



Manual 1

Study Protocol, General Description and Study Management

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Tracking of Revisions to HCHS/SOL Protocol Manuals

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1.0 Objectives and Background

1.1 Objectives

The overall objectives of this research are to identify the prevalence of and risk factors (protective or harmful) for diseases, disorders and conditions in Hispanic/Latino populations, and to determine the role of acculturation and disparities in their prevalence and development. This study is intended to be broad-based and to address a wide variety of conditions, including heart disease, stroke, asthma, chronic obstructive lung disease, sleep disorders, dental caries and disease, hearing impairment and tinnitus, diabetes, kidney and liver disease, and cognitive impairment. Risk factors to be assessed include (but are not limited to) nutrition, activity, obesity, smoking, blood pressure, blood lipids, acculturation, social and economic disparity, psychosocial factors, occupation, health care access, medication and supplement use, and environmental context. Samples of Hispanics/Latinos are selected to be representative of a defined community, participate in an examination consisting of interviews and procedures, and be followed over time for disease occurrence. This is achieved through the following specific objectives in a 6.5-year contract:

- A. To identify, sample, and recruit up to 4000 persons of Hispanic/Latino origin from each of these separate communities for participation in a longitudinal epidemiology study (up to 16,000 persons total, age 18-74).
- B. To conduct a detailed interview and examination of these study participants including fasting blood draw, questionnaires, and procedures to capture health behaviors and risk factors for many chronic diseases.
- C. To conduct an annual contact, consisting of a brief questionnaire, of these persons following the initial examination.
- D. To identify new coronary heart disease, stroke, heart failure, and chronic obstructive lung disease events that have required hospitalization following the initial examination; to identify acute exacerbations of asthma requiring ER care or hospitalization; to review and adjudicate medical information from hospital, physician and other records.
- E. To develop innovative hypotheses, perform data analysis, and produce publications from this study.
- F. To provide community education and feedback regarding information from the study itself; to provide information to improve the health of the communities in general; and to provide training for minority investigators.
- G. To provide opportunities for ancillary studies funded by other mechanisms by establishing collaborations and publicizing the potential for these opportunities.

The above objectives are achieved through contracts by the National Heart, Lung, and Blood Institute with the four Field Centers and one Coordinating Center. The Coordinating Center contracts the services for a Central Laboratory and Reading Centers. Study protocols are common to all centers and are directed by a Steering Committee consisting of a representative of each Field Center, the Coordinating Center, and the National Heart, Lung, and Blood Institute.

Note: The National Heart, Lung, and Blood Institute (NHLBI) manages these contracts, but funding is provided by the NHLBI and the National Institute on Deafness and Other Communication Disorders, National Institute of Dental and Craniofacial Research, National Institute of Diabetes and Digestive and Kidney Diseases, National Institute of Neurological

Disorders and Stroke, the National Center on Minority Health and Health Disparities, and the NIH Office of Dietary Supplements.

1.2 Background

The Hispanic/Latino population is now the largest minority population in the US with a projected three-fold growth by 2050. Hispanics/Latinos are influenced by factors less commonly found in other US population groups, including changes in diet, activity, community support, working conditions, and health care access, particularly as these changes are associated with immigration from different cultural settings and environments. They are experiencing increasing obesity, higher risks of diabetes, and changes in social and behavioral factors with large potential impact on many major chronic diseases. They consist of population groups originating from multiple geographic areas and founder populations, and with residence in the US for varying lengths of time, ranging from many generations to less than a year. These differing cultural and genetic backgrounds can have a large potential to influence disease risk.

National data show that US Hispanic/Latino populations overall have lower coronary heart disease mortality rates than non-Hispanics/Latinos but have increased prevalence of obesity and diabetes. Hispanics/Latinos also have a lower incidence of, and mortality from, cancer (all sites) than blacks or whites. These data also show that some Hispanic/Latino groups have high asthma burden, with Puerto Ricans having a four-fold higher asthma prevalence than Mexican Americans. Disproportionate numbers of Hispanics/Latinos have fewer economic resources and more may be employed in occupations with exposures that could adversely affect health and increase risk of disease.

If the immigrant Hispanic/Latino populations follow the patterns of most other immigrant groups, their risk of chronic diseases associated with US lifestyle and culture is likely to increase. Observational data are needed to assess changes associated with immigration and acculturation to living in the US, identify those most strongly related to disease risk, and determine how best to prevent the risk factor changes which are most harmful to health. Research in differing cultural settings, such as various Hispanic/Latino groups with varying periods of residence in the US, can identify differences in risk factor associations not identifiable in more homogenous US populations. If the risk of some diseases (e.g. CHD or cancer) is actually lower in Hispanics/Latinos than in non-Hispanics/Latinos, or the risk of other diseases (e.g. asthma, obesity, diabetes) is higher in some Hispanic/Latino subgroups, identification of factors contributing to these differences is relevant to both Hispanics/Latinos and non-Hispanics/Latinos.

Hispanic/Latino populations are very much understudied with respect to many diseases. Their projected population growth underscores the need for accurate evaluation of their disease burden and risk. Their disproportionately lower economic status results in significant disparities in health care. Compared to non-Hispanics/Latinos, Mexican Americans (and for some indices all Hispanics/Latinos) are half as likely to have their hypertension controlled, more than twice as often report no usual health care, have a greater prevalence of reported fair or poor health, and are twice as likely to have no health insurance. Asthma appears to be a particular problem in some subgroups, and occupational exposures put lower socioeconomic status (SES) Hispanics/Latinos at higher risk for other lung diseases.

2.0 Study Design

2.1 Study Methodology

2.1.1 The 4 field centers recruit up to 4,000 persons of Hispanic/Latino origin to participate in a longitudinal epidemiology study. The age range is 18-74, and study participants are selected to obtain approximately 2,500 persons age 45-74, and approximately 1,500 persons age 18-44. Recruitment was designed to occur in stable communities so that persons can be contacted over time, and possibly examined more than once. Each community has a community social infrastructure and organization that enables community support and feedback.

2.1.2 The recruited individuals attend an examination to assess cardiovascular and other disease risk factors, both known and potential. The risk factors of particular interest are described in section 2.1.3 on examination questionnaires and procedures. The study strives to make the percent of identified persons who actually attend the examination high, to reduce bias from non-response. There is no exclusion of persons based on existing health status but the following persons are not recruited: those who plan on moving away in the next 3 years; those who have health problems, disabilities, or mental problems so severe as to prohibit informed consent and actual clinic attendance. Language barriers are not a reason for exclusion for Spanish speakers not proficient in English, since all contact with participants is done using the appropriate language.

2.1.3 Examination Components. The components of the examination are listed below:

Table 1. Components of the Participant Initial Interviews and Informed Consent

Procedure	Description
Personal Information	List all household members, age, background origin, years in U.S., social security number for mortality follow-up.
Household Location	Information sufficient for geocoding.
Contact Information	Collect names, addresses, and telephone numbers of 2 other persons who would know participant's location.
Informed Consent	Obtain signed informed consent that complies with all required standards.
Medical Release Form	Allows the study to obtain access to participant's medical records.

Table 2. Components of HCHS/SOL Participant Questionnaires

Questionnaire	Description
Health and Medical History	General health status, cardiovascular and lung illnesses, asthma, diabetes and kidney diseases, cancer, sleep disorders, and hearing loss or tinnitus in the past.
Family History	All conditions under the study such as cardiovascular disease, diabetes, hearing loss, kidney disease, and cancer.
Acculturation	Assessment of residence history, country of origin, ancestry, and degree of adaptation to new physical, cultural, social, and economic environment.
Social and Behavioral	Family structure, community engagement, affiliation and association with other social structures such as church and social organizations, formal education and training, traditional and/or Hispanic/Latino values and behaviors, and risk factor behaviors.
Occupational	Specific occupation(s) and aspects of occupation potentially related to lung and cardiovascular diseases, cancer, and hearing loss.
Health Care Access	Health insurance, use of health care facilities, barriers to health care and utilization access.
24-Hour Dietary Recall	Questions on dietary habits over past 24 hours, plus a food propensity questionnaire (FPQ) developed to include Hispanic/Latino foods. The 24 hour recall is obtained during initial examination and again within 1 month of examination. Includes information on dietary supplements and botanicals, both standard and alternative. The FPQ is administered in the one year follow-up telephone call.
Smoking	Past and current cigarette use, ever use of cigars and pipes, cessation attempts including use of medications to assist without quitting, and use of modified harm-reduction tobacco products, exposure to second hand smoke.
Alcohol Consumption	Usual intake and drinking patterns.
Physical Activity	Current physical activity including work, household, leisure, and sport related activity.
Disability	SF-12.
Weight Loss/Gain	History of weight gain or loss.
Sleep	Sleep disordered breathing, apnea, restless leg syndrome, number of hours slept, sleeping during the day.
Medication	Prescription and non-prescription use, vitamin/dietary supplements and alternative medications taken in past month. Participants will be instructed to bring all these medications to the examination site for direct recording.
Oral/Dental Health	Access and barriers to care, oral cancer, oral health-related quality of life.
Hearing	Hearing ability, hearing aid use, tinnitus, noise exposure, hearing protector use, pressure equalization tube use, recent cold/sinus/earache, recent loud noise/music exposure and self-assessment of hearing symmetry.

Table 3. Components of Medical Examinations

Exam	Descriptions
Blood pressure	Standard epidemiologic procedures (5 minute rest, 3 measures), and using an automated blood pressure device. Separately, measure ankle and arm blood pressure using standardized Doppler procedures.
Pulmonary Function	Obtain digitized spirometric measurements of timed pulmonary function (FVC, FEV1). Following first spirometric test, participants with impaired function will inhale a bronchodilator followed by a second spirometry test.
Sleep Assessment	Overnight sleep disordered breathing, particularly to assess sleep interruption due to sleep apnea.
ECG	Standard digital 12 lead ECG and two-minute rhythm strip.
Anthropometry	Weight, standing height, abdominal and bioelectrical impedance.
Physical Activity	Measure activity using activity monitors worn by participants.
Dental	Assessment of medical exclusion, tooth count, functional occlusion/occlusion pairs, coronal caries, restorative materials, root caries, periodontal disease, and recommendations for dental health care.
Audiometry	Otoscopy, acoustic immittance, and pure tone audiometry.

Table 4. Components of the Blood, Urine, and Laboratory Measurements

Measure	Description
Venipuncture	Obtain fasting blood samples for laboratory analytes above. Whole blood, serum, plasma, and leukocytes and DNA are stored for future analyses.
Glucose Tolerance	Two-hour oral glucose tolerance test.
Spot Urine	Collect early upon arrival at examination site.
Additional Blood	Collect additional tubes of blood to use for 5% blind replicate samples.
Lab Measurements	From blood: Total cholesterol, HDL cholesterol, triglycerides, glucose (pre- and post-OGTT), insulin, glycosylated hemoglobin, iron, creatinine, ALT, AST, UIBC, CBC with differential, platelets, serology for Hepatitis A, B, and C, and HCV RNA (on the subset hepatitis C positive). From urine: albumin, creatinine

2.1.4 Study Startup. Study startup is preceded by central training and certification of staff, pretest of forms, and conduct of a pilot run-through of all study components. Questionnaires and procedures are implemented using state-of-the-art quality control procedures including repeat measurements, quantitative evaluation of performance, and retraining and recertification as needed. Site visits by the coordinating center are conducted annually to assure compliance with study standards.

2.1.5 Data Collection. Data collection for the HCHS/SOL study requires questionnaires in each domain of measurement to be available in both English and Spanish versions. Questionnaires for which no existing Spanish translations are available are translated by a subcontracting firm, Research Triangle Institute (RTI), with expertise in multilingual instrument development for large-scale surveys. Both new and existing translations are then reviewed by members of the Translation and Validation Subcommittee. This committee includes members from the four field centers and the coordinating center who are bilingual and represent all four countries of origin for the study (Mexican, Cuban, Puerto-Rican, and Central/South American). Scoring sheets are distributed for each translation on which committee members identify problems with specific items. In addition, committee members are asked to rank each item in order of seriousness of translation issues found. The results of the reviews are discussed via teleconference, and a summary of recommended changes to the translation are sent back to RTI for modification.

Focus groups are conducted at each field center with community volunteers representing the various countries of origin at each site. It is anticipated that approximately 20% of the total number of questionnaire items planned for the study will be selected for focus group testing based on the rankings described above. Focus groups consist of six to eight members and last approximately 1.5 hours. A trained facilitator leads the discussion, and a recording is made for review and scoring after the session has concluded. Results from the focus groups are analyzed and reviewed by committee members, and a summary of any changes needed as a result are forwarded to RTI.

The final translations are certified by RTI and released for programming into the web-based data management system. Plans for pilot testing a selected subset of questionnaires are under consideration at this time. The purpose of the pilot testing would be for validation of the translation. If carried out, each questionnaire in the pilot would be administered to bilingual volunteers twice. The first administration would be in either English or Spanish, followed one to two weeks later by the second administration in the other language. The two administrations would then be compared in order to provide a measure of validity of the translation.

2.1.6 Medical Information. Appropriate medical information from the examination is provided to the participant and/or doctor. This includes alerts which require prompt attention by the participant, as well as standard reports of measurements of value to each person.

2.1.7 Annual Follow Up. Participants are contacted annually, either by telephone or in person, and administered a brief questionnaire. The questionnaire obtains information on any doctor or hospital visits in the interim, questions on health during the interim, and an update of contact information.

2.1.8 The Study identifies, abstracts, reviews, and validates cardiovascular and lung events (requiring emergency room visit or hospitalization, or based on death information) which occur in the interim between the baseline exam and each subsequent annual follow-up. Cardiovascular events include myocardial infarction, stroke and heart failure. Lung events include chronic obstructive lung disease and asthma. In more detail, we do the following:

- A. Identify possible events from the annual follow-up questionnaire which provide a self-report that a hospitalization or ER visit took place and the self-reported reason for the visit.
- B. Abstract information from these records and enter into the study data base.
- C. Validate the diagnosis by review of the abstracted information either by computer or a review committee.
- D. Identify deaths from information obtained at the annual follow-up and from a review of the vital statistics lists and obituaries from the state in which the community is located. The Coordinating Center (or Field Center if required for confidentiality) is responsible for conducting a match to the National Death Index periodically.
- E. Establish cause of death by obtaining, abstracting, and reviewing all relevant information from next-of-kin, coroner, physician, and hospital.
- F. Review the abstracted information and validate the diagnoses using trained and certified clinicians designated from each Field Center (a morbidity and mortality classification committee).
- G. Ascertain, review, and validate events.

2.1.9 Data Collection. Data collected at the Field Center is transmitted to the Coordinating Center weekly at a minimum for editing and processing. Most data is in fact entered directly over the internet on the server in the Coordinating Center.

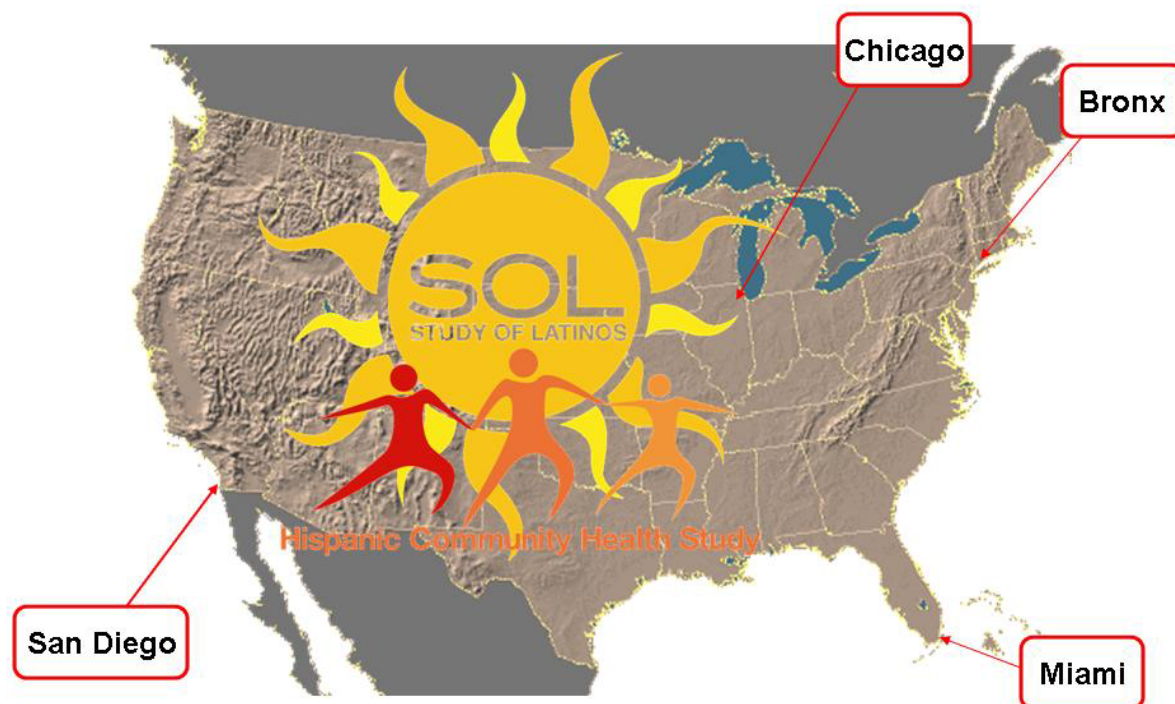
2.1.10 Community Input. The field centers maintain close connection and cooperation with the community by providing for community consultation, focus groups, and community interaction in relation to the goals and performance of the study, and for any unusual or sensitive issues such as genetic testing for identification of ancestry. Health education is provided to the community. An assessment of the impact of this education and feedback on study data is provided. Cooperation, feedback, and education are essential for successful recruitment and retention in the study.

