



SANTA CLARA COUNTY  
EMERGENCY MEDICAL SERVICES  
2019 ANNUAL REPORT  
PRESENTED TO  
HEALTH AND HOSPITAL  
COMMITTEE  
9-23-20

## Table of Contents

Mission, Vision & Values .....	2
Message from the Director .....	3
Disaster Medical Response and Preparedness.....	4
Medical Volunteers for Disaster Response (MVDR) .....	4
All Hazards Coordinator (EMS).....	4
Medical-Health Operational Area Coordinator (MHOAC) Program.....	5
Gilroy Garlic Festival Mass Shooting.....	5
PG&E Public Safety Power Shutoff Events.....	6
Response and Transport.....	7
Certification.....	9
Permitting.....	11
Investigation & Enforcement.....	13
Education and Training.....	14
Data Collection.....	16
Patient Care Data System.....	16
Quality Assurance (QA) and Quality Improvement (QI).....	20
Acetaminophen Protocol.....	21
Community Paramedicine Pilot Program.....	24
Trauma.....	27
Stroke.....	32
ST-Elevation Myocardial Infarction (STEMI).....	37
Communications.....	40
Hospital Bypass.....	41
Ambulance Patient Offload Time.....	43
EMS Trust Fund.....	45
Outstanding Achievements.....	47
Summary.....	48

## Mission, Vision & Values

### **Mission**

The Santa Clara County Emergency Medical Services Agency is an essential service dedicated to ensuring the provision of quality patient care to the people of Santa Clara County through collaboration, facilitated regulation and system management.

### **Values**

Dignity and Respect: We treat people with dignity and respect.

Progressive Innovation: We are dedicated to the continuous improvement of our processes and systems, based on science, data, and best practices.

Professionalism and Objectivity: We treat all individuals and organizations professionally, fairly and without prejudice.

Leadership: We lead through collaboration and facilitation to ensure accountability, the provision of quality patient care, while ensuring fiscal and operational stability.

Participation: We value the contributions of the public, other agencies and organizations in the development, implementation, and evaluation of the Santa Clara County EMS System.

### **Vision**

Ensuring an EMS system in Santa Clara County that provides safe, quality, and effective prehospital care.

## Message from the Director

It is with great pride that I present to you the activities and accomplishments of the Santa Clara County Emergency Medical Services (EMS) Agency for 2019. As we look back on 2019, we recall it was an exciting yet challenging time for the EMS Agency. This report is about the abundant energy, immense collaboration, incredible expertise, and unwavering commitment of EMS Agency staff to serve the people of Santa Clara County. Here, we provide a mere glimpse of their efforts and results.

The EMS Agency has spent its energy engaging stakeholders in planning and executing policies and procedures. During the year, many people have worked with EMS Agency staff to share their expertise and perspectives, collaborating and coordinating on issues related to the care of trauma, cardiac, stroke, and pediatric patients; EMS protocol development, air medical services, ambulance transportation; licensing and compliance, permitting, and any other issues that may arise. Therein lies one of the important strengths of our EMS system; the desire of people to work together to ensure it is continually improving.

Our dedicated professionals handled 124,394 emergency responses for persons in need of care and transported 83,860 (excluding Palo Alto). Our EMS first responders maintained a response time compliance of 91.5% for the year 2019, exceeding their minimum performance standard of 90%.

In addition, the Santa Clara County EMS Agency, in partnership with the EMS system's Ambulance and Fire providers, became one of the first systems in California to use intravenous acetaminophen for mild to moderate pain management.

The year 2019 will forever be remembered for the disastrous event in Gilroy on July 28, when a lone gunman, donning a bullet proof vest and armed with an assault rifle, began to open fire on attendees of the Gilroy Garlic Festival resulting in three (3) deaths and at least 17 wounded.

Santa Clara County experienced a PG&E Public Safety Power Shut Off (PSPS) twice in October impacting 1,903 Baseline Medical Equipment customers and 733 durable medical equipment users. The EMS Agency dedicated approximately 570 hours of personnel time to planning, response and mitigation efforts related to these shut offs.

*Jackie Lowther*

## Disaster Medical Response and Preparedness

### **Medical Volunteers for Disaster Response (MVDR)**

In 2019, the MVDR Program conducted a reconciliation of all member lists and records. This process took approximately six (6) months and consisted of each current member being contacted via standard mail and electronic mail to solicit their level of continued engagement in the program. Two separate rosters were created out of this process and will be maintained to assist with response efforts in our Operational Area. The first roster contains 50 volunteers who requested to remain active in the State of California Disaster Health Volunteers (DHV) database. These volunteers are typically referred to as spontaneous and elect only to be activated and vetted during a significant disaster. The second roster contains 85 members who requested to remain active members of the MVDR Program. The membership continues to be diverse and span a large range of medical capabilities and support functions including logistics personnel, physicians, pharmacists, nurses, paramedics, emergency medical technicians (EMTs), dispatchers, and allied health personnel.

The MVDR Program's current mission focuses on public education through Hands Only Cardiopulmonary Resuscitation (CPR) Training and Stop the Bleed Campaigns, as well as disaster incident response. Over the next year, the MVDR Program will be restructured to increase deployable members and increase core numbers through recruitment outreach.

### **All Hazards Coordinator (EMS)**

In 2019, the EMS All Hazards Coordinator executed the following:

- led Medical-Health planning and operational efforts
- increased visibility/knowledge about the Medical Health Operational Area Coordinator Program
- developed and submitted requests in response to State Homeland Security Grants Program
- conducted equipment training and maintenance
- led the weekly development and distribution of an EMS System Action plan that includes planned events occurring in each jurisdiction within the County, and
- participated in collaborative training.

The EMS All Hazards Coordinator and County Behavioral Health Substance Use Treatment Program were instrumental in establishing Naloxone Programs with Law Enforcement Agencies. These programs established departmental policies that were approved by the EMS Agency which included the administration of the medicine, storage, training, and quality improvement programs. The purpose of these programs was to train peace officers in the administration of Naloxone to a suspected opioid overdose patient provided they arrived on scene before Fire or EMS resources and subsequently decreasing the risk of death by opioid overdose. During the year, 100% of law enforcement agencies county-wide established programs and now deploy the medication with all officers on patrol.

### **Medical-Health Operational Area Coordinator (MHOAC) Program**

The Medical-Health Operational Area Coordinator (MHOAC) is a shared role between the County Health Officer/Public Health, EMS Director or assigned designee. The MHOAC, in cooperation with local public health, local EMS Agency, local office of environmental health and local department of mental health are responsible for ensuring Medical-Health disaster planning, response, mitigation, and recovery for their respective operational area. During 2019, the program managed response operations for several significant events including the Gilroy Garlic Festival Shooting in July and the PG&E Public Safety Power Shutoffs in October.

### **Gilroy Garlic Festival Mass Shooting**

Founded in 1979, the Gilroy Garlic Festival is hosted by thousands of community volunteers who have raised millions of dollars for local schools, charities and non-profit organizations. The Gilroy Garlic Festival is a summer food festival that extends over three full days and is typically attended by over 100,000 people. On July 28, 2019 at 5:41pm, a lone gunman donning a bulletproof vest breached a security fence, armed with an assault rifle and high capacity magazines, opened fire on attendees of the event. This active shooter incident prompted a Level 2 Mass Casualty Incident (MCI) Activation; summoned hundreds of law enforcement officers from various agencies across the County and outside of its borders; the response of all Gilroy Fire Department resources; mutual aid responses from various Fire Departments countywide and had a total response of 26 separate EMS resources. This tragic mass shooting resulted in three (3) deceased victims, at least 17 other victims wounded, and the FBI classifying this as a domestic terrorism incident. During the event, patients were rapidly distributed in a coordinated effort to four (4) hospitals in Santa Clara County by both ground and air ambulance. This incident tested the County's MCI Plan and was able to be mitigated with few losing their lives. This would not have been possible without a coordinated response, mitigation, and recovery effort by various first responder agencies and acute care hospitals countywide that are dedicated to multidisciplinary training exercises and preparedness over the last five (5) years.

### **PG&E Public Safety Power Shutoff (PSPS) Events**

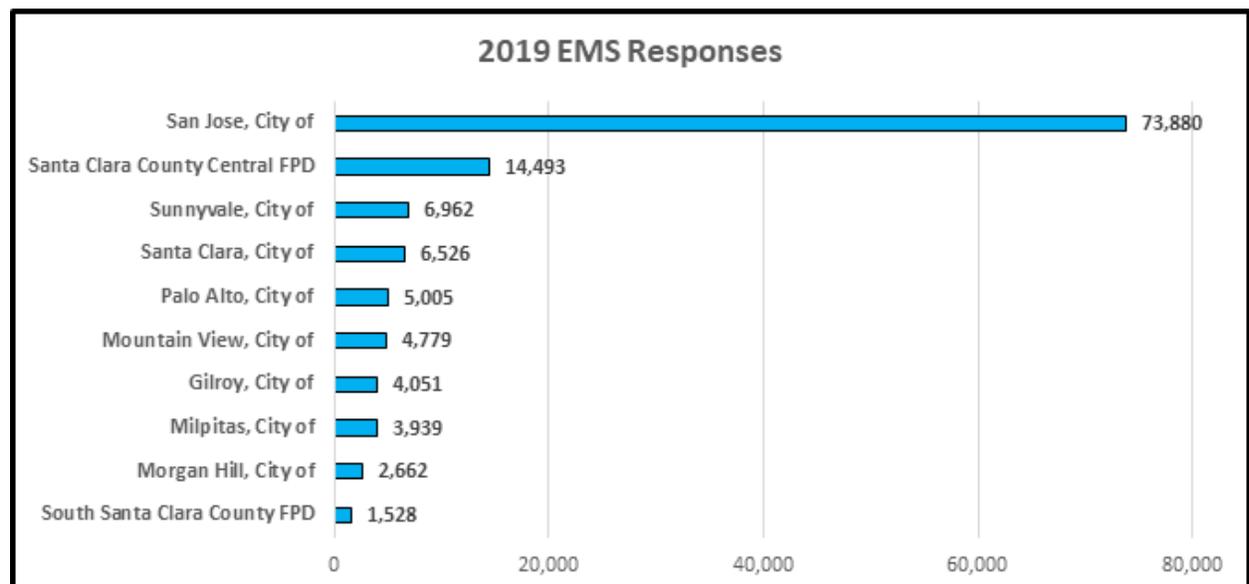
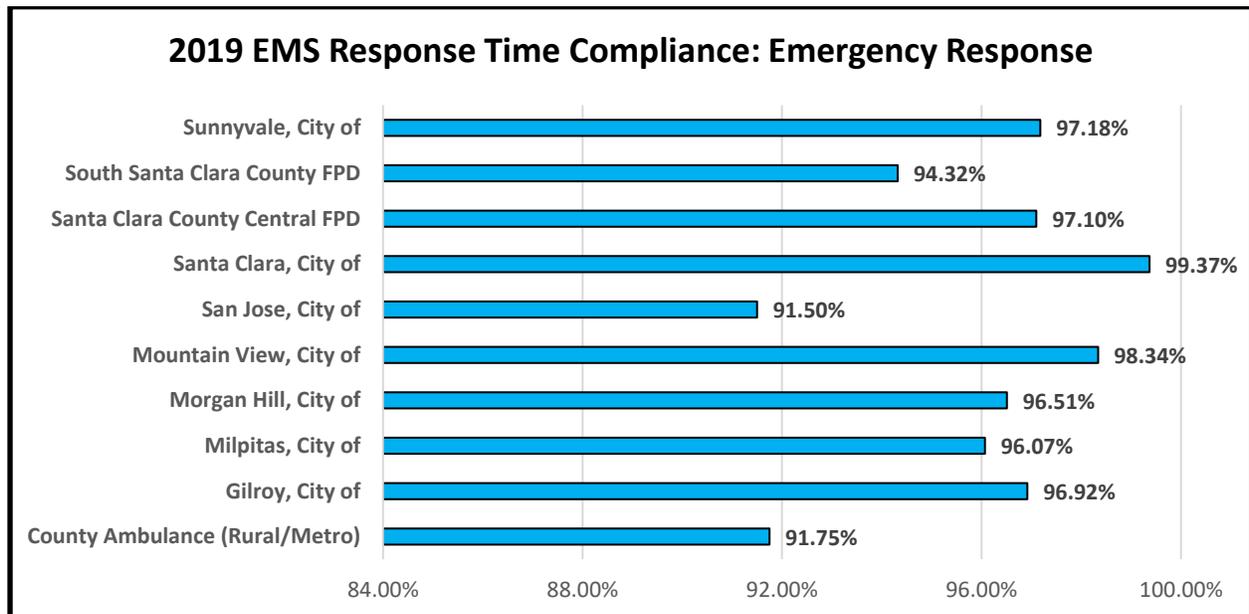
During the first PG&E PSPS event that occurred from October 7-October 10, the EMS Agency and Public Health Department worked collaboratively to address the needs of PG&E customers who had been identified in the Baseline Medical Equipment Program (BMEP). The original notification prior to the start of de-energization from PG&E stated that a total of 1,086 BMEP customers identified would be in the affected area of the de-energization. Thirty-eight individuals on that list were unable to be contacted by PG&E and required follow up contact by the County to address any needs. This was completed in a coordinated effort by the EMS Agency, County Public Health Department, County Sheriff's Office, Emergency Management personnel from various cities, and local law enforcement. The EMS Agency and Public Health Department additionally contacted 11 skilled nursing/residential health care facilities and two (2) hospitals in the affected areas to ascertain their needs related to this event. None of the facilities contacted expressed needs or concerns.

During the second PG&E PSPS event that occurred from October 25 through October 28, the EMS Agency and Public Health Department were notified that a total of 817 BMEP customers resided in the affected areas. Of the 817 customers, only 14 required follow-up by the County. During this event, the EMS Agency and Public Health Department leveraged access to emPower data, which gives appropriate agencies the ability to discover the electricity-dependent Medicare population in their state, territory, county, and ZIP Code. A total of 733 additional electricity-dependent durable medical equipment (DME) users were identified in the impacted areas. These impacted users were then prioritized based on the level of life-saving support provided by their equipment.

Both events were managed successfully through the collaboration, dedication and commitment of the Operations Section at the County Emergency Operations Center, Medical-Health Branch and Field Personnel. During the two PSPS events, the EMS Agency dedicated approximately 570 hours of personnel time to planning, response and mitigation efforts.

