



## 2006 Traffic Crash Data Linkage Results Among Oklahoma Teens 16-19 Years of Age

Motor vehicle travel is the primary means of transportation in the United States (U.S.), and traffic crashes are the leading cause of injury and death for U.S. teens, accounting for more than one in three deaths. In 2006, a total of 20,275 teens 16-19 years of age were involved in a motor vehicle crash in Oklahoma. The Oklahoma Traffic Data Linkage Project is a joint effort between the Oklahoma State Department of Health and the Oklahoma Highway Safety Office to obtain and analyze comprehensive information on traffic crashes by linking data from vital statistics, traffic crash records, and the hospital discharge database. For this report, data were analyzed for teens 16-19 years of age who were in crashes in 2006 and died prior to hospitalization, and for teens who were hospitalized following the crash.

### Teen Deaths Prior to Hospitalization

A total of 68 teens 16-19 years old died at a traffic crash scene or in a hospital emergency room. Of these, 36 were drivers, 26 were passengers and 6 had unknown occupant position. Almost two-thirds (65%) were male. Unsafe speed (44%) and failure to stop or yield (14%) were the most frequently noted causes of the crashes. Three drivers (8%) had impaired driving ability due to alcohol involvement. Seat belt status was known for 55 persons. Of these, 67% were not wearing a seat belt.

### Teens Hospitalized Following a Crash

There were a total of 314 teens with linked traffic crash and hospital discharge information in 2006. Of these, 218 (69%) were drivers and 96 (31%) were passengers. Of the 96 passengers, 8 were riding in a vehicle with a teen driver at the time of the crash.

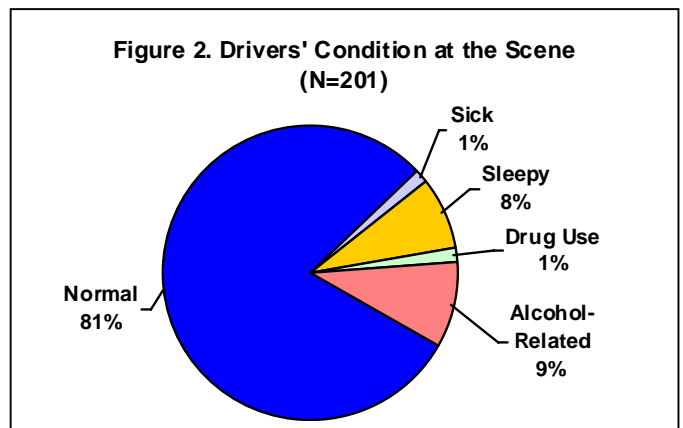
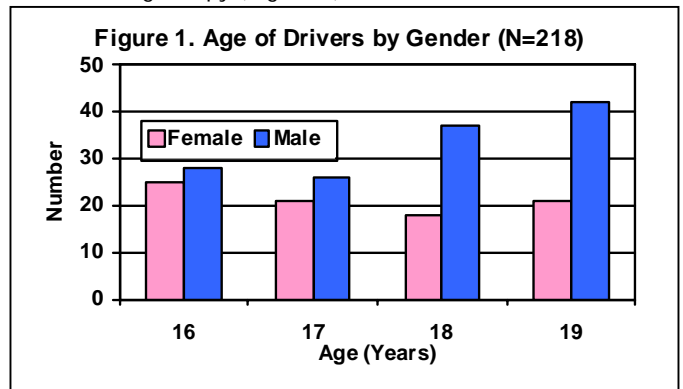
Injury Severity per Traffic Crash Report	Driver	Passenger	Total (%)
Not Injured	14	0	14 ( 5%)
Possibly Injured	38	14	52 (17%)
Non-incapacitating	66	28	94 (30%)
Incapacitating	94	50	144 ( 46%)
Fatal**	6	4	10 ( 3%)
<b>Total</b>	<b>218 (69%)</b>	<b>96 (31%)</b>	<b>314 (100%)</b>

\*Reported by law enforcement officer at the crash scene.  
 \*\*Persons who died within 30 days of the crash are coded as fatality on crash reports.

- Fourteen persons (all drivers) were initially coded as not injured at the crash scene; however, the data linkage showed that these persons were admitted at the hospital. The average hospital length of stay for these 14 drivers was 6.1 days (range: 1-25 days).
- Almost half (46%) of the 314 teens reportedly received incapacitating injuries as reported by the law enforcement officer at the crash and ten died (Table 1).
- Approximately two-thirds (209) of crashes involved passenger vehicles, 27% pick-up trucks, 5% motorcycles and 1% other types of vehicles.
- Persons in passenger vehicles (48%) were more likely to wear seat belts than persons in pickup trucks (14%).

