Practical Evaluation for Public Managers

Getting The Information You Need

Department of Health & Human Services
Office of Inspector General

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FOREWORD

Trying to make a decision without information is like shooting at a target blindfolded. You probably won't hit the bull's eye. You may not hit the target at all. And there is a chance you may injure an innocent bystander. As the Inspector General for the Department of Health and Human Services, I get to see first-hand many of the effects and side-effects of off-target decision-making.

It is my job to protect HHS programs against fraud, waste, and abuse, and to promote program effectiveness and efficiency. While I have been given a special trust to protect and improve these programs on behalf of the public, this is really the trust given all government employees. Without the cooperation of the employees of the programs we oversee, my office would accomplish very little. Further, no matter how well my staff and I, or any other oversight agency, do our jobs, most of the effectiveness of government programs rests day-to-day with program managers and their staffs, and is based on their decisions.

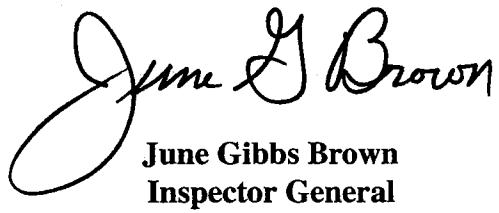
Before coming to HHS, I served as Inspector General for the Department of the Interior, for NASA, for the Department of Defense, and for the Navy's Pacific Fleet at Pearl Harbor, Hawaii. So I know the inspector general job pretty well. Earlier, I held management positions at the Navy Finance Center in Cleveland and at Interior. If there is one thing I have learned in these public service capacities, it's that *there is nothing more powerful than meaningful information in the hands of someone who can use it to make government work better.* It's always been one of my foremost goals as Inspector General to give decision-makers solid, timely, and useful information.

While most Inspectors General would share my philosophy, many rely on their auditors and investigators for program information. However, my office also depends on a small, distinct group of analysts for a great deal of the information we collect on HHS programs. The Office of Evaluation and Inspections (OEI) has adapted techniques from evaluation, policy analysis, survey

research, and other disciplines to develop a practical system for providing rapid feedback to decision-makers on program and policy issues. We have found this system works well. In fact, both Vice President Gore, as noted in the report on the National Performance Review, and Paul Light, as shown in his book *Monitoring Government*, see an evaluation role in the future of federal IGs.

Four individuals, Michael Mangano, my principal deputy, Penny Thompson, the head of OEI's Health Care Branch, and Jack Molnar and Brenda Stup, OEI senior analysts, have written this volume, which describes our evaluation system and their experiences. The authors make a strong case for program managers themselves to go beyond routine data collection to analyze and evaluate their programs, and the book presents low-cost, accessible strategies for accomplishing this.

Many thanks to Mike, Penny, Jack, and Brenda for keeping us "on target." I see this book as a valuable contribution to the ongoing endeavor to make our public programs more efficient, more effective, and more responsive.



June Gibbs Brown
Inspector General

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SETTING THE STAGE

How many times have you discovered you were missing a critical piece of information and...

- Couldn't figure out why service-delivery was inefficient?
- Couldn't understand why clients seemed dissatisfied?
- Couldn't answer an inquiry about your program's accomplishments or weak spots?
- Couldn't make a strong case for additional budget dollars?
- Couldn't assess the extent of program fraud or abuse?
- Couldn't be sure you made the right decision about which action would make the most significant program improvement?

You may have missed an opportunity because you lacked timely and reliable information. Armed with the right information, you could have made more informed decisions, eliminated a bottleneck, understood your clients' problems, documented your program's strengths and weaknesses, effectively argued for resources, protected the program from profiteers, or known which changes would produce the biggest payoff.

If you are a program manager or analyst, you are probably inundated with data and statistics. You may not even recognize an information deficit. Yet you may often find you don't have data-based answers to policy and operational questions when you need them, despite the huge investment being made in data collection and reporting in public programs.

This book is about getting the information you need in a timely manner and at a relatively modest cost. By "information," we mean something more than the data typically produced by management information systems. Rather, we use information to mean a collection of facts and logical conclusions which answer

the types of questions we posed above. By learning and using a variety of strategies for obtaining information, you can better address specific problems, gain insight into what's happening in your program, and determine what directions you should be taking. These strategies can help you reduce complexity and uncertainty in your day-to-day decision-making and see beyond the many immediate problems you face.

