

## **Agencies Working Collaboratively Improve 911 Emergency Medical Services**

### **Summary**

Citizen complaints prompted the Grand Jury to investigate the misrouting of some 911 emergency medical calls in Fresno County. The investigation determined that the number of misrouted calls was not large and that better interagency practices will help solve the problem.

### **Background**

The Fresno County Civil Grand Jury received citizen complaints that some 911 emergency medical calls made from cell phones and received by California Highway Patrol (CHP) dispatchers are routed to the California Department of Forestry and Fire Protection (CAL FIRE) rather than to the Fresno County Emergency Medical Services Communications Center (EMS).

When a medical 911 call is not routed directly to Fresno County EMS, a caller reporting a medical emergency will be required to talk to three separate 911 dispatchers before an ambulance can be dispatched.

Also delayed are pre-arrival medical care instructions (i.e. CPR, control of bleeding) that can be provided over the phone. In the most critical cases, such as cardiac arrest, pre-arrival medical care instructions are provided immediately and any delay can mean the difference between life and death, the Grand Jury was told.

On August 1, 2011, the County of Fresno reaffirmed EMS Policy #402 (Attachment A), that all 911 medical emergency calls should be routed to the Fresno County EMS

Communications Center. The policy was endorsed by all primary public safety answering points (PSAPs) and it remains in effect today.

### **Purpose of the Investigation**

The purpose of the Grand Jury's inquiry was to determine why nearly 4,000 of more than 231,000 medical emergency 911 calls received by CHP per year are not routed to the Fresno County Emergency Medical Services (EMS) Dispatch Center.

### **Methodology**

Members of the Fresno County Civil Grand Jury read the complaints and interviewed the staff of Fresno County Emergency Medical Services, members of the California Highway Patrol (CHP) and CAL FIRE and toured all three dispatch centers. They also reviewed documents provided by Fresno County EMS and internet research on general practices of emergency response systems nationwide.

### **The Evolution of 911**

The nation's 911 system has been in place for more than 40 years.

In 1957, the National Association of Fire Chiefs first suggested a designated telephone number throughout the United States to speed up emergency response times. A decade later, the Federal Communications Commission (FCC) created the current system to handle three types of calls received from landline connected phones:

- disabled vehicles with no injuries
- disabled vehicles with injuries
- medical emergencies with no vehicles involved.

Throughout the 1970s, specialized call centers were created across the county to dispatch first responders to emergencies.

Tracing a landline call to an exact location does not require complex technology. Cell phones made the process much more complicated. Like landlines, each cell phone has an owner and a billing address, but unlike landlines, that address may not be reporting from where the call is coming. In the early 1990s, with more and more emergency calls from cell phones, it became clear that 911 call centers were going to need advanced, location-based technology to find people.

In 1992, the FCC created a national committee to figure out a solution. But the committee members failed to predict just how ubiquitous cell phones would become.

According to the National Center for Health Statistics, 45 percent of US households now have cell phones, but not landlines, a number that's grown steadily for more than a decade. Emergency call centers haven't kept pace.

Calls placed on cell phones bounce off of the nearest available cellphone tower which directs them to the closest emergency call center, but calls can be intercepted in unpredictable ways. When a lot of calls are being made at once, the towers can be overwhelmed, meaning some calls will be picked up by a tower further away.

The communications technology behind the 911 system is out of date, the Grand Jury learned, a problem that is well recognized and is being addressed by states working collectively through a national effort. Statistics from 2015 indicate that nationwide, the 911 centers handle about 240 million calls per year.

Working with state governments and other interested stakeholders and members of Congress, the US Department of Transportation (DOT) has cataloged how 911 systems operate in all states and produced a design and transition plan for the next generation 911 (NG911) system. The NG911 initiative establishes the foundation for public emergency communication services in a digital, Internet-based society.

