

2024 ANNUAL REPORT



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Executive Summary

2024 was a productive year for the San Joaquin County Emergency Medical Serves Agency (SJCEMSA). SJCEMSA continued work toward our mission to ensure the efficient and effective delivery of emergency medical services and medical health mutual aid for the people of San Joaquin County. A key element to accomplishing our mission is to collate all EMS data to drive effective clinical and policy decisions to ensure better patient outcomes. In 2024, SJCEMSA focused on several projects aligned with ensuring a complete EMS data integration for valid reporting and analytics. One of the projects that was completed in 2024 to accomplish full EMS data integration was to the establishment of an EMS data interface to Stockton Fire Emergency Dispatch to receive EMS call intake and response data. The data from Stockton Fire Emergency Dispatch will be combined with other EMS call intake and response data sources to ensure complete EMS system data integration.

Additionally, SJCEMSA migrated from a legacy repository of electronic Patient Care Report (ePCR) data to a modern and complete ePCR repository, reporting, surveillance, and analytical platform. All emergency and non-emergency ambulance providers, all fire EMS first responders, and all air ambulance providers are sending ePCR data to EMS in one repository for quality improvement and EMS system evaluation efforts. SJCEMSA will continue these foundational improvements to EMS data into 2025 by implementing sophisticated clinical quality key performance metrics software for real time clinical feedback.

Jared Bagwell
EMS Director

Message from the Medical Director

A great deal of our time in 2024 was focused on data analysis and systems planning. As the medical director, the policies and protocols for San Joaquin County EMS Agency (SJCEMSA) are written using evidence-based medicine and are supported by data; therefore, this data collection and evaluation assist with enhancing and improving our patient treatments and outcomes. In addition, having this data gives us a more robust view of the various aspects of Ambulance Patient Offload Times (APOT) at each hospital. This has helped highlight areas of improvement and ensuring the submission of consistent metrics. Also, the data has continuously allowed us to monitor ambulance response times. As such, in 2024 SJCEMSA successfully assisted in the facilitation and approval of a subcontract agreement between AMR and South San Joaquin County Fire Authority (SSJCFA) to provide a backup surge emergency ambulance to service the greater Tracy area during times of unanticipated high call volume. The preliminary data has shown this has been quite effective.

We are looking forward to even more data analysis and system status improvements in 2025.

Katherine Shafer, MD EMS Medical Director



About SJCEMSA

The San Joaquin EMS Agency, a department within the San Joaquin County Health Care Services Agency, is responsible for the planning, implementation, and evaluation of the emergency medical services (EMS) system in San Joaquin County. SJCEMSA monitors and enforces more than 25 contracts and agreements for the provisions of advanced life support (ALS) emergency ambulance services, ALS and basic life support (BLS) non-emergency ambulance services, ALS and BLS first response services, base hospital medical direction, receiving hospital services, trauma services, specialty care centers, EMS training programs, and other services. This includes implementing and evaluating the County's trauma plan and other specialty care systems including oversight of San Joaquin General Hospital's performance as a designated level II trauma center and the St. Joseph's Medical Center and Dameron Hospital as STEMI (cardiac) centers.

In addition to contract monitoring and enforcement, SJCEMSA serves as the lead for all Continuous Quality Improvement (CQI) activities throughout the EMS system including the approval of dispatch, provider and hospital CQI programs; leading peer-to-peer CQI activities; managing individual and provider performance improvement plans; and investigating and tracking sentinel events, unusual occurrences, citizen complaints, and EMS personnel formal investigations. SJCEMSA maintains an on-call EMS Duty Officer, 24-hours a day/ seven days a week to respond to mutual aid requests, coordinate disaster medical operations, and to assist hospitals and providers in managing the EMS system.

SJCEMSA, in cooperation with Public Health Services, serves as the lead agency for medical disaster response with the EMS Administrator serving as the County's Medical Health Operational Area Coordinator. SJCEMSA oversees the Hospital Preparedness Program grant which provides funds for disaster planning in targeted areas including: healthcare system preparedness and recovery, emergency operation coordination, information sharing, medical surge and medical volunteer management.

Certifications, Accreditations, & Authorizations

SJCEMSA has established policies for issuing certifications, accreditations, and authorization to EMS personnel that provide emergency medical services care to the sick and injured residents and visitors in San Joaquin County.

