

# COUNTY OF SAN DIEGO EMERGENCY MEDICAL SERVICES

## 2014 EMERGENCY MEDICAL SERVICES SYSTEM REPORT

### San Diego County Facts

**Population** - 3,194,362

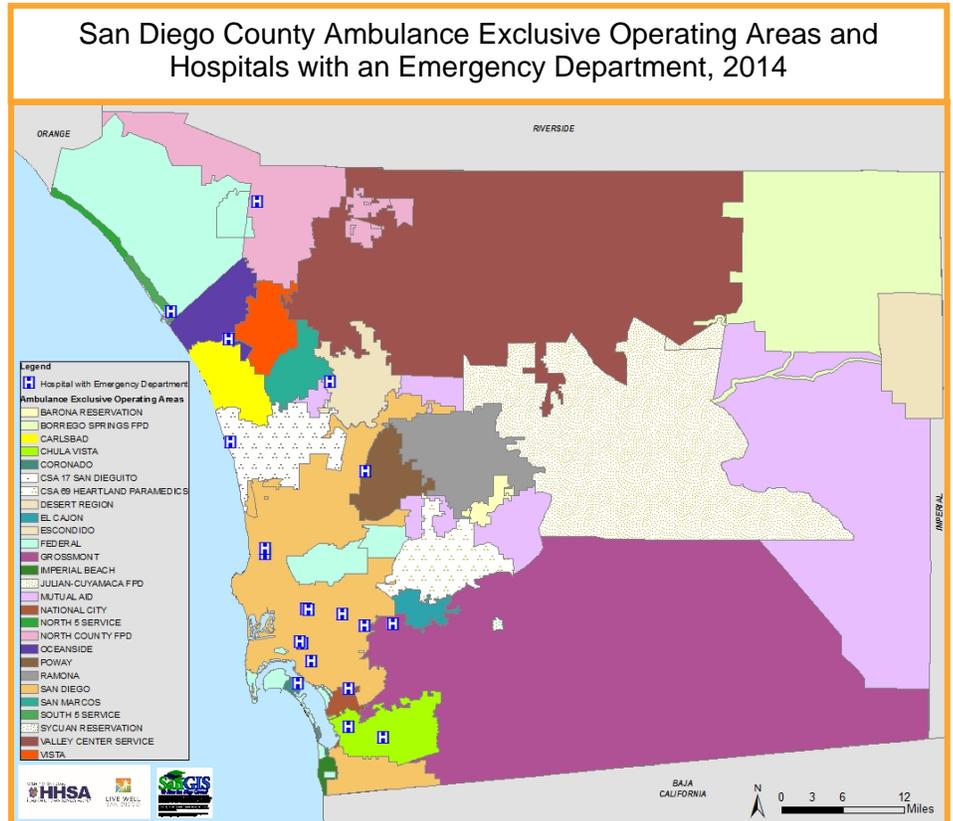
**Square Miles** - Over 4,200

**Agencies** - 73 agencies

- Advanced Life Support (ALS) - 35
- Basic Life Support (BLS) - 32
- ALS and BLS - 4
- Air Ambulance - 2

### Hospitals

- Emergency Departments - 20
- Base Hospitals - 7
- Trauma Centers - 6
- STEMI Receiving Centers - 13
- Stroke Receiving Centers - 16

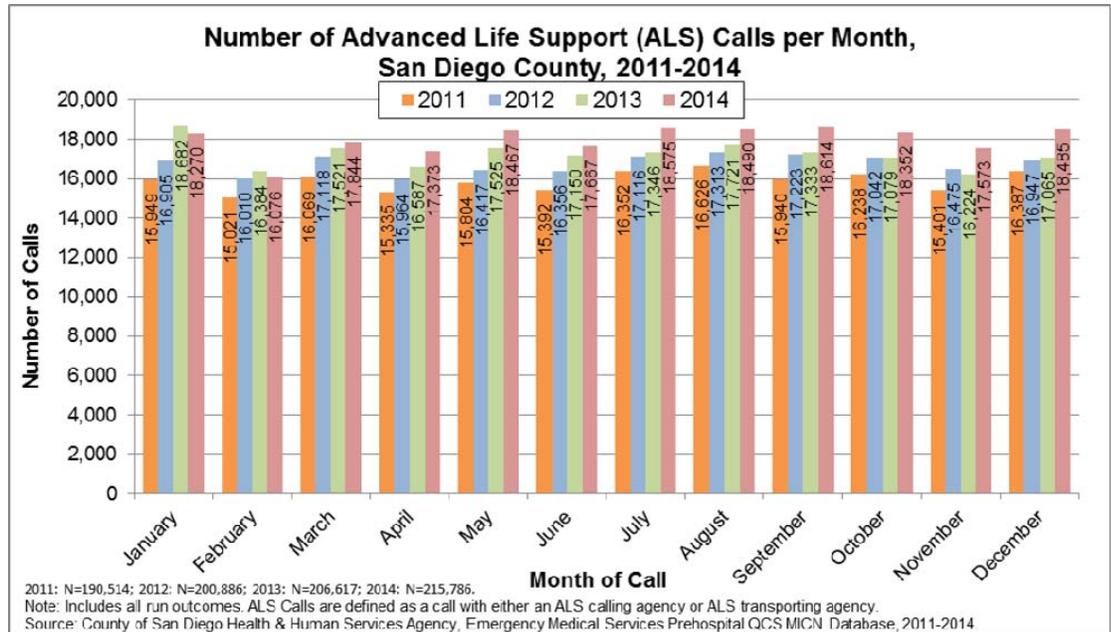


### Inside This Issue

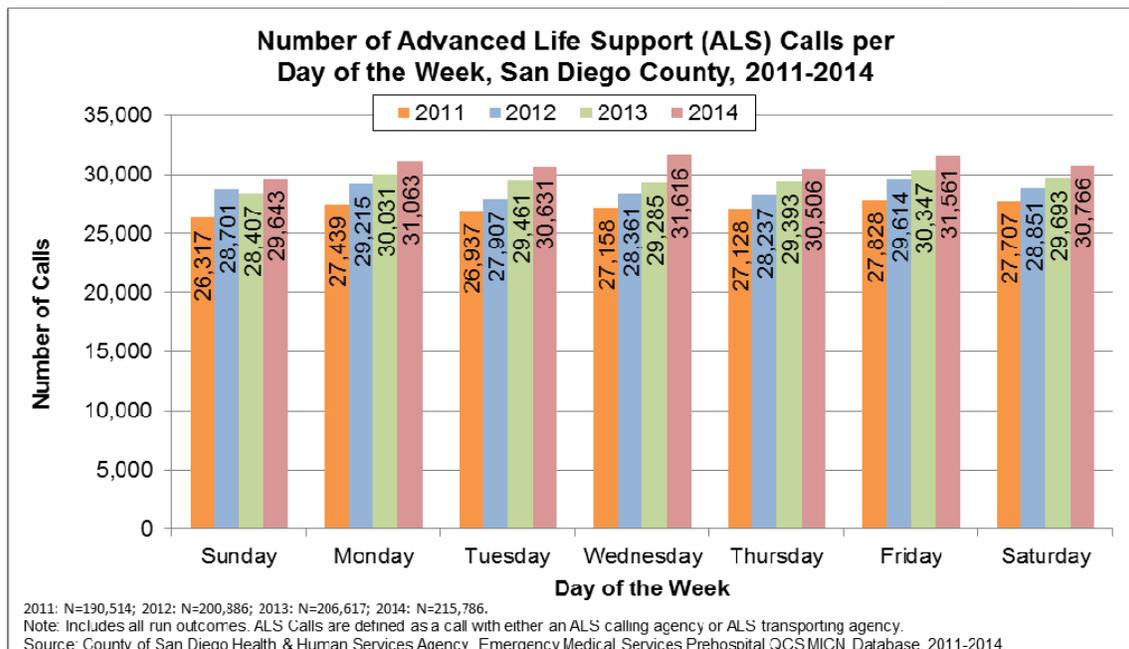
Prehospital System Overview - Advanced Life Support Calls.....	2 - 8
Prehospital System Overview - Advanced Life Support Transports.....	9 - 13
Prehospital System Overview - Emergency Department Diversion.....	14
Specialty System Overview - STEMI .....	15
Specialty System Overview - Stroke .....	16
Specialty System Overview - Trauma .....	17

## Prehospital System Overview - Advanced Life Support (ALS) Calls

In 2014, there were 215,786 ALS calls made in San Diego County; a 13.3% increase (25,272 more calls) from 2011.



