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Culture, Illness, and Care:
Clinical Lessons From Anthropologic and Cross-Cultural Research

Abstract: Major health care problems such as patient dissatisfaction, inequity of access to care, and spiraling costs no longer seem amenable to traditional biomedical solutions. Concepts derived from anthropologic and cross-cultural research may provide an alternative framework for identifying issues that require resolution. A limited set of such concepts is described and illustrated, including a fundamental distinction between disease and illness, and the notion of the cultural construction of clinical reality. These social science concepts can be developed into clinical strategies with direct application in practice and teaching. One such strategy is outlined as an example of a *clinical social science* capable of translating concepts from cultural anthropology into clinical language for practical application. The implementation of this approach in medical teaching and practice requires more support, both curricular and financial.

The public perception of a crisis in health care is made up of a number of components intolerable costs ($2188 per family in 1975); inaccessibility of medical care because of maldistribution by locality and specialty; and dissatisfaction with the "quality" of the medical encounter when it does occur (1).

Paradoxically, this comes at a time when biotechnical medicine has greatly increased its potential to make a decisive difference in individual patient encounters (2).

Without denying the key importance of continuing biomedical research, it is our contention that traditional research approaches are often irrelevant to the solutions of the problems described above (3). Only if we are able to conceptualize those problems in terms appropriate to their analysis are we likely to make progress toward their resolution. In this endeavor, cross-cultural studies of health practices and anthropologic studies of American health culture can make significant contributions. By freeing ourselves from ethnocentric and "medicocentric" views, we may begin to recognize important issues that thus far have been systematically ignored (4).

The medical encounter is but one step in a more inclusive sequence. The illness process begins with personal awareness of a change in body feeling and continues with the labeling of the sufferer by family or by self as "ill." Personal and family action is undertaken to bring about recovery, advice is sought from members of the extended family or the community, and professional and "marginal" practitioners are consulted. This sequence may or may not include registration within the legitimized health system.

An estimated 70% to 90% of all self-recognized episodes of sickness are managed exclusively outside the perimeter of the formal health care system (5). In all cases of sickness, the "popular" and "folk" sectors (self-treatment, family care, self-help groups, religious practitioners, heterodox healers, and so forth) provide a substantial proportion of health care. Once this fact is brought into focus, it becomes evident that the professional health care system neither can nor should be expanded to take over this broader area of management. Indeed a small shift in the boundary between cases managed solely in the popular sector and those cared for professionally could overwhelm professional institutions. (If, for example, 90% of all illness episodes are managed without resort to professionals, a shift of 10% of these cases could double the demand on medical institutions.) Clearly we need to know more about the nature and efficacy of therapeutics and decision-making in the popular health care sector. And changes in the interrelation between professional and popular care have the potential for far greater effects on cost, access, and satisfaction than changes in professional care alone.

Contemporary medical practice has become increasingly discordant with lay expectations. Modern physicians diagnose and treat *diseases*

(abnormalities in the structure and function of body organs and systems), whereas patients suffer *illnesses* (experiences of disvalued changes in states of being and in social function; the human experience of sickness) (6–8). Illness and disease, so defined, do not stand in a one-to-one relation. Similar degrees of organ pathology may generate quite different reports of pain and distress (9, 10). Illness may occur in the absence of disease (50% of visits to the doctor are for complaints without an ascertainable biologic base); and the course of a disease is distinct from he trajectory of the accompanying illness (11). Moreover, the remedies prescribed by physicians may fail to cure disease, despite effective pharmacologic action, when patients fail to follow through on the medical regimen because they do not understand (or do not agree with) the physicians' stated rationale for their actions (12).

For many chronic medical problems, patients' reported improvement may be greater after encounters with marginal or folk practitioners than with modern physicians (13). In part, it can be ascribed to smaller social class differential between patient and practitioner, an increased emphasis on "explanation," and a greater concordance between the explanatory systems of healer and patient.

The foregoing themes have major implications for health care policy decisions and the training of practitioners. Simply tinkering with the system of primary care without addressing the fundamental problems within the sector of popular medicine will have marginal effects, at best, on the perceived crisis. The incorporation of "clinical social science" is essential if physicians are to understand, respond to, and help patients deal with the concerns they bring to the doctor (14).

