

## **A naturalistic study of child and adult bicycling behaviors and risk exposure**

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### **ABSTRACT**

Half a million bicyclists visit emergency departments each year in the United States as a result of bicycling injuries, but little is known about contributors to those injuries. The purpose of this study was to naturalistically examine bicyclist risk exposure, route choice, use of bicycle-specific infrastructure, rider errors, and other rider behaviors contributing to risk among adults and children. We enrolled 10 adults (5 male, 5 female) and 10 children (5 male, 5 female) aged 10 to 14 years old between August and October of 2013. We equipped each participant with a Portable Video and Data System for Assessing Rider Locomotion (Pedal PORTAL), which included a helmet-mounted, GPS-enabled, forward-facing camera. Eligible participants lived in Johnson County, Iowa, and rode their bicycles at least four times per week. Participants completed baseline demographic questionnaires, recorded all their bicycle trips for seven consecutive days, and completed trip diaries, which included trip purpose and descriptions of any near misses or crashes. Characteristics of 283 bicycling trips (57 hours, 670 miles), including rider error, crash, and near miss rates will be presented. Data collection and data processing protocols will also be described [1].

**Keywords:** naturalistic cycling study, cycling behavior, cycling safety, children, adults

### **REFERENCES**

- [1] Centers for Disease Control and Prevention. Injury Prevention & Control: Data & Statistics (WISQARS). Centers for Disease Control and Prevention; 2010 [May 28, 2014]. Available from: <http://www.cdc.gov/injury/wisqars/index.html>