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| Educational Level * | PhD Candidate |
| If Selected Other | |
| College * | College of Public Health |
| Department * | Epidemiology |
| Title of Research * | Matched case-control study of on-road bicycle facilities and bicycle crashes in Iowa, 2007-2010 |
| Other Authors * | Corinne Peek-Asa |
| Introduction & Purpose * | In 2009 there were over 51,000 traffic-related bicycle injuries and 630 deaths in the United States, demonstrating the need for improvement of prevention approaches. The objective of this study is to determine whether bicycle-specific roadway facilities (such as bicycle lanes or bicycle-specific signage) are protective against crashes and if there are differences in crash risks between facility types. |
| Experimental Design * | We conducted a case-site control-site study of 147 crash-sites, identified from the Iowa DOT database from 2007-2010, and 147 matched non-crash sites. Control sites were randomly selected from eligible intersections according to matching variables: neighborhood (census block group) and road classification (arterial, feeder, collector, etc.). Descriptive statistics and univariate conditional regression analyses, focusing on the impact of bicycle lanes, have been conducted. Specifically, we looked at variables "bike lane only" and "bike lane present". Further analyses will be included at time of presentation, examining the other facility types, confounders, effect modifiers, and multivariate models. |
| Results * | 4.76% of case-sites and 6.80% of controls had a bike lane present. Case intersections had slightly higher bicycle volume (3.52 vs 3.34 per 30min) and motor vehicle volume (248.77 vs 205.76 per 30min) than controls. For both bicycle lane present (OR: 0.40, 95% CI: 0.08-2.06) and the subset analysis of bike lane only (OR: 0.25, 95% CI: 0.03-2.24) results suggest bike lanes are protective, although not significant. |
| Conclusions * | Based on this preliminary analysis, data suggest bicycle lanes are protective, but there are likely many more factors contributing to crash risk that need to be examined. |

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