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The Art of Appropriate Evaluation

First released in 1999, *The Art of Appropriate Evaluation* has been one of NHTSA's most popular publications. NHTSA has prepared a revised and updated version of the guide. The document is intended for project managers who oversee evaluations of traffic safety programs at the State or local levels, but who do not have an evaluation background. The guide gives an overview of the steps involved in producing an evaluation appropriate to the project, whether conducted in-house or by an independent evaluator.

In approximately 60 pages, the guide explains the importance of evaluation without being overly simplistic or too detailed from an experimental or statistical point of view. The updated version describes how to develop an evaluation mentality to assure sound program evaluations. It includes a glossary of evaluation terms, new case studies of well-evaluated traffic safety programs, and a list of sources for program evaluation information in the appendices.

Traffic safety evaluation is an applied science that works within the constraints of state and local program implementation. Most local communities simply do not have the volume of traffic deaths and injuries to conduct countermeasure effectiveness evaluations measuring changes in deaths and injuries. There are many proven traffic safety countermeasures that improve traffic safety that do not need a comprehensive outcomes evaluation to show, once again, that they work.

Local communities still need to report on their successes to their funding sources within their resources. This can be accomplished by focusing their evaluation efforts on determining if the particular program they implemented achieved its specific objectives and whether behaviors (like seat belt use) changed. These are intermediate measures. The guide will help a program manager determine what level of evaluation they need by fostering an *evaluation mentality*.

Evaluation at the Start of a Program

Evaluation should be an integral part of program implementation and needs to be included at the start. Here are the seven primary steps involved in evaluation.

1. Identify the problem
2. Develop reasonable objectives
3. Develop a plan for measuring results
4. Gather baseline data
5. Implement your program
6. Gather data and analyze results
7. Report results

Problem identification is often overlooked in evaluations. It provides the information necessary for selecting an appropriate countermeasure and target audience for your program. You will be looking for information on the magnitude of the problem, the underlying causes, and the target groups most affected. Problem identification enables you to select the most effective countermeasure and provides some of the baseline data to determine if the program meets its objectives.

Developing reasonable objectives is the next step to define what you expect to accomplish. Many would argue that this is the most critical step in the evaluation process because it determines what success will be and how it will be measured. One approach to writing objectives is to use the SMART approach.

- Specific
- Measurable
- Action-oriented
- Reasonable
- Time-specific

Avoid using generalities like "improving traffic safety" or "increasing awareness" in favor of more specific statements like "increase seat belt use to 82%" or "increase citations 15% over the baseline." If you identify exactly what you want to happen, then you can document your success. For an objective to be measurable there must be something to quantify, like DWI arrests, over time. Action is something you can see and count.

Reasonable objectives flow from the first three steps. For example, a small community implemented a public information campaign on the value of traffic safety enforcement. The published objective of the campaign was to reduce traffic deaths community-wide. While this would be a desirable

outcome, it is not reasonable to expect that an advertising campaign alone would change behaviors and ultimately reduce traffic crashes. Public information and education alone are rarely effective in traffic safety unless linked to a highly visible enforcement campaign. And finally, deadlines make it clear to everyone when the program will end and when results can be expected.

What Will You Measure and When?

Once you have decided what you will measure to determine if your program achieved its objectives, you need to decide how to gather the information needed to make the measurement. These decisions revolve around deciding where and when to collect the data, how much data is needed, and what procedures will be followed. There are five basic ways that you can measure program effects.

- Observational surveys
- Knowledge, attitude, and awareness surveys
- Activity records
- Data records
- Media coverage

Table 1 lists some measures that can be used to evaluate traffic safety programs. They are listed in descending order of importance for measuring outcomes, but in ascending order of convenience and ease of data collection. As you read down the list, the data are easier to obtain but have less of a direct link to measuring reductions in crashes, injury, and death.

The guide illustrates these steps by walking through a community level evaluation of a selective traffic enforcement program (STEP) to increase seat belt use in Chemung County, NY. There are sample data collection forms as a new feature of the updated guide—one for observational data, and a second for a driver licensing office survey to collect information about knowledge and attitudes.

Because some complex evaluations may require a professional evaluator, there is a chapter summarizing the core knowledge, skills, and abilities that program managers should look for in the evaluators they hire. There are tips about sources to tap to locate the right evaluator for the job.

Program managers who want to learn more about evaluation concepts should consider attending NHTSA's two-and-

a-half-day course at the Transportation Safety Institute in Oklahoma City. *Data Analysis and Evaluation* is specifically for highway safety program managers who do not have formal training in research methods or statistics but have the responsibility of evaluating their programs.

Table 1. Important vs. Convenient Possible Evaluation Measures[1]

More Important / Less Convenient	**Primary Outcomes**	
	Changes in Crashes (the number or severity)	
	Reductions in fatalities and the severity of injuries	
	Secondary Outcomes (also called Proxy Measures)	**Examples**
	Changes in observed behavior	• Observing the use of seat belts and child safety seats • Observing the use of bicycle and motorcycle helmets • Measuring the speed of vehicles • Observing red-light running • Counting the number of pedestrians who jaywalk
	Changes in reported behavior (what people say they do when asked)	• How often do you wear your seat belt? • Have you ever driven after having too much to drink?
	Changes in attitude (what people believe)	• Support for legislative initiatives • Knowledge of a seat belt law • Teen attitudes about drinking and driving
	Changes in awareness (what messages people have heard)	• Awareness of high visibility enforcement campaigns • Perceived risk of getting a traffic ticket
Less Important / More Convenient	Changes in activities conducted (new program implemented)	• Citations issued by the police • Special police patrols and check points • Presentations • Training Programs • Media coverage • Legislation changes

[1] Adapted from Devon County Council. (No Date). *Speed Management Strategy for Devon*. Accessed at: http://www.devon.gov.uk/index/ transport/roads/road_safety/safer_speeds.htm.

How to Order

Download a copy of *The Art of Appropriate Evaluation* (56 pages plus appendices) from www.nhtsa.gov or write to the Office of Behavioral Safety Research, NHTSA, NTI-130, 1200 New Jersey Avenue SE., Washington, DC 20590, fax 202-366-7394. Ian Reagan was the Contracting Officer's Technical Representative for this project.