

SECTION I

The Context of Health Program Development

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CHAPTER 1

Context of Health Program Development and Evaluation

Health is not a state of being that can easily be achieved through isolated, uninformed, individualistic actions. *Health* of individuals, of families, and of populations is a state in which physical, mental, and social well-being are integrated to enable optimal functioning. From this perspective, achieving and maintaining health across a life span is a complex, complicated, intricate affair. For some, health is present irrespective of any special efforts or intention. For most of us, health requires, at a minimum, some level of attention and specific information. It is through health programs that attention is given focus and information is provided or made available, but that does not guarantee that the attention and information are translated into actions or behaviors needed to achieve health. Thus, those providing health programs, however large or small, need to understand both the processes whereby those in need of attention and health information can receive what is needed, and also the processes by which to learn from the experience of providing the health program.

The processes and effects of health program planning and evaluation are the subjects of this text. The discussion begins here with a brief overview of the historical context. This background sets the stage for appreciating the considerable number of publications on the topic of health program planning and evaluation, and for acknowledging the professionalization of evaluators. The use of the term *processes* to describe the actions involved in health program planning and evaluation is intended to denote action, cycles, and open-endedness. This chapter introduces the planning and evaluation cycle, and the interactions and iterative nature of this cycle are stressed throughout the text. Because health is an individual, aggregate, and population phenomenon, health programs need to be conceptualized across those levels. The public health pyramid, introduced in this chapter, is used throughout the text as a tool for conceptualizing and actualizing health programs for individuals, aggregates, and populations.

► History and Context

An appropriate starting point for this text is reflecting on and understanding what “health” is, along with having a basic appreciation for the genesis of the fields of health program planning and evaluation. A foundation in these elements is key to becoming an evaluation professional.

Concept of Health

To begin the health program planning and evaluation cycle requires first reflecting on the meaning of health. Both explicit and implicit meanings of health can dramatically influence what is considered the health problem and the subsequent direction of a program. The most widely accepted definition of *health* is that put forth by the World Health Organization (WHO), which for the first time defined health as more than the absence of illness and as the presence of well-being (WHO, 1947).

Since the publication of the WHO definition, health has come to be viewed across the health professions as a holistic concept that encompasses the presence of physical, mental, developmental, social, and financial capabilities, assets, and balance. This idea does not preclude each health profession from having a particular aspect of health to which it primarily contributes. For example, a dentist contributes primarily to a patient’s oral health, knowing that the state of the patient’s teeth and gums has a direct relationship to his or her physical and social health. Thus the dentist might say that the health problem is caries. The term *health problem* is used, rather than *illness*, *diagnosis*, or *pathology*, in keeping with the holistic view that there can be problems, deficits, and pathologies in one component of health while the other components remain “healthy.” Using the term *health problem* also makes it easier to think about and plan health programs for aggregates of individuals. A community, a family, and a school can each have a health problem that is the focus of a health program intervention. The extent to which the health program planners have

a shared definition of health and have defined the scope of that definition influences the nature of the health program.

Health is a matter of concern for more than just health professionals. For many Americans, the concept of health is perceived as a right, along with civil rights and liberties. The right to health is often translated by the public and politicians into the perceived right to have or to access health care. This political aspect of health is the genesis of health policy at the local, federal, and international levels. The extent to which the political nature of health underlies the health problem of concern being programmatically addressed also influences the final nature of the health program.

Health Programs, Projects, and Services

What distinguishes a program from a project or from a service can be difficult to explain, given the fluidity of language and terms. The term *program* is fairly generic but generally connotes a structured effort to provide a specific set of services or interventions. In contrast, a *project* often refers to a time-limited or experimental effort to provide a specific set of services or interventions through an organizational structure. In the abstract, a *service* can be difficult to define but generally includes interaction between provider and client, an intangibility aspect to what is provided, and a nonpermanence or transitory nature to what is provided. Using this definition of service, it is easy to see that what is provided in a health program qualifies as a service, although it may not be a health service.

A *health program* is a totality of an organized structure designed for the provision of a fairly discrete health-focused intervention, where that intervention is designed for a specific target audience. By comparison, *health services* are the organizational structures through which providers interact with clients or patients to meet the needs or address the health problems of the clients or patients. Health programs, particularly

in public health, tend to provide educational services, have a prevention focus, and deliver services that are aggregate or population-focused. In contrast, health services exist exclusively as direct services. Recognizing the distinction between health programs and health services is important for understanding the corresponding unique planning and evaluation needs of each.

History of Health Program Planning and Evaluation

The history of planning health programs has a different lineage than that of program evaluation. Only relatively recently, in historical terms, have these lineages begun to overlap, with resulting synergies. Planning for health programs has the older history, if public health is considered. Rosen (1993) argued that public health planning began approximately 4,000 years ago with planned cities in the Indus Valley that had covered sewers. Particularly since the Industrial Revolution, planning for the health of populations has progressed, and it is now considered a key characteristic of the discipline of public health.

Blum (1981) related *planning* to efforts undertaken on behalf of the public well-being to achieve deliberate or intended social change as well as providing a sense of direction and alternative modes of proceeding to influence social attitudes and actions. Others (Dever, 1980; Rohrer, 1996; Turnock, 2004) have similarly defined planning as an intentional effort to create something that has not occurred previously for the betterment of others and for the purpose of meeting desired goals. The purpose of planning is to ensure that a program has the best possible likelihood of being successful, defined in terms of being effective with the least possible resources. Planning encompasses a variety of activities undertaken to meet this purpose.

The quintessential example of planning is the development and use of the *Healthy People* goals. In 1979, *Healthy People* (U.S. Department of Health, Education, and Welfare [DHEW], 1979) was published as an outgrowth of the

need to establish an illness prevention agenda for the United States. The companion publication, *Promoting Health/Preventing Disease* (U.S. Department of Health and Human Services [DHHS], 1980), marked the first time that goals and objectives regarding specific areas of the nation's health were made explicit, with the expectation that these goals would be met by the year 1990. *Healthy People* became the framework for the development of state and local health promotion and disease prevention agendas. Since its initial publication, the U.S. goals for national health have been revised and published as *Healthy People 2000* (DHHS, 1991), *Healthy Communities 2000* (American Public Health Association [APHA], 1991), *Healthy People 2010* (DHHS, 2000), and *Healthy People 2020* (DHHS, 2011), with development of *Healthy People 2030* underway. Other nations also set health status goals and international organizations, such as the World Health Organization (WHO) and Pan American Health Organization (PAHO), develop health goals applicable across nations.

The evolution of *Healthy People* goals also reflects the accelerating rate of emphasis on nationwide coordination of health promotion and disease prevention efforts and a reliance on systematic planning to achieve this coordination. The development of the *Healthy People* publications also reflects the underlying assumption that planning is a rational activity that can lead to results. However, at the end of each 10-year cycle, many of the U.S. health objectives were not achieved, reflecting the potential for planning to fail. Given this failure potential, this text emphasizes techniques to help future planners of health programs to be more realistic in setting goals and less dependent upon a linear, rational approach to planning.

The *Healthy People 1990* objectives were developed by academics and clinician experts in illness prevention and health promotion. In contrast, development of the goals and health problems listed in *Healthy People 2010* and *Healthy People 2020* incorporated ideas generated at public forums and through Internet commentary; these ideas later were revised and refined by expert panels before final publication of the

objectives. Greater participation of the public during the planning stage of health programs has become the norm. In keeping with the emphasis on participation, the role and involvement of stakeholders are stressed at each stage of the planning and evaluation cycle.

The history of evaluation, from which the evaluation of health programs grew, is far shorter than the history of planning, beginning roughly in the early 1900s, but it is equally rich in important lessons for future health program evaluators. The first evaluations were done in the field of education, particularly as student assessment and evaluation of teaching strategies gained interest (Patton, 2008). Assessment of student scholastic achievement is a comparatively circumscribed outcome of an educational intervention. For this reason, early program evaluators came from the discipline of education, and it was from the fields of education and educational psychology that many methodological advances were made and statistics developed.

Guba and Lincoln (1987) summarized the history of evaluations by proposing generational milestones or characteristics that typify distinct generations. Later, Swenson (1991) built on their concept of generations by acknowledging that subsequent generations of evaluations will occur. Each generation incorporates the knowledge of early evaluations and extends that knowledge based on current broad cultural and political trends.

Guba and Lincoln (1987) called the first generation of evaluations in the early 1900s “the technical generation.” During this time, nascent scientific management, statistics, and research methodologies were used to test interventions. Currently, evaluations continue to incorporate the rationality of this generation by using activities that are systematic, science based, logical, and sequential. Rational approaches to evaluations focus on identifying the best-known intervention or strategy given the current knowledge, measuring quantifiable outcomes experienced by program participants, and deducing the degree of effect from the program.

The second generation, which lasted until the 1960s, focused on using goals and objectives

as the basis for evaluation. Second-generation evaluations were predominantly descriptive. With the introduction in the 1960s of broad innovation and initiation of federal social service programs, including Medicare, Medicaid, and Head Start, the focus of evaluations shifted to establishing the merit and value of the programs. Because of the political issues surrounding these and similar federal programs, determining whether the social policies were having any effect on people became a priority. Programs needed to be judged on their merits and effectiveness. The U.S. General Accounting Office (GAO; now called the Government Accountability Office) had been established in 1921 for the purpose of studying the utilization of public finances, assisting Congress in decision making with regard to policy and funding, and evaluating government programs. The second-generation evaluation emphasis on quantifying effects was spurred, in part, by reports from the GAO that were based on the evaluations of federal programs.

