



National Transportation Safety Board

Mitigating Head Injury

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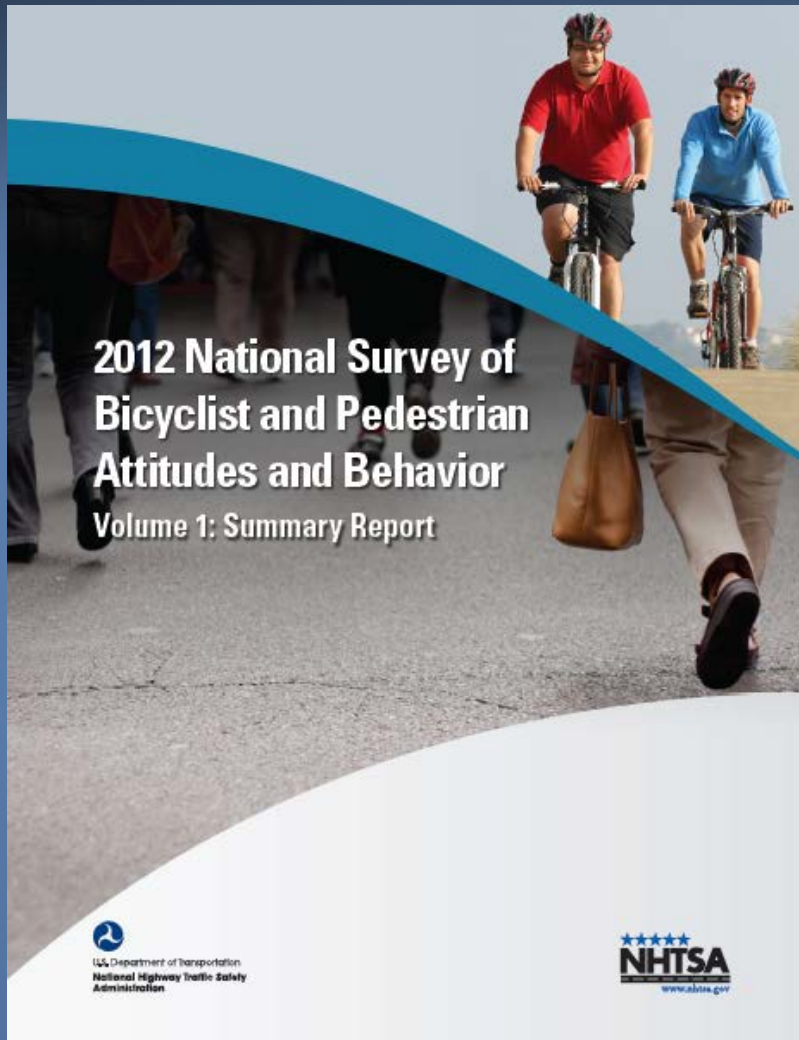
Prevalence and Lethality of Head Injury

- National Electronic Injury Surveillance System (NEISS)
1984–1988:
 - 62% of bicycle-related fatalities were related to head injuries
 - 32% of bicycle-related emergency department visits were related to head injuries
- NEISS 2014–2017:
 - 80,000 sustained head injuries in crashes with motor vehicles
 - 541,000 bicyclist head injuries overall