EMS Personnel	2024 Applications Processed	Total Personnel
EMS Dispatcher Authorization	41	94
Emergency Medical Responder Certification	19	24
Emergency Medical Technician Certification	391	796
Paramedic Accreditation	197	330
Mobile Intensive Care Nurse Authorization	37	58
Paramedic Preceptor Authorization	12	47
Paramedic Accreditation Officer Authorization	1	8

Source: SJCEMSA / Authority: California Health and Safety Code – Division 2.5. Emergency Medical Services • 1797.210, 1797.220, 1798 et seq



SJCEMSA EMS Award of Excellence

Cheryl Heaney-Ordez

2024 San Joaquin County EMS Award of Excellence Recipient

Recipients of this award are recognized for their efforts and dedication to improving the EMS system in San Joaquin County, being a mentor and supporter of other EMS system participants, providing valuable education and feedback to the EMS system, and a commitment to helping others in our community.

Ms. Heaney-Ordez is recognized by her peers and other leaders for her desire to mentor, teach, and improve the continuum of care in the EMS system. Ms. Heaney-Ordez has been a key voice and advocate for improving patient care. She has focused her career on working with all stake holders of the EMS system and sharing our mission.

Ms. Heaney-Ordez has worked as a nurse for over 31 years. In 2005, she became the Emergency Department Director at St. Joseph's Medical Center. She has been instrumental in promoting change to the EMS system, working as a Mobile Intensive Care Nurse (MICN) assisting and providing support to EMS field operations, including advocating for the implementation of 12 lead EKG transmissions from the field. She advocated for STEMI Receiving Center designation in San Joaquin County and worked to develop a Stroke program for St. Joseph's Medical Center and advocated for Primary Stroke Center designation in San Joaquin County, which contributed to all hospitals within San Joaquin County becoming designated as Primary Stroke Centers. Most recently she has been assisting with a taskforce to address the mental health crisis and impact on the EMS and medical systems. She's assisting in working on a solution for better patient outcomes and care.

Non-Emergency Ambulance Providers

San Joaquin County Ambulance Ordinance 4563 and the EMS system allows for non-emergency ambulance providers to be permitted to provide different levels of service. These providers enhance the system to allow for patients to be transferred and transported to higher levels of care or alterative care/treatment without taking emergency ambulances away from providing care to the 9-1-1 system.

Non-Emergency Ambulance Transport Providers	2024 Transports	Level of Service
Amwest Ambulance	2,527	ALS, BLS, SCT
Bay Medic Transportation	4, 697	BLS, SCT
Citizens Medical Response, LLC	2,047	BLS
NORCAL Ambulance	17,681	ALS,BLS, NTL, SCT
ProTransport-1, LLC	687	BLS, SCT

Source: Amwest Ambulance, Bay Medic Transportation, Citizen Medical response, LLC, NORCAL Ambulance, and ProTransport-1, LLC.

Authority: San Joaquin County Ambulance Ordinance 4563 • California Health and Safety Code – Division 2.5. Emergency Medical Services

• 1797.200, 1797.204, 1797.206 et seq, 1798 et seq

Level of Service:

- Basic Life Support (BLS) two-person minimum staffing with one emergency medical technician (EMT) attendant and one EMT driver.
- Advanced Life Support (ALS) two-person minimum staffing with one paramedic attendant and one EMT driver.
- Critical Care Transport (CCT) three-person minimum staffing with an authorized registered nurse attendant and two EMTs (one driver and one attendant).
- Neonatal Transport (NTL) Meets criteria per SJCEMSA Policy No. 4411, Authorization to Conduct Neonatal Transport.
- Specialty Care Transport (SCT) a two-person minimum staffing with one authorized registered nurse attendant and one FMT.

Call Types for Service

The top five (5) types of calls for service in San Joaquin County requesting and emergency medical services response.



Source: SJCEMSA

Emergency Medical Responders

Peace officers and firefighters are often referred to as first responders. At the scene of an emergency, they are sometimes the first to provide emergency medical care to the sick and injured. Peace officers and firefighters have at a minimum, training for Public Safety First Aid and CPR; however, some have high levels of training.

