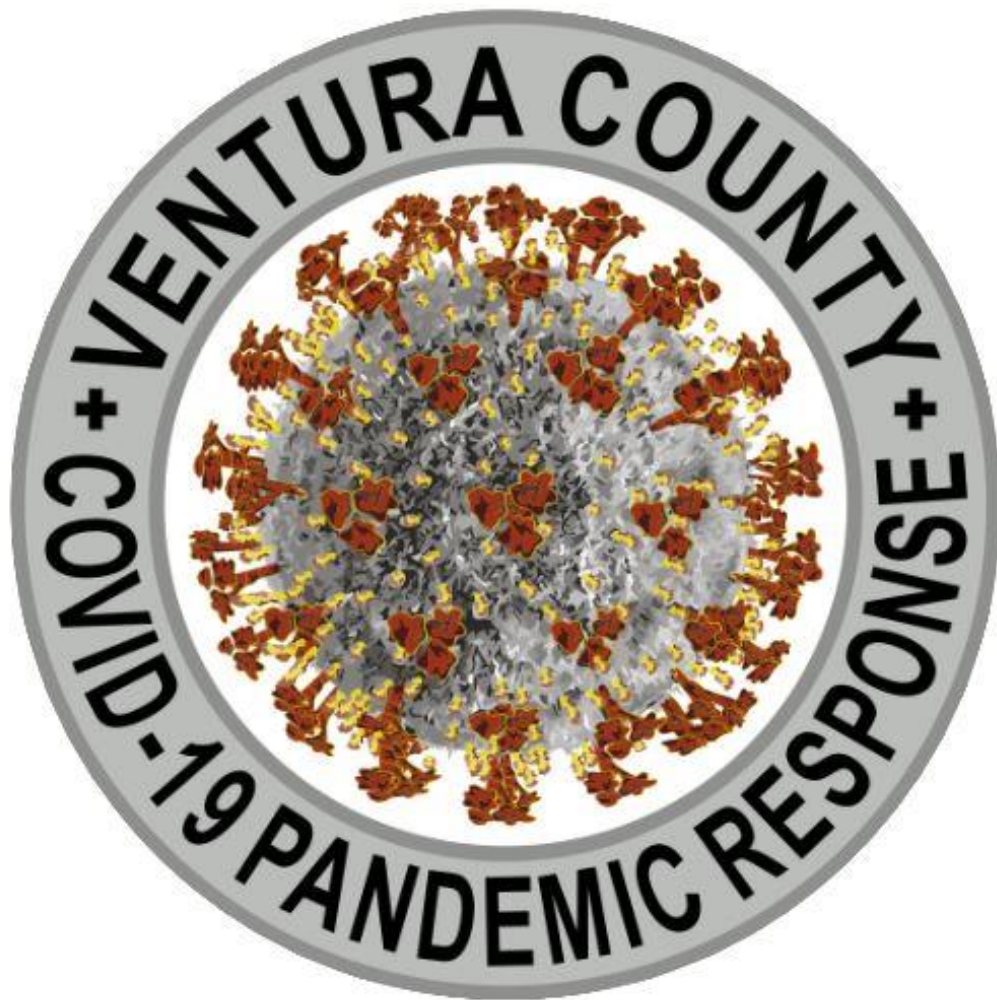




Ventura County Public Health
Emergency Medical Services Agency



2021 ANNUAL REPORT



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

Ventura County Emergency Medical Services Agency

2220 E. Gonzales Rd. #200, Oxnard, CA 93036

805-981-5301 (Office) 805-981-5300 (FAX)

email us at emsagency@ventura.org

Visit us on the web at www.vchca.org/ems



EMERGENCY MEDICAL SERVICES



POPULAR SERVICES



QUICK LINKS



EMSI NEWS FEED

- Police: Off-duty EMT shows loan, immediately renders aid.
September 01, 2022
- N.J. to get \$40M+ in Johnson & Johnson opioid case settlement.
September 01, 2022
- 2 Care, firefighters assaulted by overdose patient.
September 01, 2022
- Video: 2 Toxic EMS providers hurt in fatal ambulance collision.
August 31, 2022
- Hundreds gather to celebrate 5th of Calif. EMS captain.
August 31, 2022

powered by EMS 1



EMS AGENCY

2220 E. Gonzales Rd #200
Oxnard, CA 93036

Main: 805-981-5801
Fax: 805-981-5800

emsagency@ventura.org

WHO WE ARE

As a division of the Public Health Department, the Ventura County Emergency Medical Services Agency provides system guidance and oversight through pre-hospital provider driven policy development and a comprehensive quality improvement program...

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EMS SOCIAL MEDIA



EMS CORNER

- EMS Calendar - Track the Latest Events
- EMS System Performance
- PSC Meetings
- Critical Incident Stress Management
- Cardiac Arrest Survivors Support
- Emergency Preparedness

EMS PROGRAMS

- Emergency Medical Services Home
 - EMT Providers and Job Links
- CPR/AED Training Organization List
- Automatic External Defibrillator (AED) Program In County Facilities
- Encouraging Lay Rescuer AED Providers
- Drowning Prevention
- Education and Training
- Trauma System
- Continuous Quality Improvement
- Medical Marijuana Identification
- Ventura County Healthcare Coalition (VCHCC)
- EMS Data Systems
- Medical Reserve Corps

PUBLIC HEALTH MAIN MENU

- Public Health Home
- Our Mission & Vision
- Organization Chart
- Frequently Asked Questions
- Our Phone Numbers
- Public Health Locations
- Full List of Services and Resources

SUPPORT US

Table of Contents

Administration Message.....	1
Executive Summary.....	2
EMS Agency Organizational Chart	3
EMS Agency Staff Responsibilities.....	4
EMS Certification/Accreditation/Authorization.....	5-6
COVID Response and Coordination Summary.....	7-8
Medical Reserve Corps.....	9
EMS System Volume and Demographics.....	10
Emergency Medical Dispatch	11-12
EMS Providers.....	13-14
Ambulance Response Time Compliance.....	15-16
Ambulance Service Area Map.....	17
Base and Receiving Hospitals.....	18
Trauma System.....	19-22
STEMI Program.....	23-25
Stroke System.....	26-28
Cardiac Arrest Management.....	29
PRESTO Update.....	30
Health Care Coalition.....	31-32
Quality Improvement.....	33
Prehospital Services Committee and EMS Advisory Committee.....	34

Ventura County EMS Agency (VCEMS) is pleased to provide our 2021 Annual System Report, reviewing the operations and performance of VCEMS and the Ventura County EMS System. We hope you find the information in this year's report informative and inspirational.




Through a highly coordinated system of public-private partnerships, our Ventura County EMS system providers responded to over 73,000 emergency medical responses in 2021, resulting in over 45,000 ambulance transports.

The unprecedented COVID-19 pandemic continued through 2021 and dominated much of our healthcare system resources. In collaboration with our colleagues at the Public Health Department, local hospitals, public safety organizations and other healthcare providers, we all continued to serve our patient's needs, despite the ongoing and evolving challenges. We worked to ensure access to appropriate personal protective equipment and other critical medical supplies, coordinated centralized reporting of hospital and long-term care facility status, assessed our healthcare and EMS system capacity to surge, managed first responder guidelines and testing, contributed to a variety of other COVID related activities and participated in the largest vaccine distribution program in history. Additionally, we were able to maintain our normal EMS system operations, including provider and personnel oversight, quality assurance, and contract compliance.




National Emergency Medical Services Week 2021 was recognized on May 16 – 22, 2021, and the theme, “This is EMS: Caring for Our Communities”, was a reminder of the commitment we all make to serve the residents and visitors of every community in Ventura County. Without hesitation, our EMS system providers, and our healthcare system partners, united to respond to the COVID-19 crisis, to care for our communities, while still responding to everyday emergencies.

As we continue to navigate the future of EMS in Ventura County, additional challenges are inevitable, but so are additional opportunities. We are privileged to serve with you and we want to express our appreciation to all of you for your dedication, collaboration, and commitment to the Ventura County EMS System.


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 21-22, Ventura County EMS Agency had a budget of \$4,253,964, 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. \$1,108,662 was dispersed from the Maddy Fund in 2021 to settle the hospital and physician claims and for pediatric trauma funding.

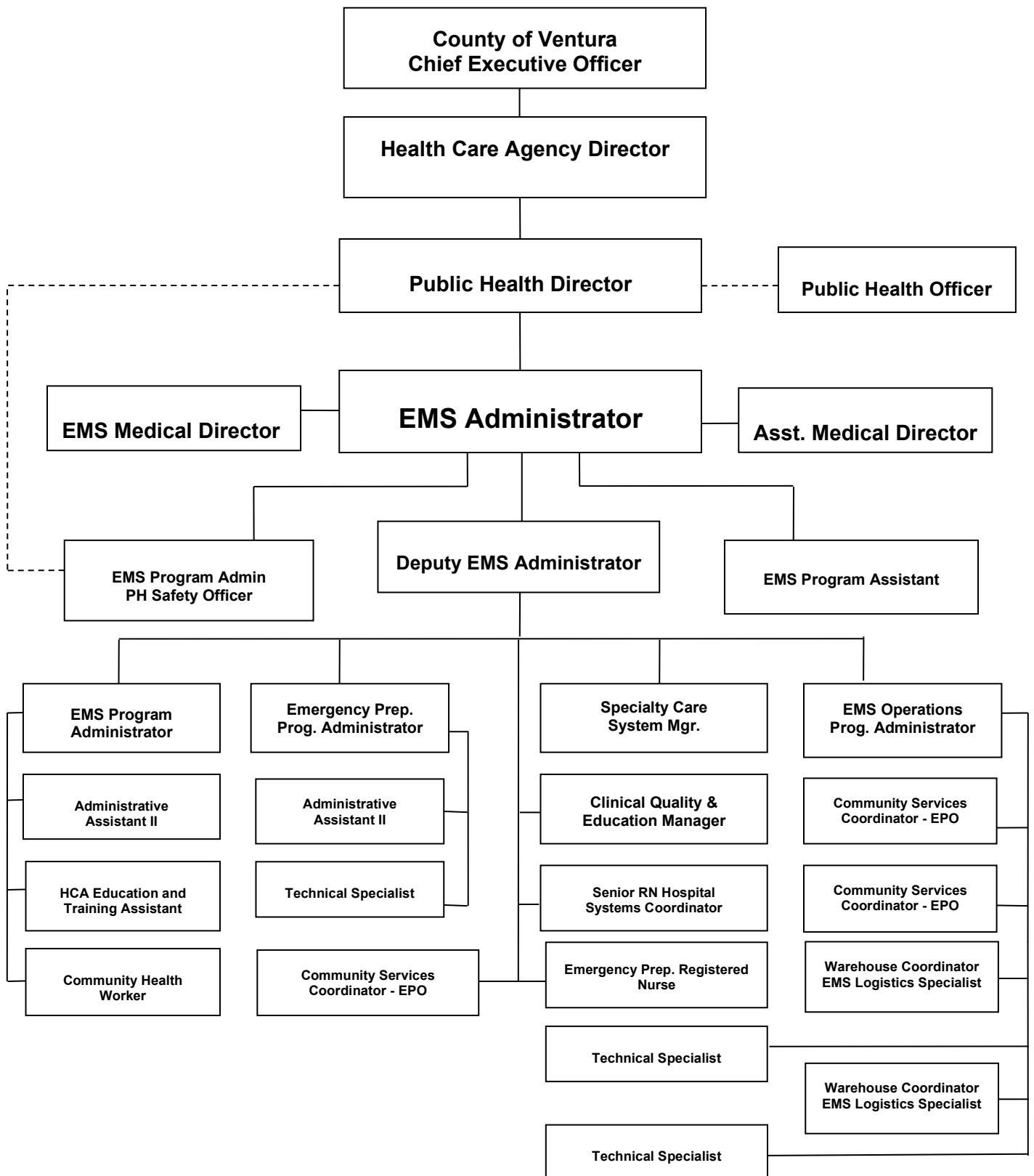


The EMS Agency is staffed with 19 full-time personnel, and a medical director and an assistant medical director. Positions include EMS Administrator, Deputy Administrator, Specialty Care Systems Manager, Senior Hospital Systems Coordinator, Clinical Quality Manager, four Program Administrators, Program Assistant, three Community Services Coordinators, two EMS Logistics Specialists, two Administrative Assistants, EMS Certification Specialist and one Community Health Worker. In addition, the EMS Agency has employed several Technical Specialists to assist with response to the COVID-19 emergency.

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 2021 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 2021



EMS Agency Staff Responsibilities

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

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.

