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## Approach to a Patient: The Patient Evaluation Grid

1. A 56-year-old man had a routine chest X ray as a part of his company's physical fitness program. The X ray revealed a coin lesion in the right lung, indicative of a tumor. When he was told that more medical workup was needed, he felt very perplexed and somewhat angry because he "felt so well." His wife, who was told of the possible implications of the X-ray shadow (cancer), became very anxious, which in turn made the patient more upset. Since he had always been a strong, healthy man, he attempted to dismiss the fact that there was a need for further medical tests and, in fact, did not keep his next appointment with the doctor. Since the X ray had been done at the company's request, he was eventually told by his superiors that he had to report to the doctor, who in turn had to report to the manager. When the diagnosis of cancer was made, he was retired from work. A depressive syndrome ensued, his physical state deteriorated, and the cancer became symptomatic.

2. A 7½-month-pregnant 24-year-old black woman was admitted to the obstetrical ward because of toxemia of pregnancy. There had also been excessive weight gain. In the hospital, she was found eating white starch powder from a box. The intern learned that this was a common custom during pregnancy in some Southern subcultures.

3. A 15-year-old girl was admitted to the surgical service for correction of tetralogy of Fallot (a form of congenital heart disease). In the hospital, she displayed excessive anxiety that was not controlled by diazepam (Valium). When the intern asked her detailed questions about her family, she found that the patient's parents had agreed to separate when their daughter's heart condition had been repaired. The patient was anxious about the impending separation of her parents!

4. A 45-year-old man had an operation for coronary artery disease. During the second postoperative day, he began to have frightening visual hallucinations. He was also tremulous and febrile. Since the symptoms were very similar to delirium tremens, the astute medical student on the case asked the family about the patient's drinking habits. It turned out that he customarily drank at least half a dozen cocktails a day when he was working. In fact, even during his hospitalization, his wife had supplied him with several bottles of vodka that were hidden in his room. He lost access to alcohol only after the operation!

Once a person comes to the physician for medical care, it is the doctor's responsibility to carry out a comprehensive evaluation, to diagnose disease if present, and to treat the patient to the best of his or her ability. As noted in earlier chapters, the physician and health-care personnel will, to a large degree, determine through their demeanor and behavior how much cooperation the patient will give in the assessment and treatment process and, further, what the patient's attitudes and expectations will be in future contacts with the health-care system.

The chapters in this section focus on the critical task of clinical assessment. Specifically, we discuss a system for organizing data and for thinking about patients and their problems. The aim of this system of approach is to facilitate the organization of relevant biological, psychological, and environmental information about the patient in a comprehensive and integrated fashion. This system of organized information can then be the basis for diagnosis and for treatment planning.

Before information about a patient can be organized and evaluated, it must first be gathered, and this is not a simple task. To obtain information effectively, the physician must have (1) extensive knowledge of clinical medicine, (2) high degrees of skill in conducting medical interviews and in managing interpersonal relationships, and (3) extensive knowledge of human psychology, particularly in respect to pathogenesis and to the experience of medical illness.

Medical history-taking—a specialized instance of interviewing—is an art and a skill that the physician continuously practices and aims to develop and improve throughout his entire professional career. Guided by knowledge of signs, symptoms, and natural history of disease, the physician uses the interview to formulate a series of (diagnostic) hypotheses, which he or she continually tests against the new information that is elicited from the patient as the interview proceeds. New information then leads to changing hypotheses and seeking further data in a series of algorithmic steps.

Eventually a final diagnostic hypothesis—the “differential diagnosis”—is subjected to a series of empirical tests, i.e., the physical examination, selected laboratory tests, and special diagnostic procedures. The heuristic value of the biological data obtained in the later diagnostic steps is dependent on the medical knowledge that guided the selection of procedures and on the physician's skill in eliciting personal and historical as well as purely medical information.

As mentioned above, medical interviewing is a special form of interviewing; its basic guidelines derive from the same set of general principles that govern all interview procedures. But one special feature distinguishes the medical history: It takes place in the context of medical help-seeking behavior (usually accompanied by pain, suffering, or worry). The effectiveness of the medical interview depends on the nature of the developing doctor-patient relationship. At the same time, the patient's experience of the interview contributes to shaping that relationship. Thus, the effectiveness of the medical history-taking also depends on personal qualities: the physician's capacity to be empathic, to respond to the patient with sensitivity and with understanding of his needs for compassion and respect. These qualities not only shape the nature of the doctor-patient relationship initially but also later exert a continuing influence on the patient's clinical condition and response to treatment.