Sharing Techniques and Approaches. This book describes the methods used by a group of professional analysts dedicated to putting practical program information in the hands of the people who need it in time to make a difference. The strategies we present in the next chapters are drawn from our experience as analysts in the Inspector General's office for the U. S. Department of Health and Human Services (HHS). A short description of our operation, mission, and philosophy might help explain why we are writing this book.

Our organization, the Office of Evaluation and Inspections, comprises about 100 analysts who come from a variety of educational and occupational backgrounds. Stationed across the country, we work in teams to conduct short turnaround evaluations of HHS programs. These generally take six to nine months from the time we settle on a project design to the time we present preliminary findings to our audience. We can move even faster when the need arises. Our studies usually fall into one or more of the following categories: client satisfaction surveys; performance indicator studies; compliance reviews; effective practice reviews; early implementation reviews; and emerging issue reviews. We have organized this book around these categories.

We tend to be very pragmatic in our outlook and approach. We search out the methods and data sources that will produce the best information in time to be useful. In fact, we measure our success in terms of program improvements and dollars saved or put to better use. We strive to anticipate critical issues. We define our studies using a relatively sharp focus. Our techniques allow us to reach logical conclusions rather than definitive answers. We

believe timing is the key to our success and that, no matter how accurate, information provided too late is of little value.

Because of this, some people might call our work "quick and dirty" or question the accuracy of calling what we do evaluation at all. Indeed, you may tend to associate the field of evaluation with drug testing, for example, more readily than with program management. The most scientific evaluations involve control and test groups to assess the effects of a particular intervention (e.g., a drug). In its purest form, such an evaluation involves randomly assigning individuals to either the control (no treatment or intervention) or the test group, so that any measurable differences in the groups over time can be attributed to the one difference between the groups: the presence or absence of the treatment or intervention. On the strength of evidence amassed in such "pure" evaluations, our society makes critical decisions, not only about which medical treatments work best, but about how individuals respond to all sorts of interventions.

Yet, as part of an agency charged with overseeing some of the largest federal programs in existence, we often must assess and evaluate programs or other interventions without the luxury of conducting a scientific experiment. To do this, we use methods consistent with principles of evaluation but quite different from the exacting work of scientists who supply us with the kind of definitive information described above. We see our approach as far more attainable and our goals as very much like those of most program managers. We examine and report on issues of efficiency, fraud and abuse, and program effectiveness. Similar responsibilities—to use public dollars wisely, to maintain public confidence, and to achieve intended results—fall on program managers. Like many program managers, we move quickly from one issue to the next, as we anticipate and respond to the interests and needs of decision-makers in the executive and legislative branches of government.

We are interested in making our commonsense approach to evaluation—*providing outcome-oriented, practical information*

for immediate use—available to program managers and others who may not consider themselves evaluators. We realize that establishing a distinct evaluation component like ours may be an unreachable or even inappropriate goal for many programs. It requires the help of experienced evaluators, a long-term commitment, and more than a little risk-taking. It's hard work. However, with an understanding of the way evaluation techniques can apply to program management, non-evaluators can effectively use the services of evaluators to obtain needed information. Similar to any relationship based on a contract for services, the more you know about the concepts and applications of evaluation, the stronger your partnership with professional evaluators will be, and the more likely you will be to end up with information that meets your needs. With this objective, we will share our strategies with you in the chapters that follow.

Since our goal is to make evaluation more accessible, we've limited our use of professional jargon. We've avoided technical terms that may be unfamiliar to non-evaluators. We haven't filled our discussion with theory or references, although we offer suggestions for further reading if you are interested in learning more. We concentrate on the techniques with which we've had the most success over a number of years. We hope this information will start you thinking about how to use evaluation to improve the program you manage or to expand your repertoire as an analyst.

We certainly don't claim to have all the answers or to have originated a new evaluation system. We've had enough successes as well as failures to know what works and what doesn't. We've borrowed extensively from the fields of journalism, auditing, investigation, and management analysis, as well as evaluation, in developing our techniques. We will describe our strategies, along with examples of how we have used them, and explain why they work.

We know that many of you have long been convinced of the value of producing timely, relevant information to monitor the effects of your program and that you have developed your own

techniques to do this. For those of you who fall into this category, we hope to offer some new ideas for collecting and analyzing program information. Others of you may be wary of committing any of your dwindling resources to evaluation efforts. We hope to convince you that evaluation is critical to your program's success, and possibly its very survival, and to give you some simple ways to get started.

