

Barriers to Health Care among Asian Immigrants in the United States: A Traditional Review

Juliana Clough, MPH
Sunmin Lee, ScD, MPH
David H. Chae, ScD, MA

Abstract: Asian immigrants in the U.S. are far less likely to have health insurance or use health care services than both U.S.-born Asians and non-Hispanic Whites. Furthermore, Asian immigrants who access the U.S. health care system are less likely than non-Hispanic Whites to receive high-quality services. This paper reviews four barriers faced by Asian immigrants to participating in the U.S. health care system fully: (1) linguistic discordance between providers and patients; (2) health-related beliefs and cultural incompetency of health systems; (3) issues related to accessing health services; and (4) discrimination in the health care system. Interventions to improve the health of Asian immigrants must address barriers experienced at multiple levels, including those that occur interpersonally and institutionally, as well as broader societal factors that affect health care access and quality.

Key words: Asian American, immigrant, health care access, health beliefs, discrimination, linguistic barriers.

The Asian population in the U.S. has experienced tremendous growth in recent decades. Between 2000 and 2010 alone, the Asian population grew from 10.2 million to 14.7 million, representing a growth rate of 43%.¹ Aside from the American Hispanic population, which grew at a similar rate between 2000 and 2010, Asians are the fastest-growing racial/ethnic group in the United States.¹ Asian immigrants are also highly diverse, representing almost 50 nationalities, with most immigrants arriving from India, China, Vietnam, the Philippines, and Korea.² Furthermore, the Asian American population predominantly consists of immigrants, with just over 66% being foreign-born.¹⁻³ At least 30% of each Asian ancestry group living in the U.S. is foreign-born, ranging from 39.7% of Japanese Americans to 84.2% of Malay Americans.³ While a majority of the Asian immigrant population has settled on the West Coast, Asian immigrants of many national ancestries can be found in all 50 U.S. states.²

Asian Americans are often perceived by the general public to be socioeconomically successful, upwardly mobile, and unaffected by crime and dependence on social

THE AUTHORS are affiliated with the University of Massachusetts Medical School, Worcester, Massachusetts (JC), the Department of Epidemiology and Biostatistics, University of Maryland School of Public Health, College Park (SL), and the Department of Behavioral Sciences and Health Education, Rollins School of Public Health, Emory University (DHC). Please address correspondence to Juliana Clough, University of Massachusetts Medical School, 55 Lake Ave N Box #277, Worcester, MA, 01605, juliana.clough@umassmed.edu.

programs, commonly referred to as the *model minority myth*.⁴ While on aggregate, Asians have the highest median household income of any racial/ethnic group, and the percentage living below the federal poverty threshold only narrowly exceeds that of non-Hispanic Whites (12.5% vs. 12.3%),⁵ these broad observations ignore considerable heterogeneity within the Asian American population. For example, while less than 6% of Filipino-Americans and less than 9% of Japanese-Americans were living below the federal poverty threshold by 2010, over 19% and over 28% of the mostly immigrant Cambodian and Hmong populations were living in poverty.⁶ Although over 50% of Asians in the U.S. have earned at least a bachelor's degree, this ranges from a high of 70.7% of Asian Indians to 26.3% of Vietnamese and 14.4% of Hmong residents.³ While the reasons for these trends are undoubtedly complex, Southeast Asian immigrants are more likely to be refugees with few resources in their home countries and little social support in the United States. In comparison, immigrants from more developed Asian nations tend to arrive with more education and wealth, and consequently join more established and prosperous immigrant communities.⁷

Although Asian Americans overall tend to report better health than other racial/ethnic groups in the U.S.,⁸ these aggregated statistics also obscure considerable heterogeneity within broad racial classifications. In addition to the socioeconomic diversity of the Asian American population, studies have consistently pointed to differences in health that are patterned along immigration-related factors.^{7,9,10} Asian immigrants in general have been found to have better health than their U.S.-born counterparts, despite often having worse socioeconomic circumstances and less access to health resources—a phenomenon sometimes referred to as the *healthy immigrant effect*.⁹ Various explanations have been posited to explain this somewhat counterintuitive observation, which may be an artifact of the selection of healthier, younger, and more robust segments of the sending population; for example, back-migration to countries of origin of those who are less healthy, as well as theories around the maintenance of relatively healthier behaviors that are culturally more salient or normative among immigrants.^{11–17} However, despite research indicating that Asian immigrants may be healthier than those who are U.S.-born, there is a growing body of evidence suggesting that (1) some Asian immigrant groups arrive with health considerations that are more prevalent than in the general U.S. population; and (2) that upon moving to the U.S., immigrants experience a decline in health that cannot be attributed solely to increasing age.^{9,11,18} Hepatitis B, a viral infection affecting the liver, is particularly common in immigrants arriving from Asia.^{19–21} Tuberculosis, another serious infectious disease, is also common among Asian immigrants, especially refugees.²² Asian immigrants may also be at higher risk for osteoporosis, stomach cancer, and, in connection with Hepatitis B, liver cancer.^{23,24} The high prevalence of these conditions within the Asian immigrant community is compounded by higher rates of uninsurance and lower rates of health service utilization compared to both U.S.-born Asians and non-Hispanic Whites.^{25–27} While around 15% of non-Hispanic Whites in the United States lack health insurance, almost 30% of non-citizen Asians are uninsured.²⁸ As many studies have confirmed, being uninsured is directly associated with a decrease in access to health services of all kinds.^{29–32}

Furthermore, several studies have found that health advantages associated with immigrant status deteriorate with increasing duration in the United States.^{8–10,33,34} This

phenomenon appears to be related to acculturation, defined by Redfield and colleagues as the changes to cultural patterns that occur with continuous contact to groups of another culture.³⁵ While measurement of the acculturation of immigrant groups in the U.S. is not uniform across the literature, it often involves variables relating to the length of stay in the country and the proficiency of the English language.³⁶ Some researchers have suggested that protective cultural factors of many immigrant groups, including social and familial support, and norms around healthy diet and taboos against damaging behaviors, gradually erode with increased acculturation to U.S. lifestyles.^{8,11,37–40} Supporting this hypothesis, analysis of the California Health Interview Study found that foreign-born Asians who interviewed in English more closely resembled U.S.-born Asians on demographic, health status, and health behavior variables than did foreign-born Asians who interviewed in other languages.⁴¹ In addition, other studies suggest that greater duration of stay in the U.S. among Asian immigrants may be associated with greater exposure to various sources of psychosocial stress, including acculturative stressors arising from adjustment to a new culture, the experience of racial discrimination, and linguistic barriers.^{42–44} Together, these studies conclude that despite overall better health status upon arrival to the U.S., Asian immigrants collectively experience a downward trajectory in health as they adapt to life in the U.S.

Given the particular health needs of Asian immigrants in the U.S., there is a need to investigate barriers to health care access as well as the quality of care experienced by this population. In light of the heterogeneity of the Asian immigrant population—in socioeconomic, ethnic, as well as specific health domains—there is a need for a more nuanced approach to addressing the health care needs of these communities that goes beyond the illusion of the model minority. Notably, Asian Americans are one of the least likely population groups to register for public services for which they are eligible.⁴⁵ Additionally, Asian Americans are less likely to be enrolled in health insurance or use formal health services than non-Hispanic Whites, and these rates are even lower for immigrants.^{25–26} To protect the health of the Asian immigrant population, it is imperative to investigate the barriers faced within this population to accessing and receiving quality treatment in the U.S. health care system.

