

California Traffic Collisions Hit & Run 2004-2016

Data compiled from:

- CHP SWITERS Traffic Database
- Dept. of Finance - State of California
- Local Roadway Safety Manual - CalTrans

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Refresh 10/2016 - 1/1/2004 to 3Q-2016

State collision data obtained and compiled from SWITRS.

State population data obtained and compiled from the State of California Dept. of Finance and includes actual census counts and State estimates to 2016.

State cost data obtained and compiled from the CalTrans Local Roadway Safety Manual v1.1 revised in 2015.

Commissioned by:

Prepared for: Ted Rogers

Note on rates and costs:

Rates shown in this report are derived from population estimates based on Census counts (when taken), and formulations by the State Dept. of Finance.

Costs shown in this report are obtained and derived from CalTrans Local Roadway Safety v1.1 2013 using the KABCO scale which is a very rough estimate and arguably wide ranging and while not as specific as costs derived from the CDC or the NHTSA, suffices for this general overview and is discounted from 2013 at a 3% rate to 2004 and increased 3% to 2016 to reflect the variability in the value of the US dollar.

Thank you

California H&R Collisions Overview

Of all 5,719,064 Traffic Collisions in the State:

18.9% were H&R or 1,083,614 Collisions.

10.25% = Alcohol Involved, or 586,061 Collisions

Total California Collision Casualties:

- Bike Riders: 1,696 Dead - 152,682 Injured
- Pedestrians: 8,749 Dead - 166,865 Injured
- Motorcyclists: 5,496 Dead - 142,461 Injured
- Others: 26,937 Dead - 2,717,336 Injured
- Estimated Monetary Cost = \$368,853,975,000₂

Data extracted from SWITRs database 10/1/16.

Any Hit and Run collision that generated a police report and contained in the SWITRs database is reflected in this presentation.

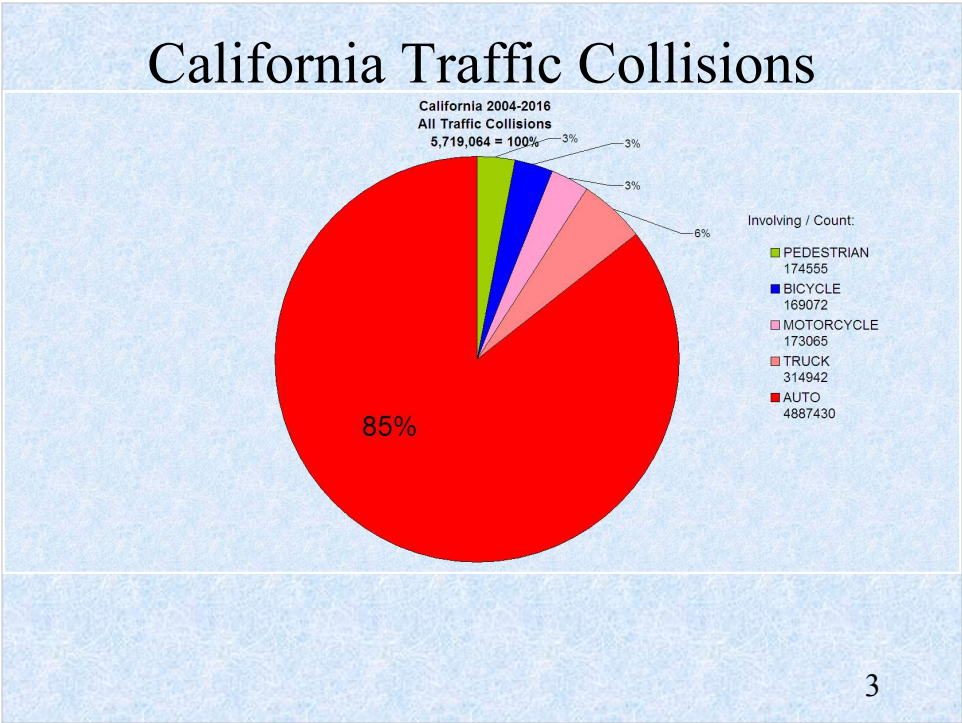
Collisions result in: loss of life, debilitating injuries, damage to property, costs to responders, and costs to survivors.

Identifying trends and areas of concern will assist in developing counter measures to their causes and provide measurement to their success.

Almost 1/5th of all aggregated traffic collisions in the State are Hit and Runs but their approximate costs are only 7.35% of the State total.

While comprehensive in scope, the totals listed should be viewed as a “floor” or the minimum of known collisions since not all collisions are reported to the CHP and thus are external to the database from which this report was created.

Data for 2014-2016 are still in-flowing and should be viewed accordingly. Some charts will show 2014-2016 data in dotted lines indicating the preliminary nature of the data.

