CHAPTER

2

Culture, Behavior, and Health

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"If you wish to help a community improve its health, you must learn to think like the people of that community. Before asking a group of people to assume new health habits, it is wise to ascertain the existing habits, how these habits are linked to one another, what functions they perform, and what they mean to those who practice them" (Paul, 1955).

People around the world have beliefs and behaviors related to health and illness that stem from cultural forces and individual experiences and perceptions. A 16-country study of community perceptions of health, illness, and primary health care found that in all 42 communities studied, people used both the Western biomedical system and indigenous practices, including indigenous practitioners. Also, there were discrepancies between services the governmental agencies said existed in the community and what was really available. Due to positive experiences with alternative healing systems, and shortcomings in the Western biomedical system, people relied on both (Scrimshaw, 1992). Experience has shown that health programs that fail to recognize and work with indigenous beliefs and practices also fail to reach their goals. Similarly, research to plan and evaluate health programs must take cultural beliefs and behaviors into account if researchers expect to understand why programs are not working, and what to do about it.

This chapter draws on the social sciences, particularly anthropology, psychology, and sociology, to examine the cultural and behavioral parameters that are essential to understanding international health

efforts. It begins with some key concepts from the field of anthropology and the subfield of medical anthropology. It continues with lists and brief descriptions of types of health belief systems and healers around the world. Next, some key theories of health behavior and behavioral and cultural change are described and discussed. Issues of health literacy and health communication are then addressed, along with health promotion strategies. Methodological issues are presented, followed by a case study of AIDS in Africa. The chapter concludes with a summary of how all these areas need to be considered in international health efforts.

Basic Concepts from Medical Anthropology

Health and illness are defined, labeled, evaluated, and acted upon in the context of culture. In the 18th century, anthropologist Edmund Tylor defined culture as "that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities acquired by man as a member of society" (Tylor, 1871). Since those early days of anthropology, there have been literally hundreds of definitions of culture, but most have the following concepts in common (Institute of Medicine, 2002):

- Shared ideas, meanings, and values
- Socially learned, not genetically transmitted

- Patterns of behavior that are guided by these shared ideas, meanings, and values
- Often exists at an unconscious level
- Constantly being modified through "lived experiences"

The last of these concepts is a relatively new introduction. *Lived experiences* are defined as the experiences that people (and sometimes groups of people) go through as they live their lives. These experiences modify their culturally influenced beliefs and behaviors (Garro, 2000, 2001). This means culture is not static on either the group or individual level, because people are constantly changing. This concept helps allow for cultural change as people migrate to a new setting (community, region, or country), as people acquire additional education and experiences, and as conditions change around them (e.g., armed conflicts, economic changes in a country or region, political changes). This is a helpful viewpoint when looking at cultural change on both the individual and group levels.

Medical anthropologists observe different cultures and their perspectives on disease and illness by looking at the biological and the ecological aspects of disease, the cultural perspectives, and the ways in which cultures approach prevention and treatment.

To understand the cultural context of health, it is essential to work with several key concepts. First, the concepts of insider and outsider perspectives are useful for examining when we are seeing things from our point of view and when we are trying to understand someone else's view of things. The insider perspective (*emic* in anthropological terminology) shows the culture as viewed from within. It refers to the meaning that people attach to things from their cultural perspective. For example, some cultures view worms (*Ascaris*) in children as normal and believe they are caused by eating sweets. The *outsider* perspective (*etic* in anthropology) refers to the same thing as seen from the outside. Rather than meaning, it conveys a structural approach, or something as seen without understanding its meaning for a culture. It can also convey an outsider's meaning attached to the same phenomenon—for example, that ascariasis is contracted through ingesting eggs found in contaminated soil or in foods contaminated by contact with that soil. The eggs get into the soil through fecal wastes from infected individuals. The concepts of insider and outsider perspectives allow us to look at health, illness, and prevention and treatment systems from several perspectives, to analyze the differences between these perspectives, and to develop approaches that will work within a cultural context.

To continue the example, in Guatemalan villages where these beliefs prevailed, researchers learned that mothers believed that worms were normal and were not a problem unless they became agitated. In their view, worms live in a bag or sac in the stomach and are fine while so confined. Agitated worms get out and appear in the feces or may be coughed up. Mothers also believed that worms are more likely to become agitated during the rainy season because the thunder and lightning frightened them. From an outsider perspective, this makes sense: Sanitation is more likely to break down in the rainy season, so there is more chance of infection and more diarrheal disease, which will reveal the worms. The dilemma for the health workers was to get the mothers to accept deworming medication for their children, because most of the time worms were perceived as normal. If the health workers tried to tell the mothers that their beliefs were wrong, the mothers would reason that the health workers did not understand illness in a Guatemalan village and would reject their proposal. The compromise was to suggest that the children be dewormed just before the rainy season, in order to avoid the problem of agitated worms. It worked.[1]

The insider/outsider approach leads to another set of concepts. *Disease* is the outsider view, usually the Western biomedical definition. It refers to an undesirable deviation from a measurable norm. Deviations in temperature, white cell count, red cell count, bone density, and many others are seen as indicators of disease. *Illness,* on the other hand, means "not feeling well." Thus it is a subjective, insider view. This sets up some immediate dissonances between the two views. It is possible to have an undesirable deviation from a Western biomedical norm and to feel fine. Hypertension, early stages of cancer, HIV infection, and early stages of diabetes are all instances where people may feel well but have a disease. This means that health care providers must communicate the need for behaviors to address something that people may not realize is a problem.

It is also possible for someone to feel ill and for the Western biomedical system not to identify a disease. When this occurs, there is a tendency for Western-trained health care providers to say that nothing is wrong or that it is a psychosomatic problem. Although both of these can be the case, there are several other explanations for this occurrence. One possibility is that Western biomedical science has not yet figured out how to measure something.

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[1] I am indebted to Elena Hurtado of Guatemala for this example.

Several recent examples of this include AIDS, generalized anxiety attacks, and chronic fatigue syndrome. All of these were labeled psychosomatic at one time and now have measurable deviations from a biological norm. Similarly, painful menstruation used to be labeled "subconscious rejection of femininity," but it is now associated with elevated prostaglandin levels and can be helped by a prostaglandin inhibitor.

Another possibility is something that anthropologists have called "culture bound syndromes" (Hughes, 1990), but this might be better described as "culturally defined syndromes." Culturally defined syndromes are an insider way of describing and attributing a set of symptoms. They often refer to symptoms of a mental or psychological problem, but a physiological disease may exist, posing a challenge to the health practitioner. For example, Rubel and colleagues (1984) found that an illness called *susto,* or fright, in Mexico corresponded with symptoms of tuberculosis in adults. If people were told there was no such thing as *susto* and that they, in fact, had tuberculosis, they rejected the diagnosis and the treatment on the grounds that the doctors obviously knew nothing about *susto.* This was complicated by the fact that tuberculosis was viewed as serious and stigmatizing. The solution was to discuss the symptoms with people and mention that Western biomedicine had a treatment for those symptoms (Rubel et al., 1984). *Susto* may also be used to describe other sets of symptoms, for example, those of diarrheal disease in children (Scrimshaw & Hurtado, 1988).

With culturally defined syndromes, it is essential for an outsider to ask about the symptoms associated with the illness and to proceed with diagnosis and treatment on the basis of those symptoms. This is good practice in any event, because people often make a distinction between the cause of a disease or illness and its symptoms. Even if the perceived cause is inconsistent with the Western biomedical system, a disease can be diagnosed and treated based on the symptoms without challenging people's beliefs about the cause.

The term *Western biomedical system* is used throughout this chapter because a term such as *modern medicine* would deny the fact that there are other medical systems, such as Chinese and Ayurvedic medicine, that have modern forms. *Indigenous medical system* is used to refer to an insider (within the culture) system. Thus, the Western biomedical system is an indigenous medical system in some countries, but it still may exist side by side with other indigenous systems, even in the United States and western Europe. In most of the world, the Western biomedical system

now coexists with, and often dominates, local or indigenous systems. Because of this, and because of class differences, physicians and policy makers in a country may not accept or even be aware of the extent to which indigenous systems exist and their importance. Also, many countries contain multiple cultures and languages. The cross-cultural principles discussed in this chapter may be just as important for working within a country as for working in multiple countries or cultures.

Another key concept from medical anthropology is that of ethnocentrism. *Ethnocentric* refers to seeing your own culture as best. This is a natural tendency, because the survival and perpetuation of a culture depend on teaching children to accept it and on its members feeling that it is a good thing. In the context of cross-cultural understanding, ethnocentrism poses a barrier if people approach a culture with the attitude that it is inferior. *Cultural relativism* in anthropology refers to the idea that each culture has developed its own ways of solving the problems of how to live together; how to obtain the essentials of life, such as food and shelter; how to explain phenomena; and so on. No one way is viewed as better or worse; they are just different. This works well for classic anthropology but is a challenge when international health is considered. What if a behavior is "wrong" from an epidemiologic perspective? How does one distinguish between dangerous behaviors (e.g., using an HIV-contaminated needle, swimming in a river with snails known to carry schistosomiasis, ingesting a powder with lead in it as part of a healing ritual) and behaviors that are merely different and therefore seem odd? For example, Bolivian peasants used very fine clay in a drink believed to be good for digestion and stomach ailments. Health workers succeeded in discouraging this practice in some communities because "eating dirt" seemed like a bad thing. The health workers then found themselves faced with increased caries and other symptoms of calcium deficiency. Upon analysis, the clay was found to be a key source of calcium for these communities. In addition, we use clay in Western biomedicine, but we color it pink or give it a mint flavor and put it in a bottle with a fancy label.

Thus, there is a delicate balance between being judgmental without good reason and introducing behavior change because there is real harm from existing behaviors. In general, it is best to leave harmless practices alone and focus on understanding and changing harmful behaviors. This is harder than it seems, because the concept of cultural relativism also applies to perceptions of quality of life. A culture in

which people believe in reincarnation may approach death with equanimity and may not adopt drastic procedures that only briefly prolong life. In some cultures, loss of a body organ is viewed as impeding the ability to go to an afterlife or the next life, and such surgery may be refused. It is important in international public health for cultural outsiders to be cautious about statements about what is good for someone else.