Methods

Traditional methods were used to conduct our review, in which we initially performed a search for specific key words relevant to Asian American immigrant health, conducted supplementary searches on specific themes that emerged in the literature, and then incorporated additional articles recommended by experts in the field of Asian American health. Databases used to perform the initial searches were PubMed and Web of Science, and the search terms were “Asian American health,” “Asian immigrant health,” “barriers to health care,” “Asian culture and health,” “discrimination and health care,” “immigrant health insurance,” “language and health,” “healthy immigrant effect,” and “acculturation and health.” Articles describing trends in countries other than the United States were excluded, as were all articles written in languages other than English or published before 1980 and after April 2011. Searches involving combinations of the above key words and related terms continued until the authors believed that saturation

of content had been achieved. At that stage, no other articles providing new information pertaining to Asian immigrant experiences of the U.S. health care system were found. Articles were then coded based on their key findings and analyzed based on common themes that emerged during this process.

Due to the traditional rather than systematic methods used in this review, the authors acknowledge the possibility that selection bias may have affected the articles discussed in this paper. However, while this more purposive strategy to conduct a literature review has the potential to bias the scope of the literature examined and the subsequent conclusions that are drawn, the narrative synthesis method is considered appropriate for the purpose of summarizing, synthesizing, drawing insight from the collective body of work, and positing additional directions particularly when research on a topic is limited.^{46,47} The information presented in this review represents an overview of the salient barriers faced by Asian immigrants of all cultures and national origins to full participation in the United States health care system. Four main themes emerged from the literature with respect to health care access and quality among Asian immigrants: access to health services; linguistic discordance and health communication between patient and provider; health-related beliefs of patients and cultural incompetency of health systems; and perceived discrimination in the health care setting.

Access to Health Care Services

At the institutional and societal levels, Asian immigrants experience a multitude of access barriers that preclude full participation in the U.S. health care system. Despite the stereotype of being a model minority, Asian Americans are more likely to lack health insurance than White Americans. Data from the Census Bureau's 2011 Current Population Survey estimated that 18.1% of Asian Americans were uninsured *versus* 11.7% of non-Hispanic Whites.²⁸ Furthermore, 20.8% of Asian immigrants were uninsured, including 27% of non-citizens.²⁸ Additionally, an analysis of National Health Interview Survey data indicated that Asian immigrant children are three times more likely than Asian children born in the U.S. to be uninsured.²⁶ Considering that Asian American children are three times less likely to be insured than White children, the disparity between White children and Asian immigrant children is considerably larger.⁴⁸ As stated previously, being uninsured is strongly related to decreased access to both routine and acute health services for children and adults.²⁹⁻³² Uninsured Asian immigrant children are eight times more likely to go without a regular source of care than those with health insurance, and they are also half as likely to have a physical exam over a two-year period.²⁶ Lack of contact with health care providers might lead to the oversight of standard vaccinations and screenings, both of which might conceivably endanger these children and their peers. A similar correlation exists between lack of health insurance and clinical service use among Asian immigrant adults. For example, uninsured Asian immigrant women in the California Health Interview Survey were less likely to receive routine cancer screenings than both Hispanic and White immigrant women.²⁷ Additionally, regardless of insurance status, Asian immigrants are more likely than American-born Asians to lack a usual source of medical care, and this difference is even more pronounced among immigrants who have lived in the U.S. for less than

10 years.⁷ Similarly, Asians are more likely than non-Hispanic Whites to receive usual care in the emergency room rather than in a primary care office.^{49,50}

Aside from health insurance access, other studies have suggested that acculturation, or the adjustment to American culture and norms, may be associated with increased service use regardless of insurance status. Uninsured immigrant women who had been living in the U.S. for longer than 10 years were more likely to receive Pap smears and mammograms than uninsured immigrant women who had been living in the United States for less than 10 years.⁵¹ While this finding was for all immigrants, including Hispanic, Asian, and non-Hispanic White immigrant women, results were consistent among all racial and ethnic groups included in the analysis. However, increased acculturation and health service use is not necessarily correlated with better health. A study by Lee et al. found that self-reported health among immigrants of various races declined with an increased duration of stay in the United States. Furthermore, immigrants with no access to health insurance reported poorer health and used fewer preventive health services than their insured peers.⁵² These results suggest that while health insurance alone does not lead to positive health outcomes for immigrants, increasing coverage may somewhat mitigate a downward assimilation in health.

In 1996, President Clinton signed the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) into law. The PRWORA, which has been commonly called *welfare reform* since before its passage, not only restructured how federal cash assistance is distributed, but also dramatically affected immigrants' access to public health insurance. Under the new law, immigrants would still be granted necessary emergency care under the Emergency Medical Treatment and Active Labor Act of 1986 (EMTALA), but most would only be eligible for the Medicaid program after they had been lawful permanent residents of the United States for at least five years. Exempt from the five-year barrier were certain refugees, battered women, and asylees.⁵³ Nonetheless, the five-year barrier was purportedly enacted to deter immigration to the United States by populations in need of social assistance.⁵⁴ Little research on the effect of the PRWORA on immigrant health insurance access has been conducted. However, one study found almost no adverse effect on access, though most of the study sample had been legal permanent residents before the PRWORA was enacted.⁵⁵ Nevertheless, a significant drop in Asian immigrant participation in Medicaid was observed in the mid-1990s, though this may be attributed to a combined effect of PRWORA and an economic boom.²⁵ Furthermore, some of the most vulnerable Asian immigrants are refugees from Southeast Asia, and this group would have been unaffected by the passage of the PRWORA.⁵⁵ Still this population maintains a high uninsurance rate, with 30% of Vietnamese immigrants being uninsured and another 16% to 18% being on Medicaid.^{25,56} The data suggest that many Asian immigrants falsely believe that using publically funded insurance will mar their path to citizenship, which may in part explain this trend.⁵⁷ Refugees tend to have the weakest social support system of all immigrants, and also have fewer advocates to help them take ownership over their health care.⁵⁸

In addition to the pressure introduced by limited access to health insurance, undocumented immigrants may be more hesitant to utilize health services due to fear of being reported to immigration authorities. Some states, including California and Arizona, have considered mandatory reporting of undocumented immigrants by health care

providers.^{59,60} Though no proposal has been signed into law, undocumented immigrants exercise vigilance when accessing public social services. In a study of patients enrolled in the Los Angeles County Tuberculosis Registry, immigrants who feared being reported to the authorities were four times more likely to delay seeking treatment for more than two months.⁶⁰ Tuberculosis is very common among immigrants from Asia and also extremely infectious, and policies or attitudes that discourage treatment-seeking behaviors on the part of Asian immigrants could result in a significant public health crisis.^{22,61} A similar issue emerges with HIV; undocumented Asian men in New York City who are positive for the virus may avoid treatment if they feel that doctors might report them.⁶² Though it is unclear how often this phenomenon occurs, it remains a plausible concern for some Asian immigrants in need of health services.

