CARE DRIVER DISTRACTIONS STUDY

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As a result of heavy National Highway Traffic Safety Administration interest in the subject of driver distractions, a summit on this subject was held at the University of Alabama at Birmingham on December 3, 2009. This study was request to provide information for the Summit, which was attended by over 100 traffic safety professionals from throughout Alabama. A variety of driver distraction causes are discussed and compared. The report begins with a summary of the study conducted followed by a summary of the results and findings. This is followed by a discussion of the practical findings and the supportive CARE IMPACT displays.

Summary of CARE Study Conducted:

- Alabama's old data does not have the complete list of distractions (including electronic devices), so the eCrash data were used.
- Most current eCrash data contained 28,105 records, which is a good sample.
- Using the 2008 total crashes as a benchmark, this is approximately 22.7% of the estimated 123,968 crashes that occurred in 2008. These numbers were used to prorate the eCrash numbers to provide an estimate of an equivalent year's worth of data.
- "Driver Distractions" are obtained from the eCrash Primary Contributing Circumstances variable (C015). This assures that it is the primary cause of the crash.

Summary of Results:

- Figure 1, which is ordered by the driver distraction category with the largest number first, summarizes the results of the raw eCrash data. It shows that three driver distraction categories are predominant:
    - Other Distraction Inside the Vehicle;
    - Fatigue/Asleep; and
    - Other Distractions Outside the Vehicle.
    - The three above account for about 74% of the reported Distracted Driver crashes.
- The two "electronic device use" categories account for only 391 cases or about 15% of the distraction cases.
- Figure 2 gives a view of the severity of the driver distraction crashes recorded in eCrash:
    - Clearly the Fatigued/Asleep category has the most fatalities and injuries as well as the greatest frequently reported.
    - The two "use of electronic device" categories showed no fatal crashes and were under-represented in the higher injury severity categories.
- Further analyses determined that only 14 of the 642 crashes caused by Fatigue/Asleep had an officer's opinion of DUI. This, despite the time, age and day of the week variables being extremely well correlated to those characteristic of DUI. However, this is to be expected of this type of "distraction" – it will occur

very late night (early hours of the morning), over weekends, and it will involve 21 to 25 year old drivers who are still prone to take risks.

- Table 1 presents the results prorated to an estimated annualized basis. Based on this, on an annualized basis, it can be expected that in any typical year:
    - 11,557 (or 9.3% of) crashes will be caused by some form of driver distraction;
    - Driver distraction will account for 25,613 (or 15.4% of all) injury crashes;
    - Driver distraction will account for 53 (or 6.0% of) all fatal crashes;
    - The use of electronic devices will account for 1,725 crashes, 556 of which will be injury crashes (no estimate could be made of the number of fatal crashes at this time).
- Further analysis combining the two "use of electronic device" categories showed the following are significantly over-represented in this category:
    - Younger ages and especially 16-19 year olds (see Figure 3);
    - Females, with a slightly higher proportion than expected (see Figure 4);
    - County roads, the only category of roadway that was significantly over-represented, by about 25% more than expected (see Figure 5);
    - Rear end and single vehicle crashes; and
    - Ran off the road, both left and right.

Practical Considerations:

- NHTSA has emphasized the danger in the use of electronic devices almost to the exclusion of other types of distractions. While there is no doubt serious hazards caused by drivers who text, talk or otherwise are distracted by electronic devices, it seems clear that there are other types of distractions that should not be neglected, e.g., Fatigued/Asleep.
- The data from Alabama does not show the use of electronic devices to be a relatively high cause of crashes when compared to other distractions or, for that matter, other causes apart from distractions. There could be two possible explanations for this:
    - The use of electronic devices is not a relatively serious problem in Alabama compared to other crash causes; or
    - Alabama law enforcement officers are not able to detect once they arrive on the scene if an electronic device was in use or not just prior to the crash.
- This is the first time that Alabama law enforcement officials have been asked to complete this distracted driver data element with codes for electronic devices; it could be that they need to get used to this code or be given additional training to look for it and use it.
- It could also be that the officer is giving the benefit of the doubt to the driver, and even though a cell phone was in use, the officer is not attributing that to the cause of the crash.
- These results do not take into account the alarming growth of the in-vehicle use of electronic devices, so although this might not seem to be the predominant issue now, there is little doubt that the growth in the use of these devices will

have a grave effect on traffic deaths and injuries in the future. Follow-up studies will be conducted to track this growth.

