



Ventura County Public Health  
Emergency Medical Services Agency



# 2018 ANNUAL REPORT

## VENTURA COUNTY



# STRONG



VENTURA COUNTY  
PUBLIC HEALTH  
A Department of Ventura County Health Care Agency

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## Administration Message



The Ventura County EMS Agency (VCEMS) is pleased to provide our 2018 Annual System Report, reviewing the operations and performance of VCEMS and the Ventura County EMS System.

As with previous years, 2018 proved to be an exciting and successful year for EMS, yet this year will forever be remembered for a number of significant tragic events that struck our community and our neighbors.

In, January, merely weeks after suffering the devastating effects of the Thomas Fire, we were requested to provide mutual aid to our neighboring Santa Barbara County following the Montecito Mudslide disaster. Ventura County sent numerous fire, law, ambulance, EMS and MRC personnel to assist with the massive rescue operation. On November 7<sup>th</sup>, Ventura County experienced a tragic mass shooting at the Borderline Bar and Grill in Thousand Oaks. This event resulted in numerous injuries and 12 deaths, including the loss of responding Sheriff's Sgt. Ron Helus. The next day, Ventura County and our neighboring Los Angeles County, were struck with more devastating wildfires when the Hill and Woolsey Fires erupted, burning over 96,000 acres, killing three people, destroying over 1,600 homes and forcing wide spread evacuations. We remain proud of how our EMS system responded to these extraordinary challenges.

Other noteworthy events in 2018 include:

- 10<sup>th</sup> Annual Master the Disaster training symposium in February with over 600 attendees.
- Collaboration with VCFD to teach the Stop the Bleed program for county employees.
- Coordinated with the CEO for the placement of 20 additional bleeding control stations.
- Ventura County EMS initiated the EMS System Assessment in the spring of 2018.
- Continued collaboration with our Ventura County Behavioral Health partners in the Ventura County Opioid Abuse Suppression Taskforce (COAST) grant program.
- Expanded the Law Enforcement Use of Naloxone (Narcan) program with several additional law enforcement agencies joining those that were already trained.
- Santa Paula Fire Department absorbed into the Ventura County Fire Protection District.
- VCEMS acquired a surplus jail transport bus for use as a multipurpose emergency unit for mass casualty incidents, medical events, large scale evacuations or rehab assignments.
- The Oxnard Fire Department implemented their ALS program when Squad 68 was placed into service in Southeast Oxnard in November.
- Community Memorial Hospital opened their new Ocean Tower in December.

2019 is sure to bring additional challenges and successes. We continue to appreciate the proficiency and professionalism of each and every member of our EMS System every day.

Steve Carroll, Paramedic  
EMS Administrator

Daniel Shepherd, MD  
EMS Medical Director

Angelo Salvucci, MD FACEP  
Assistant EMS Medical Director

## Executive Summary

Ventura County is a geographically diverse region covering over 2200 square miles with a population of over 850,000. With 10 incorporated cities, a number of unincorporated communities, 43 miles of coastline, two offshore islands, two military installations, a variety of lakes and a large area of national forest and state park land, Ventura County offers a distinct mix of urban cities, rural sectors and wilderness.



The Ventura County EMS System is comprised of various disciplines, including fire departments, law enforcement, ambulance services, hospitals, and other provider agencies. These agencies respond to provide lifesaving care to those in need 24 hours a day, seven days a week. From the dispatchers who talk with 9-1-1 callers and the responders who provide care in the field and transport patients, to the emergency room staff who receive the patients, the EMS Agency ensures the highest quality pre-hospital care for those in need of emergency medical services in Ventura County through an integrated and coordinated system of services.

A division of the Health Care Agency Public Health Department, the EMS Agency monitors and evaluates the quality of advanced life support (ALS) and basic life support (BLS) emergency medical care provided to the residents of and visitors to Ventura County by authorized pre-hospital personnel, provider agencies, and hospitals. In this role, the EMS Agency:

- Serves as the lead agency for the emergency medical services system in the county and coordinates all system participants in its jurisdiction, encompassing both public and private sectors.
- Provides system guidance and direction through provider and community driven policy development aimed at establishing and maintaining standards for care.
- Monitors patient care through a comprehensive quality improvement program.
- Ensures medical disaster preparedness through the emergency planning process and coordinates response to local disasters and incidents with multiple casualties.
- Ensures prehospital personnel excellence through training, certification, accreditation and continuing education program review.

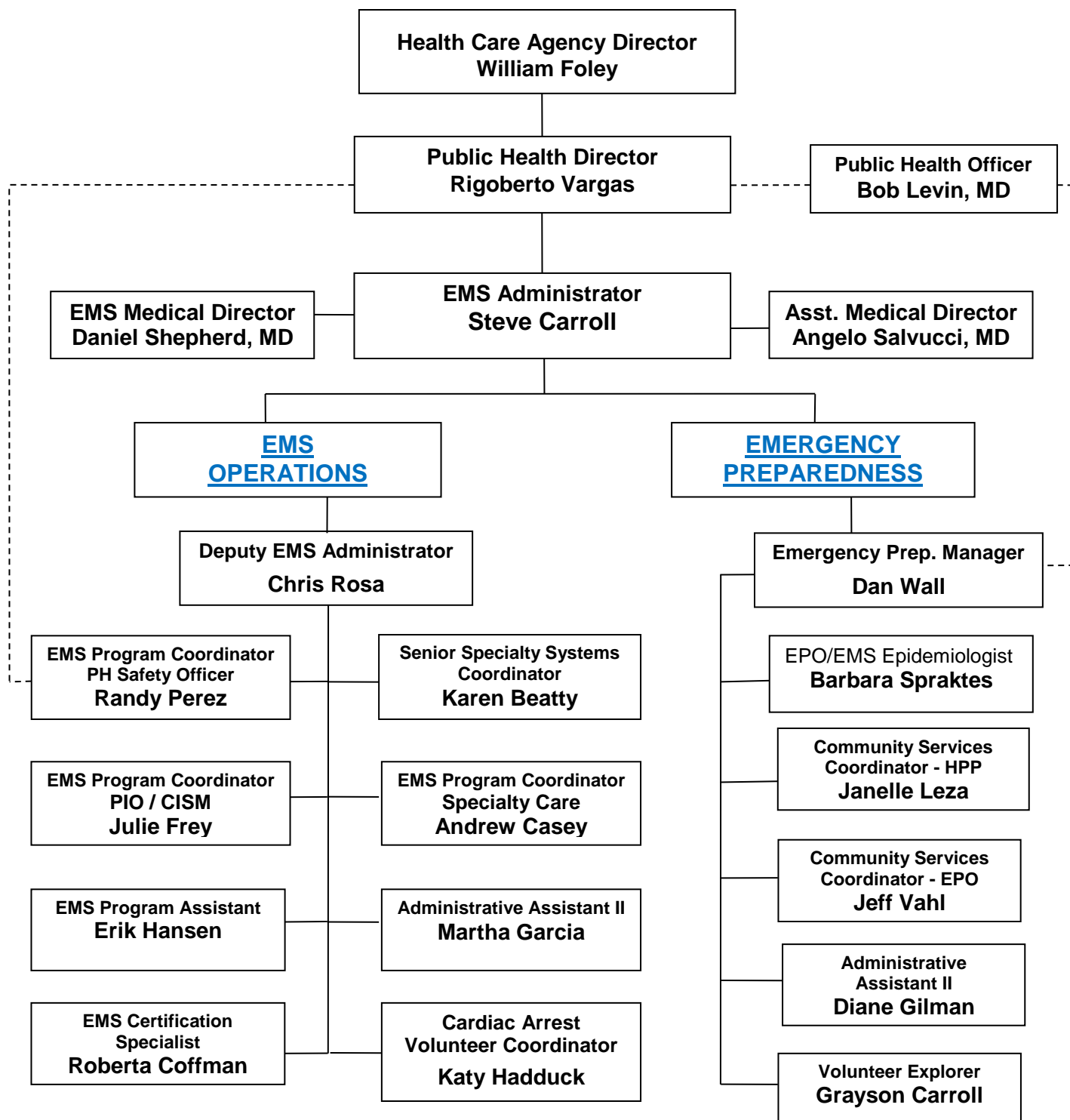
In FY 18-19, Ventura County EMS Agency had an adopted budget of \$5,131,676, which includes a mix of service fees, provider charges and penalties, traffic fine collections, grant funding and county general funds. The EMS Agency also provides administration of the Maddy Fund, which reimburses physicians and emergency rooms for a portion of uncompensated care with traffic fine funding. \$1,505,949 was dispersed from the Maddy Fund in 2018 to settle the hospital and physician claims.

The EMS Agency is comprised of two divisions, Emergency Operations and Emergency Preparedness, and is staffed with 14 full time personnel, a half-time medical director and an assistant medical director. In addition to the medical directors, positions include EMS Administrator, Deputy Administrator, Emergency Preparedness Manager, Specialty Systems Coordinator, Epidemiologist, three Program Administrators, Program Assistant, two Community Services Coordinators, two Administrative Assistants and one EMS Certification Specialist.

The EMS Agency is proud of its strong team of professionals that are called to action with every 9-1-1 call. This team is made up of people who care about serving the community while maintaining high standards in a demanding career. No matter the uniform, all team members strive for excellence each and every time they respond. Through a state-of-the-art communication system, ongoing training and modern equipment, Ventura County EMS providers can respond quickly and efficiently to the needs of the community.

The 2018 annual report is designed to provide an overview of the Ventura County EMS operations, specialty care and emergency preparedness programs, and provide updates on program activities and performance data.

