

Community Health Needs & Resource Assessment:

An Exploratory Study of Chinese in NYC



Community Health Needs & Resource Assessment:

An Exploratory Study of Chinese in NYC



NYU School of Medicine
Institute of Community Health and Research

**Center for the Study of
Asian American Health**

550 First Avenue, MSB-153

New York, NY 10016

www.med.nyu.edu/csaah

Table of Contents

Acknowledgements	v
Background	1
Who are the Chinese in NYC?	3
Health Status & Information	9
Access to Healthcare.	11
Health Conditions	13
Literature Gaps and Recommendations.	21
References	23
Appendix	27

Acknowledgements

Written by Jennifer Ahn
and Noilyn Abesamis-Mendoza

Photography credits: Noilyn Abesamis-Mendoza, Christian Ngo, and Jennifer Ahn

Designed by The Ant Men Creative, LLC

CSAAH COMMUNITY OUTREACH TEAM

- Noilyn Abesamis-Mendoza, MPH
- Henrietta Ho-Asjoe, MPS
- Douglas Nam Le

FUNDING SUPPORT

This publication was made possible by Grant Number P60 MD000538 from the National Institutes of Health, National Center on Minority Health and Health Disparities and its contents are solely the responsibility of the authors and do not necessarily represent the official views of the NCMHD.

COMMUNITY SUPPORT

The Center for the Study of Asian American Health is also grateful to the following individuals and organizations who have offered invaluable advice, insight, information and assistance for this project: David Aguilar, Chris Cho, Dr. Warren Chin, Waiwah Chung, Dr. Kenny Kwong,

Rhodora Ursua, Anthony Wong, Sally Wong and volunteers from the New York Downtown Hospital summer student program, Chinese American Healthy Heart Coalition, Charles B. Wang Community Health Center, and the Chinese American Medical Society.

For more information, please contact us at csaah@med.nyu.edu or 212-263-3072.

SUGGESTED CITATION:

Ahn, J., Abesamis-Mendoza, N., Ho-Asjoe, H., Le, D., Rey, M.R. (2007). Chinese American Community Health Needs and Resource Assessment. New York, NY: NYU Center for the Study of Asian American Health.

Note: To date, CSAAH has completed assessments in the Cambodian, Chinese, Filipino, Korean, Vietnamese, and South Asian communities. The Japanese CHNRA is forthcoming. Bilingual surveys were administered by trained staff members and volunteers at various community-based sites such as community centers, places of worship, health organizations/agencies, local businesses as well as community events like health fairs and cultural celebrations. Each assessment had a set of advisors to guide the process; which included CSAAH partnering with over 30 concerned individuals, community groups, faith based organizations, and professional associations to design, conduct, analyze, and interpret these assessments.

Background



More than one million documented and undocumented Asian Americans live in New York City (NYC). However, there is scant health research available on NYC Asian Americans. In collaboration with community-based organizations and advocates, the NYU Center for the Study of Asian American Health conducted a series of community health needs and resource assessments (CHNRA) among Cambodians, Chinese, Filipinos, Koreans, Japanese, South Asians, and Vietnamese in NYC from 2004-2007. The studies were exploratory in nature, using formative research methods to identify the health concerns and needs of Asian Americans in New York City. The goals of the assessments were to determine 1) the degree to which the health issues exist in the Asian American community; (2) the resources available for Asian Americans; and (3) the best approaches to meet the needs of the Asian American community in New York City. The study activities included a review of the current state of health literature on Asian American health and the conduct of a survey on the community's perceived health status, health seeking behaviors, barriers to care, and health resources available for the community. From this, a set of health priority areas and strategies



were developed that will guide health education material development, community outreach initiatives, and future research projects for the specific Asian American communities.

The following are the results from 106 surveys of the Chinese CHNRA of individuals 18 years or older. The fact sheet also includes a literature review on the state of health literature on Chinese Americans. Findings of the Chinese CHNRA are compared to national, state, and local data to assess similarities and differences of experiences.

Who are the Chinese in NYC?



HISTORICAL OVERVIEW

The Chinese were the first group of Asians to immigrate to the United States, and their arrival dates back to the mid-1800s. Most immigrants settled in Hawaiian plantations as contract laborers or near the gold mines of California, seeking the economic prosperity they could not find back in China. Subsequent immigration followed with the development of transcontinental railroads in the west. Though the Chinese Exclusion Act of 1882 brought an end to unrestrained immigration, by 1943 the ban was lifted. In 1952, Chinese immigrants were subsequently granted U.S. citizenship. Between 1960 and 1985, the Chinese American population quadrupled. Immigration to the U.S. was encouraged further in 1992, when the Chinese Student Protection Act granted permanent residency status to immigrants from China who wanted to escape Communism and further their academic goals (Brooks, 1992). In 2005, the Chinese American population in the U.S. was reaching 450,000 (U.S. Census, 2005), which is almost 100,000 more people than in 2000 (U.S. Census, 2000). Now they are the largest ethnic group among Asian Pacific Americans in the United States.



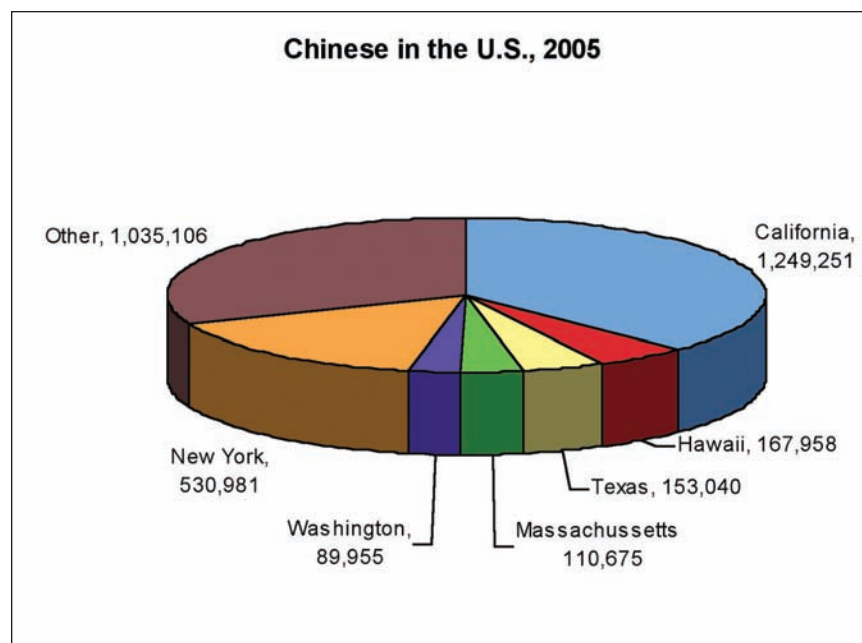


Figure 1: Chinese Population in the United States.

Source: American Community Survey, 2005.

