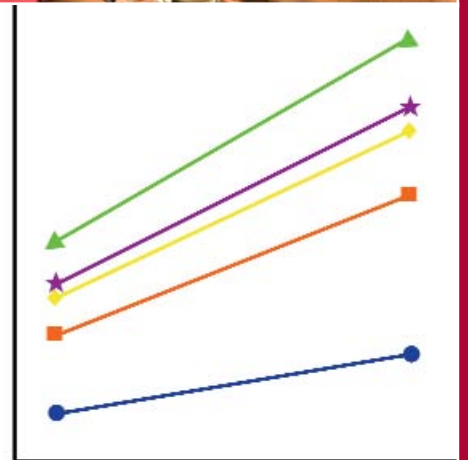
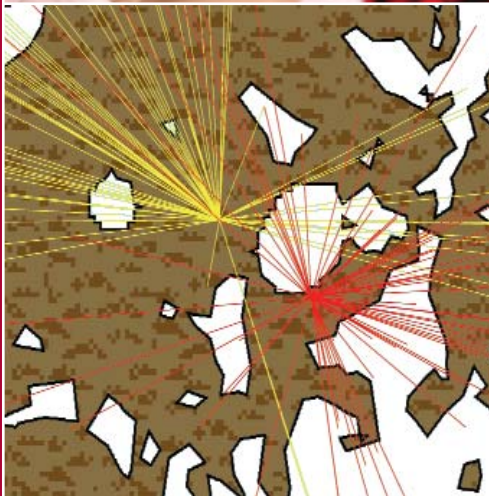
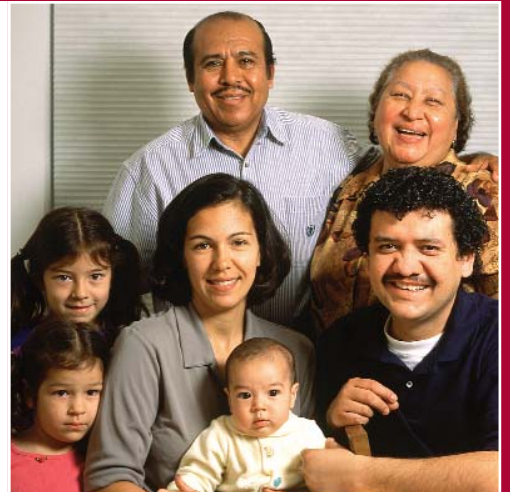
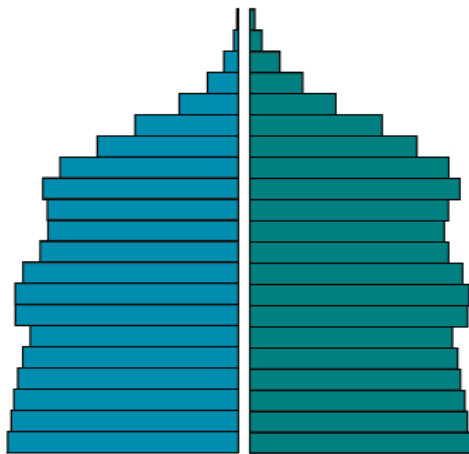


# Demographic and Behavioral Sciences Branch (DBSB) NICHD



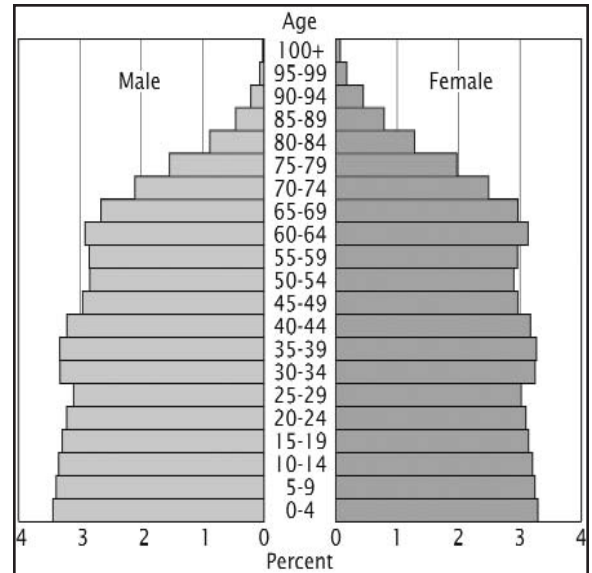
## Report to the NACHHD Council September 2007

U.S. Department of Health and Human Services  
National Institutes of Health  
National Institute of Child Health and Human Development

## Cover Notes

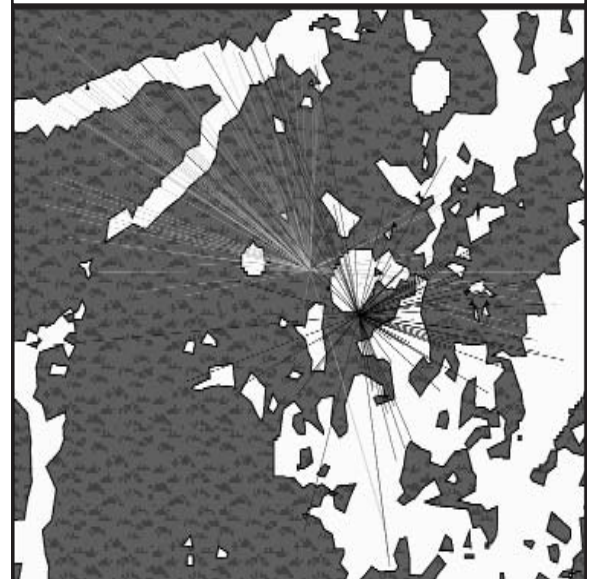
**Front cover, top left: New mother and infant.** Fertility levels have remained close to replacement in the United States for many decades, but women--especially highly educated women--are having children at older ages and, in some cases, with the assistance of new reproductive technologies. Meanwhile, teen pregnancy rates have declined to historic lows. (Photo courtesy of Michael Spittel, DBSB, NICHD)

**Front cover, top middle: Representation of a population pyramid of the projected age and sex structure of the United States in 2025.** (Full pyramid shown here top right.) The straight sides of the pyramid are typical of aging populations, in which the lower ratio of working adults to dependents places stress on families and on public resources. (Source: U.S. Bureau of the Census; image courtesy of Victoria Velkoff, Population Division, U.S. Bureau of the Census)



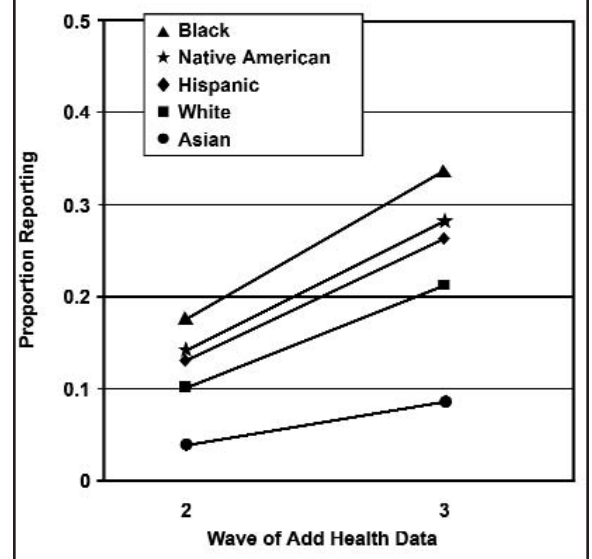
**Front cover, top right: Immigrant family.** More than one in five U.S. children is either an immigrant or the child of one or more immigrant parents. Children in immigrant families are more likely to be poor, but their educational achievement equals or exceeds that of other U.S. children once differences in poverty are taken into account.

**Front cover, bottom left: Representation of population, land use, and the environment in a rice-growing region.** (Full map shown here middle right.) Radiating lines from each of two villages in Nang Rong, Thailand, show the location of the plots farmed by residents. These lines are superimposed on inundation patterns from the annual monsoon, extrapolated from a Landsat ETM satellite image for July 2000. Researchers construct these maps to better understand the nature of risk in relation to migration patterns at household and village levels. (Image courtesy of Barbara Entwisle and Ronald Rindfuss, Carolina Population Center, University of North Carolina, Chapel Hill)



**Front cover, bottom middle: Married couple.** The percentage of Americans who were married by their late twenties fell from two-thirds to barely one-half between 1985 and 2005, while rates of non-marital cohabitation rose. Changes in marriage, cohabitation, and other intimate unions have implications for non-marital childbearing, family stability, the risk of HIV and other sexually transmitted infections, and population health and well-being.

**Front cover, bottom right: Schematic of increases in obesity among young women between adolescence and early adulthood.** (Full graph shown here bottom right.) The percentage of young women who were obese increased among all racial/ethnic groups studied by the National Longitudinal Study of Adolescent Health, but differences among the groups widened. Increases were largest among African American women and were smallest among Asian women. For all groups, Wave 1 estimate differs from Wave 3 estimate ( $p < 0.05$ ), and for blacks, Hispanics, and Asians, the change over time differs from the change for whites ( $p = 0.05$ ). (Full chart courtesy of Kathleen Mullan Harris, University of North Carolina, Chapel Hill)



## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>INTRODUCTION TO THE BRANCH.....</b>	<b>3</b>
<b>POPULATIONS AND HEALTH.....</b>	<b>6</b>
GENETIC FACTORS MAY PLAY A ROLE IN ADOLESCENT RISK BEHAVIORS .....	8
RACIAL AND ETHNIC GROUP HEALTH DISPARITIES EMERGE EARLY IN LIFE.....	9
SOCIOECONOMIC ADVANTAGE IMPROVES HEALTH IN BOTH PEOPLE AND PLACES.....	10
HEALTH AND FAMILY FUNCTIONING—A TWO-WAY STREET .....	11
POLICIES AND PROGRAMS OFFER PROMISE FOR IMPROVING POPULATION HEALTH .....	11
<b>HUMAN DEVELOPMENT IN SOCIAL CONTEXT .....</b>	<b>12</b>
DISPARITIES IN RESOURCES AVAILABLE TO CHILDREN ARE WIDENING.....	13
EARLY YEARS OF WELFARE REFORM DID NOT HURT CHILDREN.....	14
FATHERS MATTER .....	14
FAMILY INSTABILITY, COHABITATION, AND CHILD DEVELOPMENT .....	15
ADOPTIVE FAMILIES .....	16
NEIGHBORHOOD AND SCHOOL CONTEXTS HAVE INDEPENDENT EFFECTS ON DEVELOPMENT .....	17
THE IMPORTANCE OF EARLY INTERVENTION .....	17
<b>CREATING FAMILIES: RESEARCH ON MARRIAGE AND FERTILITY .....</b>	<b>18</b>
COHABITATION IS A DISTINCT—AND SHORT-LIVED—FAMILY ARRANGEMENT .....	19
MARRIAGE.....	19
PRECURSORS OF ADULT RELATIONSHIP FORMATION.....	20
INTERGENERATIONAL TRANSMISSION OF FAMILY STRUCTURE AND POVERTY .....	21
WHY HASN'T U.S. FERTILITY FALLEN BELOW REPLACEMENT LEVELS? .....	21
NO “EPIDEMIC” OF INFERTILITY, BUT DISPARITIES AMONG GROUPS .....	22
BIOGENETIC ORIGINS AND SOCIAL IDENTITY.....	23
<b>SEXUAL BEHAVIOR, PREGNANCY, AND HIV.....</b>	<b>24</b>
TEEN ROMANTIC RELATIONSHIPS ARE AN IMPORTANT CONTEXT FOR EARLY SEX .....	24
EXPOSURE TO “SEXY” MEDIA PREDICTS LATER SEXUAL BEHAVIORS.....	25
EFFORTS TO ADDRESS BARRIERS TO EFFECTIVE CONTRACEPTION PRODUCE MIXED RESULTS .....	26
SOCIAL AND CULTURAL PROCESSES FRAME HIV RISK AND PREVENTION IN AFRICA .....	27
EXPLORING NEW STRATEGIES FOR ADDRESSING HIV .....	28
<b>PEOPLE, PLACES, AND POPULATION MOVEMENT .....</b>	<b>29</b>
WHY DO IMMIGRANTS COME TO THE UNITED STATES? .....	30
NEW IMMIGRANTS ARE NOT ALWAYS NEW .....	31
CHILDREN IN IMMIGRANT FAMILIES ARE ECONOMICALLY DISADVANTAGED BUT SUCCESSFUL IN SCHOOL .....	31
FOREIGN-BORN LESS LIKELY TO HAVE HEALTH INSURANCE.....	32
RACIAL, ETHNIC, AND SOCIOECONOMIC FACTORS PLAY A ROLE IN MIGRATION .....	32

INTERRACIAL MARRIAGE INCREASES .....	33
GROWTH IN NUMBERS OF HOUSEHOLDS IS HARMING THE ENVIRONMENT .....	34
<b>INVESTING IN ESSENTIAL INFRASTRUCTURE FOR POPULATION SCIENCE .....</b>	<b>34</b>
INVESTMENTS IN DATA .....	34
INVESTMENTS IN INTERDISCIPLINARY CENTERS .....	36
INVESTMENTS IN TRAINING .....	37
<b>DISSEMINATION AND TRANSLATION OF DBSB-FUNDED RESEARCH .....</b>	<b>38</b>
INFORMING POLICY .....	39
INFORMING AND TESTING INTERVENTIONS .....	40
DISSEMINATING KNOWLEDGE .....	40
<b>FUTURE DIRECTIONS FOR THE DBSB .....</b>	<b>41</b>
RESEARCH AREA 1: WHY/HOW ARE FAMILIES RESHAPING THEMSELVES?.....	42
RESEARCH AREA 2: WHAT ARE THE CAUSES AND CONSEQUENCES OF POPULATION HEALTH? .....	42
RESEARCH AREA 3: WHY DO PEOPLE MOVE? HOW DOES MIGRATION RESHAPE SOCIETIES, COMMUNITIES, FAMILIES, AND PEOPLE?.....	43
INVESTMENTS IN THE FUTURE.....	44
<b>FIGURES AND TABLES .....</b>	<b>FIGURES AND TABLES-1</b>
<b>APPENDIX A: DBSB PERSONNEL.....</b>	<b>APPENDIX-1</b>
<b>APPENDIX B: DBSB STAFF ACTIVITIES, FISCAL YEAR 2003 THROUGH FISCAL YEAR 2007.....</b>	<b>APPENDIX-3</b>
<b>APPENDIX C: DBSB FUNDING INITIATIVES, FISCAL YEAR 2003 THROUGH FISCAL YEAR 2007.....</b>	<b>APPENDIX-6</b>
<b>APPENDIX D: DBSB CONFERENCES AND WORKSHOPS, FISCAL YEAR 2007 TO FISCAL YEAR 2003.....</b>	<b>APPENDIX-7</b>
<b>APPENDIX E: SELECTED DBSB-SUPPORTED POPULATION DATASETS, FISCAL YEAR 1997 THROUGH FISCAL YEAR 2006.....</b>	<b>APPENDIX-15</b>
<b>APPENDIX F: POPULATION RESEARCH INFRASTRUCTURE PROGRAM (PRIP) GRANTEES, FISCAL YEAR 2006 .....</b>	<b>APPENDIX-20</b>
<b>APPENDIX G: DBSB EXPERT PANEL MEMBERS .....</b>	<b>APPENDIX-22</b>
<b>APPENDIX H: TRAINING AND CAREER DEVELOPMENT MECHANISMS AND GRANTEES, FISCAL YEAR 2003 THROUGH FISCAL YEAR 2007.....</b>	<b>APPENDIX-23</b>

## EXECUTIVE SUMMARY

The Demographic and Behavioral Sciences Branch (DBSB) seeks to improve the health and well-being of individuals, families, and populations by adding to knowledge about human population dynamics and their causes and consequences. The Branch's portfolio of demographic, behavioral, and social sciences research addresses topics such as health, human development, family change, pregnancy and HIV prevention, and population movement. The DBSB advances its mission by funding investigator-initiated research and through extensive collaborative activities within the National Institute of Child Health and Human Development (NICHD), across the National Institutes of Health (NIH), and with other federal and non-federal organizations.

The DBSB's mission in health research encompasses three goals: examining the causes and consequences of health and well-being from a population perspective; understanding the interrelationships among health and demographic processes; and supporting the integration of social science, behavioral, and biomedical approaches to understanding health. Recent Branch-supported research has explored the role of genetic influences in adolescent risk behaviors, the emergence of racial and ethnic health disparities early in life, the impact of early life socioeconomic disadvantage on later health, and the effects of public policies, communities, health care disparities, and families on population health.

The Branch's program on human development studies the implications of the social contexts in which children grow as they relate to developmental trajectories. Recent research has documented an increasing gap between the resources available to children whose parents are well educated and less well educated and examined the mechanisms through which family structure and family instability affect children's development, the contributions that fathers make to child development, the effects of adoption and residential mobility on children, and policy, neighborhood, and peer influences on child development.

The DBSB portfolio in family research examines the determinants and consequences of the dramatic changes that have occurred in U.S. families during the last half century. Recent research accomplishments include significant advances in knowledge about the meanings of marriage and cohabitation in contemporary family formation patterns, economic and cultural factors that hinder marriage in poor populations, reasons for increasing levels of non-marital childbearing, mechanisms that maintain U.S. fertility near replacement levels, and disparities in infertility and infertility treatment.

DBSB-supported research on sexual behavior, pregnancy, and HIV infection seeks to identify constructive solutions to issues that pose continuing concerns for public health and societal well-being. These issues include unintended pregnancy, the formation of stable adult partnerships, parenthood, the ability to care for children, and the prevention of HIV and other sexually transmitted infections (STIs). Recent advances include further understanding of the effects of relationship context on disease and pregnancy risk, findings about the effects of sexual content in the media on adolescent sexual behaviors, new data on the acceptability of microbicidal products, and results related to the cultural, economic, and institutional factors that shape international responses to the AIDS epidemic.

Scientists are increasingly recognizing that where people live makes a difference in their health and well-being. The DBSB supports research that examines: how the health and well-being of people and communities intersect and interrelate with where people live; their movement to new places; their identifications with national, ethnic, or racial origins; and the socioeconomic and physical environments they inhabit. Recent research has provided a more thorough understanding of the following: processes that drive immigration to the United States; the health and well-being of immigrants and their children; the roles of race, ethnicity, and socioeconomic status (SES) in movement to new neighborhoods or communities; and demographic factors that influence environmental change.

Population science depends heavily on several types of shared infrastructure, including shared data, interdisciplinary centers, and training. The DBSB contributes to the support of nationally representative population databases, which provide an essential foundation for the field (see [Appendix E](#)), provides incentives for universities to create interdisciplinary centers for population research (see [Appendix F](#)), and invests in the training of new population scientists and researchers (see [Appendix H](#)), who are able to participate effectively in interdisciplinary research. The Branch also invests in translating basic research into practice. DBSB research is used to inform policy, design new programs and intervention approaches, and inform the public.

As an extramural program, the DBSB accomplishes its mission primarily by funding extramural grants. In fiscal year 2006, the DBSB invested \$102.7 million in extramural research, training, and infrastructure (see [Figure 1](#)). About three-fifths of this amount (\$61.4 million) was invested in traditional research grants (R01s), 16 percent (\$16.7 million) in other research grants (e.g., program projects, small grants, and exploratory grants), 12 percent (\$11.8 million) in infrastructure support for research in the United States and Africa, 8 percent (\$7.7 million) in training and career development, and 5 percent (\$5.0 million) in contracts and interagency agreements.

In the years to come, the Branch will continue to support a wide range of investigator-initiated research that responds to its basic mission. But fostering excellence and innovation in population research requires that the Branch lead, as well as respond to new directions in research. With the help of an expert panel (see [Appendix G](#)), which provided guidance on the Branch's long-range planning process in December 2006, and with input from many others in its scientific communities, the DBSB has identified three major substantive areas that require continued or new emphasis during the 2007 to 2011 period. These areas can be summed up by the following questions:

- Why and how are families reshaping themselves?
- What are the causes and consequences of population health?
- Why do people move? How does migration reshape societies, communities, families, and people?

A discussion of the rationale for these questions is available in the [Future Directions for the DBSB](#) section of this report.

In addition to these areas of emphasis, the Branch will continue to develop and support other areas within its portfolio, including research on HIV/AIDS, unintended pregnancy and infertility, race and ethnicity, and population and environment.

## **INTRODUCTION TO THE BRANCH**

The Demographic and Behavioral Sciences Branch (DBSB) is one of three programs in the Center for Population Research within the National Institute of Child Health and Human Development (NICHD). Its mission is to improve the health and well-being of individuals, families, and populations by adding to knowledge about human population dynamics and their causes and consequences. The Branch funds demographic, behavioral, and social sciences research on fertility, families, population movement, morbidity and mortality, HIV/AIDS, and population composition. The Branch also collaborates with other programs across the NICHD, the National Institutes of Health (NIH), other federal agencies, and non-government organizations to enhance the resources available to support population research as well as to enhance the impact of research on policy and practice.

Because population research provides information about population characteristics and population change that is essential to informing other domains of research, the DBSB mission complements the missions of other NICHD components and NIH programs. For example, research on unintended pregnancy and its socioeconomic correlates points to critical challenges in providing preconception care to vulnerable populations. Research on racial disparities in pregnancy outcomes and infant mortality reveals the limits on the reach of new life-saving technologies. Research on the increasing proportion of children who are immigrants or who are the children of immigrants illuminates the need for tailored approaches to improving school readiness. Research on changing family patterns underscores the need to understand the wide variety of family environments children may experience, and how these experiences can impact developmental processes.

Population research also contributes to interdisciplinary studies that seek to understand how health and human development evolve through the interplay of biological, behavioral, and environmental factors. In the past, researchers have studied such topics as the effects of poverty and family instability on child development, the effects of neighborhood context on adolescent sexual behavior, and the relationship between socioeconomic status (SES) and fetal death rates. Most recently, population researchers have contributed to interdisciplinary studies of the biological and environmental causes of health disparities in pregnancy outcomes; have designed a nationally representative study that integrates social, behavioral, and biomedical data to study health trajectories during early adulthood; and have contributed to the design of the National Children's Study. As science increasingly recognizes the role of the environment in health and as tools for measuring both biological and environmental attributes proliferate, these types of studies have enormous future promise.

Finally, research supported by the DBSB provides a population perspective that is essential to informing health and social policy. Branch-funded studies have produced unique information about immigration trends and the adaptation and health of immigrant populations that Capitol Hill lawmakers as well as federal policy offices use to inform policy. DBSB research on the interrelationships among welfare programs, family behaviors, and child well-being has also informed welfare reform legislation. Population researchers are increasingly tackling the challenges involved in understanding the implications of individual behaviors for population processes—a central issue in demographic research that has remained relatively neglected in recent years. For example, one grantee has modeled how patterns of concurrency in sexual partnerships can drive the spread of HIV in a population. Another team examined the role of changing family-formation patterns in the growing income inequality in the United States. This “micro-to-macro” research is developing rapidly and has great promise as a tool for translating basic scientific knowledge into effective interventions and policies.

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Characterizing the Branch’s funding by research area is difficult because many studies address multiple topics in multiple program areas. However, the largest programs are in HIV and sexual behavior (25 percent of funding in fiscal year 2006) and family and fertility (17 percent in fiscal year 2006). Research on children’s well-being, health, and population movement comprised 16 percent, 14 percent, and 5 percent, respectively, of the Branch’s fiscal year 2006 funding; the remaining funds went to infrastructure support, training, formal demographic and methodological studies, and data dissemination (see [Table 1](#)).

