

Community Road Safety Grants Program - A Guide to Evaluation

1. What is Evaluation?

Evaluation is defined as the process by which we judge the worth or value of a project (Hawe Degeling & Hall 1990). This is done by

1. Observation and measurement
2. Comparison of what you observe with some criterion or standard of acceptability, or standard of what you would consider an indication of good performance.

Evaluations can either be done using quantitative methods or by qualitative methods. The quantitative method is where data is recorded as frequency of response and probability theory is used to generalise from the study to the population (Hawe Degeling & Hall 1990). For example you may conduct a survey before to find out the number or percentage of people who speed all of the time.

Qualitative methods are not concerned with numbers or percentages but records data, which describes the range of response and the variation between two responses (Hawe Degeling & Hall 1990). It is all about looking for the pattern/s in the data. For example you may conduct a focus group to research attitudes towards speeding in your target group, to help you better understand why people stopped speeding after your intervention. From this focus group you would gather all of the participants responses to your questions and look for patterns and differences to help you explain why people made the behaviour change.

There are four types of evaluation and these are:

1. Formative Evaluation – Evaluation for the purpose of improving the program as it is being implemented (Hawe Degeling & Hall 1990).
2. Process Evaluation – It is the first part of program evaluation. It measures the activity of a program and whom it is reaching and determines the extent to which the program is being implemented as planned. Key measures for this type of evaluation include; program reach, participant satisfaction, implementation of program activities, performance of materials or other components and ongoing quality assurance (Hawe Degeling & Hall 1990).
3. Impact Evaluation – This type of evaluation corresponds to the measurement of program objectives and is the first step in measuring the performance of a completed program. It is concerned with the immediate effects of the program that is its effect on those factors, which contribute to or cause the health problem in question (Hawe Degeling & Hall 1990).
4. Outcome Evaluation – It is the second step of measuring the performance of a program and is concerned with the longer-term effects of the program and as such corresponds with the program goal/s (Hawe Degeling & Hall 1990). This type of evaluation answers the question of whether the project has achieved its goal – whether or not the program been able alleviate the road safety problem and at what cost?

2. Why do you need to evaluate?

- o To ensure that your activities are not making the problem worse.
- o To ensure that your program is making a useful contribution in addressing a road safety problem.
- o To provide rewarding feedback, recognition and greater support for your activities.
- o To reinforce to others the value of you're activities especially to funding authorities.
- o Evaluation contributes to improving the quality of road safety activities run everywhere. A program or activity that brings about improvement shown by good evaluation should and can be communicated to others so that more people can benefit.
- o While it is disappointing when your evaluation shows that your program has not achieved its goal, it is important and valuable to find this out. If your program does not work out as planned you can investigate to find out why and this can be used to improve yours and other group's future road safety programs or activities (Hawe Degeling & Hall 1990).

3. Where does evaluation start?

Evaluation begins at the start of your program or activity in it's planning stages to ensure that the project or activity can be evaluated. In planning your program or activity consider:

- o The goals, objectives and strategies of the project – Are they achievable and measurable?
- o Expectation of your funding (Activities funded by the Community Road Safety Grants Program are required to be evaluated in some way)

- o Your own expertise – not sure what to do, see if anyone can help, talk to your RoadWise Officer ect.
- o Funding available – as a guide 10-15% of your total budget should be for evaluation
- o Purpose of the evaluation report – To show that you has or has not achieved your program's goals and objectives.

Planning models such as the Precede Proceed model can be used not only to help ensure the program you are planning is appropriate, well designed and achievable but also able to be evaluated. Table 1 shows how evaluation links to the goals and objectives and to the problem or issue targeted by the program.

Table 1: The links between the problem/issue, the goals and objectives and evaluation (adapted from Hawe Degeling & Hall 1990).

