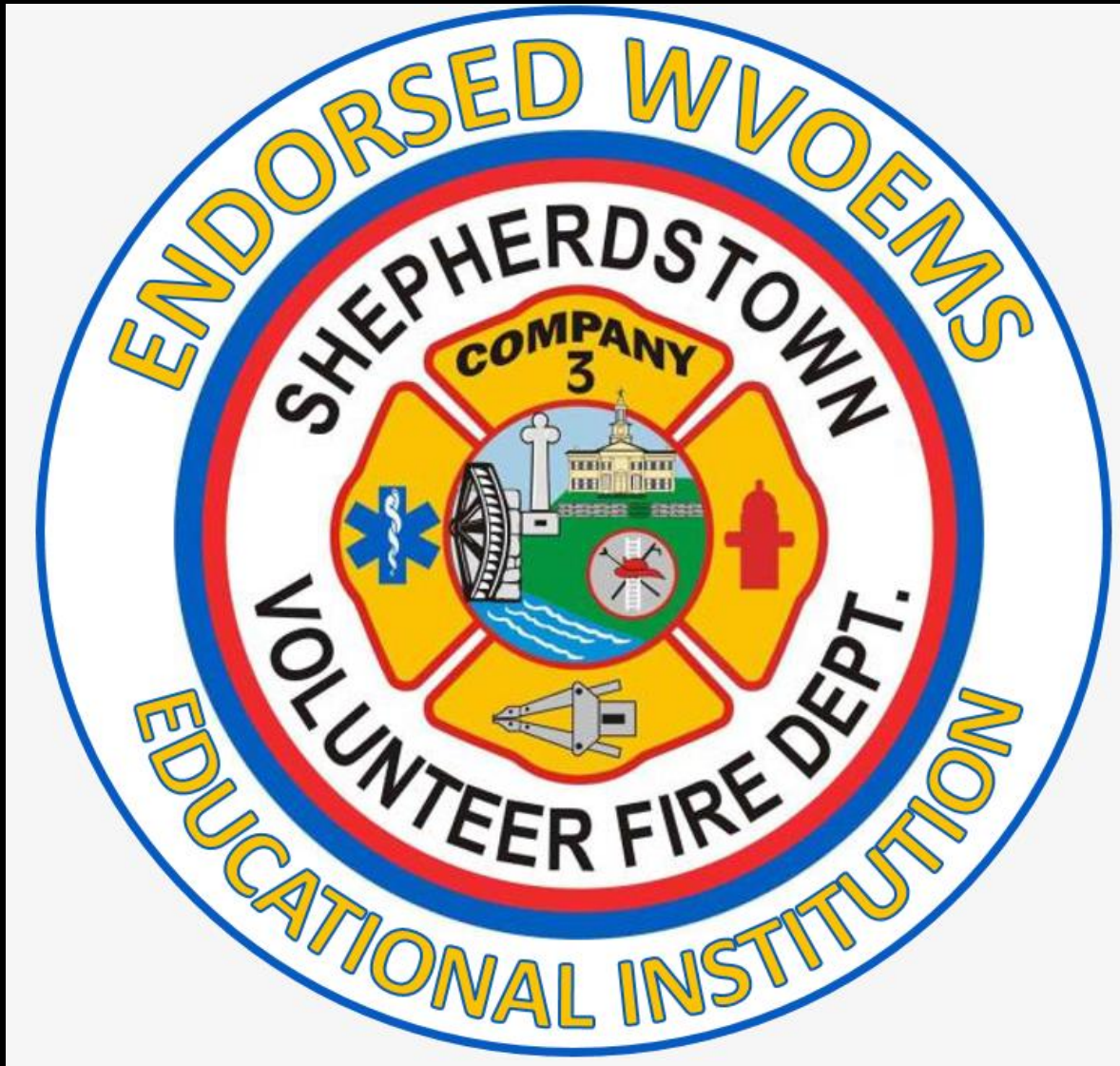


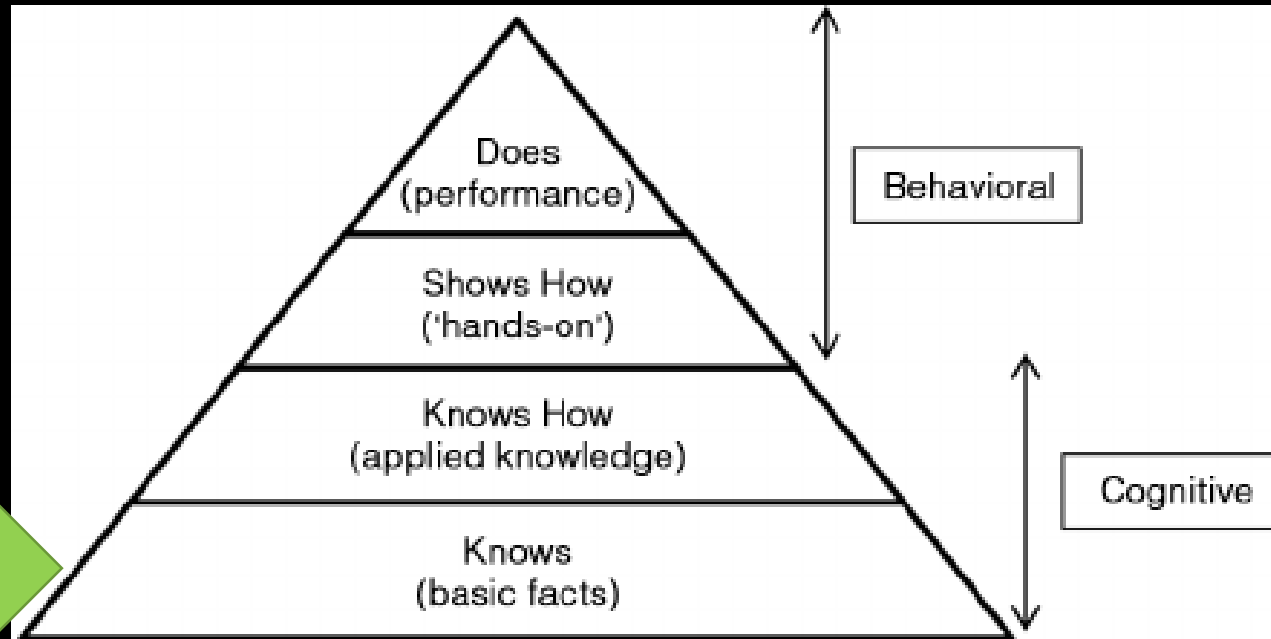
# Communications:

A Review of Jefferson County procedure, guidelines, and tools



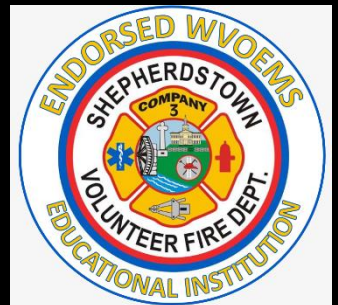


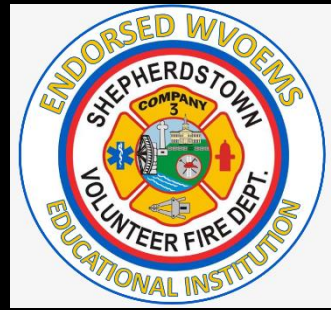
The mission of the Shepherdstown Fire Department Educational Institution is to prepare competent emergency medical providers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains through the delivery of safe and effective training.



## Domain

This training will focus in the Cognitive Domain (basic facts), and this understanding will drive behavior (performance).





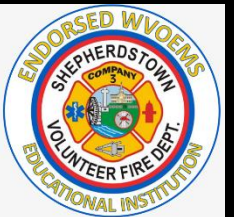
# Objectives

- Provide an overview of the Call-Taking Procedures, ProQA system, and dispatch algorithms.
- Provide an overview of radio principles, Jefferson County policy, and best practices.
- Provide a review of basic radio and CAD components, and related procedures
- Clarify the role of the EMS Provider, Firefighter, Officer (Fire/EMS), Dispatcher, and Communications Center (QA, Admin).



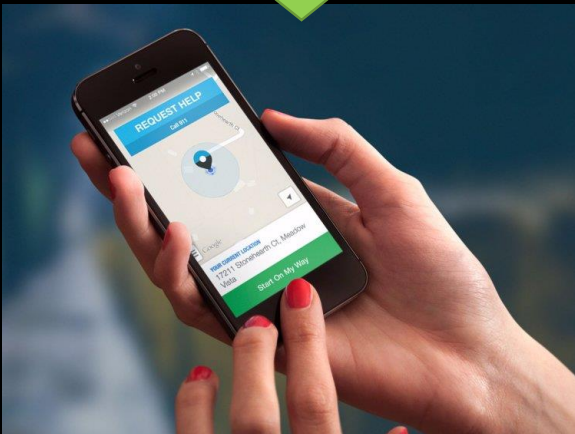
# Overview of the Call-Taking Procedures, ProQA system, and dispatch algorithms

Communications: A Review of Jefferson County procedure, guidelines, and tools.