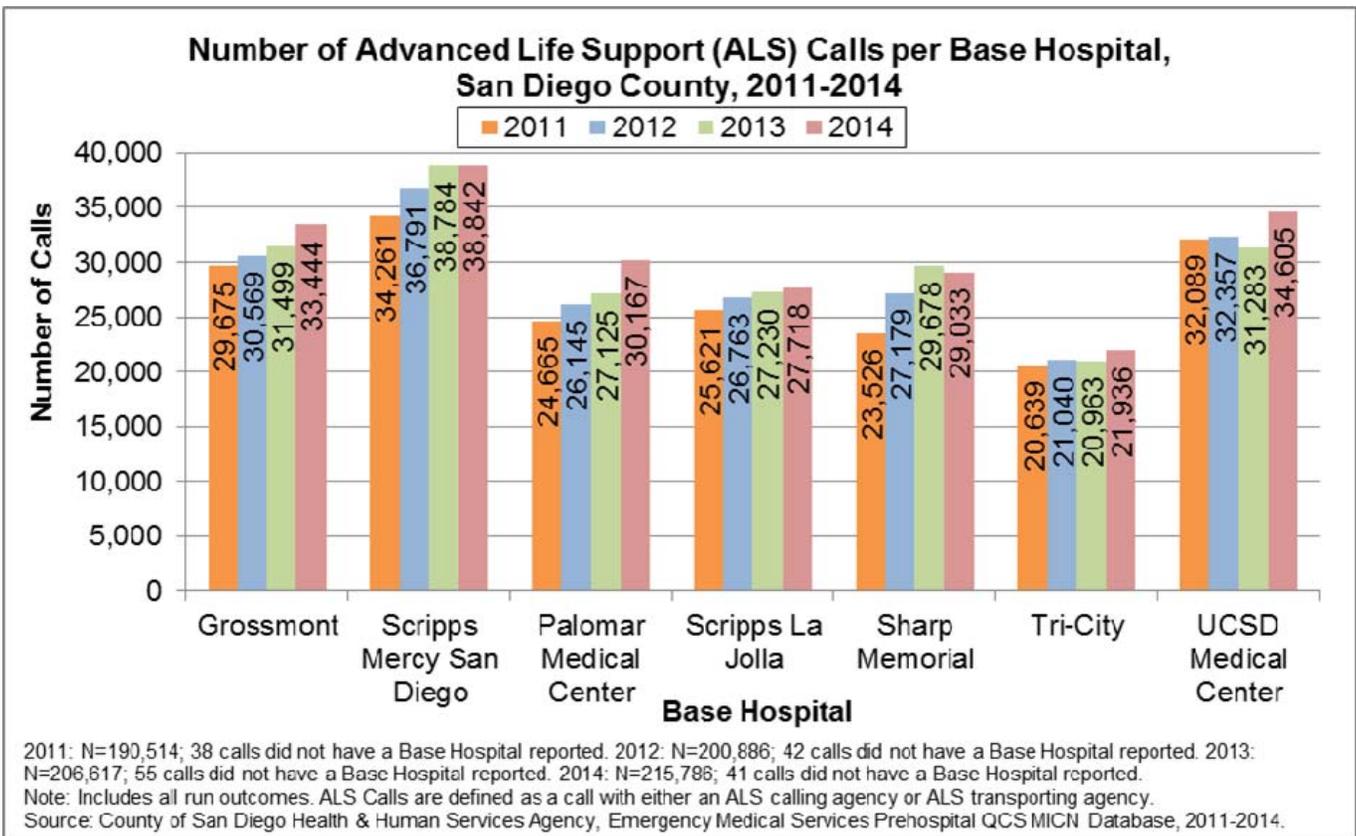
On average, there were 17,982 ALS calls per month, and 591 calls per day, in 2014. The most ALS calls occurred in September, while the least occurred in February.



In 2014, ALS calls occurred most often on a Wednesday (31,616), followed closely by Friday (31,561). This is a change from 2011 through 2013, when calls occurred most frequently on a Friday.

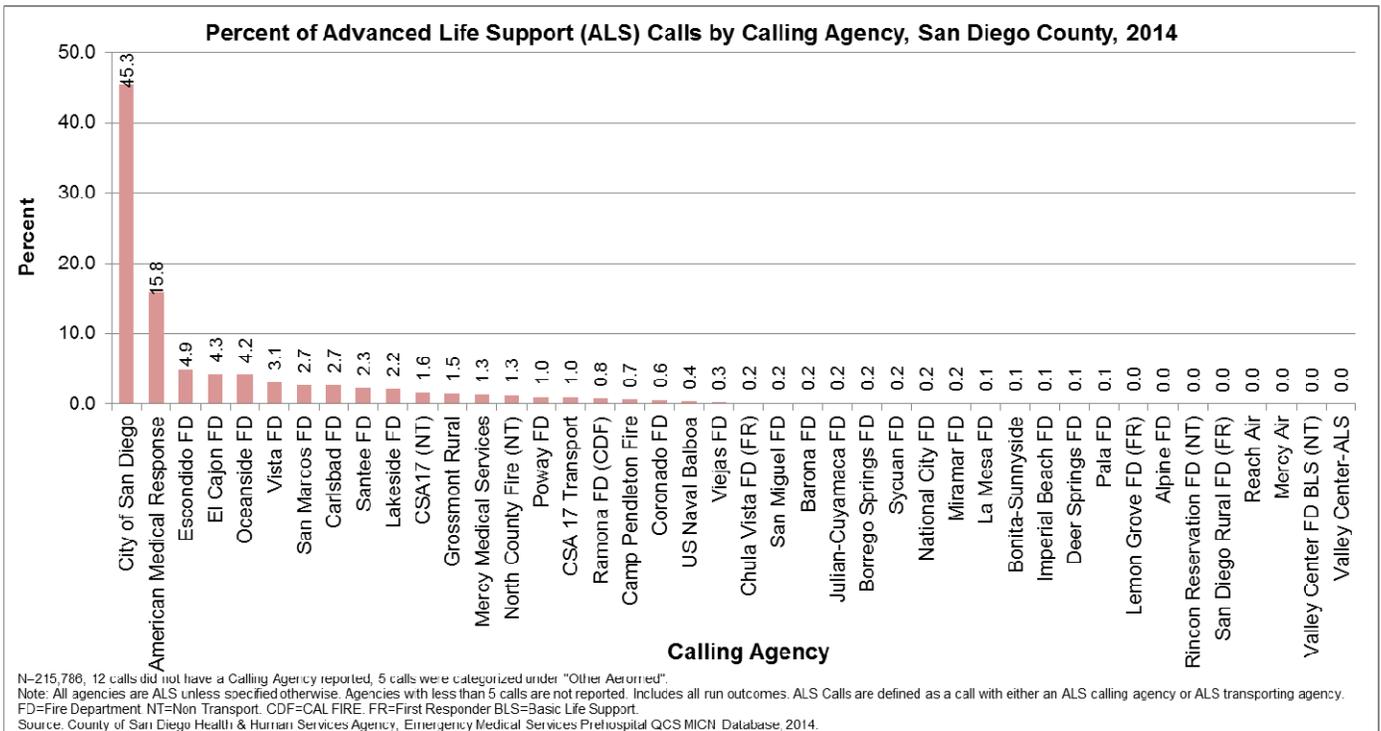
Prehospital System Overview -  
Advanced Life Support (ALS) Calls

In 2014, there were 9,169 more ALS calls answered by a San Diego County Base Hospital than in 2013; a 4.4% increase from 2013. Since 2011, the largest increase in the number of calls occurred between 2011 and 2012, with 10,372 more calls in 2012, accounting for 5.4% more calls than in 2011.

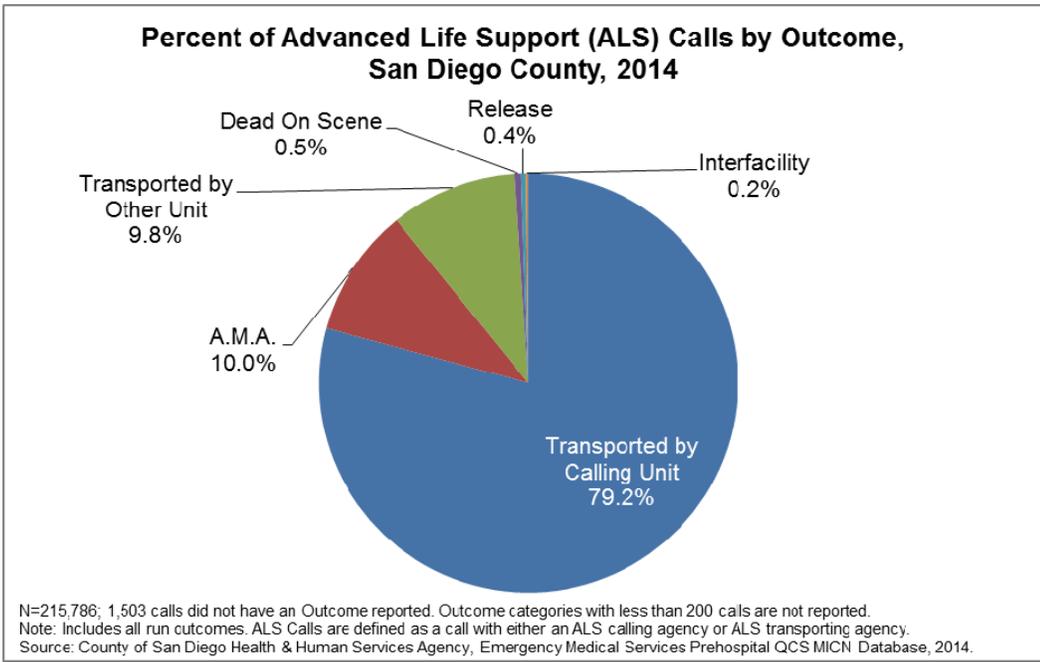


The distribution of ALS calls among the San Diego County Base Hospitals ranged from 10.2% to 18.0%, in 2014. The distribution of calls has remained relatively consistent since 2011.

## Prehospital System Overview - Advanced Life Support (ALS) Calls



In 2014, the distribution of ALS calls among calling agencies ranged from 45.3% to less than 1.0%.

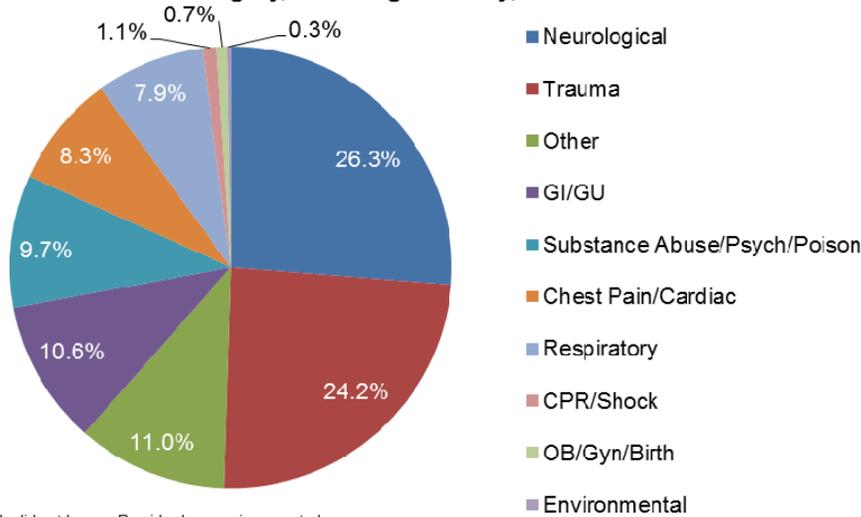


In 2014, 88% of ALS calls resulted in patient transport to an emergency department. Ten percent of ALS calls resulted in the patient refusing transport (A.M.A.).