IMMIGRATION AND SETTLEMENT IN NYC

A major influx of Chinese to New York City's Chinatown followed the anti-Chinese movements in the American West during the 1880s (Chen, 1992). After the ban on Chinese immigration was lifted, new immigration laws in 1965 allowed for the equal treatment of Chinese immigrants with other immigrant nationalities and facilitated migration. Many new Chinese immigrants flocked to the United States, and New York City was a major area of settlement. This group mainly consisted of college students from Taiwan and Hong Kong that came to the U.S. for advanced studies. The subsequent waves of Chinese immigrating to the U.S. has varied over the years thus making the Chinese community of NYC a very diverse group. Some Chinese American families immigrated to NYC over 100 years ago such as the Toishanese, while other newcomer communities, such as the Fukienese have arrived in the past 15 years. They have different educational backgrounds, work experiences, household patterns, and social networks.

Today, NYC's Chinatown is the largest one in the United States. Between 1990 and 2000, the Chinese population in NYC rose 61%, which far exceeds the total NYC population increase of 9%, but is less than the 71% expansion of the total Asian population. The American Community Survey of 2005 estimates the Chinese American population in the nation to be about 3.3 million (Fig.1), 530,981 of which live in New York, and 450,200 of which reside in New York City (Fig. 2). Although the number of residents is less than that of California with around 1.25 million Chinese Americans (Fig.1), the majority of immigrants of the New York region have settled in the city and thus the changing trends in demographics have been representative of state as a whole.

Since 1965, Chinatown's boundaries have enlarged, and its demographics have changed significantly. Today, many new Chinese immigrants do not live in Chinatown (Chen, 1992) and instead make their home in NYC's Outer Boroughs. Other areas of Chinese

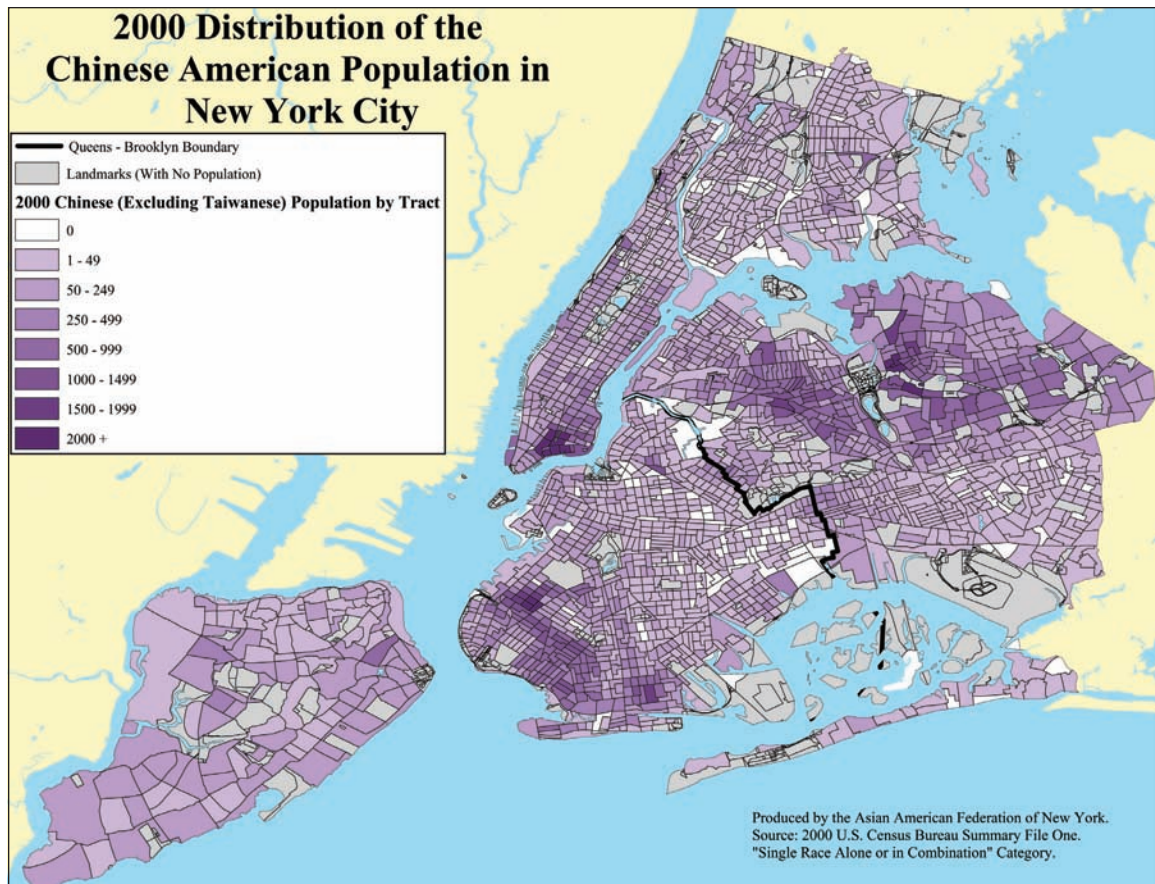


Figure 2: Geographic Distribution of Chinese in NYC.

Source: Asian American Federation of New York (2004). Census Profile: New York City's Chinese American Population. New York, NY: Asian American Federation of New York Census Information Center.

American concentration are the southern part of Brooklyn, and the Jackson Heights, Flushing, and Elmhurst sections of Queens. Settlement in these areas of Queens contradicts the view that foreign-born Chinese tend to aggregate to central sections of metropolitan areas. Manhattan's current Chinatown is similar to the ethnic enclaves of Queens and Brooklyn.

In terms of work sectors, the laundry business was the second most important occupation for Chinese after restaurants in the early years of settlement. Today, the service industry continues to grow with many Chinese immigrants finding work in the restaurant, hotel, and entertainment

sector. The number of Chinese employees of knitting, garment factories, and stores dropped significantly after 9/11/01 when many were displaced from their jobs. There are also many Chinese whom are small business owners with establishments such as bakeries, restaurants, retail shops, production/manufacturing companies, and laundries. Finally, there is a significant number of Chinese who are employed in the education, health care, and social service sectors (U.S. Census, 2006).

As far as key demographics, the U.S. Census (2006) found median household income for NYC Chinese to be \$45,938, which is higher

than the city average at \$43,434 (U.S. Census, 2006). However, the average household size for Chinese is slightly higher (3.07) persons when compared to the overall city average (2.93 persons). In terms of per capita income, NYC Chinese earn on average \$21,877 a year; a figure lower than the city average of \$28,986. When compared to their NYS State and national counterparts, NYC Chinese also earn less on average (U.S. Census, 2006).