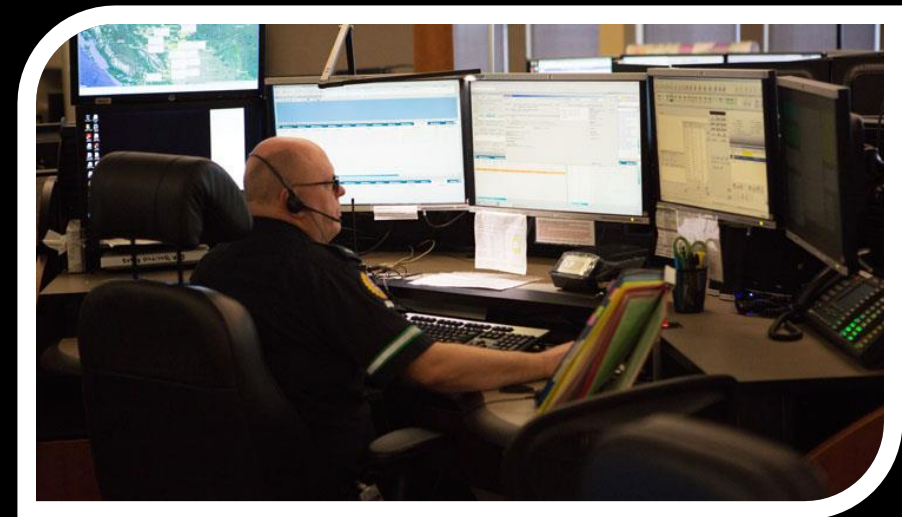
# A History of 911 Communications



- The milestone that kicked off emergency communications happened the same year Alexander Graham Bell patented the telephone. In 1876, the first rudimentary emergency telephone system was implemented in Britain. This led to Call Boxes, where the first call was placed in Massachusetts in the 1880s.
- In the early 1900s, all calls—including emergency phone calls—had to go through an operator. Operators took calls in the order they came in, making it impossible to prioritize emergencies. In 1935, a call regarding a house fire in London was pushed off due to the inefficiencies of the operating system. As a result, five women perished in the fire. This event led to the idea of emergency phone lines.
- In 1968, AT&T announced 911 would be the universal number for U.S. citizens to call in the event of an emergency. On Feb. 16, 1968, Alabama Speaker of the House Rankin Fite placed the first-ever 911 call in Haleyville, Alabama.
- Since then, mobile phones have led to a huge increase in 911 calls. Mobile phones account for almost 80% of our 9-1-1 calls.
- Though the first versions of computer-aided dispatch were developed in the 1960s, they weren't adopted widely until the late 1990s.
- First authorized by Congress in 2012, FirstNet was developed to provide emergency responders with the first nationwide, high-speed, broadband network. As of 2017, the FirstNet network includes all 50 states, two territories and Washington, D.C. FirstNet was a major step toward interoperability between first responders. In 2018, SFD went aboard FirstNet.
- Launched in May 2018, Uber's 911 Assistance is a good example of 911 integrations into apps. The company's new line of security can be activated with a swipe up of the screen where riders can easily tap on the "911 Assistance" button. After a rider confirms their intention to call 911, information can be shared with emergency dispatch, including a real-time location, and details about the incident.

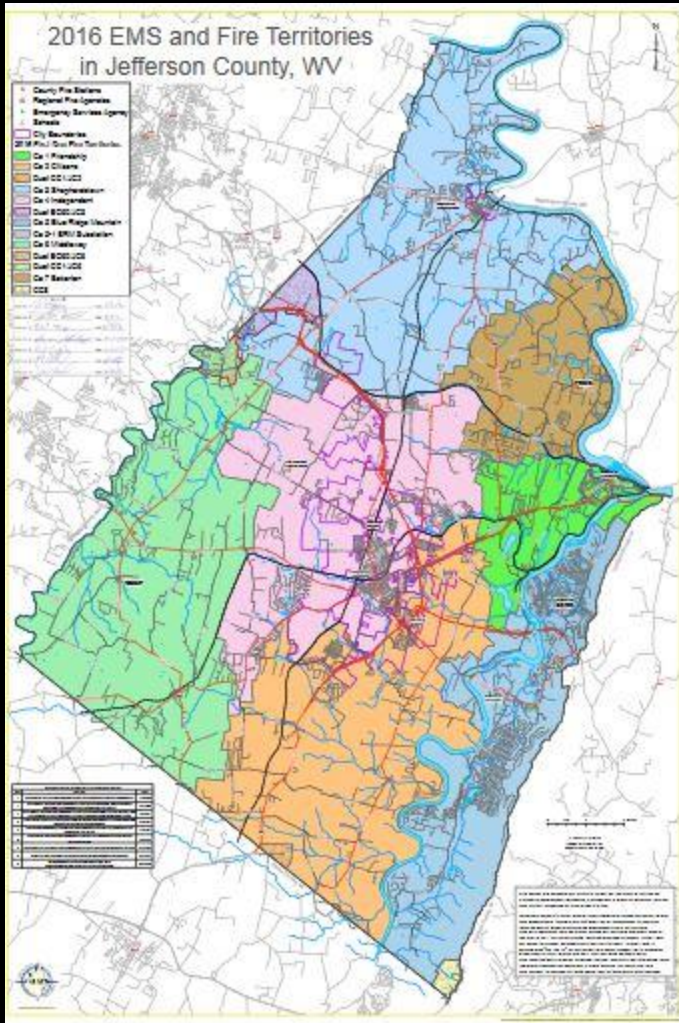
# Understand Call-Taking

- A Person or Entity calls 9-1-1, or contacts the communications center via radio, CAD, or other means.
- The same dispatcher answers the calls, and loads the details in CAD while giving the caller instruction.
- Dispatch can not take place until certain criteria have been met:
  - Location
  - Nature
  - MPDS
  - Dispatch Code





# Determine the Location



- Jefferson County is divided into zones for the purpose of response, and each fire company is responsible for a given geographical area.
- This larger area is then sub-divided into smaller working areas, referred to as the box areas.
- Any given box area could be large enough to include multiple subdivisions, or only include a school (S), medical facility (M), or similar (X). The advantage of this scheme is the ability to define the unit(s) to respond for that specific area.
- CAD uses a method for determining what unit(s) to dispatch which is based on the incident type (NATURE) and the location of the incident.
  - “Response Plan” dispatch is coming.

# Understand the Need for EMD

- In the early days of 9-1-1, dispatchers were on their own without a protocol system to accurately and consistently dispatch needed support.
- No method to adjust to the variety of calls coming in to their centers.
- There were no key questions to narrow and focus calls or pre-arrival instructions, such as CPR, to help the caller until the needed help arrived.
- The quick and often hasty response ultimately wasted time and resources.
  - EMS agency risked sending the wrong emergency vehicles
  - Caller was left without the benefit of further, life-saving instructions

# Understand MPDS

- **Medical Priority Dispatch System® (MPDS)** is in part based on published standards by:
  - The National Association of EMS Physicians (NAEMSP),
  - The American Society for Testing and Materials (ASTM),
  - The American College of Emergency Physicians (ACEP),
  - The U.S. Department of Transportation (USDOT),
  - The National Institutes of Health (NIH),
  - The American Medical Association (AMA), and
  - More than 20 years of research, development, and field testing throughout the world.



# Understand MPDS

- **MDPS** protocol contains 34 Chief Complaint Protocols, Case Entry and Exit information, call termination scripts, and additional verbatim instruction protocols for AED support, CPR, childbirth assistance, airway and breathing, and the Heimlich maneuver.
- Special protocols for stroke identification, aspirin administration, pandemic flu triage are included.
- Jefferson County Emergency Communications (JCECC) is an Emergency Medical Dispatch **ACCREDITED CENTER OF EXCELLENCE** and has maintained the high standards of the ACE center since being accredited in June 2003.
- JCECC is the only emergency communications center in West Virginia, and was the 82nd in the world, to be awarded this highest distinction for our comprehensive implementation and compliance with the Medical Priority Dispatch System (MPDS) and associated "20 Points of Excellence."

# Emergency Medical Dispatch in Detail

- “Any true or actual medical emergency, as it worsens, will result in one or more of 4 basic priority symptoms...”
  - chest pain;
  - difficulty breathing;
  - change in level of consciousness;
  - serious hemorrhage...

...in all cases, no exceptions.”

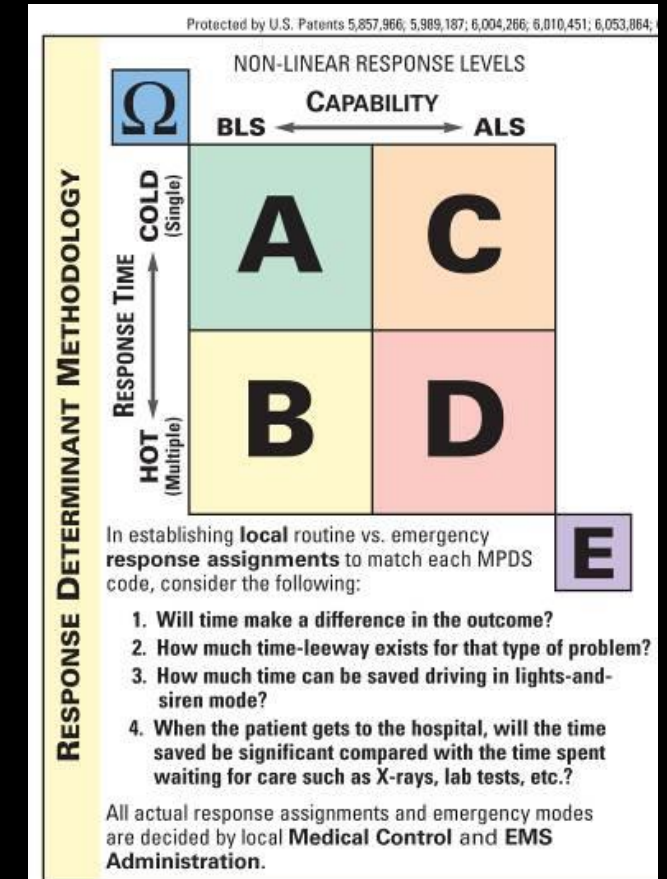
- Dispatchers will use Case Entry and Key Question to determine scene safety, mechanism of injury (if trauma), and priority symptoms.
- The EMD’s job is to interrogate about the presence or absence of priority symptoms through Key Questions.
- The EMD will determine the Four Commandments
  - Chief Complaint (True or Actual Emergency)
  - Age
  - Status of Consciousness
  - Status of Breathing

The image shows a circular inset of an Emergency Medical Dispatch (EMD) form. The form is titled "EMD PROTOCOL" and "Medical Priority Dispatch". It contains various sections for dispatchers to fill out, including "Case Entry", "Key Questions", and "Post-Dispatch Instructions". The form is color-coded with yellow, green, and blue sections. The "Case Entry" section includes questions about the location, time, and nature of the emergency. The "Key Questions" section includes questions about the patient's condition, such as "Are you with the patient now?", "How many (other) people are hurt (sick)?", and "Is s/he breathing or coughing at all?". The "Post-Dispatch Instructions" section includes instructions for the dispatcher to follow, such as "I'm sending the paramedics (ambulance) to help you now. Stay on the line." and "Cut her/him down immediately, loosen the noose, then tell me if s/he's breathing." The form also includes a section for "Critical Caller Data" and a section for "Dispatch Notes".



# EMD in Detail




- JCECC's automated program, ProQA, will generate the dispatch code based upon the answers provided during our fully scripted Case Entry and Key Question interrogation.
  - The “dispatch code” is a combination of the Protocol's number and the highest determinant level and descriptor that applies. Some protocols have a suffix that is appended to the end of the code to further define the nature of the response.
  - The dispatch code provides responders with the essential information needed in the initial dispatch:
    - The dispatch code provides responders with the nature and urgency level of the EMS response.
- During and after dispatch, our dispatchers continue questions and provide instructions, not only for life saving measures, but also to assist the responder and help ensure their safety at the scene. This is our “zero-second” response to begin helping the patient while EMS and Fire are en route.
  - Additional “plain language” information can be provided to responders when en route, as a result of the continued questioning.



