CHAPTER 2

Introduction to Management and Leadership Concepts, Principles, and Practices

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INTRODUCTION

Everyone manages. We manage our finances, time, careers, and relationships. We tend not to think of these activities as "managing" or of ourselves as being "managers." Nevertheless, they are. These examples of managing or being managers are relatively simple and straightforward, even though we may find many of them fraught with difficulty. It is when the concepts of managing or being a manager are applied to organizations that complexity increases—almost always exponentially. At this point it becomes necessary to study and understand the theoretical bases of management.

The practice of management and the classical enunciation of management principles can be traced to the 19th century. The development of management as an academic discipline based on a body of knowledge that can be taught is a recent development and is generally attributed to the work of Peter F. Drucker in the latter half of the 20th century. That body of knowledge is taught in graduate schools of business and in programs that prepare managers of public health departments, programs, and health services organizations, such as hospitals, clinics, and long-term care facilities. This chapter provides a basic introduction to management theory and problem solving, and concludes with a brief discussion of negotiation and alternative dispute resolution.

Managers are persons who are formally appointed to positions of authority in organizations. They enable others to do their work and are accountable to a higher authority for work results. Primarily, the differences between levels of managers are the degree of authority and the scope of their accountability for work results. Line managers manage people and things; staff managers, such as the human resources department and the fiscal office, support the work of line managers.

LEARNING OBJECTIVES

After reading the chapter, the reader will be able to:

- 1. Review the background on managing and management.
- 2. Discuss organizational culture, philosophy, and performance.
- 3. Describe the elements of management knowledge.
- 4. Describe the five functions of management and decision making.
- 5. Discuss the distinctions between managing and leading.
- 6. Outline management skills, roles, and competencies.
- 7. Review the steps in managerial problem solving.
- 8. Discuss designing formal organizations.
- 9. Describe the contributions of contemporary management theorists.
- 10. Discuss negotiating and alternative dispute resolution.

ORGANIZATIONAL CULTURE, PHILOSOPHY, AND PERFORMANCE

Management, organization, culture, and organizational philosophy are inextricably linked; they are especially linked to organizational effectiveness. Much has been written about an organization's culture and the need for managers to not only understand the values in that culture, but to move that culture in the direction of values that further the organization's mission and vision. The value system of an organization can also be called its *organizational philosophy*—the ethical context in which goods and services are rendered. Ethics audits are an important tool managers can use to "biopsy" the organization's value system. These audits are comprised of staff surveys; observations of staff/patient interaction; and reviews of staff recruitment, selection, and training. Audits provide an understanding of the culture so that the culture's values can be moved in the desired direction.

Managers are judged by their organizations' performance. The way managers set standards, coordinate and integrate workgroups, make decisions, and design the organization affect performance. In addition, it is patently clear from research and anecdotal evidence that high-performing organizations have a values system that furthers the organization's goals. These values are expressed in explicit and implicit ways by managers and are expected to be present in the work of all members of the staff. Managers must model appropriate behavior. It is logical to conclude that an organization in which all staff understand the desired values and incorporate them into their work lives will achieve its goals more effectively.

MANAGEMENT THEORY

Management or managing has four main elements. It is (1) a process comprised of interrelated social and technical functions and activities (2) that accomplishes organizational objectives, (3) achieves these objectives through use of people and other resources, and (4) does so in a formal organizational setting. In concert with managers at various levels, senior management establishes organizational objectives, and all who work in the organization strive to achieve them. Management's work includes providing an organizational context in which direct and support work can be performed effectively, and preparing an organization to deal with threats and opportunities in its external environment.

Managers at all levels shape organizational values and culture by their decisions and through leading by example (modeling), even though senior managers usually have the clearest and most direct effect. The organization's overall performance is the best evidence of managers' efforts. Regardless of hierarchical level, managers throughout an organization engage in the same basic, generic functions, even though decisions made at senior levels have the most dramatic effect on the organization (Rakich, Longest, & Darr, 2000). Managers can be described by the functions they perform, the skills they use, the roles they play, and the competencies they must have to succeed. This emphasizes the process of managing.

Management Functions and Decision Making

The five management functions of planning, organizing, controlling, directing, and staffing are brought to life and connected by *decision making*, which is itself a subset of the essential process for managers that is known as *problem solv*- *ing.* Little that managers at all levels in an organization do falls outside the purview of the five management functions. Management theorists and practitioners may chose one or two of the five functions as most important, but this is not borne out normatively. When one considers the full range of what managers do (or should do) as they perform their work, concentrating on a few to the exclusion or diminution of the others will invariably cause problems for the organization.

Decision making is an inherent activity of managers, and they make decisions within and among the five management functions. Decision making is part of the process of problem solving, which also includes problem analysis. Performance of the management functions and the decision making of problem solving should be evaluated using explicit and measurable criteria. In addition to engaging in the five management functions, managers must utilize specific skills, play various roles, and evidence a number of competencies.

Managing and Leading

Some theorists and academicians distinguish managers and leaders, based on the view that managing is more caretaking and maintaining status quo (transactional) whereas leading is more visionary and dynamic (transformational). That distinction may be more important pedagogically than in practical application, however, especially at the organization's operating level. Senior managers must ensure effective current organizational activities *and* that an organization's future is envisioned. Using this vision, the organization can be transformed as needed.

As they work to achieve organizational objectives, managers use technical, conceptual, and interpersonal skills. These skills are applied in various proportions, depending on the manager's task and level in the organizational hierarchy. Usually, senior managers make greater use of conceptual skills, whereas middle- and entry-level managers use a more even mix of the three.

The research of Henry Mintzberg found that managers have different roles, the general categories of which include interpersonal, informational, and decisional. Each may be segmented. For example, the interpersonal role includes figurehead and influencer, informational includes monitor and spokesperson, and the decisional role includes entrepreneur and negotiator. Successful managers integrate these various roles and are likely to engage in them without making a clear distinction.

Another way to understand managers' work is to identify their competencies, some of which are found in the categorizations discussed earlier. Conceptual, technical managerial/ clinical, interpersonal/collaborative, political, commercial, and governance competencies are used in different proportions by managers at various levels of the organization.

Management Skills and Roles

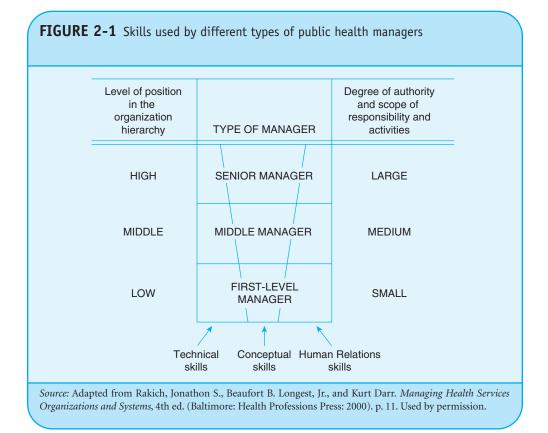
Figure 2-1 suggests the relationships of technical, conceptual, and human relations skills and shows their typical weighting at various levels. Specific situations require greater or lesser use of the skills at all levels of the organization.