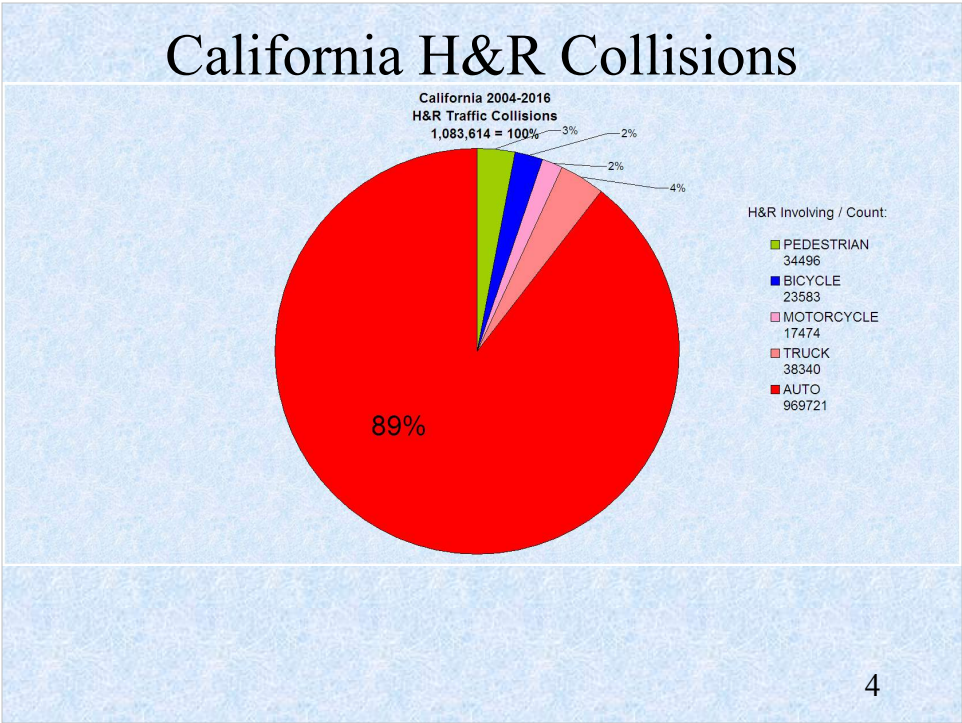


Aggregated traffic collisions reveal 94% of traffic collisions in the State were between motorized vehicles with the remaining 6% divided somewhat evenly between some of the most vulnerable people on the road: people on bikes and people using their feet.

Table of Collisions:

2004 to 3Q-2016		Resulting in:		As a % of total	
Mode	Collisions	Death	Injury	Death%	Injury%
BICYCLE	169,072	1,696	152,682	1.0%	90.3%
MOTORCYCLE	173,065	5,496	142,461	3.2%	82.3%
PEDESTRIAN	174,555	8,749	166,865	5.0%	95.6%
Auto+Truck	5,202,372	26,937	2,717,336	0.5%	52.2%

Immediate costs for collisions can be as simple as a hidden percentage of every transaction you make, to death - the ultimate price.



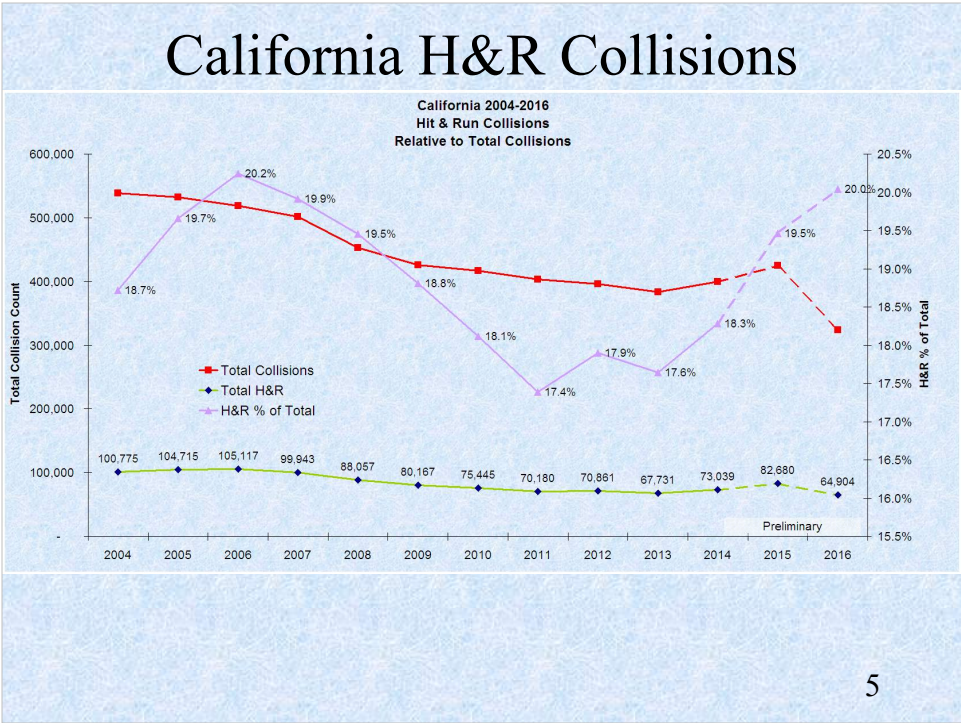
Aggregated H&R collisions reveal just a slight difference from the previous chart of total traffic collisions. Pedestrians fare worst in H&R collisions as you might expect.

Here's the totals:

Table of Collisions:

2004 to 3Q-2016		Resulting in:		As a % of total	
Mode	Collisions	Death	Injury	Death%	Injury%
BICYCLE	23,583	230	18,879	1.0%	80.1%
MOTORCYCLE	17,474	232	9,044	1.3%	51.8%
PEDESTRIAN	34,496	1,660	32,317	4.8%	93.7%
Auto+Truck	1,008,061	943	224,319	0.1%	22.3%

It would appear that people on 2 feet and people on 2 wheels are bearing the brunt of hit and run collisions.