2.1.11 Data for Other Researchers. The Coordinating Center is responsible for preparing a limited access data set (LADS) of data from this study. Limited access data refers to study data, with certain deletions and recoding, that are released to requesting institutions and investigators for specific purposes and with certain restrictions and conditions. Limited access data are made available to the public in accordance with the draft NHLBI Policy for Distribution of Data. (<http://www.nhlbi.nih.gov/funding/inits/ladspolicy.doc>.)

2.1.12 Ancillary Study Opportunities. Investigators with the study promote the development and implementation of ancillary studies through Federal and non-Federal grant mechanisms, particularly during the latter years of the contract when there is no regularly scheduled contract required examination. An ancillary study is one which is not required in the statement of work, and not funded under the negotiated contract.

2.2 Field Centers

Study participants are recruited from four field centers located across the United States. These centers are located in Bronx, New York; Chicago, Illinois; Miami, Florida; and San Diego, California. The cities and the population of interest are described in further detail in the following section. Descriptive statistics on each area of interest are in Appendix I. More information on each center is in this section.

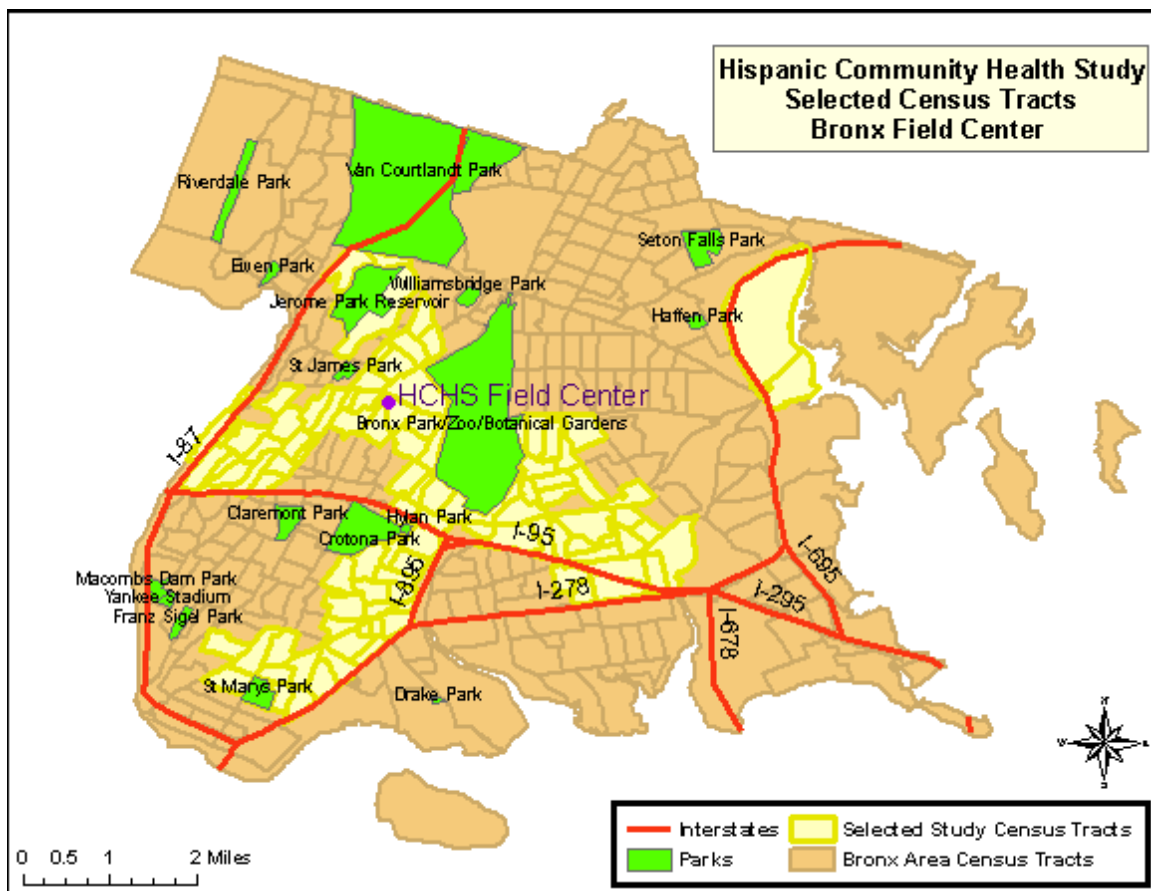


2.2.1 Study Populations

Bronx, New York

The Bronx County population, the 27th largest county in the US, represents one of the largest, oldest, and most well-established concentrations of Hispanic/Latino individuals in the US. The Bronx is home to 644,705 Hispanic/Latino individuals, representing 48% of the 1.3 million Bronx residents (at the county level, the second highest percentage of Latinos anywhere east of the Mississippi River). Of the 5 boroughs of New York, the Bronx has the largest proportion of Hispanics/Latinos. Puerto Ricans are the most represented Hispanic/Latino subgroup in the Bronx (50%, n=319,240), followed by Dominican (21%, n=133,087) and Mexican (5%, n=34,377) individuals.

For recruiting, areas of the Bronx that have the highest Hispanic/Latino concentration and that are in closest proximity to the Bronx Field Center location(s) in the South and East Bronx are targeted. Map 1 highlights the specific recruiting areas for the Bronx. Areas in yellow represent the selected census tracts.

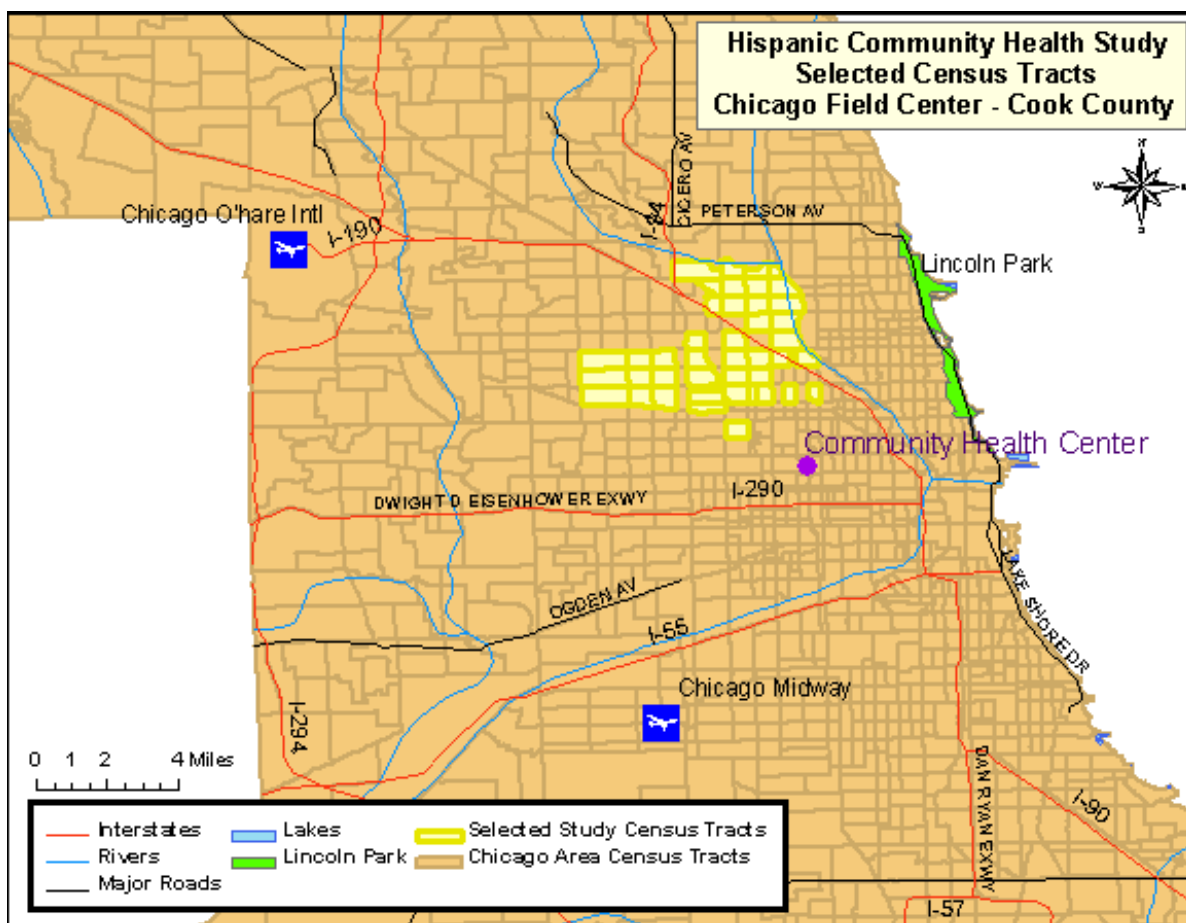


Map 1: HCHS/SOL Selected Census Tracts, Bronx

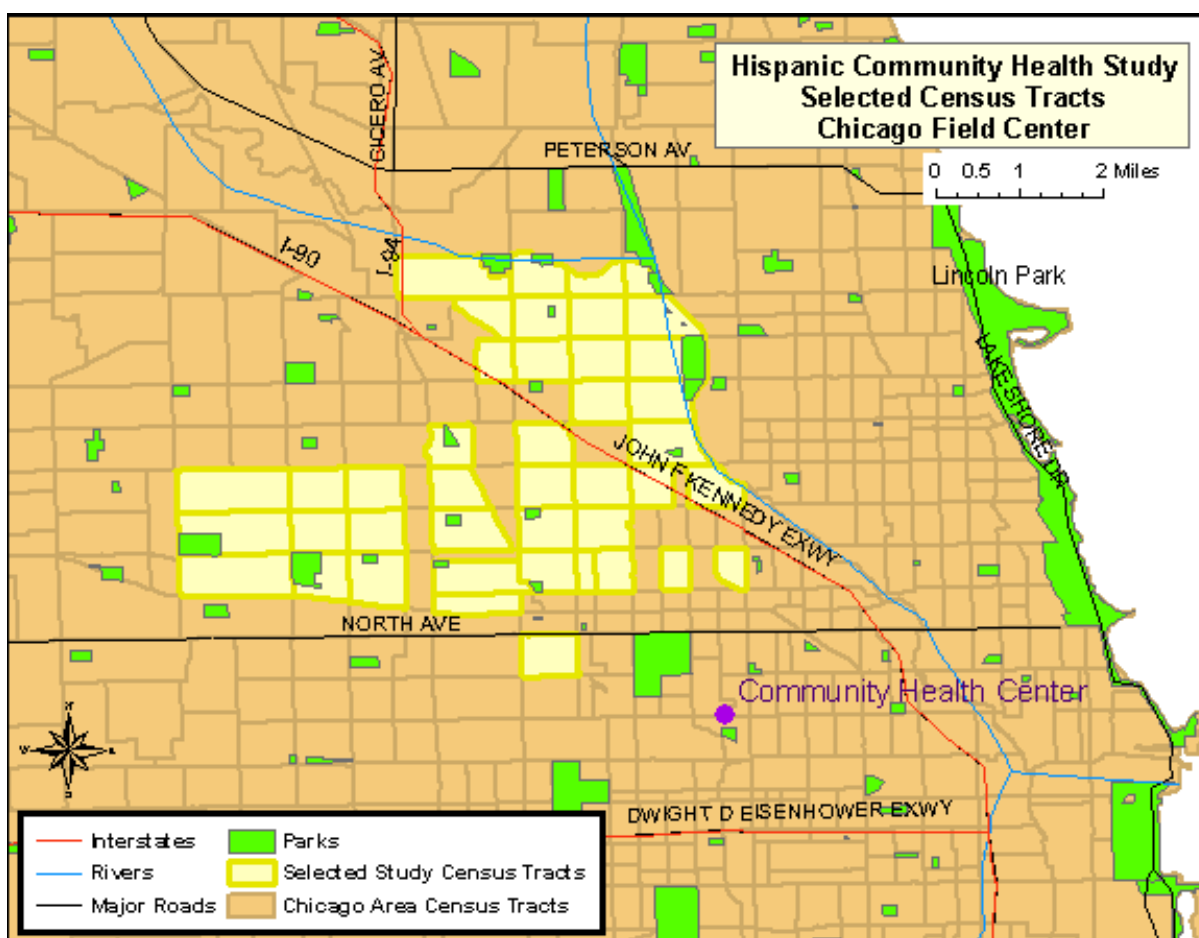
Chicago, Illinois

The Chicago-Naperville-Joliet Metropolitan Statistical area has over 1.7 million residents of Hispanic/Latino origin according to estimates from the American Community Survey, 2005 (ACS05). Nearly one in five area residents is of Hispanic/Latino origin, making the area the third largest concentration of Hispanics/Latinos in the US after Los Angeles and New York. Nearly 30% of the estimated 2,701,926 residents of the city of Chicago are of Hispanic/Latino origin according to ACS05. There are 778,234 Hispanics/Latinos in the city of Chicago proper with Mexican/Mexican Americans being the largest subgroup (73%, n=564,853), followed by Puerto Ricans (15%, n=113,924), and other Hispanics/Latinos (13%, n=99,467) (ACS05).

While recent years have seen a trend of urban gentrification in some traditionally Latino neighborhoods in the city and a corresponding trend of Hispanic/Latino out-migration to the suburbs, there remain numerous neighborhoods with substantial concentrations of Hispanics/Latinos. The targeted area for the Chicago site is composed of such ethnically diverse neighborhoods with several that have been majority Hispanic/Latino for decades as well as others that were traditionally White/European-immigrant which have experienced Hispanic/Latino in-migration only recently. The highlighted areas in Map 2 represent the selected census tracts in the Cook County, where Chicago is located.



Map 2: HCHS/SOL Selected Census Tracts, Cook County



Map 3: HCHS/SOL Selected Census Tracts, Chicago

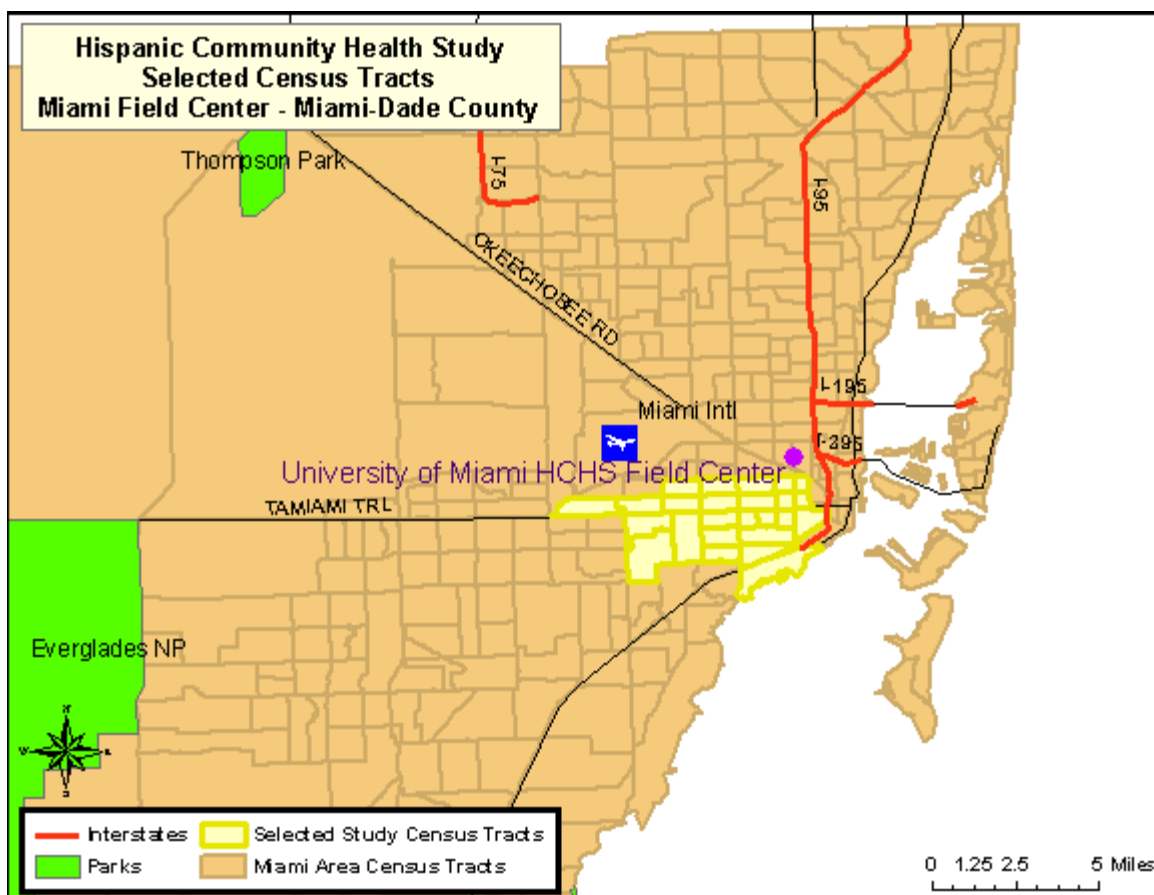
Map 3 represents a closer view of the census tracts selected. According to the 2000 census, there are 170,592 Hispanics/Latinos in the sampling frame area with an estimated 108,348 Hispanic/Latino persons ages 18-74, which includes Mexican/Americans (56%, n=61,298), Puerto Ricans (24%, n=26,202), and Central/South Americans (10%, n=10,572). Persons designated as "Other Hispanics" make up an additional 10% of the Hispanic/Latino population in the targeted area.