The DBSB portfolio is largely focused on domestic research, but about one-quarter of the Branch’s funding for research project grants goes to projects with some international component. This fact reflects two factors: first, the need for research in diverse populations to test hypotheses about population change and variation; and second, the large program in HIV/AIDS that is increasingly focused in areas such as sub-Saharan Africa and Asia where the epidemic is concentrated.

Most DBSB grants are investigator-initiated, and the DBSB staff conduct a wide variety of outreach activities with the scientific community to educate potential applicants about funding opportunities at the NIH. Occasionally, the Branch initiates activities to address gaps and barriers to scientific progress. These activities may be Program Announcements (PAs/PARs/PASs), Requests for Applications (RFAs), contracts, workshops, conferences, or special sessions at professional meetings. (Relevant funding initiatives are listed in [Appendix C](#); recent conferences appear in [Appendix D](#)). Program initiatives are informed by the results of periodic planning activities. The DBSB continually monitors the state of the science by



surveilling the literature and ongoing grants, informal discussions with other scientists, and attendance at scientific meetings.

About once every five years, the Branch undertakes a formal long-range planning activity in which a selected group of experts are invited to advise the Branch about possible future directions and priorities for research. The Branch has held seven such meetings since 1980. [Appendix G](#) provides the roster of experts who participated in the most recent planning activity, which was held in December 2006. The [Future Directions for the DBSB](#) section of this report summarizes the directions that the Branch plans to pursue until its next report to the National Advisory Child Health and Human Development (NACHHD) Council.

One of the primary ways in which the DBSB advances its mission is through extensive collaboration within the NICHD, across the NIH, and with other federal and non-federal organizations. Within the NICHD, the Branch has active scientific collaborations with the Reproductive Sciences Branch (RSB), and the Contraception and Reproductive Health Branch, the Child Development and Behavior Branch (CDBB), and the Pregnancy and Perinatology Branch (PPB). It is also actively working with the Endocrinology, Nutrition, and Growth Branch on an obesity initiative. It co-leads the NICHD Consortium on Behavioral and Social Sciences Research, a group devoted to improving communication and interdisciplinary collaboration within the behavioral and social sciences and with the biomedical sciences. Across the NIH, the Branch collaborates with the National Cancer Institute, the National Institute on Alcoholism and Alcohol Abuse, the National Institute on Aging (NIA); the National Institute on Allergy and Infectious Disease; the National Institute on Drug Abuse, the National Institute of Mental Health, and the National Institute on Nursing Research (NINR). Branch staff members also regularly contribute to the activities of the NIH Office of Behavioral and Social Sciences (OBSSR) and the NIH Office of AIDS Research, and many consult on a regular basis with other federal agencies and non-government organizations. A full list of DBSB activities is available in [Appendix B](#), and brief biographies of DBSB staff members are in [Appendix A](#). Branch collaborations help to ensure that opportunities for contributions by population scientists are recognized and acted upon in areas normally outside the traditional foci of the DBSB.

The next five sections of this report highlight findings from DBSB-supported research between 2003 and 2007:

- *Populations and Health* summarizes findings related to health disparities, contextual influences on health, and the consequences of health for children and families.
- *Human Development in Social Context* highlights research on the effects of families and family change on children, as well as the effects of other contexts—schools, neighborhoods, peer groups, and public policies—that affect children’s outcomes.
- *Creating Families: Research on Marriage and Fertility* focuses on research that explores changing patterns of family formation, including cohabitation, marriage, non-marital fertility, infertility, and low fertility.
- *Sexual Behavior, Pregnancy, and HIV* highlights research on sexual behavior, romantic relationships, contraceptive use, unintended pregnancy, and HIV risk and prevention.
- *Population Movement, Distribution, and Composition* summarizes research findings related to immigration, immigrant children and youth, internal migration, and population-environment interactions.

Following these five sections, two subsequent sections in the report describe the Branch's efforts to support the necessary infrastructure or "building blocks" of demographic research, and to translate and disseminate research findings for policy, practice, and general audiences. The final section of the report looks at the Branch's future directions, outlining possible strategic goals for the Branch to pursue during the next four years.

## POPULATIONS AND HEALTH

The DBSB's mission related to health encompasses three goals: examining the causes and consequences of health and well-being from a population perspective; understanding the interrelationships among health and demographic processes; and supporting the integration of social science, behavioral, and biomedical approaches to understanding health. The Branch adopts a broad definition of "health" to include not only the absence of specific diseases or disabilities, but also positive aspects, such as effective functioning and overall well-being. The Institute views health as a developmental process—that is, at a particular point in time, health is a function of prior history as well as current experiences and capacities. Examples of the types of studies that address this mission include: population-level studies of health from the time of conception through middle adulthood; health disparities research; studies of social, behavioral, and biological pathways through which the social environment affects health; and research on the consequences of health for individuals and families. Health issues also permeate other areas of the Branch's mission, including research on child development, reproductive health, infertility, and HIV. A full statement of the Branch's mission in health research is available at <http://www.nichd.nih.gov/about/org/cpr/dbs/index.cfm>.

The Branch's health-related research agenda is ambitious. It requires the development of mechanisms to facilitate contributions from the biomedical sciences as well as from the social, demographic, and behavioral sciences. Therefore, in addition to supporting investigator-initiated research, the Branch adopts a variety of collaborative strategies to create the capacity for interdisciplinary research.

The first strategy is active collaboration with the NIH OBSSR and NIH Institutes on initiatives that develop science at the interface of the social, behavioral, and biomedical sciences. Some examples include:

- Since 1999, the Branch has participated in the Research on Mind-Body/Interactions and Health Program, which funds research on the relationships among cognition, emotion, personality, social relationships, and health. As part of this effort, the DBSB oversees the University of Michigan's Interdisciplinary Center on Social Inequality, Mind, and Body. This Center links processes associated with social inequality with epidemiological approaches to studying population health. In May 2007, the Center hosted a conference on the use of systems methodologies and agent-based modeling to address public health concerns.

- Since 2003, DBSB has participated in the Pathways Linking Education and Health Initiative, which supports research to elucidate the specific mechanisms through which education exerts effects on health and disease. Currently, the DBSB is responsible for six ongoing R01 research projects funded under this initiative.
- Since 2004, the DBSB has helped to lead an OBSSR initiative on health disparities research. This effort, designed to complement efforts by the National Center for Minority Health and Health Disparities, focuses on behavioral and social-science contributions to understanding and addressing health disparities. In October 2006, the OBSSR convened a conference to assess knowledge about the mechanisms that influence disparities. It focused on three potential “levers of change”—policy, prevention, and health care. The Branch subsequently helped to develop and support an initiative that will fund basic and applied research related to these levers.

The DBSB also addresses its mission in health research by developing interdisciplinary, collaborative networks to address the intersections between social processes and health. Two networks are currently underway:

- The Community Child Health Network (CCHN) grew out of collaboration between the NICHD’s PPB and the DBSB. The CCHN includes a community-based participatory research project, which will study the social and biological pathways responsible for health disparities in infant and child health. At five community sites, participants will investigate how community-level factors, family dynamics, and individual characteristics influence mothers’ allostatic load during the inter-pregnancy interval. They will also study the relationship of physiological stress markers to prematurity, adequacy of intrauterine growth, and early child health indicators, such as days of hospitalization, respiratory problems, and early postnatal growth, before and during pregnancy. The NINR collaborates with the NICHD on this project.
- The Work, Family, and Health Network designs research to evaluate the health benefits of novel workplace policies and practices. Its focus is to improve the health of children and parents by improving the ability of the employee to successfully meet both work and family demands. Blending sociology, child development, social epidemiology, occupational health psychology, and organizational behavior, the researchers are developing an interdisciplinary approach to implementing and evaluating workplace interventions. The research measures health broadly, from self-report of parent-child relations to collection of sleep-pattern actigraphy. The NICHD, NIA, OBSSR, and National Institute on Occupational Health and Safety collaborate to support six research and coordinating teams. The Network is working with three corporations and several small businesses and receives guidance from a business advisory board.

The Branch’s third strategy for studying health is to support the collection and scientific use of population-level data that integrate biological, behavioral, and environmental measures related to health. See [Appendix E](#) for brief descriptions of these types of studies.

Three datasets notable in this regard include:

- The DBSB initially funded the National Longitudinal Study of Adolescent Health (Add Health) in 1994 as a social science study of the causes of adolescent health and health-related behaviors. As the cohort of adolescents has moved into early adulthood, the study's focus has shifted to the environmental, behavioral, and biological pathways that lead to the development of adult chronic disease. The study initially incorporated measures of social environments—peer groups, families, schools, and neighborhoods—that could affect health and incorporated a sibling-pair design that facilitated quantitative genetic studies. Most recently, the NICHD, in collaboration with 14 other NIH Institutes and federal offices, funded a new wave of interviews that will include collection of genetic data and biological markers of disease processes, as well as basic social, individual, and behavioral data. The new design was developed by a collaborative team representing the fields of epidemiology, cardiology, psychology, sociology, behavioral genetics, nutrition, biostatistics, anthropology, medicine, molecular virology, statistics, and survey research.
- The Branch provides funding to the Los Angeles Family and Neighborhood Study (L.A. FANS) to incorporate biological measures of stress and health. The goal of this study is to investigate the effects of neighborhood and family environments on the health status of adults and children, focusing on the role of stress pathways. The design of the study addresses many of the problems that have limited previous research on neighborhood effects by collecting longitudinal data and by accounting for residential choices and neighborhood change. The study will collect anthropometric measures (e.g., height, weight, and waist/hip circumference), a measure of lung function, markers for stress, and the precursors of diabetes and cardiovascular disease.
- The DBSB supports the integration of genetic data into the Fragile Families and Child Well-Being Study (Fragile Families Study), a survey focused on examining the health and well-being of children born to unmarried parents. This multidisciplinary effort includes expertise from the fields of medicine, psychology, economics, and public health. Investigators will use these data to study whether adverse environments (e.g., those characterized by family instability, harsh parenting, or stressful life effects) have differential effects on the child development depending on the presence or absence of particular genotypes.

The strategies and initiatives described above are laying the foundation for far more interdisciplinary science than the Branch has funded to date in its health and mortality research program. The goal of these efforts is to build on the strengths of earlier social science, demographic, and behavioral research funded by the DBSB, while also incorporating knowledge about disease pathways and measurements gathered from the biological and biomedical sciences. The following section highlights selected accomplishments from Branch-funded research, beginning with early work exploring genetic contributions to health-related behaviors, and continuing with research on health disparities and social-environmental influences on health.

### **GENETIC FACTORS MAY PLAY A ROLE IN ADOLESCENT RISK BEHAVIORS**

A large body of quantitative genetic studies has established the likelihood that genetic factors play an important role in risky behaviors and, hence, in the etiology of behavior-related health problems. Using molecular genetic data collected from Add Health's sibling samples in 2002,

interdisciplinary teams of researchers have begun to explore the linkages between genetic variations and risky behaviors in adolescence. Most of these studies have focused on genes thought to be associated with reward circuits in the brain. Some of the findings include:

- Polymorphisms in the *DRD2* gene and the 40-basepair *VNTR* sequence in the *DAT1* gene are associated with self-reported serious and violent delinquency in males, but not in females. Among males, the *DAT1* gene, which codes for a dopamine-transporter protein, is also associated with having a high number of sexual partners. Adjusting for SES, religiosity, family structure, neighborhood poverty, and marital/cohabitation history did not attenuate these associations.
- Adolescents with a 3R genotype (one polymorphism of the *DRD4* gene) are at increased risk of initiating sexual intercourse. The *DRD4* gene's relationship to age at first sexual intercourse may reflect its importance to the mesolimbic dopaminergic system in the brain's reward circuits.
- In early adulthood, a set of five genes (*DRD4*, *DRD2*, *MAOA*, *DAT1*, and *5HTT*) is significantly associated with frequency of alcohol consumption, with the genotype effects ranging from 7 percent to 20 percent of the mean score of alcohol consumption. The association exists only in young adulthood; it does not appear in the same sample of individuals during adolescence, suggesting that genetic variations may contribute differentially to behavioral variation at different stages of the life course.

The wealth of Add Health data on adolescents' social contexts has also facilitated research on the ways in which beliefs and practices may moderate genetic-behavior associations. A recent study found that religiosity moderated the extent to which genetic factors contributed to smoking initiation. This quantitative genetic analysis found that high levels of self-rated religiousness attenuated the additive genetic component for smoking initiation, but high levels of attendance at religious services did not have the same effect.

The complexity of sorting out contributions of genetic and environmental effects in adolescent risk behaviors is underscored by another analysis of Add Health data using a quantitative genetic analysis to show that adolescents tended to choose same-sex friends who were genetically similar to themselves, and that these genetic similarities contributed significantly to similarities in characteristics, such as grade point average, verbal ability, and aggressive behavior. Although researchers have long recognized that friendship choices complicate the study of peer effects, the role of genetic similarities in these choices was not explored previously.

### **RACIAL AND ETHNIC GROUP HEALTH DISPARITIES EMERGE EARLY IN LIFE**

Research has documented disparities in health among the different racial and ethnic groups in the United States. DBSB grantees have contributed to this research, and to studies that attempt to understand the complex set of causes that contribute to these disparities. For example, the Fragile Families Study found sharp differences in the prevalence of obesity (defined as a body mass index [BMI] at or higher than the 95th percentile) among urban children who were three years of age: more than one in four Hispanic children (25.8 percent), 16.2 percent of black children, and 14.8 percent of white children were obese. The higher rate of obesity in Hispanic children was not explained by differences in maternal education, household income, or food

security. Another study examined cause-specific disparities in infant mortality. Historically, infant death rates from respiratory distress syndrome (RDS) were higher for white infants than for black infants. However, around the time that pulmonary surfactant replacement therapy was introduced as a treatment for RDS, the survival advantage among black babies disappeared and a survival advantage for white babies emerged. The results suggest that white babies may have benefited more and sooner from the introduction of surfactant and point to the potential for racial disparities in health to widen when innovations in health care occur in a context of social inequality.

The large samples of ethnic and racial minority populations that participated in Add Health have provided a valuable resource for measuring health disparities. One analysis examined changes in a set of 20 health indicators that occurred between adolescence and early adulthood among groups differing by race and ethnicity. Fifteen of the indicators, including measures of diet, inactivity, obesity, health care access, substance use, and reproductive health, worsened with age, often sharply. Perceived mental and physical health improved with age, while exposure to violence lessened. On most health indicators, disparities among racial and ethnic groups widened during the transition to young adulthood. Although white subjects had more favorable health in adolescence, they experienced the greatest declines by young adulthood. No single race/ethnic group consistently led or fell behind in health across all indicators.

### **SOCIOECONOMIC ADVANTAGE IMPROVES HEALTH IN BOTH PEOPLE AND PLACES**

Researchers have documented socioeconomic gradients in health across many different diseases and health measures. Although some diseases and health outcomes do not follow the general pattern, in most cases, low levels of education, income, and assets, as well as residence in impoverished areas are associated with poor health. Recent research has shown that the effects of low SES early in life seem to persist into adulthood. Investigators examined mortality resulting from cardiovascular and other causes in women during the period 1965 to 1994. They found that both early and later life indicators of socioeconomic position contributed to increased mortality risk among socioeconomically disadvantaged women. These effects were strongest for cardiovascular mortality.

Public health monitoring of socioeconomic health disparities is hampered by a lack of appropriate measures in most health surveillance systems. Using area-based socioeconomic measures derived from data collected by the U.S. Census Bureau for public health monitoring can potentially overcome this problem, as Branch-funded researchers demonstrated in a pilot study using such data for Massachusetts and Rhode Island. They found that measures of tract poverty predicted a broad range of health outcomes, including death, cancer incidence, tuberculosis, childhood lead poisoning, and non-fatal weapons-related injuries. Using an educational program that was also developed with support from the Branch, the researchers are disseminating the techniques they used to create area-based measures for surveillance to public health officials.

Understanding the mechanisms through which features of poor communities contribute to the health disadvantage of residents requires multi-level research designs and independent measurement of environmental conditions. In a study of obesity, researchers assessed the

geographic and social distribution of physical activity facilities (e.g., parks, gyms) and related these to the physical activity and overweight status of community residents. Areas with high SES were more likely than poorer areas to have at least one such facility; having at least one facility was associated with higher rates of physical activity and decreased rates of overweight.

### **HEALTH AND FAMILY FUNCTIONING—A TWO-WAY STREET**

Scientists have recently started exploring the ways in which children's health both depends on, and influences the relationships and well-being of their parents. For example, research in Uttar Pradesh, India, investigated the effect of domestic violence during pregnancy on birth outcomes in a representative sample of more than 45,000 women of reproductive age and their husbands. The study was the first to look at men's reports of violence and connect them to female partners' reports of perinatal and early childhood mortality. Mothers who experienced domestic violence had risks for perinatal and neonatal mortality that were 2.4 times to 2.6 times higher than mothers who did not experience violence. The researchers further found that the effect of abuse remained strong when other conditions, such as lack of access to prenatal and postnatal care, were statistically controlled.

Having a child who is in poor health can also have serious effects on parental relationships. A number of researchers analyzed data from the Fragile Families Study to estimate the effect that poor child health had on families during the post-welfare reform period. They found that, within a short time, having a child with low birth weight, a disability, or a developmental delay decreased the likelihood that unmarried parents would live together or marry. They also found that having a disabled child reduced the number of hours worked by mothers who were employed, as well as the probability that the father would be employed at all. Having a child in poor health also increased the probability that the mother would receive welfare payments, Medicaid, and housing assistance.

### **POLICIES AND PROGRAMS OFFER PROMISE FOR IMPROVING POPULATION HEALTH**

The power of public policy and broad-based programs to improve health lies in their ability to affect large groups of people. However, careful research is needed to evaluate the effects of such programs on health outcomes. In recent years, DBSB-supported researchers have demonstrated the impact of policies in several domains on child health. One study of child care regulations showed that increasing the educational requirements for directors of day care facilities reduced the incidence of unintentional injuries. However, these educational requirements also tended to crowd some children out of care, as did regulations that required frequent inspections of child care facilities and lower pupil-to-teacher ratios. Thus, regulation creates winners and losers: some children benefit from the resulting safer environments, while others whose access to the regulated sector is limited are placed at higher risk of injury.

Several researchers have evaluated the impact of federal food programs, such as the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), the Food Stamp Program, the National School Lunch Program, and the School Breakfast Program, on children's health.

Results include the following:

- WIC participation at age four reduced the risk of overweight (BMI greater than 85th percentile) at ages four to six.
- Neither the Food Stamp Program, nor school-based food programs had any impact on overweight among children ages six to 11 years; and
- The School Breakfast Program had no effect on the total calories consumed by children, but improved the nutritional value of food at the school and the nutritional status of both participating children and their families.

One study of an intervention implemented by the Mexican government used financial transfers to induce poor families to invest in their children's health and human capital. Using an experimental design, investigators showed that the program, known as *Progresa*, reduced rates of illness and improved physical development among children. This program continues today in Mexico, under the name *Oportunidades*, and has been adopted in more than 20 countries. In September 2007, a program directly modeled on *Progresa* called "Opportunity NYC" was implemented in New York under the leadership of Mayor Michael Bloomberg.

## **HUMAN DEVELOPMENT IN SOCIAL CONTEXT**

The DBSB brings a population perspective to the NICHD's mission in human development that focuses on the social contexts in which children grow and that studies the implications of context for developmental trajectories. Although DBSB-supported research addresses a variety of social contexts, including neighborhood and school environments, the Branch's past research has focused most extensively on family and public policy contexts. By focusing on the complex structures of families and their relation to family processes, this program is able to study the pathways through which changes in society and social or economic disparities translate into developmental outcomes for children. Families, in turn, are deeply affected by and responsive to public policies, and the policies affect children largely through these family effects.

Addressing these interrelationships requires a multidisciplinary, cooperative effort involving researchers with expertise in child development, family processes, public policy, and other aspects of the social environment. To this end, the DBSB works with the NICHD's CDBB to oversee the Science and Ecology of Early Development (SEED) program, which encourages research on the mechanisms through which social, economic, cultural, and community-level factors and their interactions impact the cognitive, neurobiological, socio-emotional, and physical development of children.

The DBSB-supported Family and Child Well-Being Research Network, which ended in 2005, also bridged policy and developmental and demographic research. It was designed to facilitate multidisciplinary research on family and child well-being, and to make research findings in these areas accessible to the public-policy process. The Network was particularly successful in using



multiple datasets to examine questions related to poverty, fatherhood, and contextual influences on child development.

DBSB support of large-scale studies that produce population data on child development, families, and social contexts is also vital to advancing this research agenda. Examples of such support include the: Child Supplement to the National Longitudinal Survey of Youth's 1979 Cohort (NLSY-Child); Early Childhood Longitudinal Study-Birth Cohort (ECLS-B); National Survey of Families and Households (NSFH); Child Development Supplement to the Panel Study of Income Dynamics (PSID-CDS); and Family Life studies in Malaysia, Indonesia, and Mexico.

After the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 transformed welfare systems in the United States, the DBSB funded three new studies that addressed how families and children fared in the post-reform era. These included the: Fragile Families Study; Welfare, Children, and Families: A Three-City Study (hereafter, the Three-City Study); and L.A. FANS. Each of these studies examines unique aspects of policy, neighborhood, and family influences on children and their parents. [Appendix E](#) provides brief descriptions of these and other datasets supported by the Branch.

The following section highlights selected findings from DBSB-supported research about the social contexts in which children grow and their effects on human development.

### **DISPARITIES IN RESOURCES AVAILABLE TO CHILDREN ARE WIDENING**

Since 1960, young children whose mothers are highly educated have gained steadily in access to both parental time and money resources, while children whose mothers are poorly educated have increasingly fallen behind in these measures. In 1960, the most educated quartile of families with young children had about twice the family income of the lowest educated quartile. Now, the best educated have nearly a four-fold advantage in income over their least educated peers. Employment outside the home has also increased more among highly educated mothers whose children are younger than six years old (from 18 percent to 65 percent) than among their poorly educated counterparts (from 12 percent to 30 percent). The gap in children's living arrangements has also increased. The percentage of mothers with young children who were not married or not living with their husbands rose from 4.5 percent to 7 percent among highly educated mothers between 1960 and 2000; it increased from 14 percent to 43 percent among poorly educated mothers. Differences in the amount time fathers spend with their children are also widening. College-educated fathers are increasingly more likely to be resident in the home compared to other fathers, and resident fathers spend more time with their children. Further, even among resident fathers, those with college educations spend more hours per day with their children than fathers who have not completed college, a gap that has remained roughly constant since 1985.

Research shows that whether children are raised by their married, biological parents is strongly associated with the economic resources of the family. Although cohabiting-parent families have more resources than single parents, children living with cohabiting parents are more likely to be poor and to suffer from food insecurity and housing insecurity than those living with married parents. However, these differences are largely accounted for by variation in cohabitation by

race, ethnicity, and education and are likely to reflect factors that lead parents to choose cohabitation rather than marriage. Further, differentials in the economic well-being of children in cohabiting- and married-parent families vary by race and ethnicity. Hispanic children living with cohabiting or married parents share similar levels of economic well-being. Among non-Hispanic black children, economic well-being is lower for those living with a cohabiting mother only if she is not living with the child's biological father. In contrast, for non-Hispanic white children, living with a mother who is cohabiting is disadvantageous regardless of whether the biological father is also living with the child.