# Ventura County Emergency Medical Services Agency Organizational Chart 2018



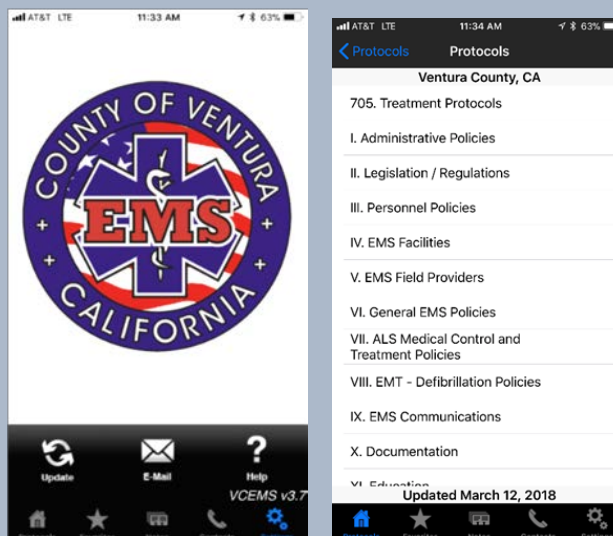


## EMS Agency Staff Responsibilities

Name	Title	Contact Info	Primary Responsibilities
Steve Carroll, Paramedic	EMS Administrator	<a href="mailto:Steve.carroll@ventura.org">Steve.carroll@ventura.org</a> 805-981-5305	<ul style="list-style-type: none"> <li>EMS System Delivery and Emergency Preparedness oversight</li> <li>Ambulance contract administration and compliance monitoring</li> <li>Certification, accreditation, authorization and discipline oversight</li> <li>Disaster Medical Health Operational Area Coordination</li> <li>Agency operations oversight and fiscal management</li> </ul>
Daniel Shepherd, MD	EMS Medical Director	<a href="mailto:Daniel.shepherd@ventura.org">Daniel.shepherd@ventura.org</a> 805-981-5304	<ul style="list-style-type: none"> <li>EMS Medical direction and oversight, including development of local policies, procedures, protocols and treatment guidelines</li> <li>Medical direction and oversight of specialty care systems, QI program, system wide committees and various EMS projects</li> </ul>
Angelo Salvucci, MD, FACEP	Assistant EMS Medical Director	<a href="mailto:Angelo.salvucci@ventura.org">Angelo.salvucci@ventura.org</a> 805-981-5301	<ul style="list-style-type: none"> <li>Medical direction and oversight, including maintaining various specialty care system programs and development and maintenance of local policies, procedures and protocols</li> </ul>
Chris Rosa, MS, Paramedic	Deputy EMS Administrator	<a href="mailto:Chris.rosa@ventura.org">Chris.rosa@ventura.org</a> 805-981-5308	<ul style="list-style-type: none"> <li>Assist with oversight of day-to-day EMS System operations</li> <li>EMS data systems management</li> <li>Countywide MCI program management</li> <li>Oversight of prehospital education providers</li> <li>Disaster Medical Health Operational Area Coordination Designee</li> </ul>
Daniel Wall, RN, MPPA	Emergency Preparedness Manager	<a href="mailto:Dan.wall@ventura.org">Dan.wall@ventura.org</a> 805-981-5307	<ul style="list-style-type: none"> <li>Emergency Preparedness Office oversight</li> <li>Responsible for management of HPP, PHEP, Pan Flu Grants</li> <li>Facilitates medical/health disaster preparedness and training efforts</li> <li>Coordinates community preparedness initiatives</li> </ul>
Barbara Spraktes	EPO/EMS Epidemiologist	<a href="mailto:Barbara.spraktes-wilkins@ventura.org">Barbara.spraktes-wilkins@ventura.org</a> 805-981-5279	<ul style="list-style-type: none"> <li>Epidemiological support for Public Health, EPO and EMS</li> <li>Syndromic surveillance and outbreak response</li> <li>Liaison to medical/health partners for public health monitoring</li> </ul>
Karen Beatty, RN, EMT	Senior Specialty Care Coordinator	<a href="mailto:Karen.beatty@ventura.org">Karen.beatty@ventura.org</a> 805-981-5309	<ul style="list-style-type: none"> <li>Collection and monitoring of STEMI and Stroke data</li> <li>Oversight of Stroke, STEMI and QI programs</li> <li>Maintenance of policies for the QI, Stroke and STEMI systems</li> <li>Trauma and specialty care system oversight and management</li> </ul>
Julie Frey	EMS Program Administrator/ CISM Coordinator	<a href="mailto:Julie.frey@ventura.org">Julie.frey@ventura.org</a> 805-981-5306	<ul style="list-style-type: none"> <li>EMD and CISM Program Coordinator</li> <li>Community Paramedic Program Liaison</li> <li>Prehospital Services Committee Coordinator</li> </ul>
Randy Perez, Paramedic	AED Program Administrator/ PH Safety Officer	<a href="mailto:Randy.perez@ventura.org">Randy.perez@ventura.org</a> 805-981-5310	<ul style="list-style-type: none"> <li>Countywide AED Program Administrator</li> <li>Ventura County Public Health Department Safety Officer</li> <li>Countywide Sidewalk CPR Program Coordinator</li> <li>PSFA Naloxone Program coordination</li> </ul>
Andrew Casey, Paramedic	EMS Program Coordinator/ Specialty Care	<a href="mailto:Andrew.casey@ventura.org">Andrew.casey@ventura.org</a> 805-981-5311	<ul style="list-style-type: none"> <li>Collection and monitoring of STEMI and Stroke data</li> <li>Oversight of Stroke, STEMI and QI programs</li> <li>Maintenance of policies for the QI, Stroke and STEMI systems</li> </ul>
Erik Hansen, EMT	EMS Program Assistant	<a href="mailto:Erik.hansen@ventura.org">Erik.hansen@ventura.org</a> 805-981-5322	<ul style="list-style-type: none"> <li>Emergency preparedness and communications coordination</li> <li>Coordination of various EMS training programs</li> <li>Medical volunteer management and CAHAN Administration</li> <li>Stop the Bleed Program coordination</li> </ul>
Jeff Vahl, EMT	EPO Community Services Coordinator	<a href="mailto:Jeffrey.vahl@ventura.org">Jeffrey.vahl@ventura.org</a> 805-981-5261	<ul style="list-style-type: none"> <li>Countywide medical/health logistics coordination</li> <li>HCA Department Operations Center coordination</li> <li>Disaster preparedness outreach</li> </ul>
Janelle Leza, MPPA	Health Care Coalition Coordinator	<a href="mailto:Janelle.leza@ventura.org">Janelle.leza@ventura.org</a> 805-981-5335	<ul style="list-style-type: none"> <li>Ventura County Health Care Coalition Coordinator</li> <li>Health care facilities' emergency contacts database</li> <li>Coordinate preparedness outreach with partner agencies</li> </ul>
Diane Gilman	EMS Administrative Assistant II	<a href="mailto:Diane.gilman@ventura.org">Diane.gilman@ventura.org</a> 805-981-5331	<ul style="list-style-type: none"> <li>Fiscal accounting, processing and tracking</li> <li>EPO grant tracking</li> <li>Front office staff management</li> <li>Provide administrative support</li> </ul>
Martha Garcia	EMS Administrative Assistant II	<a href="mailto:MarthaL.garcia@ventura.org">MarthaL.garcia@ventura.org</a> 805-981-5303	<ul style="list-style-type: none"> <li>Certification, accreditation and authorizations of personnel</li> <li>Monitor and audit personnel training requirements</li> <li>Update and maintain databases</li> <li>Provide administrative support</li> </ul>
Roberta Coffman	EMS Certification Specialist	<a href="mailto:Roberta.Coffman@ventura.org">Roberta.Coffman@ventura.org</a> 805-981-5301	<ul style="list-style-type: none"> <li>Certification, accreditation and authorization of personnel</li> <li>Maintain database for EMTs, Medics</li> <li>Medical Marijuana Identification Card program</li> <li>Provide administrative support</li> </ul>

## VCEMS Mobile Application

In June of 2018, the Ventura County EMS Agency contracted with Acid ReMap, LLC to develop a mobile application that could make the prehospital policies and procedures manual available to EMS system providers in the field at no cost. Paramedics and EMTs in the field have been requesting an official app for a number of years, but there were no low-cost solutions available at the time. Now, the entire policy and procedures manual is available by smartphone, 24/7. The password-protected application is only available to active participants within the VCEMS system and is available only on iOS (Apple) and Android platforms.



## Public Safety First Aid – Naloxone Administration Program

The Ventura County Emergency Medical Services Agency (EMSA), in partnership with Ventura County Behavioral Health coordinates the Public Safety First Aid (PSFA) Naloxone Administration Program. The program allows law enforcement first responders to administer naloxone to persons exhibiting signs and symptoms of an opioid overdose.



Providing law enforcement with the knowledge and the tools to reverse opioid overdoses in the field can reduce the time between when an overdose victim is discovered and when they receive lifesaving assistance.

In 2018, EMSA and our partners authorized and trained 287 law enforcement personnel to carry and administer naloxone under specific circumstances as directed by the applicable policies, procedures and protocols.





## Ventura County Critical Incident Stress Management (CISM) Coalition

Throughout Ventura County and across the nation, emergency service personnel have become more aware of the stressors unique to their occupations. These stressors, to which the providers are routinely exposed, can manifest themselves in physical and/or psychological symptoms which the individuals may not be able to manage on their own.

In Ventura County we offer a countywide response team for all emergency agencies, hospitals and the medical examiner's office. This program is coordinated by the Ventura County Emergency Medical Services (EMS) Agency.

The CISM Coalition is dedicated to providing support services in the aftermath of any critical incident and working to reduce stress among emergency services personnel. This is accomplished through education, post incident support and appropriate referrals.

The CISM Coalition meets monthly to discuss the countywide coordination efforts, review defusing/debriefing activity, and continue disaster response planning efforts among participating agencies.

In 2018, the CISM Coalition responded to 203 requests for service.



## California Health Alert Network (CAHAN)

The California Health Alert Network (CAHAN) is the State of California's web-based information and communications system available on a 24/7/365 basis for distribution of health alerts, dissemination of prevention guidelines, coordination of disease investigation efforts, preparedness planning, and other initiatives that strengthen state and local preparedness. CAHAN participants have the ability to receive alerts and notifications via e-mail, fax, and phone (cellular and landline).

- Rapid and secure communications system among state and local health agencies, health care providers, emergency management officials, and other emergency response partners
- Dissemination of announcements from local, state or federal public health authorities to inform health and medical service personnel of likely or imminent dangers to the health of their community
- Secure collaborative environment to develop and share information for emergency preparedness planning and response

If you are affiliated with a healthcare facility in the Ventura area and would like to sign up for CAHAN please contact the EMS office at 805-981-5301.



## Ventura County Stop the Bleed Program



Stop the Bleed is a national awareness campaign and call-to-action. Stop the Bleed is intended to cultivate grassroots efforts that encourage bystanders to become trained, equipped, and empowered to help in a bleeding emergency before professional help arrives.

Uncontrolled bleeding is a major cause of preventable deaths. Approximately 40% of trauma-related deaths worldwide are due to bleeding or its consequences, establishing hemorrhage as the most common cause of preventable death in trauma. A person who is bleeding can die from blood loss within five minutes, so quickly stopping the bleeding is critical. The ability to recognize life-threatening bleeding and the ability to intervene effectively can save a person's life. Whether a bleeding injury is the result of a shooting or a home accident, one person who is on the scene, at the right time, and who has the right skills can make a life or death difference.



The Ventura County Emergency Medical Services Agency (VCEMS), in partnership with the County CEO's office and Ventura County Fire Protection District, launched the Ventura County Stop the Bleed Program. The program consists of educating the public in lifesaving skills required in the first few minutes of major trauma and strategically locating "Bleeding Control Kits" in government buildings throughout Ventura County.

In 2018, VCEMS and our partners trained nearly 400 Ventura County employees. The program continues to be well received. With the support of government administrators and partner agencies VCEMS will continue to expand our partnerships with local agencies and hospitals to reach additional sectors of the community.

## Oxnard Fire Department Paramedic Program



Following an exhaustive planning, design, and implementation process, the Oxnard Fire Department initiated their new Advanced Life Support program in late 2018. The new program utilized existing Oxnard Fire Department EMT personnel, who had maintained their California paramedic licenses. The “new” paramedics completed an extensive training program to refresh their paramedic

knowledge and skills competency and met all of the local accreditation standards. Squad 68 was placed into service from Station 68 in Southeast Oxnard in November.

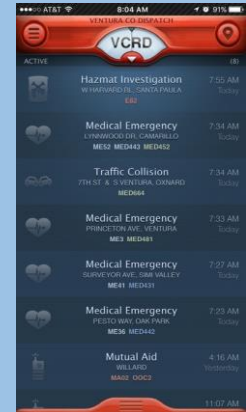
## American Medical Response Equipment Upgrade

In July 2018, American Medical Response initiated a system wide equipment upgrade with the purchase and deployment of new modular style ambulances that will begin to replace older van style ambulances that are currently in service throughout Ventura County. These new ambulances have a separate square patient compartment that is mounted onto a cut-a-way van chassis. They offer greater storage options and additional space for the crew and patients. These new style ambulances will be replacing the existing ambulance fleet as they are due for replacement.



## PulsePoint Mobile Application (App)

The Ventura County Fire Protection District (Fire District), in partnership with the Ventura County Emergency Medical Services Agency (EMSA), participate in the Ventura County PulsePoint Program, a mobile app that alerts registered users whenever a cardiac arrest occurs in a public place nearby. 2018 saw a significant growth of App followers to 25,994. This project increases citizen awareness and enables the public to provide potentially life-saving CPR.



The app is linked directly to the Fire District's Ventura County Regional Dispatch (VCRD) system, which handles fire and emergency medical dispatching for all fire and ambulance resources in Ventura County. The free PulsePoint app is available for iPhone and Android and can be downloaded from the iTunes Store and Google Play as "PulsePoint Foundation."



### Hands Only "Sidewalk" CPR

Sudden cardiac arrest is a leading cause of death in the U.S., striking people in all settings. From schools to homes to public places, approximately 326,200 people experience sudden cardiac arrest each year. Ventura County Emergency Medical Services (VCEMS), along with partner agencies host free Hands-Only "Sidewalk CPR" trainings at locations throughout Ventura County. CPR instructors demonstrate the Hands-Only CPR technique in public places with the goal of teaching more people how to respond appropriately if they witness someone experiencing sudden cardiac arrest. In 2018, over 7,000 residents and visitors of Ventura County were trained in Hands Only CPR.

### Ventura County Public Access Defibrillator Program

Ventura County EMS Agency administers the Ventura County Public Access Defibrillator (PAD) Program. This is a partnership between public and private organizations and businesses placing over 810 AEDs throughout Ventura County. Over 149 AEDs are placed in government buildings and vehicles, and another 661 provided by public and private businesses and organizations for the protection of their patrons and community.





