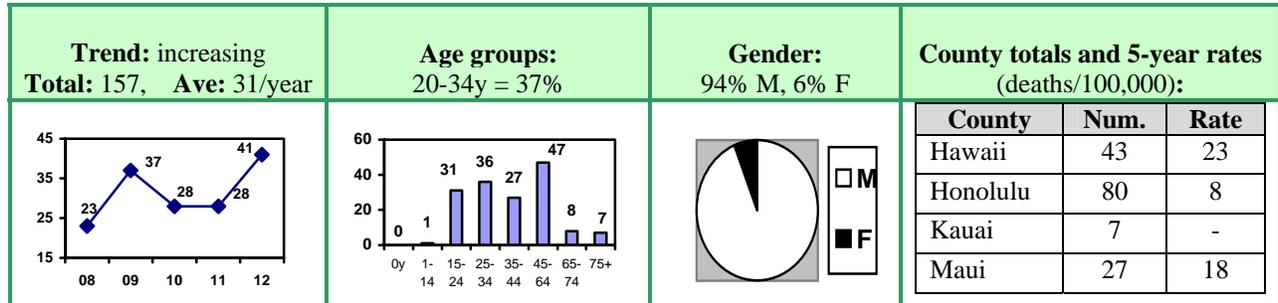


Motor vehicle crashes, motorcyclists

Fatal injuries

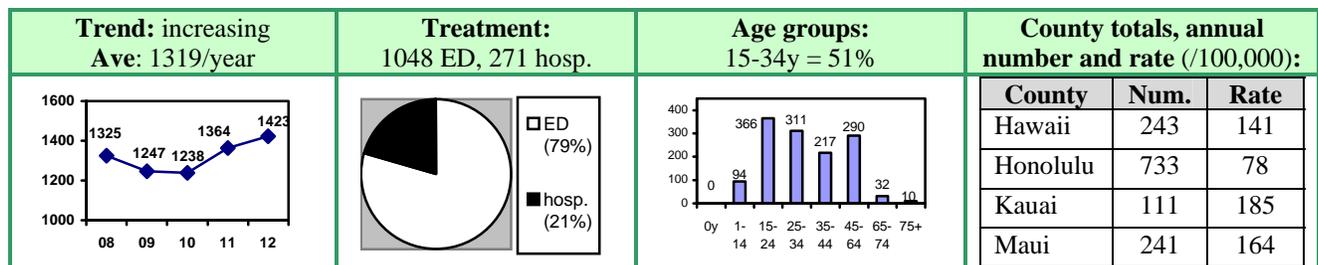
Deaths among motorcyclists were the 5th leading cause of fatal unintentional injuries in the state, accounting for 157 total deaths from 2008 to 2012. Nearly half (45%) of the victims were adult males 20 to 40 years of age. Most (81%) of the decedents were riding motorcycles; there were also 30 moped riders who were killed, including 22 over the 2010 to 2012 period. The 5-year fatality rates were significantly higher for residents of Hawaii and Maui counties compared to Honolulu County.



FARS data, 2007-2010: Almost half (46%) of the fatal crashes did not involve another vehicle, although that proportion was lower (26%) among the fatally injured moped riders. Only about one-fourth (27%) of all riders were wearing a helmet at the time of the crash, including only 7% of the moped riders. Nearly half (47%) of the decedents tested positive for alcohol, and 29% for illicit drugs. Alcohol use was most common among drivers who crashed during nighttime (66%) and among those in crashes without another motor vehicle (69%). About half (51%) of the fatally injured drivers did not have a valid motorcyclist license, and that proportion was significantly higher among those who had consumed alcohol (58%, vs. 44% among other drivers). More than one-half (58%) of the riders were noted to have been speeding at the time of the crash, a proportion that was higher among motorcyclists (62%) and those who crashed on Oahu (66%).

Nonfatal injuries

There was an increasing trend in the annual number of nonfatal injuries among motorcyclists over the 2010 to 2012 period. More than 1000 were treated in EDs each year and another 271 were hospitalized. Patient age was narrowly distributed, with 55% between 15 and 34 years of age. The peak age for rates of both ED visits and hospitalizations was among 20 to 24 year-olds. Most (83%) of the patients were males.



Although over half (55%) of the patients were residents of Honolulu County, residents there had significantly lower rates of nonfatal injuries than residents of any other county. Injury rates were approximately twice as high among residents of Neighbor Islands. Forty-five percent of the crashes did not involve a collision, but were due to loss of control by the rider. Three-fourths (76%) of the nonfatal injuries were coded as “traffic” related, or occurring on a public roadway, while 24% were in “non-traffic” environments, including off-road crashes. Nearly one-fifth (18%) of the patients who were injured in non-traffic crashes were 5 to 14 years of age. The average hospitalization was nearly 1 week in duration and resulted in nearly \$53,000 in medical charges. About two-thirds (65%) of the hospitalized patients and 22% of those treated in EDs had fractures.

EMS data and 2007 linked data (EMS, DOT, HHIC, FARS, death certificates)

About 55% of the EMS Patients were riding motorcycles (55%), and 40% were riding mopeds (status unknown for 5%). About two-thirds (65%) of all riders were wearing a helmet. The proportion not wearing helmets was significantly higher, nearly doubled, among the moped riders (68%), compared to motorcycle riders (38%). Patient condition differed by helmet usage, as helmeted riders were significantly more likely to be transported with minor or moderate injuries (23%, compared to 19% for unhelmeted riders), and significantly less likely to be transported in critical condition (1.9% vs. 3.7%). The mortality rate among helmeted riders (2.5%, or 31 of 1249) was also significantly less than that among unhelmeted riders (4.6%, or 86 of 1879). Probable alcohol use was noted for about 12% of the patients, and alcohol users were significantly less likely to have worn helmets (14%, vs 41% among those with no alcohol use).

Linked data from 2007 showed the odds of sustaining an injury that required hospitalization or resulted in death were 40% higher among unhelmeted rides compared to helmeted riders, and the former also had more than twice the odds (2.2) of a fatal injury. The protective effects of helmet use were magnified if only motorcycle riders were considered. Unhelmeted motorcycle riders had twice the odds of an injury that required hospitalization or resulted in death, more than 3 times the odds of a fatal injury, and 3 times the odds of a TBI.

Hawaii Trauma Registry (toxicology data)

About one-fourth (26%) of the injured resident motorcycle/moped riders in the HTR tested positive for alcohol, including 21% (178) with BAC levels of 0.08 or greater, and 14% (117) with BAC levels of 0.16% or greater. Moped riders were significantly more likely than motorcyclists to have been drinking (31% vs 24%, respectively). More than half (54%, or 464) of the riders tested positive for either alcohol or drugs, including most (78%) of the 285 moped riders. Alcohol usage was 4 times more common among those who crashed during night time (54%) compared to those who crashed between 6:30 a.m. and 7:29 p.m. (14%).