Road Safety Problem	<i>Corresponds to</i>	Goal	<i>Is measured in</i>	Outcome evaluation
Risk Factor	<i>Corresponds to</i>	Objective	<i>Is measured in</i>	Impact evaluation
Contributing factor (Predisposing, reinforcing and enabling factors)	<i>Corresponds to</i>	Sub-objective	<i>Is measured in</i>	Impact Evaluation
Sub-objectives (Any desired change in a predisposing, enabling or reinforcing factor and represent the components of a risk factor)	<i>Correspond to</i>	Strategy – Objective (What your program is going to provide and deliver)	<i>Is measured in</i>	Process Evaluation

When designing your program make sure that your activities are rational and fit the objectives (what you wish to achieve). For example your objective may be to increase the proportion of children who are correctly restrained in approved child car restraints in your town/area. To meet this objective you design a display on child restraints for one weeks use at your local library as your activity to meet this objective. While both the objective and the activity are good, use of this activity alone is unlikely to achieve such a result. An activity more suitable to achieving this objective would be a police enforcement campaign, that also refers those driving cars detected with unrestrained children on to child health nurses trained in fitting child restraints so that offenders can learn to fit child restraints correctly as well as get information on the importance of properly restraining children. Along with this you could also include the display on child restraints in the library for one week to help increase the reach of your program. A good understanding of the problem that you are addressing including what strategies have previously been used in both your town and others, which have and have not worked, will help ensure that this is easier for you to do.

When designing your evaluation, always consider what information you need, and if the information you are collecting will actually show that your program has meet the objectives. For example There is little use collecting information on the target groups knowledge of the effect of speeding on crash impact if what you want your evaluation to show is the target group has mastered a number of skills in managing peer pressure to exceed the speed limit when driving. If you measure more items than are required you will not only increase the cost of it in terms of resources and your time, but your evaluation will also be diminished as you will be measuring items which you have not provided any intervention for. E.g if you have not provided people with information about the impact of speeding on crash impact, they will probably not be able to recall this information when you measure it during the evaluation. To further help you plan your program for evaluation Appendix 1 is a written example showing how the problem relates to the goals and objectives and how these are related to the evaluation.

4. Planning your program to include evaluation

The Precede Proceed model consists of ten questions you should ask your self when planning your program, they are split into two section Planning Questions (Precede) and Evaluation Questions (Proceed) (Green & Krueter 1991).

Planning Questions (Precede):

1. How serious is the road safety problem?
2. Which behavioural and environmental risk factors are involved?
3. What are the determinants of those risk factors?
 - a. Predisposing factors – Any characteristic of an individual or a community that predisposes behaviour or other conditions. Includes knowledge, beliefs and attitudes.
 - b. Reinforcing factors – Any reward or punishment or any feedback following or anticipated as a consequence of behaviour.
 - c. Enabling factors – Any characteristic of an individual, community or environment that facilitates behaviour including and skills and resources that may be needed.
4. Which combination of interventions might change these factors?
5. How can those interventions be implemented (Green &Krueter 1991)?

Questions 1 helps you to fully define the problem and create a goal, questions 2&3 helps you set appropriate and achievable objectives (based on the risk factors) and sub – objectives (based on the predisposing, reinforcing and enabling factors) and question 4&5 help you select your strategies (strategy objectives) and decide how you will go about implementing these (strategy activities (Green &Krueter 1991)).

Evaluation Questions (Proceed)

1. Has the implementation been carried out as intended?
2. Have the interventions been executed as planned?
3. Have the determinants / causes of behaviour changed?
4. Has the behaviour changed?
5. Has the road safety problem been lessened (Green &Krueter 1991)?

Questions 1&2 refers to process evaluation, questions 3&4 refer to impact evaluation and question 5 refers to outcome evaluation (Green &Krueter 1991). Before you start impact or outcome evaluations it is important that you have completed your process evaluation and that this has shown that your program has been implemented as you intended it to be. There is little chance that your project will prove to be effective if it has not been implemented well.

By answering all of these questions at the planning stages of your program will not only ensure that you will be able to evaluate your program but it will also increase your chances of your program being a success (Green &Krueter 1991).

