



COUNTY OF LOS ANGELES FIRE DEPARTMENT 2020 PEDIATRIC STATISTICS

INTRODUCTION

The County of Los Angeles Fire Department serves 60 District Cities and all unincorporated areas of Los Angeles County, spanning over 2,300 square miles, and protecting more than four million residents. The Department responds to over 400,000 requests for service annually. These responses include fires, natural disasters, emergency medical services (EMS), mutual aid, and more. EMS incidents account for approximately 86 percent of the Department's total responses.

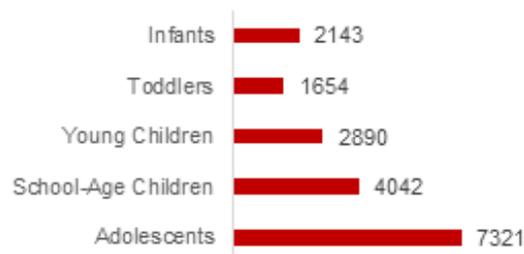
A majority of the care provided by emergency personnel occurs within the same environment where the illness or injury occurred. This presents a unique insight into the nature of the patient's condition, including possible cases of child maltreatment that may not be apparent to other providers in the continuum of care. Given the potential nature of these contacts, all emergency responders are mandated reporters and have been trained to identify and report suspected child abuse and neglect.

The County of Los Angeles Fire Department is proud to partner with the Inter-Agency Council on Child Abuse and Neglect (ICAN) to improve collaboration between agencies for the safety and well-being of children throughout the county.

PEDIATRIC PATIENT POPULATION

In 2020, the Department provided emergency medical care to 347,722 patients; 18,050 (5%) of these were pediatric patients, 17 years of age and younger. Infants (0-11 months), toddlers (12-23 months), and young children (2-5 years) combined account for 37% of all pediatric patients. School-age children (6-12 years) and adolescents (13-17) account for 22% and 41% respectively.

Figure 1: Distribution by Age Category





Approximately 61% of all pediatric patient contacts received transport to a 9-1-1 receiving center:

- 5,530 (50%) were transported with advanced life support (ALS) care.
- 5,320 (48%) were transported with basic life support (BLS) care.
- 141 (1%) were transported by helicopter with ALS care.

Service Planning Areas (SPA)

The Department provides services across all Los Angeles County SPAs and within the city of La Habra (Orange County). East County (SPA 7) and adjacent San Gabriel Valley (SPA 3) continue to have the highest volumes of pediatric patient contacts. See Figure 2 for a breakdown of the pediatric patient volume by SPA and see Figure 8 for the corresponding map of the Los Angeles County SPAs.

Figure 2

VOLUME PEDIATRIC PATIENT INCIDENTS BY SPA

SPA	CITY/COMMUNITY	COUNT
SPA 1	Antelope Valley	3,038
SPA 2	San Fernando	1,320
SPA 3	San Gabriel	4,043
SPA 4	Metro	44
SPA 5	West	653
SPA 6	South	1,432
SPA 7	East	4,611
SPA 8	South Bay	2,910

HEALTH & SAFETY

Infants, Toddlers, & Young Children

Children five and under typically have different presenting conditions than school-age children and adolescents. The most common conditions for these age groups in 2020 were:

- Traumatic Injury (20%)
- Seizure (17%)
- Fever (6%)
- Respiratory Distress (6%)
- Airway Obstruction (6%)
- Cold / Flu Symptoms (5%)

School-Age Children

With school-age children Trauma/ Injury, Seizure, and Behavioral Disorder remain the top three reasons for 9-1-1 utilization. This remains consistent compared to 2018-2019. The most common conditions among this age group in 2020 were:

- Traumatic Injury (35%)
- Seizure (11%)
- Behavioral/Psychiatric Crisis (9%)
- Stings and Venomous Bites (4%)
- Syncope/Near Syncope (4%)
- Body Pain – Non-Traumatic (4%)

Adolescents

With the adolescent patient population, the most common conditions are:

- Traumatic Injury (27%)
- Behavioral/Psychiatric Crisis (20%)
- Seizure (7%)
- Overdose / Poisoning / Ingestion (7%)
- Abdominal Pain/Problems (4%)
- Syncope/Near Syncope (4%)

In 2020, there was a total of 683 cases of adolescent intoxication or poisoning, a 2.7% decrease when compared to the previous year. Of these cases, 23% (155) involved alcohol intoxication, while 77% (528) involved the use of recreational drugs, prescription drugs, and/or other household chemicals or poisons. The following is a breakdown of reasons for drug/poison use:

- Recreational Use (74%)
- Suicide Attempt (24%)
- Accidental or Unknown (2%)

The top 3 drug types documented as being used by adolescents in 2020 are listed below within their classifications:

- Prescription and Over-the-counter Medications (24%)
- Benzodiazepines and Opiates (Xanax, Percocet, Oxycodone/Oxycontin) (21%)
- Alcohol (21%)
- Marijuana (15%)
- Narcotic Other (LSD, Methamphetamines, Cocaine) (15%)
- Unknown and Other (4%)

There was a total of 177 documented incidents of adolescent suicide attempts by overdose and



poisoning, an increase of 65% when compared to the previous year. Of these incidents, 81% (144) of attempts were made by females and 19% (33) by males.