In San Joaquin County, we have agreements with fire departments/districts to provide Basic Life Support (BLS) or Advanced Life Support (ALS). BLS services are provided by EMT's and ALS services are provided by paramedics.

First Responder Agency	2024 EMS Response	Level of Service
Clements Rural Fire District	143	BLS
Collegeville Fire District	182	BLS
Defense Logistics Agency	79	ALS
Escalon Consolidated Fire Protection District	590	BLS
Farmington Fire District	123	BLS
French Camp-McKinley Fire District	686	BLS
Lathrop-Manteca Fire Protection District	2,972	BLS
Liberty Rural Fire Protection District	181	BLS
Linden-Peters Fire District	280	BLS
Lodi Fire Department	6,775	BLS
Manteca Fire Department	8,359	BLS
Mokelumne Rural County Fire District	375	BLS
Montezuma Fire Protection District	460	BLS
Mountain House Fire Department	493	BLS
Ripon Consolidated Fire District	897	ALS
South San Joaquin County Fire Authority	9,243	ALS
Stockton Fire Department	32,368	ALS
Thornton Fire District	141	BLS
Waterloo-Morada Fire District	1,017	BLS
Woodbridge Fire District	878	BLS

Source: Valley Regional Communication Center, Defense Logistics Agency, and Stockton Fire Department / **Authority:** California Health and Safety Code – Division 2.5. Emergency Medical Services • 1797.200, 1797.204, 1797.206 et seq, 1798 et seq

Air Ambulance Providers

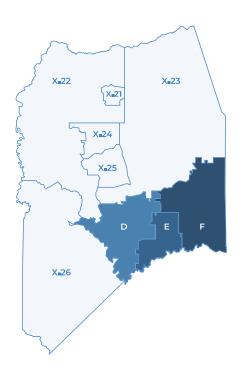
Air ambulances are permitted and available in San Joaquin County to provide air transportation from a facility (hospital) to a higher level of care or specialty care facility. In addition, they can respond to the scene of an emergency.

Air Ambulance Providers	Inter-Facility Transport	Scene Transport
REACH / CALSTAR	333	21
Standford Life Flight	27	0

Source: REACH and Standford Life Flight / **Authority:** San Joaquin County Ambulance Ordinance 4563 • California Health and Safety Code – Division 2.5. Emergency Medical Services 1797.220; 1798 et seq

Emergency Ambulance Providers

San Joaquin County has established four (4) zones for emergency ambulance services. This system design allows for exclusive operating areas (EOAs) in those zones. Services for zone X is provided by American Medical Response. Zone D is serviced by Manteca District Ambulance Services. Zone E is serviced by Ripon Consolidated Fire Districts. Zone F is serviced by Escalon Community Ambulance.



Emergency Ambulance Providers	Responses	Transports	Percentage of Responses Transported	Zone
American Medical Response	85,553	67,206	78.55%	X
Escalon Community Ambulance	1,139	757	66.46%	F
Manteca District Ambulance Services	11,576	8,894	76.83%	D
Ripon Consolidated Fire District	1,608	1,078	67.04%	Е

Source: SJCEMSA **/ Authority:** San Joaquin County Ambulance Ordinance 4563 • California Health and Safety Code – Division 2.5. Emergency Medical Services • 1797.200, 1797.204, 1797.206 et seq, 1798 et seq

Hospital / Receiving Center Designations

SJCEMSA is granted authority through California Health and Safety Code and California Code of Regulation to administer the local EMS system, which includes designation of General Acute Care Hospitals as receiving hospitals for all patients arriving by ambulance in San Joaquin County. In addition, hospitals that provide specialized care in Stroke, Trauma, and Cardiac services are approved by SJCEMSA for designation of specialty care services. SJCEMSA develops and oversees the Stroke, Trauma, and STEMI system of care in San Joaquin County.

SJCEMSA Policy No. 5201, <u>Medical Patient Destination</u>, allows for patients to choose to be transported to a hospital in San Joaquin County, Sacramento County, or Stanislaus County hospital to receive emergency medical care. 85% of the patients are transported to a hospital in San Joaquin County by choice or by medical necessity.

Below is the table that indicates the specialty care designations awarded the seven (7) hospitals within San Joaquin County.