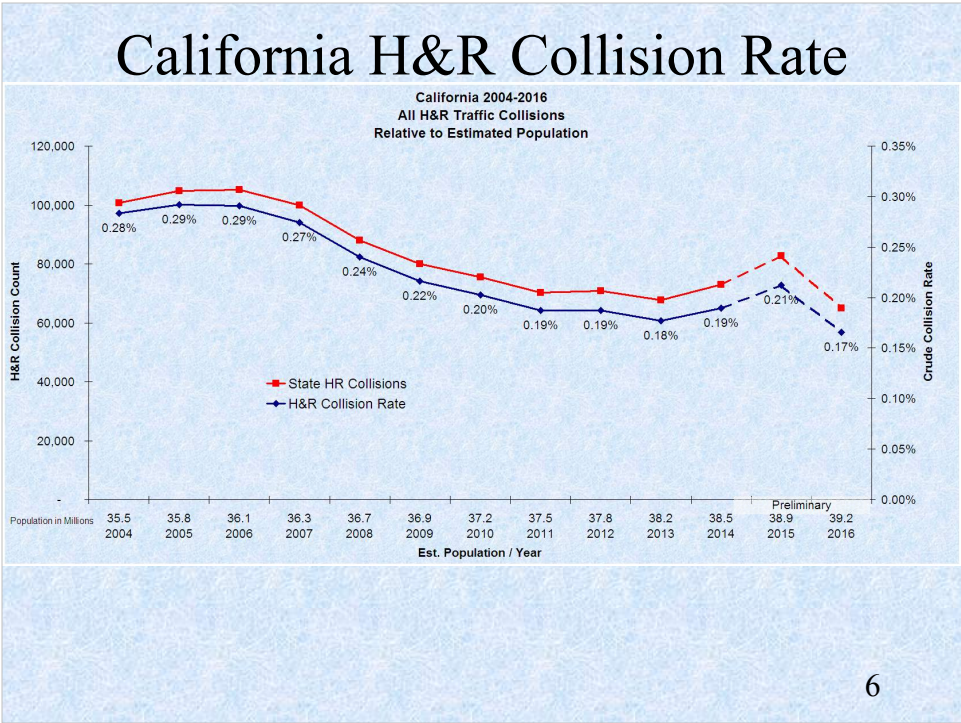


Shown here are the total traffic collisions for California compared with the number of H&R collisions from 2004-2016.

H&R collisions in the State peaked at 105,117 or 20.2% of 519,203 total traffic collisions in 2006 and decreased at a faster rate to 17.6% in 2013. While the down trend is evident from 2004-2013, a disturbing upswing appears to be forming from 2013 to the present. From a collision rate of 17.6% of total collisions in 2013, the rate rose almost 4% to 18.3% in 2014, and rose another 6.5% to 19.5% in 2015 while 2016 is not looking too good.

The rate of change in H&R collisions is greater than that of all traffic collisions in the State indicating a problem that needs to be fixed if collision reduction is a real goal in this State.

If so, then the question becomes: At what cost, and whose expense?



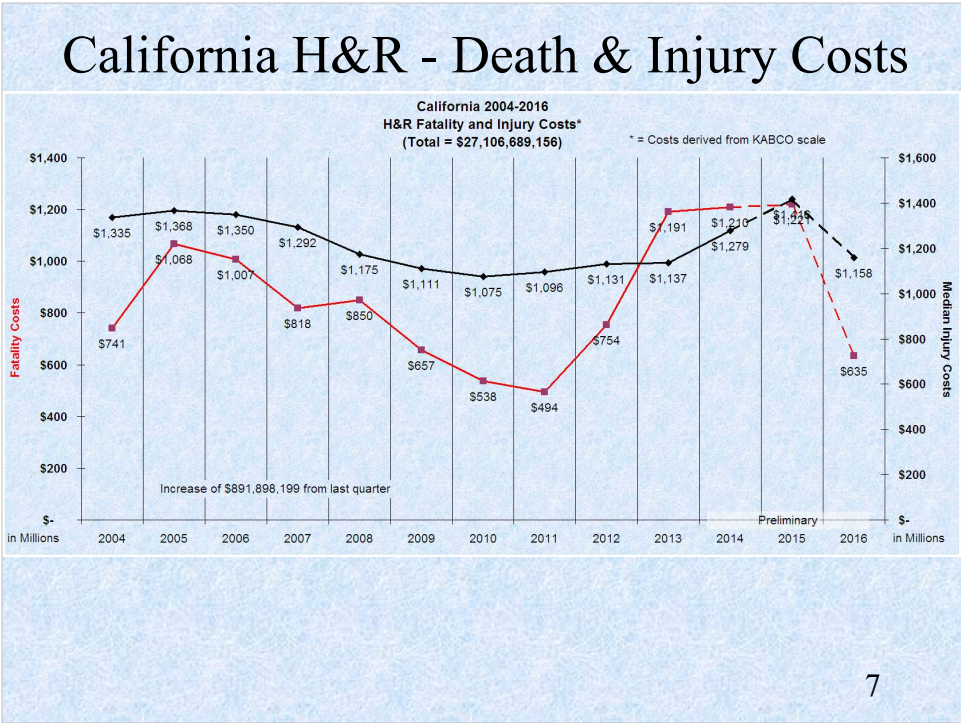
Shown here are the total H&R traffic collisions for California with the estimated population (in millions) above each year from 2004-2016.

While a slight but clear down trend is evident from 2006-2013, a disturbing upswing appears to be forming from 2013 to the present. From a collision rate of .18% of the population in 2013 the rate rose 5.5% to .19% in 2014, and rose another 10.5% to .21% in 2015. The increase of 14,949 H&R collisions from 67,731 in 2013 to 82,680 in 2015 resulted in an additional 30,431 people who were parties directly impacted (pardon the pun), although many more people were both directly and indirectly affected as the effects of collisions ripple through the fabric of our State.

The economic impact and productivity losses to the State, the locality, and the families of those involved due to collisions are better left to economists and productivity experts except to say that collisions carry enormous costs beyond the bent bumper or broken leg.