Linguistic discordance and inadequate health communication. Limited access to health services constitutes a serious barrier to health care among Asian immigrants on the institutional and societal levels. However, other barriers existing at the interpersonal level may also significantly decrease the quality of care received by this population. The term *linguistic discordance* in a health care encounter is used for situations where the patient and practitioner do not comfortably speak the same language, a common scenario for immigrants of many ethnic origins. Studies have consistently documented the linguistic barriers that non-native English speakers of all races/ethnicities experience in American health care settings, and the implications of linguistic discordance for health outcomes and quality of care.⁶³⁻⁶⁷ Miscommunication between linguistically discordant patients and providers has been shown to increase the likelihood of incorrect diagnosis, inappropriate treatment, and even the unnecessary involvement of social services.^{63,64} Patients who speak different languages from their doctors are also less likely to receive education about their health and medications and more likely to be dissatisfied with their relationships with their doctors.⁶⁵ Additionally, other studies have suggested that language barriers in the health care setting can lead to increased use of diagnostic testing, increased wait times for patients, and may discourage patients from seeking future health care.^{66,67} The use of interpreters, however, may mitigate some of the negative effects of patient-provider linguistic discordance.^{68,69} While interpreters are indispensable members of any health care team in a multicultural society, interpreters in health care facilities are scarce.⁷⁰ Patients with limited English proficiency may attempt to use their own linguistic skills or those of family and friends to compensate; however, these *ad hoc* interpreters have been found to make serious mistakes, omissions, and subjective interpretations of vital information compared with formally trained medical interpreters.⁷⁰ As a result, a dearth of hospital interpreters could compromise the communication of vital medical information to immigrants with limited English proficiency.

A qualitative analysis of immigrant Asian women by Bauer et al. showed that linguistic barriers in the health care setting can compromise the doctor-patient relationship. Trouble expressing and articulating health concerns can further distance immigrant patients and their health care providers, potentially affecting the amount and quality of health information that is communicated.⁷¹ Though interpreters can be of help in these situations, the experience of conveying information through a third person can also hinder the development of rapport.^{71,72} Additionally, an observational study by Green and colleagues of nearly 3,000 Chinese and Vietnamese immigrant adults supports the

conclusion that the use of interpreters can reduce the quality of discussions between doctor and patient. In this study, patients who needed to use an interpreter were more likely to leave their clinic appointments with unanswered questions about their care than patients who were able to communicate directly with their doctor in their native language.⁷³ Among patients who used interpreters, those who rated their interpreters as “very good” or “excellent” were more likely to be satisfied with their health care visit than patients who rated their interpreter as “good,” “fair,” or “poor.” The latter group was also more likely to report that their doctors and nurses did not take sufficient time to explain health information during the visit.⁷³ These results highlight both the benefits and disadvantages of interpreter services in health care settings. While the use of interpreters may interfere with the doctor-patient relationship, well-trained interpreters on staff may be able to increase the quality of health care visits for immigrants.

Despite the imperfect interpreter-patient-doctor arrangement, interpreters do show promise in helping Asian immigrants understand and adhere to their treatment plans. Choe and colleagues have found that Vietnamese immigrants who had access to interpreters in health care settings were more likely to be tested for Hepatitis B antibodies.⁷⁴ These results have been replicated in non-Asian immigrant communities as well. One study mostly of Spanish-speaking clinical patients enrolled in a large northeastern HMO found that the introduction of interpreter services in the health care setting increased the number of office visits, filled prescriptions, and rectal screenings performed by a doctor.⁷² These findings provide evidence for increasing the availability of interpreters as a means to improve access to a full range of health care services for immigrants. Together, these studies demonstrate that interpreter use may lessen linguistic barriers in the clinical encounter and facilitate service use among Asian immigrants.

Still, logistic issues and financial constraints impede immigrants’ access to vital interpreter services. Title VI of the Civil Rights Act mandates that all patients who speak limited English are afforded the right to an interpreter in the medical setting.⁷⁰ However, budget shortfalls in many hospitals, especially public facilities, have led to decreases in the availability of professionally trained interpreters to interact with patients.⁷⁰ These challenges are pronounced among Asian immigrants given that there are a great many Asian languages and dialects. Patients belonging to ethnic communities with less representation in the U.S., as well as those who live in geographic areas with smaller numbers of particular ethnic groups, are conceivably even less likely to be connected with an interpreter that can assist in a health care setting. Most health insurers do not reimburse for interpreter services, making their use financially unsustainable.⁷⁵ Even when interpreters are available for patient exams, they rarely have time to help patients prepare for discharge, make follow-up appointments, or arrange for transportation.⁷⁶ These issues decrease the likelihood that chronic conditions are regularly monitored, that prescriptions are filled, and follow-up health concerns are addressed.

In addition to the barriers to complete health care that arise from linguistic discordance, Asian immigrants may be accustomed to an understanding of the power dynamics of a doctor-patient relationship that differs from that assumed in most U.S. health care settings. In the United States, the doctor-patient relationship is evolving from a paternalistic, doctor-centered relationship to a more consumer-driven, patient-centered, and egalitarian arrangement in which patients have taken more control over

their own medical decisions.^{77,78} In contrast, Asian cultures often see the doctor-patient relationship as hierarchical, with an emphasis on deference to the doctor's decisions and expertise.^{78,79} While a caring doctor with a sense of responsibility toward the patient is perceived as an important component of the doctor-patient relationship, patients from Asia may not take an active role in their health care to the same degree as patients in the U.S.^{78,80,81} This patient-participation characteristic of American health care culture may be a new experience for many Asian immigrants, potentially compromising effective health communication to this population. For example, Asian immigrant patients may be more likely to expect physicians to be authoritative in treatment decisions and in providing detailed instructions regarding care.⁸² A study of Asian breast cancer patients found that participants reported being dissatisfied with non-specific recommendations on diet and physical activity, and also that they expected more explicit guidelines from their doctors.⁸² These observations suggest that efforts to increase familiarity regarding beliefs about the perceived role of doctors, in addition to certain traditional practices as well as treatment methods, may promote the provision of more culturally competent care and improve the delivery of health services to Asian immigrant populations.

Health-related beliefs and cultural incompetency of health systems. Several researchers have speculated that a gravitation of Asian immigrants towards more familiar Eastern medicine may impede full participation in the mainstream U.S. health care system, another potential interpersonal barrier to health care in the United States.^{57,58,83-85} Various common beliefs and cultural practices held by immigrants from Asian countries may be the first resort for healing rather than mainstream medical care for some groups. Some of these practices, which are intended to restore the balance of natural energy in the body, are perceived as being questionable to most Western-trained physicians. For example, *cupping*, a technique practiced in numerous East Asian countries, involves placing a hot cup on an area of the body that may be a source of energy imbalance.^{58,76,86,87} The tightening of the skin around the cup is intended to suck out "the wind," or *phong*, that was causing the particular ailment. Another practice that is common within most East Asian traditions, called *coin rubbing*, is believed to draw out toxins through the skin by rubbing a small object such as a coin along the back or a limb.^{84,88,89} Both cupping and coin rubbing are generally harmless, though the marks they leave may startle the inexperienced physician. To Western clinicians, rashes, bruises, and other red marks from these practices can appear to be skin infections or the result of physical abuse.^{58,83} A limited understanding or awareness of these practices could delay doctors in making an accurate diagnosis, or lead to unnecessary referrals to social services.

Another traditional belief that may clash with conventional Western medical practice is the perception of the role of blood held in some Asian cultures. Blood is considered a source of nonrenewable vital energy, which coincides with the belief that illness can be caused by an imbalance of bodily energy or an excess of *phong*.⁸³ As a result, some immigrants who are unfamiliar with the U.S. medical system may resist giving blood for testing.⁸³ Additionally, the widespread use of ginseng among several Asian cultures has raised a flag for medical professionals treating older patients. While ginseng has largely been deemed safe, some neurological symptoms have been associated with the herb, and it is known to interact with some medicines prescribed for heart disease.^{83,90}

American medical culture views routine check-ups, screens, and tests as part of a normal clinical regimen for even the healthiest of patients. However, several studies have pointed that Asian immigrants are unlikely to seek medical care in the U.S. until being symptomatic. A survey of almost 5,000 Chinese, Filipino, Korean, and Vietnamese Americans living in the U.S. found that even when access to care was accounted for, foreign-born Asians were less likely to receive general preventive services such as colonoscopies, mammograms, and Pap smears than non-Hispanic Whites.⁵⁷ Furthermore, immigrant participants reported believing that visiting the doctor is unnecessary when symptoms of illness are not present.^{57,85} Given the unfamiliarity and complexity of the health care system, new immigrants may be reluctant to seek out medical care unless absolutely necessary.^{58,62} Additionally, health care practitioners should be aware of common social barriers that may preclude Asian immigrants' willingness to seek treatment or their ability to manage a chronic illness.

