

SOUTH ASIANS IN THE UNITED STATES

HISTORY

South Asia includes the countries of India, Pakistan, Bangladesh, Nepal, Burma, Sri Lanka, Bhutan and the Maldives; people of South Asian origin trace their ancestry to one of these countries. During the last 200 years, due largely to the influence of the British Empire, South Asians migrated to many parts of the world. As a result of this migration, the South Asian diaspora is incredibly vast; many South Asians now living in the United States have an established history in countries such as Fiji, Kenya, British Guyana, South Africa, and parts of the Caribbean, as well as in England and Australia. Over 300 languages are spoken in South Asian countries; South Asians in the U.S. speak many of these languages, including Bangla, Burmese, Gujrathi, Hindi, Nepali, Punjabi, Sinhalese, Tamil, and Urdu. There is also tremendous diversity in religious practices, with Buddhism, Hinduism, Islam, Jainism, Sikhism, Zoroastrianism, and Christianity being the most common religions.

South Asians arrived in the United States during four major immigration waves. In the late 1800s and early 1900s, small groups of Sikh and Muslim farmers migrated to the U.S. and settled along the West Coast, many intermarrying with the Mexican population in California. However, the vast majority of South Asians in the U.S. arrived only in the last 40 years. The 1965 Immigration and Naturalization Act opened the doors to immigration for many people from around the world, allowing foreign-born professionals into the country in much higher numbers than ever before. The Immigration Reform and Control Act of 1986 made it easier for family members and low-skill laborers to enter the country. In recent years, South Asians have entered the U.S. in increasing numbers on work visas related to the technology industry. While not technically immigrants, many of these hi-tech workers hope to eventually be able to adjust their status and remain in the U.S.

DEMOGRAPHICS

The U.S. Census Bureau estimates that in 2000 nearly 1.7 million Asian Indians lived in the United States. This number includes data from only certain South Asian communities (identified as Asian Indian, Bengalese,

Bharat, Dravidian, East Indian, or Goanese) (U.S. Census Bureau, 2001).

From 1990 to 2000, South Asian subgroups have had extremely high growth rates (APIAHF, 2005).

- The Bangladeshi population increased 385% (from 11,838 to 57,412)
- The Pakistani population increased 151% (from 81,371 to 204,309)
- The Asian Indian population increased 133% (from 815,447 to 1,899,599). New York City has the nation's largest concentration of Asian Indians (206,228).

ENGLISH LANGUAGE PROFICIENCY

The ability to speak English has a tremendous impact on access to health information, public services (i.e. Medicaid, Medicare, SCHIP), effective communication with providers and emergency personnel, and the ability to understand and utilize medications properly.

Data available on four South Asian subgroups shows that 95% of Bangladeshi speak a language other than English at home, which is the second highest rate among Asian subgroups, surpassed only by the Hmong. Pakistani's are at 91%, Asian Indian at 78% and Sri Lankans at 72% compared to 18% for the United States. There is also a variable rate of LEP (Limited English Proficiency) in this population. Bangladeshi's have the fourth highest rate among Asian subgroups at 52%, with Pakistani's at 32%, Asian Indian 23%, and Sri Lankan 18%. Further data describes linguistically isolated households, with Bangladeshi at 33%, Pakistani 16%, Asian Indian 11%, and Sri Lankan 11% (APIAHF, 2005).

POVERTY/INCOME

The relationship between income and health has been well established over the years. Poverty and lower income have been correlated with high rates of death and disease while higher income has been correlated with better health status. Large disparities in income have been linked to lower life expectancy in cross-national comparisons as well as higher mortality and obesity rates at the state level.

The per capita income of the South Asian groups range from \$13,532 for Bangladeshi's to \$26,530 for Sri

Lankans with Pakistani's and Asian Indians in between (\$17,685 and \$26,415). Twenty-three percent of Bangladeshis live below the federal poverty level and 51% live at 200% of the federal poverty level, making them the third lowest in income among Asian subgroups. Pakistanis are at 18% and 39%, Asian Indians at 10% and 23%, and Sri Lankans at 10% and 22%, respectively (APIAHF, 2005).

