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## Appendix 3-B.

### **ABSTRACTS OF PROJECTS STARTED IN 2014: AGENCY FOR HEALTHCARE RESEARCH AND QUALITY (AHRQ) DATA OR NATIONAL CENTER FOR HEALTH STATISTICS (NCHS) DATA**

Projects in this portion of the appendix use data provided by the Agency for Healthcare Research and Quality (AHRQ) or data provided by the National Center for Health Statistics (NCHS). Under authority of the Economy Act, the Center for Economic Studies hosts projects in Research Data Centers using data provided by AHRQ or NCHS. AHRQ or NCHS is solely responsible for selecting projects and for conducting disclosure avoidance review.

#### **PHYSICAL DISABILITY AND DISPARITIES IN HEALTH CARE SYSTEM (AHRQ)**

*Elham Mahmoudi – University of Michigan*

The U.S. health care system is confronted with numerous problems, including lack of access to health care for large segments of the population, rapidly escalating health care costs, and

insufficient effort in the promotion of clinical and community-based prevention and population health. These issues are more pronounced for individuals with physical disabilities, primarily

because those without functional limitations often overlook barriers to health care. This study investigates factors associated with disability-related disparities in health care.

#### **HEALTH CARE ACCESS AT THE CROSSROADS: ANALYSES OF STATES AS THEY PREPARE FOR IMPLEMENTING THE PPACA (NCHS)**

*Michel Boudreaux – University of Minnesota  
Heather Dahlen – University of Minnesota  
Donna Spencer – University of Minnesota*

*Joanna Turner – University of Minnesota  
Karen Turner – University of Minnesota*

The Affordable Care Act of 2010 (ACA) makes significant changes in health insurance coverage and health care systems across the United States, with states responsible for many of the key elements of reform. This research conducts a series of analyses using the National Health Interview Survey (NHIS) to aid states in their preparation for and implementation of ACA and to expand the role of the NHIS in monitoring the impacts

of health reform in the states. The research includes descriptive and multivariate analyses examining: (1) eligibility for and enrollment in state Medicaid and Children's Health Insurance Programs (CHIP), (2) insurance coverage and uninsurance, (3) access to and use of health care, (4) the affordability of care, and (5) state and community health care markets. Analyses are carried out for the overall population as well as for key

population subgroups, including subgroups defined by age (e.g., children and non-elderly adults), income, and health status. The project will examine differences across regions and, where possible, across states. These analyses will provide baseline data for the evaluation of the impacts of health reform in the states as elements of ACA are implemented between now and 2014.

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## ACCESS TO HEALTHCARE AMONG ASIAN SUBGROUPS IN THE UNITED STATES: EXAMINING THE INTERACTION BETWEEN COMMUNITY- AND INDIVIDUAL-LEVEL CHARACTERISTICS USING MULTILEVEL MODELING (NCHS)

*Sunha Choi – University of Tennessee, Knoxville*

Asian Americans are one of the least studied minority populations in the United States. Specifically, due to small sample sizes and data limitations, the subgroup differences have often been overlooked by using aggregated data for all Asian groups. Additionally, although the effects of contextual factors on individuals' health service utilization are important considerations,

few studies have focused on Asian subgroups. Thus, the goal of this study is to inform program development and implementation to promote the health of Asian subgroups by filling this gap in the literature. To achieve this goal, the specific aims of the proposed study are: (1) to examine whether healthcare utilization and health behaviors differ by ethnicity among Asian

Americans after controlling for individual-level covariates (predisposing, enabling, and need factors) and the effects of geographic clustering, and (2) to examine whether county- and state-level contextual factors affect the relationships between ethnicity and other individual-level characteristics and health care behaviors among Asian Americans (interaction effects).

