



*Oakland County Wireless Integrated Network*



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# *User's Guide EMS Operations*



Oakland County Wireless Integrated Network

## CHAPTER 4

### *Emergency Medical Services*

The purpose of this policy is to provide a standard method for utilization of the Oakland County 800 MHz Trunked Radio System and provide procedures to be utilized by Emergency Medical Service agencies participating in the radio system.

Adherence to this policy will provide participating EMS agencies with the following benefits:

- Improved hospital communications through use of additional radio resources and technology
- Greatly improved interoperability between EMS agencies and other emergency responders locally and regionally
- Communications capability that is scalable from every day routine operations to major multi-agency incidents
- Direct communication with the Medical Control Authority during an activation of the Oakland County Emergency Operation Center

While it is not practical to designate specific countywide uses for every type of incident, it is appropriate to utilize these guidelines in talk group assignment.

#### **4.1 Talk Groups**

In trunked radio systems, a talk group is defined as an operational group of radio users requiring two-way radio communications. The following talk groups have been designated for EMS use.

- A. One talk group for each Oakland County Medical Control Authority hospital including Genesys in Genesee County

| D       | PROVIDER                        |
|---------|---------------------------------|
| DRHOSP  | Doctors Hospital                |
| POH     | POH Medical Center              |
| SJMC    | St. Joseph Hospital-Pontiac     |
| CHMC    | Crittenton Hospital             |
| HVSH    | Huron Valley-Sinai Hospital     |
| GENESYS | Genesys Regional Medical Center |



|          |                                     |
|----------|-------------------------------------|
| WBRO     | William Beaumont Hospital-Royal Oak |
| WBTRY    | William Beaumont Hospital-Troy      |
| BOTS     | Botsford Hospital                   |
| PROVSFLD | Providence Hospital-Southfield      |
| PROVNOVI | Providence Hospital-Nov             |
| STJOHNO  | St. John Hospital-Oakland           |
| HFWD     | Henry Ford West Bloomfield          |
| DMCSURG  | DMS Surgical Hospital               |

- B. One talk group that is common to all Oakland County hospitals and the Oakland County Emergency Operations. This talk group is patched to an MPSCS talk group with the same name at all times.

| ID     | PROVIDER      |
|--------|---------------|
| 63OAKH | All hospitals |

- C. One “common” EMS talk group is available to all PSAPs in Oakland County and used by EMS agencies when responding to mutual aid requests

| ID      | PROVIDER              |
|---------|-----------------------|
| CW_EMSC | Countywide EMS Common |

- D. Four countywide EMS talk groups for coordination of incidents locally and regionally, and used for countywide EMS incidents, mutual aid scenarios with both public and private EMS agencies, and for routine interagency operations where a private EMS agency provides EMS under contract with a municipality

| ID      | PROVIDER             |
|---------|----------------------|
| CW_EMS1 | Countywide EMS One   |
| CW_EMS2 | Countywide EMS Two   |
| CW_EMS3 | Countywide EMS Three |
| CW_EMS4 | Countywide EMS Four  |

## 4.2 Open Sky Profiles

A profile is a set of Open Sky trunked talk groups that are organized to meet the operational needs of the mobile and portable radio users. Each profile can have as many as 16 talk groups. A profile can be thought of as a “bank of channels/talk groups”.

- A. Home Profile (HOME1)

1. This profile is for private ambulance radios that do not have other talk groups assigned.



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2. This profile contains:
    - a. Countywide talk group CW\_EMSC used for hailing PSAPs outside the EMS agency's primary service area
    - b. Countywide talk groups CW\_EMS1 through CW\_EMS4 used for EMS incident communications and available to all police, fire, and EMS users
    - c. One talk group 63OAKH for interoperability with jurisdictions (Macomb and St. Clair Counties) that participate in Region 2 North
  3. All PSAP dispatch centers in Oakland County are capable of receiving and transmitting on all of the countywide talk groups.
- B. Special Events Profile (EVENT)
1. This profile contains countywide talk groups EV\_1 through EV\_13.
  2. These talk groups will be used for special pre-planned events such as the Dream Cruise, local festivals, etc. that require usage of a dedicated talk group for interoperability.
  3. These talk groups should be reserved in advance by utilizing the *Event Talk Group Request Form* located in Chapter 15 of this User's Guide.
  4. All PSAP dispatch centers in Oakland County are capable of receiving and transmitting on all of the special events talk groups.
- C. Interoperability with Michigan Public Safety Communications System (INTEROP)
1. This profile contains countywide talk groups 63OAKH, 63MPSC1, 63MPSC2, 63MPSC3, 63MPSC4, and 63MPSC5.
  2. All PSAP dispatch centers in Oakland County are capable of receiving and transmitting on all of the interop talk groups.