Typically, the results of evaluations were not used in the “early” days of evaluating education and social programs. That is, federal health policy was not driven by whether evaluations showed the programs to be successful. Although the scientific rigor of evaluations improved, their usefulness remained minimal. Beginning in the 1980s, however, the third generation of evaluations—termed “the negotiation generation” or “the responsiveness generation”—began. During this generation, evaluators began to acknowledge that they were not autonomous and that their work needed to respond to the needs of those being evaluated. As a result of this awareness, several lineages have emerged. These lineages within the responsiveness generation account for the current diversity in types, emphases, and philosophies related to program evaluation.

One lineage is utilization-focused evaluation (Patton, 2012), in which the evaluator’s primary concern is with developing an evaluation that will be used by the stakeholders. Utilization-focused evaluations are built on the following premises (Patton, 1987): Concern for use of the evaluation pervades the evaluation from beginning to end;

evaluations are aimed at the interests and needs of the users; users of the evaluation must be invested in the decisions regarding the evaluation; and a variety of community, organizational, political, resource, and scientific factors affect the utilization of evaluations. Utilization-focused evaluation differs from evaluations that are focused exclusively on outcomes

Another lineage is participatory evaluation (Whitmore, 1998), in which the evaluation is merely guided by the expert and is actually generated by and conducted by those invested in the health problem. A participatory or empowerment approach invites a wide range of stakeholders into the activity of planning and evaluation, providing those participants with the skills and knowledge to contribute substantively to the activities and fostering their sense of ownership of the product (TABLE 1-1).

The fourth generation of evaluation, which emerged in the mid-1990s, seems to be meta-evaluation, that is, the evaluation of

evaluations done across similar programs. This trend in program evaluation parallels the trend in social science toward using meta-analysis of existing studies to better understand theorized relationships and the trend across the health professions toward establishing evidence-based practice guidelines. This new generation became possible because of a pervasive culture of evaluation in the health services and because of the availability of huge data sets for use in the meta-evaluations. An early example of the evaluation culture was the mandate from United Way, a major funder of community-based health programs, for their grantees to conduct outcome evaluations. To help grantees meet this mandate, United Way published a user-friendly manual (United Way of America, 1996) that could be used by nonprofessionals in the development of basic program evaluations. More broadly, the culture of evaluation can be seen in the explicit requirement of federal agencies that fund community-based health programs that

TABLE 1-1 Comparison of Outcome-Focused, Utilization-Focused, and Participatory Focused Evaluations

	Outcome-Focused Evaluations	Utilization-Focused Evaluations	Participatory Focused Evaluations
Purpose	Show program effect	Get stakeholders to use evaluation-findings for decisions regarding program improvements and future program development	Involve the stakeholders in designing programs and evaluations, and utilizing findings
Audience	Funders, researchers, other external audience	Program people (internal audience), funders	Those directly concerned with the health problem and program
Method	Research methods, external evaluators (usually)	Research methods, participatory	Research methods as implemented by the stakeholders

such programs include evaluations conducted by local evaluators.

Most people have an intuitive sense of what evaluation is. The purpose of evaluation can be to measure the effects of a program against the goals set for it and thus to contribute to subsequent decision making about the program (Weiss, 1972). Alternatively, evaluation can be defined as “the use of social research methods to systematically investigate the effectiveness of social intervention programs in ways that are adapted to their political and organizational environments and are designed to inform social action to improve social conditions” (Rossi, Lipsey, & Freeman, 2004, p. 16). Others (Herman, Morris, & Fitz-Gibbon, 1987) have defined evaluation as judging how well policies and procedures are working or as assessing the quality of a program. These definitions of evaluation all remain relevant.

Inherently these definitions of evaluation have an element of being judged against some criteria. This implicit understanding of evaluation leads those involved with the health program to feel as though they will be judged or found not to meet those criteria and will subsequently experience some form of repercussions. They may fear that they as individuals or as a program will be labeled a failure, unsuccessful, or inadequate. Such feelings must be acknowledged and addressed early in the planning cycle. Throughout the planning and evaluation cycle, program planners have numerous opportunities to engage and involve program staff and stakeholders in the evaluation process. Taking advantage of these opportunities goes a long way in alleviating the concerns of program staff and stakeholders about the judgmental quality of the program evaluation.

► Evaluation as a Profession

A major development in the field of evaluation has been the professionalization of evaluators. The American Evaluation Association (AEA)

serves evaluators primarily in the United States. Several counterparts to the AEA exist, such as the Society for Evaluation in the United Kingdom and the Australian Evaluation Society. The establishment of these professional organizations, whose members are evaluators, and the presence of health-related sections within these organizations demonstrate the existence of a field of expertise and of specialized knowledge regarding the evaluation of health-related programs.

As the field of evaluation has evolved, so have the number and diversity of approaches that can guide the development of evaluations. Currently, 23 different approaches to evaluation have been identified, falling into 3 major groups (Stufflebeam & Coryn, 2014). One group of evaluations is oriented toward questions and methods such as objectives-based studies and experimental evaluations. The second group of evaluations is oriented toward improvements and accountability and includes consumer-oriented and accreditation approaches. The third group of evaluations includes those that have a social agenda or advocacy approach, such as responsive evaluations, democratic evaluations, and utilization-focused evaluation. They also acknowledge pseudo-evaluations and quasi-evaluations as distinct groups, reflecting the continuing evolution of the field of evaluation.

Several concepts are common across the types of evaluations—namely, pluralism of values, stakeholder constructions, fairness and equity regarding stakeholders, the merit and worth of the evaluation, a negotiated process and outcomes, and full collaboration. These concepts have been formalized into the standards for evaluations that were established by the Joint Commission on Standards for Educational Evaluation in 1975 (American Evaluation Association, 2011). Currently, this Joint Commission includes many organizations in its membership, such as the American Evaluation Association and the American Educational Research Association.

The five standards of evaluation established by the American Evaluation Association are utility, feasibility, propriety, accuracy, and evaluation

TABLE 1-2 Evaluation Standards Established by the Joint Commission on Standards for Educational Evaluation

Standard	Description
Utility	To increase the extent to which program stakeholders find evaluation processes and products valuable in meeting their needs.
Feasibility	To increase evaluation effectiveness and efficiency.
Propriety	To support what is proper, fair, legal, right, and just in evaluations.
Accuracy	To increase the dependability and truthfulness of evaluation representations, propositions, and findings, especially those that support interpretations and judgments about quality.
Evaluation accountability	To encourage adequate documentation of evaluations and a meta-evaluative perspective focused on improvement and accountability for evaluation processes and products.

Data from American Evaluation Association (2012).

accountability (**TABLE 1-2**; American Evaluation Association, 2011).

The utility standard specifies that an evaluation must be useful to those who requested the evaluation. A useful evaluation shows ways to make improvements to the intervention, increase the efficiency of the program, or enhance the possibility of garnering financial support for the program. The feasibility standard denotes that the ideal may not be practical. Evaluations that are highly complex or costly will not be done by small programs with limited capabilities and resources. Propriety is the ethical and politically correct component of the standards. Evaluations can invade privacy or be harmful to either program participants or program staff members. The propriety standard also holds evaluators accountable for upholding all of the other standards. Accuracy is essential and is achieved through the elements that constitute scientific rigor. These established and accepted standards for evaluations reflect current norms

and values held by professional evaluators and deserve attention in health program evaluations. The existence and acceptance of standards truly indicates the professionalism of evaluators.

Achieving these standards requires that those involved in the program planning and evaluation have experience in at least one aspect of planning or evaluation, whether that is experience with the health problem; experience with epidemiological, social, or behavioral science research methods; or skill in facilitating processes that involve diverse constituents, capabilities, and interests. Program planning and evaluation can be done in innumerable ways, with no single “right way.” This degree of freedom and flexibility can feel uncomfortable for some people. As with any skill or activity, until they have experience, program planners and evaluators may feel intimidated by the size of the task or by the experience of others involved. To become a professional evaluator, therefore, requires a degree of willingness to learn, to grow, and to be flexible.

Who Does Planning and Evaluations?

Many different types of health professionals and social scientists can be involved in health program planning and evaluation. At the outset of program planning and evaluation, some trepidation revolves around who ought to be the planners and evaluators. In a sense, almost anyone with an interest and a willingness to be an active participant in the planning or evaluation process could be involved, including health professionals, businesspersons, paraprofessionals, and advocates or activists.

Planners and evaluators may be employees of the organization about to undertake the activity, or they may be external consultants hired to assist in all phases or just a specific phase of the planning and evaluation cycle. Internal and external planners and evaluators each have their advantages and disadvantages. Regardless of whether an internal or external evaluator is used, professional stakes and allegiances ought to be acknowledged and understood as factors that can affect the decision making.

Planners and evaluators from within the organization are susceptible to biases, consciously or not, in favor of the program or some aspect of the program, particularly if their involvement can positively affect their work. On the positive side, internal planners and evaluators are more likely to have insider knowledge of organizational factors that can be utilized or may have a positive effect on the delivery and success of the health program. Internal evaluators may experience divided loyalties, such as between the program and their job, between the program staff members and other staff, or between the proposed program or evaluation and their view of what would be better.