## INVESTIGATING THE HEALTH OF IMMIGRANTS AND REFUGEES (NCHS)

*Holly Reed – Queens College, CUNY*

Although much health disparities research focuses on race and ethnicity, nativity has proved crucial in explaining the “epidemiological paradox,” whereby Latinos have been found to be healthier than their non-Latino counterparts despite their lower socioeconomic status. The majority of this literature focuses on Latino immigrants' “health advantage” over native-born Americans, but there is a lack of research comparing immigrant groups from other regions. This project aims to disaggregate nativity into

geographic sub-groups (Africa vs. Latin America) and into visa category sub-groups (refugees vs. non-refugee immigrants). The research seeks to “unpack” the influence of nativity and visa status on a broad array of health outcomes — including self-reported health status, chronic conditions, functional limitations, obesity and body mass index — using multivariate statistical analyses of two nationally representative datasets: the National Health Interview Survey (NHIS) and the New Immigrant Survey (NIS). The specific aim

of this part of the project is to determine if refugees in general — and African refugees in particular — have a health disadvantage relative to other groups and examine potential explanations for this disadvantage. The research examines the effects of migrant selection and socioeconomic status, acculturation, health behaviors, co-ethnic community, and access to care on the health outcomes of these geographic and visa category sub-groups.

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## FOOD ALLERGEN LABELING MANDATES: OPTIMAL DESIGN OF RISK INFORMATION POLICIES (NCHS)

*Maria Aslam – Emory University  
David Frisvold – University of Iowa*

This project analyzes the provision of risk information programs on consumers, and investigates consumers' response to the hazard information. The efficacy of risk information campaigns is assessed with examples of industry, federal, and state-level food allergen labeling regulation. The industry

guidelines stress the need for voluntary disclosure of product's risk characteristics. The federal legislation sets uniform criteria for determining how to display risk information, while the state-level regulation varies in the soundness of their warning messages. This project focuses on non-addictive goods, which

allow consumers to be less constrained in their reaction to products' hazardous characteristics. The policy outcome of this study is to suggest guidelines for designing information provision policies that ensure the optimal mode of expressing risk information.

## THE IMPACT OF HEAT AND COLD WAVES ON CAUSE-SPECIFIC MORTALITY IN THE UNITED STATES (NCHS)

*Igor Akushevich – Duke University  
Julia Krauchanka – Duke University*

This study evaluates the associations between cause-specific mortality for a wide spectrum of diseases (which includes both diseases that are ICD-coded as heat/cold-related and diseases that are not coded as heat/cold-related) and weather characteristics such as temperature, humidity, wind, and air pollution. These associations will

be analyzed by age, sex, and race for three U.S. states at the county level: North Carolina, California, and New York. The evidence of time trends in evaluated effects will be investigated over four decades of observation. Analyses will include the regression analyses, time-series analyses, and evaluation of the lag period for effects of

temperature on cause-specific mortality, and the estimation of the thresholds for the high and low temperatures effects on mortality for each studied state. The comprehensive model of association of cause-specific mortality and temperature patterns will be developed.

## ADD AND SEXUAL RESPONSIBILITY IN MINORS (NCHS)

*Steven Thomas – Duke University*

Using 2001-2004 National Health and Nutrition Examination Survey (NHANES) data, previous research has established that Attention Deficit Disorders (ADD) are prevalent among teenagers in the United States. Of 3,082 children and adolescents aged 6 to 15 years old, 8.7 percent met diagnosis classification codes as defined

in the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision (DMS-IV). An increased prevalence of risk-taking behaviors is well established for teenagers and young adults with ADD. The relationship between ADD and risk-taking behaviors in teenagers and adults is not as well studied as the prevalence of associations

between ADD and other risk-taking behaviors. This research uses NHANES data to study the relationship between ADD and high-risk sexual behaviors, and the relationship between ADD and the adverse consequences of high-risk (irresponsible) sexual behaviors.