In this paper, we will examine anthropologic and cross-cultural perspectives on these issues. We attempt to translate several concepts, which emerge from these fields, into strategies that can be directly applied by clinicians to patient care. We indicate how these strategies can be used to teach clinical skills. And we point to several key questions arising from our analysis that require further investigation by both physicians and anthropologists.

CULTURAL PATTERNING OF SICKNESS AND CARE

DISEASE/ILLNESS

Anthropologic and sociologic studies justify the conceptual distinction we make between *disease* and *illness* (15). That distinction holds that disease in the Western medical paradigm is malfunction-ing or maladaptation of biologic and psychophysiologic processes in the individual; whereas illness represents personal, interpersonal, and cultural reactions to disease or discomfort. Illness is shaped by cultural factors governing perception, labeling, explanation, and valuation of the discomforting experience (16), processes embedded in a complex family, social, and cultural nexus (17). Because illness experience is an intimate part of social systems of meaning and rules for behavior, it is strongly influenced by culture: it is, as we shall see, culturally constructed.

Illness is culturally shaped in the sense that how we perceive, experience, and cope with disease is based on our explanations of sickness, explanations specific to the social positions we occupy and systems of meaning we employ (18). These have been shown to influence our expectations and perceptions of symptoms (19), the way we attach particular sickness labels to them (20), and the valuations and responses that flow from those labels (20). How we communicate about our health problems, the manner in which we present our symptoms, when and to whom we go for care, how long we remain in care, and how we evaluate that care are all affected by cultural beliefs (18). Illness behavior is a normative experience governed by cultural rules: we learn "approved" ways of being ill. It is not surprising then, that there can be marked cross-cultural and historical variation in how disorders are defined and coped with (16, 22). The variation may be equally great across ethnic, class, and family boundaries in our own society (23). And doctors' explanations and activities, as those of their patients, are culture-specific (24).

Neither disease nor illness should be regarded as entities. Both concepts are explanatory models mirroring multilevel relations between separate aspects of a complex, fluid, total phenomenon: sickness (25). They derive from and help construct the special forms of clinical reality we consider below. The dynamic interplay between biologic, psychologic, and sociocultural levels of sickness requires that a new framework for understanding and treating sickness be developed (7, 26). The disease/illness distinction is one conceptual means to meet this requirement.

For patients, illness problems—the difficulties in living resulting from sickness—are usually viewed as constituting the entire disorder (27, 28). Conversely, doctors often disregard illness problems because they look upon the disease as the disorder. Both views are insufficient.

Medical anthropologic studies show that traditional healing in developing societies and popular health care in our own are principally concerned

with illness, that is, with treating the human experience of sickness (18, 29, 30). Healers seek to provide a meaningful explanation for illness and to respond to the personal, family, and community issues surrounding illness (27, 30).

On the other hand, biomedicine is primarily interested in the recognition and treatment of disease (curing). So paramount is this orientation that the professional training of doctors tends to disregard illness and its treatment. Biomedicine has increasingly banished the illness experience as a legitimate object of clinical concern. Carried to its extreme, this orientation, so successful in generating technological interventions, leads to a veterinary practice of medicine.

This systematic inattention to illness is in part responsible for patient noncompliance, patient and family dissatisfaction with professional health care, and inadequate clinical care (12, 18, 31–35). It may also be a determinant in medical-legal suits, the increasing resort to alternative healing systems, and the mounting consumer criticism leveled at medicine. Clinical science must investigate illness as well as disease; and clinical care should be directed at both. Although it has been argued that these two clinical functions—curing and healing—might be separated to be practiced by different types of professionals (36), it should be clear that to do so carries with it the risk of further distorting and impoverishing clinical practice (1). It is possible that it might blind clinicians to the important influences social and cultural factors have on disease and its treatment, and reduce the effect on disease produced by care for illness. Furthermore, it would render medicine irrelevant to the treatment of the many patients without biologically based disease who go to doctors for healing of illness (11).

In order to break out of a narrow medicocentric orientation, it is useful to examine case illustrations from a cross-cultural research project. The following case shows the impact cultural beliefs can have on patient *and* practitioner explanations of sickness, goals for clinical management, and evaluations of therapeutic efficacy. It shows how divergent explanatory models, based on different cultural perspectives and social roles, can produce problems in clinical care. The Chinese context of this case illustrates dramatically phenomena that occur in day-to-day clinical practice in the mainstream of American culture.

