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Research Note

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Injuries Associated With Hazards Involving Motor Vehicle Power Windows

NHTSA's National Center for Statistics and Analysis (NCSA) recently completed a study of data from the Consumer Product Safety Commission's (CPSC) National Electronic Injury Surveillance System (NEISS) on cases involving injuries associated with motor vehicle power windows. NEISS data on persons treated in hospital emergency rooms for these injuries were studied to determine the action or activity involved in producing the injury, the type of injury sustained and its severity, the body part most often injured, and the age of the injured person.

CPSC's NEISS collects data on a nationally representative sample of consumer product-related injuries treated in hospital emergency rooms. NEISS, a three (3)-level system consisting of surveillance of emergency room injuries; follow-back telephone interviews with injured persons or witnesses; and comprehensive investigations with injured persons and/or witnesses, obtains data from a sample of 91 of the 6,127 hospitals nationwide with at least six beds that provide emergency care on a continuing 24-hour basis. The data on injuries associated with motor vehicle power windows were obtained through an agreement between NHTSA and CPSC to collect data on injuries associated with specific motor vehicle hazards.

During the period October 1, 1993 through September 30, 1994, data on ten (10) cases of injuries associated with motor vehicle power windows were obtained from CPSC's NEISS. Based upon these 10 cases, an estimated 499 persons were treated in hospital emergency rooms for injuries associated with motor vehicle power windows nationwide during the twelve month study period. Ninety-three percent (465/499) of the injured persons were injured in connection with passenger car power windows. Ninety-one percent (456/499) of those injured were treated and released from the emergency room without hospitalization. Tables 1 through 5 provide additional details on the persons injured during the period October 1, 1993 - September 30, 1994 by the action which produced the injury, the part of the body most severely injured, the injury diagnosis, the injury severity, and the age of the injured person, respectively. (The percentages may not add to 100% in every table due to rounding.)

As shown in Table 1, 88% of the estimated 499 persons injured were injured as a result of [unintentionally] closing the power window on a finger, wrist, or hand (either one's own or another person's). Another 4% were injured as a result of attempting to work on or repair the window and/or was cut by broken glass. Just under 9% attributed the cause of the injury to a "faulty" power window. Table 2 presents data on the diagnosis of the injury sustained by the estimated 499 persons injured. A large proportion were diagnosed as having a fracture (38%) or had a body part considered as crushed (30%).

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Table 1
Estimated Number of Persons Injured by M/V Power Windows by Injury Producing Action
October 1993-September 1994

Injury Producing Action	Estimated No. Of Persons Injured	% Total
Closing Window on a Hand, Wrist, or Finger	437	88%
Faulty Power Window	43	9%
Working on Power Window and/or Cut by Broken Glass	19	4%
Total	499	100%

Table 2
Estimated Number of Persons Injured by M/V Power Windows by Injury Diagnosis
October 1993-September 1994

Diagnosis	Estimated No. Of Persons Injured	% Total
Fracture	192	38%
Crushing	150	30%
Contusion or Abrasion	77	15%
Dislocation	43	9%
Laceration	19	4%
Strain or Sprain	18	4%
Total	499	100%

For the majority of the 499 persons estimated to have been injured by power windows, the body part most severely injured was a finger (77%). In fact, all of the injuries sustained were confined to a portion of an upper extremity (finger, wrist, or hand). These data are presented in Table 3. As seen in Table 4, more than half (53%) of the injuries sustained were considered "minor." The majority (64%) of the persons injured were children under the age of fifteen, with half of these being less than six years of age. Table 5 presents data on the age of the injured person. While none of these 10 CPSC cases included data on fatal injuries associated with motor vehicle power windows, NHTSA is aware of reported cases from other sources involving fatalities, particularly to children.

Table 3
Estimated Number of Persons Injured by M/V Power Windows by Injured Body Part
October 1993-September 1994

Body Part Injured	Estimated No. Of Persons Injured	%Total
Finger	384	77%
Wrist	61	12%
Hand	54	11%
Total	499	100%

Table 4
Estimated Number of Persons Injured by M/V Power Windows by Injury Severity
October 1993-September 1994

Severity of Injury	Estimated No. Of Persons Injured	%Total
Minor	264	53%
Moderate	235	47%
Total	499	100%

Table 5
Estimated Number of Persons Injured by M/V Power Windows by Age
October 1993-September 1994

Age of Person	Estimated No. Of Persons Injured	% Total
0 - 5 Years	158	32%
6 - 14 Years	158	32%
15 - 29 Years	68	14%
30 - 44 Years	38	8%
45 - 59 Years	43	9%
Over 60 Years	34	7%
Total	499	100%

For additional copies of this research note, please call (202) 366-4198 or toll free 1-800-934-8517. For questions, contact Henri Richardson at (202) 366-5354 or Delmas Johnson at (202) 366-5382. This research note and other general information on highway traffic safety may be accessed by Internet users at http://www.nhtsa.dot.gov/people/ncsa.

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