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## HOW DO REFERENCE GROUPS AFFECT PERCEPTIONS OF OVERWEIGHT STATUS? (NCHS)

Mary Burke – Federal Reserve Bank of Boston  
Arman Khachiyani – Federal Reserve Bank of Boston

Evidence from NHANES and other surveys indicates that individuals tend to understate their body weight and overstate their height and that many fail to perceive that they are overweight. The tendency to misreport physical characteristics varies systematically with the individual's true characteristics and with demographic factors. However, understanding of the underlying mechanisms is lacking. This research investigates whether misreporting of weight and height depend on the characteristics of an individual's peers,

defined by geographic location. Such a relationship might arise if, as suggested by previous evidence, individuals define "normal" physiques in relation to the distribution of physical types in a local peer or reference group. If demographic factors in a local reference group are associated with misreporting of weight and height, a possible implication is that individuals disregard medical standards in setting weight goals and related behaviors. Assessment of the nature and scale of peer influences on self-reporting behaviors will be

done by a comparison of the strength of effects at different geographic levels of aggregation, in addition to assessing the relative importance of different demographic factors. The effects will be identified using cross-sectional variation in local reference group characteristics as well as inter-temporal changes in demographics within a location. In addition, the data permit an investigation of the relationship between misreporting of weight and misperception of overweight status.

## AMERICAN FERTILITY IN THE GREAT RECESSION (NCHS)

Daniel Schneider – University of California, Berkeley

The effects of the Great Recession on the fertility of American women are examined to understand an array of economic conditions that may affect the likelihood of birth in a given month. This project investigates whether macro-economic conditions affect fertility, for whom these effects are most pronounced, and the pathways by which any such effects might operate. The National Survey of Family Growth, 2006-2010 calendar-month data, and other data sources will be used to determine how unemployment, mortgage delinquency and

foreclosure, and consumer confidence as well as media coverage of the recession are linked to the likelihood of birth in a given month. Data on birth intentions will be employed to provide some insight into whether the recession has reduced plans for future births, suggesting lasting effects, or not, suggesting more temporary effects. A set of socio-demographic individual characteristics and data on attitudes and family background are used to examine variation in the effects of the recession on fertility. Calendar months of conceptions, contraceptive use,

sexual inactivity, and romantic relationship status derived from the public-use file are used to examine the mechanisms connecting the macro-economy to fertility. The use of restricted variables (region, state, county, and CBSA) for Place of Residence at Interview, combined with macro-economic data at several levels of aggregation to the individual level NSFG data, will allow for examination of exogenous variation in economic condition on both spatial and temporal dimensions.

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## **ASSOCIATION OF ACCELEROMETRY-ASSESSED AND SELF-REPORTED PHYSICAL ACTIVITY AND MORTALITY AMONG A NATIONAL SAMPLE OF THE UNITED STATES (NCHS)**

*Fang Wen – University of North Carolina at Chapel Hill*

Using the adult sample of participants enrolled in the National Health and Nutrition Examination Survey (NHANES) from 2003-2006, this project will determine the associations of objectively assessed physical activity and sedentary behavior with the risk of all-cause and cardiovascular disease CVD mortality. Secondary aims include (1) using latent class analysis to determine patterns of objectively assessed physical activity

and determine the association of these patterns with the risk of all cause and CVD mortality, and (2) determining the association of self-reported physical activity with the risk of all-cause and CVD mortality, and contrast the resulting associations with those found using objectively-measured physical activity. For the NHANES cohort, physical activity was determined using both a self-reported assessment and an objective measure, the

ActiGraph accelerometer. The accelerometer accurately detects movement that can be translated into sedentary, light, moderate, and vigorous physical activity. Participant files are linked with mortality through 2011 using the National Death Index. Results can provide evidence towards the national physical activity guidelines with more specificity related to physical activity and sedentary behavior and greater generalizability.

