



U.S. Department of Health and Human Services



Agency for Healthcare Research and Quality  
Advancing Excellence in Health Care • [www.ahrq.gov](http://www.ahrq.gov)

# Workshop on Restricted Health Data Available at the Philadelphia FSRDC

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**University of Pennsylvania**  
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## Disclaimer

**The findings and conclusions in this presentation are those of the author and do not necessarily represent the views of the Agency for Healthcare Research and Quality or the Centers for Disease Control and Prevention.**



# FSRDC Health Data

own review and approval process. Explore the links below to learn more about the data each agency makes available and the process to access their data.

## Agency for Healthcare Research and Quality

[Available Data and Proposal Process for AHRQ Data](#)

The Agency for Healthcare Research and Quality's (AHRQ) mission is to produce evidence to make health care safer, higher quality, more accessible, equitable, and affordable, and to work with the U.S. Department of Health and Human Services (HHS) and other partners to make sure that the evidence is understood and used.

AHRQ's priority areas of focus are: (1) Improve health care quality by accelerating implementation of patient-centered outcomes research (PCOR). (2) Make health care safer. (3) Increase accessibility to health care. (4) Improve health care affordability, efficiency, and cost transparency.

## Census Bureau

[Available Data and Proposal Process for Census Bureau Data](#)

The Census Bureau's mission is to serve as the leading source of quality data about the nation's people and economy. We honor privacy, protect confidentiality, share our expertise globally, and conduct our work openly. We are guided in this mission by scientific objectivity, our strong and capable workforce, our devotion to research-based innovation, and our abiding commitment to our customers. Our researchers explore innovative ways to conduct surveys, increase respondent participation, reduce costs, and improve accuracy.

RDC research is critical to the Census Bureau. One way for the Census Bureau to check the quality of the data it collects, edits, and tabulates is to make its microdata records available in a controlled, secure environment to sophisticated users who, by employing the micro records in the course of rigorous analysis, will uncover the strengths and weaknesses of the microdata records. Each set of observations is the result of many decision rules covering definitions, classifications, coding procedures, processing rules, editing rules, disclosure rules, and so on. The validity and consequences of all these decision rules only become evident when the Census Bureau's micro databases are tested in the course of analysis. These analyses can also help address important policy questions without the need for additional, expensive and burdensome data collections.

## National Center for Health Statistics

[Available Data and Proposal Process for NCHS Data](#)

The mission of the National Center for Health Statistics (NCHS) is to provide statistical information that will guide actions and policies to improve the health of the American people. As the



# Plan for Presentation

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- **Description of AHRQ data (MEPS)**
- **Description of NCHS datasets**
- **Description of restricted data**
  - **Geocodes**
  - **Other restricted variables**
  - **Early release data (NHIS)**
  - **Linked administrative records**
- **Examples of use of restricted data**
- **Some proposal tips**



# Medical Expenditure Panel Survey (MEPS) History

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- ❑ 1977 National Medical Care Expenditure Survey (NMCES)**
- ❑ 1987 National Medical Expenditure Survey (NMES)**
- ❑ 1996 Medical Expenditure Panel Survey (MEPS)**



# www.meps.ahrq.gov



U.S. Department of Health & Human Services

www.hhs.gov

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## Medical Expenditure Panel Survey

[Contact MEPS](#) | [MEPS FAQ](#) | [MEPS Site Map](#)

Search MEPS

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Home

### MEPS Home

#### About MEPS

- Survey Background
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#### Survey Components

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#### Communication

- What's New
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The Medical Expenditure Panel Survey (MEPS) is a set of large-scale surveys of families and individuals, their medical providers, and employers across the United States. MEPS is the most complete source of data on the cost and use of health care and health insurance coverage. [Learn more about MEPS.](#)

The MEPS website will be unavailable due to maintenance activities on Saturday June 11 between 8:00 am and 6:00 pm.

### Contact MEPS

#### New to MEPS?

- Select a profile:
- [General user](#)
  - [Researcher](#)
  - [Policymaker](#)
  - [Media](#)
  - [Survey participant](#)

### MEPS Topics

- [Access to Health Care](#)
- [Children's Health](#)
- [Children's Insurance Coverage](#)
- [Elderly Health Care](#)
- [Health Care Costs/Expenditures](#)
- [Health Care Disparities](#)
- [Health Insurance](#)
- [Medical Conditions](#)
- [Medicare/Medicaid/SCHIP](#)
- [Men's Health](#)
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- [Prescription Drugs](#)
- [Protected Data/Expenditures](#)
- [Quality of Health Care](#)
- [State and Metro Area Estimates](#)
- [The Uninsured](#)
- [Women's Health](#)

[Click here for full topic list ...](#)

