

# Work-Related Motor Vehicle Crash Fatalities, 2007-2008

## BACKGROUND

- During 2007-2008 there were 10,871 work-related fatalities in the U.S.; 41% of these deaths were transportation-related. The number of work-related fatalities decreased by 8% from 5,657 in 2007 to 5,214 in 2008.
- In Oklahoma, the number of work-related fatalities increased by 16% from 105 in 2007 to 122 in 2008; 52% were transportation-related.

## STUDY OBJECTIVES

To describe work-related traffic fatalities that occurred on public roadways in Oklahoma.

## METHODS

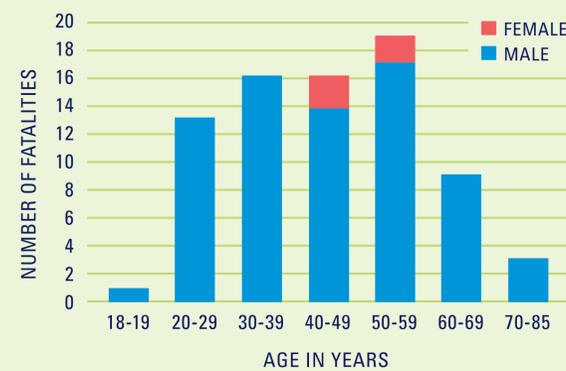
- Link Plus V 2.0 software was used to electronically link traffic crash records, inpatient hospital discharge data and Vital Statistics death data for 2007-2008.
  - The records were matched and linked with occupational fatality records.
  - Matching variables included name, date of birth, last four digits of the social security number, gender, and date of event.
- Cases included vehicle occupants and pedestrians who were fatally injured on public roadways while working.
  - Included Oklahoma residents and non-residents.
- Factors related to the crash incidents were examined including person and environmental factors, and vehicle type.
  - Vehicles were categorized as large trucks/tractor-trailer trucks\* and other type vehicles.\*\*
- Analyses were conducted using SAS 9.2.



## RESULTS

- Seventy-seven fatal injuries occurred among persons working in or traveling through Oklahoma in 2007 and 2008.
  - The median age of workers was 43 years (range: 18-85 years); 95% were male.
  - 61% were workers 30-59 years of age with the highest number of fatalities among workers 50-59 years of age (Figure 1).
  - The mortality rate for black workers was nearly two times the rate for white workers or Native American workers (7.3, 4.2, 4.1 per 100,000 workers, respectively).

FIGURE 1: WORK-RELATED TRAFFIC CRASH FATALITIES BY AGE GROUP AND GENDER, OKLAHOMA, 2007-2008



- Victims included drivers (78%), passengers (12%), pedestrians (7%), and train conductors (3%).
  - Three highway maintenance pedestrians were killed while working at a work zone area.
- Six percent of workers were impaired by alcohol at the time of the crash.
- The most common contributing factors included unsafe or excessive speed for traffic or road conditions (35%), driver inattention/sleepiness (18%), driving left of center of roadway (13%), and failure to stop (13%).
- A slightly higher proportion of other type vehicle crashes occurred during unfavorable weather conditions and daytime hours than crashes in large trucks/tractor-trailers.
- Most crashes occurred Monday through Friday, during the day, and on high speed roadways.

- Nearly three-fourths (71%) of fatal injuries involved large trucks/tractor-trailer trucks\*
  - 50 persons killed in large trucks/tractor-trailer crashes were truck drivers by occupation.
  - 43 persons were driving at the time of the crash.
  - 39 crashes involved commercial motor vehicles (CMV):
    - 67% had five axles;
    - 33% were out-of-state residents;
    - 59% were interstate CMV use.
- The majority of work-related traffic crash fatalities occurred among non-belted drivers, in rural areas, and on state or U.S. highways (Table 1).

TABLE 1: WORK-RELATED TRAFFIC CRASH FATALITIES BY SELECTED CHARACTERISTICS AND VEHICLE TYPE, OKLAHOMA 2007-2008

Persons and Environmental Factors (characteristics)	Large Trucks/Tractor-Trailer* Trucks (55 workers)	Other Vehicles** (22 workers)
Occupancy Status:		
Driver	43 (78%)	17 (77%)
Passenger/other	12 (22%)	5 (23%)
Seat Belt Use (occupants):		
Belted	12 (22%)	6 (27%)
Non-belted	18 (33%)	11 (50%)
Rural Area	49 (89%)	19 (86%)
Urban Area	6 (11%)	3 (14%)
Type of Roadway:		
State or US Highway	24 (44%)	13 (59%)
Interstate Highway	14 (26%)	4 (18%)
Interstate Turnpike	7 (13%)	1 (5%)
County Road	9 (16%)	2 (9%)
Posted Speed Limit:		
40-55 mph	10 (18%)	4 (18%)
60-75 mph	31 (56%)	13 (59%)
Weather Condition:		
Clear	29 (53%)	9 (41%)
Cloudy/Foggy/Rain/Sleet	24 (44%)	13 (59%)
Time of Crash:		
Day	38 (69%)	17 (77%)
Night	17 (31%)	5 (23%)
Monday-Friday	45 (82%)	15 (68%)
Saturday-Sunday	10 (18%)	7 (32%)

\* Large trucks/tractor-trailer trucks included single unit truck with 2 or more axles, truck/trailer, truck-tractor or other heavy trucks with more than 10,000 lbs.

\*\* Other type vehicles included passenger cars, pickup trucks, farm machinery on public roadway, a sport utility vehicle and a passenger van.

- One-third of occupants of large truck/tractor-trailer trucks were not wearing a seat belt and half of the occupants of other type vehicles were not belted at the time of the crash.
- The most common occupations of workers in other type vehicles included sales/services, oil field, construction workers; and government employees.
- The most common industries were transportation/delivery (48%), oil and gas (16%), and construction (9%).

## PREVENTION

- Prevention of work-related traffic crash fatalities should target males and unrestrained vehicle occupants, and focus on safe operation of heavy/large trucks, especially on rural and high speed roadways.
- Seat belts should be used while driving on or off the job.
- Drivers should travel at speeds safe for the road conditions.
- Drivers should not operate a motor vehicle while the driver's ability or alertness is impaired through fatigue, illness, or any other cause.

## CONCLUSION

- Males 30-59, transportation/delivery industry workers, and large truck/tractor-trailer truck drivers had the highest occurrence of work-related traffic crash fatalities.
- The percent of seat belt use among vehicle occupants who died in work-related traffic crashes was much lower than the statewide seat belt usage rates (83.1% in 2007 and 84.3% in 2008).
- One-third of fatal crashes involving large trucks/tractor-trailer trucks were out-of-state carriers.
- Limitations of study:
  - Only two years of data available.
  - Unable to detect statistical differences due to the small number of cases.