Case 1: A 33-year-old Chinese man (Cantonese-speaking) came to the medical clinic at the Massachusetts General Hospital with tiredness, dizziness, general weakness, pains in the upper back described as rheumatism, a sensation of heaviness in the feet, 9.07-kg (20-lb)

weight loss, and insomnia of 6 months' duration. He denied any emotional complaints. Past medical history was noncontributory. Medical workup was unrevealing, except that the patient seemed anxious and looked depressed. He refused to acknowledge either, however. He initially refused psychotherapy, stating that talk therapy would not help him. He finally accepted psychiatric care only after it was agreed that he would be given medication. During the course of his care, the patient never accepted the idea that he was suffering from a mental illness. He described his problem, as did his family, as due to "wind" (*fung*) and "not enough blood" (*mkaù-huèt*).

The patient was born into a family of educated farmers and teachers in a village in Kwangtung Province. He and his family moved to Canton when he was a young child. His father died during the war with Japan, and the patient remembered recurrent feelings of grief and loneliness throughout his childhood and adolescence. At age 10 he accompanied his family to Hong Kong; 10 years later they moved to the U.S. The patient denied any family history of mental illness. He reported that his health problem began 2 years before when he returned to Hong Kong to find a wife. He acquired the "wind" disease, he believes in retrospect, after having overindulged in sexual relations with prostitutes, which resulted in loss of *huèt-hèi* (blood and vital breath) causing him to suffer from "cold" (*leūng*) and "not enough blood." His symptoms worsened after his wife's second miscarriage (they have no children) and shortly after he had lost most of his savings. However, he denied feeling depressed at that time, though he admitted being anxious, fearful, irritable, and worried about his financial situation. These feelings he also attributed to "not enough blood."

The patient first began treating himself for his symptoms with traditional Chinese herbs and diet therapy. This involved both the use of tonics to "increase blood" (*po-huèt*) and treatment with symbolically "hot" (*it*) food to correct his underlying state of humoral imbalance. He did this only after seeking advice from his family and friends in Boston's Chinatown. They concurred that he was suffering from a "wind" and "cold" disorder. They prescribed other herbal medicines when he failed to improve. They suggested that he return to Hong Kong to consult traditional Chinese practitioners there.

While the patient was seen at the Massachusetts General Hospital's medical clinic, he continued to use Chinese drugs and to

seek out consultation and advice from friends, neighbors, and recognized "experts" in the local Chinese community. He was frequently told that his problem could not be helped by Western medicine. At the time of receiving psychiatric care, the patient was also planning to visit a well-known traditional Chinese doctor in New York's Chinatown, and he was also considering acupuncture treatment locally. He continued taking Chinese drugs throughout his illness and never told his family or friends about receiving psychiatric care. He expressed gratitude, however, that the psychiatrist listened to his views about his problem and that he explained to him in detail psychiatric ideas about depression. He remembered feeling bad about his care in the medical clinic where after the lengthy workup, almost nothing was explained to him and no medicine was given. He had decided not to return to that clinic.

The patient responded to a course of antidepressant medication with complete remission of all symptoms. He thanked the psychiatrist for his help, but confided that (1) he remained confident that he was not suffering from a mental illness, (2) talk therapy had not been of help, (3) antidepressants perhaps were effective against "wind" disorders, and (4) because he had concurrently taken a number of traditional Chinese herbs, it was uncertain what had been effective, and perhaps the combination of both traditional Chinese and Western drugs had been responsible for his cure.

This patient and his family believed his sickness to be a physical disorder, labeling it in traditional Chinese medical terms. In Chinese cultural settings, where mental illness is highly stigmatized, minor psychiatric problems are most commonly manifested by somatizing (focusing on physical instead of psychologic symptoms) and are managed by providing a socially sanctioned medical sick role (37, 38). The cultural category the patient used not only exerted a striking influence on the perception and labeling of his symptoms but also shaped his treatment expectations, the logic of his illness trajectory through his system of care, and his evaluation of the treatment he received. Discrepancies between his culturally patterned treatment expectations and those of his doctors almost led him to drop out of professional care (as members of ethnic minorities frequently do (39–41)), which would have prevented him from receiving a relatively specific therapeutic agent. Whereas his behavior appeared idiosyncratic and irrational to those unfamiliar with his

culture, knowledge of Chinese illness categories rendered his actions understandable and enabled us to negotiate with him a common ground that provided appropriate treatment both for his disease (depressive syndrome) and for his illness (a culture-specific type of somatization).