## Certification/Accreditation/Authorization



### EMT Certification

**Emergency Medical Technician (EMT)** - The EMT provides basic assessment and treatment to patients that access the Ventura County EMS System. The EMT is trained in basic life support skills including patient assessment and treatment of minor medical conditions and injuries. Once an EMT is certified by a Local EMS Agency, he/she is authorized to operate as an EMT anywhere in the State of California. New regulations were passed in 2017 that significantly expand the scope of practice for an EMT, in addition to the requirements for the initial and ongoing cognitive and psychomotor skills training of an EMT. Educational materials and policies were developed at the local EMS Agency level, and programs were required to implement these new training requirements in 2018.

**EMT ALS Assist** – Local authorization level indicating that an EMT has met additional training requirements, and is now able to operate with a Level II Paramedic on a 911 ambulance that responds to medical emergencies. The ALS Assist training includes more in depth training on major medical emergencies such as cardiac arrest, and better prepares the EMT for working with a paramedic in an emergency setting.

### Paramedic Accreditation and Authorization

**Paramedic** – The paramedic provides advanced emergency medical care for patients who access the Ventura County EMS system. The paramedic is highly trained in various aspects of patient care and assessment, and is continuously evaluated to ensure knowledge of skills and treatment modalities remains current. The paramedic operates under clearly defined medical control guidelines and protocol established by the VCEMS Medical Director.



**Level I Paramedic** – Local authorization level indicating paramedic has met requirements for initial accreditation, but is not yet authorized to function as the only paramedic at the scene of a medical emergency.

**Level II Paramedic** – Local authorization level indicating paramedic has met requirements for continued accreditation, and is authorized to function as the only paramedic at the scene of a medical emergency. Level II paramedics can function alone on a paramedic support vehicle, but may also function as the senior paramedic working on a two (or more) person team comprised of other EMTs or paramedics.

**MICN Authorization**



**Mobile Intensive Care Nurse (MICN)** – The MICN is a registered nurse authorized by the medical director of the Agency as qualified to communicate instructions to pre-hospital personnel according to EMS policy and procedures. In addition, MICNs are trained in certain aspects of multi-casualty incident management and act as destination

coordinators during a declared MCI, regardless of incident size.

**Certification/Accreditation/Authorization Activity**

<b>VCEMS Certifications, Accreditations, and Authorizations Issued - 2018</b>	
EMT Certifications	357
EMT Re-Certifications	571
Paramedic Accreditation	48
Paramedic Re-Accreditation	140
Authorized Level I Active in VCEMS System	33
Authorized Level II Active in VCEMS System	242
MICN Authorization	9
MICN Re-Authorization	83
Active MICNs in VCEMS System	140

**EMS Education Programs**

<b>VCEMS Authorized Prehospital Training Programs - 2018</b>	
EMT – Initial and Refresher	6
Paramedic Training Program	1

Additional information regarding CE Provider Programs, EMT, and Paramedic Training Programs can be found online at the California EMS Authority Education Database:

<http://www2.emsa.ca.gov/Training/TrainingMaster/GroupByTrainingMasterTable.aspx>



## Community Paramedicine Pilot Programs Hospice / Tuberculosis

In 2014, the California Emergency Medical Services Authority (EMSA) approved Ventura County to take part in two unique pilot programs that allows paramedics to provide hospice support, as well as, follow-up treatment for tuberculosis patients.



### Hospice

The provision of hospice care by paramedics is an innovative program designed to improve patient care for hospice patients in their home environment.

The Community Paramedic (CP) is dispatched to all 911 calls involving hospice patients. The CP will liaison between the patient, hospice team and the patients family/caregiver and provide the appropriate care/treatment until the hospice team arrives. In a majority of cases, the patient's wish to stay out of a hospital environment can be maintained.

Community Paramedics responded to assist 83 hospice patients in 2018, with only 16 of these patient contacts resulting in a transport to the hospital.

### Tuberculosis (TB)

The purpose of this project is to improve the treatment for people with tuberculosis (TB), and thereby benefit the patient, their family, other contacts, and the community, by providing directly observed treatment to TB patients in the field, in support of the Ventura County Public Health Department's TB Specialty Clinic and the patients they serve.

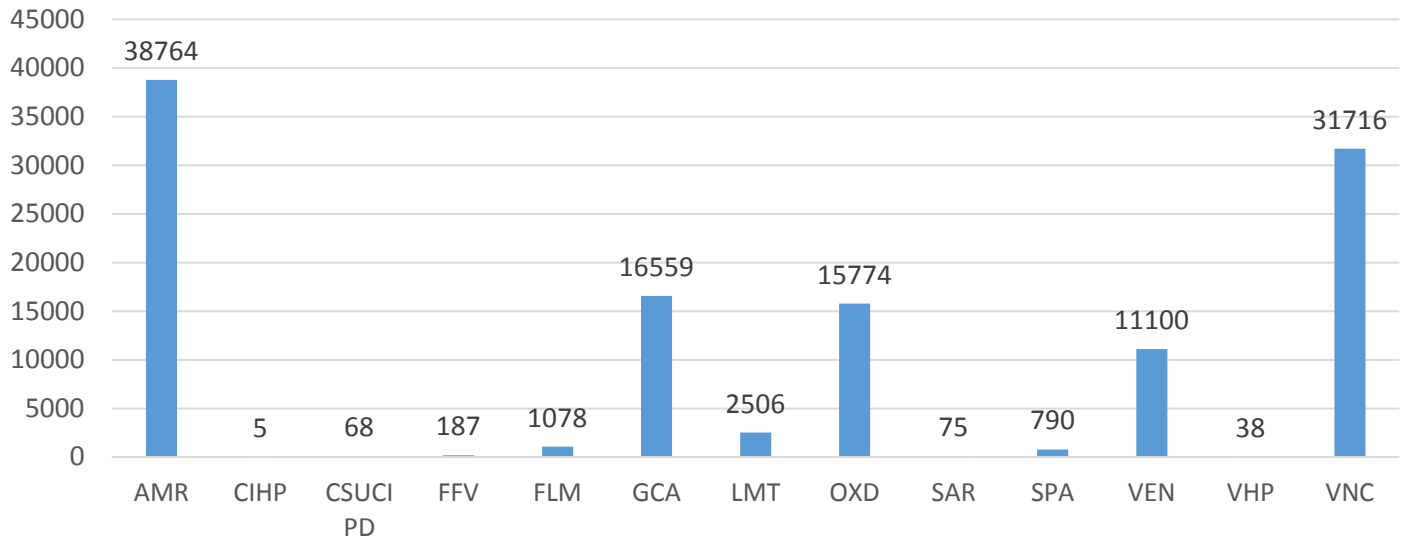
This is being accomplished by improving patient compliance with directly observed treatment (DOT), increasing the percentage of patients who complete the full course of treatment for TB and identifying and treating side-effects and mal-absorption issues early, with physicians as needed.



In 2018, Community Paramedics assisted with 12 routine patients (some who were seen multiple times a day). 9 patients completed their course of treatment under the care of the Community Paramedics in 2018.

## Ventura County EMS System Volume

### Medical Responses by Agency - 2018



AMR = American Medical Response

CSUCI PD = Cal State University Channel Islands PD

CIHP = Channel Islands Harbor Patrol

FFV = Naval Base Ventura County Fire Dept.

FLM = Fillmore Fire Department

GCA = Gold Coast Ambulance

LMT = Lifeline Medical Transport

OXD = Oxnard Fire Department

SPA = Santa Paula Fire Department

VNC = Ventura County Fire Protection District

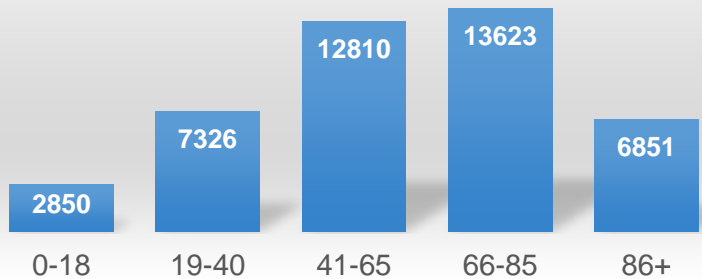
SAR = Ventura County Sheriff's Air Unit / SAR

VEN = Ventura City Fire Department

VHP = Ventura Harbor Patrol

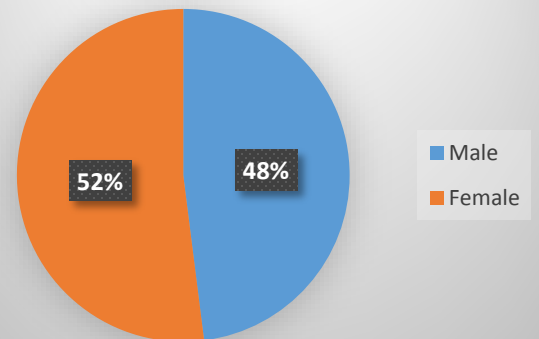
## Patient Demographics (transported only) - 2018

### Patient Population, by Age Group



Median Age - 63

### Patient Gender



Medical Responses by Agency and Patient Demographic data is collected through the ImageTrend Electronic Patient Care Reporting System posted within the Ventura County EMS system and may differ slightly from other data sources due to collection process variances.

## Emergency Medical Dispatch



The County of Ventura has 9 primary Public Safety Answering Points (PSAP), including California Highway Patrol (CHP), California State University Channel Islands (CSUCI), Naval Base Ventura County (NBVC), Oxnard Police Department (OPD), Port Hueneme Police Department (PHPD), Santa Paula Police Department (SPPD), Simi Valley Police Department (SVPD), Ventura City Police Department (VPD) and Ventura County Sheriff's Office (VCSO). When a primary PSAP receives a call for a medical or fire emergency, the call is transferred to the secondary PSAP at the Ventura County Fire Communications Center (FCC), where fire and ambulance resources are coordinated. All Fire and EMS resources in Ventura County are dispatched by FCC. This regionalized operation results in increased coordination and communication among response partners, reduced duplication, and closest unit response to emergencies regardless of geographic jurisdiction. FCC is the only Emergency Medical Dispatch (EMD) provider in Ventura

County. EMD is a program designed to provide predetermined medical protocols/medical instructions to victims and bystanders before the arrival of first responders. EMD trained personnel use Medical Priority Dispatch Systems ProQA Dispatch Software to help emergency dispatchers move smoothly through case entry and key questioning.

**Quality Assurance** - ProQA helps FCC maintain a consistently high level of service by improving call taker compliance to the International Association of Emergency Dispatcher (IAED) Protocols. ProQA automatically presents questions and instructions in the proper order. It automatically skips questions and instructions that are not appropriate for the specific circumstances of each case. This automation frees call takers to focus their attention on providing quality service. ProQA also saves every action taken by the call taker so that the information can be exported for use in Quality Assurance (QA) program software. All high risk calls and routine random sample calls from each dispatcher are reviewed for quality assurance by the medical professionals at the Ventura County Fire Department EMS Division.

**Ventura County Fire  
Communications Center**



# Emergency Medical Dispatch

## Countywide Emergency Medical Dispatch Activity by Call Type

PROBLEM TYPE	2018 TOTAL INCIDENTS	PROBLEM TYPE	2018 TOTAL INCIDENTS
ABDOMINAL PAIN	1442	HEAT / COLD EXPOSURE	130
AIRCRAFT EMERGENCY	19	HEMORRHAGE / LACERATION	1720
ALLERGIES / ENVENOMATION	486	JUVENILE BEHAVIORAL TRANSPORT	67
AMBULANCE ONLY	288	LIFT ASSIST	466
ANIMAL BITES / ATTACKS	122	MEDICAL ALARM	2554
ASSAULT	1669	MOTORCYCLE COLLISION	166
ASSIST OTHER AGENCY MEDICAL	85	MUTUAL AID - MEDICAL	205
BACK PAIN	690	OBVIOUS OR EXPECTED DEATH	203
BEHAVIORAL EMERGENCY	1564	OVERDOSE / POISONING	1744
BREATHING PROBLEMS	5464	PENETRATING WOUNDS	5
BURNS / EXPLOSIONS	44	PREGNANCY RELATED EMERGENCY	165
CARDIAC / RESP ARREST	967	REMOTE RESCUE	80
CHEST PAIN	4018	SICK PERSON	8873
CHOKING	393	STABBING	112
INHALATION EXPOSURE / HAZMAT	83	STEMI TRANSPORT	98
CONVULSIONS / SEIZURES	2528	STROKE (CVA)	1501
DIABETIC PROBLEMS	1080	STROKE TRANSPORT	33
ELECTROCUTION / LIGHTNING	5	TRAFFIC COLLISION	5414
ENTRAPMENT NON VEHICLE	75	TECHNICAL RESCUE	18
EYE PROBLEMS / INJURIES	52	TRAUMA TRANSFER	42
FALLS	10355	TRAUMATIC INJURIES	1963
GUNSHOT	124	UNCONSCIOUS / FAINTING	5020
HEADACHE	315	UNKNOWN PROBLEM	4928
HEART PROBLEM	719	WATER RESCUE	81
<b>TOTAL 2018 MEDICAL RELATED RESPONSES - 68213</b>			

## Fire Departments



### Federal Fire Department – Ventura County

Covers all areas of Naval Base Ventura County, including San Nicholas Island, from four stations with BLS engines and BLS ambulances.