Skills

- *Technical skills* are the abilities of managers to use the methods, processes, and techniques of managing (such as preparing a budget or a pro forma, planning a new process, or reorganizing a workgroup). Technical skills tend to decrease in importance as managers become more senior.
- Conceptual skills are the mental ability to see how various factors in a given situation fit together and interact. Seeing second- and third-order consequences of decisions and nondecisions is especially important. The need to use conceptual skills increases significantly as managers become more senior.
- *Human/interpersonal skills* include cooperating with others, understanding them, and motivating and leading them in the workplace. Human relations skills tend to become less important as managers become more senior.

Roles Managers engage in a wide variety of roles as they do their work.

- The *interpersonal* roles of figurehead, leader, and liaison derive from the formal authority of the manager.
- The *informational* roles include monitor, disseminator, and spokesperson. The informational roles have special significance in organizations in the health field, which are more complex and require effective communication. Access to information is a measure of power. Less secure and capable managers tend to hoard information or provide it only reluctantly, thus reinforcing their importance.
- As noted, decision making is integral to the management functions. There are various types of *decisional* roles, including entrepreneur, resource allocator, and negotiator. In this group, negotiation may be the most important and is an almost daily activity of managers.
- The *designer* role is similar to that of the management function of organizing. Managers at different levels will design various components of the organization.
- The *strategist* role is not unlike the manager's planning function. It suggests a specific focus on how to adapt their organizational domains to external challenges and opportunities.



• The *leader* role is affected by how well the roles of designer and strategist are performed. The leader role is more difficult because of the dynamism of the health services field, the multiple constituencies of its organizations, and the potential need for extensive sharing of the leader role.

Competencies In addition to the classical management functions and managerial roles, managers must develop a number of competencies.

- *Conceptual competence* is like that of the conceptual role. Middle and entry-level managers use conceptual competence to understand how their work fits into the larger organization, as well as the interrelationships in their areas of responsibility. As suggested earlier, senior managers use their ability to conceptualize to predict consequences of decisions and nondecisions.
- *Technical managerial/clinical competency* enables managers to perform the work of management, as well as understand and more effectively direct the work in the unit(s) for which they are responsible. Managers without a clinical or technical background must make a determined and persistent effort to understand the basics of specialized activities in their areas of responsibility, as well as in the organization generally.
- *Interpersonal/collaborative competency* requires that managers have good interpersonal and collaborative skills so as to effectively lead or direct others. These skills enable the manager to instill a common vision, stimulate a determination to pursue the vision, and meet the objectives that are part of the vision.
- *Political competency* means senior-level managers must understand and be able to work with the political processes of local, state, and even federal government. Effective application of this competency is key to meeting the health needs of the community. The position and technical knowledge held by senior managers enables them to influence the legislative and rule-making (regulatory) processes.
- *Commercial competency* and economic success require that organizations create economic exchanges that offer value to those involved. Managers must establish and maintain an environment that facilitates these economic exchanges. This necessitates a businesslike orientation for basic operation, but with a humanitarian and Samaritan overlay. Many not-for-profit and government organizations fall prey to an overemphasis on doing good and neglect the need to manage in a businesslike fashion.

Governance competence means working with the governing body¹ to establish a vision, assemble resources, lead the organization, and ensure accountability to stakeholders. These efforts require that senior managers interact effectively with members of the governing body. The governing body determines the right thing (direction) for the organization; management determines the right way to achieve it. Many chief executive officers (CEOs) are voting members of their governing bodies, or, if not, they attend governing body meetings and sit on its committees. Regardless, they interact with governing body members in various settings and in a variety of ways.

Leadership Behavior

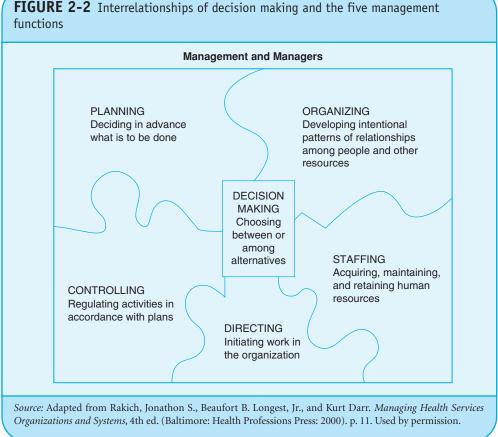
Managers as leaders influence followers to achieve objectives because they have authority or power. Various sources of power have been identified: legitimate (formal), reward, coercive, expert, and referent. These sources of power are more likely to be complementary than mutually exclusive. Effective leaders understand the risks and benefits of using each type of power and try to use them appropriately. Some researchers have sought to explain leader success by identifying *leader traits* such as assertive, cooperative, decisive, and dependable, and *leader skills* such as intelligent, conceptually skilled, creative, and persuasive. Other researchers focused on leader styles, such as Rensis Likert (1903–1981), whose continuum of leadership effectiveness spans autocratic, benevolent, consultative, and participative/democratic.

An approach asserting that traits, behaviors, and styles are inadequate to explain the success of leaders is called *situational* or *contingency theory*. Its hypothesis is that certain actions or responses (behavior/styles) in some situations lead to success, while their use in other situations causes failure. Incorporating situational factors or contingencies into the analyses of leader styles made them more sophisticated and enhanced their usability. Many of the efforts to analyze leaders and the reasons for their success overlap, but they all contribute to understanding managers qua leaders (Rakich et al., 2000, ch 15).

Management Functions

Figure 2-2 shows the management functions and their intimate connection with decision making. None is necessarily more important than another. They are complementary and tend to have a sequence of use and connection. The dynamic

¹*Governing body* is a generic term used to describe the body to whom the public health manager is accountable, whether it is a city council, county council, commissioners elected by a special tax district, commissioners appointed through an interstate compact, or the like.



that connects them is complex, and it may not be clear at any one time which function the manager is applying.