The health status of the family head also has important implications for children's exposure to poverty. A decline in his or her health often serves as a triggering event or downward turning point in the family's income trajectory. The effect is strongest in families whose economic fortunes are already on a downward trajectory. Economically stable non-poor families may briefly experience poverty during a spell of ill health for the family head, but they escape poverty once his or her health status improves. In addition, family resources and the level of economic stability within a family influence how well families adapt to a widespread economic crisis. For example, in Indonesia, wealthy families who were able to merge households to achieve economies of scale, and who could reduce spending on non-food items were able to "ride out" the impact of rapid currency inflation. Families tended to adjust their spending on education, maintaining spending on older children at the expense of younger children.

### **EARLY YEARS OF WELFARE REFORM DID NOT HURT CHILDREN**

Welfare and employment experiments launched in the early 1990s aimed to increase the self-sufficiency of low-income parents in the United States and Canada. Analyses of program results explored effects on children and found that younger children—those who were ages two to five when their parents entered a program—showed small improvements in their school achievement when their parents participated in a program that included earnings supplements. These effects on children could be due to increased family income and, perhaps, to increased use of center-based child care arrangements.

When PRWORA became law in 1996, many mothers were required to obtain paid employment as a condition of their receiving welfare. In an effort to assess how children were affected by these new requirements, the Three-City Study tracked preschoolers and adolescents from 1999 to 2001. Results showed that a mother's entry into the labor force as a result of welfare reform had no effect on preschoolers' cognitive achievement, problem behaviors, or psychological well-being. Results were similar for adolescents, and findings hinted at potential benefits in adolescents' psychological well-being. The third wave of the Three-City Study, conducted in 2005 and 2006, may provide new evidence on these contradictory findings. When the welfare reform program was re-authorized in 2006, it included a focus on strengthening families and caring for children.

## **FATHERS MATTER**

In recent years, the DBSB has emphasized research on the role fathers play in child well-being. Fathers' influence on children has been a neglected aspect of child development, and their roles in family life were often only measured by their absence. The Branch has supported several large-scale studies of father involvement using measures developed by former NICHD researcher Michael Lamb, Ph.D.

Findings indicate that fathers have independent effects on children's internalizing and externalizing behaviors. Analysis of data from the NSFH found that adolescents who reported high relationship quality with non-resident fathers exhibited fewer internalizing problems than those who did not have close ties to their non-resident fathers, even if the relationship with the mother was poor. Another study found that high levels of father involvement had an independent, but significant impact on teens' externalizing and internalizing behaviors, and that these effects were especially strong when the biological father lived with the adolescent.

In an analysis of PSID-CDS data, one Branch-funded researcher found that married biological fathers spent more time, on average, engaged with their children than did unmarried biological fathers, stepfathers, and unmarried partners of mothers. However, single fathers spent the most time engaged with children—an average of 22 hours per week compared to 15 hours per week for married fathers. The analysis found no evidence that family structure (defined by the marital status of parents in the household and their biological relationship to the child) affected children's cognitive achievement, after taking into account the demographic and economic characteristics of fathers. However, children who lived with married biological parents had fewer behavior problems, in part, because of greater parental (maternal and paternal) investments of time. Similar results from the Fragile Families Study showed that sons who did not live with their biological fathers were more likely to be incarcerated, and that living with a stepfather increased the risk of incarceration even more than did having an absent biological father.

The Fragile Families Study also revealed that unmarried fathers generally desired and intended to be involved in the lives of their children at the time of birth. It found that establishing in-hospital paternity had a significant positive effect on subsequent child support payments (both informal and formal) and on father-child visitation.

## **FAMILY INSTABILITY, COHABITATION, AND CHILD DEVELOPMENT**

Children born to cohabiting parents are more likely to experience the disruption of their parents' union than are children born to married parents. Researchers found that parents who married after the birth reduced the likelihood of family instability only for white children, but not for other groups. Measures that did not account for mothers' transitions into and out of cohabitation underestimated children's experience of family instability by 30 percent for white children and by more than 100 percent for black children. For example, black children experienced an average of 0.55 parental marital transitions by age 12 years; they experienced 1.18 transitions on average by that age when cohabitation transitions were also considered.

Children's experience of family instability may have important implications for their development. For example, children who experience family instability are more likely than their peers from stable families to be rated by teachers and observers as having behavior problems. The size of these differences varies by family structure at birth and the emotional, social, and material resources in the family. According to one analysis that used NLSY-Child data, these differences may also be limited to white children. The study examined whether the association between family instability and children's developmental outcomes persisted after accounting for pre-existing differences in maternal characteristics that predicted family instability, such as education, drug use, and sexual history. Among white children, the number of family structure transitions that children experienced had no net effect on cognitive outcomes, but did predict externalizing and delinquent behaviors. Among black children, the researchers found no relationship between family instability and either cognitive or behavioral outcomes. However, for both white and black children, living in a mother-only household at least 75 percent of the time during the first four years after birth was associated with subsequent behavioral problems.

Family structure affects children in part through its effect on parents' mental health. Externalizing behaviors are more common among children whose mother or father is in poor mental health. A father's positive mental health can buffer the impact of the mother's poor mental health on the child. The effects of cohabitation on children's educational outcomes may also reflect, in part, poor mental health of the mother. Researchers found that, while becoming a parent was mildly associated with well-being for married and single women, cohabiting women experienced remarkable declines in social and psychological well-being, even when researchers controlled for their (often lower) level of well-being prior to the birth of the child: that is, cohabitation was associated with particularly problematic mental health outcomes for new mothers.

### **ADOPTIVE FAMILIES**

Despite reports that adopted children are referred for clinical treatment of behavior problems more often than non-adoptees, research based on data from Add Health showed that adopted children were not more likely to exhibit behavior problems once relevant factors were taken into account. Such factors—early maltreatment, parental absence at key times of the day, and peer behavior—were predictive of participation in antisocial behavior for adolescents regardless of adopted status.

Adoption used to be shrouded in secrecy, but in recent decades open adoption has become more common, allowing an exchange of information and contacts among the parents and children involved in the adoption. In a unique longitudinal study of children adopted through open and closed procedures, researchers found that contact between adoptees and birth mothers was not harmful and could actually improve adolescents' emotional and behavioral outcomes, as long as all adults involved worked in a collaborative manner. Adopted adolescents varied in terms of their reported desire for contact; their feelings, along with other factors, provided direction for establishing the degree of openness at particular points in the life course.

## **NEIGHBORHOOD AND SCHOOL CONTEXTS HAVE INDEPENDENT EFFECTS ON DEVELOPMENT**

Neighborhoods and schools are critical components of the social environment during childhood and adolescence. The Moving to Opportunity Project used an experimental design to study whether giving public housing tenants the choice of residential location improved families' economic well-being and children's development. The program showed positive effects for girls, but not for boys. The program's effects were attenuated because many tenants chose neighborhoods that were similar to the ones they left, resulting in very little change in the neighborhood conditions.

Residential mobility usually causes some disruption in children's neighborhood and school environments. Researchers using Add Health data found that residential and school mobility affected the structure of adolescents' friendship networks. Recent movers or school changers tended to have small, dense friendship networks, occupied less central and less prestigious positions in their networks, and had parents who were less knowledgeable about members of their children's networks. These effects seemed to persist for several years. Friends' involvement in deviant peer networks partially explained higher levels of violence among adolescents who moved. Other researchers found that variations in residential mobility and neighborhood distress factors (e.g., poverty, unemployment) explained much of the effect of family composition on premarital childbearing and school dropout, suggesting that geographic context represents important mechanisms through which family conditions shape adolescent development.

Data from Add Health, combined with high school transcript information, have also illuminated the role of friends in behavior problems and decisions to take advanced courses. Girls were more likely to progress to advanced courses when their same-sex friends did well in school. Another analysis showed that friends' academic achievement, alcohol use, emotional distress, and extracurricular activity participation independently predicted an adolescent's subsequent behavior problems, but these characteristics also combined within a peer group to produce unique behavioral influences. This analysis also showed that associations between friendship factors and adolescent behavior varied as a function of the larger peer network and school context. Adolescents who occupied central positions in their social network were most affected by peers' characteristics. Peer effects were strongest in academically rigorous schools, and high levels of bonding between teachers and students helped to attenuate negative peer influences.

DBSB-funded work also found that racial segregation in urban areas seemed to exacerbate racial disparities in education. The gap between black and white test scores was higher in more segregated cities. If family background and other factors were held constant, the difference between a fully segregated and a completely integrated city accounted for about one-quarter of the raw black-white gap in Scholastic Aptitude Test (SAT) scores. Although neighborhood segregation had a consistent impact on the test-score gap, school segregation had no independent effect, a situation that may occur because within-school segregation increased when schools were more highly integrated, which potentially offset the benefits of school desegregation.

## **THE IMPORTANCE OF EARLY INTERVENTION**

Disparities in non-cognitive and cognitive skills exist before children enter school. In his Nobel lecture, DBSB grantee James Heckman, Ph.D., argued that investments in cognitive and non-cognitive skill formation among disadvantaged youth have the highest economic rate of return when concentrated in early childhood, specifically by ages four to six years. Early intervention increased children's skills and cultivated a self-reinforcing motivation to learn more. Heckman found that non-cognitive skills (i.e., motivation to learn) were equally, if not more important than cognitive skills (i.e., math and reading) for predicting the trajectory of later earnings and education. Programs that increased the desire to learn and the self-directedness of children could help children overcome neighborhood and financial disadvantage even if the programs did not increase measures of intelligence. In newly funded research, Dr. Heckman will conduct a careful study of what makes an "effective" early childhood intervention by reanalyzing data from previous longitudinal experiments of early childhood development and augmenting them with information from the National Longitudinal Survey of Youth, 1979 cohort (NLSY79) to correct selection bias.

## **CREATING FAMILIES: RESEARCH ON MARRIAGE AND FERTILITY**

Because families are so important for the well-being of children and adults, the dramatic changes that have occurred in family forms and family formation during the last half-century have prompted widespread concerns as well as considerable debate. A few of these major changes include:

- The rise of non-marital cohabitation: nearly two out of three women who married between 1995 and 2002 had cohabited before marrying.
- Marriage at older ages: the percentage of Americans who were married by their late twenties fell from two-thirds to barely one-half between 1985 and 2005.
- Increases in non-marital childbearing: the portion of such births rose from 18 percent of all births in 1980 to 37 percent in 2005.
- Instability in marital and other unions: although divorce rates in the overall population have not increased since the 1980s, less educated couples and black couples have experienced substantial increases in union instability.

Within this context, the DBSB seeks to advance knowledge of how and why families and their formation are changing, in addition to knowledge about the consequences of these changes. This program of research has long been a centerpiece of the DBSB portfolio, addressing a wide range of topics, including unintended pregnancy, infertility, adoption, delayed and low fertility, cohabitation, marriage, union stability and divorce, and non-marital childbearing. It also addresses the determinants and consequences of individual behaviors related to family formation (e.g., the effect of early life experiences on marital stability, or the consequences of early childbearing), and the ways in which the behaviors of individuals feed into and are influenced by patterns at the population level (e.g., how norms relating to non-marital childbearing change, or how changes in social policy affect decisions about marriage).

Several Branch investments have proven critical to progress in this area of research, including a number of large-scale data collection projects, which have given rise to new discoveries about family behaviors. Such projects include NSFH, NLSY79, National Longitudinal Survey of Youth-1997 Cohort (NLSY97), Fragile Families Study, the Three-City Study, and Add Health. In addition, the National Survey of Family Growth (NSFG), conducted by the National Center for Health Statistics with funding from the NICHD, provides unique information about trends in key measures of fertility, infertility, contraceptive use, cohabitation, and marriage. Analyses using these large databases are complemented by in-depth studies, which explore family processes and the cultural meanings that underlie family behaviors. An ongoing DBSB-supported contract, the Explaining Family Change Project, is developing new approaches to research on the family and family change. In September 2008, project researchers plan to deliver a report suggesting avenues for developing theories, measuring family constructs, and enhancing data to enrich family research and assure ongoing monitoring of family trends. The following information highlights Branch-funded scientific advances in research areas that have been particularly productive in recent years.

### **COHABITATION IS A DISTINCT—AND SHORT-LIVED—FAMILY ARRANGEMENT**

The dramatic rise in cohabiting unions is one of the most significant factors transforming the family formation process for young adults in the United States. Recent research funded by the DBSB has examined the meaning and quality of these unions, as well as their prevalence and correlates. Results from in-depth interviews with cohabiting men and women suggest that cohabitation is a distinct phenomenon compared with marriage and being single. Couples interviewed explained that they began cohabiting without making a deliberate decision to do so, and without considering the option of marriage. Researchers also learned that relationship quality was significantly lower in cohabiting relationships than in married couples, and that the quality gap widened the longer the relationship continued.

Cohabitation also tends to be short lived. For instance, an analysis using NLSY79 data showed that about one in four cohabiting couples separated within a year; a similar fraction had married during the same time frame. Within five years, 44 percent married and 46 percent separated. Despite these odds, couples who are currently cohabiting are optimistic about their chances of marriage. In an analysis of NSFG data, about 70 percent reported a “pretty good” or “almost certain” chance that they would marry their current partner.

### **MARRIAGE**

A number of important societal changes, including the growth of service-sector employment, increased participation of women in the labor force, and relaxed norms about premarital sex, have contributed to dramatic shifts in the meaning and timing of marriage in the United States. Today, fewer people marry to gain economic security, and more do so for companionship. Recent findings show that today’s young people have adopted high economic and relationship prerequisites for marriage. The link between male employment and marriage is much weaker today than it was 20 years ago. Economic standards for getting married now go beyond steady

employment; they include achieving a set of financial goals such as home-ownership, savings, and being able to afford a “real” wedding. Today’s young people view marriage as a capstone of economic success, rather than a step along the way. Fear of divorce has also become a deterrent to marriage, and a factor in the expressed need to be sure that the partner and relationship are of high quality before a commitment is made. Research has most extensively documented these concerns among unmarried couples with children. In these populations, cultural changes in the requirements for marriage have given renewed force to joblessness and other economic barriers to marriage. However, the concerns are also evident in other populations, and timing of marriage is delayed across all social classes.

The high rates of non-marital childbearing in the United States also reflect changes in the meaning and timing of marriage. The United States has experienced a major bifurcation of childbearing patterns, such that births to highly educated women occur later and overwhelmingly within marriage, while births to less educated women occur earlier and mostly outside of marriage. Since the mid-1990s, public policies have attempted to address high rates of non-marital childbearing through abstinence education, state-level incentives, marriage promotion, and welfare reforms. DBSB-supported research suggests that specific welfare reform policies have done little to affect these rates. In one study, none of a wide range of policies—family caps on welfare payments, earnings disregards, work exemptions, work requirements, and sanctions—significantly contributed to a change in non-marital childbearing, after the net effects of individual characteristics and state economic environments were taken into account. A recipient of a DBSB Method to Extend Research in Time (MERIT) Award is currently conducting a thorough evaluation of the effects of welfare policies on non-marital childbearing using multiple datasets and research approaches.

With regard to marriage-promotion programs, recent findings from the Fragile Families Study suggest that efforts to promote marriage among unmarried men and women who are already parents may be complicated by the high proportion of such parents who have children by more than one partner. In fully 59 percent of study couples who were unmarried at the time of the baby’s birth, at least one parent had a child from another relationship. In contrast, only 21 percent of married relationships with children had a child by another partner. Other research has found that having children with multiple partners is associated with the mother’s high fertility, the father’s previous incarceration, race/ethnicity (e.g., it is highest among black non-Hispanic couples), and having a first birth between ages 14 and 16 years. Multi-partnered fertility complicates marriage-promotion efforts because one mother must relate to multiple men who are fathers to her children. It may also negatively affect children’s outcomes by placing a strain on the time, financial, and emotional investments a parent can make for children living in different households.

### **PRECURSORS OF ADULT RELATIONSHIP FORMATION**

Recent research suggests that the formation of stable relationships during adulthood depends, in part, on developmental experiences. An analysis of the Three-City Study explored the link between a woman’s history of physical or sexual abuse and her formation of adult relationships. More than one-half of the women in the study had been physically or sexually abused at some time in their lives, and 24 percent of the women had been sexually abused before the age of



18 years. Women who had not been abused were twice as likely as those with a history of abuse to be married. Further, the timing and different forms of abuse had distinctive associations with union formation. Women who were abused as minors tended to have a “transitory” relationship pattern—a series of short, mostly cohabiting relationships, which lasted only about six to eight months each. Women who were abused as adults were more likely to have withdrawn from romantic relationships.

Analysis of Add Health data has documented strong continuities in patterns of relationships that occur between adolescence and early adulthood. Compared with those who had no romantic relationships during the teenage years, men and women who were involved in romantic relationships were more likely to both cohabit and marry in their early twenties. Involvement in sexual relationships with non-romantic partners during the teen years increased the likelihood of cohabitation, but not of marriage, in early adulthood.

### **INTERGENERATIONAL TRANSMISSION OF FAMILY STRUCTURE AND POVERTY**

In the United States, single-parent families and poverty tend to co-occur, and much evidence suggests that they are causally related. Research also demonstrates that they are correlated across generations: that is, the children of single-parent or poor families are themselves more likely to form single-parent or poor families. Recent research has explored the causal pathways that underlie the intergenerational “transmission” of poverty and family structure, and the implications of these pathways for population distribution of income and for family structure. The research found that the intergenerational associations of poverty and family structure operated through largely independent pathways. Once researchers took into account the net effect of the correlation between poverty and family structure within a generation, they found that childhood poverty had no direct effect on adult family structure, and that childhood family structure had no direct effect on adult poverty. Poverty was more likely to be transmitted across generations than was family structure. Further, they learned that the processes of intergenerational inheritance had not changed over time and had almost no effect in producing the marked changes observed in the proportions of adult women who are poor and are single mothers. This work suggests that breaking the link between poverty and family structure within a generation could help to weaken the persistence of poverty across generations.

### **WHY HASN'T U.S. FERTILITY FALLEN BELOW REPLACEMENT LEVELS?**

In many parts of the industrialized world, including Europe and many Asian countries, fertility has fallen well below the levels necessary for population replacement. In the United States, however, the total fertility rate was 2.054 births per woman in 2005—only slightly below the rate needed for population replacement. Immigration and population diversity play crucial roles in bolstering the birth rate; for instance, fertility among Hispanic women is approximately 2.8 births per woman. However, researchers also attribute the higher fertility of the United States to its institutional and normative environment. To learn more about this theory, one Branch-supported investigator analyzed fertility decisions in five developed countries, including the United States. He found that institutional differences among the countries helped to explain inter-country variations in the perceived costs of having children. Another researcher used a rich

longitudinal data set from Norway and statistical techniques that controlled for unobserved community-level differences; he found that increased availability of day care had positive effects on the timing of the first birth.

These results may help to explain an intriguing reversal in the association between fertility and female participation in the labor force that has been observed in other research. This association was negative before and during the 1980s, but became strongly positive by the 1990s. Researchers argue that societal-level changes, including normative and structural changes that make non-maternal care more feasible, have eased the incompatibility between mother and worker roles.

The importance of normative and structural factors is also illustrated by research in Japan, which currently has a fertility rate of 1.4 births per woman. Low marriage and fertility rates in Japan reflect the effects of traditional gender norms, which assign household and childrearing responsibilities to women. However, there is evidence that these norms are changing. For instance, both husbands and wives in Japan report a strong preference for women to work. Between 1994 and 2000, the proportion of Japanese husbands doing any housework increased from 58 percent to 70 percent, and increases were strongest among couples with well-educated wives. Researchers have documented that non-traditional family behaviors are diffusing through social networks. Results also showed that attitudes toward behaviors, such as use of child care, not marrying, and cohabitation, were most tolerant among individuals who personally knew someone who engaged in the behavior.

### **NO “EPIDEMIC” OF INFERTILITY, BUT DISPARITIES AMONG GROUPS**

Media attention on new reproductive technologies has fueled a widespread perception of an “epidemic” of infertility linked to the delay of childbearing among high-status white women. However, data from the 2002 NSFG provides only minimal support for these perceptions. The study found no increase in the prevalence of observed infertility (defined as a 12-month interval of unprotected intercourse with no resulting pregnancy) among married couples, but did find that the self-reported perception that a woman or her partner may have difficulty conceiving or carrying a child to term has increased. This perception may reflect the increased cultural awareness of infertility and health care providers’ readiness to diagnose a problem, rather than an actual increase in the prevalence of fertility problems. Although an epidemic of infertility seems unsupported, it is impossible to rule out some increase in infertility prevalence in the absence of definitive biophysical measures of infertility at the population level.

The NSFG also revealed strong evidence of racial, ethnic, and socioeconomic disparities in both infertility status and access to treatment. Among women of various racial/ethnic backgrounds, white non-Hispanic women were least likely to actually experience infertility (as defined above), but were most likely to seek treatment for perceived infertility. Infertility was most common among women with lower levels of education. Further, recent policy changes affecting health insurance coverage for infertility services may have little impact on these disparities. A recent study compared fertility rates in states that implemented mandates requiring infertility benefits in employer-sponsored health insurance coverage to those of states without such policies. It found that the new policies increased birth rates only for first births among white women older than 35

years of age, but had no effects on rates for higher order births, younger women, or black women.

Understanding help-seeking pathways is also an important part of confronting racial/ethnic differences in the receipt of infertility care. Infertility help seeking is likely tied to cultural issues related to knowledge of, access to, and trust in the medical establishment and is further complicated by the existence of a range of perceived treatments in alternative medicine, the availability of social solutions (e.g., adoption), and race- and class-based ideas about who deserves to be a parent. Researchers have studied these issues intensively among Latino men and women. In this population, those who sought fertility treatment reported that they felt childless marriages were a “failure,” and that the purpose of marriage was to have children. Latina women who were born in the United States were more assertive in seeking care than were foreign-born Latina women. The DBSB, in collaboration with the NICHD’s RSB, organized an interdisciplinary conference in 2005 on health disparities in infertility; the event resulted in a special feature in the April 2006 issue of *Fertility and Sterility* dedicated to the topic.

### **BIOGENETIC ORIGINS AND SOCIAL IDENTITY**

DBSB-supported researchers are beginning to examine how families and children are coping with identity issues sparked by new methods of family formation. One study addressed how parents who use donor gametes to conceive their children handle issues of family identity. Adults who become parents using these technologies struggle with how to handle discussions, which are very common in U.S. culture, about their child’s physical resemblance or dissemblance to them. Parents in the study who shared age-appropriate information with the child about his or her biogenetic origins earlier—at age three or four—generally expressed more relief than those who disclosed later; no parent regretted disclosing this information to the child.

The study of open adoption discussed in the previous section also examined these issues. All adolescents struggle with identity issues, but adopted adolescents have the added dimension of a separation between their birth parents and the family in which they are raised. The aforementioned study found that, as long as adolescents’ desires regarding contact with birth parents were respected by adults and professionals, open adoption had no adverse effect on identity processes. The study is currently following this cohort into young adulthood and will eventually be able to report on how adopted status impacts these youth’s own experiences of parenthood.