The concept of holism is also useful in looking at health and disease cross-culturally. *Holism* is an approach used by anthropologists that looks at the broad context of whatever phenomenon is being studied. Holism involves staying alert for unexpected influences, because you never know what may have a bearing on the program you are trying to implement. For public health, this is crucial because there may be diverse factors influencing health and health behavior.

One classic example of this is the detective work that went into discovering the etiology of the New Guinea degenerative nerve disease kuru. Epidemiologists could not figure out how people contracted the disease, which appeared to have a long incubation period and to be more frequent in women and children than in men. Many hypotheses were advanced, including inheritance (genetic), infection (bacterial, parasitic), and psychosomatic origin. By the early 1960s the most accepted of the prevailing hypotheses was that it was genetically transmitted. Yet this did not explain the sex differences in infection rates seen in adults but not in children, nor how such a lethal gene could persist. Working with Gadjusek of the National Institutes of Health, cultural anthropologists Glasse and Lindenbaum used in-depth ethnographic interviews to establish that kuru was relatively new to that region of New Guinea, as was the practice of cannibalism. Women and children were more likely to engage in the ritual consumption of dead relatives as a way of paying tribute to them, which was culturally less acceptable for men. Also, this tissue was cooked, but women, who did the cooking, and children, who were around during cooking, were more likely to eat it when it was partially cooked and therefore still infectious. Lindenbaum and Glasse suggested the disease was transmitted by cannibalism. To confirm their hypothesis, Gadjusek's team inoculated chimpanzees with brain material from women who had died of kuru, and the animals developed the disease. The disease was found to be a slow virus, transmitted through the ingestion of brain tissue. Since then, the practice of cannibalism has declined and the disease has now virtually disappeared (Gadjusek, Gibbs, & Alpers, 1967; Lindenbaum, 1971).

In recent years, increasing attention has been focused on another area that intersects with culture in people's ability to understand and access health care. This is the concept of health literacy. *Health literacy* is defined as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (Ratzan & Parker, 2000). Health literacy has been most thoroughly explored in the United States and, until recently, was seen more as a literacy than a cultural issue. A 2004 Institute of Medicine report notes the importance of considering cultural issues, such as those discussed in this chapter, and of taking a more global look at the problem and needed interventions (Institute of Medicine, 2004).

It is particularly important to note that health literacy is as much the problem of the health care provider and health communication staff as it is of a patient or people in a community. If medical jargon is used, no amount of education short of medical or nursing school will help someone understand. Terms such as *oncology, nephrology,* and *gastroenterology* have meaning for the medical world, but not for patients. Health care providers outside the United States often have a better understanding of this than their U.S. counterparts.

Cultural Views of Health, Illness, and Healers

Cultures vary in their definitions of health and of illness. A condition that is endemic in a population may be seen as normal and may not be defined as illness. Ascariasis in young children has already been mentioned as a perceived normal condition in many populations. Similarly, malaria is seen as normal in some parts of Africa, because everyone has it or has had it. In Egypt, where schistosomiasis was common and affected the blood vessels around the bladder, blood in the urine was referred to as "male menstruation" and was seen as normal. These definitions may also vary by age and by gender. In most cultures, symptoms, such as fever, in children are seen as more serious than in adults. Men may deny symptoms more than women in some cultures, but women may do the same in others. Often, adult denial of symptoms is due to the need to continue working.

Sociologist Talcott Parsons (1948) first discussed the concept of the *sick role,* wherein an individual must "agree" to be considered ill and to take actions (or allow others to take actions) to define the state of his or her health, discover a remedy, and do what is

necessary to become well. Individuals who adopt the sick role neglect their usual duties, may indulge in dependent behaviors, and seek treatment to get well. By adopting the sick role, they are viewed as having "permission" to be exempted from usual obligations, but they are also under an obligation to try to restore health. The process of seeking to remain healthy or to restore health will be discussed later.

Belief Systems

Table 2-1 depicts types of insider cultural explanations of disease causation. It is based on the literature and is an attempt to be as comprehensive as possible for cultures around the world. It is important to note that the table consists of generalizations about culture-specific health beliefs and behaviors and that generalizations cannot be assumed to apply to every individual from a given culture. We can learn about the hot/cold balance system of Latinos, Asians, and Middle Easterners, but the details of the system will vary from country to country, village to village, and individual to individual. When someone walks in the door of a clinic, you cannot know if he or she as an individual adheres to the beliefs described for his or her culture and what shape the individual's belief system takes. This makes the task both easier and harder.

It means a practitioner working with a Mexican population does not have to memorize which foods are hot and which are cold in Mexico, but the practitioner does need to know that the hot/cold belief system is important in Mexican culture and be able to be understanding and responsive when people bring up the topic.

The beliefs held by cultures around the world are classified into various categories, which are discussed in the following subsections. The categories are used for diagnosis and treatment and for explaining the etiology or origin of the illness. Often, multiple categories are used. For example, emotions may be seen as causing a "hot" illness.

Body Balances

In the category of body balances, the concept of hot and cold is one of the most pervasive around the world. It is particularly important in Asian, Latin American, and Mediterranean cultures. Hot and cold beliefs are part of what is referred to as *humoral medicine,* which is thought to have derived from Greek, Arabic, and East Indian pre-Christian traditions (Foster, 1953; Weller, 1983; Logan, 1972). This concept of opposites (such as hot and cold, wet and dry) also may have developed independently in other

Table 2-1	Types of Insider Culture Explanations of Disease Causation

Body Balances
Temperature: Hot, cold
Energy
Blood: Loss of blood; properties of blood reflect imbalance; pollution from menstrual blood
Dislocation: Fallen fontanel
Organs: Swollen stomach; heart; uterus; liver; umbilicus; others
Incompatibility of horoscopes

Emotional
Fright
Sorrow
Envy
Stress

Weather
Winds
Change of weather
Seasonal disbalance

Vectors or Organisms
Worms
Flies
Parasites
Germs

Supernatural
Bewitching
Demons
Spirit possession
Evil eye
Offending God or gods
Soul loss

Food
Properties: Hot, cold, heavy (rich), light
Spoiled foods
Dirty foods
Sweets
Raw foods
Combining the "wrong" foods (incompatible foods)
Mud

Sexual
Sex with forbidden person
Overindulgence in sex

Heredity

Old Age

cultures (Rubel & Haas, 1990). For example, in the Chinese medical tradition, hot is referred to as *yin,* and cold as *yang* (Topley, 1976). In the hot and cold belief system, a healthy body is seen as in balance between the two. Illness may be brought on by violating the balance, such as washing the hair too soon after childbirth (cold may enter the body, which is still hot from the birth), eating hot/heavy foods at night, or breastfeeding while upset (the milk will be hot from the emotions and make the baby ill). It should be noted that *hot* does not always refer to temperature. Often foods such as beef and pork are classified as hot regardless of temperature, whereas fish may be seen as cold regardless of temperature. When illness has been diagnosed, the system is used to attempt to restore balance. Thus, in Central America some diarrheas in children are viewed as hot, and protein-rich "hot" foods such as meats are withheld, aggravating the malnutrition that may be present and may be exacerbated by the diarrheal disease (Scrimshaw & Hurtado, 1988). Extensive literature exists on the topic of hot and cold illness classifications and treatments for many of the world's cultures.

Energy balance is particularly important in Chinese medicine, where it is referred to as *chi.* When the balance is disturbed, there are internal problems of homeostasis. Foods (often following the hot/cold theories) and acupuncture are among the strategies used to restore balance (Topley, 1976).

Blood beliefs include the concept that blood is irreplaceable and that loss of blood, even small amounts, is a major risk. Adams (1955) describes a nutritional research project in a Guatemalan village where this belief inhibited the researcher's ability to obtain blood samples until the phlebotomists were instructed to draw as little blood as possible. Also, villagers were told that the blood would be examined to see if it was "sick" or "well" (another belief about blood) and they would be informed and given medicines if it were sick, which in fact did occur.

Menstrual blood is regarded as dangerous, especially to men, in many cultures, and elaborate precautions are taken to avoid contamination (Buckley & Gottlieb, 1988). As with the Guatemalan example, blood may have many properties that both diagnose and explain illness. Bad blood is seen as causing scabies in south India (Beals, 1976). Haitians have a particularly elaborate blood belief system, which includes concepts such as *mauvais sang* (literally, bad blood, which is when blood rises in the body and is dirty), *saisissement* (rapid heartbeat and cool blood, due to trauma), and *faiblesses* (too little blood). Blood may also be seen as opposites, such as clean/unclean, sweet/normal, bitter/normal, high/normal, heavy/weak, clotted/thin, and quiet-turbulent (C. Scott, personal communication, 1976). It is easy to see how these concepts could be used in a current program to prevent HIV infection in a Haitian community, because the culture already has ways of describing problems with blood.

Dislocation of body parts may occur with organs, but also with a physical aspect, such as the fontanel, or "soft spot," in a baby's head where the bones do not come together in the first year or so to allow for growth. From the outsider perspective, a depression in this spot can be indicative of dehydration, often due to diarrheal disease; from the insider perspective, however, it is referred to as a cause of the disease (*caida de mollera*) in Mexico and Central America.

Many cultures associate illness with problems in specific organs. Good and Good (1981) talk about the importance of the heart for both Chinese and Iranian cultures. They discuss a case in which problems with cardiac medication were wrongly diagnosed for a Chinese woman who kept complaining about pain in her heart. In fact, she was referring to her grief over the loss of her son. The Hmong of Laos link many problems to the liver, referring to "ugly liver," "difficult liver," "broken liver," "short liver," "murmuring liver," and "rotten liver." These are said to refer to mental and emotional problems, and thus are idiomatic rather than literal (O'Connor, 1995).

Topley (1976) mentions incompatibility of horoscopes between mother and child as appearing in Chinese explanations for some children's illnesses.

Emotional

Illnesses of emotional origin are important in many cultures. Sorrow (as in the case of the Chinese woman mentioned earlier), envy, fright, and stress are seen as causing illnesses. In a Bolivian village in 1965, a young girl's smallpox infection was attributed to her sorrow over the death of her father.

Envy is believed to cause illness because people with envy could cast the evil eye on someone they envied, even unwittingly, or the envious person could become ill from the emotion (Reichel-Dolmatoff & Reichel-Dolmatoff, 1961). Fright, called *susto* in Latin America, has already been mentioned. In addition to the case of tuberculosis in adults discussed previously, it is a common explanation for illness in children. It is also mentioned for Chinese culture (Topley, 1976).