<b>1 (Phone to Patient)</b> <ul style="list-style-type: none"> <li>• Are you <b>right by</b> her/him <b>now</b>?  <div>Yes → 2</div> </li> </ul> <p>(No) Get the <b>phone</b> as <b>close</b> to her/him as possible. Don't hang up. <b>Do it now</b> and tell me when it's done.          (If I'm not here, stay on the line.)</p> <div>→ 2</div>	<b>2 Check Airway</b> <b>Listen carefully.</b> <b>Lay</b> her/him <b>flat</b> on her/his <b>back</b> on the <b>ground</b> and <b>remove</b> any <b>pillows</b> . Kneel next to her/him and <b>look</b> in the <b>mouth</b> for <b>food</b> or <b>vomit</b> . <ul style="list-style-type: none"> <li>• Is there <b>anything</b> in the <b>mouth</b>?  <div>Yes → 13</div> <div>No → 3</div> </li> </ul>	<b>3 Check Breathing</b> Now place your <b>hand</b> on her/his <b>forehead</b> , your <b>other hand</b> under her/his <b>neck</b> , then <b>carefully tilt</b> the head <b>back</b> . Put your <b>ear</b> next to her/his <b>mouth</b> . <ul style="list-style-type: none"> <li>• Can you <b>feel</b> or <b>hear</b> any <b>breathing</b>?  <div>No → 4</div> <div>Uncertain/Just a little → 12</div> </li> <li>• (Yes) Is s/he <b>breathing normally</b>?  <div>Yes → 14</div> <div>No/Uncertain → 12</div> </li> </ul>
<b>4 Start Mouth-to-Mouth</b> I'm going to tell you how to give <b>mouth-to-mouth</b> . <div>*Refused M-T-M → 5</div> <p>With her/his head <b>carefully tilted</b> back, <b>pinch</b> her/his <b>nose</b> closed and completely <b>cover</b> her/his <b>mouth</b> with <b>your mouth</b>, then blow <b>2 regular breaths</b> into the lungs, about <b>1 second</b> each, just enough to make the <b>chest rise with each breath</b>.  <ul style="list-style-type: none"> <li>• Did you <b>feel</b> the air going in and out?  <div>Yes → 5</div> <div>No → 11</div> </li> </ul> </p>	<b>5 CPR Landmarks</b> <b>Listen carefully</b> and I'll tell you how to do chest compressions. (Make sure s/he is <b>flat</b> on her/his <b>back</b> on the <b>ground</b> .) Place the <b>heel</b> of your <b>hand</b> on the <b>breastbone</b> in the <b>center</b> of her/his chest, right <b>between</b> the nipples. <div>→ 6</div> <div>Refused M-T-M → 9</div>	<b>6 Compressions</b> Push down <b>1½ inches</b> (4 cm) with only the <b>heel</b> of one hand touching the chest. <b>Pump</b> the chest <b>hard and fast 30 times</b> , at least <b>twice per second</b> . Let the chest <b>come all the way up</b> between pumps. Tell me when you're done. (Previous airway blockage) Check in her/his <b>mouth</b> for an <b>object</b> and <b>remove</b> anything you find. <ul style="list-style-type: none"> <li>• Do you <b>understand</b> me so far?  <div>Yes → 7</div> <div>No → Clarify/Reassure</div> </li> </ul>
<b>7 CPR with Mouth-to-Mouth</b> With your hand <b>under</b> her/his neck, <b>pinch</b> her/his <b>nose</b> closed and <b>carefully tilt</b> her/his head <b>back</b> again. Give <b>2 more regular breaths</b> , then <b>pump</b> the chest <b>30 more times</b> . Make sure the <b>heel</b> of your <b>hand</b> is on the <b>breastbone</b> in the <b>center</b> of the <b>chest</b> , right <b>between</b> the nipples. <ul style="list-style-type: none"> <li>• Do you <b>understand</b>?  <div>Yes → 8</div> <div>No → Clarify/Reassure</div> </li> </ul>	<b>8 Continue CPR with Mouth-to-Mouth</b> From now on, <b>give</b> her/him <b>2 breaths</b> then <b>30 pumps, 2 breaths</b> then <b>30 pumps</b> . <b>Keep doing it</b> until help can take over. (Tell me <b>when</b> they're right <b>with</b> her/him.) If anything <b>changes</b> , tell me <b>immediately</b> . <div>→ 10</div> <div>Started Breathing → ?</div>	<b>9 CPR/Refused Mouth-to-Mouth</b> Push down <b>1½ inches</b> (4 cm) with only the <b>heel</b> of one hand touching the chest. <b>Pump</b> the chest <b>hard and fast</b> , at least <b>twice per second</b> , until help can <b>take over</b> . Let the chest <b>come all the way up</b> between pumps. (Choking) Check in her/his <b>mouth</b> for an <b>object</b> every few minutes. <b>Remove</b> anything you find. <ul style="list-style-type: none"> <li>• Do you <b>understand</b>?  <div>Yes → 10</div> <div>No → Clarify/Reassure</div> </li> </ul>



## KEY QUESTIONS

1. **(OBVIOUS DEATH – Explosive GSW to head)** Do you think s/he is **beyond** any **help** (resuscitation/CPR)?  
**Yes** \_\_\_\_\_  **27-B-5**
2. **Is the assailant** (attacker) **still nearby**?  **27-D-1**
3. Is there any **SERIOUS** bleeding?  
 **Unconscious, Arrest, OBVIOUS DEATH** (per Case Entry) \_\_\_\_\_ 
4. Is s/he **completely alert** (responding appropriately)?
5. What **part** of the body was **injured**?
6. Is there **more** than **one wound**?
7. **When** did this **happen**?


## POST-DISPATCH INSTRUCTIONS

- a. I'm sending the **paramedics** (ambulance) to help you now. **Stay on the line** and I'll tell you **exactly** what to do next.
- b. **(Penetrating object)** **Do not** pull it out.
- c. **(OBVIOUS DEATH)** I'm sending someone to **assist** you. Is there **anything else** we can do?

**\* In volatile/criminal situations, refer to applicable law enforcement protocol.** 

**\* (OBVIOUS DEATH)** Notify proper **authorities**.

DLS **\* Link to**  **X-1 unless:** 

<b>Danger or Crime Scene</b> _____		<b>X-9</b>
<b>Unconscious or Arrest</b> _____		<b>ABC-1</b>
<b>INEFFECTIVE BREATHING</b> and <b>Not alert</b> _____		<b>ABC-1</b>
<b>Control Bleeding</b> _____		<b>X-5</b>

LEVELS	#	DETERMINANT DESCRIPTORS	➔ S G P X Y	CODES	RESPONSES	MODES
<b>D</b>	1	<b>Unconscious or Arrest</b>		<b>27-D-1</b>		
	2	<b>Not alert</b>		<b>27-D-2</b>		
	3	<b>CENTRAL</b> wounds		<b>27-D-3</b>		
	4	<b>Multiple</b> wounds		<b>27-D-4</b>		
	5	<b>Multiple</b> victims		<b>27-D-5</b>		
<b>B</b>	1	<b>NON-RECENT</b> (≥ 6hrs) <b>single CENTRAL</b> wound		<b>27-B-1</b>		
	2	Known <b>single PERIPHERAL</b> wound		<b>27-B-2</b>		
	3	<b>SERIOUS</b> hemorrhage		<b>27-B-3</b>		
	4	<b>Unknown</b> status/ <b>Other</b> codes <b>not</b> applicable		<b>27-B-4</b>		
	5	<b>OBVIOUS DEATH</b> ( <b>explosive</b> GSW to head)		<b>27-B-5</b>		
<b>A</b>	1	<b>NON-RECENT</b> (≥ 6hrs) <b>PERIPHERAL</b> wounds ( <b>without</b> priority symptoms)		<b>27-A-1</b>		

# Determine the Response Code

Formula:

Chief Complaint Protocol number

+ Determinant level

+ Determinant Descriptor number

+ Suffix (if applicable)

= Determinant Code

27 - D - 4 - S

**27** STAB / GUNSHOT / PENETRATING TRAUMA

KEY QUESTIONS

1. **(OBVIOUS DEATH – Explosive GSW to head)** Do you know if the patient is **beyond** any **help** (resuscitation/CPR)?  
**Yes**

2. **Is the assailant (attacker) still nearby?** ☆

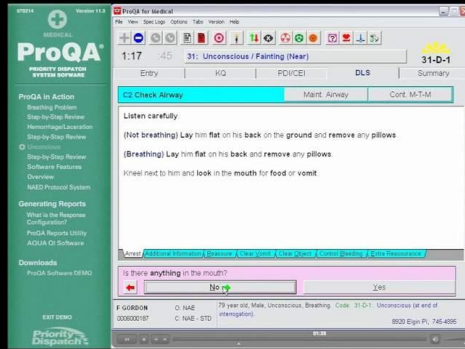
Unconscious or Arrest (per Case Entry)

LEVELS	#	DETERMINANT DESCRIPTORS	+	S	G	P	X	Y
<b>D</b>	1	Unconscious or Arrest						
	2	Not alert						
	3	CENTRAL wounds						
	4	Multiple wounds						
	5	Multiple victims						
<b>B</b>	1	NON-RECENT (≥ 6hrs) single CENTRAL wound						
	2	Known single PERIPHERAL wound						
	3	SERIOUS hemorrhage						
	4	Unknown status/Other codes not applicable						
	5	OBVIOUS DEATH (explosive GSW to head)						
<b>A</b>	1	NON-RECENT (≥ 6hrs) PERIPHERAL wounds (without prior)						

# Formula for Making a Dispatch

A call is ready to dispatch when there is a valid NATURE, a valid ADDRESS within a valid ZONE, and the call STATUS shows RCVD (Received).