Specialty Care Designation

Hospital	Trauma	Base	STEMI	Stroke	Transports Received
Adventist Health Lodi Memorial Hospital				Χ	8,406
Dameron Hospital			Χ	Χ	6,572
Doctor's Hospital Manteca				Χ	3,788
Kaiser Permanente Hospital Manteca				X	3,786
San Joaquin General Hospital	Χ	Χ		X	12,278
St. Joseph's Medical Center			X	X	26,974
Sutter-Tracy Community Hospital				Χ	4,539

Source: SJCEMSA / **Authority:** Health and Safety Code, Division 2.5, Sections 1797.67, 1797.88, 1797.220, 1798, 1798.162, 1798.163, 1798.164, 1798.165, 1798.168, 1798.170, and 1798.172; California Code of Regulations, Title 22, Division 9, Chapter 6.

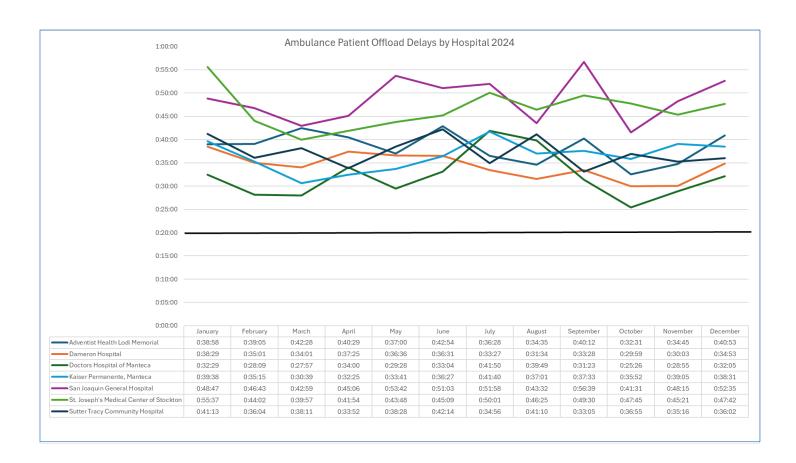
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Ambulance Patients Offload Delays

Receiving hospitals are obligated pursuant to the federal Emergency Medical Treatment and Active Labor Act (EMTALA) to promptly provide each patient arriving at the receiving hospital with an appropriate medical screening examination and necessary stabilizing treatment for emergency medical conditions and labor within the hospital's capability and capacity. SJCEMSA has determined that 20 minutes is the maximum time an ambulance should wait at any emergency department to be transferred to a hospital bed.

In May 2024 the EMS Advisory Committee stood up an Ambulance Patient Offload Delay (APOD) subcommittee with three objectives: 1) Identify and review current transfer of care practices and identify ways to improve education and accuracy, 2) Identify and review barriers and efficiencies to hospital throughput, and 3) Identify local solutions to reduce ambulance patient offload delays greater than twenty (20) minutes.

SJCEMSA along with the designated receiving center hospitals located in San Joaquin County have been working diligently to improve APOD.



EMS Specialty Care

Primary Stroke Centers (PSC)

All seven (7) hospitals in San Joaquin County are designated as Primary Stroke Centers (PSC) and have met the requirements as set forth in SJCEMSA Policy No. 4811, <u>Primary Stroke Center Designation</u>. In 2024, EMS responders provided stroke alerts (prenotification) 81% of the time on suspected stroke patients enroute to PSCs. Stroke alerts prepare PSCs to receive patients suffering from suspected stroke symptoms and allow for quicker diagnostic procedures, improving patient outcomes.

SJCEMSA implemented policies adopting time standards that have proven to improve patient outcomes from the American Heart Association (AHA)/American Stroke Association (ASA).

Stroke System of Care Measures	Goal Time	SJC Average Time
EMS First Medical Contact to Thrombolytics "FMC to Needle"	≤ 1:30:00	1:08:59
Hospital arrival to Thrombolytics "Door to Needle"	≤ 0:60:00	0:47:47
Hospital Arrival to CT Scan "Door to CT"	≤ 0:25:00	0:12:10

Source: AHA Get with the Guidelines Stroke Registry / **Authority:** Health and Safety Code, Division 2.5, Section 1797.67, 1797.88, 1797.220, 1798, and 1798.170; California Code of Regulations, Title 22, Division 9, Chapter 6.