In 2014, ALS call outcomes were nearly identical to previous years.

## Prehospital System Overview - Advanced Life Support (ALS) Calls

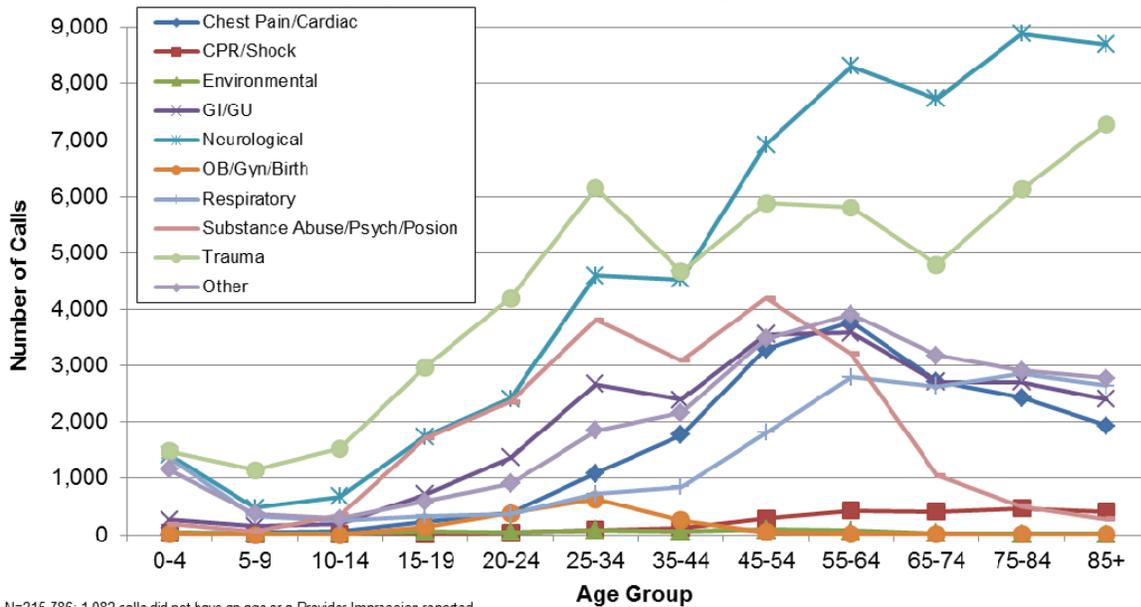
**Percent of Advanced Life Support (ALS) Calls by Provider Impression Category, San Diego County, 2014**



In 2014, more than one fourth of ALS calls were neurological related, and another 24.2% were trauma related.

N=215,786. 749 calls did not have a Provider Impression reported.  
 Note: Includes all run outcomes. ALS Calls are defined as a call with either an ALS calling agency or ALS transporting agency.  
 Source: County of San Diego Health & Human Services Agency, Emergency Medical Services Prehospital CCS MICN Database, 2014.

**Number of Advanced Life Support (ALS) Calls by Provider Impression Category and Age Group, San Diego County, 2014**



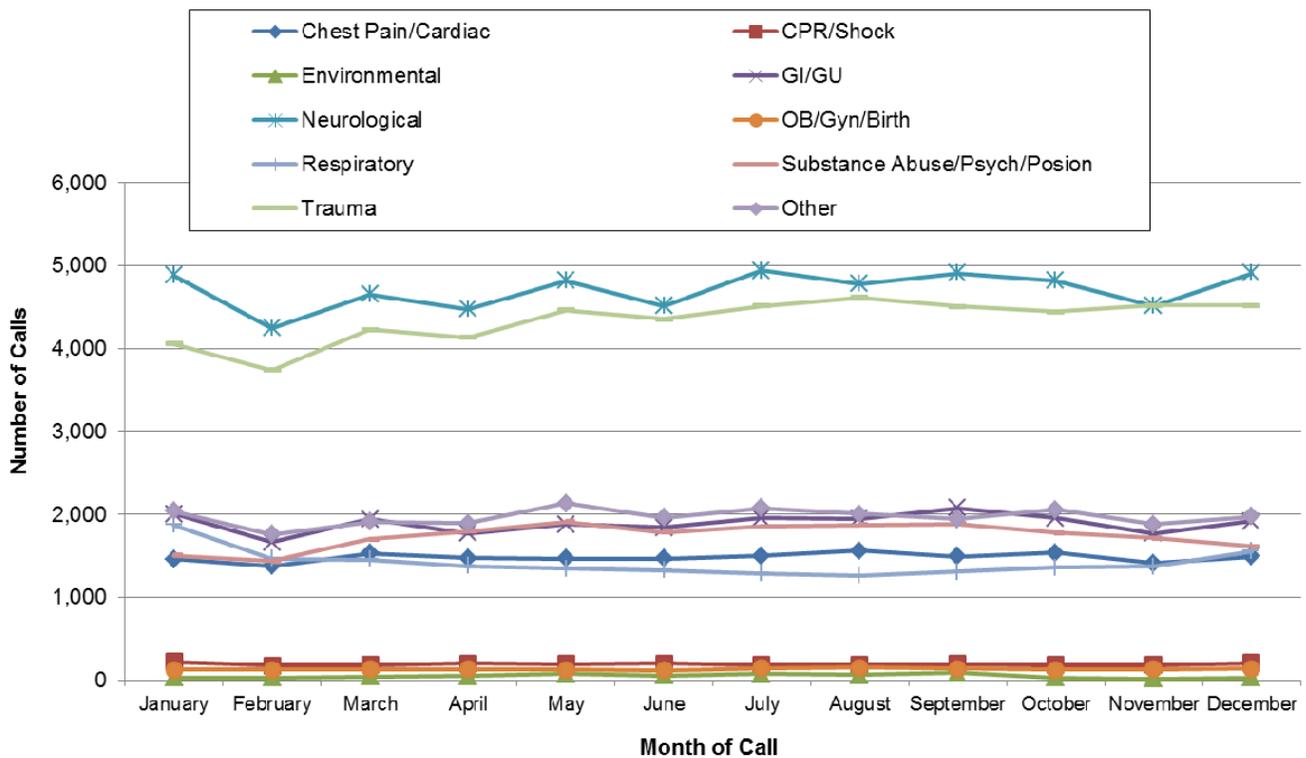
N=215,786; 1,082 calls did not have an age or a Provider Impression reported.  
 Note: ALS Calls are defined as a call with either an ALS calling agency or ALS transporting agency.  
 Source: County of San Diego Health & Human Services Agency, Emergency Medical Services Prehospital QCS MICN Database, 2014.

In 2014, there were 883 more neurological related ALS calls among the 55-64 year old age group than in 2013. This was the largest increase among age group and Provider Impression categories between 2013 to 2014.

## Prehospital System Overview - Advanced Life Support (ALS) Calls

In 2014, the Provider Impression (PI) categories with the most ALS calls each month were neurological and trauma related. Each month, these two categories accounted for approximately half of all ALS calls.

**Number of Advanced Life Support (ALS) Calls by Provider Impression Category and Month of Call, San Diego County, 2014**



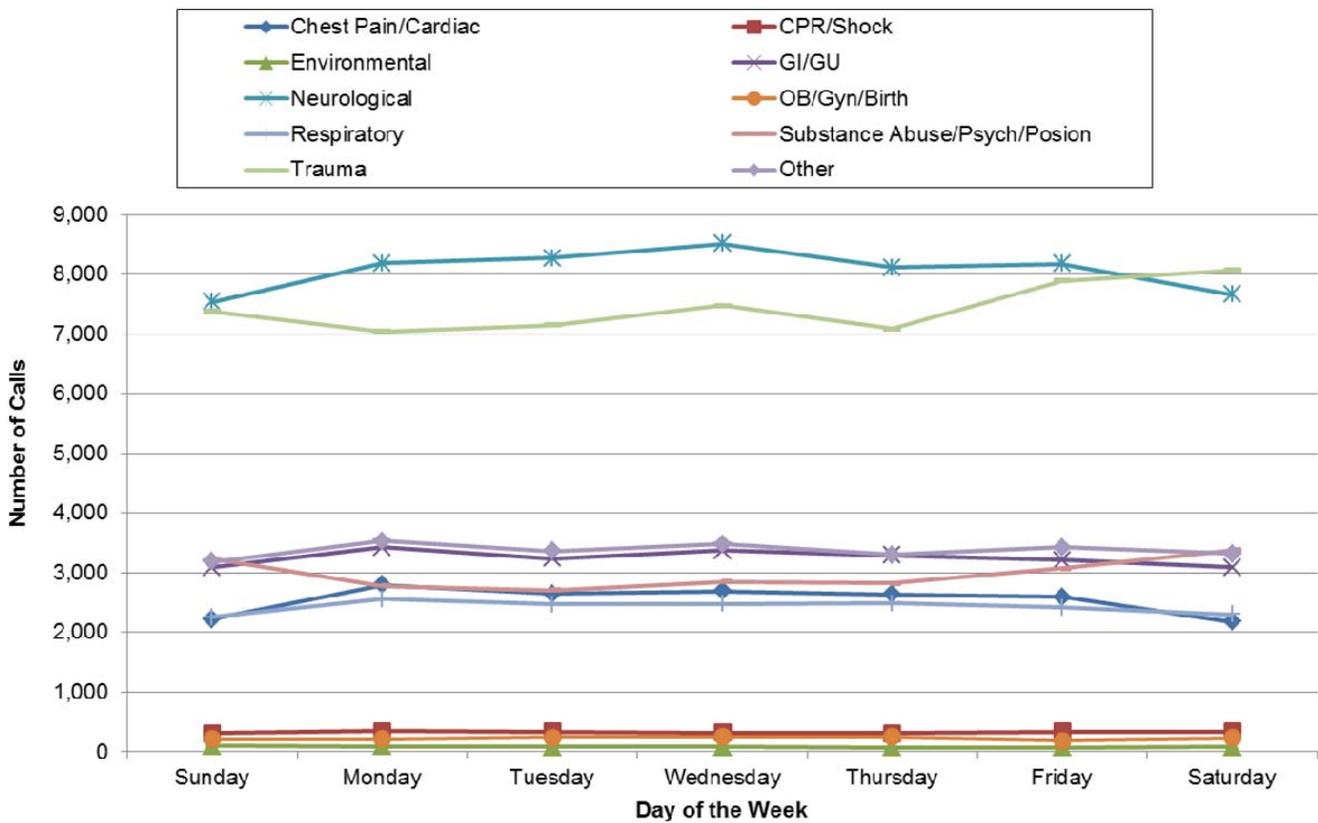
N=215,786; 749 calls did not have a Provider Impression reported.  
 Note: ALS Calls are defined as a call with either an ALS calling agency or ALS transporting agency.  
 Source: County of San Diego Health & Human Services Agency, Emergency Medical Services Prehospital QCS MICN Database, 2014.