There is also some evidence suggesting the need to integrate an educational component in the clinical encounter for some subgroups. A focus group of undocumented Asian men in New York City revealed that immigrant communities may avoid HIV positive community members, fearing that they will contract the disease through casual interactions.⁶² Similarly, a cohort of Korean immigrants in the Seattle-Tacoma area believed that Hepatitis B could be spread through very commonplace behaviors like sharing serving utensils.⁹¹ Inaccurate information and misperceptions about disease risk factors held by some subgroups of Asian immigrants may be addressed through increased health education efforts that are linguistically and culturally appropriate.

Social stigma of certain medical conditions may also pose a barrier to Asian immigrants who are seeking care in the U.S. A qualitative study of HIV-positive Asian immigrants in New York City found that there was a widespread belief that Asians and Pacific Islanders are less susceptible to HIV. Furthermore, much like in mainstream American culture, HIV was believed to carry a stigma associated with shameful behavior, including illicit drug use and sexual promiscuity.⁶² Potential rejection from immigrant communities may result in non-disclosure of HIV serostatus, and perhaps delays in formal medical treatment. Having no social support to help navigate the medical system may also discourage help-seeking behavior.⁶²

A similar stigma in the Asian immigrant community exists for mental health disorders. Across many Asian cultures, mental illness is often viewed as a lack of moral fiber and a shameful condition for the afflicted and their immediate communities.⁹²⁻⁹³ An analysis by Shin and colleagues of 70 Korean immigrants in New York City found that many immigrants may understand mental health symptoms to be a natural aspect of moving to a new country and result in prolonging care. While most preferred to keep their symptoms to themselves, the first line of treatment was typically with the family; and sharing a mental health condition with others outside the family was considered undignified. Shin's analysis also found that those who resorted to professional health services waited an average of five years between the onset of their symptoms and their initial appointment. The fear of being labeled as mentally ill may postpone necessary treatment, perhaps putting sufferers at risk for more serious illness and even death.⁹² In support of the stigma theory, an analysis by Abe-Kim and colleagues found that mental health service use is lower among Asians than among non-Hispanic Whites. Further,

Asian immigrants were far less likely to use mental health services than their American-born Asian peers.⁹⁴ Another study by Atkinson found that greater acculturation among Asian immigrant college students was directly related to mental health service use. A mix of factors may be at play to explain this trend, though the authors hypothesized that acculturation may help to de-stigmatize the use of mental health services.⁹³

Although conflicts between Eastern and Western medical cultures and beliefs about illness may pose problems for some Asian immigrants in the U.S., other research suggests that these differences may not necessarily result in the rejection of mainstream care. A survey of over 200 Vietnamese immigrants to the U.S. found that while traditional medicine remains important, it does not preclude Western medical care.⁸³ Survey respondents reported a widespread belief of *phong* as a cause of disease and faith in coin rubbing as the best means to treat a cold (67% and 65%, respectively). Similarly, 48% believed that an imbalance of *âm dương*, or hot and cold, can cause illness. Despite these beliefs, 90% of the respondents believed that Western medical care is more effective than Eastern medical care: seventy-five percent of the sample reported preferring to see a Western doctor over an Eastern practitioner when ill. Similarly, a survey of 105 Chinese immigrants found that while 94.6% of the sample reported using home remedies in the two years preceding the survey, 45.3% reported a mix of Western and Eastern medicine use and 21.3% reported primary use of Western medicine. However, only 44% of the sample had used Western medical care in the past 12 months, and 32% and 25.3% had traveled to China or Taiwan for treatment or exclusively used Eastern methods for treatment, respectively.⁹⁵ Furthermore, researchers have found that there is a widespread belief among Asian immigrants of all ethnicities that Western medical care is best for serious, acute issues, while traditional Eastern care with fewer side effects may be better for chronic care.^{76,94}

Perceived discrimination. Experiences of discrimination may be defined as the perception of differential treatment on the basis of a trait, characteristic, or membership in a particular social group; its corollary, prejudice, may be defined as pre-existing beliefs and attitudes. Both discrimination and prejudice continue to be pervasive in the lives of Asian Americans in a number of domains.⁹⁶⁻⁹⁸ Asian Americans continue to be victims of racially motivated crimes, experience discrimination in housing, employment, and health care settings, as well as pervasive stereotyping. There is a growing body of evidence suggesting that experiences of racial discrimination have detrimental consequences for a range of health outcomes, indirectly (e.g., through its impact on socioeconomic attainment, or segregation into worse environmental conditions) as well as directly, as in the case of physical victimization; and also through the effects of stress on the weathering of biological systems.⁹⁷⁻¹⁰¹ For example, a national study of Asian Americans found a positive relationship between self-reported experiences of discrimination and several chronic health conditions.¹⁰² Importantly, experiences of discrimination specifically in health care contexts may have detrimental consequences for both the use and quality of services.

Asian immigrants specifically may experience additional forms of discrimination in health care, including experiences of discrimination based on language ability and perceived legal status. An analysis by Lauderdale and colleagues of foreign-born and US-born Asians living in California found that Asian immigrants were more likely to

perceive discrimination in health care than non-Hispanic Whites, though U.S.-born Asians were less likely to perceive discrimination than Whites.¹⁰³ Asians who spoke a foreign language were more likely to perceive discrimination, regardless of nativity, and while having private health insurance was protective, this was only true for non-immigrants. Most respondents who perceived being discriminated against in getting health care believed that they would have received better care had they belonged to a different racial group.¹⁰³ Data from the Diabetes Study of Northern California (DISTANCE) also found that younger age, poorer health literacy, and poorer English proficiency were positively associated with experiences of health care discrimination among a diverse group of Asians.¹⁰⁴

In the context of the health care system, bias against Asians not only leads to dissatisfaction with practitioners and hospitals, but also influences how this group seeks medical care. Lee et al. found that not only do Asians perceive more discrimination in health care than Whites, but also that perceived discrimination is correlated with having an unmet health care need or a delay in seeking treatment. Furthermore, discrimination on the part of health care providers was found to mediate the relationship between race and self-reported poor health.¹⁰⁵ Given these findings and those of other studies examining Asian as well as non-Asian racial minority groups, it is plausible that discrimination experienced within the health care setting can increase vulnerability to poor health in at least two different ways: (1) Health care practitioners may be less likely to prescribe clinically indicated treatment if they discriminate against their patients on the basis of race. Studies of other racial minorities have found that this is a common phenomenon, with racial minorities being less likely to receive beneficial treatment and more likely to receive drastic or debilitating treatment, even when controlling for insurance status.¹⁰⁶⁻¹⁰⁸ (2) Discrimination may lead to mistrust of the health care system on the part of patients. Although this sentiment has not been explicitly studied in Asian populations, it has been well documented in other racial minority groups.^{109,110} Supporting this hypothesis, however, an analysis of mental health service use among Chinese Americans found that negative attitudes towards formal care were associated with the use of traditional medicine and other sources of informal care. Additionally, Chinese Americans who experienced language-based discrimination were far more likely to forego formal mental health services.¹¹¹ These results are consistent with a similar nationwide study of several Asian ethnic ancestry groups.¹¹²

