

National Transportation Safety Board

Bicyclist Safety on US Roadways: Crash Risks and Countermeasures

Eric Emery, PhD

Why the NTSB Did This Study

- Growing use of bicycles as a means of transportation
- Bicyclists are vulnerable road users
- 806 bicyclists died in crashes with motor vehicles in 2017
- Update our understanding of bicyclist safety in the United States



Trends of Bicyclist Fatality Rates (1980 through 2016)





Research Goals

- Describe injury trends
- Examine scope and nature of crash and injury risk factors
- Identify proven yet underused countermeasures
- Assess obstacles interfering with their use
- Explore emerging issues



Methods

- Review of scientific literature and available countermeasures
- Activity, crash, and injury data analysis
- Stakeholder interviews
 - Traffic engineers and planners
 - Law enforcement
 - Bicycle safety advocates
 - Researchers and educators
 - Pedestrian-bicycle advisory committee members



Safety Issue Areas

 Improving roadway infrastructure for bicyclists

- Enhancing bicycle and bicyclist conspicuity
- Mitigating bicyclist head injury



NTSB Staff

- Dr. Ivan Cheung
- Dr. Jana Price
- Dr. Kathleen Curry
- Dr. Eric Emery

Dr. Julie Kang Julie Perrot





| National Transportation Safety Board