♻EPA   Project Summary

Evaluation and Effective Risk Communication Workshop Proceedings

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Many agencies and other organizations communicate with the public about risk. How can these agencies and organizations learn whether they are communicating effectively? Are their messages appropriate and clear to the intended audience? Are their messages reaching that audience? Is the audience understanding and internalizing the message? To explore these questions, the Workshop on Evaluation and Effective Risk Communication brought together experts from academia, government agencies, and the private sector under the auspices of the federal Task Force on Environmental Cancer and Heart and Lung Disease and its subcommittee, the Interagency Group on Public Education and Communication. The workshop's objectives were to:

° Improve understanding of evaluation problems and tasks;
° Survey principles and methods of evaluation relevant to risk communication;
° Illustrate the practice of evaluation through examples;
° Provide guidance for organizations engaged in planning and coordinating the evaluation of risk communication;
° Derive recommendations for improving risk communication; and
° Identify future needs.

The workshop proceedings provide an overview of the principles and methods of evaluation and of their application to risk communication programs. That volume includes four commissioned papers, five presentations on how to implement evaluation of risk communication, 14 discussions of various practical aspects of such evaluations, and summaries of 16 case study evaluations. This project summary highlights the most important issues and conclusions.

This Project Summary was developed by EPA's Risk Communication Program, Washington, DC, to announce key findings of the workshop that is documented in a full report of the same title (see ordering information at back).

Introduction

Risk communication can be defined as any purposeful exchange of information about health or environmental risks between interested parties. We define it as exchanging information about:
- levels of health or environmental risks,
- the significance or meaning of health or environmental risks,
- the data and methods used in deriving estimates of risk, or
- decisions, actions, or policies aimed at managing or controlling health or environmental risks.

Evaluation, in the context of risk communication, is any purposeful effort to determine the effectiveness of risk communication programs. Evaluation encompasses a wide range of activities, from diagnosing risk communication problems to measuring and analyzing program effects and outcomes.

Background

A fundamental question dominated initial workshop discussions: Why is it important to evaluate risk communication programs? Participants agreed that evaluation is criti-

cal to effective risk communication; without evaluation, there is no way to determine whether risk communication activities are achieving (or have achieved) their objectives.

Evaluation should be an integral part of the risk communication process. When carried out at each stage of program development, evaluation provides information that is critical to program effectiveness. For example, it provides essential planning information, it provides program direction, and it can help demonstrate program accomplishments. Most important, evaluation can signal the need for timely modifications.

Evaluation has much to offer organizations that communicate about risk. During the planning and pre-production phase, evaluation can provide data critical to effective program design, including information about health, environment, and lifestyle needs and concerns, information about risk management needs and concerns, and information about how to meet those needs and concerns. Through surveys, questionnaires, focus groups, and other research tools, evaluation can be used to identify stakeholders and other relevant audiences, to assess audience opinion or reaction, to find out what people see as important problems, to find out what issues and events people are aware of, and to find out how people react to different sources of information. Pretesting and pilot testing can be used to forecast the effectiveness and feasibility of alternative risk communication activities, to determine the kinds of information needed by target audiences to understand messages about risk, to examine how people process and interpret risk messages, and to obtain feedback on draft materials. Estimates of the effectiveness of alternative risk communication activities can be combined with information about their costs to show which risk communication strategy will be most cost-effective.

When the risk communication program is operating, evaluation can address questions of accountability and performance. For example, evaluation studies can determine whether the risk communication program is reaching the intended audience, provide feedback on the performance of risk communicators, identify program strengths, suggest ways these strengths can be used to communicate more effectively, and determine whether the program is being implemented appropriately (for example, what material was produced, how much was produced, how long it took, what it cost, and what audiences received the material).

Once the risk communication program has been implemented, evaluation can provide information on program impact and outcome. For example, evaluation can determine what members of the audience actually received, what they learned, and whether change occurred in the way they feel, think, or behave. The results can be used to answer the most important question: Did the program achieve its goals?

Few organizations have the resources needed to launch state-of-the-art risk communication programs that address multiple audiences through multiple channels. Thus, one major reason for evaluating risk communication activities is to help managers choose messages and channels that use their limited resources most effectively.

Discussion: Problems and Difficulties

These advantages raise a second question: If evaluation is so valuable, why are so few risk communication activities formally evaluated? The answer appears to lie in a variety of problems and difficulties stemming from conflicts and disagreements about values, goals, resources, and usefulness. Each is briefly discussed below.

Values. Many difficulties in evaluation arise from its nature as a normative, value-laden undertaking that carries important policy, ethical, and practical implications. Evaluation is value-laden partly because of the many stakeholders interested in the conduct and effectiveness of any given risk communication activity or program. Government agencies, corporations and industry groups, unions, the media, scientists, professional organizations, public interest groups, and individual citizens each have varying and often conflicting needs, interests, and perspectives.