Organization of the Book. Our discussion starts with some compelling reasons for conducting program evaluations, then examines a variety of effective evaluation techniques, with examples of their use, and ends with a review of some of the practical considerations involved in developing an evaluation capacity. The first chapter answers the question: Why should program managers conduct evaluations? It describes the legislative, private-sector, and public forces pushing managers in this direction. Chapter 2 discusses what's involved in program evaluation. Chapters 3 through 8 cover six types of information-gathering strategies you may find useful. In Chapter 9, we talk about what to do after you've made the decision to add program evaluation to your management system.

About the Authors. Michael Mangano is Principal Deputy Inspector General for the U.S. Department of Health and Human Services. Penny Thompson is Chief of the Health Care Branch for the Office of Evaluation and Inspections, where she devotes her attention to evaluations of the Medicare and Medicaid programs. Jack Molnar and Brenda Stup are senior analysts in the Office of Evaluation and Inspections and are both currently involved in evaluations involving Social Security issues. All four have published articles on program evaluation and related topics in professional journals and books. Together, the authors have over 50 years of hands-on experience in conducting studies of over 250 programs within HHS.

CHAPTER 1

MAKING THE COMMITMENT

The American public is demanding better government. As the private sector devotes more attention to meeting customers' needs, people want and expect the same responsiveness from government. We look to the federal government to provide for a common defense, to collect taxes, to assist the needy, to regulate health care, to monitor air quality, to operate parks, to keep defective products off the market,...the list goes on and on. However, the staffing levels and budgets that previously sustained these programs and services are shrinking.

Is it really possible to "do more with less," and "work smarter, not harder"? The evidence from the private sector seems to say it is. Over the last decade or more, innovative managers in a number of industries have shown us a virtual quality explosion coupled with significant cost reductions. They did it by investing in employee training and modern equipment, reducing the ranks of middle management and empowering all staff, redesigning products to stress quality and "delight" customers, rethinking basic processes, and focusing on the long term. This is how the U. S. automotive industry, particularly Ford and Chrysler, turned itself around and became competitive again.

People have begun to realize that if such dramatic improvement can be achieved in the private sector, it can be accomplished in the public sector as well. We are seeing the results of this awareness in several initiatives to improve accountability in the management of federal programs.

Reporting Out the Results. In November 1990, the Congress passed and the President signed the Chief Financial Officers Act. One of the objectives of the Act is to "provide for the production of complete, reliable, timely, and consistent financial information for use by the executive branch of the government and the Con-

gress in the financing, management, and evaluation of federal programs." The Act also requires agencies to collect information needed for "the systematic measurement of performance" and to report the information in their financial statements. Managers of federal agencies covered by the Act are required to establish indicators for assessing their programs and to report the results of their assessments to the Congress. The measurements can include inputs, outputs, outcomes, and impacts. Managers will now be held publicly accountable for program accomplishments.

The Government Performance and Results Act of 1993 further strengthens federal government accountability by mandating quantifiable program results. In passing this law, the Congress set out to "improve the confidence of the American people in the capability of the federal government, by systematically holding federal agencies accountable for achieving program results." The law requires each agency to "establish performance indicators to be used in measuring or assessing the relevant outputs, service levels, and outcomes of each program activity."

Managing for Quality. These new requirements for accountability to the Congress, and, more importantly, to the taxpayer, demand new information-gathering strategies for managing federal programs. As we noted in the introduction, current management information systems often provide a profusion of data without answering basic questions about program effectiveness. A change in philosophy within government highlights this "information deficit" perhaps more than any new statute. Learning the lessons of the private sector, many public managers have adopted Total Quality Management (TQM) as a guide to improving performance. While there are differences among approaches to TQM, all have in common some basic tenets: continuous improvement, client focus, employee empowerment, investment in training, strategic planning, and quality measurement.

TQM requires good information. To continuously improve your program, you have to know which processes and systems need improving and where the biggest impact on your operations

can be gained by new strategies and ways of doing business. You will need to evaluate the effects of the changes you make, to determine when new problems crop up, and to deal with unforeseen obstacles that prevent you from achieving the good results you intend. You will need to set performance standards appropriate to the fundamental purpose of your organization. By showing progress toward those standards, you can convince others of the value of your improvements. Documented progress will help garner support from your staff and, eventually, the public. It will enable you to build on your successful initiatives. Further, it will assist the executive and legislative branches in resource allocation, to your benefit.