## SEXUAL BEHAVIOR, PREGNANCY, AND HIV

Sexual behavior has profound implications for adult roles, health, and well-being. It is a critical element of human development that has the potential for negative as well as positive outcomes. DBSB support for sexual behavior research is tied to issues at the heart of the Branch's mission—unintended pregnancy, the formation of stable adult partnerships, parenthood, the ability to care for children, and the prevention of HIV and other sexually transmitted infections (STIs). The Branch portfolio seeks to advance a rich, interdisciplinary body of knowledge that can help to identify productive solutions to issues linked with sexual behavior, specifically those that pose continuing concerns for public health and societal well-being.

For example, overall rates of unintended pregnancy in the United States have remained unchanged, but disparities in these rates have increased. Between 1994 and 2001, the rate of unintended pregnancy increased by 29 percent among poor women, but fell 20 percent among women with moderate or high incomes. The disparity in abortion rates increased as well. HIV prevalence remains relatively low in the United States (fewer than one in every 1,000 adults ages 18 to 24 is infected, based on screening performed by a nationally representative study), but prevalence is dramatically higher for non-Hispanic blacks (4.9 adults per 1,000) compared to persons of other races (0.22 adults per 1,000). The prevalence of other STIs, including Chlamydia (41.9 adults per 1,000) and gonorrhea (4.3 adults per 1,000), is also higher in this age group.

The need to inform HIV-prevention efforts has been a strong motivator for recent research on sexual behavior. The Branch issued a number of PAs and RFAs soliciting social science research on HIV-related issues, including studies on the acceptability of microbicides, the role of religious organizations in HIV prevention, men's sexual behavior, couple relationships and HIV risk, social networks and HIV prevention, and the social-structural impact of the epidemic. The design, implementation, and evaluation of theory-based prevention interventions in a wide range of populations have also become a small, but significant part of the Branch portfolio. Support for international research has also grown steadily: about one-quarter of Branch studies are currently conducted in Asia and Africa, where HIV is concentrated. The DBSB also recently renewed a special initiative—Global Partnerships for Social Science AIDS Research—to support the development of social science expertise and research infrastructure in developing countries in Africa, Asia, and Latin America.

Recognizing that HIV prevention and pregnancy prevention are deeply intertwined, the Branch continues to work toward integrating research in these areas. A recent DBSB RFA invited research on pregnancy planning in the context of HIV. Maintaining an active portfolio in research on effective contraceptive use and on the roles of men in reproductive behaviors is also a high priority for the Branch. The information below highlights areas of research within these contexts that have been particularly active in recent years.

## **TEEN ROMANTIC RELATIONSHIPS ARE AN IMPORTANT CONTEXT FOR EARLY SEX**

Although research on sexual behavior in the adolescent and young adult years has been a central focus for the DBSB since the 1970s, in-depth exploration of the relationship contexts of these behaviors has occurred only recently. Research shows that adolescent relationships lay the foundation for intimate relationships later in life and influence the likelihood of sexual involvement, the ability to prevent unintended pregnancy and STIs, and participants' mental health.

An in-depth study of romantic relationships among teenagers in the Midwest demonstrated that boys perceived significantly more awkwardness than girls in communicating with romantic partners and felt less confident navigating various aspects of their relationships, even when they reported levels of emotional engagement similar to their romantic partners. When these teens perceived a power imbalance, boys were more likely to report that their partner had more power. These findings contradict many previous theories about gender and power and suggest the need to consider the unique features of the adolescent life stage in future research.

Cultural factors shape adolescent relationships in important ways. Researchers found that Mexican American and black teenagers tended to hold different concepts about what love and sex "should be." The Latino youth put much more emphasis on romantic love and on the importance of family. Marriage, not hedonic relationships, was more likely to be the goal of young Latinos of both sexes. Compared to white youth, black youth reported involvement in relationships of longer duration, but their levels of intimate self-disclosure and frequency of interaction were lower, even when differences in SES and family structure were taken into account.

Studies also show that relationship and partner characteristics influence the use of contraceptive methods. Researchers found that consistent use was more common among those who waited a longer time between the start of a relationship and first sex with that partner, and among those who discussed contraception before having first sex. Adolescents who had an older partner, or who had a greater number of close friends who knew their partner were less likely to use a method, and to use one consistently. Condom use is a particularly sensitive issue in relationship dynamics because use of condoms in an ongoing relationship often triggers questions about fidelity.

## **EXPOSURE TO "SEXY" MEDIA PREDICTS LATER SEXUAL BEHAVIORS**

Adolescents in the United States spend at least five or six hours a day occupied by some form of mass media that, in many cases, depicts sex as glamorous and consequence free. As the result of a DBSB initiative, important new evidence has emerged about the relationship of media exposure to adolescent sexual behavior. Although the recent findings do not provide definitive evidence of causality, they represent a significant advance over previous research because all the studies used longitudinal designs and in-depth measurement of media content, and most used representative population samples.

In one nationally representative study, the researchers found that adolescents who watched TV programs with more sexual content were subsequently less fearful about the negative consequences of sex and were more likely to initiate sexual intercourse than those exposed to less sexual content in TV programs. These findings held even after controlling for an extensive set of variables known to influence sexual debut, such as sensation seeking, mental health, and religiosity. Exposure to programs that included only talk about sex was associated with the same risks as exposure to programs that depicted or suggested sexual intercourse. Exposure to sexual content on television also predicted engagement in types of sexual activity other than intercourse during the subsequent year; the findings held even after controlling for the extent to which an adolescent engaged in such behaviors at baseline.

Because some adolescents seek out media with sexual content, identifying and controlling the factors that make this situation likely is an important aspect of the research. In a study conducted in North Carolina, early puberty was identified as a powerful predictor of a media diet high in sexual content, even after controlling for pubertal stage and other factors related to the risk of sexual debut. However, seventh- and eighth-graders' exposure to sexual content in music, movies, television, and magazines independently predicted risk of engaging in sexual intercourse two years later. In this study, the findings held for white teens, but not for black teens.

Family processes and peers also influence teens' media diets. Research indicated that teenagers who perceived that their friends approved of having sex, and those who had non-coital sexual experiences were more likely than other teens to watch TV shows with sexual content. However, these risk factors had no effect when parents enforced strict rules about household TV watching. In addition, having a TV in the teen's bedroom and greater time spent in a house alone were particularly predictive of a teen watching TV shows with sexual content.

The influence of sexual content is not limited to television shows. About 40 percent of popular songs contain references to romance, sexual relationships, and sexual behavior, but the lyrics vary greatly in the way they portray these subjects. Researchers found that exposure to this kind of content in popular music only increased the probability of a teen having intercourse if the lyrics were sexually degrading, e.g., depicting women as sexual objects and sexual intercourse as inconsequential. Songs that portrayed sex and romance in more neutral terms were unrelated to sexual behavior.

Further, not all sexual content on television has negative consequences for teens. One study surveyed teens after they watched an episode of the television show *Friends* in which the characters discussed pregnancy risk associated with condom use. Researchers found that 10 percent of those who watched the episode later spoke to their parents about condom use.

## **EFFORTS TO ADDRESS BARRIERS TO EFFECTIVE CONTRACEPTION PRODUCE MIXED RESULTS**

The United States has one of the highest rates of unintended pregnancy in the developed world. To address this situation, researchers and practitioners are working to identify and eliminate the barriers to effective use of contraception. Results of some of these efforts include the following:

- A recent randomized clinical trial evaluated whether allowing new patients to take their first dose of oral contraception at the clinic visit, rather than waiting until their next menstrual period increased continuation rates. The experimental procedure had no effect on continuation rates. Self-reported side effects—including weight gain, headaches, and moodiness—were the major factor in prompting women to stop taking their pills, regardless of whether they attributed their symptoms to the method or to another cause.
- Another researcher studied the effects of improving young women’s access to emergency contraceptive pills on pregnancy and STI rates. One group of women received two packs of emergency contraception in advance of needing it, with unlimited resupply; the control group had to obtain emergency contraception from the clinic. The study found no effect on rates of pregnancy or STIs.
- Although purchasing oral and transdermal contraceptives using the Internet may make it easier for some individuals to obtain them, there are potential risks involved with not getting the items through proper medical channels. Researchers sought to determine how well such sites screened orderers for potential health risks by placing an order as a healthy 25-year-old woman, then as an obese 35-year-old woman who was a heavy tobacco user, and then as a 35-year-old woman who was a smoker and was taking an antihypertensive medication. In spite of the orderers’ reports of known risk factors for estrogen use, Internet sites invariably filled the orders for hormonal contraception methods. The sites also conducted no medical follow-up to these sales, except for offers to sell more products.
- Researchers studying women who were about to be released from jail developed a successful strategy for improving the women’s contraceptive use after release. In this study, women who received contraceptive supplies in advance of their release were 14.6 times more likely to initiate a contraceptive method than were women who received only referrals to free community services.
- Research in the United States suggests that cultural attitudes and beliefs pose substantial barriers to contraceptive use. One study found that oral contraceptive or barrier method use was less likely among women who held negative views about government involvement in contraceptive use, negative views about the pharmaceutical industry, or strong religious beliefs. In a similar study, “conspiracy” beliefs (for example, the belief that AIDS was produced in a government laboratory) were associated with less consistent condom use and with more negative attitudes toward condoms, especially among black men.
- A study conducted in Zambia found that involving both members of a couple in the process of making contraception decisions helped to maximize the effectiveness of HIV risk-reduction efforts. Serodiscordant couples welcomed and used family planning services when the options were presented in a manner that explained the services could improve the family’s overall well-being, and could protect family wealth for the children.

## **SOCIAL AND CULTURAL PROCESSES FRAME HIV RISK AND PREVENTION IN AFRICA**

Research in Malawi, Nigeria, and Uganda underscores the importance of social and cultural factors in defining HIV risk and in developing appropriate strategies to reduce risk. One set of studies examined the role of marriage in HIV risk across these different countries. The researchers found that ideas about modern marriage contributed to married women's risk in complicated ways. Prevention programs that emphasized the moral value of monogamy made it difficult for couples to truly assess whether they were at risk. Couples' efforts to maintain social reputations and the appearances of sexual morality, even while engaging in risky sexual relationships, produced secrets and silences with regard to actual sexual behavior; such secrets can be life threatening in the era of AIDS.

A set of projects conducted in rural Malawi has also provided a rich understanding of behavioral responses to the AIDS epidemic, and how these responses develop within local populations. Rural Malawians commonly share views about the epidemic with members of their social networks. Qualitative studies documented that these discussions not only incorporated prevention strategies promoted by public health officials, including abstinence, fidelity, and consistent condom use, but also incorporated "home-grown" strategies, such as managing partner selection, divorce, and renewed religious commitment. The studies found that women were most concerned about their husbands as a possible source of infection. In response, they urged their husbands to avoid infection and, increasingly, used divorce to reduce their own risk. Men worried most about the risk of infection from extramarital partners and adopted preventive strategies, such as having fewer partners and being more careful about partner selection to reduce their own risk. Regional variations in marriage patterns influenced which strategies were adopted. For instance, women in the parts of Malawi with a matrilineal tradition were significantly more likely to consider divorce or separation than were those from regions with patrilineal traditions.

Social interactions are powerful mechanisms for both social and behavioral change. Until recently, studies documenting their operations and effects in actual populations were both uncommon and flawed because of a failure to account for the propensity of individuals to include those similar to themselves in their social networks. However, quantitative analyses conducted by Branch-funded researchers studying the diffusion of ideas about HIV in Kenya and Malawi have yielded important new knowledge about how these processes operate. In models that explicitly accounted for the selection of network partners, these analyses found that social interactions had substantial effects on individual perceptions of the risk of HIV/AIDS, as well as on spousal communication about AIDS. These social network effects were asymmetrical and nonlinear. For example, having one network partner who was very concerned about AIDS substantially increased one's own perceived risk, whereas acquiring additional network partners who were very concerned about AIDS had little additional effect. The study also documented the ability of network interactions to multiply the effects of AIDS-related programs on the population. The researchers estimated that about 20 percent of the total effect of AIDS awareness programs on AIDS risk perceptions was mediated through social networks.



## **EXPLORING NEW STRATEGIES FOR ADDRESSING HIV**

For more than a decade, scientists have been working on the development of effective topical microbicides to provide women with a female-controlled barrier method that would prevent HIV infection. In numerous cross-sectional surveys, women at risk for HIV reported high levels of intention to use these products. Among one group of African female sex workers participating in a clinical trial, the demand for the potential microbicide product was so high that participants continued to urge their partners to accept its use even after they were told that the drug had not proved effective. One line of thought in favor of microbicides is that they are amenable to covert use by women. However, focus group research indicated that men did not want their partners to withhold information about microbicide use, and that many women shared this view. As in the case of condoms, decisions about microbicide use are complicated by the widespread belief that discussing or using STI prevention methods signals a lack of trust in a partner's fidelity.

A recent Branch initiative has encouraged studies on the roles that religious organizations can play in HIV prevention and care. One study conducted an in-depth exploration of the responses made by a mosque, a Buddhist temple, and a Protestant church to HIV in their communities. One religious leader indicated that formal policies or religious teachings prohibited any involvement in HIV educational activities. Leaders of the other two institutions did not embrace all aspects of HIV education, but demonstrated a willingness to involve their religious institutions in HIV education activities in limited ways. Specifically, they partnered with outside organizations (e.g., a health department or social service agency) that were already involved in HIV prevention efforts. The researcher conducting the study termed this response "conservative innovation" and noted that it allowed the religious organization to engage in HIV prevention without having to take the lead in prevention activities.

## **PEOPLE, PLACES, AND POPULATION MOVEMENT**

Public health scientists are increasingly recognizing that where people live makes a difference for their health and well-being. Research on population distribution and movement is an important part of the population sciences, and one that continues to contribute to a broad range of public health, policy, environmental, and social welfare issues. In the past, the DBSB's portfolio in this area was small, but it is expanding in response to the importance of immigration to the U.S. population, the nation's increasing population diversity, and innovations in spatial theory and methods. The Branch supports research that examines how the health and well-being of people and communities intersect and interrelate with: where people live; their movement to new places; their identifications with national, ethnic, or racial origins; and the socioeconomic and physical environments they inhabit. Funded research falls into four main topic areas: internal migration and population distribution, immigration and immigrants, race and ethnicity, and population and environment. Increasingly, as immigration to the United States continues to grow, both in absolute number and impact, research on immigrants is overlapping with research on internal U.S. migration and population distribution and with research on race and ethnicity.

Since the Branch's last long-range planning effort in 2001, five major research themes have emerged within these topic areas. Some of these themes are reflected in the PA, *Social and Demographic Studies of Race and Ethnicity in the United States*, which was issued in response to the Branch's 2001 long-range planning activities. They include:

- *Race, ethnicity, and identity* includes studies on how race and ethnicity are measured in the United States, and how individuals, and especially children who are of mixed race or ethnicity or who live in immigrant families, develop a racial/ethnic identity.
- *Race, ethnicity, immigration, and population distribution* includes studies on how race, ethnicity, and immigrant status affect housing choices, residential segregation, and geographic mobility, and how, in turn, geographic distribution affects immigrant assimilation.
- *Children in immigrant families* includes studies on educational attainment, English-language acquisition, racial/ethnic differences in assimilation and achievement, family structure, economic circumstances, and geographic distribution of children in these families. Research in this area, which is also supported by the NICHD's CDBB, was the featured topic of a joint grantee workshop held in 2005.
- *Migration and health* focuses mostly on health and international immigrants, usually those living in the United States, and encompasses research on immigrant selectivity and health, immigrant mental health, the "Hispanic health paradox," and a growing group of projects that examine fertility behavior and HIV/AIDS risk in Hispanic immigrant communities. A related body of research studies HIV/AIDS among migrants in African countries.
- The last area, which is just beginning to emerge, is *remote sensing and the built environment*. The DBSB funds several ongoing studies of population and environment that use remote sensing (e.g., satellite-based imaging of the earth) to obtain data on the natural environment. Other studies use remote sensing to obtain information on the built environment to improve population estimates and population health research in areas that lack adequate data-collection systems.

The following information highlights important activities and research findings from this program.

### **WHY DO IMMIGRANTS COME TO THE UNITED STATES?**

Research on diverse populations suggests that the neoclassical economic framework, which argues that migration springs from wage differentials and that people move to maximize lifetime earnings, does not adequately explain migration behavior. Results from the Mexican Migration Project suggest that the initial motivation of migrants is usually not to permanently settle abroad to maximize lifetime earnings, but to diversify sources of household income, finance home acquisition, or raise capital for a productive enterprise. Data revealed that, if left to their own devices, most migrants would return home after a limited period of work abroad. The findings also indicated that new migrants often took advantage of social ties to current and former migrants; these ties offered social capital that enabled new migrants to gain entry to the United States and obtain employment. Similar research on migration conducted in Thailand also points to the importance of social ties for predicting whether rural-urban migrants remain in urban areas.

Comparative analysis of immigration to the United States from different Latin American countries, as part of the Latin American Migration Project, suggests that the fundamental causes and processes of international migration are basically the same across settings, but that the relative importance of causal factors varies across place and time. For example, Caribbean women played a much more important role in making migration decisions and in leading the migration process compared with women in more patriarchal countries, such as Mexico. Once the migration process began, however, migrant networks arose to connect sending and receiving communities, and these networks were a critical source of social capital that promoted additional international movement by reducing the costs and risks of migration. International comparisons showed that the greater the costs of migration, the more important migrant networks and social capital were in promoting international movement.

### **NEW IMMIGRANTS ARE NOT ALWAYS NEW**

The New Immigrant Survey (NIS), the first nationally representative longitudinal survey of legal immigrants to the United States, completed its first wave of data collection in 2003 and 2004. The survey included interviews with 8,573 adult immigrants and the parents or sponsors of 810 sampled child immigrants. It gathered both current and retrospective information on health, economic characteristics, family, education, and several measures of acculturation and assimilation. The first wave also collected information in more than 15 languages, far more than any other survey. The second wave of data collection began in summer 2007.

Analysis of NIS data showed that new immigrants to the United States are rarely “new” in the sense that they have never been to the United States before. The vast majority have prior experience as students, professionals, persons who entered illegally, or persons who overstayed visas. Only about one-third of all legal immigrants were actually new to the country. New immigrants are simultaneously more and less educated than natives and have higher fractions of both college graduates and high school dropouts among them. In general, the analysis indicated that Asians had higher levels of education and Latin Americans (especially Mexicans) had lower levels. Whatever their education, new immigrants of labor-force age had high rates of employment and were generally healthier than natives. Large fractions of immigrants indicated that they already spoke English, and many were taking steps to improve their proficiency. By moving to the United States, most workers substantially improved their incomes.

### **CHILDREN IN IMMIGRANT FAMILIES ARE ECONOMICALLY DISADVANTAGED BUT SUCCESSFUL IN SCHOOL**

Recent research findings have focused attention on the hardships faced by children in immigrant families living in the United States. Analysis of 40 years of data from the U.S. Census Bureau showed that, while children in immigrant families had lower poverty rates than other children in the late 1960s (12 percent versus 14 percent), by 1999, the poverty rates for children in immigrant families were substantially higher than those of other children (22 percent versus 15 percent). This change occurred despite very high labor-force participation among immigrant males and the low prevalence of single-parent structures among immigrant families.

Explanations include: increases in the share of children in immigrant families who are members of minority groups; increases in the share of these children's parents who are recent—rather than long-term—immigrants; relatively low labor-force participation of immigrant women; and educational attainment rates among parents that have improved over time, but that still lag behind the rates of native parents.

At virtually all levels of schooling, from pre-kindergarten through college, children in immigrant families are doing well. In general, when lower achievement levels of first- and second-generation immigrants are observed, they are attributable to relatively low SES and factors related to poverty. Analysis of L.A. FANS data showed that ethnicity and immigrant status were not important predictors of school readiness, once differences in SES were taken into account. In fact, once the effect of SES was removed, preschool children whose parents were born outside the United States did better on tests of basic skills than did children with U.S.-born parents. Analysis of Add Health data showed that, although adolescents of Mexican descent had lower math/science achievement than their peers, this difference disappeared when the analysis accounted for greater family and school disadvantages among teens of Mexican descent. However, teens of Mexican descent were less likely to enroll in math and science courses even after controlling for SES. At the high school level, when researchers took family characteristics into account, school achievement gains of immigrants equaled or exceeded those of their native peers, and graduation rates were similar. Furthermore, there was no evidence that immigrant cohorts who arrived more recently were further behind or achieved less than immigrant cohorts who arrived earlier. Finally, studies using different methodologies found that high school graduates from immigrant families were at least as likely to go on to college as their peers from American-born families, although there was also evidence that children from families of Asian origin were more likely to transition to college than those from families of Latin American origin.

### **FOREIGN-BORN LESS LIKELY TO HAVE HEALTH INSURANCE**

L.A. FANS, the first large-scale study to collect data on immigrants' legal status and on health insurance coverage, found large differences in health insurance coverage among legal immigrants, undocumented aliens, and native citizens. Undocumented aliens were less likely than others to have health insurance, both because they were less likely to obtain insurance at all and because, if they did obtain coverage, they were more likely to lose it than were native citizens. Although socioeconomic factors largely accounted for the higher rates of insurance coverage among native-born compared with foreign-born Americans of all legal statuses combined, they did not explain the large gap between coverage for undocumented aliens and other foreign-born groups. Extrapolating based on data from L.A. FANS and the U.S. Census Bureau, economists have estimated that undocumented aliens account for approximately one-third of the total increase in the number of uninsured adults in the United States that occurred between 1980 and 2000.

## **RACIAL, ETHNIC, AND SOCIOECONOMIC FACTORS PLAY A ROLE IN MIGRATION**

A large body of research has shown that living in segregated and low-income neighborhoods has negative implications for health and development. Using data from the Panel Study of Income Dynamics (PSID), researchers have studied differences in movement into and out of such neighborhoods among racial and ethnic groups. The research showed that:

- Both blacks and Hispanics were less likely than non-Hispanic whites (Anglos) to escape high-poverty neighborhoods by moving to lower poverty neighborhoods.
- Puerto Ricans and Mexicans were less likely than blacks to move to better areas, but blacks were the most likely of any racial or ethnic group to move into high-poverty neighborhoods.
- Black and white mobility patterns converged to some degree, largely due to changes in socio-demographic characteristics of white and black households and changing conditions in metropolitan areas.
- Persistent black-white differences in the likelihood of moving to high-status neighborhoods could not be explained by differences in wealth.
- Among Hispanics, factors associated with moving into predominantly Anglo neighborhoods included: increased levels of human and financial capital; the ability to speak English; being Mexican rather than Puerto Rican; and, among Puerto Ricans and Cubans, having lighter rather than darker skin color.

Analysis of 2000 Census data suggests that race and ethnicity also play roles in interstate migration. The presence of high concentrations of same-race residents inhibited out-migration and attracted in-migration among Hispanics, Asians, and blacks. Among better educated Hispanics and Asians, these cultural constraints had less effect on migration. Highly educated Hispanics and Asians exhibited “spatial assimilation”—they were more likely to move out of a state with a large concentration of members of their racial/ethnic group, or into a state with a lower concentration, but with better prospects for economic or quality-of-life improvement. Immigration also influenced interstate migration. Less educated individuals of all race and ethnic groups are more likely to move to a new state when they live in states that have high rates of immigration and high housing costs.