## Response and Transport Performance

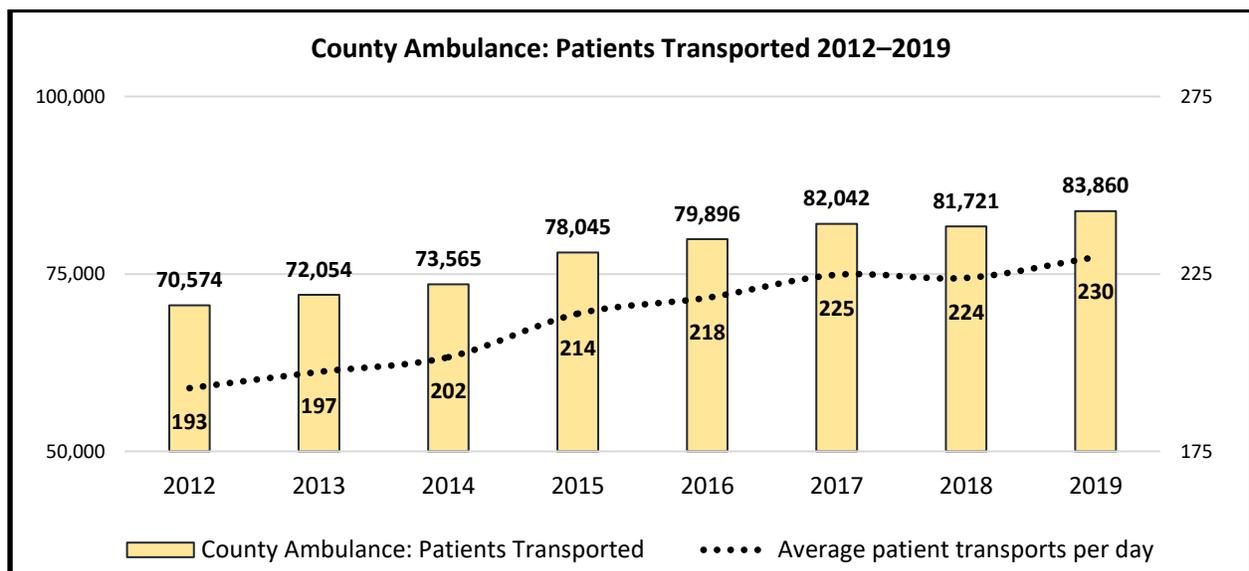
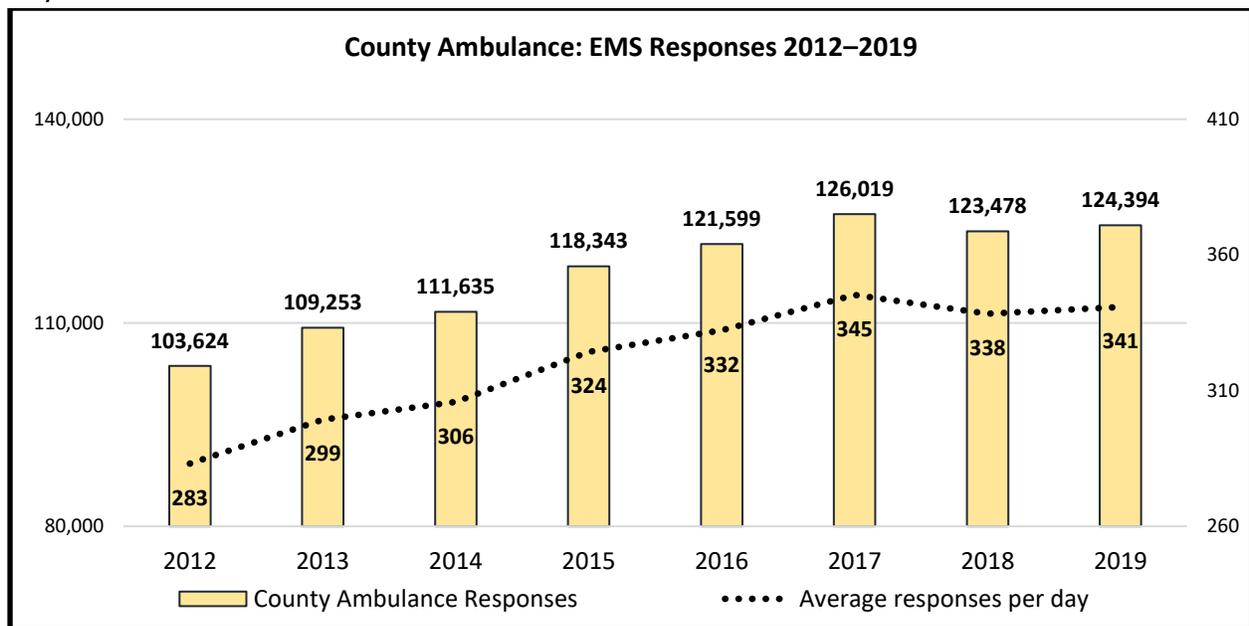
The County currently maintains ten (10) agreements for emergency medical services. Response time performance is a key performance indicator for assessing compliance with the agreement requirements. Response time performance is measured monthly. The minimum performance standards for response time performance is 90.00%. The following chart measured month-to-month average Code 3 (lights and sirens) response performance for 2019.



## Response and Transport Performance (continued)

Another key performance indicator used to measure system performance is response and transport utilization. In 2019, the County Emergency Ambulance Provider responded to 124,394 calls for service. Those responses resulted in 83,860 patients being transported to local hospitals, which averaged to 230 transports per day. From an average daily perspective (24 hour), the County Emergency Ambulance Provider responded to 341 calls for service. From a narrower frequency perspective, there were 14 responses per hour or one response every 4½ minutes. In 2019, responses and transports increased slightly as compared to the previous

year. Responses increased by 1% or three more per day and transports by 2.5% or six more per day.



## Certification

Within the EMS System, there are over 2,700 Emergency Medical Technicians (EMT), Paramedics, Critical Care Transport Registered Nurses (CCT-RN), Mobile Intensive Care Nurses (MICN), Emergency Field Supervisors (EFS), and EMS Duty Chiefs. The Agency is responsible for assuring that each of these providers meets the minimum training and education standards to perform at their respective position. When a new provider enters the EMS System, they are required to apply to the EMS Agency, complete a Department of Justice and FBI background check and submit the required completed training documents. Additionally, applicants are required to pass a 50-question written examination. Once an individual completes the application and examination processes, they are provided an EMS System Identification Badge and are eligible to work in our EMS System.

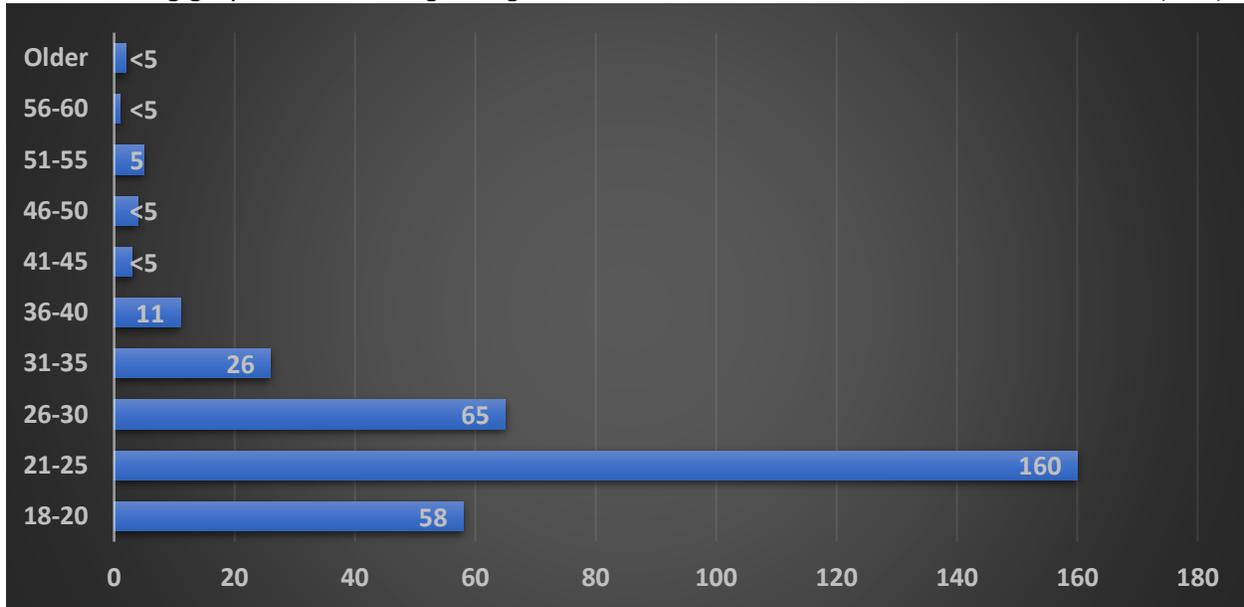
Every two years, EMS personnel must recertify with the EMS Agency by demonstrating they have completed the required continuing education hours (48 hours for paramedics and 24 hours for EMTs), as well as skills verification through direct observation in ten specific areas of patient care (EMT only).

The County of Santa Clara EMS Agency began tracking all EMT Initial applicants' age, gender, race/ethnicity, and previous criminal convictions, investigations, certificate restrictions and denials as required by assembly bill 2293 (AB2293 Reyes. Emergency medical services: report).

Santa Clara County EMS System Orientation Examination 2019						
Attempt 1	Pass	Fail	Pass %	Fail %	Tested	Did Not Return
EMT	297	353	46%	54%	650	
Paramedic	82	40	67%	33%	122	
Attempt 2	Pass	Fail	Pass %	Fail %		
EMT	281	38	88%	12%	319	34
Paramedic	33	0	100%	0%	33	7
Attempt 3	Pass	Fail	Pass %	Fail %		
EMT	26	7	79%	21%	33	5
Paramedic	0	0	N/A	N/A	0	0
Attempt 4	Pass	Fail	Pass %	Fail %		
EMT	7	0	100%	0%	7	0
Paramedic	0	0	N/A	N/A	0	0
Totals	Pass	Fail	Pass %	Fail %		
EMT	611	398	61%	39%		
Paramedic	115	40	74%	26%		
726	# of Providers completing the Exam with a passing score					
46	# of Providers NOT completing the Exam with a passing score					

## Certification (continued)

The following graph shows the age range of EMTs who certified for the first time in 2019 (335).



The following table shows the total number of accredited providers at the end of 2019.

Provider	EMT	Medic	RN
American Medical Response	15	0	11
CALSTAR	0	9	6
County Fire	144	95	0
Falcon Critical Care Transport	46	0	12
Falck	68	4	6
Gilroy Fire	15	20	0
Milpitas Fire	30	29	0
Moffett Field	39	0	0
Mountain View Fire	36	29	0
NorCal Ambulance	152	0	35
Palo Alto Fire	39	52	0
ProTransport-1	74	19	28
Royal Ambulance	131	0	15
CAL FIRE	20	25	0
San Jose Fire	466	177	0
Santa Clara Fire	79	49	0
Sunnyvale DPS	189	0	0
Silicon Valley Ambulance	38	8	0
Westmed Ambulance	66	6	6
Rural/Metro	204	172	0
Valley Medical Center MICN	0	0	39
<b>Totals</b>	<b>1851</b>	<b>694</b>	<b>158</b>

## Permitting

The Permit Officer is responsible for ensuring Fire apparatus or EMS resource compliance with all the provisions of Chapter XVI of Division A18 of the County of Santa Clara Ordinance Code. Having all agencies self-inspect their apparatus alone is not sufficient. Conducting an audit of the fleet helps ensure compliance. ImageTrend License Management lists all vehicle inspections that have been conducted by Agency staff and the date of each inspection. The database can be used to find the total number of inspections conducted each year. Emergency Medical Service providers must pay for permits on an annual basis. If the EMS Agency discovers an unpermitted apparatus that is operating in the county, providers will be subject to a financial penalty. When auditing providers, the EMS Agency can point out any issues to providers that may subject them to penalty. The cost of a permit includes County audits/inspections at no additional charge. When the EMS Agency staff inspects emergency vehicles, the inspector ensures that all the necessary supplies and equipment are on the vehicle to provide the best possible care for the people of Santa Clara County in a medical emergency. The EMS Agency had a goal of inspecting at least 15% of all permitted emergency medical vehicles in the county on a yearly basis. In 2019, the Agency was able to physically inspect 64 out of 440 permitted vehicles or 15%.

### Non-911 Private Ground Ambulance Providers (2019):

Provider	Levels of Service
American Medical Response – Sutter	CCT, BLS
Bayshore Ambulance*	CCT, BLS
Falck North America	CCT, ALS, BLS
Falcon Critical Care Transport	CCT, BLS
NORCAL Ambulance	CCT, BLS
ProTransport-1	CCT, ALS, BLS
Royal Ambulance	CCT, BLS
Silicon Valley Ambulance	ALS, BLS
Westmed Ambulance	CCT, ALS, BLS

ALS = Advanced Life Support (Paramedic), BLS = Basic Life Support (EMT), CCT = Critical Care Transport (Nurse)

\*Bayshore Ambulance ceased operations in Santa Clara County effective April 28, 2019

**Permitting (continued)**

**Number of Non-911 resources (at the end of 2019):**

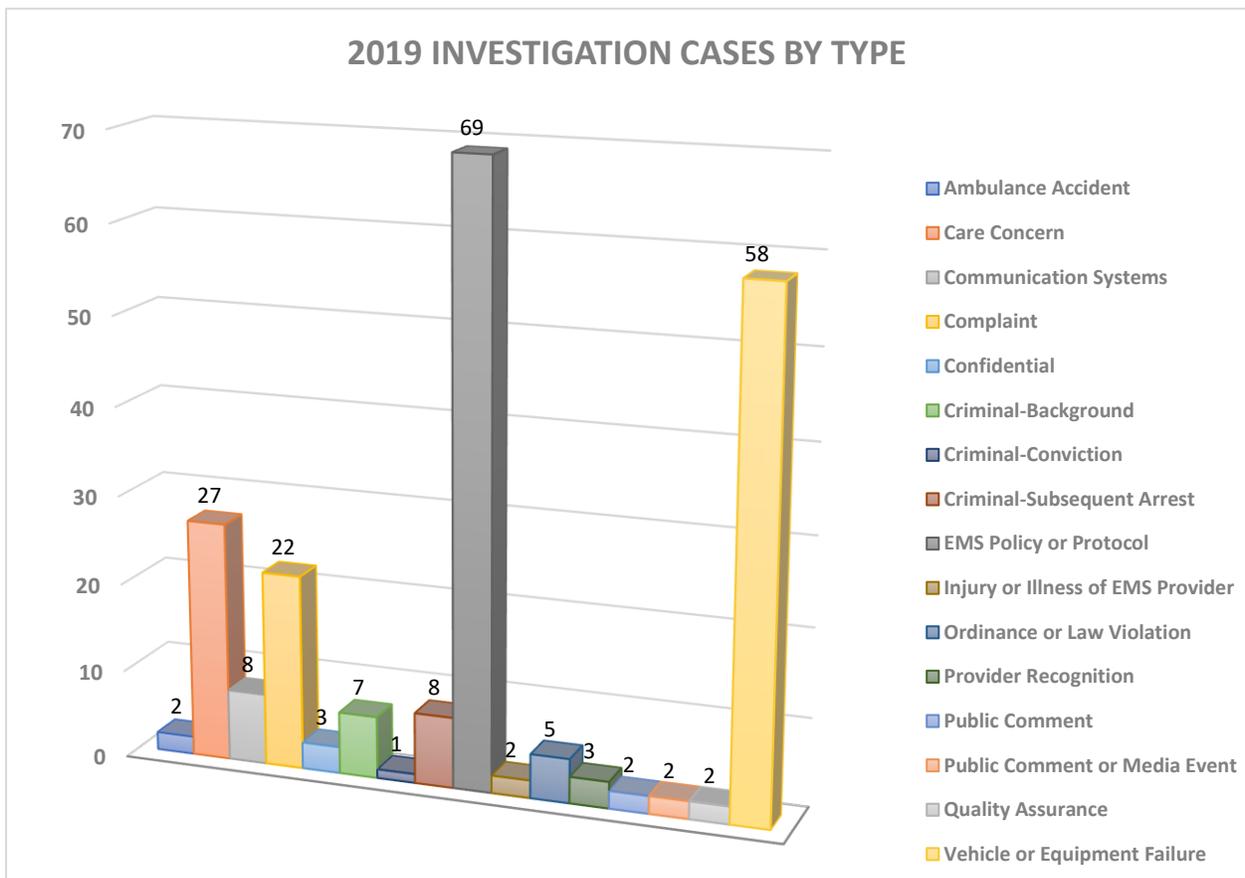
<b>Provider</b>	<b>Santa Clara County Resources</b>
American Medical Response - Sutter	7
Falck North America	14
Falcon Critical Care Transport	9
NORCAL Ambulance	6
ProTransport-1	30
Royal Ambulance	29
Silicon Valley Ambulance	9
Westmed Ambulance	22

**Number of EMS Agency field inspections of ambulances and fire apparatus, during CY2019:**

<b>Resource Type</b>	<b>Inspections</b>
Ambulances (Fire, EOA, and Non-911)	53
Fire Apparatus (Non-Transport)	8
Quick Response Vehicle (EOA)	3

## Investigation and Enforcement

The County of Santa Clara EMS Agency investigates allegations of misconduct, ensures that each provider is safe, professional and ensures compliance with state regulations. In 2019, the EMS Agency reviewed 221 cases that included vehicle/equipment failures, care concerns, complaints, arrests or convictions, and policy or protocol variances. All cases are entered into an online database where they are assigned, tracked and dispositioned. Should an issue arise, the EMS Agency will work with the individual's employer to ensure a formal investigation is completed. Depending on the issue, the EMS Agency may be required to refer the case to the State EMS Authority. Upon completion of an investigation, the Santa Clara County EMS Agency's Medical Director (EMS Medical Director) may take action against a holder's certification that may include denial, suspension, revocation, or placing certification on probation.



## Education and Training

### Public Education

In 2019, the EMS Agency promoted multiple public education outreach campaigns. Each month, the EMS Agency provides educational campaign materials to every fire department and ambulance service within the Santa Clara County EMS System. These materials include educational flyers, postcards, posters, and pamphlets to distribute to the community, and talking points for use during presentations. By coordinating the public education campaigns within the EMS System, the public message is consistent, regardless of which organization provides the message. Education materials are also provided in Spanish and Vietnamese.

Public Education
<i>Carbon Monoxide Poisoning</i>
<i>Influenza</i>
<i>Lifesaving Information for Emergency (L.I.F.E.) Files</i>
<i>Pool Safety</i>
<i>Preventing Snake Bites</i>
<i>STROKE Awareness</i>
<i>Heart Attacks, Heart Attacks and Women</i>
<i>Heat Related Illness</i>
<i>Falls and Seniors</i>
<i>"Pull to the Right for Sirens and Lights"</i>

### EMS System Education

Continuing Education is a focus for all Paramedics and EMTs in any EMS System. Not only is it required for the renewal of licensure and certifications, but it helps first responders stay current on best practices and advancements in medicine. This year, the entire EMS System participated in training that focused on abuse. First responders are in a unique situation where the community invites them into their home during a time of need. Unfortunately, sometimes these medical emergencies are the result of abuse. Some are obvious and others are not. This training focused on the categories of abuse and the signs and symptoms that may be present. The first responders looked at examples of partner abuse, elder abuse, child abuse, and sexual assault. They learned about the characteristics associated with the profile of the typical abuser of a spouse, of the elder, and of children, as well as the typical assailant of sexual assault. They learned how to identify the profile of the "at-risk" spouse, elder and child. A key strategy for preventing any recurrence of abuse is establishing a support network for the victim. As such, first responders reviewed the resources available in our local community, including facts such as websites, phone numbers, locations, and other contact information. The focus was on how they, as care givers, can provide care for the abused patient not just in that moment of need but helping them for the days ahead.

