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TICKET CAMERAS INCREASE CRASHES (IIHS OXNARD STUDY REFUTED)

On April 26, 2001, amidst media fanfare, the Insurance Institute for Highway Safety (IIHS) unveiled their study, "Crash Reductions Associated with Red Light Camera Enforcement in Oxnard, California." It was reported as a breakthrough (first in the U.S.) study proving "cameras save lives."

The News Release claimed a 29% reduction of injury crashes at signalized intersections and 32% less overall angle crashes.

The actual eight-page study compared crash records for 29 months before ticket cameras began operating to 29 months after. However, the report failed to provide any conclusive, objective data proving that cameras reduced collisions. The IIHS admits that specific crash types – such as red-light violations – were not identified. Also, "crashes at the 11 camera equipped intersections were not analyzed separately" from the other 114 signalized intersections in Oxnard.

Tables 1 and 3, which documented numbers and percentages, actually establish a case against photo enforcement. Oxnard with ticket cameras and a "40% reduction in red-light running," recorded a drop in signalized intersection crashes from 1322 before, to 1250 after automated enforcement, or a 5.4% decrease. Santa Barbara, without red-light cameras, and lacking any reductions in red light violations (page 3), shows a decline from 488 crashes to 438 or – 10.2%. In plain English: The town without cameras and not manipulating driver behavior generated roughly twice the safety improvements of camera-enforced Oxnard.

Oxnard posted a 20% (not 29%) reduction of injury crashes versus – 5.6% for Santa Barbara. However, their rates of injuries were identical at 19% of all crashes. San Bernardino, without ticket cameras and lacking accident reductions, maintained a slightly better 17.6% injury rate.

The study abounds with misinformation. "Spillover effect" is a dubious theory derived from the unproven generalization that enforcement produces a meaningful effect on traffic safety. If reduced violations resulted in less crashes, no control site would ever maintain better safety records than a ticket camera site. Many control sites also contain lower average violation rates than photo enforced intersections, including Oxnard. Which leads us to the real problem – poor traffic engineering policies and the failure of public agencies to employ traffic engineering practices proven to eliminate red light violations and reduce intersection accidents.

Proper signal engineering is the key to compliance and safety. Such programs in Detroit, Long Island, Mesa, Omaha and San Francisco have shown dramatic reductions in violations and accidents.

The "Institute's" claim of being the "first U.S. research" on this subject ignores a previous study for **Mesa, Arizona (1995-1998)** by Tatro and Vinzant. In the Mesa study crash rates were documented from four equivalent quadrants of 6 dangerous intersections. Like the new Oxnard study, when analyzed properly, the control site (no cameras) yielded the best safety results. The only fatal crash in 1998 occurred in a camera-enforced quadrant.

Many other photo enforcement studies cast serious doubts on this technology, including the following:

Howard County, Maryland (1997-1998). Only two of four sites were analyzed using an inadequate one-year to the next comparison. Still, one camera enforced site doubled in number of right-angle crashes.

Polk County, Florida (1994-1996). Demonstration project. Using only red light violation crash data, 1994 results, without cameras, incurred 6% less crashes than in 1996, after automated enforcement (227 versus 241.)

New York City. City officials established the nation's first red-light camera program in 1993. City officials have made no efforts to disclose crash records, despite repeated public records requests from our organization, the National Motorists Association.

Melbourne, Australia (1979-1989). This stands as the most comprehensive study on the subject of red light cameras. Research Scientist David Andreassen (1995) thoroughly analyzed crash data, from 5 years before red-light cameras to 5 years after, at 41 camera enforced intersections. Specific crash types were documented.

Collectively, an average of 60 annual rear-end crashes occurred from 1979-1984, before ticket cameras. By 1988, rear-end crashes climbed to 139 or an increase of 125 percent! Right-thru accidents (left-turn, U.S.) averaged 110 annually before camera enforcement, but climbed to over 140 by 1987. And red light violation collisions, which consistently decreased yearly before photo enforcement, rose over 150% after cameras were installed (30 versus 80). Only pedestrian accidents remained unchanged. The control sites, as usual, were safer than the ticket camera sites.