### **4.3 Conventional Mode (Nationwide Interoperability Channels)**

- A. This is a separate mode of operation from the Open Sky trunking mode. The conventional channels in this mode operate in an analog mode that is mandated by the Federal Communications Commission (FCC) and are nationally available to all 800 MHz trunked system users regardless of trunking technology. These channels are required



to be present in all 800 MHz public safety communication systems to facilitate interoperability. Currently, the Michigan State Police regional dispatch centers monitor ICALL and ITAC1. The calling channel may be utilized for emergency communications in any areas served by 800 MHz trunked radio systems.

- B. PSAP dispatch centers in Oakland County are not capable of receiving and transmitting on any of the ITAC channels.

#### 4.4 Conventional Mode Template

|     | "7-TAC 2" | "7-TAC 1" | "I-TAC"  | "8-TAC"  | "D-TAC"  |
|-----|-----------|-----------|----------|----------|----------|
| CH. | Alias     | Alias     | Alias    | Alias    | Alias    |
| 1   | 7TRVL70D  | 7CALL50D  | I-CALL   | 8CALL90  | 7FTAC1D  |
| 2   | 7TAC75D   | 7TAC55D   | I-CALL D | 8CALL90D | 7FTAC2D  |
| 3   | 7TAC76D   | 7TAC56D   | I-TAC 1  | 8TAC91   | 7FTAC3D  |
| 4   | 7MOB79D   | 7MOB59D   | I-TAC 1D | 8TAC91D  | 7GTAC4D  |
| 5   | 7LAW81D   | 7LAW61D   | I-TAC 2  | 8TAC92   | 7GTAC5D  |
| 6   | 7LAW82D   | 7LAW62D   | I-TAC 2D | 8TAC92D  | 7LTAC6D  |
| 7   | 7FIRE83D  | 7FIRE63D  | I-TAC 3  | 8TAC93   | 7LTAC7D  |
| 8   | 7FIRE84D  | 7FIRE64D  | I-TAC 3D | 8TAC93D  | 7LTAC8D  |
| 9   | 7MED86D   | 7MED65D   | I-TAC 4  | 8TAC94   | 7MTAC9D  |
| 10  | 7MED87D   | 7MED66D   | I-TAC 4D | 8TAC94D  | 7NTAC10D |
| 11  | 7TRVL70   | 7CALL50   | I-TAC 4D | 8TAC94D  | 7NTAC11D |
| 12  | 7TAC75    | 7TAC55    | I-TAC 4D | 8TAC94D  | 7NTAC12D |
| 13  | 7MOB79    | 7MOB59    | I-TAC 4D | 8TAC94D  | I-TAC 1D |
| 14  | 7LAW81    | 7LAW61    | I-TAC 4D | 8TAC94D  | I-TAC 2D |
| 15  | 7FIRE83   | 7FIRE63   | I-TAC 4D | 8TAC94D  | I-TAC 3D |
| 16  | 7MED86    | 7MED65    | I-TAC 4D | 8TAC94D  | I-TAC 4D |

#### 4.5 Hospital Equipment

Each participating hospital/medical facility is equipped with two control stations. While these control stations are programmed identically, under normal conditions one of the control



stations will be set on the 63OAKH talk group and the other control station will be on the hospital's dedicated talk group.

In addition, both control stations will have an audible warning chime that will sound when an EMS unit transmits on the hospital's primary talk group. Each console will have a separate chime. To accommodate the maximum number of users, the chime can be placed on any electrical outlet within 5 feet of the console.

A. Procedure for Use of Hospital Consoles\*

1. Upon notice of an incoming call on the console, the staff should:
  - a. Lift the handset on the radio
  - b. Press the transmit/reset button
  - c. All incoming traffic on the radio will be audible through the handset AND the speaker on the console to facilitate multiple clinicians listening to the radio report:
    - i. Handset in cradle-Audible signal
    - ii. Handset off cradle- Handset only
  - d. Depress the transmit button the neck of the handset
  - e. Speak slowly and clearly into the handset
    - i. Example: "Go ahead Beaumont Royal Oak"
  - f. When the conversation is concluded, replace the handset on the console

**\*Important: Use the handset with ALL transmissions. Talk within 2 inches of the mouthpiece of the handset.**

## **4.6 Calling Procedure**

A standardized method of communicating with units and between departments will ensure effective communications. Agencies are encouraged to practice these methods so use will become natural. Called-party-first or receiver-from-sender shall be the standard method for establishing contact with another unit.



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To avoid confusion, a standard format using the agency's name, level of service, and unit number shall be used to designate units. For example, "Alliance Bravo 482, Community Alpha 712, Oxford Alpha 311".