The potential for developing the art, skill, and human qualities mentioned above is present in most, if not all, students when they choose medicine as a career. There are, however, many factors in medical education that understandably but regrettably tend to blunt these capabilities. But the fact is that nurturance and full development of these qualities should constitute a major goal of medical teachers and students alike, and for that matter of all physicians throughout their entire careers. But this goal depends on more than good intentions and common sense. There are well-established principles to be learned and skills to be practiced. Learning about medical interviewing constitutes a separate subject—too extensive and too important to be relegated to an abbreviated and inadequate textual development that space limitations of this introductory text would dictate. More extensive specialized texts and monographs should be studied as guides for developing this highly important medical skill.\*

\*Two good books on interviewing are *Patient Interviewing, The Human Dimension*, by Reiser and Schroder, and *The Clinical Approach to the Patient*, by Morgan and Engel (see Recommended Reading).

### THE PATIENT, THE PATIENT'S COMPONENTS, AND THE PATIENT'S ENVIRONMENT

To evaluate a diseased organ thoroughly, it is necessary to consider it in three broad perspectives that reflect the three levels of organization that are cogent to its function: (1) the function and state of the organ as a whole; (2) the function and state of components or subsystems of the organ, such as component cells and tissues, blood supply, and chemical subsystems; and (3) the function and state of the larger system of which the organ is a part (e.g., the cardiovascular or digestive) and even its relationship with other organs (e.g., heart and kidney, liver and brain). For example, a thrombus in a coronary artery (part of the cardiovascular system) results in anoxia of myocardial tissues (chemical), leading to infarction (tissue), and thus reduces cardiac contractility (organ), resulting in congestive heart failure (system).

Similarly, in repairing an automobile, the mechanic must know the state of the engine, radiator, and other *components* of the automobile; how the car is functioning as a *whole* (such as its maximum speed, handling characteristics, and appearance); and the *interaction* of the automobile with external factors (such as how the owner is maintaining it and whether it is habitually driven on particularly rough roads).

In approaching patients, a similar conceptual approach is useful—that is, a thorough evaluation of the patient that includes organizing data according to three dimensions: (1) the *biological dimension*, that is, the structural and functional state of physiochemical components and subsystems, including, of course, healthy and possibly diseased organs; (2) the *personal dimension*, that is, the psychological state and behavior of the whole person (patient); and (3) the *environment dimension*, that is, the environmental-interpersonal data, including interaction of the patient with the physical environment and with family, work, and the health-care system, among others (Figure 27). Each of these levels or dimensions can be conceptualized as a *system*, with subsystems at each level and with interactions both within and across dimensions (see Chapter 23).

### DISEASE, ILLNESS, AND DISTRESS

A patient, by definition, is a person seeking help for experienced distress. The cause of the distress and the factors that contribute to it

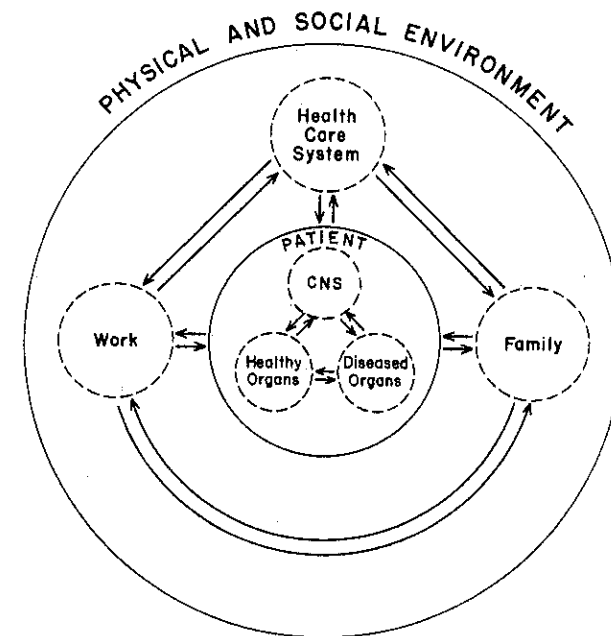


Figure 27. The patient, the patient's components, and the patient's environment.

reside in and relate to the three dimensions discussed above, that is, the *biological*, the *personal*, and the *environmental-interpersonal*.