Gender distribution is relatively even for Chinese with 49.8% male and 50.2% female. Nearly 67% of Chinese in NYC are working age adults between the ages of 18 to 64 years. In addition,

7 out of 10 Chinese in New York City (69%) were foreign born, compared with 37% of the total city population in 2005. The overwhelming majority of NYC Chinese immigrants have lived in the U.S. for 15 years or more (55%). Seventy two percent of all NYC Chinese are U.S. Citizens with 60% of all foreign-born Chinese being naturalized citizens. (U.S. Census, 2006). In terms of educational attainment, 33% of all Chinese in NYC have a bachelor's degree or higher; a rate similar to the average New Yorker (32%). Despite this, a third of all Chinese in NYC have less than a high school diploma (U.S. Census, 2006).

Figure 3. The Chinese American Demographic Profile At-A-Glance

	United States	New York State	New York City	Chinese CHNRA
Source	U.S. Census (2006). National Data from the American Community Survey, 2005 of Chinese alone or in any combination.	U.S. Census (2006). New York State Data from the American Community Survey, 2005 of Chinese alone or in combination.	U.S. Census (2006). New York City Data from the American Community Survey, 2005 of Chinese alone or in combination. (Unless otherwise noted)	CSAAH (2007). Chinese Community Health Needs & Resource Assessment.
Total Population	3,336,966	530,981	445,200	106
Gender	52% Female 48% Male	51% Female 49% Male	50% Female 49% Male	61% Female 39% Male
Residence	See Figure 1.	16% Outside of NYC 84% NYC	38% Queens* 34% Brooklyn* 24% Manhattan* 2% Bronx* 2% Staten Island*	43% Manhattan 36% Brooklyn 9% Queens 7% Outside of NYC 1% Bronx & Staten Island
Place of Birth	63% Born Outside U.S. 37% US-Born	68% Born Outside U.S. 32% US-Born	77% Born Outside U.S. 23% US-Born	75% China 13% Other Country 12% United States
Length of stay in U.S.	19% Entered 2000 or later 32% Entered 1990 to 1999 49% Entered before 1990	16% Entered 2000 or later 30% Entered 1990 to 1999 54% Entered before 1990	15% Entered 2000 or later 30% Entered 1990 to 1999 54% Entered before 1990	33% Entered 2000 or later 21% Entered 1990 to 1999 46% Entered before 1990

Citizenship	75% US Citizens 50% Native 50% Naturalized	73% US Citizens 43% Native 57% Naturalized	72% US Citizens 42% Native Born 58% Naturalized	---
	25% Not US Citizens	37% Not US Citizens	28% Not US Citizens	
Age	8% Ages 18-24 16% Ages 25-34 18% Ages 35-44 15% Ages 45-54 9% Ages 55-64 5% Ages 65-74 4% Ages 75 and older	8% Ages 18-24 16% Ages 25-34 19% Ages 35-44 15% Ages 45-54 9% Ages 55-64 6% Ages 65-74 5% Ages 75 and older	8% Ages 18-24 16% Ages 25-34 19% Ages 35-44 15% Ages 45-54 9% Ages 55-64 7% Ages 65-74 4% Ages 75 and older	11% Ages 18-24 11% Ages 25-34 9% Ages 35-44 16% Ages 45-54 22% Ages 55-64 21% Ages 65-74 10% Ages 75 and older
Educational attainment	17% Less than high school 16% High school graduate 16% Some college 25% Bachelor's degree 26% Graduate or professional degree • Population 25 years or older	28% Less than high school 21% High school graduate 13% Some college 21% Bachelor's degree 16% Graduate or professional degree • Population 25 years or older	31% Less than high school 23% High school graduate 14% Some college 21% Bachelor's degree 12% Graduate or professional degree • Population 25 years or older	45% Less than high school 21% High school degree 14% Some College 11% Bachelor's degree 5% Graduate or professional degree • Population 18 years or older
Language	42% speak English less than "very well"	53% speak English less than "very well"	56% speak English less than "very well"	75% speak English less than "very well"
Employment status	65% In labor force 35% Not in labor force	56% In labor force 44% Not in labor force	62% In labor force 38% Not in labor force	42% In labor force 57% Not in workforce
Income	\$58,993 (median household income) \$27,767 (per capita income)	\$48,555 (median household income) \$23,479 (per capita income)	\$42,820 (median household income) \$21,877 (per capita income)	---
Average number of people in household	3.1 Persons	3.1 Persons	3.1 Persons	2.7 Persons
Average number of people contributing to household income	---	---	---	1.8 Persons

* U.S. Census 2000, Summary File 1.

Health Status and Information



PERCEIVED HEALTH STATUS

Results from the Chinese CHNRA found that the majority (48%) of respondents described their health status as “fair or poor”, while 38% reported “good” and 14% “excellent” health. When compared to findings from a NYC-wide community health survey (NYC DOHMH, 2005), Chinese respondents had higher rates of reporting their health as “fair or poor” versus NYC Asians overall (30%) and all NYC residents (23%) (Fig.4).

HEALTH INFORMATION

Chinese CHNRA respondents are more likely to learn health information from reading the newspaper (36%) or from their healthcare provider (31%) versus from their family and friends (26%), a social service agency (17%), the internet (11%), and work or other sources (15%).



Access to Healthcare



ROUTINE CHECKUPS

Within the arena of preventive health care, studies have highlighted the importance of maintaining healthy eating habits, stopping smoking, reducing alcohol intake, drinking sufficient water, adhering to a regular exercise regimen, and getting regular screenings or examinations (Cornelius, 2002). By doing so, the likelihood of developing many diseases and conditions such as certain types of cancers, cardiovascular problems, asthma, diabetes, and infectious diseases is decreased.

Nearly 80% percent of Chinese CHNRA respondents saw their doctor for a routine checkup within the past year. Whereas, 4% indicated they do not have a regular doctor or have never had a checkup before. Findings from the Chinese CHNRA also showed that those who lived longer in the U.S. were more likely to report having had a check up or preventive screening for conditions such as cardiovascular disease, diabetes, cancer, Hepatitis B, HIV/AIDS, and oral health.



HEALTH INSURANCE

According to a 2002 Commonwealth Foundation report, one out of five Asian American adults

ages 18 to 64 years is uninsured or has been uninsured at some point in the past year. This study found that 12% of Chinese Americans in NYC were uninsured (Hughes, 2002). Results of the Chinese CHNRA found similar results with 15% of all respondents that indicated not having health insurance coverage. Additionally, 28% of respondents had private or employer based coverage, 19% have Medicaid, 15% have Medicare, and 16% have other types of public health insurance coverage (i.e., Family Health Plus, Prenatal Care Assistance Programs).

BARRIERS TO HEALTHCARE

English language proficiency is among the most important indicators to understanding the health care challenges facing immigrant communities. Also relevant are poverty and income, education, and immigration status, as these factors may determine the likelihood of immigrants to seek medical attention (Fig. 3). According to the 2005 American Community Survey, about 89% of Chinese speak a language other than English at home. Correspondingly, 71% percent of Chinese CHNRA respondents reported that they felt most comfortable speaking Cantonese, Mandarin, or other Chinese dialects. Seventy-five percent of survey respondents were speaking English less than “very well” (limited English proficient).