Weather

Everything from the change of seasons to unusual variations within seasons (too warm, too cold, too

wet, too dry) can be blamed for causing illness. Winds, such as the Santa Ana in California or the Scirocco in the North African desert, are also implicated.

Vectors or Organisms

Vectors or organisms are blamed for illness in some cultures and represent a blend of Western biomedical and indigenous concepts. "Germs" is a catchall category, as is "parasites." Worms are seen as causing diarrhea, whereas flies are seen as causing illness and, sometimes, as carrying germs.

Supernatural

The supernatural is another frequently viewed source of illness, especially in Africa and Asia, but it is certainly not confined to those regions. In fact, the evil eye is a widespread concept, in which someone can deliberately or unwittingly bring on illness by looking at someone with envy, malice, or too hot a gaze. In cultures where most people have dark eyes, strangers with light eyes are seen as dangerous. In Latin America, a light-eyed person who admires a child can risk bringing evil eye to that child, but can counter it by touching the child. In other cultures, touching the child can be unlucky, so it is important to learn about local customs. Frequently, amulets and other protective devices, such as small eyes of glass, red hats, and a red string around the wrist, are worn to prevent the evil eye. These objects can be viewed as an opportunity to discuss preventive health measures, because they are an indication that people are thinking about prevention.

Bewitching is deliberate malice, either done by the individual who wishes someone ill (literally) or by a practitioner at someone else's request. Bewitching can be countered by another practitioner or by specific measures taken by an individual. In some regions of Africa, epidemics are blamed on "too many witches," and people disperse to get away from them, thus reducing the critical population density that had sustained the epidemic (Alland, 1970).

Belief in soul loss is widespread throughout the world. Soul loss can be caused by things such as fright, bewitching, the evil eye, and demons. It can occur in adults and children. Soul loss is serious and can lead to death. It must be treated through rituals to retrieve the soul. In Bolivia, a village priest complained that his attempt to visit a sick child was thwarted when the family would not allow him to enter the house. The family later reported that an indigenous healer was performing a curing ritual at the time, and the soul was flying around the house as they were trying to persuade it to reenter the child. Opening the door to the priest would have allowed the soul to escape. The child's symptoms were those of severe malnutrition.

Spirit possession is also a worldwide concept and is found frequently in African and Asian cultures. Writing about a village in South India, Beals (1976) mentions spirit possession in a daughter-in-law whose symptoms were refusing to work and speaking insultingly to her mother-in-law. He suggests that spirit possession is a "culturally sanctioned means of psychological release for oppressed daughters-in-law" (p. 188). Freed and Freed (1967) discuss similar cases in other parts of India. In Haiti, spirit possession is seen as a mark of favor by the spirits and is sought. One of the drawbacks, however, is that the possessing spirits object to the presence of foreign objects in the body, so some women do not want to use intrauterine devices.

Demons are viewed as causing illness in Chinese culture, whereas offending God or gods is a problem in others (Topley, 1976). In South India, epidemic diseases such as chickenpox and cholera (and, formerly, smallpox) are believed to be caused by disease goddesses. They bring the diseases to punish communities that become sinful (Beals, 1976). The concept of punishment from God is seen in a case study from Mexico, where onchocerciasis (river blindness), which is caused by a parasite transmitted by the bite of a fly that lives near streams, is often thought to be due to sins committed either by the victim or relatives of the victim. These transgressions against God are punished by God closing the victim's eyes (Gwaltney, 1970).

Food

Food can cause illness through its role in the hot and cold belief system, through spoiled foods, dirty foods, raw foods, and combining the wrong foods. Sweets are implicated as a cause of worms in children, and children who eat mud or dirt may get ill. Foods may also cause problems if eaten at the wrong time of day, such as "heavy" foods at night. There is an extensive literature on food beliefs and practices worldwide, which have important implications for public health practice.

Sexual

In Ecuador in the early 1970s, children's illnesses were sometime blamed on affairs between one of the child's parents and a *compadre* or *comadre*—one of the child's godparents (Scrimshaw, 1974). Such a relationship was viewed as incestuous and dangerous to the child. In India, sex is sometimes viewed as weakening to the man, so overindulgence

Table 2-2 **Taxonomy of Diarrhea**

	Mother's milk						Food				Tooth Eruption	Fallen Fontanel, Fallen Stomach		Evil Eye	Stomach Worms	Cold Enters Stomach		Dysentery
CAUSE	Physical activity	Hot foods (Hot)	Pregnancy (Hot)	Anger (Emotional)	Sadness (Emotional)	Fright (Emotional)	Bad food / Excess	Does not eat on time	Quality Hot	Quality Cold		Fallen stomach	Fallen fontanel			From feet	From head	
SYMPTOMS All types have watery and frequent stools				Very dangerous	Very dangerous	Very dangerous	Flatulence, feeling of fullness				Tooth eruption	Green with mucus	Sunken fontanel; vomiting; green in color	Fever	Worms	White in color	White in color	Blood in stools, "urgency"; color is red or black
TREATMENT	Not breastfeeding when hot	Mother changes diet	Breastfeeding stops	Home, drugstore, Injectionist, witch, spiritist	Home, drugstore, Injectionist, witch, spiritist	Home, drugstore, Injectionist, witch, spiritist	Home, folk curer	Home, folk curer	Home, folk curer	Home, folk curer	None	Folk curer	Folk curer	Folk curer	Drugstore, home, folk curer	Folk curer	Folk curer	Home, drugstore, health post

Source: S. C. M. Scrimshaw and E. Hurtado, *Rapid Assessment Procedures for Nutrition and Primary Health Care: Anthropological Approaches to Improving Program Effectiveness (RAP)* (Los Angeles: UCLA Latin America Center, 1987), p. 26. Reprinted with permission.

is considered a cause of weakness. To return to the concept of blood beliefs, it is thought that 30 drops of blood are needed to make one drop of semen, thus weakening a man.
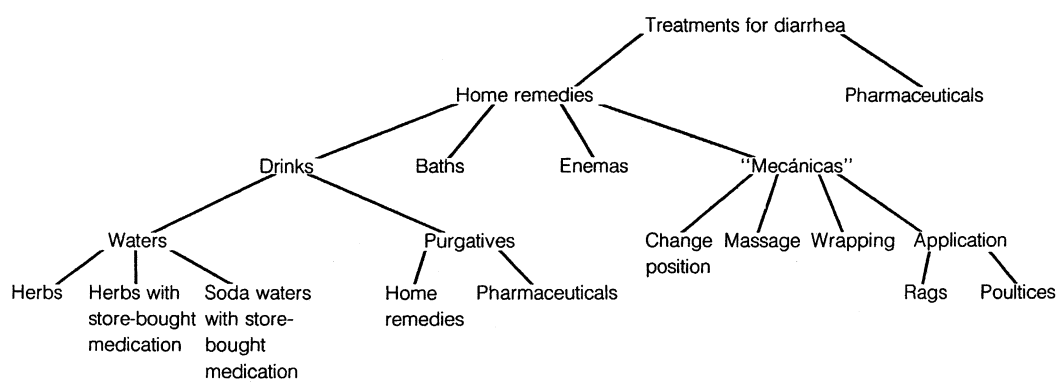
Heredity and Old Age

Heredity is sometimes blamed for illness, early death, or some types of death. Similarly, old age may be the simple explanation given for illness or death.

Illness in Forms

Table 2-2 illustrates the way in which some of these beliefs are used to explain a particular illness, diar-

rheal disease in Central America. It is typical of the way in which an illness may be seen as having different forms, or manifestations, with different etiologies. It is also typical of the way in which several different explanations may be used for one set of symptoms.

In this case, Table 2-2 and Figure 2-1, the diagram of treatments, were key in expanding the orientation of the Central American diarrheal disease program. The program had intended to focus the distribution of oral rehydration solutions (ORS) in the clinics, but the insider perception was that you usually only take a child to the clinic for the worst form of diarrhea, dysentery. Instead, the most common treatment con-

Treatments for diarrhea
- Home remedies
  - Drinks
    - Waters
      - Herbs
      - Herbs with store-bought medication
      - Soda waters with store-bought medication
    - Purgatives
      - Home remedies
      - Pharmaceuticals
  - Baths
  - Enemas
  - "Mecánicas"
    - Change position
    - Massage
    - Wrapping
    - Application
      - Rags
      - Poultices
- Pharmaceuticals

Figure 2-1 Taxonomy of Treatments of Diarrhea. *Source:* S. C. M. Scrimshaw and E. Hurtado, *Rapid Assessment Procedures for Nutrition and Primary Health Care: Anthropological Approaches to Improving Program Effectiveness (RAP)* (Los Angeles: UCLA Latin America Center, 1987), p. 26. Reprinted with permission.

sisted of fluids in the form of herbal teas or sodas with medicines added. Often, storekeepers and pharmacists were consulted. It made sense to provide the ORS at stores and pharmacies as well as at clinics, so that all diarrheas were more likely to be treated (Scrimshaw & Hurtado, 1988).

In a related situation, Kendall, Foote, and Martorell (1983) found that when the government of Honduras did not include indigenous or folk terminology for diarrheal disease in their mass media messages regarding oral rehydration, people did not use ORS for diarrheas attributed to indigenously defined causes.

Healers

Table 2-3 lists types of healers. This list includes types ranging from indigenous to Western biomedical. Pluralistic healers are those who mix the two traditions, although some Western biomedical healers and those from other medical systems may also mix traditions in their practices.

As with the types of explanations of disease, the types of healers listed here are found in different combinations in different cultures. There is always more than one type of healer available to a community, even if members have to travel to seek care. The 16-country study of health-seeking behavior described earlier found that in all communities people used more than one healing tradition, and usually more than one type of healer (Scrimshaw, 1992). The processes of diagnosing illness and seeking a cure have been referred to as *patterns of resort* rather than the older term *hierarchy of resort* (Scrimshaw & Hurtado, 1987). This is because people

may zigzag from one practitioner to another, crossing from type to type of healer and not always starting with the simplest and cheapest, but with the one they can best afford and who they feel will be most effective given the severity of the problem. Even middle- and upper-class individuals, who can afford Western biomedical care, may also use other types of practitioners and practices.

