

## Report Highlights

### Motorcycle Injuries and Fatalities Since the 2003 Repeal of the Mandatory Helmet Law

House Resolution 349 directs the LB&FC to conduct a study of reported motorcycle crashes and associated injuries and fatalities following the 2003 passage of the Helmet Repeal Law. For the first two years following the repeal, the study was to determine (1) the number of reported motorcycle crashes, (2) the number of individuals wearing helmets in these crashes, and (3) the increase, if any, in injuries and fatalities specifically due to head trauma when individuals were not wearing helmets.

#### Study Findings (pp. S-1 to S-12):

- **1. Number of Motorcycle Crashes.** During 2004 and 2005, the first two full calendar years following the repeal of the Helmet Law, the total number of motorcycle crashes in Pennsylvania increased by nearly one-third while motorcycle registrations rose by nearly 20 percent. In 2004, the number of crashes involving motorcycles totaled 3,621. In 2005, this number increased to 4,039.
- **2. Motorcycle Helmet Usage.** The percentage of individuals involved in motorcycle crashes who were wearing helmets declined from about 73 percent in CY 2001 (2002 data not available) to about 54 percent in both calendar years 2004 and 2005.
- **3. Motorcyclist Injuries and Fatalities.** From existing data systems, it is not possible to link specific motorcycle crash events (and helmeted/non-helmeted status) with specific medical outcomes for involved motorcycle drivers and passengers. A multi-agency attempt to establish such linkages through the PA Crash Outcome Data Evaluation System (CODES) is currently underway. In the interim, the following trend data is available from PENNDOT and the PA Trauma Systems Foundation pertinent to the question of helmet usage and injuries and fatalities related to head trauma.
  - a. Data From the PENNDOT Crash Reporting System**
    - **Motorcyclist Fatalities:** Motorcyclist fatalities increased by only two, from 156 in 2003 to 158 during 2004, the first full year following repeal of the Helmet Law. Fatalities then increased by nearly 30 percent to 204 in CY 2005. However, when the number of registered motorcycles is taken into consideration, the average annual fatality rate after repeal of the Helmet Law (5.9 fatalities per 10,000 registered motorcycles in 2004 and 2005) was not substantially higher than the pre-repeal (2001 and 2002) average annual fatality rate of 5.4 fatalities per 10,000 registered motorcycles.
    - **Major Injuries:** In 2000 and 2001, prior to the Helmet Law repeal, motorcyclists had an average annual rate of 18.6 major injuries per 10,000 registered motorcycles. This compares to a rate of 18.9 major injuries per 10,000 registered motorcycles after the repeal (2004 and 2005).
  - b. Data From the Statewide Trauma Registry**
    - **Motorcycle Crash Patients Admitted to Trauma Centers:** During 2004, the first full year of the Helmet Law repeal, the number of motorcycle crash patients admitted to a trauma center with a head injury increased by 47.6 percent. The average annual trauma center admission rate for motorcyclists with a head injury was 15.0 per 10,000 registered motorcycles pre-repeal (2001 and 2002) compared to 19.9 admissions per 10,000 motorcycles post-repeal (2004 and 2005).
    - **Head Injury Severity.** The severity of head injuries suffered by motorcycle crash patients admitted to a trauma center are rated on a 1 (minor) to 6 (maximum) scale. In the two years prior to repeal (2001 and 2002), 269 motorcyclists sustained a category 3 (serious), 4 (severe), or 5 (critical) head injury. In the first two years following repeal of the Helmet Law, the number of motorcycle crash patients with serious, severe, and critical head injuries increased to 530, a 97 percent increase. This translates to 8.7 serious, severe, or critical head injuries per 10,000 registered motorcycles after repeal (in 2004 and 2005) compared to 5.6 serious, severe, or critical head injuries per 10,000 motorcycle registrations pre-repeal (2001 and 2002).

For a full copy of the report, please call 717-783-1600 or e-mail us at [info@lbfc.legis.state.pa.us](mailto:info@lbfc.legis.state.pa.us)