EDUCATIONAL ATTAINMENT

According to the Institute of Medicine (IOM), the likelihood of being insured rises with higher levels of educational attainment. Having a college degree is strongly associated with multiple factors that increase the likelihood of being insured—employment in sectors that are more likely to offer coverage, higher income, and a greater likelihood of choosing employment-based coverage if offered. Previous studies of Census data have shown that adults who did not graduate from high school were almost twice as likely to be uninsured as those with a high school diploma (38.5% compared to 19.6%)(APIAHF, 2005).

Bangladeshis rank in the top 10 Asian ethnic groups with having less than a high school degree at 23%. They are followed by Pakistanis at 19%, Asian Indians at 15%, and Sri Lankans at 14%, compared to 20% of the general U.S. population. Those who have achieved at most a high school diploma include 26% of Bangladeshis, 24% of Pakistanis, 20% of Asian Indians and 29% of Sri Lankans, compared to 50% within the general U.S. population. Those who have achieved a bachelor's degree at most include 29% of Pakistanis and Asian Indians, 24% for Bangladeshis and 22% of Sri Lankans, all of which are higher than the US general population at 16% (APIAHF, 2005).

IMMIGRATION/CITIZENSHIP STATUS

Citizenship status also has significant and widespread effect on an immigrants' ability to access health services and obtain insurance coverage. While an estimated 15% of citizens lack health insurance, 42% to 51% of non-citizens lack health coverage.

A larger proportion of South Asians are foreign-born compared to other Asian groups. In aggregate, 63% of Asian Americans are foreign born, but 83% of Bangladeshis, 79% of Sri Lankans, 74% of Pakistanis, and 73% of Asian Indians are foreign born. Of the foreign born, 31% of Bangladeshis are naturalized citizens, 38% of Sri Lankans, and 40% of both Asian Indians and Pakistani's (APIAHF, 2005).

HEALTH STATUS

It is difficult to characterize the health status of South Asians. Many studies do not differentiate between the various ethnicities studied. Small sample sizes make it difficult to generalize research findings. Finally, in some cases, data are just not available. For these reasons, the data contained here provide only a rough estimate of South Asian health status.

HEALTH INSURANCE COVERAGE

Analysis of Current Population Survey data by the UCLA Center for Health Policy Research has found that one in every five South Asians is uninsured. In 1997, approximately 4% received Medicaid or other public health care coverage. Their job-based insurance rate did not increase between 1994 and 1997 as it did with other ethnic groups, holding steady at 69%. At the same time, privately purchased insurance declined from 9 to 5%. Forty percent of uninsured South Asians ages 0-64 had no usual source of care and even 15% of those with insurance felt they had no usual source of care (Brown, et al, 2000).

CHRONIC DISEASES

HEART DISEASE & STROKE

Heart disease is a major cause of death and disability among South Asians. High rates of coronary artery disease have been found among South Asians who have migrated to countries outside of South Asia. In the U.S., Asian Indian men have been found to have a rate of heart attacks that is nearly 3 times higher than the general U.S. population (7% vs. 3%), although they are less likely to suffer from hypertension (14% vs. 19%) (Enas, 1996).

A study in the San Jose, California area found that cardiovascular risk increases with age, family history, and duration of stay in the United States (the longer an immigrant stays in the United States, the greater the risk). The high rate of heart disease among South Asians in the U.S. is thought to be partly the result of lifestyle changes due to Westernization (Sundaram, et al, 2005).

A community based participatory survey conducted in English and Punjabi in California found that 46.4% of their sample had BMIs in the overweight category. Among the 300+ participants, 20.4% had hypertension, 10.6% were diabetic, 35% had high cholesterol and 63% had one or more cardiovascular risk factor (Ivey, et al, 2004).

A study of immigrant Asian Indians in northern California has shown that those who are physically active have a

more favorable metabolic syndrome risk profile. Since Asian Indians have high rates of diabetes and cardiovascular disease, programs need to target physical activity programs for Asian Indian immigrants, particularly women, in order to reduce the prevalence of the metabolic syndrome (Misra, et al, 2005).

CANCER

South Asians experience higher rates of cancer in the U.S. than in their native countries. The 2005 California Cancer Registry indicates that the three leading cancer sites for South Asian men are prostate, colorectal, and lung. While the leading cancer site among women of all ethnicities is the breast, followed by colorectal and lung cancer. However, after breast cancer, South Asian women are more likely to be diagnosed with ovarian and uterine cancer (ACS, 2005). Anecdotal evidence shows that screening rates for cancer among South Asians, particularly among women, are lower than among other populations.