LESSONS FROM A STUDY OF INDIGENOUS HEALERS

Supporting evidence for the distinction we are making between disease and illness comes from a study one of us (A.K.) conducted with indigenous healers in Taiwan (13, 38). Of 100 patients treated by a range of indigenous healers, 89 were found to be suffering from disorders that fell into one of the following three groups: [1] minimal, self-limited diseases; [2] non-life-threatening chronic diseases in which management of psychologic and social problems related to the illness were the chief concerns of clinical management; and [3] somatization. The last category accounted for 50% of the cases.

Nineteen consecutive patients treated at one shrine during a 3-night period were followed. Four moved away and three refused interviews. Of the remaining 12 cases, 10 reported their treatment as effective, only two as failures. Of the 10 who rated their treatment as effective, however, two had experienced only minimal symptomatic improvement; one had experienced no symptom change; and one had actually experienced significant worsening of symptoms. All four of these patients reported feeling better *even in the absence* of significant improvement in physical symptoms. The two patients who rated their treatment as unsuccessful were the only patients who experienced severe acute medical and psychiatric disorders (acute pyelonephritis and full-blown depressive syndrome, respectively).

We interpret these findings to mean that illness problems predominated for most patients who visited these indigenous healers. Patients evaluating their treatment as successful experienced satisfactory treatment for their illness. Those evaluating their treatment as unsuccessful had not received effective treatment (cure) for their diseases. From the medical perspective, only two cases suffered from diseases that could be cured in biomedical terms, and both of those rated the indigenous treatment as a failure because it failed to provide cure of disease.

Nearly 50% of patients treated by modern doctors in the U.S. (11) as well as Taiwan (13) come principally for treatment of illness problems. Present patient dissatisfaction with modern clinical practice suggests that doctors inadequately treat illness (3, 12, 42, 43); this clinical function appears

to be better performed by indigenous practitioners (13, 38, 42–45). Implications of this discrepancy will be elaborated below.

CULTURAL CONSTRUCTION OF CLINICAL REALITY

Studies of the social context of health care disclose three structural domains of health care in society: professional; popular (family, social network, community); and folk (nonprofessional healers) (4). The great majority of health care takes place in the popular domain: 70% to 90% (5, 46). Most illness episodes never enter the professional or folk domains (46). When they do, decisions about where and when to seek care, how long to remain in care, and how to evaluate treatment also occur in the popular domain, most commonly in the context of the family (5, 17, 24). Each domain possesses its own explanatory systems, social roles, interaction settings, and institutions (18). For example, a sufferer is a sick family member or friend in the popular domain, a specific type of patient in the professional domain, and a client of one sort or another in the folk domain. These roles can be quite distinct.

For particular episodes of sickness, different domains yield explanatory models that are used clinically to ascertain what is wrong with the patient and what should be done. Through diagnostic activities and labeling, health care providers negotiate with patients medical "realities" that become the object of medical attention and therapeutics. We shall refer to this process as the cultural construction of clinical reality (49). It is crucial to recognize that patient-doctor interactions are transactions between explanatory models, transactions often involving major discrepancies in cognitive content as well as therapeutic values, expectations, and goals (47, 48). Clinical realities are thus culturally constituted and vary cross-culturally and across the domains of health care in the same society. Social and economic factors influence clinical reality, but we focus here on its cultural determinants.

Different orientations to disease/illness and to clinical reality affect patient care. Anthropologists have shown how this operates among patients from ethnic minorities, where the result is most striking (40, 41). We suggest this occurs to a greater or lesser degree in *all* clinical transactions. We will illustrate these concepts with case examples taken from a comparative study of doctor-patient relations in the U.S. and Taiwan.

First, we present a case illustration of how a patient's explanatory model and view of clinical reality can be quite discordant with the professional medical model, producing misunderstanding and problems in clinical management. In this case, elicitation of the patient model followed by appropriate negotiation was "therapeutic." Though the case is extreme, the phenomenon it illustrates is common.