A source of internal evaluators can be members of quality improvement teams, particularly if they have received any training in program development or evaluation as they relate to quality improvement. The use of total quality management (TQM), continuous quality improvement (CQI), and other quality improvement methodologies by healthcare

organizations and public health agencies can be integral to achieving well-functioning programs.

External evaluators can bring a fresh perspective and a way of thinking that generates alternatives not currently in the agencies' repertoire of approaches to the health problem and program evaluation. Compared to internal evaluators, external evaluators are less likely to be biased in favor of one approach—unless, of course, they were chosen for their expertise in a particular area, which would naturally bias their perspective to some extent. External program planners and evaluators, however, can be expensive consultants. Some organizations that specialize in health program evaluations serve as one category of external evaluator. These research firms receive contracts to evaluate health program initiatives and conduct national evaluations that require sophisticated methodology and considerable resources.

The question of who does evaluations also can be answered by looking at who funds health program evaluations. From this perspective, organizations that do evaluations as a component of their business are the answer to the question, Who does evaluations? Although most funding agencies prefer to fund health programs rather than stand-alone program evaluations, some exceptions exist. For example, the Agency for Healthcare Research and Quality (AHRQ) funds health services research about the quality of medical care, which is essentially effect evaluation research. Other federal agencies, such as the National Institutes of Health and the bureaus within the Department of Health and Human Services, fund evaluation research of pilot health programs. However, the funding priorities of these federal agencies change to be consistent with federal health policy. This is a reminder that organizations funding and conducting health program evaluations evolve over time.

Roles of Evaluators

Evaluators may be required to take on various roles, given that they are professionals involved in a process

that very likely involves others. For example, as the evaluation takes on a sociopolitical process, the evaluators become mediators and change agents. If the evaluation is a learning–teaching process, evaluators become both teacher and student of the stakeholders. To the extent that the evaluation is a process that creates a new reality for stakeholders, program staff members, and program participants, evaluators are reality shapers. Sometimes the evaluation may have an unpredictable outcome; at such times, evaluators are human instruments that gauge what is occurring and analyze events. Ideally, evaluations are a collaborative process, and evaluators act as collaborators with the stakeholders, program staff members, and program participants. If the evaluation takes the form of a case study, the evaluators may become illustrators, historians, and storytellers.

These are but a few examples of how the roles of the professional program evaluator evolve and emerge from the situation at hand. The individual's role in the planning and evaluation activities may not be clear at the time that the project is started. Roles will develop and evolve as the planning and evaluation activities progress.

► Planning and Evaluation Cycle

Although planning and evaluation are commonly described in a linear sequential manner, they actually constitute a cyclical process. In this section, the cycle is described along with an emphasis on factors that enhance and detract from that process being effective.

Interdependent and Cyclic Nature of Planning and Evaluation

A major premise running through the current thinking about programs and evaluation is that the activities constituting program planning and program evaluation are cyclical and interdependent

(**FIGURE 1-1**) and that the activities occur more or less in stages or sets of activities. The stages are cyclical to the extent that the end of one program or stage flows almost seamlessly into the next program or planning activity. The activities are interdependent to the extent that the learning, insights, and ideas that result at one stage are likely to influence the available information and thus the decision making and actions of another stage. Interdependence of activities and stages ideally result from information and data feedback loops that connect the stages.

Naturally, not all of the possible interactions among program planning, implementation, and evaluation are shown in Figure 1-1. In reality, the cyclical or interactive nature of health program planning and evaluation exists in varying degrees. In the ideal, interactions, feedback loops, and reiterations of process would be reflected throughout this text. For the sake of clarity, however, the cycle is presented in a linear fashion in the text, with steps and sequences covered in an orderly fashion across the progression of chapters. This pedagogical approach belies the true messiness of health program planning and program evaluation. Because the planning and evaluation cycle is susceptible to and affected by external influences, to be successful as a program planner or evaluator requires a substantial degree of flexibility and creativity in recovering from these influences.

The cycle begins with a trigger event, such as awareness of a health problem; a periodic strategic planning effort; a process required by a stakeholder, such as a 5-year strategic planning process or a grant renewal; or newly available funds for a health program. An indirect trigger for planning could be information generated from an evaluation that reveals either the failure of a health program, extraordinary success of the program, or the need for additional programs. The trigger might also be a news media exposé or legal action. For those seeking to initiate the planning process, getting the attention of influential individuals requires having access to them, packaging the message about the need for planning in ways that are immediately attractive,

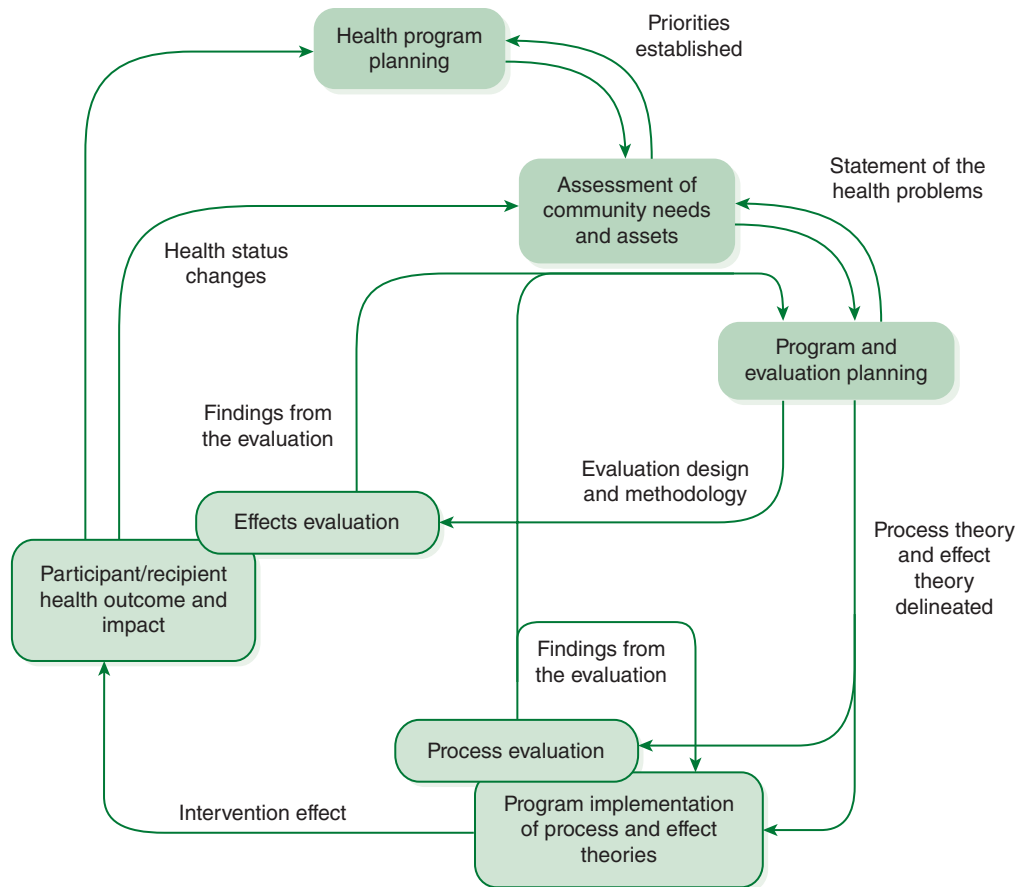


FIGURE 1-1 The Planning and Evaluation Cycle

and demonstrating the salience of the issue. Thus, to get a specific health problem or issue “on the table,” activists can use the salient events to get the attention of influential individuals. The importance of having a salient trigger event is to serve as a reminder that key individuals mentally sort through and choose among competing attention getters. This trigger event or situation leads to the collection of data about the health problem, the characteristics of the people affected, and their perceptions of the health problem. These data, along with additional data on available resources, constitute a community needs and assets assessment.

Based on the data from the needs assessment, program development begins. Problems

and their solutions are prioritized. The planning phase includes developing the program theory, which explicates the connection between what is done and the intended effects of the program. Another component of the planning phase includes assessment of organizational and infrastructure resources for implementing the program, such as garnering resources to implement and sustain the program. Yet another major component of program planning is setting goals and objectives that are derived from the program theory.

After the resources necessary to implement the program have been secured and the activities that make up the program intervention have been explicated, the program can be implemented. The logistics of implementation include marketing

the program to the target audience, training and managing program personnel, and delivering or providing the intervention as planned. During implementation of the program, it is critical to conduct an evaluation of the extent to which the program is provided as planned; this is the process evaluation. The data and findings from the process evaluation are key feedback items in the planning and evaluation cycle, and they can and ought to lead to revisions in the program delivery.

Ultimately, the health program ought to have an effect on the health of the individual program participants or on the recipients of the program intervention if provided to the community or a population. The evaluation can be an outcome evaluation of immediate and closely causally linked programmatic effects or an impact evaluation of more temporally and causally distal programmatic effects. Both types of evaluations provide information to the health program planners for use in subsequent program planning. Evaluation of the effects of the program provides data and information that can be used to alter the program intervention. These findings can also be used in subsequent assessments of the need for future or other health programs.

The model used throughout this text as a framework (Figure 1-1) generically represents the steps and processes. It is one of many possible ways to characterize the planning and evaluation cycle. As a generic representation, the planning and evaluation cycle model used in this text includes the essential elements, but it cannot provide detailed instructions on the “whens” and “hows” because each situation will be slightly different.

