

6

Managerial Problem Solving and Decision Making

Learning Objectives

- Distinguish problem solving and decision making
- Understand the steps in problem solving
- Formulate a problem statement
- Identify facts and develop assumptions supported by facts
- Analyze a case and apply the problem-solving method
- Comprehend the uses, benefits, and risks of group problem solving
- Learn the decision-making styles and how they are applied

Discussion Questions

1. *Explain why decision making is integral to the management functions. Identify the three managerial decision classifications, and give examples of each.*

All managers make decisions. It is basic to the management functions, activities, and roles. Nonmanagers also make decisions, but outside the context of managing. Students will benefit from referencing Figure 5.1 for the connection between decision making and the management functions.

Decision making is defined as 1) identifying and evaluating alternatives and 2) choosing from among alternatives. It occurs in planning, whether it is senior managers formulating HSO/HS objectives and strategy or middle-level managers determining departmental objectives or how to implement programs. Organizing includes decision making about authority–responsibility relationships; design of work systems, procedures, and flows; and relationships among structure, tasks, technology, and people. Staffing involves decision making as to numbers of staff to be hired, compensation, performance appraisal, transfer and promotion, and counseling. As managers initiate individual and organizational work by directing others, that is, by leading, motivating, and communicating, they make decisions about what leadership style and motivational approach to use, and how much information to provide to whom, when, and where. When managers control, they make decisions about individual and organizational work results relative to expectations and predetermined standards.

Managers also engage in decision making when they adopt various managerial roles, such as the interpersonal roles of figurehead, liaison (and leader), and influencer; the informational roles of monitor, disseminator, and spokesperson; and the decisional roles of change agent, disturbance handler, resource allocator, and negotiator. The decision classifications shown in Figure 6.1 are ends–means, administrative–operational, and nonprogrammable–programmable:

- *Ends–means decisions* are about objectives and strategies that affect the entire organization and typically involve a substantial commitment of resources. *Ends* are determined by senior management. Examples include modifying organizational culture; changing (expanding, adding, reducing) facilities, services, and/or staff; forming joint ventures or merging or consolidating with an HSO; forming alliances with important external stakeholders; changing organization structure to a new model; and diversifying into unrelated for-profit products and services. The *means* of achieving these changes are determined by midlevel and lower management once the ends decision has been made.
- *Administrative–operational decisions* concern the manager’s position (level) in the hierarchy. Primarily, administrative decisions are made by senior and midlevel managers. Occasionally, their decisions are operational, such as scheduling personal staff. Operational decisions are made by midlevel and first-line managers. Examples are to assign tasks to subordinates, schedule work, and order supplies.
- *Nonprogrammable decisions* involve situations not covered by procedures or rules (e.g., unique and nonroutine situations). For example, decision making under the conditions of opportunity or threat and improvement are likely nonprogrammable. Decisions under the condition of deviation may or may not be programmable.
- *Programmable decisions* are repetitive and routine and are usually governed by procedures or rules, such as purchasing, admitting, and patient billing. Occasionally, managers must review these decisions. Some procedures and rules cover human resources, such as hiring, compensation rates, and absenteeism; others address ethics or organizational culture, such

as treating all patients regardless of ability to pay and basing emergency department service on acuity of illness, not order of arrival.

2. What conditions initiate problem solving? Discuss how problem solving under the condition of improvement is related to problem solving under the condition of opportunity.

Figure 6.3 shows the problem-solving conditions: opportunity/threat (prospective-might), crisis (immediate-will), deviation (retrospective-has/is), and improvement (concurrent-seek).

- *Opportunity* problem solving is prospective and anticipatory. It is used when situations favorable to the HSO develop that might enable it to achieve or enhance desired results. The locus for opportunity problem solving may be internal or external.
- *Threat* problem solving is also prospective and anticipatory; it is the converse of opportunity problem solving, however, and is used when events or situations occur that, if left unaddressed, might cause future results to be less than desired. The locus for threat problem solving may be internal or external.
- *Crisis* problem solving is immediate. It is triggered by a threat that was ignored, or by an unanticipated event. The threat must be addressed immediately, lest organizational results are less than desired.
- *Deviation* problem solving is retrospective. It occurs after a difference between actual and desired organizational results is detected.

Improvement problem solving is the opposite of deviation problem solving. It assumes that all systems and processes can be improved and initiates and supports efforts to improve individual and organizational work results. Unlike deviation problem solving, improvement problem solving is not restricted to or focused on a problem that has been defined. Improvement problem solving is concurrent action in which problem solvers seek improvement of systems and processes. Problem solving under the condition of improvement is conceptually related to problem solving under the condition of opportunity. Improvement and opportunity problem solving are at the ends of a continuum opposite that of crisis and deviation problem solving. Improvement and opportunity problem solving have less immediate certainty of results than do crisis and deviation problem solving. The problem definition is constrained by actual results when crisis and deviation problem solving are undertaken. However, there are no actual results to suggest a problem definition for either opportunity or improvement problem solving. For both, managers are problem seekers who identify opportunities and take advantage of them or seek ways to improve what exists. Opportunity and improvement problem solving are proactive. Crisis and deviation problem solving are reactive and retrospective.

3. How are problem solving and decision making related? What predecision and postdecision activities are inherent in problem solving? What are the steps of problem solving?

Figure 6.2 shows that decision making is identifying and evaluating alternative solutions and choosing (decision making) an alternative. All problem solving involves decision making; not all decision making involves problem solving. Problem solving includes problem analysis, which is 1) predecision situation assessment and 2) postdecision implementation of the alternative that was chosen and evaluation of results.

To identify the predecision and postdecision activities of problem solving, students should refer to the problem-solving process model in Figure 6.4. *Predecision* activities include 1) problem analysis—problem recognition (comparing actual with desired results [in deviation problem solving]) and definition (gathering and evaluating information) and 2) making assumptions (structural, personal, and problem centered). Decision making includes evaluating alternatives relative to decision criteria and desired results and choosing an alternative.

Postdecision activities include 1) implementing the solution chosen and 2) evaluating to determine if results are acceptable.

The steps in problem solving (see Figure 6.4) are 1) problem recognition and definition, including writing a problem statement (part of problem analysis), 2) making assumptions, 3) identifying (developing) tentative alternative solutions, 4) evaluating alternatives and applying decision criteria relative to desired results, 5) selecting an alternative (making a decision), and 6) implementing the alternative chosen and evaluating the results after implementation (part of problem analysis).

4. *Using the problem-solving process model in Figure 6.4, discuss and give examples of the following: How do assumptions affect problem solving? What are some positive and negative results that can occur in the tentative alternative solution loop? Why are both quantitative and non-quantitative criteria important when evaluating and choosing an alternative?*

Students should be referred to the problem-solving process model in Figure 6.4 and the text narrative explaining it. The discussion should note that all persons make assumptions about problems and events in their personal and professional lives. The three types of assumptions—*structural*, *personal*, and *problem centered*—set boundaries for problem solving. Assumptions may be narrow or broad, be appropriate or (proven) inappropriate, or have various probabilities of occurring. Assumptions allow decision makers to extend what is known into the logically probable. All assumptions *must* be based on fact(s). Lacking a basis in fact(s), “assumptions” are only assertion, opinion, and speculation and have no basis of support. Fact(s) allow the problem solver to draw inferences using inductive or deductive reasoning. Use of logic strengthens the inferences (assumptions) and makes them valuable to problem solving.

How Assumptions Affect Problem Solving

If assumptions are too restrictive, are inappropriate to the problem, or have a low probability of being valid (or happening), the breadth or range of tentative alternatives is narrowed. Consequently, alternatives as good as or better than those considered may be excluded.

Students will likely have difficulty making personal assumptions when they analyze case studies. It is important, however, that students begin to develop an ability to put themselves in the place of the problem solver and decision maker, whether fictional, as in the case studies, or in the real world of management. In addition, as nascent managers, they must be able to mentally step outside themselves and see how their biases, experience, and *Weltanschauung* affect their decisions. Drilling students on making personal assumptions will give them a skill that is key to being effective problem solvers and decision makers. The effects of anchoring, escalating commitment, and confirmation bias discussed in the text should be highlighted and reinforced.

Once a manager has recognized and defined the problem [1], established its cause(s) and parameters, and made assumptions [2], alternative solutions are developed [3]. Figure 6.4 shows that 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 decision to accept or reject. If no tentative alternative solutions are acceptable, this step must be repeated.

It is in the tentative alternative solution loop that problem solvers can be creative and innovative in developing and considering solutions. Tentative alternatives that meet the general criteria applied in [3] are evaluated more closely and systematically in the next step, alternative solution evaluation and decision criteria [4], which uses more specific decision criteria.

Positive and Negative Results That Can Occur in the Tentative Alternative Solution Loop

Positive results are that nontraditional solutions can be considered; creativity, originality, and “blue skying” are encouraged; better quality alternatives can be considered if the problem statement and assumptions are not overly restrictive; better alternatives are more likely to be considered than would be the case absent the tentative alternative solution loop; and there is little risk.

Negative results may include spending too much time here; collecting too much information and data; devoting too many resources to this step; letting reiteration become unproductive before it ends; letting urgent problems that need immediate action stay in the loop too long; and using the tentative alternative loop as an excuse to avoid making a decision (procrastinating).

Several factors influence the time and resources used in the tentative alternative solution loop. The quality and precision of the initial problem analysis and problem definition (problem statement) and the degree to which assumptions are not overly restrictive are two of the most important. Others include the sophistication of the HSO’s/HS’s information system, the availability of data, and the degree to which the problem is structured. Unstructured problems or those that are complex and involve many variables take longer to solve. They require developing and evaluating more tentative alternative solutions than problems that are simple, obvious, or narrowly defined.

Why Both Quantitative and Nonquantitative Criteria Are Important When Evaluating and Choosing an Alternative

Both quantitative and nonquantitative considerations are important when evaluating and choosing an alternative. Quantitative or objective evaluation measures costs and benefits of the alternative, and these can almost always be expressed numerically. Nonquantitative (subjective) evaluation assesses considerations (advantages and disadvantages) not easily reduced to numeric expression. A problem of low occupancy in obstetrics suggests the alternative of eliminating that service. Quantitative evaluation may indicate that cost savings will be greater than revenues lost—a net economic benefit. Nonquantitative evaluation may show, however, that eliminating obstetrics diminishes four important considerations: remaining a full-service HSO; positive effect on employee morale—especially nursing; synergism and system optimization; and community service. Decision makers must weigh quantitative *and* nonquantitative considerations.

5. Distinguish facts and assumptions. Give examples of the role of inductive and deductive reasoning in making assumptions.

Facts may be defined as verities, truth, and objectively verifiable. Facts may be difficult to obtain and, if so, should be treasured. Assumptions are inferences that *must* be based on fact(s). Inferences can be drawn using either inductive or deductive reasoning. Inductive reasoning uses one fact from which an inference is drawn. Deductive reasoning uses several similar or mutually supportive facts to draw an inference. The broader base (greater number) of facts available to support an inference makes an assumption based on deductive reasoning more desirable. Either inductive or deductive reasoning may be used, but the problem solver or

decision maker should be aware of the support (facts) available and the type of reasoning used to draw the inference (assumption).

Students may require practice to use logic and reasoning to draw inferences based on inductive and deductive reasoning. Common experiences such as riding public transportation, punctuality of a professor to class, and the quality of a meal at a restaurant can be used to learn the process for drawing inferences. For example, a bad experience with the first meal at a restaurant supports an inference based on inductive reasoning that one should avoid it. Three bad experiences at the same restaurant support an inference based on deductive reasoning that one should avoid it. Both inferences have validity, but the greater number of facts supporting the deductively reached inference show its greater validity and reliability. Amateur criminologists will appreciate the value of inductive and deductive reasoning in the use of circumstantial evidence to convict a wrongdoer. For example, even when there is no direct evidence linking a suspect to a murder, inductive and deductive reasoning can develop circumstantial evidence that the suspect had the motive, means, and opportunity to commit the murder, and successfully use these inferences (assumptions) to convince a jury to convict the suspect.

6. Identify the factors that influence problem solving. Describe three situations, and indicate which factors were influential in shaping the outcome.

This question should cause students to think about the many factors that affect problem solving. Students should be referred to Figure 6.6 and the narrative in the text. Factors influencing problem solving are problem solver, situation, and external and internal environments. For each category, students can identify factors that appear in Figure 6.6. They should be encouraged to brainstorm and identify factors that do not appear in the figure.

Students should be asked to describe a problem-solving situation to the class to answer the second part of the question. Ask them to proceed through and describe how each step in the problem-solving process model (see Figure 6.4) was applied and which of the influencing factors in Figure 6.6 were relevant. This exercise may be initiated by asking questions about a public event students are likely to know about and initiating a general discussion as students apply the steps in Figure 6.4. A question such as “Why did you choose to study health services administration?” can be the basis for working through the problem-solving process.

7. What are the advantages of group problem solving? List reasons why it is critical to the success of organizationwide quality improvement. Describe a situation from your experience in which the phenomenon of groupthink occurred.

Group problem solving can involve subordinates, peers, and/or superiors. Several advantages accrue when managers involve others, such as subordinates, in problem solving:

- Problem definition and its parameters may be improved.
- Those closer to a problem usually know more about it and the circumstances from which it arises. This makes their assistance in identifying tentative alternative solutions more valuable.
- Involving persons knowledgeable about the problem and who will be involved in implementing a solution enhances their commitment to it—pride of ownership.
- Group problem solving enhances communication and coordination.
- Group problem solving is essential for successful quality improvement (QI), which is discussed in Chapters 7 and 8.

Kaluzny reinforces the importance of group problem solving in continuous quality improvement (CQI).¹ He views a structured and organizational commitment to group problem solving—the involvement of others—as critical. It has advantages in addition to those already listed:

- It forces senior managers to rethink the problem-solving role and responsibility of midlevel managers. The aim is to enlarge their roles and increase their authority and responsibility.
- It forces midlevel managers to rethink the relationships between themselves and subordinates to achieve greater involvement of subordinates in problem solving and achieve greater commitment to the HSO and its objectives. This is known as empowerment.
- Greater commitment resulting from a team approach facilitates higher performance of individuals and of the group/unit. There will be more desirable work results.
- At its apogee, CQI is a pervasive organizational philosophy, with total management and worker commitment; this means group problem solving is an inherent part. Formalized methods of group problem solving discussed in the chapter are quality circles and quality improvement teams.

Groupthink can be an outcome of group problem solving. It is an extreme result of social pressure to conform. The attributes of groupthink that students should identify in the situations they describe are the following:

- The group ignores important clues and cues about the problem. Assumptions about the problem are restrictive; only those consistent with the mindset of the members are considered.
- Those outside the group who have been critical of it in the past are stereotyped as hostile to the group—their views are rejected out of hand.
- The group pressures dissenting members to conform.
- There is group censorship and the illusion of unanimity.
- Information contrary to the group members' values and assumptions is discounted.

The U.S. automobile industry showed evidence of groupthink during the 1980s and early 1990s when they ignored the rise in Japanese auto imports. They discounted information showing that consumers wanted better-quality, more fuel-efficient cars. Those critical of U.S. manufacturers, such as Ralph Nader and the federal government, were considered enemies. Internal members who were outspoken and critical, such as Ross Perot, who was a member of the board of directors of General Motors, were pressured to conform. There was group censorship, with Lee Iacocca (of Chrysler) seeming to be the informal spokesperson for the industry.

The discussion question asks students to identify and describe a situation that they have experienced in which groupthink occurred. After the students have done so, it may be useful to allow them to analyze the following to find evidence of groupthink:

- A conscious decision by a hospital's senior management and GB not to inform former patients who received invasive treatment from a staff member who died of AIDS
- Case Study 1 in Chapter 4, "What's a Manager to Do?," which might be useful for students to reanalyze from a groupthink perspective
- The American Medical Association's position in the early and mid-1960s opposing enactment of Medicare
- The reluctance of hospitals to expand into ambulatory care until competition forced them to do so
- The almost unanimous support by organized medicine (e.g., American Medical Association [AMA]) and provider groups (e.g., American Hospital Association [AHA] and Catholic Health Association of the United States [CHA]) of the federal Patient Protection and Affordable Care Act before its passage, even though the proposed legislation was unavailable for review

8. *Identify the types of problem-solving and decision-making styles. Use Figure 6.7 and Table 6.4 to describe situations that show the following styles: AI, CI, and GII.*

The types of managerial problem-solving/decision-making styles (AI–GII), relative to the superior's involvement of subordinates, are presented in Table 6.3. The purpose of this question is to have students think about different problem-solving/decision-making styles managers may adopt vis-à-vis subordinate involvement. Students should review Table 6.4 and Figure 6.7, which examine how problem attributes (e.g., the situation) affect a manager's choice of decision-making style. Students should trace the logic of Figure 6.7 as they describe the situations that result in use of approaches AI, CI, and GII. The same may be done for AII and CII.

Case Study 1

The Nursing Assistant

This short case can be used to help students develop the ability to distinguish facts from hearsay and assertions/opinions. Proceeding through the case sentence by sentence may be the best method of identifying facts. The ability to distinguish facts from other information is essential to good problem solving. Declaratory sentences found in cases are usually facts, unless their content is to the contrary.

1. *Identify the facts in this case.*

The facts are relatively few. The information is provided in declaratory sentences:

- 1) You are the supervisor 2) on the day shift 3) of a nursing facility 4) with 100 beds.
- 1) During the past month, 2) one 20-bed unit has had 3) a workload heavier than other units.
- 1) In that unit 2) you observed family members of a bed-bound resident turning the resident.
- 1) On several occasions 2) in the past week, 3) you saw nursing assistant Johnson sitting in the utility room for what *seemed* to be long periods of time. (It is a fact that you saw Johnson sitting in the utility room. But how long Johnson was sitting in the utility room is indefinite and impressionistic and is, therefore, not a fact and cannot support an assumption. (Is it possible that Johnson was on break? Or that Johnson was seated while waiting for supplies to be delivered?))

The statement made by the patient's family in response to your question as to why they were turning a bed-bound patient is *not* a fact. It is what the law calls hearsay—someone said something that is being “repeated.” The truth of what was allegedly said by the nursing assistant cannot be determined without further investigation. It is a fact that you (the supervisor) saw the family turning the patient. The other information—the reason given by the family for what they were doing—is hearsay.

2. *State the problem.*

Examples of problem statements include the following:

- *Broad problem statement.* In what ways can we solve the problem of unbalanced workload in the nursing facility in order to improve residents' care and satisfaction?
- *Narrow problem statement.* In what ways can we address the heavy workload in the one unit in order to improve residents' care and satisfaction?

It is almost certain that Johnson's behavior is only a symptom of an underlying problem. Students whose problem statements focus on Johnson should be convinced that this is a very

narrow statement of the problem and that disciplining Johnson will not solve the underlying problem. Students' solutions to the problem will depend on the assumptions they make.

3. Make assumptions of the three types described in the chapter. List them in order of declining certainty.

Examples of assumptions include the following (the few facts in the case means all assumptions are based on inductive reasoning):

- *Structural.* I (the supervisor) have the authority to solve the problem on the day shift. (Fact: I am the day shift supervisor.) The problem is caused by an unbalanced workload in the facility. (Fact: The workload is unbalanced.)
- *Personal.* I (the supervisor) tend to be less than aggressive in addressing problems. (Fact: The workload in one unit has been heavier than in others for a month.) I am inclined to think that nonprofessional staff tends to shirk their duties. (Fact: I saw Johnson sitting in the utility room for what seemed like extended periods of time.)
- *Problem centered.* The problem is important. (Fact: Families believe that they should turn residents. This may result in bad publicity because it suggests poor-quality care.) The problem is high risk. (Fact: Families believe that they should turn residents. This may result in injury to the resident or to family members doing something they're untrained to do.)

4. Develop five solutions that should be considered. Which one should be chosen? Why?

Broad Problem Statement. In what ways can we solve the problem of unbalanced work load in the nursing facility in order to improve residents' care and satisfaction?

Examples of solutions include the following:

- Review and adjust staffing patterns.
- Transfer patients to balance the workload.
- Try to hire more staff.
- Undertake process improvement to make care processes more efficient.
- Review admissions criteria to reduce the number of high-acuity patients.
- Improve managers' access to residents' acuity levels to allow more flexible/responsive staffing levels.

Doing nothing will not solve the problem as stated. Doing nothing is rarely a viable solution, regardless of how the problem is stated.

Case Study 2

The New Charge Nurse

This case introduces students to the realities of work life in an acute care hospital nursing unit. You, the supervisor, are faced with a difficult problem—whether to continue trying to develop management skills in a charge nurse with whom you have a good personal relationship or to admit that you made an error in judgment and to transfer, demote, or terminate Besnick. Personal relationships may result in escalating commitment, which is a type of personal assumption that causes the decision maker to continue on a problematic path because of an unwillingness to admit previous error. Note: A charge nurse is the nurse (almost always an RN) responsible for a unit during evening and night shifts.

1. *Describe the education and training received by nursing assistants, licensed practical (licensed vocational) nurses, and the RNs of the various types. Referring to the discussion of nursing in Chapter 1 may be helpful.*

- Nursing assistants are graduates of nonacademic training programs that are only a few months long. Certification is required for nursing assistants who work in nursing facilities that receive Medicare reimbursement. Certification requires passing a certifying examination administered by a state.
- LPNs/LVNs are graduates of 1-year programs. They are licensed but more limited than RNs as to the level of care they can provide and the responsibilities that they can undertake.²
- RNs are graduates of 2-year (technical), 3-year diploma (usually hospital based with a college/university affiliation), or 4-year baccalaureate programs.³ As the case notes, the bachelor of science in nursing (BSN) is the “gold standard” of preparation for registered nurses. Those at all levels of educational preparation may take the licensing examination and become “registered.” It is not unusual to find competition, elitism, and professional discord among those who have been trained in various programs, all of which lead to the RN designation. The BSN is preferred and is likely to be first in the perceived or actual order of precedence for staff nurses with RNs.

2. *Develop a problem statement. Identify several tentative alternative solutions.*

Broad Problem Statement. In what ways can we (I) solve the problems of low morale, high absenteeism, administrative work not getting done, and disrespectful behavior on Besnick’s unit in order to improve delivery of patient care?

Tentative alternative solutions include the following:

- Provide more training to Besnick and/or her subordinate(s).
- Demote Besnick (relieve her of supervisory responsibilities).
- Transfer Besnick and/or some or all of her subordinate(s).
- Fire Besnick and/or her subordinate(s).
- Discipline Besnick and/or her subordinate(s).
- Counsel Besnick and/or her subordinate(s).
- Mentor and support Besnick.

Narrow Problem Statement. In what ways can we (I) improve Besnick’s managerial abilities in order to solve problems of low morale, high absenteeism, work not getting done, and disrespectful behavior on her unit?

Tentative alternative solutions include the following:

- Provide more training to Besnick and/or her subordinate(s).
- Counsel Besnick and/or her subordinate(s).
- Mentor and support Besnick.

As is obvious, there are far fewer tentative alternative solutions for the narrow problem statement than for the broad statement. The solutions that require the supervisor to demote Besnick (relieve her of supervisory responsibilities), transfer Besnick and/or her subordinate(s), fire Besnick and/or her subordinate(s), and discipline Besnick and/or her subordinate(s) cannot be used for the narrow problem statement because the problem statement limits actions to only those that *will improve Besnick’s managerial abilities*. Again, and notably, “doing nothing” is inappropriate for either statement of the problem because doing nothing will not solve the problem as stated.

3. Which solution is best? Why?

Students should be asked to identify tentative alternative solutions and use broad-based criteria to screen them. The broad-based criteria include ethical and legal considerations; furthering the organization's values, mission, vision, or culture; unacceptable financial or political costs; and whether the solutions are infeasible. Those tentative alternative solutions that do not meet the general criteria must be discarded. Those listed above have already been tested against the general criteria.

On completion of the tentative alternative loop, more specific decision criteria are applied to the alternative solutions remaining. Examples of these criteria are provided in the book and include the following: whether the solution solves the problem; feasibility of implementation; cost–benefit analysis; advantage–disadvantage analysis; political acceptance; criticalness; time frame; opportunity costs; and financial costs. Students should develop a decision matrix such as that shown in Table 6.2 and judge the alternatives against those criteria. If the results are equivocal, the criteria should be increased in number and/or stated more precisely.

The answer to the question Which solution is best? Is the solution that has the highest score as judged by the decision criteria.

4. Describe how you would implement the solution chosen. How would you evaluate the results?

Implementation will depend on the alternative solution that is chosen. What must be clear, however, is that the student(s) have thought about how they will put the solution into place and at least have a general understanding of the steps involved.

The means of evaluating the solution must be included, literally built into the implementation. Evaluation must be specific as to whom, how, when, and the criteria that are used in judging results.

Case Study 3

Listening

The purpose of this case is to suggest to students one important connection an HSO can have with its community. The best-managed HSO will see itself as a community resource—whatever its tax status—that is more than an emergency department, a hospital bed, and a nursing station with a few MDs sprinkled into the mix. Beyond the community connection, the case highlights the importance of being responsive to customers and the importance of empowering employees to solve problems, rather than relying solely on managers to do so.

1. Develop a problem statement.

Broad Problem Statement. In what ways can we improve cafeteria processes in order to be more responsive to customers and increase their satisfaction?

Narrow Problem Statement. In what ways can we improve our response to customer complaints in order to increase customer satisfaction?

2. Characterize the manager's management style and the cafeteria staff's view of their role in serving the cafeteria's patrons.

This answer assumes that staff spoke to management as they promised to do. The manager's style is autocratic and not customer focused: 1) staff input is neither given attention nor is staff involved in problem solving; 2) the manager does not manage by walking around and thus is

unaware of conditions and problems in the cafeteria; 3) customers are neither surveyed nor asked about their level of satisfaction.

The staff appears to be trying to solve the problems identified by the customers. Chapter 7 discusses Deming's view that workers are part of a process that is developed and controlled by management. They have no authority to change the process (here, repair or purchase a toaster) in response to customers' complaints. If, as seems to be true here, management is unwilling to listen to input from staff, there is little staff can do except to apologize and be frustrated.

3. *How is customer satisfaction factored into efforts to improve performance?*

Customer satisfaction must drive performance improvement. Here, customers are not only employees who use the cafeteria, but also residents from the neighborhood. In terms of improving public relations and enhancing community benefit (a measure used by the IRS to judge continued tax-exempt status), the HSO does itself a favor by providing nutritious, reasonably priced meals to all customers. The hospital must determine the level of customer satisfaction by using surveys, focus groups, or the proxy measures of trend lines in volume of meals served and wasted uneaten food purchased in the cafeteria. Managers must bear in mind that everything they do is customer driven.

4. *Develop three solutions to solve the kind of problem that Billy and Bobbie had.*

Broad Problem Statement. In what ways can we improve cafeteria processes in order to be more responsive to customers and increase their satisfaction?

- Identify cafeteria core processes, and measure output and intraprocess performance.
- Establish process improvement teams for each core process to review data and recommend process change(s).
- Find benchmark hospital cafeterias; study their processes to find ways to improve.

Narrow Problem Statement. In what ways can we improve our response to customer complaints in order to increase customer satisfaction?

- Provide customer comment cards that are used as a focus for improvement efforts.
- Encourage staff to ask customers about their satisfaction with the cafeteria; organize that information to focus improvement efforts.
- Randomly survey customers, using a short questionnaire to identify problem areas.

Case Study 4

Ping-Ponging

This case brings to the students' attention the important connection between management of an HSO (in this case a hospital) and concerns that might arise regarding the PSO. An underlying premise is that HSO leadership cannot ignore its responsibility to the community and the wider society beyond. This responsibility includes taking action when potentially dishonest actions are identified, even though they do not involve the HSO directly.

1. *What are the clinical implications of patients receiving unneeded tests and having overlong lengths of stay?*

Clinical implications of unneeded testing include the risk of the test and its associated pain and discomfort. In addition, the equipment and staff are unavailable for patients who actually need the test(s). Hospitals are dangerous places, and excessive lengths of stay expose patients to a higher risk of infection, as well as other risks, such as injuries from a fall.

2. *Develop a statement of the problem from the perspective of the VPMA.*

Preliminary/Investigatory Statement. In what ways can we collect data in order to determine the truth of the anecdotal information?

The Problem Statement. If the problem suggested by the anecdotal information is correct, the problem statement is as follows: In what ways can we minimize overtesting and excessive lengths of stay in order to protect patients and minimize Medicare denials without alienating PSO members other than those who are involved in the practice?

3. *What weight should be given to the ethical and legal implications, compared with the economic implications?*

All three areas are important, but if the ethical implications are addressed successfully, the legal and economic implications will resolve themselves. The hospital has an ethical duty of beneficence and nonmaleficence to patients. These ethical obligations are met by furthering the best interests of patients and protecting them from harm. This means working to end the apparently unethical and clinically unjustified practices described in the case that subjected some patients to unneeded testing and excessive lengths of stay. It is tempting to address the issues raised by working backward from the denials of reimbursement to the hospital. Denials (and legal problems) are retrospective, and the potential (or actual) harm to the patient has already occurred. A two-pronged approach can be used—the economic (based on the denials) and the ethical. The emphasis must be on prevention, however, since this avoids all of the sequelae of the initial questionable action.

4. *What, if anything, should you as CEO do about the problem described by the VPMA, as stated in the answer to Question 2 above?*

At the very least, the CEO has an obligation to determine whether there are facts to support the anecdotes. The CEO's basic ethical obligation is to protect patients from harm and further their interests in terms of safety and rapid return to maximal health and function. Thus, if investigation shows that there is a problem, the CEO must take action.

The CEO may have a duality of interests that could result in an actual conflict of interest. The unneeded testing and excessive lengths of stay generate revenue for the hospital. If some of these charges are denied but most are paid, the result will be improved financial circumstances for the hospital. This enhances the CEO's reputation and is an incentive to continue the practice.

In addition, interfering in physician practice patterns (perhaps especially if there is corruption to be kept hidden) has the potential to turn those involved, as well as other members of the PSO, against the CEO. The net result may be that the CEO is terminated. A terminated CEO has no influence to protect patients. Thus action must be undertaken only with extreme caution. Action is necessary, however, and it is the CEO's ethical obligation to do so.

Additional Case Study 1: Preferred Provider Organization

This case study focuses students' attention on problem-solving and decision-making styles and considers them in a practical way. To determine the extent of subordinate (or peer) involvement in solving the problem, students must understand 1) management problem-solving and decision-making styles (see Table 6.3), 2) problem attributes (see Table 6.4), and 3) the appropriateness of style to the situation (i.e., problem attributes) and the logic of the model that appears in Figure 6.7.

You are the senior vice president and chief operating officer (COO) of Mercy Hospital, a 400-bed acute care hospital and medical center. The president of Mercy Hospital asked

you to investigate what she thinks is a problem and to identify alternatives to solve it. The hospital's inpatient days, occupancy rate, ancillary services work units, and outpatient visits have been declining for a number of months—at least 10% in each category. The president thinks that the cause is competition from a health maintenance organization (HMO) that was established a year ago and from two investor-owned freestanding emergency centers that opened 6 months ago. The two other hospitals in Lincoln City, a town of 300,000 where Mercy is located, have not done anything differently this year compared with the past. The president of Mercy has learned that bad debt has increased for them as well.

You know that the professional staff organization membership has changed little over the period, Mercy enjoys good media and stakeholder relations, there have been no quality problems, and Mercy's inpatient and outpatient charges are about 5% less than at the other two hospitals. It seems that inpatient days and outpatient visits should have increased since the hospital completed a building expansion 6 months ago, especially because it added space to the outpatient department. The expansion was completed ahead of schedule and under budget—the area's 13% unemployment rate allowed contractors to accelerate construction because skilled workers were readily available.

You are perplexed as to why there seems to be a problem. To your knowledge, the HMO has a contract with only one major manufacturer, whose employees and dependents represent fewer than 4% of Mercy's business.

You must submit your recommendation to the president in 2 weeks. You are considering calling a meeting of your subordinates, who include the vice president of patient care services (nursing service), two operations vice presidents, and the vice president for human resources. Two other individuals who report directly to the president could be invited to attend the meeting—the vice president for professional staff liaison (VP-PSL) and the chief financial officer (CFO). Your subordinates are united in purpose, and it is easy to work with them. The two who report to the president see things differently than you do. They look at problems as they affect their own areas of responsibility, not the hospital as a whole, and they do not always cooperate with you.

You have been thinking about recommending the formation of a preferred provider organization (PPO) under whose auspices the hospital could contract with physician practices through an independent practice association to provide in- and outpatient services at a discounted rate. The PPO would be marketed to local businesses. You believe that this arrangement would increase patient volume. In fact, as you think about it, you wonder whether you need to hold that meeting.

1. Use the information in Figure 6.7 and Tables 6.3 and 6.4 to identify the problem-solving and decision-making style that you should use in solving the problem. Should the meeting be held? Why? Be prepared to discuss why you selected a particular style.

A meeting should be held because 1) there is a quality requirement—not all possible solutions are obvious, and some are better than others; 2) the COO does not have sufficient information; 3) the problem is not structured; and 4) acceptance of the decision (alternative chosen) by subordinates (or peers) is critical to implementation. Consequently, involvement of others is necessary, so the unilateral AI or AII styles are not appropriate.

The case study states that the VP-PSL and CFO report to the president and are not the COO's subordinates. They must be involved in solving the problem, as must the COO's subordinates, because 1) they have material information, 2) their cooperation is needed because implementing any alternative affects/involves their areas of responsibility, and 3) there is conflict because not all share the same goals. This makes style 13-CII appropriate. The reasoning follows (refer to Table 6.3 and Figure 6.7; bracketed letters [a–g] refer to the problem attributes in Figure 6.7 and Table 6.4):

- [a] Yes. There is a quality requirement. Some solutions are better than others.
- [b] No. The COO alone does not have sufficient information.
- [c] No. The problem is not structured.
- [d] Yes. Acceptance by subordinates and peers (VP-PSL and CFO) is critical to implementation.

- [e] No. A unilateral decision might be accepted by the COO's subordinates; a unilateral decision is unlikely to be accepted by the VP-PSL and CFO.
 - [f] No. The VP-PSL and CFO do not share organizational goals to be attained in solving the problem. "They look at problems as they affect their own areas of responsibility, not the hospital as a whole. . . ."
 - [g] There is likely to be resistance from the VP-PSL and CFO in undertaking the preferred solution. Thus they must be involved and won over.
2. *Assume that you unilaterally made a decision and recommended the PPO alternative to the president. Use the problem-solving model shown in Figure 6.4 to identify the steps that were not done or were not done well, and why.*

If the COO made a unilateral (AI or AII) decision and recommended a PPO to the president, the following would have occurred (bracketed letters [a–g] refer to problem attributes in Figure 6.7 and Table 6.4):

- [a] Since there is a quality requirement (one alternative solution is not necessarily as meritorious as another), other tentative solutions may not have been adequately considered—that is, there may be a better solution (refer to Identifying Tentative Alternative Solutions [3] in Figure 6.4). Thus the process of developing tentative alternatives may not have been done well.
- [b] The COO does not have sufficient information. The COO needs assistance from others as to definition, assumptions, decision criteria, and ramifications from implementation (refer to parts 1, 2, 4, 5, and 6 of the problem-solving model in Figure 6.4). Thinking and analyses throughout may be flawed, including the definition of the problem. In fact, the COO accepted the president's description of the problem: declining inpatient days, occupancy rate, ancillary services, and outpatient visits. Some or all of these may be symptoms of the real problem, such as excess capacity after the recent building program. It is possible that the PPO alternative will not solve it. The high unemployment rate (13%) in the area means fewer people have employment-based health insurance. This would be an uncontrollable factor that a PPO cannot solve. Nutt's concept of the recognition/definition of a problem as "formative" applies here;⁴ everything else was based on the president's definition.
- [c] The problem is not structured. Therefore, the structuring done by the COO was based on the COO's assumptions (refer to part 2 of Figure 6.4), which may have been too restrictive. The COO accepted the president's assumption of decline estimated as "at least 10% in each category." This may be incorrect; true rates could be higher or lower. The CFO would know. The personal bias of the COO resulted in anchoring—choosing a starting point, which might be wrong—and going from there. Escalating commitment may be present as well.
- [d] Acceptance by subordinates and the VP-PSL and CFO are critical to success. Non-involvement of the VP-PSL and CFO will likely result in resistance; therefore, implementing a PPO alternative—if that is the solution selected—may be more difficult or impossible.
- [e] Acceptance by subordinates is likely. But acceptance by the VP-PSL and CFO is unlikely, and they may actually resist.
- [f] The COO's subordinates share organizational goals; the VP-PSL and CFO do not.

The PPO may be a solution, but its appropriateness depends on the problem's definition. If the president's definition is correct, a PPO might be successful. The instructor may choose to incorporate discussion of factors influencing problem solving and the COO's choice of a PPO (see Figure 6.6).

Additional Case Study 2: There Are Hours and There Are Hours

This simple case provides another opportunity for students to develop problem-solving skills. It may be useful to hypothesize various organizational philosophies (values) to understand the effects on assumptions and acceptable tentative alternative solutions that can then be considered, using detailed decision criteria (see Steps [3] and [4] in Figure 6.4). For example, an organizational philosophy that all employees are salvageable and every effort must be made to train, retrain, and transfer will produce solutions that are quite different from a philosophy that employees are units of production that are easily interchanged. It is also useful to distinguish the results in a situation in which a philosophy is stated but not followed.

You are the vice president for support services at Autumn Days Nursing and Rehabilitation Center. Frances “Frankie” Hammerman, the full-time coordinator of volunteers, reports to you. She has held that position for 6 months after working 10 years as a social worker in the social services department at Autumn Days. Hammerman works alone and is responsible for recruiting, training, assigning, and monitoring the work of about 130 volunteers at the center.

Full-time center employees work 40 hours a week. Everyone, including managers, completes a time card biweekly. About a month ago, you noted that whenever you called Hammerman after 2:00 p.m., you were connected to her voice mail. Although she called early the next working day, something seemed amiss. Out of curiosity, you reviewed her time cards for several months and saw that she had entered 40 hours each week.

You asked Hammerman to meet with you. You are pleased with her work and began the meeting by telling her so. She was composed when you mentioned the apparent discrepancy between her time cards and her availability. Without embarrassment, Hammerman told you that she is efficient and her daily work is complete in less than 6 hours. She had thought about slowing her pace and staying at her desk for a full 8 hours, but she considered that dishonest. Hammerman believes that showing 8 hours worked each day on her time card is okay because she accomplishes the work of 8 hours in less time. Thus, when she is finished for the day, she goes home.

You reacted calmly but with a sense of bewilderment—you have never heard such an explanation. Your first thought was to fire Hammerman because her actions seemed blatantly dishonest.

1. State the problem.

Narrow Statement. In what ways can I (we) discipline Hammerman in order to end her dishonest behavior?

Broad Statement. In what ways can I restructure or change Hammerman’s job so her capabilities/talents are used fully in order for her to achieve “joy in work”?

2. Identify the facts in this case. What assumptions should be made?

The information in this case is clear. The following facts are present:

1. You are vice president for support services.
2. Hammerman
 - a. is the full-time coordinator of volunteers.
 - b. has held that position for 6 months.
 - c. was a social worker for 10 years in social services at Autumn Days.
 - d. works alone.

- e. is responsible for recruiting, training, assigning, and monitoring 130 volunteers.
 - f. reports to you.
3. Full-time employees at the center work 40 hours per week.
 4. Everyone completes a time card.
 5. For approximately 1 month, every time you called Hammerman after 2:00 p.m., you were connected with her voice mail.
 6. Hammerman called promptly the next working day in response to your message.
 7. You reviewed Hammerman's time cards for several months; each showed 40 hours per week.
 8. You asked Hammerman to meet with you.
 9. You are pleased with Hammerman's work and tell her so when the meeting begins.
 10. Hammerman is composed when you tell her about your concern.
 11. Hammerman tells you she is very efficient and her daily work takes only 6 hours.
 12. Hammerman tells you that she had considered alternatives such as slowing the pace of her work and staying at her desk the full 8 hours but considered this dishonest.
 13. When she is finished for the day, Hammerman goes home.
 14. You are bewildered by Hammerman's explanation.
 15. Your first thought is to fire Hammerman.

Examples of assumptions that can be drawn include the following:

- *Structural.* You have the authority to fire Hammerman (Facts 2a and 2f). You have the authority to discipline Hammerman (Facts 2a and 2f). Volunteers are important in performing the organization's work (Fact 2e).
- *Personal.* You tend to react with dismay to what you judge to be illogical reasoning (Fact 14). Hammerman has done her work well. "Anchoring" or "escalating commitment" may become an issue for you (Fact 9). People can rationalize almost anything; for example, Hammerman considered it dishonest to slow the pace of her work so it occupied 8 hours, but she did not consider it dishonest to record 8 hours on her time card despite working only 6 hours (Facts 11 and 12). Volunteers are an essential part of the center's activities, and good management is needed to integrate them effectively (Fact 2e).
- *Problem-Centered.* Hammerman is self-confident and competent (Facts 10, 11, and 12). The problem is important but not critical; it need not be solved immediately (Fact 5). Other staff may learn about Hammerman's actions, and the problem may spread (Facts 5, 12, and 13).

3. Develop five alternative solutions.

Possible solutions to a narrow statement of the problem include the following:

- Fire Hammerman.
- Send a letter of reprimand, and dock Hammerman's pay retrospectively for 1 month.
- Send Hammerman a letter of warning that she will be terminated if she continues to misstate her hours.

- Place a memorandum in Hammerman's personnel file that reflects the verbal warning you will give her.
- Require Hammerman to check in with you or your secretary whenever she comes to work or leaves.

Examples of solutions to a broad statement of the problem include the following:

- Identify other jobs/tasks in the center that Hammerman could perform on a regular basis.
- Direct Hammerman to increase the number of volunteers so that she has more work.
- Assign Hammerman special projects that you identify.
- Identify promotion opportunities within the center, and suggest them to Hammerman.
- Expand the role and work of volunteers so that Hammerman has more work.

4. Develop a set of decision criteria that should be used.

For a narrow statement of the problem, the solution

- must be fully implemented within 30 days.
- cannot cost more than \$100 in overhead and out-of-pocket expenses.
- must be politically feasible and cause minimal dysfunction to the center.
- must not interrupt the work of the volunteers.
- cannot have any adverse legal effects, equal employment violations, or formal grievances.
- must fit with the mission, vision, and ethical framework of the center.

For a broad statement of the problem, the solution

- must be fully implemented within 6 months.
- cannot cost more than \$1,000.
- must be acceptable to Hammerman.
- must be politically feasible and cause minimal dysfunction to the center.
- must not interrupt the work of the volunteers.
- must contribute to the overall efficiency and effectiveness of the center.

Additional Case Study 3: Increasing ED Throughput

The situation described in this case study is common in EDs. Process improvement will diminish wait times and increase patient satisfaction. This case study can be used as both a problem-solving exercise and in conjunction with the material from Chapters 7 and 8 that addresses quality and performance improvement.

The emergency department (ED) at City Hospital (CH) is very busy and has over 80,000 admissions per year. The ED is the only level-one trauma unit for a service area population of 150,000. It receives the full range of patients from the most serious trauma to the worried well. The helipad brings state police med-evac transports.

You are the administrative director of the ED. Your responsibilities include managing the non-LIP staff (all are employed by CH), the physical plant, supply chain, and capital budget up to \$5,000 per item. An ED physician group contracts with the hospital to provide LIP staffing, including physicians. The group also employs several physician assistants (PA) and nurse practitioners (NP). The ED group is managed by the physician-owner, Dr. Ridgwell.

There are problems with lengthy wait times in the ED. Nonacute patients may wait 3 hours after triage to be seen by a clinician; total time from initial triage to discharge averages 5 hours. About 2 years ago, a fast-track system was introduced. Patients are triaged by a PA or an NP; the acutely ill use a separate process. Nonacute patients in Fast Track are seen by PAs, NPs, and second-year residents. General clinical supervision for Fast Track is provided by a full-time physician member of the ED group.

To identify reasons for the lengthy delays, you and Dr. Ridgwell convened a focus group of nurses, LIPs, non-LIPs, administrative staff, and several former patients. In a brainstorming session the group identified dozens of reasons for delays in Fast Track. One former patient said that the first order of business should be to change the name from Fast Track to Side Track—because patients were left sitting so long. Although accurate, the rail transport metaphor was a very negative comparison.

More helpful suggestions identified the following as primary reasons for delays in Fast Track: too many persons who did not need ED services, even those in Fast Track; slow turnaround times from the laboratory; long waits for the technicians who brought the portable x-ray machine to the ED; too few staff for the volume of patients during certain hours; charts/medical records unavailable as needed for returning patients; confusion among staff members as to how the process was organized and next steps; family members/friends crowding into treatment bays; delays in writing ED discharge orders; and delays in providing discharge instructions for patients' self-care after they left the ED.

Following the focus group meeting, you feel even more directionless. Where should you start? Resources are limited; hiring a consultant is not possible. You must rely on internal assets if throughput is to be improved.

1. Describe the steps in establishing a QIT.

This discussion presumes that CH has a quality improvement council (QIC [or similar]) empowered to sanction quality improvement teams (QITs).

- a. ED administrative and clinical management asks the QIC to sanction (establish) a QIT. This sanctioning is necessary because it is likely that improving the ED Fast Track is likely to affect other parts of the hospital (e.g., laboratories, radiology [imaging]). The request should be accompanied by an opportunity statement that describes what will be done and the expected outcome(s).
- b. After sanctioning, the QIT must be staffed. Primary/core members must be persons who work in the process and can provide detailed information as to how the process functions currently. The team leader is the process owner—the person with administrative responsibility and a keen interest in improving its functioning.
- c. The QIT should be as small as is consistent with the need for data collection and analysis. A facilitator and data analysis support should be provided by the office of quality improvement, which functions in a support role. Even though they are not members of the QIT, persons with special process knowledge can be used to provide information, as needed.
- d. A first step of the QIT is to prepare a flow diagram, sometimes called a process map. The flow diagram shows the current process that is Fast Track in all of its complexity. If the complexity of the process is not known, data collection about it will lack the precision to enable the QIT to identify sources of delay.

2. Identify the types of baseline data needed to understand what is happening in the ED.

- a. Macro data on ED admissions, patient wait times by day and time of day, staffing levels by shift and numbers of, and turnaround times (TAT) for laboratory tests, radiology (imaging), and pharmacy.
- b. Comparative data from similar hospital EDs, including benchmark(s).

3. Outline a plan to collect data for Fast Track.

Data collection should occur only after a flow diagram/process map is available. Use a fishbone (Taguchi) diagram to organize reasons for delay that the flow diagram suggests have the most influence on delays. Focus attention for data collection on the area(s) that are likely to produce the earliest and most significant results. Use reliable, pre-collected data whenever possible. Try to identify and correct problems that are the “low-hanging fruit.”

4. Identify three process improvement data tools that could be used to understand the process(es) in Fast Track.

- a. Control charts
- b. Scatter diagrams
- c. Taguchi (fishbone/cause-and-effect) diagrams
- d. Bar graphs
- e. Pareto charts

Notes

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3. American Nurses Association. “How to Become a Nurse.” <http://www.nursingworld.org/EspeciallyForYou/What-is-Nursing/Tools-You-Need/RegisteredNurseLicensing.html>, retrieved January 8, 2014.
4. Nutt, Paul C. “The Identification of Solution Ideas during Organizational Decision Making.” *Management Science* 39 (September 1993): 1,071–1,085.