Case 2: The patient was a 60-year-old white Protestant grandmother recovering from pulmonary edema secondary to atherosclerotic cardiovascular disease and chronic congestive heart failure on one of the medical wards at the Massachusetts General Hospital. Her behavior in the recovery phase of her illness was described as bizarre by the house staff and nurses. Although her cardiac status greatly improved and she became virtually asymptomatic, she induced vomiting and urinated frequently into her bed. She became angry when told to stop. Psychiatric consultation was requested.

Review of the lengthy medical record showed nothing as to the personal significance of the patient's behavior. When asked to explain why she was engaging in it and what meaning it had for her, the patient's response was most revealing. Describing herself as the wife and daughter of plumbers, the patient noted that she was informed by the medical team responsible for her care that she had "water in the lungs." Her concept of the anatomy of the human body had the chest hooked up to two pipes leading to the mouth and the urethra. The patient explained that she had been trying to remove as much water from her chest as possible through self-induced vomiting and frequent urination. She analogized the latter to the work of the "water pills" she was taking, which she had been told were getting rid of the water on her chest. She concluded: "I can't understand why people are angry at me." After appropriate explanations, along with diagrams, she acknowledged that the "plumbing" of the body is remarkable and quite different from what she had believed. Her unusual behavior ended at that time.

The next case example illustrates how cultural beliefs shape the patient's explanatory model, which then strongly influences her perception of clinical reality and the behavior that perception evokes. Elicitation of this patient's view of clinical reality was essential to effective care.

Case 3: A 26-year-old Guatemalan woman who had resided in the U.S. for 10 years and who was being treated for severe regional enteritis with intravenous hyperalimentation and restriction of all oral intake had become angry, withdrawn, and uncooperative. She believed

her problem to be caused by the witchcraft of her fiance's sister. She also believed that because she was no longer receiving food by mouth, and especially because she could no longer regulate her hot/cold balance of nutrients, the basis of the traditional health belief of the folk medical system she grew up in, she had been written off by her doctors as unlikely to live. Her behavior followed directly from this mistaken belief. She was unable to talk about her ideas because of fear of ridicule, and her doctors were totally unaware of this problem, except as manifested in her difficult behavior. When the psychiatric consultant encouraged the patient to express her own ideas about the illness, she was visibly relieved to find her ideas treated with respect, although the doctor indicated he did not share them. Her hostile and withdrawn behavior disappeared and she cooperated with the treatment regimen when she was reassured that the doctors had not given up on her.

The following case vignette shows the importance of negotiating between discrepant patient and physician explanatory models.

Case 4: A 38-year-old university professor with chest pain was diagnosed in a cardiology clinic as having angina based on coronary artery disease, but refused to accept the diagnosis. He insisted that the cardiologist acknowledge that he had a pulmonary embolus. The psychiatric consultant uncovered not a disease phobia, but a popular explanatory model: the belief, shared by his wife and friend that the development of angina signals the end of an active lifestyle and the onset of invalidism. This patient was trying to prove that his cardiologist had made a mistake and that he had been mislabeled. Unfortunately, his cardiologist did not appreciate this hidden explanatory model and, therefore, could not attempt to correct it or negotiate with it. After eliciting the patient's model and informing the cardiologist about his fears of the angina label, both were able to frankly discuss this problem and the patient came to accept his disease along with the need for certain changes in lifestyle.

A final case shows how medical models are translated by patients in terms of their views of clinical reality. Such translation most frequently occurs outside the doctor's awareness and can result in marked distortion of the doctor's explanatory model and the treatment regimen prescribed.

Case 5: A 56-year-old Italian-American former railroad conductor, recovering from an acute myocardial infarction in the coronary care unit of the Massachusetts General Hospital, had been evaluated in the same facility 2 years before for chest pain. At that time his cardiologist gave him a full explanation of the etiology, pathophysiology, and course of atherosclerotic cardiovascular disease. During the more recent hospitalization, the patient reported a rather different model of his problem. He had never told his cardiologist about this model, even though it was his chief belief about his illness and had been since the time of his last admission. In his view and that of his family, there are two major heart diseases: angina pectoris and coronary thrombosis. The former is mild and self-limited. He believed that the former and the latter are *mutually exclusive*, so that to suffer from the milder one is to have the good fortune not to have to worry about experiencing the more severe and dangerous one. He thus justified his almost complete failure to comply with his medical regimen on logical grounds, understood and supported by his family who had shared his denial of serious illness.