There is also a diversity of socio-economic status within the selected area. In the selected census tracts, median household income ranges from \$27K to \$51K (median \$38K) and the percent of high school graduates for those 25 and older ranges from 37% to 75% (median 56%).

Miami, Florida

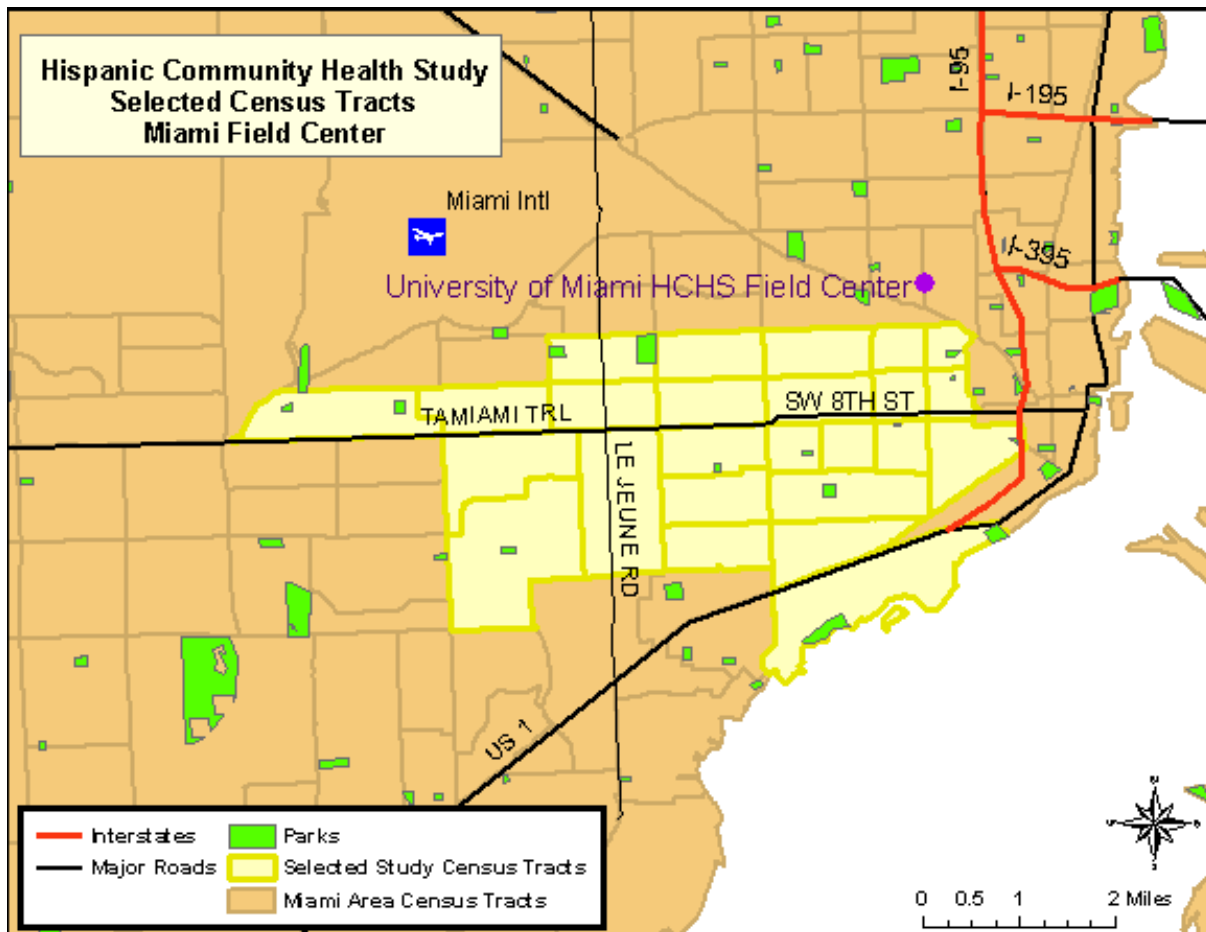
Miami-Dade County, Florida consists of 36 cities as well as unincorporated areas that comprise 45% of the county population. According to the 2000 census, Miami-Dade county had a population of 2,253,362 of whom 1,291,737 (57%) were Hispanic/Latino. By 2005 the population grew to 2,422,075 with proportionate growth throughout most of the county, including the two largest cities (Miami, 386,882 and Hialeah, 230,407). The city of Miami is 66% Hispanic/Latino and Hialeah is 90% Hispanic/Latino.

According to the 2000 census, among the 1,291,737 Hispanics/Latinos living in Miami-Dade County, 50% were Cuban American, 11% South American, 9% Central American, 6% Puerto Rican, 3% Mexican American, 3% Dominican American, and 18% classified as Other. Within the county, 54% of the residents were foreign born. Of these, 93% came from Latin America and 59% report speaking Spanish at home. Some of the 31% of residents who have lived in Miami-Dade County for five years or more report speaking English less than very well. Above the age of 25 years, 60% of Hispanics/Latinos have at least completed high school compared with 68% for the total county. The highlighted areas of Map 4 represent the selected census tracts in Miami-Dade County.



Map 4: HCHS/SOL Selected Census Tracts, Miami-Dade County

The primary focus of recruitment for the HCHS/SOL is in the southwest section of Miami-Dade County. This area consists of approximately 20 contiguous census tracts beginning just south of the Miami Field Center and extending further south and west to the city of Coral Gables. Most of the targeted census tracts are located in the city of Miami. Of 362,470 people living in the city of Miami according to the 2000 census, 238,351 (66%) were Hispanic/Latino. Among those 52% were Cuban American, 4% Puerto Rican, 2% Mexican American, and 42% Other Hispanic/Latino. In the city of Coral Gables there were 42,249 residents according to the 2000 census with 19,703 (47%) being Hispanic/Latino. Among these Hispanic/Latino 62% were Cuban American, 5% Puerto Rican, 2% Mexican American and 31% Other Hispanic/Latino. Map 5 provides a closer view of the selected census tracts in the Miami area.



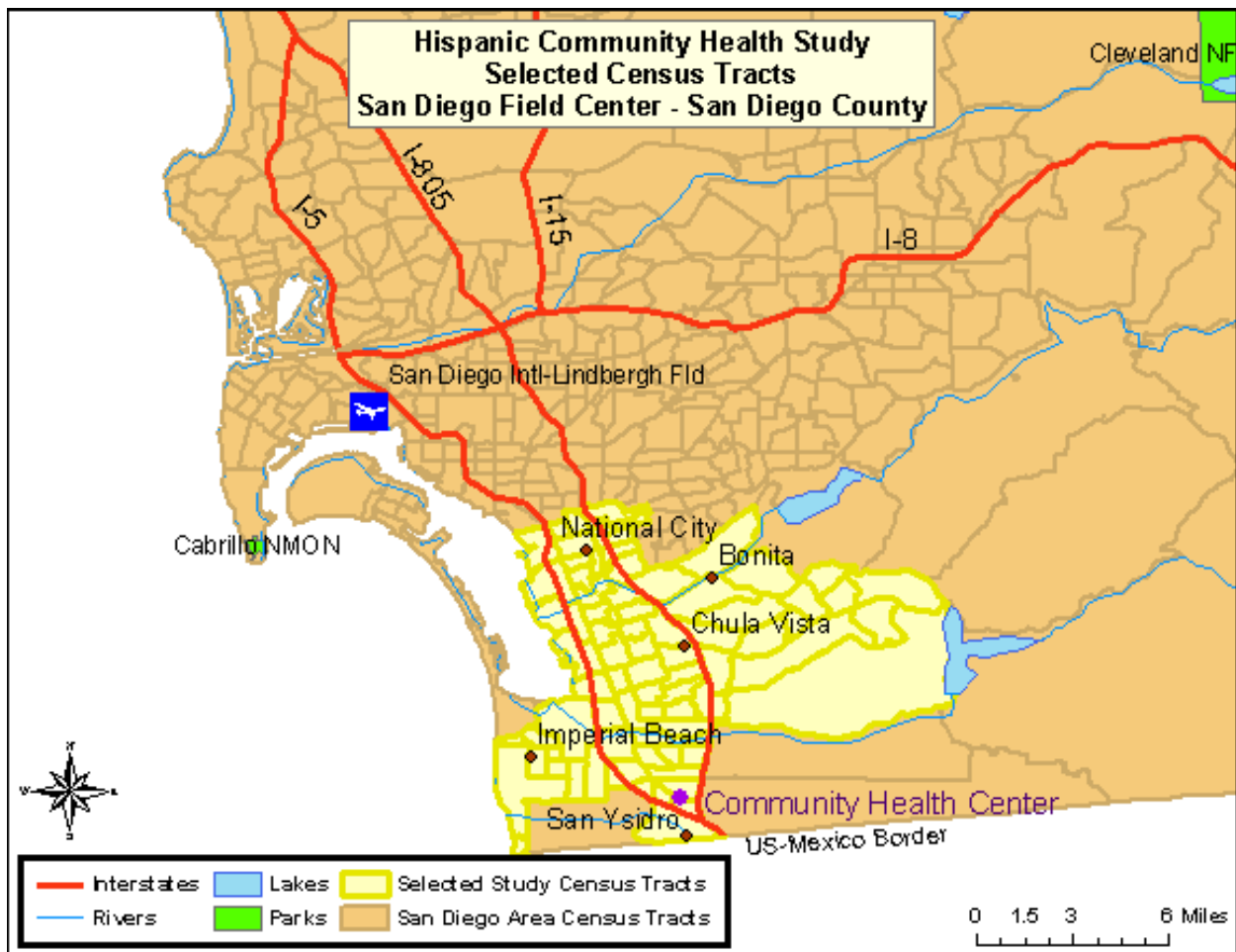
Map 5: HCHS/SOL Selected Census Tracts, Miami

Within the primary focus area, the city of Miami had a median household income of \$23,483 with 24% of households classified as poor although there was considerable income diversity; and the city of Coral Gables had a median household income of \$66,839 with only 8% of households classified as poor.

San Diego, California

Currently, San Diego County has a total population of 3 million with 28% identifying as Hispanic/Latino (SANDAG (2005a)). The vast majority (84%) of those identifying as Hispanic/Latino are of Mexican origin; over 22% of San Diego County's population is Mexican (US Census Bureau (2005)).

The combined region of South Suburban and South-Central San Diego County, commonly referred to as the "South Bay", is the target community. This area includes the communities of San Ysidro, Chula Vista, Imperial Beach, National City, and Bonita. These areas contain large proportions of minority residents, with Hispanics/Latinos representing the largest percentage (US Census Bureau (2005)). The highlighted areas in Map 6 represent the selected census tracts in the San Diego County.

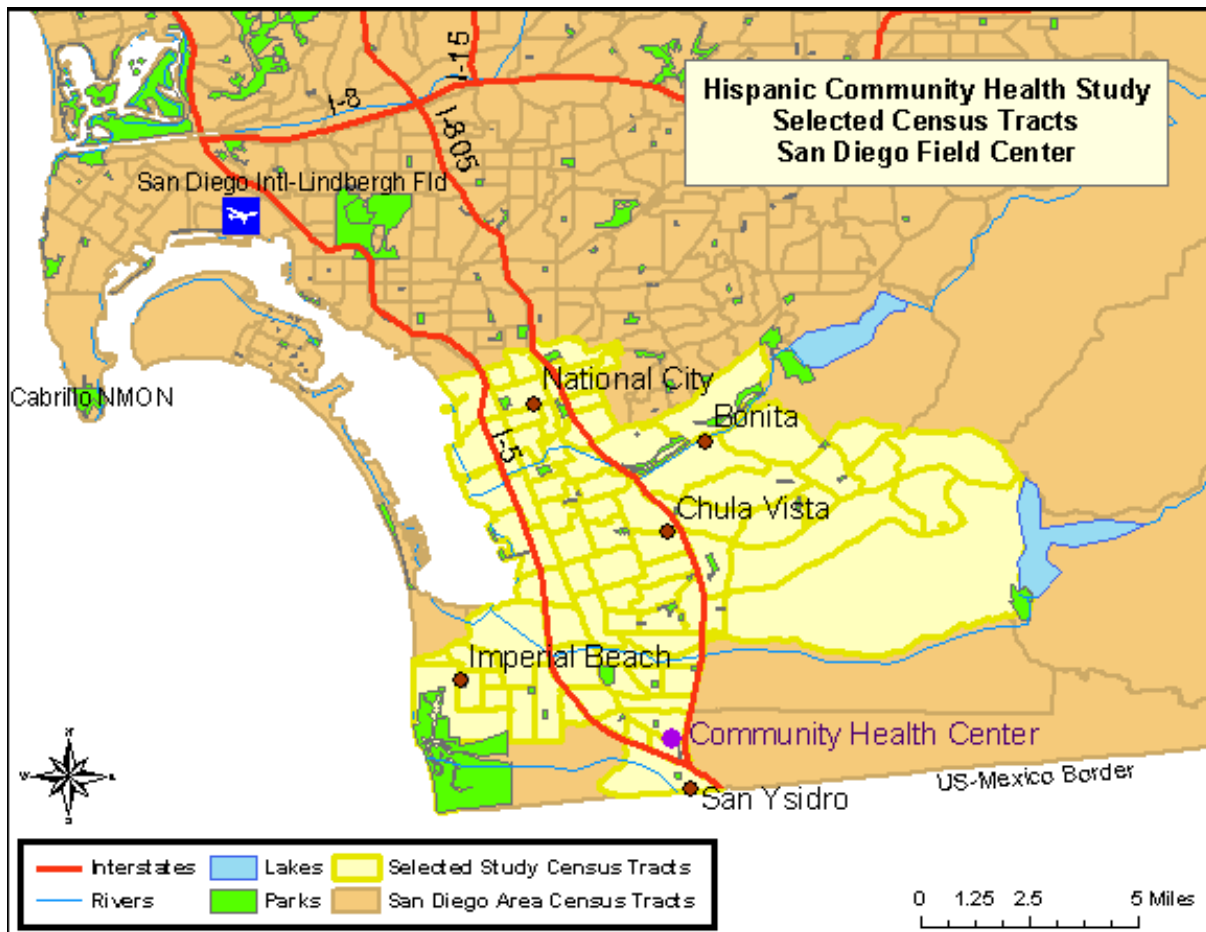


Map 6: HCHS/SOL Selected Census Tracts, San Diego County

South Suburban and Central San Diego have a total (estimated current) population of 1,013,925, and has the highest concentration of Hispanics/Latinos in San Diego County. Hispanics/Latinos comprise 38% and 54% of the Central and South Suburban population, respectively (SANDAG Current Estimates, Fall 2005). City-specific, Hispanics/Latinos comprise 75.8% of San Ysidro's population, 60% of National City's population, nearly 50% of Chula Vista's population, 40% of Imperial Beach's population, and 30.5% of Bonita's population. Over 50% of National City

residents are Mexican-American with 43.1%, 33.6%, and 25.4% of Chula Vista, Imperial Beach, and Bonita residents, respectively, being Mexican-American. Map 7 provides a closer view of the selected areas in San Diego.

The targeted recruitment area has diversity in generational status. In San Diego County, immigration is no longer the main source of population growth of the Hispanic/Latino community. The last census reports the largest source of Hispanic/Latino population growth was natality (US Census Bureau (2005)) suggesting a growing but stable Hispanic/Latino population. The San Diego community is at the cusp of a dynamic transition from a predominantly immigrant group to an emerging American-born ethnic minority population.



Map 7: HCHS/SOL Selected Census Tracts, San Diego

The targeted area also represents diversity in household income. San Ysidro is a low-income community with a median household income of \$13,000 per year and has the highest concentration of public housing in San Diego County. National City, in the Central region, has the next lowest median household income in the region at \$31,255, but its 27% increase in median income was one of the largest of any jurisdiction between 1990 and 1998. The 2000 census reports Imperial Beach's median household income as \$35,882. Chula Vista had the fastest growing median income at over 30% between 1990 and 1998; its median household income is \$44,861. Bonita's median household income, according to the last census, was

\$70,109 (US Census Bureau (2005)). Based on a random digit dial phone survey in the target area conducted in 2007 among adults 18 to 69 years of age, 60.7% had completed high school. Thus, the South and Central communities of the target area include a range of income/socioeconomic status levels, all with a majority Mexican-origin population.

2.2.2 Sampling and Recruitment

The sampling and recruitment plan for the study is designed to support two analysis objectives. First, the study sample supports estimates of prevalence of baseline risk factors, both overall and by country of origin and other demographic subgroups. Second, the sample supports evaluation of the relationships between the various risk factors and disease outcomes measured during follow-up. To accomplish both objectives, a representative sample of participants in the target areas at each field center is selected. Methods of sample selection, recruitment, and retention are designed to maximize participation rates, minimize non-response, and minimize attrition during the follow-up period.

Sample selection is accomplished through a two-stage area probability sample implemented for each site. At the first stage, a stratified sample of Census block groups is selected. Stratification factors common across the four field centers are (1) low versus high SES (as measured by the proportion of persons with at least a high school education) and (2) low vs. high concentration of Hispanic/Latino households, resulting in four strata per field center. Selection of block groups is carried out proportionately with respect to the SES strata and disproportionately with respect to the Hispanic/Latino concentration strata, that is, block groups in the high concentration stratum are selected at a higher rate than those in the lower concentration stratum. This over-sampling is carried out to maximize efficiencies in the field by increasing the probability that a selected household is a Hispanic/Latino household. In addition to these four strata, block groups in the Coop City area are isolated into a 5th stratum in the Bronx, and block groups representing high concentration areas for Central and South Americans are isolated into a 5th stratum in Miami. Both of these ‘special’ strata are defined to ensure selection of adequate numbers of households in the respective areas.