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

VCEMS Certifications, Accreditations, and Authorizations Issued - 2021	
EMT Certifications	424
EMT Re-Certifications	1000
Paramedic Accreditation	34
Paramedic Re-Accreditation	157
Authorized Level I Active in VCEMS System	32
Authorized Level II Active in VCEMS System	235
MICN Authorization	16
MICN Re-Authorization	64
Active MICNs in VCEMS System	133

EMS Education Programs

VCEMS Authorized Prehospital Training Programs - 2021	
EMT – Initial and Refresher	5
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/ShowTraining/TrainingPrograms/GroupByTrainingProgramsTable.aspx>

COVID-19 Incident Response and Coordination



The countywide response to COVID-19 continued in 2021, with VCEMS coordinating and/or supporting various initiatives – both ongoing and newly developed. The new year presented some significant challenges in terms of healthcare facility staffing and surge, and the need for support in terms of staffing and equipment increased significantly. The Medical and Health Operational Coordination (MHOAC) program worked closely with leaders from various healthcare facilities, in addition to county-level leaders and representatives at a regional and state level to ensure that healthcare infrastructure remained intact. While the county saw unprecedented delays in ambulance offload due to hospitals that were overwhelmed with COVID patients

and other non-COVID medical patients, staffing teams and equipment was able to be brought in and the situation stabilized. These challenges were amid many other initiatives and programs that were either initiated or significantly ramped up during 2021 – especially regarding the countywide COVID vaccination program that peaked in the Winter and Spring.

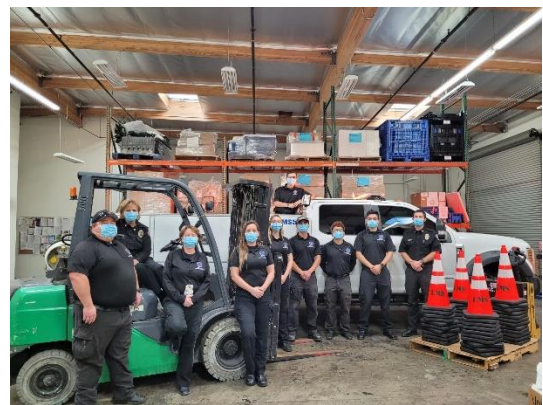
Program: EMS Logistics

- Coordinate EMS warehouse operations, while securing additional warehouse space in support of longer-term COVID programs.
- Personal Protective Equipment (PPE) distribution – hospitals, first responders, and other medical entities/providers
- Increased logistical support for vaccine points of distribution (PODs)
- Distribution of critical medical equipment to hospitals (ventilators, Powered Air Purifying Respirator (PAPR), emergency surge beds).
- Distribution of COVID therapeutics to hospitals and healthcare entities.



Program: COVID-19 Data Analysis

- Enhanced the integration of many data sources into one consolidated model to allow for internal COVID assessment, and publicly published COVID data.
- Maintained a patient record process early in the pandemic which allowed for much more detailed analysis of the hospitalized COVID population than was available from pre-existing sources.
- Established a process for measuring hospital and morgue capacity countywide.



Program: Public Health Department Operations Center

- Develop Incident Action Plan (IAP) for incident objectives
- Coordinate with group supervisors on COVID-19 response
- Coordinate weekly DOC meetings

COVID-19 Incident Response and Coordination

Program: Ventura County Medical Reserve Corps

- Vaccine administration and support POD operations
- Distribution of COVID testing supplies to healthcare entities
- PPE distribution



Program: Medical/Health Guidance, Coordination and Testing

- Maintained COVID-19 specific treatment guidelines for prehospital personnel responding to 911 calls to ensure that guidance was current compared to the regularly changing info from CDC and CDPH.
- Worked with agencies to ensure adequate isolation and quarantine measures were taken to limit additional exposure/spread.
- Worked with the Ventura County Fire Department to open and oversee a vaccine POD focused on prehospital and law enforcement personnel.
- Led weekly calls with all first responder agencies to ensure they were provided up-to-date information related to the ongoing public health emergency, in addition to weekly calls with hospitals to share information and coordinate response to COVID surge.
- Expanded a program that provided training for paramedic and EMT level providers hired by the county to staff vaccination sites.
- Through the MHOAC program, worked with local agencies and healthcare facilities to process emergency staffing and equipment requests that allowed them to operate throughout the surge.



Program: Ventura County Health Care Coalition

- Continued providing Long-Term Care Facility Guidance, based on updated rules and regulations from HHS, CDC and CDPH
- Expanded the COVID-19 Infection Control Education Campaign
- Developed a process for Skilled Nursing Facilities experiencing an outbreak to have rapid access to valuable therapeutic medications through Public Health
- Expanded outreach and education related to COVID therapeutics for the community and healthcare professionals.
- Ongoing engagement with HCC partners regarding current COVID-19 guidance and all-hazards mitigation (e.g. wildfires and Public Safety Power Shutoff).



Ventura County Medical Reserve Corps



The Ventura County Medical Reserve Corps (MRC) Unit 959 deployed to support Ventura County Emergency Medical Services COVID-19 activities in Ventura County. MRC was deployed to sustain logistical support and provide COVID-19 vaccinations. MRC volunteers continued to dispense personal protective equipment to healthcare providers and provided COVID-19 vaccinations at Point of Dispensing (POD) sites. Requests for vaccinations were approved through the Ventura County Public Health Department Operation Center Operations Section and the MRC embedded with Public Health vaccination teams.

MRC volunteers joined Public Health mobile vaccine teams to reach people in all communities and vaccinated hard-to-reach and high-risk populations. The mobile teams were successful in reaching the underserved and individuals in rural communities. MRC was instrumental in supplementing Public Health staffing, especially during a staffing crisis where Public Health staff were experiencing significant increase in illness related to COVID-19.



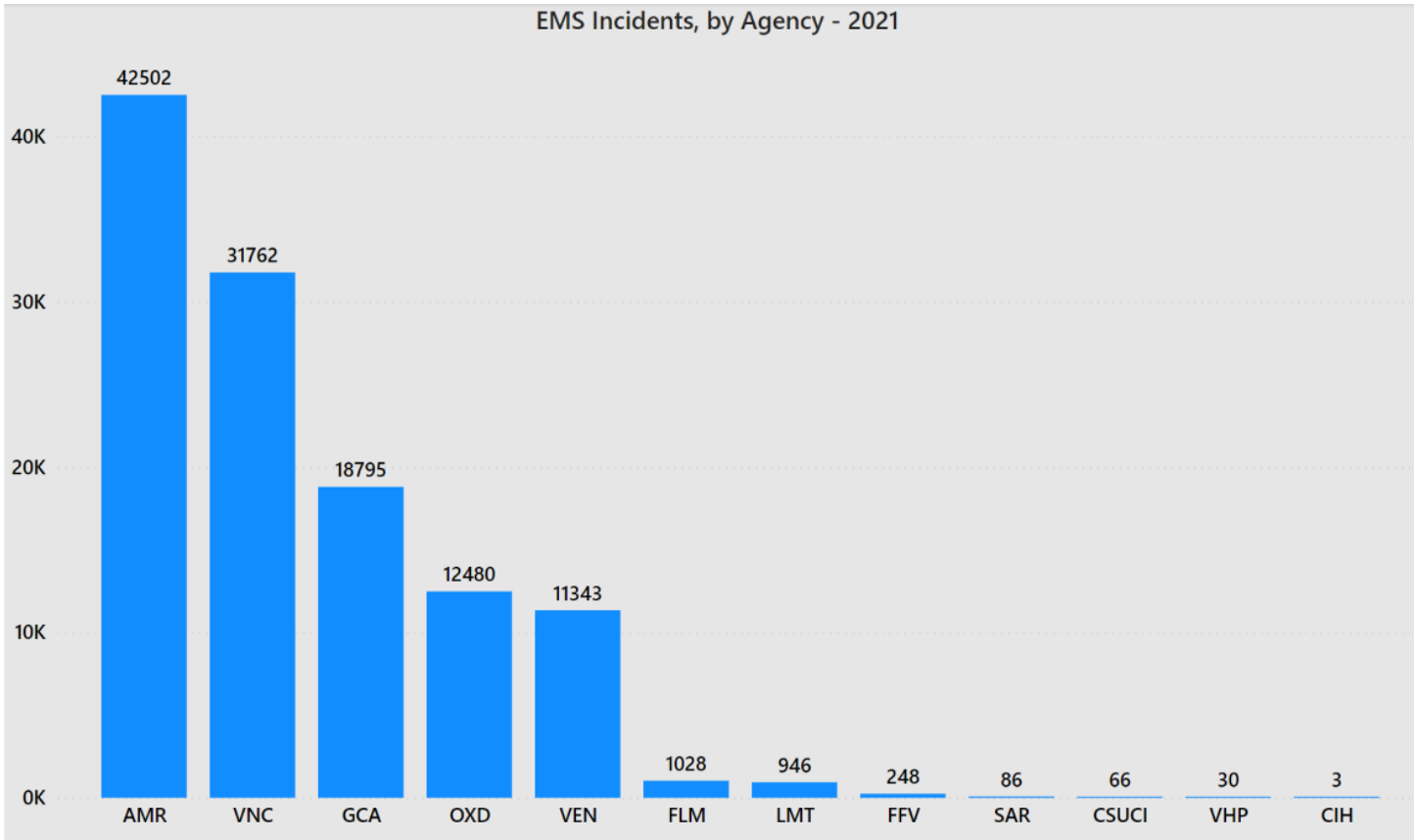
MRC held a crucial role in supporting the South Oxnard Public Health drive-through vaccination clinic. Volunteer physicians, physician assistants, nurse practitioners, paramedics, and emergency medical technicians provided vaccinations in austere conditions. The clinic was located outdoors in an emergency shelter which stood in the parking lot for 12 months. MRC worked out of the emergency shelter in rain or shine, windy conditions and in the summer heat. MRC demonstrated

their hardy demeanor and dedication to serve the community. MRC also participated in the planning and implementation of the Fall '21 joint influenza and COVID-19 vaccination PODs throughout the County of Ventura. The MRC held four large walk-through model PODs at the Goebel Center, Santa Clara High School, Port Hueneme Community Center, and the Santa Paula Community Center. These PODs were successful and provided valuable information for future vaccinations efforts.

As of 12/31/2021, 53 MRC volunteers served a total of 3,917 hours during the COVID-19 response. An economic impact report from the United States Department of Health and Human Services established an economic value of the Ventura County MRC response to be \$150,728.89



Ventura County EMS System Volume

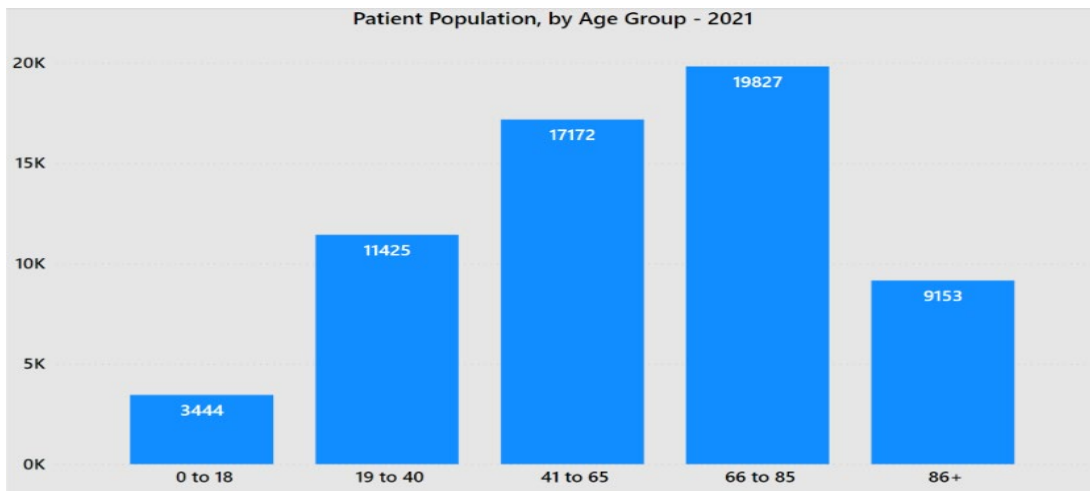


AMR = American Medical Response
 OXD = Oxnard Fire Department
 FLM = Fillmore Fire Department
 CSU = Cal State Channel Islands University PD

VNC = Ventura County Fire Protection District
 VEN = Ventura Fire Department
 FFV = Federal Fire Department – Ventura County
 VHP = Ventura Harbor Patrol

GCA = Gold Coast Ambulance
 LMT = Lifeline Medical Transport
 SAR = Ventura County Sheriff’s Search and Rescue Aviation Unit
 CIH = Channel Islands Harbor Patrol

Patient Demographics (transported only) – 2021



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. Ventura County Fire Department has contracted with Priority Dispatch to review high risk calls and random sample calls from each dispatcher for quality assurance.