The person experiences distress, such as anxiety, suffering, and depression (see Part II), which together with the symptoms emanating from the biological components constitutes the *illness* (Feinstein, 1974), and these then interact with each other and with components of the environment.

Disease at the organ level often produces the experience of illness, but a disease process may exist without illness for extended periods (e.g., asymptomatic progression of a cancer, as in vignette 1), and a patient may experience an illness without evidence of disease (e.g., "psychogenic" pain [see Chapter 9]). Factors at the personal level may contribute to the pathogenesis of disease, such as a habit of smoking or excessive drinking (vignette 4).

At the environmental level, interpersonal difficulties may result in the experience of anxiety and in heterothetic (problems of living presenting as a symptom [see Chapter 1]) help-seeking behaviors. Furthermore, help-seeking behavior is often prompted by family or friends of

the patient. Environmental factors may also contribute to the pathogenesis of disease (Rahe, 1972); examples of such factors are environmental poisons, occupational toxins (e.g., heavy metals), and interpersonal loss (e.g., bereavement). Assessment of the environmental system is also important in the management of the patient, since treatment plans should take the patient's family and work situation into account.

### PATIENT EVALUATION GRID (PEG)

If information pertaining to the three basic dimensions is to be of practical help in the management of patients, it must be organized in such a way as to be applicable in the clinical arena. We propose such a method that organizes information in the three dimensions according to three longitudinal *time contexts* taking the patient's help-seeking behavior as the fixed point of time reference. These three time contexts are (1) *current*, (2) *recent*, and (3) *background*. They expand in scope and complexity with retrograde movement along a time continuum from the present to the remote past.

The *current context* refers to the cross-sectional *state* in each dimension at the time of help-seeking behavior. The *recent context* refers to *recent state* changes and events in each system. This includes the appearance of symptoms and signs, as well as such stressful events as bereavement, retirement, recent hospitalization, and recent disease. The *background context* refers to *traits* rather than states, i.e., congenital and early childhood diseases, long-standing personality traits, and early environmental, interpersonal, and cultural influences. Early experience, heredity, constitution, personality style, family background, cultural heritage, and other determinants are included in the background context.

A three-by-three grid, the Patient Evaluation Grid (PEG),\* displays the intersection of data regarding the three dimensions of organization (biological, personal, and environmental) with the three longitudinal time contexts (current, recent, and background), creating a nine-compartment grid that we have found useful in teaching and research and in everyday clinical practice (see Figures 28 and 29).

In diagnosis, the PEG can serve as a useful guide for (1) taking a complete medical history, (2) performing the physical examination, and (3) planning further special diagnostic procedures (e.g., laboratory tests). It is useful to have the PEG in mind while interviewing the patient and, eventually, to enter information into the squares with dates. Relevant

\*The PEG was developed by H Leigh, MF Reiser, and AR Feinstein in 1978.

CONTEXTS	BACKGROUND (Culture, Traits, Constitution)			
	RECENT (Recent Events and Changes)			
	CURRENT (Current States)			
DIMENSIONS		BIOLOGICAL	PERSONAL	ENVIRONMENTAL

Figure 28. Framework of the PEG.

CONTEXTS			
DIMENSIONS	CURRENT (Current States)	RECENT (Recent Events and Changes)	BACKGROUND (Culture, Traits, Constitution)
BIOLOGICAL	physical symptoms, signs physical exam medications abnormal lab values	onset/change in symptoms and signs change in physical condition change in medications recreational drugs	past history of disease family history of medical disease family history of psychiatric illness
PERSONAL	chief complaint chief psychiatric complaint mental status expected treatment	change in psychiatric condition change in mood/behavior change in habits recent help-seeking	personality traits defense/coping mechanism past psychiatric history
ENVIRONMENTAL	who lives with patient occupation stress physical environment	change in living condition change in occupation LCU (Holmes & Rahe) change in physical environment	parents occupation and socioeconomic class schools attended early relationships marriage/jobs

Figure 29. PEG: Organization of relevant information. Biological dimension refers to the components of the patient, such as the organ systems, tissue, and chemical composition. Personal dimension refers to attributes of the whole person, including the psychological and behavioral aspects. This includes personal habits such as smoking and drinking. Environmental dimension refers to the psychosocial and physical environments surrounding the patient.

information covering some matters can, when appropriate, be obtained from family members as well as the patient, e.g., matters pertaining to cultural and family expectations of the sick role, the meaning of illness, personality style, and so forth (Leigh *et al.*, 1980). In this chapter, we will discuss each of the elements of the PEG briefly to provide the reader with an overview. More detailed discussion of each of the contexts follows in subsequent chapters, which will also illustrate its application in patient management.