Using Evaluation Results as the Cyclical Link

Before embarking on either a process or an effect evaluation, it is important to consider who will use the results because, in being used, evaluation results are perpetuating the program planning and evaluation cycle. The usefulness

of an evaluation depends on the extent to which questions that need to be answered are, in fact, answered. Naturally, different stakeholder groups that are likely to use evaluation findings will be concerned with different questions.

Funding organizations, whether federal agencies or private foundations, constitute one stakeholder group. Funders may use process evaluations for program accountability and effect evaluations for determining the success of broad initiatives and individual program effectiveness. Project directors and managers, another stakeholder group, use both process and effect evaluation findings as a basis for seeking further funding as well as for making improvements to the health program. The program staff members, another stakeholder group, are likely to use both the process and the effect evaluation as a validation of their efforts and as a justification for their feelings about their success with program participants or recipients. Scholars and health professionals constitute another stakeholder group that accesses the findings of effect evaluations through the professional literature. Members of this group are likely to use effect evaluations as the basis for generating new theories about what is effective in addressing a particular health problem and why it is effective.

Policy makers are yet another stakeholder group that uses both published literature and final program reports regarding process and effect evaluation findings when formulating health policy and making decisions about program resource allocation. Community action groups, community members, and program participants and recipients form another group of stakeholders. This stakeholder group is most likely to advocate for a community health assessment and to use process evaluation results as a basis for seeking additional resources or to hold the program accountable.

Program Life Cycle

Feedback loops contribute to the overall development and evolution of a health program, giving it a life cycle. In the early stages of an idea

for a health program, the program may begin as a pilot. At this stage, program development occurs and involves use of literature and needs assessment data (Scheirer, 2012). The program may not rely on any existing format or theory, so simple trial and error is used to determine whether it is feasible as a program. It is likely to be small and somewhat experimental because a similar type of program has not been developed or previously attempted. As the program matures, it may evolve into a model program. A *model program* has interventions that are formalized, or explicit, with protocols that standardize the intervention, and the program is delivered under conditions that are controlled by the program staff members and developers. Model programs can be difficult to sustain over time because of the need to follow the protocols. Evaluations of programs at this stage focus on identifying and documenting the effects and efficacy of the program (Scheirer, 2014). Successful model programs become *institutionalized* within the organization as an ongoing part of the services provided. Successful programs can be institutionalized across a number of organizations in a community to gain wide acceptance as standard practice, with the establishment of an expectation that a “good” agency will provide the program. At this last stage, the health program has become institutionalized within health services. Evaluations tend to focus on quality and performance improvements, as well as sustainability. The last life cycle stage is the dissemination and replication of programs shown to be effective.

Regardless of the stage in a program’s life cycle, the major planning and evaluation stages of community assessment and evaluation are carried out. The precise nature and purpose of each activity vary slightly as the program matures. Being aware of the stage of the program being implemented can help tailor the community assessment and evaluation.

This life cycle of a health program is reflected in the evolution of hospice care. Hospice—care for the dying in a home and family setting—began in London in 1967 as a grassroots service that entailed trial and error about how to manage

dying patients (Kaur, 2000). As its advocates saw the need for reimbursement for the service, they began systematically to control what was done and who was “admitted” to hospice. Once evaluations of these hospice programs began to yield findings that demonstrated their positive benefits, they became the model for more widespread programs that were implemented in local agencies or by new hospice organizations. As hospice programs became accepted as a standard of care for the dying, the hospice programs became standard, institutionalized services for the organization. Today the availability and use of hospice services for terminally ill patients are accepted as standard practice, and most larger healthcare organizations or systems have established a hospice program. The evolution of hospice is but one example of how an idea for a “better” or “needed” program can gradually become widely available as routine care.

► The Fuzzy Aspects of Planning

We like to think of planning as a rational, linear process, with few ambiguities and only the rare dispute. Unfortunately, this is not the reality of health program planning. Many paradoxes inherently exist in planning as well as implicit assumptions, ambiguities, and the potential for conflict. In addition, it is important to be familiar with the key ethical principles that underlie the decision making that is part of planning.

Paradoxes

Several paradoxes pervade health planning (Porter, 2011), which may or may not be resolvable. Those involved can hold assumptions about planning that complicate the act of planning, whether for health systems or programs. Being aware of the paradoxes and assumptions can, however, help program planners understand possible sources of frustration.

One paradox is that planning is shaped by the same forces that created the problems that planning is supposed to correct. Put simply, the healthcare, sociopolitical, and cultural factors that contributed to the health problem or condition are very likely to be same factors that affect the health planning process. The interwoven relationship of health and other aspects of life affects health planning. For example, housing, employment, and social justice affect many health conditions that stimulate planning. This paradox implies that health planning itself is also affected by housing, employment, and social justice.

Another paradox is that the “good” of individuals and society experiencing the prosperity associated with health and well-being is “bad” to the extent that this prosperity also produces ill health. Prosperity in our modern world has its own associated health risks, such as higher cholesterol levels, increased stress, increased risk of cardiovascular disease, and increased levels of environmental pollutants. Also, as one group prospers, other groups often become disproportionately worse off. So, to the extent that health program planning promotes the prosperity of a society or a group of individuals, health issues for others will arise that require health program planning.

A third paradox is that what may be easier and more effective may be less acceptable. A good example of this paradox stems from decisions about active and passive protective interventions. Active protection and passive protection are both approaches to risk reduction and health promotion. *Active protection* requires that individuals actively participate in reducing their risks—for example, through diet changes or the use of motorcycle helmets. *Passive protection* occurs when individuals are protected by virtue of some factor other than their behavior—for example, water fluoridation and mandates for smoke-free workplaces. For many health programs, passive protection in the form of health policy or health regulations may be more effective and efficient. However, ethical and political issues can arise when the emphasis on passive protection, through laws

and communitywide mandates, does not take into account cultural trends or preferences.

Another paradox is that those in need ideally, but rarely, trigger the planning of health programs; rather, health professionals initiate the process. This paradox addresses the issue of who knows best and who has the best ideas for how to resolve the “real” problem. The perspective held by health professionals often does not reflect broader, more common health social values (Reinke & Hall, 1988), including the values possessed by those individuals with the “problem.” Because persons in need of health programs are most likely to know what will work for them, community and stakeholder participation becomes not just crucial but, in many instances, is actually mandated by funding agencies. This paradox also calls into question the role of health professionals in developing health programs. Their normative perspective and scientific knowledge need to be weighed against individuals’ choices that may have caused the health problem.

A corollary to the paradox dealing with the sources of the best ideas is the notion that politicians tend to prefer immediate and permanent cures, whereas health planners prefer long-term, strategic, and less visible interventions (Reinke & Hall, 1988). Generally, people want to be cured of existing problems rather than to think probabilistically about preventing problems that may or may not occur in the future. As a consequence, the prevention and long-term solutions that seem obvious to public health practitioners can conflict with the solutions identified by those with the “problem.”

One reason that the best solutions might come from those with the problem is that health professionals can be perceived as blaming those with the health problem for their problem. Blum (1981), for example, identified the practice of “blaming the victim” as a threat to effective planning. When a woman who experiences domestic violence is said to be “asking for it,” the victim is being blamed. During the planning process, blaming the victim can be implicitly and rather subtly manifested in group settings

through interpretation of data about needs, thereby affecting decisions related to those needs. Having the attitude that “the victim is to blame” can also create conflict and tension among those involved in the planning process, especially if the “victims” are included as stakeholders. The activities for which the victim is being blamed need to be reframed in terms of the causes of those activities or behaviors.

Yet another paradox is the fact that planning is intended to be successful; no one plans to fail. Because of the bias throughout the program planning cycle in favor of succeeding, unanticipated consequences may not be investigated or recognized. The unanticipated consequences of one action can lead to the need for other health decisions that were in themselves unintended (Patrick & Erickson, 1993). To overcome this paradox, brainstorming and thinking creatively at key points in the planning process ought to be fostered and appreciated.

A final paradox of planning, not included on Reinke and Hall’s (1988) list, is that most planning is for making changes, not for creating stability. Yet once a change has been achieved, whether in an individual’s health status or a community’s rates of health problems, the achievement needs to be maintained. Many health programs and health improvement initiatives are designed to be accomplished within a limited time frame, with little or no attention to what happens after the program is completed. To address this paradox requires that planning anticipate the conclusion of a health program and include a plan for sustaining the gains achieved.

Assumptions

Assumptions also influence the effectiveness of planning. The first and primary assumption underlying all planning processes is that a solution, remedy, or appropriate intervention can be identified or developed and provided. Without this assumption, planning would be pointless. It is fundamentally an optimistic assumption about the capacity of the planners, the stakeholders, and the state of the science to address the

health problem. The assumption of possibilities further presumes that the resources available, whether human or otherwise, are sufficient for the task and are suitable to address the health problem. The assumption of adequate capacity and knowledge is actually tested through the process of planning.

A companion assumption is that planning leads to the allocation of resources needed to address the health problem. This assumption is challenged by the reality that four groups of stakeholders have interests in the decision making regarding health resources (Sloan & Conover, 1996) and each group exists in all program planning. Those with the health problem and who are members of the target audience for the health program are one group. Another group of stakeholders is health payers, such as insurance companies and local, federal, and philanthropic funding agencies. The third group is individual healthcare providers and healthcare organizations and networks. Last, the general public is a stakeholder group because it is affected by how resources are allocated for health programs. This list of stakeholder groups highlights the variety of motives each group has for being involved in health program planning, such as personal gain, visibility for an organization, or acquisition of resources associated with the program.

