Fayette County Emergency Management Agency Presents...

THE ANATOMY OF A 911 CALL
The Anatomy of a 911 Call

If you’ve ever wondered what happens behind the scenes when you call 911 for an emergency, you’re about to find out.

This presentation will walk you through a simulated 911 phone call from the time it’s answered at the 911 center until the ambulance is on the way to the hospital.

You might be surprised to find how intricate, complex, and detailed the process is – and even more surprised to find out how fast it all takes place!
First, we will quickly look at all of the resources used during a 911 call.

- **CAD Software**: Computer Aided Dispatch software is used to enter all call information into a computer and aids in notifying initial responders of the nature of the call.
- **Public Safety Radio**: At Fayette County 911, we use a software program provided by Motorola to speak to all of our responding units in the field.
- **GIS/Mapping**: We maintain detailed computerized maps of every square inch of Fayette County that assist us and our responders in locating people or places anywhere in our jurisdiction.
- **Emergency Medical Dispatch (EMD) Guide Cards**: These cards are developed by a doctor and used by the dispatcher to help “paint a picture” of the situation, gathering vital information that is then passed along to our responding units via radio.
Our dispatchers have four monitors in front of them at all times. In addition to the CAD screen that you just saw, on another screen they look at this. It is their phone software. When the phone rings, the window on the left flashes and the dispatcher can then answer the call.
This is the CAD screen that a dispatcher always looks at. There are currently no active calls in this example...
The third monitor contains the GIS/Mapping software. There are different layers we use to show us waterways, structures, roads, municipal boundaries, and more.
As if that’s not confusing enough, here is the radio screen as seen by an EMS dispatcher. From here, the dispatcher can access all the public safety radio frequencies throughout the entire county.
Here’s a scaled-down version of how it looks when a dispatcher has all of this information in front of them at once. It can get confusing if you’re not properly trained!

Picture every screen shot as a separate computer monitor:

Phone on the left, CAD in the middle, mapping and radio on the right.
Now that you’re familiar with the tools a dispatcher uses, let’s discuss what happens when you place an emergency call to 911 using a simulated example. In the following slides, you’ll see:

- The calltaker answering the phone
- The calltaker creating a new incident in CAD
- The calltaker verifying basic information and then entering it into the CAD incident
- The dispatcher using CAD and the radio to send the appropriate response
- The calltaker entering additional info, which the dispatcher then verifies and passes along to responders
The calltaker has used his phone software to answer the call. On the left, you see the “ALI” (Automatic Location Information).
The ALI contains info from the phone company including the subscriber name, address, and responder info.
During that, this screen pops up in the CAD software, displaying the ALI. The calltaker can then press the “C” key to create a new incident.
The ALI info is then transferred from the CAD software to the mapping software, where it is converted to a location on a map. A flashing dot indicates their location.
Here’s what the calltaker sees in front of them just seconds after answering the phone.

The phone screen has the ALI info, as does the CAD screen, which both pop up automatically.

The map pops to the location provided in the ALI info.

The radio screen is not pictured here.
Now that the call has been answered, the calltaker must create an incident in CAD.

The following slides will show how this is done, and explain how information is gathered.

After that, you’ll learn how a call goes to dispatch.
After telling the CAD software to create a new incident, the ALI info is transferred into the CAD incident form. It’s now up to the calltaker to verify this info. How do they know what to ask?
Creating an Incident

This is the “First Card” – It is a part of the EMD Guide Cards. EVERY 911 CALL REQUIRES THE QUESTIONS ON THIS CARD TO BE ASKED. Basic information such as location, contact information, and chief complaint are gathered from this interrogation.

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**All Callers Interrogation**

1. Where is the patient? (Address or location)
2. What is the telephone number from which you are calling?
3. What is the problem?
4. What is your name?
5. Is the patient conscious? (Able to talk)
   - **YES:** Determine age, sex, chief complaint and turn to appropriate card.
   - **NO:** Continue.
6. Is the patient breathing **NORMALLY**?
   - **Uncertain:** GO and SEE if the chest rises, then come back to the phone.
   - **YES:** Dispatch ALS Response - Go directly to UNCONSCIOUS/UNRESPONSIVE SYNCOPE Guidecard.
   - **NO:** Continue.
7. Describe the patient’s breathing.
   - If patients breathing is **not** described as Agonal respirations, go to UNCONSCIOUS/UNRESPONSIVE/SYNCOPE Guidecard.
   - If patients breathing is **described** as Agonal respirations dispatch ALS Response and continue:

   *Do you want to do CPR? – I’ll help you.*
   - **YES:** Go to CPR Instructions for appropriate age group.
   - **NO:** I have dispatched help. Stay on the line.
     (Do not put the caller on hold unless necessary.)
The calltaker uses the first card questionnaire to verify vital info such as location, callers name, location, and primary complaint. In race cases, the ALI info is wrong or outdated, so the calltaker MUST make sure to verify this info.
In addition, if a caller is using a mobile phone, the calltaker receives no ALI information. They are able to attempt to gather a GPS location, but the accuracy varies depending on the service provider and location. Always try to know where you are!
Gathering Additional Info

The calltaker now has the basic “first card” information – the bare minimum amount of info needed to dispatch.

However, we must still gather additional information so that responding units have an idea of what they’re getting into…
The next slide shows an EMD guide card. Based on the primary complaint of the caller, the dispatcher chooses the best guide card for the situation.

They then ask further questions according to the card, which is reviewed regularly by a physician, then record the information in the CAD incident.