Andreassen also refuted several other studies used to promote ticket cameras.

Proper analysis of 15 photo enforcement programs worldwide prove that cameras do not prevent accidents or save lives. Oftentimes, these devices cause more crashes, especially rear-end collisions. (Rear end related collisions cause 75 percent more fatalities than do red light violations, 1661 versus 947 in 1999; NHTSA, FHWA).

Ticket cameras not only increase crashes but also violate a citizen's right to due process, to be presumed innocent and to face his/her accusers. Many other problems and deceptions abound. Those who support cameras, whether well-intentioned or not, have created a situation where revenue enhancement and private profit are competing against and distorting public policies that can and will improve traffic safety.

More detailed information on this subject and the above mentioned studies can be found in a special 96 page report, **Camera Enforcement-Developing the Factual Picture**. This report was prepared by Greg Mauz, Activist for the Florida Chapter of the National Motorists Association.

To order a copy or to obtain NMA information call us at 608/849-6000 or email at nma@motorists.org. You can also visit our site at www.motorists.org. *The National Motorists Association was established in 1982 to represent the interests and rights of North American motorists. It operates at the national level and through a system of state chapters. The NMA is solely supported through the contributions of individuals, families and small businesses.*

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Note: IIHS failed to report a 180% increase in rear-end collisions - 18 before to 51 after ticket cameras. [Kadison] See photos. Rear-end crashes are NOT to be taken lightly. People dying because of greed (\$\$\$) is NOT a joke.

A generalized linear regression model was developed to evaluate changes in total crashes, injury crashes, and specific crash types. The model used the natural logarithm of crash counts as the response variable. Independent variables were city, intersection type (signalized and nonsignalized), and period (before and after enforcement). Two-factor interactions of city-by-period and city-by-intersection type also were included, as crash trends were different in different cities. Analysis of variance was used to test the statistical significance.

RESULTS

Table 1 summarizes changes in the numbers of crashes from the baseline period through the enforcement period, for signalized and nonsignalized intersections. For the three control cities, the frequency of crashes changed roughly in the same way at both signalized and nonsignalized intersections. In Bakersfield and Santa Barbara, the number of crashes declined at both types of intersections; in San Bernardino, they increased. Table 2 summarizes the effect of red light camera enforcement as estimated by the model. It is estimated that red light camera enforcement reduced the number of crashes at Oxnard signalized intersections by 7 percent (with 95 percent confidence limits of 1.3 and 12.5).

Table 1
Total Crashes Before and After Enforcement

City	Type of Intersection	Before	After	Percent Change	
Bakersfield	Nonsignalized	760	753	-0.9	
	Signalized	771	739	-4.2	no cameras
San Bernardino	Nonsignalized	1,220	1,283	5.2	
	Signalized	1,324	1,400	5.7	
Santa Barbara	Nonsignalized	712	622	-12.6	
	Signalized	488	438	-10.2	no cameras
Oxnard	Nonsignalized	994	1,011	1.7	
	Signalized	1,322	1,250	-5.4	cameras

Table 2
Estimated Effects on Total Crashes

Effect	Degrees of Freedom	Mean Square	F-value	p-value	Estimate	Percent Reduction
Camera	1	0.0013308	11.33	0.0281	-0.07296	7
Error	4	0.00011741				

Table 3 summarizes changes in the number of injury crashes for signalized and nonsignalized intersections in all four cities. As was found for total crashes, the numbers of injury crashes in control cities changed roughly in the same way at signalized and nonsignalized intersections from the baseline period through the enforcement period. Results of the statistical model used to evaluate changes in injury crashes are summarized in Table 4. It is estimated that red light camera enforcement reduced the number of injury crashes at Oxnard signalized intersections by 29 percent (with 95 percent confidence limits of 16.6 and 39.1).

Results: Santa Barbara, without ticket cameras, generated twice the safety benefits of camera-enforced Oxnard. JIM FLNMI