In addition to the system-wide training on abuse, all EMTs within the EMS System were required to complete training to expand upon their scope of practice. The scope of practice for all EMTs within the state of California was expanded to include the administration of Naloxone for patients being treated for an overdose, the administration of aspirin for patients being treated for chest pain, and the use of a glucometer as a diagnostic tool for the assessment of a patient with an altered level of consciousness or suspected hypoglycemia (low blood sugar). This training was completed by the end of 2019 and became standard scope of practice for EMTs in Santa Clara County on January 1, 2020.

## Education and Training (continued)

Permitted Training Program	EMT	Paramedic	Continuing
Foothill College	✓	✓	✓
Gilroy Fire Department			✓
HeartShare Training Services, Inc			✓
Milpitas Fire Department			✓
Mission College	✓		✓
MOF / NASA Aimes Fire Department			✓
Mountain View Fire Department			✓
National University	✓		✓
Palo Alto Fire Department			✓
San Jose City College	✓		✓
San Jose Fire Department			✓
Santa Clara City Fire Department			✓
Santa Clara County Ambulance			✓
Santa Clara County Fire Department			✓
Silicon Valley Ambulance	✓		✓
So. Bay Reg. Public Safety Training Consortium	✓		✓
Stanford University	✓		✓
Sunnyvale Dept. of Public Safety	✓		✓
WestMed College		Closed	

### Patient Care Data System

In 2019, the EMS Agency focused on revising the main governing policies of the EMS Patient Care Data System. These policies had not reflected the recent changes in State regulations mandating the records systems to be electronic and compliant with the National and State data set. The EMS Data Task Force, and several other key stakeholder committees, dedicated several meetings throughout the year to ensure the revised policies reflected the most current requirements and standards of practice.

Policy 503 – EMS Patient Care Data System Overview, provides a great explanation of what the Santa Clara County EMS Patient Care Data System is comprised of. The main components are:

1. **Image Trend Elite Online** – The main component of the EMS Data System which accepts patient care data from each of the provider’s patient care documentation solution(s) through a data exchange and makes it accessible to authorized users. This solution is also utilized by authorized users to access and view electronic patient care records (ePCR) provided by their agency.
2. **Image Trend Elite Field** – The County provided ePCR solution provides a means to document patient care data from the scene of the call, where it immediately becomes accessible to authorized users.
3. **Hospital Hub** – Is a web based accessible software platform that provides access for authorized hospital staff to retrieve patient care reports (ePCR) of patients who have been transported to their facility from the 911 EMS System.
4. **Report Writer** – Within the Image Trend Elite Online this imbedded data analytic solution that may be utilized by authorized users for quality assurance, quality improvement tasks, simple or complex data reporting.
5. **License Management** – An electronic web-based solution providing certification and accreditation of EMS personnel, EMS vehicles and EMS programs. Personnel records created allow authorized users to access Image Trend Elite Online and Elite Field. Vehicle records are synchronized with data elements in Image Trend Elite Field.
6. **Patient Registry** – A specialty center database (usually for trauma, stroke or STEMI) that works in conjunction with Image Trend Elite allowing ePCR data to link the prehospital ePCR to the hospital EHR, thus allowing for analytics to be performed utilizing data from both the field care as well as in hospital care.

Policy 500 – Electronic Patient Care Record (ePCR) Documentation, details the requirements of each patient care chart that must be submitted for every patient contact that originates in the Santa Clara County operational area.

## Data Collection (continued)

Training for these two policies was provided to every EMS Provider through the EMS Annual Update Training in October 2019. In addition, the users of the Image Trend Elite Field, which mainly consists of the 911 System EMS Providers, received additional training on the revised charting platform in Elite Field.

Policy 509 – Elite ePCR Documentation Guideline, serves as a document guide of the most current charting process. This policy was intended to capture the elements that are mandatory for patient care documentation according to current regulations and standards of practice, meanwhile providing a practical guide of instruction for all users.

The revision of the charting platform, or run form, took nearly half the year to revise, test and perfect. This newly designed run form allows for the EMS Provider to quickly document the assessment of vital signs and other values using power tools within the system. These power tools have been arranged in such a way that provides consistency with the assessment and treatment outlined in the Prehospital Care Protocols. This redesign began with the focus to ease the capture of the necessary data while the EMS Provider is at the patient's bedside. This enables the real time transfer of the most current EMS collected data to be made available in the Hospital Hub. Thus, allowing the ePCR to be present at the hospital as soon as the facility is selected.

This redesigned run form also included improvements in the collection of G.F.A.S.T. (gaze abnormalities, facial droop, arm drift, speech abnormalities, time last seen normal) tool used for stroke assessment and documentation. The EMS Provider may now record the GFAST assessment multiple times as each element is now treated as a separate vital sign. This increases successful documentation of the multiple assessments that may occur as a patient's stroke symptoms may evolve or lessen throughout the patient encounter time.

The EMS Agency was pleased to create the first of its kind Abuse and Neglect documentation section inside the EMS ePCR. This new section allows the EMS Provider the opportunity to formally document the appropriate findings during the patient encounter. This section also provides the EMS Provider with assessment questions that the provider may be too hesitant to ask leaving the abuse undocumented or unrealized as a factor of the 911 event.

## Data Collection (continued)

In light of the all the significant improvements described that have been made to the data systems to assist the EMS Provider in the completion of the run form, the EMS System and Hospital System will benefit from the timely submission of PCRs for time sensitive injuries. In patient care scenarios that involve time sensitive injuries (such as: Stroke, Heart Attacks or Major Trauma), the PCR provides the hospital care teams with valuable information to assist in the rapid care and treatment of these severe injuries.

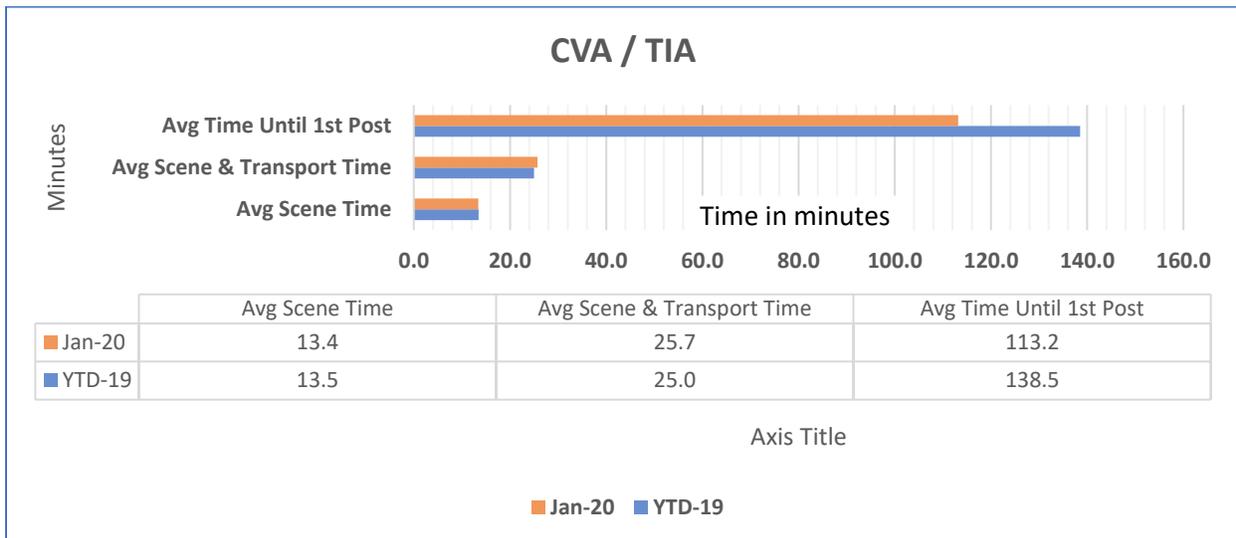
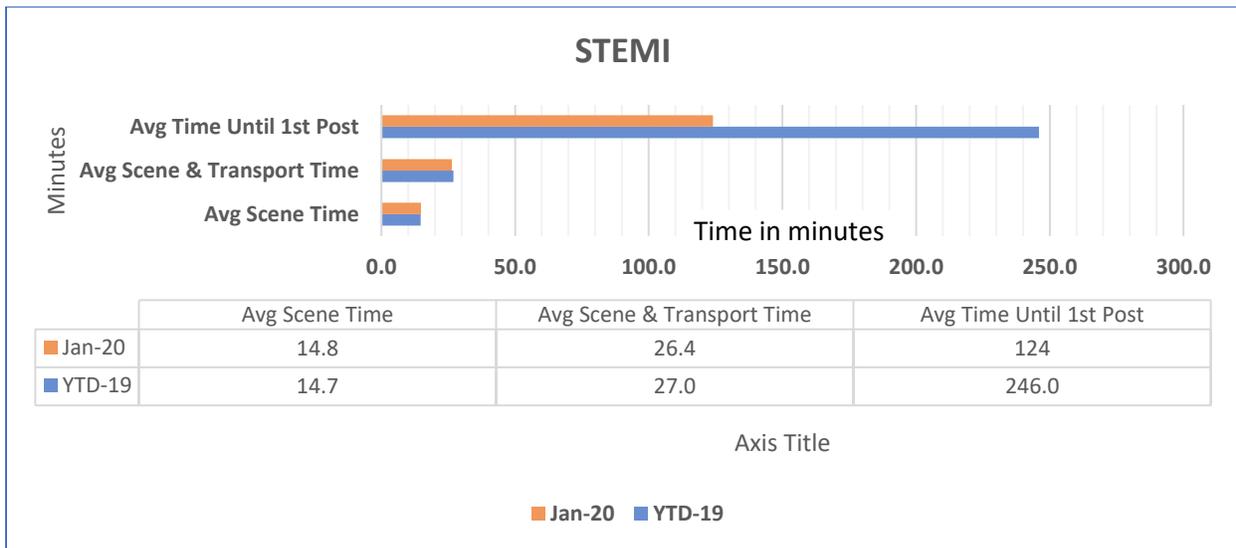
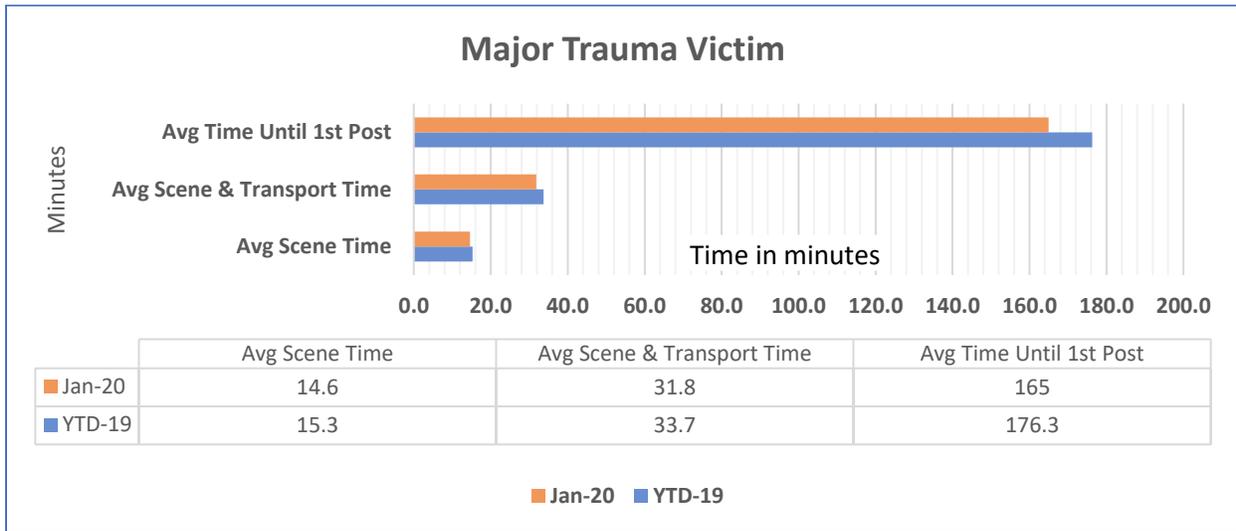
The overall depiction of how well the system performs at delivering the most charts of the most critical patient types and following regulations can be accomplished by: comparing the average of time interval from when a 911 ambulance crew arrived at the patient's side and the time the chart was first posted to the database, to the average scene time of patients suffering from time sensitive injuries.

Scene times are comprised of many distinct uncontrollable variables. Due to this discrepancy, our metrics of measure are not expected to be 100%. A more realistic view would be the average scene time plus "x" minutes. Success for this goal would be 80% of the charts submitted (posted) in less than the average scene time (see three graphs on next page).

The EMS Agency has set the following goals to achieve in the 2020 calendar year.

<b>Time</b>	<b>% of time</b>	<b>Minutes to 1<sup>st</sup> Post</b>
<b>End of 2020 – Q1</b>	50%	Average Scene Time + 100 minutes
<b>End of 2020 – Q2</b>	55%	Average Scene Time + 70 minutes
<b>End of 2020 – Q3</b>	65%	Average Scene Time + 40 minutes
<b>End of 2020 – Q4</b>	70%	Average Scene Time + 20 minutes

Data Collection (continued)



## Quality Assurance (QA) and Quality Improvement (QI)

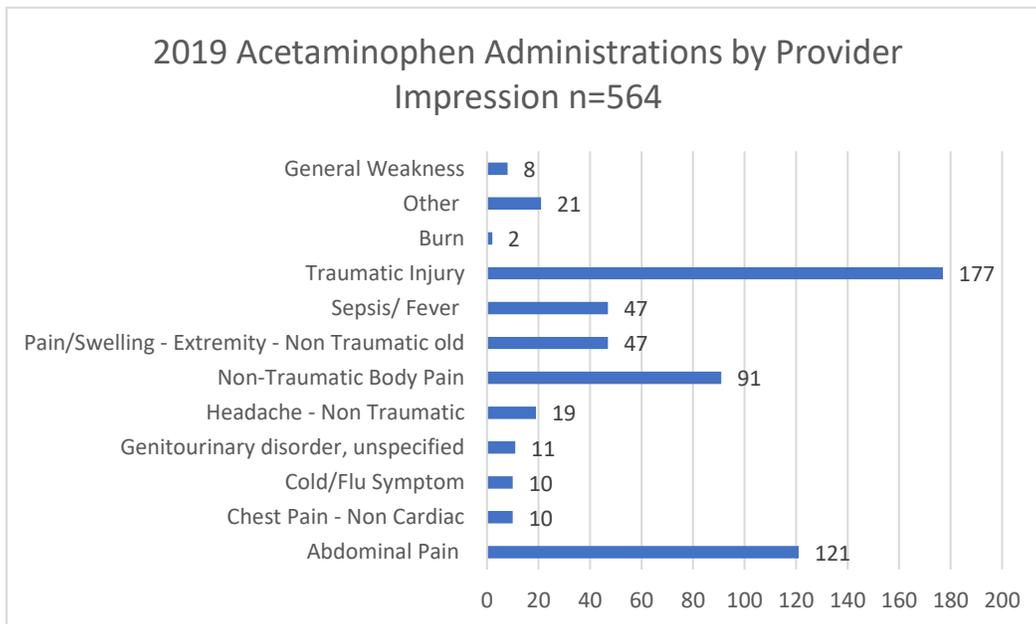
The Santa Clara County EMS Agency participates in a multitude of QA activities each year. One of the main activities is chart review. When a first responder or transport agency completes their electronic patient care records (ePCR), the EMS Agency can view them. When the EMS Agency staff reviews an ePCR, they can confirm that all applicable policies and protocols are being followed. If any issues are discovered, the EMS Agency staff can reach out to the Program Managers at the various fire departments and ambulance companies for immediate action. During calendar year 2019, ePCRs were reviewed related to traumatic injuries, pediatrics, pain management, community paramedicine, airway insertion, cardiac arrest (death), heart attacks, and strokes, just to name a few. Not only are ePCRs reviewed for policy and protocol compliance, but they are also reviewed for scene time confirmation. There is an industry standard across the nation related to the amount of time spent on scene by responders prior to transporting the patient to the hospital. A good rule of thumb is 15 minutes spent on scene by responders, especially in relation to traumatic injuries, strokes, and heart attacks. Another QA Activity that takes place on a yearly basis is vehicle inspections. Vehicle inspections were covered in greater detail elsewhere in this report.