However, good measurement systems need "care and feeding"—ongoing analysis and refinement. This requires some investment in establishing and maintaining those systems. TQM teaches us to consult regularly with our customers, in our case, the public, the Congress, and other organizations impacted by our products, in instituting performance standards and measurement systems.

Reinventing Government. These new philosophies about government's role and about how government should respond to changing expectations are described in Osborne and Gaebler's book *Reinventing Government.* By challenging many of the traditional roles and methods of government, Osborne and Gaebler demand that public managers reassess what they do. One of the most notable responses to this challenge has been Vice President Gore's 1993 National Performance Review (NPR). Modeled after the Texas Performance Review, the NPR entailed a major assessment of all federal programs. On a smaller scale, such efforts now are taking place at all levels of government, and not as one-time reviews. We are entering a period where programs need to "reinvent" themselves as times and challenges change. You as a program manager will need to evaluate your agency's performance and to assess the external environment on an ongoing basis to ensure your success.

Do it First or Others Will Do it for You. The forces of change are evident. New laws call for the reform and use of financial and other performance information systems to better plan and assess program effectiveness. Management philosophies like TQM have gained legitimacy and achieved success by focusing on quality, clients, and performance measurement. The Vice President personally, through the NPR, has led an effort to assess every federal program with an eye toward giving citizens their money's worth, and this movement is evident at all levels of government.

The direction is clear. To be successful, government managers will have to develop the skills and tools to evaluate program performance. Your ability to respond to public pressure for effective and efficient service delivery will depend on your ability to get the information you need when you need it. You can plan an active evaluation program to meet your own information needs and set your own performance standards...or you can wait for others tell you what to do.

First Choices. Evaluation, as we defined it earlier, means obtaining information for use in decision-making. So the first step in deciding what kinds of evaluations you should undertake is to decide what your questions are. Some examples of key questions that may not be easily answered from data you now collect are: What are the unintended harmful effects of your program or bottlenecks impeding efficient service? How do beneficiaries, interest groups, or your own workers view the program? How vulnerable is your program to criminal abuse?

The next chapter contains basic information about how to evaluate these types of issues. The chapters that follow describe a number of specific types of evaluation techniques we employ that you may want to use to help answer your key questions.

- Client satisfaction surveys determine how the beneficiaries of your program or others affected by it feel about it. This technique can be used to monitor performance over time and to help pinpoint problems, successes, and areas for improvement.

- Performance indicator studies help you forge ahead in the movement to development performance indicators and measures by identifying and testing these yardsticks for program success.

- Compliance reviews assess how well your program is doing at meeting its legal or regulatory requirements.

- Effective practice reviews identify and describe methods that work better than others and why.

- Early implementation reviews provide an immediate reading on how well a new program is operating. They emphasize identifying problem areas so you can take corrective action quickly.

- Emerging issue reviews gather information on emerging problems or opportunities that require your attention.

The last chapter deals with other early decisions concerning how you might go about building an evaluation capacity. The possibilities include contracting the work out, either by individual study or on a long-term basis; hiring professional evaluators to become part of your staff; or developing the evaluation skills of your current employees.

CHAPTER 2

WHAT'S IT ALL ABOUT?

Evaluation is a process for getting information. Like most processes, an evaluation has definable phases and technical components. Fortunately, evaluation has a lot to do with common sense. It's useful to think of an evaluation as having four distinct phases:

- *Design.* You'll need a plan of attack. What is the purpose of your evaluation? What are the specific questions you hope to answer? What information do you need and how will you collect it? How will you use this information to accomplish your original purpose?

- *Data Collection.* You'll need to collect the right information and make sure it's accurate. What information is available and how do you go about getting it? Who will be responsible for interviewing key people, reviewing policies and procedures, and obtaining data from records? How do you make sure the information you get is reliable?

- *Data Analysis.* Once you have all the information, you'll need to make good use of it. How does it answer your study questions? How do you learn all you can from it? How do you separate the wheat from the chaff? This is the stage in which you distill key findings from your data and develop recommendations for action.

- *Presentation.* After you develop findings and recommendations, you'll probably want to share your results with others, perhaps a variety of people with different backgrounds and interests. How do you present the information you've collected in a compelling way that makes sense to all your audiences?

Understanding these phases, and some technical concepts that are important for each one, will give you a frame of reference for our later discussion of evaluation strategies.