Indigenous practitioners are usually of the culture and follow traditional practices. Today they often mix elements of Western biomedicine and other traditional systems. In many instances, they are called to their profession through dreams, omens, or an illness, which usually can only be cured by their agreement to become a practitioner. Most learn through apprenticeship to other healers, but some are taught by dreams. Often they will take courses in Western practices in programs such as those developed to train "barefoot doctors" or community-based health promoters. In some instances, they must conceal their role as traditional healer from those running the training programs. The incorporation of some Western biomedical knowledge and skills often enhances a practitioner's prestige in the community.

Some indigenous practitioners charge for their services, but many do not, accepting gifts instead. In a few traditions (including some Chinese), practitioners are paid as long as family members are well, but they are not paid for illness treatment. The duty of the practitioner in those cases is to keep people well, which argues for the acceptability of prevention programs in those cultures.

Table 2-3	Types of Healers	
Indigenous		**Western Biomedical**
Midwives		Pharmacists
Shamans		Nurse-midwives
Curers		Nurses
Spiritualists		Nurse practitioners
Witches		Physicians
Sorcerers		Dentists
Priests		Other health professionals
Diviners		
Herbalists		**Other Medical Systems**
Bonesetters		Chinese medical system
Massagers		Practitioners
		Chemists/herbalists
Pluralistic		Acupuncturists
Injectionists		Ayurvedic practitioners
Indigenous health workers		Taoist priests
Western-trained birth attendants		
Traditional chemists/herbalists		
Storekeepers and vendors		

For the most part, indigenous practitioners do "good," or healing. Some can do both good and ill (for example, shamans, sorcerers, and witches in many cultures). A few practice only evil or negative rituals (some shamans, sorcerers, and witches). Their work must then be countered by someone who does "good" magic. The power of belief is such that if individuals believe they have been bewitched, they may need a counteractive ritual, even if the Western biomedical system detects and treats a specific disease. In Guayaquil, Ecuador, one woman believed she had been *maleada* (cursed) by a woman who was jealous of her and that this was making her and her children ill. A *curandera* (curer) was brought in to do a *limpia* (ritual cleansing) of the house and family to remove the curse (Scrimshaw, 1974).

The importance of the power of belief is not confined to bewitching. One anthropologist working with a Haitian population discovered that a Haitian burn patient made no progress until she went to a *Houngan* (voodoo priest) on the patient's behalf and had the appropriate healing ritual conducted (J. Halifax-Groff, personal communication, 1976).

In some cultures healers are seen as diagnosticians, while others do the treatment (Alland, 1970). Other healers may do both, but refer some kinds of illness to other practitioners. In Haiti, both midwives and voodoo priests refer some cases to the Western biomedical system. Healers who combine healing practices or who combine the ability to diagnose and to treat are viewed as more powerful than other types. Topley (1976) discusses this for Hong Kong and notes that Taoist priest healers are particularly respected. They are seen as both priest and doctor and "claim to combine the ethics of Confucianism, the hygiene and meditation of Taoism, and the prayers and self-cultivation of the Buddhist monk."

Pluralistic healers combine Western biomedical and indigenous practices. Injectionists will give an injection of antibiotics, vitamins, or other drugs purchased at pharmacies or stores. Sometimes these injections are suggested by the pharmacist or storekeeper; other times they are self-prescribed. Because antibiotics were so dramatic in curing infections when Western biomedicine was first introduced in many cultures, injections are seen as conveying greater healing than the same substance taken orally. Thus, many antibiotics now available orally and vitamins are injected. In today's environment this increases the risk of contracting HIV or hepatitis if sterile or new needles and syringes are not used.

Traditional chemists and herbalists, as well as storekeepers and vendors (many communities are too small to have a pharmacy), sell Western biomedical medications, including those that require a prescription in the United States and western Europe. Although prescriptions may be legally required in many countries, the laws are not rigorously enforced. This is also true for pharmacies, which are very important, sometimes the most important, sources of diagnosis and treatment in many communities around the world.

Western biomedical practitioners are an important source of care, but they may also be expensive or hard to access from remote areas. As mentioned earlier, if an individual believes that an illness is due to a cause explained by the indigenous system and a Western biomedical practitioner denies that cause, the individual may not return to that practitioner but seek help elsewhere.

As noted, there are other medical systems with long traditions, systematic ways of training practitioners, and well-established diagnostic and treatment procedures. Until recently Western biomedical practitioners totally rejected both these and indigenous systems, often failing to recognize how many practices and medicines in Western biomedicine were derived from other systems (e.g., quinine, digitalis, many anesthetics, aspirin, and estrogen). Elements of these systems that were derided in the past, such as acupuncture, have now found their way into Western biomedical practice and are being legitimized by Western research.

Theories of Health Behavior and Behavior Change

The fields of sociology, psychology, and anthropology have developed many theories to explain health beliefs and behaviors and behavior change. Some theories developed by sociologists and psychologists in the United States were developed first for U.S. populations and only later applied internationally. Others were developed with international and multicultural populations in mind from the beginning. Only a few of the many theories of health and illness beliefs and behavior are discussed here, but they are ones that have been quite influential in general or that are applicable for international work in particular.

Health Belief Model

The health belief model suggests that decision making about health behaviors is influenced by four basic premises—perceived susceptibility to the illness, perceived severity of the illness, perceived benefits of the prevention behavior, and perceived barriers to that behavior—as well as other variables, such as sociodemographic factors (Rosenstock, Strecher, &

Becker, 1974). In general, people are seen as weighing perceived susceptibility (how likely they are to get the disease) and perceived severity (how serious the disease is) against their belief in the benefits and effectiveness of the prevention behavior they must undertake and the costs of that behavior in terms of barriers such as time, money, and aggravation. The more serious the disease is believed to be, and the more effective the prevention, the more likely people are to incur the costs of engaging in the prevention behavior. This model has been extensively studied, critiqued, modified, and expanded to explain people's responses to symptoms and compliance with health care regimens for diagnosed illnesses. One concern has been that this model does not work as well for chronic problems or habitual behaviors because people learn to manage their behaviors or the health care system. Also, it has been accused of failing to take environmental and social forces into account, which in turn increases the potential for blaming the individual. The difficulty in quantifying the model for research and evaluation purposes is also a problem.

Work by Bandura led to the inclusion of self efficacy in the model. *Self-efficacy* has been defined as "the conviction that one can successfully execute the behavior required to produce the desired outcome" (Bandura, 1977, 1989). The concept of locus of control, or belief in the ability to control one's life, also has been used with this model. In one example, a comparison of migrant Yugoslavian and Swedish diabetic females revealed stronger locus of control in the Swedes and more passivity toward self-care in the Yugoslavs, who also had a lower self-efficacy that the authors attributed to the different political systems in the two countries—collectivism in Yugoslavia, individualism in Sweden (Hjelm, Nyberg, Isacsson, & Apelqvist, 1999).

The value of the four basic premises of the health belief model has held up well under scrutiny. Perceived barriers have the strongest predictive value of the four dimensions, followed by perceived susceptibility and perceived benefits. Perceived susceptibility is most frequently associated with compliance with health screening exams. Perceived severity of risk has been noted to have a weaker predictive value for protective health behaviors, while it is strongly associated with sick-role behaviors.

In *Medical Choice in a Mexican Village*, Young (1981) describes a health decision-making process very similar to that found in the health belief model. In choosing between home remedies, pharmacy or store, indigenous healer or doctor, the villagers weigh the perceived severity of the illness, the potential efficacy of the cure to be sought, the cost (money, time, and so on) of the cure, and their own resources to seek treatment and pay the cost as they make their decision. The simplest, least costly treatment is always the first choice, but the severity of illness and issues concerning efficacy may force a more costly option. Other studies of health-seeking behavior have found similar patterns throughout the world.

Theory of Reasoned Action

The theory of reasoned action was first proposed by Ajzen and Fishbein (1972) to predict an individual's intention to engage in a behavior in a specific time and place. The theory was intended to explain virtually all behaviors over which people have the ability to exert self-control. There are five basic constructs that precede the performance of a behavior. These are behavioral intent, attitudes, beliefs and evaluations of behavioral outcomes, subjective norms, and normative beliefs. Behavioral intent is seen as the immediate predictor of behavior. Factors that influence behavioral choices are mediated through this variable. In order to maximize the predictive ability of an intention to perform a specific behavior, the measurement of the intent must closely reflect the measurement of the behavior. Thus, measurement of the intention to begin to take oral contraceptives must include questions about the date a woman plans to visit a clinic and which clinic she plans to attend. The failure to address action, target, context, and time in the measurement of behavioral intention will undermine the predictive value of the model.

In a recent test of this theory in the prediction of intentions regarding condom use in a national sample of young people in England, measures of past behavior were the best predictors of intentions and attenuated the effects of attitude and subjective norms (Sutton, McVey, & Glanz, 1999).

Diffusion of Health Innovations Model

The diffusion of health innovations model proposes that communication is essential for social change, and that diffusion is the process by which an innovation is communicated through certain channels over time among members of a social system (Rogers, 1983; Rogers & Shoemaker, 1972). An *innovation* is an idea, practice, service, or other object that is perceived as new by an individual or group.

Ideally, the development of a diffusion strategy for a specific health behavior change goal will proceed through six stages:

1. Recognition of a problem or need
2. Performance of basic and applied research to address the specific problem

3. Development of strategies and materials that will put the innovative concept into a form that will meet the needs of the target population

4. Commercialization of the innovation, which will involve production, marketing, and distribution efforts

5. Diffusion and adoption of the innovation

6. Consequences associated with adoption of the innovation

According to classic diffusion theory, a population targeted by an intervention to promote acceptance of an innovation comprises six groups: innovators, early adopters, early majority, late majority, late adopters, and laggards. The rapidity and extent to which health innovations are adopted by a target population are mediated by a number of factors, including relative advantage, compatibility, complexity, communicability, observability, trialability, cost-efficiency, time, commitment, risk and uncertainty, reversibility, modifiability, and emergence. Relative advantage refers to the extent to which a health innovation is better (faster, cheaper, more beneficial) than an existing behavior or practice. Antibiotics were quickly accepted in most of the world because they were dramatically faster and more effective than traditional practices. Compatibility is the degree to which the innovation is congruent with the target population's existing set of practices and values. Polgar and Marshall (1976) point out that injectable contraceptives were acceptable in the village in India where Marshall worked because injections were viewed so positively due to the success of antibiotics. The degree to which an innovation is easy to incorporate into existing health regimens may also affect rates of diffusion. Iodized salt is an easier way to ensure people are receiving iodine than taking an iodine pill, because using salt is already a habit. Health innovations are also more likely to be adopted quickly and by larger numbers of individuals if the innovation itself can be easily communicated.