### Fillmore City Fire Department

Covers the City of Fillmore from one station with ALS and BLS engines.



### Oxnard Fire Department

Covers the City of Oxnard from eight stations with eight BLS engines and two BLS ladder trucks and one ALS squad.



### Ventura City Fire Department

Covers the City of Ventura from six stations with six ALS engines, one variable staffed ALS engine and one ALS ladder truck.



### Ventura County Fire Department

Covers the cities of Simi Valley, Moorpark, Thousand Oaks, Camarillo, Port Hueneme, Ojai, Santa Paula and all unincorporated areas of Ventura County from 33 stations. Ventura County Fire Department provides services with 12 ALS engines, 19 BLS engines, 4 variable staffed engines, 4 BLS ladder trucks and 2 ALS squads.

## Sheriff's Air Rescue



### Ventura County Sheriff's Department Aviation Unit

Covers all areas of the county, including remote wilderness within the Los Padres National Forest and Santa Monica Mountains National Recreation Area.



## Ambulance Providers

### American Medical Response

Covers the cities of Simi Valley, Moorpark, Thousand Oaks, Camarillo, Ventura, Santa Paula, Fillmore, and unincorporated areas within their contracted ambulance service zones with a daily staffing of 14-19 ALS ambulances and 2 ALS supervisors.



### Gold Coast Ambulance

Covers the cities of Oxnard and Port Hueneme, and unincorporated areas within their contracted ambulance service zone with a daily staffing of 5 ALS ambulances, several BLS ambulances and one ALS supervisor.



### Lifeline Medical Transport

Covers the city of Ojai, as well as the unincorporated areas of Oak View, Meiners Oaks and Casitas Springs with daily staffing of 3 ALS ambulances, several BLS ambulances and one ALS supervisor.



## Law Enforcement / Harbor Patrol

### California State University, Channel Islands

Covers first responder emergency medical services for the campus of the State University, as well as the communities immediately surrounding the campus.



### Channel Islands Harbor Patrol

Covers the Channel Islands Harbor, as well as the ocean area surrounding the harbor.



### Ventura Harbor Patrol

Covers the Ventura Harbor, as well as the communities immediately surrounding the harbor and the ocean area surrounding the harbor.



## Ambulance Contract Administration and Oversight



Through “performance-based” ambulance service agreements, the Ventura County Emergency Medical Services Agency conducts comprehensive monitoring and evaluation of the EMS System to ensure compliance with standards, policies and procedures in order to provide our jurisdiction with the best possible prehospital emergency medical care.

In December 2004, the County entered into seven (7) agreements for continued provision of emergency ambulance service by its existing “grandfathered” providers, one for each of the seven Ventura County EMS service areas. One agreement is with Lifeline Medical Transport for Area 1; one with Gold Coast Ambulance Service for Area 6; and five are with American Medical Response (AMR) for Areas 2, 3, 4, 5 and 7.

The original term for each agreement was six (6) years, from January 1, 2005 through June 30, 2011, with review of contractor performance every two years per the Contractors Review Process outlined in the agreement. Contractor’s meeting or exceeding the minimum agreement requirements and expectations shall be entitled to a two-year extension of the term of this agreement. Reviews conducted in 2007, 2009, 2011, 2013 and 2015 resulted in approval of two-year extensions, with current agreements extending through 2021.

The ambulance agreements outline the services to be performed by the contracted providers including, but not limited to:

- Providing uninterrupted emergency ambulance service on a continuous 24/7 basis
- Collecting data utilizing the VCEMS electronic patient care record system
- Ensuring compliance with response time standards
- Participation in the Continuous Quality Improvement Program
- Providing staffing consistent with VCEMS policies and procedures
- Conducting required staff training and education
- Providing comprehensive fleet maintenance and scheduled ambulance replacement
- Conducting public information and education

All emergency ambulances in Ventura County are dispatched through contract with the Ventura County Fire Communications Center using the TriTech Computer Aided Dispatch system. Ambulances are deployed countywide based on established System Status Management plans and all are equipped with modern mobile dispatch computers and automatic vehicle location systems. All emergency ambulances are equipped with mobile and portable radios programmed to the County’s uniform channel listing, which allows all first responders and ambulance personnel to communicate on common radio frequencies.

## Ambulance Contract Administration and Oversight

### Response Time Performance Standards

Ambulance response time compliance is monitored through the FirstWatch Online Compliance Utility program. Compliance performance by exclusive operating zone is included in this report on subsequent pages. Response time criteria varies based on population density and call priority. Metropolitan/Urban areas require an ambulance response time of 8 minutes, 90% of the time for emergencies and 15 minutes, 90% of the time for non-emergencies. Suburban/Rural areas require an ambulance response time of 20 minutes, 90% of the time. Various low density and geographically remote areas are allowed an ambulance response time of 30 minutes, 90% of the time and highly remote "Wilderness" areas are contracted as ASAP zones and listed as 45 minute response zones in the data for reporting purposes only. Non-compliant responses, without an approved exemption, are assessed a financial penalty based on the contract guidelines. Area 4 is divided into four sub-zones for purposes of penalty assessment, however, contracted 90% requirement is based on total Area 4 compliance. In 2018, there was one instance in Area 5 where the 90% requirement was not met, which was a minor variance that did not represent a material breach according to the contract terms. All other areas were fully compliant with the 90% requirement in 2018.

### 2018 Response Time Compliance

#### All Exclusive Operating Areas (EOA)

	LMT 1	AMR 2	AMR 3	AMR 4	AMR 5	GCA 6	AMR 7	Average
<b>JAN</b>	95.98%	92.47%	91.10%	91.51%	91.90%	93.75%	91.67%	92.63%
<b>FEB</b>	96.00%	91.14%	90.07%	92.14%	91.13%	94.05%	91.87%	92.34%
<b>MAR</b>	99.01%	91.99%	91.80%	92.48%	88.29%	91.51%	92.83%	92.56%
<b>APR</b>	97.28%	93.45%	91.33%	90.43%	91.55%	95.18%	92.90%	93.16%
<b>MAY</b>	94.34%	92.42%	94.83%	92.09%	91.30%	95.07%	91.55%	93.09%
<b>JUN</b>	98.16%	92.86%	91.82%	91.63%	91.09%	95.82%	92.77%	93.45%
<b>JUL</b>	96.55%	95.59%	92.35%	92.00%	94.38%	96.61%	94.38%	94.55%
<b>AUG</b>	98.77%	93.82%	92.46%	92.24%	94.00%	96.92%	94.70%	94.70%
<b>SEP</b>	96.70%	93.63%	90.12%	93.14%	94.35%	96.08%	92.28%	93.76%
<b>OCT</b>	97.47%	94.12%	92.80%	94.31%	95.27%	96.74%	93.14%	94.84%
<b>NOV</b>	96.40%	92.89%	92.22%	93.29%	93.32%	95.42%	91.52%	93.58%
<b>DEC</b>	97.86%	93.09%	91.55%	91.52%	93.37%	93.10%	91.96%	93.21%
<b>Average</b>	<b>97.04%</b>	<b>93.12%</b>	<b>91.87%</b>	<b>92.23%</b>	<b>92.50%</b>	<b>95.02%</b>	<b>92.63%</b>	<b>93.49%</b>

#### EOA Providers

AMR = American Medical Response  
GCA = Gold Coast Ambulance  
LMT = LifeLine Medical Transport

#### EOA Zones

1 = Ojai/Oak View  
2 = Santa Paula/Fillmore/Piru  
3 = Simi Valley  
4 = Thousand Oaks/Moorpark  
5 = Camarillo  
6 = Oxnard/Port Hueneme  
7 = Ventura

#### Area 4 Sub-Zones

MP = Moorpark  
NP = Newbury Park  
OP = Oak Park  
TO = Thousand Oaks

## Lifeline Medical Transport Exclusive Operating Area 1 Compliance

Comprised of the City of Ojai and the unincorporated areas of the Ojai Valley including Upper Ojai, Meiners Oaks, Mira Monte, Oak View, Casitas Springs and the Hwy. 33 and Hwy. 150 corridors.

2018		EOA1				
		08:00	15:00	20:00	30:00	45:00
Total Volume	2,096	1,453	423	101	6	52
At-Scene Time Not Documented	1	1	0	0	0	0
Compliant - Time Extension	74	74	0	0	0	0
Compliant - No Map	0	0	0	0	0	0
Gross Exceptions	140	119	17	4	0	0
Exemptions Requested	100	80	17	3	0	0
Exemptions Approved	81	64	15	2	0	0
Chargeable Late Responses	59	55	2	2	0	0
<b>Compliance</b>	<b>97.04%</b>	<b>96.21%</b>	<b>99.53%</b>	<b>98.02%</b>	<b>100.00%</b>	<b>100.00%</b>

## American Medical Response Exclusive Operating Area 2 Compliance

Comprised of the Cities of Santa Paula and Fillmore and the unincorporated areas of the Santa Clara Valley including Piru, South Mountain, Bardsdale, and the Hwy. 126 corridor.

2018		EOA2				
		08:00	15:00	20:00	30:00	45:00
Total Volume	3,261	2,282	537	356	23	63
At-Scene Time Not Documented	8	6	1	1	0	0
Compliant - Time Extension	67	67	0	0	0	0
Gross Exceptions	435	369	43	22	1	0
Exemptions Requested	231	201	21	8	1	0
Exemptions Approved	211	181	21	8	1	0
Chargeable Late Responses	224	188	22	14	0	0
<b>Compliance</b>	<b>93.12%</b>	<b>91.76%</b>	<b>95.90%</b>	<b>96.07%</b>	<b>100.00%</b>	<b>100.00%</b>

## American Medical Response Exclusive Operating Area 3 Compliance

Comprised of the City of Simi Valley and the surrounding unincorporated areas.

2018		EOA3				
		08:00	15:00	20:00	30:00	45:00
Total Volume	7,535	5,998	1,384	102	0	51
At-Scene Time Not Documented	23	20	3	0	0	0
Compliant - Time Extension	285	285	0	0	0	0
Gross Exceptions	1,022	962	57	3	0	0
Exemptions Requested	436	401	33	2	0	0
Exemptions Approved	414	381	31	2	0	0
Chargeable Late Responses	608	581	26	1	0	0
<b>Compliance</b>	<b>91.87%</b>	<b>90.31%</b>	<b>98.12%</b>	<b>99.02%</b>	<b>100.00%</b>	<b>100.00%</b>

## American Medical Response Exclusive Operating Area 4 Compliance

Comprised of the Cities of Thousand Oaks and Moorpark and the unincorporated areas of the Conejo Valley including Newbury Park, Oak Park, Westlake, North Ranch and Lake Sherwood.

2018		EOA4				
		08:00	15:00	20:00	30:00	45:00
Total Volume	11,519	9045	2259	195	0	20
At-Scene Time Not Documented	25	15	9	1	0	0
Compliant - Time Extension	626	626	0	0	0	0
Gross Exceptions	1,217	1144	67	6	0	0
Exemptions Requested	342	317	22	3	0	0
Exemptions Approved	322	297	22	3	0	0
Chargeable Late Responses	895	847	45	3	0	0
<b>Compliance</b>	<b>92.23%</b>	<b>90.64%</b>	<b>98.01%</b>	<b>98.47%</b>	<b>100.00%</b>	<b>100.00%</b>



## American Medical Response Exclusive Operating Area 5 Compliance

Comprised of the City of Camarillo and the surrounding unincorporated areas including Somis, Santa Rosa Valley and the California State University Channel Islands.