Ventura County Fire Communications Center



Emergency Medical Dispatch

Countywide Emergency Medical Dispatch Activity by Call Type

PROBLEM TYPE	2021 TOTAL INCIDENTS	PROBLEM TYPE	2021 TOTAL INCIDENTS
ABDOMINAL PAIN	1743	HEAT / COLD EXPOSURE	69
AIRCRAFT EMERGENCY	25	HEMORRHAGE / LACERATION	1971
ALLERGIES / ENVENOMATION	524	JUVENILE BEHAVIORAL TRANSPORT	27
AMBULANCE ONLY	209	LIFT ASSIST	941
ANIMAL BITES / ATTACKS	133	MEDICAL ALARM	2379
ASSAULT	1729	MOTORCYCLE COLLISION	144
ASSIST OTHER AGENCY MEDICAL	142	MUTUAL AID - MEDICAL	6
BACK PAIN	776	OBVIOUS OR EXPECTED DEATH	190
BEHAVIORAL EMERGENCY	1692	OVERDOSE / POISONING	1959
BREATHING PROBLEMS	6707	PENETRATING WOUNDS	7
BURNS / EXPLOSIONS	32	PREGNANCY RELATED EMERGENCY	164
CARDIAC / RESP ARREST	1249	REMOTE RESCUE	133
CHEST PAIN	3988	SICK PERSON	10013
CHOKING	432	STABBING	150
INHALATION EXPOSURE / HAZMAT	47	STEMI TRANSPORT	71
CONVULSIONS / SEIZURES	2433	STROKE (CVA)	1840
DIABETIC PROBLEMS	985	STROKE TRANSPORT	59
ELECTROCUTION / LIGHTNING	11	TRAFFIC COLLISION	5050
ENTRAPMENT NON VEHICLE	52	TECHNICAL RESCUE	16
EYE PROBLEMS / INJURIES	73	TRAUMA TRANSFER	69
FALLS	11211	TRAUMATIC INJURIES	1922
GUNSHOT	158	UNCONSCIOUS / FAINTING	5137
HEADACHE	380	UNKNOWN PROBLEM	5228
HEART PROBLEM	961	WATER RESCUE	73
TOTAL 2021 MEDICAL RELATED RESPONSES - 73312			

Fire Departments



Federal Fire Department – Ventura County

Covers all areas of Naval Base Ventura County, including San Nicholas Island, from four stations.



Fillmore City Fire Department

Covers the City of Fillmore from one station.



Oxnard Fire Department

Covers the City of Oxnard from eight stations.



Ventura City Fire Department

Covers the City of Ventura from six stations.



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.

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 exclusive operating areas 2, 3, 4, 5 and 7.



Gold Coast Ambulance

Covers the city of Ojai, as well as the unincorporated areas of Oak View, Meiners Oaks and Casitas Springs designated and exclusive operating area 1 and covers the cities of Oxnard and Port Hueneme, and the surrounding unincorporated areas designated as exclusive operating area 6.



Lifeline Medical Transport (1935-2021)



On June 1, 2021, LifeLine Medical Transport (LMT), formerly known as Ojai Ambulance (OAS), sold all operating assets and transferred complete operations to Gold Coast Ambulance Service, Inc., who will continue to serve the Ojai Valley in the same scope and manner.

The ambulance service has been independently owned and operated in the Ojai Valley since it was opened by the Clausen family in 1935. Steve Frank, having worked for OAS since 1979, acquired the operation in 1994. Thank you, Steve, for your more than 40 years of unwavering commitment to EMS in Ventura County. Enjoy your well-deserved retirement.



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



On July 1, 2021, the County entered into a new three-year agreement with the existing “grandfathered” providers for the provision of emergency ambulance service in the seven Ventura County EMS exclusive operating areas (EOA). The agreement also provides the opportunity for two one-year extensions. Gold Coast Ambulance Service serves Area 1 and Area 6; and American Medical Response (AMR) serves Areas 2, 3, 4, 5 and 7.

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.

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

- Providing 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 ambulance replacement
- Conducting public information and education

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

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. Contract performance standard is 90% monthly compliance in each ambulance zone. Response time criteria is measured monthly, and requirements vary based on population density and call priority. Metropolitan/Urban areas require an ambulance response time of 8 minutes for emergencies and 15 minutes for non-emergencies. Suburban/Rural areas require an ambulance response time of 20 minutes. Certain low density and geographically remote areas are allowed an ambulance response time of 30 minutes and highly remote "Wilderness" areas are contracted as "ASAP" zones. Non-compliant responses, without an approved exemption, are assessed a financial penalty based on contract guidelines. In 2021, all response areas were fully compliant with the monthly 90% compliance requirements.

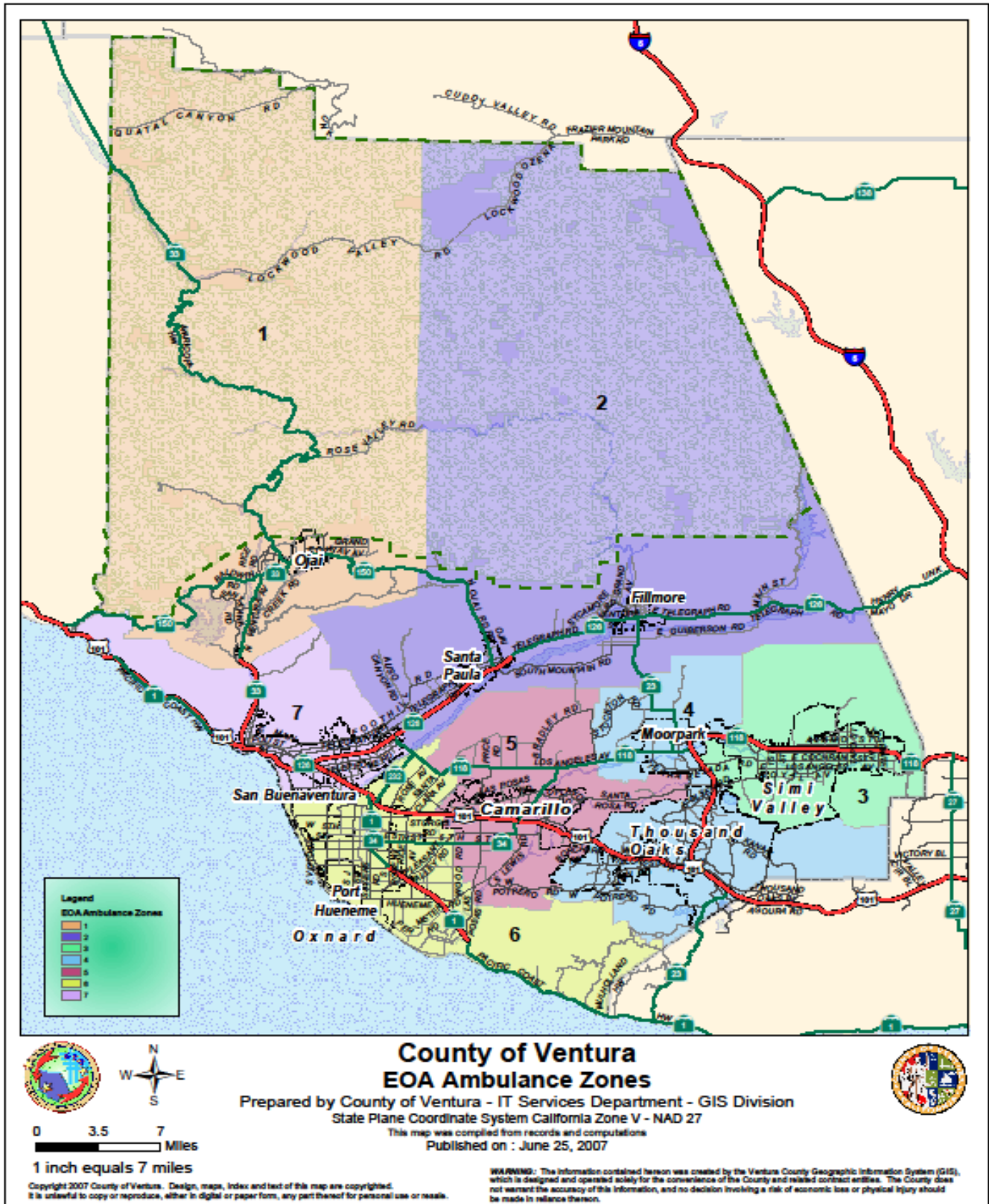
In July 2021, in association with the new ambulance contracts, the FirstWatch system was updated to provide additional capability. The updated system now shows pre-exemption compliance data known as "raw compliance" and allows for the ambulance provider to provide a corrected arrival time for responses that were verified "on-scene" through GPS by the ambulance automatic vehicle location device. For the below 2021 report, the first half of the year is from the legacy FirstWatch system, and the second half of the year is from the updated FirstWatch system. Some data fields were not available in the old report and are shaded grey. Monthly compliance reporting is also now available on the EMS Agency website.

Ventura County Ambulance Response Compliance Report

Reporting Period 01/01/2021 - 12/31/2021

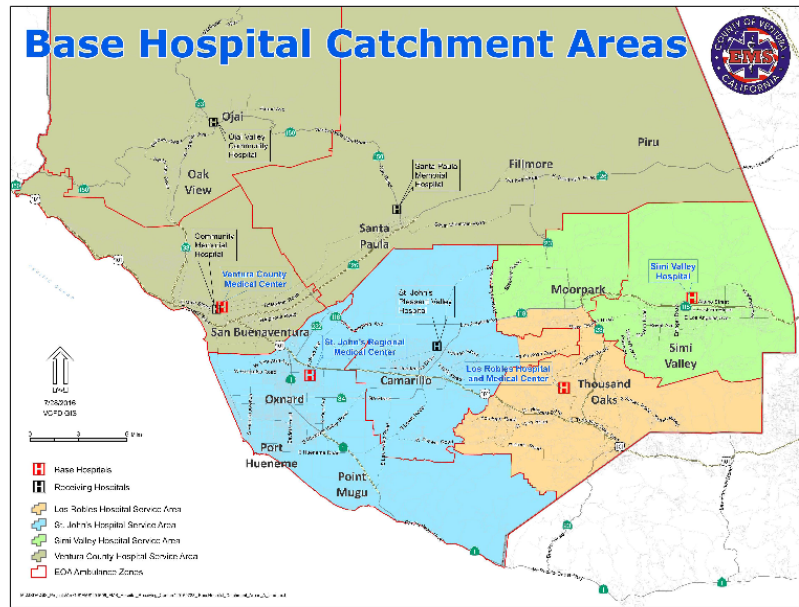
Zone	Period	Total Incidents	On Time	Late	Cancelled Enroute Compliant	Adjusted Total Incidents	Raw Compliance	Time Corrections Approved	Total Late Responses	Raw Compliance with Time Correction	Exemptions Requested	Exemptions Approved	Compliance Calculated Incidents	Compliance Calculated Late	Contracted Response Time Compliance
EOA 1	Jan-Jun 2021	987	904	83		987			83		61	50	937	33	96.66%
EOA 1	Jul-Dec 2021	1304	1158	146	100	1204	87.87%	35	111	90.78%	60	60	1144	51	95.54%
EOA 1	Total 2021	2291	2062	229	100	2191	89.55%	35	194	91.15%	121	110	2081	84	96.17%
EOA 2	Jan-Jun 2021	1790	1660	130		1790			130		55	53	1737	77	95.70%
EOA 2	Jul-Dec 2021	2198	2009	189	186	2012	90.61%	54	135	93.04%	38	37	1975	98	94.78%
EOA 2	Total 2021	3988	3669	319	186	3802	91.61%	54	265	93.03%	93	90	3712	175	95.40%
EOA 3	Jan-Jun 2021	3947	3474	473		3947			473		175	171	3776	302	92.35%
EOA 3	Jul-Dec 2021	4790	4228	562	372	4418	87.28%	106	456	89.63%	120	118	4300	338	92.09%
EOA 3	Total 2021	8737	7702	1035	372	8365	87.63%	106	929	88.89%	295	289	8076	640	92.35%
EOA 4	Jan-Jun 2021	5932	5391	541		5932			541		69	66	5866	475	91.99%
EOA 4	Jul-Dec 2021	7632	6880	752	513	7119	89.44%	146	606	91.45%	102	102	7017	504	92.77%
EOA 4	Total 2021	13564	12271	1293	513	13051	90.09%	146	1147	91.21%	171	168	12883	979	92.50%
EOA 5	Jan-Jun 2021	3516	3158	358		3516			358		104	101	3415	257	92.69%
EOA 5	Jul-Dec 2021	4216	3773	443	275	3941	88.76%	87	356	90.94%	91	89	3852	267	93.04%
EOA 5	Total 2021	7732	6931	801	275	7457	89.26%	87	714	90.43%	195	190	7267	524	92.97%
EOA 6	Jan-Jun 2021	8366	7684	682		8366			682		233	223	8143	459	94.51%
EOA 6	Jul-Dec 2021	9738	8740	998	588	9150	89.09%	165	833	90.85%	266	260	8890	573	93.51%
EOA 6	Total 2021	18104	16424	1680	588	17516	90.41%	165	1515	91.35%	499	483	17033	1032	94.11%
EOA 7	Jan-Jun 2021	5564	5004	560		5564			560		241	235	5329	325	94.16%
EOA 7	Jul-Dec 2021	7550	6735	815	785	6765	87.95%	136	679	89.87%	159	158	6607	521	92.02%
EOA 7	Total 2021	13114	11739	1375	785	12329	88.85%	136	1239	89.95%	400	393	11936	846	93.14%