At the second stage, households in the sampled block groups are selected from a dual frame constructed from non-over-lapping lists of postal addresses and Hispanic/Latino surnames. Addresses are selected from the surname list at a higher rate than from the postal list, to further maximize efficiency of field operations by increasing the probability that a selected household is a Hispanic/Latino household. Selected households are screened for eligibility, where eligibility is defined as at least one Hispanic/Latino household member aged 18-74 years. Eligible households in which all Hispanic/Latinos in the target age range are at least 45 years of age are selected with certainty (probability of selection = 1), while all other households are selected with probability ($0 \leq p < 1$) based on the expected household composition for the area. Once a household is selected, all members of the household are invited to participate. This household selection algorithm is designed to provide the target age distribution for the HCHS/SOL study, namely, 62.5% of participants aged 45-74 years and 38.5% aged 18-44 years, and to minimize the amount of information required for screened households that may not be selected for participation. Selection of households corresponds to an over-sampling of Hispanic/Latinos in the older age range, which is necessary given the age distribution of Hispanic/Latinos currently living in the US.

Considerable effort is expended to ensure adequate participation rates among sample members, once selected and identified as eligible. The recruitment protocol consists of advance mailings describing the study and its objectives, followed by telephone contacts. If possible, household screening and selection of household members is conducted via the telephone. For those not responding to the mailing or telephone contacts, in-person screening visits are conducted.

Recruitment is planned for a three-year period. The sample of households in each target area is randomly allocated to each of the three years of recruitment. Within each recruitment year, we anticipate fielding the sample in waves, with each wave corresponding to a random sub-sample of the original sample of households allocated to that year. Continued monitoring of field activities enables decisions concerning release of waves to be made in a timely manner.

2.2.3 Center Description

Bronx, New York

Albert Einstein College of Medicine/Montefiore Medical Center (AECOM) is the major provider of primary, secondary, and tertiary health care services in Bronx, NY. The primary research clinic for the Bronx Field Center is located at 1 Fordham Plaza. This facility, located in an area convenient to multiple bus lines, subway and Metro-North railway, is in a large building which houses a Montefiore Medical Center Family Health Clinic and administrative offices, as well as other tenants unrelated to AECOM or Montefiore. The site was selected with the advice of Community Board members. The clinical site is dedicated to the HCHS/SOL and is constructed specifically for this study. It includes a waiting area, a play area for children, a reception area, six staff/interview offices, work area for phone interviewers, four examining rooms, a hearing examination room, a dental examination room, a conference room, a laboratory, a locker room, and a changing area.

Chicago, Illinois

The Department of Preventive Medicine at Northwestern University (NU), Feinberg School of Medicine in collaboration with the Midwest Latino Health Research Training & Policy Center at the University of Illinois at Chicago (UIC) established The Chicago Hispanic Community Health Study Field Center (CFC). The CFC utilizes collaborative resources of Hispanic/Latino and other investigators at Northwestern University, University of Illinois at Chicago, Roosevelt University, Kennedy King College, and participating community based organizations/media to identify, recruit, and screen possible participants and to retain participants for annual follow-up studies.

The clinical examinations for the HCHS/SOL are performed at two locations. The primary site is a community clinic known locally as the Community Health Clinic or simply, CommunityHealth, which is a volunteer-based organization dedicated to enhancing the health and wellness of the underserved Chicago community by providing free services to uninsured individuals (approximately 65% of Hispanic/Latino origin) without sufficient financial means. The clinic is affiliated with both NU and UIC through the medical training program. It serves the metropolitan Chicago area and beyond, with the majority of patients coming from Humboldt

Park, West Town, Logan Square, and the Near North Side.

The clinic offers 15 examining rooms, a laboratory, three bathrooms, a kitchen, a large conference room, and reception area with children's play area. Usually the clinic opens for patient services later in the day and closes between 9 and 10pm. In order for staff to collect the baseline examination, the clinic hours start early in the morning and continue into early afternoon. The clinic is located on a business street in a primarily residential area on the near-northwest side; street parking is readily available and the clinic is directly accessible via public transportation.

The secondary site is the Department of Preventive Medicine's Research Clinic (DPMRC). The DPMRC is located in rented space on the 8th floor of the building which houses the department offices adjacent to Northwestern's downtown campus. The DPMRC is utilized by several ongoing studies including CARDIA, MESA, the Chicago Healthy Aging Study, and WHI. The clinic offers 5 examining rooms, a laboratory, 2 bathrooms, a kitchen, a conference room, and a reception area.

Miami, Florida

The Miami Field Center represents a university-wide collaboration involving the College of Arts and Sciences and the Miller School of Medicine of the University of Miami together with multiple community partners including community-based primary care practices affiliated with Jackson Memorial Hospital/University of Miami, community-services agencies, the Miami-Dade County Health Department, and a Community Advisory Board. Within this context, the University of Miami provides expertise for the administration of all required questionnaires as well as components of medical examinations, recruitment, and follow-up activities. The Miami HCHS/SOL Community Advisory Coalition, which is an alliance of individuals and community organizations, supports the recruitment, retention, and health education efforts of the Miami Field Center and provides advice and guidance regarding potentially relevant relationships among the community, study participants, and the HCHS/SOL.

Administration of questionnaires, interviews, and most examination procedures are conducted in the Clinical Research Building (CRB) of the University of Miami/Jackson Memorial Medical Center in the city of Miami. More than 600,000 Hispanics/Latinos live within 7 miles of the CRB. Adequate parking is available on site and the CRB is in close proximity to public transportation including an elevated train, buses, and taxis. The fifteen story building is dedicated to research 7 days a week with 24-hour security. During regular working hours the service/reception area is staffed by the University to greet, orient, and direct participants within the strict guidelines of privacy prescribed for clinical research protocols. At other times, as necessary, the service/reception area for the HCHS/SOL is staffed by the Miami Field Center.

The CRB provides research office space as well as clinical examination and laboratory space. All investigators and staff for the Miami Field Center have assigned office space in the CRB. The clinical space for the HCHS/SOL is located on the 6th floor of the CRB, within the Behavioral Medicine Research Center. This includes 10 dedicated rooms specifically designed for HCHS/SOL interactions with participants. Facilities are appropriate for blood draws, sample preparation, oral glucose tolerance tests (OGTT), etc. Storage facilities for refrigeration, ultra-low temperature (-70°C) freezers, and centrifugation are all conveniently available within the

Behavioral Medicine Research Center as are facilities for data management, equipment maintenance (e.g., for sleep studies), etc.

San Diego, California

The San Diego field site is a partnership between San Diego State University Graduate School of Public Health (SDSU), University of California at San Diego School of Medicine (Preventive Cardiology) (UCSD), and the San Ysidro Health Center (SYHC). Primary functions and responsibilities play on the expertise of each partner. SDSU staff's primary functions include recruitment and retention of the study population, psychosocial and behavioral theory development and measurement, training core activities, the hearing exams, the cognitive status assessments, physical activity assessment, and formative research and community consultation. UCSD staff's primary functions include the CVD risk factors, subclinical disease and CVD events ascertainment, sleep studies, medical records adjudication, and oversight for pulmonary function test.

SYHC, as a partner, provides expertise regarding health promotion and research in the Hispanic/Latino community, and ambulatory and hospital services for the Hispanic/Latino community. The primary service area of SYHC is South Suburban and Central San Diego County, or the "South Bay". SYHC has 4 medical clinics extending along the corridor from the border to National City. The fact that SYHC is present in the South Suburban and Central region facilitates their role in the partnership in terms of community consultation, established contacts with the medical community, and the potential to assist with recruitment and access to care for potential participants.

SYHC staff's primary functions include outreach efforts in the target community, formative research and community consultation, recruitment, access to care for uninsured patients, health education, dental exams, and the training core activities. In particular, SYHC plays a central role in giving back to the target community. SYHC is responsible for the health education component of the HCHS/SOL. SYHC hires, trains and supervises several *promotores* or lay health advisors, who provide participants with risk factor counseling and referral into SYHC and/or other community programs.

The San Diego field site is located in the heart of the target area in the city of Chula Vista between Interstate 5 and 805. The site is accessible by bus, a light rail system and there is ample parking for those that drive. The clinical space occupies 3,600 square feet in commercial medical office space on the campus of the Scripps Chula Vista Hospital. The suite has about 20 rooms to comfortably accommodate participants during the screening process including adult and child waiting areas and staff offices with views of San Diego Bay.

2.3 Project Office/Contract Office

The Project Office for this study is located in the Epidemiology Branch, Division of Prevention and Population Sciences, National Heart, Lung and Blood Institute (NHLBI). The Project Officer and Deputies are responsible for ensuring that the conduct of the study proceeds at the highest scientific and administrative level, that the Statement of Work is followed, that timelines and recruitment goals are met, and that scientific productivity is maximized to improve the

health for not only Hispanics/Latinos but for the US population as a whole. The Project Officer is a member of the Steering Committee.

The Contract Office for this study is located in the Epidemiology and Clinical Applications Branch, Office of Acquisitions, Division of Extramural Research Activities, NHLBI. The Contract Officer is legally responsible for the administration of all of the contracts for this project and ensures that the expenditure of funds is appropriate and consistent with the agreed upon statement of work.

National Institutes of Health Sponsors:

The HCHS/SOL is funded by support from seven Institutes/Centers/Offices. The NHLBI provides the majority funding, but essential support for both the core functions of the study and for the specialty areas are also funded by others within the NIH. The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) provides support for laboratory measures related to kidney and liver disorders, and for diabetes. The National Institute of Neurological Disorders and Stroke (NINDS) provides support for measures of cognitive function. The National Institute of Deafness and Other Communication Disorders (NIDCD) provides support for research on hearing including an audiometric examination. The National Institute of Dental and Craniofacial Research (NIDCR) provides support for research on dental conditions and provides for a detailed periodontal examination. The NIH Office of Dietary Supplements (ODS) provides funding for collection of data on dietary supplements. The National Center for Minority Health and Health Disparities (NCMHD) provides funding for research to understand health disparities in the Hispanic/Latino population.

2.4 Coordinating Center

The Coordinating Center (CC) for the HCHS/SOL Study is part of the Collaborative Studies Coordinating Center (CSCC), a division within the Department of Biostatistics of the School of Public Health at the University of North Carolina at Chapel Hill. The mission of the CSCC is to improve public health by coordinating important health research, developing innovative research methodology, and providing practical training in the application of research methods. As the coordinating center for a number of multi-center public health and medical studies, it provides statistical, data management, quality assurance, and study management services.

The Coordinating Center works cooperatively and coordinates study activities among the Field Centers, Laboratories, Reading Centers and the NHLBI Project Office. The Coordinating Center also implements, distributes, and maintains HCHS/SOL data collection and management system. This system is designed to optimize the accuracy and completeness of collected data and maintain its security.

In providing protocol development and training, the Coordinating Center participates fully as a member of the Steering Committee and its subcommittees. The Coordinating Center also coordinates the quality control activities, data processing, analyses, and support for all Field Centers. Also, the Coordinating Center provides both scientific and methodological expertise for analyzing and publishing important findings related to study objectives.

Finally, the Coordinating Center maintains a website with downloadable files (i.e. study manuals, protocols, publications lists and manuscript proposals), to permit investigators outside

the study following appropriate procedures, to participate in data analysis. In the course of study implementation and data analysis, the external website will include lay summaries of publications for general reading and other information to provide the community with information about HCHS/SOL progress and findings.

2.5 Reading Centers and Lab

2.5.1 Central Laboratory

The Collaborative Studies Clinical Laboratory at the University of Minnesota Medical Center, Fairview serves as the central laboratory for the study. The Clinical Laboratory performs analytical tests at high levels of quality control on cholesterol, HDL cholesterol, triglycerides, glucose, insulin, HbA1c, urinary albumin/creatinine, serum alanine and aspartate aminotransferase, iron, serum creatinine, CBC, UIBC, serology for hepatitis A, B, C, and HCV RNA (on the subset of hepatitis C positive). The Clinical Laboratory also aliquots and stores samples including serum, plasma, whole blood, urine, and DNA for future use. The Department of Laboratory Medicine and Pathology oversees the performance and monitors the quality control for the analytical tests and DNA isolation. The Department also provides the Steering Committee guidance with respect to laboratory tests, quality control, and specimen collection procedures.

2.5.2 Pulmonary Function Testing (PFT) Reading Center

The Pulmonary Function Testing Reading Center at Columbia University Medical Center assumes primary responsibility for testing lung function using spirometry methods. The most widely used test of lung function is spirometry, which measures lung functions such as FEV1 and FVC. The most common chronic lung diseases, asthma and COPD, cause airway obstruction, which is associated with a low FEV1/FVC. Obstructive lung disease causes considerable morbidity and mortality rates and low lung function is an independent predictor of all-cause mortality, as well as death due to lung disease and cardiovascular disease. The Reading Center writes the spirometry testing protocol as well as develops innovative pulmonary-related hypotheses. Recommendations on standardized pulmonary-related questions for the baseline and follow-up questionnaires, as well as study participant spirometry reports, come from the Reading Center. The Reading Center also trains, certifies, and monitors all technologists who perform the tests as well as perform quality control site visits to ensure spirometry quality.

2.5.3 Central Electrocardiogram Reading Center

The Epidemiological Cardiology Research Center (EPICARE) of Wake Forest University's School of Medicine participates in the development of detailed written manuals of operation for the procedures used to acquire, transfer and analyze ECGs, advises and facilitates the field centers in obtaining appropriate ECG equipment and software, and trains field center staff in acquisition and data transfer procedures to the subcontractor. EPICARE actively participates on working groups and committees as necessary to meet these goals. EPICARE works with the study committees to develop guidelines and appropriate feedback for study participants based on the initial acquisition of the ECG. Development of specific alert notifications for clinic physicians on-site and a final results report to the Coordinating Center for ECG classification after interpretation occurs during the planning year in conjunction with the appropriate committee and the Coordinating Center.

2.5.4 Sleep Reading Center

Case Western Reserve University School of Medicine provides the services of a Sleep Reading Center (CSRC) and participates in publication activities for this study as per the proposal submitted and approved by the National Institutes of Health, National Heart, Lung, and Blood Institute. The Case Sleep Reading Center participates in the selection and development of sleep monitoring equipment most appropriate for the study. The CSRC also develops a standardized protocol for data acquisition, processing, scoring, and urgent alert identification; documenting specific procedures in both written and web-posted Manual of Procedures. The Reading Center also reviews and scores studies by trained and certified scorers, monitors the quality of submitted sleep studies, central reading and scoring, and periodically posts performance summaries on a study website as well as transmits these posts to the Coordinating Center. The CSRC assists with data analyses, manuscript preparation, as well as develops and proposes ancillary studies aimed at extending initial sleep data collection to address extended hypotheses. The CSRC plans to develop an interactive, web-accessible and fully documented data dictionary for sleep variables and sleep data for data dissemination.

2.5.5 Audiometry Reading Center

The Epidemiology of Sensory Disorders Research Program (EpiSense) at the University of Wisconsin's School of Medicine has been conducting epidemiological field studies of hearing loss since 1993. To date, EpiSense has collected and managed data from more than 9500 audiologic evaluations which include otoscopy, tympanometry, pure tone air and bone conduction audiometry as well as more specialized speech testing and otoacoustic emission measures. EpiSense has developed a custom software application to capture hearing thresholds. Computer-assisted interviews for questionnaire data have also been developed to electronically capture test information. The Reading Center writes protocols, trains and certifies technicians to conduct standardized audiologic examinations, provide data management, review test results for clinically appropriate feedback, and conduct quality assurance processes. EpiSense works with the study committees to develop guidelines and appropriate feedback for study participants based on the audiological data.