For this particular example, we will say the caller is having abdominal pain.
Gathering Additional Info

**Abdominal/Back Pain**

**ALS Priority Response**
- Unconscious/not breathing normally
- Difficulty breathing
- Vomiting red blood
- Black tarry stool
- Bright red/bloody stools (two or more)
- Upper abdominal pain, patient over 35 yrs.
- Lower abdominal pain, woman: 12-50 yrs (if associated with dizziness or fainting or heavy vaginal bleeding, 3 pads or greater than 2 tampons/hour)
- Abdominal and/or back pain w/fainting or near fainting, patient over 50 yrs.
- Fainting/near fainting when sitting
- Decreased level of consciousness
- Upper abdominal pain w/history of heart problems
- Pain w/vomiting (coffee-ground-like material or bright red blood)
- Pain w/bright red bloody stools (one or less)
- Flank pain/back

**Vital Points Questions**
- Is the pain due to an injury?
- Is the patient short of breath or does it hurt to breathe?
- Is the patient able to speak in full sentences?
- Has the patient vomited?
- Is it bloody or black like coffee grounds?
- Are the patient's bowel movements different than normal?
- Is it bloody or black like tar?
- Is the pain above or below the belly button?
- How much?
- How does the patient act when they sit up?
- Does the patient have any other medical or surgical history?
- Is the patient wearing a MEDIC ALERT tag?
- What does it say?

**BLS Priority Response**
- Pain unspecified
- Abdominal/Back pain (non-traumatic) patient under 50 yrs.
- Chronic back pain

**Pre-Arrival Instructions**
- If unconscious, go to AIRWAY CONTROL instructions.
- Nothing to eat or drink.
- Allow position of comfort.
- Gather patient's medications, if any.
- If anything changes or the patient's condition worsens, call back immediately.

**Short Report**
- Age
- Sex
- Chief complaint
- Dispatch Criteria used to determine response
- Patient related symptoms
- Medical/surgical history, if any
- Other agencies responding/Doctor to field units, if present
A closer look at the Abdominal Pain EMD Guidecard...
It is important to note that by this stage in the call, help has already been dispatched.

The calltaker is not slowing down your responders by asking additional questions.
The CAD software has different event codes to allow everyone involved to know what type of call it is. These correspond with the EMD guide cards.
Gathering Additional Info

You’ll notice some incidents are listed twice, followed by “ALS” and “BLS”… This is how we prioritize EMS calls – Advanced Life Support or Basic Life Support. More severe calls are ALS responses.
While the caller is still on the line, this info is then sent to the EMS dispatcher to get an ambulance started. This all usually occurs in under a minute. The calltaker then gathers additional info for the call narrative.
Dispatching The Call

Now that the calltaker has gathered the basic info on the patient, the call is saved into the system, where the EMS dispatcher will take over.

This involves reading the CAD incident form, the call narrative, and utilizing the radio system to give the call info to the proper responders. How do we know who to send, though?
Fortunately, our mapping software tells us who to send. This is why knowing your location is vital to a quick and effective response...
As you can see, the responder for our call is Uniontown FD EMS. However, just a mile or two away in any direction, and it’s a completely different provider!
Dispatching The Call

The dispatcher must verify the municipality (i.e., city, township, or borough) that the incident is taking place in in order to know who to send.

For instance, Uniontown City Police may respond to a call at this location, but a mile away might be state police territory.

This also includes fire departments and EMS providers as well. We CANNOT send someone outside of their jurisdiction under most circumstances!
Additionally, municipalities (as well as the name of the patch you’re in, if any) are important because many places under the same “mailing” address have several streets with the same name.

A good example of this is Redstone Township. In Redstone Twp, there are no fewer than EIGHT “Main Streets” in various patches, most of which have Brownsville mailing addresses!

Imagine if you needed help, called 911, and we sent your ambulance to Brownsville Borough when you really needed it in Tower Hill!

When seconds matter, this information is VITAL!
Now that we’ve got the proper location and responder information figured out, we go to the dispatch screen in the CAD incident.

Here’s what the dispatchers’ CAD screen looks like at this point…
Dispatching The Call
The dispatchers’ attention then turns to the radio screen. After the radio page goes out, the dispatcher makes an announcement to the responders stating what kind of call they have and where.
Here is a closer look at the CAD Dispatch Form. As you can see, the dispatcher simply enters UTFD (the identifier for Uniontown EMS) and the software automatically notifies them that they have a call via radio pager.
After the responding unit calls en route, the dispatcher checks the call narrative to see if the calltaker has entered any additional vital information.

The following slide shows what it looks like on the screen, and the one after shows a closeup of the type of information that goes into the narrative.
Dispatching The Call
As you can see, the calltaker has entered more important information in the narrative. In the event that anything changes during the course of the incident, the dispatcher or supervisor can add or change the narrative as needed.
The unit which has called en route via radio, for this example, is Uniontown Medic 401 – The dispatcher marks them en route, on scene, and clear of scene as appropriate.
When the incident is over, the dispatcher can mark the responding unit clear via the CAD software. The call then disappears and is automatically faxed to anyone who responded.
Assuming no other calls came in (not likely!), we are back to a clear CAD screen. The call is now complete.
It may seem like a lot happened over the course of our example, and, indeed it did.

However, make note that everything, from when the dispatcher answered the phone until the ambulance called en route, happened in less than three minutes.
As soon as the caller's location, name, phone number (so we can call back in case we get disconnected), and primary complaint, the call was dispatched and help was responding.

Although it may seem like forever to a panicked caller, this all happened in less than one minute!
Additional Notes

If you have any additional questions, feel free to contact us via our web site:

http://www.fcemao.org