## **INTERRACIAL MARRIAGE INCREASES**

One way in which the integration of different nationality, racial, and ethnic groups can occur is through intermarriage. A study of trends in intermarriage in the United States showed that intermarriage between blacks and whites increased during the 1990s. Intermarriage involving Hispanics and Asians both declined, perhaps reflecting the high proportions of recent immigrants among these groups. Despite these declines, intermarriage among Hispanic and Asian Americans remained substantially higher than among blacks in 2000.

White and non-white Hispanics show markedly different intermarriage patterns. White Hispanics’ marriage patterns followed classic patterns of assimilation: those born in the United States were more likely to intermarry with non-Hispanic whites than were those born outside the United States. Non-white Hispanics showed the reverse pattern in that the foreign born were more likely to intermarry.

Research suggests that the racial identification of children from interracial unions depends on a number of factors. In one study, Asian/white children were the most likely to be identified as white, while black/white children were the least likely to have that identification. Identification of biracial children as a minority occurred most often when the minority spouse was male, native-born, or had no white ancestry, and when the family lived in a neighborhood with a high concentration of minorities.

### **GROWTH IN NUMBERS OF HOUSEHOLDS IS HARMING THE ENVIRONMENT**

New research on population dynamics and the environment in a variety of settings suggests that growth in the number of households is often more significant than growth in total population for driving negative environmental consequences because households, not individuals, are usually the unit of consumption. In recent decades, increases in the number of households have generally outstripped population growth in both developed and developing countries, especially in areas with high biodiversity, so-called environmental “hotspots.” Even in regions where population size declined, the number of households still increased substantially because of declines in average household size. Therefore, ameliorating loss of biodiversity and the human impact on the environment will require not only reducing human population growth, but also either slowing growth in the number of households or mediating the effects of these households on the environment. Other research conducted in Northeast Thailand reaffirmed that population pressure remains a direct and important mechanism driving environmental change. Researchers found that both population density and population growth contributed directly to the expansion of upland crop production and market agriculture. Additional findings from DBSB-funded research on population-environment dynamics in China, India, Nepal, Thailand, the Brazilian and Ecuadorian Amazon, and the U.S. Great Plains appeared in *Population, Land Use, and the Environment* (ISBN-10: 0-309-09655-3), a volume recently published by the National Academies of Sciences.

### **INVESTING IN ESSENTIAL INFRASTRUCTURE FOR POPULATION SCIENCE**

Population science depends heavily on several types of shared infrastructure. This section highlights Branch activities and investments related to three types of infrastructure: data, interdisciplinary centers, and training.

#### **INVESTMENTS IN DATA**

All science involves data collection of some kind, be it recording the outcomes of laboratory experiments or conducting prospective cohort studies. In population research, large, nationally representative population databases are an essential foundation of the field. These databases provide unique descriptive information about trends and variations in demographic processes as well as the raw material for cost-effective research. Most of the large databases that the DBSB

supports are used by hundreds, sometimes thousands of researchers. In fiscal year 2006, 39 percent of DBSB research grants and 23 percent of funds went to projects that depended upon existing databases.

The production of demographic databases is a task shared by federal statistical agencies, the scientific community, and various funding agencies. The DBSB contributes to this task by helping to support large data-collection projects through interagency agreements and grants. Collaborations with statistical agencies enable the DBSB to enhance existing federal surveys with measures and design features that greatly improve their utility for research. By funding large data-collection projects through investigator-initiated grants, the Branch addresses the need for innovative research data that explore critical scientific and public health issues beyond the purview of statistical agencies.

In spite of their overall benefits, these projects are costly to conduct. In fiscal year 2006, the Branch supported nine projects that, at some point in the prior decade, had received \$500,000 or more in direct costs in a single year, for a total of \$14.4 million, or about 14 percent of the DBSB budget. As [Figure 3](#) shows, this percentage has declined since fiscal year 2000 and is currently at about the same level as it was a decade ago. Year-to-year variations in this percentage reflect the timing of large data-collection efforts. [Appendix E](#) provides brief descriptions of the data-collection projects referenced in the text of this report and/or that received \$500,000 or more in direct costs in any fiscal year between 1997 and 2006.

The impact of these projects is substantial, as the following examples illustrate:

- More than 3,500 investigators have used Add Health dataset. To date, the dataset has produced more than 700 peer-reviewed published and forthcoming papers; more than 1,000 presentations at conferences, meetings, and invited seminars and talks; and 122 dissertations. More than 270 grants have been awarded to fund analysis of Add Health data; of those, 141 were awarded by the NIH.
- Data from NLSY-Child have produced more than 700 publications, 650 working papers and abstracts, and 155 dissertations. These data have had a major impact on research about factors that influence healthy child development, including: maternal employment, poverty and program participation; parenting practices; and parental marital histories.
- The U.S. General Accounting Office has used data from the NIS to develop cost estimates for educating the children of undocumented immigrants. Congressional staff and the U.S. Commission on Immigration Reform have also used the data to assess the economic effects of immigrants on American society.
- *The New York Times*' Robert Pear characterized findings from the Three-City Study as, "the most extensive evidence yet to answer questions that have been swirling around one of the biggest experiments in American social policy in the last half-century" (Welfare-to-work study finds no harm to children, March 7, 2003). His article reported findings about the well-being of children in the aftermath of the welfare reform legislation of 1996 (discussed in the [Human Development in Social Context](#) section).

The DBSB manages its investments in large data-collection projects through a variety of strategies including: consultation with scientific communities and federal statistical agency partners; internal NICHD discussions regarding levels of investment; development of co-funding

with other NIH Institutes, federal agencies, and private foundations; and negotiations with principal investigators. The Branch gives priority to projects that provide unique data to answer important scientific questions, which cannot be otherwise addressed, and to projects likely to attract widespread scientific use. The Branch also supports cost-efficient projects, which add to the value of existing data-collection efforts either by enriching the databases with new information, or by making the data easier to access and use. The Branch's investments in making historical U.S.- and international Census data accessible to researchers through the Integrated Public Use Microdata Series have resulted in more than 2,000 publications to date.

Maximizing the research productivity of investments in data collection requires that both the DBSB and the investigators it supports give serious attention to the sharing of research data. The Branch has undertaken a variety of activities intended to facilitate researchers' access to shared data and to safeguard confidentiality during the sharing of research data. The Data Sharing for Demographic Research (DSDR) project is a collaboration involving the University of Michigan; the University of North Carolina, Chapel Hill; the University of Minnesota; and the NICHD. (See <http://www.icpsr.umich.edu/DSDR/> for more information.) The project, designed to address the needs of both data users and data sharers, is developing tools for archiving complex data files and datasets, while effectively minimizing the risk of harm to research participants. This risk stems from the possibility that anonymized research data could be re-identified and used to embarrass or harm participants. Research on assessing disclosure risks and ways to minimize them is also supported through the DSDR project, and through a separate program project at the University of Michigan.

The DBSB recently addressed confidentiality and human subject protection issues that arise when survey data are linked geographically to high-resolution images, usually collected from earth-orbiting satellites. Although linking these data provides powerful new information and tools for analyzing population dynamics and health, it can also provide location-specific information at the household or even neighborhood level, making it relatively easy to identify subjects and break the promise of confidentiality. *Putting People on the Map: Protecting Confidentiality with Linked Social-Spatial Data* (ISBN-10: 0-309-10414-9) elucidates the problem and provides evidence on preserving the scientific promise of such methods, while protecting the human subjects involved. The volume, published in 2007, was jointly funded by the National Science Foundation, the U.S. National Air and Space Administration, and the DBSB.

### **INVESTMENTS IN INTERDISCIPLINARY CENTERS**

The population sciences are inherently interdisciplinary, drawing scientists from fields such as economics, sociology, developmental and social psychology, public health, anthropology, geography, epidemiology, and, increasingly, the biological sciences. At academic institutions, expertise in these fields is scattered not only across departments, but also across university divisions and schools. Developing common languages, concepts, and research strategies to address population problems requires that these spatial and administrative divisions be overcome. Therefore, the DBSB supports an infrastructure program to provide incentives for universities to create institutional "homes" for population research in the form of centers. These centers provide the administrative and research supports for launching collaborative projects,



and, most importantly, they provide intellectual environments that stimulate innovation and interdisciplinary collaboration in population research.

The Population Research Infrastructure Program (PRIP) uses the R24 mechanism to support infrastructure and developmental activities that advance population research. The Program was launched in 2000 to replace an existing P30/P50 program. When the initial PRIP RFA was issued, the existing P30/P50 program included 12 centers; eight of these had been in existence for at least 20 years, and incumbents faced few competitive challenges because of the structure of that program. The DBSB designed PRIP to enhance competition and strengthen incentives for innovative interdisciplinary research. Since the first competition, the PRIP has received 64 applications. Although all of the original 12 centers ultimately succeeded in transitioning to an R24 PRIP award, one-third failed in their first attempt. The Program is also funding eight new centers, including four that were funded through a special program for emerging population centers that uses the R21 mechanism. See [Appendix F](#) for a listing of PRIP awardees from 2006. Most notably, the Branch has funded new centers without increasing (beyond inflationary adjustments) the funds devoted to the Program, and while reducing the proportion of Branch funds supporting this kind of infrastructure from nearly 18 percent in 1998 to less than 10 percent in 2006.

As intended, most PRIP awards fund infrastructure in support of primary research activities. These grantees have enhanced their infrastructure by: developing signature themes for research and plans for advancing them; initiating programs of seed funding to facilitate innovative projects and foster junior scientists; and, in many cases, creating new linkages with health research. In addition, several of the grantees have developed infrastructure activities that benefit the entire field. For example, the Population Reference Bureau translates and disseminates population research to professional, policy, and lay audiences; the University of Minnesota disseminates widely used datasets to the population research community. The PRIP underwent a preliminary evaluation in 2004; a copy of this review is available at [http://www.nichd.nih.gov/publications/pubs\\_details.cfm?from=&pubs\\_id=5644](http://www.nichd.nih.gov/publications/pubs_details.cfm?from=&pubs_id=5644).

### **INVESTMENTS IN TRAINING**

Another type of essential infrastructure for population research is the training of new scientists. Branch investments in training focus on two major goals: training researchers in the population sciences; and preparing scientists to participate effectively in interdisciplinary research. To achieve these goals, the Branch relies, in part, on mechanisms in common use across the NICHD, including: individual pre-doctoral fellowships for individuals who are members of underrepresented minorities or who have disabilities (F31); individual postdoctoral fellowships (F32); institutional training grants (T32) that support both pre-doctoral and postdoctoral training; and career development awards for investigators who focus their research endeavors on patient-oriented research (K23). See [Appendix H](#) for a listing of Branch training and career development awards issued since fiscal year 2003.

In addition, the Branch has developed specialized mechanisms to address mission-specific needs:

- The Mentored Research Scientist Development Award for Population Research (K01) supports career development of junior-level researchers in the area of population research. Grantees may use this support to advance their research capabilities in population research or to develop interdisciplinary capabilities.
- The Educational Programs for Population Research (R25) Program supports short-term educational programs in population research. This mechanism, developed by the Branch in response to findings from a previous planning effort, permits targeted training to enhance interdisciplinary research, methodological skills, and the use of complex datasets. Funded programs have included training in formal and quantitative demography, spatial approaches to measurement in health disparities research, geographic information systems, and historical demographic techniques for analyzing longitudinal data.
- The International Population Health Training (D43) Program supports advanced training of population health researchers from low- and middle-income countries. This program, a collaborative initiative with the Fogarty International Center, currently supports four DBSB-administered awards.

Growth in the Branch's investments in training and career development since fiscal year 2000 reflects the development of the K01 and R25 programs, as well as increased numbers of K23 awards.

Encouraging the recruitment and retention of scientists from racial or ethnic groups that are underrepresented in the sciences is another important Branch goal. Three DBSB-funded T32 programs have received NICHD MENTOR awards in recognition of superior performance in minority recruitment and retention; another received an additional training slot through a program that recognizes exemplary inclusion of underrepresented minority trainees. The DBSB also makes awards through the NIH Program for Research Supplements to Promote Diversity in Health-Related Research. In fiscal years 2004 and 2005, the Branch awarded 16 supplements; six supplements supported graduate students, five supported investigators, two supported postdoctoral fellows, and three supported individuals of other statuses.

## **DISSEMINATION AND TRANSLATION OF DBSB-FUNDED RESEARCH**

One of the NIH's current priorities emphasizes the translation of basic research into practice. In the biomedical world, this translation means finding ways to go from basic biomedical discoveries—the bench—to developing new treatments and delivering them to patients—the bedside. Translating research in the social and behavioral sciences into programs and practices entails a different set of challenges and opportunities. Research findings in these fields typically inform the development of behavioral, social, or policy interventions, not medical treatments. They can also have profound benefits for society by informing people's understandings of the world around them and explaining the consequences of behavioral choices. Challenges include the need to assure that research findings are well established before they are translated into action, and the disadvantage of working in substantive areas in which strongly held beliefs may

alter acceptance of scientific findings. This section highlights some examples of the DBSB's contributions to disseminating and translating research findings.

## **INFORMING POLICY**

The DBSB supports a wide range of research used by policy analysts and lawmakers to inform public policies. Some of this research starts with basic findings, which are then applied in the development or refinement of policies. Other research is built into existing policy interventions to provide a richer perspective of why policies work or fail, and to elaborate on a wider array of consequences intended or unintended by the policy. Some policy-related research is inherently descriptive, providing sound statistical estimates on key issues affecting the country, such as immigration, non-marital childbearing, or disparities in infant mortality. In the past, DBSB-supported research illuminated such questions as the relationship of family planning to fertility, the cost-effectiveness of keeping teenage mothers in school, the establishment of child-support standards, and the modeling of the AIDS/HIV epidemic.

In recent years, the Branch has contributed in numerous ways to informing debates about welfare reform. The DBSB has supported extensive work to document the transformation of American family structure and the relationship of family structure to poverty and welfare dependence. This work was cited frequently during the welfare reform debates, which culminated with the re-authorization of the welfare reform statutes in 2006. The body of scientific evidence, assembled in part through DBSB funding, provided a critical foundation for a broad bipartisan approach to welfare reform.

As described in the [\*Human Development in Social Context\*](#) section of this report, several DBSB initiatives helped to build this foundation. The SEED initiative facilitated policy-relevant research on the effects of poverty on children. The Research Network on Child and Family Well-Being forged connections among research on child development, on families and communities, and on the needs of the policy community. Finally, the Branch funded several studies—ranging from large longitudinal studies, such as the Three-City Study and L.A. FANS, to research questions added to ongoing welfare reform experiments—to measure the demographic effects of welfare reform and its effects on children. These studies helped to enhance attention to child well-being and to strategies that could strengthen families in the welfare reform debates. Some of these projects obtained non-federal funding to develop short policy briefs, which described key findings to effectively inform public policy; these products have greatly impacted the broader debate because they are timely and accessible to a general audience.

Branch efforts related to welfare were closely intertwined with another major initiative in public policy, the Fatherhood Initiative. The Branch funded a number of studies to enhance data collection on fathers, including the NSFG, ECLS-B, and the Early Head Start Evaluation. It also funded the Fragile Families Study, which has produced a significant body of research on the conditions that enable new unmarried parents to stay together, and that allow unmarried fathers to invest in their children. The Fragile Families Study helped to inspire the emphasis on strengthening families that exists in the 2006 welfare reform legislation and to inform the

investment of approximately \$150 million in government funds for family-strengthening programs.

The DBSB also informs policy through staff consultations with policy and action agencies, both in the United States and internationally. In a recent example of such activity, DBSB staff provided technical assistance to a federal evaluation of abstinence-only education programs. In addressing such collaborations, staff members draw on research supported by the Branch, as well as on their own knowledge of relevant fields and scientific methods.

### **INFORMING AND TESTING INTERVENTIONS**

Another way to move research to practice is to use scientific knowledge to develop new interventions, which can then be delivered to individuals, families, and communities. In the past, DBSB supported the development and evaluation of intervention strategies primarily in the area of HIV prevention. In recent years, however, this focus has expanded to include interventions in pregnancy prevention and strengthening couple relationships.

The state of California's program to reduce teen pregnancy is one example of the influence of DBSB-funded research on prevention strategies. Research findings demonstrated a high risk for teen parenthood among the siblings of teens who become parents; these findings influenced the state to initiate educational interventions targeted toward siblings in families in which one teenage daughter is pregnant or parenting. An evaluation of the program showed that the program delayed onset of sexual intercourse among both male and female siblings and reduced pregnancy rates among female siblings. This work was featured in a *TIME* magazine cover story (July 2, 2006).

In the field of HIV prevention, the Branch has supported numerous studies to test the efficacy of individual-level and classroom interventions for promoting abstinence and risk-reduction behavior among adolescents and young adults. One effort tested *Reach for Health*, a school-based intervention in which community service requirements were blended with a sex education curriculum. The program achieved a significant and long-lasting delay in sexual activity among inner-city middle-school children. In another initiative, the DBSB challenged researchers to replicate successes of HIV-intervention programs for adolescents that had proven effective in at least one clinical trial. The goal was to learn lessons about the ability to transfer knowledge across communities and population groups, and to elucidate the steps needed to adapt programs in such transfers. Although some of these "proven" programs successfully replicated their initial efforts, many were unable to replicate earlier successful results.

### **DISSEMINATING KNOWLEDGE**

In many cases, the translation of demographic and social science research results simply from disseminating research findings to the general public, not from researchers' targeted efforts to inform policies or programs. To be sure, when disseminated to general audiences, research findings can reach and have an impact on policy makers and program administrators. However, they also reach broader populations of individuals who are making decisions about their lives.

Parents raising children, couples deciding whether to live together or marry, and adolescents making decisions about sex and contraception can all draw on knowledge from reported research that shows how different courses of action affect peoples' lives.

As a result of its 2001 long-range planning, the DBSB adopted a cross-cutting goal of improving the dissemination of its research. The Branch wants to augment the efforts of individual researchers and studies, and to create a consensus on what, how, and when findings should be translated and to what audiences. The Branch partially met this goal through an infrastructure grant to the Population Reference Bureau. Under this grant, the Bureau is working with the population research community to identify significant demographic research and disseminate it to journalists and policy audiences. Centers funded through the PRIP also play an important role in disseminating research results; their progress reports to DBSB staff invariably contain many examples of media coverage and research impacts. Finally, DBSB staff often work with investigators and with the NICHD Public Information and Communications Branch to develop news releases and other materials on important findings.

## **FUTURE DIRECTIONS FOR THE DBSB**

About every five years, the DBSB undertakes a formal long-range planning activity in which a selected group of experts are invited to advise the Branch about possible future directions and priorities for research. The Branch has held seven such meetings since 1980. This time, the Branch's usual planning activities complemented the NICHD-wide effort to increase the transparency of and participation in setting Institute research priorities. [Appendix G](#) provides the roster of experts who participated in the most recent planning activity, which was held in December 2006. With the help of its expert panel and with input from many others in its scientific communities, the DBSB identified important research areas for focus during the 2007 through 2011 period.

In the years to come, DBSB will continue to support a wide range of investigator-initiated research that responds to its basic mission—to improve the health and well-being of individuals, families, and populations by adding to knowledge about human population dynamics and their causes and consequences. But fostering excellence and innovation in population research requires that the Branch lead, as well as respond to, new directions in research. The Branch has identified three substantive areas of research—summarized by the following questions—that require continued or new emphasis:

- Why and how are families reshaping themselves?
- What are the causes and consequences of population health?
- Why do people move? How does migration reshape societies, communities, families, and people?

In addition to these areas of emphasis, the Branch will continue to develop and support other areas within its portfolio, including research on HIV/AIDS, unintended pregnancy and infertility, race and ethnicity, and population and environment.

## **RESEARCH AREA 1: WHY/HOW ARE FAMILIES RESHAPING THEMSELVES?**

The family is a core focus of the DBSB mission and, as the primary context for child health and development, is very important to the NICHD mission as well. As discussed previously, families in the United States have experienced a dramatic restructuring. Fertility is lower; nearly two babies in five are born to unmarried parents; and family members are much more likely to be spread across different households, communities, and even countries. Dramatic differences in the timing and circumstances of childbearing have also emerged between affluent and poor American families. These changes and differences are well documented, and previous work supported by the Branch has studied their consequences for children's family stability and development.

Although previous achievements in family research provide much to be proud of, many challenges remain. One major concern is the need to understand family processes that transcend individual households; these include: the contributions of absent fathers; the relationships between grandparents and children; and the supports that partners, siblings, cousins, other relatives, and close friends provide for each other. This type of research will likely require new kinds of study designs and/or expanded measures in household surveys.

A second major concern is the further development of theories to address the causes of family change. Such theories will need to consider: biogenetic origins of family behaviors; the constantly evolving mix of structural, institutional, and technological constraints and opportunities in which families must form and function; and the active role played by individuals in "choosing" and shaping their family configurations. The Branch will continue to support research that explores the interrelationships among family transitions and other life-course events, as well as the consequences of transitions for individual health, mobility, and well-being and for intergenerational and interpersonal relationships.

## **RESEARCH AREA 2: WHAT ARE THE CAUSES AND CONSEQUENCES OF POPULATION HEALTH?**

Obesity epidemics, disparities in infant mortality and HIV, and declines in tobacco consumption are all products of social, cultural, and economic change and variation. But these changes also have consequences for societal goals, such as productivity and individual well-being. No single program can tackle these issues single handedly, but the DBSB will move to strengthen its contributions in three important ways:

- The Branch will continue to support basic demographic analysis of trends and differences in population health. Such analyses document what is happening to the health of different population groups and can pinpoint whether changes are real or simply the consequence of changing population composition. The Branch will also encourage methodological and data innovations that facilitate this essential task, including the development of data on the spatial distribution of health and disease.
- Another, far more complex Branch goal is to advance interdisciplinary research that explores the mechanisms through which social and economic realities shape individual health,

especially among disadvantaged populations. Research on these mechanisms will require the identification and measurement of relevant contexts at multiple levels—schools, families, workplaces, social networks, and dyadic relationships, in addition to policies and neighborhoods. It will require advances in understanding: how individuals interact with their environments; how social processes, such as stigmatization and discrimination, affect these interactions; and how neurobiological processes are affected by and also shape these interactions. Accomplishing this goal will require research designs that merge outstanding social science with strong measurement of relevant behavioral mediators and the use of biomarkers to directly measure genetic factors, biological processes, health outcomes, and environmental exposures. It will also require studies that address how health and disease are produced over a lifetime and influenced across generations.

- The Branch will support studies examining the effects of health on individual productivity, family stability, and societal well-being. To accomplish this goal, the Branch will encourage research that complements demographic perspectives on such issues with research on relevant biological, psychological, and behavioral mechanisms.

To achieve these goals, the DBSB will continue to work with other Branches, Offices, and Programs within NICHD and the NIH to develop collaborative initiatives, support the addition of biological and contextual measures to existing social science studies, and explore mechanisms for stimulating interdisciplinary partnerships.

### **RESEARCH AREA 3: WHY DO PEOPLE MOVE? HOW DOES MIGRATION RESHAPE SOCIETIES, COMMUNITIES, FAMILIES, AND PEOPLE?**

Population movement has important implications for many issues central to the DBSB mission. For example: frequent movement is associated with children’s behavior problems; streams of movement affect the spread of disease; and residential location exposes people differentially to healthy and unhealthy environments. Population movement from other countries into the United States has amplified the nation’s population diversity; sending and receiving communities are transformed by international and internal migration. Further, an understanding of movement is essential to research on the effects of context on human health and well-being because humans choose, to varying extents, the contexts they occupy.