Conclusion

The barriers experienced by Asian immigrants to fully participating in the U.S. health care system are diverse, revolving around issues of access to health services, the receipt of quality care during the clinical encounter, and broader societal inequalities that inform differential treatment. Asian immigrants are less likely to come into contact with the health care system, being less likely to be eligible for public health insurance or to purchase private insurance in the individual marketplace. When the health care system is accessed, linguistic discordance between Asian immigrants and their health care providers may result in lower levels of patient satisfaction and compromise health care quality. Furthermore, having no mechanism to coordinate follow up visits,

health education, or transportation places Asian immigrants who are less proficient in English at a disadvantage when navigating the health care system. Similarly, culturally incompetent providers are unlikely to understand their patients' attitudes and beliefs about illness and expectations in healthcare settings, and this compounds the difficulty of communicating diagnoses, treatment options, and recommended health behaviors. Lastly, perceived discrimination in the health care setting may discourage Asian immigrants from initially seeking care, and discrimination on the part of health care providers may lead to decreased quality of services. While each of these barriers alone poses a serious hindrance to obtaining quality health care services, it is important to recognize their interconnectedness and the fact that all must be addressed to more effectively improve Asian immigrants' experiences of U.S. health care.

Exploring the health care barriers faced by Asian immigrants exposes several directions of intervention at many levels of the health care system, and these are summarized in Box 1. These suggestions are meant to serve as starting points for professionals in the fields of policy, public health, and medicine as they design interventions to improve the health care experience of Asian immigrants. First, bridging the health care system with more traditional Eastern medical care may entail education for health professionals as part of a broader curriculum on providing culturally competent care. Data show that Asian immigrant patients hold a desire to discuss traditional medicine with their doctors, though they may feel that doctors will deride alternative health beliefs and therapies.⁷⁶ By exposing health professionals to the diversity of traditions and beliefs held by the US patient population, the health care system can create a culture of sensitivity among health care practitioners. Furthermore, Tervalon and Murray-García advocate for the use of a bolder cultural sensitivity curriculum, which encourages a more equalized relationship between doctors and patients of different backgrounds.¹¹³ This approach not only addresses sensitivity to cultural differences, but also has the potential to break the cycle of mistrust and discrimination in the exam room. Next, it is important to increase the diversity of the health care work force. While interpreters can provide much needed aid to linguistically and culturally discordant doctors and patients, doctors may be able to build stronger relationships with patients they can speak with directly.⁶⁶ Doctors who speak the same language as their patients may also be more likely to understand their patients' customs and beliefs, therefore providing an opportunity to integrate both Eastern and Western health care regimens.

Limited access to health insurance calls for more continuous health outreach to Asian immigrant populations. A study including several hundred Vietnamese men in Seattle, Washington, found that this group sought health information most often from Vietnamese print and television sources as well as family and friends in the local community.¹¹⁴ Additionally, Vietnamese women in Santa Clara County, California, were more likely to seek Pap tests and understand key facts about human papillomavirus (HPV) after exposure to a targeted media education campaign and visits from lay health workers.¹¹⁵ These efforts suggest that a combination of culturally sensitive care and active intervention with Asian immigrant communities has the potential to reach many individuals who may not have access to formal health care. Providing services directly to an immigrant community in need can also be a mechanism for trust building and education about available health resources.

Box 1.**BARRIERS TO HEALTH CARE AMONG ASIAN IMMIGRANTS**

Barrier	Implication for Health Care	Potential Interventions	Key Actors
Access to health services	Low receipt of preventive and acute health services Poorer self-reported health	Increase access to health insurance Clarify misperceptions about citizenship status and health care use Health outreach programs for vulnerable communities	Health care administrators Lay health workers Local, state, and federal policymakers Non-profit organizations Public health specialists
Linguistic discordance and inadequate health communication	Less satisfaction with health care experiences Poor care coordination	Explore sustainable funding sources for clinical interpreters Expand the use of multilingual patient navigators, including lay health workers	Health care administrators Lay health workers Local, state, and federal policymakers
Health-related beliefs and cultural incompetency of health systems	Clinician misunderstanding of patient health care preferences Delayed treatment seeking Misperception of risk for disease	Media and educational campaigns to encourage preventive care use Cultural sensitivity training for health professions students and clinicians Increase the diversity of the health care workforce	Health professions schools Lay health workers Public health specialists
Perceived discrimination	Mistrust of the medical system Delayed treatment seeking Poor quality of care	Cultural sensitivity training for health professions students and clinicians Increase the diversity of the health care workforce	Health professions schools Lay health workers Public health specialists

On the policy level, hospital interpreter services may be expanded. Currently, hospital interpreters are usually not funded through insurance reimbursement, thus forcing hospitals and clinics to maintain this service independently. Unfortunately, in times of financial strain, this type of independently maintained service is often the first to be reduced. However, interpreters are one of the most vital patient services a health facility can offer; not only can they assist doctors, nurses, and other practitioners, but they can help patients coordinate follow-up care, find transportation, and understand health information. Increasing the availability of interpreters calls for a more robust and solvent funding mechanism, perhaps through direct reimbursement by patients' insurance. To account for uninsured patients and patients on Medicaid, additional funding sources could include state, federal, or private agencies. Regardless of the funding sources, however, it is clear that better access to interpreters could greatly improve the quality of health care provided to immigrants. Alternatively, coordination of care for non-English speaking patients could be fulfilled by bilingual patient navigators, who would not need the specialized training in medical terminology required of hospital interpreters. Increased use of patient navigators could potentially ease the strain on interpreters, leaving them more time to work with clinicians in the exam room.

A reassessment of PRWORA may also be necessary to increase health care access for Asian immigrants. Although fully repealing the immigration components of the law may be politically untenable, some compromises might be viable, such as allowing immigrant children and working adults to enroll in Medicaid. The Patient Protection and Affordable Care Act of 2010 may also improve access by expanding Medicaid eligibility rules and making it easier to purchase insurance in the private market.¹¹⁶

A number of practical challenges pose limitations to both serving and studying Asian immigrant populations. First, immigrants from Asia are extremely diverse economically, culturally, linguistically, and socially. While some immigrants arrive highly educated with excellent job prospects, others arrive as refugees with little social support. Merely controlling for demographic variables in a diverse sample may mask unique patterns within particular ethnic ancestry groups. On the other hand, research on specific groups may not be generalizable to other populations of different backgrounds. As little research has been conducted on the barriers to health care experienced by Asian immigrants from specific ethnic groups, it is difficult to identify the unique health challenges experienced by these subpopulations. Therefore, it is imperative that more research be conducted to inform interventions that can be effectively tailored to meet the needs of different Asian ethnic groups. Second, reaching hidden populations within the Asian immigrant population, such as those who are undocumented, can be extremely difficult considering the fear of exposure and possible deportation. Given that these undocumented immigrants may be among the most vulnerable groups in the Asian community, services may not be reaching those who need them most. Third, eligibility for social services varies greatly state to state. While Asian immigrants in California may have better access to services, this may not be the case in other states where eligibility criteria are more stringent. As a result, differential access to resources may place immigrants residing in particular regions of the country at greater disadvantage.

Asian immigrants are faced with a complex network of barriers when accessing the US health care system. Future interventions and advocacy work should take into account obstacles to quality care at multiple ecological levels, including those around access,

enhancing the nature of the clinical encounter, addressing issues related to systemic discrimination, as well as institutional and social policies that inform barriers to health.

