



INFANT AND CHILD RESTRAINT USAGE REPORT 2018

October, 2018



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STUDY RESULTS

Overall Results

This report details the Summer 2018 use of child restraints (car seats and safety belts) in passenger vehicles on California roadways. The data collection relied upon direct visual observations. These were performed at 102 different locations across 17 counties selected based on geography and population, to be consistent with the NHTSA occupant seat belt survey. The 2018 and 2017 surveys used a new set of sites compared to the previous five-years of surveys. This re-sampling was to stay consistent with NHTSA guidelines and to keep the child and infant survey consistent with the adult seat belt survey. Drivers and child passengers from infants to eight-year-old children were observed to determine proper restraint usage. Vehicles carrying children were observed on one specified date per site for a fifty minute period. This method yielded 1,364 usable observations for the state. Of these 1,364 observations, 204 were infants and 1,160 were children.

Percent Properly Restrained

	2018
Combined	96.0
Infants (Up to 1 year)	94.1%
Children (1-8 years)	96.3%



Results by County

County	Percent in 2013	Percent in 2014	Percent in 2015	Percent in 2016	Percent in 2017	Percent in 2018
Alameda	99.3%	99.6%	97.6%	93.3%	94.7%	100.0%
Contra Costa	NA	NA	NA	NA	98.5%	95.3%
El Dorado	81.3%	98.3%	85.2%	77.4%	NA	NA
Fresno	97.3%	95.5%	94.4%	95.3%	NA	NA
Kern	73.7%	79.6%	81.0%	98.9%	99.3%	93.3%
Los Angeles	76.7%	75.9%	99.7%	98.4%	100.0%	98.4%
Mendocino	92.3%	93.1%	83.7%	94.2%	NA	NA
Merced	89.5%	82.2%	96.7%	100.0%	NA	NA
Monterey	81.4%	87.2%	86.3%	99.6%	94.3%	97.1%
Orange	NA	NA	NA	NA	74.3%	100.0%
Riverside	99.6%	99.5%	98.9%	79.0%	95.5%	90.3%
Sacramento	90.4%	96.1%	99.5%	95.1%	87.8%	91.3%
San Bernardino	77.6%	79.0%	90.1%	100.0%	73.7%	91.2%
San Diego	77.0%	99.7%	86.0%	88.1%	98.9%	99.2%
San Joaquin	NA	NA	NA	NA	96.8%	97.3%
San Luis Obispo	NA	NA	NA	NA	97.7%	93.9%
San Mateo	NA	NA	NA	NA	97.4%	95.7%
Santa Barbara	NA	NA	NA	NA	100.0%	98.6%
Shasta	92.0%	90.7%	91.9%	90.7%	NA	NA
Solano	NA	NA	NA	NA	98.4%	98.6%
Sonoma	98.7%	81.7%	100.0%	95.9%	74.7%	97.0%
Ventura	NA	NA	NA	NA	98.4%	97.7%

NA = Not surveyed in the specific year due to change in sampling methods.

As can be seen in the Results by County, there was significant variation in usage rates across the state, but all counties had above 90% usage. The three lowest counties were Riverside, San Bernardino, and Sacramento. In two counties, however, 100% of children were restrained (Orange and Alameda).

The greatest variation in use of child restraints was found when considering whether the driver was belted. Infants and small children are more likely to be restrained properly when the driver is wearing a seatbelt (94.1%) than when the driver is not belted (54.5%). This finding is consistent with Pickrell and Ye's report (2009) on child restraint use, which notes that 92% of birth to seven-year-old children driven by buckled drivers were restrained, compared to 54% for children riding with unbelted drivers. In California, the pattern closely approximated these national findings. This pattern seems consistent and robust. It should be pointed out, however, that the drivers were restrained at a rate of 98.9% meaning that virtually all of the drivers were belted.

Percent Properly Restrained by Driver Belted or Not

	Driver Belted	Driver Not Belted
Combined	96.8%	61.1%

The benefits of child restraint use continue to be substantial. The National Highway Traffic Safety Administration (NHTSA) notes that over the period 1975 through 2015, an estimated 10,940 lives were saved by child restraints (child restraints and adult safety belts) for children under 5 years old in passenger vehicles. Research on child safety seats has found them to reduce fatal injury by 71% for infants and by 54% for toddlers (1-4 years old) in passenger cars. These reductions are 58% and 59%, respectively, for infants and toddlers riding in pickup trucks (NHTSA, 2008).

The 2018 California child restraint study shows a very strong connection between driver seat belt use and the use of child passenger restraints, reconfirming the conclusions of earlier studies: education and public awareness of child restraint protections are strongly related.

An additional possibility for variation in usage rates that was explored in this study was the type of vehicle being driven. Previous evidence in California suggests that pickup truck drivers have lower restraint usage rates than the drivers of other vehicles. Results in other states, suggest that this pattern holds for the use of infant and child restraints as well.

Restraint Usage Rates by Vehicle Type for Infants and Children
Infants & Children

	Properly Restrained	Not Properly Restrained
Automobiles	96.0% (N = 754)	4.0% (N = 30)
Vans/SUVs	97.4% (N = 516)	2.6% (N = 14)
Pickup Trucks	86.3% (N = 69)	13.7% (N = 11)

In recent years, vans/SUVs and automobiles have had roughly equivalent usage rates. This pattern held for 2018. For the seventh year in a row, pickup trucks were found to have significantly lower usage rates for children than the other vehicle types. The gap between pickups and the other vehicle types, however, decreased significantly in 2018 and continued a trend (with the exception of 2017) of smaller gaps between the vehicle types in recent years.

RECOMMENDATIONS

2018 was the second year of the revised infant and child survey. With multiple years of data, significant trends are becoming more evident, and there are a number of recommendations that can be derived from the current California survey and from similar surveys in other states. The main recommendations from this study are that California does the following:



- Continue to encourage and support *vigorous* enforcement of penalties for noncompliance with California's Seat Belt law;
- Collect county-level data on enforcement of the use of passenger belts and child restraint devices to document the relationship between enforcement and restraint use;
- Focus attention on counties with low historical usage rates to increase the overall rates;
- Direct special attention (enforcement and education efforts) toward pickup truck drivers since the protection rate of child passengers riding in pickup trucks remains lower than for any other kind of vehicle;
- Continue to develop and expand statewide public education and awareness programs using NHTSA guidelines by encouraging the use of booster seats for older children, by placing infants and small children in the back seat of all vehicles, and by the elimination of exemptions;
- Promote the use of child restraints in identified populations where the highest percentage of young children and their parents are located. This would likely include day care centers, doctor offices, hospitals, and faith-based organizations.
- Provide proper instructions for parents, grandparents, and older siblings. In addition, a focus on other caregivers of infants and small children are especially important.