The DBSB will seek to expand fundamental research on human migration by encouraging:

- Development of new theories, behavioral models, and data to explain why some individuals and families move and other do not.
- Integration of knowledge about internal and international migration;
- Research that relates mobility decisions to individual life-course trajectories, family changes, and social networks;
- Research on the effects of movement on individuals, social networks, families, and communities (including fiscal impacts and economic consequences of immigration for individuals and communities); and
- Research linking mobility patterns to population health.

Collectively, these efforts will contribute directly to research about the effects of neighborhoods on health and development through improved knowledge about the processes through which individuals come to live in particular environments.

### **INVESTMENTS IN THE FUTURE**

To keep pace with the development of science within the DBSB mission areas, and to achieve efficiencies, the Branch will exercise special vigilance over its investments in data infrastructure. The Branch will maintain its support for the creation, continuation, and dissemination of large-scale data-collection projects. Indeed, the emphases outlined above will require new investments in data. However, to the extent possible, the Branch will seek to minimize the costs of new investments by building strategically on existing studies, many of which are supported only partially, if at all, by the NICHD. Further, the Branch will accept applications to continue ongoing studies only when there is a compelling scientific argument that the continuation will break new scientific ground.

In an effort to multiply the value of DBSB-supported data collections, the Branch will explore ways to identify and encourage the voluntary inclusion of a small set of measures to enable comparison across datasets of concepts central to the Branch's mission. The Branch will encourage methodological developments that have potential to reduce data-collection costs through improved designs and technologies, and through projects that address expanding measurement needs and the demand for multi-informant, multi-method studies. The DBSB will continue its current emphasis on data sharing and data access and will expand efforts to coordinate data-access investments across population centers nationwide.

Meeting the goals of the Branch will require a major effort to facilitate interdisciplinary research. A key element of this effort will be the continuation of the PRIP, which provides essential resources and incentives to build interdisciplinary collaborations across the social sciences and with the behavioral and biological sciences. The current structure of this Program, including its developmental center component, has successfully fostered innovation in the population sciences. The DBSB will encourage PRIP grantees to expand outreach activities that encourage collaborations among population researchers, biomedical scientists, and geographers.

The Branch will also continue its current activities in training, emphasizing the importance of core training in the population sciences, as well as the need to prepare students for interdisciplinary collaboration. The Educational Programs for Population Research (R25) initiative will also continue as a proven cost-effective mechanism for addressing specialized training needs for interdisciplinary work. To encourage a healthy "pipeline" for future generations of population researchers, the Branch will disseminate information on available mechanisms to attract capable undergraduates to the field.

Finally, the goals for facilitating interdisciplinary work will require new mechanisms for the construction of scientific teams. These new mechanisms must provide the time and resources needed for scientists from disciplines with widely differing theories, languages, methods, and standards to craft shared understandings of common problems and to develop integrated research



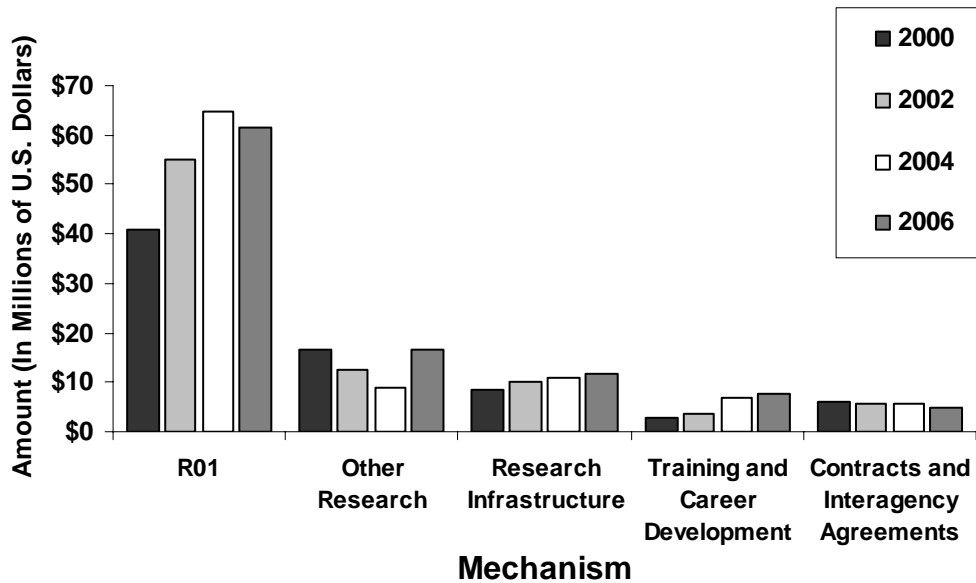
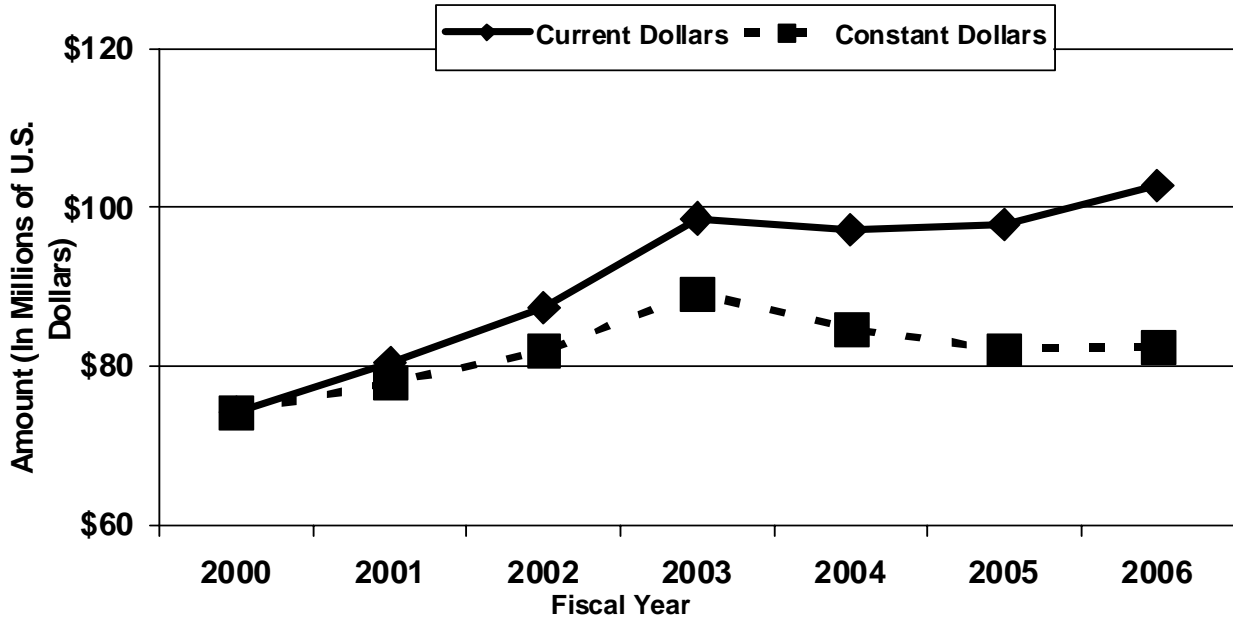
designs. The Branch will explore the potential for using existing or new mechanisms and technologies to provide such team-building resources.

A final essential goal for the DBSB is to improve its translation of basic research so that the findings can lead to improvements in population health and well-being. The Branch will seek to increase its investments in research dissemination, so that members of the public and the policy and practice communities are aware of important research findings. In addition, it will seek to strengthen the relevance of DBSB-supported work for affected communities through evaluation and adaptation of Community Participatory Action Research models for the behavioral and social sciences. Finally, it will encourage the broadening of Branch-funded intervention research into areas within the Branch's portfolio that are currently limited to basic research. Areas for potential expansion include the family, pre-pregnancy care, and community-level health interventions.



## FIGURES AND TABLES

**FIGURE 1: DBSB FUNDING HISTORY, IN CURRENT AND CONSTANT DOLLARS, FISCAL YEAR 2000 THROUGH FISCAL YEAR 2006**



**FIGURE 2: DBSB FUNDING BY MECHANISM, FISCAL YEAR 2000 THROUGH FISCAL YEAR 2006**

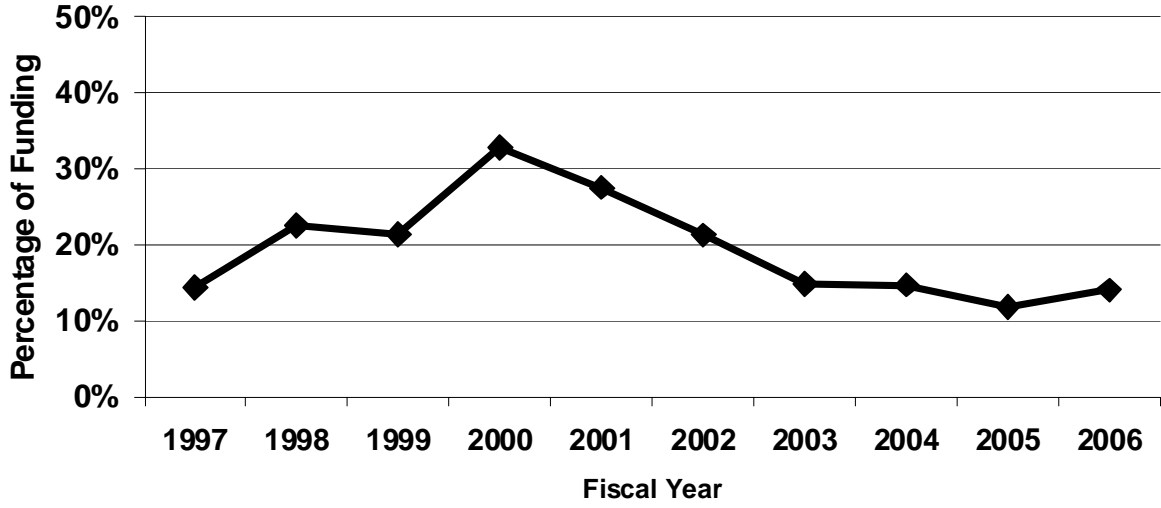
Note:

“Other Research” includes P01, R03, R21, R13, R15, R29, R37, R43, R44, and U01 mechanisms.

“Research Infrastructure” includes P30, P50, R24, and U24 mechanisms. In 2002-2006, this category included the Global Partnerships for Social Science AIDS Research Program as well as the Population Research Infrastructure Program.

“Training & Career Development” includes D43, F31, F32, K01, K07, K23, R25, and T32 mechanisms.

**FIGURE 3: PERCENT OF TOTAL DBSB FUNDS FOR LARGE DATA-COLLECTION PROJECTS, FISCAL YEAR 1997 THROUGH FISCAL YEAR 2006**



**TABLE 1: DBSB PROJECTS AND FUNDING, BY PROGRAM AREA, FISCAL YEAR 2006**

<b>Program Area</b>	<b>Number of Projects</b>	<b>Percentage of Projects</b>	<b>Funding</b>	<b>Percentage of Funding</b>
<b>Sexual behavior and prevention</b>				
Pregnancy prevention—basic research	3		\$658,826	
HIV and Sexually Transmitted Infection (STI) prevention—basic research	30		\$9,147,473	
Both HIV/STI and pregnancy prevention—basic research	14		\$3,689,451	
Pregnancy prevention—intervention research	1		\$198,883	
HIV/STI prevention—intervention research	12		\$5,747,285	
Both HIV/STI and pregnancy prevention—intervention research	5		\$1,795,973	
Acceptability of HIV prevention methods	3		\$1,089,571	
HIV/STI epidemic dynamics and impacts	3		\$988,098	
HIV Infrastructure	6		\$1,642,743	
HIV—other	2		\$859,783	
<b>Total</b>	<b>79</b>	<b>23.0%</b>	<b>\$25,818,086</b>	<b>25.1%</b>
<b>Fertility and family</b>				
Pregnancy and birth—including unintended pregnancy, outcomes of pregnancy	2		\$207,928	
Fecundity and infertility	5		\$1,854,207	
Determinants of fertility, fertility trends (includes non-marital childbearing)	14		\$4,466,920	
Marriage, divorce, cohabitation, family structure—determinants, trends, family dynamics	19		\$4,750,324	
Fatherhood, family investment in children	8		\$4,571,849	
Intergenerational relations	5		\$1,750,251	
<b>Total</b>	<b>53</b>	<b>15.4%</b>	<b>\$17,601,479</b>	<b>17.1%</b>
<b>Policy and child/family well-being</b>				
Welfare programs	4		\$1,764,877	
Work, family, child care (includes policy)	7		\$1,207,557	
Other policy (not workplace related)	3		\$397,641	
Education, human capital	8		\$1,812,332	
Consequences of fertility, family structure, and parental investment for children and adults	21		\$7,827,894	
Consequences of macro-level factors (poverty, neighborhood, community) on children	7		\$3,546,917	
<b>Total</b>	<b>50</b>	<b>14.5%</b>	<b>\$16,557,218</b>	<b>16.1%</b>

<b>Program Area</b>	<b>Number of Projects</b>	<b>Percentage of Projects</b>	<b>Funding</b>	<b>Percentage of Funding</b>
<b>Health and mortality</b>				
Birth outcomes	3		\$680,594	
Infant mortality	4		\$869,287	
Health disparities	4		\$805,278	
Families and health	6		\$1,011,591	
Economic, Socioeconomic Status (SES) determinants (includes access)	10		\$2,415,667	
Macro/policy determinants	21		\$4,120,769	
Adolescent health	3		\$766,342	
Biomarkers, biosocial, genetics	3		\$2,804,539	
Other health	7		\$663,497	
<b>Total</b>	<b>61</b>	<b>17.7%</b>	<b>\$14,137,564</b>	<b>13.8%</b>
<b>Population movement</b>				
Internal migration/population distribution	12		\$1,603,751	
Immigration and immigrants	9		\$2,948,674	
Population and environment	3		\$796,715	
<b>Total</b>	<b>24</b>	<b>7.0%</b>	<b>\$5,349,140</b>	<b>5.2%</b>
<b>Other</b>				
Institutional training	18		\$3,627,204	
Other training	12		\$1,112,390	
Centers/infrastructure	22		\$10,012,362	
Statistics and formal demography	5		\$748,819	
Data and information dissemination	20		\$7,694,483	
<b>Total</b>	<b>77</b>	<b>22.4%</b>	<b>\$23,195,258</b>	<b>22.6%</b>
<b>DBSB Total</b>	<b>344</b>	<b>100.0%</b>	<b>\$102,658,745</b>	<b>100.0%</b>

## APPENDIX A: DBSB PERSONNEL

**Christine A. Bachrach, Ph.D.**, received her Ph.D. in population dynamics from Johns Hopkins University School of Hygiene and Public Health. She joined the NICHD in 1988 and has served in her current position as Branch chief since 1992. In addition to serving as chief of the Branch, Dr. Bachrach is responsible for a small grants portfolio in the areas of fertility and family and serves as the program official for the National Longitudinal Study of Adolescent Health, the program scientist for the Data Sharing for Demographic Research Initiative, and program officer for the Explaining Family Change Project. Her own research has examined a variety of topics related to the family, including fertility, contraceptive use, sexual behavior, cohabitation, and adoption.

**Rebecca L. Clark, Ph.D.**, received her Ph.D. in sociology, with specializations in demography and urban studies, from Brown University. She oversees the Branch's portfolios on immigration, internal migration and population distribution, race and ethnicity, population and environment, and demographic methods. She manages the Population Research Infrastructure Program and the NICHD Mentored Population Research Scientist Development Award (K01) Program and co-manages the Branch's National Research Service Award Institutional Research Training Grants (T32) Program. Before joining the Branch in February 2000, she was a senior researcher at the Urban Institute. Dr. Clark's research interests include immigration, race and ethnicity, public policy, and the family.

**V. Jeffery Evans, Ph.D., J.D.**, received a Ph.D. in economics from Duke University, where he was also cross-trained in demography. He also earned a J.D. from the University of Maryland School of Law. He joined the NICHD in 1975 and has served as an administrator of grants, contracts, interagency agreements, and cooperative agreements and centers programs in the population sciences. He directs the Intergenerational Research Program within the DBSB, participates in the NICHD Health Disparities Planning Group, manages the family and household portfolio for the Branch, and is program scientist for the Community Child Health Network, a collaborative initiative conducting community-based research on disparities in pregnancy outcomes and child health. Dr. Evans' research interests include public policy research and its translation into application.

**Rosalind B. King, Ph.D.**, received her Ph.D. in sociology and demography from the University of Pennsylvania. She is the program scientist for the Work, Family, Health, and Well-Being Initiative and oversees a grants portfolio in fertility, infertility, adoption, and new reproductive technologies. She also manages the Science and Ecology of Early Development portfolio within the DBSB. Before joining the Branch in July 2002, Dr. King was a postdoctoral fellow at the University of North Carolina, Chapel Hill. Dr. King's own research has focused on adolescent social and physical development, union formation, and fertility.

**Susan F. Newcomer, Ph.D.**, earned a Ph.D. in population studies and sociology from the University of North Carolina, an M.A. in educational administration from Iowa State University, and a B.A. in psychology and Chinese from Barnard College. She is responsible for managing the Branch portfolio on adolescent sexual health, contraceptive use, and other fertility-related behaviors. She also manages a portfolio of AIDS/HIV risk research. Prior to joining the Branch in 1988, she was the national director of education for the Planned Parenthood Federation of America. Her own research has focused on teen pregnancy prevention, sexual behavior, and contraceptive use.

**Michael L. Spittel, Ph.D.**, received his Ph.D. in sociology from the University of Wisconsin-Madison. He oversees the Branch's portfolios related to population studies on mortality and morbidity, infant/child health, and health disparities. In addition, he co-manages the DBSB's training program (T32), which helps support pre- and postdoctoral researchers in demography. Before joining the Branch in October 2005, he was an associate service fellow in the Mortality Statistics Branch of the Division of Vital Statistics at the National Center for Health Statistics. Dr. Spittel's own research interests include health disparities, immigration, and statistical methodology.

#### **DBSB Interns, Fellows, and Staff (Fiscal Year 2003 through Fiscal Year 2007)**

- Lynne Casper, health scientist administrator, 2000-2005
- Frank Avenilla, intern, 2001-2003
- Anita Yuan, summer intern, 2003
- Erica L. Linden, DHHS Emerging Leader, 2003
- Jennifer Browning, summer assistant, 2003
- Stephanie Glezos Bell, Presidential Management Fellow, 2004
- Shameem Abbasy, visiting fellow, 2004
- Shara Marrero, summer intern, 2004
- Chris Morret, summer intern, 2005
- Brittany Dawson McGill, DHHS Emerging Leader, 2005
- Leila Rodriguez, summer intern, 2005
- Adrienne Frech, summer intern, 2006
- Juan Albertorio, Executive Leadership Program, 2007
- Suzumi Yasutake, summer intern, 2007



**APPENDIX B: DBSB STAFF ACTIVITIES, FISCAL YEAR 2003  
THROUGH FISCAL YEAR 2007**

**WITHIN THE NICHD**

- Co-chair, NICHD Consortium of the Behavioral and Social Sciences, 2005–Current
- Large Grants Committee, 2004–Current
- Obesity Working Group, 2005
- 40th Anniversary Coordinating Committee, 2003
- Training Policy Committee and Fellowship Second Level Review, 2004–Current
- New Investigators Committee 2005–Current
- Minority and Disability Supplement Review Committee
- Working Group on Counterterrorism, 2005
- NICHD Behavioral and Social Science Consortium
- Co-Chair, NICHD Health Disparities Planning Group
- Newborn Screening Advisory Committee
- Division of Scientific Review Reorganization Committee
- NICHD Liaison to the Board on Children, Youth, and Families, National Research Council, 2005–Current

**WITHIN THE NIH**

- Co-chair, NIH Community-Based Participatory Research Special Interest Group, 2007
- Roadmap Interdisciplinary Methods and Technology Summit, 2006
- NIH Roadmap for Medical Research, Interdisciplinary Research, Implementation Group Member, 2003–2004
- Institute representative, NIH Behavioral and Social Sciences Research Coordinating Committee, 1994–Current; Member, Executive Committee, 2004–Current
- Member, Strategic Planning Expert Panel, NIH Office of Behavioral and Social Sciences Research (OBSSR), 2005
- Member, OBSSR planning groups for Pathways Linking Education to Health Request for Application, Community Participatory Action Research Program Announcement, Committee for Integrating Social Work Research in the NIH, Methodology and Measurement in the Behavioral and Social Sciences Program Announcement
- NIH Behavioral and Social Sciences Lecture Series Planning Committee
- Matilda White Riley Annual Lecture Nominations Committee (OBSSR), 2005
- Member, Planning Committee for Conference on Methodology in Clinical Research
- Member, Health Disparities and the Behavioral and Social Sciences Conference Planning Committee, 2004–2005 (Co-chairs, Policy Working Group, Prevention Working Group)
- OBSSR Anniversary Committee
- Behavioral and Social Sciences Coordinating Committee, NIH Office of AIDS Research (OAR)

- International Studies Coordination Group, NIH OAR
- Microbicide Studies Coordination Group, NIH OAR
- Women and Girls Coordination Group, NIH OAR
- NIH Data Resources Sharing Interest Group
- Extramural Program Management Committee, Subcommittee on Foreign Grants
- Indo-U.S. Joint Working Group on Reproductive Health Research in India
- Co-chair, Social Environment Working Group, National Children's Study, 2001–2004
- NIH Program Official/Project Officer Forum (POPOF), NICHD alternate delegate, 2003–2004
- NIH Staff Training in Extramural Programs Committee: Chair 2006–2007; Vice-Chair 2005–2005; Member 2004–2005
- Representative, NIH Federal Women's Program Network, 2002–2004
- Rotation as Scientific Review Administrator at the Center for Scientific Review, 2005

### **WITHIN THE FEDERAL GOVERNMENT**

- National Institute for Occupational Safety and Health (NIOSH), Work Life 2007 Symposium Planning Committee
- Interagency Fertility Preservation Working Group
- Federal Interagency Forum on Child and Family Statistics: Executive Committee, Data-Collection Committee
- Federal Working Group on International Migration Statistics and Research, NIH representative, 2005–Current
- Healthy People 2010, Adolescents, Family Planning, and Special Populations Working Groups
- Technical Work Group, Special Projects of Regional and National Significance (SPRANS) Abstinence Education Program Evaluation, 2003–2007
- Technical Work Group, National Title V Abstinence Education Evaluation, 1998–2007
- Expert Panel on Marriage and Divorce Vital Statistics, 2004
- Early Childhood Longitudinal Study-Birth Cohort Conference Planning Committee, 2006
- Advisory Board, NIOSH Work, Stress, and Health Conference, 2004
- Expert Panel on Parent and Family Involvement, National Household Education Survey, 2004
- Indo-U.S. Joint Working Group on Reproductive Health Research
- Member, Conference Planning Committees for the social science tracks: Microbicides 2002, 2004, 2006, and 2008
- Review Participation: National Science Foundation Sociology Program; Department of Education; Office of Population Affairs, Office of Public Health and Science, DHHS; National and Area Poverty Research Centers, Assistant Secretary for Planning and Evaluation, DHHS