5. Designing your evaluation

There is no perfect evaluation design made for all road safety programs. Choosing an evaluation design will depend of what information you want and need and what you are practically able to get given your resources and time constraints. There are many designs available and explained below are a few of the more common types.

Key

X = Intervention (your implementation of your strategies)

O = Observation (When you are gathering data to evaluate your program)

5.1 Design One – Single Group, Post Test only

X_____O

This design involves having the intervention and then conducting a single evaluation afterwards on only members who received it. The problem with this design is that you cannot tell whether a change has actually occurred as you do not know what your target group were like before your intervention. You also cannot attribute the results to your program as any change may have been the result of something else that has occurred.

5.2 Design Two – Single Group, Pre-test and Post-test

O1 _____ X _____ O2

This design involves collecting data before you implement your strategies (intervention) to ascertain what your target group is like. Then after you implement your strategies you collect the same data again to see if there has been any change. This design is better than design one because you are able to detect if a change has occurred be it in your group’s attitudes, beliefs of behaviour, but you are unable to attribute the results solely to your activities.

5.3 Design Three – Non-Equivalent Comparison Groups Post test only

Group 1 X _____ O
 Group 2 _____ O

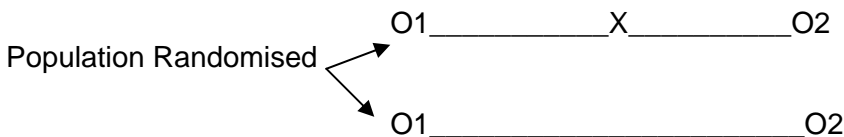
This design involves collecting data after you have implemented your strategies (intervention) on two groups. However one group receives the intervention and the other group does not. The advantage of using this design is that you avoid having the observation having an effect of the desired intervention effects (this is known as the testing effect were the observation can act like an intervention in it own right). The problems with this design are that you cannot detect if there has been any change or if any changes are a result of your program. You are also not aware if there were any significant differences between the two groups when the program began.

5.4 Design Four – Non-Equivalent Comparison Groups Pre-test and Post-test

Group 1 O1 _____ X _____ O2
 Group 2 O1 _____ O2

This design involves observing two groups twice with only one of the groups getting the intervention. What you are aiming to show in your results is that there was a greater improvement in the attributes you are measuring in the group that got the intervention compared to the group, which did not receive the intervention. The advantages of using this design include that you are able to detect if there were any changes and compare the results of both the group who got the intervention and the group that did not. You are also aware of any differences that may exist between the two groups (e.g. if both groups were the same at the start of your program). Problems that arise with the use of this design is that you can not be sure if the result in because of your intervention, the need for you to control for the differences between the two groups, it can be expensive and it is often difficult to fund a comparison group and stop any contamination of this group. This design also limits the extent to which your results can be generalised back to the population (you can not say for certain that if the program was to reach all of the population that it will be successful).

5.5 Design Five – Randomised Controlled Trail (Equivalent groups pre and post-test)



This is the strongest evaluation design you can use. It involves the random selection of test subjects into two groups the intervention group who receive and participate in your programs strategies and the control group who do not receive any of your programs strategies. Both groups are observed twice, once before any intervention and once after. What your aiming to show in your results is if there has been a significantly greater improvement in the attributes you are measuring in the intervention group than in the control group. This design not only shows if there has been any change but it also rules out any alternative explanation to why the change has occurred. This is because each test subject has and equal chance of being in either the intervention or control group and therefore both groups should be exactly the same as each other at the beginning of the intervention.

This design is costly and requires large amounts of time and resources. It also requires some knowledge and experience in working with statistical theories to get the most benefit from it.

6. Data Collection - How are you going to observe what is happening?

There are a variety of ways that data can be collected of the target group so you can measure the performance of your program or activity. These include:

- Self Administered Surveys
- Telephone interviews
- Focus Groups
- Nominal Group Process
- Observation / Case Studies
- Face to Face Interviews
- Readability Tests and Peer reviews
- Program Checklists, Record keeping, Activity assessments

These data collection methods can either collect qualitative data or quantitative data depending on what you want.