2018		EOA5				
		08:00	15:00	20:00	30:00	45:00
Total Volume	6,600	5,096	1,228	264	0	12
At-Scene Time Not Documented	19	16	2	1	0	0
Compliant - Time Extension	303	303	0	0	0	0
Gross Exceptions	771	705	55	11	0	0
Exemptions Requested	287	250	27	10	0	0
Exemptions Approved	275	239	27	9	0	0
Chargeable Late Responses	496	466	28	2	0	0
<b>Compliance</b>	<b>92.50%</b>	<b>90.79%</b>	<b>97.72%</b>	<b>99.24%</b>	<b>100.00%</b>	<b>100.00%</b>

## Gold Coast Ambulance Exclusive Operating Area 6 Compliance

Comprised of the Cities of Oxnard and Port Hueneme and the surrounding unincorporated areas including El Rio, Nyeland Acres, Silver Strand, Naval Base Ventura County, Point Mugu and Malibu.

2018		EOA6				
		08:00	15:00	20:00	30:00	45:00
Total Volume	16,243	13,132	2,704	313	66	28
At-Scene Time Not Documented	32	29	1	1	1	0
Compliant - Time Extension	108	108	0	0	0	0
Gross Exceptions	1,482	1,362	113	4	3	0
Exemptions Requested	697	626	69	2	0	0
Exemptions Approved	676	605	69	2	0	0
Chargeable Late Responses	806	757	44	2	3	0
<b>Compliance</b>	<b>95.02%</b>	<b>94.24%</b>	<b>98.37%</b>	<b>99.36%</b>	<b>95.45%</b>	<b>100.00%</b>

## American Medical Response Exclusive Operating Area 7 Compliance

Comprised of the City of Ventura and the surrounding unincorporated areas  
Including Saticoy, Montalvo, Rincon and La Conchita.

2018		EOA7				
		08:00	15:00	20:00	30:00	45:00
Total Volume	10,698	8,736	1,780	144	35	7
At-Scene Time Not Documented	23	13	10	0	0	0
Compliant - Time Extension	1,475	1,475	0	0	0	0
Gross Exceptions	1,517	1,349	159	8	1	0
Exemptions Requested	745	660	80	5	0	0
Exemptions Approved	731	647	79	5	0	0
Chargeable Late Responses	786	702	80	3	1	0
<b>Compliance</b>	<b>92.63%</b>	<b>91.96%</b>	<b>95.51%</b>	<b>97.92%</b>	<b>96.77%</b>	<b>100.00%</b>



# Ventura County Emergency Medical Services Agency Ambulance Service Areas



**Legend**  
EOA Ambulance Zones

- 1
- 2
- 3
- 4
- 5
- 6
- 7

0 3.5 7  
Miles  
1 inch equals 7 miles

**County of Ventura  
EOA Ambulance Zones**  
Prepared by County of Ventura - IT Services Department - GIS Division  
State Plane Coordinate System California Zone V - NAD 27  
This map was compiled from records and computations  
Published on : June 25, 2007

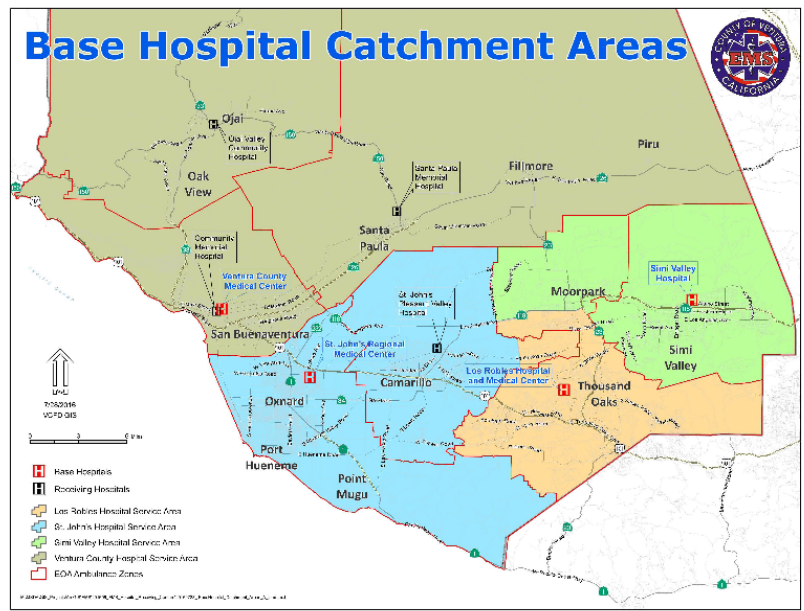
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**WARNING:** The information contained herein was created by the Ventura County Geographic Information System (GIS), which is designed and operated solely for the convenience of the County and related contract entities. The County does not warrant the accuracy of this information, and no decision involving a risk of economic loss or physical injury should be made in reliance thereon.

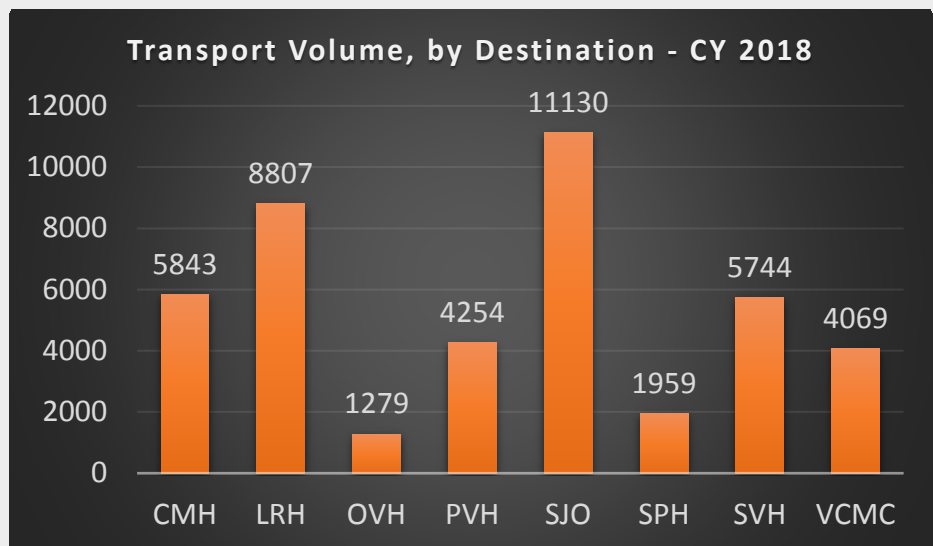


## Ventura County Base and Receiving Hospitals

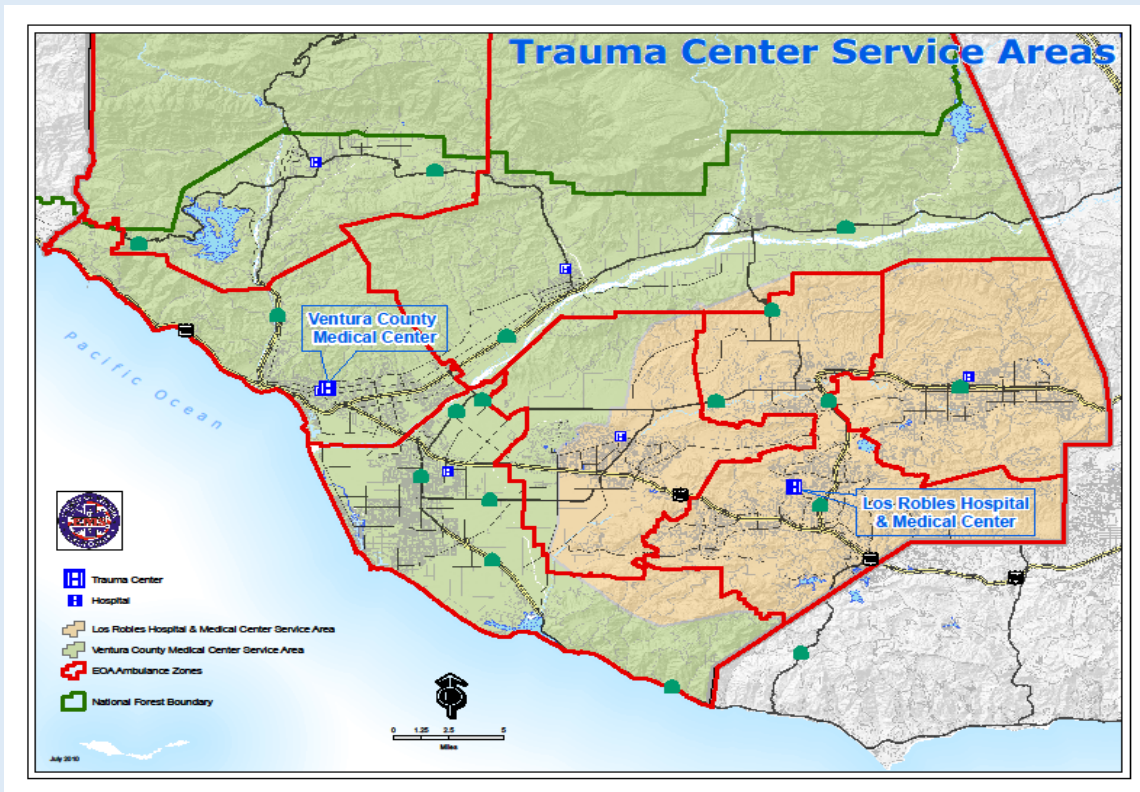
There are eight acute care hospitals in Ventura County, all of whom have emergency departments and receive ambulances with patients involved in prehospital incidents. Four of these hospitals are designated as Base Hospitals, providing oversight and direction to the county's prehospital providers. Hospitals who provide specialty care services are recognized by EMS policy, and patients who triage into specialty criteria are preferentially directed to the closest, most appropriate hospital for care. A patient who arrives at a hospital by private vehicle may be rapidly assessed, and if any specialty criteria is met, an ambulance may be summoned immediately to transfer the patient to a specialty hospital. Ventura County boasts one of the best systems in the nation for rapid assessment and re-triage to specialty care.



HOSPITAL CAPABILITIES	Receiving Hospital	Base Hospital	Level II Trauma Center	Acute Stroke Center	STEMI Receiving Center	Labor & Delivery
CMH	X			X	X	X
LRHMC	X	X	X	X	X	X
OVCH	Standby					
PVH	X			X		
SPH	X					X
SVH	X	X		X	X	X
SJRMCM	X	X		X	X	X
VCMC	X	X	X	X		X



## Ventura County Trauma System



Ventura County's trauma system was initiated in July 2010, and since then, has provided specialty trauma care to thousands of patients with traumatic injuries. The County's system of prehospital triage, rapid transport, and emergency department care has resulted in lives saved and reduction in disabilities associated with trauma.

Through prehospital triage and rapid emergency department assessment, patients with life-or-limb threatening injuries are rapidly identified and triaged to the closest, most appropriate trauma center. Patients who self-refer to a non-trauma center hospital may be rapidly triaged by the emergency department physician and immediately transferred to a trauma center by 911 ambulance.

There are two Level II Trauma Centers in the County, both of whom are County-designated and accredited by the American College of Surgeons (ACS): Los Robles Hospital & Medical Center and Ventura County Medical Center. Trauma Center catchment areas are assigned according to drive time from an incident to the trauma center. With the population centers and division of trauma destinations, most trauma patients from a 911 incident arrive at a trauma center within fifteen minutes after an ambulance departs the scene.