Breast cancer is one of the most frequent causes of death among Asian Indian women living in India. However, there is limited information whether those rates alter after immigration to the U.S. Female immigrants adopt many American customs, while also maintaining traditions. The degree to which awareness and screening has followed is unknown. Twelve percent (12%) of Asian Indian females in Canada perform monthly breast self-exams. In a study of Asian Indian women living in Southern California, 40.7% of those 20-39 years old and 54.8% of those 40 years old and older reported performing a breast self-exam in the past month. Of those over 40 years of age, 61.3% reported having a mammogram in the past year, which is lower than the HP 2010 goal of 70%, but is a fairly high screening rate. Study authors assert that many Asian Indian families speak English and have access to insurance, which may contribute to them accepting physician recommendations to participate in the screening. The lower rates of breast self-exams may be attributed to women who do not know how, the feeling that a mammography is sufficient, or cultural barriers (i.e. touching oneself). Also, while 78.4% were willing to receive education information on breast cancer, only 45.4% felt they had adequate breast cancer knowledge (Sadler, et al, 2001).

Pap smears have been useful in detecting cervical cancer, but are underutilized in minority women. There is a paucity of data on cervical cancer screening in South Asian women. One study of South Asians nationwide found that 73% reported having a Pap smear in the past three years. Their likelihood of having done so was

greater if they were married, more educated, had a consistent source of health care and were more acculturated. However, despite the high SES of South Asian women, their rate of Pap smears is lower than the national Healthy People 2010 goal of 85% (Chaudhry, et al, 2003).

Oral cancer is highly common among adults in South Asia. Increasing immigration coupled with limited access to dental care, suggests that this disease poses a public health problem in the U.S.-based population. Studies have found that South Asian immigrants are also at high risk for oral cancer due to high rates of chewing paan (tobacco) (Summers, et al, 1994) and sucking/chewing areca (a nut common in South Asia) in conjunction with religious/ cultural practices is associated with oral cancer (Ahluwalia, 2005).

DIABETES

Diabetes has been found to be a major problem among South Asians still living in Asia, as well as among South Asians who have immigrated to other countries. In the U.S., one study found that South Asian immigrants were seven times more likely to suffer from Type 2 diabetes than the general population (prevalence of 8% vs. 1%) (Bhopal, et al, 1999).

Women of Asian and South Asian descent may have a lower body mass index (BMI) than Caucasians, but are at increased risk for developing gestational diabetes mellitus during pregnancy (Retnakaran, et al, 2005). Evidence exists showing that Asian Indians are more insulin resistant than Whites and such resistance puts them at increased risk for diabetes and heart disease (Bajaj & Banerji, 2004).

A study of Asian Indians originally from the state of Gujarat and now living in the Atlanta metro area found a diabetes mellitus prevalence of 22.5% in men and 13.6% in women. The overall prevalence of Asian Indians greater than 20 years old was higher than all other racial groups in the U.S. However, the elderly (>70 years old) prevalence of diabetes in Asian Indians is similar to that in elderly Hispanics and blacks. This study also asserted that populations with acculturation from traditional to modern lifestyles have a higher prevalence of type 2 diabetes mellitus (Venkataraman, et al, 2004).

INFECTIOUS DISEASES

TUBERCULOSIS

South Asians have a TB rate of 10%, compared to 4% for the U.S. (Worley, et al, 2000).

HIV/AIDS & SEXUALLY TRANSMITTED DISEASES

In 1998, the CDC found that of all known South Asian AIDS cases in the U.S., 73% were from India, 19% were from Pakistan, 6% were from Bangladesh, and 2% were from Sri Lanka (CDC, 1998). Based on the 29 states with confidential name-based HIV surveillance systems, between 1999 and 2002, 17.4% of APIs diagnosed with HIV were born in India compared to 1.1% Pakistani and 31.9% U.S.-born API. Between 1985 and 2002, 4.9% of AIDS cases were among people born in India, compared to 1.0% Pakistani and 39.6% U.S.-born (Zaidi, 2005).