Although 76% of survey respondents indicated that they had a provider that spoke a language in which they were comfortable communicating in, 20% indicated they had problems understanding information about their health. Health literacy as defined by Healthy People 2010 is the “capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.” This becomes an

important issue when addressing the needs of Chinese immigrants.

About a third of respondents (34%) reported needing an interpreter when going to a hospital or health clinic. Often, these individuals rely on a family member or friend (31%), of which 15% use their children as the interpreter. In addition, they also utilize phone interpretation services (9%) and professional medical interpreters (14%).

According to a Chinese community leader and nurse, health providers should also be concerned with the literacy of Chinese immigrants in their native language or dialect. While providing bilingual health education materials and forms are key steps to reducing barriers for immigrant communities, health providers should be aware that many community members may not be able to understand or read these documents even if translated (Abesamis-Mendoza, personal communication, August 17, 2007).

Besides language and communication barriers, the largest barrier that respondents faced was time constraints, which was faced by nearly a third (28%) of all respondents. Other difficulties that respondents faced was not knowing where to go to for healthcare services (23%), financial barriers (17%), cultural barriers (17%), and transportation barriers (9%).

Health Conditions



CANCER

A report by the state of California collecting data on cancer cases found that Chinese Americans have the high rates of colorectal, liver, and lung cancer compared to other Asian ethnic groups (McCracken, 2007). Chinese men have the third highest incidence of colorectal cancer (52.2/100,000), while females have the second highest incidence (41.5/100,000). These numbers are in contrast with the low numbers of colorectal cancer incidence in China, which implicate acculturation to western lifestyle as a likely cause (McCracken, 2007).

Additionally, Chinese men have the third highest incidence (23.3/100,000) and mortality rates (19.9/100,000) of liver cancer amongst Asian Americans, which in the U.S. is related to Hepatitis C and obesity, while in China is related to Hepatitis B (McCracken, 2007). Chinese women have the highest lung cancer incidence (29.8/100,000) and mortality rate (7.8/100,000) amongst Asian Americans, which is surprising considering the low rates of smoking (McCracken, 2007). It is believed that their exposure to second-hand smoke and oil at high temperatures during cooking may contribute to high lung cancer rates (McCracken, 2007).

Figure 4. Community Health Profile

Population	All NYC Residents	All NYC Asian Residents	Chinese CHNRA Sample
Source	NYC Department of Health & Mental Hygiene (2005). Community Health Survey.	NYC Department of Health & Mental Hygiene (2005). Community Health Survey.	CSAAH (2007). Chinese Community Health Needs & Resource Assessment.
Health Status	19% Excellent 25% Very Good 34% Good 23% Fair or Poor	13% Excellent 26% Very Good 32% Good 30% Fair or Poor	14% Excellent 38% Good 43% Fair 5% Poor
Health Insurance	18% Medicaid 12% Medicare 4% Others 59% Private 17% Uninsured	22% Medicaid 11% Medicare 5% Others 41% Private 21% Uninsured	18% Medicaid 15% Medicare 16% Other Public Insurance 28% Private 15% Uninsured
Have a Regular Healthcare Provider	80% Have a regular provider	79% Have a regular provider	96% Have a regular provider
Cholesterol Screening	80% Yes 20% No	75% Yes 25% No	72% Yes 28% No
Blood Pressure Screening	96% Yes* 4% No*	91% Yes* 9% No*	71% Yes 29% No
HIV Test	58% Yes 42% No	40% Yes 61% No	19% Yes 81% No
Colonoscopy (50 years or older)	55% Yes 45% No	50% Yes 50% No	57% Yes 43% No
Mammogram	73% Yes 28% No	65% Yes 35% No	68% Yes 32% No
Pap Test	80% Yes 20% No	64% Yes 36% No	56% Yes 44% No
Current Smoker	19%	13%	5%
Heavy Smoker (more than 10 cigarettes a day)	Among current smokers, 44% Yes 56% No	Among current smokers, 41% Yes 59% No	Among current smokers, 20% Yes 80% No
Binge Drinking (5 or more drinks on one occasion in the past 30 days)	15% Yes 85% No	9% Yes 91% No	22% Yes 78% No

*Data drawn from 2002 New York City Community Health Survey

Early detection is key to reducing the burden of cancers among the Chinese community.

Consistent with the California study, screening rates among the Chinese CHNRA respondents was low. Results from the Chinese CHNRA show that 67% of female respondents had a clinical breast exam and 68% of female respondents aged 40 years or older had a mammogram.

Rates for mammograms were similar to Asian American women living in NYC (65%), but significantly lower when compared to all NYC women (73%) (Fig. 4) (NYC DOHMH, 2005).

Fifty six percent of Chinese CHNRA women had a pap smear; of which 89% reported having one within the past 3 years. Rates for pap smear were considerably lower when

compared to Asian American women living in NYC (64%) and all NYC women (80%) (Fig. 4) (NYC DOHMH, 2005).

Among respondents who were 50 years or older, 57% received a colonoscopy (63% of women over 50 years; 43% of men over 50 years). The overall screening rate for colonoscopy among Chinese CHNRA respondents over the age of 50 years was similar to other Asian Americans in NYC and all NYC residents (Fig. 4) (NYCDOHMH, 2005). Additionally, 40% of male respondents over the age of 50 years received a prostate exam.

CARDIOVASCULAR DISEASE

About one third of the Chinese CHNRA respondents indicated that cardiovascular disease (CVD) was a major concern for themselves or their families. These included CVD-related conditions such as hypertension, coronary heart disease, and stroke.

Their concerns are justified as heart disease is the leading cause of death among Chinese living in New York City, and stroke is the fourth leading cause of death (The Health of Immigrants in NYC, 2006). While deaths from heart disease are lower than non-Hispanic whites, stroke deaths of Chinese Americans are higher. In a study conducted at NYU Downtown Hospital, 136 stroke patients were interviewed, and it was found that after a stroke attack, only 27% of patients went to the doctor's office immediately (Foo et al., 2005). Therefore, it is important to educate patients about the warning signs of a stroke attack, as well as the use of 9-1-1 in order to get to a hospital instead of waiting for a family member to come home (Foo et al., 2005). In terms of receiving

a CVD-related screenings, 71% of Chinese CHNRA respondents received a check-up for hypertension (high blood pressure), a leading risk factor for stroke. Among them, nearly 60% had their blood pressure checked within the past year.

Additionally, 72% of respondents of the Chinese CHNRA have had their cholesterol checked. Of which, 55% had it done within the past year.