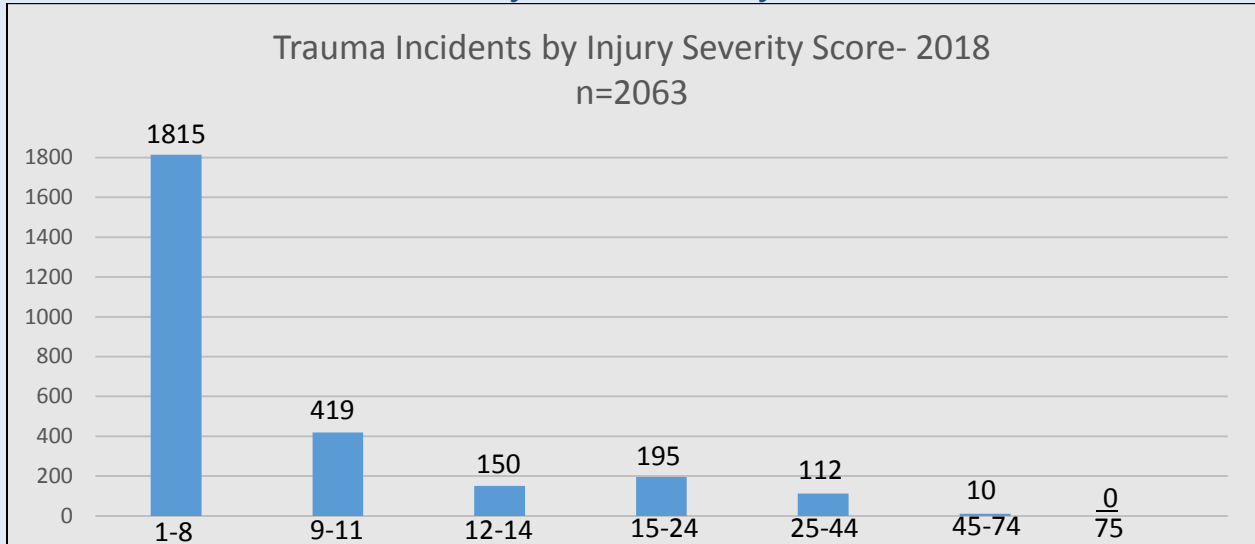
## 2018 Ventura County Trauma Destinations

Base Hospital Destination	Step 1 TOTAL 282	Step 2 TOTAL 209	Step 3 TOTAL 438
<b>VCMC Trauma Base Hospital</b>	<b>190</b>	<b>167</b>	<b>288</b>
VCMC	179	162	236
CMH	4	0	5
SPH	0	0	3
SJRCM	4	1	18
SJPV	1	1	3
OVH	1	1	7
HMNMH	1	2	15
Kern County Medical Center	0	0	0
Santa Barbara Cottage Hospital	0	0	1
<b>LRHMC Trauma Base Hospital</b>	<b>92</b>	<b>42</b>	<b>150</b>
LRHMC	90	42	147
SVH	1	0	2
Kaiser WH	0	0	0
Holy Cross	1	0	1

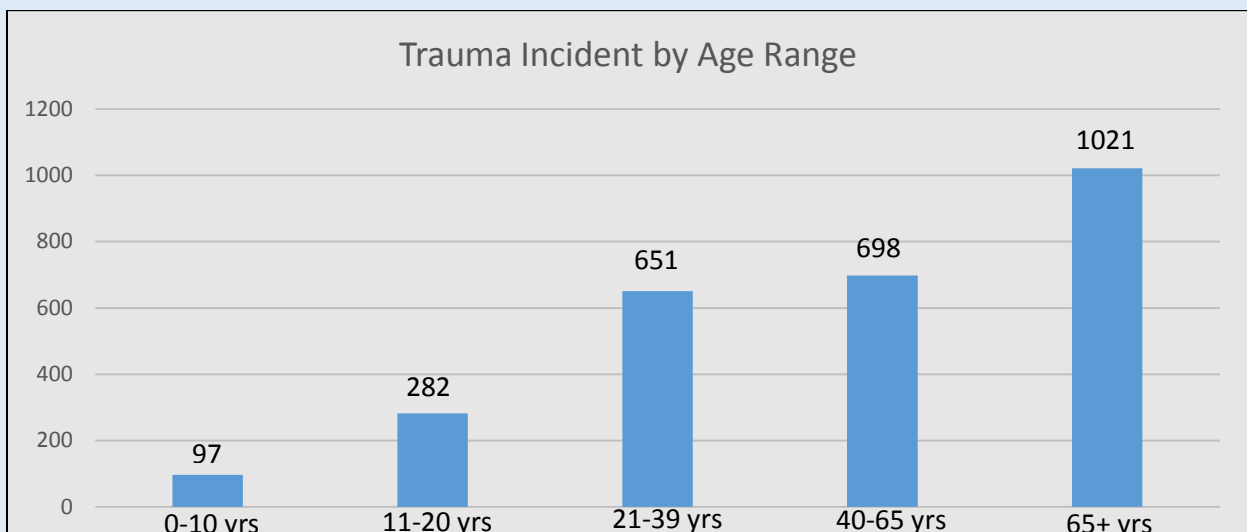
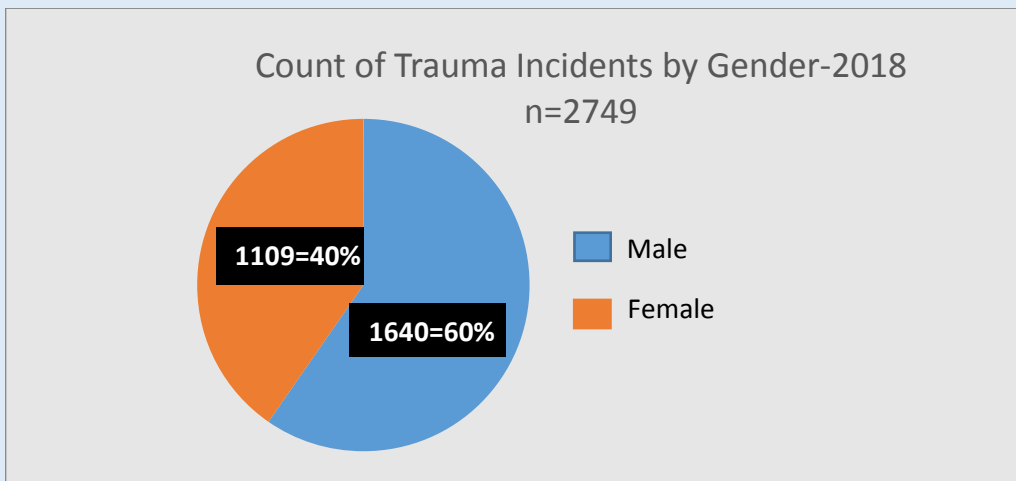
<b>2018 Step 1-3 by Hospital</b>	<b>N</b>
Ventura County Medical Center	577
Los Robles Hospital and Medical Center	279
St. John's Regional Medical Center	23
Henry Mayo Newhall Memorial Hospital	18
Community Memorial Hospital	9
Ojai Valley Hospital	9
St. John's Pleasant Valley Hospital	5
Santa Paula Hospital	3
Providence Holy Cross	2
Simi Valley Hospital	3
Kern County Medical Center	0
Cottage Hospital	1
<b>TOTAL</b>	<b>929</b>

<b>2018 Step 4 by Hospital</b>	<b>N</b>
St. John's Regional Medical Center	669
Los Robles Hospital and Medical Center	523
Community Memorial Hospital	369
St. John's Pleasant Valley Hospital	273
Ventura County Medical Center	277
Simi Valley Hospital	178
Ojai Valley Hospital	107
Santa Paula Hospital	48
Henry Mayo Newhall Memorial Hospital	6
Santa Barbara Cottage Hospital	3
Kaiser Woodland Hills Hospital	1
<b>TOTAL</b>	<b>2456</b>

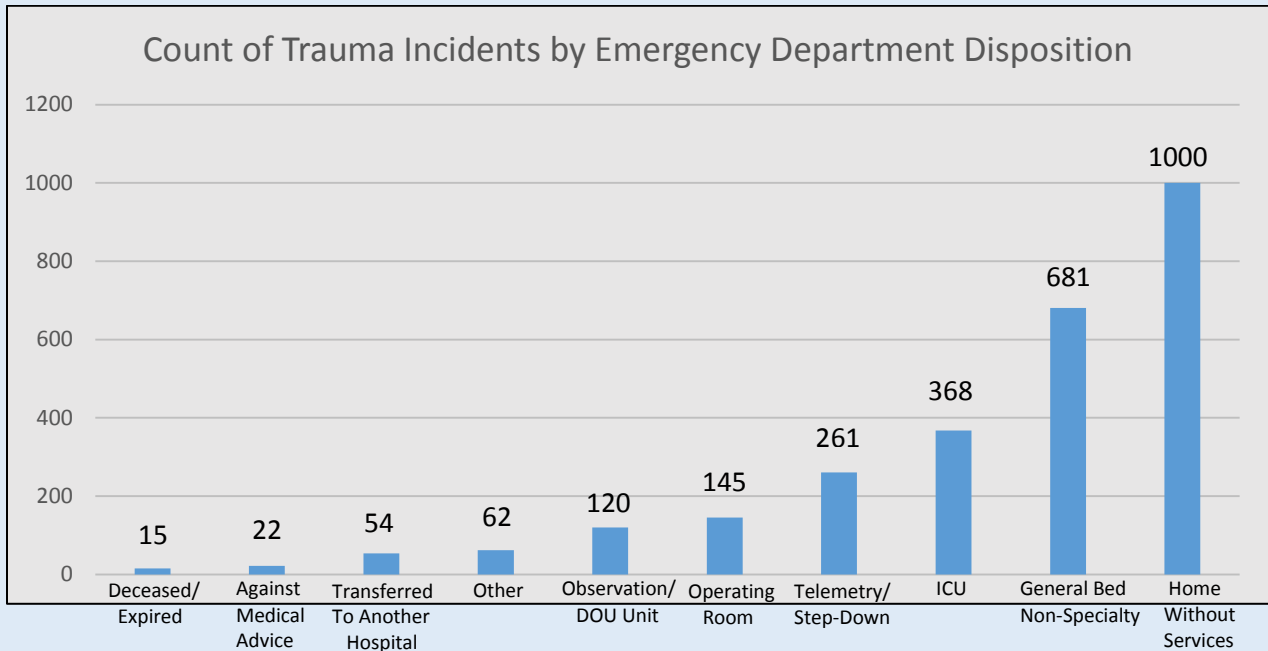
## Ventura County Trauma System Statistics



The **Injury Severity Score (ISS)** is an established medical score to assess trauma severity. It correlates with mortality, morbidity and hospitalization time after trauma, and is used to define the term “major trauma.” A major trauma is defined as the ISS being greater than 15.



## Ventura County Trauma System Statistics



Ventura County established, and provides leadership for, two active committees that provide system oversight, policy review, and peer education.

**The Tri-County Trauma Audit Committee (TAC)** is a confidential, closed committee consisting of trauma surgeons, program managers and prehospital coordinators from three Level II, and two Level III trauma centers, located in Ventura, Santa Barbara, and San Luis Obispo Counties. The committee provides a collaborative forum in which trauma cases that meet specific audit filter criteria may be discussed and reviewed. Representatives from all five trauma centers present cases for confidential peer review and bring an important perspective to Ventura County’s trauma system and regional trauma care.

**The Trauma Operational Review Committee (TORC)** is a confidential, closed committee consisting of representatives from the local EMS agency, first responder and transport provider agencies, non-trauma hospitals and trauma centers in Ventura County. The committee provides a collaborative forum in which system issues surrounding trauma care may be brought for discussion and improvement, such as prehospital destination determinations and interfacility transfers for trauma care.

## STEMI System

Most deadly type of heart attack

Patients suffering from an ST Elevation Myocardial Infarction (STEMI) have the best chance of survival when they receive rapid assessment and transport to a receiving hospital which have specialized equipment and personnel to treat these deadly heart attacks. The Ventura County STEMI System began in 2007 and currently has four STEMI Receiving Centers (SRC). Paramedics use field transmission of 12-Lead ECGs and “STEMI Alerts” to provide early notification of cardiac intervention teams. The goal for the patient who is having a STEMI is to receive a procedure called Percutaneous Cardiac Intervention, which quickly restores blood flow to the heart. When a patient is identified as having a STEMI in a non-STEMI hospital, we have systems in place for a rapid transport to a STEMI receiving hospital within 30 minutes. STEMI system performance is based on standards developed by the American College of Cardiology, the American Heart Association and the California Department of Public Health. In 2018, Ventura County STEMI System received the Gold Plus Level recognition from the American Heart Association’s Mission Lifeline program. This represents the fourth year in a row where Ventura County has attained Gold level or higher. The Mission Lifeline Program recognizes Systems of Care that meet the following performance measures: First Medical Contact to Intervention in less than 90 minutes 88% of the time, and 12-Lead ECGs obtained on patients having chest pain 77% of the time. Below are other performance measures we track and assess for improvement.