Notes

1. U.S. Census Bureau. Overview of race and Hispanic origin: 2010. Washington DC: United States Department of Commerce, 2011. Available at: <http://www.census.gov/prod/cen2010/briefs/c2010br-02.pdf>.
2. U. S. Census Bureau. 2010 American Community Survey 1-year estimates (selected population tables): first ancestry reported by state. Washington DC: United States Department of Commerce, 2010. Available at: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_1YR_B04001&prodType=table.
3. U. S. Census Bureau. 2006–2010 American Community Survey (selected population tables): selected social characteristics in the United States. Washington DC: United States Department of Commerce, 2010. Available at: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_SF4_DP02&prodType=table.
4. Wong P, Lai CF, Nagasawa R, et al. Asian Americans as a model minority: self-perceptions and perceptions by other racial groups. *Sociol Perspect*. 1998 Spring; 41(1):95–118.
5. DeNavas-Walt C, Proctor BD, Smith JC. Income, poverty, and health insurance coverage in the United States: 2009. U. S. Census Bureau, Current Population Reports (Pub P60-238). Washington DC: U.S. Government Printing Office, 2010. Available at: <http://www.census.gov/prod/2010pubs/p60-238.pdf>.
6. U. S. Census Bureau. 2006–2010 American Community Survey (selected population tables): poverty in the past 12 months by nativity. Washington DC: United States Department of Commerce, 2010. Available at: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_SF4_B17025&prodType=table.
7. Frisbie WP, Cho Y, Hummer RA. Immigration and the health of Asian and Pacific Islander adults in the United States. *Am J Epidemiol*. 2001 Feb 15;153(4):372–80.
8. McGee DL, Liao Y, Cao G, et al. Self-reported health status and mortality in a multi-ethnic US cohort. *Am J Epidemiol*. 1999 Jan 1;149(1):41–6.
9. Acevedo-Garcia D, Bates LM, Osypuk TL, et al. The effect of immigrant generation and duration on self-rated health among U.S. adults 2003–2007. *Soc Sci Med*. 2010 Sep;71(6):1161–72. Epub 2010 Jun 16.
10. Singh GK, Miller BA. Health, life expectancy, and mortality patterns among immigrant populations in the United States. *Can J Public Health*. 2004 May–Jun;95(3):114–21.
11. Abraido-Lanza AF, Dohrenwend BP, Ng-Mak DS, et al. The Latino mortality paradox: a test of the “salmon bias” and healthy migrant hypotheses. *Am J Public Health*. 1999 Oct;89(10):1543–8.
12. Abraido-Lanza AF, Armbrister AN, Flórez KR, et al. Toward a theory-driven model of acculturation in public health research. *Am J Public Health*. 2006 Aug;96(8):1342–6. Epub 2006 Jun 29.
13. Jasso G, Massey DS, Rosenzweig MR, et al. Immigration, health, and New York City: early results based on the U.S. New Immigrant Cohort of 2003. *Economic Policy Review*. 2005 Dec;11:27–51.
14. Markides KS, Eschbach K. Aging, migration, and mortality: current status of research on the Hispanic paradox. *J Gerontol B Psychol Sci Soc Sci*. 2005 Oct;60 Spec No 2: 68–75.

15. Landale NS, Oprea RS. Migration, social support, and perinatal health: an origin-destination analysis of Puerto Rican women. *J Health Soc Behav.* 2001 Jun;42(2):166–83.
16. Palloni A, Arias E. Paradox lost: explaining the Hispanic adult mortality advantage. *Demography.* 2004 Aug;41(3):385–415.
17. Vega WA, Amaro H. Latino outlook: good health, uncertain prognosis. *Annu Rev Public Health.* 1994;15:39–67.
18. Scribner R. Paradox as paradigm—the health outcomes of Mexican Americans. *Am J Public Health.* 1996 Mar;86(3):303–5.
19. Boxall E, Skidmore S, Evans C, et al. The prevalence of hepatitis B and C in an antenatal population of various ethnic origins. *Epidemiol Infect.* 1994 Dec;113(3):523–8.
20. Ugwu C, Varkey P, Bagniewski S, et al. Sero-epidemiology of hepatitis B among new refugees to Minnesota. *J Immigr Minor Health.* 2008 Oct;10(5):469–74.
21. Franks AL, Berg CJ, Kane MA, et al. Hepatitis B virus infection among children born in the United States to Southeast Asian refugees. *N Engl J Med.* 1989 Nov 9;321(19):1301–5.
22. Evans CA Jr. Immigrants and health care: mounting problems. *Ann Intern Med.* 1995 Feb 15;122(4):309–10.
23. Marquez MA, Melton LJ 3rd, Muhs JM, et al. Bone density in an immigrant population from Southeast Asia. *Osteoporos Int.* 2001;12(7):595–604.
24. Rosenblatt KA, Weiss NS, Schwartz SM. Liver cancer in Asian migrants to the United States and their descendants. *Cancer Causes Control.* 1996 May;7(3):345–50.
25. Brown ER, Ojeda VD, Wyn R, et al. Racial and ethnic disparities in access to health insurance and health care. Los Angeles, CA: UCLA Center for Health Policy Research, 2000. Available at: <http://www.healthpolicy.ucla.edu/pubs/files/racialandethnicdisparitiesreport.pdf>.
26. Yu SM, Hunag ZJ, Singh GK. Health status and health services utilization among US Chinese, Asian Indian, Filipino, and other Asian/Pacific Islander children. *Pediatrics.* 2004 Jan;113(1 Pt 1):101–7.
27. De Alba I, Hubbell FA, McMullin JM, et al. Impact of U.S. citizenship status on cancer screening among immigrant women. *J Gen Intern Med.* 2005 Mar;20(3):290–6.
28. U. S. Census Bureau. Current Population Survey (CPS Table Creator) 2011 annual social and economic supplement: health insurance by race and ethnicity. Available at: <http://www.census.gov/cps/data/cpstablecreator.html>.
29. Burstin HR, Swartz K, O'Neill AC, et al. The effect of change of health insurance on access to care. *Inquiry.* 1998–1999 Winter;35(4):389–97.
30. Baker DW, Shapiro MF, Schur CL. Health insurance and access to care for symptomatic conditions. *Arch Intern Med.* 2000 May 8;160(9):1269–74.
31. Newacheck PW, Stoddard JJ, Hughs DC, et al. Health insurance and access to primary care for children. *N Engl J Med.* 1998 Feb 19;338(8):513–9.
32. Kasper JD, Giovannini TA, Hoffman C. Gaining and losing health insurance: strengthening the evidence for effects on access to care and health outcomes. *Med Care Res Rev.* 2000 Sep;57(3):298–318.
33. Antecol H, Bedard K. Unhealthy assimilation: why do immigrants converge to American health status levels? *Demography.* 2006 May;43(2): 337–60.
34. Cho Y, Parker Frisbie W, Hummer RA, et al. Nativity, duration of residence, and the health of Hispanic adults in the United States. *Int Migr Rev.* 2004 Mar; 38(1):184–211.
35. Redfield R, Linton R, Herskovits MJ. Memorandum for the study of acculturation. *Am Anthropol.* 1936 Jan–Mar;38(1):149–52.

