

Empirical Bayes Analysis

Safety and Design Technical Services Team

PRODUCTS & SERVICES

The Safety and Design Technical Service Team (TST) of the FHWA Resource Center is available to assist with the performance of before and after analysis. One method of analysis that may be used is Empirical Bayes Analysis

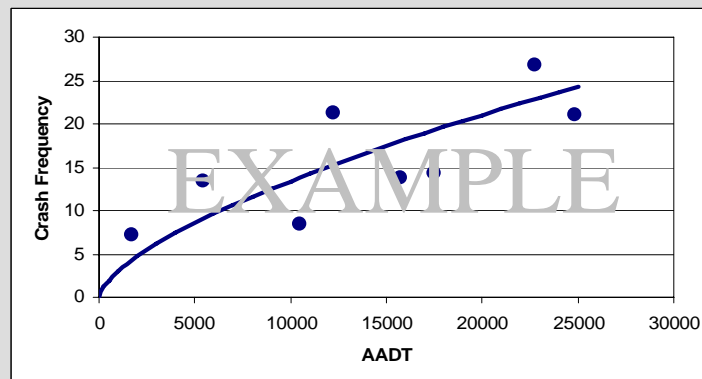
Named after its developer, Reverend Thomas Bayes, this probability theory arose in the 18th century.

Bayes Analysis is used by transportation professional to predict the possible effects of a variety of transportation projects and scenarios.

Transportation professionals seeking training or assistance with Bayes Analysis may contact the Resource Center Safety and Design TST.



*Rev. Thomas Bayes
(1702-1761)*



SAFETY AND DESIGN TECHNICAL SERVICES TEAM
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Workshops, Seminars and Courses

An Introduction to Before-After Highway Safety Data Studies and Empirical Bayesian Analysis

This workshop will involve a review of terminology and concepts related to before-after highway safety data analysis techniques. These types of analyses will be illustrated and applied via examples and work problems. This workshop will also include a hands-on application of Empirical Bayesian (EB) statistics procedures to overcome the effects of the regression to the mean phenomenon. Students should bring calculators and be prepared to work. By the end of this workshop, students will be capable of applying the EB approach to Highway Safety Data.

The workshop will present a variety of key principles in before-after highway safety analysis techniques. Upon completion of the workshop, participants will:

- Have a basic understanding of the four step before-after study process.
- Have applied this four step process to actual highway crash data.
- Obtain a basic understanding to the concept of regression to the mean (RTM) and what impact this phenomenon has on highway safety data analysis.
- Be introduced to the EB approach and apply this approach to address the RTM bias associated with crash data.

This course will present the following topics:

- 4-Step Before-After Study for Highway Safety Analysis.
- Crash Data Limitations.
- Regression to the Mean-What is it?
- EB Statistics-What is it?
- Why EB Statistics?
- The Application of EB to address RTM.

Who should attend?

The target audience for this workshop is FHWA/State DOT or Local DOT staff involved with highway safety principles. The workshop may be of interest to a wide range of professionals involved in Highway Safety.

For more information contact:

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