### Performance Data for 2018

Criteria	County Performance Data
Total number of EMS STEMI Patients who received Percutaneous Cardiac Intervention	69
911 call to Percutaneous Cardiac Intervention	87 min (Goal < 90 min)
Positive EMS STEMI 12-Lead to Percutaneous Cardiac Intervention	69 min (Goal < 90 min)
Arrival at STEMI hospital to Percutaneous Cardiac Intervention	52 min (Goal < 90 min)
First Medical Contact to Percutaneous Cardiac Intervention	80 min (Goal < 90 min)



## Stroke System

Fifth-leading cause of death nationally,  
and the leading cause of permanent disability

In 2018, Ventura County had 1338 patients who were diagnosed with strokes, which were treated at one of five facilities designated as Primary Stroke Centers. This certification recognizes that a hospital has achieved a high level of compliance with national standards in stroke care, and is able to meet the unique and specialized needs of stroke patients. One of these five facilities, Los Robles Hospital and Medical Center, is certified as a Comprehensive Stroke Center (CSC), which provides for specialty procedures such as removal of a blood clot, known as an Emergent Large Vessel Occlusion (ELVO). All of these facilities participate in the American Heart Association “Get with the Guidelines” Stroke Registry. We are able to evaluate specific measurements of quality of care and report Core Measures to the State. Paramedics are trained to evaluate patients using the Cincinnati Prehospital Stroke Scale (CPSS) and provide early notification by calling in a “stroke alert” to the hospital so resources can be mobilized to provide immediate treatment of a possible stroke patient upon arrival. In, 2016 we developed a pilot study in the east end of our county to screen for ELVO type stroke patients. Once identified, using a prehospital screening tool called the Ventura ELVO Score (VES), the patient was transported to our CSC. Based on this study, in October of 2017, we introduced county wide a **prehospital diversion** policy of suspected ELVO type stroke patients. This addition to our stroke triage system is designed to preferentially divert patients to a facility capable of performing mechanical thrombectomy. Paramedics perform a two-part screen: First, they screen for stroke using the (CPSS). Second, patients who are CPSS positive are screened for an ELVO using the VES. Patients who screen positive for both CPSS and VES are transported directly as an “ELVO Alert” to our CSC, or our Thrombectomy Capable Acute Stroke Center (TCASC), which is St. John’s Regional Medical Center. We had 260 “ELVO Alerts” in 2018 and 34% were actual ELVOs, and 12% were hemorrhagic strokes. We are monitoring this system enhancement to determine the improved outcomes for patients with an acute stroke due to an emergent large vessel occlusion. The primary objective of a stroke system is to coordinate care between the emergency medical system and hospitals so patients possibly suffering from a stroke will receive care within 3 to 4 ½ hours of their first symptoms. In 2019, we will be changing our criteria to decrease our false positive ELVO Alerts.”

Ventura County EMS Agency developed a unique identifier which allows us to track a patient’s care from the 911 call through their hospital stay. One of the intervals we track is the time dispatch is notified to the time a neurologist receives the brain image report. In 2018 our median time for this interval is 56 minutes. Our on-scene time is 13 minutes. We also monitor the time of arrival at the hospital to the time the clot-busting medication tPA (Tissue Plasminogen Activator) is administered. The benchmark goal is within 60 minutes, and in 2018 our median time is 38 minutes.

### Performance Data 2018

Criteria	County Performance Data
Total stroke patients	1338
Total number of ischemic strokes	793 (62%)
Total ischemic stroke patients who arrived by ambulance	433 (52%)
Total ischemic stroke patients who arrived by interfacility transport	62 (7%)
Percentage of ischemic stroke patients treated with IV tPA who arrived within 4.5 hours of time last known well.	144 (18%) (national average 7%)
Percentage of patients treated with IV tPA within 60 min.	133 (90%) (national average 50%)
Percentage of patients treated with IV tPA within 45 min. (new measure)	101 (70%) (national average 50%)



## Quality Improvement Program



The Ventura County EMS Quality Improvement Program uses patient care data from our stakeholders to evaluate system performance. Hospitals submit data through the Outcome Sciences Registry for our Stroke Program, Cardiac Arrest Registry to Enhance Survival (CARES) for our Sudden Cardiac Arrest Program, ImageTrend Trauma Registry for our Trauma System, and an internal secure system for our STEMI Program data. We started participation in the American Heart Association Coronary

Artery Disease (CAD) registry the last quarter of 2018. We anticipate replacing our current internal STEMI registry with CAD. Countywide EMS providers use the ImageTrend electronic patient care record system (e-PCR) and dispatch data is collected through the County Fire Department TriTech Computer Aided Dispatch system and Medical Priority Dispatch System (MPDS). Data is collected from our pre-hospital agencies and hospitals in order to follow a patient from a 911 call to activities done in the hospital.

We developed and distributed to our stakeholders a complete annual EMS Systems Performance Report along with posting it on our EMS website for the public to review.

The American Heart Association awarded our EMS Agency, along with 10 other first responder agencies, the 2018 Mission Lifeline Gold Plus Level Award for outstanding performance in STEMI data measures. By reviewing our Sudden Cardiac Arrest data, we are able to maintain our survival rate percentages above the CARES national benchmark.

We participate in Ventura County's Fall Prevention program by gathering data on patients that have fallen or have a potential to fall and are *not* transported by EMS to the hospital. We answer a set of questions that are sent to the fall prevention coordinator along with leaving educational material about fall prevention at the home. We meet quarterly to discuss the data and areas of improvement. The Fall Prevention Committee had two community outreach symposiums in 2018, including one presented in Spanish. We have seen a decrease in secondary falls during 2018.

Ventura County EMS continues to require all paramedics to attend 4 airway lab stations over a two year period along with one paramedic skills day annually. The paramedic skills lab sessions include education stations covering certain low-frequency, high-risk procedures. In addition, various critical procedures, such as advanced airway, transcutaneous pacing, and intraosseous infusion are monitored regularly through the FirstWatch data surveillance software.

Ventura County's two Trauma Centers also actively participate in data collection, which helps to identify severity index scores on EMS patients. We can analyze this data and use it for injury prevention education in the community. Data measures are patient focused and implementation for improvement is timely and sustainable through the collaboration of our key stakeholders.



## Cardiac Arrest Management (CAM)

**Cardiac Arrest Management (CAM)** represents eleven years of hard work from all of our EMS Stakeholders. We have tracked our cardiac arrest statistics since 2007 and joined the national Cardiac Arrest Registry to Enhance Survival (CARES) Program in 2008, making a commitment to improve our survival rates. By using the “pit crew” technique combined with the latest resuscitation science, a prescribed set of actions were developed. Each first responder is trained with a job to do and understands their position’s responsibility when arriving on scene of a patient who is not breathing and does not have a pulse. We continue to improve our bystander CPR rates by expanding our community education of “hands only” CPR and the expansion of the “PulsePoint” application to our cardiac arrest response.

### Performance Data for 2018

<b>ALL CARDIAC</b>	
<b>Presumed Cardiac Etiology</b>	<b>361</b>
<b>Bystander CPR Provided</b>	<b>51.5%</b>
<b>Survival to Hospital Discharge</b>	<b>15.2%</b>
<b>CARES National Benchmark for survival to Hospital Discharge</b>	<b>13.6%</b>
<b>UTSTEIN</b>	
<b>Bystander Witnessed, Shockable Rhythm</b>	<b>66</b>
<b>Bystander CPR Provided</b>	<b>68.2%</b>
<b>Survival to Hospital Discharge</b>	<b>50.0%</b>
<b>CARES National Benchmark for survival to Hospital Discharge</b>	<b>32.7%</b>

## Ventura County Medical Reserve Corps



Our local Medical Reserve Corps unit boasts 80+ medical volunteers under the direction of EMS staff and the Ventura County Medical Reserve Corps Council. The Medical Reserve Corps (MRC) is a network in the U.S. of community-based units initiated and established by local organizations to meet the public health needs of their communities. It is sponsored by the Office of the Assistant Secretary for Preparedness and

Response (ASPR). The MRC consists of medical and non-medical volunteers who contribute to local health initiatives, such as activities meeting the Surgeon General's priorities for public health, and supplement existing response capabilities in time of emergency. The MRC provides the structure necessary to pre-identify, credential, train, and activate medical and public health volunteers. MRC conducts monthly meetings and trainings they have also assisted at various event medical-aid stations. If you are interested in joining the Ventura County MRC, please contact the EMS office at 805-981-5301.

The Ventura County Medical Reserve Corps occasionally conducts Point of Dispensing (POD) activities throughout the year. The Ventura County Medical Reserve Corps distributed flu vaccine to the residents and duty personnel at Naval Base Ventura County (NBVC), as well as for visitors of the Center Point Mall in South Oxnard.



In 2018, the Ventura County Medical Reserve Corps was also requested to assist the Public Health Department's Tuberculosis Program in responding to a tuberculosis exposure. MRC personnel provided staffing to support blood specimen collection centers at local schools, where they successfully evaluated students and staff who were identified as possibly being exposed.



VENTURA COUNTY EMERGENCY MEDICAL SERVICES AGENCY  
2018 ANNUAL SYSTEM REPORT

# Public Health Emergency Preparedness Program (PHEP) Hospital Preparedness Program (HPP)



In response to the attacks of September 11, 2001 and the subsequent anthrax attacks later that year, public health and medical leaders became concerned about the low level of preparedness for bioterrorist attacks on the United States.

The Hospital Preparedness Program (HPP) and Public Health Emergency Preparedness Program (PHEP) were created with funding provided to address gaps in medical and health preparedness. Ventura County has participated in the preparedness program since its inception in 2002.

The year 2018 Emergency Preparedness Office activity included the following:

- Conducted the Master the Disaster 2018 training symposium,
- Activation of our Department Operations Center related to tuberculosis outbreak,
- Site visits to coalition partners acute care facilities to support TJC surveys,
- Hosted Public Health Nursing training,
- Hosted three interns from CLU and Thousand Oaks C.I.T.Y. program,
- Providing presentations related to preparedness initiatives,
- Supporting countywide long-term recovery planning,
- Participated in the Annual Health Care Coalition Conference in Houston Texas,
- Continued to expand and develop new partners with the VC Health Care Coalition,
- Procured mass fatality storage for Medical Examiner,
- Hosted Foothill High School Public Health site visit,
- Provided Real Colors training to PH staff,
- Hosted local session of the FBI Crime Epi training program,
- Rancho Campana High School EMS Preparedness - Video projects

[https://www.youtube.com/channel/UCKtz6t\\_OIYF2sGJuH6oxFlw](https://www.youtube.com/channel/UCKtz6t_OIYF2sGJuH6oxFlw)

## Master the Disaster 2018



On February 22, 2018, Ventura County Emergency Medical Services Agency held the 10th annual “Master the Disaster” preparedness seminar. This event was attended by over 600 first responders, STEM students and medical staff.

Topics presented this year included Current trends within the response sector require careful analysis to improve outcomes. This annual training symposium aims to do just that. The number of incidents that have occurred each year continue to allow for detailed post-incident analysis, which results in improved outcomes on subsequent events.





2018 proved to be another eventful year for medical/health preparedness and response. The Ventura County Health Care Coalition (VCHCC) began the year with a focus on analyses and plans. An After-Action Meeting was held to provide the VCHCC partners with the opportunity to discuss their experiences, lessons learned, and best practices from the devastating Thomas Fire. Attendees contributed to the strengths, areas for improvement, and corrective actions included in the VCHCC Thomas Fire After-Action Report/Improvement Plan (AAR/IP). The beginning of the year was also marked with the compilation of a medical/health Hazard Vulnerability Analysis (HVA) – commonly referred to as a risk assessment – to

provide a systematic approach to recognizing hazards that may affect the demand for services or the ability to provide those services. The VCHCC utilized this process to assess and document potential hazards likely to impact the geographical region, community, facilities and patient population. The VCHCC partners also provided direct input in the VCHCC Preparedness Plan; promoting a whole-community approach to the we prepare for disasters and significant events.

In an effort to continuously increase the medical/health community's level of preparedness in 2018, the VCHCC offered trainings, built relationships, and began implementation of corrective actions derived from real events and exercise Improvement Plans.