A. Calling Hospitals

1. When EMS users are communicating with hospitals, they should utilize their agency name, level of service, and unit number.
2. Unit numbers are assigned through the MCA.
3. Example: "St. John's Oakland from Alliance Alpha 428"  
"Go ahead for St. John's Oakland"

B. Agency Calling Another Agency

1. Example: "CEMS Alpha 712 from Star Alpha 638 on Countywide EMS1"

## **4.7 Operational Considerations**

A. Emergency Button

1. The emergency alerting capability is not enabled on EMS radios utilized by private providers

B. Transmit Timer

1. The transmit timer on all radios is set at 30 seconds
2. Lengthy transmissions **MUST** be divided into parts that do not exceed 20 to 25 seconds each
3. If a radio remains in transmit for 30 seconds, a tone will sound and the radio will stop transmitting

C. Ambulance Transmissions

1. Radio transmissions from the patient compartments of ambulances can be problematic due to the shielding effect of the ambulance vehicle



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2. Use of an external antenna and/or vehicle charger may improve the system coverage in ambulance vehicles

D. Protocols/Procedures

1. Oakland County Medical Control Authority (OCMCA) regulates EMS communications
2. Chapter 3 of the OCMCA Policy and Procedure Manual details procedures for EMS communications

## **4.8 Mass Casualty Incident Operations**

A. Number of Patients/Choosing an Incident Type

1. The number of should not determine if the incident is a multiple patient incident or the mass casualty incident (MCI) level.
2. The incident commander (IC) determines if the incident will be handled as a multiple patient incident or MCI. The incident commander will also select which level MCI the incident will be classified as (level 1, 2, or 3). This decision will be based on the command structure and communication plan the IC would like to put in place to manage the incident.
3. *Example: Royal Oak Fire may respond to an incident involving 15 patients and choose to handle it as a multiple patient incident, call no mutual aid, and have all communications on their primary dispatch frequency, ROF\_FD1.*

**OR**

4. *Example: Addison fire may respond to an incident involving 9 patients and choose to declare a level 1 MCI. Addison's Incident Commander may elect to switch to a tactical channel. The incident commander would assign a EMS Group Leader. Ambulances from Oakland, Oxford, Brandon, Alliance, and STAR would all contact the EMS Group Leader on CW\_EMSC when they are approaching the scene.*

B. Multiple Patient Incident Protocol

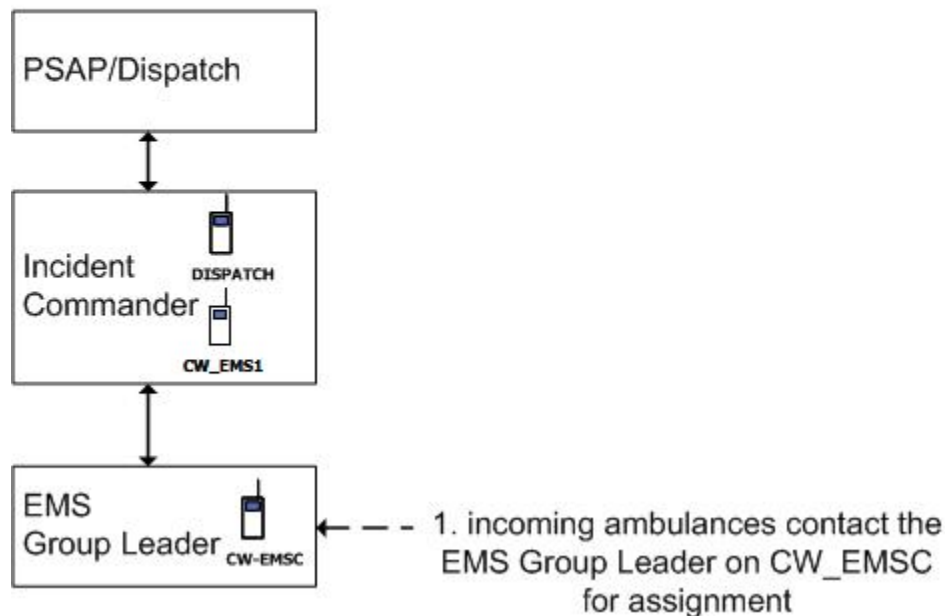
1. A multiple patient incident may be handled by a single large agency, or several small agencies using their existing mutual aid procedures.



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2. *Example: A two-car, motor vehicle accident with four patients*
  3. The incident commander will assign incoming EMS units to patients, as the EMS units arrive on scene.
  4. On scene communications will be handled using existing agency or mutual aid policies.
  5. Each ambulance will contact the appropriate hospital using existing communication protocol. All EMS units will follow existing treatment and transportation protocols.
- C. Level 1 Mass Casualty Incident Protocol

### MCI Level 1





1. A level 1 mass casualty incident is expected to use resources from a single mutual aid region. An incident commander should consider declaring a level 1 MCI when he or she believes deploying triage tags and having all incoming ambulances on a single channel will improve the management of the incident. Sufficient EMS units should arrive rapidly enough to transport all patients.
2. *Example: A car loses control and drives into a crowd at Arts, Beats & Eats. Twelve people are hurt. By-standers helping patients have blood on them and it is difficult to distinguish patients from by-standers.*