### What's New Highlights

#### New Publications

In Medicaid expansion states, uninsured rates were higher in 2013 for non-elderly adults in fair or poor health than for those in good to excellent health, but in 2014 there was no significant difference in the rate of uninsurance by health status. — From [Statistical Brief 490: Uninsurance and Insurance Transitions Before and After 2014: Estimates for U.S., Non-Elderly Adults by Health Status, Presence of Chronic Conditions and State Medicaid Expansion Status](#)

From 2012-2013 to 2013-2014, there was an increased likelihood of gaining any coverage and of gaining Medicaid coverage, along with some enrollment in newly-available Marketplace coverage, that was observed across a broad array of demographic groups defined by age, race/ethnicity, and educational attainment. — From [Statistical Brief 489: Transitions in Health Insurance Coverage for Non-Elderly Adults in the U.S. Civilian Noninstitutionalized Population: 2013-2014 and Selected Preceding Two-Year Periods](#)

The percentage of non-elderly adults ages 18-64, uninsured for the entire calendar year, declined from 18.8 percent (35.6 million adults) to 14.4 percent (27.4 million adults) between 2013 and 2014. — From [Statistical Brief 488: The Uninsured in America: Estimates of the Percentage of Non-Elderly Adults Uninsured throughout Each Calendar Year, by Selected Population Subgroups and State Medicaid Expansion Status: 2013 and 2014](#)



# MEPS Survey Components

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## ☐ MEPS-HC: Household Component

## ☐ MEPS-MPC: Medical Provider Component

- Follow-back survey of medical providers linked to respondents of the MEPS-HC
- 2016 MEPS Medical Organization Survey (MOS)

## ☐ MEPS-IC: Insurance Component

- Independent survey of employers and unions not linked to the MEPS-HC

## ☐ Annual Survey of 14,000 households

- Provides national estimates of health care use, expenditures, insurance coverage, sources of payment, access to care and health care quality

## ☐ Uses of the MEPS

- Trends in annual health care use, expenditures and insurance coverage
- Expenditures for specific conditions
- Policy-related and behavioral research on the determinants of health care use, spending, and insurance coverage
- Microsimulation models to analyze alternative health care delivery proposals





# MEPS-HC Survey Design

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- ☐ Sub-sample of respondents from the previous year's National Health Interview Survey (NHIS), sponsored by NCHS
- ☐ Representative of the civilian non-institutionalized population of the US
- ☐ Collects 2 years of healthcare use in each panel
- ☐ 5 in-person interviews over 2 ½ year period using CAPI
- ☐ One respondent per household
- ☐ Person and family level data collected
- ☐ Interviews average 90 minutes with a range of one to four hours



# MEPS-Medical Provider Component (MPC)

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- ❑ Survey of medical providers linked to respondents of the MEPS-HC.
- ❑ Collects data that household respondents cannot accurately provide, such as dates of visit, diagnosis and procedure codes, charges and payments.
- ❑ The Pharmacy Component (PC), a subcomponent of the MPC, collects drug detail information, including National Drug Code (NDC) and medicine name, date filled and sources and amounts of payment.
- ❑ The MPC is not designed to yield national estimates. It is primarily used as an imputation source to supplement household reported expenditure information.