These statistics, coupled with the fact that the risk profile among APIs with AIDS is similar to the U.S. pattern rather than the pattern in Asian countries hit hard by the epidemic (Wortley et al, 2000), suggests that many APIs who were born abroad acquired their HIV infection after having immigrated to the U.S. It has also been hypothesized that exposure to different cultural norms, and more autonomy to engage in sexual activities that are stigmatized in countries of origin, may enhance the risk for acquiring HIV (Chng et al., 2003).

There are no known formal studies of behavioral risk factors for HIV among South Asians in the U.S. Anecdotal evidence shows that many South Asian women discover they are HIV+ when they begin prenatal care and are tested for HIV as part of routine testing in early pregnancy (Sheth, 2001). However, overall there is a lack of studies examining the affects of assimilation and acculturation to the U.S. More measures of immigration behavior, acculturation issues, family/community support and norms, testing behaviors, and risk behaviors are needed to provide a full picture of the epidemic and issues faced by this understudied and underserved population (Zaidi, 2005).

Specifically, New York City has the country's largest concentration of Indian Americans. Migrant Indian men are known to be at high risk for HIV and the Indian American population remains a population that travels back and forth between India and the U.S., socializing and having sexual contacts in both countries. A study of Indian American males in New York City stated that Indian American men saw casual sex as an appropriate release for unmarried men, with monogamous, emotionally invested sex being reserved for marriage. The study noted that Indian patriarchal society permits men to gain sexual experience through encounters with commercial sex workers. The participants generally saw American culture as sexually liberated, with more options for having multiple partners and/or not using condoms with casual partners. Before immigration,

participants did not learn about HIV transmission routes and explained that infected men often did not disclose HIV risk behaviors to potential brides in India. All participants stated they now knew how HIV was transmitted, most denied any personal risk of infection and few said they knew people with HIV/AIDS. This perception may have been influenced by an overall lack of STI knowledge and a wish to differentiate themselves from truck drivers and commercial sex workers, the highest-risk behavior groups in India (Shedlin, et al, 2006). Future research needs to explore social relationships and their affects upon HIV risks.

A study of Asian Indian adolescents in the New York metropolitan area found that 86% knew having unsafe sex with an HIV+ individual could transmit HIV. However, 47% did not know that sharing a razor with an HIV+ person could do so and 50% incorrectly believed the process of donating blood and 33% believed taking a blood test could transmit HIV. Most of the participants (97%) listed TV as the most useful source of information, and 90% found information via school with 81% believing this to be a useful form of communication. Only 60-68% of adolescents listed doctors or parents as sources of information. The results from this study indicate that these adolescents have a knowledge gap and that HIV/AIDS prevention programs, particularly in schools have the ability to close the knowledge gap and clarify misconceptions (Bhattacharya, et al, 2000).

DOMESTIC VIOLENCE

A study of 160 South Asian women (who were married or in a heterosexual relationship) in Greater Boston, found:

- 40.8% of the participants reported that they had been physically and/or sexually abused in some way by their current male partners in their lifetime; 36.9% reported having been victimized in the past year.
- 65% of the women reporting physical abuse also reported sexual abuse, and almost a third (30.4%) of those reporting sexual abuse reported injuries, some requiring medical attention.
- No significant difference was found in the prevalence of domestic violence between arranged marriages [typically refers to marriages arranged by parents or relatives of each member of the couple] and non-arranged marriages (Raj & Silverman, 2002).

Another study of approximately 200 women in the greater Boston area found:

- Majority were Indian, non-U.S. citizens, and highly educated
- 21.2% suffered from intimate partner violence in the current relationship.
- 2.6 times as likely to report discolored vaginal discharge in the past year.
- 3.1 times as likely to report burning during urination in the past year.
- 3.4 times as likely to report unwanted pregnancy in the current relationship.

Domestic violence has been a major problem among the South Asian community; many community-based organizations have been created around the U.S. to address domestic violence needs among this population. While no national studies have been conducted to document the prevalence of domestic violence among the South Asian community, one study showed South Asian women are often reluctant to seek help or report abuse for a variety of reasons. They may be accused of bringing shame on the family, may not be believed by friends and family, and may also have concerns regarding their immigration status. There is a need for increased education and gynecological health outreach to the female population (Raj, et al, 2005).