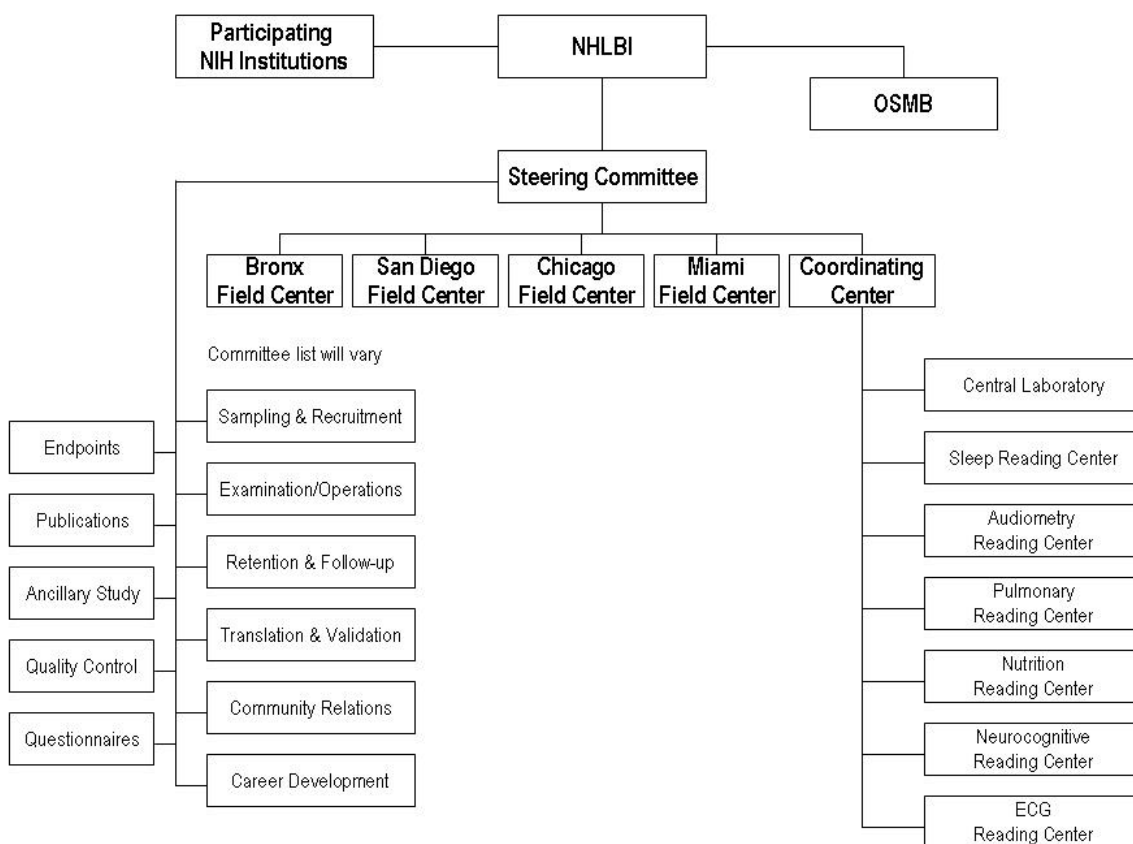
2.5.6 Nutrition Reading Center

The Nutrition Coordinating Center (NCC) at the University of Minnesota, School of Public Health, was initially established in 1974 by the NHLBI to develop a standardized system for collection and analysis of dietary intake data for large clinical trials. NCC has evolved to meet the diverse needs of research communities by providing state-of-the-art methods and databases. The NCC participates in the development of data collection instruments, provides detailed written manuals of operation for the procedures used to acquire and analyze the nutrition assessment, advises and facilitates the field centers in obtaining and using the NDSR software, and trains field center staff in acquisition and data transfer procedures to the NCC. The Diet and Supplement Subcommittee helps identify Hispanic/Latino foods and recipes to be added to the NDSR Food and Nutrition Database and to the Food Propensity Questionnaire, provides expertise concerning local or ethnic-specific food names and recipes, and provides guidance concerning cultural and language issues for data collection and for quality-control procedures. The NCC works with the study committees to develop guidelines and appropriate feedback for study participants based in the initial acquisition of the 24 hour dietary recalls.

2.5.7 Neurocognitive Center

The Memory Impairment and Neurodegenerative Dementia (MIND) Center at the University of Mississippi Medical Center serves as the Neurocognitive Center for the study. The Neurocognitive Center assumes primary responsibility for development of the neurocognitive assessment battery and prepares manuals of operation, develop guidelines for participant alert notification, conducts training and certification of all field center staff involved in neurocognitive testing, establishes and monitors quality control procedures, and performs site visits to ensure standardization to protocol across the field centers. The Neurocognitive Center provides expertise in the formulation of hypotheses, interpretation of analyses, and preparation of manuscripts and ancillary studies related to the brain and neurocognitive function.

3.0 Study Management



Study Organizational Chart (committee listing is incomplete/subject to change)

3.1 Introduction

HCHS/SOL is funded by the National Heart, Lung, and Blood Institute, with support from other Institutes as described in Section 2.3. The Study is directed by the Epidemiology and Biometry Program of the Division of Epidemiology and Clinical Applications. Principal Investigators and their affiliations are listed in Appendix II. The operations of the study are directed by the HCHS/SOL Steering Committee whose members are the Principal Investigators of the field centers, Coordinating Center, and the NHLBI Project Officer, as shown in the list of committees and membership in Appendix III. The Principal Investigators of the reading centers and laboratory and the Project Officers of the other participating NIH Institutes are ex-officio members of the Steering Committee.

The Steering Committee has subcommittees responsible for the details of study design and implementation. These committees report and make recommendations to the Steering Committee. The subcommittees and their charges are listed in the next section. A common charge for all committees is to develop the pertinent sections of the study's Manual of Operations. The composition of each committee is given in Appendix III. An Observational

Study Monitoring Board (OSMB) provides an annual evaluation of the study with recommendations to the NHLBI. It is further described in Section 3.4 and the membership listed in Appendix IV.

3.2 Committees and Charges

Members of the committee/subcommittees are principal investigators, co-investigators, representatives designated by the principal investigators, representatives of the Project Office and other Institutes. Committee conference calls as well as other activities (including study-related training activities) and assignments will be held among members of the different subcommittees and led by their respective Chair. Conference calls and other activities are not open to the public. Advisors, experts and consultants who are not study personnel can temporarily participate in committee meetings/conference calls and other activities to review topics of mutual interest, at the invitation of the Chair of a subcommittee and not as standing members of the committees. Voting will be exercised by the members of the Steering Committee and other subcommittees. The different subcommittees will submit recommendations to the Steering Committee. The final voting and approval will be exercised by the members of the Steering Committee.

3.2.1 The Sampling and Recruitment committee establishes guidelines for sampling and recruitment, and for the characterization of non-respondents. It develops the protocol for follow-up. The subcommittee works with the Coordinating Center to plan and implement training for recruitment.

3.2.2 The Translation & Validation committee contracts for translation of questionnaires and for overseeing assessment of appropriateness of the translation for the various communities to be included in the study.

3.2.3 The Questionnaires and Examination/Operations committees oversee development of protocols for clinic operations and measurements: blood pressure, anthropometry, ECG, pulmonary function, questionnaires, and interviews. In matters pertaining to the examination, the committee is also responsible for oversight of equipment selection, design of exam flow, and for design of the pilot study. Both committees work together with appropriate sub-committees to develop sections of the field center Manual of Operations and forms.

3.2.4 The Endpoints committee decides on the definition of events to be ascertained in the follow-up cohort and what specific information is to be collected for each type of diagnosis. It establishes criteria for diagnosing these events as well as the procedures by which the Morbidity and Mortality Classification Committee (MMCC) makes these diagnoses. The subcommittee develops the protocol for the areas of hospitalization and death investigations, and for selection/design of instruments on medical care in hospital. The subcommittee is responsible for working with the Coordinating Center to training interviewers, MMCC members, and abstractors.

3.2.5 The Retention and Follow-up committee monitors completeness of annual telephone contact and also proposes methods to improve retention of participants.

3.2.6 The **Community Relations** subcommittee works with community organizations and leaders to encourage participation in the study and to learn from these community contacts how best to maintain community interest and support.

3.2.7 The **Publications** committee reviews manuscript proposals, abstracts, and manuscripts and makes recommendations to the Steering Committee with regards to approval. The committee, with the Coordinating Center, also tracks all proposals, from submission of proposal to publication of manuscript, and works to assure that there is no overlap in approved proposals.

3.2.8 The **Ancillary Study** committee reviews concept and final ancillary study proposals and makes recommendations to the Steering Committee with regards to approval. The committee, with the Coordinating Center, also tracks all ancillary studies with respect to data transfer and, with assistance from the Publications Committee, publications resulting from the ancillary studies.

3.2.9 The **Laboratory and Sample Processing** committee is responsible for developing the procedures for blood collection, field center processing, shipping, and laboratory measurements and developing associated quality control procedures.

3.2.10 The **Quality Control** committee develops and monitors procedures to ensure high quality of data collected and to review regular data quality reports produced by the Coordinating Center. The committee provides feedback to field centers and reading centers on quality issues and reports to the Steering Committee on these issues and resolutions to quality problems.

3.2.11 The **Dietary** committee helps identify Hispanic/Latino foods and recipes to be added to the NDSR Food and Nutrient Database and to the Food Propensity Questionnaire, provides expertise concerning local or ethnic-specific food names and recipes, and provides guidance concerning cultural and language issues for data collection and for quality-control procedures.

3.2.12 The **Morbidity and Mortality Classification** committee (MMCC), comprised of physicians from the Coordinating Center and each field center, is responsible for the process of assigning all medical events of interest in the HCHS/SOL into diagnostic classes defined by the study. Hospitalized events may be classified into disease categories by computer algorithm. The MMCC reviews this process by independent diagnoses. For fatal events, computer assignment is more limited. MMCC classifies the cause of death wherever classification cannot be done by computer and independently reviews the computer classification for most cohort events. The MMCC operates by assessing medical information received from each field center. In most cases, this involves independent assessment by two committee members with differences adjudicated by the full committee. Problems in classification may result from lack of clarity in the study diagnostic criteria. Under these circumstances the committee recommends specific case law procedure for dealing with the ambiguity, or providing alternate diagnostic algorithms for classification.

3.3 Communications

3.3.1 Periodic Reports

The field centers and central agencies prepare routine periodic reports to the HCHS/SOL Project Office which document the progress to date in each major activity, administrative matters,

staffing changes, and current or anticipated problems. The Coordinating Center also provides reports on the data collection at the field and laboratory centers, quality control findings on examinations, re-abstracted records, re-certification of staff, laboratory result determinations, and protocol adherence. Status reports on recruitment and data collection prepared for the Project Officer and Steering Committee are also sent to the field centers. Quality control reports are likewise sent to the central laboratory and reading centers.

3.3.2 Study and Public Websites

The Coordinating Center maintains a HCHS/SOL website to facilitate communication among HCHS/SOL investigators and staff. In general, the site includes (1) reports from the Project Office, the Coordinating Center, the central laboratory and reading centers, and the Steering Committee, (2) a description of the facilities and staff of the field centers and other central agencies, (3) general information on data management, and (4) a calendar of events. The website also provides applications for generating reports on issues such as recruitment and participant follow-up rates and serves as an archival repository for all study documents. The portal to HCHS/SOL websites is found at <http://www.csc.unc.edu/hchs/>. A public website will be developed to foster communication with the local Hispanic/Latino communities, community leaders, and to provide general information for study participants (in Spanish as well as English).

3.3.3 Electronic Mail

All field centers, central agencies, the Coordinating Center, and the Project Office are linked by electronic mail using microcomputers at each center. The electronic mail network is used to facilitate rapid and efficient official communications among centers and agencies for messages such as announcements, meeting agendas, abstracts and manuscripts for review, and acknowledgements of receipt of data.

3.3.4 Field Center Visits

Project Office and Coordinating Center staff conduct periodic monitoring visits to field centers as needed to (1) maintain channels of communication with field center investigators and staff, (2) solve participant recruitment or follow-up problems, (3) monitor adherence to the study interview and examination protocol, and (4) provide technical support for activities such as data management and quality control.

3.3.5 Periodic Conference Calls

The Coordinating Center facilitates conference calls among the members of the study committees by acting as a distribution hub for call content (agendas, materials, etc.) and arranging the scheduling and logistics of the teleconferences. Regularly scheduled calls for standing committees like the Steering Committee, Quality Assurance committee, or special purpose working groups, like the project coordinators, occur on at least a monthly basis during the active conduct of the study. A member of the Coordinating Center works with each committee as a liaison to facilitate interaction between the committees and provides support for implementation of the study protocol. Conference calls occur weekly or semi-monthly, or monthly as needed during the initial year.

3.3.6 Publications Tracking System

A publications and presentations database and tracking system are provided for the study as communication support for study committees so that information about manuscripts can be

followed from initial proposal stage through the process to the stage of a completed paper, or presentation. The system provides the publications committee with a tool that generates reports useful for managing the review and approval process.

3.4 Observational Study Monitoring Board (OSMB)

An OSMB is constituted to provide an annual evaluation of the study with recommendations to the NHLBI regarding:

- A. Participant safety, burden, confidentiality and any other matter pertaining to protection of the study participants;
- B. Study performance in terms of recruitment and retention, implementation of procedures and questionnaires, follow-up for events, and all aspects of quality control; and
- C. Study productivity in terms of significant research results to improve the health of Hispanics/Latinos and non-Hispanic/Latino alike.

The Board meets in person on an annual basis with members of the study Steering Committee (others investigators if needed). The Coordinating Center provides materials to inform the Board of HCHS/SOL progress, and the investigators provide presentations and respond to any concerns addressed by the Board. The Board has the responsibility of reviewing all Ancillary Study proposals to determine whether the Ancillary Study could provide harm to the conduct of the main study. The Ancillary Study review by the Board can be done during the annual Board meeting, or by email review. An Executive Secretary for the Board is an NHLBI staff member not associated with the HCHS/SOL who provides for all interaction between the Study and the Board.

The following NHLBI website describes the responsibilities of OSMBs:

http://www.nhlbi.nih.gov/funding/policies/osmb_inst.htm

3.5 Data Management

3.5.1 Approach

HCHS/SOL involves intensive data collection, closely coordinated to permit examination and interview of 5-6 fasting study participants per day. The Data Management System (DMS) for this study provides maximum flexibility to field centers to meet their constraints on scheduling, the availability of equipment and trained technicians. The web-based Data Management system allows immediate update of the central database (located at the Coordinating Center) upon data entry; “transparent” and immediate installation of DMS updates once implemented by the Coordinating Center; and ease of integration of laboratory and reading center data with field center data for generating results reports, alert reports to participants and their providers of medical care.

Features of the DMS include a menu-driven graphical user interface, data validation upon entry, transaction auditing, database updating, database closure, reports, data archiving, and data retrieval. Reading center and laboratory data are uploaded to the Coordinating Center server over the web and automatically loaded into the centralized data management system files. Participant result reports are assembled within 24 hours of receipt at the Coordinating Center and are available to be downloaded by field centers at the beginning of each work day.

3.5.2 Data Entry

The Coordinating Center DMS has the capability of being used either for electronic data capture, (data recorded directly on-screen and validated during collection) or for distributed data management (data recorded first on paper forms and then keyed and validated at the field centers). Field centers have the flexibility to select the data collection method for each data collection instrument, and the location of administration depending upon the facilities at that location. Current versions of each data collection instrument are available for situations in which the computer systems are not appropriate or inaccessible for any reason.

3.5.3 Consolidated Database

Computers at the Coordinating Center are connected via a Local Area Network. Clustered servers running the Microsoft network operating system provide web services for the data management system. The web servers are isolated by a router from the servers holding study data. The consolidated database is stored in a SQL-server database. Standard transaction validity checks are applied to all updates to the database (e.g., to prevent the addition of records with duplicate keys, etc.). Audit logs from the DMS provide complete documentation for changes to the consolidated database. Backups of the consolidated database as well as processing reports are made daily. Once a month, the current backup tape is permanently archived at an off-site data storage facility.

3.5.4 Reading Center and Central Laboratory Data Transfer and Tracking

An integral component of HCHS/SOL is the incorporation of central reading center data (ECG, spirometry, sleep, dietary, physical activity, and audiometry) and laboratory results into the study database. Laboratories and reading centers with established data management systems in place may prefer to use those systems for transfer data into our system, in addition to using for data collection and local data management. Managing central agency data could alternatively involve direct use of customized DMS screens developed by the Coordinating Center. The Coordinating Center tracks the shipment of samples from the field centers to the central laboratory and provides feedback to the centers on whether all expected samples have been received.

3.5.5 Reporting

The DMS provides each field center with the ability to generate a variety of reports. These include participants contacted and examined, indicators of data quality, completion status of participant result reports and specimen tracking reports, among others. The reports for study participants and their dentists or physicians are described in Section 3.6, Reporting of Study Results. The field center data quality reports are complementary to the Steering Committee reports, which are produced monthly.

3.5.6 Data Security and Confidentiality

Data confidentiality and security are applied at all levels of data acquisition, transfer and storage, for all study agencies, from field centers to coordinating center. The password controlled access to the study equipment and the DMS is the initial level of security. All data collected at the field centers and in hospital record rooms are encrypted by the system and can only be decrypted for display on-screen by authorized study personnel. Personal identifiers are collected on separate forms (and transferred as separate, encrypted records). Should paper data collection forms be used they will be retained at secure locations at the field centers until the Steering Committee

acts on recommendations from the Coordinating Center to dispose of such records (e.g., incremental data closure). The secure storage and disposition of hard copy records at field centers will follow institutional procedures at each site.

The DMS server is housed at the Coordinating Center and exclusively managed by Coordinating Center personnel. Measures to ensure the security of the data include: restricting access to users with valid IDs and passwords; using a firewall to restrict access to the web server and to shield the UNC Coordinating Center LAN from web users; using the secure sockets layer standard to provide encryption and user authentication. All data transferred to the Coordinating Center is stored, processed, and analyzed within the Coordinating Center office suite, with access to office space containing data controlled through locked doors. Access to computer data files is controlled by passwords released only to the Coordinating Center personnel who use such files. In addition, data files with personal identifiers (and sensitive information per designation by a study's Steering Committee) are encrypted. As standard practice, output mailed to a field center identifies participants only by ID number. No individually identifiable information is distributed by the Coordinating Center to any study agency other than the originating field center. Printed material containing confidential information is discarded through supervised loading, transportation, and storage using a chain of custody control process, until the material can be recycled into paper pulp.

All Coordinating Center staff are required to complete a confidentiality certification procedure upon employment.

3.5.7 Data Retrieval and Statistical Computing

Data is retrieved from the study database and converted into SAS files on a regular schedule (e.g., monthly). Most statistical computing is done using SAS software. Statistical computing is performed by a dedicated statistical programming staff, using a well-established statistical computing request system that has proven itself through use with many long-term, multi-center research projects managed by the Coordinating Center. This system includes thorough documentation of requested computing, programming standards, naming conventions for datasets, programs and program results, inventorying and tracking of computing requests, procedures for program review, and permanent archival of completed programs, results, and datasets.

3.5.8 Database Closure

Data queries are generated on a monthly basis, immediately following data retrieval. Typical data checks include classifying the universe of enrolled IDs, assuring all expected forms were received, performing consistency checks between related data fields, assuring all queries generated are resolved, etc. If there are unexpectedly high error rates for a site or a user, we explore the causes of the error and take corrective action, such as retraining personnel or making changes to the data management system.