These examples show how clinical reality is viewed differently by doctor and patient. Discrepancies between these views strongly affect clinical management and lead to inadequate or poor care. In one recent study, surgeons and patients were shown to maintain separate, and at times opposed, criteria for evaluating successful peptic ulcer surgery (50). In another, patients evaluated chiropractors as more satisfactory deliverers of treatment for low back pain than doctors because, in part, they were more interested and skilled at handling illness problems and providing explanatory models that conform to popular belief (42).

Patients and their families know what to expect from different kinds of doctors and have some notion of what is expected of them (24, 47). For example, in Taiwan (38) patients expect Western-style doctors to provide injections, but not to spend much time in explanations and in answering their questions. Chinese-style doctors are expected to prescribe herbs and to limit their remarks to discussing symptoms and diet. Unlike Western-style doctors, however, they are expected to respond to questions. Folk practitioners are believed to be more interested in their patients' problems and are expected to spend more time with patients and to respond to personal and social issues. Patients know that these three types of practitioners use different concepts, and many patients are able to translate

their complaints into the terms appropriate to each of these medical settings. Resort to practitioners is logical: people go to Western-style and Chinese-style doctors to get specific kinds of technologic treatment. They go to folk practitioners, and sometimes to Chinese-style doctors, to obtain personally and culturally meaningful explanations. Given this pattern, it is of note that in Taiwan, Western-style doctors are quite commonly sued, Chinese-style doctors are much less commonly sued, and folk practitioners are hardly ever sued (38).

Not surprisingly, practitioners are usually aware of patient expectations and patterns of behavior, and act in correspondence with them. The interplay between patient and practitioner expectations shapes the clinical reality that is negotiated in medical practice, as has been documented in a number of societies, including our own (18, 51–55). As a result, clinical reality varies by social setting and type of practitioner.

The biomedical view of clinical reality, held by modern health professionals in developing as well as developed countries, assumes that biologic concerns are more basic, "real," clinically significant, and interesting than psychologic and sociocultural issues. Disease, not illness, is the chief concern: curing, not healing, is the chief objective. Treatment oriented within this view emphasizes a technical "fix" rather than psychosocial management. It is less concerned with "meaning" than other forms of clinical care. It deals with the patient as a machine. Contrary to the usual belief of health professionals, this biomedical viewpoint is both culture-specific and value-laden: it is based upon particular Western explanatory models and value-orientations, which in turn provide a very special paradigm for how patients are regarded and treated (6, 7).

The contemporary crisis arises in part because patients and laymen generally have found this orientation inadequate (3). Much of the consumer critique of professional medical care in the U.S. is directed at the biomedical version of clinical reality and the professional attitudes and behaviors of those trained in it.

Yet most attempts to change the counter-productive aspects of the professional view of clinical reality, both within and without the profession, have failed. Anthropologic and sociologic studies of clinical practice might help in introducing this much needed change, because they show how culture shapes the biomedical view of clinical reality. They can show students and practitioners that there are alternative ways to construe sickness and its treatment. Moreover, anthropologic and sociologic input at the clinical level can directly shape medical behavior. Most efforts at teaching behavioral and

social science in medical schools have had only limited effect on practice because they have not focused on their use in actual clinical practice. Hence, we argue the need for a clinical social science.

We shall try to show how the concepts we have sketched—the disease/illness dichotomy and the cultural construction of clinical reality—can be used in the clinic. First, we shall list some hypotheses generated by these concepts that deserve investigation by clinicians as well as anthropologists, because they can illuminate fundamental aspects of present practice. After that we shall outline a strategy for using these concepts in primary care teaching and practice.

CLINICAL HYPOTHESES GENERATED BY ANTHROPOLOGIC AND CROSS-CULTURAL STUDIES

[1] Where only disease is treated, care will be less satisfactory to the patient and less clinically effective than where both disease and illness are treated together.

[2] Medical legal problems, poor compliance, poor clinical care, and special clinical management problems most often result from hidden discrepancies in views of clinical reality.