Level II Trauma Center

San Joaquin General Hospital is designated by SJCEMSA as a Level II Trauma Center. They have met all the standards and requirements of a level II trauma center as set forth by SJCEMSA Policy No. 4712, <u>Level II Trauma Center Standards</u>, and the American College of Surgeons Committee on Trauma (ACS-COT).

Major Trauma Transports 2024		
Blunt Trauma		2,150
Penetrating Trauma		271
Burn Trauma		41
	TOTAL	2, 462

Source: SJGH / Authority: Health and Safety Code, Division 2.5, Sections 1797.67, 1797.88, 1797.220, 1798, 1798.162, 1798.163, 1798.164,

1798.165, 1798.168, 1798.170, and 1798.172; California Code of Regulations, Title 22, Division 9, Chapter 6.

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EMS Specialty Care (Continued)

STEMI Receiving Centers (SRC)

"STEMI" means ST Segment Elevation Myocardial Infarction and refers to a clinical syndrome defined by symptoms of myocardial infarction in association with ST-segment elevation on electrocardiogram. SJCEMSA has designated both Dameron Hospital and St. Joseph's Medical Center as STEMI Receiving Centers (SRC). Both hospitals have been evaluated and met the requirements set by SJCEMSA Policy 4801, STEMI Receiving Center Designation.

The American Heart Association has set time standards that lead to the best patient outcomes. In addition, SJCEMSA has implemented policies to ensure patients have early and rapid care.

STEMI System of Care Measures	Goal Time	SJC Average Time
EMS First Medical Contact to PCI	≤ 1:30:00	1:26:30
Hospital arrival to PCI	≤ 1:30:00	0:57:44

Source: AHA Get with the Guidelines CAD STEMI Registry / **Authority:** Health and Safety Code, Division 2.5, Section 1797.67, 1797.88, 1797.220, 1798, and 1798.170; California Code of Regulations, Title 22, Division 9, Chapter 6.

"PCI" or "Percutaneous Coronary Intervention" means a procedure used to open or widen a narrowed or blocked coronary artery to restore blood flow supplying the heart, usually done on an emergency basis for a STEMI patient

In 2024, 91% of STEMI patients transported that receive PCI survived.



Disaster & Emergency Preparedness

SJCEMSA coordinates medical and health mutual aid, as the Medical Health Operational Area Coordinator (MHOAC) in accordance with California Health and Safety Code 1797.153.

In addition, SJCEMSA manages the Federal Hospital Preparedness Program (HPP) Grant and chairs the San Joaquin Operational Area Healthcare Coalition.

San Joaquin Operational Area Healthcare Coalition's purpose is to improve and sustain the healthcare preparedness capabilities within San Joaquin County by providing a forum for multi-agency coordination; joint emergency preparedness planning, training and exercising; as well as information and resource sharing.

The coalition is comprised of 237 healthcare facilities, providers, public and private medical and health agencies/organizations, public safety agencies, non-government agencies, and other community partners operating within the geographic boundaries of San Joaquin County.

The San Joaquin Operational Area Healthcare Coalition is made up of three distinct functional groups:

- Medical/Health Multi-Agency Coordination Group (Med MAC)
- Emergency Preparedness Committee (EPC)
- Healthcare Coalition Memorandum of Understanding Signatories (MOU)

In 2024, SJCEMSA, in conjunction with the Emergency Preparedness Committee, updated the Chemical Surge Annex to the San Joaquin Operational Area Healthcare Coalition Emergency Operations Plan (EOP). The annex describes a coordinated healthcare response to a chemical emergency in which the number and severity of exposed or possibly exposed patients challenges the capability of healthcare facilities. The annex outlines specific incidents and response protocols necessary to properly plan for, manage, and care for patients during a chemical emergency.

SJCEMSA received State Homeland Security Grant funding to procure and build seven Hospital Emergency Department Radiological Response kits The kits will enable hospital personnel to rapidly screen patients for radiological contamination, thereby improving patient care and protecting healthcare workers from ionizing radiation.