## **DISPARITIES IN HEALTH AND MORTALITY BY NATIVITY AND IMMIGRANT STATUS (NCHS)**

*Deborah Graefe – Pennsylvania State University*

*Isaac Sasson – University of Texas*

*Jennifer Van Hook – Pennsylvania State University*

This project explores how immigration and immigrant legal status contribute to racial/ethnic disparities in health and mortality. This research uses restricted-use data on immigration, work, and place of residence, combined with public-use data on health behaviors and outcomes and social and economic circumstances for respondents from eight different years of the National Health Interview Survey (NHIS), to estimate health and mortality disparities by nativity

and immigrant status. The project will also estimate the likely range of these differentials given uncertainty in the accuracy of immigrant status estimates. The restricted-use data will enable assessment of a wide array of child and adult risk behaviors and health and mortality outcomes for the U.S. population and numerous national-origin groups by nativity and immigrant status (including categories such as native-born, naturalized citizen, non-citizen

Legal Permanent Resident (LPR), non-citizen refugee, legal non-immigrant (i.e., foreign-born residents with temporary visas), and other). Such critical descriptive information will provide a detailed profile of immigrant health and mortality and stimulate the kinds of path-breaking research necessary for advancing scientific knowledge about the origins of U.S. racial/ethnic health and mortality disparities.

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## **EVALUATING THE IMPACT OF ENVIRONMENTAL CONTAMINANTS ON NEUROCOGNITIVE FUNCTIONING IN SCHOOLCHILDREN: A NOVEL GEOGRAPHICAL ANALYSIS OF NHANES AND SABINS DATA (NCHS)**

*David Van Riper – University of Minnesota*

Chemicals used in food or household applications can accumulate in children after exposure in utero, as well as via dietary and environmental exposures. Current understanding of the potentially deleterious effects of such exposure on neurocognitive development and functioning in children, while suggested in the literature, remains inconclusive. It is also unclear whether this exposure may affect the overall functioning of whole populations, for example children who live in the

same area and attend the same school. The primary objective of this research is to explore the links between levels of four groups of environmental contaminants in children and prenatal exposure levels (as indicated by levels in women of childbearing age in the appropriate time frame) on school test scores, a proxy for neurocognitive functioning, while controlling for confounding factors such as socioeconomic status. The application of geographic overlay and statistical techniques

allows for a novel linkage of existing datasets that monitor environmental exposure levels in the U.S. population and that aggregate student test scores to individual school catchment areas. Results from this study will provide the first spatially explicit indication of the relationship between exposure to contaminants and neurocognitive performance using a statistically representative sample of U.S. children and of women of childbearing age in the appropriate time period.

## **ASSOCIATION OF EXPOSURE TO TRAFFIC AND PAHS AND CHILD NEUROBEHAVIOR (NCHS)**

*Aimin Chen – University of Cincinnati*

*Stephani Kim – University of Cincinnati*

Polycyclic aromatic hydrocarbons (PAHs) are identified as carcinogenic to humans, and recent evidence suggests that it may have additional adverse health effects, including reproductive and developmental toxicity. Traffic is one of major sources of PAH emission in the air in the United States. Pre- and postnatal

exposure to PAHs may be related to adverse neurodevelopment outcomes. This project, therefore, links data from the National Highway Planning Network (NHPN) and CDISC for children aged 8 to 15 years to investigate the association between urinary PAH metabolites and neurobehavioral deficits, in particular

attention deficit hyperactivity disorder (ADHD) and conduct disorder (CD). Data on the PAH metabolites in urine, blood lead, urine creatinine, and serum cotinine levels are publicly available through NHANES 2001-2004. Data on ADHD and CD are available in the restricted-use NHPN.

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## **EXAMINING RELATIONS BETWEEN RESIDENTIAL SEGREGATIONS, POLITICAL EMPOWERMENT, AND ADVERSE BIRTH OUTCOMES AMONG U.S. BIRTHS FROM 2008-2010 (NCHS)**

*Claire Margerison-Zilko – University of Texas at Austin*  
*Maria Perez-Patron – Texas A&M University*

The objectives of this project are to (1) use U.S. vital statistics data from 2008-2010 to comprehensively examine the associations between residential segregation and risk of pre-term birth and low birth weight in U.S. cities among black/

non-Hispanic, Hispanic/Latino, and white/non-Hispanic women, and (2) to determine whether increased minority political empowerment can counteract any negative effects of segregation on birth outcomes. The research links data on all U.S.

births from 2008-2010 from the National Center for Health Statistics Vital Statistics natality data to data on residential segregation from the American Communities Project and data on political empowerment collected by the research team.