## **OUTSIDE THE FEDERAL GOVERNMENT**

- Member, American Psychological Association, Work, Stress, and Health 2008 Conference Advisory Committee
- Member, Advisory Board for the National Social Life, Health, and Aging Project, University of Chicago
- Member, National Advisory Committee, The Robert Wood Johnson Foundation Health and Society Scholars Program
- Member, Social and Behavior Sciences Working Group, National Human Research Protection Advisory Committee, 2001–2002 (continued until 2004 as independent working group)
- Member, Technical Work Group, SPRANS Abstinence Education Program Evaluation, 2003–2007
- National Campaign to Prevent Teen Pregnancy, Effective Programs and Research Task Force, 2000–2003
- American Sociological Association, Committee on Committees (elected), 2007–2008
- American Sociological Association Section on the Sociology of Population, Nominating Committee Chair, 2004–2005, Member 2003–2004
- American Public Health Association Population Section, Awards Committee, 2004–2007
- Population Association of America:
  - Vice President, 2003
  - Secretary Treasurer, 2003–2004
  - Board of Directors, 2004–2005
  - Membership Committee 2002–2003
  - Nominations Committee, 2005
  - Committee on Population Statistics, 2005–Current
  - Robert J. Lapham Award Committee, 2002–2003, 2004–2005.
- Psychosocial Factors in Population Change, Workshop Co-Chair, 2007
- Southern Demographic Association, Board of Directors Federal Liaison (elected), 2005–2007
- Society for the Study of Social Biology, Board of Directors, 1995–2004
- Editorial Board: *Adoption Quarterly*, *Contraception*, *Journal of Adolescent Health*, *Journal of AIDS Education and Prevention*, *Journal of Marriage and Family*, *Perspectives on Sexual and Reproductive Health*, and *Population Research and Policy Review*
- Journal Reviewer: *American Journal of Public Health*, *American Sociological Review*, *Annals of Pediatrics*, *Demography*, *Early Childhood Research Quarterly*, *Gender & Society*, *General Hospital Psychiatry*, *International Migration Review*, *Journal of Comparative Family Studies*, *Journal of Health and Social Behavior*, *Journal of Marriage and Family*, *Maternal and Child Health Journal*, *Pediatrics*, *Perspectives in Reproductive and Sexual Health*, *Population and Development Review*, *Social Biology*, and *Sociology of Education*

**APPENDIX C: DBSB FUNDING INITIATIVES, FISCAL YEAR 2003  
THROUGH FISCAL YEAR 2007**

<b>Title</b>	<b>Activity Code</b>	<b>Announcement Number</b>
Addressing the Role of Pregnancy in HIV Prevention	R01	RFA-HD-07-020
Behavioral and Social Research on Disasters and Health*	R01 R21 R03 R03	PA-07-141 PA-06-452 PA-06-453 PA-06-454
Community Child Health Network Phase 2	U01	LOI-HD05-108
Community Participation in Research*	R01 R21 R21	PAR-07-283 PAR-06-247 PAR-05-026
Designing New Models for Explaining Family Change and Variation	N01	RFP-HD-03-03
Developing Study Designs to Evaluate the Health Benefits of Workplace Policies and Practices	U01	RFA-HD04-017
Developmental Infrastructure for Population Research	R21 R21	PAR-06-362 PAR-04-138
Educational Programs for Population Research	R25	PAR-05-134
Facilitating Interdisciplinary Research via Methodological and Technological Innovation in the Behavioral and Social Sciences*	R21	RFA-RM-07-004
Global Partnerships for Social Science AIDS Research	R24	RFA-HD-06-007
Global Research Training in Population Health*	D43	RFA-TW-05-002
Health Disparities Among Minority and Underserved Women*	R01 R01	PA-07-154 PA-04-153
Health, Environment, and Economic Development*	R21	RFA-TW-03-005
Health Promotion among Racial and Ethnic Minorities*	R01 R21	PA-03-170
Health Research with Diverse Populations*	R01	PA-06-218
Infrastructure for Data Sharing and Archiving	U24	RFA-HD-03-032
Innovations in Biomedical Computational Science and Technology*	R01 R21 r21	PAR-06-410 PAR-06-411 PAR-03-106
Meetings and Networks for Methodological Development in Interdisciplinary Research*	R13 R21	RFA-RM-04-014
Men's Heterosexual Behavior and HIV Infection	R01 R01	PA-07-147 PA-05-033
Mentored Population Research Scientist Development Award	K01	PA 06-001 NOT-HD-07-010
Methodology and Measurement in the Behavioral and Social Sciences*	R01 R21 R03 R03	PA-07-060 PA-06-343 PA-06-344 PA-05-090

\* Indicates a collaborative initiative in which another Institute, Office, or Center had leadership responsibility.

## **APPENDIX D: DBSB CONFERENCES AND WORKSHOPS, FISCAL YEAR 2007 TO FISCAL YEAR 2003**

### **Religious Organizations and the Response to HIV/AIDS**

*MAY 14-15, 2007*

This workshop assembled investigators leading 10 grants funded by the DBSB under a Program Announcement (PA) for studies to examine the extent and nature of religious organizations' involvement in HIV-related activities, the factors that influence such involvement, and its effectiveness.

### **The 2007 NICHD/National Center for Education Statistics Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) Conference: Development from Birth through Age Two**

*MAY 8-10, 2007*

This conference featured findings from research that used data from a nationally representative prospective study of 14,000 children born in the year 2001. Information about these children was collected when the children were age nine months, two years of age, and in preschool. Children, their parents, their child care providers, and their teachers and school administrators provide information on children's cognitive, social, emotional, and physical development across multiple settings (e.g., home, child care, school). The conference highlighted analyses of the nine-month and two-year data on topics including child health and developmental outcomes.

### **What's it Going to Take? Extending the Research Base to Improve Teen Pregnancy Prevention**

*MARCH 7-8, 2007*

This multi-agency conference addressed areas for future research that could contribute to further reducing rates of teen pregnancy in the United States. The conference was a collaboration among the DBSB, the National Center for Chronic Disease Prevention and Health Promotion, Center for Disease Control and Prevention; and the National Campaign to Prevent Teen Pregnancy. Presentations highlighted four topical areas, listed below, in which new knowledge has the potential to improve efforts to prevent teen pregnancy:

- Epidemiological trends in sexual risk-taking and pregnancy/birth rates among adolescents, with a focus on the subgroups with the highest rates;
- Impact of childhood and adolescent development (e.g., early family environments, pubertal and brain development) on adolescents' risk of early pregnancy;
- Influence of parents, peers, and the media on teen attitudes, behavior, and romantic relationships; and
- Need to advance implementation research, defined as the scientific study of methods to promote the systematic uptake of research findings into routine practice.

## **Understanding and Reducing Health Disparities: Contributions of the Behavioral and Social Sciences**

*OCTOBER 23-24, 2006*

This trans-NIH conference highlighted behavioral and social science research on three broad areas of action that can potentially address health disparities: policy, prevention, and health care. It emphasized both basic research on the behavioral, social, and biomedical pathways, which give rise to disparities in health, and applied research on the development, testing, and delivery of interventions to reduce disparities in these three action areas.

## **The Science and Ecology of Early Development (SEED) Grantee Workshop**

*SEPTEMBER 28-29, 2006*

*SEPTEMBER 15-16, 2005*

*SEPTEMBER 13-14, 2004*

The SEED PA, which was originally issued in 2000 and re-issued in 2004, encourages interdisciplinary research among sociologists, demographers, psychologists, and economists on the effects of context and public policy on the development of children in low-income and poor families. At these workshops, grantees funded through this solicitation met to present results from their research thus far and discuss future scientific directions for the SEED initiative.

## **The Population Sciences and Agent-Based Methodology: An Answer to the Macro-Micro Link?**

*SEPTEMBER 27, 2006*

In studying human populations, a long-standing challenge in demography has been to integrate what is labeled the “macro” (e.g., characteristics of an entire community or population, such as disease prevalence) and the “micro” (e.g., individual attributes and behaviors, such as those related to disease risk). In particular, research on the mechanisms that translate behavior at the individual level to outcomes at the population level has been limited by methodological constraints. Recently, demographers have started exploring the potential for a computationally intensive simulation method called agent-based modeling that permits researchers to explicitly model the macro-level consequences of individual-level attributes and behaviors based on a set of assumptions about intervening mechanisms, and then observe the fit to empirically observed patterns. This workshop featured speakers on how agent-based modeling could contribute to demographic research across a variety of population-based topics.

## **2006 Add Health Users’ Conference**

*JULY 17-18, 2006*

This Add Health Users’ Workshop, the seventh in a series, provided an opportunity for investigators using Add Health data to share research findings, discuss issues in the analysis of this complex dataset, and learn about specialized aspects of the data and its use. The two-day workshop featured research presentations, didactic sessions, and sessions on the future directions of the study.

## **The Effects of Electronic Media on Children's Development and Health**

*MAY 15-16, 2006*

American youth live in a media-rich environment and spend an average of six to seven hours a day with some form of media, including television, videos, movies, radio, computers, the Internet, and video games. This conference adopted a developmental approach to the identification of research gaps in the effects of media exposure on children's and adolescents' psychological development and health. The conference was a collaboration between the DBSB and the NICHD's Child Development and Behavior Branch.

## **The Moving Americans Conference: Interdisciplinary Conversations on Internal Migration**

*MAY 4-6, 2006*

This conference convened scientists working in the area of population distribution and geographic mobility to address the question: What is the best way to advance understanding of how the geographic distribution of U.S. children and families affects their well-being? Participants considered well-being across a number of spheres, including health, human development, family, and economic well-being. The conference was held at the University of Washington, Seattle, and was co-organized by the DBSB, Stewart Tolnay, Mark Ellis, and James Gregory.

## **American Time-Use Survey Early Results Conference**

*DECEMBER 8-9, 2005*

Stress levels have risen in the United States and studies suggest the major sources of stress stem from difficulties women and men have in meeting work and family responsibilities. The goal of this conference was to improve the quality and quantity of research using time-use information to study topics of high priority to the DBSB.

## **Love, Marriage, and HIV: Gender and HIV Risk**

*DECEMBER 1, 2005*

This meeting included a presentation by Dr. Jennifer Hirsch and co-investigators about their anthropological research conducted in five countries. Presentations examined how women's and men's marital status and marital expectations vary across cultures, and how these factors interact with HIV risk.

## **Multidisciplinary Perspectives on Culture**

*JUNE 13-14, 2005*

In recent years, demographers and other social scientists have struggled to incorporate concepts of "culture" into their explanatory models and their research. The importance of culture and cultural change to understanding demographic behavior is self evident, yet it is a difficult construct to capture in rigorous research designs. This workshop, a collaboration with the Explaining Family Change Project, was designed to bring together an interdisciplinary group to discuss these new developments, compare concepts and theories relevant to culture across disciplines, and stimulate further discussion and research that will advance the treatment of culture in demographic research.

## **Addressing Health, Educational, and Socioeconomic Disparities of Children in Immigrant Families**

*MAY 23-24, 2005*

More than one in five children in the United States are in an immigrant family, either immigrants themselves or the children of immigrants. Understanding immigrant families is necessary for understanding disparities in health, education, and other types of well-being among Asian, Hispanic, and black children. This workshop, which involved past and current NICHD grantees and other national experts, did the following: highlighted major accomplishments of the field so far; identified gaps in knowledge, methodology, and data that still exist; promoted interdisciplinary communication, cooperation, and collaboration; and developed a research agenda for future studies. Particular emphasis was given to describing new findings from research on the children and family of immigrants; discussing technological and methodological advances related to research on immigrants, particularly issues related to research involving non-English speaking populations, populations with diverse cultural backgrounds, and the development of children in immigrant families; a particular focus throughout the discussion of all topics was mechanisms for encouraging interdisciplinary research on immigrants and immigration.

## **Health Disparities in Infertility**

*MARCH 10-11, 2005*

Infertility is a major public health problem affecting up to 10 percent of Americans of reproductive age (based on reports from the American Society for Reproductive Medicine). However, very few studies have looked at the prevalence and receipt of infertility services by minority and low-income populations. In the United States, the costs of infertility treatments are borne primarily by the couples, including an estimated 85 percent of the cost of *in vitro* fertilization, and those who seek treatment are generally Caucasian, older, married, and with middle to high incomes. Emerging evidence also suggests that variation in treatment response to assistive reproductive technology and causes of infertility may vary by racial/ethnic group. This conference, a collaboration between the DBSB and the NICHD's Reproductive Sciences Branch, attracted demographers and clinicians funded by the two Branches as well as other investigators. The conference resulted in a special feature in the April 2006 issue of *Fertility and Sterility* and may lead to a PA encouraging interdisciplinary studies.

## **Intergenerational Family Resource Allocation Grantee Workshop**

*NOVEMBER 29-30, 2004*

NICHD collaborated with National Institute on Aging on a 2003 Request for Applications (RFA) (see <http://grants2.nih.gov/grants/guide/rfa-files/RFA-HD-02-030.html>) inviting research on: how private family resource-allocation decisions influence the health, wealth accumulation (including human capital), and well-being of children, active adults, and the elderly; and how public policy interacts with family processes to alter these outcomes. This workshop brought together the grantees supported under the RFA to share information about their research plans and progress.



## **Steps to a Healthier U.S. Workforce: Symposium 2004**

*OCTOBER 26-28, 2004*

This symposium provided an opportunity for researchers, policy makers, practitioners, and industry and labor leaders to share their experiences with integrated and coordinated programs to: protect, preserve, and improve the health of people who work; identify ways to reduce the separation in these diverse communities; and point to future directions for relevant research and improved practice. The symposium explored economic issues related to the interrelationships between work, health, health care needs, productivity, and the impact of improved and integrated approaches to health promotion and health protection. It also assessed the scientific basis for integrative approaches, established a research agenda in this area, and highlighted successful programs, practices, and policies of protection and promotion that resulted in improved health for people who work.

## **Methods and Materials for Social and Behavioral Science Research on Reproductive Health in India**

*OCTOBER 25-29, 2004*

This workshop provided instruction to 35 junior Indian researchers on the development of research applications in the behavioral and social sciences. Both Indian and U.S. senior researchers participated as faculty. The curriculum included lectures on research methodologies and intensive one-on-one consultations on projects the junior researchers wished to develop for funding.

## **2004 Add Health Users' Workshop**

*JULY 20-21, 2004*

The Add Health Users' Workshop provides an opportunity for investigators who are using Add Health data to share research findings, discuss issues in the analysis of this complex dataset, and learn about specialized aspects of the data and its use. This workshop, the fifth in an annual series, presented the first findings from an affiliated study that collected the high school transcripts of Add Health participants and included sessions on how to use these data.

## **Outcomes and Study Designs for Evaluating the Impacts of Work-Family Policies and Practices on Health and Well-Being**

*JULY 22-23, 2004*

This two-part workshop was designed to provide technical assistance for potential applicants to the RFA *Developing Study Designs to Evaluate the Benefits of Workplace Policies and Practices*. The first day was devoted to presentations and discussions of possible health outcomes and the current best scientific practices for measuring them. The second day was spent considering the current best scientific practices in experimental and quasi-experimental designs for interdisciplinary social and behavioral research. The goal of this workshop was to encourage potential applicants to submit competitive applications for the RFA.

## **Workplace Strategies and Interventions for Improving Health and Well-Being**

*APRIL 13-15, 2004*

The goal of this conference was to assess the state of the science with regard to workplace strategies and interventions for improving the health and well-being of workers and their families by affecting their abilities to better meet work and family demands. Speakers included leading scientists in the field as well as employers, work-life professionals, and employee representatives. Topics covered included current workplace policies and practices, state and federal laws and policies pertaining to work, and employees' and work-life professionals' experiences with workplace policies and practices. This conference highlighted knowledge about the most significant health and well-being domains for employers, employees, and researchers.

## **Measurement of Media Content**

*DECEMBER 11-14, 2003*

Researchers are exploring media-related concerns, such as violence, ethnic and/or gender stereotyping, and sexual behavior, by tracking the presence of such messages in entertainment programming. This event was an agenda-setting meeting among scholars actively engaged in researching these and related issues. This meeting was envisioned as a retreat for a small number of participants to discuss research questions in depth and to develop critical perspectives on the topics that would help inform future content analysis investigations in the public health realm.

## **Counting Couples II: Improved Marriage, Divorce, Remarriage, and Cohabitation Data**

*NOVEMBER 13-14, 2003*

The purpose of this conference was to describe why and how the measurement of family-related demographic phenomena matters and to discuss and recommend how best to improve current data-collection practices to more accurately depict family change and behavior. This conference was a follow-up to the *Counting Couples: Improving Marriage, Divorce, Remarriage, and Cohabitation Data in the Federal Statistical System*, held December 13 and 14, 2001, at the NIH in Bethesda, Maryland. A report summarizing the meeting is available at <http://childstats.gov/americaschildren/pdf/countingcouples/ccr.pdf>.

## **Data Sharing Workshop**

*AUGUST 8, 2003*

The purpose of this workshop was to examine issues of privacy versus access in the sharing of research data. Participants addressed the need to balance data access with the need for data-security measures that protect the privacy of survey respondents from direct or deductive disclosure. What factors must be considered in achieving an appropriate balance between access and security? The workshop featured a discussion of these issues by investigators who have collected sensitive data, other individuals who represent the user community, and specialists in data security. A report of the workshop is available at [http://www.nichd.nih.gov/publications/pubs\\_details.cfm?from=&pubs\\_id=5641](http://www.nichd.nih.gov/publications/pubs_details.cfm?from=&pubs_id=5641).

### **Add Health Users' Workshop**

*JULY 28-29, 2003*

The Add Health Users' Workshop provides an opportunity for investigators who are using Add Health data to share research findings, discuss issues in the analysis of this complex dataset, and learn about specialized aspects of the data and its use. This year's workshop, the fourth in an annual series, addressed the third wave of Add Health data that had been recently released to researchers around the country.

### **Workforce-Workplace Mismatch? Work, Family, Health, and Well-Being Conference**

*JUNE 16-18, 2003*

This conference launched a new initiative aimed at testing innovative approaches for improving child and family well-being by altering workplace policies and conditions. The primary goal of this conference was to examine existing research to assess the state of scientific knowledge from a variety of disciplinary perspectives, and to provide directions for new areas of research. The conference considered research that explored: many dimensions of work and family; the interaction of work and family behaviors; and the relation of the work-family interactions to various dimensions of health and well-being. The health and well-being of workers, their families and children, and communities were also considered.

### **Workshop on the Influence of Gender on HIV Risk**

*MARCH 14, 2003*

This grantee workshop focused on how norms and institutions related to gender affect HIV risk and prevention in various cultural contexts. Examples of relevant features of gender included differential access to resources, power differentials and dynamics, and cultural scripts for male and female behaviors in sexual and romantic relationships.

### **SEED Workshop on School Readiness**

*FEBRUARY 25-26, 2003*

This meeting examined research on how school environments influence children's development of school readiness and facilitate children's transition to school. Researchers discussed: characteristics of classrooms, teachers, and schools that foster successful transitions into school and positive development in the kindergarten year; characteristics of early childhood programs that foster the development of skills, abilities, and other characteristics associated with school readiness; and resource, policy, and training needs associated with improving school and preschool environments that would enhance school readiness and successful school transitions.

### **Training in the Demographic and Behavioral Sciences**

*FEBRUARY 24, 2003*

At this workshop, principal investigators who received DBSB T32 grants, directors of other major demography training programs, and other training experts met to discuss graduate and post-graduate training in demography. Discussion focused on the goals and structure of demography training programs, the characteristics of a good training program, student development, and minority recruitment and retention.

## **Workshop on Dual Protection**

*JANUARY 9-10, 2003*

At this workshop, current and past Branch grantees reported findings from research studies on dual protection: that is, the use of methods to protect against both pregnancy and STIs (including HIV). Participants considered: the prevalence of dual protection; determinants at the levels of the individual, couple, and broader contexts; and intervention programs to promote dual protection.

## **APPENDIX E: SELECTED DBSB-SUPPORTED POPULATION DATASETS, FISCAL YEAR 1997 THROUGH FISCAL YEAR 2006**

This appendix describes population datasets that appear by name in the body of the report and/or those (designated by \*) that received \$500,000 or more direct cost from the Branch in any year from 1997 through 2006.

### **SUPPORTED THROUGH INTERAGENCY AGREEMENT**

#### **Early Childhood Longitudinal Study—Birth Cohort (ECLS-B)\***

*IN PARTNERSHIP WITH THE NATIONAL CENTER FOR EDUCATION STATISTICS (NCES)*

The ECLS-B follows a nationally representative sample of 14,000 children born in the year 2001 by collecting measures of health, development, care, and education during the formative years from birth through kindergarten entry. Information about these children was collected when the children were approximately nine months old, two years old (2003), in preschool (Fall 2005), and when age-eligible for kindergarten (Fall 2006 or 2007). Visit <http://nces.ed.gov/ecls/Birth.asp> for more information.

#### **Early Head Start Evaluation—Fathers Component (EHS-Fathers)\***

*IN PARTNERSHIP WITH THE ADMINISTRATION FOR CHILDREN AND FAMILIES (ACF)*

EHS-Fathers complemented a large-scale evaluation of Early Head Start programs by enrolling the biological or social fathers of participating children. Approximately 750 fathers at 12 of the 17 research sites were interviewed when the children were two years and three years old, and again in the spring before their kindergarten year. In addition, a practitioner study used survey and qualitative methods to examine father involvement in program activities. Other components included an in-depth study of the fathers and mothers of newborns and local studies focused on fatherhood. Visit [http://www.acf.hhs.gov/programs/opre/ehs/ehs\\_resrch/index.html](http://www.acf.hhs.gov/programs/opre/ehs/ehs_resrch/index.html) for more information.

#### **National Longitudinal Survey of Youth—79 Panel (NLSY79) and Child Supplement (NLSY-Child)\***

*IN PARTNERSHIP WITH THE BUREAU OF LABOR STATISTICS*

The NLSY79 is a nationally representative sample of 12,686 young men and women who were 14 to 22 years old when they were first surveyed in 1979. These individuals were interviewed annually through 1994 and, since then, on a biennial basis. NLSY-Child is a separate survey of all children born to NLSY79 female respondents. The child survey includes assessments of each child as well as additional demographic and development information collected from either the mother or child. Visit <http://www.bls.gov/nls/nlsy79.htm> for more information on NLSY79, and <http://www.bls.gov/nls/nlsy79ch.htm> for more information on NLSY-Child.

## **National Longitudinal Survey of Youth—97 Panel (NLSY97)**

*IN PARTNERSHIP WITH THE BUREAU OF LABOR STATISTICS*

The NLSY97 is a nationally representative survey of approximately 9,000 youths who were 12 to 16 years old as of December 31, 1996. The NLSY97 interviews youths annually to document the transition from school to work and into adulthood. Parents were also interviewed in Round 1 (1997). Visit <http://www.bls.gov/nls/nlsy79ch.htm> for more information.

## **National Survey of Family Growth (NSFG)\***

*IN PARTNERSHIP WITH THE NATIONAL CENTER FOR HEALTH STATISTICS (NCHS)*

The NSFG collects data on factors affecting pregnancy and reproductive health in the United States. NSFG surveys were conducted in 1973 (Cycle I), 1976 (Cycle II), 1982 (Cycle III), 1988 and 1990 (Cycle IV), 1995 (Cycle V), and 2002 (Cycle VI). NCHS conducts personal interviews with a national sample of women (all cycles) and men (beginning with Cycle VI) ages 15 to 44 years to collect data on contraception, infertility, childbearing, marriage, cohabitation, and divorce. Visit <http://www.cdc.gov/nchs/nsfg.htm> for more information.