In 2014, the Provider Impression (PI) category with the most calls in a single month was the neurological related category with 4,937 calls in July. Nearly the same number of calls occurred in September with a neurological related PI (4,911). The largest increase in call volume occurred among neurological related calls in July, which increased by 497 calls, or 11.2%, from 2013. The second largest increase occurred in December among trauma related PIs with 487 more calls (12.1% increase).

## Prehospital System Overview - Advanced Life Support (ALS) Calls

In 2014, the PI category with the largest call volume was neurological related with 8,513 calls on Wednesdays. The PI category with the largest increase was neurological related, with 693 more calls (8.9% increase) on Wednesdays than in 2013.

**Number of Advanced Life Support (ALS) Calls by Provider Impression Category and Day of the Week of the Call, San Diego County, 2014**



N=215,786; 749 calls did not have a Provider Impression reported.  
 Note: ALS Calls are defined as a call with either an ALS calling agency or ALS transporting agency.  
 Source: County of San Diego Health & Human Services Agency, Emergency Medical Services Prehospital QCS MICN Database, 2014.

Prehospital System Overview -  
Advanced Life Support (ALS) Calls

Leading Provider Impression Categories by Age Group in San Diego County, 2014				
Age Group				
0-14	15-24	25-64	65+	Total
Trauma 4,169	Trauma 7,174	Neurological 24,365	Neurological 25,316	Neurological 56,408
Neurological 2,575	Neurological 4,152	Trauma 22,503	Trauma 18,197	Trauma 52,043
Respiratory 1,936	Substance Abuse/ Psych/Poison 4,066	Substance Abuse/ Psych/Poison 14,308	Other 8,867	Other 23,590
Other 1,814	GI/GU 2,081	GI/GU 12,198	Respiratory 8,141	GI/GU 22,713
Substance Abuse/ Psych/Poison 614	Other 1,509	Other 11,400	GI/GU 7,826	Substance Abuse/ Psych/Poison 20,826
GI/GU 608	Respiratory 698	Chest Pain/Cardiac 9,929	Chest Pain/Cardiac 7,089	Chest Pain/Cardiac 17,746
Chest Pain/Cardiac 119	Chest Pain/Cardiac 609	Respiratory 6,187	Substance Abuse/ Psych/Poison 1,838	Respiratory 16,962
Environmental 104	OB/Gyn/Birth 528	OB/Gyn/Birth 953	CPR/Shock 1,289	CPR/Shock 2,305
CPR/Shock 53	Environmental 111	CPR/Shock 920	Environmental 59	OB/Gyn/Birth 1,527
OB/Gyn/Birth 15	CPR/Shock 43	Environmental 310	OB/Gyn/Birth 31	Environmental 584

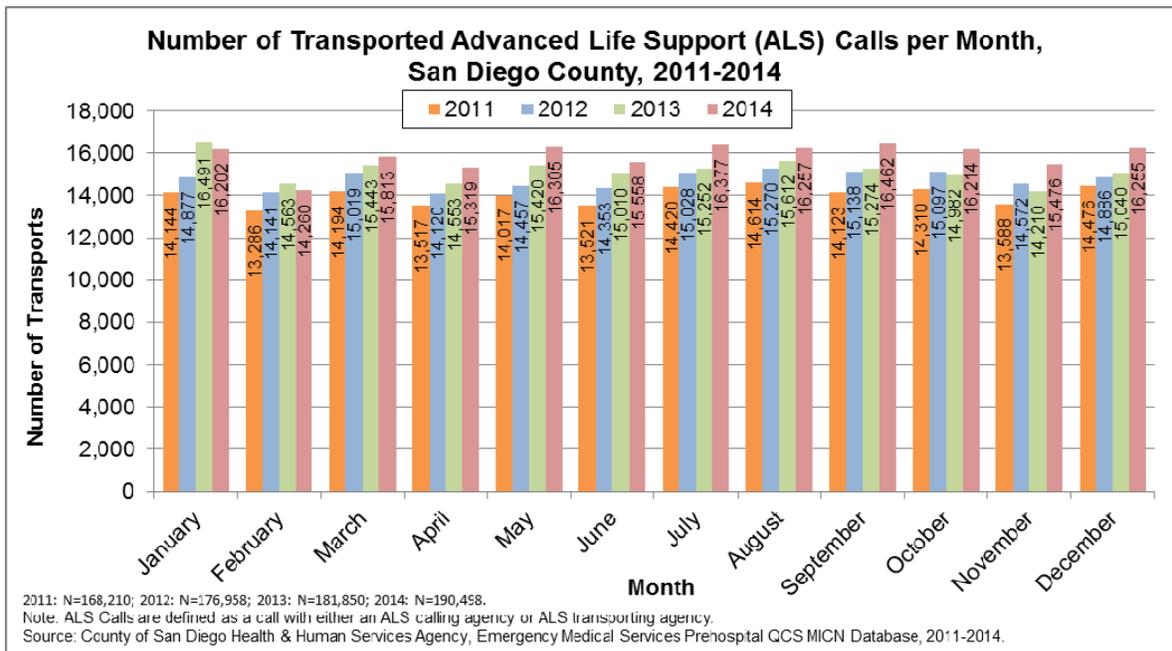
N=215,786; 1,082 calls did not have an age or a Provider Impression reported.

Note: ALS Calls are defined as a call with either an ALS calling agency or ALS transporting agency.

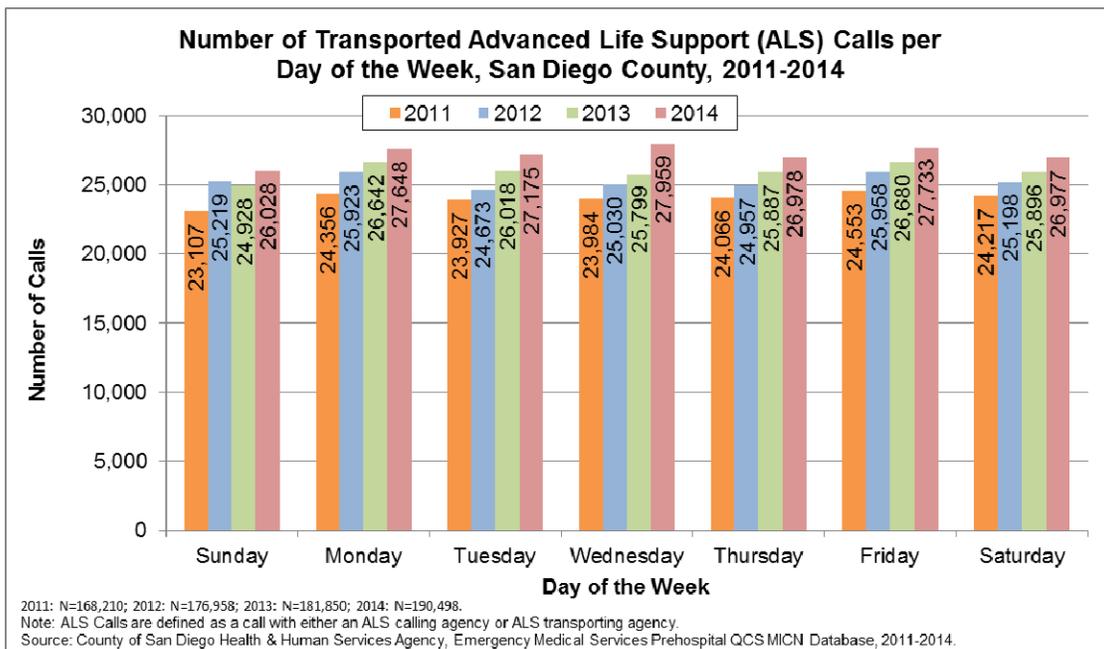
Source: County of San Diego Health & Human Services Agency, Emergency Medical Services Prehospital QCS MICN Database, 2014.

In 2014, overall, there were 2,730 more neurological related ALS calls than in 2013, and it remained the leading Provider Impression (PI) category. Neurological related calls among the 25-64 years old age group was the category with the largest increase in ALS calls from 2013 to 2014, with nearly 1,500 more calls in 2014, a 6.3% increase from 2013.