- Planning. Planning is usually identified as the first step of managing. It may occur de novo such as the planning for a new program, service, or facility. In addition, planning may be necessary after the outcomes of previous initiatives are found inadequate. Managers at all levels planalthough the focus, context, and terms are different.
- Organizing. Planning establishes objectives. Organizing develops intentional patterns of relationships among staff and other resources in the health services organization (HSO) to achieve these objectives. The result is an organizational design. There is a hierarchy in this design, beginning with individual positions and moving through work groups into larger units and, perhaps, eventually into an entire organization. The design of this hierarchy includes assigning authority and responsibility. Departmentation results from organizational design. Processes and integration are key to successful design.
- Staffing. Managers may give little thought to human resources until there is a problem with staffing, which includes acquiring, maintaining, and retaining human capital in the organization. Staffing is both technical (such as planning, job analysis, performance evaluation, and compensation and benefits) and social (such as training, promotion, and counseling). Given that the majority of costs in a typical organization are staff pay and benefits, it is difficult to overstate the importance of the staffing function.
- Directing. Directing occurs when managers initiate action. Effectively directing depends on being able to lead, motivate, and communicate with the staff for whom one is accountable. The various demands of effectively leading others necessitates a variety of leadership styles, some of which will be discussed later. The ability to motivate others is linked to having a shared vision.
- Controlling. The word suggests its function. At root, managers control by comparing actual with desired output and making adjustments. Controlling is directly

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linked to planning, because the latter has set out the objectives that the organization (or its units) is expected to achieve, and controlling determines if this has occurred. Control monitors input and output, but it also monitors processes, or how work is done. Controlling has four basic steps: setting standards, measuring performance, comparing actual with expected results, and acting to correct deviations.

It is clear from Figure 2-2 and a basic understanding of the management functions that decision making is key to all of them. Without decision making, the management functions could not be undertaken. The process of problem solving inherent in most decision making is discussed next.

Problem Solving²

Middle- and senior-level managers spend most of their time solving problems. The results of problem solving affect allocation and use of resources as well as work results. The circumstances surrounding problem solving are often complex, unstructured, and nonroutine, thus making it difficult and time consuming. At times, the problem lies beyond the manager's direct control. Except for the condition of improvement, the process of problem solving is essentially the same regardless of problem type, scope, time involved, intensity of analysis, or the conditions that initiate it. Problem solving includes:

- 1. Problem identification, or recognizing the presence of a problem (including gathering and evaluating information) and stating the problem.
- 2. Making assumptions, which uses logic to extend what is known.
- 3. Developing tentative alternative solutions and selecting those to be considered in depth.
- 4. Evaluating alternative solutions by applying decision criteria.
- 5. Selecting the alternative that best fits the criteria.
- 6. Implementing the solution.
- 7. Evaluating the results of implementing the solution.

These steps are shown in **Figure 2-3**. The numbers in that figure correspond to those in the following discussion.

Problem Analysis [1] Problem analysis is divided into [1a] problem recognition and definition, and [1b] developing a problem statement. The product of problem analysis is the

problem statement. It is the problem statement about which assumptions are made in step [2].

Problem Recognition and Definition [1a] Problem solving under the condition of deviation occurs when actual results are inconsistent with desired results and the manager determines that this is a problem that must be solved. Examples of desired results are (1) organizationwide objectives such as quality of services provided or financial solvency; (2) program objectives such as increasing customer satisfaction, reducing staff turnover, or improving case finding; and (3) improving the performance of an individual employee.

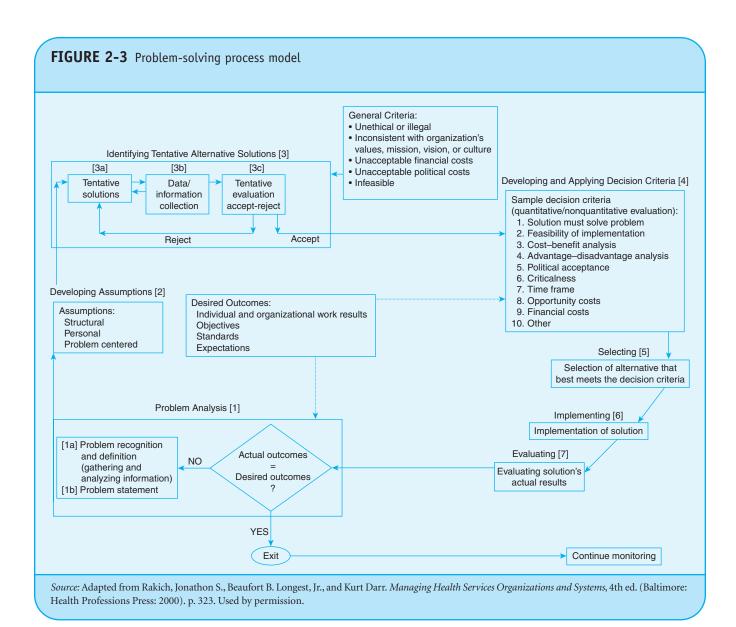
Applying the theory of problem recognition is not easy. Problem recognition

> rarely occurs as a completely discrete event. In practice the process occurs through various time intervals (from seconds to years), amidst a variety of ongoing activities and in different ways depending on both situational and individual factors. At times, the process of problem recognition is automatic; at other times, it involves conscious effort. Often, it is a highly objective phenomenon resulting in problem descriptions that most anyone would agree on. At other times it is definitely a subjective process, where the nature of a problem description varies from individual to individual (Cowan, 1986, p. 764).

Problem recognition occurs in three stages. The first is *gestation/latency*, in which some cue or triggering event indicates a potential problem. The second is *categorization*, in which managers become aware that something is wrong but cannot clearly describe it. *Diagnosis* is third, which involves efforts to obtain the information that will provide greater certainty in problem definition (Cowan, 1986, p. 766). Often, symptoms clutter and confuse and make it difficult to recognize a problem and define its parameters. More experienced and expert managers are likely to be better problem solvers because they have superior problem recognizing limits, and being sensitive to identifying and interpreting cues are skills gained only with experience.

Problem recognition and definition includes gathering, systematically evaluating, and judging the importance of information from sources such as routine reports and data, interviews and observation, information from workgroups, and customer feedback (Andriole, 1983). In this process, it is difficult to overestimate the importance of facts—information derived from consistently applied operational definitions. An

²Adapted from Chapter 7 of Jonathon S. Rakich, Beaufort B. Longest Jr., and Kurt Darr, *Managing Health Services Organizations and Systems*, 4th ed. (Baltimore: Health Professions Press, 2000).



essential and difficult job for the problem solver is to distinguish facts from other types of information—a learned ability honed by experience that improves problem solving.

In unstructured or complex situations, circumstantial evidence and deductive reasoning are helpful. Exclusionary thinking may be used to "rule out" problems. Once conclusions are reached, the problem is classified by type, nature, and scope. This recognition-definition stage is formative because subsequent actions, especially developing alternatives, are derived from it (Nutt, 1991). Ending the problem definition stage too soon will likely result in a low-quality solution or in solving the wrong problem (Chow, Haddad, & Wong-Boren, 1981). *Problem Statement [1b]* The problem statement puts what is learned during the definition stage into a brief description of the problem to be solved. Almost always, one sentence is sufficient. Good problem statements have four parts: (1) an invitational stem, (2) an ownership component, (3) an action component, and (4) a goal component (Evan, 1991). The following sample problem statement contains the four parts: "In what ways can we improve system response time to reduce how long customers must wait for an answer to an inquiry about school vaccination requirements?"