The concept of trialability involves the ease of trying out a new behavior. For example, it is easier to try a condom than to be fitted for a diaphragm. Observability refers to role models, such as village leaders volunteering to be the first in a vaccination campaign. A health innovation is also more likely to be adopted if it is seen as cost-efficient. A famous case study of water boiling in a Peruvian town demonstrated that the cost in time and energy of gathering wood and making a fire to boil the water far outweighed any perceived benefits, so water boiling was seldom adopted (Wellin, 1955). Successful health innovations are likely to be those that do not require expenditure of much additional time, energy, or other resources.

One of the overall messages regarding communication for the purposes of health education and promotion is that mass media and interpersonal communication channels should be used in conjunction (Rogers, 1973). Implementing both methods is of particular importance in developing countries, especially in rural communities. Rogers emphasizes that mass media deliver information to a large population to add knowledge, although interpersonal contacts are needed to persuade people to adopt new behaviors (thereby using the knowledge function, the persuasion function, and the innovation-decision process). According to Rogers's work and other work cited by him, "family planning diffusion is almost entirely via interpersonal channels" (1973, p. 263). He presented five examples in different countries, including India, Taiwan, and Hong Kong, in which interpersonal channels were the primary source for family planning information and were the motivating factors for seeking services.

The limitations to mass media in this area include the following:

- *Limited exposure:* In less developed countries, smaller audiences have access to mass media (radio is the most common mass media tool), and low literacy is also a barrier.

- *Message irrelevancy:* The content of mass media messages may be of no practical use for many rural and nonelite populations. Often instrumental information ("how to") is not included in the messages (e.g., information on where to receive services or on the positive and negative consequences of adopting a particular health behavior).

- *Low credibility:* For people to accept and believe the messages being diffused, trust needs to exist between the sender and receiver. Often radio and TV stations are a government monopoly and may be considered as government propaganda by the receivers.

The diffusion of innovations model focuses solely on the processes and determinants of adoption of a new behavior and does not help to understand or explain the maintenance of behavior change. Many health behaviors require permanent or long-term changes. Also, it is important to understand whether a new behavior is being conducted appropriately, consistently, or at all. One example is the story of condom use, which was demonstrated by unrolling

the condom over a banana. Women who became pregnant while they reported using condoms had been faithfully putting them on bananas.

PRECEDE Model

The PRECEDE model of health promotion was first proposed by Green, Kreuter, Deeds, and Partridge in 1980. PRECEDE is an acronym for "predisposing, reinforcing, and enabling causes in educational diagnosis and evaluation." This model focuses on communities rather than individuals as the primary units of change. This approach incorporates specific recommendations for evaluating the effectiveness of interventions and provides a highly focused target for the intervention.

The framework of the PRECEDE model outlines progression through seven phases. Phase 1, also known as social diagnosis, relies on assessment of the general problems of concern that have a negative impact on overall quality of life for members of the target population. Those populations might include patients, health care providers, family caregivers, lay health workers, or consumers of health care. During phase 1 there is an emphasis on identification of social problems encountered by the target population. This provides an important opportunity to involve the community. Community participation in and acceptance of programs greatly increase their likelihood of success.

Phase 2 focuses on epidemiologic diagnosis. Activities associated with phase 3 focus on the identification of nonbehavioral (and often nonmodifiable) causes and behavioral causes of the priority health problem. Phase 4 of the model is identified as educational diagnosis and consists of activities to identify predisposing, reinforcing, and enabling factors associated with the target health behavior. At phase 5 intervention planners must decide which of the factors are to be addressed by various aspects of the intervention. Phase 6 is administrative diagnosis and refers to the development and implementation of the intervention program. Viable intervention strategies suggested by Green and colleagues (1980) include group lectures, individual instruction, mass media messages, audiovisual aids, programmed learning, educational television, skill development workshops, simulations, role playing, educational games, peer group discussions, behavior modification, modeling, and community development. The seventh and final phase is focused on evaluation, which begins during each of the preceding six phases and ranges from simple process evaluation to impact and outcome evaluation.

Transtheoretical Model

Theories concerning the concept of stages of change have been evolving since the early 1950s. Currently the most widely accepted stage change model is the transtheoretical model of behavior change developed by Prochaska, DiClemente, and Norcross (1992). This model has four core constructs: (1) stages of change, (2) decisional balance, (3) self-efficacy, and (4) processes of change. Interventions relying on this model are expected to include all four constructs in the development of strategies to communicate, promote, and maintain behavior change.

The stages of change include several steps. The first is precontemplation, in which individuals have no intention to take action within the next 6 months. The contemplation stage refers to expressing an intention to take some action to change a negative health behavior or adopt a positive one within the next 6 months. The preparation stage refers to the intent to make a change within the next 30 days. The action stage is defined as the demonstration of an overt behavior change for an interval of less than six months. In the fifth stage, maintenance, a person will have sustained a change for at least 6 months.

Decisional balance is an assessment of the costs and benefits of changing, which will vary with the stage of change. Self-efficacy is divided into two concepts. The first is confidence that one can engage in the new behavior. Second, the temptation aspect of self-efficacy refers to factors that can tempt one to engage in unhealthy behaviors across different settings.

The fourth construct of the transtheoretical model deals with the process of change. This includes 10 factors that can affect the progression of individuals from the precontemplation to the maintenance stages.

Explanatory Models

Explanatory models were initially proposed by physician-anthropologist Kleinman (1980, 1986, 1988). They differ from some of the theories described earlier in this section in that they are designed for multicultural settings. They include models such as the meaning-centered approach to staff-patient negotiation described by Good and Good (1981). These models focus on individual interactions between physicians or other staff and patients, but the concepts, such as Kleinman's negotiation model, have proved useful for research and for behavioral interventions for larger populations. An explanatory model is seen as dynamic, and can change based on individual experiences with health, health information, or with the illness in question.

Table 2-4 adapts and summarizes concepts from Good and Good's description of the meaning-centered approach. The approach involves mutual interpretations across systems of meaning. The interpretive goal is understanding the patient's perspective. The underlying premise is that disorders vary profoundly in their psychodynamics, cultural influences in interpretation, behavioral expression, severity, and duration. As noted earlier, it is difficult to provide universal keys to culture and symptoms due to factors such as individual variation, groups assimilating or changing, and groups adding beliefs and behaviors from other cultures. For example, *espiritismo* (spiritism) was strongest in the Puerto Rican groups in the United States, but it has now been adopted by other cultures of Latin American origin as well. Instead of trying to provide formulas for understanding health and illness belief systems for different cultures, the focus is on the meaning of symptoms. The medical encounter is seen as involving the interpretation of symptoms and other relevant information. The suggestions in the "Actions" section of the table can be used both to explain insider/outsider views to health providers and to give them tools to work with individual patients or populations. (See Chapter 8 for further explanation of insider and outsider perspectives.)

Other Theories

A number of other theories can be useful in looking at culture and behavior. These include multiattribute utility theory, which predicts behavior directly from an individual's evaluation of the consequences or outcomes associated with both performing and not performing a given behavior. Some, such as social learning theory, have been criticized by anthropologists who argue against the notion that people are like a black box into which you can pour information and expect a specific behavior change.

Some Common Features of Successful Health Communication and Health Promotion Programs

When applied in practice, many of the principles discussed in this chapter help increase the success of health communication and health promotion programs. In particular, understanding and incorporating people's insider cultural values, beliefs, and behaviors; basing the program in the community with strong community participation; incorporating peer group education, including community-based outreach workers; and using multilevel intervention approaches have proved essential to program success.

For example, the Agita Sao Paulo Program provides a case study in using local culture to design both the content and delivery system for a program to use physical activity to promote health (Matsudo et al., 2003). Just the word *agita* (which means to move the body, to agitate in the sense of stirring, but also to change, is more culturally understood and internalized than a literal translation of *exercise*. In addition to careful work on culturally acceptable ways of delivering the message, the project provides multiple culturally valued ways to increase physical activity, and tailors these to the age, gender, and lifestyles of community members.

In a very different project, work in three townships in South Africa focused on identifying where AIDS prevention would be most effective from the culturally appropriate, insider perspective (Weir et al., 2003). Among other things, researchers learned that ideal prevention intervention sites varied depending on whether the central business district or the township was the location for initiating new sexual encounters.

Table 2-4	Meaning-Centered Approach to Clinical Practice

Primary Principles

Groups vary in the specificity of their medical complaints.

Groups vary in their style of medical complaining.

Groups vary in the nature of their anxiety about the meaning of symptoms.

Groups vary in their focus on organ systems.

Groups vary in their response to therapeutic strategies.

Human illness is fundamentally sematic or meaningful (it may have a biological base, but is a human experience).

Corollary

Clinical practice is inherently interpretive.

Actions

Practitioners must

    Elicit patients' requests, questions, etc.

    Elicit and decode patients' semantic networks

    Distinguish disease and illness and develop plans for managing problems.

    Elicit explanatory models of patients and families, analyze conflict with biomedical models, and negotiate alternatives

Source: B. J. Good and M. J. D. Good, "The Meaning of Symptoms: A Cultural Hermeneutic Model for Clinical Practice," in I. Eisenberg and A. Kleinman, *The Relevance of Social Science for Medicine* (Dordrecht: Kluwer Academic Publishers, 1981). Adapted and reprinted with kind permission of Kluwer Academic Publishers.

The type of sex (commercial vs. casual) as well as the availability of condoms varied with the site. The age of people engaging in risky behaviors and risk behaviors by gender also varied by site. Again, prevention programs needed to be tailored. In another AIDS prevention project, this time in Vietnam, paying attention to culture and religion was essential to program strategies (Rekart, 2002). In Belize, understanding adolescents and making sure the program met their needs in both culture- and age-appropriate ways was key (Martiniuk, O'Connor, & King, 2003).

Another example of focusing on understanding and changing cultural values in regard to unhealthy behaviors is found in the area of smoking cessation. Abdullah and Husten (2004) set forth a framework for public health intervention in this area that addresses multiple levels of society.