Provider Impression (Complaint)	Average Time Ambulance Crew Spent on Scene
Stroke	15 minutes 49 seconds
Chest Pain - Heart Attack	16 minutes 30 seconds
Major Trauma Victim	17 minutes 28 seconds

## Acetaminophen Protocol

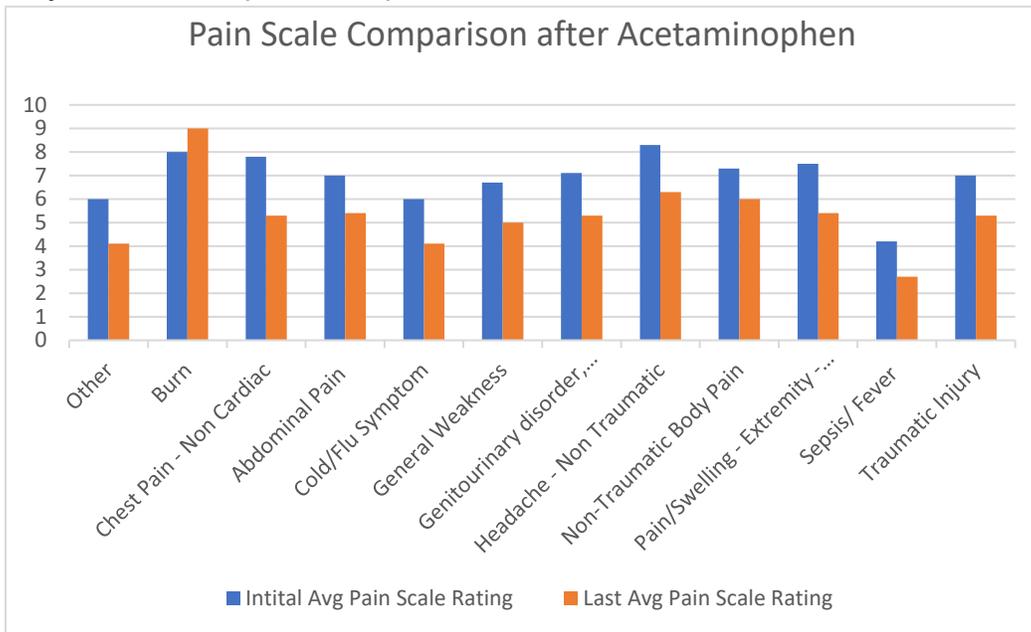
In February 2019, the Santa Clara County Emergency Medical Services Agency, in partnership with the EMS system's Ambulance and Fire providers, became one of the first EMS systems in California to begin the utilization of intravenous acetaminophen (Ofirmev) for the treatment of mild to moderate pain management. The decision for the use of acetaminophen was based on both logistical and medical rationale. The initial logistical factor was combating continuous national shortages of morphine sulfate and from the medical perspective, EMS providers in Santa Clara County only had morphine at their disposal for pain management. The administration of morphine often resulted in the over treatment of moderate acuity pain patients or patients with lower acuity pain might not receive pain management at all. In addition to providing a more appropriate medication for these patients, the use of intravenous acetaminophen may decrease the usage of opiates during the country's opiate epidemic.

Patients were deemed eligible for intravenous acetaminophen if they complained of pain rated six or less on the analog pain scale (1 through 10) and had no past medical history of hepatic disease, chronic alcoholism, malnutrition, or history of tuberculosis treatment with the medication Isoniazid. Additional exclusionary criteria of patients weighing less than fifty kilograms, prior acetaminophen use that exceeds 3,000 mg in a twenty-four-hour period and known allergy to acetaminophen. These patients were, however, treated with morphine sulfate. Intravenous acetaminophen was not used in patients experiencing suspected cardiac chest pain.



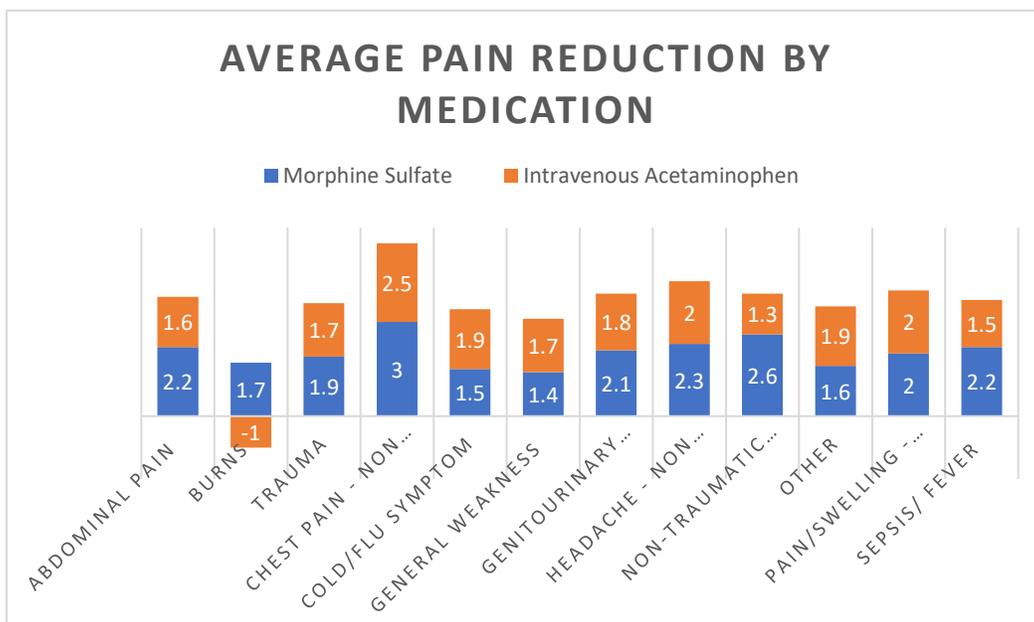
In 2019, a total of 564 patients received intravenous acetaminophen for management of pain. Traumatic injury was the most frequent provider impression that received treatment. (Note: traumatic injury does not always result in major trauma designation and/or treatment at a Trauma Center.)

### Acetaminophen Protocol (continued)



Intravenous acetaminophen treatment reduced the patient’s pain in all categories except burns, which showed a pain scale increase. Intravenous acetaminophen reduced pain an average of 1.3 points on the analog pain scale. Intravenous acetaminophen had the greatest impact on non-cardiac chest pain while having the lowest positive impact on non-traumatic body pain (excluding burns).

\*Both burn patients initial pain scale assessment should have excluded them from receiving intravenous acetaminophen.



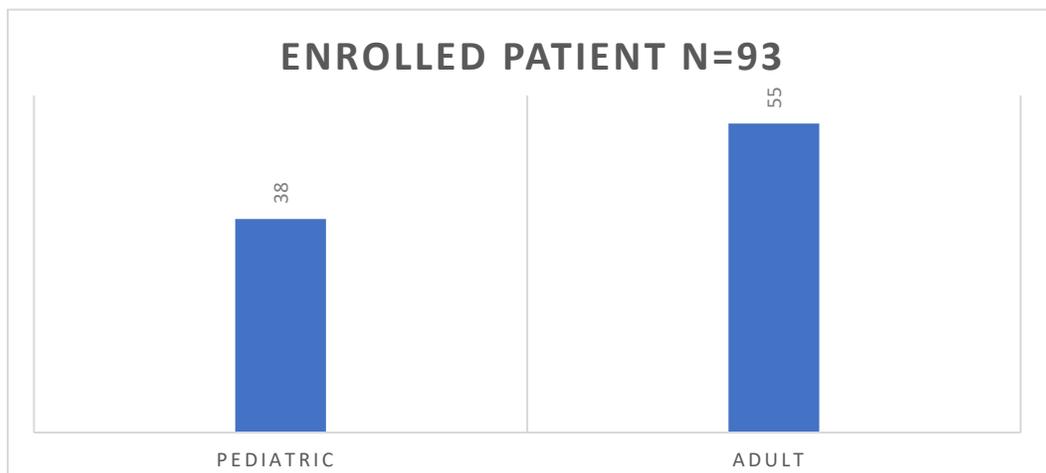
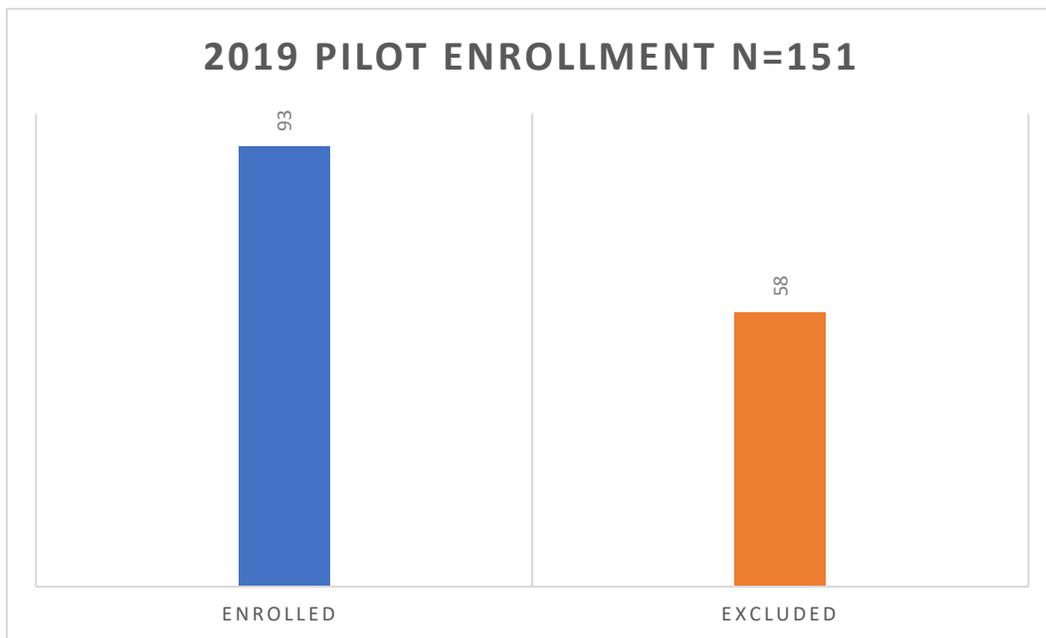
### **Acetaminophen Protocol (continued)**

When comparing intravenous acetaminophen's pain reduction performance against morphine sulfate, intravenous acetaminophen outperformed morphine sulfate in pain reduction for the following primary impressions: Cold/Flu Symptoms, General Weakness and other had equal performance in pain reduction with Pain/Swelling-Extremity. Morphine Sulfate significantly outperformed intravenous acetaminophen with Burns and Non-Traumatic Body Pain. The remaining primary impressions only showed a marked performance improvement with morphine sulfate. In total, morphine sulfate reduced pain an average of 2 points on the analog pain scale vs intravenous acetaminophen's reduction of 1.3.

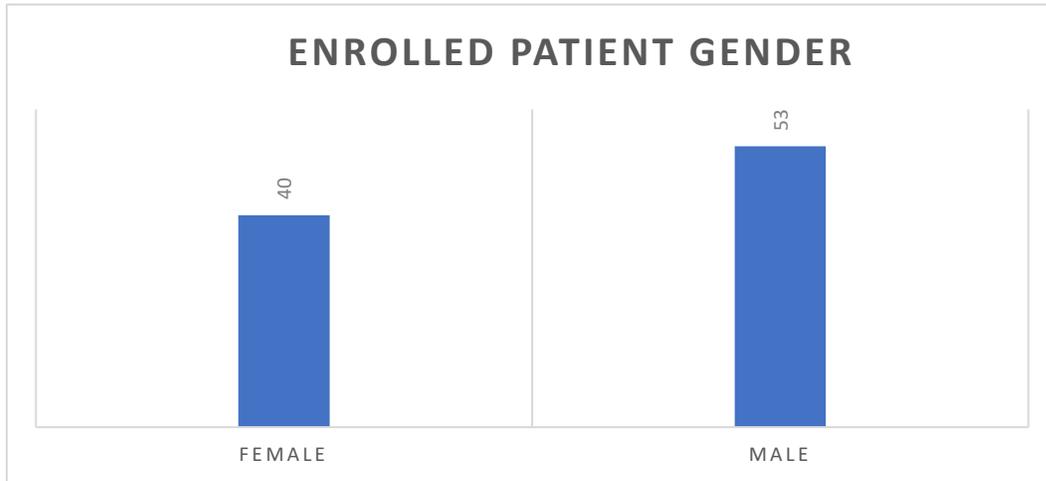
Over 2019, intravenous acetaminophen was demonstrated to be almost as effective as morphine sulfate in treating mild to moderate pain under most circumstances. Intravenous acetaminophen outperformed morphine sulfate when the patient's pain was the result of cold, flu like symptom or general weakness. The commonality seen in both the categories of cold or flu like symptoms and general weakness was a febrile patient. The average initial recorded temperature in both demographics was 100.1 degrees Fahrenheit. Intravenous acetaminophens performance can be attributed to the medication's antipyretic properties. Intravenous acetaminophen, however, did show that it is was a viable treatment option for the management of severe pain. Morphine sulfate still maintains a therapeutic advantage in treating severe pain. In conclusion, based upon the performance of intravenous acetaminophen, there is a justified role for the medication in the emergency medical services system.

## Community Paramedicine Pilot Program

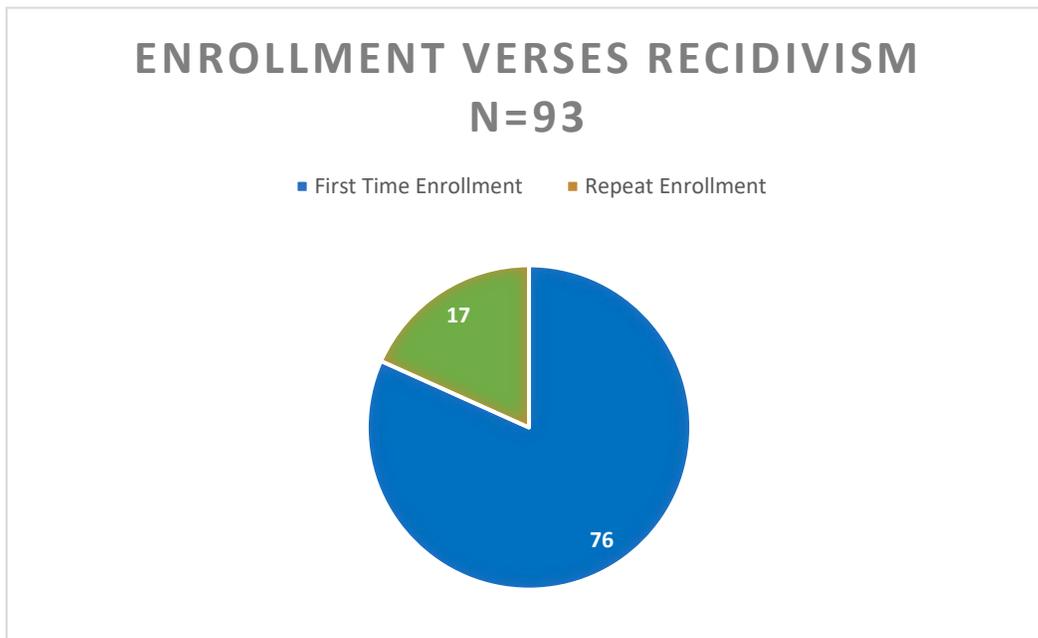
In 2019, the Santa Clara County Emergency Medical Services Agency, in partnership with the City of Gilroy's Fire Department, continued to participate in the Community Paramedicine Pilot Program under the authority of the State of California's Emergency Medical Services Authority (EMSA). The focus of Santa Clara County's Community Paramedicine program has been centered around the assessment and delivery of behavioral crisis and intoxicated patients within the City of Gilroy to alternate care destinations. The primary goal of the program has been to safely assess these patients while delivering them to more appropriate care. The result provides appropriate specialized care to these patients while saving Emergency Department (ED) resources for higher acuity medical complaints.



### Community Paramedicine Pilot Program (continued)



In 2019, the predominate enrolled patient was adult and of those total enrolled patients the predominate gender was male. The average age of total enrolled patients was 29 years of age with a median age of 21.5 years of age.



Of the 93 times a patient was enrolled into the pilot, 17 of the enrollments were patients who had been enrolled from a previous event, giving the pilot a 11% recidivism rate for 2019.