In what ways can (stem) we (owner of problem)

improve (action)

response time to reduce how long customers must wait for an answer to an inquiry about school vaccination requirements? (goal) (Couger, 1995, p. 184)

The invitational stem "In what ways can we ...?" encourages a divergent response, rather than the more narrow "How ...?" *Divergent* means thinking in different directions or searching for a variety of answers to a question that may have many right answers (Couger, 1995, p. 113).

The problem statement should have other attributes as well. Ideally, the problem definition phase has identified the root cause, which is reflected in the problem statement. If the problem statement reflects only a symptom, rather than the root cause, the problem must be "solved" again and again. A clinical simile is the symptomatic relief that aspirin gives flu sufferers; they feel better, but the cause is uncured. Sometimes, the root cause of the problem cannot be determined, or, even if the root cause is known, resources may be insufficient to solve it. Occasionally, it is politically infeasible to solve the root cause. There may be many reasons addressing symptoms is the only realistic choice. Doing so, however, must be seen for what it is a temporary, expedient solution.

The problem statement should be narrow enough so that solving it lies within the problem solver's authority, resource limits, and the like, but not so narrow that only the symptoms are "treated." For example, certain employees seem to be taking too many coffee breaks. A narrow problem statement focuses on those employees. A somewhat broader problem statement addresses coffee breaks or breaks in general. An even broader problem statement, but one that is not too broad, identifies the efficient use of time or the quantity and assignment of work as the focus for action. Focusing on the employees addresses only a symptom, not the root cause.

The breadth of the problem statement also determines the clarity of direction that is given the problem solver. Narrow problem statements identify clearly what problem needs solving but risk addressing only a symptom. Overly broad problem statements may leave the problem solver without clear direction—no understanding of the first step. Sometimes problems are amorphous or lack specificity, especially as to knowing where to start. Organizational malaise or morale problems are amorphous. Here, problem solvers must cast their nets widely and engage in several iterations of problem solving from the very broad to the more narrow and specific—before the problem is identified. Iterative problem solving is also known as heuristic problem solving.

The psychological stimulus that is provided by an action orientation should not be underestimated. Problem statements

include positive goals but may also include limitations. The problem statement regarding coffee breaks described earlier could be: "In what ways can I (we) solve the problem of excessive coffee breaks by staff so as to maximize use of staff resources, but without damaging morale?" Here, a limitation to be considered in selecting a solution is avoiding damage to staff morale.

There is more than one correct way to state a problem, but doing it well requires thought and the patience to prepare more than one iteration. The importance of developing a problem statement lies in the discipline of reducing thoughts to writing and the advantages of a written document in communicating to others who are working to solve the same problem. As the great American educator, John Dewey (1933), stated, "A question well put is half answered." The admonition to "Just stand there, don't just do something" until a suitable problem statement has been developed has more application than might be generally thought.

Facts and Reasoning A *fact* can be defined as an actuality, certainty, reality, or truth. Facts are highly prized and provide the firmest grounding for problem solving and decision making. Some facts are objectively verifiable. Many "facts" are subject to dispute, however, unless they result from an operational definition. Deming (2000) stressed the critical importance of operational definitions. Objectively verifiable facts or facts that are based on the same operational definition take precedence over all other types of information.

Once facts have been identified, two other issues arise. One is the weight to be given to them. Obviously, some facts are more important than others, and people who share problem-solving responsibilities must understand how facts are weighted. A second issue is that facts are subject to judgment and interpretation. For example, a tape measure will gauge a room's dimensions. Whether the room is large enough for a certain activity or job is a matter of opinion. The fact that the room has seating does not answer the question of how comfortable the seating is. Decision makers must be able to separate fact from conclusion (judgment), interpretation, and opinion and not allow them to merge.

Rarely are facts sufficient to solve a problem, however. Obtaining facts is necessarily constrained by time and resources. Problem solvers can partly overcome this deficit through inductive and deductive reasoning. *Inductive reasoning* moves from the single event or fact to a conclusion or generalization based on that event or fact. Inductive reasoning allows one to conclude that the fact of a painted wall means that there was a painter. *Deductive reasoning* uses the facts of related or similar events to reach a conclusion. Deductive reasoning is employed in a criminal prosecution when circumstantial evidence is used to prove the defendant's guilt, despite lack of direct evidence such as fingerprints or the testimony of a witness. Circumstantial evidence is based on inferences (deductions) that are drawn from facts. A deduction from finding room after room with half-painted walls is that the work of the painter(s) is undone.

Often, problem solvers and decision makers have the need to consider what weight, if any, to give to information that is hearsay, rumor, or assertion. "Hearsay" refers to words attributed to a third party. With few exceptions, hearsay is inadmissible in court proceedings. Similarly, decision makers should identify hearsay and give it little or no weight. Rumors abound in all organizations; many of them come to the notice of decision makers. They, too, should be given little weight. Assertions may be based on fact, hearsay, or rumor. Assertions may also be called judgments or conclusions. Assertions may be stated forcefully and with a degree of authority that seems to give them credibility. They must be accepted with caution.

Hearsay and rumor may have elements of truth. This makes them important to the extent that they suggest potential problems that warrant further investigation. In themselves, hearsay and rumor are never the basis for action or decision making. Persons who make assertions should be asked how the assertions are supported by facts. In the absence of facts, assertions should be given little or no weight.

Developing Assumptions [2] The problem statement developed in the problem analysis [1] allows the next step, developing assumptions [2]. Assumptions never supersede facts. When facts are insufficient, however, problem solvers use inductive and deductive reasoning to make assumptions. Only in the most unusual circumstances should problem solvers make assumptions that are unsupported by facts or logic because doing so means that the assumptions were chosen capriciously, which is not a basis for good management. Assumptions extend what is known. For example, if every time an employee is disciplined there are rumors that staff members will unionize, deductive reasoning tells us that the same thing will likely happen next time. This, then, is a logically supportable assumption.

Assumptions have a significant effect on the choice and quality of the solution and, consequently, on the quality of problem solving. In general, assumptions are of three types: structural, personal, and problem centered (Brightman, 1980).

Structural assumptions relate to the context of the problem—they are boundary assumptions: the problem lies within (or outside) a manager's authority; additional resources are (or are not) available to solve the problem; other departments cause the problem; or the problem is caused by an un-

controllable external factor—high unemployment in the county means that fewer people have employer-based health insurance and they must rely on public clinics for routine care.