DIABETES

Despite having a lower body weight, Asian Americans are more likely than non-Hispanic Whites to have diabetes (Asian American Diabetes Initiative, 2007). Diabetes affects about 10% of Asian Americans with between 90% - 95% of Asians with diabetes having type 2 diabetes (Asian American Diabetes Initiative, 2007). Genetic and environmental influences are said to be the primary factors for developing diabetes among individuals of Asian descent. According to the Joslin Diabetes Center's Asian American Diabetes Initiative, the rate of diabetes among Chinese Americans is notably higher than the rate in the Chinese population living in rural China. Frequent screening and lifestyle modifications are necessary to reduce the likelihood of developing diabetes. Despite the increased risk of diabetes among Chinese Americans, only 44% of the Chinese CHNRA respondents had their blood glucose level checked.

OSTEOPOROSIS

Being of Asian descent is one of the risk factors for developing osteoporosis, in addition to being female, having a small, thin frame, being menopausal, and having a family history (National Osteoporosis Foundation, 2007). In a

study on the bone mineral density (BMD) of 359 Chinese American women, earlier immigration was positively associated with higher bone mineral density (Walker et al., 2006). A study conducted in New York City found similar results in 300 immigrant Chinese women. Lower BMD was associated with shorter height, and arriving in the U.S. at an older age (Babbar et al., 2006). Furthermore, these women generally had poor knowledge about osteoporosis, but could identify at least one food item with abundant calcium. It is therefore important to educate immigrants about the disease, since they are capable of making necessary changes, such as consuming calcium-rich foods that are more prevalent in the U.S. than in their native country.

Not surprisingly, nearly a quarter (21%) of CHNRA respondents indicated that orthopedic problems was an important health concern for the Chinese community. These included conditions such as arthritis, osteoporosis, and joint injuries.

INFECTIOUS DISEASES

Hepatitis

There is limited information about Hepatitis B infection in the Chinese American population, however it is known that they have higher rates of the disease than the general population. Infection amongst Asian and Pacific Islander (API) Americans in general is very high. While 0.3% of the U.S. population has the Hepatitis B virus (HBV), more than half of the 1.3-1.5 million infected are APIs (Stanford University Asian Liver Center, 2006). The prevalence of HBV among APIs is 7%, however chronic infection tends to be higher in foreign-born APIs (5-15%) compared to U.S. born APIs (1.4%) (Stanford University Asian Liver Center, 2006).

In a 2005 screening done on Asian Americans for HBV in New York City, more than half of the participants were Chinese, and the majority was foreign born. Of the 1,633, Asian Americans screened, 24% of the participants were positive for HBV (Pollack et al., 2006). Although vaccination is available, many Asians do not get tested due to limited access to health care, language barriers, and lack of health insurance (Lee et. al, 2005). Consistent with these studies, only 38% percent of the Chinese CHNRA respondents have been screened for Hepatitis B and 26% for Hepatitis C.

Tuberculosis (TB)

Nationally, the proportion of non-US born TB cases increased dramatically, from 30% in 1993 to 53% in 2003, with most of these cases being among individuals originally from high TB incidence areas such Mexico, the Philippines, Vietnam, India, Haiti, and South Korea as Asia (Talbot et al., 2000; CDC, 2004). This trend is typified in New York City, where the case rate among self-identified Asian Americans has been higher than that of any other ethnic/racial group in NYC since 1995 (Liu et al., 2005). Despite this, screening rates remain low. According to the Chinese CHNRA, 44% percent of survey respondents have had a tuberculosis (TB) test of which, 31% had the screening within the past year. Increased and continuous efforts to educate, screen, and offer treatment can eliminate tuberculosis among high-risk populations.

HIV/AIDS & Sexually Transmitted Diseases (STDs)

APIs in New York City infected with AIDS make up a substantial portion of the cumulative API HIV cases in the U.S. As of December 2004, there

were at least 1,163 APIs diagnosed with AIDS, accounting for 16% of total API AIDS cases in the U.S (Chin, 2006). Confidentiality concerns, language and cost barriers, and not knowing where to go for services often deter patients from seeking help. In a study by Chin and colleagues on the role of religious institutions in educating Chinese and South Asians with HIV in New York City, immigrant institutions, namely religious institutions were the most effective means of communicating with patients (Chin, 2005). Researchers stressed the importance of these rather conservative institutions to step up and educate the community on HIV treatment and prevention.

Few studies of sexually transmitted diseases (STDs) have been conducted on the Chinese American population alone. APIs in general have lowest rates of HIV/AIDS compared to other ethnic groups and they are significantly less likely to report sexual behavior (Kuo et al., 2006). However, studies have shown that acculturation to a Western lifestyle does increase sexual behavior. In one study, APIs born in the U.S. had sexual debuts earlier than their foreign-born counterparts; and in another study, young APIs living in English-speaking households had higher reports of being non-virgins than those in non-English speaking households (Kuo et al., 2006).

Kuo and colleagues (2006) conducted a study on self-reported sexual behavior and STD infection comparing Chinese American and Non-Hispanic White young people, and found no difference between reported STDs in the two groups. Thus, it may come as a surprise that significantly less Chinese Americans reported being sexually active or having non-

regular partners than non-Hispanic Whites. This community is not always properly informed of the risk of contracting an STD and the methods of protection. Educating the Chinese community about STDs as well as practicing safe sex are imperative in preventing these diseases.

Despite findings from these studies, screenings rates for STDs such HIV/AIDS remain low. Only 19% of all Chinese CHNRA respondents reported being tested for HIV/AIDS. Chinese women (25%) were more likely to be screened than Chinese men (10%). The screening rate for the Chinese CHNRA sample was dramatically lower when compared to Asian Americans living in NYC (58%) and all NYC residents (58%) (Fig. 4) (NYC DOHMH, 2005).

SUBSTANCE USE AND ABUSE

Tobacco

Chinese Americans have a lower smoking rate than other Asian ethnic groups such as Southeast Asians (Vietnamese, Cambodians, Laotians) (APIAHF, 2006). This was consistent with the CHNRA results that showed only 5% of respondents reported being current smokers. Among current smokers, 20% reported smoking more than 10 cigarettes (half a pack) a day.

However, other studies found much higher smoking prevalence among Chinese Americans. A 2002 survey of Chinese Americans in Chicago found a smoking prevalence of 34% in men and 2% in women (Yu et al., 2002). In a study by Shelley and colleagues that examined smoking behavior among 712 Chinese Americans aged between 18-74 years, 29% of men and 4% of women were found to be smokers. Furthermore, their results indicated that acculturation was associated with a history of never smoking,

but not with smoking cessation (Shelley et al., 2004). Participants who were highly aware about the effects of smoking were less likely to be smokers, which indicates that education is crucial in prevention as well as cessation of smoking.