Designing the Evaluation. We strongly believe a good design is the most important element of a successful evaluation. However, since this phase is less visible than others, it may be the one where you are most tempted to cut corners. PLEASE DON'T! A comprehensive design process ensures that the evaluation is targeted to critical issues (and that your report will be used, not just added to a pile on someone's desk). A well-crafted design lays out a coherent strategy for the implementation phases—collecting, analyzing, and presenting the data. It helps everyone working on the project stay focused and "on task." Consequently, we urge you to spend the time and resources to do it well, and we will devote some effort here to helping you do this.

Purpose. The first and maybe the hardest part of the design phase is formulating the purpose. It might seem like a simple and straightforward task to write a purpose statement and a list of questions you want the study to answer. However, to truly focus an evaluation, the purpose statement should be *complete, concise,* and *concrete.* A complete yet concise statement sets out exactly what you intend to do—no more and no less. "Concrete" means your goal is real and measurable. Avoid vague purposes that begin "To review," "To explore," or "To study." Instead, the statement should call for a specific action, such as to determine, to identify, or to measure, for example, "To describe the enforcement of State laws prohibiting the sale of cigarettes to minors."

As you develop the purpose statement, be sure to identify and respond to the needs of the study's sponsor, whether that is you, the program manager; a congressional committee; your boss; or the budget office. Ask yourself if fulfilling the purpose as you've stated it will meet those needs. If not, go back to the drawing board.

Issues. The purpose statement should be supported by issues. These are the key questions that are directly relevant to your purpose and which your evaluation will attempt to answer. We cannot overemphasize the need for "doing your homework" as you develop your study issues. Learn the history of the program and review previous studies related to your purpose. Talk with knowledgeable people. Developing the issues is generally a very unstructured, informal, and iterative process, and the insights to be gained are absolutely critical to a successful evaluation.

While the issue questions need to address the purpose of the evaluation fully, their connection should be solid. A tightly focused study represents the best use of your resources. If you find your list of key issues expanding beyond three or four, it may be a good idea to revisit the purpose statement to see if the scope of your review is too broad or if you're getting sidetracked. Each issue you choose to examine may have several sub-issues associated with it, but you should be able to explain the focus of your review to your sponsor or audience in a few minutes. Limiting the number of issues forces you to concentrate on those that are the most important.

Your sub-issues, or study questions, should point directly to the data you will need to collect. As you develop the sub-issues, avoid the tendency to pose questions that would be easy to answer but fail to yield useful information. One way to do this is to ask yourself, "What action could I take with this piece of information?" Questions that are too vague can mean different things to different people. Our advice here is to be specific. For example, you may have identified an issue such as, "What do our clients think of our new application form?" Go on to questions like "What do our clients like or dislike about our new application form?" "Do our clients find the instructions on the new application form helpful or confusing?" "Is the new form easier or harder to understand than the old form?" Specific questions will be more likely to give you information you can act on to improve your program. Well developed issues and sub-issues provide a solid foundation for the entire study.

Methodology. The methodology part of the design describes the data sources to be used and how you will select and access them. Many data sources and methodological approaches are possible. We'd like to limit this part of our discussion to those that you may find helpful in conducting the kinds of evaluations we present later on.

Data sources include individuals (e.g., program clients, program officials, or interest group officials), case files, policy and procedure manuals, or even the evidence of your own eyes. In our work, we often use several data sources for a single evaluation because we recognize that each has its own bias. That is, each data source may be undependable in some way. Respondents may not be objective. Case files may be missing important pieces of information. Procedure manuals may tell us how things are supposed to work, but not how they actually work. Even our own eyes may deceive us if we fail to recognize or understand what we see.

Of course, the most important factor in deciding which data sources to use is how well they will answer your questions. Some other practical considerations include: how easy it will be to access the data; how consistent, complete and reliable the data are; and how easy the data will be to analyze. A final consideration, and an extremely important one, is whether the information you get from these data sources will be convincing. It's often helpful to discuss your decisions about methodology with key audiences before proceeding with the evaluation. Even statistically valid data may not convince people if that isn't what they believe is needed to prove a point. This doesn't mean you have to give them exactly what they want, no matter what. But you should be sensitive to which arguments and data will convince the skeptical audience, regardless of the outcome. Find out whether the sources and levels of evidence you've chosen will convince them to accept your results.

Once you've decided which data sources to use, the next question is how to select and access them. If you're going to interview

clients, which clients (of maybe millions) should you interview? If you're going to look at case files, which ones should you examine? The answer is, "It depends." It depends on your purpose, your audience, your resources, and your capabilities.