The need for the involvement of communities is also clearly demonstrated in the literature. Literally hundreds of references exist on this topic. A recent summary article on this topic outlines many of the broad principles in this approach. These include community analysis with community participation, action plans designed with community input, and community involvement in implementation. The latter can include community involvement in ongoing oversight and evaluation as well as the more usual modes of community outreach workers (e.g., see Thevos, Quick, & Yanduli, 2000), working through community organizations, and getting individuals involved (Bhuyan, 2004). A report from a recent project in Bolivia documents the success of involving community members in everything from mapping the villages to setting priorities for the program (Perry, Shanklin, & Schroeder, 2003).

Two projects in Chicago demonstrate the success of the community outreach worker approach. In one case, the project focuses on intravenous drug abusers, reducing their HIV/AIDS risk behaviors and helping them to initiate drug abuse treatment programs. This work simply could not be accomplished without community outreach workers, all of whom are former addicts who know how and when to reach current addicts. Also, the outreach workers are from the predominant cultural/ethnic group in each community (Ouellet, Huo, & Bailey, 2004). Similarly, the Chicago Project for Violence Prevention involves ex-gang members as outreach workers (Chicago Project for Violence Prevention). Both programs have been adopted internationally as well as in other cities in the United States. A similar focus on peer group education in Botswana led to increased knowledge and prevention behaviors among women at risk for HIV/AIDS infection (Norr et al., 2004).

Methodologies for Understanding Culture and Behavior

Many of the research methodologies developed in the United States did not translate easily, literally, or figuratively to international settings. Differences in linguistic nuances, in the meanings of words and concepts, and in what people would reveal to a stranger versus what they would reveal to someone from their community all complicated the application of the quantitative methodologies used by sociologists, psychologists, and epidemiologists. The realization of these problems came about gradually, through failed projects and missed interpretations, and particularly once AIDS appeared. As a disease whose only prevention is still behavioral, with many hidden or taboo behaviors involved, AIDS brought out the need for qualitative research and for research conducted by individuals from the cultures being studied. The field of international public health has now moved from an almost exclusively quantitative orientation to the recognition that we have a toolbox of methodologies. Some may be more valuable than others for some situations or questions; other times, a mix of several methodologies may offer the best approach. These methodologies derive from epidemiology, survey research, psychology, anthropology, marketing (including social marketing), and other fields. The biggest disagreement has been over the relative value of quantitative and qualitative methods.

The debate on the scientific value of qualitative versus quantitative research is well summarized by Pelto and Pelto (1978). They define science as the "accumulation of systematic and reliable knowledge about an aspect of the universe, carried out by empirical observation and interpreted in terms of the interrelating of concepts referable to empirical observations" (p. 22). The Peltos add that "if the 'personal factor' in anthropology makes it automatically unscientific, then much of medical science, psychology, geography, and significant parts of all disciplines (including chemistry and physics) are unscientific" (p. 23).

In fact, scientific research is not truly objective but is governed by the cultural framework and theoretical orientation of the researcher. One example is the past tendency of biomedical researchers in the United States to focus on adult men for many health problems that also occur in women (such as heart disease). The earlier example of kuru demonstrates the limitations of cultural bias.

The methodological concepts of validity and reliability provide a common foundation for the integration of quantitative and qualitative techniques.

Validity refers to the accuracy of scientific measurement, "the degree to which scientific observations measure what they purport to measure" (Pelto & Pelto, 1978, p. 33). For example, in Spanish Harlem in New York City, the question "*¿Sabe como evitar los hijos?*" (Do you know how to avoid [having] children?) elicited responses on contraceptive methods and was used as the first in a series of questions on family planning. By not using family planning terminology at the outset, the study was able to avoid biasing respondents (Scrimshaw & Pasquariella, 1970). The same phrase in Ecuador, however, produced reactions such as "I would never take out [abort] a child!" If the New York questionnaire had been applied in Ecuador without testing it through semistructured ethnographic interviews, the same words would have produced answers to what was in fact a different question (Scrimshaw, 1974). Qualitative methods often provide greater validity than quantitative methods because they rely on multiple data sources, including direct observation of behavior and multiple contacts with people over time. Thus they can be used to increase the validity of survey research.

Reliability refers to replicability: the extent to which scientific observations can be repeated and the same results obtained. In general, this is best accomplished through survey research or other quantitative means. Surveys can test hypotheses and examine questions generated through qualitative data. Qualitative methods may help us discover a behavior or how to ask questions about it, while quantitative data can tell us how extensive the behavior is in a population and what other variables are associated with it. Murray (1976) describes just such a discovery during qualitative research in a Haitian community, where the simple question "Are you pregnant?" had two meanings. Women could be pregnant with *gros ventre* (big belly) or could be pregnant and in *perdition*. Perdition meant a state in which a woman was pregnant, but the baby was "stuck" in utero and refused to grow. Perdition was attributed to causes such as cold, spirits, or ancestors. Women may be in perdition for years, and may be separated, divorced, or widowed, but the pregnancy is attributed to her partner when it commenced. Murray then included questions about perdition in a subsequent survey, which revealed that it was apparently a cultural way of making infertility or subfecundity socially acceptable, as many women in perdition fell into these categories.

Surveys are effective tools for collecting data from a large sample, particularly when the distribution of a variable in a population is needed (e.g., the percentage of women who obtain prenatal care) or when rarely occurring events (e.g., neonatal deaths) must be assessed. Surveys are also used to record people's answers to questions about their behavior, motivations, perception of an event, and similar topics. Although surveys are carefully designed to collect data in the most objective manner possible, they often suffer inaccuracies based on respondents' perceptions of their own behavior, their differing interpretations of the meaning of the question, or their desire to please the interviewer with their answers. Surveys also can have difficulty uncovering motives (i.e., why individuals behave as they do), and they are not apt to uncover behaviors that may be consciously or unconsciously concealed. In "Truths and Untruths in Village Haiti: An Experiment in Third World Survey Research," Chen and Murray (1976) describe some of these problems.

The traditional anthropological approach involves one person or a small team in a research site for at least a year. This is done in part to take into account the changes in people's lifestyles with the changes in seasons, activities, available food, and so on. Also, the anthropologist often needs time to learn a language or dialect and learn enough about the culture to provide a context for questions and observations. More recently a subset of anthropological tools (ethnographic interview, participant observation, conversation, and observation) plus the market researchers' tool of focus groups have been combined in a rapid anthropological assessment process known as Rapid Assessment Procedures (RAP) (Scrimshaw & Hurtado, 1987; Scrimshaw, et al., 1991, 1992).

The RAP evolved around the same time as Rapid Rural Appraisal was developed by rural sociologists (Chambers, 1992). Both methods made listening to community voices easier for program planners and health care providers and became a frequently used tool for program development and evaluation. RAPs have been developed for many topics, including AIDS, women's health, diarrheal disease, seizure disorders, water and health, and childhood obesity prevention. RAP has become a generic concept and has been modified for many uses. Modified titles include RARE and ERAP. Several versions of the RAP as adapted for different topics and related information can be found at www.uic.edu/sph/rap.

A final comment on methodology is that as the social sciences are increasingly combining methodologies and sharing each other's tools, it is also important to share theoretical approaches. Where methodology is concerned, this leads to using multilevel approaches to research, in which environment, biological factors, cognitive issues, societal and cultural context, and political and economic forces can

all contribute to the analyses. This should take place at least to the extent that an examination is made of data one step above and one step below the phenomenon being explained (Rubenstein, Scrimshaw, & Morrissey, 2000).
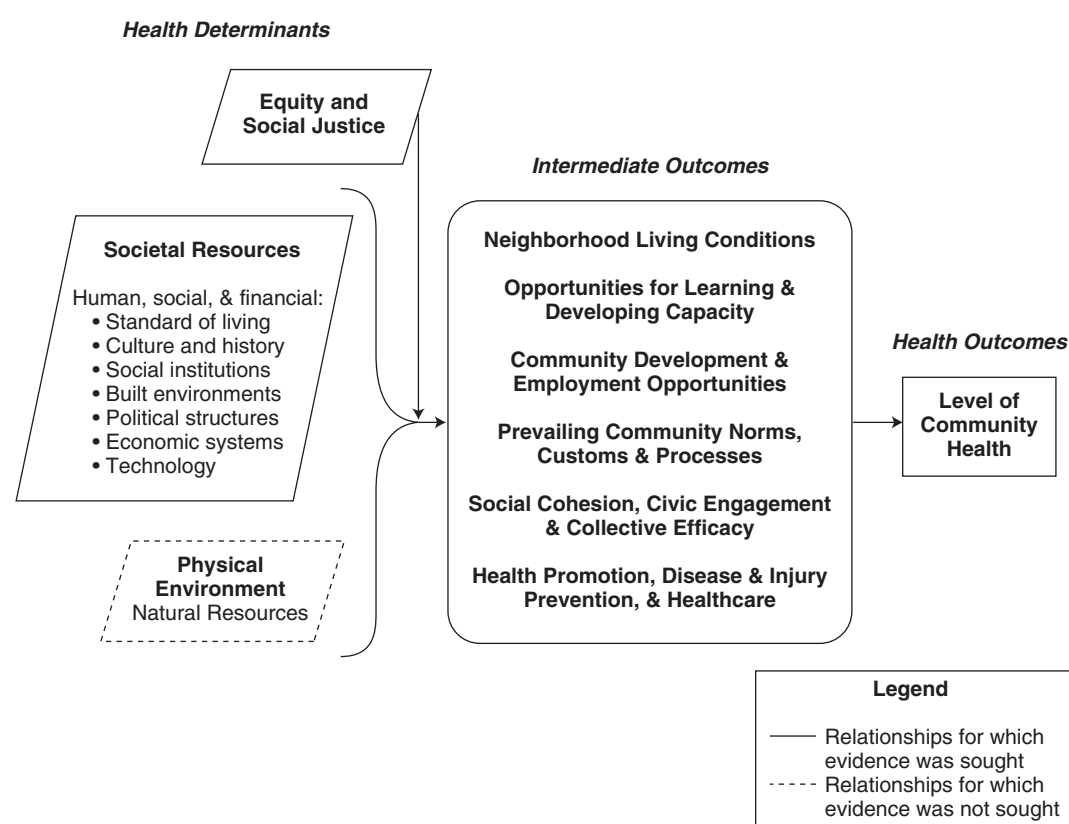
An example of a logic framework using this approach can be found in the work of the Centers for Disease Control and Prevention (CDC) task force that has been developing the *Guide to Community Preventative Services,* which is a series of evidence-based recommendations for community public health practice based on a systematic and critical review of the evidence. (For more information go to www.the communityguide.org.) Topics considered by the guide include major risk behaviors (tobacco use, alcohol abuse and misuse, other substance abuse, nutrition, physical activity, healthy sexual behavior), specific illnesses (e.g., cancer, diabetes), and one overarching topic, the sociocultural environment. Figure 2-2 contains the logic framework for this topic. The outcomes of community health (on the right) stem from factors in the physical environment, societal resources, and equity and social justice issues, shown on the left of the figure. The immediate outcomes are listed in the middle, and range from neighborhood living conditions to prevailing community norms to prevention and health care (Anderson et al., 2003a, 2003b). This approach greatly broadens the context for understanding and addressing the health of individuals and communities.