MATERNAL AND CHILD HEALTH

Approximately 80% of South Asian women in the United States receive prenatal care in the first trimester, compared to 82% of white women (NIH, 2006). Asian Indian immigrants are more likely to give birth to a low birth weight infant and have a higher incidence of fetal deaths than white women (Gould, et al, 2003). In California, 8% of all deliveries to an Asian Indian mother are low birth weight (NIH, 2006). One study found that Asian Indian women breast feed for a shorter duration than white women and are more likely to rely on family networks for information on feeding rather than to seek advice from health professionals (Kannan, et al, 1999).

A study of Californian Asian Indian women birth/death records from 1995-1997 showed that foreign-born Asian Indian mothers had good prenatal care; only 3.4% had no prenatal care compared to whites at 3.5%. Asian Indians rarely gave birth as teenagers (0.9% vs. 7.9% white), had dramatically higher levels of both maternal and paternal education, and had the lowest percentage of deliveries paid for by Medi-Cal (18.1% vs. 23.3% of whites). However, Asian Indian infants, although seemingly of low sociodemographic risk, had higher levels of low birth weight (LBW) compared to White and Mexican infants. They also had higher levels of fetal mortality rates (FMR) than that of whites and Mexican

mothers (6.6% vs 3.9% in whites and 4.5% in Mexicans). Higher levels of education, early entry into prenatal care, and health insurance were not protective factors of low birth weight in the Asian Indian population. This study asserts that more research needs to be done on perinatal risk factors to determine the reasons for LBW and FMR in this population (Gould, et al, 2003).

Research has shown that postpartum depression (PPD) exists in Asian Indian women living in India and in Europe. However, there is little known about the incidence of PPD in immigrant Asian Indian women living in the U.S. Also, there is virtually no data on the manifestations of PPD in this population or how Asian Indian immigrant women and families experience PPD. The impact of acculturation and cultural customs, such as arranged marriage or the gender of the infant on the development of PPD, are unknown. A study of Asian Indian women in northern California showed there was a minor depressive symptoms rate of 28% and an additional major depressive symptoms rate of 24%. No differences in depression scores were found with regard to arranged marriage or the gender of the newborn. Overall findings suggest that Asian Indian women in the U.S. are just as likely to experience PPD symptoms as White women (Goyal, et al, 2005).

MENTAL HEALTH

There are few studies on mental health and depression among South Asians in the U.S. Anecdotally, community based organizations have noted that South Asians are often unwilling to seek mental health services and prefer to try and work issues out within the family. However, attitudes towards counseling among second-generation immigrants are more positive (Panganamala & Plummer, 1998).

Suicide rates within the South Asian community, however, are found to be higher than among other populations. Young South Asian women, in particular, have higher rates of suicide than South Asian males and the general U.S. population. Mental illness is not usually described as a precursor to suicide, but family conflict, depression, anxiety, and domestic violence may be contributing factors (Patel & Gaw, 1996).

A study of mental health professionals and patients made some conclusions about the cultural influences on depression and care outcomes of Asian Indians with depression. This study stated that religious belief in suffering as a punishment for past deeds contributes to decreased initiative to seek help from a doctor. Also, cultural stigmatization of mental illness is also a barrier

to early recognition of symptoms and seeking early intervention. The cultural stigma attached to mental illness intensifies the family's difficulty in accepting a family member's condition and developing trust in the practitioner. Families tend to seek episodic help and do not see the need for continued therapy. There are also stressors in family relationships, hierarchy, gender roles and expectations that influence a person's desire and ability to seek help. Communication is also hampered by language differences, meanings and patterns. There is a need for trained interpreters who have the knowledge and sensitivity to address the distinct cultural needs of patients and families. Mental health practitioners of the same ethnic origin were found to be most knowledgeable and more trusted by patients in this study because of their understanding of the culture and sensitivity to the cultural norms (Conrad & Pacquiao, 2005).

A study of older Asian Indians in the Atlanta area found that acculturation affects well-being. Satisfaction with friendships and one's cultural or ethnic identity relate to a sense of belongingness and one's well-being. Religious activities also help give meaning and purpose for coping with life's events. Therefore, increasing opportunities for social interaction in Asian Indian elder communities is important to help individuals become more adaptive and handle stress that occurs with migration and living in a new environment (Diwan, et al, 2004).