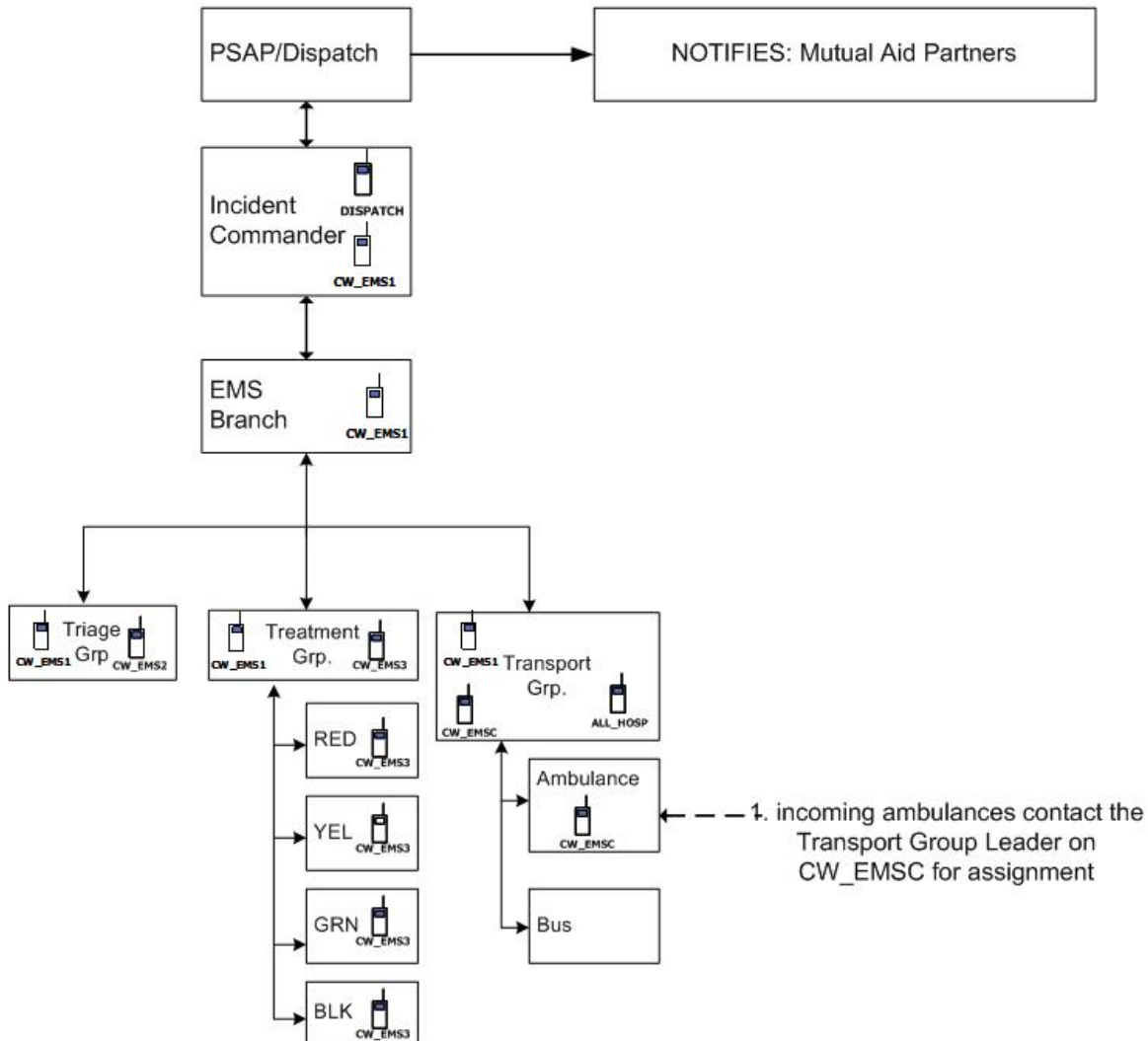
**OR**

3. *Example: A multi-vehicle accident occurs on I-75 and Sashabaw. There are nine people injured, with patients in both the Northbound and Southbound lanes. Ambulances from several jurisdictions are responding.*
4. The incident commander will assign an EMS Group Leader. The EMS Group Leader will wear an orange vest. The EMS Group Leader will perform or oversee the deployment of triage tags.
5. The IC will notify area hospitals of a Level 1 MCI.
6. All incoming ambulances will contact the EMS Group Leader on CW\_EMSC for assignment. The EMS Group Leader will determine each patient's hospital destination, including which patients will be transported to a trauma center.
7. Each transporting ambulance will contact the receiving hospital using current communication protocol. All EMS units will follow existing treatment protocols.