Ventura County Emergency Medical Services Agency Ambulance Service Areas

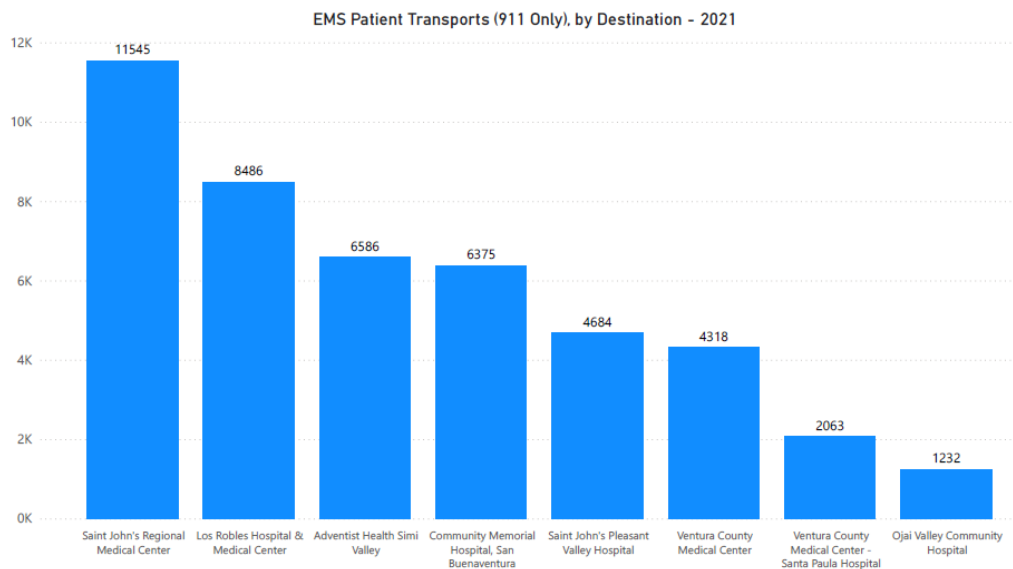


Ventura County Base and Receiving Hospitals

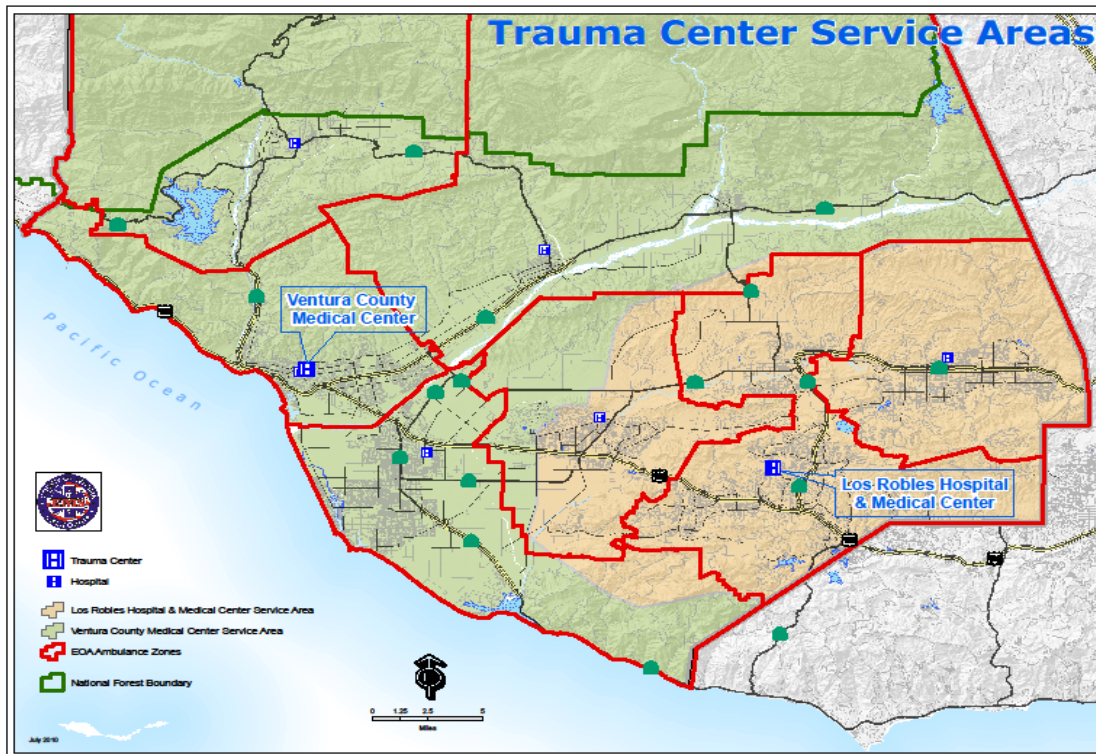
There are eight acute care hospitals in Ventura County, all of whom have emergency departments and receive ambulances with patients involved in prehospital incidents. Four of these hospitals are designated as Base Hospitals, providing oversight and direction to the county’s prehospital providers. Hospitals 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	Thrombectomy Capable Acute Stroke Center	STEMI Receiving Center	Labor & Delivery
CMH	X			X		X	X
LRHMC	X	X	X	X	X	X	X
OVCH	Standby						
PVH	X			X			
SPH	X						X
AHSV	X	X		X		X	X
SJRMC	X	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.

2021 Ventura County Trauma Destinations

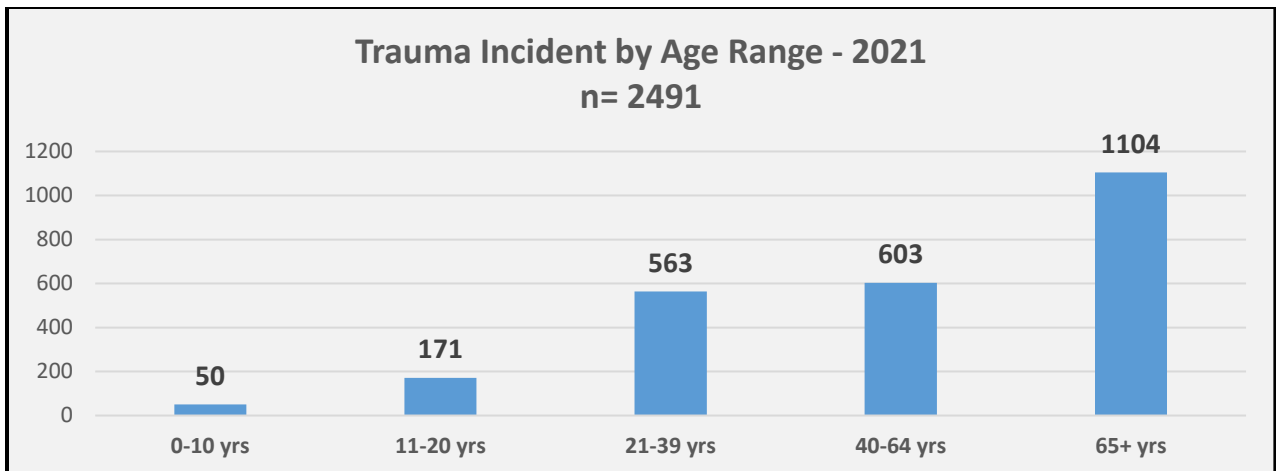
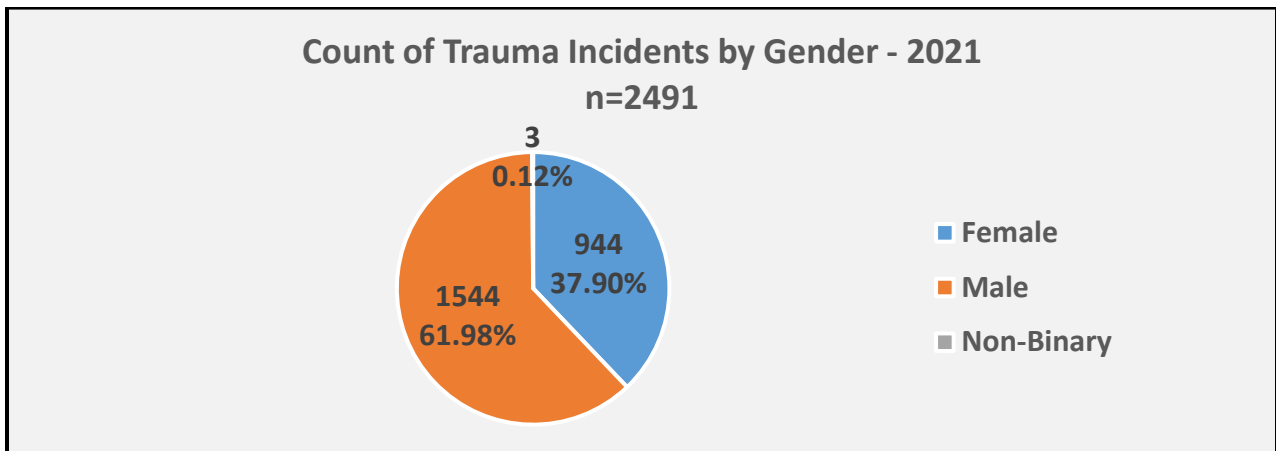
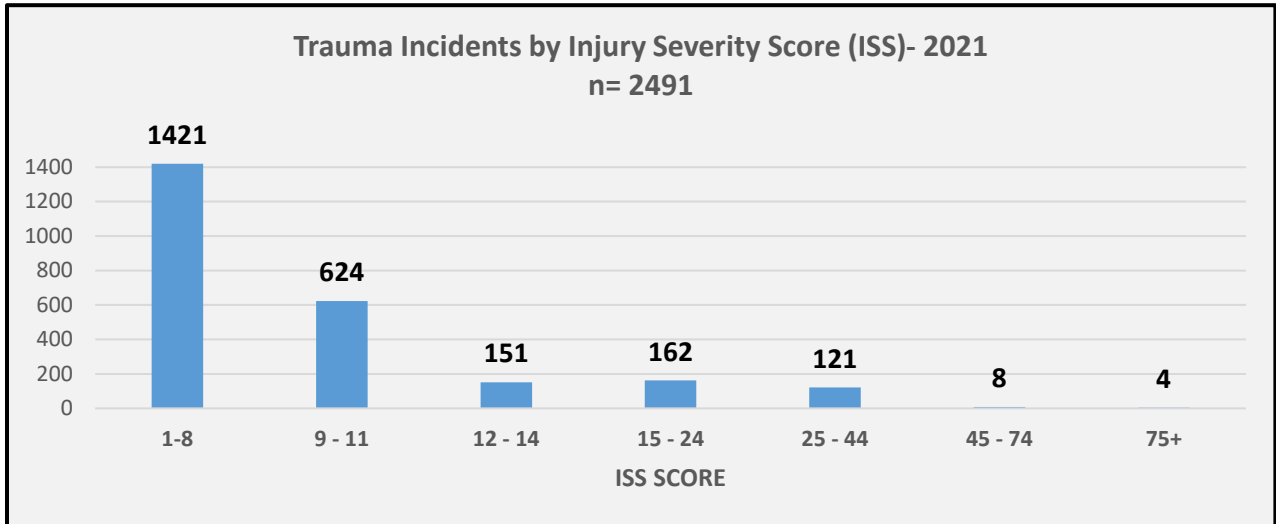
Trauma Catchment Base Hospital	-Trauma Center		
Destination	Step 1 TOTAL 357	Step 2 TOTAL 287	Step 3 TOTAL 462
VCMC Trauma Catchment Calls	222	231	308
Community Memorial Hospital	0	0	1
-Henry Mayo Newhall Memorial Hospital	3	7	12
-Los Robles Hospital and Medical Center	1	1	4
-Northridge Medical Center	2	0	0
Ojai Valley Hospital	1	0	1
-Santa Barbara Cottage Hospital	0	1	0
Santa Paula Hospital	0	0	1
St. John's Pleasant Valley Hospital	0	0	1
St. John's Regional Medical Center	0	0	11
-Ventura County Medical Center	215	222	277
LRHMC Trauma Catchment Calls	135	56	154
Adventist Health Simi Valley	1	1	4
-Los Robles Hospital and Medical Center	133	55	149
-Providence Holy Cross	1	0	0
St. John's Regional Medical Center	0	0	1

2021 Step 1-3 by Hospital	N
Adventist Health Simi Valley	6
Community Memorial Hospital	1
-Henry Mayo Newhall Memorial Hospital	22
-Los Robles Hospital and Medical Center	343
-Northridge Medical Center	2
Ojai Valley Hospital	2
-Providence Holy Cross	1
-Santa Barbara Cottage Hospital	1
Santa Paula Hospital	1
St. John's Pleasant Valley Hospital	2
St. John's Regional Medical Center	11
-Ventura County Medical Center	714
TOTAL	1106