- There are ways that law enforcement could check phone records automatically to determine if any of the drivers were on cell phones or texting. Perhaps this is a way to get more accurate data on this very important data element.

DISPLAYS

Figure 1. Raw eCrash Data on Various Types of Driver Distractions
(5.5 Months; eCrash Portion of Data Only – about 22.7% of 2009)

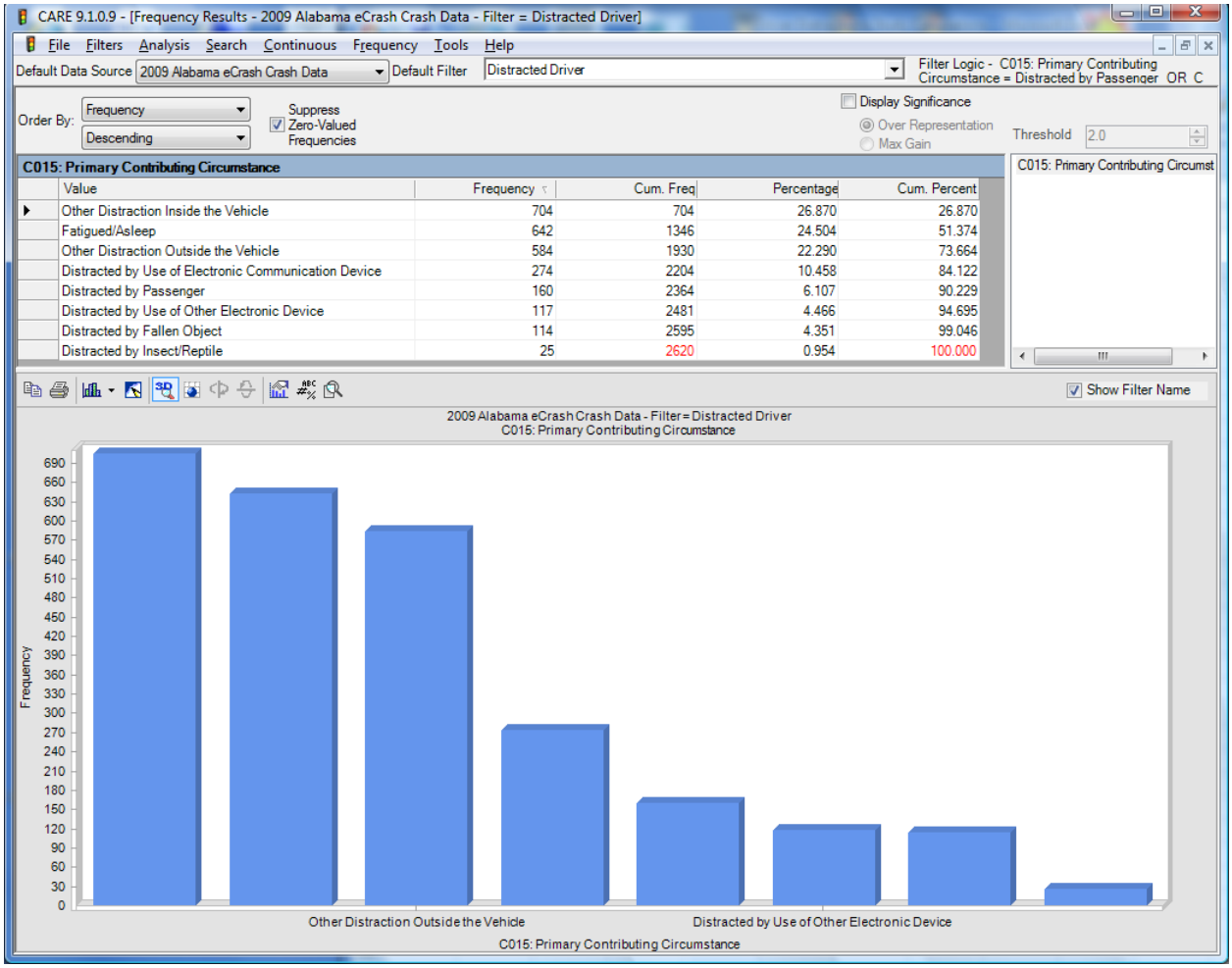
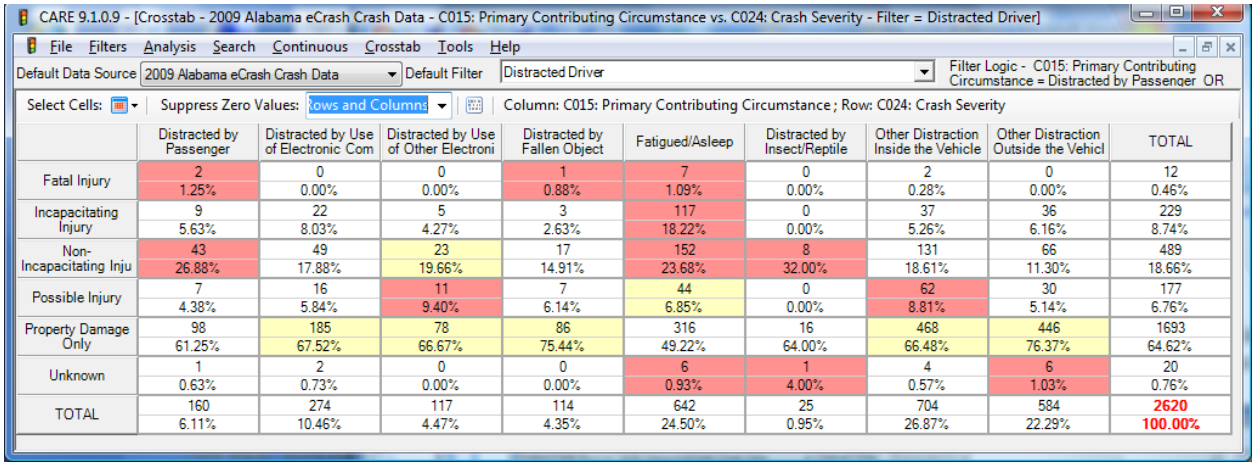


