

SYMPOSIUM 2. BEHAVIOR ANALYSIS IN TRANSPORTATION

How to Design Transportation Environments to Reduce Pedestrian Crashes

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ABSTRACT

Because unsafe driver behaviors are a major cause of crashes, ensuring safe human driving behavior is an important goal for improving any transportation system. Behavior Analysis is a practical approach to changing driving behaviors. Two reasons why drivers do not engage in safe driving behavior are the immediate consequences that reinforce unsafe behaviors and the poor control the roadway environment has over appropriate driving behavior. Behavioral programs can be designed to increase safe driving behaviors and to reduce unsafe driving behaviors. Pedestrian safety is an important safety target in the United States and in Italy. One behavior that is related to pedestrian safety is yielding right-of-way to pedestrians in crosswalks. This paper will examine a number of variables related to driver and pedestrian behavior and illustrate how to use behavior analysis to increase yielding right-of-way on a citywide basis. Although this paper focuses specifically on yielding right-of-way to pedestrians, the same principles can be used to increase seatbelt use, reduce speeding, or to change any other aspect of the driving culture. A similar approach applies to aviation safety, rail safety or any other transportation problem.

Keywords: Pedestrian Safety, Behavior Based Safety, Transportation and Traffic Safety

REFERENCES

- 1) Van Houten, R., Malenfant, L., Huitema, B. & Blomberg, R. (2013) The effects of High Visibility Enforcement on Driver Compliance to Pedestrian Right-of-Way Laws. *Transportation Research Record*, 2393, 41-49. (won the TRB pedestrian best paper award & the TRB Waller Award) (1998) How to Use Prompts. Austin, TX; Pro Ed.
- 2) Bennett, M. & Van Houten, R. (2014). A Comparison of Gateway In-Street Sign Treatment to other Driver Prompts to Increase Yielding to Pedestrians at Crosswalks *Journal of Applied Behavior Analysis*. 47, 1-13.