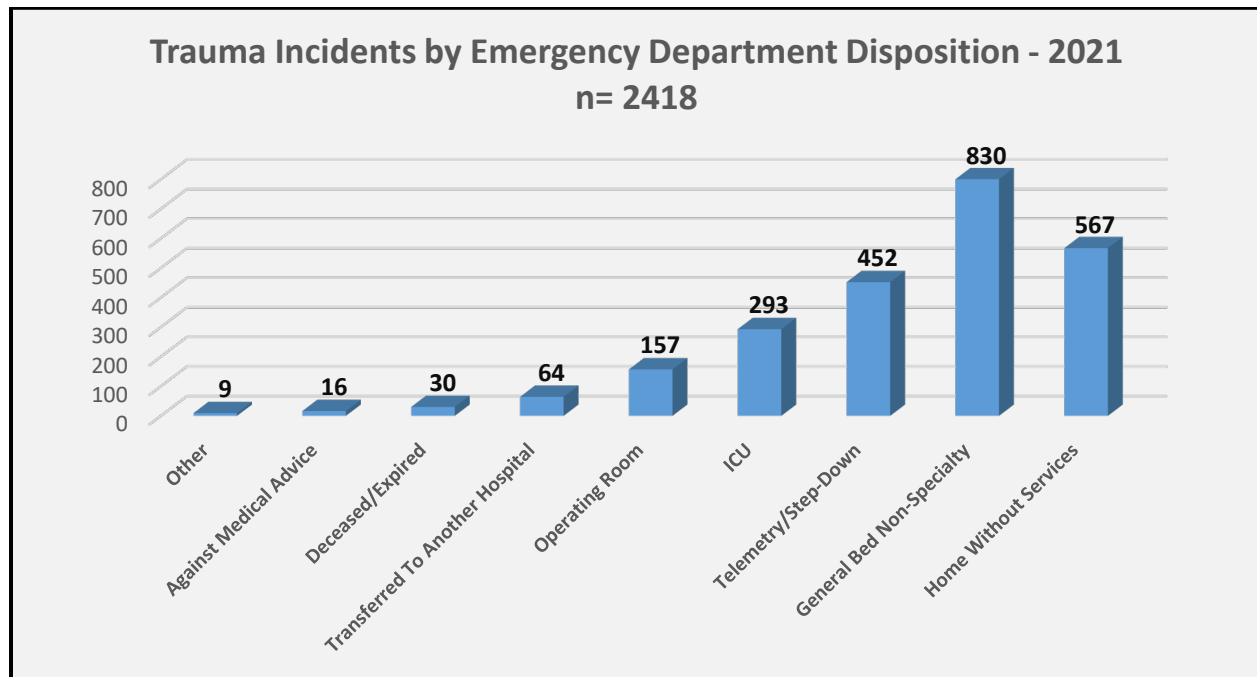
2021 Step 4 by Hospital	N
Adventist Health Simi Valley	306
Community Memorial Hospital	340
-Henry Mayo Newhall Memorial Hospital	7
-Los Robles Hospital and Medical Center	593
Ojai Valley Hospital	57
Santa Paula Hospital	53
St. John's Pleasant Valley Hospital	270
St. John's Regional Medical Center	565
-Ventura County Medical Center	431
TOTAL	2622

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. We have continued to meet through virtual meetings during the year.

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.

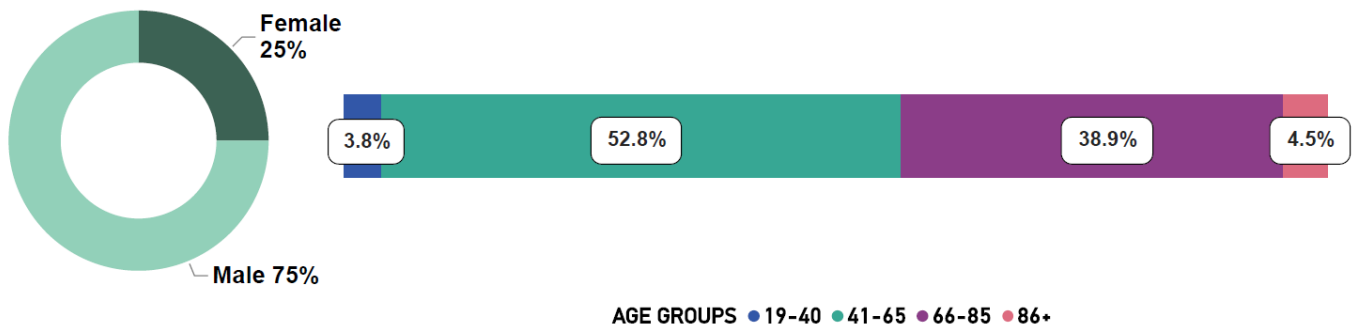
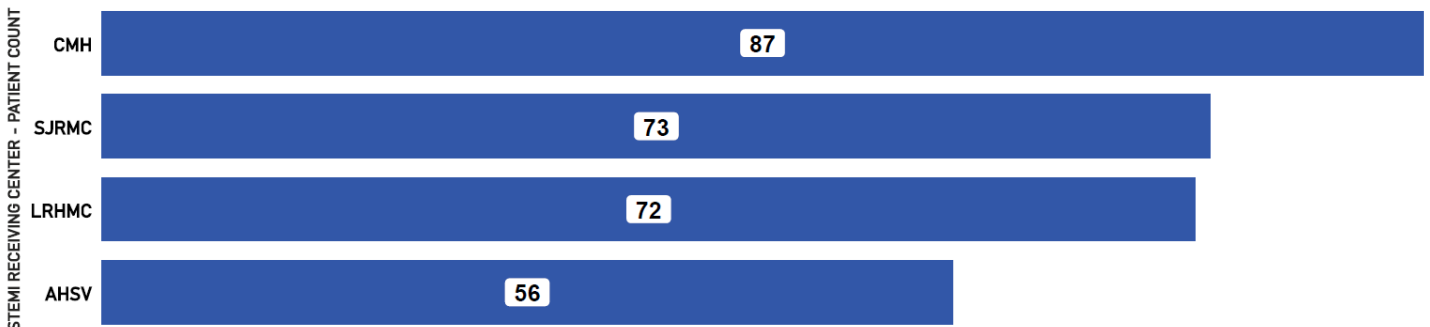
VCEMS STEMI SYSTEM



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 with 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). 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. For 2021, Ventura County's STEMI System received the *Gold Plus Level* recognition from the American Heart Association's Mission Lifeline program. This represents the seventh year in a row where Ventura County has attained the Gold level or higher.



2021 PATIENT DATA



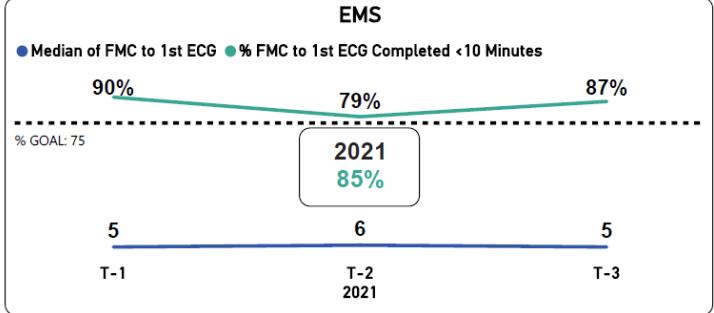
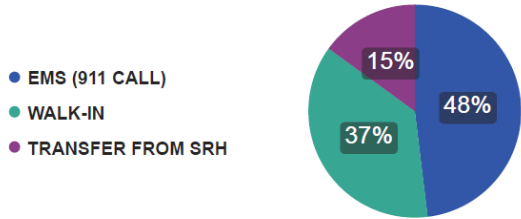
VCEMS STEMI SYSTEM

Patients arrive at STEMI Receiving Centers by EMS, Walk-In, or by Transfer from a STEMI Referral Hospital (SRH). One of the key measures is early recognition that the patient is having a STEMI. This is accomplished by quickly performing a 12-Lead ECG.

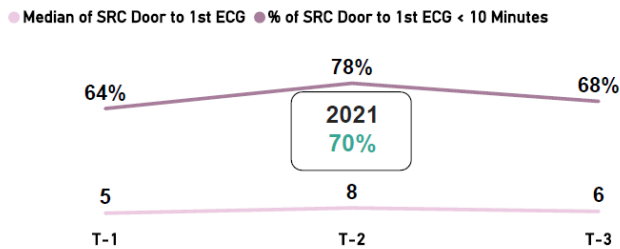
TIME TO OBTAIN 1ST ECG

FMC = First Medical Contact
 SRC = STEMI Receiving Center
 SRH = STEMI Referral Hospital

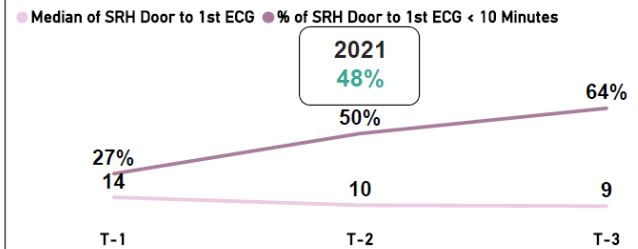
HOW PATIENTS ARRIVED AT THE SRC



SRC WALK-INS



SRH WALK-INS

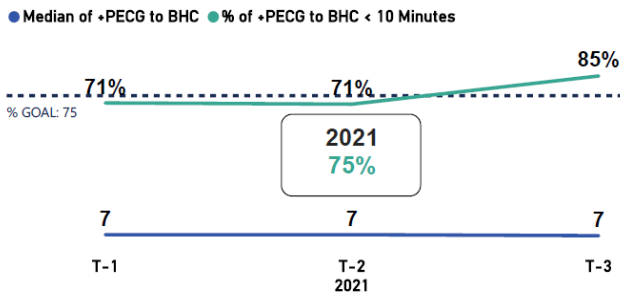


After EMS has identified that the patient is having a STEMI, another key component to the STEMI System is early SRC notification. This is accomplished through a phone call referred to as a Base Hospital Contact. The early notification allows the specialized cardiac team at the SRC to prepare the cardiac catheterization lab prior to patient arrival.

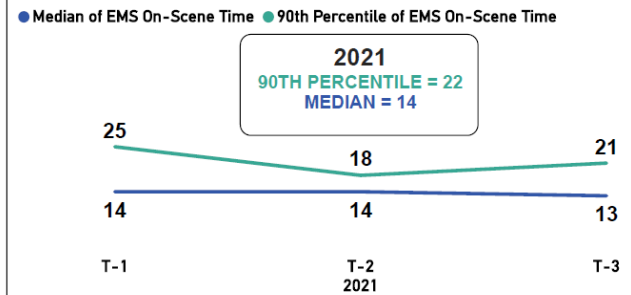
EMS TIMES

+PECG = PREHOSPITAL ECG
 BHC = BASE HOSPITAL CONTACT

+PECG TO BHC



ON-SCENE TIME



When the patient is a Walk-In to a STEMI Referral Hospital (SRH), the patient requires transfer to a higher level of care provided by the STEMI Receiving Center (SRC). The transfer process goes through the 911 system in order to have the closest ambulance respond and transfer the patient expeditiously to the SRC.

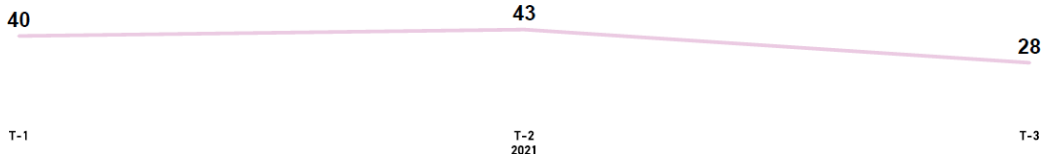
TRANSFER TIMES

DIDO = DOOR-IN TO DOOR-OUT

2021 DIDO in 30 Minutes
 51%

2021 DIDO in 45 Minutes
 69%

MEDIAN OF DIDO

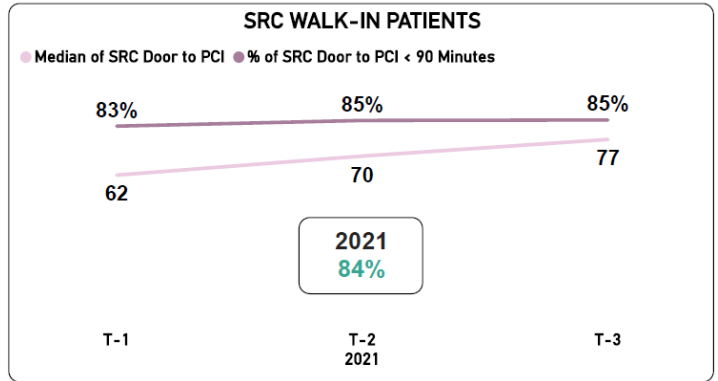
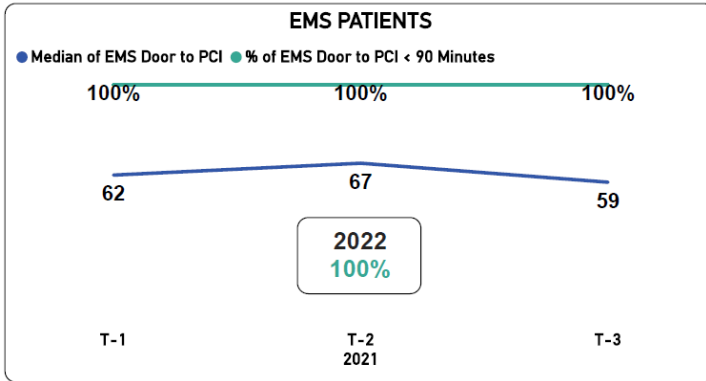




Once a STEMI is recognized, the goal is for the patient to receive timely Percutaneous Cardiac Intervention (PCI). PCI is a procedure that helps to restore blood flow to the heart. It is performed in a specialized catheterization lab (cath lab) located at the SRC.