## Prehospital System Overview - Advanced Life Support (ALS) Transports

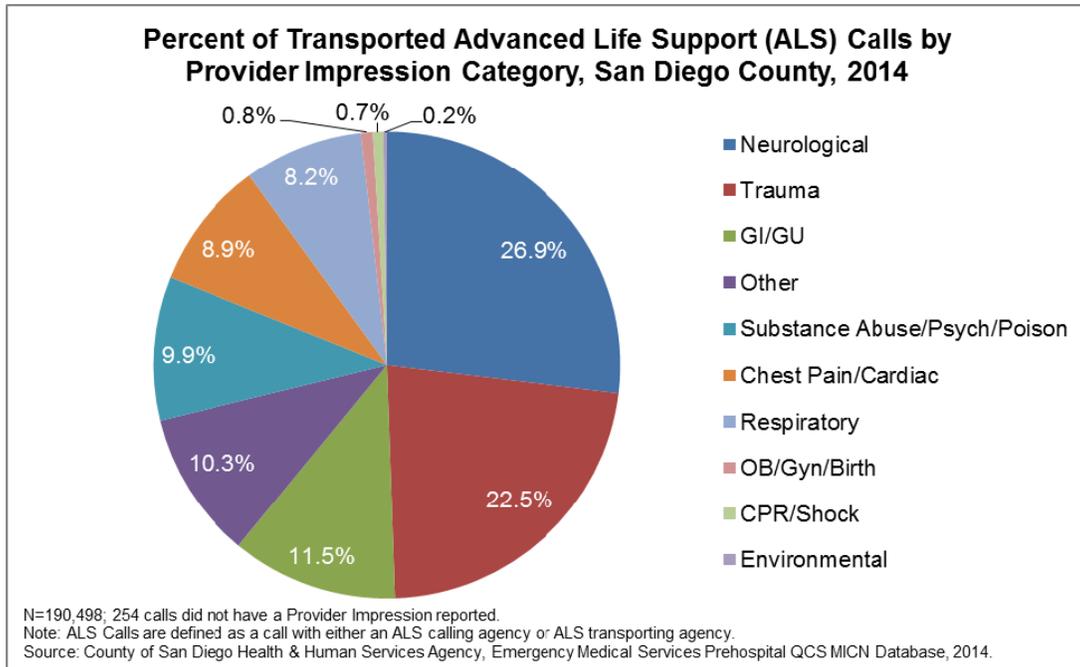


In 2014, there were 190,498 ALS calls that were transported in San Diego County. This accounts for a 13.3% increase (22,288 more transports) in ALS transports since 2011. The average number of ALS transports per day in 2014 was 522.

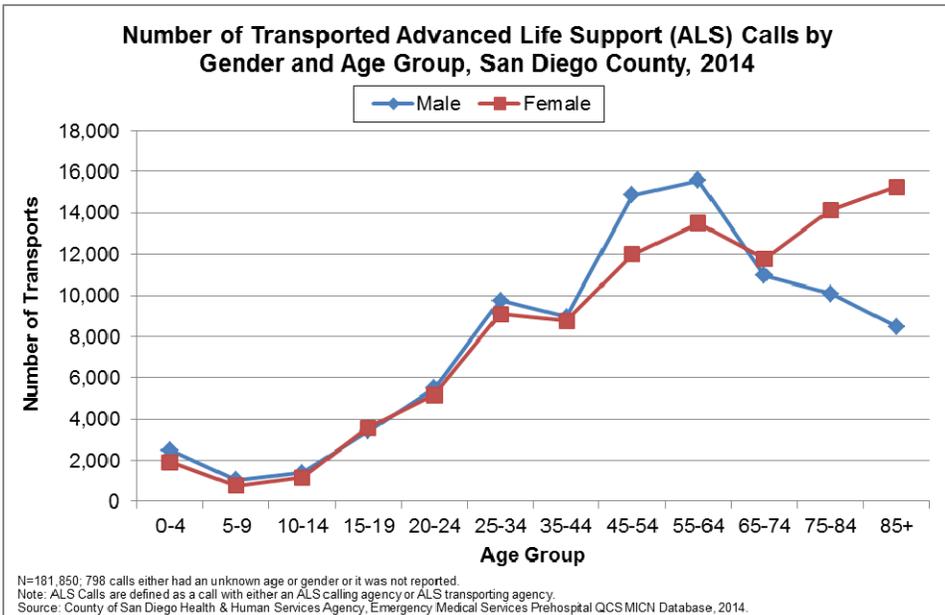


Similar to ALS calls in 2014, ALS transports occurred most frequently on a Wednesday, whereas in previous years they occurred most often on a Friday.

### Prehospital System Overview - Advanced Life Support (ALS) Transports



In 2014, neurological related ALS transports were the most common, followed closely by trauma related ALS transports. This was consistent with the transports in 2011, 2012, and 2013.



In 2014, there were 1,321 more ALS transports among 55-64 year old males than there were in 2013. This was a 9.3% increase from 2013. Similarly, there were 1,110 more transports among 65-74 year old males compared to the previous year; an 11.3% increase from 2013.

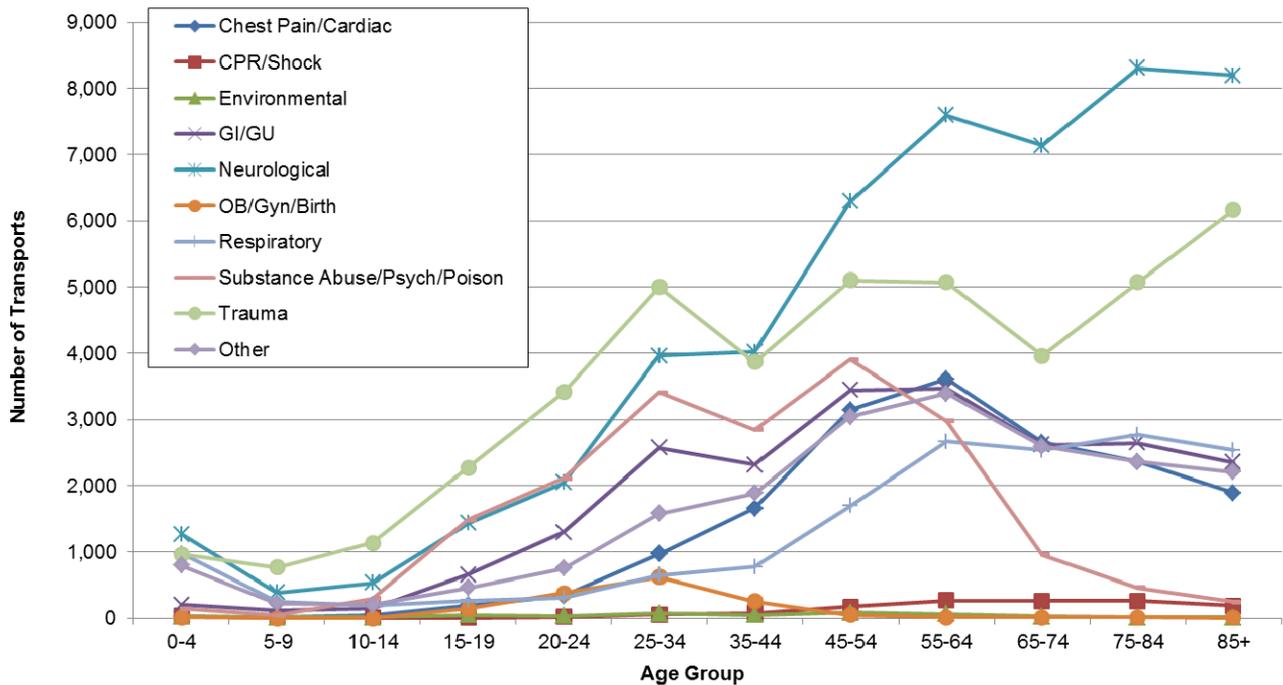
In 2014, the male 55-64 year old age group had the most ALS transports, followed closely by the female 85 years and older age group.

## Prehospital System Overview - Advanced Life Support (ALS) Transports

Transport of neurological related calls occurred more often than any other Provider Impression (PI) category. In 2014, there were 51,215 transports with a neurological related PI, accounting for 26.9% of all transports. Trauma related transports were the second most common, accounting for 22.5% of all transports in 2014. The largest increase in transports among the PI categories was seen in the number of neurological related transports, which increased by 2,424 (5.0% increase) from 2013. The second largest increase was among trauma related transports, which increased by 1,598 (3.9%) from the previous year.

Similar to ALS calls, the largest increase in ALS transports occurred among the neurological related transports for the 55-64 year old age group. There was an increase of 757 (11.1% increase) transports among this group from 2013 to 2014.

**Number of Transported Advanced Life Support (ALS) Calls by Provider Impression Category and Age Group, San Diego County, 2014**