Personal assumptions are conclusions and biases that decision makers bring to the problem. Often, they are based on experience. Managers may have a high or low tolerance for the risk and uncertainty inherent in changes that invariably result from problem solving. A manager's previous experience of being blamed for any problems caused by changes after problem solving may cause an aversion to risk, and this may lead to making assumptions about the problem or alternatives that cause selection of low-risk solutions. Assumptions may be made about the likely reactions of superiors, subordinates, or stakeholders to potential solutions. In addition to risk taking and other types of experiences that cause bias in the decision maker, the personal assumptions of anchoring and escalating commitment can affect problem solving. Anchoring occurs when the individual "chooses a starting point (an 'anchor'), perhaps from past data, and then adjusts from the anchor based on new information" (Chow et al., 1991, p. 194). An inaccurate anchor causes flawed analysis. Using last year's budget as a starting point for a new budget is an example of anchoring. Despite the problems, "[d]ecision makers display a strong bias toward alternatives that perpetuate the status quo" (Hammond, Keeney, & Raiffa, 2006, p. 120). The personal bias of escalating commitment means that a manager is unwilling to admit earlier mistakes. Managers whose decisions have become a problem "tend to be locked into a previously chosen course of action" (Chow et al., 1991, p. 202). The tendency of decision makers to make decisions in a way that justifies past choices has also been described as the "sunk-cost trap," meaning that old investments of time and resources cannot be recovered, but further commitments are made because it is so difficult for managers to admit past mistakes (Hammond et al., 2006, p. 122).

Problem-centered assumptions cover a wide range, including perceived relative importance of the problem, degree of risk posed by the problem, and how urgently a solution is needed. Other problem-centered assumptions include economic and political costs and benefits, the degree to which subordinates or superiors will accept solutions, and the likelihood of success if a solution is implemented.

It is important to emphasize that the three types of assumptions affect the decision maker and the problem-solving process differently. Assumptions differ in at least two ways: qualitatively, and in the amount of control that decision makers have over them. For example, a structural assumption that no funds are available to solve a problem profoundly affects the solutions that can be considered, and there may be little or nothing the decision maker can do to remedy a lack of funds. A personal assumption in which the decision maker recognizes an aversion to risk can be overcome to some extent, even though the decision maker may remain less willing to accept certain solutions or continues to be reluctant to experience higher levels of discomfort. Problem-centered assumptions are likely to involve more judgment, which is more often based on the decision maker's experience, hunch, or intuition, than are structural assumptions.

In summary, making assumptions is necessary to almost all problem solving. Decision makers must use caution in formulating and accepting assumptions because, if this step is done poorly, assumptions can limit the scope of problem solving or even preclude identifying the best solution (Chow et al., 1991).

Identifying Tentative Alternative Solutions [3] Once the manager has recognized, defined, and analyzed the problem; established its cause(s) and parameters; prepared a problem statement [1]; and made assumptions [2], tentative alternative solutions are developed [3]. In Figure 2–3 this step includes identifying tentative alternative solutions [3a]; collecting data/information [3b], if necessary; and evaluating the merits of each tentative alternative [3c] for an initial accept/reject decision. The initial accept/reject decision uses general criteria such as whether the tentative solution is unethical or illegal; is inconsistent with organizational values, mission, vision or culture; has unacceptable financial or political costs; or is infeasible. If no tentative alternatives meet these general criteria, the step must be repeated. Unique, nontraditional, and creative tentative solutions are identified more readily if structural, personal, and problem-centered assumptions are not overly restrictive.

Identifying tentative solutions is very important because it consumes more resources than any other problem-solving activity and because, if creativity is to occur, it must occur here (Nutt, 1993). It is in the tentative alternative solution loop that creativity is important (Couger, 1995). Although the terms are often used synonymously, *creativity*—defined as imagination and ingenuity—should be distinguished from the narrower concept of *innovation*—defined as changing or transforming (Couger, 1995).

Several categories or tactics that can be used to identify ideas for solutions have been described (Nutt, 1993). Regrettably, most do not suggest creativity as a source. *Readymade tactics* assume that organizations have a store of fully developed solutions—a situation in which solutions wait for problems. *Search tactics* identify solutions from available ideas. Proposals are elicited and compared to identify solutions that seem viable. A *design tactic* seeks a custom-made solution—an opportunity for creativity. Several factors influence the time and resources that are devoted to the tentative alternative solution loop. Most important are the quality and precision of the initial problem definition and the restrictiveness of assumptions. Others include sophistication of the organization's information systems, availability of data, and the degree to which the problem is structured. Unstructured problems are more complex, involve many variables, and take longer to solve than problems that are straightforward, relatively obvious, or narrowly defined. Typically, unstructured problems require several iterations of problem solving.

The tentative alternative solution loop has two hazards. Some managers spend excessive time and resources seeking the optimal solution when another solution is acceptable. In addition, extensive attention to activities in the loop and reiteration may be an excuse for not taking action. "I need more information" may be an excuse to procrastinate and make no decision (Etzioni, 1989).

Developing and Applying Decision Criteria [4] The alternatives that met the general criteria applied in the tentative alternative solution loop [3] are now ready for formal assessment. To select the best of several alternatives, managers must develop decision criteria that allow alternative solutions to be evaluated and compared [4]. The decision criteria include those in the "Desired Outcomes" cell in the center of Figure 2–3: individual and organizational work results, objectives, standards, and expectations. At least three other decision criteria are usually applied: effectiveness of the alternative in solving the problem, feasibility of implementation, and acceptability of the alternative based on objective and subjective analyses (Pearce & Robinson, 1989).

Alternatives that are not effective in solving the problem should be rejected. Examples are alternatives that solve only part of a problem, address only symptoms, or are not permanent. Exceptions may be necessary, however. For example, if the need for action is critical, it may be appropriate to select and implement a less-than-optimal solution because the consequences of doing nothing or waiting for a better solution are worse.

The feasibility of implementing an alternative is the second common decision criterion. Infeasible alternatives will be rejected in the tentative alternative solution loop. Those that survive may be implemented to varying degrees in terms of effort; structural boundaries and constraints; dependence on other people, departments, or both; and costs. Managers are less likely to select an alternative that depends on people and departments beyond their control. This is especially true if high political costs are associated with forcing implementation.

The third common criterion judges the effective use of resources, including quantitative (objective) cost-benefit analysis and assessment of nonquantitative (subjective) advantages and disadvantages. Lowest cost should not be a sole criterioncosts and benefits of alternatives must be considered, as should the opportunity costs of doing nothing. Objective evaluation means quantifying costs and benefits and should be attempted, despite the difficulty of estimating some data. Subjective evaluation means understanding advantages and disadvantages that may be impossible to quantify but cannot be ignored. Both types of assessment should be considered when evaluating and comparing alternatives. If an alternative is costly but the problem solver concludes that subjective considerations are more important, then a rational decision has been made. Here, it might be useful to list nonquantitative advantages and disadvantages, which adds the useful dimension of subjective judgment to the decision-making process.

Some decision criteria are likely to be more important than others in a given situation; several methods may be used to differentiate them. One method rank orders decision criteria using decision-maker judgments. Another method divides criteria into mandatory (must be met) and wanted. A solution that does not meet a *mandatory* criterion is discarded.