Volunteer Management

SJCEMSA manages 748 registered volunteers in the San Joaquin Unit of the California Disaster Healthcare Volunteers (DHV). All deployed volunteers are provided with state funded workers' compensation protection, in accordance with the California Disaster Service Workers Volunteers Program.

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Other 2024 Activities & Accomplishments

Month	Activity and Accomplishment
January	 Transitioned to NEMSIS 3.5 reporting data for electronic patient care records. Conducted ICS-300 Intermediate Incident Command System for Expanding Incidents course. Participated in the Statewide Disaster Healthcare Volunteers (DHV) System Drill. Conducted the Healthcare Coalition Ham Radio Communications Drill.
February	 Conducted ICS-400 Advanced Incident Command System Course. Conducted Medical Preparedness and Response for Bombing Incidents (MGT-348) course. Permitted NORCAL Ambulance began offering ALS non-emergency transport services.
March	 SJCEMSA and NCTI Paramedic Training Program's 1st Cohort began. Renewed Linden Peters Fire District renewed a 5-year Basic Life Support Authorization Agreement.
April	 Released EMS System Assessment by Healthcare Strategist consultants was released to the public. Conducted a CHEMPACK training. Participated in the Statewide Disaster Healthcare Volunteers (DHV) System Drill. Vendor selected for the Med Net and HEAR radio replacement project (base radios, antennas, and tone remotes) for the six receiving hospitals and San Joaquin General Hospital (ARPA Funds).
May	 EMS Week. Renewed REACH Air Medical Services, LLC 3-year Air Ambulance Agreement. Conducted a CHEMPACK Tabletop Exercise. Conducted an amateur radio licensing class "HAM Cram" training.
June	SJCEMSA Emergency Medical Responder Course (12 participants).
July	 Processed and deployed mutual aid request for Personal Protective Equipment (PPE) to support local Avian Flu H5N1 outbreaks (on-going). Implemented new and revised SJCEMSA policies. Commenced Ambulance Patient Off-Load Delays (APOD) subcommittee. Added Tranexamic Acid (TXA) to the Trauma Policy. Participated in the Statewide Disaster Healthcare Volunteers (DHV) System Drill. Conducted the Healthcare Coalition Ham Radio Communication Drill. Acquired names and addresses of all at risk Medicare beneficiaries (1,001) residing with in the boundaries of a planned Public Safety Powers Shutoff (PSPS) in greater Tracy area. The data was accessed through the US Department of Health and Human Services emPOWER program, and was available to jurisdictions to conduct wellness checks.

Other 2024 Activities & Accomplishments (Continued)

Month	Activity and Accomplishment
August	 Renewed Defense Logistics Agency (DLA) 5-year MOU Agreement for Advanced Life Support (ALS) Services. Participated in the American College of Surgeons (ACS) review of San Joaquin General Hospital (SJGH) for Trauma Services Standards. Approved American Medical Response (AMR) sub-contract agreement with South San Joaquin County Fire Authority (SSJCFA) for surge ambulance services for the greater Tracy area. Conducted a CHEMPACK Functional/Full-Scale Exercise.
September	 Replaced the Med Net radio antennas at the six receiving hospitals and the San Joaquin General HEAR radio. Implemented new EMS ePCR data repository. Conducted a Medical Management of Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) even (PER-211) course.
October	 SJCEMSA New Staff: Nasir Khan (RN, EMS Specialty Care Coordinator). Paul Harper (Pre-Hospital Care Coordinator) Leon Brown (MBA, EMS Analyst). Conducted the Medical Response and Surge Exercise (simulated evacuation of St. Joseph's Medical Center). Participated in the Statewide Disaster Healthcare Volunteers (DHV) System Drill.
November	Began the SJCEMSA and NCTI Paramedic Training Program's 2nd Cohort.
December	SJGH was reverified by ACS for level II trauma center.

Looking Ahead - 2025 Goals

In 2025 SJCEMSA Goals include:

- 1. Bolster all data sources and promote data sharing with the stakeholders.
- 2. Continuing advancing to a partnership with Delta College for a Paramedic Training Program.
- 3. Participating in system training and events.
- 4. Establishing Nurse Navigation at 911 dispatch.
- 5. Publishing emergency ambulance RFP and selection of EOA provider.



www.sjgov.org/ems