Another assumption about those involved is that they share similar views on how to plan health programs. During the planning process, their points of view and cultural perspectives will likely come into contrast. Hoch (1994) suggested that planners need to know what is relevant and important for the problem at hand. Planners can believe in one set of community purposes and values yet still recognize the validity and merit of competing purposes. He argues that effective planning requires tolerance, freedom, and fairness and that technical and political values are two bases from which to give planning advice. In other words, stakeholders involved in the planning process need to be guided into appreciating and perhaps applying a variety of perspectives about planning.

Each stakeholder group assumes that there are limited resources to be allocated for addressing the health problem and is receptive or responsive to a different set of strategies for allocating health resources. The resulting conflicts among the stakeholders for the limited resources apply whether they are allocating resources across the healthcare system or among programs for specific health problems. Limited resources, whether real or not, raise ethical questions of what to do when possible gains from needed health programs or policies are likely to be small, especially when the health program addresses serious health problems.

It is interesting that, the assumption of limited resources parallels the paradox that planning occurs around what is limited rather than what is abundant. Rarely is there a discussion of the abundant or unlimited resources available for health planning. Particularly in the United States, we have an amazing abundance of volunteer hours and interest and of advocacy groups and energy, and recently retired equipment that may be appropriate in some situations. Such resources, while not glamorous or constituting a substantial entry on a balance sheet, deserve to be acknowledged in the planning process.

Another assumption about the planning process is that it occurs in an orderly fashion and that a rational approach is best. To understand the implications of this assumption, one must first acknowledge that four key elements are inherent in planning: uncertainty, ambiguity, risk, and control. The presence of each of these elements contradicts the assumption of a rational approach, and each generates its own paradoxes.

Uncertainty, Ambiguity, Risk, and Control

Despite the orderly approach implied by use of the term *planning*, this process is affected by the limits of both scientific rationality and the usefulness of data to cope with the uncertainties, ambiguities, and risks being addressed by the planning process (see **TABLE 1-3**).

Uncertainty is the unknown likelihood of a possible outcome. Rice, O'Connor, and Pierantozzi (2008) have identified four types of uncertainty: types and amount of resources, technological, market receptivity to the product, and organizational. Each of these uncertainties is present in planning health programs. *Ambiguity* is doubt about a course of action stemming from awareness that known and unknown factors exist that can decrease the possibility of certainty. In this sense, ambiguity results in uncertainty. Both uncertainty and ambiguity pervade the planning process because it is impossible to know and estimate the effect of all relevant factors—from all possible causes of the health problem, to all possible health effects from program interventions, to all possible acts and intentions of individuals. A rational approach to planning presumes that all relevant factors can be completely accounted for by anticipating the effect of a program, but our experiences as humans tell us otherwise.

Ambiguity is the characteristic of not having a clear or single meaning. Change, or the possibility of change, is a possible source of ambiguity. When ambiguity is ignored, the resulting differences in interpretation can lead to confusion and conflict among stakeholders and planners, among planners and those with the health problem, and among those with various health problems vying for resources. The conflict, whether subtle and friendly or openly hostile, detracts from the planning process by requiring time and personnel resources to address and resolve the conflict. Nonetheless, openly and constructively addressing the ambiguity and any associated conflict can lead to innovations in the program.

Risk is the perceived possibility or uncertain probability of an adverse outcome in a given situation. Health planners need to be aware of the community's perception and interpretation of probabilities as they relate to health and illness. Risk is not just about taking chances (e.g., bungee jumping or having unprotected sex) but is also about uncertainty and ambiguity (as is the case with estimates of cure rates and projections about future health conditions).

TABLE 1-3 Fuzzy Aspects Throughout the Planning and Evaluation Cycle

	Stages in the Planning and Evaluation Cycle			
	Community Assessment	Planning	Implementation	Effect Evaluation
Uncertainty	Unknown likelihood of finding key health determinants	Unknown likelihood of selecting an effective intervention, unknown likelihood of the intervention being effective	Unknown likelihood of the intervention being provided as designed and planned	Unknown likelihood of intervention being effective
Ambiguity	Unclear about who is being assessed or why	Unclear about the process, who is leading planning process, or what it is intended to accomplish	Unclear about the boundaries of the program, who ought to participate, or who ought to deliver the program	Unclear about meaning of the evaluation results
Risk	Unknown possibility of the assessment causing harm	Unknown possibility of planning touching on politically sensitive issues	Unknown possibility of the intervention having an adverse effect on participants	Unknown possibility of adverse effect from the evaluation design, or from misinterpretation of the findings
Control	Directing the process of gathering and interpreting data about the health problem	Directing the decisions about the program	Directing the manner in which the program is provided	Directing the process of data collection, analysis and interpretation

Risk is pervasive and inherent throughout the planning process in terms of deciding who to involve and how, which planning approach to use, which intervention to use, and in estimating which health problem deserves attention. The importance of understanding risk as an element both of the program planning process and of

the target audience provides planners with a basis from which to be flexible and speculative.

Control, as in being in charge of or managing, is a natural reaction to the presence of ambiguity, conflict, and risk. It can take the form of directing attention and allocating resources or of exerting dominance over others. Control

remains a key element of management. In other words, addressing the ambiguity, uncertainty, and risk that might have been the trigger for the planning process requires less—not more—control. Those who preside over and influence the planning process are often thought of as having control over solutions to the health problem or condition. They do not. Instead, effective guidance of the planning process limits the amount of control exerted by any one stakeholder and addresses the anxiety that often accompanies the lack of control.

► Introduction to the Types of Evaluation

Several major types of activities are classified as evaluations. Each type of activity requires a specific focus, purpose, and set of skills. The types of evaluations are introduced here as an overview of the field of planning and evaluation.

Community needs assessment (also known as community health assessment) is a type of evaluation that is performed to collect data about the health problems of a particular group. The data collected for this purpose are then used to tailor the health program to the needs and distinctive characteristics of that group. A community needs assessment is a major component of program planning because it is, done at an early stage in the program planning and evaluation cycle. In addition, the regular completion of community assessments may be required. For example, many states do 5-year planning of programs based on state needs assessments.

Another type of evaluation begins at the same time that the program starts. *Process evaluations* focus on the degree to which the program has been implemented as planned and on the quality of the program implementation. Process evaluations are known by a variety of terms, such as monitoring evaluations, depending on their focus and characteristics. The underlying framework for designing a process evaluation comes from the process theory component of

the overall program theory developed during the planning stage. The *process theory* delineates the logistical activities, resources, and interventions needed to achieve the health change in program participants or recipients. Information from the process evaluation is used to plan, revise, or improve the program.

The third type of evaluation seeks to determine the effect of the program—in other words, to demonstrate or identify the program's effect on those who participated in the program. *Effect evaluations* answer a key question: Did the program make a difference? The effect theory component of the program theory is used as the basis for designing this evaluation. Evaluators seek to use the most rigorous and robust designs, methods, and statistics possible and feasible when conducting an effect evaluation. Findings from effect evaluations are used to revise the program and may be used in subsequent initial program planning activities. Effect evaluations may be referred to as outcome or impact evaluations, terms which seem to be used interchangeably in the literature. For clarity, *outcome evaluations* focus on the more immediate effects of the program, whereas *impact evaluations* may have a more long-term focus. Program planners and evaluators must be vigilant with regard to how they and others are using terms and should clarify meanings and address misconceptions or misunderstandings.

A fourth type of evaluation focuses on efficiency and the costs associated with the program. *Cost evaluations* encompass a variety of more specific cost-related evaluations—namely, cost-effectiveness evaluations, cost-benefit evaluations, and cost-utility evaluations. For the most part, cost evaluations are done by researchers because cost-benefit and cost-utility evaluations, in particular, require expertise in economics. Nonetheless, small-scale and simplified cost-effectiveness evaluations can be done if good cost accounting has been maintained by the program and a more sophisticated outcome or impact evaluation has been conducted. The similarities and differences among these three types of cost studies are reviewed in greater detail

in the text so that program planners can be, at minimum, savvy consumers of published reports of cost evaluations. Because cost evaluations are performed late in the planning and evaluation cycle, their results are not likely to be available in time to make program improvements or revisions. Instead, such evaluations are generally used during subsequent planning stages to gather information for prioritizing program options.

Comprehensive evaluations, the fifth type of evaluation, involve analyzing needs assessment data, process evaluation data, effect evaluation data, and cost evaluation data as a set of data. Given the resources needed to integrate analysis of various types of data to draw conclusions about the effectiveness and efficiency of the program, comprehensive evaluations are relatively uncommon. A sixth type of evaluation is a *meta-evaluation*. A meta-evaluation is done by combining the findings from previous outcome evaluations of various programs for the same health problem. The purpose of a meta-evaluation is to gain insights into which of the various programmatic approaches has had the most effect and to determine the maximum effect that a particular programmatic approach has had on the health problem. This type of evaluation relies on the availability of existing information about evaluations and on the use of a specific set of methodological and statistical procedures. For these reasons, meta-evaluations are less likely to be done by program personnel; instead, they are generally carried out by evaluation researchers. Meta-evaluations that are published are extremely useful in program planning because they indicate which programmatic interventions are more likely to succeed in having an effect on the participants. Published meta-evaluations can also be valuable in influencing health policy and health funding decisions.