The CDC's guide can be accessed through the website www.thecommunityguide.org. The website and related publications listed there provide evidence-based guidelines for improving community health, many of which have global relevance.

Case Study: The Slim Disease—HIV/AIDS in Sub-Saharan Africa

AIDS changed the way in which epidemiologic and behavioral research could be conducted and health interventions designed and carried out. This case

Health Determinants

Equity and Social Justice

Intermediate Outcomes

Societal Resources

Human, social, & financial:
• Standard of living
• Culture and history
• Social institutions
• Built environments
• Political structures
• Economic systems
• Technology

Neighborhood Living Conditions

Opportunities for Learning & Developing Capacity

Health Outcomes

Community Development & Employment Opportunities

Prevailing Community Norms, Customs & Processes

Level of Community Health

Social Cohesion, Civic Engagement & Collective Efficacy

Health Promotion, Disease & Injury Prevention, & Healthcare

Physical Environment
Natural Resources

Legend

—— Relationships for which evidence was sought
----- Relationships for which evidence was not sought

Figure 2-2 The *Guide to Community Preventive Service's* Social Environment and Health Model. *Source:* L. M. Anderson, S. C. Scrimshaw, M. T. Fullilove, et al., "The Community Guide's Model for Linking the Social Environment to Health," 2003, *American Journal of Preventive Medicine, 24*(3S), p. 13. Reprinted with permission.

study illustrates virtually all the topics covered in this chapter.[2]

Epidemiology

At the end of 2003, 37.8 (34–42) million adults and children were living with HIV/AIDS worldwide. Of these millions, 70% of the world's HIV-positive cases are in Africa, where an estimated 14.7 million people have already died from AIDS. Sub-Saharan Africa has been hit hardest, with an estimated 25 (23.1–27.9) million people currently living with HIV/AIDS. The virus is spreading throughout the African population at alarming rates. HIV prevalence among pregnant women has risen to between 15% and 30% in some provinces in South Africa alone (World Health Organization [WHO], 2004).

Unlike the West, where AIDS has been largely associated with gay men and injecting drug users, in Africa the most common transmission is through heterosexual sex. A husband often infects his wife as a result of his involvement with other partners. A pregnant, HIV-positive woman may transmit the virus to her fetus through the placenta or to her infant through breastfeeding. In sub-Saharan Africa, an estimated 1.9 million children are living with the virus as a result of mother-to-child transmission. Rural communities are not immune to HIV and AIDS, considering that the majority of the population lives in nonurban settings (Hunt, 1989; Salopek, 2000).

Generally, AIDS patients in Africa suffer from intestinal infections, skin disease, tuberculosis, herpes zoster, and meningitis. In the industrialized countries, AIDS is associated with Karposi's sarcoma (a skin cancer), meningitis, and pneumonia. So why does the same disease spread so differently from one region of the world to another? History, politics, economics, and cultural and social environments influence the course of a disease in a society. In the case of Africa, traditional family, social, and environmental structures were disrupted by European colonization, which imposed changes. Even after countries became independent from Europe, political, ecological, and economic structures remained disrupted and often unstable. Many of these factors contributed to an environment in which AIDS easily took hold (Akeroyd, 1997; Bond et al., 1997; Hunt, 1989). These factors and their association with the AIDS pandemic are described in the following sections. In addition to illustrating the relationship between cultural norms, prevention and health care access, and disease, the following discussion demonstrates the profound relationship between the general sociocultural, political, physical, and economic environment and health.

Risk of AIDS Associated with Migratory Labor

The integral family structure of the African culture has been broken up by the migratory labor system in eastern, central, and southern Africa. The migratory labor system is historically part of the regions' industrial development and colonization by European powers. These large industries, including mining, railroad work, plantation work, and primary production facilities such as oil refineries, absorbed massive labor from rural areas. Men typically left their homes and traveled outside their communities to work sites for long periods of time. This system has not only kept families apart, but has also increased the numbers of sex partners, thus giving rise to the prevalence of sexually transmitted infections (STIs) and later AIDS. In many African cultures, regular sex is believed essential to health. Men in the migratory labor system have sex with prostitutes close to their work sites, become infected, and eventually return home and infect their wives, whose babies may in turn become infected (Hunt, 1989; Salopek, 2000).

War

In 2001 there were 24 major armed conflicts globally, half of which occurred in Africa. A country at war faces the weakness of its political system, and the situation intensifies the impact of the AIDS epidemic. Several populations become more vulnerable to HIV/AIDS during wartime, including those affected by food emergencies and scarcity, displaced persons, and refugees. Women are especially at risk. They are six times more likely to contract HIV in refugee camps than populations outside. Women are victims of rape as a weapon of war by the enemy side. Armed forces and the commercial sex workers they interact with are also affected by the epidemic (UNAIDS, 1999; Akeroyd, 1997; Carballo & Siem, 1996; Commission on Human Security, 2003).

Gender Roles and Cultural Traditions

African women's struggle with the AIDS pandemic has been depicted often in the literature (Salopek, 2000; UNAIDS, 1999a, 1999b; Hunt, 1989; Akeroyd, 1997; Carballo & Siem, 1996; Messersmith, 1991). The risk to women from husbands or partners returning from work in other areas has already been discussed. Another risk factor—sex work or prostitution by women as a means of survival—is now almost a death sentence, considering the great risk of con-

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[2]This case study was developed by Isabel Martinez, MPH.

tracting HIV/AIDS. There are many reasons why some African women find the need to engage in sex work, though studies have linked the reasons to a political economy context. Sex in exchange for favors, material goods, or money is conducted at all socioeconomic levels, from female entrepreneurs in foreign trade having to use sexual ploys to ensure business to impoverished young women needing money to support themselves and their families. The women typically travel outside their community or country into urban areas and locations where tourists vacation. As mentioned earlier, prostitution also takes place in the surrounding communities near labor camps and vacation areas. Even if women in sex work are knowledgeable about preventing HIV infection through use of condoms, cost, availability, and the resistance of some men to using them raise barriers to their use and play a part in further transmission of the disease (Akeroyd, 1997; Messersmith, 1991).

Other cultural factors that place young women at greater risk for HIV infection include a superstition in some areas that having sex with a virgin will cure an HIV-infected man, and the practice of female circumcision. In both these circumstances, the risk of contracting HIV through sex or infected surgical instruments increases for adolescents (Salopek, 2000; Akeroyd, 1997).

These and additional cultural factors have contributed to the fact that for the first time in the history of the epidemic, more women than men are infected (Akeroyd, 1997; Hunt, 1989; Messersmith, 1991; Salopek, 2000). Across the region, there are 13 women living with HIV for every 10 men. For most countries of this region, women are being infected earlier than men, with the most pronounced difference in the 15 to 24 age group. For this population it has been estimated that for every 36 young women living with HIV there are 10 men. According to the UNAIDS *AIDs Epidemic Update* (2004a), in a study of women in Zimbabwe and South Africa, "66% reported having one lifetime partner, 79% had abstained from sex until at least their 17th birthday, and 79% said they used a condom. Yet 40% of the young women were HIV-positive."

Additional Cultural Beliefs

Secrecy regarding HIV/AIDS is common within regions of the sub-Saharan culture. Denying that AIDS is affecting one's community or that one is infected increases chances of transmitting the virus because preventive actions are not taken (Akeroyd, 1997; Salopek, 2000; UNAIDS & WHO, 1999; UNAIDS & Welcome Trust, 1999). Preventive actions go beyond preventing sexual transmission to concerns about

transmission during treatment of ill individuals and during funeral practices.

In some parts of Africa, AIDS is referred to as the "slim disease" because of the wasting away that occurs as a result of the infection. Because of this belief, men prefer sex with plump women, believing that they are not infected. AIDS is called "whiteman's disease" in Gabon and "that other thing" in Zimbabwe. HIV and AIDS are a source of shame and denial in the culture. AIDS is also considered a punishment for overindulgence of the body. One *sangoma*, or faith healer, who has helped revive an ancient Zulu custom of virginity testing of young girls, supported her belief in reviving this custom, saying, "We have adopted too many Western things without thinking, and we lost respect for our bodies. This has allowed things like AIDS to come torture us" (Akeroyd, 1997; Hunt, 1989; Salopek, 2000; UNAIDS & WHO, 1999).

Social and Economic Impacts

Two of the gravest social and economic consequences of the AIDS epidemic in sub-Saharan Africa are millions of orphaned children and a stifled economy for almost an entire continent. About half of HIV infections occur before the age of 25, and most of those afflicted die before 35. In Zimbabwe, for example, life expectancy was 52 years in 1990 but only 34 years in 2003 (UNAIDS, 2004a). This tragedy has left more than 12 million orphans in Africa—90% of the world's AIDS orphans. It is expected that by 2010, this number will rise to more than 18 million. Because this disease strikes people during their most productive years, the growth and development of Africa's economy is being threatened because infected people eventually become too weak to work, then die. This affliction has left many of Africa's traditionally prosperous industries, such as farming, mining, and oil, extremely vulnerable because of a lack of healthy workers and AIDS-related cost of workers' medical care. These social and economic crises may threaten political stability in many African countries and weaken the health of the population.