### What Goes into the PEG

*Current Context.* This column, which concerns the current state of the patient, has most immediacy for both the patient and the doctor, since the information indicates the pressing needs of the patient as well as any constraints that may have to be taken into account in formulating therapeutic plans.

*Biological Dimension.* This square contains information about the patient's physical state, vital signs, and the classic data of the present illness, including physical symptoms and laboratory findings, which constitute the basis of clinical diagnosis and many therapeutic decisions.

*Personal Dimension.* Data concerning the chief complaint, appearance, current psychological state, mental status, and the anxiety level are contained here. The chief complaint relating to physical state belongs in both the biological and the personal dimension to the extent that the patient is suffering from it. This square also contains answers to questions such as the following: Is the patient coherent, confused, frightened, or depressed? What does the patient think about the symptoms? What does the patient expect (e.g., hospitalization, a "shot," an operation)? The information is valuable for an understanding of how the patient experiences illness and of his motivation in seeking help. Recognition of the patient's immediate need for help may consolidate the doctor-patient relationship and increase patient cooperation.

*Environmental Dimension.* Examples of data that belong in this square are answers to the following questions: Who accompanied the patient? Who lives with the patient? Marital status? Who suggested seeing a doctor? What effects will the patient's illness have on his family and occupation? The value of this square is its information about the patient's "significant others." At a very practical level, the next of kin, family, or friend is an important source of information, support, and, occasionally, consent.

*Recent Context.* This column contains highlights of recent changes and events, including symptoms, illness, and disease processes and their

effects on the patient's life and family, as well as changes in long-standing patterns such as habits. This column also includes information about possible contributing, complicating, or precipitating factors of the illness and help-seeking behavior. "Recent" is used here as a relative term, its range being measured in days, weeks, or months—often as much as 6-12 months, seldom longer. All entries here should include the *date* or approximate *duration* of the event.

*Biological Dimension.* Recent physical change, weight gain or loss, injuries, discovery of hypertension, recent surgery, and medications are examples of data to be included here. Data found in this square provide information concerning early signs of current disease and possible contributing or antecedent factors, as well as physical effects of recent environmental and behavioral changes.

*Personal Dimension.* This square contains such information as data concerning personality change, change in habits (e.g., increased drinking), mood change (e.g., depression), and preoccupation with disease (e.g., conviction that he has cancer). Mood and habit changes may contribute to disease (e.g., depression causing self-neglect and malnutrition and susceptibility to infection) or may be symptoms of a disease process (e.g., personality change in frontal lobe tumor).

*Environmental Dimension.* This section, which denotes possible environmental stressors causing disease or illness behavior (McWhinney, 1972; Mechanic, 1962; Rahe, 1972), is concerned with such data as change in residence or job, marriage, separation, divorce, bereavement, recent travel, exposure to doctors or hospitals, and recent illness in the family.

*Background Context.* The background factors indicate previous illnesses and medical experiences and predispositions to disease. They also set the tone and attitude of the patient toward illness and help-seeking behavior and adaptation to the sick role through personality, constitution, predisposition, and cultural experiences. The items appearing here represent relatively long-standing, stable characteristics of the patient and are usually resistant to change. This information is important in setting realistic goals for care as well as in understanding the patient's needs.

*Biological Dimension.* This square contains information concerning congenital conditions, constitutional vulnerability, predisposition, genetic endowment, and acquired tendency for specific diseases. Family history of hereditary disease and early injuries, diseases, and deformities also belong here, as do answers to such questions as history of functional disorders under stress and allergies.

*Personal Dimension.* Data such as the patient's personality type (see Chapter 18), habitual psychological defenses, and coping styles (see Chapter 5) belong here. They include answers to such questions as the following: Does the patient tend to deny the presence of symptoms and signs? Habitual complaining of minor symptoms? Tendency to be exacting and somewhat obsessive? Tendency to become overly dependent? The patient's habits (e.g., alcohol, smoking), hobbies, ambitions (e.g., always wanted to be a doctor), and educational and intelligence level are also pertinent data here. How information is processed and interpreted by the patient, what current illness means to the patient, and how the patient may respond to planned therapeutic approaches may be determined by the factors found in this square.