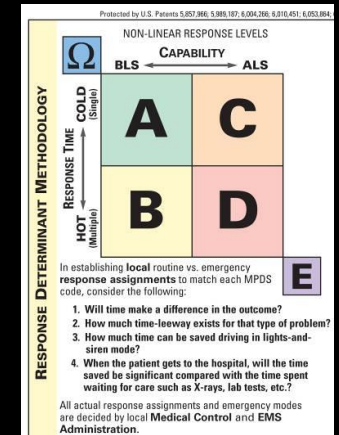
- Response Location



- Four Commandment Info

- Chief Complaint (True or Actual Emergency)
- Age
- Status of Consciousness
- Status of Breathing

- Dispatch Code





# Dispatching a EMS Call

- The process of dispatching an EMS call:
  - A single alert tone
    - First announcement
      - Box
      - Nature
  - Activate the appropriate pager(s)
    - Second announcement
      - Box
      - Each of the recommended units
      - The response level and nature of the incident
      - The full address, business, location, municipality/subdivision, cross-street (or between), major access road and/or point of entry
  - Third announcement upon unit response will parrot the unit response and ask about need for supplemental info.
  - Response check (if necessary)



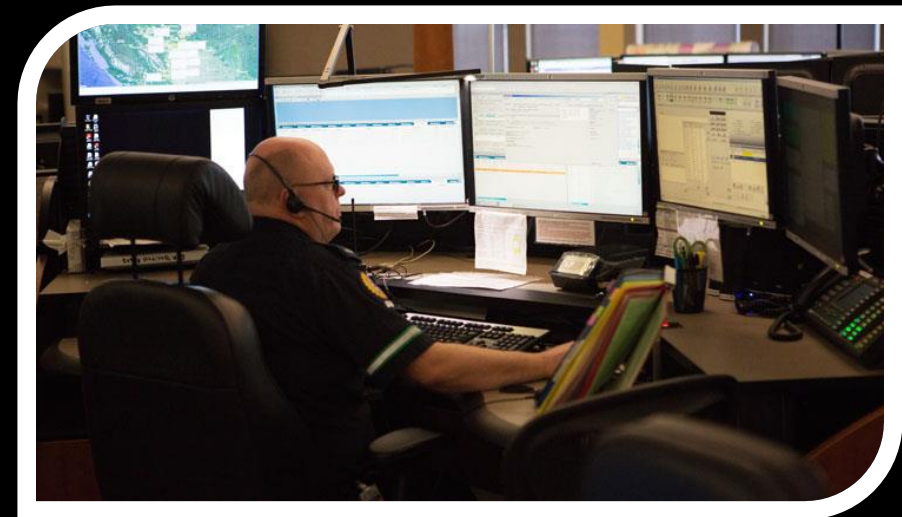
## Things you WILL NOT Hear:

- Reminders of the Call in progress (You won't hear your call again until 5 min.)
- 2<sup>nd</sup> Due Call (“A3-1, Respond for a 2<sup>nd</sup> due...”)
- Units already responding (“Respond along with...”)
- Failed Re-Alert (in the event of a failure, current policy is not to re-alert primary)

The intent is to limit radio traffic to only that which is necessary.

# Understand Fire Call-Taking

- A Person or Entity calls 9-1-1, or contacts the communications center via radio, CAD, or other means.
- The process for managing a fire emergency is different, but the principles are the same.
- Dispatch can not take place until certain criteria have been met:
  - Location
  - Nature



# Dispatching a Fire Call

- The process of dispatching a fire call:
  - A single alert tone
  - First announcement, containing:
    - Box
    - Nature
  - Activate the appropriate pager(s)
  - Second announcement, containing
    - Box
    - Each of the recommended units
    - The nature of the incident
    - The full address, business, location, municipality/subdivision, cross-street (or between), major access road and/or point of entry
    - Operations talk group (TAC)
  - Third announcement upon unit response will Parrot unit response and inquire “Are you direct on supplemental?”
  - Response check (if necessary)



## Things you WILL NOT Hear:

- Reminders of the Call in progress (You won't hear your call again until 7 min.)
- 2<sup>nd</sup> Due Call (“RE3, Respond for a 2<sup>nd</sup> due...”)
- Units already responding (“Respond along with...”)
- Failed Re-Alert (in the event of a failure, current policy is not to re-alert primary)

The intent is to limit radio traffic to only that which is necessary.



# Reasons Behind Dispatch Changes

- There are multiple avenues to see the call details for initial incident response:
  - Smartphone,
  - Video monitors in stations,
  - Mobile data units;
- There is a necessity for a reduction of radio traffic with the ECC taking the lead to be the example;
- The ECC is creating a standard and uniform protocol so that responders hear the same thing each and every dispatch;
- Response personnel need to reduce the overwhelming and unnecessary radio traffic during initial response.

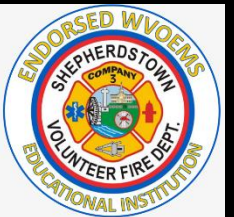
# Questions?

Communications: A Review of Jefferson County procedure, guidelines, and tools.



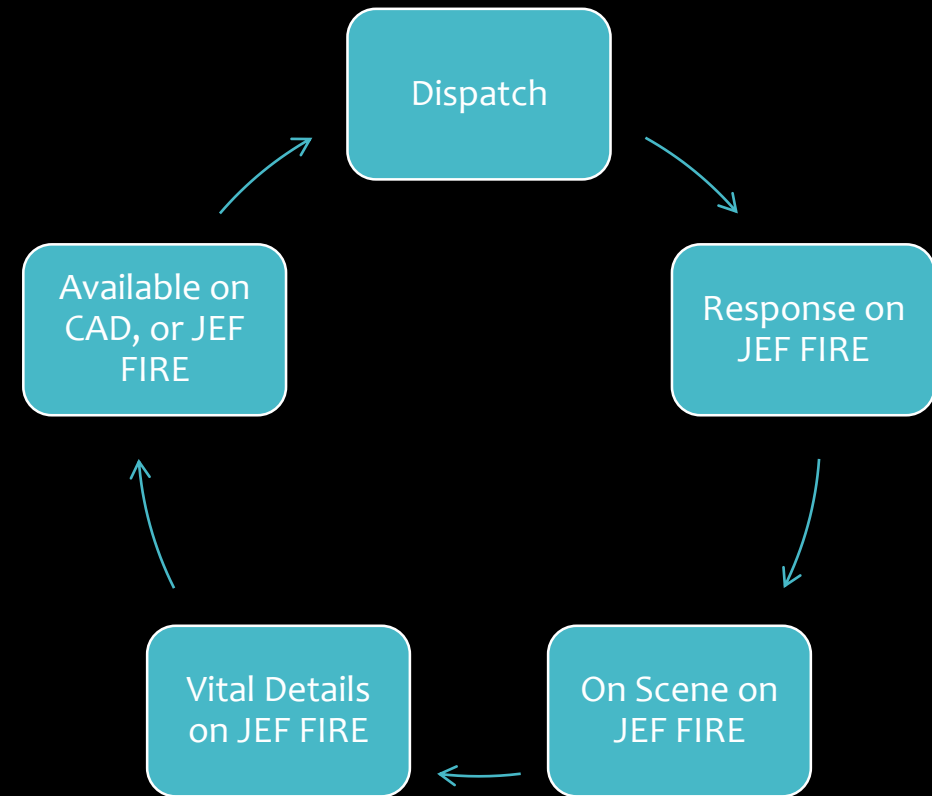
# Channel Assignments and Emergency Scenarios

Communications: A Review of Jefferson County procedure,  
guidelines, and tools.

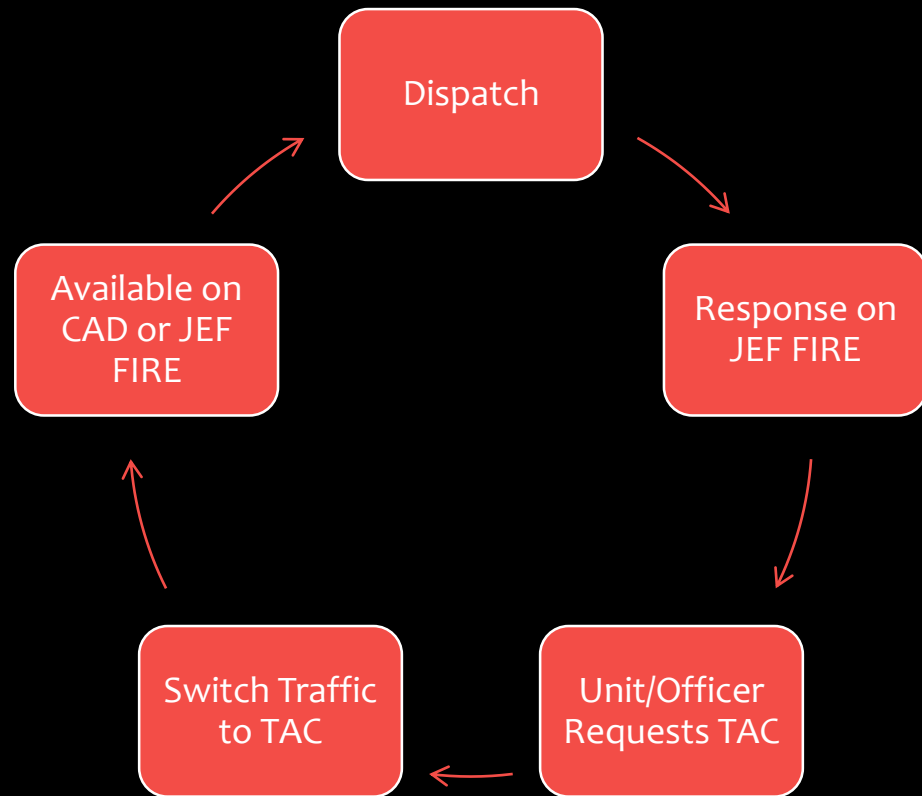


# Channel Assignment

- Units shall remain on the primary dispatch talk group (JEF FIRE) unless directed to switch to an alternate talk group
- The primary responsibility of the dispatcher is monitoring and communicating on JEF FIRE.
- JEF FIRE shall always be the command talk group until another command talk group is formally established.



# Talk Group Assignment



- Any unit desiring an alternate communications talk group must request a talk group assignment from the ECC.
- The ECC shall determine, through policy and best practices, the appropriate talk group assignment based upon the type of incident, the units involved, and the need.
- Units shall refrain from assuming talk group assignment and must first receive authorization from *JEFFERSON* prior to switching.

The purpose of a tactical talk group is strictly for the on-scene intercommunication between operating units *at the incident*.



# Status Updates

- Status changes of any unit should be transmitted on JEF FIRE.
- Should a unit transmit a status change on a tactical talk group, it is important that the Incident Commander (IC) report the status change to the ECC on the established command channel.
- Status changes and incident details can be added directly to CAD.



The screenshot shows a CAD interface with a red header bar containing icons for 'Call', 'File', 'Print', 'Star', and 'Status'. Below the header is a table with columns: Location, City, Zone, P, Status, Time, and Units. The table lists several incidents, including '501 S CHERRY ST', '101 SANDUSKY WAY', '750 N 12TH ST; MEADOWLA', '501 S CHERRY ST', '123 MAIN GATE AVE', and '401 ELDER ST'. A second table below shows incident details with columns: Time, Call#, Zone, Agency, Location, and Description. It lists incidents such as 'Incident # F16-0007 Completed Call call=1f', 'Incident # 1605-0002 Enroute to a Call call=1f', 'Incident # 1605-0001 Arrived on Scene call=1f', and 'Incident # 1605-0002 Enroute to a Call call=1f'.