Why should you care?

You (and I) are paying for it, and lowering the collision rate will return more disposable income for you to do as you please, and tangentially provide a safer and healthier environment to go about spending it if you choose to do so.



This chart shows the estimated costs related to H&R collisions in the State of California from 2004 to 2016.

Costs are derived from the following table:

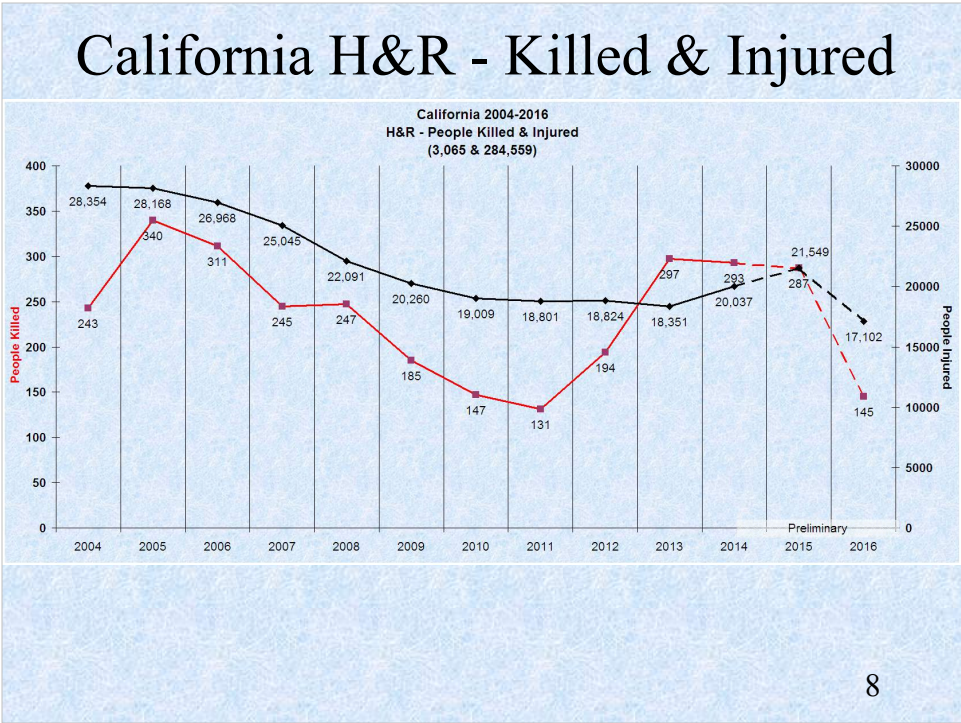
Crash Severity	Crash Cost in 2013
Fatality (K)	\$4,008,900
Severe/Disabling Injury (A)	\$216,000
Evident Injury – Other Visible (B)	\$79,000
Possible Injury – Complaint of Pain (C)	\$44,900
Property Damage Only (O)	\$7,400

KABCO costs are used for expediency and should be viewed as a general lower bound as CDC or NHTSA methodologies produce higher costs.

Costs were decreased at 3% per year, and increased 3% from 2013 to reflect the value variability of the US dollar.

Fatality counts were multiplied by the Kvalue for each year while injury counts were multiplied by the median of ABCO since it is 33% less than the average in order to reduce the inherent variability of the KABCO scale and provide the lower cost boundary.

2014-2016 are shown in dotted lines indicating the preliminary nature of these rates.



This chart shows the trend of people killed and injured from H&R collisions in California from 2004 to 2016.

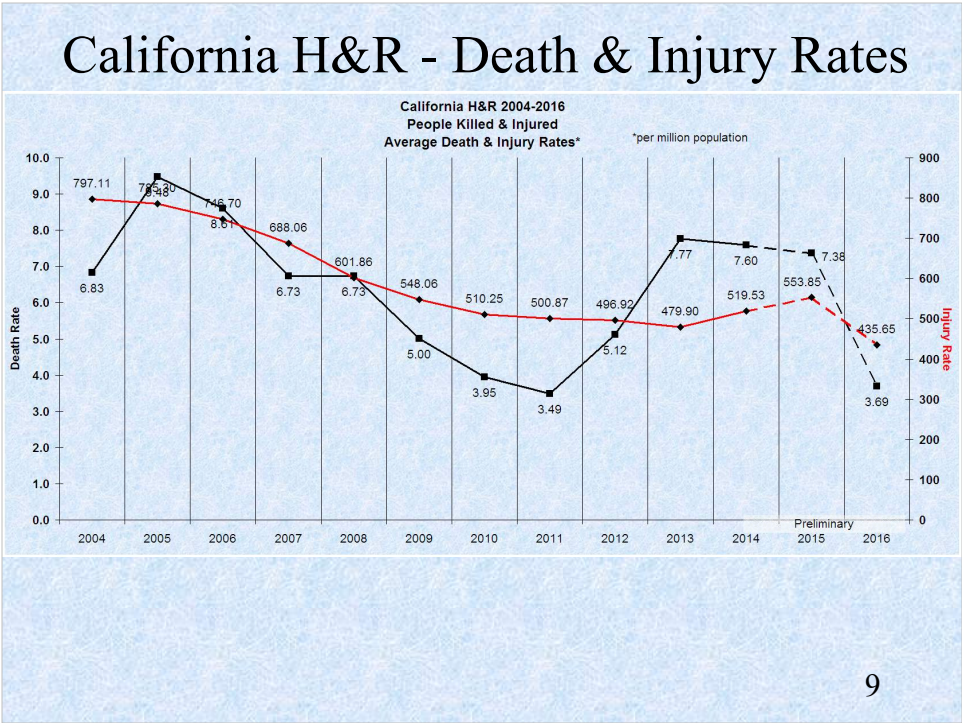
Counts shown are the absolute number of fatalities and injuries as reflected from SWITRS.