SUBSTANCE USE

A study of U.S.-born Asian Indian adolescents (13-18 years old) in the New York City metropolitan area commented on the lack of data among U.S.-born Asian Indian adolescents' drug use. Socially, some alcohol use is acceptable for religious rituals among older Asian Indians, but not for those under 21 years of age. This is also true for marijuana use. Asian Indians see drug use as a moral problem that dishonors one's community and lessens a family's prestige. When looking at alcohol, these adolescents consumed more distilled spirits than beer and wine. The vast majority of adolescents reported little or no marijuana or hard drug use. In order for an intervention to succeed in this community, it must be recognized that an adolescent who abuses drugs may still meet family expectations academically, whereas others drug abuse is linked to academic difficulties. Multiple-risk indicators must be assessed (Bhattacharya, 2002).

A study of Indian American blue-collar workers, white-collar workers and students in New York City found that

the Indian American respondents used beer and wine to socialize, especially with peers. They saw the use of alcohol as essential to alleviate job-related stress, hopelessness, and depression. In response to feelings of frustration and failure, some of the men described using alcohol in conjunction with visits to commercial sex workers, which they saw as means to relieve boredom and depression. Some blue-collar workers expressed a preference for hard liquor such as rum and vodka. Only the students reported illegal drug use (occasional marijuana experimentation with ecstasy)(Shedlin, et al, 2006).

TOBACCO USE

Smoking rates among South Asians are thought to be lower than among the overall population, and markedly lower in some studies (Bhopal, et al, 1999).

A study of U.S. born Asian Indian adolescents (13-18 years old) in the New York City metropolitan area found that of the adolescents surveyed, 16.5% had smoked cigarettes once in their lifetime, with 44.4% smoking less than one-half pack per day (Bhattacharya, 2002).

NUTRITION, WEIGHT AND PHYSICAL ACTIVITY

A study in the metropolitan Atlanta area assessed nutrition and physical activity among Asian Indian men and women, 50 years and older, who have lived in the U.S. for a minimum of 5 years. This survey showed that the mean fiber intake score indicated a diet deficient in high fiber foods for 74% of this population (i.e. fruits, vegetables, beans and grains). Fat intake score fell within the recommended guidelines for most, but 30% consumed high fat diets. Ethnic identity (bicultural or more American identity) and higher depression levels were associated with a higher fat intake. Approximately 55% had incorporated some type of aerobic activity and 52% had a normal body mass index (BMI), but 30% had no physical activity. This study also stated that existing nutrition literature on this population shows that acculturation was associated with increased consumption of non-ethnic foods. Therefore, acculturation can influence the health behaviors of immigrants through the adoption of dietary patterns and lifestyle practices more typical of the birth country (Jonnalagadda & Diwan, 2005).

RESOURCES

The following agencies and websites are able to provide additional information regarding the South Asian community and organizations serving them:

- SAWNET
www.sawnet.org
- South Asian Public Health Association
<http://www.sapha.net/>

