Promoting Change for Improved Road Safety

Motor and Equipment Manufacturers Association

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Administrator
National Highway Traffic Safety Administration
Vehicle Miles Traveled, 1966 – 2003  (in Billions)

Source: FHWA
Persons Killed and Rate Per 100M VMT

Source: 2002 FARS
<table>
<thead>
<tr>
<th>RANK</th>
<th>Cause and Number of Deaths</th>
<th>Years of Life Lost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Perinatal Period 13,734</td>
<td>Malignant Neoplasms 23% (0,614,131)</td>
</tr>
<tr>
<td></td>
<td>Congenital Anomalies 5,513</td>
<td>Malignant Neoplasms 22% (8,110,571)</td>
</tr>
<tr>
<td>2</td>
<td>Heart Disease 479</td>
<td>Stroke 163,538</td>
</tr>
<tr>
<td></td>
<td>Congenital Anomalies 332</td>
<td>Malignant Neoplasms 5% (1,700,952)</td>
</tr>
<tr>
<td>3</td>
<td>Heart Disease 200</td>
<td>Chronic Liver Disease 53,707</td>
</tr>
<tr>
<td></td>
<td>Congenital Anomalies 312</td>
<td>Influenza/Pneumonia 62,034</td>
</tr>
<tr>
<td>4</td>
<td>Heart Disease 133</td>
<td>Suicide 3% (1,079,822)</td>
</tr>
<tr>
<td></td>
<td>Congenital Anomalies 199</td>
<td>Malignant Neoplasms 3% (1,070,154)</td>
</tr>
<tr>
<td>5</td>
<td>Septicemia 96</td>
<td>Septicemia 3% (624,263)</td>
</tr>
<tr>
<td></td>
<td>Nephritis/Nephrosis 82</td>
<td>Nephritis/Nephrosis 3% (623,998)</td>
</tr>
<tr>
<td>6</td>
<td>Septicemia 82</td>
<td>Malignant Neoplasms 3% (36,866,317)</td>
</tr>
<tr>
<td></td>
<td>Nephritis/Nephrosis 78</td>
<td>Malignant Neoplasms 3% (36,866,317)</td>
</tr>
</tbody>
</table>

ALL | Cause and Number of Deaths | Years of Life Lost |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>27,568</td>
<td>All Causes 100% (36,866,317)</td>
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</tr>
</tbody>
</table>
Economic Cost of Crashes

- $230 billion total
  - $32 billion medical cost
  - $51 billion for impaired driving
  - $20 billion failure to use belts
Employers Cost from Crashes

- $60 billion annual expense, including
  - $16 billion in health benefit costs
  - $9 billion in life & disability insurance, sick leave
  - $8 billion in medical care for injuries

Source: *Economic Burden of Traffic Crashes on Employers, 12/03*
Predicted Lives Saved by Countermeasure

- Impaired Driving: 30%
- Safety Belts at 90% Use: 34%
- All Other Combined: 36%
2002 Occupant Fatalities: 32,598

Alcohol-Related Fatalities (13,102)
- Belted: 28%
- NOT Belted: 72%

Other Fatalities (19,496)
- Belted: 50%
- NOT Belted: 50%
Vehicles and Fatalities by Collision Type - 2002

Passenger Vehicles in Crashes
Approx. 10.6 million vehicles involved

Passenger Vehicle Occupant Fatalities
32,335 total occupants killed

- Rollover: 33%
- Front: 29%
- Side: 23%
- Rear: 2%
- Other: 1%

- Rollover: 33%
- Front: 39%
- Side: 23%
- Rear: 4%
- Other: 2%
Restrained Occupants Are Rarely Ejected In Fatal Rollovers

- 65% of occupants not restrained are ejected.
- 35% of occupants restrained are ejected.
- 92% of occupants restrained are not ejected.

Not Restrained: 65%
Not Ejected

Restrained: 8%
Not Ejected: 92%
### Driver Fatality Ratios in Frontal Crashes

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Van</td>
<td>1:8.5</td>
</tr>
<tr>
<td>Large Pickup</td>
<td>1:7.9</td>
</tr>
<tr>
<td>Sport Utility Vehicle (All)</td>
<td>1:4.5</td>
</tr>
<tr>
<td>Minivan</td>
<td>1:3.6</td>
</tr>
<tr>
<td>Compact Pickup</td>
<td>1:2.1</td>
</tr>
</tbody>
</table>

Source: FARS 1995-2001
Driver Fatality Ratios in Side Crashes

- Large Pickup: 1:39.1
- Sport Utility Vehicle (All): 1:22.1
- Passenger Car: 1:8.2

Source: FARS 1995-2001
Highway Safety Priorities

- Increase safety belt use
- Reduce impaired driving
- Improve data
- Reduce rollovers
- Improve vehicle compatibility
Lives Saved by Rulemakings

- Child Restraints: 36 – 50 lives
- Advanced Air Bags: 117 – 215 lives
- TPMS: 124 lives
- Tire Upgrade: 1 – 4 lives
- Fuel Tank Integrity: 8 – 21 lives

Total: 286 – 414 lives/year

Primary belt laws: 1400 lives
Alcohol-Related Fatalities
1982 – 2003

Source: FARS
<table>
<thead>
<tr>
<th>Human</th>
<th>Vehicle</th>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Event</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>![Image]</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Event</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>![Image]</td>
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</tr>
<tr>
<td><strong>Post-Event</strong></td>
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<td>![Image]</td>
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Crash Causation Factors

- Driver Related Factors: 90%
- Vehicle Defects: 3%
- Road Surface: 8%
Evolution of Vehicle Safety

The Past
Crash Worthiness

The Future
Crash Avoidance
Delivery of Auto Safety

Traditional Approach
- Define problem
- Develop safety countermeasures
- Evaluate benefits
- Regulation

New Approach
- Identify technologies
- Collaborative research
- Evaluate benefits
- Consumer information
www.safercar.gov
Reduce Rollovers
Fishhook Maneuver

Zone where tip-up most likely to occur

Overcorrection

Initial rapid steering input

Test Complete

~540 DEGREES

~270 DEGREES
2000 Toyota 4Runner 4x4

Maneuver: Fishhook

Entrance Speed: 40 mph

ESC: No
2003 Toyota 4Runner 4x4

Maneuver: Fishhook

Entrance Speed: 45 mph

ESC: Yes
NHTSA Statutory Authority

- Secretary to establish Federal Motor Vehicle Safety Standards
- Standards must be:
  - Practicable
  - Objective
- Public protected against harm from:
  - Vehicle design
  - Vehicle construction
  - Vehicle performance
H.R. 4167

To authorize appropriations for the motor vehicle safety and information and cost savings programs of the National Highway Traffic Safety Administration for fiscal years 2005 through 2007, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

APRIL 2, 2004

Mr. STEARNS (by request) introduced the following bill, which was referred to the Committee on Energy and Commerce

A BILL

To authorize appropriations for the motor vehicle safety and information and cost savings programs of the National Highway Traffic Safety Administration for fiscal years 2005 through 2007, and for other purposes.

1 Be it enacted by the Senate and House of Representa-
2 tives of the United States of America in Congress assembled,
3 TITLE I—MOTOR VEHICLE
4 SAFETY
5 SEC. 101. AUTHORIZATION OF APPROPRIATIONS.
6 Section 30104 of title 49, United States Code, is
7 amended to read as follows:
What You Can Do

As corporate leaders
- Help deliver safety technology innovations
- Promote primary belt laws
- Ensure workplace safety via corporate safety belt use policies
- Support vigorous traffic enforcement