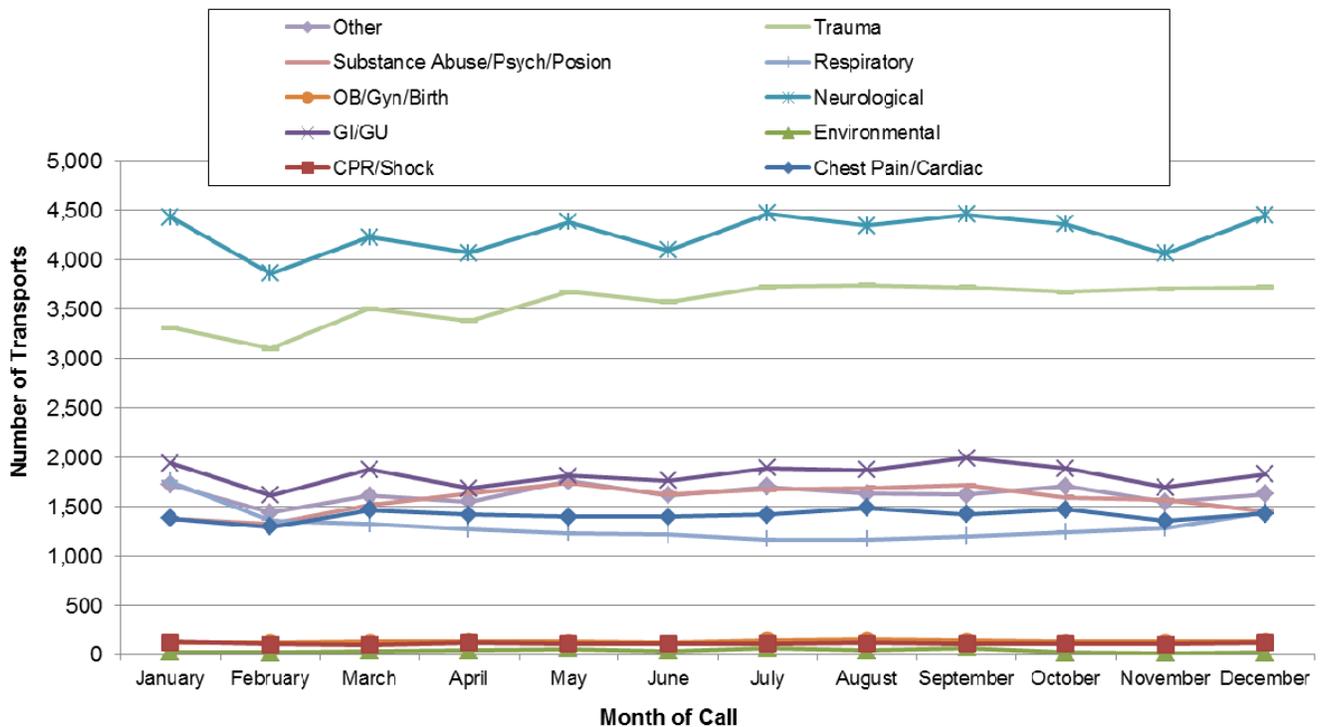


N=190,498; 510 calls did not have an age or a Provider Impression reported.  
 Note: ALS Calls are defined as a call with either an ALS calling agency or ALS transporting agency.  
 Source: County of San Diego Health & Human Services Agency, Emergency Medical Services Prehospital QCS MICN Database, 2014.

## Prehospital System Overview - Advanced Life Support (ALS) Transports

As in 2013, the neurological related category of Provider Impressions (PIs) had more ALS transports each month than any other PI category, followed by trauma related ALS transports in 2014.

**Number of Transported Advanced Life Support (ALS) Calls by Provider Impression Category and Month of Call, San Diego County, 2014**



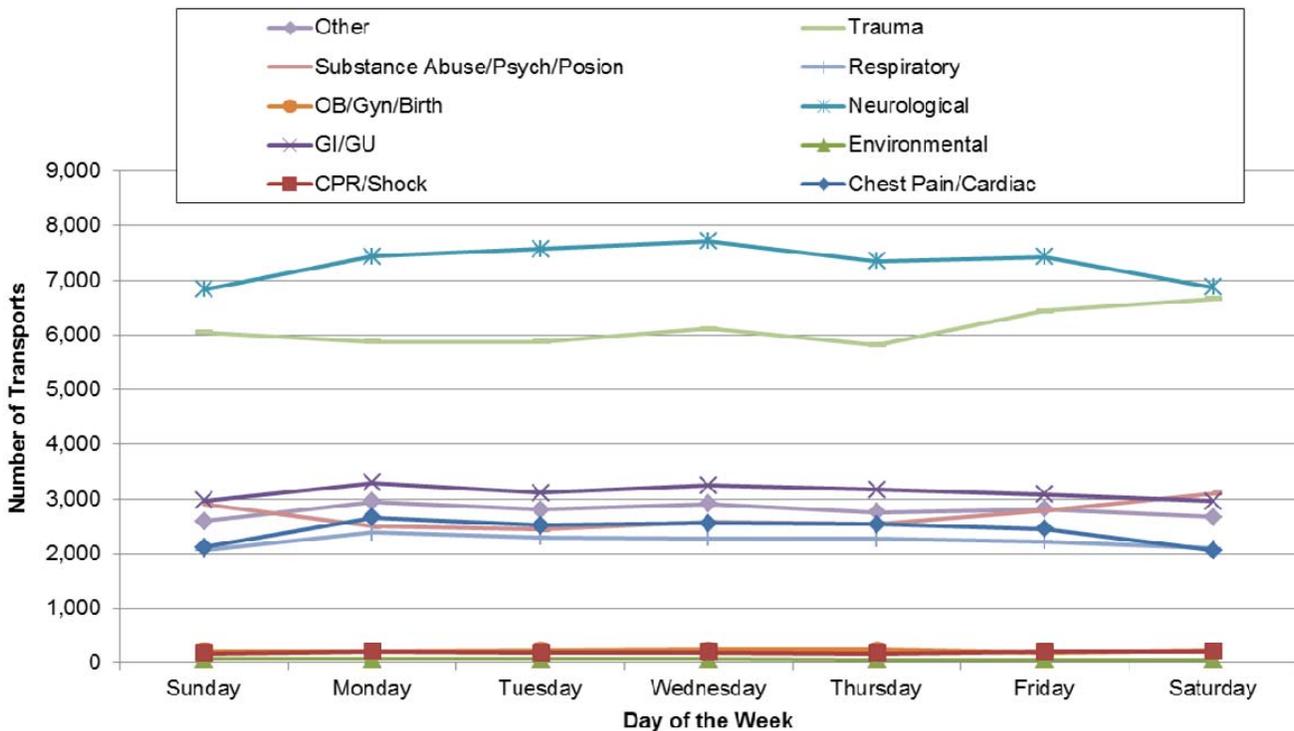
N=190,498; 254 calls did not have a Provider Impression reported.  
 Note: ALS Calls are defined as a call with either an ALS calling agency or ALS transporting agency.  
 Source: County of San Diego Health & Human Services Agency, Emergency Medical Services Prehospital QCSMICN Database, 2014.

The most transports of any PI category occurred in July, with 4,469 neurological related ALS transports. This was an increase of 435 transports compared to 2013, which was the largest increase from 2013 to 2014 for any PI category and month. The second largest increase was in the number of trauma related ALS transports in December, with 410 more transports in 2014 than 2013.

## Prehospital System Overview - Advanced Life Support (ALS) Transports

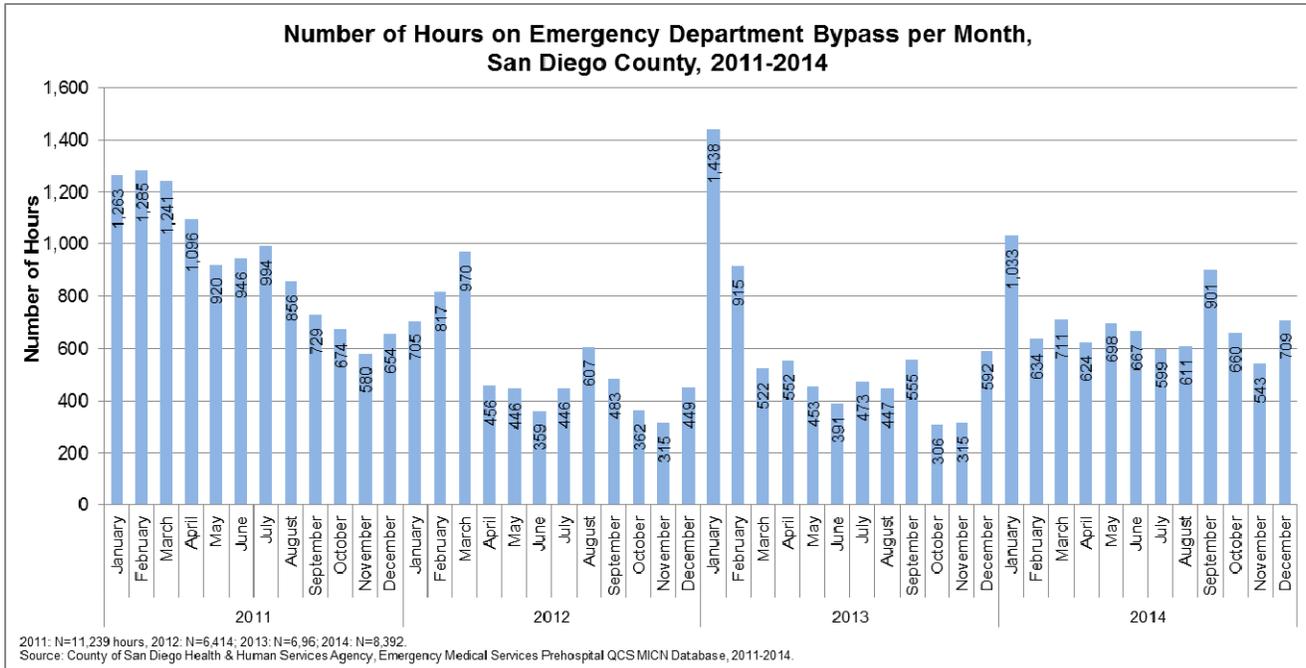
Similar to ALS calls, transports with a neurological related PI occurred most often on Wednesdays in 2014. The number of these transports increase by 602 (8.5% increase) from 2013. The second largest increase was among trauma related transports on Wednesdays, with 535 more transports than the previous year, with an increase of 9.6%.