## D. Level 2 Mass Casualty Incident Protocol

### MCI Level 2





1. A level 2 mass casualty incident is expected to use resources from two or more mutual aid regions. An incident commander should consider declaring a level 2 MCI when he/she believes triage tags alone will not be effective in sorting the number of patients on the scene, and/or the number of patients on the scene will exceed the number of ambulances expected to rapidly arrive, creating the need for a centralized treatment area.
2. *Example: A Greyhound bus returning from the casino overturns on an exit ramp from M-59 to I-75. 48 people are trapped and/or injured.*

**OR**

3. *Example: A fire occurs at a dance club in Ferndale, resulting in a stampede. 70 people are suffering from burns, smoke inhalation, and traumatic injuries.*
4. The IC will direct the Transport Group Leader to notify all county hospitals on 63OAKH that there is a Level 2 MCI response in progress. The incident commander will request an MCI trailer to respond.
5. The Incident Commander will assign an EMS Branch Director to manage all EMS operations. The EMS branch director will assign a Triage Group Leader, a Treatment Group Leader, and a Transportation Group Leader. All positions will wear an orange vest.
6. The EMS Branch Director will operate on CW\_EMS1. The Triage Group Leader, Treatment Group Leader & Transport Group Leader will monitor CW\_EMS1 and use this talk group when needed to contact the EMS Branch Director.
7. The Triage Group will operate on CW\_EMS2. The Treatment Group will operate on CW\_EMS3. The Transport Group will operate on CW\_EMSC.
  - a. The Triage Group Leader, and any personnel assigned to the Triage Group (if any), will conduct triage using the START triage system, and deploy triage tags.
  - b. The Treatment Group Leader, and any personnel assigned to the Treatment Group (if any), will set up treatment area using red, yellow, green, and black tarps. The treatment group will provide care & comfort to all patients while awaiting transport. All medical treatment will be pre-radio.



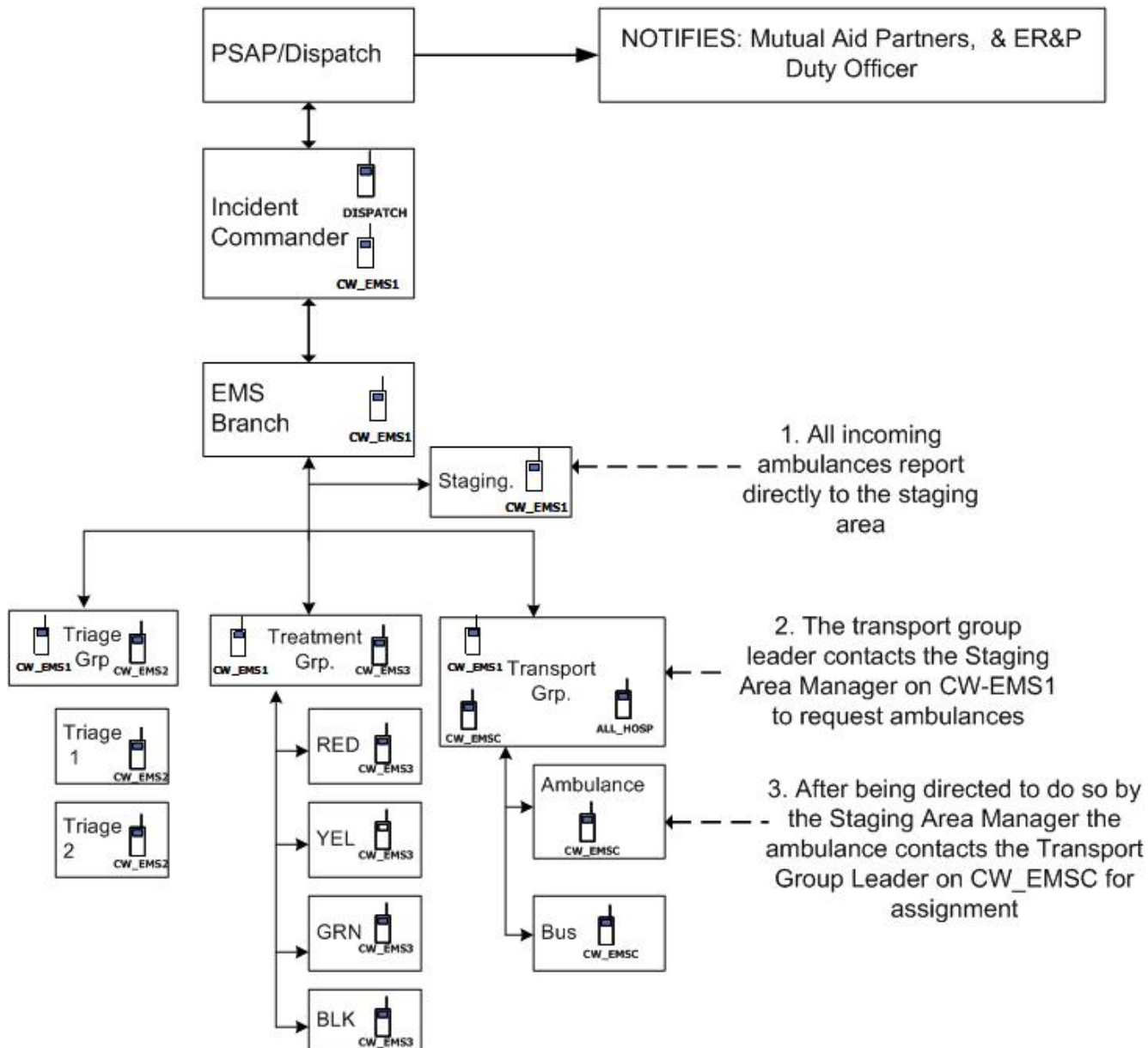
- c. The Transport Group Leader, and any personnel assigned to the Transport Group, will coordinate incoming ambulances, and mass transit vehicles. All incoming ambulances shall stage at least 1000' from the incident, and contact the Transport Group Leader on CW\_EMSC for direction.
  - d. The Transport Group will coordinate with local hospitals on the 63OAKH talk group to determine each patient's hospital destination, including which patients will be transported to a trauma center. Once notified of a Level 2 MCI, all county hospitals shall assign a person to the hospital radio until all priority 1 and 2 patients are transported off the scene of the MCI. The Transport Group Leader (or designee) will contact each hospital on talk group 63OAKH. The Transport Group will provide each hospital with the age, sex, priority, and chief complaint of each inbound patient.
- 8. Transporting units will not contact the receiving facility, unless urgent medical direction is needed. All treatment shall be pre-radio.
- 9. After delivering a patient to the hospital with verbal report and completed triage tag, ambulances may return to service without completing a full patient care report (PCR). EMS crews must complete report while in-service and fax it to the receiving hospital. PCR should include triage tag number.