Location	City	Zone	P	Status	Time	Units
501 S CHERRY ST	SFD	LSW	3	RCVD	55.4m	
101 SANDUSKY WAY	SFD	LN	4	RCVD	1.1H	
750 N 12TH ST; MEADOWLA	PIE	FSOU	1	RCVD	1.1H	
501 S CHERRY ST	SFD	FSW	3	RCVD	55.4m	
123 MAIN GATE AVE	PIE	EAST	4	ARRVD	1.0H	102
401 ELDER ST	SFD	LNW	4	ENRT	55.8m	106, 105

Time	Call#	Zone	Agency	Location	Description
7.0d			FSOUT	SFD	Incident # F16-0007 Completed Call call=1f
1.0H		LSW	SPD		Lunch @ Wendy's
34.1m	4I	LSW	SPD	401 EL	Incident # 1605-0002 Enroute to a Call call=1f
1.0H	3I	LSW	SPD	123 M	Incident # 1605-0001 Arrived on Scene call=1f
55.8m	4I	LSE	SPD	401 EL	Incident # 1605-0002 Enroute to a Call call=1f
5.9m		LSE	SPD		Thistle Firearms Range



Responder



Dispatcher



Officer  
or IC

# Dispatcher Monitoring

- The primary responsibility of the dispatcher is monitoring and communicating on JEF FIRE.
- The secondary responsibility of the dispatcher is monitoring and communicating on FIRE CMD 1 and/or FIRE CMD 2.
- The ECC will monitor tactical talk groups for MAYDAY or VACATE radio transmissions.



Only if a “tactical dispatcher” is available will he or she monitor and be responsible for traffic on any assigned tactical talk groups during a major incident.



Only if a “tactical dispatcher” is available - he or she shall monitor and be responsible for traffic on any assigned tactical talk groups during a major incident.



- A portable radio is as much a necessary piece of safety equipment as is PPE, SCBA, and PASS device.
- Radio communication problems are contributing factors in firefighter deaths and injuries.
  - Firefighter fatality in Syracuse, New York; Four firefighters died in a three-story, wood-frame apartment building when fire erupted out of a void space, trapping them on the third floor. Approximately 16 minutes into the fire, a weak radio transmission "Help me" was recorded on the "Master Fire Control Tape" at the Syracuse Fire Department dispatch office. Approximately one minute later, a second transmission was recorded: "Help, help, help, static." **Fire personnel on the scene could not hear these transmissions; dispatchers could, but the delay proved fatal.**
  - Fire at Hackensack Ford in Hackensack, New Jersey, claimed the lives of five firefighters. The NJ Fire Bureau audited the radio communications tape and discovered that **approximately 50 percent of all radio communications made at the Hackensack Ford fire were never acknowledged or heard by CMD, yet dispatcher did, but the delay proved fatal.**
  - Fire claimed the life of a Seattle fire lieutenant at the Blackstock Lumber Company. After trying unsuccessfully to find their way out, the officer began calling for help on his portable radio. As the officer got low on air, he passed the radio to the firefighter, who also transmitted repeated requests for help. **Neither the incident commander, nor other personnel on the scene, heard any of these requests for help.** However, people in the area who were monitoring the incident with scanners heard the transmissions.



Only if a “tactical dispatcher” is available - he or she shall monitor and be responsible for traffic on any assigned tactical talk groups during a major incident.



- As Emergency Responders in Jefferson County, you must recognize the danger from not having TAC Channels fully monitored by the ECC.
  - Incident Cmd can and will miss radio transmissions.
- As Incident Command, or unit officers, you must understand the danger to your crews by not having the ECC fully monitor TAC Channels.
  - You will miss vital information without proper planning.
  - The IC is wholly responsible for the units and personnel within their operation.
- It is difficult to maintain efficient communications on the emergency scene. Background noise, distractions, and the IC's being engaged in face-to-face communications are among the factors that **WILL cause messages to be missed.**

## Mitigate Some Danger



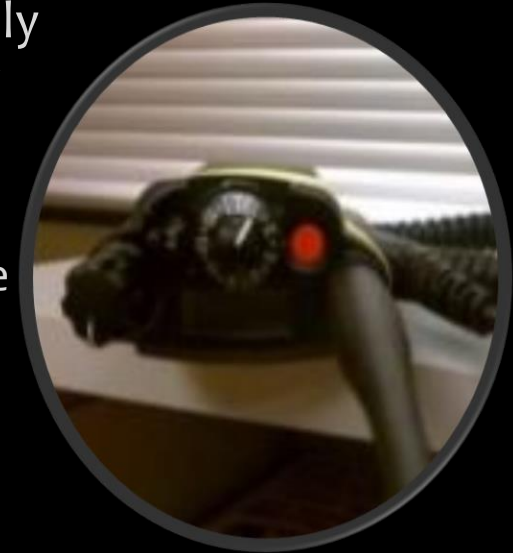
- *All crews entering a Fire or EMS scene should be equipped with a portable radio.*
- *All scene radio communications should be on the same channel.*
- *Scene channels must be separate from dispatch channels.*
- *The IC needs help in monitoring the operations channel.*
- *Radio channel discipline is essential.*





# EA Activation

- Mobile and portable radios are equipped with a button on the device that is capable of signaling an EMERGENCY. Activation of the EMERGENCY sends a loud audible and highly visible notification to every console in the ECC.
- An EMERGENCY is defined as the immediate threat to life safety of the user of the device.
- The use of the EMERGENCY button shall be reserved exclusively for the imminent threat of peril to the user whenever the **user does not have any other means to communicate their imminent threat of grave danger.**
  - The user should understand and be prepared to communicate the threat to their safety with the dispatch center



# EA Activation: Not on a Call

- **Upon receiving an EA from a unit that is NOT on an emergency call:**
  - The dispatcher shall transmit the “EA Response Statement” on appropriate talk group:
    - “(UNIT ID), confirm or deny your EA.”
  - The dispatcher, if unanswered, will repeat a total of 3 times at 10 second intervals.
  - If “CONFIRMED”
    - The dispatcher will immediately ask the following questions in one transmission:
      - “(UNIT ID), provide your location and the nature of your emergency.”
    - Once info is received, the ECC will then dispatch appropriately.
  - If a unit transmits an EA and gives no response to the EA response statement, or responds with “CONFIRM” but does not answer the vital questions, the dispatcher will set off tones, and request a line officer contact ECC – while continuing to call the unit.

# EA Activation: On a Call

- **Upon receiving an EA from a unit that IS on an emergency call:**
  - If command has been established:
    - The dispatcher will contact the Incident Commander (IC) on the previously established COMMAND talk group, and tell them the following:
      - UNIT ID
      - Talk Group that the EA was transmitted on
    - The IC will then communicate directly with the unit, and notify ECC of outcome.
  - If units are on a call of a single resource incident or command has not yet been established:
    - Dispatcher will give the EA response statement to the unit transmitting the EA. If unit responds with **DENY**, no further action is necessary (other than reset)
    - If unit responds with **CONFIRMED**, the dispatcher will inquire: *“What is the nature of your emergency?”* The dispatcher shall then dispatch accordingly.
    - **If the unit does not respond at all**, the dispatcher shall send the following response:
      - Two law enforcement units
      - One ambulance and one ALS provider
      - The next due engine company
    - The dispatcher shall also broadcast the EA response statement every 30 seconds, up to two additional minutes.

Personnel should NOT utilize the EA in place of calling a MAYDAY as this will only delay (more to come)...

# MAYDAY

- MAYDAY is an emergency code word used internationally as a distress signal in voice procedure radio communications.
- The call is always given three times in a row, "MAYDAY MAYDAY MAYDAY," to prevent mistaking it for some similar-sounding phrase under noisy conditions and to distinguish an actual MAYDAY call from a message about a MAYDAY call.
- Emergency personnel **SHOULD transmit a MAYDAY any time they feel they are in imminent danger, and NOT reserve it** for when a danger is confirmed.
- The ECC shall automatically dispatch the following apparatus:
  - 2 Ambulances
  - 2 ALS providers
  - 3 Engine Companies
  - 2 Truck Companies (Rescue units may respond)

# MAYDAY, MAYDAY, MAYDAY

- Personnel will transmit over the radio:
  - MAYDAY, MAYDAY, MAYDAY and provide WHO, WHERE, WHAT:
    - *MAYDAY – MAYDAY – MAYDAY, Firefighter Smith, Division 2, and I’m out of air.*
    - *MAYDAY – MAYDAY – MAYDAY, EMT Davis, High Street, and a subject pulled a gun.*
  - *IF MAYDAY is not acknowledged, the personnel will hit their “EA.”*
- Once acknowledged;
  - Give LUNAR Report
  - Activate PASS Device, if applicable
  - Orient yourself
  - Communicate with your crew, the RIT team or Command using – CAN Report
  - Solve the problem!



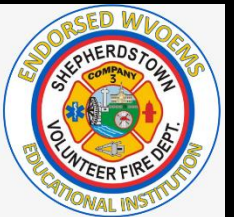
# Give LUNAR and CAN Report

- L – Location (where you are in building or what your assignment was)
- U – Unit – apparatus you were assigned to
- N – Name – give your name, take the guessing out of the game for Command
- A – Assignment – what task you were there to accomplish
- R – Reason for Calling – what is the emergency

- C – Conditions – visibility, heat, structure
- A – Actions – what you are doing, where you are going
- N – Needs – what you need or think you may need

# Overview of radio principles, Jefferson County policy, and best practices

Communications: A Review of Jefferson County procedure, guidelines, and tools.



- NIMS Requirements must be completed
  - 100, 200, 700, 800
  - 300, 400 for Chiefs
- Radio Training Class
  - In House Trainers
  - Online (TBD)

## Before You Use A Radio

Per Policy, certain prerequisites are required for responders to utilize the radio system.



Personnel in control of a county monitored radio **shall limit radio usage to purposeful and deliberate communications** for the sole purpose of conducting emergency operations within the county.

All Jefferson County operational personnel shall commit to respectful, deliberate, and meaningful communications via the radio. At no time shall any user use foul language, be disparaging or harassing, or blatantly misuse the radio system for personal or ill-conceived reasons.

# Communication Foundations

- **Communication foundations: The 7 C's**
  - Clear
  - Concise
  - Concrete
  - Correct
  - Coherent
  - Complete
  - Courteous
- When you follow the 7 C's they will give you the foundation you need to become the best communicator possible.



