The National Institutes of Health: 
Investing in Population Sciences to Improve Health

What is demographic, or population, research?

Demography is the study of populations and how or why they change. Population scientists, including demographers, sociologists, economists, and statisticians, collect and analyze data on trends in births, deaths, family formation and separation; patterns of migration; health and disability; and racial, ethnic, and socioeconomic diversity in populations. Major policy issues that researchers from the field focus on include:

» Population Aging
   Understanding the consequences of population aging is essential to monitoring and maintaining the health and productivity of our population.

» Fertility, Marriage, and Children’s Health
   Studying fertility and family trends provides key insights into the long-term health and development of children.

» Immigration and Migration
   Analyzing how migration from other countries affects the diversity, health, and well-being of our population informs policy-making on immigration. Analyzing migration within the United States in response to natural disasters and local economic conditions helps federal, state, and local policymakers plan for the future.

» Population Health
   Understanding how and why health, disease, and disability differ across demographic groups and regions of the country provides critical information for improving health of all U.S. citizens.

Why does NIH support demographic or population research?

A central component of the NIH mission is “to seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce the burdens of illness and disability.”

The health of our population is fundamentally intertwined with the demography of our population. Recognizing the connection between health and demography, the NIH supports population research programs primarily though the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) and the National Institute on Aging (NIA).

Demographic or population research provides the scientific tools for understanding the relationships between “macro” factors, such as changing family dynamics, population diversity, marriage, community, migration, and economic resources, and the health and well being of people. Further, demographic or population research identifies the conditions that produce poor health and unhealthy behaviors. The methods, experience, and empirical rigor of demographic or population research are necessary to identify and understand the complex and interdependent causal processes affecting health behaviors and the health status of our population. This basic research mission belongs at the NIH because the NIH is the federal agency with the statutory mission for funding basic health research.
Examples of recent major NIH-funded demographic research advances

In 1994, NICHD launched the National Longitudinal Study of Adolescent to Adult Health (Add Health), a survey of over 20,000 adolescents who have been followed for 15 years into adulthood. Add Health provides the evidence needed to reduce the prevalence and costs of chronic disease in America by understanding how adolescent environments and behaviors are linked to adult health. In 2014, using Add Health data, scientists reported new findings on the long-term effects of birth weight and breastfeeding duration on inflammation (a contributing factor to disease and disability) in early adulthood.

In 2014, drawing on NIH-funded research, population scientists, in conjunction with the National Academy of Sciences (NAS), issued a report on the leading causes of premature death, making recommendations to improve the understanding of these causes. Specifically, NAS found that more than half of premature deaths are attributable to underlying social and behavioral issues. The National Institute on Aging, the leading aging research Institute at NIH, used these findings to propose a new initiative in fiscal year 2016 that will explore why other industrialized countries surpass the United States in health at older ages and longevity.

Future research

Population sciences are poised uniquely to research the underlying causes and consequences of disease and disability. Some of the unanswered research questions population scientists are pursuing include:

- What effects will changing family patterns have on the health of children and adults?
- How do population movements caused by migration, immigration, and natural disasters, impact the social and natural environments and health of communities, families and individuals?
- What accounts for the strong connection between education, income, and health?
- Why are racial and ethnic disparities in health large and persistent?
- How will population aging and trends in health and disability affect pensions, Social Security, and health and long-term care systems as the Baby Boomers retire?
- How will programmatic changes in the U.S. health care system affect population health and health disparities?

Continued NIH investment in demographic, or population, research ensures these important health-related issues will be addressed, employing the highest standards of peer-reviewed scientific research.