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## E. Level 3 Mass Casualty Incident Protocol

### MCI Level 3





1. A level 3 mass casualty incident is expected to use or exceed the resources from every mutual aid region in the county. An incident commander should consider declaring a level 3 MCI when he/she believes the number patient is so great that EMS units may have to make return trips to the scene and hospital, and/or numerous ambulances from outside Oakland County may need to be called in, and/or Oakland County hospital capacities may be overwhelmed.
2. *Example: A commercial aircraft crashes at Pontiac Oakland Airport; 90 people are seriously injured.*

**OR**

3. *Example: A toxic gas plume is released from an industrial complex in Madison Heights, 150 people injured, many more “worried well”.*
4. In addition to the procedures used in a Level 2 MCI the following actions should be taken:
  - a. The incident commander should assign an EMS staging area. The incident commander should assign an EMS Staging Area Manager. The EMS staging area manager should operate on CW\_EMS1.
  - b. All incoming ambulances should report to the staging area. The Staging Area Manager will send additional ambulances to the scene when requested by the Transport Group Leader.
  - c. The Treatment Group Leader should assign a Treatment Area Manager to each of the four treatment areas. Each manager shall wear an orange vest. The entire treatment group will continue to operate on CW\_EMS3. The OCMCA physician medical director will be available for medical direction to the Treatment Group Leader on CW\_EMS3.
  - d. The Triage Group will operate on CW\_EMS2 and the EMS Branch Director will operate on CW\_EMS1.

## **4.9 Region 2 North Interoperability**

The Region consists of Macomb, Oakland and St. Clair counties. The purpose of the region is to provide a framework for coordinating preparedness activities across jurisdictional boundaries within the region. The planning board for the region is composed of members representing hospitals, ambulance services, fire departments, public health departments,



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medical control authorities, and other entities with a responsibility to respond to a regional emergency that impacts the public health. The core component of this system is the Modular Emergency Medical System (MEMS).

A. Modular Emergency Medical System (MEMS)

MEMS is composed of six main functional groups all of which are designed to operate within the National Incident Management System. Of those six groups, three have communications needs that must be addressed in the context of OakWIN.

B. Alternative Care Center (ACC)

An ACC is designed to treat patients who need more extensive care such as hydration or pain management than can be provided in other MEMS components. This component is typically established in a large indoor space such as a high school gymnasium. An ACC is not designed to provide acute critical care for patients requiring mechanical ventilation. Patients admitted to an ACC may be admitted for end of life care utilizing the hospice concept. The ACC concept also facilitates cohort isolation of patients with the same type of infection or exposure. Patients are only admitted to an ACC by referral, there are no walk-ins.

C. Casualty Transportation Systems (CTS)

The Casualty Transportation System provides inter-facility transportation of patients within the components of the MEMS model. For example, they may be utilized to transport non-critical patients out of existing hospitals to other facilities in order to free up bed space for casualties requiring hospitalization in an acute care facility. Assets allocated for use by the CTS are not available for use in the 911 system to provide EMS care. Currently three Oakland County ambulance services, Alliance Mobile Health, Community EMS, and Star EMS, make up the Oakland County CTS.