Alcohol

Alcohol use patterns and the prevalence of alcohol-related problems vary among ethnic groups. Among the elements thought to account for these ethnic differences are social or cultural factors such as drinking norms and attitudes and, in some cases, genetic factors (Galvan and Caetano, 2003). In general, the rate of problem drinking in Asians is lower than the national average, but may be underestimated in some groups of immigrants. Chinese-Americans born in the U.S. consume more alcohol than immigrant Chinese-Americans (Huff & Kline, 1999; Sue, Zane, & Ito, 1979). Flushing and other vasomotor symptoms (due to acetaldehyde dehydrogenase type I deficiency) that occur with ingestion of alcohol by people of Chinese descent could be partly responsible for lower rates of alcoholism in Chinese (Lassiter, 1995). Additionally, Chinese Americans are less likely to be heavy drinkers compared to other Asian groups such as Koreans and Japanese (Sue et al, 1985; Chi et al., 1989). Findings from the Chinese CHNRA was consistent with these studies. Twenty-one percent of survey respondents are current drinkers. However, among current drinkers in the Chinese CHNRA sample, 22% are binge drinkers (drinking 5 or more drinks on occasion at least once a month).

MENTAL HEALTH

It is believed that Chinese American immigrants have greater rates of depression than their

Chinese counterparts (Hwang et al., 2005). The stresses of relocation, losing contact from a support network, and adapting to a new environment are major contributors for depression in immigrants shortly after their move. However, Hwang and colleagues also found that the risk of experiencing a first depressive episode decreased with increased length of residence in the U.S. (Hwang et al., 2005).

In a study that observed Chinese American adolescents living in an urban environment, those who experienced more violence reported more symptoms of post-traumatic stress disorder (PTSD), depression, and aggression. The results were still significant after controlling for daily stressors, including limited financial and recreational opportunities, conflicts with family and peers, and academic pressure (Ozer, Emily J., McDonald, Kristen L., 2005). Findings from this study may shed light in understanding how to treat patients suffering from a traumatic incident(s). The World Trade Center bombing of September 11th, 2001 is an event unique to New York City that had a significant impact on displaced Chinese American workers. In a study conducted on 77 displaced workers following 9/11, 21% met diagnostic criteria for PTSD, yet few received treatment (Thiel Bocanegra et al., 2004).

In addition to depression and post-traumatic stress disorder, another key mental health concern among Chinese Americans is suicide. According to Kin Wah Lee of the New York Coalition for Asian American Mental Health, there were at least 28 suicide-related deaths among Chinese Americans in New York City alone in 2005. However, mental health advocates

believe the actual number of suicides among Chinese Americans in New York City is much higher (Office of Minority Health, 2006).

These studies are consistent with the findings from the Chinese CHNRA. The two-point Patient Health Questionnaire (PH-9), which is used as a screening tool for depression was incorporated into the CHNRA survey. When asked how often Chinese CHNRA respondents felt down, depressed, or hopeless within the past 2 weeks, 21% reported feeling this way for several days, 3% for more than half the days, and 3% nearly every day. Additionally, when asked how often they felt little pleasure in doing things within the past two weeks, 13% reported feeling this way for several days followed by 4% for more than half the days, 3% nearly everyday. Lastly, only 13% of all survey respondents indicate that mental health is an important health concern.

Chinese Americans may shy away from mental health services on the basis of avoiding shame, language barriers, and the general limitations of Western services in meeting needs specific to immigrant populations (APIAHF, 2006). A comprehensive approach should be taken to increasing the community's awareness of and willingness to seek mental health services. In recent years, there has been an efforts locally to create integration between the primary care setting and mental health services. For instance at the Charles B. Wang Community Health Center, physicians and mental health professionals have developed a collaborative depression care model (CD-Care) that consists of physician intervention regarding depression care, proactive patient follow-ups by care managers, and mental health care consultation support. These are important steps to increasing

the access of community members to needed mental health services.

ORAL HEALTH

For many active adults, the hectic pace of their lifestyles often leaves little time for the daily oral health care routine needed to prevent cavities and periodontal disease. This is unfortunate since periodontal disease is the most common cause of tooth loss in adults. According to the American Dental Hygienists Association, an estimated 75% of Americans reportedly have some form of periodontal disease. Research also suggests potential links between the bacteria that cause periodontal (gum) disease and systemic diseases and conditions, such as oral cancers, cardiovascular disease, premature birth, diabetes, HIV/AIDS and other STDs, osteoporosis, Sjogren's syndrome, eating disorders, and substance abuse (Mayo Clinic, 2007).

Early detection of periodontal disease reduces the risk of permanent damage to teeth and gums and can prevent more extensive and costly treatment in later years. However, research with ethnic minorities has shown that culture and age cohort, as well as language and economic limitations, act as barriers to obtaining dental care and maintaining good oral health (Lee and Kiyak, 1992).

According to the Chinese CHNRA, 63% of all respondents have had a dental check up, of which 43% had it within the past year. Increasing the community's awareness about regular professional visits, every six months or as scheduled by a dental professional, will help reduce the likelihood of developing gingivitis and periodontal disease.

Literature Gaps and Recommendations



Being the largest API population in the United States, Chinese Americans have often been the focus of various health disparity studies. However, data is still lacking, such as in the areas of substance abuse, certain infectious diseases, and oral health. What is more, there are few health studies assessing the particular experiences of Chinese in New York City. There may be unique characteristics (geographic, political and social environment, access to resources and support systems) that impact the health of Chinese in NYC that would be not evident in other parts of the country. Additionally, increased efforts to document the distinctive experiences of various subgroups of NYC Chinese based on region/city of origin, occupation, gender, sexual orientation, etc. will add to the growing knowledge base.

Based on results from the Chinese CHNRA, several programmatic and policy recommendations are provided:

- Increase advocacy efforts to ensure medical interpreter services are provided in hospitals and clinics in New York City, especially in areas with a high Chinese population density

- Focus health education and screening efforts on health issues that are of particular concern for Chinese Americans, such as certain types of cancer like colorectal, liver, and lung cancer; stroke; diabetes; Hepatitis B; osteoporosis, and mental health conditions such as depression and suicide.
- Create gender- and age-specific health programs and interventions
- Develop health education materials that are responsive to the language needs and literacy capacity of Chinese communities
- Partner with community-based institutions like churches, businesses, schools, and other organizations to develop health promotion and screening activities.
- Form linkages with media outlets such as ethnic and local newspapers to develop health awareness activities