Summative evaluations, in the strictest sense, are done at the conclusion of a program to provide a conclusive statement regarding program effects. Unfortunately, the term *summative evaluation* is sometimes used to refer to either an outcome or impact evaluation, adding even more confusion to the evaluation terminology and vernacular language. Summative evaluations

are usually contrasted with *formative evaluations*. The term *formative evaluation* is used to refer to program assessments that are performed early in the implementation of the program and used to make changes to the program. Formative evaluations might include elements of process evaluation and preliminary effect evaluations.

Mandated and Voluntary Evaluations

Evaluations are not spontaneous events. Rather, they are either mandated or voluntary. A mandate to evaluate a program is always linked in some way to the funding agencies, whether a governmental body or a foundation. If an evaluation is mandated, then the contract for receiving the program funding will include language specifying the parameters and time line for the mandated evaluation. The mandate for an evaluation may specify whether the evaluation will be done by project staff members or external evaluators, or both. For example, the State Child Health Insurance Program (SCHIP), created in 1998, is a federally funded and mandated program to expand insurance coverage to children just above the federal poverty level. Congress has the authority to mandate evaluations of federal programs and did just that with the SCHIP. Mandated evaluations of SCHIP include an overall evaluation study by Wooldridge and associates from the Urban Institute (2003), and an evaluation specifically focused on outcomes for children with special healthcare needs (Zickafoose, Smith, & Dye, 2015).

Other evaluations may be linked to accreditation that is required for reimbursement of services provided, making them *de facto* mandated evaluations. For example, to receive accreditation from the Joint Commission, a health services organization must collect data over time on patient outcomes. These data are then used to develop ongoing quality improvement efforts. A similar process exists for mental health agencies. The Commission on Accreditation of Rehabilitation Facilities (CARF) requires that

provider organizations conduct a self-evaluation as an early step in the accreditation process. These accreditation-related evaluations apply predominantly to direct care providers rather than to specific programs.

Completely voluntary evaluations are initiated, planned, and completed by the project staff members in an effort to make improvements. However, given the relatively low reward from, and cost associated with, doing an evaluation when it is not required, these evaluations are likely to be small with low scientific rigor. Programs that engage voluntarily in evaluations may have good intentions, but they often lack the skills and knowledge required to conduct an appropriate evaluation.

When Not to Evaluate

Situations and circumstances that are not amenable to conducting an evaluation do exist, despite a request or the requirement for having an evaluation. Specifically, it is not advisable to attempt an evaluation under the following four circumstances: when there are no questions about the program, when the program has no clear direction, when stakeholders cannot agree on the program objectives, and when there is not enough money to conduct a sound evaluation (Patton, 2008). In addition to these situations, Weiss (1972) recognized that sometimes evaluations are requested and conducted for less than legitimate purposes, namely, to postpone program or policy decisions, thereby avoiding the responsibility of making the program or policy decision; to make a program look good as a public relations effort; or to fulfill program grant requirements. As these lists suggest, those engaged in program planning and evaluation need to be purposeful in what is done and should be aware that external forces can influence the planning and evaluation processes.

Since Weiss made her observation in 1972, funders have begun to require program process and effect evaluations, and conducting these evaluations to meet that requirement is considered quite legitimate. This change has occurred

as techniques for designing and conducting both program process and effect evaluations have improved, and the expectation is that even mandated evaluations will be useful in some way. Nonetheless, it remains critical to consider how to conduct evaluations legitimately, rigorously, inexpensively, and fairly. In addition, if the AEA standards of utility, feasibility, propriety, and accuracy cannot be met, it is not wise to conduct an evaluation (Patton, 2008).

Interests and the degree of influence held by stakeholders can change. Such changes affect not only how the evaluation is conceptualized but also whether evaluation findings are used. In addition, the priorities and responsibilities of the organizations and agencies providing the program can change during the course of delivering the program, which can then lead to changes in the program implementation that have not been taken into account by the evaluation. For example, if withdrawal of resources leads to a shortened or streamlined evaluation, subsequent findings may indicate a failure of the program intervention. However, it will remain unclear whether the apparently ineffective intervention was due to the design of the program or the design of the evaluation. In addition, unanticipated problems in delivering the program interventions and the evaluation will always exist. Even rigorously designed evaluations face challenges in the real world stemming from staff turnover, potential participants' noninvolvement in the program, bad weather, or any of a host of other factors that might hamper achieving the original evaluation design. Stakeholders will need to understand that the evaluator attempted to address challenges as they arose if they are to have confidence in the evaluation findings.

► The Public Health Pyramid

Pyramids tend to be easy to understand and work well to capture tiered concepts. For these reasons, pyramids have been used to depict the

tiered nature of primary healthcare, secondary healthcare, and tertiary healthcare services (U.S. Public Health Service, 1994), the inverse relationship of effort needed and health impact of different interventions (Frieden, 2010), and nutrition recommendations (Gil, Ruiz-Lopez, Fernandez-Gonzalez, & de Victoria, 2014).

The public health pyramid is divided into four sections (FIGURE 1-2). The top, or the first, section of the pyramid contains direct healthcare services, such as medical care, psychological counseling, hospital care, and pharmacy services. At this level of the pyramid, programs are delivered to individuals, whether patients, clients, or even students. Generally, programs at the direct services level have a direct, and often relatively immediate, effect on individual participants in the health program. Direct services of these types appear at the tip of the pyramid to reflect that, overall, the smallest proportion of a population receives them. These interventions, according to the Health Impact Pyramid (Frieden, 2010), require considerable effort, with minimal population effects.

At the second level of the pyramid are enabling services, which are those health and social services that support or enhance the health of aggregates. *Aggregates* are used to distinguish between individuals and populations; they are groups of individuals who share a defining characteristic, such as mental illness or a terminal disease. Examples of enabling services include

mental health drop-in centers, hospice programs, financial assistance programs that provide transportation to medical care, community-based case management for patients with acquired immune deficiency syndrome (AIDS), low-income housing, nutrition education programs provided by schools, and workplace child care centers. As this list of programs demonstrates, the services at this level may directly or indirectly contribute to the health of individuals, families, and communities and are provided to aggregates. Enabling services can also be thought of as addressing some of the consequences of social determinants of health.

The next, more encompassing level of the public health pyramid is population-based services. At the population level of the pyramid, services are delivered to an entire population, such as all persons residing in a city, state, or country. Examples of population services include immunization programs for all children in a county, newborn screening for all infants born in a state, food safety inspections carried out under the auspices of state regulations, workplace safety programs, nutrition labeling on food, and the Medicaid program for pregnant women whose incomes fall below the federal poverty guidelines. As this list reflects, the distinction between an aggregate and a population can be blurry. Programs at this level typically are intended to reach an entire population, sometimes without the conscious involvement of individuals. In this sense, individuals receive a population-based health program, such as water fluoridation, rather than participating in the program, as they would in a smoking-cessation class. Interventions and programs aimed at changing the socioeconomic context within which populations live would be included at this population level of the pyramid. Such programs are directed at changing one or more social determinants of health. Population-level programs contribute to the health of individuals and, cumulatively, to the health status of the population.

Supporting the pyramid at its base is the infrastructure of the healthcare system and the public health system. The health services at the other pyramid levels would not be possible

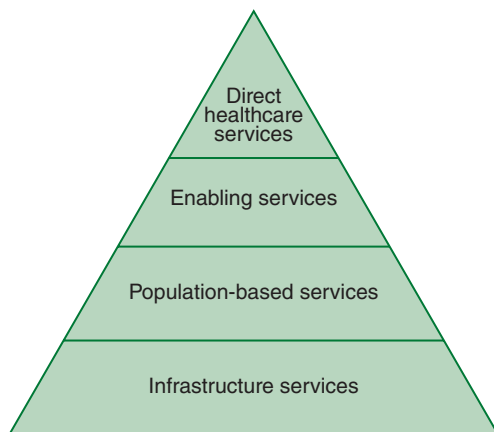


FIGURE 1-2 The Public Health Pyramid

unless there were skilled, knowledgeable health professionals; laws and regulations pertinent to the health of the people; quality assurance and improvement programs; leadership and managerial oversight; health planning and program evaluation; information systems; and technological resources. The planning and evaluation of health programs at the direct, enabling, and population services levels is itself a component of the infrastructure; these are infrastructure activities. In addition, planning programs to address problems of the infrastructure, as well as to evaluate the infrastructure itself, are needed to keep the health and public health system infrastructure strong, stable, and supportive of the myriad of health programs.

Use of the Public Health Pyramid in Program Planning and Evaluation

Health programs exist across the pyramid levels, and evaluations of these programs are needed. However, at each level of the pyramid, certain issues unique to that level must be addressed in developing health programs. Accordingly, the types of health professionals and the types of expertise needed vary by pyramid level, reinforcing the need to match program, participants, and providers appropriately. Similarly, each level of the pyramid is characterized by unique challenges for evaluating programs. For this reason, the public health pyramid, as a framework, helps illuminate those differences, issues, and challenges, as well as to reinforce that health programs are needed across the pyramid levels if the *Healthy People 2020* goals and objectives are to be achieved.

In a more general sense, the public health pyramid provides reminders that various aggregates of potential audiences exist for any health problem and program and that health programs are needed across the pyramid. Depending on the health discipline and the environment in which the planning is being done, direct service programs may be the natural or only inclination. The public health pyramid, however, provides a framework for balancing the level

of the program with meeting the needs of the broadest number of people with a given need. Reaching the same number of persons with a direct services program as with a population services program poses additional expense and logistic challenges.