*Environmental Dimension.* The patient's cultural background, early physical environment, ethnic origin, and religion are examples of data to be entered into this square. Answers to questions such as the following also belong here: Early exposure to illness in family? Cultural sick-role expectations? Cultural myths about illness and treatment? Religious qualms about procedures? Early experiences with doctor or hospital? Information contained in this section may provide clues to the patient's current attitudes and expectations. Early contact with the physician or hospital may be related to unrealistic or irrational attitudes toward medical care.

## SIGNIFICANCE OF CONTEXTS

The organization of longitudinal data into current, recent, and background contexts makes clear the immediacy or novelty of or degree of habituation to a particular phenomenon. For example, chest pain appearing in the recent context *de novo* has greater immediacy for the patient than chest pain that first appeared in the background-context column. Although we are dealing here with chronological material along a time dimension, the material is seen from the vantage point of the patient's help-seeking behavior. Thus, the background, recent, and current contexts may affect one another in both forward and backward directions. For example, if the patient is confused currently, he may not be able to give a complete or accurate past history.

The need for intervention or treatment and the ease with which this can be done are usually greatest in the current context and decrease progressively in the recent and background time frames. Although the background context information, in general, most often points to limiting

factors in approaching the patient, certain background phenomena are amenable to change. For example, the patient's expectations and fantasies about a medical procedure may change if specifically discussed. In vignette 3, the congenital heart disease is a background context factor that is amenable to change. Also, the expectation that the parents would separate after the girl's recovery could be discussed and coped with by counseling and possibly family therapy.

### SIGNIFICANCE OF DIMENSIONS

The *biological dimension* provides information concerning the structure and status of the component parts of the person. Information referable to this dimension forms the basis of the diagnosis of disease. Data can be systematized most thoroughly at this level thanks to the expansion of our knowledge in this dimension through research in physiology, biochemistry, pathology, and other disciplines. Obviously, there are a number of subsystems or levels within the biological level, e.g., organs, tissues, cells, and molecules. Disease may involve alteration at any of these levels of organization within this dimension. In using the PEG, the entries in this dimension should include the important laboratory and physical findings as well as diagnosed and suspected diseases. In this dimension, as in others, the current-context physical or physiological state requires immediate attention and treatment. Information concerning the etiological and predisposing biological factors is usually to be found in the recent and background contexts.

The *personal dimension* denotes qualities and characteristics ascribable to the patient's total personality, including appearance, disposition, habits, feelings, idiosyncrasies, fantasies, and prejudices. Since the central nervous system, especially the brain, is the control center for the whole organism, the attributes of the personal dimension often reflect the condition of the central nervous system, although they are not confined to it.

Background-context personality or habits may contribute to or serve as markers of vulnerability to certain diseases. For example, smoking contributes to lung cancer and coronary disease.

Recent-context events or changes, such as personality change or mood change, may be secondary to disease (e.g., carcinoma of the tail of the pancreas) or an interpersonal event (e.g., bereavement) and in turn may give rise to a disease (e.g., depression resulting in malnutrition

and infection) or to a change in behavior (e.g., increasing intake of alcohol resulting in problems at work and unemployment).

Current-context information such as chief complaint (suffering), mental status, and behavior indicate the motivation for help-seeking behavior. Care must be directed toward the immediate need (relief from suffering that motivated the help-seeking behavior) if the patient is to receive satisfactory medical treatment, since he will be less motivated to comply with the physician's plans if the plans omit measures to relieve or ameliorate the specific current suffering. Relief of the immediate and specific suffering, such as overwhelming anxiety or pain, may be necessary before further evaluation can proceed (vignette 3). An important factor at the personal level is the patient's fantasies and expectations concerning the health-care system. Elucidation of these is essential for any patient who has difficulties in complying with medical procedures or regimen, since simple direct reassurance or education may correct unrealistic fantasies and expectations.

The *environmental dimension* provides information concerning the physical and interpersonal environment in which the patient lives and functions. This environment, in the background context, helped shape the patient's personality and cultural aspirations and in a real sense provided the patient with a large part of his constitutional endowment. Previous contact with the health-care system and health-care personnel provides information concerning the patient's sick-role behavior. Changes in the physical environment (e.g., getting a job in a chemical factory) may provide a clue to the cause of illness (e.g., heavy-metal poisoning). Customs unique to subcultures may provide clues to unusual behavior (e.g., weight gain and unusual eating habits, as in vignette 2).

