What is EMS?

• A prehospital system of coordinated and seamless system of emergency medical care.

• The organizational structure of EMS, as well as who provides and finances the services, varies significantly from community to community in San Diego.

• It involves, many public and private agencies and organizations, communication and transportation networks, hospitals, trauma centers, prehospital personnel, and administrators and government officials.
History of San Diego EMS

Prior to 1970

Scoop & Haul
The History of EMS

• National Highway Traffic Safety Administration (NHTSA) began establishing law due to increase in increasing # of injuries and deaths on highways

• NHTSA created the Star of Life to represent EMS
History of San Diego EMS

During 70’s

In 1972, San Diego County was designated by U.S Dept of Health, Education, and Welfare, as one of five areas in the nation to become an EMS demonstration project. The project included:

- Development of a regional trauma center at UCSD Medical Center.
- Establishment of an emergency and non-emergency ambulance system.
- Development of Emergency Medical Technician (EMT) training at community colleges.
History of San Diego EMS

Moving to the Forefront in 80’s & 90’s

- Fire Depts provided EMS services (1st on the scene of incident.)
- Fire Depts increased the # of 1st responder services.
- Fire Depts dispatchers underwent Emergency Medical Dispatch training in 911 telephone triage and pre-arrival instruction.
- Fire Depts placed defibrillators on all 1st responder engines and trucks (combating heat attacks.)
- Local authorities partnered with private sector in providing paramedic ambulance coverage.
San Diego EMS

Today

• 250,000 ambulance calls/year within 18 different jurisdictions (incorporated cities) and unincorporated areas.
• 5,700 major trauma patients/year (MTOS)
• 18 receiving emergency departments
• 6 trauma facilities
• 7 base hospitals
• Approximately 45 ambulance agencies
  – 17 Advanced Life Support (ALS)
  – 27 Basic Life Support (BLS)
  – 1 Air Ambulance
San Diego County By Health Services Regions
With Ambulance Service Areas and Hospital Facilities

Source: County of San Diego Health and Human Services Agency, Division of Emergency Medical Services, March 2001.
EMS Activities

- Medical Direction
- Base Hospital Program
- ALS Program
- BLS Program
- Ambulance Ordinance
- Trauma System
- CIREN
- EMS for Children
- SART Coordination
- Epidemiology, Surveillance and Community Health Statistics
- Administration
- Information Communications Management
- Disaster Medical Response
- HRSA Coordination
- Bioterrorism Coordination
- Metropolitan Medical Response System (MMRS)
Administration

Goal: To administer all EMS contracts and funds and to provide administrative support to EMS programs.

- Contract administration
- Budget and fiscal administration
- Personnel administration
- Administration of two County Service Areas (CSAs)
- Processing of all MICN, paramedic, and EMT certifications
- Equipment and supplies requisitions and inventory
- Administration of Maddy fund
- Other Administrative/Clerical Support
Contracts, MOAs and MOUs

- EMS Expenditure contracts 110 to 130
- HPP/Pandemic expenditure contracts 30-40
- MOAs 80-100 currently, 15-20 future for Stroke System
- MOUs 5-10
- Revenue contracts 15-20
ALS & BLS Programs

Goal: To provide safe, enhanced care to patients who require emergency medical intervention.

- Regulate delivery of ALS and BLS services countywide
- Assure countywide ALS coverage
- Credentialing
  - Certification issues /investigations
- Continuing education
- Prehospital patient databases
- Call volume distribution
ALS & BLS Programs

• Certification:
  - 8,000 certified EMT in San Diego County / need to retested every two years on the skills

• Continuing education
  - Educate EMT and paramedics about VOL during field care audit of agencies.
  - Influence the paramedic agency training/ school to include VOL in their curriculum.
Medical Direction

Goal: To provide medical oversight of the prehospital and trauma systems and to evaluate and establish the highest standards of emergency medical care.

- Medical Oversight
- Policies and Protocols
- Investigations
- Cardiac Care Centers (STEMI)
- Stroke System
Prehospital Patient Data

- Patient demographics
- Chief complaint
- Vital signs
- Skills/medications
- Incident location
- Patient disposition
- Drop-in surveillance
Information Communication Services

Goal: To provide oversight and management of the division’s information communication projects, services, and needs in support of the division’s overall goal and program services.