Wanted criteria are weighted by degree of desirability. The resulting weighted scores determine which solution is selected (Kepner & Tregoe, 1981). A third method assumes that all decision criteria are equally important (which is unlikely) and judges how closely or well each alternative meets them and assigns a numerical value. The highest total determines which alternative is chosen. A decision matrix is an excellent tool for arraying and comparing decision criteria and solutions. Table 2-1 shows a sample decision matrix.

The virtues of numerically weighting decision criteria include forcing decision makers to compare and evaluate them, thus providing a basis for discussion in group decision making. It is important that the numbers are understood to be the results of judgments by decision makers, judgments that could be challenged by reasonable people. This basis in subjectivity means that the numbers are, at best, approximations. This must be borne in mind during analysis.

As noted earlier, this step is sometimes called decision analysis. Most often, decision makers have several alternative solutions that can be used; it is a matter of determining which one best (fully or partially) meets the decision criteria. There are, however, other variations of decision analysis. Sometimes, there is only one solution and a yes/no, accept/reject decision must be made. Here, the analysis compares the proposed solution to a reasonable (perhaps idealized) model of what could or should be done to determine whether the solution is acceptable. At other times, there are no alternatives and the decision maker must decide how to accomplish a desired result. Here, the first step is to clearly define the objectives. Then, a set of components that will most feasibly and effectively meet those objectives is selected from all of the available components (Kepner & Tregoe, 1981).

Selecting, Implementing, and Evaluating the Alternative Solution [5, 6, and 7] Almost always a manager selects an alternative (makes a decision) [5]. This does not end the problem-

TABLE 2-1 Decision Matrix for Evaluating Alternative Solutions

Decision Criteria	Alternative Solution 1	Alternative Solution 2	Alternative Solution 3
Must meet these requirements:			
1. Solution effectively solves the problem	3	5	5
2. Feasibility of implementation	5	3	5
3. Cost-benefit analysis	5	5	3
4. Advantage-disadvantage analysis	3	3	5
Wants to meet these requirements:			
5. Political acceptability	1	3	3
6. Criticalness	1	3	5
7. Time frame	1	3	5
8. Opportunity costs	5	1	3
9. Monetary costs	3	5	5
Total Score	27	31	39
Conclusion: Alternative solution 3 accepted.			
Key:			
5 = Solution fully meets decision criterion.			
3 = Solution partially meets decision criterion. 1 = Solution fails to meet decision criterion.			

solving process, however. Implementation [6] and evaluation [7] must be planned. Implementation [6] usually requires that resources are made available. The effects of the intervention (change) that has been implemented must be evaluated (monitored) [7] to determine that they are consistent with desired results [1]—the problem has been solved. Effective implementation and evaluation require that who will do what, how, and in what time frame are determined prospectively. It is desirable for evaluation to be integral (built in) to implementation. Data collection must be specific, especially as to where in the organization it will be done and with whom responsibility lies.

Evaluation is a commonly neglected part of problem solving—busy managers assume that the solution selected and implemented will be effective, and they turn to solving other problems. The solution, however, may solve the problem completely, partially, or not at all. Effectiveness of the solution can only be known if data are collected.

If the problem is not solved then the problem-solving process begins again, perhaps by fine-tuning the alternative implemented, reconsidering alternatives previously rejected, or developing new alternatives. Furthermore, solving one problem often causes others. For example, increasing the effectiveness of well-baby care may result in more case findings that require referrals to other providers, thus increasing costs of follow-up. This ripple effect necessarily leads to new rounds of problem solving.

Implications for the Public Health Manager

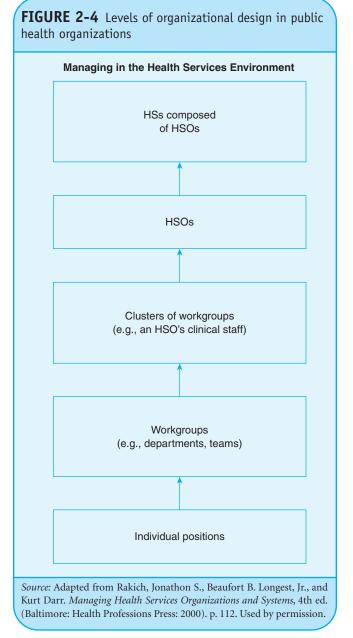
Problem solving is a major responsibility of managers at all levels. When done effectively, resource allocation and consumption are superior and results are more consistent with those desired. Managers' skills in problem solving, including decision making, are directly reflected in the quality of solutions and interventions.

Designing Formal Organizations

The organizing function, which encompasses the design (and redesign) of organizations, has its genesis in the planning function. Senior managers and, depending on the scope of decisions being made, the governing body are concerned with such broad aspects of organizing as authority and responsibility relationships, departmentation, and coordination and relationships of components whether within an organization or among the elements in a system of organizations. Lower-level (operational) managers are concerned with individual positions, aggregations of individual positions into workgroups, and clusters of workgroups. The work of classical management theorists such as Max Weber, Henri Fayol, and Chester Barnard established a theoretical basis for organizational design in the late 19th and early 20th centuries. Their concepts of division of work, authority and responsibility relationships, departmentation, span of control, and coordination have been complemented by contemporary theorists. **Figure 2-4** shows levels of organization design.

Classical Concepts

The historical roots of organizational design theory—some of which date from the 19th century—continue to be important in contemporary management. Many design concepts can be traced to the hierarchy of the Roman Catholic Church and the organizational structures of European and American armies.



Weber and Bureaucracy

Max Weber (1864–1920) was the first to develop a theory about *bureaucracy*, which in its pure form was said to be the ideal and most rational form of organizing. The ideal bureaucracy included a clear division of labor, positions arranged in a hierarchy, formal rules and regulations to uniformly guide employees' actions, impersonal relationships between managers and employees, employment based on technical competence, and protection against arbitrary dismissal. Regrettably, bureaucracy has come to mean duplication, delay, waste, low morale, and low motivation. The word *pure* must be borne in mind when considering what Weber argued was desirable about bureaucracy.

Fayol and the 14 Principles of Management

Henri Fayol (1841–1925) identified 14 principles that he asserted were essential to management. These principles are often identified in management theory texts without naming Fayol as the originator. These principles seem intuitive and rational, yet they are often violated in organizational design and managing. Examples of these principles include division of work (specialization by tasks), authority (the ability to give orders), unity of command (employees should receive orders from only one person), scalar chain (a line of authority from top to bottom), and equity (managers should be kind and fair to their subordinates).

Machiavelli

Niccolo Machiavelli (1469–1527) likely did not consider himself a management theorist. His book, *The Prince*, written in the early 16th century described the problems of ruling and how rulers should deal with friends and enemies. He discussed the risks of being loved by subordinates, versus being feared by them, as well as the risks of being generous in payment and gifts. His insights are thought provoking and should be of interest to all serious students of management.