Evaluators often are asked to respond to the interests of many of these constituencies. But different audiences have different goals, different audiences need different types of information, and different risk communication activities require different types of evaluation studies. As a result, an initial difficulty in any evaluation is determining the perspective from which it will be conducted. Choosing a perspective has several reporting implications, including the evaluator's responsibility to be explicit about the chosen perspective and to acknowledge the existence of other perspectives. Several practical implications also follow, including limits on the relevance and role that evaluation can play in affecting risk communication programs, and an increased likelihood that evaluation results will be criticized, even by the sponsors of the evaluation.

Goals. A second problem affecting evaluation is the difficulty in identifying goals for risk communication. What goals are appropriate? Should the primary goal of risk communication be to help people become aware of an issue, make more informed decisions take action, seek information, seek help protect themselves, change their behavior or participate more effectively in the decision making process? For some, the goal of risk communication is narrowly defined as personal or organizational survival and damage control; for others, it is to overcome opposition to decisions; for still others, it is to achieve informed consent, enhanced public participation, constructive dialogue, and citizen empowerment.

Meaningful evaluation is possible only when the program's goals, intended audience, and expected effects can be specified clearly. Even the most basic risk communication activity, such as responding to a telephone inquiry from a concerned citizen, should have a specific goal. Without clear communication goals--be they informational, organizational, legally mandated, or process goals--it is impossible to know if the interaction and exchange has been successful. Such specification is extremely difficult and sometimes impossible for many risk communication programs. Evaluators and those who commission the evaluation often cannot agree on what the goals of the risk communication program should be, let alone which goals should be assessed or what kinds of success measured (e.g., through measures of knowledge, attitudes, and perceptions; measures of message awareness, comprehension, and acceptance; measures of information demand; or measures of behavioral intentions or actual behavior).

Once risk communication goals have been determined, they should occupy a key role in the planning and implementation process. At each stage of the program, activities should be evaluated in light of these goals. If warranted, program goals should be reviewed and changed as the program develops.

Resources. Effective risk communication requires a determined effort to ascertain whether the program is working as intended. Feedback is essential. If provided early enough, it can identify places where midcourse corrections could be effective.

Evaluation often is neglected in favor of what managers perceive to be more urgent tasks--especially if evaluation has not been planned and budgeted in advance. Managers are reluctant to evaluate for several reasons. Many of them believe that evaluation is prohibitively expensive and that only a few organizations have the resources and skills to carry out evaluation. Program managers tend to exhaust all available resources

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producing and distributing more risk communication materials (in the hope of increasing effectiveness by reaching more people), rather than conducting evaluation studies that ask whether the message has reached the target audience and whether the target audience has received and internalized the message. There also is an understandable reluctance on the part of many program managers to support research that has the potential for showing that the time, resources, and effort they have invested in a risk communication activity or program have not produced the desired results. Managers may not want to be told that their programs have shortcomings, because this may have implications for career advancement, for intra-organizational decisions about the allocation of resources, and for program survival. Whenever an evaluation is conducted, there is a chance that it will reveal (serious) shortcomings. So not evaluating avoids the potential for evidence of failure. On the other hand, if a program manager is convinced that evaluation can demonstrate success, according to what he judges to be appropriate measures, then evaluation may be viewed very differently; it becomes a tool to justify promotions, bonuses, or increases in financial resources and staff.

Another factor that may affect the decision to evaluate is the limited success of previous risk communication programs aimed at changing risk-related attitudes and behaviors. Planned risk communication activities make up only a small share of the many factors that impinge on people's perceptions and behavior. Most evaluation studies suggest that even when the message is clearly communicated and appears to be in the audience's best interest, the goals and expectations for such programs should be realistic. For example, a successful risk communication program might change the behavior of only a small percentage of the population. Agencies that have a public health mandate may view a small percentage change as insignificant even if the number of individuals affected is large. However, from the perspective of competing for attention and recognizing the complexities of behavioral change, risk communication endeavors should be compared with marketing efforts. For example, a marketing effort that produced an increase of a few percentage points in market share would be judged a big success. Beyond this lack of understanding of what level of impact should be considered a success, program managers may prefer formative and process evaluation over outcome and impact evaluation because the former affords opportunities to make changes in response to findings.

These factors suggest that increased attention needs to be given to understanding organizational and other barriers to evaluating risk communication activities. Equally important is the need to develop strategies to overcome these barriers. First among these strategies is planning risk communication efforts early in the program planning stage so that evaluation activities can be integrated from the beginning. Evaluation is less likely to be resisted when it is built into each stage of the risk communication process, when adequate resources are built into the risk communication budget for evaluation, and when changes suggested by evaluation data can be made.