# Communication Foundations

- **Clear**

We need to ensure our key points are as clear as possible.

- **Concise**

Be as brief as possible to get your point across.

- **Concrete**

It's important that we choose the most distinct words with the most precise meanings.

- **Correct**

Using proper words, appropriate pauses and maintaining professionalism.

- **Coherent**

Ensure that the message is logical, that it flows and is relevant to the key points.

- **Complete**

When your message is complete, the receiver has all the information necessary to be informed by your meaning and will be able to respond appropriately.

- **Courteous**

Communicate politely, respectfully, openly, honestly, and always as professionally as possible.

# Radio Basics

- Our Emergency Communications Center shall be identified on the radio as "Jefferson", and not "Headquarters", "Dispatch", or any other variation.
- When contacting another unit or facility for acknowledgement and further transmission, Identify your unit first then the unit you are calling; as example:
  - “Ambulance 3 Jefferson” (if you are on Amb 3 and calling Jefferson), or
  - “Ambulance 3, EMS Chief 3” (if you are on Amb 3 and calling EMCH3)
- Do not use “10 Codes.” Plain language is required.

# Radio Basics

- To maintain successful operations, the following benchmark communications should be reported to the dispatch center:
  - When a unit goes responding.
  - When it arrives on the scene.
  - When it leaves the scene.
  - Whenever a change of status occurs.
  - When it is available for next call.

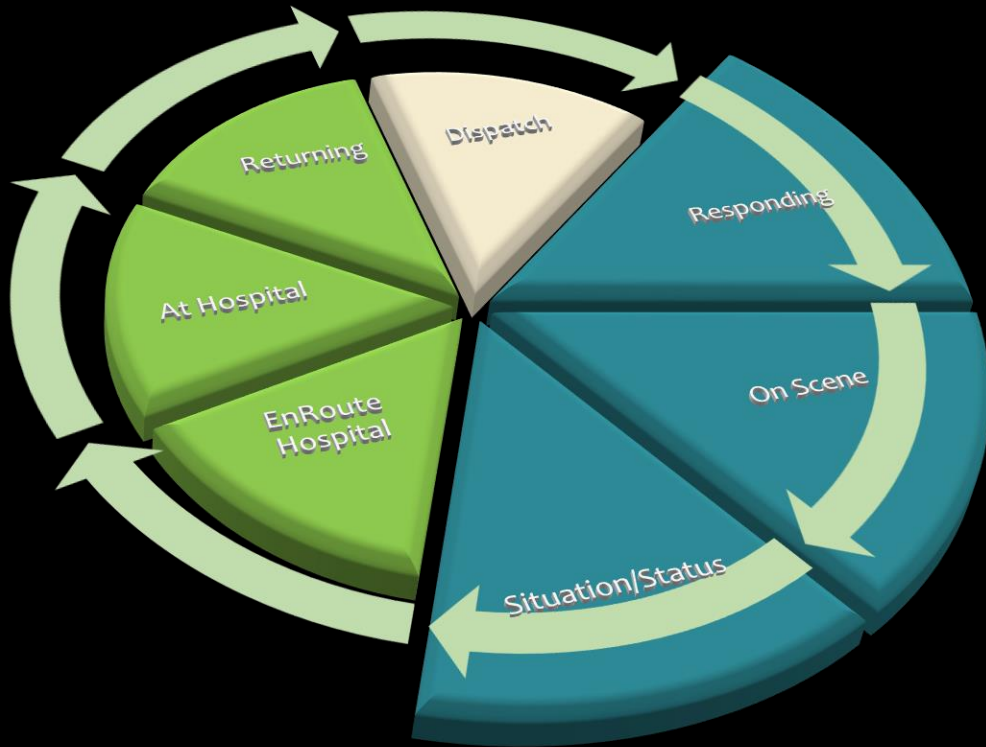
When applicable the unit officer SHOULD use CAD for the communications of a status change.

# Officer Response on the Radio

- Only one officer per company marks on the radio, unless another officer is responding directly to the scene, but even then that officer should consider only marking on scene for accountability purposes.
- Fire Police, Safety Officer, and other support officers should not normally mark responding; after arriving on the scene s/he notifies the Incident Commander.
- Any non-emergent radio traffic should be communicated on the private talk groups. Administrative radio traffic is not necessary on the dispatch channel or the tactical channel at any time.
- When applicable, it is acceptable to ask the other unit to meet you on “Private.” Additionally, all units should utilize non-radio devices whenever possible, and safe to do so.
- Example: Chief 1 to Engine 1, meet me on FFC Private



# Fire Response Terminology

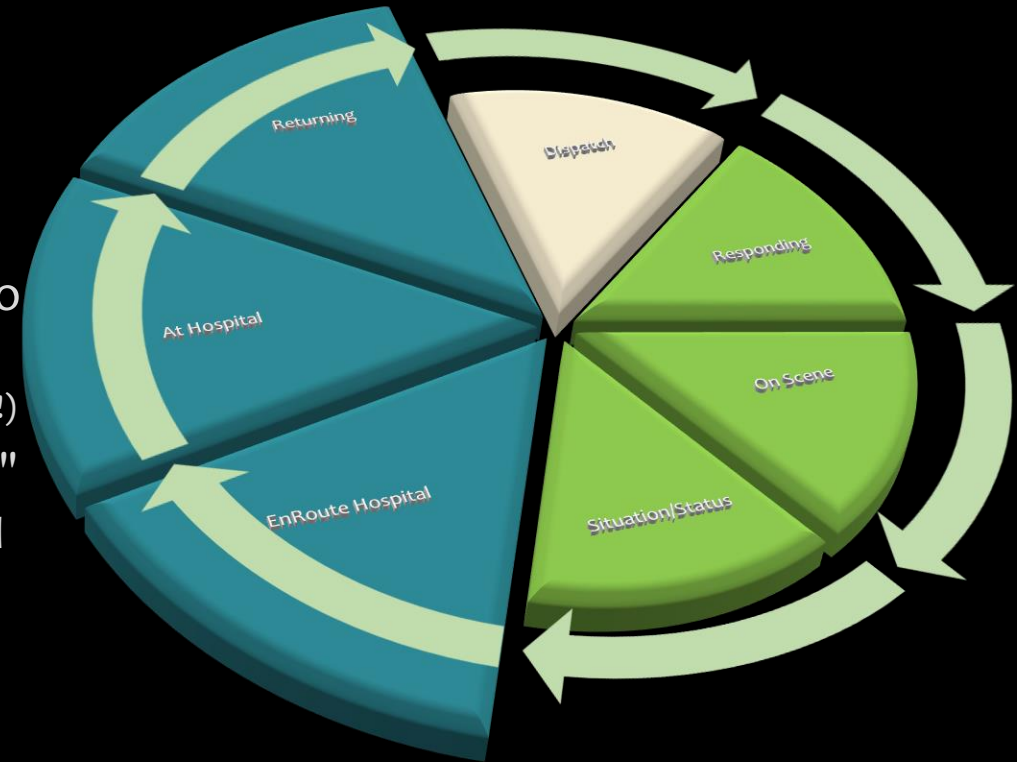


- Responding- The piece of apparatus you are on is responding to an emergency call.
  - “Engine 3 Responding”
- On Scene - The piece of apparatus has arrived on the scene. State the apparatus name, on scene, and any size up details, as applicable.
  - “Ambulance 3 on scene - one vehicle on its top - northbound lane of Kearneysville Pike will be blocked – will be out checking.”
- Situation Report - Either the incident has changed or enough time has passed to warrant an update. State the location of the incident, the change (victim is out, number of patients, refusal, etc.) or general status and estimated time remaining on scene.
  - "Ambulance 3 Jefferson - situation" [wait for acknowledgement] Kearneysville Pike. 1 green tag patient for transport and 2 refusals. Unit on scene approximately 25 minutes for clean up"



# Response Terminology

- En route to Hospital- The unit is leaving the incident scene transporting to the hospital. State unit name and destination hospital. **You do not need to** indicate your transport mode (routine vs priority).
  - "Ambulance 3 en route to JMC"
- At the Hospital-The unit is at destination hospital.
  - "Ambulance 3 at JMC" OR "Ambulance 3 arriving JMC"
- Returning - The assignment is complete and unit is returning to the station. State apparatus name and returning.
  - "Ambulance 3 returning" (this implies that you are available, no need to say it!)
  - If your unit is NOT available, "Ambulance 3 returning unavailable."
  - Note: EMS and/or Duty vehicles, when operated by an authorized duty officer, may leave the scene "available" as opposed to returning, since they are not necessarily returning to the station.
- **JCESA Personnel Aboard**
  - When JCESA personnel are aboard your unit, in the absence of a better method, that unit (ALS3, etc) should be included with your radio transmission.
    - Example: "Ambulance 3, ALS 3 Responding."



# Scene Size Up

## Structure Fire or Fire Alarm

- Confirm Dispatched Address
- Confirm Your Side (Alpha, Bravo, etc.)
- Announce Number of Floors
- Announce Type of Occupancy
- Announce Construction Type
- Announce Notable Conditions
- Announce Water Supply
- Announce Mode of Attack
- Establish Command

## Motor Vehicle or Roadway Incident

- Confirm Dispatch Address
- Announce Number of Vehicles
- Announce Conditions Found
- Announce Closure Details
- Establish Command



# Scene Size Up: Practical Application



# Scene Size Up: Practical Application





# Scene Size Up: Practical Application



## Things Not to Say...

Personnel in control of a county monitored radio **shall limit radio usage to purposeful and deliberate communications** for the sole purpose of conducting emergency operations within the county.

- “en route”,
- “go ahead and...”
- “show us...”,
- “on location”,
- “at this time”,
- "clear the scene",
- " ... returning available",
- "in service, returning, available",
- "in station".

Be Concise: Extra words are just that, extra!