Recent life changes and life situations are the sources of the patient's current joys, sorrows, and concerns and may have provided contributing factors in illness (Holmes and Rahe, 1968; Rahe, 1972). The impetus to seek help at a particular time usually comes from a recent change or event, for example, interpersonal tension (McWhinney, 1972) or a relative falling ill with a similar disease.

The current interpersonal context provides information concerning the significant others involved with the patient. At a very practical level, the next of kin or friend who accompanied the patient to the physician or who is most readily available on request is an important resource—a source of information concerning the patient and for obtaining consent for procedures when necessary.

## RATIONAL PATIENT MANAGEMENT

In formulating a rational patient-management plan, consideration of the interrelationships among findings in the nine compartments of the PEG is useful. Although illness (the suffering or distress leading to help-seeking behavior) usually occurs in the presence of a disease, it does not always have a one-to-one correlation with it. For example, suffering (illness) may be present in the absence of disease (e.g., bereavement) and may result from the treatment of disease rather than from the disease (e.g., pain caused by surgical operation to remove an asymptomatic malignant tumor of the breast). Problems of living presenting as a physical symptom are another example (McWhinney, 1972). The PEG will show, in each instance, the precipitating and contributing factors in one of the squares in the recent or current context. Events such as bereavement, unemployment, and psychological depression may be found in conjunction with biological changes leading to a disease, and such associations raise questions for research concerning the physiological mechanisms involved. For example, in a patient with current streptococcal pharyngitis and recent bereavement, one may wonder about the possible role of the central nervous system state (induced by bereavement) in (1) lowering immunological resistance and (2) influencing the likelihood of subsequent development of rheumatic fever or glomerulonephritis. On the other hand, the combination of the presence of systems and signs in the absence of identifiable disease and the absence of convincing evidence that illness behavior can be attributed to the personal and environmental-interpersonal dimensions may indicate the need for a further search into the possibility of a yet unidentified or incompletely understood disease.

In most situations, the PEG will identify the strains in the biological (disease), personal (illness), and environmental-interpersonal systems. These identified problems form the basis of the three-dimensional diagnoses to be entered into the PEG-Management Form (Figure 30). On the basis of the three-dimensional diagnoses, rational three-dimensional short-term and long-term management plans will emerge. In developing a comprehensive management plan, priority has to be assigned to each proposed intervention. An examination of the PEG will help prioritize the management plans; for example, current-context factors such as overwhelming anxiety may require immediate treatment before definitive etiological treatment for the disease can be given. Although intervention at the level of etiology would be most effective in many situations, it is not always possible, for example, in many viral diseases, fractures, or states of pain without identifiable tissue damage.

PATIENT EVALUATION GRID (PEG) - Management Form

DIMENSIONS	THERAPY PLANS	
	SHORT TERM	LONG TERM
DIAGNOSIS		
BIOLOGICAL		
PERSONAL		
ENVIRONMENTAL		

Figure 30. On the basis of the PEG, diagnoses are entered in each dimension. The therapy plans for the diagnoses need not be in the same dimensions; for example, a short-term therapy plan for depression (personal dimension) may be antidepressant drugs (biological dimension).



Setting priorities in management is a matter of clinical judgment. For example, treatment of a grave disease may take priority over the patient's possible loss of a job due to prolonged hospitalization. On the other hand, relief from an anxiety state may take priority over discussing elective surgical treatment plans for a patient with a chronic disorder such as inguinal hernia. For a patient with a congenital heart disease (background context, biological dimension) who comes to the physician with vague symptoms and depressive affect (current context, personal dimension) and who has recently lost a spouse (recent context, environmental dimension), the priority may be, first, relief from the depression, which in turn may relieve the vague symptoms; second, interpersonal support; and third, possible treatment of the congenital heart disease. On the other hand, the priority in a chronically depressed patient (background context, personal dimension) who presents with exacerbated old or even new symptoms arising out of current problems of living might well be to deal first with them, rather than with the chronic depression.

To operationalize the use of the PEG for patient-care planning, the following steps may be taken\*:

1. Underline the factors that appear important:
  - a. in the patient's current suffering;
  - b. in the pathogenesis of his disease;
  - c. in his attitude and fantasies concerning his illness;
  - d. in his perception and attitudes concerning the health-care system.
2. Also underline major limiting factors in possible intervention and care, such as personality style, nature and quality of interpersonal relationships (supportive persons), and occupation.
3. On the basis of the PEG and, especially, the underlined factors, fill in the PEG-Management Form.