## **THE EFFECT OF REIMBURSEMENTS ON PHYSICIAN SUPPLY (NCHS)**

*Alice Chen – University of Chicago*

Although Medicaid is the nation's largest health program in terms of the number of recipients, recent studies have shown that nearly a third of doctors do not accept new Medicaid patients. This study examines how responsive physicians

are to changes in the Medicaid reimbursement rate by first estimating the own-price supply elasticity for Medicaid holding constant state-specific changes in demand for Medicaid and then by showing that Medicaid and Medicare supply are

complements, Medicaid and charity care are substitutes, and private care supply is unaffected by Medicaid reimbursement changes. This study may be one of the first to consider effects of physician payment changes on substitutable insurance margins.

## **VARIABILITY OF MORTALITY LEVELS AND TRENDS BY STATE IN THE UNITED STATES (NCHS)**

*Celeste Winant – University of California, Berkeley*

The purpose of the project is to promote research on historical trends and, in particular, interstate variations in the mortality of the United States since the 1930s. The project constructs a publicly-accessible collection of mortality data series by state. The new data series will include indicators of both total (i.e., all

causes of death) and cause-specific mortality. It will contain state-level estimates of all-cause mortality by age, sex, and year for the period from 1933 to 2012. The project also creates annual state-specific estimates of mortality by age, sex, and cause of death for 1959-2012 (possibly, 1950-1958 as well).

The project tabulates individual records from Mortality Detailed Files, for years from 1959 to the latest available, by age, year of birth, sex, state of residence, state of occurrence and by cause of death. Availability of these variables varies by year.

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## THE INTERACTION OF DIET, AIR POLLUTION, AND CARDIOVASCULAR DISEASE IN NHANES III (NCHS)

*Ryan Shanley – New York University*

This research investigates the relationships between air pollution, diet, neighborhood characteristics, and health in the NHANES III study cohort. Long-term and short-term exposures to ambient air pollutants have been linked to cardiovascular disease (CVD). A number of factors, such as age and pre-existing disease, exacerbate the adverse cardiovascular effects of PM. Yet, it remains unclear whether the adverse cardiovascular effects of air pollution

could be modified by diet and lifestyle factors. Obesity and high saturated fat intake are well-established dietary risk factors for CVD, and are associated with metabolic syndrome. Recent studies suggest that air pollution exposure is associated with increased levels of intermediate biomarkers of CVD, and the relationship is modified by metabolic syndrome. The research calculates strata-specific risk estimates of the relationship between PM and

CVD mortality for each category of adiposity and saturated fat intake. In addition, it has become clear that functional single nucleotide polymorphisms (SNPs) in genes relevant to lipid metabolism and transport are associated with increases in obesity and type 2 diabetes. The researcher also calculates strata-specific risk estimates of the relationship between PM and CVD biomarkers according to each genotype.

## STRUCTURAL DISCRIMINATION AND BIRTH OUTCOMES AMONG AFRICAN AMERICAN WOMEN IN THE UNITED STATES (NCHS)

*Alicia Lukachko – Columbia University*

African Americans, compared with Whites, are at increased risk of poor birth outcomes, including low birth weight and preterm birth. Exposure to discrimination is one hypothesized mechanism for these health disparities. However, epidemiologic studies have not consistently found an association between discrimination and birth outcomes. One potential explanation for these discrepancies is that studies have relied almost exclusively on self-reported measures of discrimination, which have multiple limitations. Importantly, psychological

factors that influence whether experiences are attributed to discrimination (e.g., coping style) are themselves risk factors for negative birth outcomes, which may create a negative bias in studies. Consequently, researchers have recently begun to investigate objective exposures of discrimination that do not rely on self-report. The current study will expand this work by conducting an ecologic analysis of the relationship between structural discrimination and poor birth outcomes among African American women. Employing a composite index of

black/white disparities utilizing state-level data derived from the U.S. Census and other publicly available sources, the researcher will link this measure to data on birth outcomes and individual-level risk factors, which will be obtained from the National Survey of Family Growth. The project examines whether structural discrimination predicts poor birth outcomes among African American women and explains disparities in these outcomes between African American and white women.