- Overdose/Poisoning/Ingestion (66%)
- Other Self Harm (27%)
- Suffocation (5%)
- Firearm (2%)

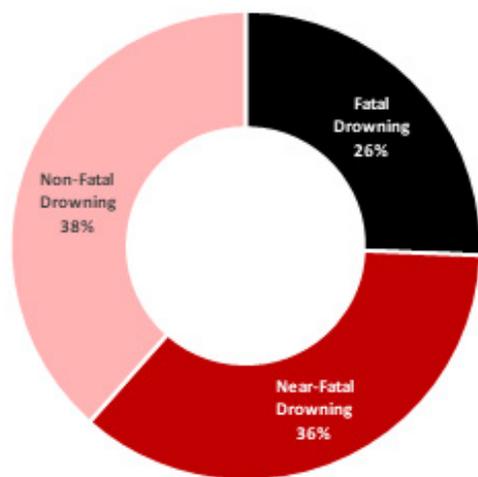
Vehicle Safety

Traffic collisions were responsible for 2,085 pediatric patient contacts last year; 1,341 (64%) of these children had a reported injury. Two hundred fourteen (16%) had a significant injury and required ALS transport to a pediatric trauma center.

Water Safety

In 2020, there were 39 incidents of submersion or drowning; 28 (72%) occurred in residential pools.

Figure 3: Submersion / Drowning Events*



*Conventional drowning categorization cannot be used due to lack of outcome information.

A little over half (24) of these incidents resulted in severe respiratory compromise or cardiac arrest, ten of which were fatal (See Figure 3). Thirteen of these cases received bystander intervention in the form of rescue breaths or cardiopulmonary resuscitation (CPR). Of the 13 cases that received bystander intervention, 9 experienced an improvement in breathing and mental status by the time of EMS arrival.

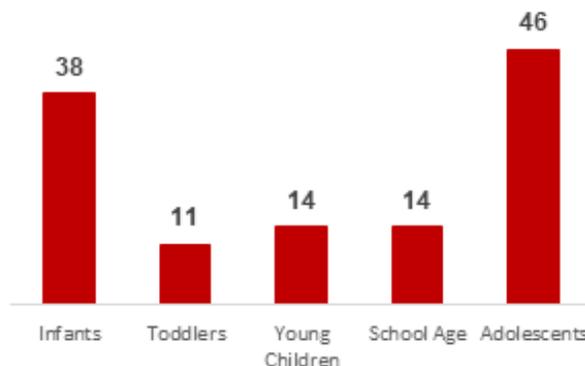
Young children are more commonly victims of submersion or drowning, comprising 19 (49%) cases

in 2020.

Pediatric Cardiac Arrests

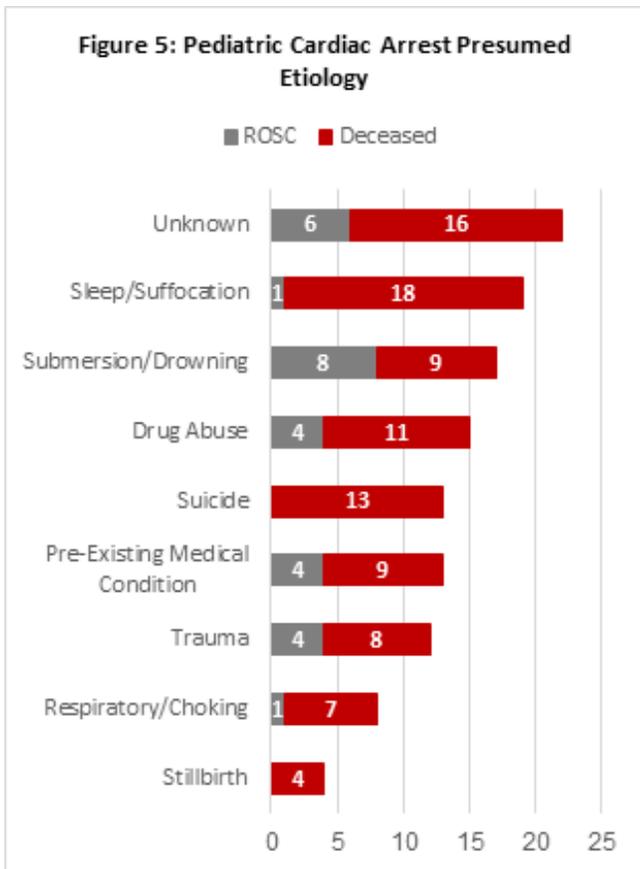
Pediatric cardiac arrests are among the most difficult cases for medical providers. Clinically, pediatric cases present a challenge because treatments and medications must be tailored to a child’s weight and/or height. It is, however, the emotional challenge of pediatric cardiac arrests that make them among the most difficult. In 2020, the Department provided care to 123 children in cardiac arrest.