**Number of Transported Advanced Life Support (ALS) Calls by Provider Impression Category and Day of the Week, San Diego County, 2014**

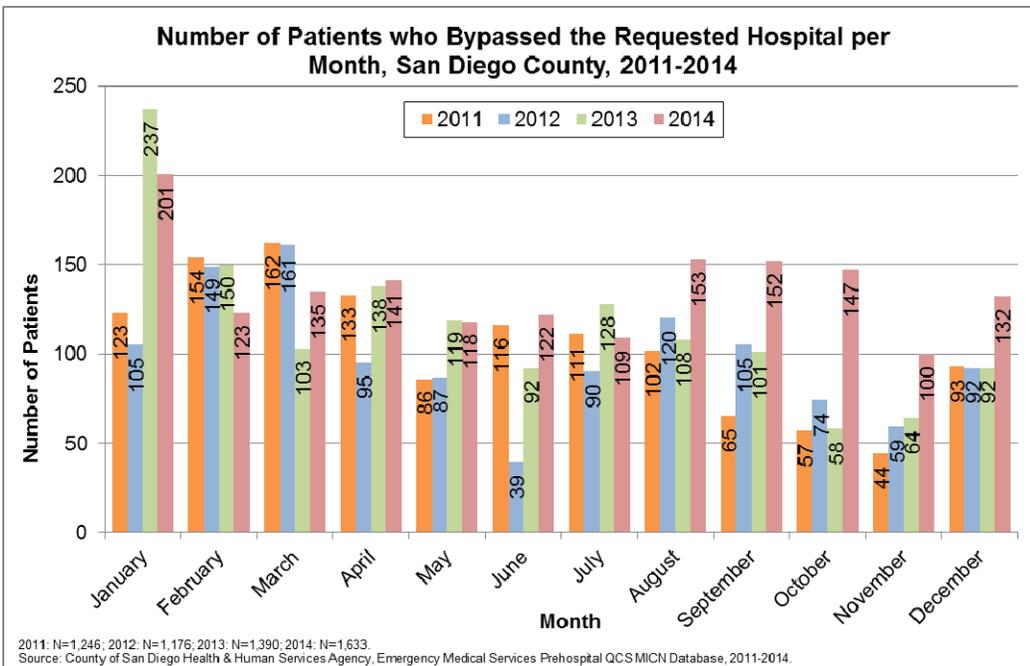


N=150,496; 254 calls did not have a Provider Impression reported.  
 Note: ALS Calls are defined as a call with either an ALS calling agency or ALS transporting agency.  
 Source: County of San Diego Health & Human Services Agency, Emergency Medical Services Prehospital QCS MICN Database, 2014

## Prehospital System Overview - Emergency Department (ED) Bypass

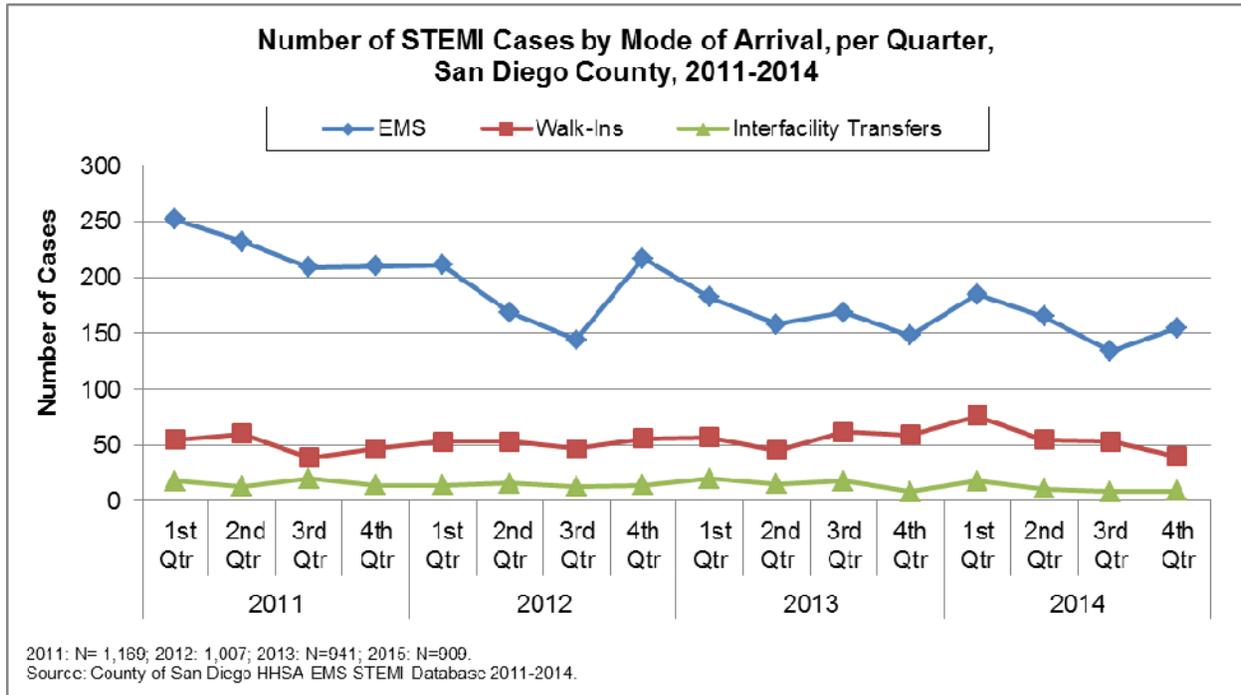


In 2014, the most number of hours spent on bypass occurred in January, while the least occurred in November. The average number of hours on ED Bypass per month in 2014 was 699.3 compared to 580.0 in 2013. The total number of hours on ED Bypass per year increased by 20.6% from 2013 to 2014.

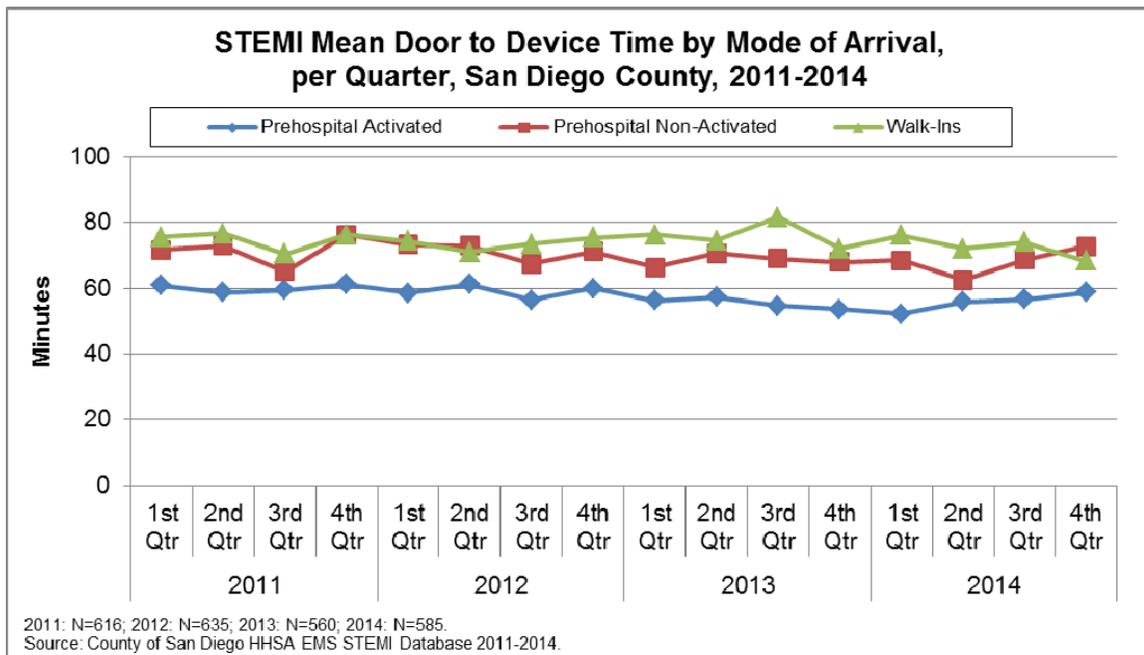


In 2014, 1,633 patients bypassed the requested hospital; an increase of 17.5% from 2013. On average, there were 136 patients bypassed each month in 2014, compared to 116 in 2013.

Prehospital System Overview - STEMI

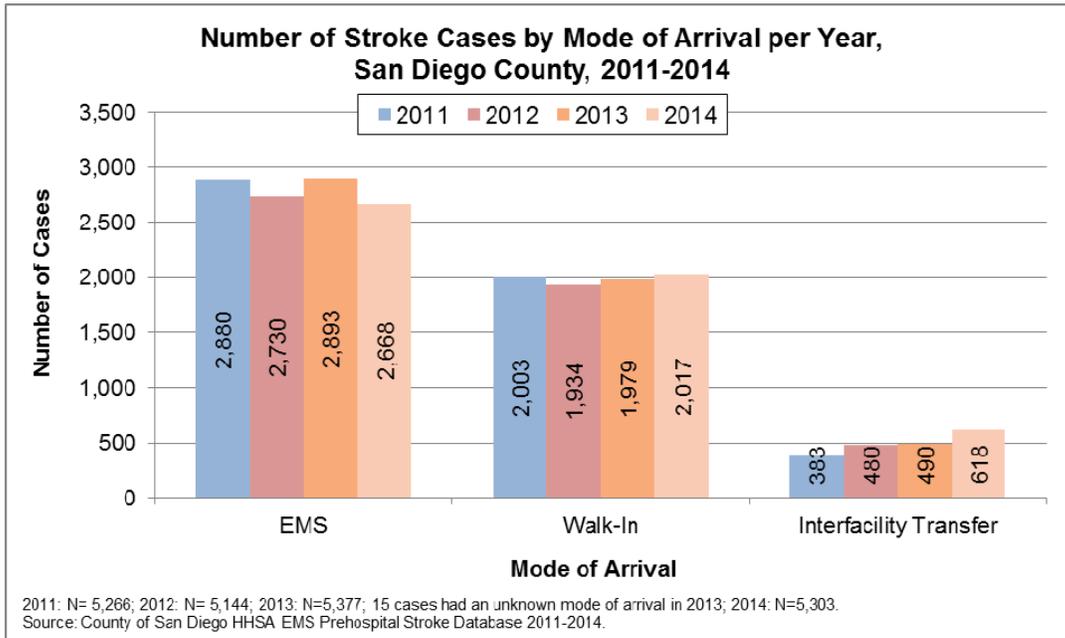


In 2014, 909 STEMI cases were treated at a STEMI receiving center. Of these, 70.3% of cases arrived via Emergency Medical Services (EMS).