## **Community Paramedicine Pilot Program (continued)**

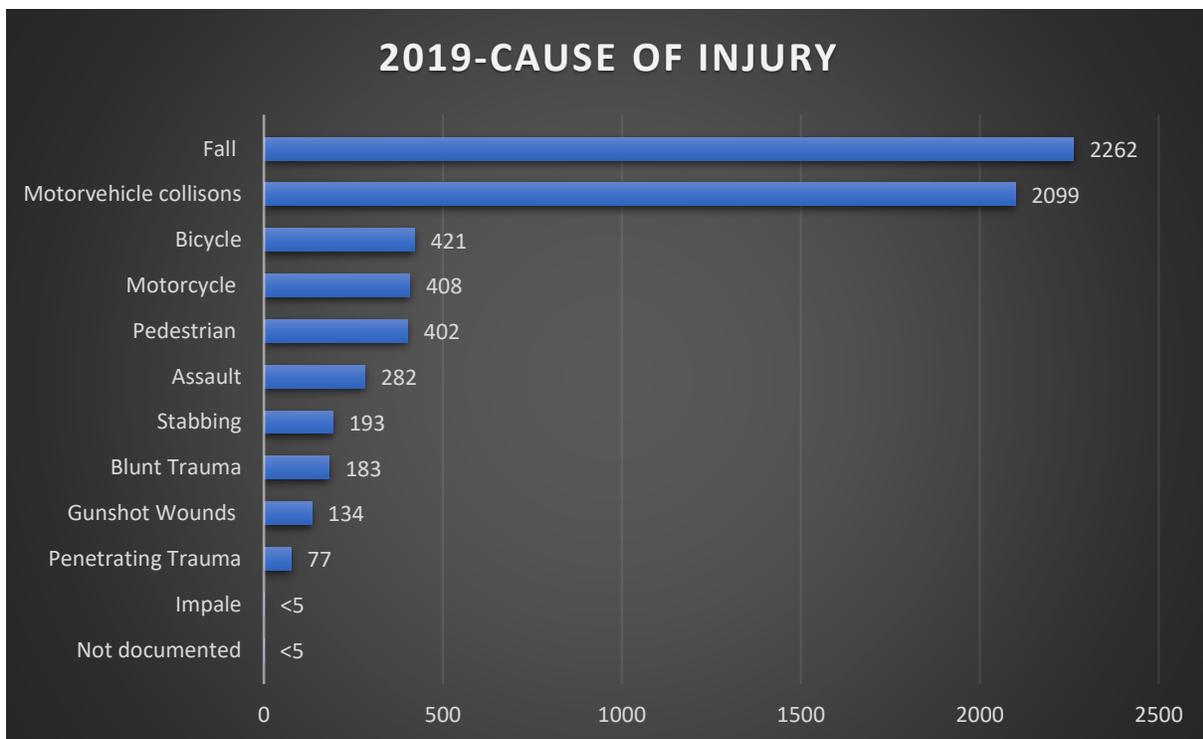
While participating in this pilot, the EMS Agency developed a better understanding of the impact of behavioral health patients entering the EMS system and what that impact is for the patient, the hospital emergency departments, and the behavioral health facilities. Before this pilot, there was no legal way for a Paramedic to transport a behavioral patient from the EMS system to a behavioral health center. These patients would often be transported to an ED for medical clearance then transferred to the behavioral Health Center, utilizing ambulance and ED resources. By allowing Community Paramedics to medically screen these patients and deliver them directly to the Behavioral Health Centers, it frees up valuable EMS and ED resources while decreasing the cost to the patient. Although this pilot has been an important first step, further refinements are needed to the system for the triage and facilitation of care for patients in behavioral crisis. Such improvements to the behavioral health system along with Community Paramedicine will usher in a new standard of care for behavioral health patients.

## Trauma

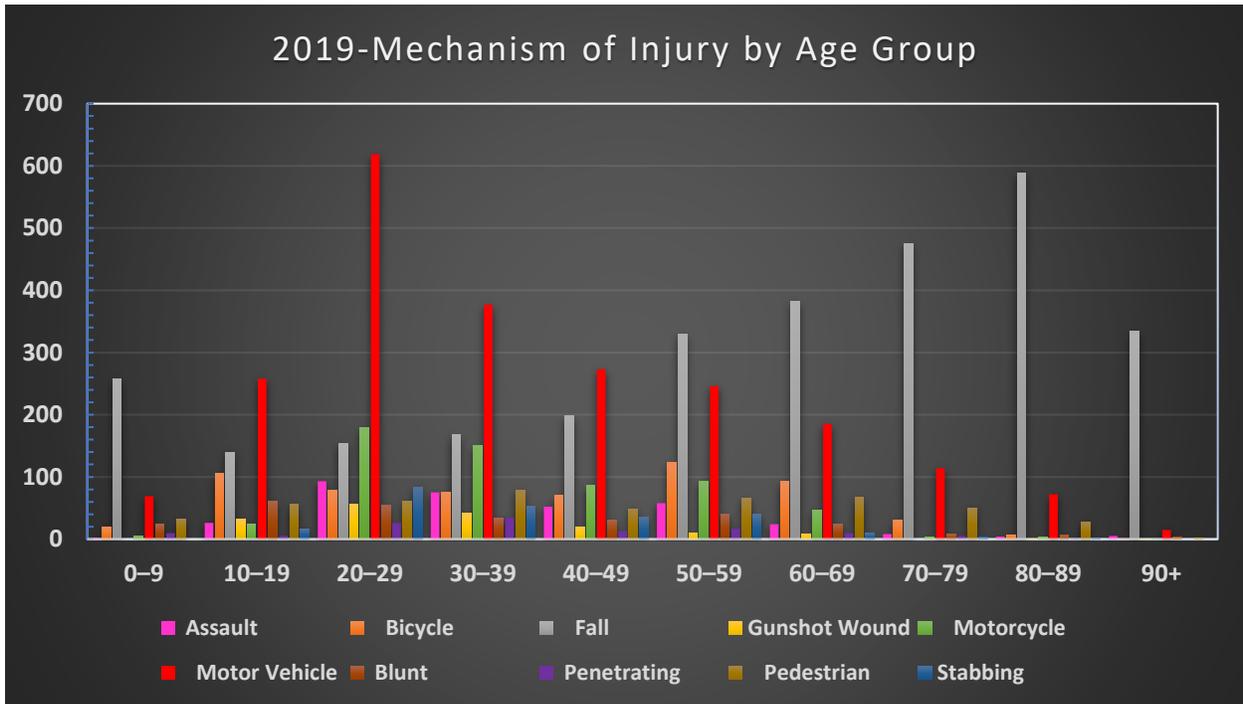
Santa Clara County (SCC) has a mature trauma system that has been in place since 1986. The system is fortunate that it has three designated trauma centers:

- Stanford Health Care  
Level I adult and pediatric trauma center
- Santa Clara Valley Medical Center  
Level I adult and a level II pediatric trauma/burn center
- Regional Medical Center  
Level II adult trauma center

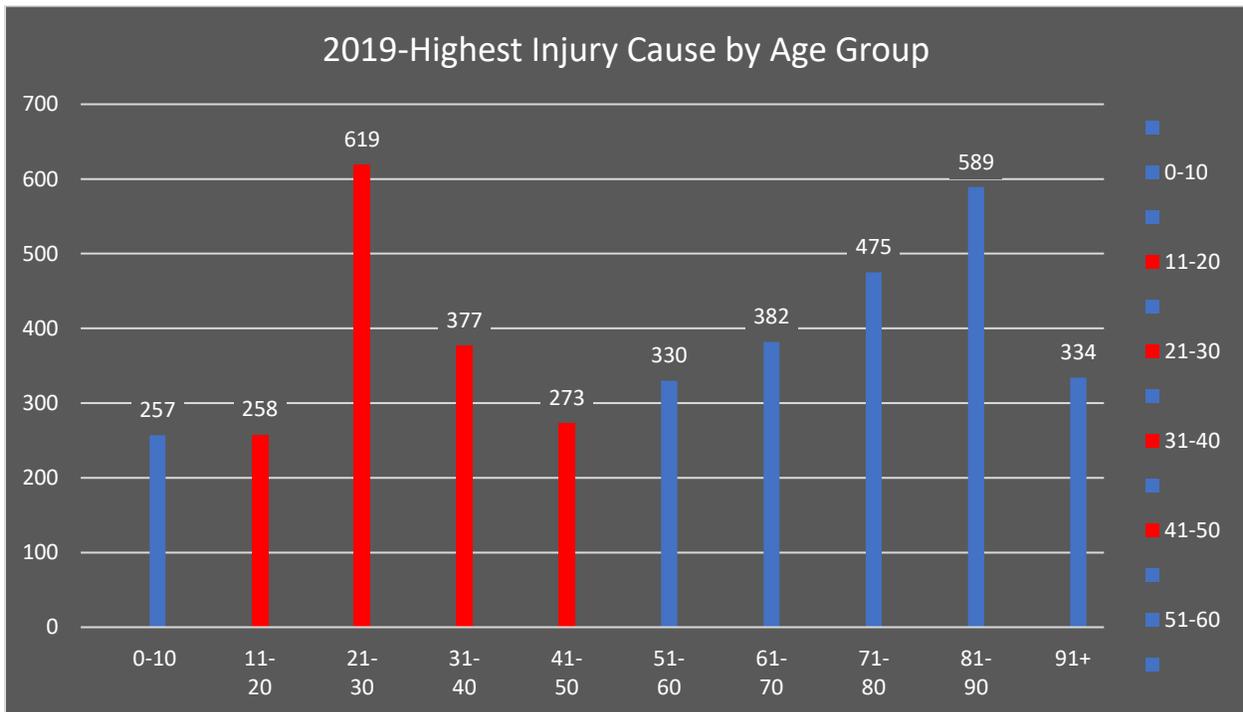
Multiple contributing factors lead to the number of traumas treated each year and their outcomes. Santa Clara County's continuously fluctuating population size and density, countless social events with large crowds, and plentiful options for outdoor adventures are commonly correlated with the mechanism and severity of traumas.

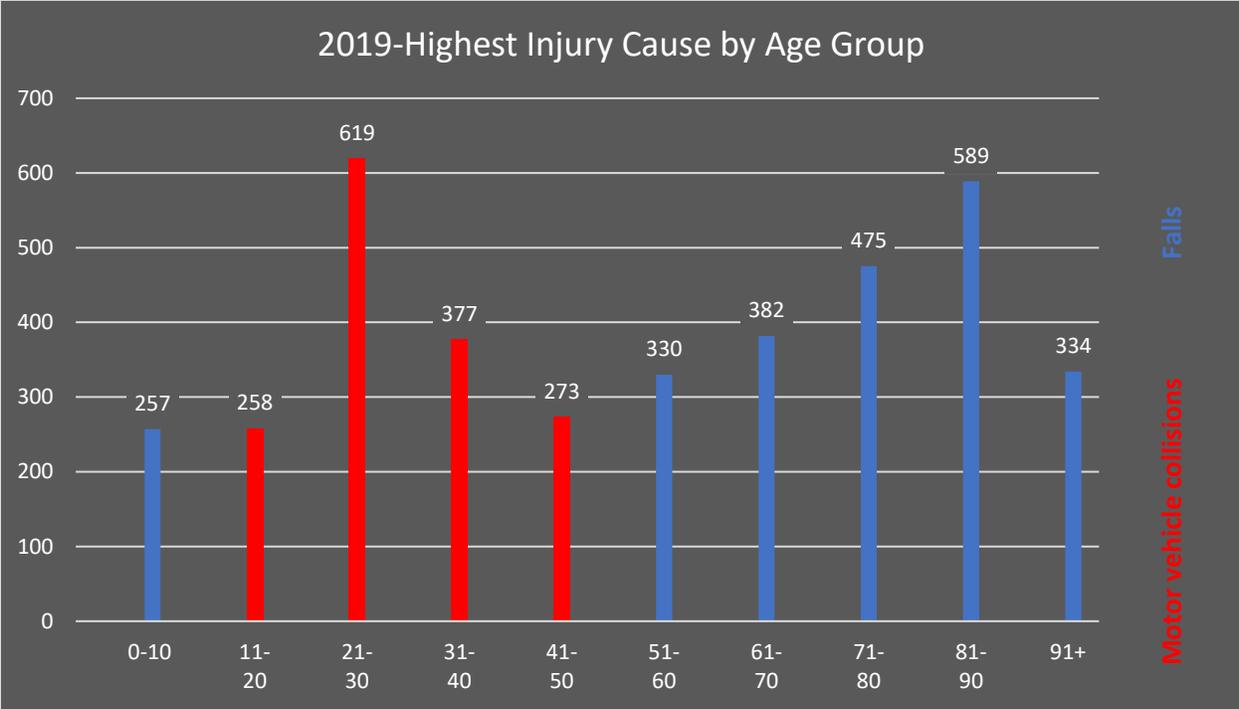


**Trauma (continued)**



Consistent with national level data, falls are the leading cause of injury for older patients in Santa Clara County. The risk of injury from falls increased 24% from the 70 to 80-year age group to the 80 to 90-year age group, then decreased 43% from the 80 to 90-year age group to the 90 and older group.





Over 35% of injuries in Santa Clara County were caused by falls, closely followed by motor vehicle crashes with 31%. Falls and motor vehicle crashes accounted for two-thirds of injury patients treated at Stanford, Santa Clara Valley Medical Center and Regional Medical Center.

Trauma (continued)

2019-CAUSE OF INJURY BY TRAUMA CENTER				
	STANFORD	VMC	RMC	PERCENT OF TOTAL INJURIES
ASSAULT	69	185	110	3.9%
BIKE	296	259	89	6.8%
FALL	1456	1130	847	36.4%
GUN SHOT WOUND	40	69	73	2.0%
IMPALE	0	<5	0	0.0%
MOTOR CYCLE CRASH	174	273	191	7.0%
MOTOR VEHICLE CRASH	743	1347	835	31.0%
NOT DETERMINED	0	<5	0	0.0%
OTHER BLUNT	151	98	78	3.5%
OTHER PENETRATING	59	52	17	1.4%
PEDESTRIAN	120	225	187	5.6%
STABBING	32	114	103	2.6%
UNKNOWN	<5	0	0	0.0%
TOTAL	3141	3756	2530	3.9%

## Trauma (continued)

Gunshot wounds have the highest case fatality rate of our trauma patients at 14.8%. Falls, which have the highest number of injuries, have a low case fatality rate of 2.3%. Pedestrians involved in motor vehicle collisions and stabbings have the second and third highest case fatality rate, respectively.

2019-CAUSES OF DEATH BY INJURY			
CAUSE OF INJURY	NUMBER OF DEATHS	NUMBER OF INJURIES	CASE FATALITY RATE (%)
ASSAULT	<5	364	1.1%
BIKE	6	644	0.9%
FALL	79	3433	2.3%
GUN SHOT WOUND	27	182	14.8%
IMPALE	0	<5	0
MOTOR CYCLE CRASH	10	638	1.6%
MOTOR VEHICLE CRASH	39	2925	1.3%
NOT DETERMINED	0	<5	0
OTHER BLUNT	<5	327	0.9%
OTHER PENETRATING	0	128	0
PEDESTRIAN	42	532	7.9%
STABBING	7	249	2.8%
UNKNOWN	0	<5	0

## Stroke System

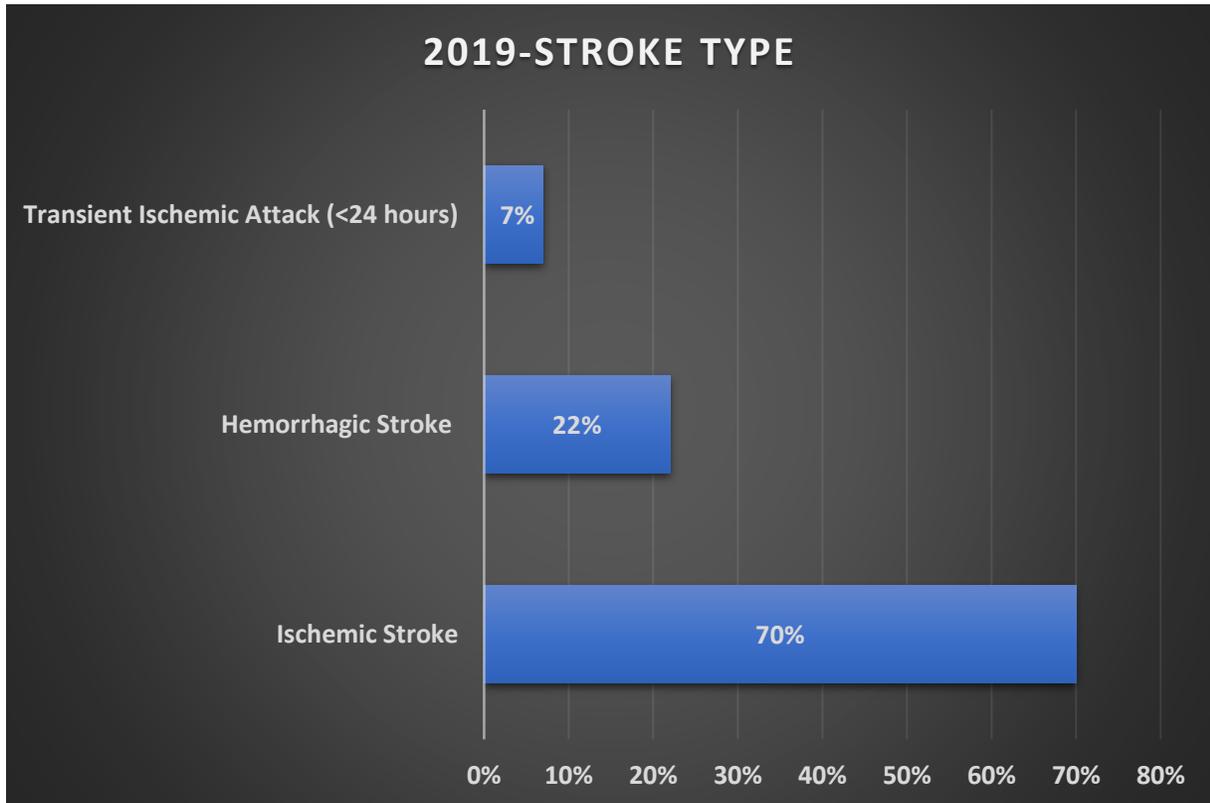
A stroke, also called cerebrovascular accident (CVA) is medical emergency and caused by an interruption of blood flow in the brain. As shown in the graph, most strokes are caused by a blockage in a blood vessel that impedes oxygen delivery to the affected part of the brain, also called ischemic stroke. The second most common type of stroke is a blood vessel bleeding into the brain, also called hemorrhagic stroke. A transient ischemic attack is a brief blockage of blood supply to the brain and often a warning sign of an ischemic stroke.