Figure 2. Distraction Categories by Severity



	Distracted by Passenger	Distracted by Use of Electronic Com	Distracted by Use of Other Electroni	Distracted by Fallen Object	Fatigued/Asleep	Distracted by Insect/Reptile	Other Distraction Inside the Vehicle	Other Distraction Outside the Vehicl	TOTAL
Fatal Injury	2 1.25%	0 0.00%	0 0.00%	1 0.88%	7 1.09%	0 0.00%	2 0.28%	0 0.00%	12 0.46%
Incapacitating Injury	9 5.63%	22 8.03%	5 4.27%	3 2.63%	117 18.22%	0 0.00%	37 5.26%	36 6.16%	229 8.74%
Non-Incapacitating Inju	43 26.88%	49 17.88%	23 19.66%	17 14.91%	152 23.68%	8 32.00%	131 18.61%	66 11.30%	489 18.66%
Possible Injury	7 4.38%	16 5.84%	11 9.40%	7 6.14%	44 6.85%	0 0.00%	62 8.81%	30 5.14%	177 6.76%
Property Damage Only	98 61.25%	185 67.52%	78 66.67%	86 75.44%	316 49.22%	16 64.00%	468 66.48%	446 76.37%	1693 64.62%
Unknown	1 0.63%	2 0.73%	0 0.00%	0 0.00%	6 0.93%	1 4.00%	4 0.57%	6 1.03%	20 0.76%
TOTAL	160 6.11%	274 10.46%	117 4.47%	114 4.35%	642 24.50%	25 0.95%	704 26.87%	584 22.29%	2620 100.00%

Table 1. Raw Data and Prorated to Annualized 2008 Total Crashes

C015: Primary Contributing Circumstance Value	Frequency	Percent	Injury	Fatal
Distracted by Passenger	160	6.11%	59	2
Distracted by Use of Electronic Communication Device	274	10.46%	87	0
Distracted by Use of Other Electronic Device	117	4.47%	39	0
Distracted by Fallen Object	114	4.35%	27	1
Fatigued/Asleep	642	24.50%	313	7
Distracted by Insect/Reptile	25	0.95%	8	0
Other Distraction Inside the Vehicle	704	26.87%	230	2
Other Distraction Outside the Vehicle	584	22.29%	132	0
	2620	1	895	12