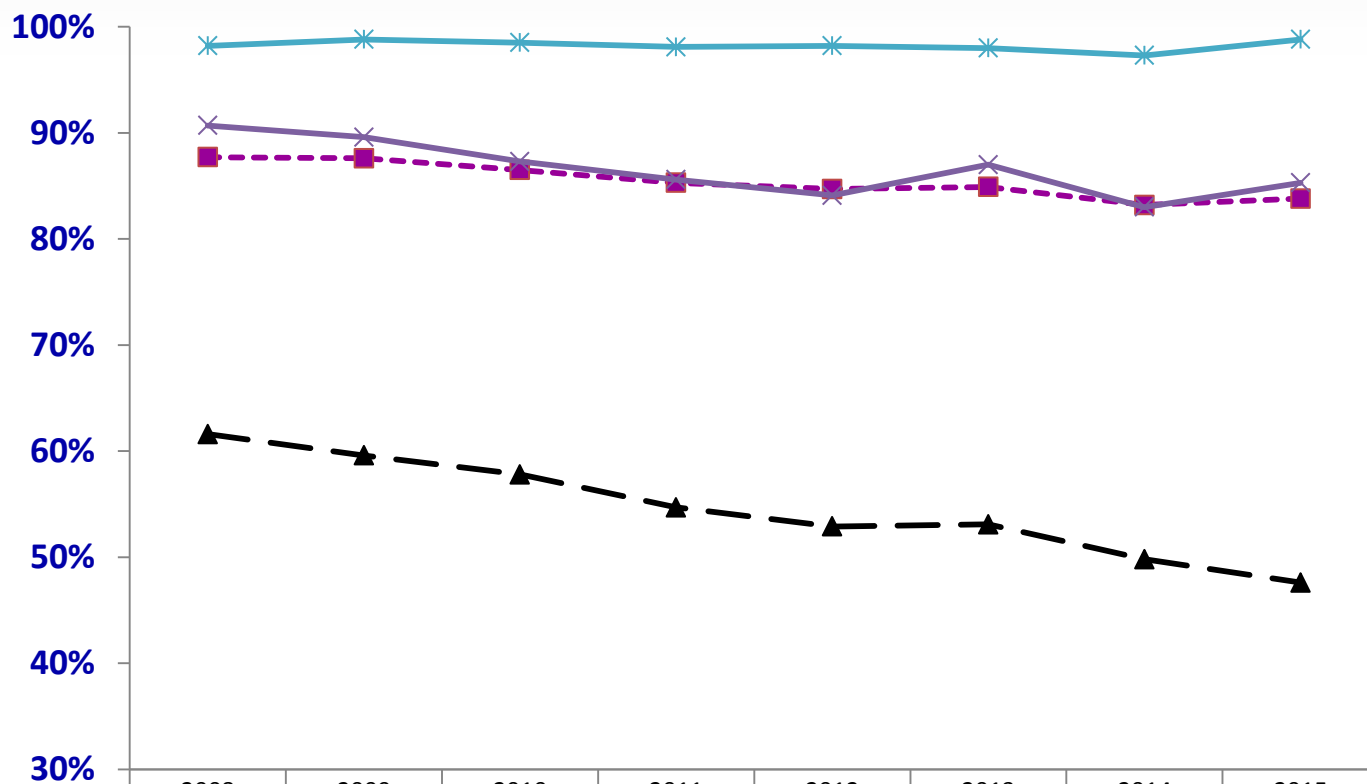


# MEPS-IC

- ☐ **Nationwide, annual survey of both private and public sector employers**
- ☐ **An independent survey of employers and unions not linked to the household survey**
- ☐ **Collected for AHRQ by the Census Bureau annually since 1996 (no data for 2007)**
- ☐ **The sample contains information from about 40,000 establishments and supports national and state-level estimates for all 50 states.**
- ☐ **Employer-sponsored health insurance measures:**
  - ☐ **Availability**
  - ☐ **Enrollment**
  - ☐ **Benefit and payment provisions**
  - ☐ **Cost**



## Offer rate: Percentage of private-sector employees in establishments that offer health insurance, overall and by firm size, 2008–2015



	2008	2009	2010	2011	2012	2013	2014	2015
United States	87.7%	87.6%	86.5%	85.3%	84.7%	84.9%	83.2%	83.8%
Small (< 50 employees)	61.6%	59.6%	57.8%	54.7%	52.9%	53.1%	49.8%	47.6%
Medium (50-99 employees)	90.7%	89.6%	87.3%	85.6%	84.1%	87.0%	83.0%	85.3%
Large (100+ employees)	98.2%	98.8%	98.5%	98.1%	98.2%	98.0%	97.3%	98.8%

Source: Center for Financing, Access, and Cost Trends, AHRQ, Medical Expenditure Panel Survey-Insurance Component, private-sector establishments, 2008–2015.



## Percentage change in total premiums per enrolled private-sector employee for single, employee-plus-one, and family coverage, 2008–2015



Source: Center for Financing, Access, and Cost Trends, AHRQ, Medical Expenditure Panel Survey-Insurance Component, private-sector establishments, 2008–2015.



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Information about all datasets  
can be found on the NCHS website:  
<http://www.cdc.gov/nchs/>

CDC - National Center for Health Statistics Homepage - Windows Internet Explorer provided by ITSO

http://www.cdc.gov/nchs/

File Edit View Favorites Tools Help

CDC - National Center for Health Statistics Homepage

CDC Home  
Centers for Disease Control and Prevention  
Your Online Source for Credible Health Information

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## National Center for Health Statistics

### NCHS Home

- Surveys and Data Collection Systems »
- National Health Care Surveys
- National Health Interview Survey
- National Health and Nutrition Examination Survey
- National Vital Statistics System
- Publications »
- Browse/Search Publications
- Data Briefs
- Health E-Stats
- Health, United States
- Data Access
- Data Access Tools
- Data Linkage

The National Center for Health Statistics' website is a rich source of information about America's health... [More »](#)

### FastStats... Statistics by Topic

- ☐ **Diseases and Conditions**  
Asthma, Cholesterol, Diabetes, Heart Disease, Hypertension, Obesity...
- ☐ **Health Care and Insurance**
- ☐ **Injuries**
- ☐ **Life Stages and Populations**
- ☐ **Lifestyle**

[More Topics »](#)

### Tools & Resources

- Health Data Interactive
- Healthy People 2010/2020
- Injury Data and Resources

### What's New!

**45 Million People Under Age 65 With Private Health Insurance Don't Have Dental Coverage**  
First NCHS study on dental insurance in 20 years.