36. Abraido-Lanza AF, Armbrister AN, Flórez KR, et al. Toward a theory-driven model of acculturation in public health research. *Am J Public Health*. 2006 Aug;96(8):1342–6. Epub 2006 Jun 29.
37. Chae DH, Gavin AR, Takeuchi DT. Smoking prevalence among Asian Americans: findings from the National Latino and Asian American Study (NLAAS). *Public Health Rep*. 2006 Nov–Dec;121(6):755–63.
38. Hummer RA, Biegler M, De Turk PB, et al. Race/ethnicity, nativity, and infant mortality in the United States. *Social Forces*. 1999 Mar; 77(3):1083–1117.
39. Hummer RA, Rogers RG, Nam CB, et al. Race/ethnicity, nativity and U.S. adult mortality. *Soc Sci Q*. 1999 Mar;80(1):136–53.
40. Landale NS, Oropesa RS, Llanes D, et al. Does Americanization have adverse effects on health? : Stress, health habits, and infant health outcomes among Puerto Ricans. *Social Forces*. 1999 Dec;78(2):613–41.
41. Lee S, Nguyen HA, Tsui J. Interview language: a proxy measure for acculturation among Asian Americans in a population-based survey. *J Immigr Minor Health*. 2011 Apr;13(2):244–52.
42. Chae DH, Takeuchi DT, Barbeau EM, et al. Unfair treatment, racial/ethnic discrimination, ethnic identification, and smoking among Asian Americans in the National Latino and Asian American Study. *Am J Public Health*. 2008 Mar;98(3):485–92. Epub 2008 Jan 30.
43. Chae DH, Takeuchi DT, Barbeau EM, et al. Alcohol disorders among Asian Americans: associations with unfair treatment, racial/ethnic discrimination, and ethnic identification (the national Latino and Asian Americans study, 2002–2003). *J Epidemiol Community Health*. 2008 Nov;62(11):973–9.
44. Lee S, Juon HS, Martinex G, et al. Model minority at risk: expressed needs of mental health by Asian American young adults. *J Community Health*. 2009 Apr;34(2):144–52.
45. Exec. Order No. 13,125, 64 Fed. Reg. 111 (Jun. 10, 1999).
46. Mulrow CD. Rationale for systematic reviews. *BMJ*. 1994 Sep 3;309(6954):597–9.
47. Rozas LW, Klein WC. The value and purpose of the traditional qualitative literature review. *J Evid Based Soc Work*. 2010 Oct;7(5):387–99.
48. Huang ZJ, Yu SM, Ledsky R. Health status and health service access and use among children in U.S. immigrant families. *Am J Public Health*. 2006 Apr;96(4):634–40. Epub 2006 Feb 28.
49. Ye J, Mack D, Fry-Johnson Y, et al. Health care access and utilization among U.S. born and foreign-born Asian Americans. *J Immigr Minor Health*. 2011 Oct;14(5):731–7.
50. Shi L. Experience of primary care by racial and ethnic groups in the United States. *Med Care*. 1999 Oct;37(10):1068–77.
51. Carrasquillo O, Pati S. The role of health insurance on Pap smear and mammography utilization by immigrants living in the United States. *Prev Med*. 2004 Nov;39(5):943–50.
52. Lee S, O'Neill A, Park J, et al. Health Insurance Moderates the Association Between Immigrant Length of Stay and Health Status. *J Immigr Minor Health*. 2010 Nov 9. [Epub ahead of print].
53. Public Law 104-193 §402(a)(2)(A). Personal Responsibility and Work Opportunity Reconciliation Act. United States: 1996.
54. Derose KP, Escarce JJ, Lurie N. Immigrants and health care: sources of vulnerability. *Health Aff (Millwood)*. 2007 Sep–Oct;26(5):1258–68.
55. Loue S, Faust M, Bunce A. The effect of immigration and welfare reform legislation on immigrants' access to health care, Cuyahoga, and Lorain Counties. *J Immigr Health*. 2000 Jan;2(1):23–30.

56. Carrasquillo O, Carrasquillo AI, Shea S. Health insurance coverage of immigrants living in the United States: differences by citizenship status and country of origin. *Am J Public Health*. 2000 Jun;90(6):917–23.
57. Kandula NR, Wen M, Jacobs EA, et al. Low rates of colorectal, cervical, and breast cancer screening in Asian Americans compared with non-Hispanic Whites: Cultural influences or access to care? *Cancer*. 2006 Jul 1;107(1):184–92.
58. Muecke MA. Caring for Southeast Asian refugee patients in the USA. *Am J Public Health*. 1983 Apr;73(4):431–8.
59. SB 1405, 2011 (AZ)—Arizona State Legislature.
60. Asch S, Leake B, Gelberg L. Does fear of immigration authorities deter tuberculosis patients from seeking care? *West J Med*. 1994 Oct;161(4):373–6.
61. McKenna MT, McCray E, Onorato I. The epidemiology of tuberculosis among foreign-born persons in the United States, 1986 to 1993. *N Engl J Med*. 1995 Apr 20;332(16):1071–6.
62. Kang E, Rapkin BD, Springer C, et al. The “Demon Plague” and access to care among Asian undocumented immigrants living with HIV disease in New York City. *J Immigr Health*. 2003 Apr;5(2):49–58.
63. Flores G, Abreu M, Schwartz I, et al. The importance of language and culture in pediatric care: case studies from the Latino community. *J Pediatr*. 2000 Dec;137(6):842–8.
64. Flores G, Laws MB, Mayo SJ, et al. Errors in medical interpretation and their potential clinical consequences in pediatric encounters. *Pediatrics*. 2003 Jan;111(1):6–14.
65. Ngo-Metzger Q, Sorkin DH, Phillips RS, et al. Providing high-quality care for limited English proficient patients: the importance of language concordance and interpreter use. *J Gen Intern Med*. 2007 Nov;22 Suppl 2:324–30.
66. Hampers LC, Cha S, Gutglass DJ, et al. Language barriers and resource utilization in a pediatric emergency department. *Pediatrics*. 1999 Jun;103(6 Pt 1):1253–6.
67. Carrasquillo O, Orav EJ, Brennan TA, et al. Impact of language barriers on patient satisfaction in an emergency department. *J Gen Intern Med*. 1999 Feb;14(2):82–7.
68. Hornburger JC, Gibson CD Jr, Wood W, et al. Eliminating language barriers for non-English-speaking patients. *Med Care*. 1996 Aug;34(8):845–56.
69. Jacobs EA, Shepard DS, Suaya JA, et al. Overcoming language barriers in health care: costs and benefits of interpreter services. *Am J Public Health*. 2004 May;94(5):866–9.
70. Woloshin S, Bicknell NA, Schwartz LM, et al. Language barriers in medicine in the United States. *JAMA*. 1995 Mar 1;273(9):724–8.
71. Bauer HM, Rodriguez MA, Quiroga SS, et al. Barriers to health care for abused Latina and Asian immigrant women. *J Health Care Poor Underserved*. 2000 Feb;11(1):33–44.
72. Jacobs EA, Lauderdale DS, Meltzer D, et al. Impact of interpreter services on delivery of health care to limited-English-proficient patients. *J Gen Intern Med*. 2001 Jul;16(7):468–74.
73. Green AR, Ngo-Metzger Q, Legedza AT, et al. Interpreter services, language concordance, and health care quality. Experiences of Asian Americans with limited English proficiency. *J Gen Intern Med*. 2005 Nov;20(11):1050–6.
74. Choe JH, Taylor VM, Yasui Y, et al. Health care access and sociodemographic factors associated with hepatitis B testing in Vietnamese American men. *J Immigr Minor Health*. 2006 Jul;8(3):193–201.
75. Ku L, Flores G. Pay now or pay later: providing interpreter services in health care. *Health Aff (Millwood)*. 2005 Mar–Apr;24(2):435–44.
76. Ngo-Metzger Q, Massagli MP, Clarridge BR, et al. Linguistic and cultural barriers to care. *J Gen Intern Med*. 2003 Jan;18(1):44–52.