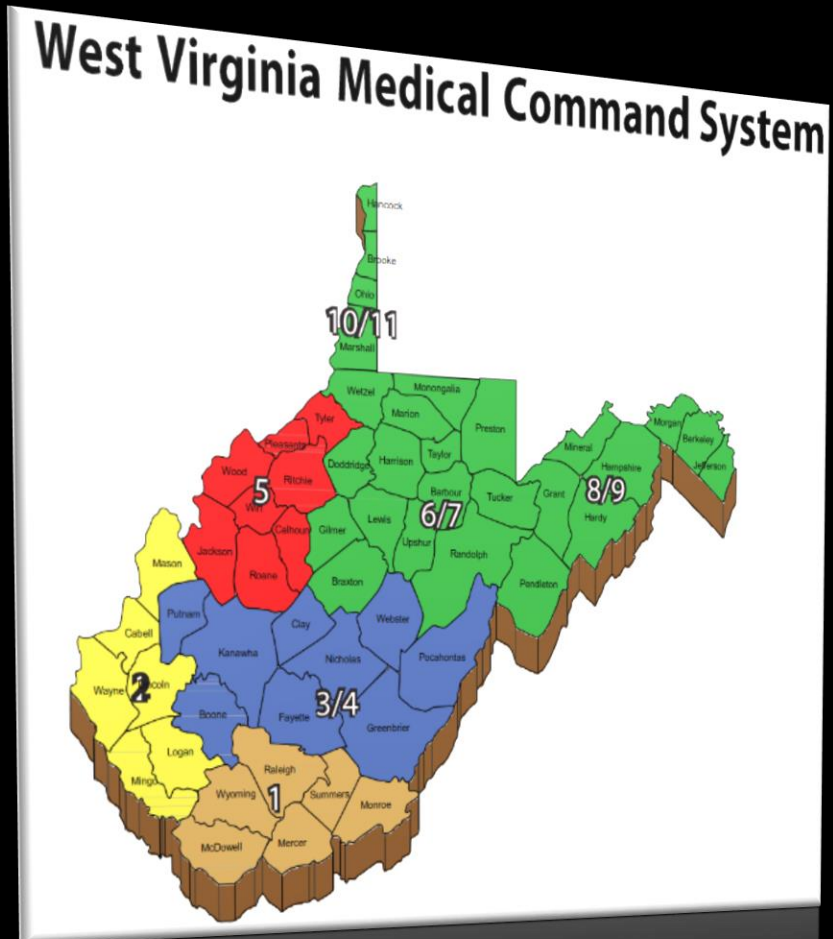


# Practice Radio Discipline

- “EMS Chief 3 to Ambulance 3. Make sure you are wearing shoes on this call.”
- “Engine 4 to Chief 4. We have a full crew, do you want us to wait or to respond?”
- “Lieutenant 5 to Chief 5. Should I go get the tanker from the main station or the engine from the sub-station?”
- “Chief 6 to Engine 6. I’m eating dinner now and wasn’t planning on responding. Let me know if you’re going to need me there or not.”
- “Lieutenant 2 to Jefferson, I’m not available for the call, but I think that’s going to be the last house on the left in the subdivision.”
- “Captain 1 to Jefferson, can you contact my wife at my residence and tell her I’m on this call and I won’t be home for about an hour.”
- “Jefferson County to Washington County Engine 11, thank you for your help. You have a good night.”

Personnel in control of a county monitored radio **shall limit radio usage to purposeful and deliberate communications** for the sole purpose of conducting emergency operations within the county.

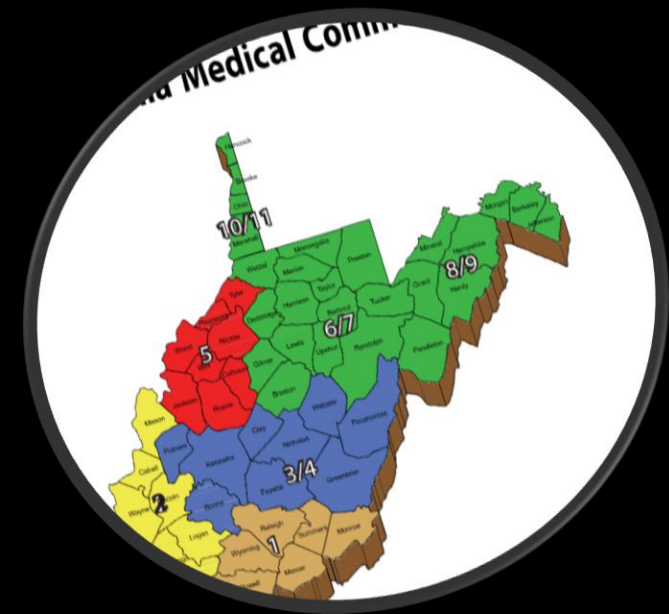
# Talking to Medical Command



- Medical direction can take many forms. Some of them are as follows:
  - Answering simple questions from field providers
  - Ordering medications or procedures for patients
  - Coordinating Aero Medical Evacuation
  - Routing STEMI, CVA and Trauma patients to the appropriate facilities
  - Collecting Data
  - Insuring adherence to WVOEMS protocols
  - Completing documentation regarding patient care for quality improvement processes.
- All EMS units transporting patients to an emergency department contacts its respective Medical Command Center and provides a patient report.
  - This report is relayed to the receiving facility's Emergency Department.

# Talking to Medical Command

- Call in Status Level is used to quickly and effectively identify the level of interaction required to properly manage the patient; the following terminology will be used:
  - **Status 3:** Provider has provided care to patient following off-line protocol and **no further consultation or orders** are required at this time.
    - Medical Command is being notified to receive a report on the patient, to confirm the treatment given, to identify which protocol was used, and to allow notification of appropriate destination facility
  - **Status 2** – Provider has provided care to patient and has followed protocol to the point where contact with **Medical Command is now required in order to proceed** with additional off-line treatment or treatments found in the protocol. These treatments within the protocols will include the words...“by order of Medical Command” or “in consultation with Medical Command” or “contact Medical Command.”
  - **Status 1 Charlie** (“C” signifies “Consultation”): Provider has provided care to patient and has followed protocol to the point where **consultation with Medical Command Physician (MCP) is now required** in order to proceed with additional treatment(s). These orders or treatments within the protocols will include the words....“by order of MCP” or “by MCP order” or “in consultation with MCP”
  - **Status 1 Delta** (“D” signifies “Direct”): Provider has provided care to patient and has followed protocol to the point where direct **voice communication with Medical Command Physician (MCP) is now required** in order to proceed with additional treatment or treatments. These orders or treatments within the protocols will include the words....“by direct order of MCP” or “by direct MCP order” or “in direct consultation with MCP”.





## MedCom Procedure

- When communicating with Medical Command, use these designations:
  - Unit with an EMT-P level of ALS care should be designated as a “Medic” Unit.
    - “Jefferson County Medic 3, WVU Medcom on MED-C”.
  - Unit with an EMT-B level of BLS care should be designated as an “EMT” Unit.
    - “Jefferson County EMT 3, WVU Medcom on MED-C”.
- After Medical Command has answered, provide the following information:
  - Unit ID (*Defined Above*)
  - Provider last name and certification number
  - Age and sex of patient
  - Chief Complaint
  - Status (3,2,1C,1D)
  - Destination and ETA

# MedCom Procedure



- When Medical Command is prepared to receive the full report, the provider will give the following pertinent patient information:
  - Age and Sex of Patient
  - Chief complaint / mechanism of Injury
  - Brief history of present condition
  - **BREAK**
  - Past Medical History, Medications, Allergies
  - **BREAK**
  - •Vital signs, GCS, Assessment
  - **BREAK**
  - Treatment given and in progress(include protocol # (s))
  - Treatment and orders requested
  - Updated ETA and destination

*The Same Rules of Etiquette Apply*

# Unlawful and Prohibited Radio Use

Personnel in control of a county monitored radio **shall limit radio usage to purposeful and deliberate communications** for the sole purpose of conducting emergency operations within the county.

- Transmission of personal messages, other than on “Private.”
- Use of profane, indecent, or obscene language.
- Willful damage of radio equipment.
- Willful or malicious interference with any radio communications.
- Unnecessary or unidentified transmissions.
- Transmission without first making sure that the transmission will not cause harmful interference.
- Making any adjustments, repairs, or alterations to a radio transmitter. It is required by law that only a licensed radio technician make adjustments or repairs.
- Denying access to any radio transmitter if a properly identified representative of the Federal Communications Commission asks to inspect it.
- Transmission of a call, signal, letters, or numbers that have not been assigned.



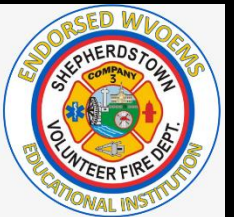
# Questions?

Communications: A Review of Jefferson County procedure, guidelines, and tools.



# Review of basic radio and CAD components, and related procedures

Communications: A Review of Jefferson County procedure,  
guidelines, and tools.





# Portable Radio

This style Portable Radio is used by all personnel. The following are the components

- A. Emergency Activation Button
- B. Power On and Volume Control
- C. Push to Talk (PTT)
- D. Scan On or Off
- E. Function Buttons
- F. Channel Toggle
- G. Home or Directional Buttons

Some Radios may have a lapel mic attached. Both PTT buttons would work to broadcast.



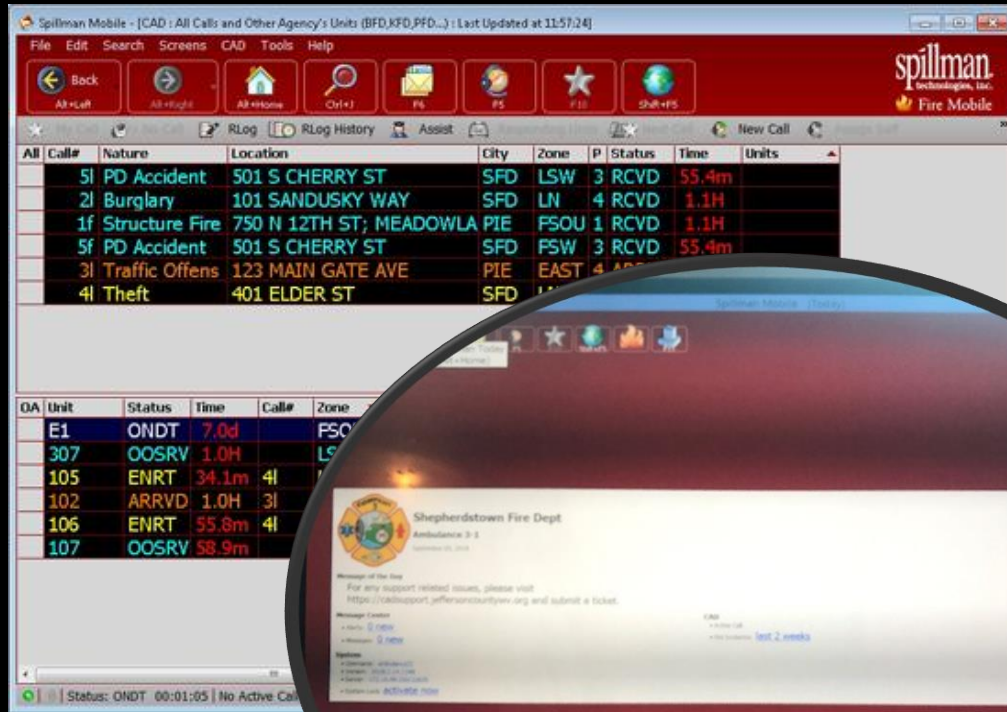
## Mobile Radio

- This style Mobile Radio is found in all county apparatus.
- The following are the components
  1. Power and Volume Control
  2. Channel Toggle
  3. Zone Up or Down
  4. Push to Talk on Handheld.
  5. Emergency Activation Button