C015: Primary Contributing Circumstance -- Annualized to 2008 Total Crashes (123,968)

Value	Frequency	Percent	Injury	Fatal
Distracted by Passenger	706	6.11%	260	9
Distracted by Use of Electronic Communication Device	1209	10.46%	384	0
Distracted by Use of Other Electronic Device	516	4.47%	172	0
Distracted by Fallen Object	503	4.35%	119	4
Fatigued/Asleep	2832	24.50%	1381	31
Distracted by Insect/Reptile	110	0.95%	35	0
Other Distraction Inside the Vehicle	3105	26.87%	1015	9
Other Distraction Outside the Vehicle	2576	22.29%	582	0
	11557	1	3948	53
Number of All 2008 Crashes of Same Severity	123,968		25613	886
Distracted Driver Percent of 2008 Crashes	9.3%		15.4%	6.0%

Figure 3. Age of Causal Driver: Electronic Device Distraction vs. No Such Distraction
Electronic Device Distraction Caused Crashes = Red Bars
No Electronic Device Distraction = Blue Bars

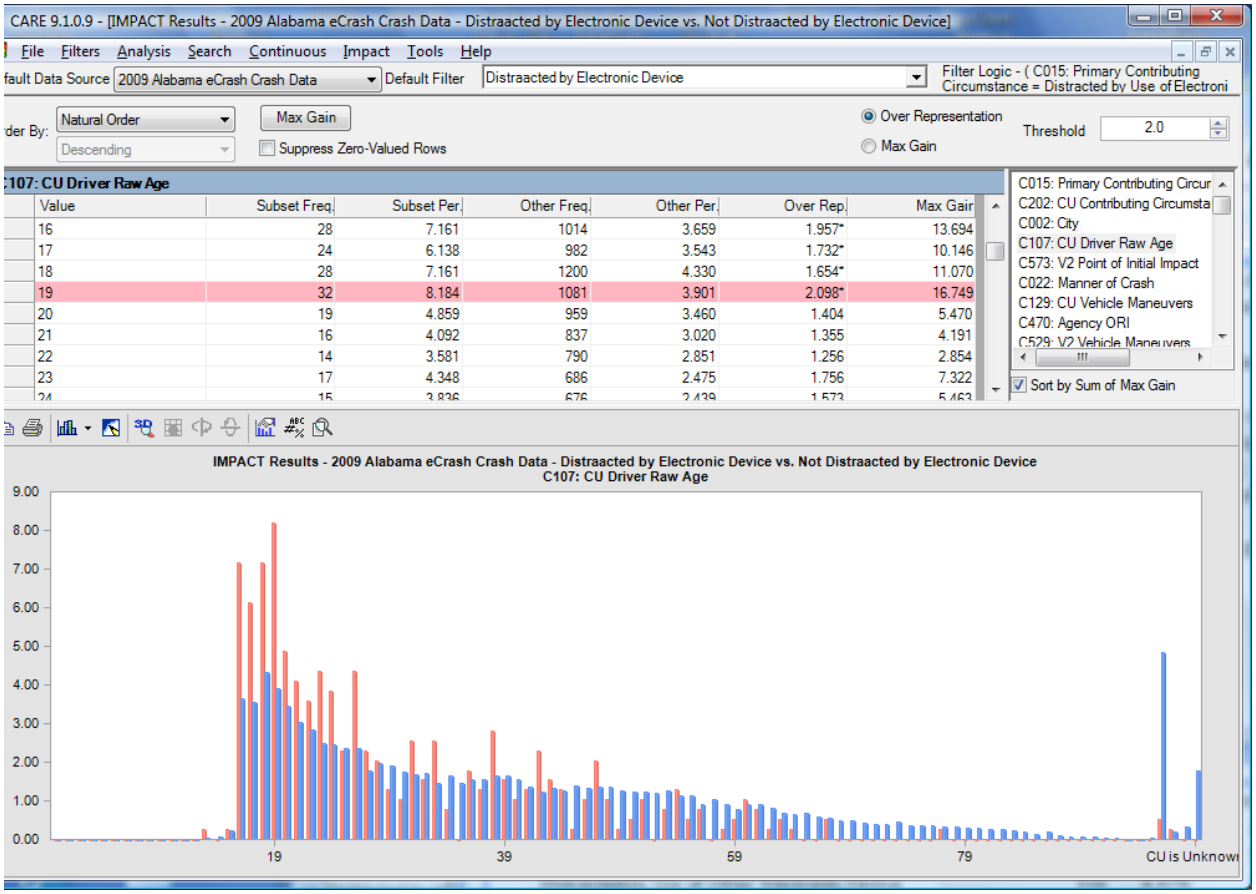


Figure 4. Gender of Causal Driver: Electronic Device Distraction vs. No Such Distraction
Electronic Device Distraction Caused Crashes = Red Bars
No Electronic Device Distraction = Blue Bars

