

## Cultural Diversity and Medication Safety

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The U.S. Census Bureau reports that one in four Americans are classified as belonging to a race other than Caucasian; one-third of children are African-American, Hispanic, or Asian; and one-tenth of Americans are foreign-born.<sup>1</sup> This cultural diversity can have implications for medication safety. Ethnic culture affects our beliefs about health, illness, and medications; it also influences how we interact with health care providers, comply with prescribed medications, and respond physiologically to pharmacotherapy.

Although our ethnic differences are endless, a few common themes found in the literature are provided below as examples.<sup>2-4</sup> However, it is unwise, and even false and prejudicial, to assume that all people from a certain culture respond in the same way.

### BELIEFS ABOUT HEALTH AND DRUG THERAPY

When illness or injury strikes, Caucasian patients are typically intolerant to pain; yet in many other cultures, pain is seen as part of life. Caucasian patients also have high expectations that their disease will be cured, or at least well managed, by means of technology and powerful drugs. In fact, most Caucasian Americans expect to leave the doctor's office with a prescription, and they often believe that the management of microbes is more important than bolstering resistance to them.

Thus, American medicine tends to be aggressive, with a primary focus on the effectiveness of treatment along with a fairly high tolerance of side effects. In Japan, a drug's safety profile is stressed more than its effectiveness, which explains the general use of lower doses and fewer reported adverse effects. European medicine reflects a mid-point between

American and Japanese medical cultures. Immigrants from various cultures, therefore, may have different expectations about the type of drugs prescribed, dosages, and tolerance of adverse effects.<sup>2-4</sup>

For example, Hispanic, Chinese, and Asian patients often expect quick relief from symptoms, but they are cautious about American medications and often initiate downward dosage adjustments to avoid even minor side effects. Chinese patients also consider American medicine to be quick and effective in removing symptoms but not in providing a permanent cure. Because they believe that traditional Chinese medicine can remove the cause of the illness, they might often use American medicine for acute illness, surgery, and severe disease but then rely on Chinese medicine for long-term treatment.<sup>2-4</sup>

### INTERACTION WITH HEALTH CARE PROVIDERS

When "minority" patients deal with Caucasian health care providers, they often consider eye contact, body posture, and other forms of nonverbal communication significant, especially if a language barrier is present. For Asian patients, who might be accustomed to a formal relationship with their health care providers, a casual appearance, attire, or attitude on the part of a health professional may hinder the development of a trusting relationship. Even when they are comfortable with health care providers, some Asian or Hispanic patients might be reluctant to speak up about their illness.

Out of a misplaced deference for doctors and a reluctance to share deeply personal information, they may minimize or conceal adverse events or might stop taking medications because of the side effects without telling the physician. Involvement of family members may also be important. In Hispanic families, the mother or grandmother (especially of the husband) usually makes the health care decisions, and the opinions of Asian family members and elders are highly respected during illness.<sup>2-4</sup>



### ADHERENCE TO PRESCRIBED MEDICATIONS

Ethnic beliefs may play a role when patients discontinue taking a prescribed medication early. For example, African-Americans and Native Americans often doubt the need for medications when symptoms ease, and they may stop taking drugs like antibiotics and antidepressants. In some developing countries, medications are customarily prescribed for just a few days. This knowledge may thwart the acceptance of drugs with a delayed onset of action, such as antidepressants.

Hispanic patients tend to believe that the lack of symptoms means that they are cured. This could be especially problematic in treating diabetes, a prevalent illness in the Hispanic community. When symptoms abate, patients often stop taking their medications.

Diabetes is a challenge for Asian-Americans too. Because the disease is uncommon in Asia, it is difficult for patients to grasp the relationship between blood glucose levels and diet. Dietary requirements also do not fit well with the Asian way of thinking about food.<sup>2-4</sup>

### CULTURAL PREFERENCES AND THEIR EFFECT ON MEDICATION ADHERENCE

Women from Islamic and African cultures who have vaginal yeast infections may prefer oral drugs to vaginally inserted medications. Latin Americans expect injections, and they may consequently believe that oral medications are less effective.

In some cultures, the practice of religious fasting can affect medication schedules or interfere with drug absorption. Mexican and Puerto Rican patients' concerns about the addictive effects of drug therapy can lead to their reluctance to take medications over the long term. In some cases, Vietnamese patients have taken only half of their prescribed medications in the belief that the drug or dose is too strong.<sup>2-4</sup>

## PHYSIOLOGICAL RESPONSE TO MEDICATIONS

A patient's race or ethnic background influences how medications are metabolized. Common genetic polymorphisms (multiple forms of enzymes used for drug metabolism) affect the metabolism of many important medications. For some polymorphisms, the proportion of rapid metabolizers and slow metabolizers varies according to the patient's ethnicity. For example, only 3% to 5% of Caucasians are poor metabolizers of drugs affected by mephenytoin polymorphism (e.g., diazepam, imipramine), but 15% to 20% of Chinese and Japanese are poor metabolizers of mephenytoin and related drugs. Clinically, there may be an increase or decrease in the expected drug effect, and dosage adjustments may be necessary.<sup>2-4</sup>

For example, Asians and Native Alaskans need lower doses of anxiolytic agents than Caucasian patients. Asians, Indians, and Pakistanis require lower doses of lithium and antipsychotic drugs. Symptoms among African-Americans generally improve faster after they take neuroleptic and anxiolytic agents. Hispanic patients may require lower doses of antidepressants than Caucasians. Because some drugs within the same drug class are often cleared by different metabolic pathways, their metabolism may vary within the same drug class, depending on differences in ethnicity.<sup>2-4</sup>

Explicit recognition of ethnic differences can be a sensitive subject because of a fear of offending people. However, these examples of ethnic diversity serve only to show that we are all members of ethnic groups, all of which have cultural values that influence our behavior and our physiological responses to medications. That knowledge should help us avoid a "we/they" attitude when caring for patients from a culture that differs from our own.

The large number of ethnic cultures in the U.S. makes it difficult to be knowledgeable about each one; however, we can approach patients with respect while assessing their likelihood of acting on cultural beliefs that could adversely affect treatment outcomes. Individuals who are recent immigrants; live in ethnic enclaves; prefer using their native tongue; travel frequently to their country of origin; and have frequent contact with others within their ethnic group are more likely to

adhere to strongly held cultural beliefs. While misinformation or lack of information should be addressed, we should strive to bring effective health care to patients within a psychosocial context that is appropriate for their culture.<sup>2-4</sup>

## REFERENCES

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*The reports described in this column were received through the USP-ISMP Medication Errors Reporting Program (MERP). Errors, close calls, or hazardous conditions may be reported on the ISMP ([www.ismp.org](http://www.ismp.org)) or the USP ([www.usp.org](http://www.usp.org)) Web site or communicated directly to ISMP by calling 1-800-FAIL SAFE or via e-mail at [ismpinfo@ismp.org](mailto:ismpinfo@ismp.org). ■*