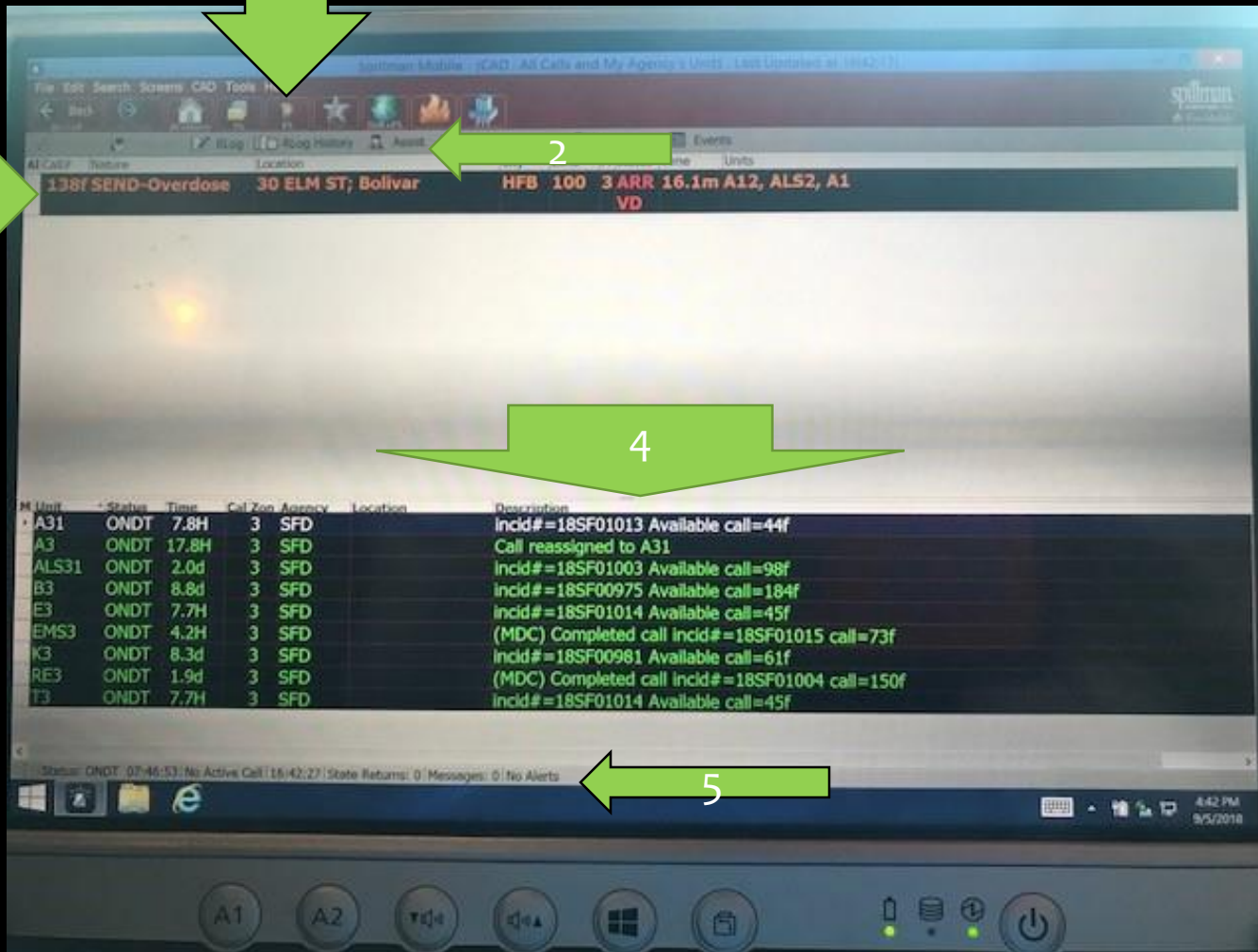
# Mobile Data Computers

- Use of the Mobile Data Units (MDU or MDC) for routine apparatus tracking is strongly encouraged.
- At a minimum, for the purpose of ambulances arriving at a hospital, and apparatus going available from a scene, all units, when adequately equipped and properly functioning, should attempt to utilize the MDC to make these status changes in CAD.
- CAD will provide call details, turn by turn directions, and apparatus status information.
- Units can add call comments, and chat with other units via instant messaging.



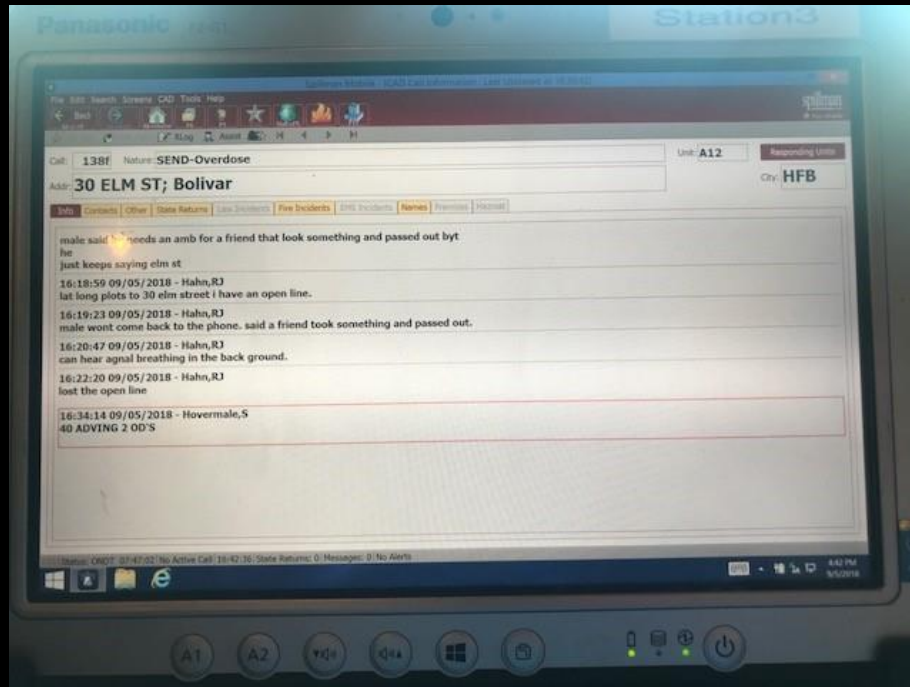
# MDC Dispatch Screen

1. CAD Functions
2. Radio Log/Assist Functions
3. Call Register
4. Unit Status and time details
5. Unit Details

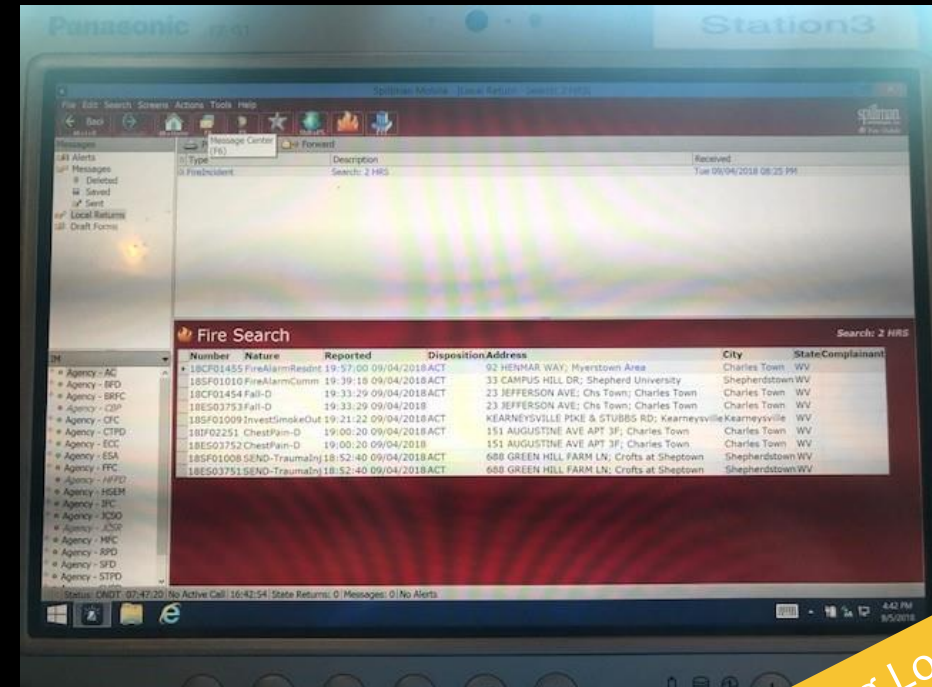


# MDC Features

Call Comments, Contact Detail,  
Location History



Email and Instant Messaging



Staging Location?



# MDC Features



# When to Use MDC?

- Policy is vague and contradictory on when end users should utilize MDC rather than radio.
  - ECC Policy states that “*all status changes of any unit **enroute to, on scene, or in service** from an incident shall be transmitted on JEF FIRE.*”
  - County Fire and EMS OG 16 states, “*Use of the Mobile Data Units (MDC) for routine apparatus tracking is strongly encouraged.*”
  - SFD OG states, “*The system is intended to be used for routine types of communications, database inquiries, and status keeping allowing the radio channel to be more available for higher priority transmissions.*”
- When adequately equipped and properly functioning, we should attempt to utilize the MDC to make status changes in CAD.
- Issues to consider:
  - JCESA Resources will not be automatically updated.
  - Dispatchers may miss your status change.\*
  - A units' status on the MDC will dictate if that unit is alerted on a call.



\*As responders begin using it more and more, the dispatchers are getting accustomed to expecting it and watching it more.

# Final Thoughts

- EMD/MPDS, although seemingly slow on our end at times, is a valuable resource to effectively triage a call and help facilitate the safe and efficient deployment of resources.
  - It needs to be done right, not just fast.
- Take a radio.
- Radio discipline is a MUST – all personnel have an obligation to demonstrate discipline in radio use – it's a SAFETY issue.
- Know the components – can you use the radios under pressure? Can you manage the CAD system in a hurry? Or at all?
- Jefferson County policy demonstrates best practices of effective communications.

# Questions?

Communications: A Review of Jefferson County procedure, guidelines, and tools.



<END>

# References

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