6.1 Self Administered Surveys

Pen and paper surveys presented in a way that the participants can complete themselves. They usually use structured close-ended questions and are a popular way of collecting quantitative data. However the questions can be unstructured and open ended and used to collect qualitative data or a mixture of both. Self administered surveys can be used for all types of evaluation, for example they can be used in formative evaluation to see what activities the target group would be interested in participating in. For process evaluation you could use these to collect data on participant satisfaction with the program, and for impact and outcome evaluation, they can be used to collect data on the participants' attitudes, knowledge, desire to change and current behaviours. Things to ask yourself when considering using a self administered survey include;

- Who will receive the questionnaire?
- How will they receive the questionnaire?
- When should people return them?
- How will you recruit participants?

6.2 Face to Face Interviews

Are similar to self-administered surveys except they are conducted one – on – one by a trained interviewer. They are good at collecting both quantitative data and qualitative data and can be structured or unstructured using both closed and open ended questions. Things to ask yourself when considering using face-to-face interviews include:

- Whether or not the interview will structured or unstructured
- How you will identify participants?
- Where and when the interview will take place?
- Who will facilitate the interview?
- The length of the interview?
- How you will record responses

6.3 Telephone Surveys

This method of data collection is completed one on one and uses a structured approach. A detailed protocol is required so that the interviewer can ensure that you get the information you need. Things to consider when wishing to use this method include:

- What time of day you will call?
- Protocols for dealing with busy, unanswered, answer machines, not available or refusal calls.
- How long the survey will take?
- How you will generate telephone numbers to call?

6.4 Focus Groups

This method is most commonly used to collect qualitative data and allows researchers to explore the “why” of the topic. It takes place in the form of a group interview or discussion focusing on a particular topic where the facilitator guides the discussion usually with a few open-ended questions while the participants talk freely. Things you need to consider when thinking of using this method include:

- Where and when the focus group will take place?
- What material will be required?
- How you will record what people are saying?
- How you will maintain peoples confidentiality
- How many participants are required?

6.5 Nominal Group Process

Is a group process used to find out the groups consensus to your question. For example you have made several radio advert scripts for a program targeting driver fatigue and now you wish to find out which advert, members of your target group are most effected by. To do this you would recruit a small sample of the target group and work with them until you reach the advert the group believes effects them the most. This method is particularly useful when there is insufficient or contradictory information available or you have many options and you want to decide upon the best one to go with. The nominal group process is often added onto focus groups to help prioritise issues that have been brought up. Unlike focus groups the process is highly structured. Before you use this method you should consider:

- Where and when you will hold the nominal group process?
- What processes you are going to use to make a group consensus?
- How you will record the responses?
- How many participants are you going to require?

6.6 Observation

Were a Rater (the researcher) observes individuals and groups and uses a measurement instrument to record observations. This is extremely useful in observing subjects actual behaviours. For example you may stand outside on a road and count the number of cars that pass were the occupants are wearing seatbelts and are not wearing seatbelts. Things to consider when you are thinking of using this method include:

- Who you are going to observe?
- Where and when you will make our observations
- Who will make the observations – what training will be required?
- How you will record your observations? (Written, audio, video, photos)
- Ethics and informed consent (A condition or all grants is that they be undertaken in accordance with the National Statement on Ethical Conduct in Research Involving Humans as published by and available from, the National Health and Medical Research Council).
- What environmental features are being observed?

6.7 Readability Tests and Peer Review

Readability tests are used for formative evaluation were you assess the readability of written material (e.g. pamphlets, fliers, posters ect) you are creating for your program or activity. This should be done to ensure that materials you produce are suitable for your target group. Examples include The SMOG Formula and FLESCH Reading Ease.

Another way to check the suitability of materials produced for your program is to have other people working in road safety review them and make recommendations about them. For example you may write a radio advert targeting non-use of restraints. To ensure that it suitable you would send it to others in the field to proof read and make sure that it is understandable and appropriate.