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## RENAL LIVING DONORS EVALUATION STUDY (RELIVE): ESRD AND LONG-TERM OUTCOMES (NCHS)

*Brenda Gillespie – University of Michigan*

*Emily Messersmith – Arbor Research Collaborative for Health*

*Robert Weyant – Arbor Research Collaborative for Health*

Based on limited long-term data available through registries and individual centers, there is no clear evidence that kidney donors are at increased risk for adverse long-term medical outcomes. To quantify the actual effect of renal donation on donor health, it is necessary to compare event rates in donors to those of a healthy control population. This study seeks to determine if living kidney donor uninephrectomy is associated with increased end stage renal disease (ESRD) and cardiovascular or other morbidities.

This goal will be achieved by studying all kidney donors who underwent donor uninephrectomy at any time from June 1963 through December 2007 at each of 3 clinical centers as part of the Renal and Lung Living Donors Evaluation (RELIVE) study consortium. Donor renal failure events are identified by retrospective chart review at the centers and by matching donors to data from the Centers for Medicare and Medicaid Services (CMS), the Scientific Registry of Transplant Recipients (SRTR), the Social Security Death Master

File (SSDMF) and the National Death Index (NDI). Incidence of ESRD and other morbidities in these live kidney donors will be compared to incidence of ESRD and other morbidities in NHANES participants. The occurrence of each of the study endpoints will be similar in kidney donors as in healthy matched NHANES control subjects, or only age and sex. The third strategy will compare RELIVE donors to NHANES control subjects using their covariate-adjusted propensity to be a donor.

## EXPLORING POST-MILLENNIAL BEVERAGE TRENDS AND THE EFFECT OF PRICE ELASTICITY ON REPORTED BEVERAGE INTAKE IN U.S. PRESCHOOL CHILDREN (NCHS)

*Christopher Ford – University of North Carolina at Chapel Hill*

Beverages are key contributors to excess caloric intake in children, which over time can lead to obesity. The prevalence of obesity in U.S. children increases with age, thereby prompting many to focus on the diets of preschool children (ages 2–5 years). Notably, many long-term dietary behaviors develop during the preschool years, thus exploring beverage trends in preschoolers may yield important insights for emerging

trends among older children. Substantial changes in dietary intake among U.S. children may have occurred between 2003 and 2012. Major economic and price changes also occurred during this period, but few studies have explored the relationship between these changes and beverage intake among children ages 2–5 years. Data from the Nielsen Homescan panel, which contains market-level beverage price data, can

be linked to geographic identifiers in the National Health and Nutrition Examination Surveys. By combining these data, the researchers explore changes in county-level beverage prices and reported beverage intake among U.S. children ages 2–5 years who participated in the National Health and Nutrition Examination Survey (NHANES) between 2003 and 2012.

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## TRENDS IN PREVALENCE OF ORAL AND VAGINAL HPV INFECTION IN THE UNITED STATES (NCHS)

*Andrew Brouwer – University of Michigan*

The Human Papillomavirus (HPV) infects the epithelial layer at several anatomical sites in the human body, and certain HPV genotypes can lead to the development of cancer. This project aims to characterize

both the prevalence of HPV by anatomical site as well as the prevalence of concurrent infection. This research has developed a mathematical model of HPV transmission and infection that will be calibrated by this

prevalence data. The research will additionally develop an age-period-cohort model to characterize trends of HPV infection at genital sites.