- Provide relevant information management and technical support
- Facilitate meetings/liaison with CTO, GITM, NG and vendor teams
- Manage planning processes and project implementation
- Ensure support to external QCS and Trauma Registry users
Background: QCS

- Created in 1993 (QA Net) to enhance documentation and data collection from the prehospital emergency ambulance system
- 24 hour, live, on-line, interactive system
- Updated every 15 seconds
- Private wide area network
- Links hospitals, ambulance agencies, and County EMS office
- Online data entry by field and hospital personnel
- Implementing Web Services in 2007
QCS Data

• Prehospital Patient Records
  – Medic
    • Completed by responding agency
    • All ambulance responses
  – MICN
    • Data entered by base hospital (BH)
    • All responses with BH contact

• Hospital Resource Information
  – Bypass statistics (Hours, number of patients)
  – Hospital Resource Availability (CT, Trauma, Internal Disaster)
  – Hospital Bed Availability
Ambulance Ordinance Program

Goal: To ensure standardized, safe and appropriate medical transportation services throughout San Diego County.

- CA Dept. of Justice paperwork for principal operators
- Annual vehicle inspections
- Maintain provider documentation/ inspection records
Base Hospital Program

Goal: To provide appropriate medical oversight to ensure that patients receive optimal prehospital medical care.

- QA/QI activities
- Contract compliance
- Paramedic protocols
- Coordinate Health Services Capacity Task Force
- Staff support to MAC, PAC, BSPC, EMOC
- EMS duty officer
Trauma System

Goal: To provide continuous reduction in the morbidity and mortality of victims of trauma.

- Periodic trauma system assessment
- Quality monitoring system/Medical Audit Committee
- Public awareness and information
- Trauma registry
  - Quality Assurance
  - Medical Education
  - Public Health
  - Research
- Surveillance
Trauma System- Background:

• 5 adult facilities
  – 2 Level 1 facilities
  – 3 Level 2 facilities
• 1 pediatric facility
• Fiscal Year 2003/04
  – 10,152 trauma team activations
  – 5,854 Modified MTOS patients
Crash Injury Research and Engineering Network (CIREN)

Goal: To reduce injuries and improve motor vehicle safety through multidisciplinary research in collaboration with other CIREN participants.

- Vehicle Reconstruction
- Occupant Kinematics
- Injury Sourcing
- Biomechanics
- Enhance Vehicle Crashworthiness
- Injury Trending for Medical Personnel
CIREN National Database

• Links
  – Vehicle data (delta v, crush, PDOF)
  – Patient injuries
    • Supporting Documentation - x-rays, body images, operative reports, hospital charges
  – Injury sourcing
    • intrusion & contact & injury & x-ray
  – Biomechanics
Emergency Medical Services for Children (EMS-C)

Goal: To reduce morbidity and mortality from injury and illness by development, implementation, and integration of Emergency Medical Services for Children (EMSC) activities into the entire spectrum of EMS systems.

- Pediatric emergency care education
- Pediatric specific data collection
- Pediatric EMS research and evaluation
Sexual Assault Response Team (SART) Program

Goal: To provide unified, victim sensitive services to victims of sexual assault in San Diego County.

- Facilitate monthly meetings of SART Systems Review Committee
- Participate in standardizing sexual assault response protocol
- Maintain database and analyze data
- Provide periodic SART report to Board of Supervisors
Sexual Assault Response Team

• Multidisciplinary Team
  – Law Enforcement
  – Forensic Examiner
  – Advocate
• Quality Evidence Collection/Chain of Custody
• Victim Sensitive Approach
Epidemiology, Surveillance and Community Health Statistics

Goal: To provide customers with accurate and timely information on emergency medical services and emergency medical and injury data and to provide regional and community support with PHS data.