The pyramid also serves as a reminder that stakeholder alignments and allegiances may be specific to a level of the pyramid. For example, a school health program (an enabling-level program) has a different set of constituents and concerned stakeholders than a highway safety program (a population-level program). The savvy program planner considers not only the potential program participants at each level of the pyramid but also the stakeholders who are likely to make themselves known during the planning process.

The public health pyramid has particular relevance for public health agencies concerned with addressing the three core functions of public health (Institute of Medicine, 1988): assessment, assurance, and policy. These core functions are evident, in varying forms, at each level of the pyramid. Similarly, the pyramid can be applied to the strategic plans of organizations in the private healthcare sector. For optimal health program planning, each health program being developed or implemented ought to be considered in terms of its relationship to services, programs, and health needs at other levels of the pyramid. For all these reasons, the public health pyramid is used throughout this text as a framework for summarizing specific issues and applications of chapter content to each level of the pyramid and to identify and discuss potential or real issues related to the topic of the chapter.

The Public Health Pyramid as an Ecological Model

Individual behavior and health are now understood to be influenced by the social and physical environment of individuals. This recognition is reflected in the growing use of the ecological approach to health services and public health

programs. The ecological approach, which stems from systems theory applied to individuals and families (Bronfenbrenner, 1970, 1989), postulates that individuals can be influenced by factors in their immediate social and physical environment. This perspective has been expanded into the social determinants perspective in public health, which has wide acceptance (Frieden, 2010). The individual is viewed as a member of an intimate social network, usually a family, which is a member of a larger social network, such as a neighborhood or community. The way in which individuals are nested within these social networks has consequences for the health of the individual.

Because it distinguishes and recognizes the importance of enabling and population services, the public health pyramid can be integrated with an ecological view of health and health problems. If one were to look down on the pyramid from above, the levels would appear as concentric circles (**FIGURE 1-3**)—direct services for individuals nested within enabling services for families, aggregates, and neighborhoods, which are in turn nested within population services for all residents of cities, states, or countries. This is similar to individuals being nested within the enabling environment of their family, workplace setting, or neighborhood, all of which are nested within

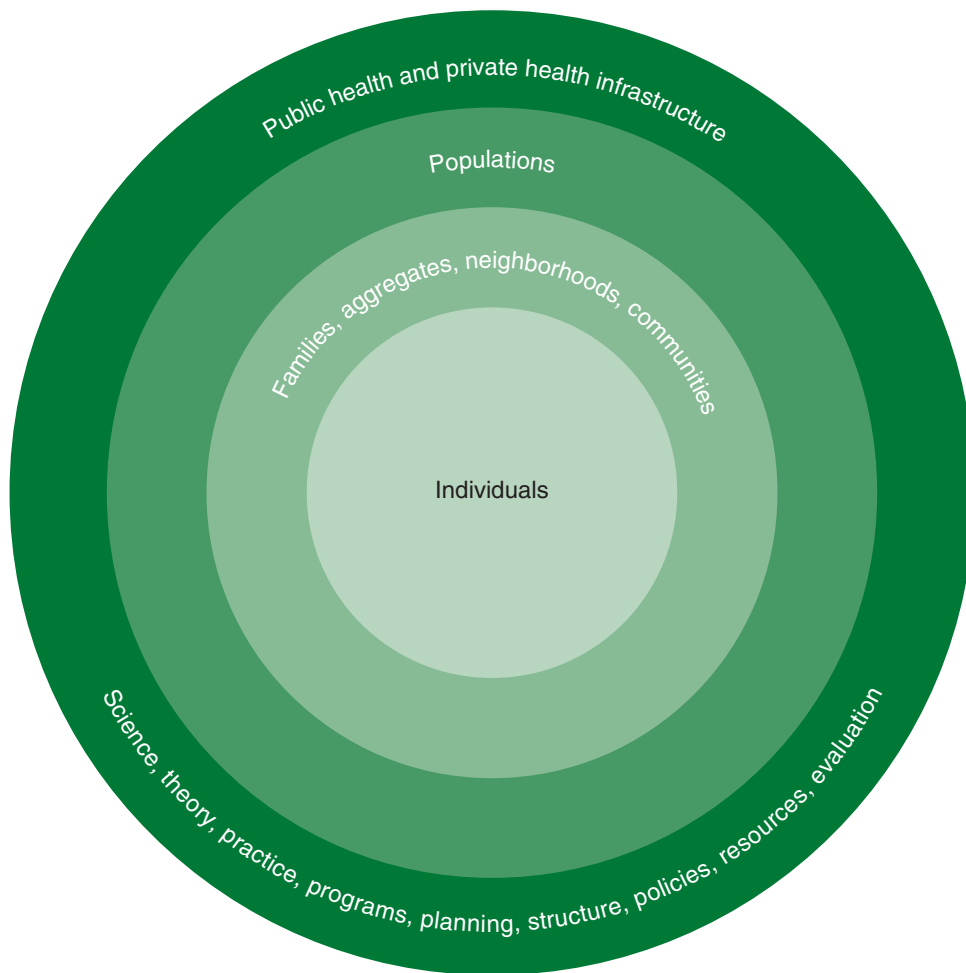


FIGURE 1-3 The Pyramid as an Ecological Model

the population environment of factors such as social norms and economic and political environments. The infrastructure of the healthcare system and public health system is the foundation and supporting environment for promoting health and preventing illnesses and diseases.

The end of the chapter presents a summary of challenges or issues related to applying the chapter content to each level of the pyramid. This feature reinforces the message that each level of the pyramid has value and importance to health program planning and evaluation. In addition, certain unique challenges are specific to each level of the pyramid. The chapter summary by levels offers an opportunity to acknowledge and address the issues related to the levels.

► The Town of Layetteville in Bowe County

As an aid to understanding and assimilating the content covered, examples from the literature are provided throughout this book. In addition, chapters include application of content to a hypothetical town (Layetteville) in an imaginary county (Bowe County). Based on a fictional community needs assessment, subsequent prioritization leads to the identification of five health problems as foci for health program planning. These health problems are used throughout the text as opportunities to demonstrate application of the chapter content. Also, some discussion questions and activities use Layetteville and Bowe County as opportunities for the reader to practice applying the chapter content. While the town and county are fictitious, the health problems around which the program planning and evaluation occur are very real and relevant.

► Across the Pyramid

At the direct services level, health program planning and evaluation focus on individual clients

or patients—that is, on developing programs that are provided to those individuals and on assessing the extent to which those programs make a difference in the health of the individuals who receive the health program. Health is defined in individual terms, and program effects are measured as individual changes. From this level of the public health pyramid, community is most likely viewed as the context affecting individual health.

At the enabling services level, health program planning and evaluation focus on the needs of aggregates of individuals and on the services that the aggregate needs to maintain health or make health improvements. Enabling services are often social, educational, or human services that have an indirect effect on health, thus warranting their inclusion in planning health programs. Health continues to be defined and measured as an individual characteristic to the extent that enabling services are provided to individual members of the aggregate. However, program planning and evaluation focus not on individuals but rather on the aggregate as a unit. At this level of the pyramid, community can be either the aggregate that is targeted for a health program or the context in which the aggregate functions and lives. How community is viewed depends on the health problem being addressed.

At the population-based services level, health program planning and evaluation focus on the needs of all members of a population. At this level of the pyramid, health programs are, at a minimum, population driven, meaning that data collected in regard to the health of the population drive the decisions about the health program. This approach results in programs that are population focused and, ideally (but not necessarily), population based. It is worth noting that population-focused programs tend to have a health promotion or health maintenance focus rather than a focus on treatment of illnesses. At a population level, health is defined in terms of population statistics, such as mortality and morbidity rates. In this regard, the *Healthy People 2020* objectives (**TABLE 1-4**) are predominantly at

TABLE 1-4 A Summary of the *Healthy People 2020* Priority Areas

1. Access to quality health services	21. Heart disease and stroke
2. Adolescent health	22. Human immunodeficiency virus infection (HIV)
3. Arthritis, osteoporosis, and chronic back conditions	23. Immunization and infectious diseases
4. Blood disorders and blood safety	24. Injury and violence prevention
5. Cancer	25. Lesbian, gay, bisexual, and transgender health
6. Chronic kidney disease	26. Maternal, infant, and child health
7. Dementias, including Alzheimer's	27. Medical product safety
8. Diabetes	28. Mental health and mental disorders
9. Disability and secondary conditions	29. Nutrition and weight status
10. Early and middle childhood	30. Occupational safety and health
11. Educational and community-based programs	31. Older adults
12. Environmental health	32. Oral health
13. Family planning	33. Physical activity
14. Food safety	34. Preparedness
15. Genomics	35. Public health infrastructure
16. Global health	36. Respiratory diseases
17. Health communication and health information technology	37. Sexually transmitted diseases
18. Healthcare-associated infections	38. Sleep health
19. Health-related quality of life and well-being	39. Social determinants of health
20. Hearing and other sensory or communication disorders	40. Substance abuse
	41. Tobacco use
	42. Vision

Source: Department of Health and Human Services. Retrieved August 20, 2016, from www.cdc.gov/nchs/healthy_people/hp2020/hp2020_topic_areas.htm.

the population level of the public health pyramid. Community is more likely to be the population targeted by the health program.