### SUMMARY

Comprehensive assessment of a patient must include evaluation of three levels of systems (dimensions): the biological (component) dimension, the personal (the whole patient) dimension, and the environmental-interpersonal dimension that surrounds the patient. *Disease* is a concept that implies a dysfunction in the biological dimension, while *illness* refers

\*A computer software that generates the PEG as well as a narrative summary has been developed (Leigh, 1988).

to the biological dysfunction plus the suffering and social problems attendant on the disease. Illness behavior, however, may be present in the absence of disease, and a disease need not produce an illness, especially in early stages.

From the vantage point of medical practice, it is useful to evaluate the three dimensions cited above in terms of three longitudinal time *contexts*: current, recent, and background. This is the *systems-contextual* approach to patients. The three dimensions (biological, personal, environmental) intersected by the three contexts (current, recent, background) form the *Patient Evaluation Grid* (PEG), which is the operational method by which information about a patient can be organized.

The PEG allows the clinician to anticipate problems relating to patient care and to assign priorities to management plans formulated in the three dimensions. In each dimension, the current-context information represents the current state and pressing needs, the recent-context information represents the contributing and precipitating factors, and the background-context information represents the broad background factors from which the recent and current problems have emerged and which are often resistant to change and so may impose limits in formulating plans for management.

### IMPLICATIONS

#### For the Patient

The patient brings with him three separate but interacting systems when he seeks help. Although the chief complaint may refer to distress (personal dimension) caused by a disease (biological dimension), the implications of hospitalization, the disease, and treatment plans inevitably involve his family, work, and physical surroundings. Factors in any of the dimensions may become intervening variables that influence the patient's clinical course and behavior in the sick role.

#### For the Physician

By the use of the PEG and the systems-contextual framework in evaluating patients, the physician can approach or aspire to a comprehensive understanding of the patient. This understanding will complement a narrower medical model of disease that leads to the diagnosis and treatment of diseases rather than patients. Such an approach enables the physician to pay attention to (1) the pressing needs of the patient

in the personal dimension (including felt distress [see Chapter 3]), (2) the contributing and precipitating events, and (3) the factors that must be kept in mind as stable and limiting influences (e.g., the patient's personality type and cultural sick-role expectations) on the disease in the narrower sense.

### For the Community and the Health-Care System

The need for a holistic, patient-centered perspective in medicine is increasing in urgency (Barondess, 1974). Such a perspective can be obtained by a general systems model of illness and health (Engel, 1960, 1977; Menninger, 1963). The systems-contextual approach we use is also based on a general systems model (Leigh and Reiser, 1977), but it is in practice closely linked with and complementary to the medical model through the use of the PEG (Leigh et al., 1980). We feel that this (or a similar) approach could be adopted with benefit especially in medical schools, where physicians of the future may, from the very beginning, learn the importance and interactions of the nine areas represented by the PEG. With this comprehensive framework, the science of medicine can develop side by side with the art of medicine.

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### RECOMMENDED READING

- Feinstein AR: *Clinical Judgment*. Huntington, New York, Robert E Krieger Publishing Co, 1974. This is an excellent and scholarly book on the science and art of clinical judgment in medicine. It includes discussions of the way physicians collect and use clinical data and the concepts of disease, illness, treatment, and response, among others. It has very interesting and thought-provoking chapters on diagnostic taxonomy, including how the concept of disease has changed throughout history. For example, some of the diseases in Hippocratic times were fever, cyanosis, consumption, and asthma. Highly recommended reading for students in medicine.
- Leigh H: The evolution of psychosomatic medicine and consultation-liaison psychiatry. *Adv Psychosom Med* 11:1-22, 1983. A review of the history of the mind-body relationship in medicine. This article traces the evolution of psychosomatic medicine that led to a recognition of the importance of a comprehensive approach to the patient and to the development of the Patient Evaluation Grid.
- Leigh H, Reiser MF: Major trends in psychosomatic medicine: The psychiatrist's evolving role in medicine. *Ann Intern Med* 83:233-239, 1977. In this article, we give an overview of the development of psychosomatic medicine. We show that the emphasis of psychosomatic medicine is the integration of biopsychosocial factors in the comprehensive management of patients. This is based on the emerging general systems model for all diseases in which the biological, personal, and environmental systems interact.
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