[3] Folk practitioners usually treat illness effectively, but do not systematically recognize and treat disease. They may at times affect disease, either directly (when efficacious folk remedies like rauwolfia exist) or via treatment of illness. Only modern health professionals are *potentially* capable of treating both disease and illness.

[4] Training modern health professionals to treat both disease and illness routinely and to uncover discrepant views of clinical reality will result in measurable improvement in management and compliance, patient satisfaction, and treatment outcomes.

[5] Because biomedical science tends to blind health professionals to questions of illness and differing versions of clinical reality, social science teaching is necessary to train professionals to deal competently with these essential, but nonbiomedical, aspects of clinical practice. To be adequately conceptualized, clinical science must be thought of as both a biomedical and social science.

[6] Health care planners both in developed and developing societies tend to build health care systems with only disease and the biomedical version of clinical reality in mind. This leads to predictable inadequacies in health care, which can only be corrected by attention to illness and to popular versions of the clinical transaction.

A CLINICAL STRATEGY FOR APPLYING SOCIAL SCIENCE CONCEPTS

A central issue in the clinical encounter is a transaction between patient and doctor explanatory models. Patient models, and popular explanations generally, deal with one or more of the same five issues described in clinicians' models: [1] etiology; [2] onset of symptoms; [3] pathophysiology; [4] course of illness (including type of sick role—acute, chronic, impaired—and severity of disorder): and [5] treatment. In general, patient explanatory models usually are not fully articulated, tend to be less abstract, may be inconsistent and even self-contradictory, and may he based on erroneous evaluation of evidence. Nonetheless, they are comparable to clinical models (also often tacit) as attempts to explain clinical phenomena. Patient and family explanatory models may differ. Such models reflect social class, cultural beliefs, education, occupation, religious affiliation, and past experience with illness and health care (l8, 56–58).

Eliciting the patient model gives the physician knowledge of the beliefs the patient holds about his illness, the personal and social meaning he attaches to his disorder, his expectations about what will happen to him and what the doctor will do, and his own therapeutic goals. Comparison of patient model with the doctor's model enables the clinician to identify major discrepancies that may cause problems for clinical management. Such comparisons also help the clinician know which aspects of his explanatory model need clearer exposition to patients (and families), and what sort of patient education is most appropriate. And they clarify conflicts not related to different levels of knowledge but different values and interests. Part of the clinical process involves negotiations between these explanatory models, once they have been made explicit.

All of this can be accomplished systematically and quickly by training clinicians to elicit the patient's model with a few simple, direct questions; formulate and communicate the doctor's model in terms which patients can understand and which explicitly deal with the five clinical issues of chief concern listed above; openly compare models in order to identify contradictions and conceptual differences; and help the patient and doctor to enter into a negotiation toward shared models, especially as these relate to expectations and therapeutic goals. The following are suggestions for putting this system into practical use.

PATIENT'S MODEL

The wording of questions will vary with characteristics of the patient, the problem, and the setting, but we suggest the following set of questions to elicit the patient explanatory model. Patients often hesitate to disclose their models to doctors. Clinicians need to be persistent in order to show patients that their ideas are of genuine interest and importance for clinical management. [1] What do you think has caused your problem? [2] Why do you think it started when it did? [3] What do you think your sickness does to you? How does it work? [4] How severe is your sickness? Will it have a short or long course? [5] What kind of treatment do you think you should receive?

Several other questions will elicit the patient's therapeutic goals and the psychosocial and cultural meaning of his illness, if these issues have not already been incorporated into his answers: [6] What are the most important results you hope to receive from this treatment? [7] What are the chief problems your sickness has caused for you? [8] What do you fear most about your sickness?

If we follow Lipowski's model (28), illness has one of four psychosocial meanings: threat, loss, no significance, gain. All but gain can be evaluated through the last two questions. Psychosocial gain may not be conscious and thus not expressed openly. It therefore must be evaluated from collateral information and inferences from the patient's sick role behavior.

Answers should be recorded in the patient record as *illness problems* alongside the list of *disease problems*. *Illness interventions*, primarily psychosocial in nature, should be formulated and applied along with *disease interventions*. The efficacy of both should be explicitly evaluated in progress notes, available to consultants, including the clinical social science consultant. Evaluation of the clinical performance of students and house officers should include routine assessment of how they perform these core clinical functions.

