This brief discusses how to implement Step 3 of the Framework for the third of the three main phases of policy evaluation: policy impact evaluation.

**Purposes of Policy Impact Evaluation**

Policy impact evaluation can have multiple aims or purposes, including:

- Demonstrating the impact of the policy, by measuring changes in short-term, intermediate and long-term outcomes.
- Determining whether changes in outcomes can be attributed to the policy.
- Comparing relative impacts of policies with different components.
- Identifying the relative cost-benefit or cost-effectiveness of a policy.

The focus of the evaluation may be a number of different areas, including the following:

- Short-term, intermediate, and long-term outcomes and impacts.
- Outcomes are short-term and intermediate changes in target audience behavior, awareness, attitudes, or knowledge.
- Impacts are long-term changes in indicators.
- Indicators are specific, observable, measurable characteristics of changes that demonstrate progress toward outcome or impact.
- Outcomes and impacts in comparison communities.
- Costs of implementing the policy.
- Cost savings resulting from policy implementation.

**Figure 1.** Illustrates where in the policy process impact evaluation is focused.

Examples of outcome and impact indicators are presented in **Figure 2**.
Sample Impact Evaluation Questions

Once the purpose and focus of the evaluation are determined, you should identify specific evaluation questions. The evaluation questions you choose will guide your selection of an appropriate evaluation design. The following are some sample policy impact evaluation questions.

- Was there a change in the outcomes and impacts of interest?
- Did the policy contribute to a change in the outcomes and impacts of interest?
- Were there any unintended consequences of the policy?
- Did contextual factors influence the level of impact?
- What was the economic impact of the policy (cost-effectiveness or cost benefit)?

Evaluation Design Considerations

Evaluating a Change in Outcomes, and Impacts

When the evaluation question focuses on identifying changes in the indicators, regardless of whether or not the changes were necessarily a result of the policy itself, the team can use non-experimental or descriptive designs. However, be sure to represent accurately what the results of this analysis demonstrate. Non-experimental designs are unable to clearly link the impacts to the policy because they are unable to rule out alternative explanations for the impacts. These types of designs are most appropriate when it is impossible or impractical to compare changes over time or to use a comparison group. Two potential non-experimental designs for impact evaluation are cross-sectional and case study.

Establishing a Link Between a Policy and Changes in Outcomes and Impacts

A randomized experimental design is sometimes considered the gold standard for conducting an impact evaluation because it produces the strongest evidence that a project, program, or policy contributed to changes in behavior or other outcomes. However, when you are evaluating the impact of a policy on a population, randomization may be unethical or impossible, not to mention costly or time-consuming. Quasi-experimental designs can be used to evaluate changes in indicators over time or compared to a group not affected by the policy. Refer to Appendix O for further description of these methods.

A number of factors can make it easier or harder to make the case for a causal relationship between the policy and the observed changes in outcomes. These factors include the following:

- Nature of the relationship between the policy and the impacts.
- Expected magnitude of change in impact.
- Expected length of time to see evidence of the policy effects.
- Nature and extent of external influences on impact.
- Availability of data.
- Extent of implementation (availability of natural comparison groups).

### Comparison Groups

In many cases, you may be able only to assert some contribution of the policy to the outcomes and impacts. Using comparison groups is one method that can increase your confidence that the policy is responsible for the change in indicators. A comparison between groups whose members have not been randomly assigned is known as non-equivalent comparison design. Although groups similar to the community or group being affected by the policy may be selected, the groups are not equivalent, regardless of how similar they may appear. Some additional steps may be required during analyses and interpretation to demonstrate the appropriateness of the comparison group. If you are unable to compare a group affected by a policy with a group not affected by a policy, you may be able to make comparisons between the groups that have been affected by a policy. For example, an evaluation may compare the impact of a universal school-based violence prevention policy between different schools, different grade levels, or different levels of implementation.