Division of Work

The concept of division of work can be traced to the economist Adam Smith, later reinforced by Fayol. It suggests the importance of *specializing* as a means of making workers more proficient and, thus, more efficient. Most organizations in public health have a high degree of specialization. Individual units might be very efficient, but it is the processes and interrelationships that are necessary for their work to be meaningful that become a problem. The value and concept of specialization are apparent in research findings showing that the quality of outcomes of service delivery declines as volumes go below certain minimums.

Authority and Responsibility Relationships

Authority is the power derived from someone's position in an organization. Implicit in this concept is that those with authority have an obligation to perform certain functions or achieve certain results and that that person is accountable to a higher level inside or outside the organization. Conversely, someone *responsible* for certain functions or certain results must have sufficient authority or power to achieve them. Managers fail if staff are held accountable for results of processes over which they have no control. Management must delegate authority proportionate to the responsibility (accountability) to which employees are held.

Departmentation

Departmentation results from the organization's need to specialize and the division of labor that specialization produces. The classical criteria groups workers into units and units into larger aggregations based on knowledge and skills, work processes and functions, time, output, client(s), and place (see Figure 2-4). The contemporary view uses bases such as service lines for departmentation. Service lines are developed because of the need to organize and deliver specific types of services. Decentralizing decision making, control, and goal setting further diminishes the perceived inflexibility of departmentation. Departmentation necessitates that management develop means of coordinating and integrating the work of departmented units.

Span of Control

The classical view of span of control is that there are inherent limits to the number of subordinates that can be effectively supervised. Smaller (narrower) spans of control result in taller organizations, that is, organizations with more levels. Larger (longer) spans of control result in flatter organizations. Some theorists set specific limits on how many subordinates could be effectively managed; others argued that the types of work to be done dictated the number of subordinates that could be managed. Regardless, it was agreed that effectively managing subordinates necessitated a limit on numbers. Organization of the Roman legions is instructive and quite precise as to the numbers and relationships, and undoubtedly contributed to their martial successes.

Coordination

The classical management theorist, Chester Barnard (1886–1961), noted that the quality of coordination is the crucial factor in survival of the organization. It is difficult to give coordination a more prominent place. The many specialized units—or silos—in organizations result in a great need for coordination. Committees, task forces, staff meetings, and voice and e-mail messaging facilitate coordination and highlight its importance. *Integration* is another word used to express the concept of coordination.

Contemporary Theorists

Peter F. Drucker

Peter F. Drucker (1909–2005) wrote extensively about managers, management, and organizations, and much of the conceptual framework for contemporary management theory derives from his work. For almost five decades after his first book, Drucker taught and wrote at Claremont College. Early training as a journalist and good knowledge of history and politics make his writing more akin to that of a novelist than a management theorist. Drucker's work as a consultant to large corporations allowed him to study organizations firsthand and develop observations about managers. His views on the traits of leaders are especially compelling. Drucker concluded that there may be charismatic leaders, but they are too few in number to make a difference. His experience persuaded him that successful leaders come in all shapes and sizes and have a wide range of personalities.

W. Edwards Deming

W. Edwards Deming (1900–1993) began his professional life as a statistician. He helped develop the theory of statistical quality control during the 1930s, a concept that was successfully applied to war production during World War II. In the late 1940s he taught Japanese industrial leaders how to use statistical quality control principles and systems thinking to produce high-quality consumer goods. Japan's success in this regard is obvious. Deming only received recognition for his work in the United States in the early 1980s, when he was featured in a public broadcasting special. Deming's 14 points for management focus on how organizations achieve quality. In his concept, managers have the responsibility to establish an environment with quality as the watchword and to improve processes so that quality can be achieved. Workers are inhibited in their efforts to produce high-quality goods and services by the processes that are developed, implemented, and controlled by management. Only management can foster improvement in services. Deming was an advocate of continuous quality improvement, a management philosophy that seeks to improve all processes in an organization. To Deming, quality improvement was not a program to be undertaken by a quality office. It is a philosophy that is customer driven and has the goal of meeting and exceeding customers' expectations.

Integrated Perspective

There is no one correct way to design an organization. More important is that the design or configuration selected furthers the goals of the organization. In this regard, it is useful to apply Drucker's criteria: clarity, as opposed to simplicity; economy of effort to maintain control; direction of vision toward the product, not the process; all individuals understanding their tasks and those of the organization; focused decision making; stability, not rigidity; and perpetuation and self-renewal.

MANAGEMENT PRACTICES

The formal organizational structure that managers design and implement provides important information about the planned interrelationships among its several elements. Within the formal structure, however, is the informal "organization," which consists of the numerous interpersonal relationships that develop outside the formal relationships established in the formal organization and that reflect the wishes and preferences of the people who work in the organization. The informal organization is characterized by dynamic behavior and activity patterns that occur within the formal organizational structure of people working together. These interactions and relationships arise spontaneously, but they are usually stable over time.

Informal groups give their members relief from monotony and boredom, offer interaction with persons having similar values, and allow achievement of a level of status that may be absent in formal relationships. Leaders emerge within informal groups. As is true with leaders of formal groups, leaders of informal group initiate action, resolve differences of opinion and conflicts, and communicate values to nonmembers.

Informal groups are most helpful to the formal organization when they blend with it. Other positive aspects include providing a level of flexibility while still meeting organization goals, providing social values and stability to the organization, allowing more general supervision, and facilitating communication. Effective managers understand and use informal groups to benefit the organization. Combined, the formal and informal organizations are the actual organization. Managers ignore informal groups and informal leaders at their peril.

Strategic and Operational Planning

Strategic planning addresses the longer-term direction and goals selected by the organization through its governance and management in order to accomplish its goals. Strategic planning may also be called strategic management, which suggests the broader, more dynamic concept of fully integrated management and planning. An extension of strategic planning that seeks to affect the external environment is strategic issues man-

agement (SIM). SIM is a systematic process that proactively seeks to influence the external environment to make it more favorable to the organization rather than reacting to events after they occur.

Operational planning focuses on the direction and activities of individual units and departments of the organization. The operational plan must be coordinated with and is subordinate to the strategic plan. **Figure 2-5** shows the general characteristics of strategic and operational planning.