### Summary of 2019

	Q1 2019		Q2 2019		Q3 2019		Q4 2019	
	Count	%	Count	%	Count	%	Count	%
Stroke Registry Patients	715	100	681	100	680	100	695	100
Ischemic Stroke	494	69	484	71	487	72	485	70
EMS Arrival	291	41	275	40	307	45	306	44
Interfacility Transfer*	177	25	155	23	138	20	132	19
Ischemic Stroke Arrival < 4.5 hours	224	45	206	43	248	51	236	49
IV rtPA Infusion	72	15	64	13	87	18	75	15
Endovascular Intervention	22	4	21	4	38	8	27	6
Age (Years)								
0-19	0	0	0	0	0	0	0	0
20-29	9	1	5	1	4	1	5	1
30-39	15	2	25	4	9	1	14	2
40-49	48	7	49	7	47	7	48	7
50-59	93	13	92	14	93	14	93	13
60-69	158	22	150	22	138	20	140	20
70-79	166	23	138	20	160	24	166	24
80-89	167	23	155	23	151	22	167	24
> 90	59	8	67	10	78	11	62	9
Median Age (Years)	72		71		73		73	
Gender								
Male	375	52	356	52	363	53	346	50
Female	340	48	325	48	317	47	349	50
Race								
White	425	59	418	61	392	58	423	61
Asian	188	26	168	25	196	29	191	27
Black	32	4	28	4	25	4	23	3
Other/Unknown	68	10	67	10	67	10	58	8

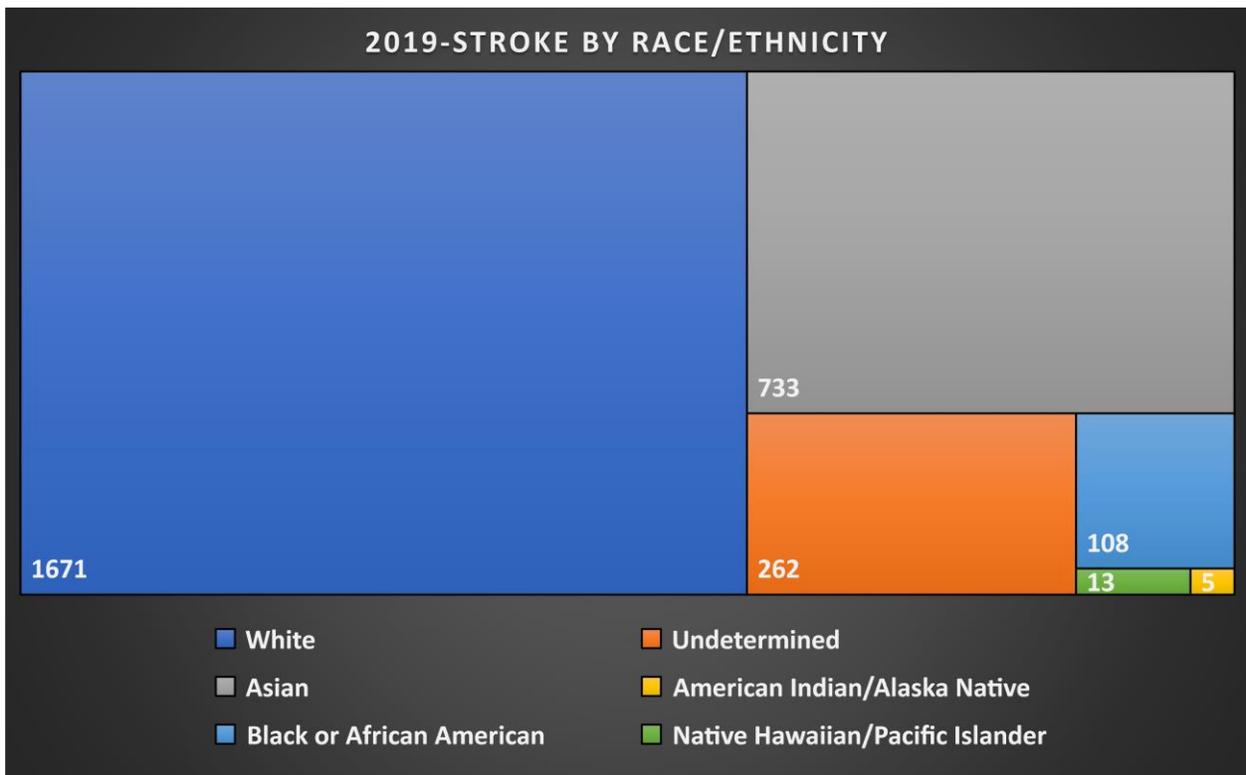
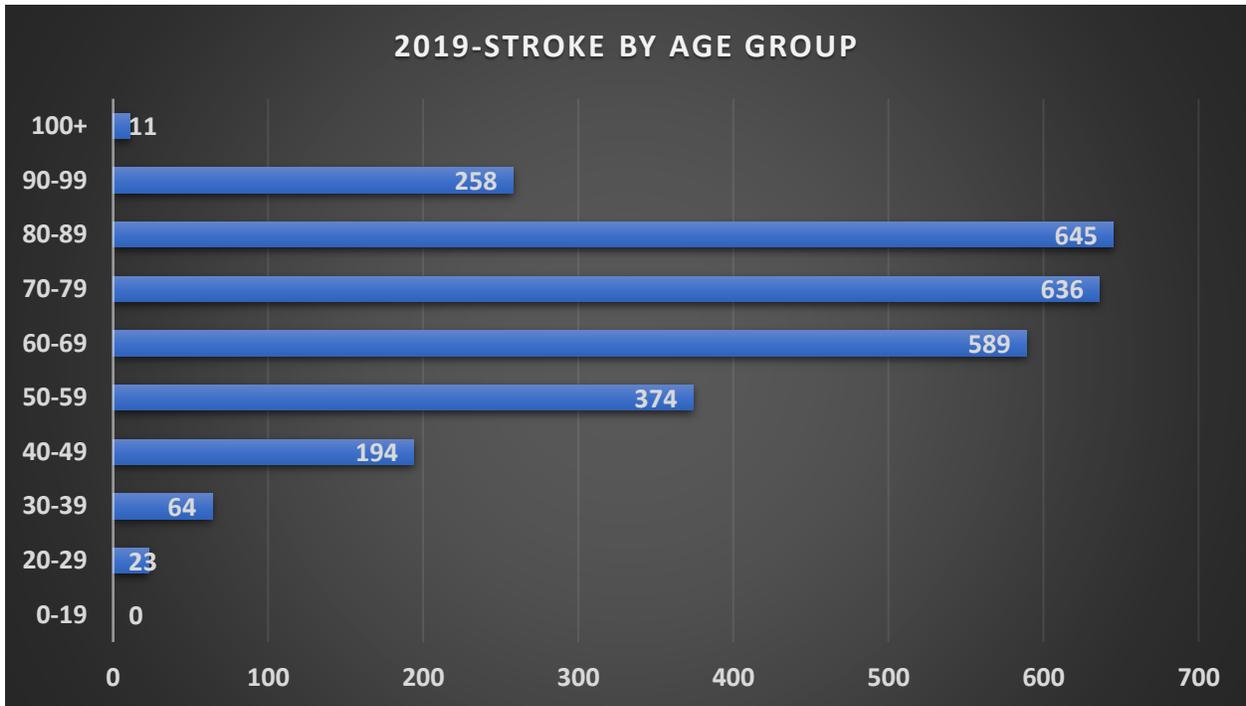
### Stroke System (continued)

According to the Centers for Disease Control (CDC), Ischemic Strokes account of 87% of stroke patients in the United States. In 2019, 70% of stroke patients in the Santa Clara County EMS system suffered from Ischemic Stroke. While Transient Ischemic Attack (TIA) accounted for only 7% of stroke patients, it is critically important for these patients to understand this is an early warning sign of a future stroke.



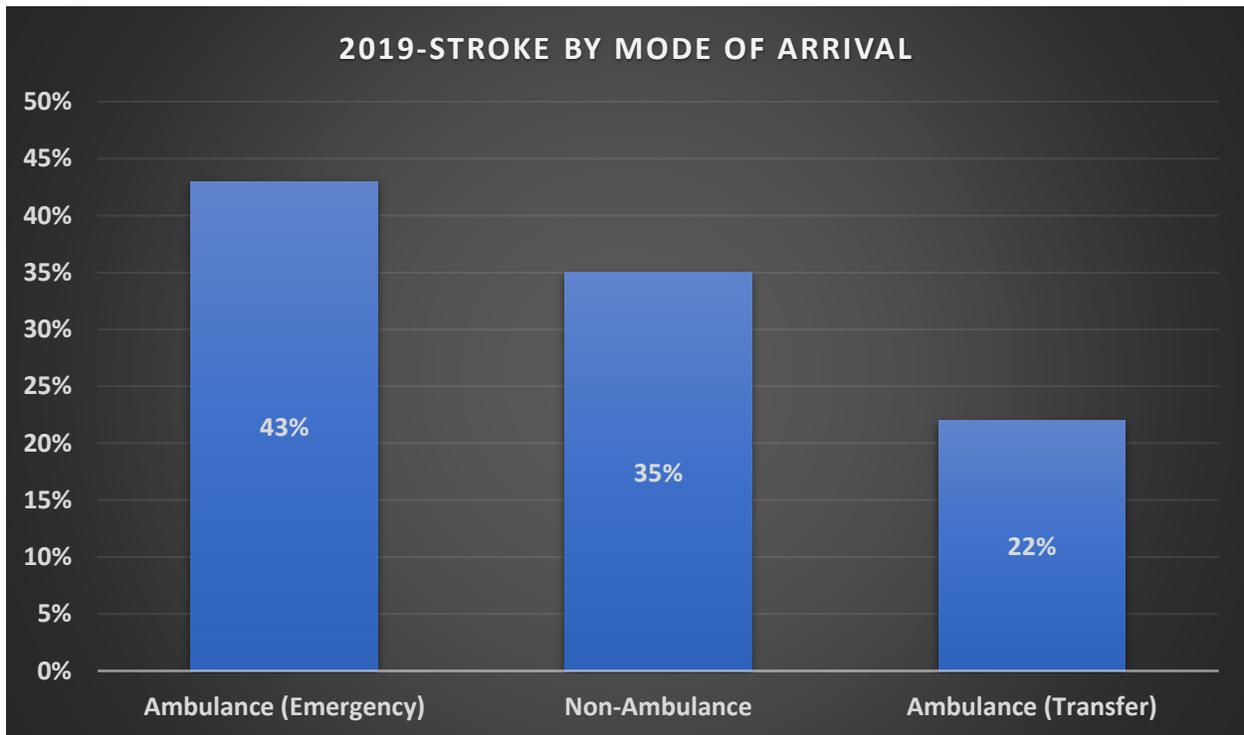
**Stroke System (continued)**

While a stroke can occur at any age, nearly 75% of strokes occur in people 65 or over and the likelihood of stroke doubles every 10 years after the age of 55. Approximately 45% of stroke patients in Santa Clara County were between the ages of 70-89.



### Stroke System (continued)

Like previous years, EMS services were more heavily utilized by stroke patients than other methods of transport to the hospital. Stroke patients arrived at the hospital by emergency ambulance 43% of the time in 2019. Earlier medical treatment can be administered and increase the likelihood of survival and better recovery from a stroke if the patient is transported to the hospital via ambulance.

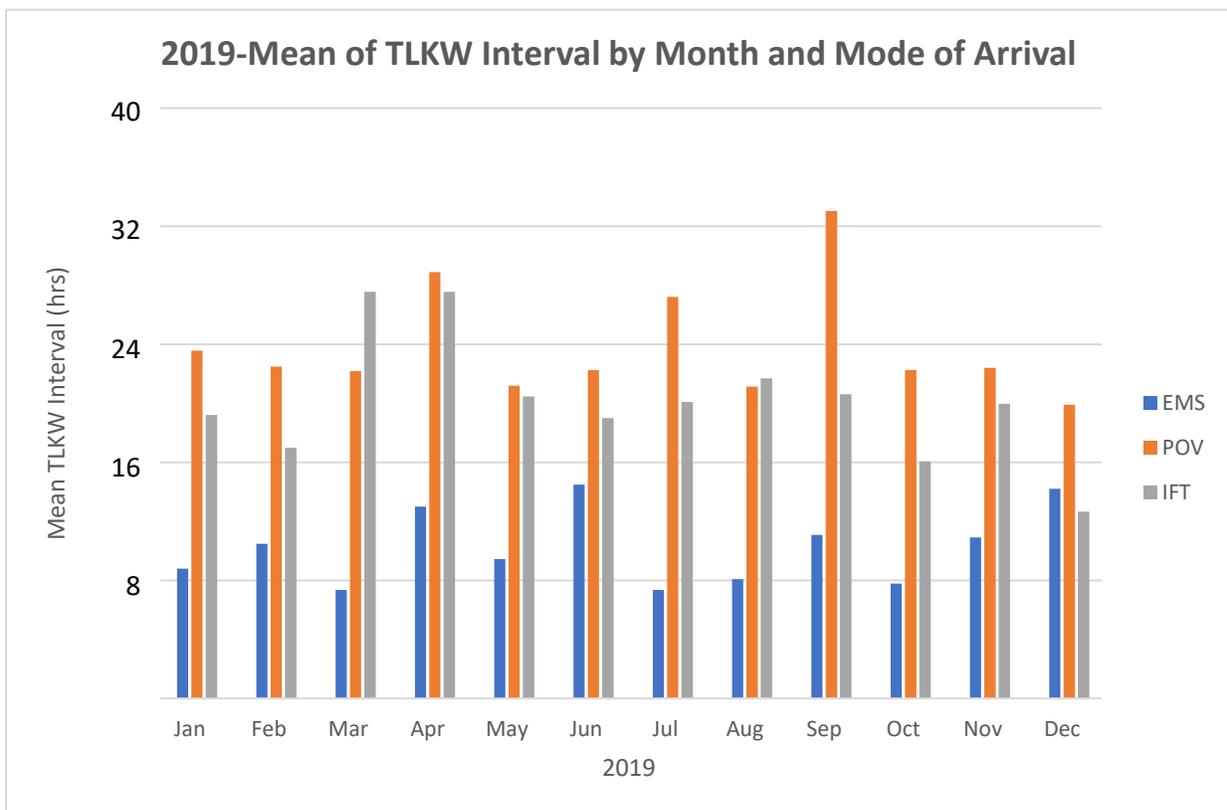


There is a narrow treatment window for Ischemic stroke patients due to a sudden loss of blood flow to areas of the brain caused by a blood clot. Medication to dissolve the clot (tissue plasminogen activator or tPA) must begin within 4.5 hours from the onset of symptoms. National benchmarks require that intravenous tPA is administered within 60 minutes from the patient's arrival at the ED 50% of the time.

## Stroke System (continued)

The time of onset for stroke symptoms is not always clear. Therefore, establishing the “time last known well” (TLKW) or “last seen normal” is critical in guiding treatment options. TLKW can determine whether a patient is a candidate for thrombolytic therapy (medication administration to dissolve a clot), mechanical thrombectomy (surgical removal of a clot), both, or neither in the setting of Ischemic stroke.