## **SUPPORTED BY GRANT FUNDING**

### **The Fragile Families and Child Well-Being Study (Fragile Families Study)\***

*PRINCIPAL INVESTIGATOR: SARA MCLANAHAN, PRINCETON UNIVERSITY*

The Fragile Families Study follows a birth cohort of nearly 5,000 children born in large U.S. cities between 1998 and 2000 (roughly three-quarters of whom were born to unmarried parents). The study is designed to provide new information on the capabilities and relationships of unwed parents, as well as on the effects of policies on family formation and child well-being. The study included interviews with both mothers and fathers at birth and again when children were ages one, three, and five years, plus in-home assessments of children and their home environments at ages three and five years. A nine-year follow-up will begin in 2007. Visit <http://www.fragilefamilies.princeton.edu/data.asp> for more information.

### **Indonesian Family Life Survey (IFLS)\***

*PRINCIPAL INVESTIGATOR: JOHN STRAUSS, RAND CORPORATION*

The IFLS is an ongoing longitudinal study of individuals, households, communities, and facilities. In addition to the household component of the survey, the data cover aspects of the physical and social environment, infrastructure, employment opportunities, food prices, access to health and educational facilities, and the quality and prices of services available at those facilities. Interviews were conducted in 1993, 1997, 1998 (on a subsample), and 2000. Visit <http://biko.sscnet.ucla.edu/IFLS/> for more information.

### **Integrated Public Use Microdata Series (IPUMS)**

*PRINCIPAL INVESTIGATOR: STEVEN RUGGLES, UNIVERSITY OF MINNESOTA*

The IPUMS consists of 39 high-precision samples of the American population drawn from every surviving U.S. Census from 1850 to 2000 and from the American Community Surveys of 2000 through 2005. Some of these samples were created specifically for this database, while others were available from other sources. The IPUMS assigns uniform codes across all the samples and

brings relevant documentation into a coherent form to facilitate analysis of social and economic change. Multiple grants, none exceeding \$500,000 direct cost per year, have contributed to the IPUMS dataset. Visit <http://usa.ipums.org/usa/intro.shtml> for more information.

### **Latin American Migration Project (LAMP)**

*PRINCIPAL INVESTIGATOR: DOUGLAS MASSEY, PRINCETON UNIVERSITY*

LAMP studies the complex processes of international migration and immigration to the United States. In addition to basic demographic data, the survey gathers information on family composition, fertility, infant mortality, household-head marital history, labor history of the household head and his/her spouse, and ownership history of properties and businesses. Furthermore, the study collects detailed data on internal migration, migration to the mainland United States, and multiple aspects of key U.S. trips (e.g., work experience, income, social networks, remittances, welfare use, etc.). Visit <http://lamp.opr.princeton.edu/> for more information.

### **Los Angeles Family and Neighborhood Study (L.A. FANS)\***

*PRINCIPAL INVESTIGATOR: ANNE PEBLEY, UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA)*

L.A. FANS is a longitudinal study of families in Los Angeles County, California, and of the neighborhoods in which they live. The L.A. FANS is specifically designed to study both family choices about neighborhoods and the effects of neighborhoods on children. By focusing on policy issues such as welfare reform, the L.A. FANS also provides evidence on how policy changes can affect the neighborhoods and families in which children grow up. Visit <http://www.lasurvey.rand.org/index.htm> for more information.

### **Mexican Family Life Survey**

*PRINCIPAL INVESTIGATOR: DUNCAN THOMAS, UCLA*

This project is an ongoing nationally representative longitudinal survey of individuals, households, families, and communities. The first wave was conducted in 2002, with follow-up in 2005. Additional follow-up is scheduled for 2008. The baseline covers more than 8,400 households in 150 communities across Mexico. Visit <http://www.radix.uia.mx/ennvih/main.php?lang=en> for more information.

### **Mexican Migration Project (MMP)**

*PRINCIPAL INVESTIGATOR: DOUGLAS MASSEY, PRINCETON UNIVERSITY*

MMP is a yearly study of Mexican migrants that randomly samples households in communities throughout Mexico. After gathering social, demographic, and economic information on the household and its members, interviewers collect basic information on each person's first and last trip to the United States. Using data for household heads, the researchers compile a year-by-year history of U.S. migration and collect information about the last trip northward, focusing on employment, earnings, and use of U.S. social services. Visit <http://mmp.opr.princeton.edu/> for more information.

### **National Longitudinal Study of Adolescent Health (Add Health)\***

*PRINCIPAL INVESTIGATOR: KATHLEEN MULLAN HARRIS, UNIVERSITY OF NORTH CAROLINA, CHAPEL HILL*

Add Health is a study of a nationally representative sample of more than 20,000 individuals that began with in-school questionnaires administered to adolescents in grades seven through 12 in the United States in 1994-1995, followed by three waves of in-home interviews in 1995, 1996, and 2001-2002. Information on these individuals covers the adolescent years and the transition to adulthood. These data allow study of the ways social contexts (i.e., families, friends, peers, schools, neighborhoods, and communities) influence adolescents' health and risk behaviors. Data at the individual, family, school, and community levels were collected in two waves between 1994 and 1996. In 2001 and 2002, Add Health respondents ages 18 to 26 years were re-interviewed in a third wave to investigate the meaning of adolescence for health and well-being outcomes in young adulthood. A fourth wave will be conducted in 2008. Visit <http://www.cpc.unc.edu/addhealth/> for more information.

### **National Longitudinal Survey of Youth 79—Young Adult Cohort\***

*PRINCIPAL INVESTIGATOR: ELIZABETH COOKSEY, OHIO STATE UNIVERSITY*

This grant-funded study provides for periodic telephone follow-up with participants in the NLSY-Child study after they reach age 21 years and are no longer followed through NLSY-Child. Visit <http://www.bls.gov/nls/nlsy79ch.htm> for more information.

### **National Survey of Families and Households (NSFH)\***

*PRINCIPAL INVESTIGATOR: LARRY BUMPASS, UNIVERSITY OF WISCONSIN*

The NSFH was designed to provide a broad range of information on family life to serve as a resource for research on change and variation in the American family. The survey collected life-history information on family living arrangements in childhood, departures and returns to the parental home, and histories of marriage, cohabitation, education, fertility, and employment. It also measured marital and parenting relationships, kin contact, and economic and psychological well-being. Interviews were conducted in 1987-1988, 1992-1994, and 2001-2003. Visit <http://www.ssc.wisc.edu/nsfh/> for more information.

### **New Immigrant Study (NIS)\***

*PRINCIPAL INVESTIGATOR: JAMES SMITH, RAND CORPORATION*

The NIS is a panel survey of a nationally representative sample of new legal immigrants to the United States based on probability samples of administrative records of the U.S. Citizenship and Immigration Services. Visit <http://nis.princeton.edu/> for more information.

### **Panel Study of Income Dynamics (PSID)—Child Development Supplement (CDS)\***

*PRINCIPAL INVESTIGATOR: FRANK STAFFORD, UNIVERSITY OF MICHIGAN*

The PSID, started in 1968, is a longitudinal study of a representative sample of U.S. individuals and the family units in which they reside. In 1997, the PSID collected additional information on PSID parents and their children, ages birth to 12 years, to study the dynamic processes of early human capital formation. The first wave of the CDS comprised 2,394 families and 3,563 children. A second wave was conducted in 2002-2003. Visit <http://psidonline.isr.umich.edu/CDS/ResearchDesign.html> for more information.



**Welfare, Children, and Families: A Three-City Study (Three-City Study)\***

*PRINCIPAL INVESTIGATOR: ANDREW CHERLIN, JOHNS HOPKINS UNIVERSITY*

This project is a longitudinal study of children and their caregivers in low-income families that were living in low-income neighborhoods in Boston, Chicago, and San Antonio in 1999. The survey was designed to provide information on the health, cognitive, behavioral, and emotional development of children, as well as information on their primary caregivers' health, well-being, family life, labor force behavior, welfare experiences, and social services use. Visit [http://www.jhu.edu/~welfare/welfare\\_question.htm](http://www.jhu.edu/~welfare/welfare_question.htm) for more information.

## **APPENDIX F: POPULATION RESEARCH INFRASTRUCTURE PROGRAM (PRIP) GRANTEES, FISCAL YEAR 2006**

### **DEVELOPMENTAL INFRASTRUCTURE AWARDS (R21)**

- Center on Social Disparities and Health, Northwestern University  
<http://www.northwestern.edu/ipr/c2s/>
- Initiative in Population Research, Ohio State University  
<http://ipr.osu.edu>
- Program on Population Processes, University of Colorado at Boulder  
<http://www.colorado.edu/ibs/CUPC/>

### **RESEARCH INFRASTRUCTURE AWARDS (R24)**

- California Center for Population Research, University of California, Los Angeles  
<http://www.ccpr.ucla.edu/asp/index.asp>
- Carolina Population Center, University of North Carolina at Chapel Hill  
<http://www.cpc.unc.edu/>
- Center for Demography and Ecology, University of Wisconsin, Madison  
<http://www.ssc.wisc.edu/cde/>
- Center for Family and Demographic Research, Bowling Green State University  
<http://www.bgsu.edu/organizations/cfdr/>
- Center for Public Information on Population Research, Population Reference Bureau  
<http://www.prb.org/cpipr/>
- Center for Social and Demographic Analysis, State University of New York at Albany  
<http://www.albany.edu/csda/>
- Center for Studies in Demography and Ecology, University of Washington  
<http://www.csde.washington.edu/>
- Hopkins Population Center, Johns Hopkins University  
<http://www.jhsph.edu/popcenter>
- Maryland Population Research Center, University of Maryland, College Park  
<http://www.popcenter.umd.edu>
- Minnesota Population Center, University of Minnesota  
<http://www.pop.umn.edu/>
- Office of Population Research, Princeton University  
<http://opr.princeton.edu/>
- Population Research Center, National Opinion Research Center and the University of Chicago  
<http://www.src.uchicago.edu/prc/>
- Population Research Center, University of Texas at Austin  
<http://www.prc.utexas.edu/>
- Population Research Institute, Pennsylvania State University  
<http://www.pop.psu.edu/>

- Population Studies and Training Center, Brown University  
<http://www.pstc.brown.edu/>
- Population Studies Center, University of Michigan  
<http://www.popcenter.umd.edu>
- Population Studies Center, University of Pennsylvania  
<http://www.pop.upenn.edu>
- RAND Population Research Center  
<http://www.rand.org/labor/population/>

## APPENDIX G: DBSB EXPERT PANEL MEMBERS

Andrew J. Cherlin, Ph.D.  
Professor, Department of Sociology  
Johns Hopkins University

Jacquelynne S. Eccles, Ph.D.\*  
Professor, Gender and Achievement Research Program  
Institute for Research on Women and Gender  
University of Michigan

Mark Ellis, Ph.D.  
Professor, Department of Geography and Center for Studies in Demography and Ecology  
University of Washington

Barbara Entwisle, Ph.D.  
Director, Carolina Population Center and Professor of Sociology  
University of North Carolina

Jennifer Johnson-Hanks, Ph.D.  
Assistant Professor, Department of Demography  
University of California, Berkeley

Kristin Moore, Ph.D.  
Senior Scholar, Child Trends, Inc.  
Washington, DC

Teresa Seeman, Ph.D.  
Professor of Medicine and Epidemiology  
Division of Geriatrics  
Geffen School of Medicine  
University of California, Los Angeles

Barbara W. Sugland, M.P.H., Sc.D.  
Executive Director  
Center for Applied Research and Technical Assistance  
Baltimore, Maryland

Duncan Thomas, Ph.D.  
Professor, Department of Economics  
University of California, Los Angeles

\*Member of the NACHHD Council

## APPENDIX H: TRAINING AND CAREER DEVELOPMENT MECHANISMS AND GRANTEES, FISCAL YEAR 2003 THROUGH FISCAL YEAR 2007

### **F31 PRE-DOCTORAL FELLOWSHIPS FOR UNDERREPRESENTED MINORITIES**

(Alphabetical by Last Name)

- Brock, Arlesia L., University of South Florida; *How privatization affects cost and access to public health services in Florida*
- Cerda, Magdalena, Harvard School of Public Health; *How collective efficacy modifies the association between neighborhood concentrated disadvantage and youth violent outcomes in the United States and Colombia*
- Do, Diem-Phuong, Rand Corporation; *How racial segregation patterns affect adult health and mortality*
- Fields, Errol L., Johns Hopkins University; *Black male sexual behavior and sexual risk for HIV infection*
- Garcia, Jonathan, Columbia University Medical Center; *Responses of Afro-Brazilian religious groups to HIV/AIDS*
- German, Miguelina, Arizona State University; *Parenting and adolescent risky sexual behaviors*
- Goodman, Melody S., Harvard School of Public Health; *Scientific, medical, social and environmental factors contributing to racial and ethnic U.S. health disparities*
- Hamilton, Madlene P., University of Texas, Austin; *Poverty, child development, and early education*
- Lee, Helen J., University of Pennsylvania; *Decision-making processes among low-income women regarding everyday infant care practices*
- Nobles, Richard H., University of Washington; *Effects of sexual minority identification on health outcomes such as depression, suicidal ideation, and substance abuse*
- Payne, Nanetta S., Jackson State University; *Acceptability of HIV testing as it relates to perceived benefits, barriers, risks, vulnerability, and adolescent-specific factors*
- Vang, Zoua M., Harvard University; *Effects of racial segregation patterns on African immigrants' educational/employment, health disparities and health care access, and exposure to crime and violence*
- Vaz, Lara M., University of North Carolina, Chapel Hill; *Behavioral and sociocultural factors influencing the disclosure of HIV infection to children living with HIV infection in Democratic Republic of Congo*

### **F31 PREDOCTORAL FELLOWSHIPS FOR STUDENTS WITH DISABILITIES**

- Kwon, Alysia Y., University of California, Los Angeles; *Effects of neighborhood social conditions on maternal depression and child behavior*

**F32 INDIVIDUAL POSTDOCTORAL FELLOWSHIPS**

(Alphabetical by Last Name)

- Berger, Lawrence M., Princeton University/University of Wisconsin; *Family resources, public policy, and child maltreatment*
- Cavanagh, Shannon E., University of Texas, Austin; *Family structure and socio-emotional well-being*
- Cortes, Kalena E., Princeton University; *Health and socioeconomic status of immigrants in the United States*
- Furdyna, Jadwiga E., University of California, Los Angeles; *Transitions in emerging adulthood among minority youth*
- Guzzo, Karen B., University of Pennsylvania; *Predicting cohabiting unions' outcomes and stability*
- Hayford, Sarah R., Duke University; *Effects of employment on fertility after the first birth*
- Howard, Kimberly S., Teachers College, Columbia University; *Father involvement and well-being of at-risk children*
- Kennedy, Sheela, University of Wisconsin, Madison; *Children's living arrangements in the United States and Europe*
- Livingston, Gretchen M., Princeton University; *Gender and social capital among U.S. Dominicans and Mexicans*
- Ryan, Rebecca M., University of Chicago; *Cohabitation, child well-being, and parental investments*
- Sayer, Liana C., University of Pennsylvania; *Spouses' resources and marital bargains and dissolution*
- Shenk, Mary K., University of Washington/University of North Carolina; *Evolutionary studies of marriage and parenting*
- White, Katherine, University of Wisconsin, Madison; *Spatial and temporal effects in population processes*

**T32 INSTITUTIONAL RESEARCH TRAINING GRANTS**

(Alphabetical by Last Name)

<b>Current Principal Investigator</b>	<b>Institution</b>	<b>Predocctoral</b>	<b>Postdoctoral</b>	<b>Special Awards</b>
Becker, Stan M.	Johns Hopkins University	X		
DeJong, Gordon	Pennsylvania State University	X	X	Exemplary minority inclusion 2004
Foster, Andrew D.	Brown University	X		
Lee, Ronald D.	University of California, Berkeley	X		
Lundberg, Shelley	University of Washington	X		
Nathanson, Constance	Columbia University Health Sciences	X		

<b>Current Principal Investigator</b>	<b>Institution</b>	<b>Predocctoral</b>	<b>Postdoctoral</b>	<b>Special Awards</b>
Palloni, Alberto	University of Wisconsin, Madison	X	X	
Potter, Joseph E.	University of Texas, Austin	X	X	
Sarto, Gloria	University of Wisconsin, Madison		X	
Seltzer, Judith A.	University of California, Los Angeles	X		
Smith, Herbert L.	University of Pennsylvania	X		
Suchindran, Chirayath M.	University of North Carolina, Chapel Hill	X	X	
Thornton, Arland D.	University of Michigan, Ann Arbor	X	X	MENTOR 2002
Townsend, Robert M.	University of Chicago	X	X	
Trussell, James	Princeton University	X	X	MENTOR 2006

**D43 AWARDS MADE THROUGH THE INTERNATIONAL TRAINING AND RESEARCH IN POPULATION AND HEALTH RFAs (TW-00-004 AND TW- 05-002)**

(Alphabetical by Last Name)

<b>PI Name</b>	<b>Title</b>	<b>Institution</b>	<b>Trainee Country/Region</b>
Lam, David A.	<i>Population research and training in developing countries</i>	University of Michigan, at Ann Arbor	Brazil, China, Nepal, South Africa, Thailand, and Vietnam
Palloni, Alberto	<i>International training in population health</i>	University of Wisconsin, Madison	Brazil, China, Cost Rica, Mexico, and Vietnam
Popkin, Barry M.	<i>International training in population, health and aging</i>	University of North Carolina, Chapel Hill	China, the Philippines, Thailand, Russia, and Ecuador
Rogers, Rick G.	<i>Global research training in population health</i>	University of Colorado at Boulder	South Africa, Kenya
Thomas, Duncan	<i>Training in international population and health sciences</i>	University of California, Los Angeles	Indonesia, Mexico
Zuberi, Tukufu	<i>Research and training program in population and health</i>	University of Pennsylvania	Sub-Saharan Africa and Latin America

## **K01 MENTORED POPULATION RESEARCH SCIENTIST DEVELOPMENT AWARDS**

(Alphabetical by Last Name)

- Boardman, Jason D., University of Colorado at Boulder; *The social determinants of genetic expression: A life-course perspective*
- Brown, Susan L., Bowling Green State University; *Children's developmental outcomes in cohabiting unions*
- Butler, Lisa M., University of California, San Francisco; *Transmission of KSHV/HHV-8 in South Africa*
- Carlson, Marcia J., Columbia University; *Family structure, parenting, and child well-being*
- Carr, David L., University of California, Santa Barbara; *Migration/demographic factors/deforestation in Guatemala*
- Chen, Feinian, North Carolina State University, Raleigh; *Grandparents caring for grandchildren*
- Gordon-Larsen, Penny, University of North Carolina, Chapel Hill; *Obesity and the environment: The transition to adulthood*
- Hacker, J. David, State University New York, Binghamton; *The decline of fertility in the United States, 1790-2000*
- Henderson, Jillian T., University of California, San Francisco; *Women's reproductive health care in the transition from adolescence to adulthood*
- Hindin, Michelle J., Johns Hopkins University; *Intergenerational influences on adolescent transitions*
- Hogan, Vijaya K., University of North Carolina, Chapel Hill; *Impact of social factors on the effectiveness of a preconceptional preterm birth program*
- Johnson-Hanks, Jennifer, University of California, Berkeley; *Fertility intentions and outcomes in West Africa*
- Jones, James Holland, Stanford University; *Demographic change and dependent social structures*
- Laraia, Barbara A., University of North Carolina, Chapel Hill; *Socio-environmental influences on nutrition and obesity*
- Meier, Ann M., University of Minnesota, Twin Cities; *Social development into adulthood*
- Musick, Kelly A., University of Southern California; *New family forms in social context*
- Pager, Devah I., Princeton University; *Discrimination in the lives of young disadvantaged men*
- Pettit, Becky M., University of Washington; *Institutionalizing inequality: Gender, work, and family*
- Witt, Whitney P., Northwestern University; *Interactions between childhood illness and the family*



## **K23 MENTORED PATIENT-ORIENTED RESEARCH CAREER DEVELOPMENT AWARD**

(Alphabetical by Last Name)

- Auerswald, Colette L., University of California, San Francisco; *Homeless youth: Street culture/social networks/HIV risk*
- Bennett, Ian Moore, University of Pennsylvania; *Literacy and maternal health: Defining obstacles to care*
- Calderon, Yvette, Yeshiva University/Albert Einstein School of Medicine; *Video-based counseling and rapid-HIV testing for teens*
- Chen, Alex Y., Children's Hospital of Los Angeles; *Access to care: Children with special health care needs*
- Chuang, Cynthia H., Pennsylvania State University/Hershey Medical Center; *Unintended pregnancy in women with chronic medical conditions*
- Chung, Paul, University of California, Los Angeles; *Family leave and parents of newborn infants or Children with Special Health Care Needs (CSHCN)*
- Clark, Liana R., Children's Hospital of Philadelphia; *Adolescent misconceptions about hormonal contraception*
- Clarke, Jennifer G., Rhode Island Hospital; *Women in prison: Decreasing unplanned pregnancies and sexually transmitted diseases*
- Galbraith, Alison, Harvard Pilgrim Health Care; *Child health and family experience under health insurance cost-sharing*
- Gilliam, Melissa L., University of Illinois at Chicago; *Improving contraceptive use/practices among young women*
- Kahn, Robert S., Children's Hospital Medical Center (Cincinnati); *Poverty, maternal health, and disparities in child outcomes*
- Marcell, Arik V., University of Maryland, Baltimore Professional School; *Teen males' reproductive health needs and barriers to care*
- Nusbaum, Margaert, University of North Carolina, Chapel Hill; *Influences on sexual health*
- Ott, Mary A., Indiana University/Purdue University at Indianapolis; *The developmental and relationship contexts of sexual abstinence among adolescents*
- Pati, Susmita, Children's Hospital of Philadelphia; *Health care access: Maternal, child, and policy factors*
- Shafii, Taraneh, University of Washington; *Brief clinician intervention for high-risk behavior in adolescents*

## **R25 EDUCATIONAL PROGRAMS FOR POPULATION RESEARCH AWARDS**

(Alphabetical by Last Name)

- Entwisle, Barbara, University of North Carolina, Chapel Hill; *Incorporating biomedical perspective in population-based research*
- Grinstead, Olga, University of California, San Francisco; *Minority communities' HIV prevention research training*
- Gutmann, Myron P., University of Michigan, Ann Arbor; *Demographic analysis of longitudinal historical data*
- Krieger, Nancy, Harvard University School of Public Health; *Geocoding, census data, and social disparities in health*
- Matthews, Stephen A., Pennsylvania State University; *GIS training program for population scientists*
- Olsen, Randall, Ohio State University; *Online system (NLS) workshops for new researchers*
- Tuljapurkar, Shripad D., Mountain View Research; *Workshops in formal and quantitative demography*
- Tuljapurkar, Shripad D., Mountain View Research; *Workshops in formal demography and biodemography*

## **ADMINISTRATIVE SUPPLEMENTS TO PROMOTE DIVERSITY AND RE-ENTRY**

In fiscal year 2004 and fiscal year 2005, the DBSB awarded 16 supplements:

- 6 supported graduate students
- 5 supported investigators
- 2 supported postdoctoral fellows
- 3 supported individuals of other statuses