Effectiveness of Bicycle Helmets

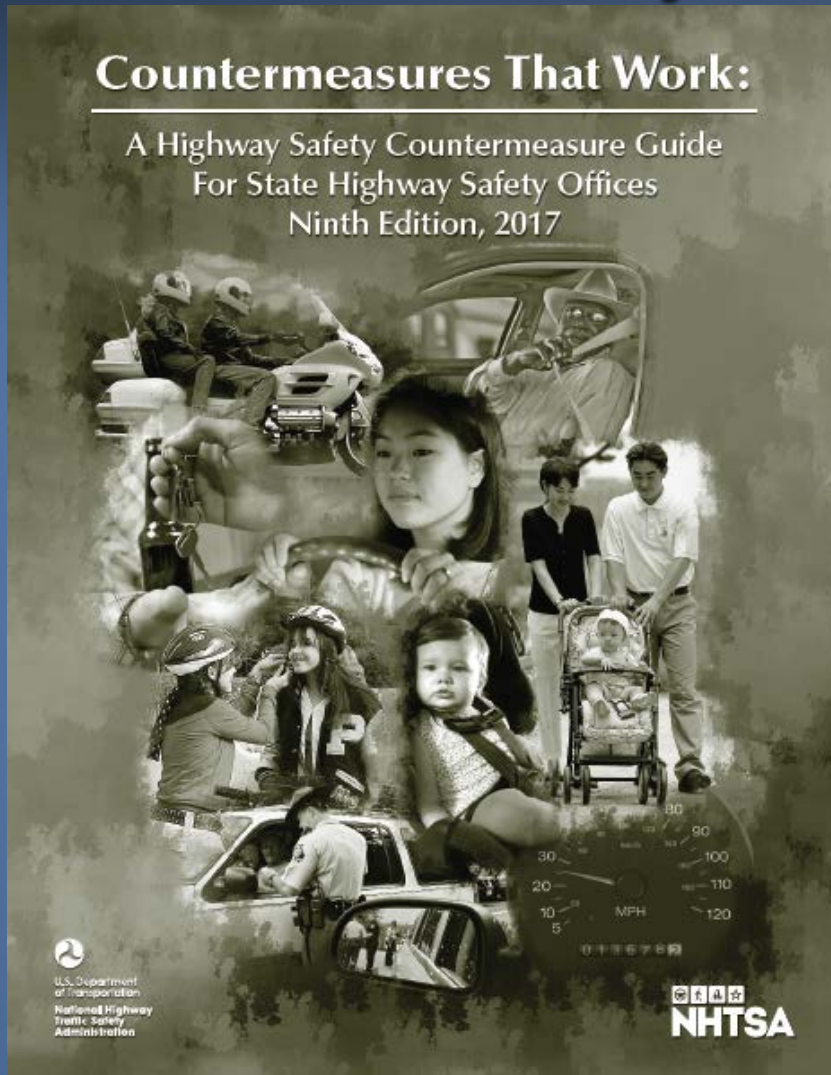
- Meta-analysis showed that wearing a helmet reduces the likelihood of—
 - All head injuries by 48%
 - Serious head injuries by 60%

Helmet Use



- 46% reported “never wore a helmet”
- Among bicyclists with known helmet use status (2010–2017):
 - Fatally injured: 79% were not wearing helmets
 - Involved in motor vehicle crashes: 63% were not wearing helmets
 - Particularly low usage among young bicyclists

Mandatory Helmet Requirements



- Bicycle helmet laws for children and adults were the most and second most effective behavioral safety countermeasures by NHTSA
- Research showed that helmet laws are effective in increasing helmet use (10% to as high as 84%)

Comprehensive Strategy to Increase Helmet Use for All Bicyclists

- Stakeholders confirm advocacy works to increase helmet use by education, outreach, and helmet distribution efforts
- No state level all-ages bicycle helmet requirement
- Washington data analysis for 2017 showed that crash-involved bicyclists were twice as likely to be wearing helmets in counties and cities with all-ages helmet requirements

Comprehensive Strategy to Increase Helmet Use for All Bicyclists

- NHTSA's current emphasis on education and awareness campaigns is inconsistent with its own identification of helmet laws as highly effective countermeasures
- Comprehensive strategy includes helmet legislation and complementary nonlegislative interventions
- Coalition of stakeholders to develop strategy to increase all-ages helmet use

Need for a Comprehensive Approach to Bicycling Safety

- Demands a commitment to safety from all stakeholders, including bicyclists
- Improves roadway infrastructure for bicyclists
- Enhances bicycle and bicyclist conspicuity
- Mitigates bicyclist head injuries
- Improves collection of bicycling activity, crash, and injury data
- Continuously monitors emerging safety issues



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