

# INJURY WATCH

Volume 1, Issue 1

September/October 2003

## FIRST EDITION

Welcome to the first edition of Injury Watch. This newsletter will be published bi-monthly by the National Study Center for Trauma and EMS and provided to legislators, researchers, and other persons with an interest in injury prevention. The facts and figures presented here may be reprinted or forwarded with acknowledgement. For other information, be sure to visit our web site at <http://nsc.umaryland.edu>.

## NSC AWARDED TWO GRANTS

The National Study Center for Trauma and Emergency Medical Systems (NSC) at the University of Maryland, Baltimore, was recently awarded two multi-year research projects totaling approximately \$2.75 million dollars to study injury in Maryland. Patricia C. Dischinger, PhD., an epidemiologist at the NSC, is principal investigator of both grant awards. The U.S. Army awarded \$1.46 million to the NSC over a three-year period to evaluate Maryland trauma patients diagnosed with mild traumatic brain injury. The study began on July 1 and will involve interviewing patients for up to 12 months post injury to identify factors that best predict their injury outcome. The second award was funded by the National Institute for Occupational Safety and Health (NIOSH) and is entitled "A Comprehensive Surveillance of Occupational Injury in Maryland." The award is for \$1.28 million for three years beginning July 10, 2003. This epidemiologic study will involve a comprehensive surveillance of all occupational injuries in Maryland requiring medical care (i.e., treatment in an emergency department or admission to a hospital) or resulting in death at the scene.

*Colin Mackenzie, MD  
Director*

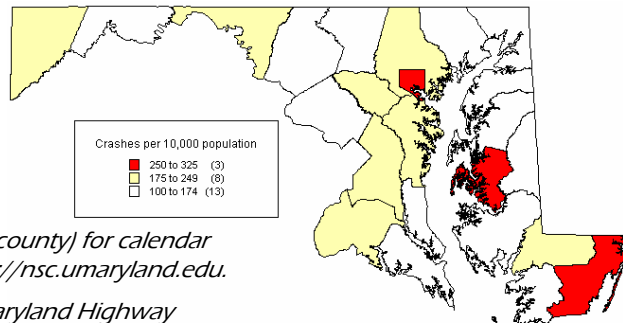
## 2002 TRAFFIC SAFETY FACTS

### Total Number of:

<b>Traffic Crashes</b>	<b>104,840</b>	
Persons Injured	59,517	
<b>Fatal Traffic Crashes</b>	<b>606</b>	
Persons Killed	661	100.0%
Drivers	360	54.5%
Occupants	142	21.5%
Motorcyclists	48	7.3%
Pedestrians	101	15.3%
Bicyclists/pedalcyclists	7	1.1%

### On an average day in Maryland:

287 traffic crashes occur.  
163 persons are injured in a traffic crash.  
1.8 persons are killed in a traffic crash.



*More Traffic Safety and Injury Facts (state and county) for calendar years 1999-2002 available on the web at <http://nsc.umaryland.edu>.*

*The fact books are supported in part by the Maryland Highway Safety Office.*

### **Board of Advisors**

*Elizabeth Baker, PhD  
NHTSA Region III*

*Robert Bass, MD  
Executive Director  
MIEMSS*

*Peter Beilenson, MD  
Baltimore City Health  
Department*

*William Bronrott  
Delegate, District 16*

*James P.G. Flynn, MD  
University Specialty Hos-  
pital*

*David Fowler, MD  
Chief Medical Examiner*

*Joseph Kaplan  
Judge, Circuit Court for  
Baltimore City*

## NATIONAL STUDY CENTER FOR TRAUMA AND EMS

701 West Pratt Street  
Box 001  
Baltimore, MD 21201

Phone: 410-328-5085  
Fax: 410-328-3699  
Email: tkerns@som.umaryland.edu  
Web: <http://nsc.umaryland.edu>



Injury Watch Editors:  
Joseph Kufera, Statistician  
Timothy Kerns, Database Engineer

"To prevent death and disability from injury and sudden illness through interdisciplinary research..."

If you would like to receive this newsletter on a regular basis, please provide your address using the contact information on the left.

## CRASH INJURY RESEARCH AND ENGINEERING NETWORK

The National Study Center is one of ten CIREN centers in the United States. The CIREN centers perform medical and engineering research on serious crash injuries that contribute to the efforts of NHTSA and the automotive industry to improve safety. Through the coordinated efforts of medical researchers, engineers, the automobile industry, and academia, the goal of CIREN research is to identify opportunities for improvement in the prevention and treatment of crash injuries.



*The Charles McC. Mathias, Jr., National Study Center for Trauma and Emergency Medical Systems (NSC) is an academic research organization dedicated to studying the causes, treatment, and outcomes of traumatic injury and sudden illness. The NSC is located on the campus of the University of Maryland, Baltimore. Since its creation in 1986, the NSC has earned an international reputation as a leader in trauma and emergency medicine research. The Center's strength resides in its teams of investigators and their expertise in study design, database linkages, interpretation of results, and application of findings. Results of NSC studies have been used to enhance patient care, to improve vehicular safety, to develop public education programs for the prevention of trauma, and to support state and federal legislation regarding injury prevention.*

## MOTORCYCLE CRASHES AND INJURIES

In calendar year 2000, there were 1,158 motorcycle operators and passengers (identified by their mechanism of injury) treated and released from an emergency department in Maryland. The total emergency department charges (excluding physician fees) for these patients was \$478,304 (mean \$413/median \$275).

Also, 598 motorcycle operators and passengers (identified by mechanism of injury, E-code) were admitted for treatment at a Maryland hospital. The total hospital charges (excluding physician fees and subsequent hospitalizations) for these patients was \$8,345,098 (mean \$13,955/median \$5988).

Further analysis of this group of admitted motorcycle operators show that, in addition to any other injuries received, 190 (32%) of them sustained a traumatic brain injury (TBI) as defined by the Centers for Disease Control (CDC). The total hospital charges for those with a CDC-defined TBI totaled \$3,068,721 (mean \$16,151, median \$5,833). The total hospital charges for those 408 motorcycle operators that were not diagnosed with a TBI was \$5,276,376 (mean \$12,392, median \$6,111).

## CRASH OUTCOME DATA EVALUATION SYSTEM (CODES)

Maryland's CODES was established in 1997 with funding from the National Highway Traffic Safety Administration (NHTSA) in an effort to improve highway safety through the use of linked motor vehicle crash data. Data from police, EMS, and hospitals are linked by NSC staff using probabilistic methodologies and software provided by NHTSA. Such linked data have been used for a variety of projects, abstracts, and papers, including a statewide study of injured motorcyclists, a study of older drivers, a geographic analysis of pedestrian injuries, a study of the patterns of injury in frontal collisions, a comparative analysis of costs among motor vehicle crashes, and an analysis of alcohol and drug use among trauma patients (see figure at right). In recent years, citations, licensing, and emergency department data have been added to the system.