At the infrastructure level, health program planning and evaluation are infrastructure activities of both the public health system and the healthcare system. Infrastructure includes organizational management, acquisition of resources, and development of health policy. A significant document reflecting health policy is *Healthy People 2020*, which outlines the goals and objectives for the health of the people of the United States. These national objectives are considered when setting priorities and are used by many federal and nongovernmental funding agencies, which often require that a

health program identify which *Healthy People 2020* objectives are being addressed. To the extent that health planners and evaluators are familiar with these objectives, they will be better able to design appropriate programs and then to argue in favor of the relevance of each of those programs. At the infrastructure level, health can be defined in terms of the individual workers in the healthcare sector (an aggregate). More to the point, because program planning and evaluation are infrastructure activities, it is actually at the infrastructure level that the decisions are made on the definition of health to be used in the program. Similarly, the way that community is viewed is determined at the infrastructure level.

► Discussion Questions

1. When and under what conditions might it be advisable not to conduct an evaluation?
2. Oral health is a major health problem, especially for children living in poverty. Describe how an oral health program developed at each level of the public health pyramid would differ and how the considerations would differ.
3. Conduct a literature search using words such as “planning,” “evaluation,” “program,” and a health condition of interest to you. Which journals publish articles about health program planning and health program evaluations? What are the current trends in the field as reflected in the published literature that you reviewed?
4. Review the program planning and evaluation cycle in Figure 1-1. Using the literature you found for Discussion Question 3, where does most of the literature fall in that cycle?
5. Access and review the material in the following document and compare it with the perspective given in this chapter: Centers for Disease Control and Prevention. (1999). Framework for program evaluation in public health. *Morbidity and Mortality Weekly Report*, 48(RR-11): i-41. Retrieved August 31, 2012, from www.cdc.gov/mmwr/preview/mmwrhtml/rr4811a1.htm.

► Internet Resources

American Evaluation Association (AEA)

This international, professional organization of evaluators is devoted to the application and exploration of program evaluation, personnel evaluation, technology, and many other forms of evaluation. The AEA website (www.eval.org/) includes links to professional groups, foundations,

online publications, and other resources related to evaluation.

Centers for Disease Control and Prevention

Centers for Disease Control and Prevention. (1999). Framework for program evaluation in public health. *Morbidity and Mortality Weekly Report*, 48(RR-11): i-41. Retrieved August 31, 2012, from www.cdc.gov/mmwr/preview/mmwrhtml/rr4811a1.htm. This online textbook describes the steps involved in conducting an evaluation.

Evaluation Center of Western Michigan University

This organization focuses on advancing the theory and practice of program, personnel, and student/constituent evaluation, as applied primarily to education and human services. Its website (<http://www.wmich.edu/evaluation>) has links and a set of checklists that can be used to improve the quality of an evaluation project.

The Evaluation Exchange

Harvard Family Research Project's evaluation periodical, *The Evaluation Exchange*, addresses current issues facing program evaluators of all levels, with articles written by the most prominent evaluators in the field. Designed as an ongoing discussion among evaluators, program practitioners, funders, and policy makers, *The Evaluation Exchange* highlights innovative methods and approaches to evaluation, emerging trends in evaluation practice, and practical applications of evaluation theory. It goes out to its subscribers free of charge four times per year. It can be accessed via the Internet at <http://www.hfrp.org/evaluation/the-evaluation-exchange>.

References

- American Evaluation Association. (2011). *The program evaluation standards: Summary form*. Retrieved August 31, 2016, from <http://www.eval.org/p/cm/ld/fid=103>
- American Public Health Association (APHA). (1991). *Healthy communities 2000: Model standards*. Washington, DC: Author.

- Blum, H. L. (1981). *Planning for health: Generics for the eighties* (2nd ed.). New York, NY: Human Sciences Press.
- Bronfenbrenner, U. (1970). *Two worlds of childhood*. New York, NY: Russell Sage Foundation.
- Bronfenbrenner, U. (1989). Ecological systems theory. *Annals of Child Development*, 16, 187–249.
- Dever, G. E. (1980). *Community health analysis: A holistic approach*. Germantown, MD: Aspen.
- Frieden, T. R. (2010). A framework for public health action: The health impact pyramid. *American Journal of Public Health*, 100, 590–595.
- Gil, A., Ruiz-Lopez, M. D., Fernandez-Gonzalez, M., & de Victoria, E. M. (2014). The FINUT Health Lifestyles Guide: Beyond the food pyramid. *Advances in Nutrition*, 5, 358S–367S.
- Guba, E. G., & Lincoln, Y. S. (1987). Fourth generation evaluation. In D. J. Palumbo (Ed.), *The politics of program evaluation* (pp. 202–204). Newbury Park, CA: Sage.
- Herman, J. L., Morris, L. L., & Fitz-Gibbon, C. T. (1987). *Evaluators' handbook*. Newbury Park, CA: Sage.
- Hoch, C. (1994). *What planners do: Power, politics and persuasion*. Chicago, IL: Planners Press.
- Institute of Medicine, National Academy of Sciences. (1988). *The future of public health*. Washington, DC: National Academy Press.
- Kaur, J. (2000). Palliative care and hospice programs. *Mayo Clinic Proceedings*, 75, 181–184.
- Patrick, D. L., & Erickson, P. (1993). *Health status and health policy: Allocating resources to health care*. Oxford, UK: Oxford University Press.
- Patton, M. Q. (1987). *How to use qualitative methods in evaluation*. Newbury Park, CA: Sage.
- Patton, M. Q. (2008). *Utilization-focused evaluation*: Sage.
- Patton, M. Q. (2012). *Essentials of utilization-focused evaluation*. Thousand Oaks, CA: Sage.
- Porter, L. (2011). Informality, the commons and the paradoxes for planning: Concepts and debates for informality and planning. *Planning Theory and Practice*, 12(1), 115–153.
- Reinke, W. A., & Hall, T. L. (1988). Political aspects of planning. In W. A. Reinke (Ed.), *Health planning for effective management* (pp. 75–85). New York, NY: Oxford University Press.
- Rice, M. P., O'Connor, G. C., & Pierantozzi, R. (2008). Implementing a learning plan to counter project uncertainty. *Sloan Management Review*, 29(2), 54–62.
- Rohrer, J. (1996). *Planning for community-oriented health systems*. Washington, DC: American Public Health Association.
- Rosen, G. (1993). *A history of public health* (expanded ed.). Baltimore, MD: Johns Hopkins University Press.
- Rossi, P. H., Lipsey, M. W., & Freeman, H. E. (2004). *Evaluation: A systematic approach* (7th ed.). Newbury Park, CA: Sage.
- Scheirer, M. A. (2012). Planning evaluation through the program life cycle. *American Journal of Evaluation*, 33(2), 263–294. doi:10.1177/1098214011434609
- Sloan, F. A., & Conover, C. J. (1996). The use of cost-effectiveness/cost-benefit analysis in actual decision making: Current status and prospects. In F. A. Sloan (Ed.), *Valuing health care: Costs, benefits, and effectiveness of pharmaceuticals and other medical technologies* (pp. 207–232). Cambridge, UK: Cambridge University Press.
- Stufflebeam, D. L., & Coryn, C. L. S. (2014). *Evaluation theory, models and applications* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Swenson, M. M. (1991). Using fourth-generation evaluation. *Evaluation and Health Professions*, 14(1), 79–87.
- Turnock, B. (2004). *Public health: What it is and how it works* (3rd ed.). Sudbury, MA: Jones & Bartlett.
- United Way of America. (1996). *Measuring program outcomes: A practical approach*. Alexandria, VA: Author.
- U.S. Department of Health and Human Services (DHHS). (1980). *Promoting health/preventing disease: Objectives for the nation*. Washington, DC: Author.
- U.S. Department of Health and Human Services (DHHS). (1991). *Healthy People 2000: National health promotion and disease prevention objectives*. Publication No. (PHS) 91-50212. Washington, DC: Author.
- U.S. Department of Health and Human Services (DHHS). (2000). *Healthy People 2010: Understanding and improving health* (2nd ed.). Washington, DC: U.S. Government Printing Office.
- U.S. Department of Health and Human Services (DHHS). (2011). *Healthy People 2020*. Retrieved November 9, 2011, from www.healthypeople.gov/2020/default.aspx
- U.S. Department of Health, Education, and Welfare (DHEW). (1979). *Healthy people: The surgeon general's report on health promotion and disease prevention* (DHEW, PHS Publication No. 79-55071). Washington, DC: Author.
- U.S. Public Health Service. (1994). *For a healthy nation: Return on investment in public health*. Washington, DC: Author.
- Weiss, C. (1972). *Evaluation*. Englewood Cliffs, NJ: Prentice Hall.
- Whitmore, E. (Ed.). (1998). *Understanding and practicing participatory evaluation: New directions for evaluation*. San Francisco, CA: Jossey-Bass.
- Wooldridge, J., Hill, I., Harrington, M., Kenney, G. M., Hawkes, C., & Haley, J. M. (2003). *Interim evaluation report: Congressionally mandated evaluation of the State Children's Health Insurance Program*. Washington, DC: Urban Institute. Retrieved August 31, 2011, from www.urban.org/expert.cfm?ID=JudithWooldridge.
- World Health Organization. (1947). *Constitution of the World Health Organization. Chronicle of World Health Organization*, 1, 29–43.
- Zickafoose, J. S., Smith, K. V., & Dye, C. (2015). Children with special health care needs in CHIP: Access, use, and child and family outcomes. *Academic Pediatrics*, 15(3), S85–S92. http://dx.doi.org/10.1016/j.acap.2015.02.001