2014-2016 are shown in dotted lines indicating the preliminary nature of these counts.

Fatalities are increasing after a 7 year decline jumping from 131 in 2011 to 297 in 2013.

Injuries are also on the increase but on a much slower rate starting from 2013.

Data is still in-flowing for 2014-2016 so expect these counts to change at the next revision.



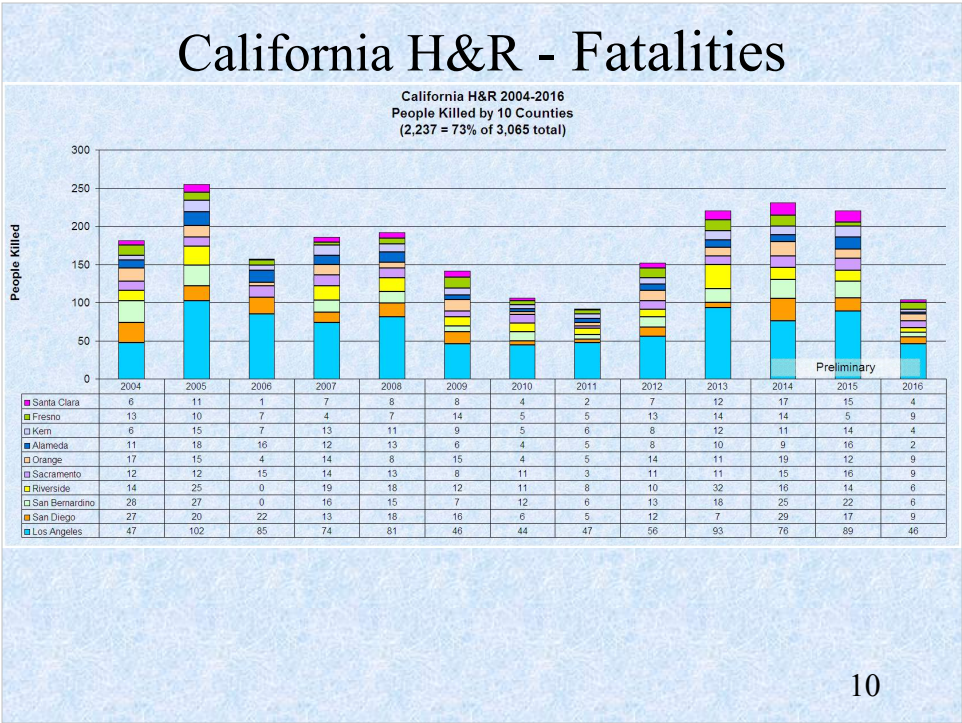
This chart shows the trend of the injury and death rate for people killed and injured from H&R collisions in California from 2004 to 2016.

The rates are derived from the respective total annual collision count divided by the estimated population* of the State for each year and standardized to 1 million.

2014-2016 are shown in dotted lines indicating the preliminary nature of these rates.

Data is still in-flowing for 2014-2016 so expect these rates to change at the next revision.

*Estimates done by the Dept. of Finance.



Here are 10 of the 58 Counties in the State with the highest count of H&R fatalities from 2004-2016.

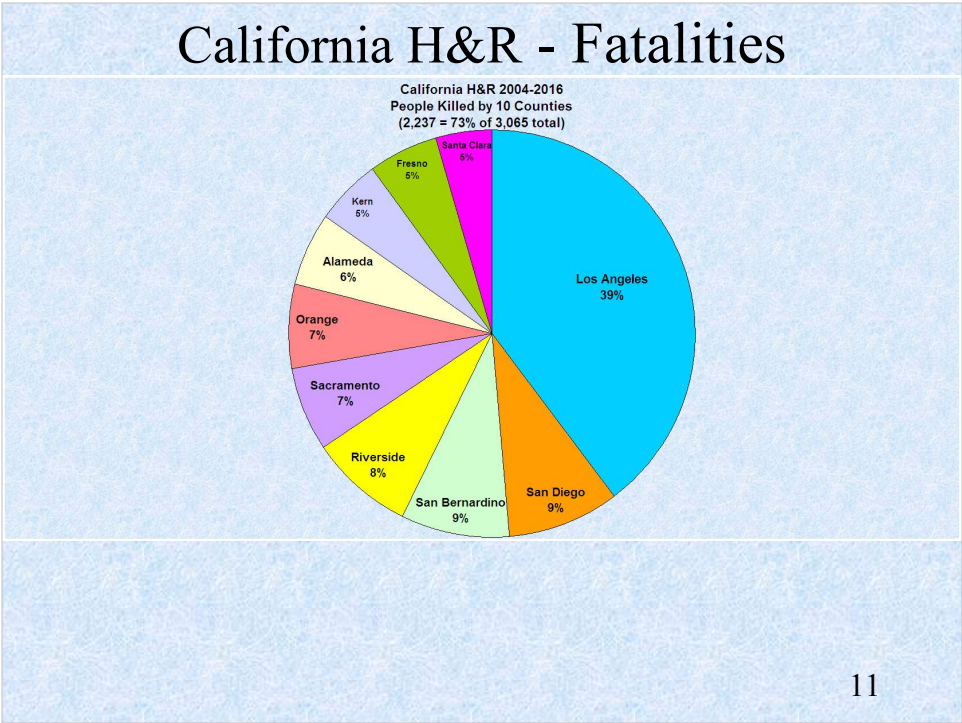
Counties are arranged from bad to worse to, top to bottom with Los Angeles County taking the gold, San Diego County for the silver, and San Bernardino County for the bronze.