DOCTOR'S MODEL

Elicitation of the patient model will aid the clinician in dealing with issues relating to conflicting beliefs and value systems. Part of systematic clinical practice should be an attempt to articulate the doctor's model in simple and direct terms for each of the five major issues of clinical concern. Students should be taught how to communicate the medical model to patients (59).

COMPARISON OF MODELS

At a stage early in management, the clinician should compare patient and doctor models openly, pointing out discrepancies in the two views of clin-

ical reality. He can then attempt to educate the patient if he feels the patient model will interfere with appropriate care. And he can give the patient the opportunity to ask questions about discrepancies between the models. The questions asked at this stage may disclose the crux of issues from the patient perspective. The major illness problems will be brought into focus. Comparison between patient and doctor explanatory models should center on the crucial points requiring patient education, clear clinical explanation, or frank negotiation. Where there are major differences in social class and cultural beliefs, these comparisons should systematically search for tacit conflicts in expectations and goals.

NEGOTIATION OF SHARED MODELS

Here the clinician mediates between different cognitive and value orientations. He actively negotiates with the patient, *as a therapeutic ally*, about treatment and expected outcomes. No simple outline suffices at this stage, because negotiation between explanatory models depends on where discrepancies lie and whether they affect care. For example, if the patient accepts the use of antibiotics but believes that the burning of incense or the wearing of an amulet or a consultation with a fortune-teller is also needed, the physician must understand this belief but need not attempt to change it. If, however, the patient regards penicillin as a "hot" remedy inappropriate for a "hot" disease (40) and is therefore unwilling to take it, one can negotiate ways to "neutralize" penicillin or one must attempt to persuade the patient of the incorrectness of his belief, a most difficult task.

Negotiation may require mediation between patient and family explanations when they are discrepant. Indeed, the family model should be routinely elicited to check for such problems.

This process of negotiation may well be the single most important step in engaging the patient's trust, preventing major discrepancies in the evaluation of therapeutic outcome, promoting compliance, and reducing patient dissatisfaction.

This clinical strategy should provide access to the personal, family, social, and cultural data that pertain directly to a patient's illness. Systematically applied by the primary care physician, this approach may obviate the need to consult psychiatrists, social workers, and psychologists, who presently function as surrogates for the diagnosis and treatment of illness problems. For difficult management problems, this approach provides the consultant with an analytic framework for detailed analysis of the impact of social and cultural factors on the illness, the patient, and the family.

We offer this outline as an approach that systematically treats illness and compares views of clinical reality. The model is provisional and needs further clinical trials. We have found the approach useful in research and practice, and one of us (B.G.) is using the approach as the basis for teaching in a primary care clerkship.

THE IDEA OF A CLINICAL SOCIAL SCIENCE: IMPLICATION FOR EDUCATION AND CLINICAL PRACTICE

We propose that social science be developed as a clinical discipline in medical schools and teaching hospitals. A department of clinical social science would be staffed both by physicians with training in anthropology or sociology, and by anthropologists or sociologists with training in a medical setting. Faculty would be expected to teach from cases, as other clinicians do; to apply their knowledge directly to patient care; and to carry out research.

In our experience, cross-cultural studies are particularly useful in clinical teaching (60–64). Medical anthropology is focused on basic clinical questions to a greater degree than other social sciences. It enables the student and practitioner to step out of an ethnocentric professional framework and to recognize clinical reality as culturally constructed and pluralistic. Accounts of healing beliefs and practices in other cultures will alert health professionals to patient and family views of clinical reality and encourage understanding of those views (65).

To accomplish these ends, clinical social science requires administrative support, curriculum time, and budget allocations for both teaching faculty and research. To be effective, programs must be integrated with departments of internal medicine and surgery as well as psychiatry. Initial ventures of this sort are under way with the creation of university divisions of medical anthropology. The danger of pedagogic isolation remains, however. Medical practice will benefit from social science only to the extent that social science becomes a clinical discipline and is taught in the context of patient care.

Clinical social science teaching is neither a royal road nor the exclusive road to competence in treating illness as well as disease. Many physicians, without explicit knowledge of these concepts, treat both superbly. What we contend is that by making explicit what is often merely tacit in good medical care, the yield of clinically competent graduates will be increased (66).

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