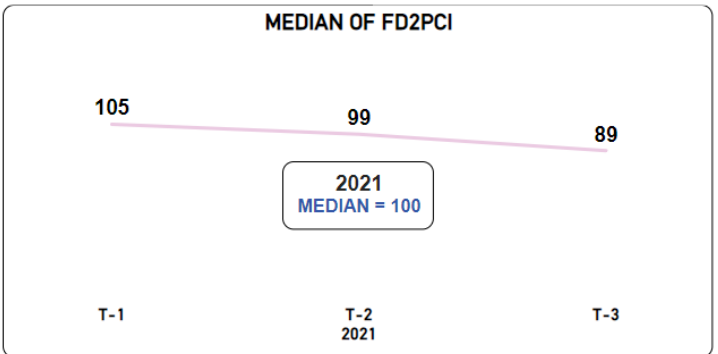
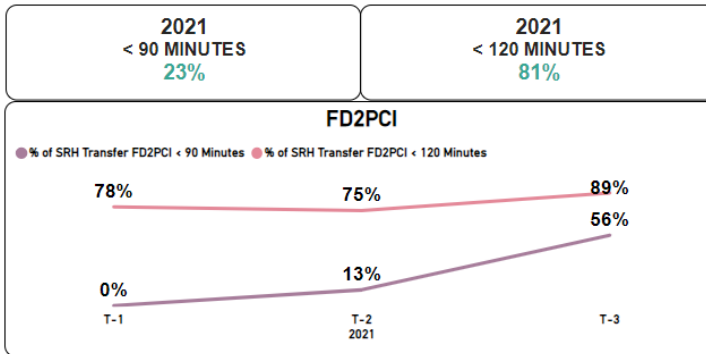
PCI DATA

PCI = PERCUTANEOUS CARDIAC INTERVENTION

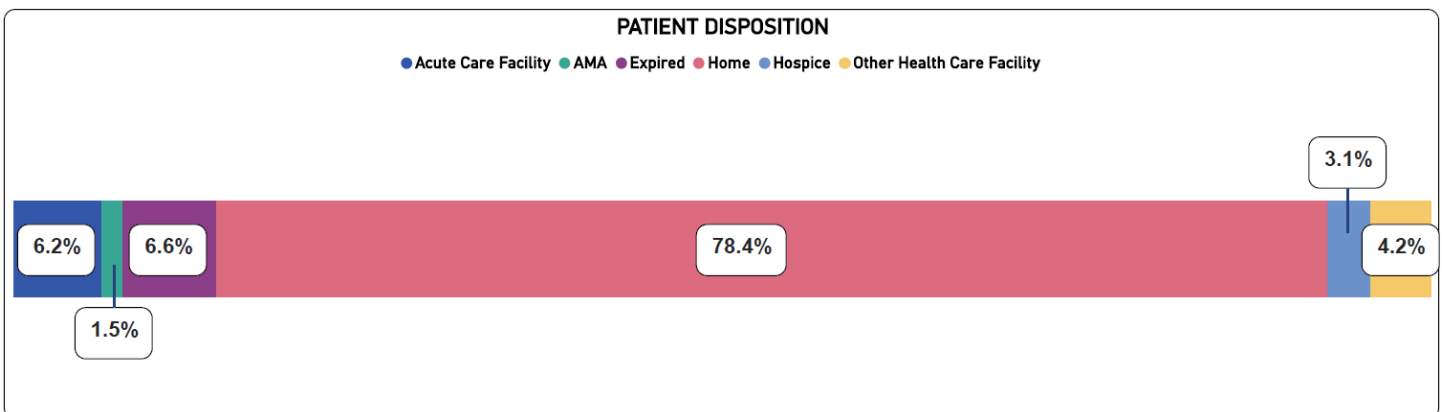


TRANSFERRED SRH WALK-IN PATIENTS

SRH = STEMI REFERRAL HOSPITAL
FD2PCI = FIRST DOOR TO PCI



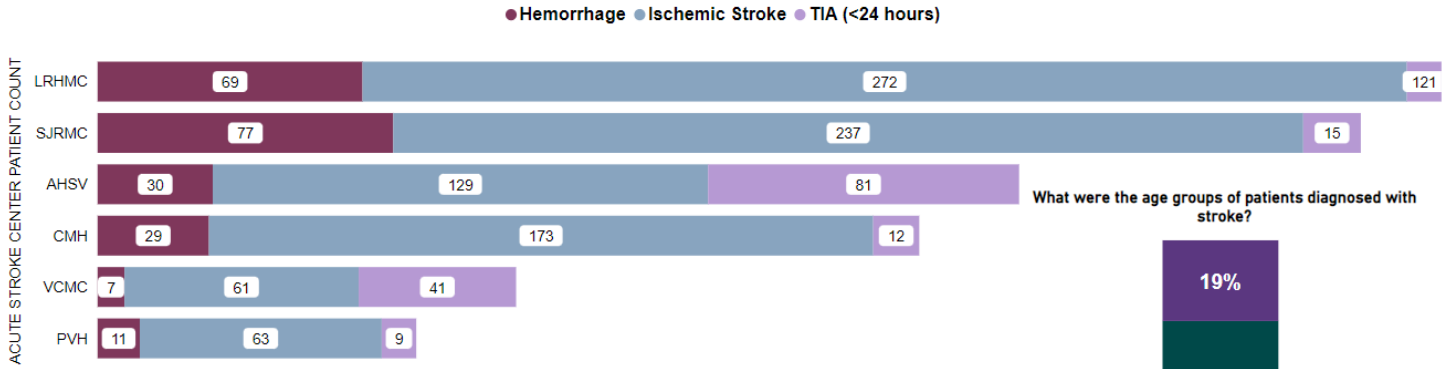
The ultimate STEMI System goal is that our patients return home after their care.





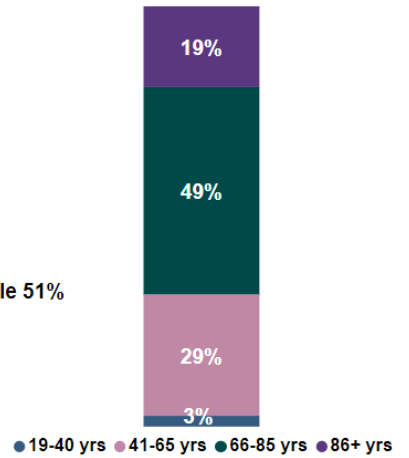
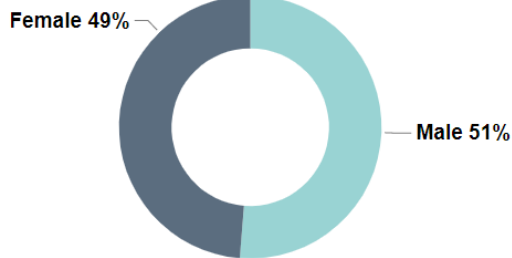
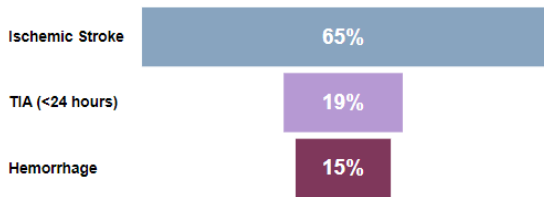
The Ventura County Stroke System is comprised of both pre-hospital providers (Paramedics and EMTs) and Acute Stroke Centers (ASC) who specialize in the treatment of strokes. Including one Comprehensive Stroke Center (CSC) and 2 Thrombectomy Capable Acute Stroke Centers (TCASC). Strokes are the leading cause of serious long-term disability and the 5th leading cause of death nationally.

2021 PATIENT DATA

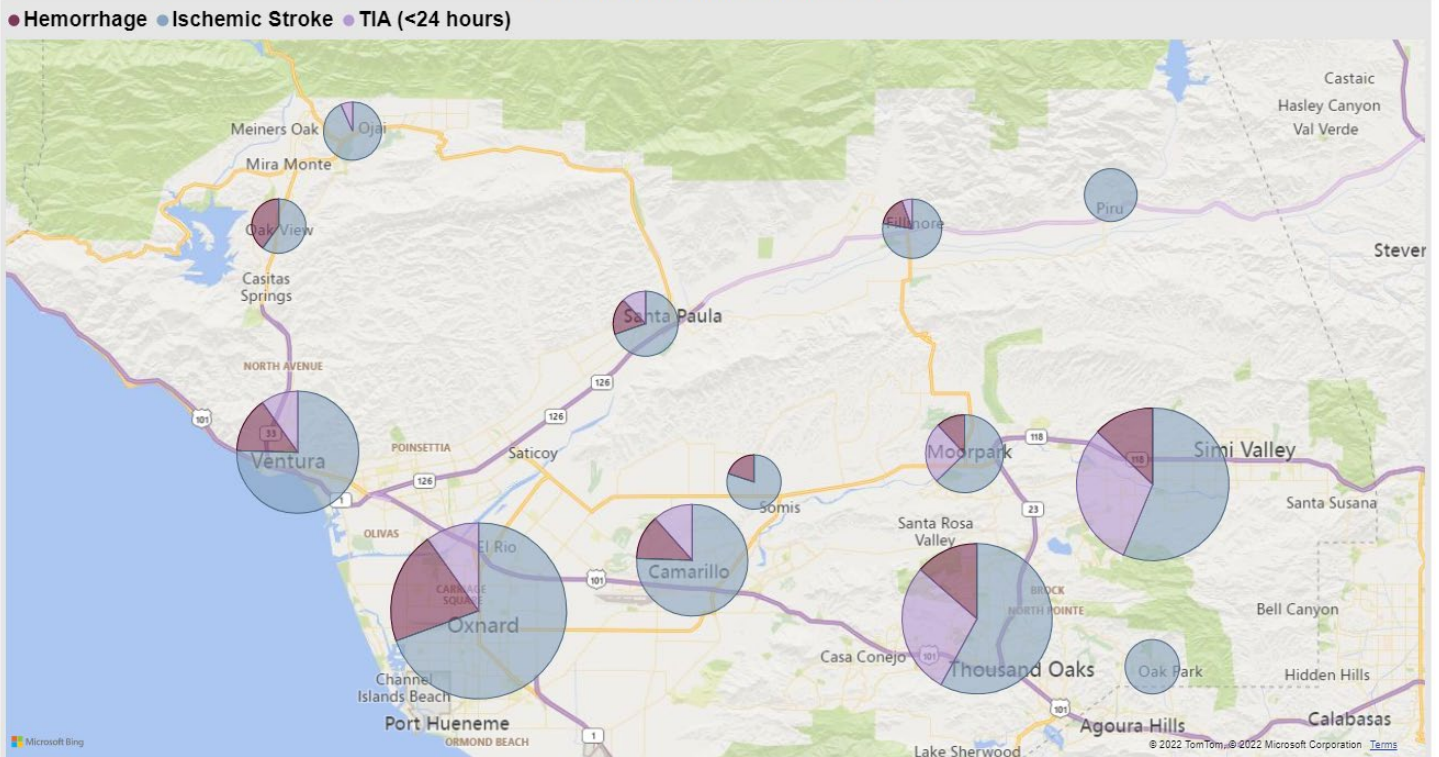


What were the age groups of patients diagnosed with stroke?

% BREAKDOWN



STROKE PATIENTS BY ZIP CODE

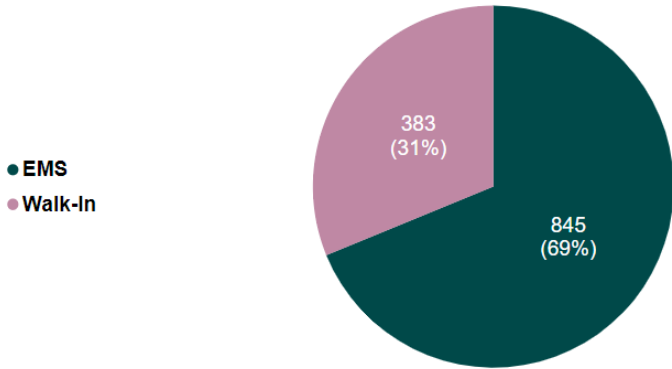


VCEMS STROKE SYSTEM

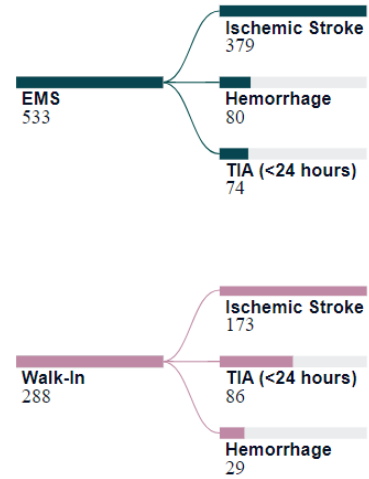


The primary objective of the stroke system is to coordinate timely care of patients who have a stroke. Patients are categorized as “Stroke Alerts” or “ELVO Alerts” based on results from 2 prehospital screening scales: The Cincinnati Prehospital Stroke Scale and The Ventura ELVO Score (VES). When one of these Alerts is identified in the field, EMS provides early notification to the hospital which allows time to mobilize needed resources prior to the patient’s arrival. Since 2017 Ventura County has been using the VES to help identify patients who may have an Emergent Large Vessel Occlusion (ELVO) and direct them to one of the TCASCs for possible intervention. With these specialized alerts, patients are often brought directly to the CT Scanner when they arrive. CT Scans help to aid in the identification of patients eligible for time sensitive treatments/interventions.