Sometimes it is important to find and examine all instances of a phenomenon. A good illustration of this is a review we did of U. S. hospitals that closed. The Secretary of HHS asked us to examine every closure of certain hospitals over the prior year to determine whether Medicare payment rates were responsible. We looked at all 69 of these hospitals that closed in 1987 and found that few Medicare patients had been using them, so Medicare payments had had little effect. We didn't have to convince anyone that our findings applied to all the closed hospitals, because we had original data on every one of them (OEI, 1992c).

If resource constraints had made it impossible to access all the closed hospitals, we could have selected a sample of them to examine. When this is your situation, normally you'll want to use a sample that is representative of the larger group, so you can talk not only about the cases you examined, but also about the cases you *didn't* examine. How can you do this and be confident in your results?

The most straightforward technique is a simple random sample. This method assures that each and every case has an equal chance of being selected for your sample. If you select a sufficient number of cases using a random sample, you can confidently project your results to the entire group of cases. Of course, any sample may be biased in some way. However, a random sample maximizes your chances of selecting cases that represent the group. This method also lets you calculate the likelihood that you might be wrong and the extent of how wrong you could be. As a result, random sampling gives you and your audience confidence in your statements. This can help you convince others that the issue you identified is an important one. Moreover, it can be extremely valuable when your issue already is being hotly debated and you need to defend your findings from possible attack.

A common misconception is that the best studies use the largest samples. On the contrary, far better results may come from using a sound statistical technique to select a smaller but representative sample, and then using the savings to fine-tune your questionnaire or to achieve a higher response rate. In selecting a sample of any kind and performing calculations of confidence and precision, you'll need statistical expertise, your own or from someone on your staff or an outside consultant. If not available in-house, your parent organization probably has a component that specializes in providing this kind of assistance. If you don't have a background in statistics, you might find it helpful to take an introductory course, such as one offered by the Office of Personnel Management, "Statistics for Management." This will give you an understanding of basic statistical concepts and will enrich your partnership with statistical consultants.

As you plan a particular evaluation, you may find that using a simple random sample would be too difficult or time consuming, or would be inappropriate. This could happen because cases are spread over too broad a geographic area or because the incidence of the factor you want to study is so low that the required sample size would be too large to manage. For such situations, which are not uncommon, there are other selection options. These include other forms of random sampling, such as staged or hierarchical sampling, and non-random sampling, known as purposeful or judgmental sampling. Another selection approach is the case study which uses one of the sampling techniques above to select cases in a confined area.

For example, we used a two-stage random sample to answer a congressional inquiry about physicians who referred Medicare patients to clinical laboratories in which the doctor had an ownership interest (OEI, 1989b). In the first stage, we randomly selected 10 areas of the country. In the second stage, we randomly selected Medicare beneficiaries *in those areas* who had received laboratory services. We sent questionnaires to the laboratories that had provided these services to determine if they were physician-owned; we also randomly selected physicians who billed

Medicare and asked them if they had ownership in facilities to which they referred their patients. Thus we were able to estimate how many Medicare physicians owned facilities to which they referred their patients and how many facilities billed Medicare for laboratory services that were physician-owned. Because using a pure random sample would have involved data collection all over the country, we compromised by selecting a limited number of geographic locations and then selecting beneficiaries and physicians in those locations. However, because we randomly chose the locations, we retained the ability to project our results nationally.

Purposeful sampling involves selecting sites or individuals with a specific intent, rather than leaving the selection to chance. Some form of random sample is preferable to a purposeful sample if your goal is to estimate or describe the characteristics of a larger group. On the other hand, you may not need to project the results to make a case for your findings if, for example, you selected the eight States with the highest rates for a particular event and this represents 90 percent of the events for the country. You may be satisfied to talk about the 90 percent. However, you do need to be careful not to assume or imply that your results are representative of the country as a whole.

Another selection technique to consider is the case study. While non-random case study results cannot be projected to a larger group, this option provides for in-depth examination of issues, processes, or outcomes at a particular site. Case studies attempt to describe the range and nature of the event under study in a confined environment and can provide interesting insights and pinpoint areas needing further study. They can answer questions of how much or how frequently with precision, but only for the site under review. When you've chosen a case study approach to examine a phenomenon or issue, be careful not to extrapolate your findings. Also be wary of a tendency of your audience to "project" your results for you, regardless of how scrupulous you are in reporting them.