The VCHCC partners were afforded the opportunity to attend a free, Healthcare Sector Emergency Preparedness course that was facilitated by the Federal Emergency Management Agency's (FEMA) Center for Domestic Preparedness. The VCHCC partners were provided with training on planning and conducting their facility- or site-based exercises that comply with emergency preparedness regulations. Additionally, the VCHCC partners were informed of the Medical Countermeasures (MCM) and Strategic National Stockpile (SNS) plans; learning about Points of Dispensing (POD) procedures. We were fortunate to have the opportunity to test these procedures in our first, VCHCC Equipment POD; wherein disaster cache supplies were distributed to the VCHCC partners.

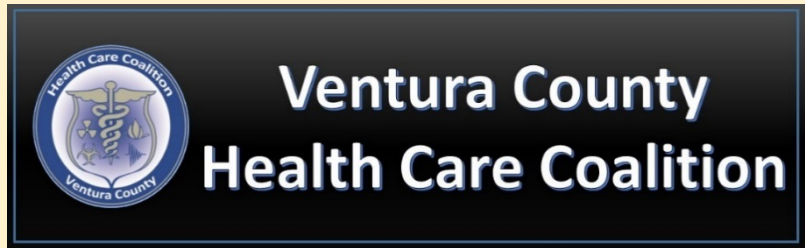
The VCHCC was pleased to support the California Department of Public Health (CDPH) with the development of a Health Care Coalition (HCC) group to enhance the collaboration and information sharing amongst HCC Coordinators across the State of California. To address area-specific concerns and needs, the VCHCC participated in a tri-counties collaboration with personnel from the Emergency Preparedness Offices and HCCs of Santa Barbara and San Luis Obispo Counties.

Locally, the VCHCC designed the 2018 community-based, full-scale exercise to make connections and build relationships needed for an Emerging Infectious Disease (EID) response. The Ventura County Public Health (VCPH) Communicable Disease (CD) Program was involved to educate partners on their requirement to submit a Confidential Morbidity Report (CMR) per Title 17, the process by which to report, and how to reach the CD Program. The VCPH Laboratory was involved to educate partners on the Laboratory's role in an EID response and procedures for processing specimens during an outbreak. The participating sites' Infection Control/Prevention personnel were involved to practice their response reporting for an EID. The participating sites' Public



Information Officers (PIOs) received education regarding the role of PIOs in disaster response, the function of the Joint Information Center, and how to connect their PIO with the Ventura County Emergency Medical Services Agency PIO.

In 2018, the VCHCC was grateful to have been asked to present our experiences and best practices with our colleagues in the emergency management community throughout the state and nation at the following events: California Department of Public Health Emergency Preparedness Office (CDPH EPO) Emergency Preparedness Training Workshop, HealthInsight End-Stage Renal Disease (ESRD) Network 18 Quality Conference, Orange County Health Care Coalition community-based Tabletop Exercise on wildfire, and the Regional Disaster Medical Health Specialist/Medical Health Operational Area Coordinator Region 1 Meeting. At a statewide conference, the VCHCC was presented with the 2018 Innovations Solutions Award from CDPH EPO and the California Emergency Medical Services Authority for the second year in a row. Additionally, the VCHCC was recognized for exceptional communication amongst the medical/health community during the 2017 Thomas Fire.



presented with the 2018 Innovations Solutions Award from

CDPH EPO and the California Emergency Medical Services Authority for the second year in a row. Additionally, the VCHCC was recognized for exceptional communication amongst the medical/health community during the 2017 Thomas Fire.

This year was nothing short of emergencies. In the early months of 2018, we kept a close watch on weather forecast and alerts; monitoring for any potential threats posed by heavy rain in the Thomas Fire burn areas. In the late hours of November 7<sup>th</sup>, a mass shooting occurred at the Borderline Bar and Grill in Thousand Oaks. On November 8<sup>th</sup> – while the community was trying to process this shooting and first responders continued to work tirelessly with family reunification/assistance efforts – the Hill Fire ignited south of Santa Rosa Valley and quickly scorched 4,531 acres. Approximately twenty minutes later, the Woolsey Fire ignited near the Santa Susana Field Laboratory and within a matter of days burned 96,949 acres.

The Ventura County community’s resilience has been continuously tested. Even amidst fatigue, however, the medical and health community’s response to disasters continues to be unprecedented. 2018 leaves us with feelings of great appreciation for the strong working relationships that we have with the VCHCC partners and their commitment to those whom they serve.



## Major Incident Response and Coordination

**Montecito Debris Flow** - 2018 proved again to be an unprecedented year in terms of response and coordination for the Ventura County EMS Agency and its system stakeholders. Beginning in January with a mutual aid response into Santa Barbara County to assist with the devastating debris flow that occurred in Montecito. Early on the morning of January 9<sup>th</sup>, the Ventura County EMS Agency Duty Officer received a call from Santa Barbara County's EMS Agency Director requesting support in the form of an ambulance strike team, a Disaster Medical Support Unit, and EMS Agency overhead. Our initial assignment was to respond to the south end of the incident and assist with the care and transport to victims of the debris flow that were cut off from rescue units to the north. Upon arrival into the City of Carpinteria, the Ventura County units quickly realized that we would not be able to continue north due to mud and debris, and the decision was made to establish a casualty collection point / shelter at a community center. In addition, units from American Medical Response in Ventura County were able to provide backup 911 response to the single AMR unit stationed in Carpinteria.



The shelter remained open for approximately twelve hours and provided assistance to a number of individuals during that time. In addition, one AMR unit remained in Carpinteria for an additional two days, providing backup 911 coverage until units from the north were once again able to make access into the area.



**Borderline** - The Ventura County EMS system was again challenged on November 7<sup>th</sup>, 2018, when an individual carried out a mass shooting at the Borderline Bar and Grill in Thousand Oaks, CA. Initial units from the Ventura County Fire Department and American Medical Response were dispatched reports of a shooting with numerous victims at 11:20pm. Within minutes, it became clear that there were numerous casualties. The Ventura County EMS Agency Duty Officer was notified by dispatch shortly after the initial response, and within a few minutes was enroute to

begin coordination of medical/health resources on the call. Los Robles Regional Medical Center, the closest hospital and trauma center, was notified by the first arriving ambulance and a multi-casualty incident was declared. Hospital staff activated Reddinet, which is an online communications tool used by all hospitals in the region for the purposes of patient tracking.

Ventura County EMS personnel were at the scene at the incident command post to coordinate patient transportation, patient tracking and communications with the hospital (MEDCOMM). In addition, EMS Agency Duty Officer activated additional VCEMS personnel to staff the medical/health branch at the County EOC and later respond to the Family Assistance Center to serve as a med/health liaison and further facilitate tracking of resources and victims. Additionally, a CISD/Peer Support team was activated and requested to the scene to assist with the debriefing of numerous responders at the scene.



A total of 19 ambulances were called to the scene as part of the initial and ongoing response, in addition to a Ventura County Sheriff's helicopter which was staged at their hangar in Camarillo. Two ambulance strike teams were requested from LA County as part of this response. Numerous fire resources (ALS and BLS) were responded, including two strike teams from LA City and LA County. In all, 12 victims were killed, including Ventura County Sheriff's Sgt. Ron Helus. Additionally, two victims were transported by ambulance to Los Robles Regional Medical Center, and another 29 victims with minor injuries self-transported to numerous hospitals throughout the region.



**Hill / Woolsey Fires** - Less than 24 hours after units were responded to the worst mass shooting in Ventura County's history, the community was faced with yet another disaster. On the afternoon of November 8<sup>th</sup>, Ventura County Fire units were dispatched to two separate fires that started within about twenty minutes of one another at opposite ends of the County: the Hill fire near Camarillo, and the Woolsey fire that started in the hills to the south and east of Simi Valley.

While the Hill fire spread rapidly and threatened numerous homes in its path, it burned into an area of decreased vegetation and began to stabilize by later in the evening. As the threat of the Hill fire began to diminish, the impacts of the Woolsey fire were just beginning. Late in the evening of November 8<sup>th</sup>, the Woolsey fire front began to push into the community of Oak Park. The fire burned quickly into Westlake Village, Thousand Oaks, and Simi Valley.



The Ventura County EMS Agency Duty Officer was contacted by the Woolsey incident commander and was requested to respond to the command post, as there were healthcare facilities identified in the Woolsey evacuation zone in Westlake and Thousand Oaks. Additional EMS personnel were also activated to respond to staff the med/health branch at the county EOC, and to provide logistical support for the broader med/health system. VCEMS worked closely with the County's Office of Emergency Services, in addition to Ventura County Fire Department to identify facilities at risk, and to determine the best course of action in terms of evacuation. A local strike team of ambulances was ordered, in addition to two ambulance strike teams from LA County. Two municipal buses were also requested from the City of Thousand Oaks, to aid in transportation of evacuees from assisted living facilities, should the need have arisen. One hospital made the decision to consolidate its patients into one facility, and the remaining facilities were sheltered in place. Ventura County EMS provided approximately 113,000 N95 particulate masks to the community by creating small points of distribution at evacuation shelters and various public buildings until air quality improved.



The Woolsey fire would continue to burn into LA County, eventually reaching the Pacific Ocean. In the end, the fire burned 96,949 acres and destroyed 1,643 structures. Using lessons learned from the Thomas Fire less than one year earlier, VCEMS and its med/health system participants were better positioned to meet the logistical and operational needs brought on by the Hill and Woolsey fires. In the months since the fires, VCEMS has worked with county agencies and healthcare partners to improve our abilities related to identification and transportation of the medically fragile, in addition to expanding our medical sheltering capabilities.





R. NAVARRO 2018



## Ventura County Emergency Medical Services Agency

### Prehospital Services Committee

The purpose of this committee shall be to provide input to the VC Emergency Medical Services (EMS) Medical Director and VC EMS administration on matters pertaining to emergency medical services, including, but not limited to, dispatch, first responders, ambulance services, communications, medical equipment, training, personnel, facilities, and disaster medical response. Membership is composed of two representatives, as appointed by the organization administrator from each of the following organizations:

Type of Organization	Member	Member
Base Hospitals	PCC	PLP
Receiving Hospitals	ED Manager	ED Physician
First Responders	Administrative	Field (provider of "hands-on" care)
Ambulance Companies	Administrative	Field (provider of "hands-on" care)
Emergency Medical Dispatch Agency	Emergency Medical Dispatch Coordinator (1 representative selected by EMD Agency coordinators)	
Air Units	Administrative	Field (provider of "hands-on" care)
Paramedic Training Programs	Director (1 representative from each program.)	

### EMS Advisory Committee

The EMS Advisory Committee is a panel comprised of five members designated by the Board of Supervisors and two members designated by VCEMS. The EMS Advisory Committee reviews the ambulance contractor performance at least every two years and provides other EMS system evaluation and oversight as needed.

Nancy Merman	–	Representing District 1 Supervisor Steve Bennett
Diane Starzak	–	Representing District 2 Supervisor Linda Parks
Craig Stevens	–	Representing District 3 Supervisor Kelly Long
Bob Brooks	–	Representing District 4 Supervisor Bob Huber
Joe Milligan	–	Representing District 5 Supervisor John Zaragoza
Audra Strickland	–	EMS Agency Appointed Representative
Daniel Shepherd, MD	–	EMS Agency Appointed Representative

# Ventura County Emergency Medical Services Agency

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## EMS Agency Staff

Steve Carroll, EMS Administrator

Daniel Shepherd, MD, EMS Medical Director

Angelo Salvucci, MD, Asst. EMS Medical Director

Chris Rosa, Deputy EMS Administrator

Karen Beatty, Specialty Systems Coordinator

Julie Frey, EMS Program Coordinator

Randy Perez, EMS Program Coordinator

Andrew Casey, EMS Program Coordinator

Erik Hansen, Community Services Coordinator

Martha Garcia, Administrative Assistant I

Roberta Coffman, EMS Certification Specialist

Katy Haddock, Volunteer Cardiac Arrest Coordinator

Grayson Carroll, EMS Agency Explorer

Dan Wall, Emergency Preparedness Manager

Barbara Spraktes, EMS/EPO Epidemiologist

Janelle Leza, Health Care Coalition Coordinator

Diane Gilman, Administrative Assistant II

Jeff Vahl, Community Services Coordinator

### Photo Credits

Robert Navarro

LifeLine Medical Transport

# Ventura County EMS Agency

## Stakeholder Agencies



VENTURA COUNTY EMERGENCY MEDICAL SERVICES AGENCY  
A Division of Ventura County Public Health Department  
A Department of Ventura County Health Care Agency