D. Medical Coordinating Center (MCC)

As of January 2007, the regional Medical Coordinating Center will be contained within the Oakland County EOC. The purpose of this component is to coordinate the provision of medical services in the event a public health incident crosses County lines. The MCC will be a communications hub with interoperability with Oakland, Macomb, and St. Clair County MEMS components, hospitals, and Emergency Operations Centers. The MCC will coordinate the activation of the CTS, establishment of ACC, and will facilitate communications between them. The MCC will also track the allocation of resources and patient load to ensure a balanced response. The MCC will help facilitate

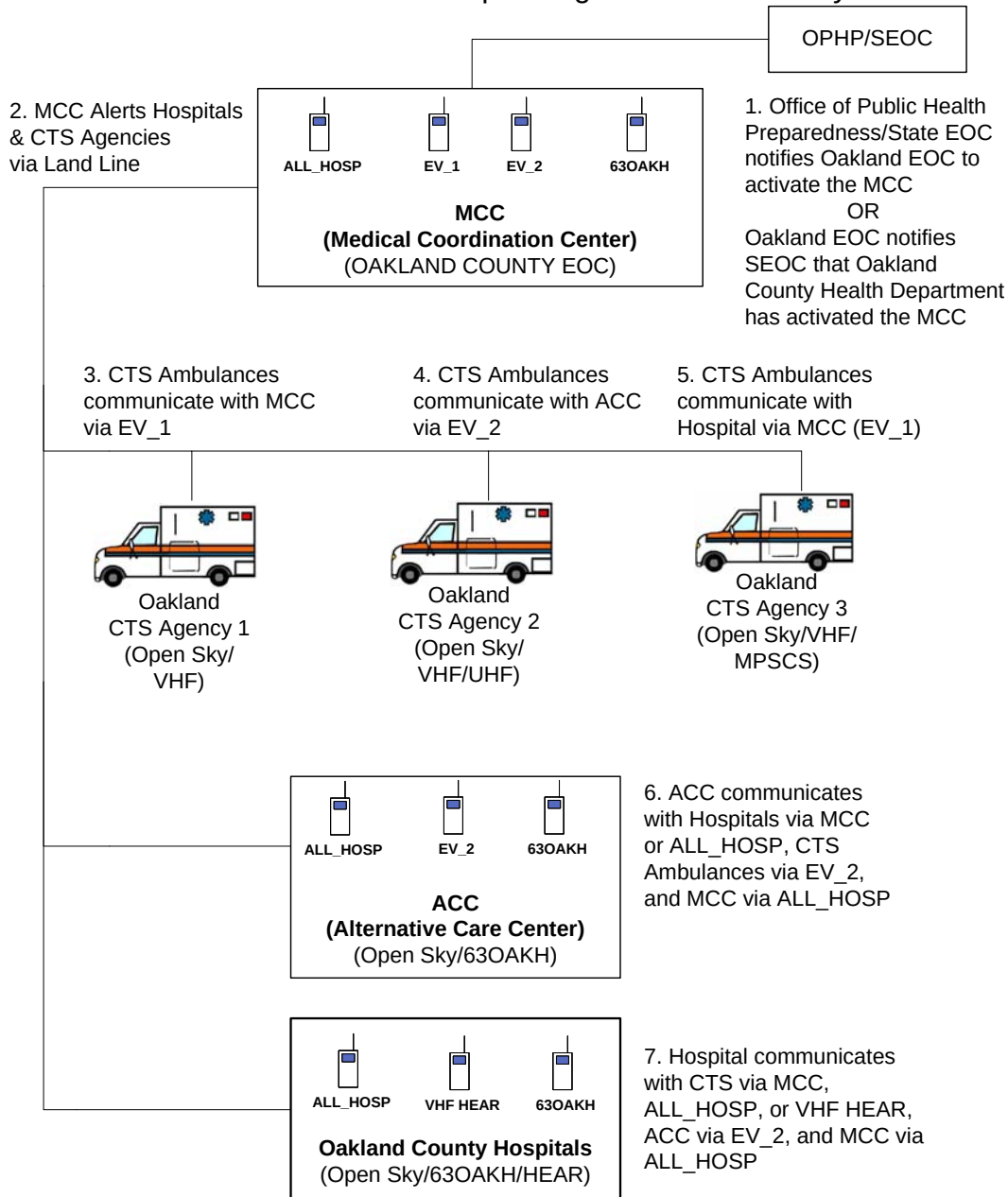


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standardization and inter-operability of health care operations and ensure optimum and efficient use of resources within the MEMS model.

Oakland County CTS agencies and ACC sites will be equipped with radios on Open Sky. Macomb County and St. Clair County CTS agencies will utilize the MPSCS for communications with Oakland ACC and CTS entities. The following scenarios outline possible methods to employ to achieve interoperable communications.