77. Wiles R, Higgins J. Doctor-patient relationship in the private sector: patients' perceptions. *Sociology of Health & Illness*. 1996;18(3):341–56.
78. Nitchaikovit T, Hill JM, Holland JC. The effects of culture on illness behavior and medical care. Asian and American differences. *Gen Hosp Psychiatry*. 1993 Jan;15(1):41–50.
79. Claramita M, Utarini A, Soebono H, et al. Doctor-patient communication in a Southeast Asian setting: the conflict between ideal and reality. *Adv Health Sci Educ Theory Pract*. 2011 Mar;16(1):69–80. Epub 2010 Jul 25.
80. Lee KH, Seow A, Luo N, et al. Attitudes towards the doctor-patient relationship: a prospective study in an Asian medical school. *Med Educ*. 2008 Nov;42(11):1092–9. Epub 2008 Sep 26.
81. Moore M. What does patient-centered communication mean in Nepal? *Med Educ*. 2008 Jan;42(1):18–26. Epub 2007 Nov 28.
82. Tam Ashing K, Padilla G, Tejero J, et al. Understanding the breast cancer experience of Asian American women. *Psychooncology*. 2003 Jan–Feb;12(1):38–58.
83. Jenkins CN, Le T, McPhee SJ, et al. Health care access and preventive care among Vietnamese immigrants: do traditional beliefs and practices pose barriers? *Soc Sci Med*. 1996 Oct;43(7):1049–56.
84. Jin XW, Slomka J, Blixen CE. Cultural and clinical issues in the care of Asian patients. *Cleve Clin J Med*. 2002 Jan;69(1):50, 53–54, 56–58 passim.
85. Lee S, Martinez G, Ma GX, et al. Barriers to health care access in 13 Asian American communities. *Am J Health Behav*. 2010 Jan–Feb;34(1):21–30.
86. Pachter LM. Culture and clinical care. Folk illness beliefs and behaviors and their implications for health care delivery. *JAMA*. 1994 Mar 2;271(9):690–4.
87. Uba L. Cultural barriers to health care for southeast Asian refugees. *Public Health Rep*. 1992 Sep–Oct;107(5):544–8.
88. Hulewicz BS. Coin-rubbing injuries. *Am J Forensic Med Pathol*. 1994 Sep;15(3):257–60.
89. Davis RE. Cultural health care or child abuse? The Southeast Asian practice of cao gio. *J Am Acad Nurse Pract*. 2000 Mar;12(3):89–95.
90. Coon JT, Ernst E. Panax ginseng: a systematic review of adverse effects and drug interactions. *Drug Saf*. 2002;25(5):323–44.
91. Choe JH, Chan N, Do HH, et al. Hepatitis B and liver cancer beliefs among Korean immigrants in Western Washington. *Cancer*. 2005 Dec 15;104(12 Suppl):2955–8.
92. Shin JK. Help-seeking behaviors by Korean immigrants for depression. *Issues Ment Health Nurs*. 2002 Jul–Aug;23(5):461–76.
93. Atkinson DR, Gim RH. Asian-American cultural identity and attitudes toward mental health services. *J Couns Psychol*. 1989 Apr;36(2):209–12.
94. Abe-Kim J, Takeuchi DT, Hong S, et al. Use of mental health-related services among immigrant and US-born Asian Americans: results from the National Latino and Asian American Study. *Am J Public Health*. 2007 Jan;97(1):91–98. Epub 2006 Nov 30.
95. Ma GX. Between two worlds: the use of traditional and Western health services by Chinese immigrants. *J Community Health*. 1999 Dec;24(6):421–37.
96. Noh S, Beiser M, Kaspar V, et al. Perceived racial discrimination, depression, and coping: a study of Southeast Asian refugees in Canada. *J Health Soc Behav*. 1999 Sep;40(3):193–207.
97. Barry DT, Grilo CM. Cultural, self-esteem, and demographic correlates of perception of personal and group discrimination among East Asian immigrants. *Am J Orthopsychiatry*. 2003 Apr;73(2):223–9.
98. Chae DH, Nuru-Jeter AM, Lincoln KD, et al. Conceptualizing racial disparities in

- health: advancement of a socio-psychobiological approach. *Du Bois Rev.* 2011 Apr; 8(1):63–77.
99. Yip T, Gee GC, Takeuchi DT. Racial discrimination and psychological distress: the impact of ethnic identity and age among immigrant and United States-born Asian adults. *Dev Psychol.* 2008 May;44(3):787–800.
 100. Karlsen S, Nazroo JY. Relation between racial discrimination, social class, and health among ethnic minority groups. *Am J Public Health.* 2002 Apr;92(4):624–31.
 101. Harrell JP, Hall S, Taliaferro J. Physiological responses to racism and discrimination: an assessment of the evidence. *Am J Public Health.* 2003 Feb;93(2):243–8.
 102. Gee GC, Spencer MS, Chen J, et al. A nationwide study of discrimination and chronic health conditions among Asian Americans. *Am J Public Health.* 2007 Jul;97(7):1275–82. Epub 2007 May 30.
 103. Lauderdale DS, Wen M, Jacobs EA, et al. Immigrant perceptions of discrimination in health care: the California Health Interview Survey 2003. *Med Care.* 2006 Oct;44(10):914–20.
 104. Lyles CR, Karter AJ, Young BA, et al. Correlates of patient-reported racial/ethnic health care discrimination in the Diabetes Study of Northern California (DISTANCE). *J Health Care Poor Underserved.* 2011 Feb;22(1):211–25.
 105. Lee C, Ayers SL, Kronenfeld JJ. The association between perceived provider discrimination, healthcare utilization and health status in racial and ethnic minorities. *Ethn Dis.* 2009 Summer;19(3):330–7.
 106. Kressin NR, Petersen LA. Racial differences in the use of invasive cardiovascular procedures: review of the literature and prescription for future research. *Ann Intern Med.* 2001 Sep 4;135(5):352–66.
 107. Nelson A. Unequal treatment: confronting racial and ethnic disparities in health care. *J Natl Med Assoc.* 2002 Aug;94(8):666–8.
 108. LaVeist TA, Rolley NC, Diala C. Prevalence and patterns of discrimination among U.S. health care consumers. *Int J Health Serv.* 2003;33(2):331–44.
 109. Gamble VN. Under the shadow of Tuskegee: African Americans and health care. *Am J Public Health.* 1997 Nov;87(11):1773–8.
 110. Boulware LE, Cooper LA, Ratner LE, et al. Race and trust in the health care system. *Public Health Rep.* 2003 Jul–Aug;118(4):358–65.
 111. Spencer MS, Chen J. Effect of discrimination on mental health service utilization among Chinese Americans. *Am J Public Health.* 2004 May;94(5):809–14.
 112. Spencer MS, Chen J, Gee GC, et al. Discrimination and mental health-related service use in a national study of Asian Americans. *Am J Public Health.* 2010 Dec; 100(12):2410–7. Epub 2010 Mar 18.
 113. Tervalon M, Murray-García J. Cultural humility versus cultural competence: a critical distinction in defining physician training outcomes in multicultural education. *J Health Care Poor Underserved.* 1998 May;9(2):117–25.
 114. Woodall ED, Taylor VM, Yasui Y, et al. Sources of health information among Vietnamese American men. *J Immigr Minor Health.* 2006 Jul;8(3):263–71.
 115. Lam TK, McPhee SJ, Mock J, et al. Encouraging Vietnamese-American women to obtain Pap tests through lay health worker outreach and media education. *J Gen Intern Med.* 2003 Jul;18(7):516–24.
 116. Public Law 111-148. Patient Protection and Affordable Care Act. 2010: USA.