## THE EFFECTS OF PEDIATRIC PNEUMONIA ON LATER LIFE HEALTH (NCHS)

*Andrew Jordan – Federal Reserve Bank of Chicago*

*Bhashkar Mazumder – Federal Reserve Bank of Chicago*

This project exploits the introduction of sulfonamide (sulfa) drugs in 1937 in order to identify the impact of pneumonia exposure in infancy on later life health. The hypothesis that infectious disease in early childhood may contribute to chronic disease in adulthood has attracted considerable interest in epidemiology and the biomedical sciences. However, there is little, if any, causal evidence of this link. The proposed use of the NHIS data will permit a focus on a rich set of very specific health outcomes, such as cardio-respiratory health, in order

to document the pathways by which pediatric pneumonia compromises later life health. The confidential version of the NHIS data provides the geographic data (state of birth, state of residence) required to link measures of pneumonia exposure at birth to health conditions in late adulthood. Pneumonia is still prevalent in the United States and, on the global stage, is the leading cause of (child) death. The analysis focuses on individuals born between 1930 and 1943 and uses the entire range of available NHIS data (1963-2011) to maximize statistical

power and to be able to identify the age of onset and trajectory of health problems associated with infant infections. Previous work by the researchers, using a similar research design, has established large and significant effects of childhood pneumonia exposure on later life schooling, income, employment and disability using the 1980, 1990, and 2000 Census data and implementing a differences-in-differences approach.

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## END-OF-LIFE MEDICARE COSTS BY DISABILITY STATUS (NCHS)

*Kimberly Ault – RTI International*

This study will estimate the effects of disability on end-of-life Medicare reimbursement using the 1994 and 1995 National Health Interview Survey-Disability Supplement (NHIS-D) linked to the NHIS Linked Mortality Restricted-use Files and the 1994-2007 Summary Medicare Enrollment and Claims (SMEC) Files. The NHIS-D data will provide detailed information on disability in terms of its type and severity, and the National

Death Index will provide detailed death dates over more than a decade (1994-2006). The SMEC files include, in addition to date of death, total Medicare reimbursement for inpatient, nursing home, home health, hospice, outpatient, physician, and durable medical equipment that will be used to create a variable for each year in the study period representing total Medicare reimbursement — the study's cost measure. The analytic approach

will estimate the additional end-of-life Medicare reimbursement associated with disability (and disability type) compared to no disability using a panel design controlling for demographic and socioeconomic characteristics as well as NHIS current weight category and self-reported health status. It will also identify rates of use of various service types (e.g. inpatient, nursing home) for people by disability status.

## GEOSPATIAL FACTORS AND IMPACTS II (NCHS)

*Tzy-Mey Kuo – University of North Carolina at Chapel Hill*

*Lee Mobley – Georgia State University*

Geographic disparities in breast cancer (BC) and colorectal cancer (CRC) prevention and outcomes have existed for decades. Their persistence may indicate inefficient or ineffectual use of healthcare resources due to factors that differ between geographic areas. This project uses advanced statistical and spatial analytical software and multivariate modeling methods, merging the newly available NPCR data

with other public, private, and protected data describing local, state, and regional contexts. Multilevel modeling will comprehensively assess factors associated with geographic disparities in cancer stage at diagnosis. To do this will require linking persons in NPCR Registries who have been diagnosed with breast or colorectal cancer to their county, state, and regional characteristics. The methods will

allow for the proper incorporation of both spatial heterogeneity and spatial dependence in modeling the complex multilevel factors influencing these geographic disparities. Data will be analyzed for all available states, aggregated across two panels: 2000-2005 and 2006-2010, to enable assessment of changes in geographic disparities over time, which may help, evaluate ongoing cancer control efforts.

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## UNDERSTANDING THE RELATIONSHIP BETWEEN THE SCHOOL BREAKFAST PROGRAM AND FOOD INSECURITY AND WEIGHT (NCHS)

*Jason Fletcher – University of Wisconsin*

*David Frisvold – University of Iowa*

Food insecurity in the United States is an important and growing issue that has become more acute during the recent Great Recession, and food insecurity has been associated with a wide range of cognitive, health, behavioral, and social difficulties. This project examines the effect of the availability of the School Breakfast Program (SBP) on food insecurity, food consumption, and obesity during

the Great Recession, and examines whether this program cushions the impacts of high food prices. A student's school must participate in the SBP program in order for the student to be able to receive breakfast. This project uses information about state mandates and the specific thresholds to determine the impact of the SBP using a difference-in-differences specification and a regression

discontinuity design. Restricted-use geocoded NHANES data containing information on food insecurity, food consumption, and obesity are merged with the percentage of free and reduced-price eligible students in a school from the Common Core of Data (CCD) to determine if the schools attended by children in the NHANES are required to participate in the SBP based on state thresholds.