Periodically the study's consolidated database is subjected to closure checks for completeness and accuracy of data collection and processing. These checks are performed on a "frozen" version of the database defined by a specific time cut point, and precede the use of data for publication. Typical closure checks include classifying the universe of IDs, assuring that all expected forms were received and all queries were resolved, examining the consistency of items across forms and visits, and checking distributions of key variables for possible errors.

3.6 Reporting of Study Results

The Coordinating Center is responsible for reporting of study results at two levels: we support the assembly and distribution of study results to participants and their providers of medical care and also prepare statistical data reports for various study committees, as needed and on an established schedule. Both types of reporting are outlined below.

3.6.1 Participant Results Reporting

Although the majority of tests and examinations performed by the HCHS/SOL are of research value and not intended for medical diagnosis or treatment, a number of test results/examination findings are of value to the examinees. Investigators thus have the opportunity to “give back” to the study participants and to their communities, particularly information that improves the individual’s ability to make health choices as well as test results that are pertinent to the guidelines widely used by health practitioners and the public. In some instances test results carry an ethical responsibility to communicate the result (and its meaning) to the participants, and with his/her authorization also to the designated provider of care. Assay values and measurement results that exceed the thresholds underwritten by diagnostic and treatment guidelines are clearly identified to the participant in the reports, with a recommendation for review or confirmation in consultation with their provider of medical care and clarification that these results originate from a research program and do not substitute for a visit to a physician.

Based on input from the pertinent experts among the HCHS/SOL investigators, the Coordinating Center drafts the contents and format of the participant results report and prepares automated templates that are assembled from the central database at UNC, for field center staff to edit and/or print. In this process the Coordinating Center also identifies clinically relevant threshold values for the pertinent study data to be considered an “alert value” that warrants follow-up and/or an expedited notification of the participant/provider of care. For this purpose, a secure web-based Report and Alert Notification feature is maintained and updated daily by the Coordinating Center that can conveniently be interrogated by the field centers to prepare their “routine” reports of results as well as expedited notifications.

3.6.2 Reports to Study Investigators and Agencies

The Coordinating Center prepares detailed data reports at regular intervals for the Steering Committee, and on an *ad hoc* basis as determined by the Steering Committee.

Steering Committee Reports: The routine reports to the Steering Committee focus on study progress, including status of enrollment, quality control issues, and data collection quality and timeliness. Objective, field center-specific, analyses of performance are presented.

Observational Study Monitoring Board (OSMB) Reports: Among the essential tasks of the Coordinating Center is the preparation of the statistical and management reports for the OSMB. While the content of these reports are ultimately responsive to OSMB requests, the reports initially consist of two major sections: recruitment and data quality. The section on recruitment provides the status of recruitment by field center, including graphs comparing performance to goals. It also details reasons for refusal and rates of response, and data acquisition. Later reports will add a focus on publications.

4.0 Publication Policy

4.1 Policy Objectives

The objectives of the publications policy of the HCHS/SOL Study are to assure:

- A. Expeditious and timely dissemination of major HCHS/SOL findings to the scientific community;
- B. Accurate and scientifically sound publications from HCHS/SOL;
- C. Encouragement of high-quality manuscripts among the HCHS/SOL investigators;
- D. A system for fair determination of collaborative authorship on HCHS/SOL collaborative publications;
- E. Opportunities for investigators from participating HCHS/SOL centers, NIH, and other outside investigators with appropriate expertise to participate and be recognized in study-wide publications and presentations.

4.2 Definitions of HCHS/SOL and non-HCHS/SOL Investigators

A HCHS/SOL study investigator is defined as a research investigator named on a current and active contract or consulting agreement with NHLBI or its contractors to work on the HCHS/SOL study. Project Office staff are also considered investigators for the purpose of this document. All other investigators would be considered non-HCHS/SOL Investigator

4.3 Priority / Primary Papers

4.3.1 Priority Papers The Publications Committee (PC) and Steering Committee (SC) will develop a list of **priority papers**. Process for authorship of these papers will be established by PC for approval by SC. One method may be to rotate first authorship among the centers, PO (Project Office), and Reading Centers.

4.3.2 Group-Authored and “Unauthored” Publications and Presentations

The HCHS/SOL PC may recommend to the SC, and the SC may decide that one or more publications be written on behalf of the HCHS/SOL group. For example, a design paper might be unauthored or group authored. An appropriate list of participating investigators will be identified in an appendix to such publications, and members of the actual writing group will either remain anonymous or, as appropriate per journal policy, be acknowledged in the publication.

4.3.3 Manuscript Progress Tracking

The PC will produce an updated progress report, with assistance from the CC, of all approved HCHS/SOL publications (e.g., approved, in preparation, submitted, in press, published) which the CC will post on the website, along with approved manuscript proposals.

4.4 Proposals for Other Papers

4.4.1 First Author

The first author of a paper will generally be the proposer unless that proposer indicates in writing that he or she nominates another member of the writing committee to be lead author. Approval of the PC is required.

4.4.2 Proposal Submissions

Paper proposals may be submitted by:

Any HCHS/SOL investigator, HCHS/SOL connected investigator in a Field Center, Reading Center or Coordinating Center, with the local PI approval, for local tracking and priority setting.

- A. PO staff, upon invitation by the PC. PO staff may not be first, last, or corresponding authors on primary papers.
- B. Non- HCHS/SOL investigators: These require approval by any one of the HCHS/SOL PIs, in a Field Center, Reading Center, Coordinating Center or Project Office.
- C. Ancillary Study Investigators (See Section 11 for manuscripts from ancillary studies.)

4.4.3 In general, first authors should lead no more than 3 study-wide papers at any one time, unless there are special considerations. This is to ensure timely progress on the papers and to afford the opportunity for others to propose papers.

4.5 Authorship and Writing Groups

4.5.1 Each study-wide paper should give each of the field centers, PO, and CC and the relevant reading center, depending on topic of paper, opportunity for representation on the writing group. PO staff may be co-authors on primary and secondary papers if requested by the PC. Others may be nominated for special expertise.

4.5.2 The lead author (writing group chair) determines the order of authorship. A major criterion for the order of authorship is the level of effort and contribution made by the members of the writing group.

4.5.3 When the writing group chair is identified, it is his/her responsibility to communicate with other writing group members to identify data needed from the CC, and to establish a plan for writing the manuscript.

4.5.4 All members of the writing group should review the final manuscript proposal and the final manuscript draft before its submission to the PC.

4.5.5 By the determination of the writing group chair, if some members of a writing group have shown little or no interest in participating in the work of the group or have failed to contribute to the task of preparing the manuscript, their names may be left off the list of authors, pending review by the PC. If a problem emerges, the PC will resolve it.

4.5.6 The Chair of each writing group is to update the PC on manuscript progress every six months after the writing group is formed. If the PC has not received a report from a lead author within 12 months, or if satisfactory progress has not been made:

- A. The PC may replace the lead author with another member of the writing group.
- B. If no writing group members are interested in assuming the lead position, other HCHS/SOL investigators outside of the writing group may be solicited to be lead author.

4.5.7 The writing group should see the manuscript after revisions suggested by the journal are made.

4.5.8 The writing group must prepare a lay summary that will be used by the PO for publicity and also be available to participants on the HCHS/SOL website.

4.6 Data to be obtained from HCHS/SOL

4.6.1 Some papers will have data analyses done by the CC. Other papers will have analyses done locally under the supervision of the lead author.

4.6.2 For those analyses done by the writing group, the following rules apply:

- A. HCHS/SOL data required for analyses for the paper will be provided by the HCHS/SOL CC, after approval of manuscript proposals that specify the dataset required. The data may also be available from complete files distributed to HCHS/SOL PIs.
- B. NHLBI rules for data distribution will apply, implemented through signed data distribution agreements.

4.7 Local Papers

Most papers will be study-wide, i.e. will use data from all the field centers, to preserve and make maximum use of the full, unique cohort. A proposal for using only local data may be considered if appropriate. Authorship for local papers will be considered on a case-by-case basis.

4.8 Abstracts

4.8.1 Abstracts should be derived from approved paper proposals.

4.8.2 Abstracts must be submitted to the committee for review at least two weeks before the due date unless special circumstances prevail. The process for submission is available on the HCHS/SOL investigator's website.

4.8.3 Abstracts will be expeditiously reviewed by two PC members with simultaneous review by the Project Office (PO). PC reviewers will be asked to respond expeditiously and to recommend approval, modifications, or disapproval of the abstract.

4.8.4 All abstracts accepted for presentation or publication should be submitted to the CC for archival purposes.

4.8.5 It is permissible to submit previously cleared abstracts to other meetings; copies should be sent to the CC for inclusion in the listings of HCHS/SOL Publications and Presentations.

4.9 Invited talks

4.9.1 An investigator receiving an invitation for a national talk on behalf of HCHS/SOL should send an abstract of the talk to PC and must obtain PC and PO approval. No approval is necessary for local talks or grand rounds.

4.9.2 When an invitation is directed to the Chair of the Steering Committee or the Chair of the PC, the respective chairs will decide who is to represent HCHS/SOL. Invitations directed to the NHLBI will be reviewed and approved by the NHLBI Project Office.

4.9.3 When a HCHS/SOL investigator or PO scientist receives a personal invitation to make a presentation, they should notify the Chair of the PC to ensure listing of the presentation on behalf of the HCHS/SOL Research Group.

4.9.4 All presentations in response to such invitations should be based on published HCHS/SOL reports unless prior approval is granted by the PC and the Project Office.

4.9.5 Requests received by PIs or their staff to present or discuss at investigator's institution meetings any previously published HCHS/SOL data need no prior clearance by the PC and acceptance of such invitations is encouraged.

4.10 Ancillary Studies

Ancillary studies follow the same publications process as main HCHS/SOL papers. The AS must submit proposal to PC, but ancillary study may select its own author group. In most instances, this should include representation from Field Centers (if data from the larger study are included in analyses), the Coordinating Center, Project Office and relevant Reading Centers. Ancillary studies will get only partial datasets relevant to their analyses (see AS policy statement).

4.11 Ancillary Study Proposal Process

4.11.1 Requests for proposed publications should include a 4-6 page document, to be submitted to the PC Chair that includes:

- A. tentative title;
- B. name of proposer;
- C. name of up to 3 suggested co-authors;
- D. rationale;
- E. keywords;
- F. main hypothesis or study questions/objectives;
- G. analysis plan (pertinent variables, analysis definitions, characteristics of population to be analyzed, table shells limited to a reasonable number);
- H. pertinent references;
- I. dummy tables.

4.11.2 The request should be in the format provided in the current Manuscript Proposal Form found on the HCHS/SOL website.

4.11.3 Proposals will be expeditiously reviewed by the PC. Reviewers will be asked to respond expeditiously and to recommend approval, modifications, or disapproval of the proposal.

4.11.4 The PC will consider the issue of overlap with other proposals and publications, and if a problem emerges, the PC will confer with the involved writing group chairs to resolve the situation. The CC will provide a search engine to all investigators to enable an easy search of the set of approved proposals of related proposals. Proposals will be reviewed by the PC and PO,

with a decision to request modifications of the proposal or with recommendation to approve or reject, and if approved a priority will be recommended.

4.11.5 After PC conference calls, requests for modifications to the proposals will be sent directly to the proposer, whereas the PC recommendations for approvals or rejections for manuscript proposals will be first circulated electronically to the Steering Committee. Steering Committee members are invited to comment by email within one week on the recommendations. After consideration of SC recommendations the PC will notify submitters of proposals of the decision.

4.12 Review of HCHS/SOL Publications and Presentations

4.12.1 The Chair will assign the final manuscripts to 2-3 reviewers for review for, scientific merit, analytic issues, interpretation and discussion issues, and policy issues, and reviewers will be asked to agree to a specific deadline date for submission of reviews to the PC.

4.12.2 The materials will simultaneously be submitted to the Steering Committee for optional review due by the same date asked for required reviews.

4.12.3 Reviews will be discussed by the full PC at monthly calls, and proposals, papers and presentations will be approved by full committee.

4.12.4 When the final manuscript has been approved by the PC it will be sent for review by the NHLBI Project Office.

4.12.5 Review and approval by the PC and review by the NHLBI Project Office are required for all HCHS/SOL publications prior to their submission for publication. When the final manuscript has been approved by the PC and reviewed by the NHLBI Project Office, it may be submitted for publication.

4.12.6 All review and approval functions of the PC and review by the NHLBI are to be done judiciously and expeditiously.

4.12.7 The writing group chair will provide a copy of the published paper to the CC and to the NHLBI Project Office for archiving.

4.12.8 Once published, the PC will send notification of publication to the HCHS/SOL Investigators.

4.12.9 Publications and presentations shall be in compliance with the rules and procedures of disclosure set forth in the Privacy Act. Confidential or proprietary information shall not be disclosed without the prior written consent of the individual or institution. Privacy Act compliance and documentation of written disclosure consents are the responsibility of each institution involved in the paper/presentation.

4.12.10 An acknowledgment of all HCHS/SOL Centers with their PIs and a reasonable number of key personnel are to appear in each publication, printed in an appendix per journal guidelines. There may be a short list and a long list developed.

4.12.11 The NHLBI support statement is to be on the front page of the manuscript. The acknowledgement should include all Institutes and Centers directly relevant to the specific paper.

The text would read: “*This study was initiated and funded by the National Heart, Lung, and Blood Institute, in conjunction with the National Institute of Diabetes and Digestive and Kidney Diseases, the National Institute of Neurological Disorders and Stroke, the National Institute on Deafness and Other Communication Disorders, the National Institute of Dental and Craniofacial Research, the Office of Dietary Supplements, and the National Center on Minority Health and Health Disparities; National Institutes of Health, Department of Health and Human Services. The study is supported by contracts (number/institutions to be inserted).*”

4.12.12 All requests for reprints are to be directed to lead authors.

4.13 Authorship for Ancillary Studies

4.13.1 Proposals for publications and presentations based on special data sets collected on HCHS/SOL participants in ancillary studies are also to be submitted to the PC. The writing group preparing such a report will consist of individuals designated by the participating Ancillary Study investigators. This should include representation from Field Centers (if data from the larger study are included in analyses), the Coordinating Center, Project Office and relevant Reading Centers.

4.13.2 All HCHS/SOL PIs and investigators will be informed of such ancillary proposals through periodic circulation

4.13.3 In addition to a statement of authorship, an ancillary study paper is to have a clear statement that this work was a substudy or ancillary study of HCHS/SOL and the support from NHLBI is to be acknowledged.

4.14 Invitations to HCHS/SOL for Presentation of Papers

4.14.1 The HCHS/SOL investigators welcome opportunities to participate and present reports of HCHS/SOL findings at national and international scientific meetings.

4.14.2 When an invitation is directed to the Chair of the Steering Committee or the Chair of the PC, the respective chairs will decide who is to represent HCHS/SOL. Invitations directed to the NHLBI will be reviewed and approved by the NHLBI Project Office.

4.14.3 When a HCHS/SOL investigator or PO scientist receives a personal invitation to make a presentation, they should notify the Chair of the PC to ensure listing of the presentation on behalf of the HCHS/SOL Research Group.

4.14.4 All presentations in response to such invitations should be based on published HCHS/SOL reports unless prior approval is granted by the PC and the Project Office.

4.14.5 Requests received by PIs or their staff to present or discuss at investigator’s institution meetings any previously published HCHS/SOL data need no prior clearance by the PC and acceptance of such invitations is encouraged.

4.15 Use of Data for Theses or Similar Academic Projects by Graduate Students

4.15.1 All requests for use of HCHS/SOL data by graduate students, medical students, residents and other trainees for theses or similar academic projects are to be reviewed by the PC and the Project Office.

4.15.2 It is required that the student requesting use for HCHS/SOL data is associated with the study through one of the HCHS/SOL investigators who is acting as the student's "sponsor" with regard to the data.

4.15.3 HCHS/SOL data may not be used by students if the data relate to major HCHS/SOL papers in progress or if the PC deems that data to be necessary for a future major paper.

4.15.4 If the PC recommends approval for the use of the requested data, a writing group is to be established and is to include the student as convener of the group.

4.15.5 The writing group is to take no action regarding the paper until the student has completed and defended the thesis provided this occurs in a reasonable length of time, to be determined on a case-by-case basis. The student's sponsor is to report the student's progress to the PC at least annually.

4.15.6 The student must include in the completed thesis:

- A. a statement acknowledging HCHS/SOL for use of the data, and
- B. a statement indicating that opinions, ideas, and interpretations included in the thesis are those of the student alone and not those of the HCHS/SOL investigators.

4.15.7 When the thesis has been completed, as determined by the sponsor, the entire writing group is to proceed to prepare the paper(s) for publication. It is the responsibility of the HCHS/SOL PI "sponsor" to ensure that the thesis accurately reflects the conduct and data from the HCHS/SOL, as dissertations are technically available to the public without going through the PC review process.

4.15.8 The standard HCHS/SOL publication policy applies to any material published from the thesis.

4.15.9 HCHS/SOL reserves the right to proceed with preparing a paper for publication on the thesis topic through the activation of a writing group if, in the view of the PC and the student's sponsor, the student has not made reasonable progress in completing the thesis.

4.16 Use of Data for Grant Application or Contract Proposal

HCHS/SOL data which have not been previously published but which are needed for grant applications or contract proposals must have prior approval for use by the HCHS/SOL Steering Committee and Project Office.

5.0 Ancillary Studies Policy

5.1 Definition of an Ancillary Study (AS)

An ancillary study is one that requires the collection of additional data from participants enrolled in HCHS/SOL, or laboratory measurements from stored biospecimens collected by HCHS/SOL. Studies that propose to analyze HCHS/SOL data for novel study questions not subsumed under the scientific aims of HCHS/SOL can also be considered as ancillary studies. Ancillary studies require separate outside funding which must include provision for any ancillary study costs that would be incurred by the parent HCHS/SOL study agencies. In order to protect the integrity of the HCHS/SOL, ancillary studies must be reviewed and approved by the Ancillary Studies Committee (ASC), and by the HCHS/SOL Steering Committee (SC), and by NHLBI, as well as by the NHLBI OSMB prior to submission for funding.