### Teen Drivers Who were Hospitalized

- Of the 218 teen drivers, 61% were male and 39% were female. Of the male drivers, the number was highest at the age of 19 years (32%). The number was greatest at the age of 16 years (29%) among female drivers (Figure 1).
- Law enforcement officers collect information on observed condition of drivers at the crash scene. Of the 201 teen drivers with this information, 81% appeared normal, 9% were reportedly driving impaired by alcohol and 8% were driving while feeling sleepy (Figure 2).





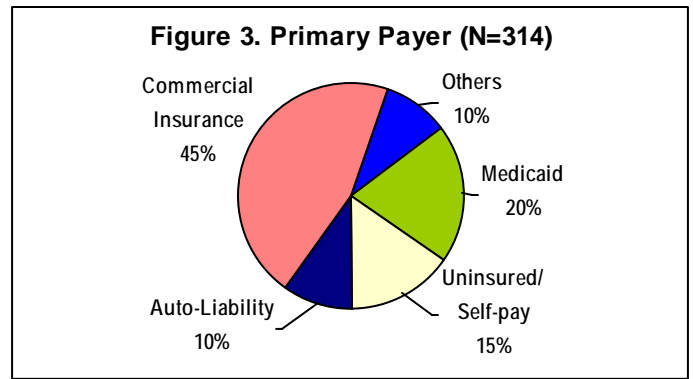
### Medical Information on Hospitalized Teens

- Overall, the average length of stay at the hospital was 4.7 days; stays ranged from 1 to 65 days (Table 2).
- Passengers had longer average hospital stays than drivers (5.7 versus 4.5 days).
- Overall, the average hospital charge per person was \$39,144, ranging from \$930 to \$725,224 (Table 3).
- Fatal cases had the highest average charge (\$89,334) and the average length of stay was 2.8 days (Tables 2-3).
- Helmet status was known for 14 of the 15 motorcyclists; 57% were not wearing a helmet.
- Just over half (53%) reported wearing a seat belt; 50% had activated airbags. Drivers were more likely to be using seat belts than passengers (75% versus 25%). Eighty percent of persons who died in a hospital were not wearing a seat belt.
- As shown on Table 3, persons using safety equipment had lower average hospital charges when compared to persons not using protective safety equipment.
- The average charge was \$47,106 for persons with no safety equipment. Persons not wearing a seat belt had an average charge of \$46,168, whereas it was \$33,848 for persons wearing a seatbelt.
- The average charge was higher among persons who did not have an activated airbag (\$41,289) than among persons with an activated airbag (\$38,004).
- Information on discharge status from the hospital was available for 312 persons; 84% were discharged home, 6% were transferred to an inpatient rehabilitation facility, 4% were discharged with home health care, 3% died, 2% were transferred to another hospital, and 1% had another discharge status.
- Nearly half (45%) of persons had commercial health insurance as their primary payer (Figure 3).
- Other primary payers were Medicaid (20%), uninsured and/or self-pay (15%), auto-liability (10%), and others (10%), which included Indian Health Service, military, Workers' Compensation and charity.

**Table 2. Hospital Length of Stay Among Hospitalized Teens 16-19 Years of Age**

Occupant Description	N	Average Stay	Min	Max
Driver	218	4.5	1	65
Passenger	96	5.7	1	50
Fatal Cases	10	2.8	1	9
Non-Fatal Cases	304	4.8	1	65
<b>TOTAL</b>	<b>314</b>	<b>4.7</b>	<b>1</b>	<b>65</b>

**Figure 3. Primary Payer (N=314)**



**Table 3. Hospital Charges Among Hospitalized Teens 16-19 Years of Age**

Occupant Description	N	Average charges	Total charges	Min charges	Max charges
Driver	218	\$39,009	\$8,504,001	\$930	\$725,224
Passenger	96	\$39,450	\$3,787,197	\$3,260	\$423,699
Belted	151	\$33,848	\$5,110,994	\$930	\$653,023
Non-belted	134	\$46,168	\$6,186,539	\$1,211	\$725,224
Airbag	143	\$38,004	\$5,434,545	\$2,195	\$653,023
No Airbag	142	\$41,289	\$5,862,988	\$930	\$725,224
No Safety Equipment	89	\$47,106	\$4,192,419	\$1,211	\$725,224
Fatal Cases	10	\$89,334	\$893,337	\$19,459	\$329,961
Non-Fatal Cases	304	\$37,493	\$11,397,861	\$930	\$725,224
<b>TOTAL</b>	<b>314</b>	<b>\$39,144</b>	<b>\$12,291,198</b>	<b>\$930</b>	<b>\$725,224</b>