REFERENCES

- Ahluwalia, K.P. (2005). Assessing the oral cancer risk of South-Asian immigrants in New York City. *Cancer*, 104(12Suppl), 2959-2961.
- American Cancer Society (ACS), California Division and Public Health Institute, California Cancer Registry. California Cancer Facts and Figures 2006. Oakland, CA: American Cancer Society, California Division, September 2005.
- Asian Pacific Islander American Health Forum (APIAHF) (2005, January). *Diverse communities, diverse experiences*. Retrieved 2006, July 25 from Web Site: www.apiahf.org/resources/pdf/Diverse%20Communities%20Diverse%20Experiences.pdf
- Bajaj, M., & Banerji, M.A. (2004). Type 2 diabetes in South Asians: A pathophysiologic focus on the Asian-Indian epidemic. *Current Diabetes Reports*, 4(3), 213-318.
- Bhattacharya, G. (2002). Drug abuse risks for acculturating immigrant adolescents: Case study of Asian Indians in the United States. *Health and Social Work*, 27(3), 175-183.
- Bhattacharya, G., Cleland, C., & Holland, S. (2000). Knowledge about HIV/AIDS, the perceived risks of infection and sources of information of Asian-Indian adolescents born in the USA. *AIDS CARE*, 12(2), 203-209.
- Bhopal, R., Unwin, N., White, M., Yallop, J., Walker, L., Alberti, K.G., Harland, J., Patel, S., Ahmad, N., Turner, C., Watson, B., Kaur, D., Kulkarni, A., & Laker, M. (1999). Heterogeneity of coronary heart disease risk factors in Indian, Pakistani, Bangladeshi, and European origin populations. *British Medical Journal*, 319(7204), 215-220.
- Brown, E.R., Ojeda, V.D., Wyn, R., & Levan, R. (2000, April). *Racial and ethnic disparities in access to health insurance and health care*. Retrieved July 31, 2006 from University of California Los Angeles, Center for Health Policy Research Web site: <http://www.healthpolicy.ucla.edu/pubs/files/RacialandEthnicDisparitiesReport.pdf>
- Chaudry, S., Fink, A., Gelberg, L., & Brook, R. (2003). Utilization of papanicolaou smears by South Asian women living in the United States. *Journal of General Internal Medicine*, 18, 377-284.
- Chng, C.L., Wong, F.Y., Park, R.J., Edberg, M.C., & Lai, D.S. (2003). A model for understanding sexual health among Asian American/Pacific Islander men who have sex with men (MSM) in the United States. *AIDS Education and Prevention*, 15(Suppl.A), 21-38.
- CDC Presentation on Asians and AIDS, 1998. Provided by Jen Kim, Asian and Pacific Islander Coalition on HIV/AIDS, New York City.
- Conrad, M.M., & Pacquiao, D.F. (2005). Manifestation, attribution, and coping with depression among Asian Indians from the perspectives of health care practitioners. *Journal of Transcultural Nursing*, 16(1), 32-40.
- Diwan, S., Jonnalagadda, S.S., & Balaswamy, S. (2004). Resources predicting positive and negative affect during the experience of stress: A study of older Asian Indian immigrants in the United States. *The Gerontologist*, 44(5), 605-614.
- Enas, E.A., Garg, A., Davidson, M.A., Nair, V.M., Huet, B.A., & Yusuf, S. (1996). Coronary heart disease and its risk factors in first-generation immigrant Asian Indians to the United States of America. *Indian Heart Journal*, 48(4), 343-53.
- Gould, J.B., Madan, A., Qin, C., & Chavez, G. (2003). Perinatal outcomes in two dissimilar immigrant populations in the United States: A dual epidemiological paradox. *Pediatrics*, 111, 676-682.
- Goyal, D., Murphy, S.O., & Cohen, J. (2005). Immigrant Asian Indian women and postpartum depression. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 35(1), 98-104.
- Ivey, S.L., Patel, S., Kalra, P., Greenlund, K., Srinivasan, S., & Grewal, D. (2004). Cardiovascular health among Asian Indians (CHAI): A community based research project. *Journal of Interprofessional Care*, 18(4), 391-402.
- Kannan, S., Carruth, B.R., & Skinner, J. (1999). Infant feeding practices of Anglo American and Asian Indian American mothers. *Journal of the American College of Nutrition*, 18(3), 279-286.
- Misra, K.B., Endemann, S.W., & Ayer, M. (2005). Leisure time physical activity and metabolic syndrome in Asian Indian immigrants residing in northern California. *Ethnicity & Disease*, 15(4), 627-34.
- National Institutes of Health (NIH) (2006). *Women of color health data book*. Retrieved July 30, 2006 from Office of the Director, Office of Research on Women's Health Web site: <http://orwh.od.nih.gov/pubs/WomenofColor2006.pdf>
- Panganamala, N.R., & Plummer, D.L. (1998). Attitudes toward counseling among Asian Indians in the United States. *Cultural Diversity in Mental Health*, 4(1), 55-63.
- Patel, S.P., & Gaw, A.C. (1996). Suicide among immigrants from the Indian subcontinent: a review. *Psychiatric Services*, 47(5), 517-21.
- Raj, A., & Silverman, J.G. (2002). Intimate partner violence against South Asian women in Greater Boston. *Journal of American Medical Women's Association*, 57(2), n.a.
- Raj, A., Liu, R., McCleary-Sills, J., & Silverman, J.G. (2005). South Asian victims of intimate partner violence more likely than non-victims to report sexual health concerns. *Journal of Immigrant Health*, 7(2), 85-91.
- Retnakaran, R., Hanley, A.J., Connelly, P.W., Sermer, M., & Zinman, B. (2006). Ethnicity modifies the effect of obesity on insulin resistance in pregnancy: a comparison of Asian, South Asian, and Caucasian women. *Journal of Clinical Endocrinology & Metabolism*, 91(1), 93-97.
- Sadler, G.R., Dhanjal, S.K., Shah, N.B., Shah, R.B., Ko, C., Anghel, M., Harshburger, R. (2001). Asian Indian women: Knowledge, attitudes and behaviors toward breast cancer early detection. *Public Health Nursing*, 18(5), 357-363.