In 1993, Central California Emergency Medical Services adopted Policy #402 to address the management of medical 911 calls in Fresno County. The purpose of the

policy is to provide direction to all Fresno County primary public safety answering points (PSAP) in the routing and processing of 911 calls for medical or emergency medical services requests that originate in Fresno County. The policy is intended to limit the number of 911 PSAP responding to a medical request to a maximum of two.

## **Discussion**

The Fresno County Department of Emergency Medical Services (EMS) was founded in 1986, in a partnership with the County of Fresno and American Ambulance. On August 1, 2011, the County of Fresno, through its EMS agency, implemented policy reaffirming the procedures for management of medical 911 calls in Fresno County: EMS Policy #402. The EMS Communications Center contracts with American Ambulance to dispatch all medical calls for ambulances in Fresno County.

In 2014 the EMS Communications Center dispatched 231,131 calls for emergency medical services. Of those, CHP first directed 3,994 medical emergency calls to CAL FIRE, which then sent them to EMS. In 2015, there were 272,458 medical 911 calls for emergency services of which the CHP directed 3,329 to CAL FIRE.

Since 2011, witnesses told the Grand Jury, EMS staff has attempted to have the CHP send all medical emergency calls directly to the EMS Communication Center.

Witnesses indicated to the Grand Jury that there was the perception that a memorandum of understanding (MOU) existed between the CHP and CAL FIRE that the CHP would forward medical emergency calls to the CAL FIRE dispatch center. Subsequent information given to the Grand Jury indicated that no such MOU exists.

The Grand Jury was told that, after a meeting between the Fresno County EMS Communications Center and the CHP in January 2016, it was agreed that ALL 911 medical emergency calls received by CHP would be directed to Fresno County EMS dispatchers. As of March 16, 2016, the Grand Jury was advised that the Fresno CHP

Dispatch Center has implemented a policy requiring the transfer of all 911 medical emergency calls to Fresno County EMS Communications Center.

Documentation provided to the Grand Jury indicates that the implementation of this new CHP policy has significantly reduced the number of misrouted medical 911 calls in the few months it has been in effect.

The issue of how 911 calls that originate from cell phones are managed is a challenge nationwide. There is potential for improvement with the adoption of NG911. The Grand Jury was told that agencies in Fresno County are keeping current on this issue, collaborating to resolve the technological challenges.

**Findings:**

**F1)** There have been inconsistencies between first responders in Fresno County in how some 911 medical emergency calls are routed.

**F2)** The Fresno County Emergency Medical Services Communications Center, approved by the State of California as a secondary Public Safety Answering Point (PSAP) to receive the direct transfer of medical emergency 911 calls, is the designated EMS dispatch center for all jurisdictions within Fresno County.

**F3)** When CHP directs emergency medical requests to CAL FIRE; the reporting party has to explain the nature of the medical emergency to three separate dispatch centers.

**F4)** Meetings between the CHP, CAL FIRE and Fresno County EMS that occurred in early 2016 resulted in policy changes that preliminary data indicates has reduced the number of misrouted medical 911 calls.

**F5)** The widespread use of cell phones has created 911 challenges nationwide. Efforts are currently underway to address them. In the meantime, local agencies need

to rely on collaboration and locally adopted practices to provide the best possible service.

**Recommendations:**

**R1)** All law enforcement and fire departments in Fresno County should follow the Central California Emergency Medical Services Policy #402. The policy states, in part, that all requests for medical emergencies be directly transferred to the Fresno County Emergency Medical Services (EMS) Communications Center for dispatching. (F1, F2, F3)

**R2)** Fresno County EMS, CHP and CAL FIRE should meet yearly, at a minimum, to review how the system is working and to work together to review/influence the national design of NG911 to meet local conditions. (F4, F5)

**Request for Response:**

Pursuant to Penal Code, section 933.05, the Fresno County Grand Jury requests responses to each of the specific findings and recommendations. It is required that responses are due within ninety (90) days of receipt of this report.