## E. MEMS – Oakland CTS Operating in Oakland County



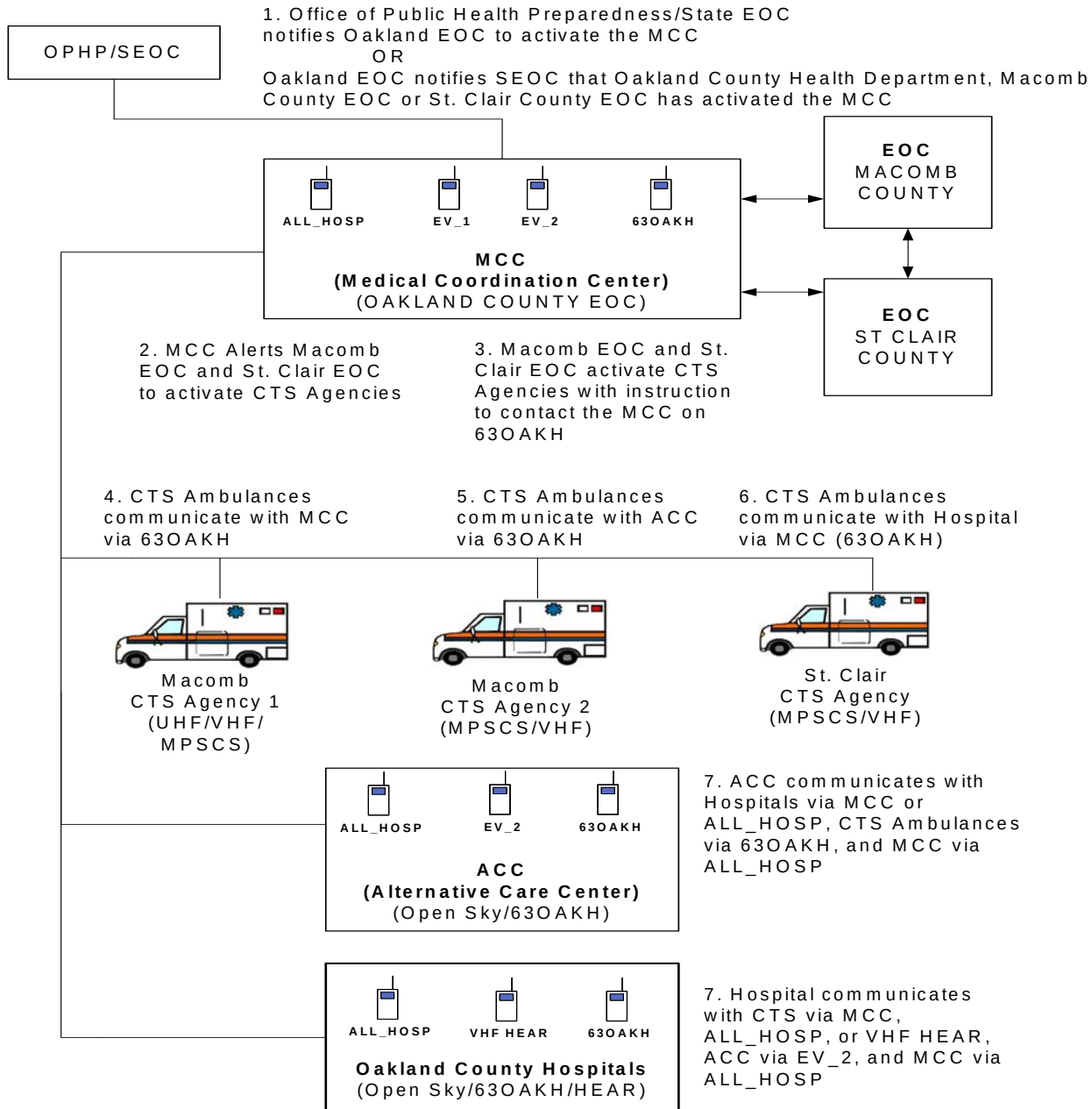
In this scenario, a localized outbreak of Tularemia involving 2500 patients is overloading the hospital systems in Oakland County. The Modular Emergency Medical System (MEMS) is activated by the proper authority. The Medical Coordinating Center (MCC) is activated at the Oakland County EOC. The MCC activates the Oakland Casualty Transportation System (CTS) by land line. Oakland CTS ambulances contact the MCC on EV\_1 for assignment. To



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communicate with Hospitals, CTS ambulances route communications through the MCC for patient and resource tracking purposes. All CTS agencies have the capability of contacting the hospital on 63OAKH or VHF HEAR, if directed to do so by the MCC. CTS ambulances can contact the ACC via EV\_2.

## F. MEMS – Macomb & St. Clair CTS Operating Oakland County



In this scenario, an outbreak of Bubonic Plague spreads to 5000 patients and is overloading the hospital systems in Oakland County. MEMS is activated. The MCC is activated at the Oakland County EOC. Oakland CTS agencies are overwhelmed with patients. The MCC requests that the Macomb County EOC and St Clair County EOC activate CTS resources



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within their jurisdiction. Macomb & St. Clair County CTS ambulances contact the MCC on 63OAKH for assignment. To communicate with Hospitals, CTS ambulances route communications through the MCC for patient and resource tracking purposes. All Macomb and St. Clair CTS agencies have the capability of contacting the hospital on VHF HEAR, or the 63OAKH MPSCS interop talk path if directed to do so by the MCC. CTS ambulances can contact the ACC via 63OAKH.