It important to know the last time that someone was seen “normal,” meaning they had no stroke symptoms the last time you saw or spoke to them. For example, the last seen normal time for someone who goes to sleep at 10 pm and wakes up the next day at 7 am with stroke symptoms is 10 pm. Knowing how long the person has had symptoms helps EMS decide how to best treat your loved one.



## ST-Elevation Myocardial Infarction (STEMI)

When a major artery of the heart is completely blocked, the result is a massive heart attack known as a ST-Elevation Myocardial Infarction (STEMI). STEMI often leads to cardiac arrest, and subsequently fatality 95% of the time.

Our system has 8 STEMI Receiving Centers that are specialized in caring for patients that experience a heart attack.

• El Camino-Mountain View	• Regional-San Jose
• Stanford Health Care	• Valley Medical Center
• Good Samaritan	• Kaiser-San Jose
• Kaiser-Santa Clara	• O'Connor

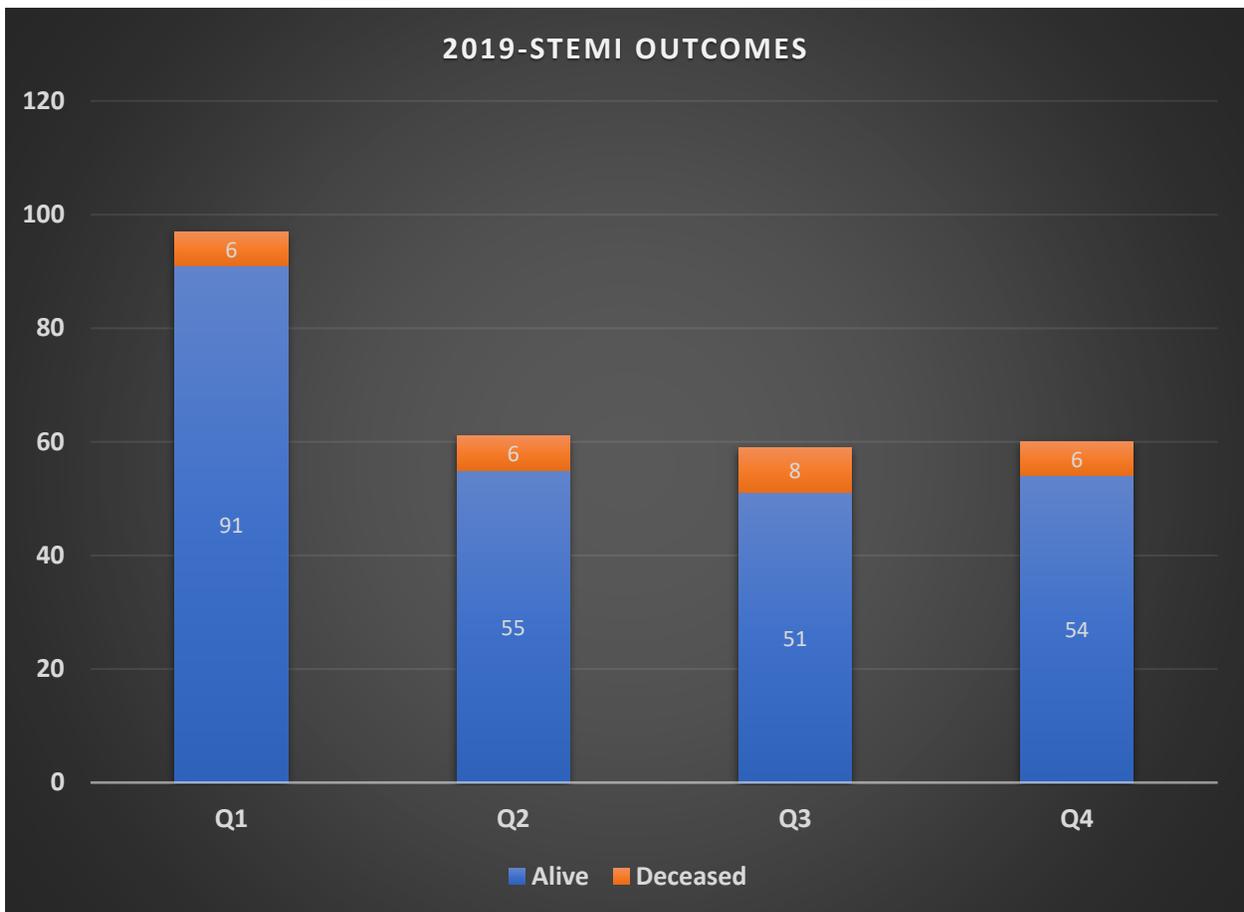
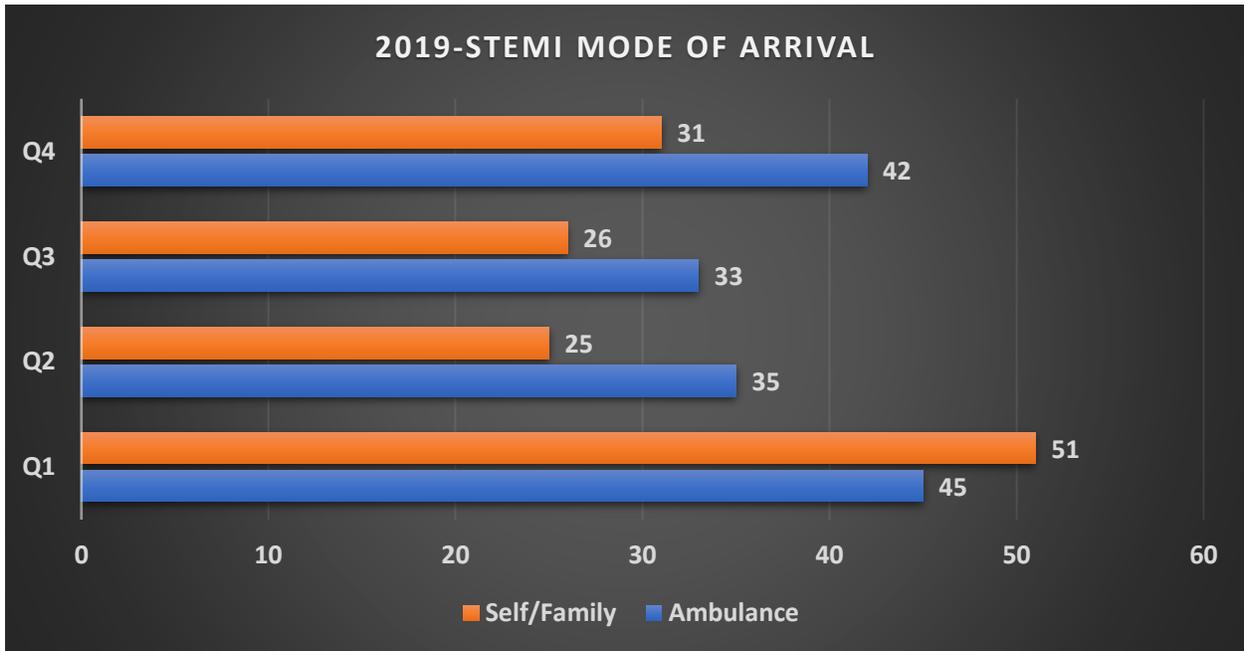
In 2019, 30% of STEMI patients in the Santa Clara County EMS system were between 60 and 69 years old. Over three-fourths of STEMI patients were male, and patients utilized EMS services over 50% of the time for transportation to the hospital.

A STEMI diagnosis is based on electrocardiographic changes that show evidence of evolving myocardial injury, as well as the presentation of the patient. When there are electrocardiographic changes and the patient presents with pain or symptoms of suspected cardiac origin, the patient goes directly to the cardiac catheterization laboratory for a possible reperfusion treatment. Therefore, STEMI patients benefit the most from rapid coronary reperfusion therapy.

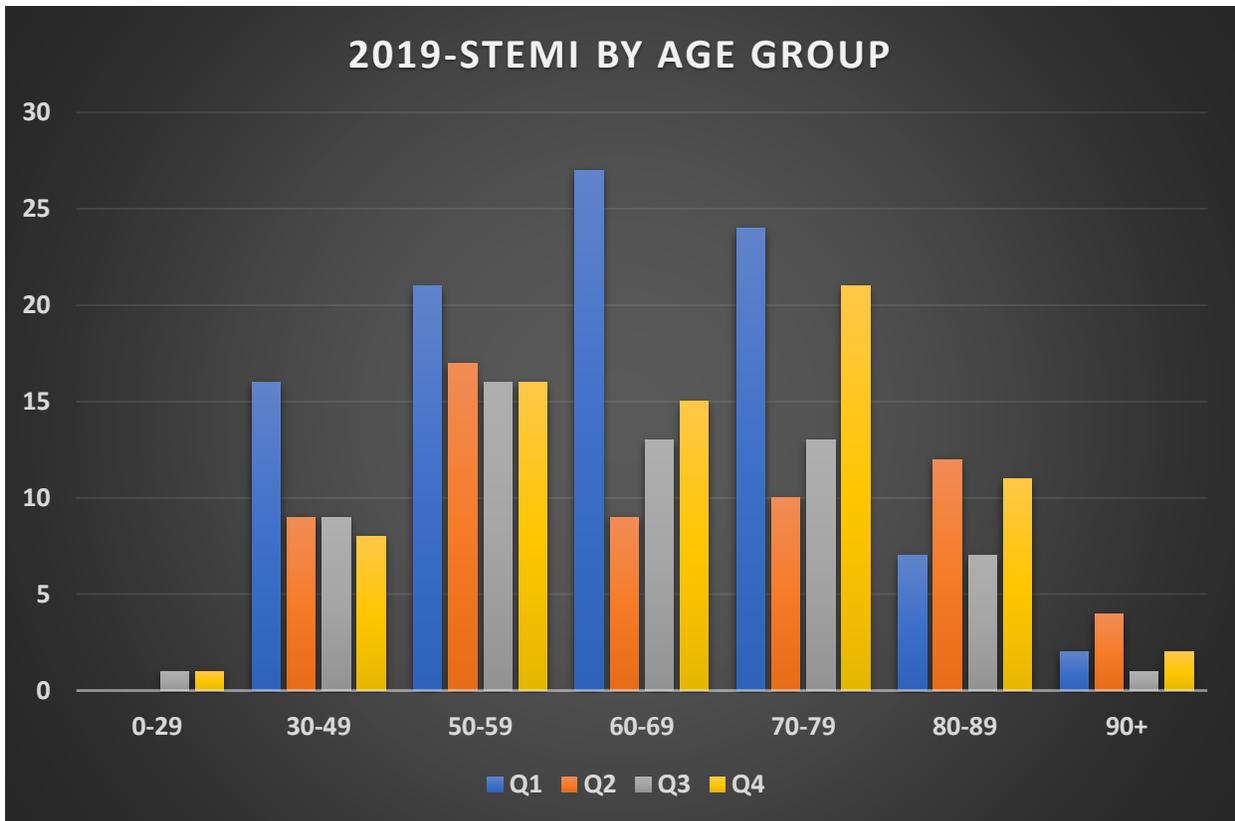
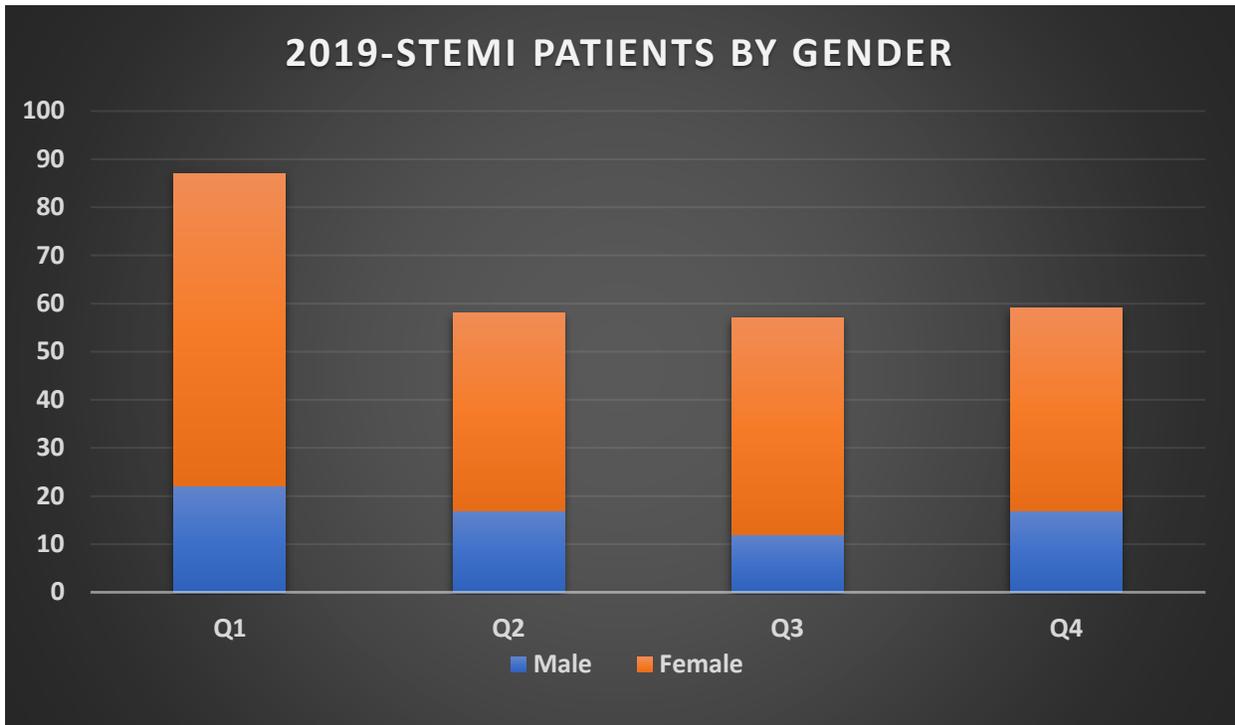
It is imperative that field personnel are well trained and STEMI receiving centers are well prepared for the patient that presents with ST Elevation on the electrocardiogram. The Santa Clara County EMS Agency has a policy in place to assist field providers in the rapid identification of a patient who may be suffering an ST Elevation Myocardial Infarction.

The median EMS patient contact-to-first 12-lead ECG interval is 14 minutes (Interquartile -IQR 10-21 minutes). The EMS Agency has identified 15 minutes as a reasonable goal for acquiring a 12-lead ECG in patients presenting with chest pain. The American Heart Association recommends a Door to Balloon (D2B) interval of 90 minutes upon arrival at the ED of a STEMI center. To achieve these timeframes, there needs to be close coordination between the EMS system and the STEMI receiving center. The median D2B interval for all STEMI patients is 78 minutes (IQR 62-100 minutes), with a 90<sup>th</sup> percentile of 141 minutes across the eight (8) STEMI centers. There is a 15-minute difference in the median D2B intervals between patients arriving via EMS (66 minutes, IQR 55-92 minutes) and those arriving outside of the EMS system (81 minutes, IQR 69-103 minutes).

ST-Elevation Myocardial Infarction (STEMI) - continued



ST-Elevation Myocardial Infarction (STEMI) - continued



## Communications

In 2010, Santa Clara County entered into a Joint Powers Agreement (JPA) with 14 cities to form the Silicon Valley Regional Interoperability Authority (SVRIA). Through significant collaboration by participating members and stakeholders, SVRIA has developed a regional interoperable communications network known as Silicon Valley Regional Communications System (SVRCS). SVRCS is a digital 700 MHz radio system designed for all agencies in Santa Clara County and once completed, it is envisioned that both public safety and local government users will migrate to the system.

The EMS Agency has placed radios in the EMS system, these radios are distributed to all the non-911 ambulance providers, air providers, hospitals, safety officers and the EMS agency staff.

The EMS Agency has retained 60 of the remaining radios and has established radio caches to be used in a disaster or preplanned large-scale event.

<b>Radio Distribution</b>	
<b>Non-911 Ambulance Provider</b>	<b>Radios Issued</b>
American Medical Response Sutter	10
Falcon Critical Care	5
NORCAL Ambulance	10
Pro Transport-1	31
Royal Ambulance	25
Silicon Valley Ambulance	9
Westmed Ambulance	31
<b>Air Ambulance Providers</b>	<b>Radios Issued</b>
CALSTAR	3
Stanford Life Flight	1
<b>Hospitals</b>	<b>Radios Issued</b>
	22
<b>Total Radios Issued</b>	<b>147</b>

## **Hospital Bypass**

Ambulance bypass occurs when an ED is temporarily closed to incoming ambulance traffic. Temporary ED closures can be triggered by overcrowding, a lack of available resources, as well as other contributing factors.

During the late 1990s and early 2000s overcrowding, including the practice of "boarding," or retaining admitted patients in the ED as they waited for a hospital bed became a chronic problem in most EDs. In turn, ED patients experienced longer wait times, and some left the hospital without being seen.