5.2 Types of Ancillary Studies (AS)

There are several types of AS:

- A. AS requiring collection of data through additional questionnaires not originally used in the baseline or follow-up collections of HCHS/SOL.
- B. AS requiring additional exam procedures may require that participants pay a separate visit to the clinic site or to another testing location.
- C. AS using stored biospecimens.
- D. AS of study questions that are not part of the HCHS/SOL scientific aims; secondary analyses of HCHS/SOL data e.g., R21 or other NIH funding mechanisms must be approved by the HCHS/SOL Publications Committee as well as by the Ancillary Studies Committee.
- E. Pooling projects or consortia that wish to use HCHS/SOL data.
- F. AS involving children or relatives of participants are considered on an individual basis.
- G. Clinical trials using HCHS/SOL participants are not approved at this time.

5.3 Local (one-center) vs. Multi-center Studies

Although studies may involve one or more or all HCHS/SOL Field Centers, studies are planned to be multi-center to take advantage of the unique characteristics of HCHS/SOL. Only if it is not feasible or desirable or appropriate to involve all centers, should a study be proposed as a single-center study.

5.4 Access – Who Can Apply

- A. Any HCHS/SOL Principal Investigator, Co-Investigator or Director of a Reading or Laboratory Center may apply. The Center's Principal Investigator's signature is required.
- B. Non- HCHS/SOL investigators who are colleagues of HCHS/SOL Principal Investigators or Co-Investigators may apply with sign-off (sponsorship) by that center's HCHS/SOL Principal Investigator. A non- HCHS/SOL "colleague" does not need to be at a HCHS/SOL institution.
- C. An AS must include an HCHS/SOL Investigator as a Co-Investigator.

- D. At this time, applications are not accepted from non- HCHS/SOL individuals who have no ties to HCHS/SOL, but this policy may be modified at a later date.

5.5 Application Process

- A. The development of an AS involves planning and consultation with other centers and reading centers in the process of preparing an application to AS. Since this involves a good deal of work on the part of the applicant, the applicant must send a one-page concept proposal using the guidelines in Appendix V to the Ancillary Studies Committee which then determines if there are any special barriers to this application going forward. The Ancillary Studies Committee provides concept approval and notifies the applicant within two weeks whether he or she should proceed with developing the proposal. For guidelines on submission of a full proposal see section 5.6.
- B. Applicants must obtain sponsorship of an HCHS/SOL Principal Investigator, or a HCHS/SOL investigator with approval of his/her HCHS/SOL Principal Investigator.
- C. The AS proposal must be submitted to the Ancillary Studies Committee. The committee may approve, recommend revision, or reject the proposal.
- D. AS that apply for HCHS/SOL biospecimens must have Laboratory Committee approval.
- E. Ancillary Studies Committee may refer the proposal to another committee or body for expert advice.
- F. After AS approval, proposal is submitted for HCHS/SOL Steering Committee approval.
- G. Following approval by the HCHS/SOL Steering Committee, the AS applicant can proceed to develop contractual or alternative cost agreements with HCHS/SOL study agencies that are to play a role in the proposed AS.
- H. Following HCHS/SOL Steering Committee approval, the AS proposal is submitted to NHLBI for review by the NHLBI Observational Study Monitoring Board (OSMB) and NHLBI approval.
- I. Only after notification of approval by the NHLBI is received can the AS be submitted for funding.
- J. If the proposal is rejected by the Ancillary Studies Committee, this action is reported to the Steering Committee which may then ask to have another review. Decisions of the Steering Committee are final.
- K. Applicant must notify the Ancillary Studies Committee if funded.
- L. The AS application should be sent to the HCHS/SOL Coordinating Center contact person listed on the website.

5.6 AS Proposal

- A. Application should be 5-7 pages including figures but not including references. Submission guidelines can be found in Appendix V.
- B. There should be an abstract with key objectives (up to 200 words).
- C. The application should include:
 - i. Specific Aims.

ii. Potential significance to HCHS/SOL, background and significance of research question.

iii. Methods.

AS relevant to proposal: compatibility with the HCHS/SOL informed consent, recruitment of participants, data collection, statistical analyses and power calculations, confidentiality, if use of specimens, type and volume of specimen requested, specification of lab methods, proposed laboratory, protection of confidentiality.

iv. Advantages to using HCHS/SOL cohort to answer the research questions.

v. AS investigator qualifications and involvement in HCHS/SOL.

vi. Length of data collection protocol and burden on participant.

vii. Potential burden on clinic staff.

- D. Specification whether separate Informed Consent is required. Note that HCHS/SOL participants have consented only to be in HCHS/SOL. They cannot be contacted by an AS investigator (they can only be contacted by the HCHS/SOL Principal Investigator). Thus, communications informing participants of an opportunity to join an ancillary study must come under the signature of the HCHS/SOL Principal Investigator.

5.7 AS Requesting Biospecimens

The HCHS/SOL is supportive of ancillary studies and strives for a balance between providing specimen volumes sufficient to test the ancillary investigators' hypotheses and preserving HCHS/SOL biospecimens for future studies. The amounts of specimen approved for an ancillary study should be considered a maximum amount. Investigators with an approved ancillary study can ask HCHS/SOL to make up for dead volume in an aliquot, and can request for an increase of up to 10 percent in the approved specimen if this responds to recommendations from study section reviewers. A request for an increase in specimen volume or in the number of aliquots of more than 10 percent of the approved amounts requires full review of a revised ancillary study application.

Types of specimen and amounts available to ancillary studies:

Type of Specimen	Volumes per Study Generally Allowable §
Serum	250 uL (total of serum and plasma per study)
EDTA plasma	250 uL (total of serum and plasma per study)
Citrate plasma	250 uL (total of serum and plasma per study)
DNA solution	0.5 microgram
Urine	5 mL

§ Larger amounts of specimen may be approved if a scientifically compelling justification is submitted.

Once an ancillary study is approved and funded, the HCHS/SOL Central Laboratory retrieves the specimen aliquots approved for the study, based on a list of IDs prepared by the HCHS/SOL Coordinating Center. Ancillary study investigators are responsible for the associated costs.

HCHS/SOL stores its biospecimen in aliquots larger than the amounts released to ancillary studies. Since it may be required to thaw (and re-aliquot) a larger volume of biospecimen to

release specimen to an ancillary study the HCHS/SOL Steering Committee reserves the right to negotiate an optimal timing for the release.

5.8 AS Data

- A. AS investigators must indicate that they are cognizant of the requirement to send the AS data to the HCHS/SOL Coordinating Center for inclusion into the HCHS/SOL database, and that the AS data are eventually made a part of the limited-access HCHS/SOL dataset available to outside investigators. (See item 9 below: Limited Access Dataset).
- B. The AS investigators have rights to use the data generated by the AS for two years after the inception of the AS. Subsequently, a copy of the AS data is sent to the HCHS/SOL Coordinating Center to be incorporated into the collaborative HCHS/SOL database.
- C. Data collected in the ancillary study and transmitted to the HCHS/SOL Coordinating Center is included in the NHLBI's limited access data program. The ancillary study must also provide appropriate documentation for the data to make it useful to outside investigators. Limited access data is made available to the public in accordance with the NHLBI Policy for Distribution of Data.

(http://www.nhlbi.nih.gov/resources/deca/policy_new.htm) as revised on June 27, 2005. This policy requires that data from studies ancillary to HCHS/SOL be included in the limited access data set submitted to NHLBI.

5.9 Data to be Obtained from HCHS/SOL

- A. HCHS/SOL data required by the AS is provided by the HCHS/SOL Coordinating Center, after approval of manuscript proposals that specify the dataset required by the AS.
- B. NIH rules for data distribution applies, implemented through signed data distribution agreements.
- C. Receipt of a Data and Materials Distribution Agreement signed by the AS Principal Investigator specifying that the AS investigators follow NIH and HCHS/SOL policies enables the HCHS/SOL Coordinating Center to provide data to the AS.

5.10 Partial Dataset

Partial access data refers to study data, with certain deletions and recoding that are released to requesting institutions and investigators for specific purposes and with certain restrictions and conditions. The partial dataset is provided to the AS Principal Investigator by the Coordinating Center.

5.11 Papers Arising from the AS

- A. Papers arising from the AS must be submitted to the HCHS/SOL Publications committee for review and approval.
- B. HCHS/SOL Publications Committee procedures apply (to be developed). AS investigators have the prerogative to select the authorship for their publications. AS investigators are required to invite an HCHS/SOL investigator to serve on writing groups and to contribute relevant expertise and knowledge of the HCHS/SOL data.

- C. The AS investigator must provide to the Coordinating Center the name and qualifications of the lead AS statistician/data analyst.

5.12 Criteria for Approval by Steering Committee

- A. An AS must be designed to answer important scientific questions or lead to innovation in research.
- B. The scientific merit of an AS application is assessed by the Ancillary Studies Committee and the HCHS/SOL Steering Committee according to the NIH study section review criteria modified for use in the HCHS/SOL Ancillary Study Policy.
- C. HCHS/SOL priorities for competing AS applications are assigned according to criteria outlined below.
- D. Use of the HCHS/SOL data and resources for pilot studies is discouraged, except under exceptional circumstances justified by the AS investigator(s).
- E. K awards and training programs are favorably considered, provided their aims have scientific merit.
- F. An AS must not place undue burden on HCHS/SOL participants.
- G. An AS must not place undue burden on an HCHS/SOL study agency (laboratory, coordinating center or field centers).
- H. The AS must be culturally sensitive to the Hispanic/Latino community and not jeopardize the relations between a HCHS/SOL study site and its community.
- I. Potentially sensitive issues raised by an AS are subject to review by and advice from the HCHS/SOL Socio-Cultural or Community Committees, or other bodies if pertinent.

5.13 HCHS/SOL Priorities and Policies

Priority is assigned to an AS application according to:

- A. Its potential for contributing to the health of Hispanic/Latino persons.
- B. Its ability to draw on unique characteristics of the HCHS/SOL.
- C. The degree to which it complements the current portfolio of studies.
- D. The value of its scientific resource contributed to the HCHS/SOL.

5.14 Timeline

Investigators who propose an AS should allow for the following turn-around time:

- A. Time from receipt of application by the Ancillary Studies Committee to Ancillary Studies Committee decision and feed-back to the investigator: up to 6 weeks (if no biospecimen is requested).
- B. If biospecimen is requested by the AS a review by the HCHS/SOL Laboratory Committee is required. The recommendations by the Laboratory committee are considered by the Ancillary Studies Committee in its review. Thus, time from receipt of application by the Ancillary Studies Committee to Ancillary Studies Committee decision and feed-back to the investigator: up to 8 weeks if HCHS/SOL biospecimen is requested.
- C. Time from Ancillary Studies Committee approval to Steering Committee Approval: 2 – 4 weeks.
- D. Time from Steering Committee approval to NHLBI/OSMB approval: up to 4 weeks.

- E. The approval of an ancillary study remains effective for 24 months from the date of the notification of approval by the NIH, during which time ancillary studies can be submitted/re-submitted for funding. If an ancillary study has not been funded, approval lapses after 24 months from the original communication to the ancillary investigator indicating approval. Once funded, the ancillary study investigators notify the HCHS/SOL Coordinating Center of this outcome.
- F. A progress report on the status of the ancillary study is sent to the HCHS/SOL Coordinating Center each year before November 1 so that the Steering Committee and the NHLBI OSMB can receive an update on the progress. This succinct report should be made on the template which is provided to AS investigators (HCHS/SOL Ancillary Study Yearly Report Form).

Note: Some variability in the turn-around times listed can be expected reflecting the complexity of the proposed AS, the requested use of biospecimen, and the inclusion of proposed data collection procedures that require contacting Investigators who propose the study.

Appendices

Appendix I HCHS/SOL Descriptive Statistics

Table 1. HCHS/SOL Study Communities: Demographic Characteristics, 2007

Study Community	<u>Population</u>		<u>Percent</u>
	Hispanic/Latino	Total	Hispanic/Latino
Bronx, New York	168,789	314,519	53.67
Chicago, Illinois	110,080	196,336	56.07
Miami, Florida	106,870	124,521	85.82
San Diego, California	121,104	244,784	49.47
Total			

Note: Data represents final selected census tracts for each field site.

Table 2. HCHS/SOL Study Communities: Hispanic/Latino Origin Characteristics, 2007

Study Community	Percent						
	Mexican	Puerto Rican	Dominican	Cuban	Central American	South American	Other
Bronx, New York	5.23	50.57	20.51	1.13	3.35	3.16	15.95
Chicago, Illinois	56.55	24.21	0.36	1.10	5.30	4.45	8.03
Miami, Florida	1.18	2.35	1.12	60.44	14.98	5.99	13.93
San Diego, California	88.13	1.31	0.06	0.27	0.76	0.63	8.83
Overall	35.33	22.91	7.16	13.43	5.64	3.43	12.10

Note: Data represents final selected census tracts for each field site.

Table 3. HCHS/SOL Study Communities: Hispanic/Latino SES Characteristics, 2007

Study Community	Income (percent)				
	Less than \$10,000	\$10,000 - \$24,999	\$25,000 - \$49,999	\$50,000 or Greater	Below Poverty Level
Bronx, New York	28.04	24.94	27.64	19.38	24.97
Chicago, Illinois	9.40	19.90	34.78	35.83	10.54
Miami, Florida	21.17	29.03	26.20	23.59	16.11
San Diego, California	10.53	24.54	33.49	31.44	11.24
Overall	19.15	24.81	29.96	26.07	16.43

Note: Data represents final selected census tracts for each field site.

Table 4 HCHS/SOL Study Communities: Hispanic/Latino Educational Attainment, 2007

Study Community	<u>Education (percent)</u>						
	Less than 9 th Grade	9 th – 12 th Grade, No Diploma	HS Graduate (or Equiv.)	Some College, No Degree	Associates Degree	Bachelors Degree	Graduate/Prof Degree
Bronx, New York	25.48	24.90	22.14	14.64	4.98	5.35	2.51
Chicago, Illinois	34.03	20.65	22.44	12.73	3.90	4.40	1.85
Miami, Florida	27.62	21.48	17.92	11.72	4.67	8.68	7.91
San Diego, California	24.00	21.01	21.49	18.78	5.01	6.08	3.63
Overall	27.37	22.33	21.07	14.55	4.69	6.10	3.89

Note: Data represents final selected census tracts for each field site.

Table 5 HCHS/SOL Study Communities: Hispanic/Latino Age Distribution, 2007

Study Community	<u>Age Distribution (percent)</u>	
	Ages 18 - 44	Ages 45 - 74
Bronx, New York	67.75	32.25
Chicago, Illinois	75.89	24.11
Miami, Florida	51.72	48.28
San Diego, California	69.49	30.51
Overall	66.92	33.08

Note: Data represents final selected census tracts for each field site.

Appendix II Principal Investigators and Affiliation

STEERING COMMITTEE PRINCIPAL INVESTIGATORS & Co-PI List

Bronx Field Center

Sylvia Wassertheil-Smoller, PhD, FACE, FAHA

Co-PI: Robert Kaplan, Ph.D.

Chicago Field Center

Martha Daviglus, MD, PhD

Co-PI: Aida Giachello, PhD

Co-PI: Kiang Liu, PhD

Miami Field Center

Neil Schneiderman, PhD

Co-PI: David J. Lee, PhD

Co-PI: Leopoldo Raij, MD

Co-PI: John G. Ryan, DrPH

San Diego Field Center

Greg Talavera, MD, MPH (Steering Chair)

Co-PI: Michael H. Criqui, MD, MPH

Co-PI: John Elder, PhD, MPH

Project Office – National Heart, Lung and Blood Institute

Paul Sorlie, PhD (Project Officer / Acting Chair 1st year)

Deputy Proj Officer: Larissa Avilés-Santa, MD, MPH

Deputy Proj Officer: Phyliss D. Sholinsky, MSPH

Deputy Proj Officer: Lorraine M. Silsbee, MHS

Contracting Officer: Kristi E Cooper

Contracting Specialist: Elizabeth Zoller

Coordinating Center

Lloyd Chambless, PhD

Co-PI: Gerardo Heiss, MD, PhD

Co-PI: Lisa LaVange, PhD

--- Listed above in large print are the Investigators who are voting members of the Steering Committee

--- Listed below are Investigators who are Ex-Officio Members of the Steering Committee

READING CENTERS PRINCIPAL INVESTIGATORS

Karen J. Cruickshanks, PhD

Audiometry Reading Center

University of Wisconsin

Department of Population Health Sciences

John Eckfeldt, MD, PhD

Central Laboratory

University of Minnesota

Graham Barr, MD

Pulmonary Reading Center

Columbia University

John Himes, PhD, MPH

Nutrition Reading Center

University of Minnesota

Thomas Mosley, PhD

Neurocognitive Reading Center

University of Mississippi Medical Center

Ronald Prineas, MD, PhD

ECG Reading Center

Wake Forest University

Susan Redline, MD, MPH

Sleep Reading Center

Case Western Reserve University

NATIONAL INSTITUTES OF HEALTH – INSTITUTIONAL REPRESENTATIVES

Roger Bulger, MD, FACP

National Center for Minority Health and Health Disparities

Jane Atkinson, DDS

National Institute of Dental and Craniofacial Research

Paul Eggers, PhD

National Institute of Diabetes and Digestive and Kidney Diseases

Howard J. Hoffman, MS

National Institute of Deafness and Other Communication Disorders

Claudia Scala Moy, PhD, MPH

National Institute of Neurological Disorders and Stroke

Mary Frances Picciano, PhD

Office of Dietary Supplements

Appendix III Committee Composition Structure

(Membership as of 1/08/2008)

Approved nominations by the Steering Committee for chairs are noted with * and highlighted (PI's appointees to assist in Committee work).