Second, greater attention needs to be given to the use of informal, quick, and simple evaluation methods, many of which can produce extremely valuable planning and program information. When more rigorous, systematic evaluations are required, these ideally should be carried out by parties other than those who control and conduct the risk communication activity or program.

Third, greater attention needs to be given to developing incentives for program managers to fund evaluations for the purpose of better understanding which risk communication activities are most effective, not solely for justifying what has been done.

Fourth, program managers should be encouraged to develop well articulated evaluation plans with clear goals and clear explanations of what the evaluation is designed to achieve.

Finally, program managers should be encouraged to document and share risk communication successes, including cases in which community feedback was solicited and used to enhance the risk communication activity or program.

Usefulness. A common criticism is that evaluation results seldom are used. Implicit in this criticism is the notion that use means direct and immediate changes in risk communication policies or programs. However, not all types of use are immediately apparent. For example, results may be used to confirm that changes in the risk communication program are not needed. In some cases, evaluation may indicate directions for risk communication that are inappropriate or infeasible. Evaluation results may accumulate over time and be absorbed slowly, eventually leading to changes in risk communication concepts, perspectives, and programs.

In assessing the usefulness of evaluation research, an important consideration is that the forces and events impinging on risk communication programs are often more powerful than the results derived from evalu-

ation studies. The environment in which risk communication programs are developed seldom permits swift and unilateral changes; new information actually can slow down the change process by making decisions more complicated.

Recommendations

Several recommendations come from these observations and from those in the volume's papers.

Most of these recommendations are oriented toward policy makers in public agencies that have risk communication responsibilities. However, they apply equally well to risk communication efforts in private organizations, such as public interest groups and industrial corporations.

Short-Term Recommendations

1. Agencies and organizations should be encouraged to use evaluation methods that are appropriate to the scale and importance of the risk communication effort. Small-scale efforts may require only quick and easy evaluation methods. In contrast, more resource-intensive, statistically reliable methods are appropriate for large-scale efforts where there may be substantial negative impacts on well-being if the risk communication activities are not effective.

2. Agencies and organizations should be encouraged to integrate evaluation strategies and results into program planning and decision making; evaluation should become a routine part of risk communication practice.

3. Mechanisms are needed to permit agencies to share evaluation methods and the results of evaluation research.

4. Agencies and organizations should develop guidelines to help managers choose the most suitable evaluation methods. Workshops or other training mechanisms are needed to build the skills required to design and implement evaluation strategies.

5. Agencies and organizations should be encouraged to evaluate risk communication programs so that mid-course corrections can be made and program impact can be assessed.

Long-Term Recommendations

1. Agencies and organizations should support research aimed at measuring the effectiveness of risk communication activities as well as the cost-effectiveness of alternative approaches. Examples of research questions that need to be answered are: How can we evaluate the role of risk communication in changing behavior? Do people make better risk management decisions as a result of

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more effective risk communication? Is it more cost-effective to extend the time period for existing risk communication activities, to intensify their use in the originally scheduled time period, or to combine multiple risk communication activities?

2. Agencies and organizations should sponsor forums for public and expert debate on issues related to the appropriateness of using different kinds of motivational and persuasive messages within risk communication programs. For example, what guidelines are needed on ethical issues related to using different types of motivational and persuasive messages to help foster a more informed public?

3. Agencies and organizations should support development of guidebooks and manuals for practitioners on how to apply evaluation techniques. These materials should include information on how to tailor an evaluation program to the scope and importance of a risk communication activity, as well as how to recognize the limitations of alternative methods. Guidebooks and manuals also should include case studies demonstrating the value and importance of evaluation research in risk communication.

Final Thoughts

(from "Risk Communication: On the Road to Maturity," by Milton Russell, page 9 in this volume)

"At a time when known changes in individual behavior could bring about the first significant improvements in the quality and length of life since antibiotics, the tools to communicate this information are rudimentary, the research is poorly supported, and many of the front line troops lack training and the support of those who send them into the field. There is little reason to believe that this situation will change as matters now stand...There will be no reason to take the risk communication process seriously until evaluations are made about whether people are truly empowered to make important choices about the way they lead their lives or about the collective decisions that others are making for them.

In summary, it is the risk communication professionals who have the largest stake in both facilitating and demanding evaluation of their efforts. They have both the professional responsibility and the personal incentive to determine what has been successful and what further efforts will be required over time to fulfill the promise of risk communication as a major element in improving public health."

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The complete report, entitled "Evaluation and Effective Risk Communication: Workshop Proceedings," will be available from:

> *Center for Environmental Research Information*
> *Cincinnati, OH 45268*
> *(EPA/600/9-90/054)*

or from:

> *National Technical Information Service*
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