Figure 4: Cardiac Arrest Distribution by Age Category



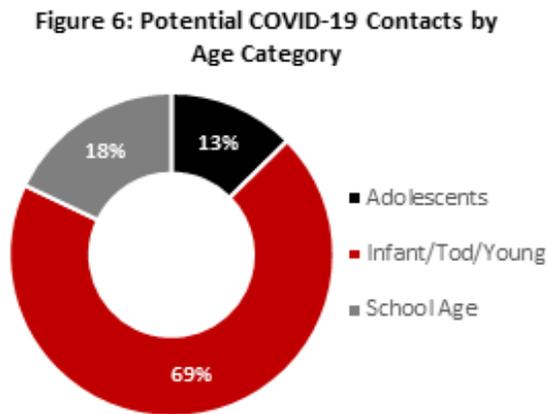
Infants account for 35% of all pediatric cardiac arrests. The most common presumed cause of death is sleep/suffocation related. Adolescents had the second highest number of cardiac arrests with the most common presumed cause of death being drug abuse, and the second suicide.

Return of spontaneous circulation (ROSC) occurred in 23% of all pediatric cardiac arrests. The highest survival rate was among children who were victims of submersion or drowning. (See Figure 5) There were thirteen suicide attempts resulting in cardiac arrest in 2020, eleven of which were adolescents



- Respiratory Distress
- Sepsis

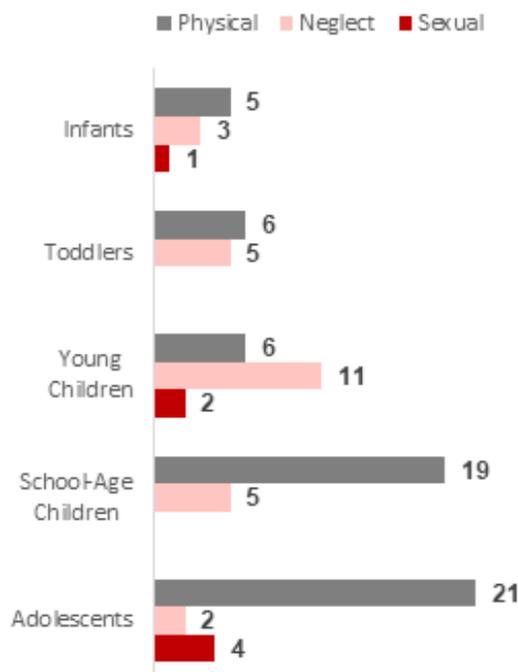
Figure 6 shows the percentage pediatric patient contacts with these conditions. Most of the potential COVID-19 contacts were five years-old and under.



ABUSE & NEGLECT

In 2020, Department paramedics treated 90 victims of suspected abuse or neglect. Of these patients, 57 were victims of suspected physical abuse, 26 were victims of suspected neglect, and seven were victims of suspected sexual abuse. More than half of these patients were over the age of five. Physical assault was the most common report of abuse across all age categories except for young children, and accounted for 63% of reports of suspected abuse. (See Figure 7)

Figure 7: Abuse & Neglect by Age Category



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Potential COVID In Pediatrics Transports

The year 2020 marked the beginning of the COVID-19 pandemic. As personal protective equipment and decontamination procedures were put in place, protocols for identifying and treating potentially infected patients were developed and modified over time. The following conditions were utilized to identify pediatric patients with COVID-like symptoms starting March of 2020.

- Cold/Flu Symptoms
- Fever



GLOSSARY

Advanced Life Support (ALS): Invasive life-saving procedures that expand upon basic life support to include advanced airway management, intravenous infusions of medications, cardiac monitoring and defibrillation, electrocardiogram interpretation and other procedures conventionally used at the hospital level. ALS is provided by physicians, paramedics or by other specially trained professionals.

Basic Life Support (BLS): Non-invasive life-saving procedures including cardiopulmonary resuscitation (CPR), use of an automated external defibrillator, bleeding control, splinting broken bones, artificial ventilation, basic airway management and administration of oral medications. BLS is usually provided by emergency medical technicians (EMS) or other similarly trained professionals.

Cardiac Arrest: A sudden, sometimes temporary, cessation of function of the heart.

Emergency Medical Services (EMS): The delivery of out-of-hospital emergency medical care and/or transport to definitive care for sick and injured patients.

Etiology: The cause or reason of a disease or condition.

Mutual Aid: A contractual agreement to enter into another agency's jurisdiction and provide aid when that agency's capacity to provide those services is surpassed.

Pediatric Patient: For Los Angeles County EMS providers, this is defined as patients who are 14 years of age and younger.

Pediatric Trauma Center: A hospital specially equipped and staffed to provide care to critically injured pediatric patients.

Provider Impression: The provider's explanation of the nature of a patient's condition; what the provider believes is wrong with the patient.

Respiratory Arrest: The cessation of breathing due to failure of the lungs to function effectively.

Return of Spontaneous Circulation (ROSC): The reappearance of effective cardiac activity after a period of cardiac arrest.



Figure 8:

