



CHAPTER THIRTEEN

ASSESSING YOUR MICROSYSTEM WITH THE 5 P'S

Chapter Purpose

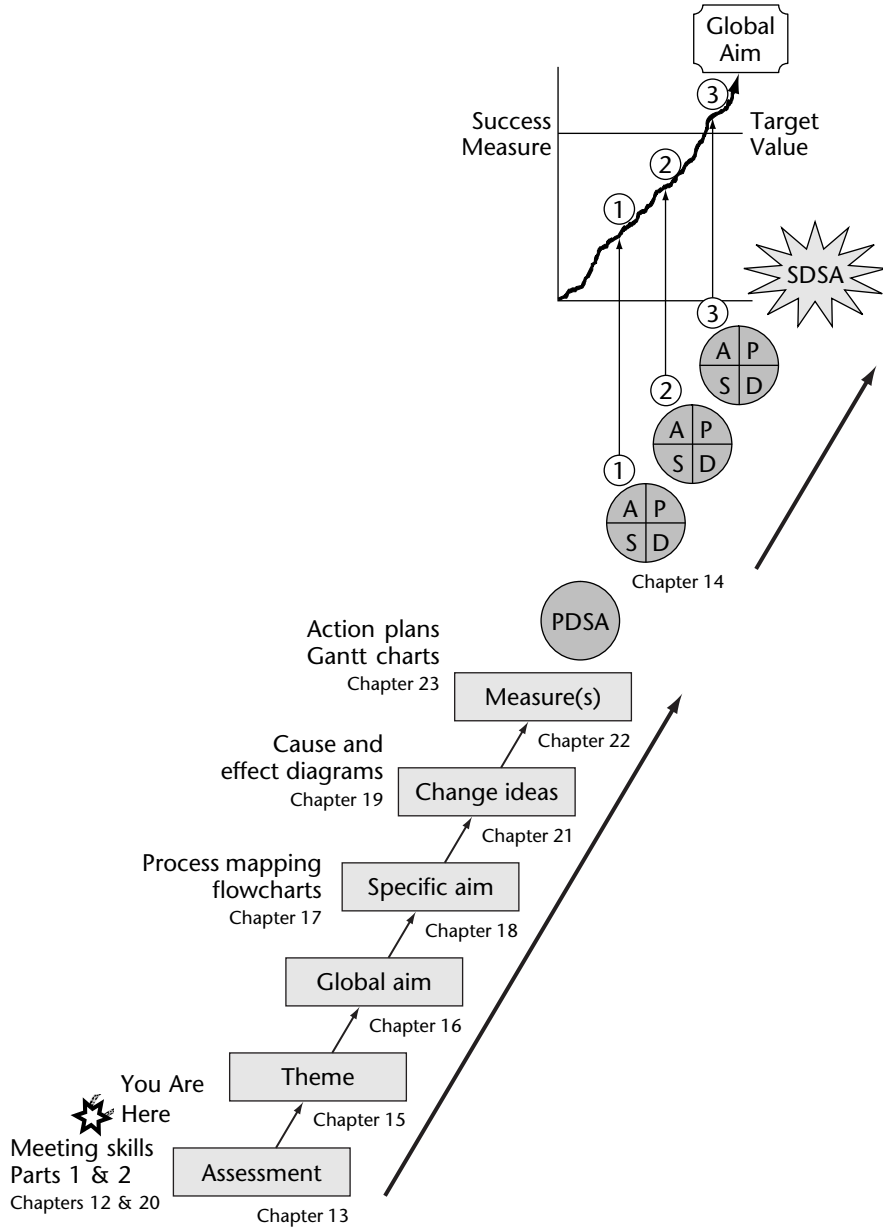
Aim. To do an assessment of your clinical microsystem using the 5 P's framework, a tested analytical method that focuses on *purpose, patients, professionals, processes, and patterns.*

Objectives. At the completion of this unit, you will be able to

- Organize your microsystem assessment so it is systematic.
- Describe your deeper knowledge of your microsystem's purpose, patients, professionals, processes, and patterns.
- Identify key tools and methods for gaining deeper knowledge.
- Engage all members of your clinical microsystem in the process of assessment and awareness building.
- Review, analyze, and draw conclusions about the relationships among the 5 P's.
- Identify strengths and opportunities for improvement based on the 5 P's assessment.

The assessment of your clinical microsystem is the beginning of that system's improvement journey. Through the assessment described in this chapter, the interdisciplinary lead improvement team will learn new information and data about the microsystem and use that material to inform their selection of improvement themes and aims. (See Figure 13.1.)

FIGURE 13.1. IMPROVEMENT RAMP: ASSESSMENT.



How Does an Interdisciplinary Lead Improvement Team Begin to Assess and Improve a Clinical Microsystem?

Think patient care. To improve a patient's health status you assess, diagnose, treat, and conduct follow-up based on biomedical and clinical care science. This process includes the patient and the family.

To improve a microsystem's "health" status—you assess, diagnose, treat, and follow-up—just as with patients—based on improvement science and the science of clinical practice. This process should include all members of the clinical microsystem. The main idea is for the microsystem to build understanding and to discover its capability from the *inside out*.

Using effective meeting skills (Chapters Twelve and Twenty) you convene the lead improvement team, representing all microsystem members' roles, to begin to review data and information about the microsystem.

The 5 P's framework is a tested and useful method for microsystem members to begin to see their microsystem in a new way and to begin to ask new questions. John Kelsch (1990), formerly the corporate director of quality for Xerox Corporation, once observed that "to do things differently, we must see things differently. When we see things we haven't noticed before, we can ask questions we didn't know to ask before."

Moreover, doing a 5 P's assessment does not mean that improvement activities need to be postponed. Many clinical teams do their assessment before starting to make improvements, but some begin organizing improvement efforts and learning about their system's 5 P's simultaneously. The discoveries that occur in the 5 P's diagnostic process often make the needed improvements clear, and ultimately, the 5 P's inform improvement activities and planning now and in the future.

What Does the 5 P's Framework Look Like?

The 5 P's framework can be thought of as a structured method of inquiring into the *anatomy* of a clinical microsystem (see Figure 1.3). Every complex, adaptive system has structure, process, patterns, and outcomes (Zimmerman, Lindberg, & Plsek, 1999), and you can make these features explicit and analyze them by using the 5 P's framework in your microsystem.

It is often useful to create a poster-sized version of the 5 P's diagram to visually display your microsystem's 5 P's facts for all staff to review and understand. A template for such a poster can be found and downloaded at <http://www.clinicalmicrosystem.org> (click on Tools) (also see Figure 13.2 in the ICCU case study at the end of this chapter).

What Resources Are Available to Guide the 5 P's Assessment?

The Primary Care Workbook in the Appendix contains a tested and helpful collection of tools to help you assess your microsystem and by so doing to build the knowledge base and system awareness of your interdisciplinary lead improvement team. In addition, the Dartmouth Clinical Microsystem Toolkit (Godfrey, Nelson, & Batalden, 2005a) includes two workbooks that focus on hospital microsystems: *Improving Care Within Your Inpatient Units and Emergency Department* (Godfrey et al., 2005c) and *Improving Care Between Your Clinical Units* (Godfrey et al., 2005b). More outpatient and specialty workbooks can be found at <http://www.clinicalmicrosystem.org>, along with full-page worksheets and tools.

What Is a Helpful Way to Introduce Your Team to the Assessment Process?

Lead improvement teams have gained deeper insight into and knowledge of their microsystems in various ways. Each microsystem is unique, and the group should determine the best method and pace for conducting their assessment. An important consideration is the amount of data and information that is, or is not, readily available. Use the workbook in the Appendix or on the Web site to preview what you might do and how you might make a strategy for forward progress. After you have previewed all the suggested data and information, you can formulate a plan to collect the data and information you need. One example of such a plan is Figure A.1 in the Appendix. Completing the data organization table in this figure will give you an outline of the material that need to be reviewed and descriptions of where current data are available. The *practice profile* worksheet in Figure A.2 will also guide you in obtaining the needed data and information.

What Are the 5 P's?

The following description of the 5 P's is essential information for microsystem leaders. Moreover, by sharing this information with everyone in the microsystem, leaders can promote learning, understanding, and awareness that is broad and deep; this improves the functioning of your microsystem.

Purpose

The purpose of your microsystem may go beyond the microsystem's mission statement. If a mission statement is available, then consider having an active discussion among all the microsystem members to enable each person to make a connection between himself or herself and his or her values on the one hand and the microsystem's purpose on the other.

High-performing microsystems have a clearly stated purpose and mission. All too often, busy interdisciplinary lead improvement teams have not taken the time to discuss and agree on the purpose of the microsystem. Every member of the microsystem should have the opportunity to contribute to the purpose statement. This active discussion aims to connect individual members with the microsystem's purpose. It reveals each member's view of the microsystem purpose. Clarifying the purpose statement also establishes a guiding light for setting priorities and making decisions in the microsystem.

Patients

Individual members of the microsystem have knowledge about the patients they provide care and services to. This knowledge usually concerns individual patients or what happens on certain days of the week or during specific shifts. General population knowledge and general facts about the microsystem are not usually shared by all members of the microsystem. Gaining deeper knowledge about the patients and subpopulations of patients that the microsystem serves can enrich all members' decision making and their design of care and services. This knowledge can help microsystem members become better informed about how to take good care of patients and how to improve their delivery system.

Professionals

Every member of the clinical microsystem who provides and contributes to the care of patients should be thought of as a professional. If every person, in every role, is respected for what he or she contributes to the smooth functioning of the microsystem, then individual self-esteem, morale, and engagement all rise. Charles Mayo, one of the Mayo Clinic's founders, reminds us, "There are no inferior jobs in any organization. No matter what the assigned task, if it is done well and with dignity, it contributes to the function of everything around it and should be valued accordingly by all" (Mayo, n.d.). Learning more about all the microsystem's professionals and what they do, what hours they work, what they wish to learn, and how they rate their workplace increases awareness for future improvement.

Processes

The interdisciplinary members of a microsystem participate in various processes, systems, and steps to care for patients. Their tasks are interrelated and should complement one another. Often microsystem members have never taken the time to meet to review specific processes of care that are repeated regularly in the system. The different views and perspectives of each member are revealed when the lead improvement team is asked to create a flowchart to show how routine care is delivered or how a patient enters the microsystem. This lack of knowledge about how the current process actually works and how it varies underlies and contributes to much of the waste and poor reliability within a microsystem. Identifying core processes and engaging all members in flowcharting the current state is a way to begin to design more efficient and effective processes. It gives the microsystem members insight about the contributions that each person makes to the process (see Figure A.11, in the Appendix). This often works best when one or two members construct the initial flow diagram and then others are asked to improve upon this draft. Eventually, the flowchart can be posted for all to review and edit.

Observing and measuring *cycle times* in processes of care can also help a microsystem group identify waste in daily work. Viewing the process of care through “the eyes of the patient” (see Figure A.5, in the Appendix) is a powerful tool for gaining important insight into that process from the patient perspective.

Patterns

Patterns exist in every microsystem but often go unnoticed, unacknowledged, or unleveraged. Does everyone in your microsystem meet regularly to discuss what patients want and need or to talk about care or the microsystem’s quality, cost, and safety outcomes? Who talks to whom? Who never talks to whom? What are the *metrics that matter* for the microsystem (see Figure A.14 in the Appendix and Godfrey et al., 2005c, p. 22)? Do all members know about, review, and discuss these metrics and causal systems? What has the microsystem improved, and what makes the members most proud? What does the microsystem celebrate? All of these patterns and more can be acknowledged and taken into consideration when increasing member’s awareness about a microsystem and when taking action to improve that microsystem.

After making a plan and beginning to obtain the data and information, the lead improvement team is ready to review the microsystem’s current state. Collecting a sample of information about each of the 5 P’s is a good way to begin.

It requires that you identify the sources for the data. (The materials in the Appendix of this book can facilitate the collection, display, and assessment of the information about each of the 5 P's.) The resulting characterization of the system's current state can be very helpful as the microsystem members continue to gain deeper knowledge about its work.

A helpful five-step exercise follows. Remember, this exercise is best done by your interdisciplinary lead improvement team. It can be done in multiple sessions, to give the team time to review and discuss and to determine next steps and gain more information. For example, you could plan five sequential meetings, with a focus on one P at each meeting. Useful materials are (1) a microsystem wall poster, (2) five envelopes, each with preliminary information for one of the P's, and (3) tape. Here's how it works:

1. Assign a meeting leader, facilitator, timekeeper, and recorder prior to starting. Develop an agenda and timeline to cover all five steps in this exercise. Be sure to assign enough time for the team to cover each of the exercise steps. Plan enough time at the end of all the sessions to synthesize the information and prepare a report.
2. Prepare five envelopes that contain preliminary information from your microsystem about the 5 P's (purpose, patients, professionals, processes, patterns), one P per envelope. Some important information will be available and some will not. Use the workbook in the Appendix and the Web site to help you identify the data needed to assess and diagnose your microsystem. Focus on one P at a time. It is important to review the data, determine what additional information is needed and where it may be obtained, and then move to the next P.
3. Use the microsystem workbook to determine which tools will help the lead improvement team to gain deeper insight into the microsystem. Some of the needed microsystem information is in each of the envelopes that you prepared; the microsystem workbook can help you to assess and diagnose your microsystem, and it provides additional tools for collecting desired information.
4. When reviewing each P, some of the questions that follow this exercise may facilitate the team discussion.
5. At the end of the 5 P's series the lead improvement team will have a deeper awareness of its microsystem and can report back to all the microsystem members and summarize the learning and conclusions. The lead improvement team will also know what additional information it needs to deepen its own knowledge about its microsystem.

Review the following discussion questions when performing each section of this exercise:

1. Purpose
 - a. What do you think about your organization's mission statement and the microsystem's mission statement?
 - b. How are these two statements aligned with each other?
 - c. How could your microsystem's purpose statement be improved?
2. Patients, professionals, processes, patterns
 - a. What do you see after reviewing the information?
 - b. What other information do you need, and how can you obtain it?
 - c. Can you begin to make any initial assessments?
 - d. How can the microsystem workbook help you with the assessment?
3. Prepare a report on your findings (in the form of wall poster) for all the members of your microsystem.
 - a. Post graphical displays and tables under each of the 5 P's on the microsystem wall poster, displaying the information for all staff to review.
 - b. Make intentional plans for team members to identify microsystem members to review the microsystem wall poster findings, to increase awareness and to stimulate further discussions.

What Should You Do with the Assessment Findings?

The 5 P's findings should be posted for all staff members in the clinical microsystem to review and comment on. It is important to identify a common area for posting the ongoing assessments, data, and information of the lead improvement team so as to invite all microsystem members to become interested and informed. The microsystem wall poster is a helpful model. Encourage all members of your microsystem to explore the relationships among the 5 P's to begin to see the different connections, draw new conclusions, and identify new system processes and designs that can be developed with this new, deeper knowledge.

Case Studies

Intermediate Cardiac Care Unit (ICCU)

To better inform the team improvement activities, the ICCU lead improvement team began the assessment of the system's 5 P's at its first microsystem learning

sessions. Team members reviewed available data, determined they needed to gather more information on the ICCU, and developed a plan to evaluate staff satisfaction in the workplace and to collect staff assessments of core and supporting processes. The team actively reviewed and adapted the many forms and methods in the *Improving Care Within Your Inpatient Units* workbook (Godfrey et al., 2005c) to inform their work. They put up a large poster containing the core and supporting processes assessment tool so all staff could rank how well the various ICCU processes were working. After much discussion among team members and with the broader ICCU staff, the team drafted this purpose statement for the ICCU:

The ICCU will create an environment in which cardiac patients and their families can receive excellent, comprehensive, specialized state of the art quality care. This will be accomplished by caring, competent professional staff that has the support and resources to do their best work to promote the emotional, physical and intellectual well-being of patients, families and caregivers.

Figure 13.2 is an example of the microsystem wall poster the ICCU lead improvement team used after initiating its 5 P's assessment.

Plastic Surgery Section

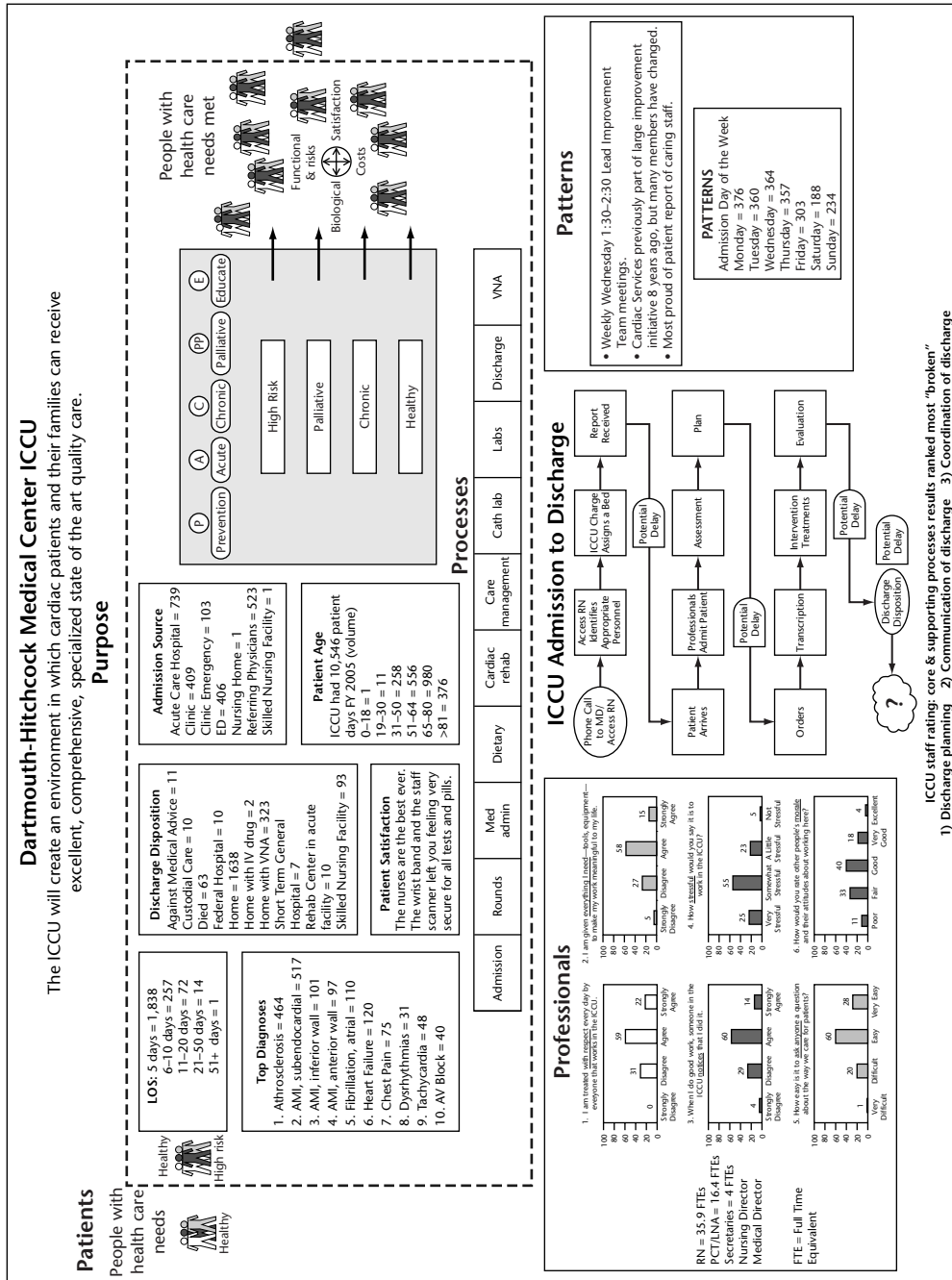
Through the ten-week course the lead improvement team was able to gain deeper insight into its microsystem's 5 P's. Team members created a microsystem wall poster to display their findings and engage other staff members' interest and curiosity. They discussed and identified their *purpose*: "Partner with our customers to improve form and function for better living."

They became more mindful of their *patients* and patient populations: pediatric, cosmetic, and reconstructive. A patient satisfaction survey revealed low patient satisfaction scores in the following areas:

- Ease of coordinating care
- Wait in waiting or exam room
- Wait for appointment

The section's *professionals* included six surgeons, three residents, three registered nurses, one registered nurse first assistant, one licensed practical nurse, two licensed nurse assistants, one physician assistant, two certified medical assistant, five secretaries, a half-time practice manager, a lead registered nurse, and an administrative supervisor. Through their improvement journey team members realized there were many opportunities to optimize the roles of their professionals

FIGURE 13.2. ICCU WALL POSTER FOR THE 5 P'S MICROSYSTEM ASSESSMENT.



Professionals

RN = 35.9 FTEs
PCT/INA = 16.4 FTEs
Secretaries = 4 FTEs
Nursing Director
Medical Director

FTE = Full Time Equivalent

ICCU Admission to Discharge

ICCU staff rating: core & supporting processes results ranked most "broken"

1) Discharge planning 2) Communication of discharge 3) Coordination of discharge

and increase staff morale. The initial staff satisfaction survey showed a high level of work unhappiness.

The *processes* they gained insight into included the scheduling systems for outpatient appointments and inpatient surgeries. They realized the system of care extended beyond their four walls. They measured cycle time in the clinic for new patient visits and minor surgical procedures and uncovered a great deal of variation in practice.

The lead improvement team members also realized there were *patterns* of access within their plastic surgery system that they needed to know more about before they could improve total system access to care, including outpatient visits, minor surgeries, and inpatient surgical procedures; this is shown in Figure 13.3. Team members began to discuss and observe the patterns in their practice. They uncovered measures specific to appointment scheduling, including poor access to appointments for new patients. A pattern of undesired variation was discovered in the way physicians scheduled follow-up visits for patients. Follow-up volumes varied significantly across the physicians.

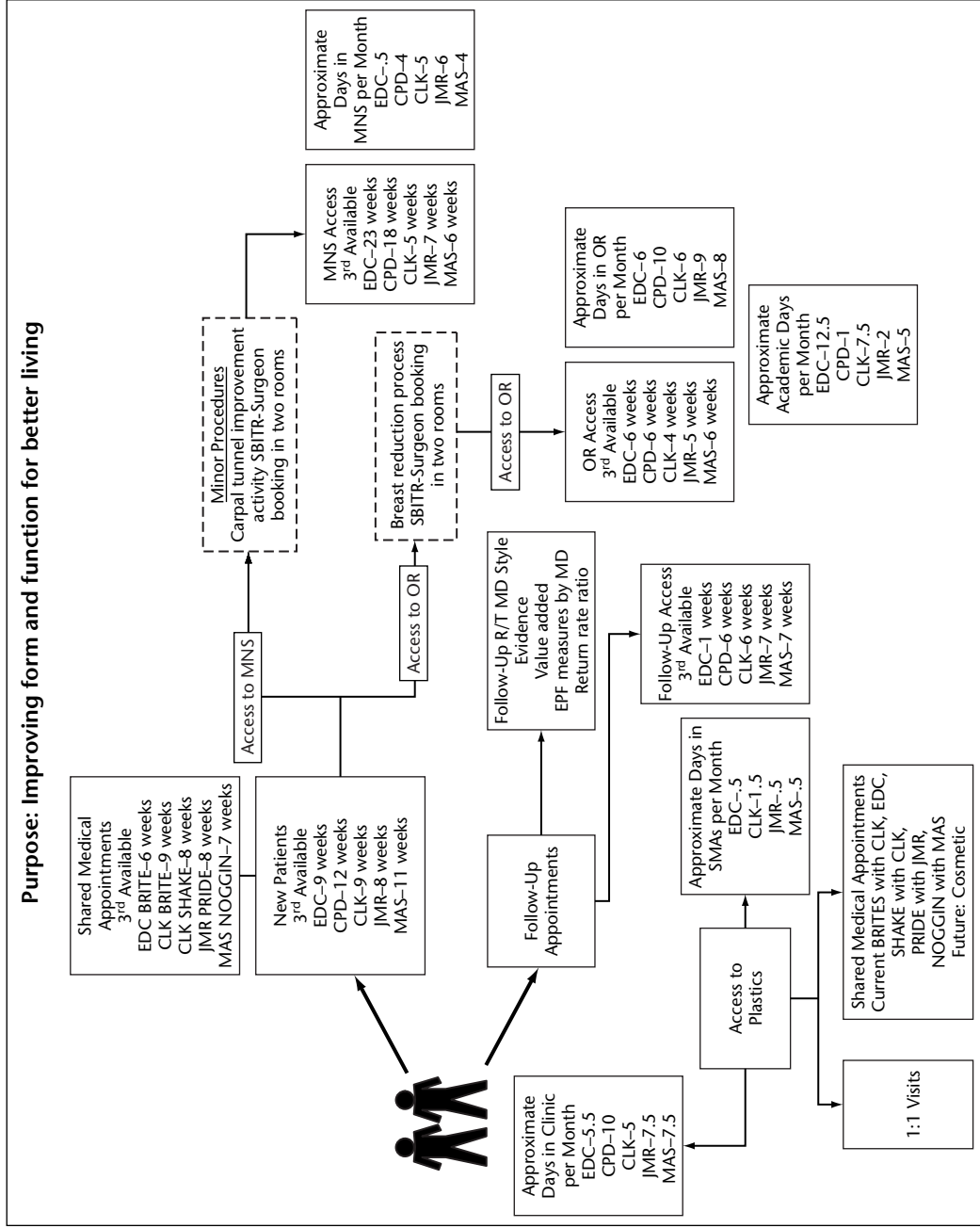
Review Questions

1. How can you use a systematic method to assess your microsystem?
2. What are the 5 P's of a microsystem?
3. What tools and methods in the workbook in the Appendix can be used to make your assessment?
4. Who should be involved in assessing and improving your microsystem?
5. What are the next steps in your microsystem's improvement journey?

Between Sessions Work

1. Review the 5 P's and determine which data and information can be obtained from your organization and which data and information will be collected through other means, such as the microsystem workbook, tools, and forms.
2. Identify who will collect which data and information.
3. Create a timeline for collecting data and reporting on the assessment work.

FIGURE 13.3. PLASTIC SURGERY SECTION ACCESS PATTERNS.



Note: MINS = minor surgery; OR = operating room; RT = return visit

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