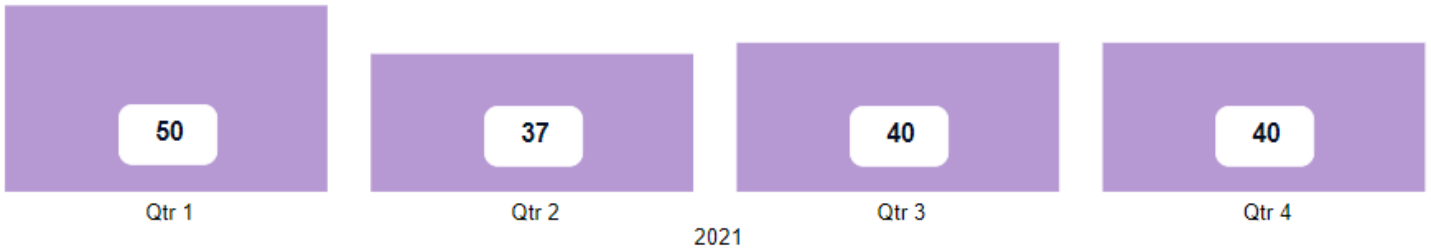
HOW STROKE ALERT PATIENTS ARRIVED AT THE ASC



STROKE ALERT PATIENTS DIAGNOSED WITH STROKE



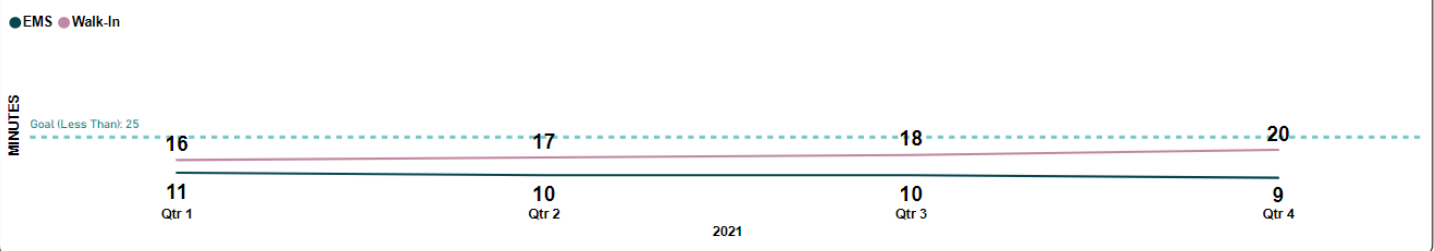
NUMBER OF ELVO ALERT PATIENTS TRANSPORTED DIRECTLY TO A TCASC



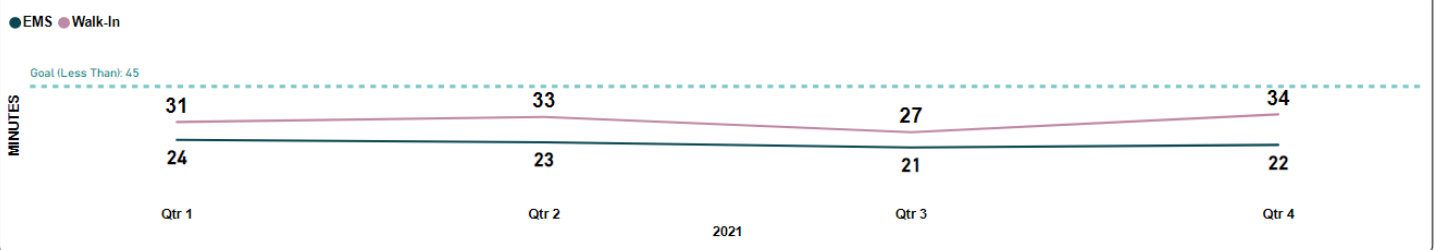
CT TIMES

CT = COMPUTED TOMOGRAPHY
CTI = CT INITIATED
CTR = CT REPORTED

MEDIAN OF PATIENT ARRIVAL TO CTI



MEDIAN OF PATIENT ARRIVAL TO CTR

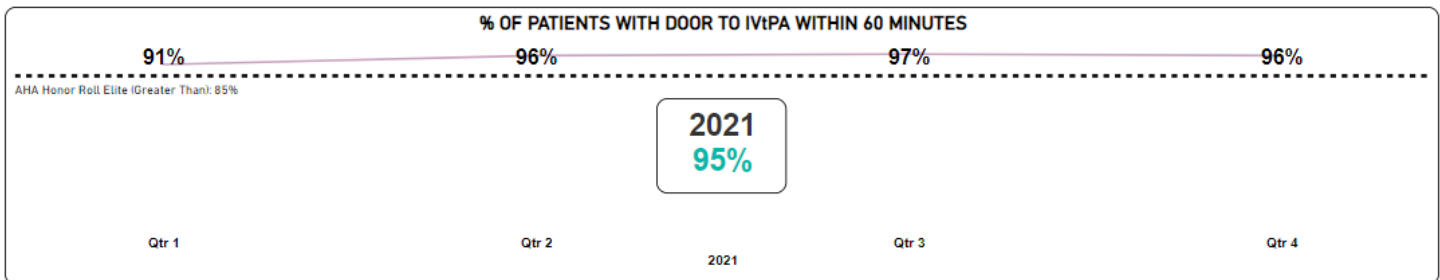
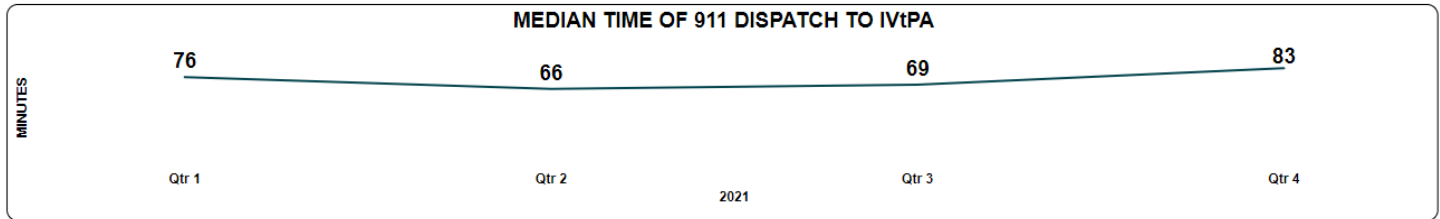




Treatment for strokes is time sensitive. If identified within specific time parameters, there is potential to treat with medication administration (IVtPA) and/or mechanical thrombectomy (clot removal for Large Vessel Occlusions). Early treatment can minimize damage to the brain and help reduce disability.

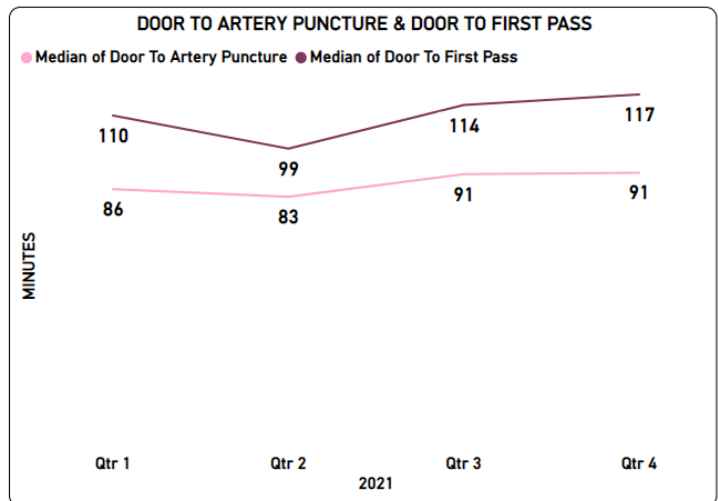
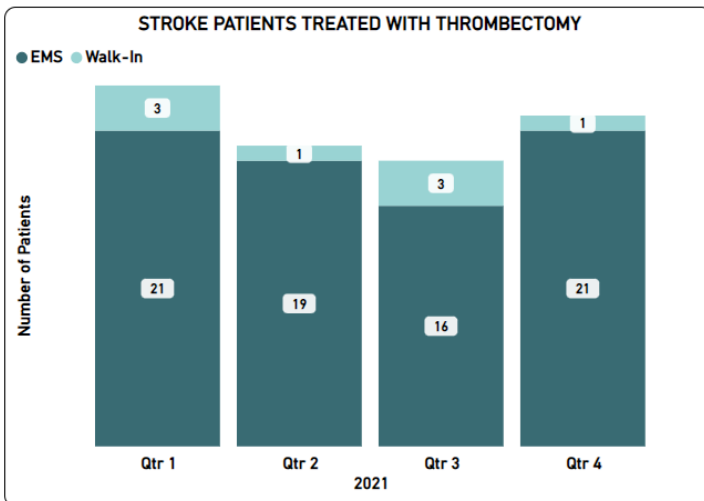
STROKE TREATMENT - IVtPA

IVtPA = Intravenous Tissue Plasminogen Activator



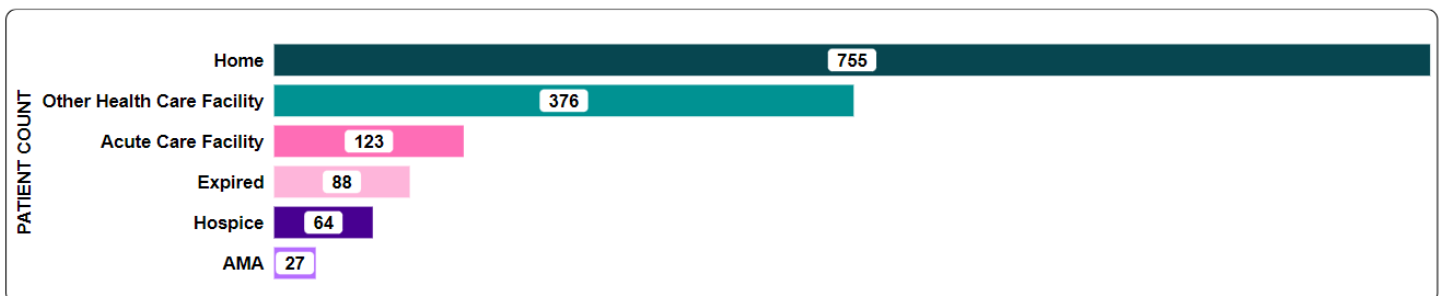
STROKE TREATMENT - THROMBECTOMY

TCASC = THROMBECTOMY CAPABLE ACUTE STROKE CENTER



Where patients are discharged from the hospital is often based on their ongoing needs for rehabilitation and recovery. Most patients are able to return home after their stroke.

DISPOSITION



Cardiac Arrest Management (CAM)



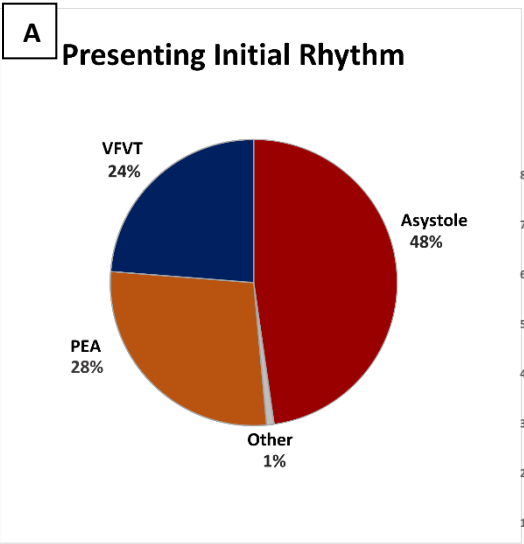
Cardiac Arrest Management (CAM) represents fourteen years of hard work from all our EMS Stakeholders. We have tracked our cardiac arrest statistics since 2007 and joined the national Cardiac Arrest Registry to Enhance Survival (CARES) Program in 2008, making a commitment to improve our survival rates. 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. While 2020 saw less witnessed cardiac arrests, likely due to COVID-19 restrictions, 2021 returned to pre-pandemic numbers. In particular the Utstein subset, patients who have a witnessed cardiac arrest and are found in a shockable rhythm, went from 11.5% of all presumed cardiac related cardiac arrests in 2020 to 15.6% in 2021. We still utilize the “Pulse Point” application for our cardiac arrest response, which alerts bystanders when there is a cardiac arrest in their vicinity. 2021 saw an increase in survival to hospital discharge for all cardiac arrest patients, including the Utstein subset which had a 10% increase from 2020.