References

- Asian American Federation of New York Census Information Center. (2004). *Census Profile: New York City's Chinese American Population*. New York, NY: Asian American Federation of New York.
- Asian Pacific Islander Health Forum. (2006). *Health Brief: Chinese in the United States*. San Francisco CA: Asian Pacific Islander Health Forum.
- Babbar, R.K., Handa, A.B., Lo, C. (2006). Bone Health of Immigrant Chinese Women Living in New York City. *Journal of Community Health*, 31(1), 7-23.
- Boyd, Monica (1971). Oriental Immigration: The Experience of Chinese, Japanese, and Filipino Populations in the United States. *International Migration Review*, 5(1), 48-61.
- Census Profile: New York City's Chinese American Population (2004). *Asian American Federation of New York Census Information*. Retrieved 14 July, 2007 from Web site: www.aafny.org
- Centers for Disease Control and Prevention. (2004). Trends in tuberculosis in the United States, 1998– 2003. *MMWR*, 53, 1–4.
- Chi I., Lubeen, J.E., and Kitano, H.H.L. (1989). Differences in drinking behavior among three Asian-American groups. *J. Stud. Alcohol*, 50,15-23.
- Chin, J., Kang, E., Kim, J. (2006). Serving Asian and Pacific Islanders with HIV/AIDS: Challenges and Lessons Learned. *Journal of Health Care for the Poor and Underserved*, 17, 910-927.
- Chin, J., Mantell, J., Weiss, L. (2005). Chinese and South Asian Religious Institutions and HIV Prevention in New York City. *AIDS Education and Prevention*, 17(5), 484-502.
- Cornelius, L.J., Smith P.L., & Simpson, G.M. (2002). What factors hinder women of color from obtaining preventive health care. *American Journal of Public Health*, 92(4), 535-539.

- Demory-Luce, D.K., Morales, M., Nicklas, T (2005). Acculturation, Weight Status, and Eating Habits Among Chinese-American Preschool Children and their Primary Caregivers: A Pilot Study. *Nutrition Research*, 25, 213-224.
- Foo, S., Fang, J., Fung, C. (2005). Characteristics of Stroke Among Chinese in New York City— Can we increase the use of Tissue plasminogen activator? Retrieved July 29, 2007 from Chinese American Health Issues, Web site: <http://www.camsociety.org/issues/strokeamongChinese.htm>
- Galvan, F.H. & Caetano, R. (2003). Alcohol use and related problems among ethnic minorities in the United States. *Alcohol Research and Health*, 27(1), 87-94.
- Hong, Lawrence K. (1976). Recent Immigrants in the Chinese-American Community: Issues of Adaptations and Impacts. *International Migration Review*, 10(4), 509-514.
- Hsiao-Rey Hicks, Madelyn (2006). The Prevalence and Characteristics of Intimate Partner Violence in a Community Study of Chinese American Women. *Journal of Interpersonal Violence*, 21(10), 1249-1269.
- Huff, R., & Kline, M (1999). *Promoting health in multicultural populations: A handbook for practitioners*. Thousand Oaks, CA: Sage.
- Hwang W., Chun, C., Takeuchi, D. (2005). Age of First Onset Major Depression in Chinese Americans. *Cultural Diversity and Ethnic Minority Psychology*, 11(1), 16-27.
- Kandula, N.R., Kersey, M., Lurie, N. (2004). Assuring the health of immigrants: what the leading health indicators tell us. *Annual Review of Public Health*, 25, 357-376.
- Kandula, N. & Lauderdale, D. (2006). Leisure time, non-leisure time, and occupational physical activity in Asian Americans. *Annual Epidemiology*, 15, 257-265.
- Kuo, W., St. Lawrence, J. (2006). Sexual behavior and self-reported sexually transmitted diseases (STDs): Comparison between White and Chinese American young people. *Culture, Sexuality & Health*, 8(4), 335-349
- Lassiter, S. (1995). *Multicultural Clients: A professional handbook for health care providers and social workers* (pp. 35-49). Westport, CT: Greenwood.
- National Osteoporosis Foundation. *Prevention: Who is at risk?* Retrieved 7 August, 2007 from Web Site: <http://www.nof.org/prevention/risk.htm>
- Mayo Clinic. *Oral health: A window to your overall health*. Retrieved 7 August, 2007 from Web Site: <http://www.mayoclinic.com/health/dental/DE00001>
- McCracken, M., Olsen, M., Chen, M.S. (2007). Cancer Incidence, Mortality, and Associated Risk Factors Among Asian Americans of Chinese, Filipino, Vietnamese, Korean, and Japanese Ethnicities. *A Cancer Journal for Clinicians*, 57, 190-205.

- New York City Department of Health & Mental Hygiene (2002). Selected results from *The Community Health Survey 2002*. New York, NY: NYC Department of Health & Mental Hygiene, Division of Epidemiology, Bureau of Epidemiology Services.
- New York City Department of Health & Mental Hygiene (2005). Selected results from *The Community Health Survey 2005*. New York, NY: NYC Department of Health & Mental Hygiene, Division of Epidemiology, Bureau of Epidemiology Services.
- Ngo-Metzger, Q., Massagli, M., Clarridge, B. (2003). Linguistic and Cultural Barriers to Care. *JGIM Populations at Risk*, 18, 44-52.
- Office of Minority Health. (2006, May 4). "Office of Minority Health's Speak Campaign Now Available in Chinese." Press release posted on www.omh.state.ny.us/omhweb/News/pr_050406_speak_english_ver.html
- Ozer, E.J., McDonald, K.L. (2006). Exposure to Violence and Mental Health among Chinese American Urban Adolescents. *Journal of Adolescent Health*, 29, 73-79.
- Pollack, H., Wan, K., Ramos, R. (2006). Screening for Chronic Hepatitis B Among Asian/Pacific Islander Populations—New York City, 2005. *Morbidity and Mortality Weekly Report*, 55: 505-509.
- Shelley, D., Fahs, M., Scheinmann, R. (2004). Acculturation and Tobacco Use Among Chinese Americans. *American Journal of Public Health*, 94, 300-307.
- Sue, S., Kitano, H., Hatanaka, H., and Yeung, W.T. (1985). Alcohol consumption among Chinese in the United States. In L. Bennett, and G. Ames (Eds.), *The American Experience with Alcohol*. New York, NY: Plenum, pp. 359-371.
- Sue, S., Zane, N., & Ito J. (1979). Alcohol drinking patterns among Asian and Caucasian Americans. *Journal of Cross-Cultural Psychology*, 10, 41-56.
- Talbot, E.A., Moore, M., McCray, E., Binkin, N.J. (2000). Tuberculosis among foreign-born persons in the United States, 1993–1998. *JAMA*, 284, 2894–2900.
- The Health of Immigrants in New York City (2006). *The New York City Department of Health And Mental Hygiene*. Retrieved July 20, 2007 from <http://www.nyc.gov/html/doh/html/home/home.shtml>
- Thiel Bocanegra, H., Brickman E. (2004). Mental Health Impact of the World Trade Center Attacks on Displaced Chinese Workers. *Journal of Traumatic Stress*, 17, 55-62.
- U.S. Census Bureau. (2006). Selected profiles from the *American Community Survey, 2005*. American Fact Finder.
- Walker, M.D., Babbar, R., Opotowsky, A. (2007). Determinants of Bone Mineral Density in Chinese-American Women. *Osteoporosis International*, 18, 471-478.
- Yu, M., Wu, T (2004). Factors Influencing Mammography Screening in Chinese American Women. *JOGNN Clinical Issues*, 24(3), 386-394.

