

# STC Research Project Description

**Project Title:** Evaluation of the Quasi-induced Exposure Method

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**Project Start Date:** 8/15/00

**End Date:** 8/14/01

**Other Milestones, Dates:** n/a

**Project Objective:** The objective of this project is to develop estimates of travel using a trip diary approach and compare these estimates to one of the more promising induced-exposure techniques, that which derives exposure from the innocent victim, the non-responsible driver in two-vehicle crashes.

**Project Abstract:** The main goal of this research effort is to evaluate the use of quasi-induced exposure as a viable alternative method in establishing crash rates and thus, developing crash rates for specific roadway users and types. The basic tool for data collection will be a trip diary that would allow for the development of exposure estimates for the various age groups of drivers. Approximately 250 participants will be solicited from rural and urban communities in Kentucky to capture the differences between driver populations in the respective areas. The participants will be contacted by phone and provided with a brief explanation of the survey and asked few short questions to determine their eligibility. For a period of ten days beginning at a predetermined date, the participant will be asked to log every trip he/she makes recording a variety of information. At the end of the recording period and at the agreed date, the interviewer will return to collect the trip diary, examine the diary to ensure its completeness and legibility, and answer any additional questions. A short questionnaire will then be administered to collect additional household socioeconomic descriptors. The beginning dates of the trip diaries will be staggered over a three-month period, with the participants from each community being randomly divided into each period. The collected data will be analyzed to develop exposure metrics based on these data. At the same time, quasi-induced exposure estimates will be obtained from the Kentucky Crash Database to be used in the comparisons between the two methods. A final report will be written to present the findings of the research effort.

## **Task Description:**

Task 1. Data collection - 6 months

Task 2. Development of exposure metrics - 3 months

Task 3. Comparison of exposure metrics - 3 months

Task 4. Final report - 2 months

**Total Budget:** \$23,884

**Student Involvement (Thesis, Assistantships, Paid Employment):** One graduate student supported with a research assistantship.

Relationship to Other Projects: n/a

Technology Transfer Activities: n/a

**Potential Benefits of Project:** The main goal of this research effort is to develop estimates of travel based on individual drivers to be used as an indicator of crash exposure and then compare these estimates to equivalent estimates based on the quasi-induced exposure technique. The study objectives that contribute to this main goal include the following: 1) identification of the types of roadways that various drivers use; 2) determination of the times that various trips are completed; and 3) development of estimates of travel that could be used as exposure metrics.

**TRB Keywords:** exposure, crash rates, safety