Contingency Planning in Public Health

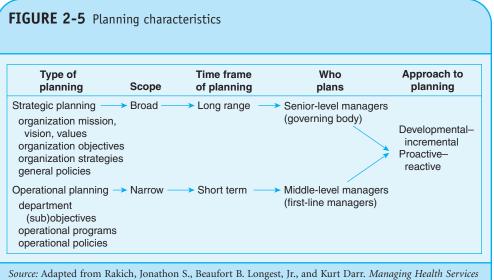
In their work, public health managers face many unknowns. Contingency planning seeks to predict the events that will affect the organization's ability to meet its mission; mitigates their potential negative implications; and, if possible, turns them into a public relations or political advantage. A well-known example of contingency planning in public health is planning for a natural disaster such as an epidemic of avian influenza or a manmade disaster such as a deliberate release of radioactive materials. These plans anticipate the demands of various scenarios, maximize effectiveness in response and minimize preventable morbidity and mortality. In addition, public health organizations must play a leading role in organizing the communitywide contingency planning for various types of disasters such as a severe earthquake, an outbreak of food poisoning that incapacitates large numbers, or a terrorist attack involving the release of poisonous chemicals. Communitywide contingency planning should also address interruption of utilities such as water, electricity, and natural gas. Failure to identify and plan for a variety of contingencies will prevent public

health organizations and providers such as hospitals from meeting their obligations to the public and will raise significant questions as to the quality of their management. At least in the military, it is said that the plan of battle has no value after the first engagement. The same is likely to be true for the contingency planning undertaken by the organizations concerned with the public's health. Besides obvious preparations such as periodic testing of communication links, emergency response and call-in drills, and knowing how to get emergency supplies of food and water, the public health organization's response must be flexible and developed with full recognition of the need for communitywide coordination and cooperation.

Managers as Negotiators

Successful managers are effective negotiators. The art of negotiating or bargaining applies to all internal or external transactions in which the parties decide what they will give and what they want to get. Negotiation is often characterized as win–win (cooperative) in which both parties benefit or win–lose (competitive) if one party prevails at the expense of the other. Deming argued that the result of win–lose negotiations is really lose–lose, because both parties lose.

Most negotiating in organizations is informal—for example, two managers agree to change how their departments coordinate activities. The result of these negotiations may be reflected in a memorandum, thus adding a level of formality. The most common type of formal negotiating occurs when contracts are negotiated and signed between or among parties who seek mutual benefit from the legal relationship that results. These contracts may be for the purchase of goods or



Source: Adapted from Rakich, Jonathon S., Beaufort B. Longest, Jr., and Kurt Darr. *Managing Health Services* Organizations and Systems, 4th ed. (Baltimore: Health Professions Press: 2000). p. 349. Used by permission.

services that are used as input to achieve its objectives, or they may bind organizations horizontally or vertically in relationships that they hope will benefit the public.

Typically, there are two sources of conflict in negotiating. The first is how the resources are to be divided—the money, goods, or services that are to be exchanged for what consideration. The second is resolving the psychological dynamics and satisfying the personal motivations of the negotiators in the organizations involved. The latter source of conflict is known as the intangibles of negotiation and can include variables such as the ego involvement of appearing to win or lose, competing effectively, or cooperating fairly. The intangibles of negotiating are often the most difficult to understand and resolve (Rakich et al.).

Nonjudicial Means of Resolving Disputes

When disputes arise, legal action should be the last resort. There are far more efficient and lower-cost ways to settle disputes, whether they involve contracts, negligence (torts), employment, or interorganizational relationships. The methods used to settle disputes other than by recourse to the legal system are known as alternative dispute resolution (ADR). As described earlier, negotiation is not part of the ADR lexicon; it is, however, the first step managers should take to settle a dispute.

ADR has been widely used for decades to resolve commercial disputes; it is becoming more common to resolve disputes everywhere. ADR is private, inexpensive, and efficient—attributes that are especially important to organizations in the public and private sectors. ADR includes binding and nonbinding arbitration (which may be voluntary or involuntary), mediation, minitrials, neutral fact finding, and variations of these mechanisms. Each mechanism or variation has qualities that make it best for use in resolving a certain type of dispute. For example, mediation is especially useful when the parties want to have a continuing relationship. Binding arbitration may be contractually required by some state and local governments as a means of resolving disputes. There are for-profit and not-for-profit private organizations that provide panels of arbitrators, mediators, and other experts in ADR.

Both mediation and arbitration involve the use of a neutral third party. Mediators and arbitrators have very different roles and training, however. *Mediators* are neutrals who work with the parties to achieve a resolution of the dispute that is acceptable to them. Mediators have no authority to impose a settlement but use various techniques and persuasion to move the parties to a point where the dispute can be settled. The result is a contract between the parties that sets out the terms of the mediated settlement. Failing successful mediation, arbitration may be used as the next step in ADR.

Arbitrators are neutrals who are appointed pursuant to a contract signed by the parties to a dispute. The contract states that the parties will abide by the decision of the arbitrator. The arbitrator has authority to conduct a quasi-legal proceeding, gather evidence, and render a decision. The decision is legally enforceable by the parties because of the contract they signed agreeing to arbitration.

Measuring Managerial Performance

A balanced scorecard should be used to measure performance of the entire management team. Quantifiable outcomes should be emphasized, but not to the exclusion of a focus on meeting or exceeding customer expectations. This focus on customers will be a somewhat more difficult transition in government agencies and units that traditionally have a less-than-enviable record in this regard. In addition to a customer focus, managerial vision in terms of power, timing, and style is important.

Power

Public health managers are expected to use politics and power to achieve organizational goals. These managers build coalitions, make deals, and compromise collective goals to achieve as much as possible. These activities require managers to be highly political and engage in the pragmatic use of power. Here, it is important to understand politics as the art of the possible.

Timing

Change without crisis is a hallmark of good management, and effective managers identify issues far enough in advance to avoid a crisis. Understanding the demands and interests of the marketplace is essential in a consumer-driven public health system, which should be its goal.

Style

Management style is key to organizational success. Effective managers are predictable, frank, responsive and persuasive; can resolve conflicts; and encourage participation in decision making.

Importance of Values

It is difficult to overstate the importance of values. They will be considered in greater depth in Chapter 7. Successful managers have a clearly identified personal ethic, which they willingly share through word and deed. Organizations should recruit and retain staff at all levels based on shared values. Applicants must be screened in ways that emphasize what the organization stands for and the values context of its service delivery. These principles are even more important in selecting senior management who are expected to live and model a personal ethic that is consistent and that reinforces the organization's values.



Discussion Questions

- 1. How do the organization's philosophy and its culture affect organizational performance? What is the role of managers in terms of the organization's philosophy and its culture?
- 2. Identify some of the differences and similarities in organization and management between public health organizations that are controlled by government and health services organizations in the private sector. Pay special attention to governance and organizational structure.
- 3. What is the relationship among the five management functions? Are some more important than others? If so, identify how and when.

- 4. How do managers develop the skills, roles, and competencies needed to effectively perform their work? Which of them cannot be learned?
- 5. Why is problem solving a generic skill? Provide some examples of problem solving from your professional or personal experience.
- 6. What considerations determine the design of an organization? Identify developments that necessitate changes in organizational design.
- 7. What is the role of negotiation in the work of managers? Identify examples of how alternative dispute resolution can assist a public health organization in achieving its mission.

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hotel? Do we count the people on the stage? The people managing the audio-visual equipment? If you change the rule for counting people, you come up with a new number... There is no such thing as a fact concerning an empirical observation. Any two people may have different ideas about what is important to know about any event. Get the facts! Is there any meaning to this exhortation?"

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