Appendix

RESOURCES FOR CHINESE AMERICANS IN NYC

AMERICAN CANCER SOCIETY - ASIAN PROGRAMS

41-60 Main Street
Flushing, NY 11355
phone: (718) 886-8890

ANNA ERIKA ASSISTED LIVING

110 Henderson Avenue
Staten Island, NY 10301
phone: (718) 727-8100

ASIAN & PACIFIC ISLANDER COALITION ON HIV/AIDS, INC.

400 Broadway
New York, NY 10013
phone: (212) 334-7940
www.apicha.org

ASIAN FAMILY SERVICES

1921 Park Street
Hartford, CT 06106
phone: (860) 951-8770 x.24
www.asianfamilyservices.org

ASIAN-AMERICAN CONSULTING SERVICES / NEW LAND COMMUNITY CENTER

677 Seneca Avenue
Ridgewood, NY 11385
phone: (718) 381-3607

BELLEVUE HOSPITAL CENTER - ASIAN IN-PATIENT PROGRAM

462 First Avenue
New York, NY 10016
phone: (212) 562-3624 / 4002

BETH ISRAEL MEDICAL CENTER - ASIAN SERVICES PROGRAM

10 Union Square East, Suite 2M
New York, NY 10003
phone: (212) 844-6888
www.wehealny.org/patients/bimc_description.html

BORINQUEN PLAZA SENIOR CENTER

80 Seigel Street
Brooklyn, NY 11206
phone: (718) 782-6334

CAMBA, INC.

1720 Church Avenue, 2nd floor
Brooklyn, NY 11226
phone: (718) 287-2600
WWW.CAMBA.ORG

CENTER FOR IMMIGRANT HEALTH

Division of Primary Care ,
NYU School of Medicine
550 First Avenue, OBV, CD-402
New York, NY 10016
phone: (212) 263-8783
www.med.nyu.edu/cih/

**CENTER FOR THE STUDY OF ASIAN
AMERICAN HEALTH**

NYU School of Medicine
550 First Avenue, MSB-153
New York, NY 10016
phone: 212-263-3072
www.med.nyu.edu/csaah

**CHARLES B. WANG COMMUNITY
HEALTH CENTER**

268 Canal Street
New York, NY 10013
phone: (212) 379-6986
www.cbwchc.org

**COALITION FOR ASIAN AMERICAN
CHILDREN AND FAMILIES**

50 Broad Street, Room 1701
New York, NY 10004
phone: (212) 809-4675
www.cacf.org

**COGNITIVE BEHAVIOR THERAPY
INSTITUTE AND THERAZENTM
CENTER FOR PSYCHOTHERAPY-
MEDITATION INTEGRATION**

211 E. 43rd Street, Suite 1901
New York, NY 10017
phone: (212) 490-3590
www.cbtinstitute.com

COOLEY'S ANEMIA FOUNDATION

330 7th Avenue
#900
New York, NY 10001
phone: (212) 279-8090
www.thalassemia.org

**FIRST CHINESE PRESBYTERIAN
COMMUNITY AFFAIRS - HOME
ATTENDANT CORPORATION**

1 Heron Court
Norwalk, CT 06854
phone: (212) 964-0521

**GOVERNEUR HOSPITAL - ASIAN
BICULTURAL CLINIC**

Behavioral Health Department
227 Madison Street, Room #3-100
New York, NY 10002
phone: (212) 238-7332

**GOVERNEUR HOSPITAL - MOBILE
CRISIS UNIT**

311 East Broadway, 2FL
New York, NY 10002
phone: 212-238-7529

GRACIE SQUARE HOSPITAL - ASIAN PROGRAM

420 East 76th Street
New York, NY 10021
phone: (212) 434-5540
www.nygsh.org

HAMILTON-MADISON HOUSE, INC.

50 Madison Street
New York, NY 10038
phone: (212) 349-3724
www.hmhonline.org

HOSPITAL FOR SPECIAL SURGERY - LANTERN (LUPUS ASIAN NETWORK) PROGRAM

Department of Patient Care
&Quality Management
535 East 70th Street
New York, NY 10021
phone: (212) 774-2508 / (866) 505-2253

LONG ISLAND ALZHEIMER'S FOUNDATION

5 Channel Drive
Port Washington, NY 11050
phone: (516) 767-6856
www.liaf.org

LOWER EASTSIDE SERVICE CENTER - CHINESE DAY TREATMENT PROGRAM

46 East Broadway
New York, NY 10002
phone: (212) 343-3520
www.lesc.org

MENTAL HEALTH ASSOCIATION OF NEW YORK - ASIAN LIFENET

666 Broadway, Suite 200
New York, NY 10012
phone: (877) 990-8585
www.mhaofnyc.org/2lifenet.html

NEW YORK ASSOCIATION FOR NEW AMERICANS, INC.

17 Battery Place
New York, NY 10004
phone: (212) 425-2900
www.nyana.org

NEW YORK COALITION FOR ASIAN AMERICAN MENTAL HEALTH

253 South Street, 3rd Floor
New York, NY 10002
phone: (212) 720-4522
www.asianmentalhealth.org

NEW YORK DOWNTOWN HOSPITAL

170 William Street
New York, NY 10038
phone: (212) 312-5000
www.downtownhospital.org

NEW YORK FOUNDATION FOR SENIOR CITIZENS, INC.

11 Park Avenue, 14th Floor
New York, NY 10007
phone: (212) 962-7559
www.nyfsc.org

**NEW YORK UNIVERSITY - CENTER
FOR IMMIGRANT HEALTH**

Division of Primary Care,
NYU School of Medicine
550 First Avenue, OBV, CD-402
New York, NY 10016
phone: 212-263-8783
www.med.nyu.edu/cih

**NY FOUNDATION FOR SENIOR
CITIZENS (CASE MANAGEMENT
PROGRAM)**

11 Park Place Suite #1111
New York, NY 10007
phone: (212) 962-7817

**SAINT VINCENT'S CATHOLIC
MEDICAL CENTER**

170 West 12th Street
New York, NY 10011
phone: (212) 604-7000
www.svcmc.org/body.cfm?id=32

**THE CHILD CENTER OF NEW YORK
- ASIAN OUTREACH PROGRAM**

87-08 Justice Avenue
Elmhurst, NY 11373
phone: (718) 899-9810
www.childcenterny.org

**TZU CHI-ELMHURST HOSPITAL
FAMILY HEALTH CENTER**

41-60 Main Street, Suite 201
Flushing, NY 11355
phone: (718) 334-6730