



HARBORVIEW
INJURY PREVENTION
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SENATE JUDICIARY

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Seat Belt Use and Health Care Costs in Montana

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- Each year in Montana, an estimated **887 unbelted** individuals are hospitalized for care. An estimated **819** admissions might have been prevented if a seat belt had been used.
- Caring for these unbelted Montana patients costs over **\$36.7 million each year in direct inpatient health care costs**, which could have been prevented through seat belt use. These costs result from three sources:
 - (1) More hospital admissions: **819 individuals** requiring hospital care for preventable injury.
 - (2) Higher costs per hospital stay: On average, an unbelted occupant had a longer hospital stay (**2.3 days longer**), required more intensive care (**2.7 days longer**) and accrued significantly higher hospital charges of **\$52,993** relative to the average belted occupant **\$36,420**.
 - (3) Costs for emergency care: **Unbelted drivers and passengers use an estimated \$9.9 million** in preventable emergency visits each year.
- Uninsured or Medicaid covered unbelted occupants **cost the state of Montana over \$14 million annually for their hospital care of their preventable injuries**.
- The excess health care costs for injured unbelted occupants mean that **each driver in Montana pays an extra \$51** to subsidize unbelted occupants.
- Among Montana crash occupants who required hospital admission following a motor vehicle crash, **58%** were not belted, and **42%** were belted.
- Unbelted occupants are significantly more likely to have their hospital costs paid from federal or state sources.

- Over one-third (**36%**) of unrestrained occupants have no insurance. Their hospital costs ultimately paid for by the state of Montana.

Table 1: Excess hospital costs and emergency care costs for unbelted motor vehicle occupants in Montana, 2006.

Costs for Unbelted Occupants	
Hospital costs	\$ 26,747,024
Emergency care costs	\$ 9,921,516
Total health care costs	\$ 36,668,540

* Hospital costs estimated for unbelted occupants requiring inpatient care in Montana. Hospital cost includes cost-to-charge reimbursement and provider fees.

Table 2: Seat Belt Use, hospital charges, average length of stay, and primary payer for hospitalized motor vehicle occupants admitted for care at Montana trauma centers* or transferred to a Level I Trauma Center, 2006.

	Not belted (n = 2663)	Belted (n = 1901)	Difference between unbelted and belted patients
Seat Belt Use (%)	58.4%	41.7%	
Average hospital charge (\$ 2005)	\$52,993	\$36,420	\$16,573
Average length of hospital stay (days)	8.0 days	5.7 days	2.3 days
Average length of intensive care unit stay (days)	6.2 days	3.5 days	2.7 days
Insurance Status			
Privately insured	40.4%	55.5%	
Medicare	16.1%	11.8%	
Medicaid	7.3%	7.0%	
Self-Pay or uninsured	36.1%	25.7%	

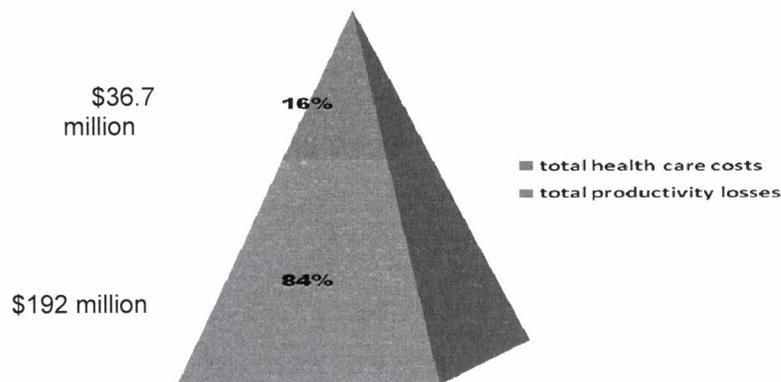
* Data from Montana level II trauma centers from 2006. Annualized data from Level I trauma center 2005-march 2008. Total admission numbers estimated based on MT trauma center data and police reported injury.

- **Unrestrained** occupants are **23 times more likely to die** following a crash (3.3% vs. 0.14%).
- From 2004 through 2006 there were **613 deaths** among motor vehicle occupants, of whom **432 (71%) were unrestrained**.

	Not belted	Belted	Unknown Belt Use	Total Montana Occupant Fatalities
2004	135	48	8	191
2005	148	50	5	203
2006	149	64	6	219
TOTAL	432 (71%)	162 (26%)	19 (3%)	613

Source: Fatal Accident Reporting System, 2004-2006.

Figure 1: Lifetime costs of unbelted motor vehicle crash injuries in Montana



*Total health care costs include costs of – hospitalized patients, nonhospitalized occupants, rehabilitation and skilled nursing facility. Hence the total health care costs represented in the diagram below is a gross underestimate of the total health care costs we included only the cost of ED visits and the hospitalized patients.

- An increase from 80% to 90% seat belt use will save Montanans an estimated \$18.7 million in health care costs. Montana state government is predicted to save an estimated \$7.2 million in health care costs alone.

	Current seat belt usage rate	Projected rate 1	Projected rate 2	Projected rate 3	100% belt use
	80%	85%	90%	95%	100%
Total costs saved		\$ 9,706,378	\$ 18,693,766	\$ 27,681,153	\$36,668,540
Costs saved by state budget		\$ 3,717,518	\$ 7,159,665	\$ 10,601,811	\$14,043,958