## ALLOWING FOR NON-RANDOMLY MISSING DATA IN NHANES TO GUIDE LEAD POISONING PREVENTION EFFORTS (NCHS)

*Eric Roberts – California Department of Public Health*

In lieu of universal blood lead screening, most states target their lead surveillance efforts based on a combination of eligibility for government assistance programs and known risk factors such as child race/ethnicity, household poverty, and residence in housing built prior to the U.S. ban on lead-based paint in 1978. Given that the prevalence of concerning blood lead levels has fallen dramatically, states have little

guidance regarding the current relevance of these risk factors or how they may have changed over time. Obstacles to conducting such analysis using NHANES include the increasing paucity of respondents with BLL > 10.0 mcg/dl (which limits statistical power), and the prevalence of missing data describing the age of respondents' housing in the survey (approximately 35% of respondents for children aged 1 to 5 years during 1999-2010).

Utilization of NHANES data therefore requires relatively new protocols that take advantage of recent developments in the epidemiology and biostatistics literature that account for this circumstance with no compromises in validity. This project employs new protocols within a Bayesian framework and employs a generalized linear mixed model with random intercept terms to account for the stratified survey design of the NHANES data.

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## NEIGHBORHOOD CONTEXT, WEIGHT, AND WEIGHT-RELATED BEHAVIORS AMONG MEXICAN AMERICAN CHILDREN (NCHS)

Megan Lemmon – Pennsylvania State University    Susana Sanchez Quiros – Pennsylvania State University  
Molly Dondero – Pennsylvania State University    Jennifer Van Hook – Pennsylvania State University

Poor nutrition, physical inactivity, and obesity have reached alarming levels in the United States, and children of immigrants are especially vulnerable to these serious health problems. Mexican-origin boys in immigrant households have particularly high obesity rates relative to all other children, including Hispanic boys in native households, but how immigration to and settlement in the U.S. contribute to such high levels of obesity is unclear. We theorize that community

factors contribute to the risk of obesity for children of Mexican immigrants and that the influence of community contexts are likely to vary by household socioeconomic status and level of exposure to the United States. This project focuses on three specific research questions: (1) How is community context related to Mexican children's weight and weight-related behaviors? (2) How do the associations of community context with children's weight and weight-related behaviors vary by

household socioeconomic status and household weight-related characteristics? (3) How do the associations of community context with children's weight and weight-related behaviors vary by indicators of householder members' and children's exposure to the United States? Using the 1999-2009 continuous NHANES the researchers link community characteristics, socioeconomic disadvantage, racial-ethnic composition, and size and maturity of the Latino community to children's records in the NHANES.

## FOSTER CARE PLACEMENT AND CHILDHOOD INEQUALITIES: EVIDENCE FROM THE NATIONAL SURVEY OF CHILDREN'S HEALTH (NSCH)

Kristin Turney – University of California, Irvine

Children in foster care have been exposed to a host of disadvantages prior to placement that, when combined with the abuse and neglect in their homes of origin, makes them an extremely vulnerable and marginalized group. Although the number of children in foster care on any given day is small — ranging from slightly more than 0.5% in 2011 to 0.8% in 2000 — approximately 6% of American children will ever

be placed in foster care. This project uses restricted data from the 2011-2012 National Survey of Children's Health (NSCH) to answer two research questions. First, to what extent do children placed in foster care experience mental health problems, physical health problems, severe deprivation, and family functioning relative to other groups of American children (e.g., the general population of American children, children in other types

of complex families)? Second, among children in foster care, how does state variation in foster care payments explain variation in wellbeing? Taken together, these analyses will provide insight into the lives of foster care children and provide broad insight into the how foster care placement may exacerbate or ameliorate the intergenerational transmission of poverty.