**Respondents:**

Mr. Dan Lynch, Director of Fresno County EMS  
Findings F1-F5, Recommendations R1, R2

Mr. David Pomaville, Director of Fresno County Department of Public Health  
Findings F1-F5, Recommendations R1, R2

## **Sources and References:**

Witness Interviews

Central California Emergency Medical Services Policy #402 (Attachment A)

Statistics and documentation provided by local medical response agencies

[www.911.gov/911-issues/standards.html](http://www.911.gov/911-issues/standards.html)

[www.its.dot.gov/ng911/index.html](http://www.its.dot.gov/ng911/index.html)

**CENTRAL CALIFORNIA  
EMERGENCY MEDICAL SERVICES**

A Division of the Fresno County Department of Public Health

Manual	Emergency Medical Services Administrative Policies and Procedures	Policy Number 402
Subject	Management of Medical 9-1-1 Calls in Fresno County	Page 1 of 2
Authority	Health and Safety Code, Division 2.5, Section 1797.220	Effective: 02/15/93

I. Purpose

The purpose of this policy is to provide direction to all Fresno County primary public safety answering points (PSAP) in the routing and processing of 9-1-1 calls for medical or Emergency Medical Services requests that originate in Fresno County. This policy is developed as part of the EMS System to provide for the most immediate response of emergency medical services, which includes the immediate receipt of medical 9-1-1 calls, provision of pre-arrival care instructions, and initiation of an emergency medical services response (e.g. first responder, ambulance, and helicopter) using priority medical dispatch. It is the intent of this policy to limit the number of 9-1-1 PSAPs that are processing a medical request to no more than two.

II. Policy

- A. The Fresno County Emergency Medical Services (EMS) Communications Center, approved by the State of California as a secondary PSAP to receive the direct transfer of 9-1-1 calls, is the designated EMS dispatch center for all jurisdictions within the County of Fresno.
- B. 9-1-1 calls are screened by primary PSAPs to determine the nature of the emergency, which are routinely categorized into Law Enforcement, Fire, or EMS incidents.
- C. Primary PSAPs shall transfer all 9-1-1 calls for medical or EMS requests originating in any jurisdiction within the County of Fresno directly to the Fresno County EMS Communications Center. Calls received on 9-1-1 for medical or EMS responses include incidents that involve any type of reported injury or illness, including motor vehicle crashes. Due to the type of incident, it may be necessary for law enforcement agencies to keep a 9-1-1 call and relay response information over another telephone line.

**EXCEPTION:** Incidents involving a reported fire, hazmat, or explosion, regardless of injuries, shall be transferred directly to the appropriate PSAP for fire dispatch. It will be the responsibility of the fire PSAP to notify the Fresno County EMS Communications Center if ambulance, EMS helicopter, or other medical resources are needed.

- D. The Fresno County EMS Communications Center shall notify the appropriate fire PSAP or fire agency if first responder or fire resources are needed on the medical incident. This does not apply to primary PSAPs who also have responsibility to dispatch its own municipal fire department. These primary PSAPs shall dispatch fire department equipment in accordance with its own policy and procedure after the 9-1-1 call is transferred to the Fresno County EMS Communications Center. Similarly, primary PSAPs that pre-alert ambulances within its jurisdiction shall continue to alert its ambulance of the ambulance request after the 9-1-1 call is transferred to the Fresno County EMS Communications Center. The Fresno County EMS Communications Center will alert and dispatch the ambulance with the priority of response and any updated information.

Approved By EMS Director	Signatures on File at EMS Agency	Revision 08/08/2011
EMS Medical Director	Signatures on File at EMS Agency	

Subject	Management of Medical 9-1-1 Calls	Policy Number 402
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- E. Certified EMS Dispatchers at the Fresno County EMS Communications Center shall interrogate callers and initiate response of EMS resources using EMS Agency approved dispatch protocols.