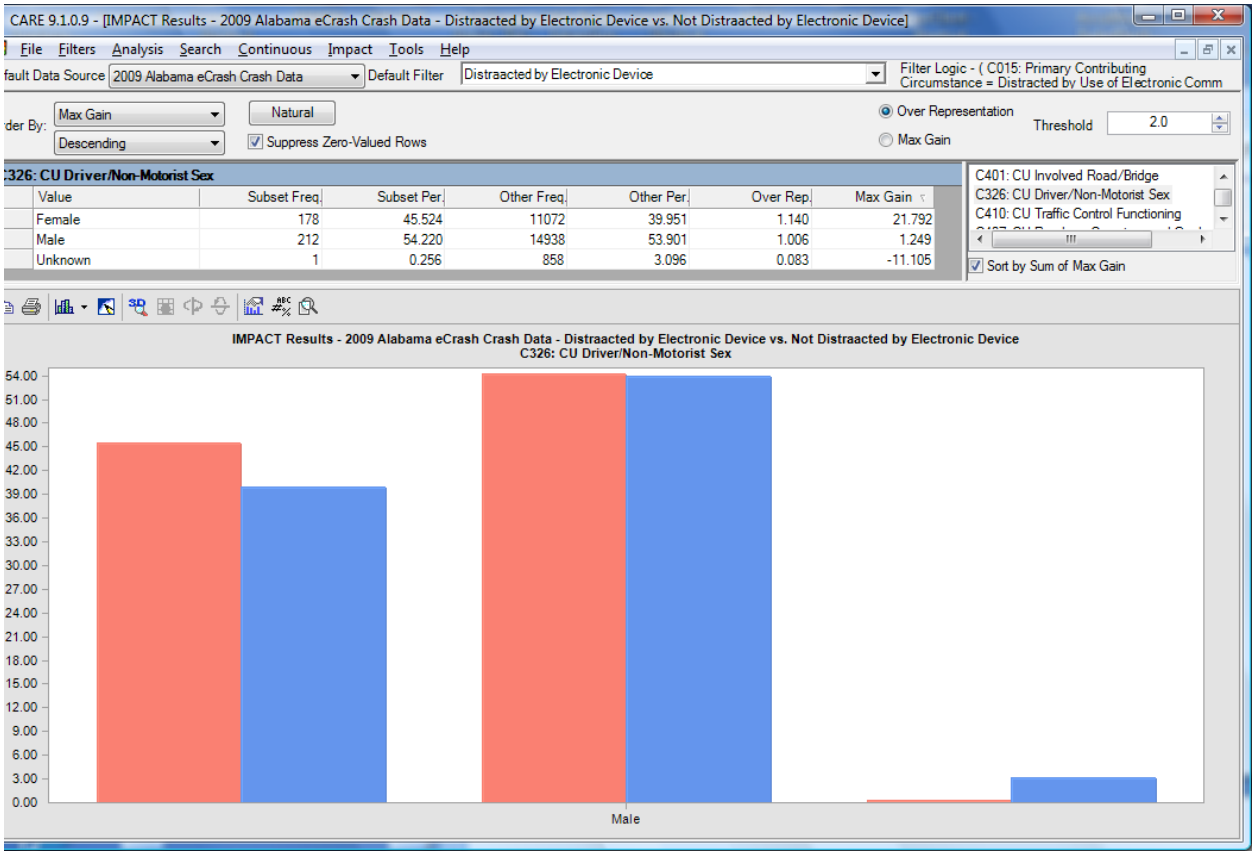


Figure 5. Highway Classification: Electronic Device Distraction vs. No Such Distraction
Electronic Device Distraction Caused Crashes = Red Bars
No Electronic Device Distraction = Blue Bars