The AIDS epidemic in Africa will eventually have an impact on many parts of the world if the problem is not controlled. The increase of travel nationally and internationally has aided the spread of diseases. In addition, if the problems associated with the transmission of HIV/AIDS are not addressed, they will get worse, more threatening, and more expensive to control (Bartholet, 2000; Bond et al., 1997; Carballo & Siem, 1996; Hunt, 1989; "Africa Matters," 2000; Salopek, 2000; UNAIDS & WHO, 1999; UNAIDS, 2004b).

Barriers to Prevention or Treatment of HIV/AIDS

Many barriers to the prevention of HIV/AIDS exist in Africa. These include lack of financial resources and the allocation of funds to projects that might be less crucial than those related to health. For example, a foreign country funded a multimillion dollar hospital in Zambia, whereas the clinics in the rural areas where the majority of the population live are often not even stocked with aspirin. Treatment of HIV/AIDS with current Western therapies is so expensive that many countries cannot afford it, and negotiating with pharmaceutical companies for less expensive supplies has not always been successful (Bartholet, 2000; Salopek, 2000).

Changing people's health behaviors and addressing cultural beliefs have also been tough challenges in prevention. Promoting safe sex, the use of contraception, and abstention from some cultural rituals can be perceived as changing traditional gender roles for both men and women and can go against some religious values that are part of the core for some communities. The need to hide or look away from the problem of HIV/AIDS stems from the disgrace attached to the disease, which makes it difficult for people even to discuss it, much less be tested. The stigma of HIV/AIDS needs to be removed in order for prevention efforts to be accepted by the people (Akeroyd, 1997; Bartholet, 2000; "Africa Matters," 2000; Salopek, 2000; UNAIDS & WHO, 1999; King, 1999).

One project in Ghana used both the health belief model and social learning theory to examine the determinants of condom use to prevent HIV infection among youth. The authors of the study found that perceived barriers significantly interacted with perceived susceptibility and self-efficacy. Youth who perceived a high level of susceptibility to HIV infection and a low level of barriers to condom use were almost six times as likely to have used condoms at last intercourse. A high level of perceived self-efficacy and a low level of perceived barriers increased the likelihood of use three times (Adih & Alexander, 1999).

Prevention Efforts by Community and Governmental Agencies and NGOs

Uganda and Senegal have received much recognition for controlling the spread of HIV/AIDS. Both of these countries have reduced their infection rate through aggressive public education and condom promotion campaigns, expanded treatment programs for other sexually transmitted infections, and mobilization of nongovernmental organizations (NGOs). The current president of Uganda has worked to reduce the stigma for people with HIV/AIDS. Senegal reacted quickly to the threat of disease starting in the early 1990s. A survey of its citizens regarding sexual behavior, knowledge, and attitudes was conducted, followed by public education campaigns. Health officials believe the education efforts regarding AIDS have contributed to women choosing to remain virgins longer and to an increase of condom use among sex workers and men and women who have casual sex. A decrease of STIs in sex workers and pregnant women was also noted ("Africa Matters," 2000; UNAIDS & WHO, 1999; UNAIDS, 1999a).

The theory of self-efficacy has proved useful in addressing AIDS. For example, one study in South Africa found that knowledge of risk and its prevention was important, but not sufficient. The authors stress the need to improve personal autonomy in decision making about sexual behavior and condom use for both men and women through skills development programs that promote self-efficacy (Reddy, et al., 1999).

International health and development organizations have joined in the fight against AIDS in Africa. The United Nations and its specialized agencies have major programs assisting countries and communities in prevention efforts, including joining forces to accelerate the development of experimental vaccines. Academic institutions have also teamed up with local community and church organizations to create prevention projects and help organize the communities to reach more of the public. These efforts have assisted in empowering many volunteers, mostly women, to motivate others in their communities through education and increasing women's negotiation skills for safe sex or condom use (Msiza-Makhubu, 1997; UNAIDS & Wellcome Trust, 1999; World Health Organization, 1997).

There is also a growing movement of doctors in Africa working with traditional healers to do outreach and education on AIDS. As discussed earlier, traditional healers have better access to many populations. People seek their help because of tradition and lack of adequate health care (Associated Press, 2000; Green, 1994).

Antiretroviral Therapy

Globally, approximately, 3 million people died of HIV/AIDS or AIDS-related disease in 2003. Although there is no cure for HIV/AIDS at this time, the provision of antiretroviral (ARV) therapy will prolong and improve the quality of life for those suffering from this disease. In the past 10 years, various agencies, countries, and individuals have con-

tributed resources (both human and financial) to improve HIV treatment and care options (services), namely in the form of antiretroviral drug therapy, in developing and transitional countries. Examples of donor agencies/organizations include the Global Fund to Fight AIDS, Tuberculosis and Malaria, the U.S. President's Emergency Plan for AIDS Relief, the World Bank, the European Commission, the World Health Organization (WHO), and the Bill and Melinda Gates Foundation, to name a few. However, despite the increasing political attention paid to HIV/AIDS, and the increase in the level of financial resources available to fight this disease, the funds are not being applied in a fully effective, coordinated manner. In some instances, AIDS funding sits idle, blocked in government bank accounts or stalled by rules of international funders (UNAIDS, 2004a; WHO, 2004).

The bureaucratic roadblocks to disseminating funds combined with the lack of knowledge about proper antiretroviral therapy guidelines mean that more than 8,000 people are still dying daily from this easily preventable and treatable disease. Even though WHO estimates as of December 2004 were that 700,000 people had started receiving antiretroviral therapy (up from 444,000 in July 2004) and this number represented a substantial increase compared with the 2001 estimates, coverage is still lowest in sub-Saharan Africa, where only 310,000 people were receiving treatment and 72% of the population's need for treatment are unmet. Furthermore, Nigeria and South Africa account for 41% of overall need for ARV therapy in the region. Access to antiretroviral treatment will ease the burden of those suffering from HIV/AIDS by improving their illness status (WHO, 2004; WHO et al., 2005).

The World Health Organization's through its 3 by 5 program, is one of the leaders in the effort to increase the provision of antiretroviral therapy to people in developing and transitional countries. This program has the goal of providing 3 million people with access to antiretroviral treatment by the end of 2005. However, the 3 by 5 program is only the beginning, since the goal of 3 million represents only half of the estimated 6 million people who were living with HIV/AIDS in these countries at the end of 2003. Of the countries that have been identified as recipients of this program due to their limited resources and heavy prevalence of HIV/AIDS, sub-Saharan African has been identified as the region with the overall highest burden.

Goals of the 3 by 5 program include building capacity in these countries to disseminate information and assist with disease and treatment management.

This includes increasing knowledge of ARV therapy programs within each country and improving (or building) tracking mechanisms to follow those who are receiving treatment. The 3 by 5 program uses the public health approach to train participant countries in national planning for antiretroviral therapy. This includes encouraging countries to develop and standardize antiretroviral therapy treatment programs. This requires countries to select a single type of first-line treatment and a limited number of second-line ARV regimens and to refer those who cannot be treated in either format to specialists. In addition, it provides the antiretroviral medicines at reduced prices. As a result, the cost of first-line treatment per person per year is now only US $150, a marked decrease compared with previous costs of US $300 or more (UNAIDS, 2004a, 2004b; WHO, 2004).

As with any international relief or assistance program, the WHO 3 by 5 program relies on long-term political support and funding. Because the most important outcome of this program is the provision of antiretroviral therapy, any reduction in, or loss of, support could have drastic results. Diminished support for antiretroviral programs could lead to the interruption of treatment to HIV/AIDS patients. This has the potential to not only reverse the trend of improving quality of life and decreasing morbidity and mortality rates, but also to provide the HIV virus with the potential to become drug resistant. This has the potential of threatening individuals and society, because drug-resistant strains of the virus can spread and render entire treatment programs ineffective. In essence, the provision of HIV/AIDS treatment would be back at square one.

Other challenges include the shortage in Africa of health professionals, many of whom have left their countries for better opportunities in more developed, higher-income countries. In addition, a lack of health literacy is a huge challenge to effective antiretroviral treatment. In some African countries (and other developing countries), patients buy ARV medicines without medical advice and prescriptions, which leads to the potential of creating drug-resistant strains of the virus if the medicine is not taken properly. It also may mean that people desperate for treatment are taking medicines that may make them sicker or that are ineffective for their particular strain of HIV. (UNAIDS, 2004b).

The individual behaviors that place people at risk are part of larger root causes of the problem in Africa, including colonialism, big industry's design of mass labor migration, poverty, gender inequalities, and war. Ideal prevention and intervention strategies must address health behavior changes as well as economic and

community barriers to the provision of social services and treatment options (Akeroyd, 1997; Bond et al., 1997; Tylor, 1871; King, 1999; UNAIDS & Wellcome Trust, 1996; World Health Organization, 1997).

Conclusion

This has been a brief exploration of cultural and behavioral issues for international public health. Anthropology, sociology, and psychology have much greater depth in both method and theory than can be described in this chapter. There is a rich and extensive literature on health beliefs and behaviors, environmental and biological contexts, health systems, and programmatic successes and failures. It is essential to take these factors into account in considering international public health work. In addition, a program must consider structural factors, such as setting, hours, child care, and ambience, as well as factors of content, such as culturally acceptable services, which includes providers who treat patients with respect and understanding.

Research and preventive services regarding health beliefs and behaviors must accept and integrate concepts different from those of Western biomedicine, of middle- or upper-class health care providers, or of health care providers from an ethnic or cultural group that is different from their patients. This demands the ability inherent in some of the anthropological methods and approaches discussed earlier: the ability to get into someone's head and understand things from an insider perspective. There is nothing like the experience of spending time with people in their own homes or community and striving to reach that insider understanding.

● ● ● **Discussion Questions**

1. What prevention strategies would you develop for the prevention of AIDS if you were the minister of health of a sub-Saharan country? What would be your strategies if you were a community leader? Would these strategies differ? If yes, how? How would you address some of the cultural beliefs or traditions associated with HIV/AIDS mentioned in the case study?

2. If you were entering a community to introduce a health program, who would you talk to? What would you ask? Why?

3. What is the hot/cold illness belief system? Why is it important? How would you incorporate it into a maternal and child health program?

4. Many people believe that healers such as midwives and shamans are called to their profession by a greater spiritual power. What significance does this have for official health programs around the world? How should they address this belief?

5. If an indigenous practice seems peculiar to you, but does no apparent harm, what should you do?

6. How could you learn what people in a community really believe about health and illness?

● ● ● **References**

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