- Shedlin, M.G., Drucker, E., Decena, C.U., Hoffman, S., Bhattacharya, G., Beckford, S., & Barreras, R. (2006). Immigration and HIV/AIDS in the New York metropolitan area. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 83(1), 43-58.
- Sheth, L., Presentation on Data Limitations, First National Meeting on HIV/AIDS Prevention in the South Asian Population in the U.S., Los Angeles, 8/01.
- Summers, R.M., Williams, S.A., & Curzon, M.E. (1994). The use of tobacco and betel quid (pan) among Bangladeshi women in West Yorkshire. *Community Dental Health*, 11(1), 12-16.
- Sundaram, B., Holley, D.C., Cornelissen, G., Naik, D., Hanumansetty, R., Singh, R.B., Otsuka, K., & Halberg, F. (2005). Circadian and circaspetan (about-weekly) aspects of immigrant Indians' blood pressure and heart rate in California, USA. *Biomedicine & Pharmacotherapy*, 59, S76-S85.
- U.S. Census Bureau (2001, May). *Census 2000 Demographic Profile*. Retrieved 2006, July 26 from, Web site: <http://www.census.gov/prod/cen2000/dp1/2kh00.pdf>
- Venkataraman, R., Nanda, N.C., Baweja, G., Parikh, N., & Bhatia, V. (2004). Prevalence of diabetes mellitus and related conditions in Asian Indians living in the United States. *American Journal of Cardiology*, 94, 977-980.
- Wortley, P.M., Metler, R.P., Hu, D.J., & Fleming, P.L. (2000). AIDS among Asians and Pacific Islanders in the United States. *American Journal of Preventive Medicine*, 18(3), 208-214.
- Zaidi, I.F., Crepaz, N., Song, R., Wan, C.K., Lin, L.S., Hu, D.J., & Sy, F.S. (2005). Epidemiology of HIV/AIDS among Asians and Pacific Islanders in the United States. *AIDS Education and Prevention*, 17(5), 405-417.

ABOUT THIS SERIES

This health brief is part of a series of that includes Cambodian, Chamorro, Chinese, Filipino, Hmong, Japanese, Korean, Native Hawaiian, Samoan, South Asian, and Vietnamese. All are available for download at www.apiahf.org.

Purpose

The purpose of the series is to summarize published research findings of disparities in the health and healthcare of the selected group. The data presented is meant for community health advocates, grant writers, evaluators and students as a tool to raise awareness, guide program development and spark future research for the well-being of Asian American and Pacific Islander populations.

Methods

This brief was updated after a PubMed literature review. In order to find the latest information, the PubMed literature search focused on the years 2000-present and each ethnic group was cross referenced with these focus areas: access to quality health services, arthritis, osteoporosis, and chronic back conditions, cancer, chronic kidney disease, diabetes, disability and secondary conditions, education & community-based programs, environmental health, family planning, food safety, health communication, heart disease and stroke, HIV, immunization, infectious disease, injury & violence prevention, maternal, infant & child health, medical product safety, mental health & mental disorder, nutrition & overweight, occupational safety & health, oral health, physical activity & fitness, public health infrastructure, respiratory disease, sexually transmitted disease, substance abuse, tobacco use, and miscellaneous topics. For the South Asian health brief, the search cross-referenced the terms Asian Indian, Bangladeshi, Bhutanese, Burmese, Nepalese, Pakistani, Sikh, South Asian and Sri Lankan with the aforementioned areas.

Limitations

It is difficult to characterize the health status of specific Asian American or Pacific Islander ethnic populations. Many studies do not differentiate between the various ethnicities studied. Small sample sizes make it difficult to generalize research findings and in some cases, data are just not available. For these reasons, the data contained here provide only a rough estimate of health status and are not an exhaustive presentation of the findings, nor are they meant for medical decision-making.

Contributors

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