6.8 Program Checklists, Record keeping, Activity assessments

Process evaluation can entail undertaking Program Checklists, Record Keeping and Activity Assessments. Creating Program checklists and having good record keeping practices are good ways of ensuring that you are implementing your project as intended, while period activity assessments such as calculating the number of participants, recording the number of activities having been implemented and asking people regularly if they are satisfied with the way the program is going, are all good ways of ensuring the program is reaching it's target group and the participants are happy and feel they are getting some benefit from their involvement. Good record keeping also ensures that your funding is being expended as intended.

7. To Wrap it Up

Evaluation is a necessary step for all road safety projects and activities and will help everyone improve the quality of projects all around the state leading to greater reductions in road trauma. When planning your program for a Community Road Safety Grant remember:

- Plan to evaluate in the early stages
- Understand the problem you are addressing first, next write you goals and objectives, then decide upon your strategies and plan how you are going to evaluate if these activities have been successful in making a positive change in the target group.
- Make sure that there is a good rational fit between what activities/strategies you are planning to implement and the objective and goals you have set.
- When designing your evaluation consider both the pros and cons of each of your options as well as the resources and skills that are available.
- Only start your impact and outcome evaluation once you have completed your process evaluation and you know that your program was implemented as planned.
- Ensure that you use appropriate data collection methods and only collect the information you need. Consider whom you are writing the evaluation report for and if there are any special requirements.
- Always make known your results – even if your program has not been successful. Let yourself and everyone learn from both your successful activities as well as your not so successful activities.

8. Want to know more?

RoadWise Officers around the state are available to help you plan, implement and evaluate your project. A good textbook that me be of assistance to you is “Evaluating Health Promotion – A Health Workers Guide” written by Penelope Hawe, Deirdre Degeling and Jane Hall and published by Maclennan and Petty (1990).

9. References

Green, L.W. & Kreuter, M.W. 1991. *Health Promotion Planning: An Educational and Environmental Approach*, Mayfield Publishing Co, London.

Hawe, P., Degeling, D. & Hall, J. 1990. *Evaluating Health Promotion A Health Worker’s Guide*, Maclennan and Petty, Sydney.

Appendix One: Example program and evaluation plan

Example									
Health Problem	Large numbers of fatal and critical crashes occurring on Fiction Town roads	Goal	To reduce the number of fatal and critical road crashes by 2% on Fiction Town roads by the year 2005	Outcome Evaluation	Use public records from before and after the program to see if there has been a decrease in the number of fatal and critical injury crashes in Fiction town over the years that they program was implemented.				
Risk Factor	Drinking and Driving	Objective	To increase the number of people in Fiction Town who never drink and drive by 3% by 2004	Impact Evaluation	Telephone Survey of a Random Sample of Fiction Town residents asking if they have ever driven home believing that they were over the legal blood alcohol concentration and if they have why.				
Contributing Risk Factors	Community believes that they can be safe drivers even if they are slightly over the legal BAC limit. (Predisposing)	Sub-Objective 1	Increase by 5% the number of people in Fiction Town who can recite three reasons why driving even slightly over the legal BAC limit is dangerous by 2003	Impact Evaluation	Telephone Survey of a Random Sample of Fiction Town residents asking if they could recite three reasons why they should not drink and drive	Strategy One	Hold alcohol education nights at licensed premises in Fiction Town.	Process evaluation	Record number of attendees ***** Publican satisfaction survey ***** Staff satisfaction survey ■■■■■■■■■■ Activities checklist (Has each planned activity been completed as intended?)
	Community believe that the is little possibility of police detection and	Sub-Objective 2	To increase by 2% the number of Random Breath Tests conducted by police each month in Fiction Town by 2004.		Record the number of RBT's completed by police each month ■■■■■■■■■■	Strategy Two	Provide funding to increase the number of police patrolling the roads		Collect financial records of police in regards to funding provided ■■■■■■■■■■ Activities checklist (Has

