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EVALUATION OF A COMPREHENSIVE PEDESTRIAN SAFETY INITIATIVE

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10.1136/ip.2010.029215.644

This project implemented a comprehensive pedestrian safety program to reduce deaths and injuries among pedestrians in a large urban environment (Miami-Dade County, Florida). Highcrash locations were targeted for countermeasure implementation and analysis. Using pedestrian crash data (1996–2001), four zones within the county were identified as having abnormally high pedestrian crash experiences. Based on crash characteristics and pedestrian factors (age, ethnicity), 16 education, enforcement and engineering treatments were implemented to reduce pedestrian crashes in the four zones and countywide. A before-after study design was used with three control groups to evaluate the effects of the program on pedestrian crashes. A 3-year after period was used (2002-2004). Multivariate intervention Auto-Regressive Integrated Moving Average time series analysis was used, along with non-parametric U-tests, to test for statistically significant differences in pedestrian crash experiences. Results showed that at the peak of the program effects in 2003 and 2004, the pedestrian safety program reduced countywide pedestrian crash rates by anywhere from 8.5% to 13.3%, depending on which control group was used. This effect translates to approximately 180 fewer crashes annually in the county, or 360 pedestrian crashes reduced for 2003 and 2004 combined, based on the more conservative 8.5% crash reduction. Countywide, the greatest crash reductions were found among children and adults; however, the program measures showed no effects in reducing crashes among older pedestrians. A number of lessons learnt were identified for future program implementation.