Counts are provided in the table.

An overall sense of the trend over the years for these 10 Counties may be discerned by following the top of the bars from left to right.

Over 72% of all H&R fatalities came from these Counties providing an indication where resources could be applied to reduce or eliminate their occurrence.

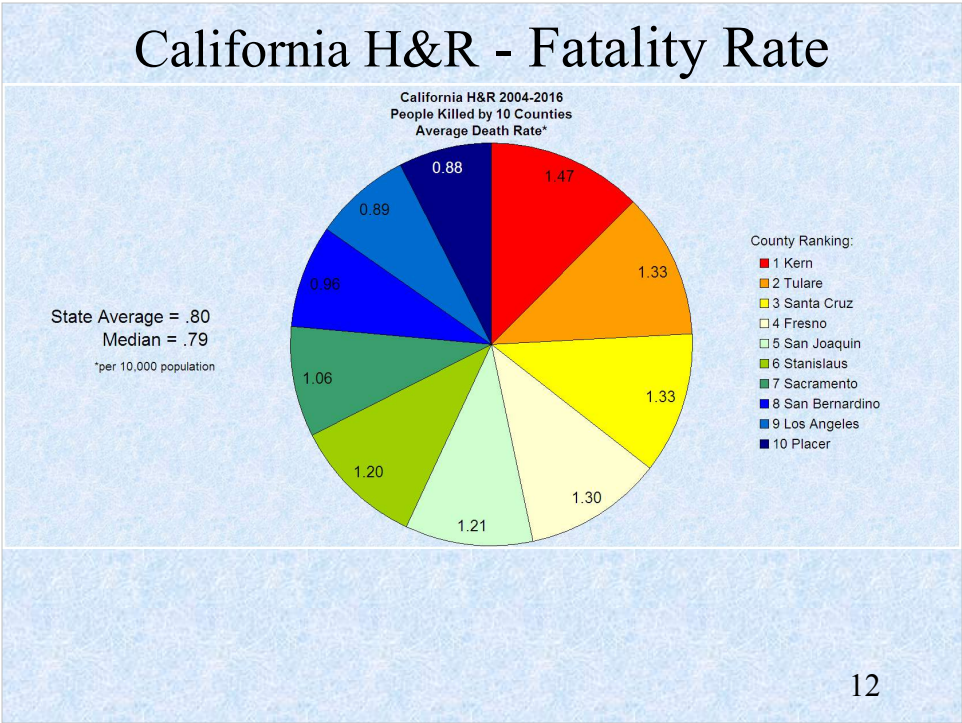
Data is still in-flowing for 2014-2016 so expect these counts to change at the next revision.



Here is the same information as the previous chart showing the percentage each of the 10 Counties contributed to the overall State H&R fatality count from 2004 to 2016.

Here's how the "Top 10" stack up - worst to bad, top to bottom.

Rank	County	H&R Fatality Count
1	Los Angeles	886
2	San Diego	201
3	San Bernardino	195
4	Riverside	185
5	Sacramento	150
6	Orange	147
7	Alameda	130
8	Kern	121
9	Fresno	120
10	Santa Clara	102
Total		2,237



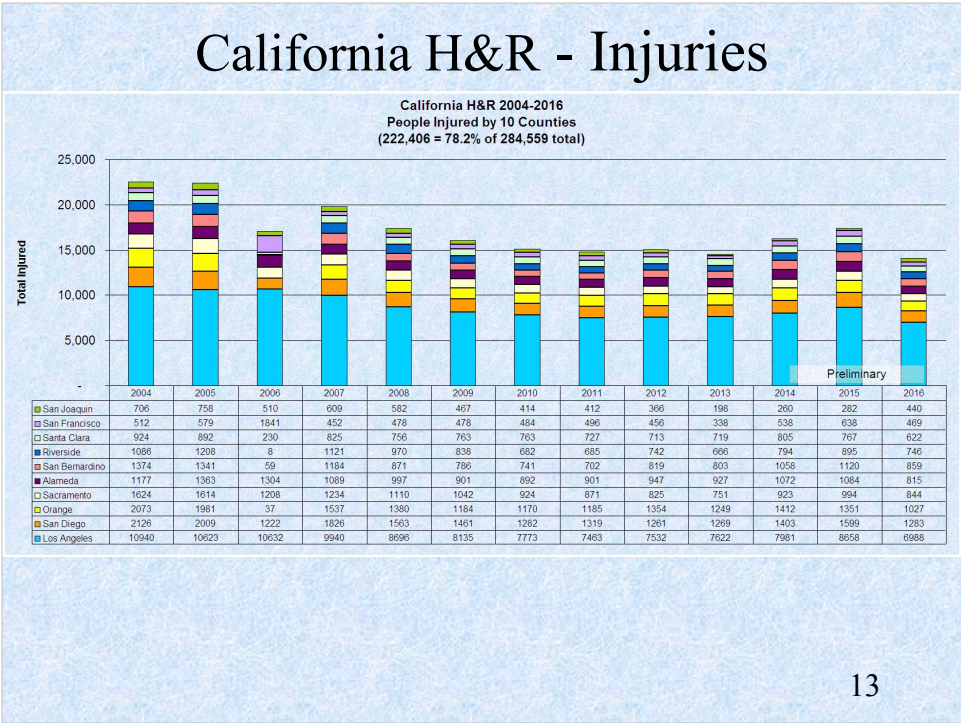
Shown here are the 10 Counties with the highest rate of H&R fatalities relative to the population of the respective County from 2004-2016.