Performance Data 5090

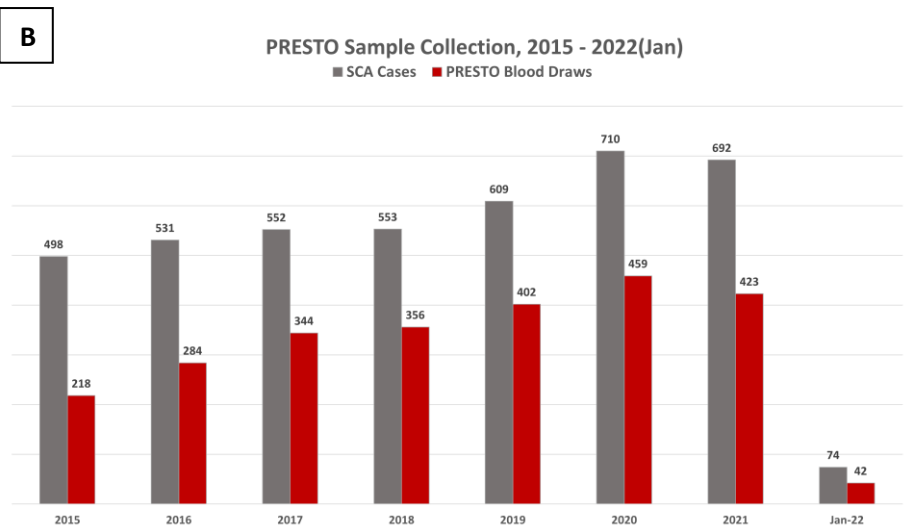
ALL PRESUMED CARDIAC	2018	2019	2020	2021
Patient Count	362	419	469	462
Bystander CPR Provided	52.3%	55.1%	53.5%	53.3%
Survival to Hospital Discharge	15.2%	12.6%	8.7%	9.1%
<i>CARES National Benchmark for survival to Hospital Discharge</i>	9.5%	9.9%	8.0%	8.1%
UTSTEIN: BYSTANDER WITNESSED/SHOCKABLE 1ST RHYTHM				
Patient Count	67	63	54	72
% of presumed cardiac arrests that are Utstein cases	18.5%	15.0%	11.5%	15.6%
Bystander CPR Provided	68.7%	74.6%	64.8%	79.2%
Survival to Hospital Discharge	49.3%	49.2%	22.2%	33.3%
<i>CARES National Benchmark for survival to Hospital Discharge</i>	32.7%	33.6%	29%	29.2%

P.R.E.S.T.O. Study Update

The **PRE**diction of **S**udden death in **mu**lTi-ethnic **c**ommunities **S**tudy represents seven plus years of hard work from all our EMS Stakeholders. We have tracked all Ventura County residents who suffered cardiac arrest and had resuscitation attempted since Feb 1, 2015. For each such case a blood sample is drawn by paramedics as specified in the protocol. This serves as the basis for the research conducted by the PRESTO group to improve the prediction of cardiac arrest by analysis of pre-hospital records, lifetime clinical history, and blood samples.



Performance Data for Feb 1, 2015-Jan 31, 2022



Bystander CPR: 54%
Response time: 6.1 ± 2.5 min
Response time > 4 min: 67%
Sustained ROSC: 31%
STHD: 13%

Figure A summarizes main findings of resuscitation outcomes since Feb 2015 among Ventura county residents who suffered a cardiac arrest related to heart disease. Overall, these results are significantly better than the national average. **Figure B** shows yearly trends in sample collection for the PRESTO study among overall cardiac arrest cases. There is a steady annual increase in rates of sample collection since 2015. These positive performance trends from EMS stakeholders continue to facilitate the PRESTO study goals.

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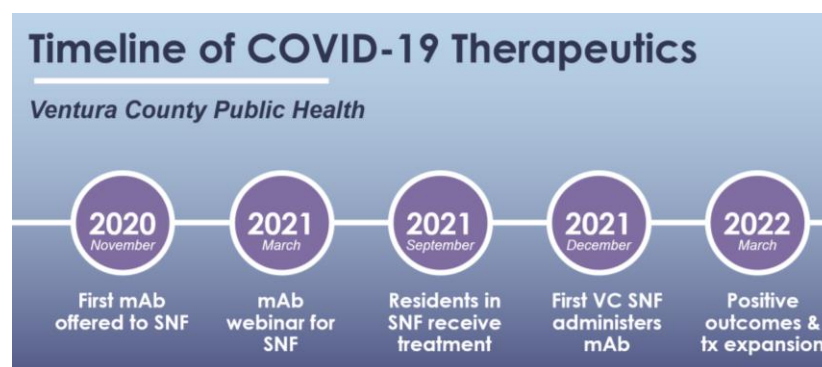
New PRESTO Research Findings have been published: A clinical algorithm for prediction of VF/VT (VFRisk) was developed from individuals in the Oregon Sudden Unexpected Death Study (SUDS) who suffered out-of-hospital sudden cardiac arrest with documented VF/pulseless VT and control subjects of whom the majority (67%) had significant coronary artery disease. This algorithm, VFRisk, constructed with 13 clinical, ECG, and echocardiographic variables successfully validated in the PRESTO study. This is the first time that a clinical risk score has been developed for prediction of shockable cardiac arrest. Given that defibrillation only works for shockable rhythms, this finding has generated significant interest in the field. We can now move the needle for improving clinical risk prediction to decide which patients would be the best candidates for surgically implantable defibrillators. Based on this publication a new study has been initiated and a clinical trial will be designed.

The Ventura County Health Care Coalition (VCHCC) continued to respond to the COVID-19 pandemic as we experienced the first, COVID winter surge. Vaccine outreach and inoculation efforts were in full swing and the VCHCC was able to play a vital role in liaising between the Ventura County Public Health Vaccine Task Force and VCHCC partners within medical/health and community-based organizations. The diverse representation of sectors within the VCHCC provided insight into its partners' workforce risk levels. Equipped with this information, the VCHCC successfully advocated for at-risk populations and workforce to be included in priority tiers through sound justification. Engagement with our partners afforded the VCHCC the ability to address the root cause of barriers, resulting in targeted messaging and content specific webinars as well as enhanced access to vaccine for vulnerable populations with limited technological or transportation resources.



The VCHCC continued to advise the Ventura County Public Health Officer on Long-Term Care (LTC) facility operations and assisted with updates to COVID guidance documents through March 2021, when Ventura County fully aligned with the State infection control recommendations and requirements. March also marked the closure of our last remaining LTC COVID Holding Unit.

As COVID response efforts ebb and flowed throughout the year, the VCHCC remained ready to assist its partners – sharing information about hotels for healthcare workers, advising of product extensions, fulfilling resource requests, issuing guidance clarification on common areas of opportunity observed by the Communicable Disease LTC team in the field, and augmenting VCHCC partners' disaster cache of personal protective equipment and testing supplies.



As COVID cases climbed in the late Fall/early Winter months, the VCHCC held several webinars and disseminated information regarding the most current therapeutic options. The decision was made to start a self-sufficient program to implement, teach, and empower administration of monoclonal

antibody (mAb) treatment in Skilled Nursing Facilities (SNF). The program began with a concept to approach COVID-19 much like influenza, wherein all SNF residents are offered vaccination but also have access to treatment after a positive test and as soon as possible after symptom onset. In an effort to provide the best protection available to this vulnerable population the program aimed to achieve sustainability in making early treatment of COVID-19 a standard of care in SNFs with the intent of decreasing disease progression and hospitalization. The first Ventura County SNF resident received treatment in September, made available through VCHCC and MHOAC coordination of resources and clinicians to administer the treatment. On December 5th the first SNF in Ventura County treated their residents under the newly implemented, sustainable program.



The COVID-19 pandemic has shone light on the disparities in healthcare and disaster response, emphasizing the need to ensure that individuals who may be disproportionately impacted during emergency situations are not only considered but engaged in the planning cycle. Recognizing the need for more inclusive planning, the VCHCC and its partners participated in planning efforts throughout 2021 to prepare for and anticipate the needs of community members living with disabilities and individuals who may have access and functional needs.

Aside from COVID response efforts, the VCHCC was involved in a number of other notable activities. The VCHCC sent a number of incident advisories for Public Safety Power Shutoff events, an excessive heat warning, and cybersecurity notifications. The VCHCC was proud to see our Mission in action when one of our partners was able to support a resource request from the California Medical/Health Mutual Aid Region I. In the evening hours prior to a holiday weekend, the Regional Disaster Medical Health Specialist reached out to the Medical Health Operational Area Coordinators requesting blood for a Level II trauma center in another county that had critically low supplies. Despite the VCHCC partner's own supplies remaining low, they filled the request.

During times when COVID cases were low and no activations were in place the VCHCC was able to shift our focus from response to preparedness, conducting the 2021 medical and health Hazard Vulnerability Analysis (HVA), updating our Situation Status Report (SitRep), participating in drills, and dedicating time to write and review plans.

The HVA results ranked the following hazards highest for likelihood to impact our operational area, the VCHCC partners' facilities, the demand for services, and patient/client/resident population: (1) Earthquake, (2) Emerging Infectious Disease, (3) Fire, (4) Electrical Failure/Outage, (5) Drought, (6) Resource Shortage, (7) Communications Failure, (8) Supply Chain Failure, (9) Cyber Attack/Information System Failure, and (10) Air Quality Issue.



The SitRep was modified to allow for our partners to complete the report more quickly in emergency situations; the number of questions included were reduced and other questions enhanced. A dashboard was created to allow for more efficient analysis of SitReps in the DOC/EOC.

The VCHCC Preparedness and Response Plan was updated, a new Pediatric Surge Annex was compiled, and information regarding an opportunity to participate in the Office of Emergency Services' County Emergency Operations Plan Update and workshops was disseminated through our network of medical/health and community-based partners.

Concluding the second year of COVID-19 pandemic response, we continue to remain in awe of our partners' resiliency and commitment to the community members in Ventura County whom they serve.

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 IQVIA Get With The Guidelines Registry (GWTG) for our Stroke Program, Cardiac Arrest Registry to Enhance Survival (CARES) for our Sudden Cardiac Arrest Program, Trauma Registry for our Trauma System, and Get With The Guidelines-Coronary Artery Disease (GWTG-CAD) for our STEMI data. Countywide EMS providers use the Image Trend 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 2021 Mission Lifeline Gold Plus Level Award for outstanding performance in STEMI data measures. In reviewing our Sudden Cardiac Arrest data, we saw an increase in our survival rate percentages from 22% to 33%, along with an increase in our bystander CPR from 65% to 79%. This increase is occurring as we recover from COVID-19 and can resume in-person “hands only” CPR classes. “Stay at home” restrictions became less in 2021, therefore we saw an increase in public cardiac arrests where they could receive quicker attention.

We follow the American Heart Association (AHA) recommendations for the care of our Stroke patients. We exceed the benchmarks for many of the measures put forth by the AHA.

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 virtually in 2021, which was presented in both English and Spanish. This included videotaped presenters and a live panel discussion. We were able to reach many more residents this way and will most likely continue this forum in 2022.

Due to COVID-19, Ventura County EMS moved from in-person paramedic skills lab training to an on-line educational platform. In addition, various critical procedures, such as advanced airway, transcutaneous pacing, and intraosseous infusion are monitored regularly through the First-Watch data surveillance software. Ventura County’s two Trauma Centers also actively participate in data collection, which helps to identify severity index scores on EMS trauma patients. We can analyze this data and use it for injury prevention education in the community. To help decrease incidents of pedestrians being struck by cars, 1,000 reflectors were purchased and handed out at community events along with education. Data measures are patient focused and implementation for improvement is timely and sustainable through the collaboration of our key stakeholders.

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.

- William Gallaher – Representing District 1 Supervisor Matt LaVere
- Diane Starzak – Representing District 2 Supervisor Linda Parks
- Craig Stevens – Representing District 3 Supervisor Kelly Long
- Bob Brooks – Representing District 4 Supervisor Bob Huber
- Michael O’Malia – Representing District 5 Supervisor Carmen Ramirez
- Audra Strickland – EMS Agency Appointed Representative
- Daniel Shepherd, MD – EMS Agency Appointed Representative



Ventura County Emergency Medical Services Agency

2220 E. Gonzales Rd. #200, Oxnard, CA 93036

805-981-5301 (Office) 805-981-5300 (FAX)

www.vchca.org/ems

email us at emsagency@ventura.org



VENTURA COUNTY
PUBLIC HEALTH



VENTURA COUNTY
HEALTH CARE AGENCY

VENTURA COUNTY EMERGENCY MEDICAL SERVICES AGENCY

A Division of Ventura County Public Health Department

A Department of Ventura County Health Care Agency