Project Officer was acting Chair of Steering Committee through January 15, 2008

NOTES: 1 Umbrella cmte coordinating QX & protocol development/testing. Includes med history med survey disability alcohol smoking

2 Umbrella cmte coordinating examination & protocol development and testing. Includes blood pressure ECG

3 Responsible for cultural appropriateness and translation

4 Includes acculturation access / barriers to health care social and economic disparities

■ Indicates on leave or sabbatical

	NIH	Chicago	Miami	New York Bronx	San Diego	Reading Ctr	CC
Steering	Sorlie	Daviglus	Schneiderman	Smoller	* Talavera	(Ex Officio)	Chambless
Sampling & Recruitment	Avilés-Santa Hoffman Sorlie	Liu Garside Concha	Lee B.Rodriguez Ryan	Kaplan Raiford	Finch R.Rodriguez	-	* LaVange Gonzalez Kalsbeek
Community Relations	Avilés-Santa Silsbee	Giachello ■ Girotti	* B.Rodriguez Ryan	Valdiveso Lee- Rey	Keir B.Rodriguez R.Rodriguez	-	Gildner Perreira
Career Development	Silsbee	Bishop	Lee	Lee-Rey Correa	* Talavera	-	-
Quality Control	Silsbee Sorlie	Liu	Gellman	Barnhart	Allison	Leiendecker-Foster	* Catellier ■ Chambless Youngblood
Retention & Follow-up	Avilés-Santa	Arrom Concha Giachello ■	B.Rodriguez Ryan	Raiford	Talavera Martinez R.Rodriguez	-	* Perreira Heiss Rosamond
Endpoints	Avilés-Santa Lynch Moy	Lloyd-Jones	Raij Sacco	Valle B arnhart Schumacher	Allison Criqui	Barr Prineas	* Rosamond Boucher Henderson LaVange
Publications	Sorlie	Daviglus	Schneiderman	* Smoller	Allison	Cruickshanks	Chambless
Ancillary Study	Sholinsky	Liu	* Schneiderman	Kaplan	Elder	Directors as applicable	Heiss
Questionnaires ¹	Sorlie Avilés-Santa	Carnethon Baker	* Lee	Smoller	Criqui Talavera	Directors as needed	Heiss
Examination//Operations ²	Sorlie Avilés-Santa	Daviglus Giovannazzi	Figueroa Gellman Raij	Kaplan Barnhart	Criqui Talavera	Directors as needed	* Heiss Youngblood
Translation & Validation ³	Avilés-Santa	Arrom Castillo Concha	Penedo B.Rodriguez	Isasi Talavera A	Arredondo Ayala	Directors as needed	* LaVange Agans Heiss Perreira
Laboratory & Sample Processing	Eggers Sholinsky	Green	Gellman Mendez	Barnhart	Allison	* Eckfeldt Leiendecker-Foster	Heiss
Morbidity & Mortality Classification	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Dietary	Krebs-Smith Loria	Van Horn	Lieberman Shor-Posner	Mossavar- Rahmani	Ayala Rock Talavera	* Himes Harnack	Chambless Siega-Riz

Continued on next page

	NIH	Chicago	Miami	New York Bronx	San Diego	Reading Ctr	CC
Psychosocial Sociocultural ⁴	Silsbee	Arrom Baker Giachello	Penedo	Isasi Correa	* Elder Gallo	Mosley	Chambless Perreira Popkin
Social-geographic context	-	* Sokas	Ryan	Isasi Lee-Rey	Gallo	-	Heiss Popkin Whitset
Neurocognitive ⁵	Avilés-Santa Moy	Choca	Penedo	Smoller Goodwin Grober	Gallo Parker	* Mosley	Catellier
Physical activity	Hoffman Loria Silsbee	* Carnethon	Gellman	Isasi Valdivieso	Arredondo Sallis	Harnack Redline	Catellier McMurray
Anthropometry	Hoffman Loria Silsbee	Van Horn	Gellman	* Isasi	Ayala Rock	Himes	Catellier Stevens
Sleep	Hoffman Twery	Zee	Wohlgemuth Hall	Arens Mossavar- Rahmani	Loreda	* Redline Spilsbury	Chambless Levine
Oral health	Canto	Beaver	Gomez	Badner	Parker	-	* Beck Heiss Mauriello
Audiometry	Hoffman	Dhar	Fifer	Dinces Tocci	Torre	* Cruickshanks	Heiss
Respiratory	Weinmann	Smith	Salathe	Aldrich Prezant	Ries	* Barr Hankinson	LaVange Boucher Henderson London
Data Management	-	Garside	Gellman	Ginsberg	Denenberg, Morgan	-	* Youngblood Bryan
Genomics	Papanicolaou	Huang Manghi	Seo	Ho	Allison McCarthy	Eckfeldt	* North

Appendix IV Membership of the OSMB



NHLBI Observational Study Monitoring Board Listing of Members (May, 2007)

Acting Chair for the June 2007 Meeting of the Board

George Howard, Dr.P.H.
Professor and Chairman of Biostatistics
University of Alabama at Birmingham

Odilia I. Bermudez, PhD, MPH
Assistant Professor
Tufts University
Friedman School of Nutrition Science and Policy

Enrique Caballero, MD
Assistant Professor
Joslin Diabetes Center

Hannia Campos, PhD
Senior Lecturer on Nutrition
Harvard University School of Public Health
School of Nutrition

Gustavo Cruz, DMD, MPH
Assistant Professor and Director of Public Health
New York University
Department of Epidemiology and Health Promotion
College of Dentistry

Judy Dubno, PhD
Professor
Medical University of South Carolina
Department of Otolaryngology/ENT

Esteban González Burchard, MD, MPH
Assistant Professor of Biopharmaceutical Sciences and Medicine
University of California, San Francisco

Martha Medrano, MD, MPH
Director of the Medical Hispanic Center of Excellence
University of Texas at San Antonio

Olson, Jean L., MD, MPH
(Executive Secretary, HCHS/SOL OSMB)
Affiliation: NHLBI

Appendix V

Ancillary Study Concept Proposal Guidelines



HCHS/SOL Ancillary Study

Concept Proposal

Because of the considerable effort required to submit an Ancillary Study Proposal to the HCHS/SOL, those considering such action must first submit an “Ancillary Study Concept Proposal” to the HCHS/SOL AS Committee. This will determine if the investigators should be encouraged to submit a full proposal or if the study does not appear to be acceptable to HCHS/SOL. The AS Committee will make a recommendation to the Steering Committee and the Steering Committee’s opinion will be conveyed back to the prospective AS Principal Investigator by the chair of the AS Committee. Please note that R01 applications requesting \$500,000 or more in direct costs will need NIH agency approval before being submitted to the NIH.

1.0. The Ancillary Study Preliminary Proposal will include the following:

- 1.1. Title
- 1.2. P.I. (name, institution, address, phone, fax, email)
 - 1.2.1. HCHS/SOL Sponsor
- 1.3. Potential Collaborators (must include at least one HCHS/SOL investigator)
- 1.4. Aims
- 1.5. Study Design (include sample size justification)
- 1.6. Methods, including:
 - 1.6.1. Participant involvement (if any)
 - 1.6.2. Data to be collected by the ancillary study (including information about translation, validation and related issues if new questionnaires will be administered; examinations; and/or biological specimens other than those being collected and processed for the primary study).
 - 1.6.3. Analysis Methods
 - 1.6.4. Relationship of study to participation by other Field Centers, Central Laboratory, Reading Centers and the UNC Coordinating Center.

The Ancillary Study Preliminary Proposal should be about two pages in length but an additional table and/or figure is acceptable.

Please send your Ancillary Study Concept Proposal to the HCHS/SOL as a Word document to the Coordinating Center (HCHSAdministration@mail.csc.unc.edu).



HCHS/SOL Ancillary Study Proposal

Date Submitted: _____

Is this a re-submission? Y ☐ N ☐

1.0. Basic Study Information and Projected Impact on HCHS/SOL

1.1. Title of study:

1.2. Principal investigator(s) (name, address, phone and fax numbers, e-mail address):

1.2.1. HCHS/SOL Sponsor:

1.3.1 Collaborators (must include at least one HCHS/SOL investigator):

1.3.2 Aims

1.3.3 Study Design (include sample size justification)

Table 1. Summary of HCHS/SOL centers and tasks involved (NA=not applicable)

Center	Enroll or examine participants (N)	Assay samples (N participants)	Provide samples (N participants)	Analyze data (yes/no)
Einstein Field Center (Bronx, NY)				
Miami Field Center (Miami, FL)				
Northwestern Field Center (Chicago, IL)				
San Diego Field Center (San Diego, CA)				
Central Laboratory				
Pulmonary Reading Center				
Sleep Reading Center				
EKG Reading Center				
Audiometry Reading Center				
Nutrition Reading Center				
Neurocognitive Reading Center				
Coordinating Center (UNC)				

1.4 HCHS/SOL participant and staff involvement:

1.4.1. Participants:

Describe number of subjects needed; special characteristics of study population; age and sex distribution. Will participants be contacted, interviewed, or examined? If so, describe participant involvement. Estimate time required of each participant.

1.4.2 HCHS/SOL Field Centers:

Describe effort (and estimated time) required of HCHS/SOL staff at each participating center.

1.4.3. HCHS/SOL Coordinating Center:

Describe effort (and estimated time) required of HCHS/SOL Coordinating Center staff. Specifically:

Will the Coordinating Center be involved in data collection, tracking, or preparation of forms or software or will these tasks be completed locally by the Ancillary Study, and a data file sent to the Coordinating Center?

1.4.3.1. If a Reading Center or laboratory is involved, will data be sent directly from the Reading Center or laboratory to the Coordinating Center for processing, or will processing be done locally (either by the Ancillary Study or at the Reading Center/Laboratory)?

1.4.3.2. Will analyses be done locally by the Ancillary Study or by analysts at the Coordinating Center? If analyses will be done locally, will you request Coordinating Center verification of the analyses? For local analyses, indicate the name and qualifications of the lead statistician/data analyst.

2.0. Data Collection and Processing

2.1. Use of Stored HCHS/SOL specimens in addition to those already specified in the HCHS/SOL protocol.

2.1.1. Describe materials to be used (e.g., stored plasma, urine, DNA). If these additional blood samples are requested, please review the HCHS/SOL Ancillary Study Policy (Manual 1. Section 5.0) in consideration of the following:

- 2.1.1.1. Study year for which samples are to be used
- 2.1.1.2. Sample type (e.g., Serum, EDTA, Citrate, DNA)
- 2.1.1.3. Requirement for frozen vs. previously thawed samples.
- 2.1.1.4. Sample volumes
- 2.1.1.5. Efforts to integrate sample needs with those of other studies to conserve sample and/or limit freeze-thaw cycles.

Please complete Table 2 if new HCHS/SOL specimens are proposed.

Table 2. Specimens in Addition to those already being collected in HCHS/SOL.

Type of Specimen	N	Volume Requested	Timepoint (e.g., BL, Y2, Y3)	Specific proposed lab and analytes at each lab (be specific e.g. list each polymorphism separately)
Serum		μl		
Plasma EDTA		μl		
Plasma citrate		μl		
DNA		μg		
Urine		μl		
RBC		μl		

- 2.2. Will you collect additional ancillary study questionnaire data (beyond that in the HCHS/SOL basic protocol)? If yes, please fill out Table 3.

Table 3. Ancillary Study Additional Questionnaire data

What data? (Attach questionnaire/form)	When collected? (e.g., BL, Y2, Y3)	Time in minutes to administer?	Interviewer (I) or Self-administered (S)?
a.			
b.			
c.			

- 2.3. Is there a need to translate and validate translated questionnaires, and if so how will this be done?
- 2.4. How much total participant time (per person) will be spent on this project? ____
- 2.5. Variables/measurements from the HCHS/SOL main study database to be analyzed:
- 2.6. Genomic information (defined as any data from a participant's DNA):
- 2.6.1. Does your proposal include any genomic materials? (please check one)
☐ No ☐ Yes
- 2.6.2. Name the gene(s), genotypes, SNPs to be investigated.

- 2.6.3. Should DNA-based results be reported to patients' physicians? Base your response on your knowledge of existing literature and current practice regarding increased risk and availability of treatment for adverse outcomes associated with the gene mutations to be studied.

3.0. Additional Information

- 3.1. Proposed starting and ending dates:
- 3.2. Estimated cost by year; number of years:
- 3.3. Source of funding; date of submission:
- 3.4. Does this study involve the support or collaboration of a for-profit corporation, or do you intend to use the data to patent any process, aspect or outcome of the analysis?
- 3.5. What is the advantage, both to HCHS/SOL and yourself, of conducting the study within the HCHS/SOL cohort versus another population?
- 3.6. Impact on ongoing HCHS/SOL studies (main study or other Ancillary Studies):
- 3.7. Provide the following assurances (answer each):
- 3.7.1. Who (name and position) will report progress of the study in the fall of each year? (Ancillary Study PI or designate preferred)
- 3.7.2. How will confidentiality of HCHS/SOL participants be maintained?
- 3.7.3. Data collected by the Ancillary Study, with documentation, will be provided to the HCHS/SOL Coordinating Center for integration into the main database. After that has been done the Ancillary Study investigators will receive the integrated file containing data from the main study. The Ancillary Study PI will be given the first and exclusive opportunity to analyze, present and publish data collected under the auspices of the Ancillary Study. After a reasonable time (in general, 12 months after data cleaning is complete or 12 months after acceptance of primary manuscript, whichever is earlier), Ancillary Study data will be made available for additional uses by other HCHS/SOL investigators. It is the responsibility of the Ancillary Study PI to state in writing to the HCHS/SOL Steering Committee any special circumstances that would warrant an exception to these guidelines for data sharing. In the spirit of encouraging collaboration, reasonable and justified requests for limiting Steering Committee access to the data will be honored, or some compromise will be worked out.
- 3.8. Any additional comments or information for the Ancillary Studies Committee
- 3.9. By signing this document, you agree to abide by HCHS/SOL policy.
- 3.9.1. Signature of Principal Investigator _____

(Required for all ancillary study applications. Please FAX this page to the Ancillary Studies Program Administrator, Rosanne Kolaczynski, at 305-284-6825 or provide scanned signature electronically).

- 3.9.2. Signature of Sponsoring HCHS/SOL Principal Investigator _____
(Required for all ancillary study applications. Please FAX this page to the Ancillary Studies Program Administrator, Rosanne Kolaczynski, at 305-284-6825 or provide scanned signature electronically).

- 3.10. Attach a proposal narrative (not to exceed 8 pages, including tables/figures/references). This narrative should include aims, significance, study design and an amplification of methods described in the Concept Proposal and Ancillary Study Proposal Form.**
- 3.11. Please submit both the completed Ancillary Study Proposal Form and the Proposal Narrative to HCHS/SOL Coordinating Center as a word document. Send to HCHSAdministration@mail.csc.unc.edu .

Appendix VI Manuscript Proposal Sample Form

HCHS/SOL Manuscript Proposal # _____

_____ Main Study paper _____ Ancillary Study paper _____ # of Ancillary Study _____
PC Reviewed: ____/____/____ Status: ____ approved ____ revise ____ disapproved Priority: ____

SC Reviewed: ____/____/____ Status: ____ approved ____ revise ____ disapproved Priority: ____

1.a. Full Title:

b. Abbreviated Title (Length 26 characters):

c. Keywords:

2. Proposer: _____

3. Center: _____

4. Sponsoring PI:

5. Suggested co-authors: _____

6. Writing Group (To be completed after PC assigns co-authors):

Writing group members:

First author:

Address:

Phone:

Fax:

E-mail:

Corresponding/senior author (if different from first author correspondence will be sent to both the first author & the corresponding author):

Address:

Phone:

Fax:

E-mail:

7. Will the DNA or biomarker data be used in this manuscript?

____ Yes ____

No

8. The lead author of this manuscript proposal has reviewed the list of existing HCHS/SOL manuscript proposals and has found no overlap between this proposal and previously approved manuscript proposals either published or still in active status. HCHS/SOL

Investigators have access to the publications lists under the Study Members Area of the web site at:
<http://www.csc.unc.edu/hchs>

_____ Yes _____ No
*ancillary studies are listed by number at _____

9. Who will do data analyses? _____ CC Chapel Hill _____ at HCHS site (under supervision of local PI) _____ at a writing group member's site which is not an HCHS center. (specify where) _____

10. a. Is this manuscript proposal associated with any HCHS ancillary studies or use any ancillary study data? _____ Yes _____ No

10. b. If yes, is the proposal

- (1) primarily the result of an ancillary study (list number*) _____
- (2) primarily based on HCHS data with ancillary data playing a minor role (usually control variables; list number(s)* _____

*ancillary studies are listed by number at <http://www.csc.unc.edu/HCHS/>

Manuscript Proposal Page _____ **MS#** _____

11. Rationale:

12. Main Hypothesis/Study Questions:

13. Analysis plan : inclusion/exclusion, outcome and variable definition, other variables of interest (potential confounders), statistical analysis, power considerations. any anticipated challenges if present. Provide dummy tables

14. Relevant references

Note: Manuscript preparation is expected to be completed in one to three years. If timely progress is not being made, the P&P may replace the lead authors or the manuscript proposal will expire.