### Evaluation of Cost Versus Benefit

Economic evaluation methods compare the costs of the policy with the resulting benefits. These methods are used in conjunction with the designs described above because they are dependent upon understanding the amount and types of changes that occurred as a result of the program. Economic evaluations attempt to place a value on these changes and then compare this value with the cost of implementing the program. Two types of economic evaluations are cost-benefit and cost-effectiveness studies. Cost-benefit studies estimate and compare the cost of a policy with the value of the benefit of the policy. Cost-effectiveness studies examine the cost of implementing policy in relation to the resulting positive outcomes or impacts, often in comparison with other interventions.

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to alternative policies or interventions. It is important to consider a wide range of potential costs and benefits related to the policy in order to account for ripple effects when evaluating cost and benefits. Economic analyses can be extremely complicated and should be thoroughly planned with input from an economist, econometrician, or quantitative policy research expert during the planning phase of the evaluation.  

General Measurement Considerations

Impact evaluations typically rely on quantitative data. Some evaluation designs require collection of population-level data at multiple times over a long period. Surveillance data is often a cost-effective source of data.

<table>
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<tr>
<th>Figure 2: Examples of Outcome and Impact Indicators</th>
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<tr>
<td><strong>Short-Term Outcomes</strong></td>
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<tr>
<td>Awareness of seat belt law</td>
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<tr>
<td>Attitudes toward violence</td>
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<tr>
<td>Awareness of Brain Trauma Foundation guidelines</td>
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In selecting data collection points, consider the planned and actual roll-out dates of the policy. Make sure data is being collected at time periods that match the evaluation design (before and after implementation). If you are using a comparison group, make sure you have access to data on both the groups.

Unintended Consequences

Consider potential unintended consequences that may occur as a result of the policy implementation. Rely on previous research and evaluations and the experience of stakeholders to brainstorm potential unintended consequences. Some unintended consequences may be uncovered during the course of policy implementation. Some examples of potential unintended consequences include:

- Increases in the arrest of intimate partner violence victims as a result of a new arrest policy.
- Increases in illegal firearm sales as a result of a firearm licensing policy.
- Increases in child injuries due to airbag deployment as a result of new regulatory requirements.
- Issues related to access to health care as the result of policies that increase reporting of injuries.

Estimating the Cost-Benefit of a Policy

To examine the cost savings associated with adopting the Brain Trauma Foundation (BTF) guidelines for treatment of severe traumatic brain injury, Faul and colleagues used surveillance systems combined with national surveys. They estimated the lifetime costs of 80% adherence to the guidelines compared with the 33% estimated adherence. Using a decision analysis model, coupled with previous research and available surveillance and survey data, they estimated savings of more than $300 million in medical costs and rehabilitation costs if the BTF guidelines were followed at 80% adherence. Faul’s team also estimated that more than 3,000 additional lives would be saved. This example demonstrates how previous research and available surveillance data can estimate the cost benefits of a policy.
<table>
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<tr>
<th>Challenges</th>
<th>Solutions</th>
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| External and contextual factors such as economic conditions or public awareness | ▪ Measure contextual factors to the extent possible.  
▪ Explore the use of difference in difference analyses which examine the difference in the target group while accounting for differences in comparison communities. |
| Length of time required to expect long-term impacts                       | ▪ Use an evaluation plan that measures short-term and intermediate outcomes that logically link to long-term outcomes.                      |
| Lack of access to appropriate data                                        | ▪ Identify available pre-existing datasets and explore the possibility of data linkage to increase analysis possibilities (see Brief 6). |

**Action Steps**

▪ Identify any resources for planning and implementing an impact evaluation.
▪ Identify evaluation questions and identify the most appropriate design given available resources and expertise.
▪ Articulate short-term and intermediate outcomes as well as long-term impacts for a particular policy.
▪ Identify data collected in an existing surveillance or administrative system to use for an evaluation.

**Additional Resources**

*The Magenta Book: Guidance for Evaluation* (Her Majesty’s Treasury). Provides general and technical guidance on policy evaluation. Available at [http://www.hm-treasury.gov.uk/data_magentabook_index.htm](http://www.hm-treasury.gov.uk/data_magentabook_index.htm)