Rates shown are standardized per 10,000 population.

Here's the H&R fatality count:

Rank	County	Fatality Count
1	Kern	121
2	Tulare	58
3	Santa Cruz	35
4	Fresno	120
5	San Joaquin	83
6	Stanislaus	62
7	Sacramento	150
8	San Bernardino	195
9	Los Angeles	886
10	Placer	30

On a population basis, Los Angeles County places 9th in the list yet has the highest count of fatal H&R collisions in the State.



Here are the 10 Counties with the highest count of H&R injuries in the State from 2004-2016.

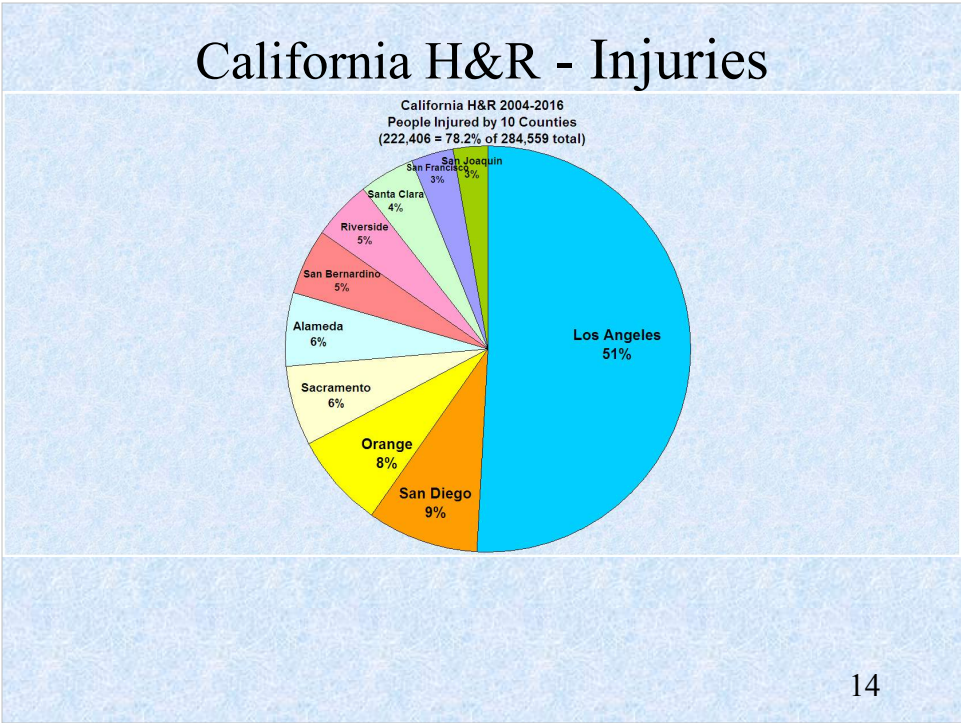
The Counties are arranged from less bad to worse, top to bottom with Los Angeles County taking the gold, San Diego County for the silver, and Orange County for the bronze.

Counts are provided in the table.

An overall sense of the trend over the years for these 10 counties may be discerned by following the top of the bars from left to right.

Over 73% of all H&R fatalities came from these Counties providing an indication where resources could be applied to reduce or eliminate their occurrence.

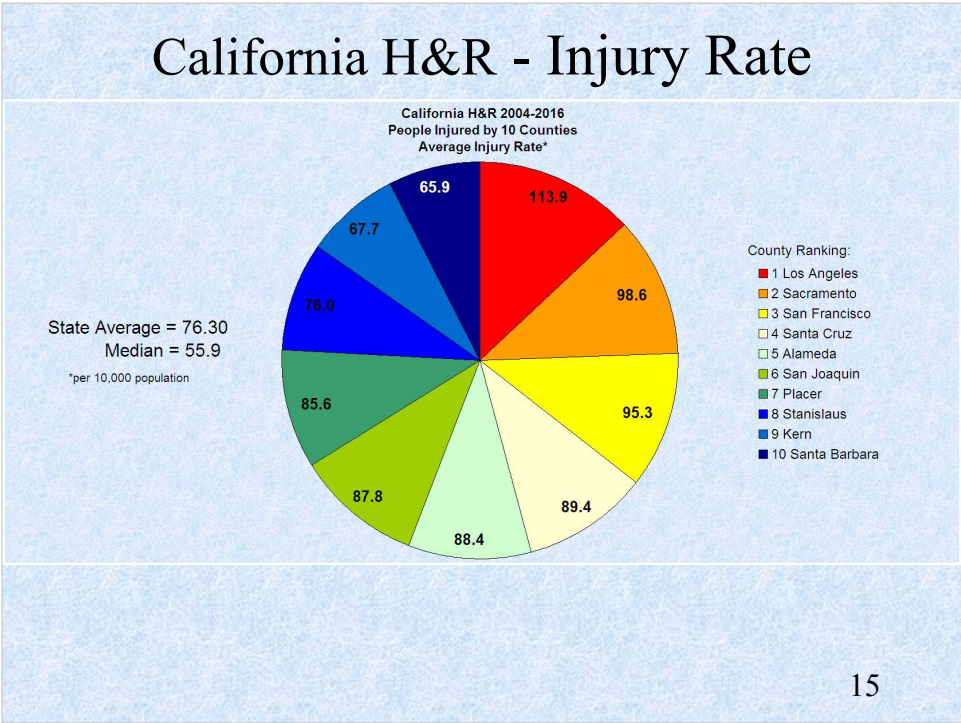
Data is still in-flowing for 2014-2016 so expect these counts to change at the next revision.