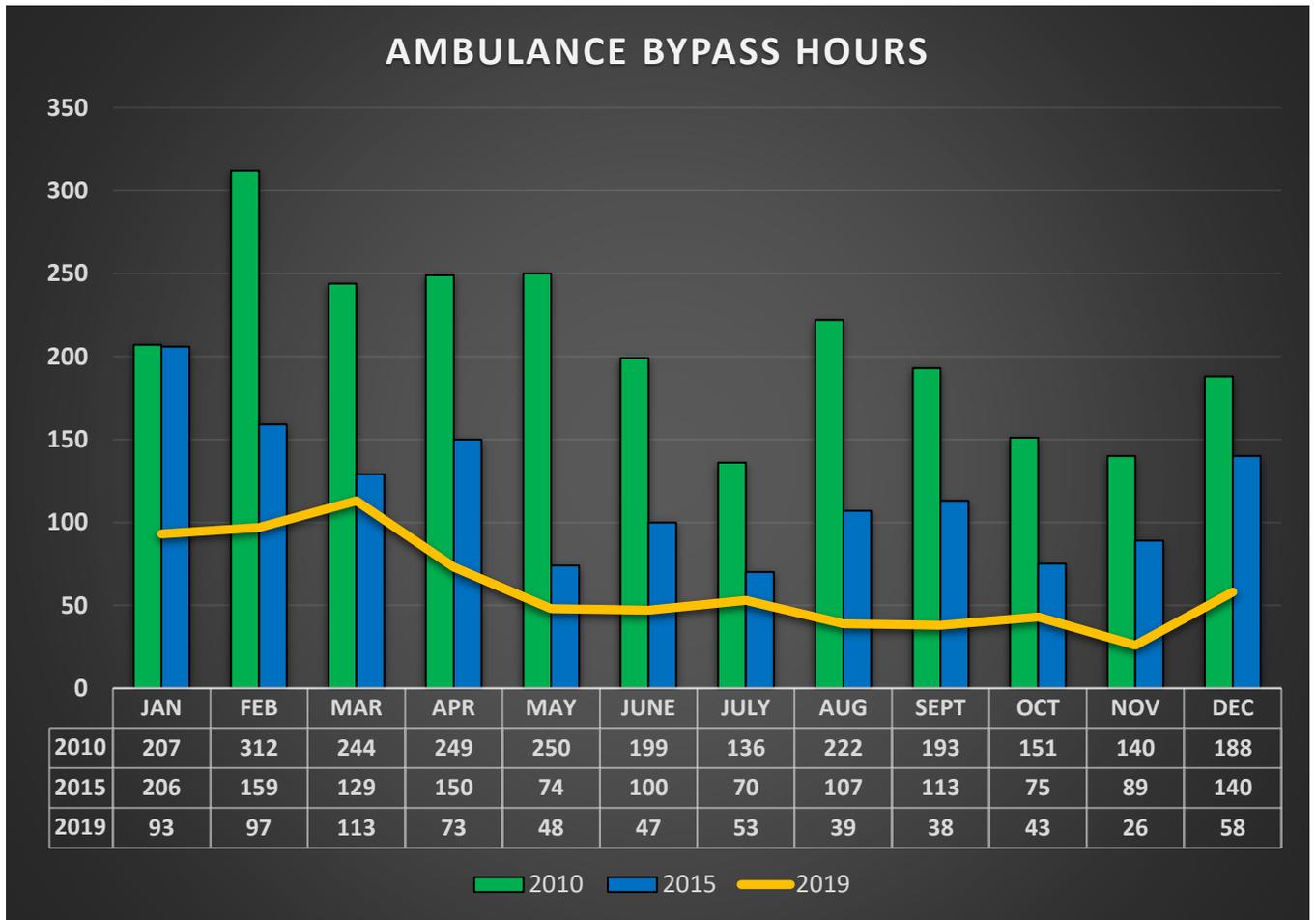
According to the Robert Wood Johnson Foundation, in the short term, ambulance bypass provides breathing room to the ED that invokes bypass status, allowing it to return to optimal functioning as it processes the overflow of patients. If the situation continues for an extended period, however, it can create a domino effect, triggering nearby facilities--now clogged with the bypassed patients--to themselves go on bypass status. It can also lead to delays in medical care for patients elsewhere in the health care system. If an ambulance cannot bring people to the nearest facility, they must be transported longer distances to receive necessary treatment. This increased travel time can reduce the availability of ambulances for new calls for other patients awaiting emergency medical service.

Despite these drawbacks, persistently high ED traffic has led to the continued use of ambulance bypass as a strategy for managing patient volume. However, hospitals continuously attempt to reduce overcrowding in their departments and if they are unable to do so when ambulances arrive with a patient, the medics are often unable to off-load their patients due to the unavailability of an ED stretcher. Patients then remain waiting on the EMS stretcher in the hospital's ED for a prolonged period.

The EMS Agency has strategized consistently with ED Directors, Managers and Administrators to assist in monitoring patient offload times, and bypass hours for the last several years. Ongoing dialogue has continued toward mutual solutions which have resulted in a sustained decline of bypass hours since 2010.

In this 2019 Annual Report, we compared the diversion hours in 2010, 2015, and 2019 to assess trends. There has been a steady decline in the number of hours of diversion over the last decade. The winter months are consistently the most difficult months to manage ED volume.

Hospital Bypass (continued)



## **Ambulance Patient Offload Time (APOT)**

The California Hospital Association and Emergency Medical Services Authority (EMSA) began a collaborative in March of 2013 to examine ambulance patient offload delays. A toolkit was developed for statewide consideration in California which included key material for successful, sustainable process improvement to reduce patient offload delays in the ED.

Approved in December 2016 to provide recommendations/guidelines to Local EMS Agencies (LEMAs) for implementing standardized methodologies for APOT data collection and reporting to the EMSA in accordance with AB 1223 (O'Donnell, 2015), Health and Safety Code 1797.120 now requires EMSA to develop a standard methodology for calculation of, and reporting by, a LEMA of ambulance patient offload time.

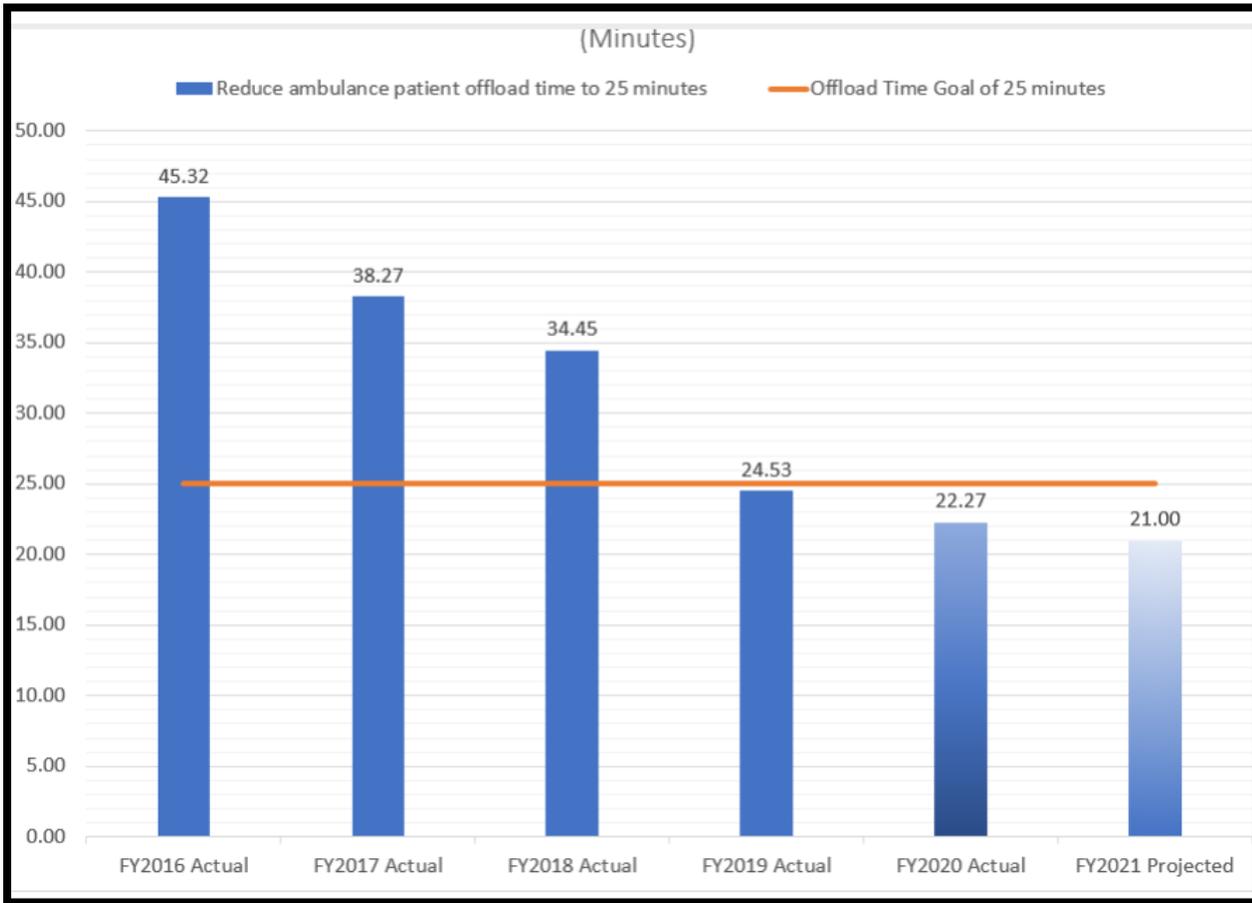
Health and Safety Code 1797.225 establishes that a LEMA may adopt policies and procedures for calculating and reporting ambulance offload time. Those policies and procedures must be based on the statewide standard methodology developed pursuant to 1797.120. LEMAs that adopt patient off-loading policies and procedures must also establish criteria for reporting and quality assurance follow-up for a patient off load time that exceeds the standards.

Patients who are experiencing an emergency and are transported to the hospital must receive rapid, efficient transfer and attention at an emergency care facility. Ensuring immediate transfer of patient care at emergency rooms will not only benefit the patient under direct care, but also ensure that emergency medical services (EMS) professionals can reenter the field to help others in need. Offload delays result in ambulances sitting idle at emergency rooms while patients wait for beds. They put a strain on the system, influencing response times and paramedic staffing, impacting service delivery, cost, and overall staff morale. Significant delays in ambulance patient offload time unacceptably prevent a patient from receiving appropriate and immediate care and pose a public safety risk by having fewer qualified EMS personnel available to respond to other emergencies.

The EMS Agency has placed significant effort into working with hospital administrators focusing on the time it takes to get ambulances back into service once they have arrived in their EDs. Decreases in offload delays will improve the time patients receive definitive care, better pain control and antibiotics when needed. Over the last six years, Santa Clara County has seen a significant decrease in delays experienced by ambulances at all area hospitals as shown below.

## Ambulance Patient Offload Time (APOT)

Below is a trending graph for Ambulance patient offload from 2019 through 2020.



## **EMS Trust Fund**

The EMS Trust Fund was created in 2000 and consists of revenue which is received from liquidated damages, which are paid by Rural/Metro (the contracted 911 ambulance provider) for failing to meet per-call response time standards; monthly zone response time standards; or for failing to meet other contract stipulations, such as maintaining minimum ambulance availability or avoiding ambulance breakdowns. In addition, revenue is also collected for first responder response time failures. These revenues are deposited to the EMS Trust Fund and are intended to fund projects that provide a countywide benefit and enhance the services provided in the Santa Clara County EMS System. There are four expense categories:

### *Category A: EMS System Reserve Investment*

Each year, at least 20% of the EMS Trust Fund revenue that is generated in the fiscal year (FY) is retained and used for future significant and long-term strategic projects that benefit the EMS System, as approved by the Board of Supervisors. These funds could also be used should the EMS System experience an unanticipated financial burden, such as extraordinary increase of cost of service or supplies, a material decrease in system-wide third-party payer reimbursement or projects deemed necessary by the Board of Supervisors.

### *Category B: EMS System Support-Training, Education and Recognition*

Funding authorized in this category would be primarily used for annual training, education, exercises, an annual EMS conference, and recognitions. Due to COVID-19, several annual trainings and exercises that are usually held in the spring were not completed. Instead there was an emphasis on the purchasing of public education material for medical file information holders, communication platforms for training and training materials/equipment.

### *Category C: Benefit to EMS System Stakeholders*

Projects in this category are requested from County of Santa Clara (County) EMS System Stakeholders, such as fire departments, County Communications, ambulance services, dispatch centers, and the EMS Agency. Projects in this category would continue to focus on one-time or shorter-term focused projects that benefit EMS System providers.

For Category C expenditures, the EMS Trust Fund Advisory Group, a subcommittee of the Emergency Medical Care Committee (EMCC), reviews proposals and makes recommendations to the EMS Agency for funding. During this FY20, Category C funds were approved by the Trust Fund Advisory Committee in various projects. Project proposals submitted and approved included the following:

- Private Ambulance Providers (non-911) request for ballistic vests.
- San Jose Fire Department request for LUCAS (Logwares Universal Commerce Application System) chest compression devices.

## EMS Trust Fund (continued)

- Santa Clara County Public Health Preparedness request for upgrades to the Medical Health Joint Operations Center (MHJOC).
- Santa Clara County Fire Chiefs-EMS Section request for Stop-the-Bleed traumatic hemorrhage kits.
- Santa Clara County Fire Department request for EMS data system hardware and CPR training equipment.
- San Jose Regional Hospital/Good Samaritan Hospital request for audio and visual equipment for educational outreach.

Of the approved projects, two were completed. Due to timelines and EMS staff reporting to the County Emergency Operations Center (EOC), funding for projects not completed in FY20 was rolled over into FY21 for completion.

### *Category D: Strategic Initiatives*

Projects in this category emphasize the development of initiatives that strategically advance the County EMS System, often in the longer term. Projects in this category may take more than one fiscal year and involve numerous parties.

Projects to note this fiscal year were the annual costs for reimbursement to Rural/Metro for costs related to training and programs that support the EMS system that included programs such as First Watch, Target Solutions, 12-Lead Transmission, Image Trend and GPS Logic. Also, annual costs to support the maintaining of the EMS System Data Hub, EMS Resource system (provides real time status of ED availabilities/bypass as well as the status of multiple EMS related resources), First Watch Solutions (web-enabled system that provides near real-time EMS System performance data analysis/operational transparency) and annual EMS operational costs, that include an EMS Strategic Operations Coordinator and building lease costs.

## Outstanding Achievements

The California Emergency Medical Services Authority honors special accomplishments, meritorious and heroic acts, innovations or fresh ideas to improve EMS in the state, or other unique and/or significant contributions by EMS personnel, physicians, nurses, EMTs, or other medical providers, local officials, members of the law enforcement community, citizens, and first responders. On December 4, 2019, two of the EMS Agency staff from Santa Clara County received awards.

This year Michael Cabano, who has been with the EMS Agency for 10 years and Jason Weed, an EMS Agency employee for 9 years, both received the Meritorious Service Medal –recognizing an individual for a meritorious act or service within EMS. This award also recognizes an EMT for an act that is above and beyond the call of duty during an EMS emergency or event.

They received this award for their accomplishments as part of an EMS Overhead Team in response to several wildfire disasters coordinating multiple evacuations and interfacility transports during the North Bay, Mendocino Complex, Tubbs, and devastating Camp Fires. Under their exceptional leadership, no EMS crews or patients were injured or killed, no ambulances were involved in any accidents, and no patients were misplaced or lost. Based on the success of this “EMS Overhead Team” model, the EMS Authority Disaster Medical Services Division and the Ambulance Strike Team Advisory Committee is working to adopt the “EMS Overhead Team” concept pioneered in these events as a best practice moving forward.

Congratulations to these exceptional EMS Specialists for their dedication and courage.



## Summary

Our successes are due to the hard work and dedication of our many partners, and the spirit of cooperative excellence that is so evident in their efforts. We thank you for all you do to care for the people of Santa Clara County and pledge to continue to strengthen our exceptional EMS system.

We live in a time of unprecedented pace of change. Some include the expectations and availability of information, the rate of discovery and understanding, the nature of our surrounding health care system, and expectations from within our communities. In 2020, our EMS community continues to focus on building a strong foundation dedicated to patient and provider safety and high-quality service.



## CONTACT US

AT

Santa Clara County Emergency Medical Services

700 Empey Way

San Jose, California 95128

408-794-0600

[www.sccemsagency.org](http://www.sccemsagency.org)

[www.facebook.com/Santa/ClaraCountyEMS](https://www.facebook.com/Santa/ClaraCountyEMS)

[twitter.com/xscems](https://twitter.com/xscems)