- Maintain EMS databases including prehospital, trauma, SART, emergency department discharge and medical examiner
- Conduct regular emergency medical and injury surveillance and data analysis
- Respond to regional and community requests for Public Health data
- Maintain current EMS information on website
- Community task force/committee participation
- Staff EMS committees
- Host monthly data analyst meeting
Surveillance Research

- Hospital ED Saturation hours
- Flu surveillance
- Prospective research studies
- Motor Vehicle
  - Pedestrian
  - Restraint use
  - Causes
  - Graduated licensing
  - Weather
- Falls
- Heat Index surveillance
- OD/Poisoning
- Homicide
- Suicide
- Sports and Recreation Injuries
  - Scooters
- Childhood Injuries
  - Airway obstruction
  - Burns and scalds
- Elderly Injuries
- Geographical Analysis
Violence Surveillance

• Domestic Violence
• SART
• Medical Examiner
  – Suicide
  – Firearm
• Suicide Surveillance
  – Elderly Suicide Prevention Toolkit
• Community Health Improvement Partners
  – Public Education Campaign
  – Suicide Data Report
Disaster Medical Response

Goal: Promote quality in the delivery of disaster patient/victim care services.

- Healthcare Disaster Council
- Region VI Disaster Medical Health Coordination
- EMS Duty Officer Program
- Annex D
- Emergency Preparedness Exercises
- Medical Reserve Corps (MRC)
- DMAT Liaison
Annex D

- Establishes a disaster medical system and prescribes responsibilities and actions required for the effective operation of the medical response to disasters.
- Minimize loss of life, subsequent disability, and human suffering by ensuring timely and coordinated medical assistance, to include evacuation of severely ill and injured patients.
- Coordinate the utilization of medical facilities and the procurement, allocation, and distribution of medical personnel, supplies, communications, and other resources.
- Provide a system for receipt and dissemination of information required for effective response to and recovery from the effects of a major disaster.
Bioterrorism Coordination

Goal: To prepare for and mitigate disease in a bioterrorism attack.

- Strategic National Stockpile/Chem Pack/City Readiness Initiative (CRI)
- Bionet
- Biowatch
- Healthcare Advisory Committee on Terrorism (HACOT)
- EMAN/CAHAN
- WebEOC
- Grant/Contract Coordination
- Medical Operations Center
Emergency Medical Alert Network (EMAN)

- EMAN is a confidential communication network between public health, public safety and local medical professionals.
- Mass alerting capacity through email, phone, cell phone, fax and pager.
- Facilitates communicable disease reporting and feedback.
- Can be used for public health emergency.
California Health Alert Network (CAHAN)

- Web-based alerting system for important public health issues and emergencies.
- Mass alerting capacity through email, phone, cell phone, fax and alpha pager.
- Document storage and collaborative environment with specific role based portals.
- Participation is role based and approved at the State and Local level.
Hospital Preparedness Program
(formerly HRSA)

Goal: To upgrade the preparedness of the Nation’s health care system to respond to bioterrorism, other outbreaks of infectious disease, and other public health threats and emergencies.

- Regional Surge Capacity Planning
- Pharmaceutical Caches
- PPE/Decon Equipment
- Communication and Information Technology
- Trauma/Burn Care Surge Capacity
- Education and Training
- Emergency Preparedness Exercises
- HPP Workgroup Team Coordination
- HPP Executive Steering Committee
Hospital Preparedness Training and Response

• The mission of the National Bioterrorism Hospital Preparedness Program is to ready hospitals and supporting health care systems to deliver coordinated and effective care to victims of terrorism and other public health emergencies.
Metropolitan Medical Response System (MMRS)

Goal: To prepare for and protect the residents of San Diego County in a terrorist event

- USPS Biohazard Detection System (BDS)
- San Diego Regional Metropolitan Medical Strike Team (MMST)
- Emergency Preparedness Exercises
- Terrorism Liaison Officer
- WIIZARD
- Homeland Security Grant Coordination
Emergency Preparedness Training and Response

- “All Hazards” preparation, planning, equipping and training to respond to a Weapon of Mass Destruction (WMD) incident or other incidents
- Protects the residents of the County of San Diego
- Activated for a potential or actual WMD event or when needed to augment response to other non-WMD incidents