Here is the same information as the previous chart showing the percentage each County contributed to the overall State H&R injury count from 2004 to 2016.

Here's how the "Top 10" stack up - worst to bad, top to bottom.

Rank	County	H&R Count
1	Los Angeles	112,983
2	San Diego	19,623
3	Orange	16,940
4	Sacramento	13,964
5	Alameda	13,469
6	San Bernardino	11,717
7	Riverside	10,441
8	Santa Clara	9,506
9	San Francisco	7,759
10	San Joaquin	6,004
Total		222,406



Shown here are the 10 Counties with the highest rate of H&R injuries relative to the population of the County from 2004-2016.

Rates shown are standardized per 10,000 population.

Here's the H&R injury count:

Rank	County	Injury Count
1	Los Angeles	112,983
2	Sacramento	13,964
3	San Francisco	7,759
4	Santa Cruz	2,356
5	Alameda	13,469
6	San Joaquin	6,004
7	Placer	2,933
8	Stanislaus	3,909
9	Kern	5,589
10	Santa Barbara	2,802

More people are injured in H&R collisions in Los Angeles County on a per capita basis making it an ideal candidate for innovative solutions to the problem of H&R collisions.

California H&R Collisions - Summary									
Rank	County	HRIndex04-16	Rank	County	HRIndex04-16	Rank	County	HRIndex04-16	Rank
1	GLENN	9.406	26	AMADOR	4.774	51	TUOLUMNE	3.940	
2	MODOC	7.010	27	SAN BENITO	4.766	52	SUTTER	3.920	
3	SAN DIEGO	6.592	28	ORANGE	4.763	53	NAPA	3.863	
4	SAN FRANCISCO	6.423	29	RIVERSIDE	4.750	54	SAN LUIS OBISPO	3.853	
5	SACRAMENTO	6.125	30	EL DORADO	4.749	55	SAN MATEO	3.563	
6	IMPERIAL	6.102	31	ALAMEDA	4.734	56	LASSEN	3.561	
7	KINGS	6.032	32	MARIN	4.717	57	DEL NORTE	3.235	
8	SANTA CLARA	5.980	33	MONO	4.714	58	SIERRA	1.700	
9	YUBA	5.582	34	INYO	4.707				
10	SHASTA	5.537	35	MADERA	4.657				
11	ALPINE	5.417	36	SANTA CRUZ	4.608				
12	PLUMAS	5.340	37	SAN BERNARDINO	4.598				
13	LOS ANGELES	5.305	38	MERCED	4.574				
14	LAKE	5.253	39	CALAVERAS	4.563				
15	TEHAMA	5.244	40	SANTA BARBARA	4.522				
16	BUTTE	5.180	41	YOLO	4.507				
17	SISKIYOU	5.144	42	COLUSA	4.487				
18	HUMBOLDT	5.077	43	NEVADA	4.447				
19	SONOMA	5.049	44	KERN	4.441				
20	VENTURA	5.014	45	STANISLAUS	4.409				
21	SAN JOAQUIN	4.999	46	TRINITY	4.320				
22	FRESNO	4.977	47	MENDOCINO	4.298				
23	SOLANO	4.857	48	CONTRA COSTA	4.294				
24	PLACER	4.803	49	TULARE	4.183				
25	MARIPOSA	4.795	50	MONTEREY	4.024				

State HR Index
Average = 4.870
Median = 4.749

State HR Index =
Sum of HR Index by County 2004-2016
Sorted Worst to "Best"

Derived by adding HR Killed & Injured,
and dividing by HR Count for each County
for each year.

The following 16 or 27.6% of the 58 Counties had high counts or high relative rates: Alameda, Fresno, Kern, Los Angeles, Orange, Placer, Riverside, Sacramento, San Bernardino, San Diego, San Francisco, San Joaquin, Santa Clara, Santa Cruz, Stanislaus, and Tulare.

The 10 or 17.2% of the 58 Counties having the highest State HR Index were: GLENN, MODOC, SAN DIEGO, SAN FRANCISCO, SACRAMENTO, IMPERIAL, KINGS, SANTA CLARA, YUBA, and SHASTA.

Focus and priority to increase and improve roadway safety should begin with the Counties having the highest degree of injury relative to the number of HR collisions and highest overall counts and death and injury rates relative to their populations. For this reporting period the Counties are: San Diego, San Francisco, Sacramento, and Santa Clara.

Counties should view reducing collision costs as a revenue source and not a cost of doing business as usual. Reduction goals should be set and measured to adjust mitigation efforts accordingly. Goals could be a 5 year 20% reduction or a more aggressive 33% reduction target with the collision cost savings going back to the general fund.

Additional information is available in the individual County presentations.

The intent and purpose of this and subsequent collision reports is to provide visibility, insight, and a quantitative measure to Hit & Run collisions in the State.

Thank You

California Traffic Collisions Hit & Run 2004-2016

End

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Total traffic collisions for the State contained in the SWITRS database were compared to the number of H&R collisions from 2004 to 2016 with percentages for each year to determine an apparent increase.

Counties were examined by counts and rates to determine the largest contributors to the H&R collision population. Additionally, an Index was created to reflect the degree of injury relative to the number of HR collisions for each County to provide a clear ranking criteria.

Aggregated estimated costs reveal less than 10% of all traffic collision costs are related to Hit & Run collisions in the State.

Pedestrians are at greatest risk of death and injury in H&R collisions.

The "top 10" Counties should be considered for H&R counter-measures or mitigation efforts to have the greatest reduction in H&R collision costs to the State, and and the people who live in it.

Thank you