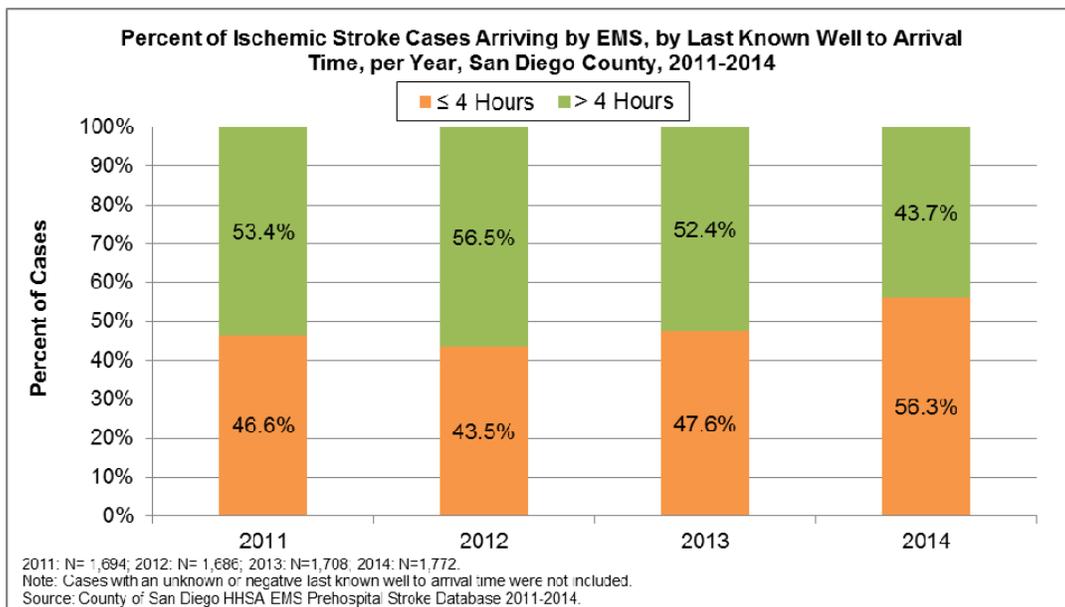


In 2014, the mean door to device time (DTDT) was 55.9 minutes for STEMI cases activated by the prehospital system, 68.3 minutes for cases not activated, and 73.3 minutes for walk-in cases. The DTDT for walk-in cases was the lowest it has been since tracking these times began in 2011.

Prehospital System Overview - Stroke

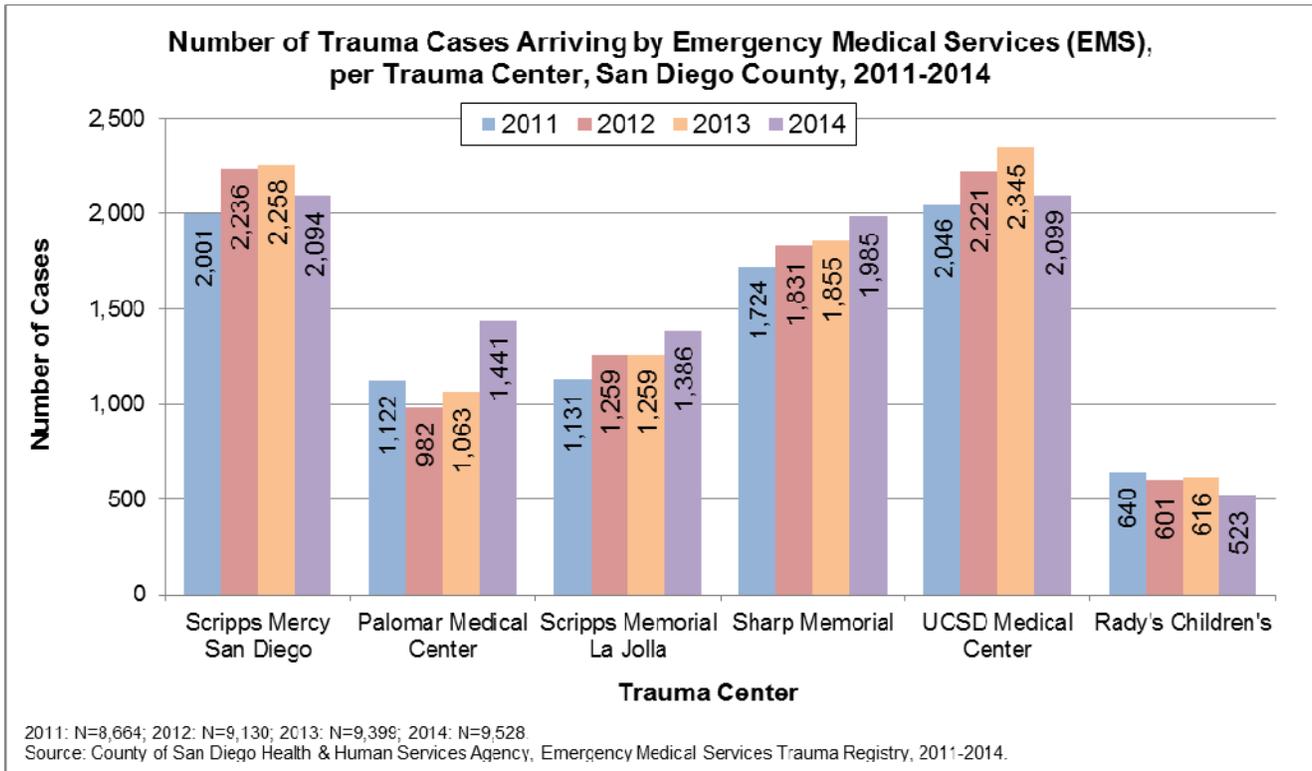


In 2014, 5,303 stroke cases were treated at a designated Stroke Receiving Center. Of these, 50.3% arrived by Emergency Medical Services (EMS), which was slightly lower than in previous years.

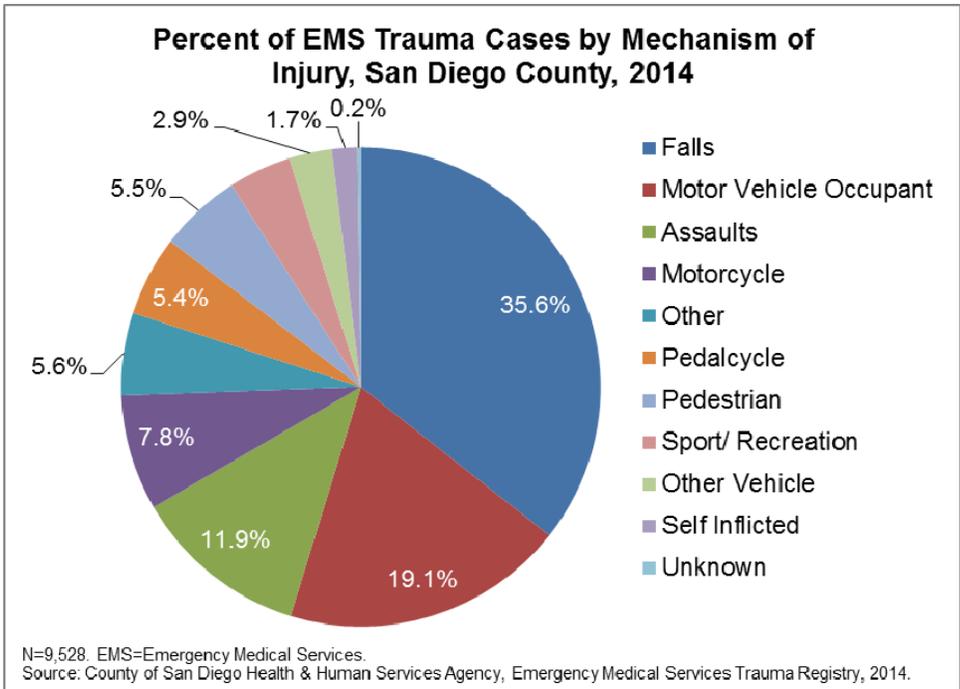


In 2014, 56.3% of the EMS transported Ischemic Stroke cases arrived at a Stroke Receiving Center within 4 hours of the last time the patient was known to be well. This was the first time since 2011 that more than half of ischemic stroke patients arrived by EMS within 4 hours of their last known well time.

Prehospital System Overview - Trauma



In 2014, 9,528 trauma cases were transported to a Trauma Center via EMS. The distribution of trauma patients transported by EMS among the Trauma Centers ranged from 5.5% to 22.0%.



Similar to previous years, more than one third of EMS transported trauma cases were due to a fall in 2014. The second most common mechanism of injury was the result of being a motor vehicle occupant.

## EMS SYSTEM REPORT

### COUNTY OF SAN DIEGO EMERGENCY MEDICAL SERVICES

**Bruce Haynes, M.D.**  
**Medical Director**

**Marcy Metz, RN**  
**Chief**

6255 Mission Gorge Road  
San Diego, CA 92120-3599  
Phone: 619-285-6429  
Fax: 619-285-6531

#### MISSION STATEMENT

Emergency Medical Services (EMS) ensures that emergency medical services, including 9-1-1 ambulance services, and trauma care services are of the highest quality. EMS also provides services in two ambulance districts and is involved in community education, prevention and research projects.

#### DID YOU KNOW?

A Branch of the County of San Diego Health and Human Services Agency, Emergency Medical Services (EMS) coordinates the activities of prehospital, trauma center and specialty service center providers for all residents and visitors of San Diego. The Branch has been designated as the County's "local EMS agency" (LEMSA) pursuant of the Health and Safety Code, and serves as the primary regulatory agency for the local EMS system. In addition, EMS has twelve different programs ranging from Disaster Medical Services to Automated External Defibrillators (AEDs).

##### EMS Programs

- County Service Area Administration
- Base Hospital and Specialty Care Systems
- Prehospital System Operations
- Prehospital System Emergency Medical Personnel
- Automated External Defibrillator (AED) Program
- Sexual Assault Response Team Program
- Epidemiology and Surveillance
- Community Health Statistics
- Information Communications, Systems and Technologies
- Disaster Medical Services
- Health Emergency Preparedness
- Community Health Preparedness