**Prevalence of Overweight, Obesity, and Extreme Obesity Among Adults: United States, Trends 1976-1980 Through 2007-2008**

**Prevalence of Obesity Among Children and Adolescents: United States, Trends 1963-1965 Through 2007-2008**

**More Than 4 in 10 Teens Have Had Sex, New Report Shows**  
Study also shows many teens not concerned about becoming pregnant.

Text size: [S](#) [M](#) [L](#) [XL](#)

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[2010 Release Schedule](#) »

Done

Trusted sites 100%



## Four Major NCHS Data Systems

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- National Vital Statistics System and surveys
- National Health Interview Survey
- National Health and Nutrition Examination Survey
- National Health Care Surveys





# National Vital Statistics System

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- Birth and death records
  - ▶ National Vital Statistics System Cooperative Program—partnership with registration areas (State and Territories)
  - ▶ Information at the State and local level



# National Survey of Family Growth

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## Data source and sample

- ▶ In-person interviews in the home
- ▶ Annual sample of 7,600 women and 5,000 men, representative of the civilian US population, ages 15-44

## Findings

- ▶ Reproductive health
  - Fertility/infertility
  - Contraception
  - Pregnancy
  - Sexual activity
- ▶ Family formation
  - Marriage, divorce, cohabitation



# National Health Interview Survey

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- Data source
  - ▶ Representative in person, in home survey of 87,500 respondents
- Data applications
  - ▶ Health status and disability
  - ▶ Insurance coverage
  - ▶ Access to and use of health services
  - ▶ Extent of illness and disability
  - ▶ Immunization
  - ▶ Health behaviors



# National Health and Nutrition Examination Survey (NHANES) Mobile Exam Center

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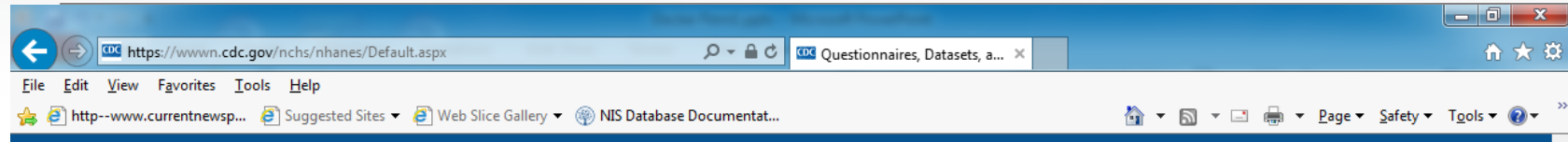
# National Health and Nutrition Examination Survey (NHANES)

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- Data source
  - ▶ Standardized physical examinations, laboratory tests, personal interviews with annual sample of 5,000
- Data applications
  - ▶ Disease or condition prevalence
  - ▶ Risk factors
  - ▶ Nutrition monitoring
  - ▶ Anthropometry
  - ▶ Growth and development
  - ▶ Disease monitoring



# NHANES



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☒ Search NCHS

SEARCH



CDC A-Z INDEX

## National Center for Health Statistics

National Health and  
Nutrition Examination  
Survey



National Health and Nutrition  
Examination Survey

About NHANES



What's New



Questionnaires,  
Datasets, and  
Related  
Documentation



Survey Methods and  
Analytic Guidelines

Search Variables

All Continuous  
NHANES



NHANES 2015-2016



[CDC](#) > [National Health and Nutrition Examination Survey](#)

## Questionnaires, Datasets, and Related Documentation



### • Continuous NHANES Data, Questionnaires and Related Documentation

- [Search Continuous NHANES Variables](#)
- [NHANES 2015-2016](#)
- [NHANES 2013-2014](#)
- [NHANES 2011-2012](#)
- [NHANES 2009-2010](#)
- [NHANES 2007-2008](#)
- [NHANES 2005-2006](#)





GIRLS: 2 TO 18 YEARS  
PHYSICAL GROWTH  
NCHS PERCENTILES

DATE NAME

AGE (YEARS)

RECORD #

AGE (YEARS)

PRE-PUBERTAL BOYS FROM 2 TO 11 1/2 YEARS  
WEIGHT FOR STATURE

Stature (cm.)

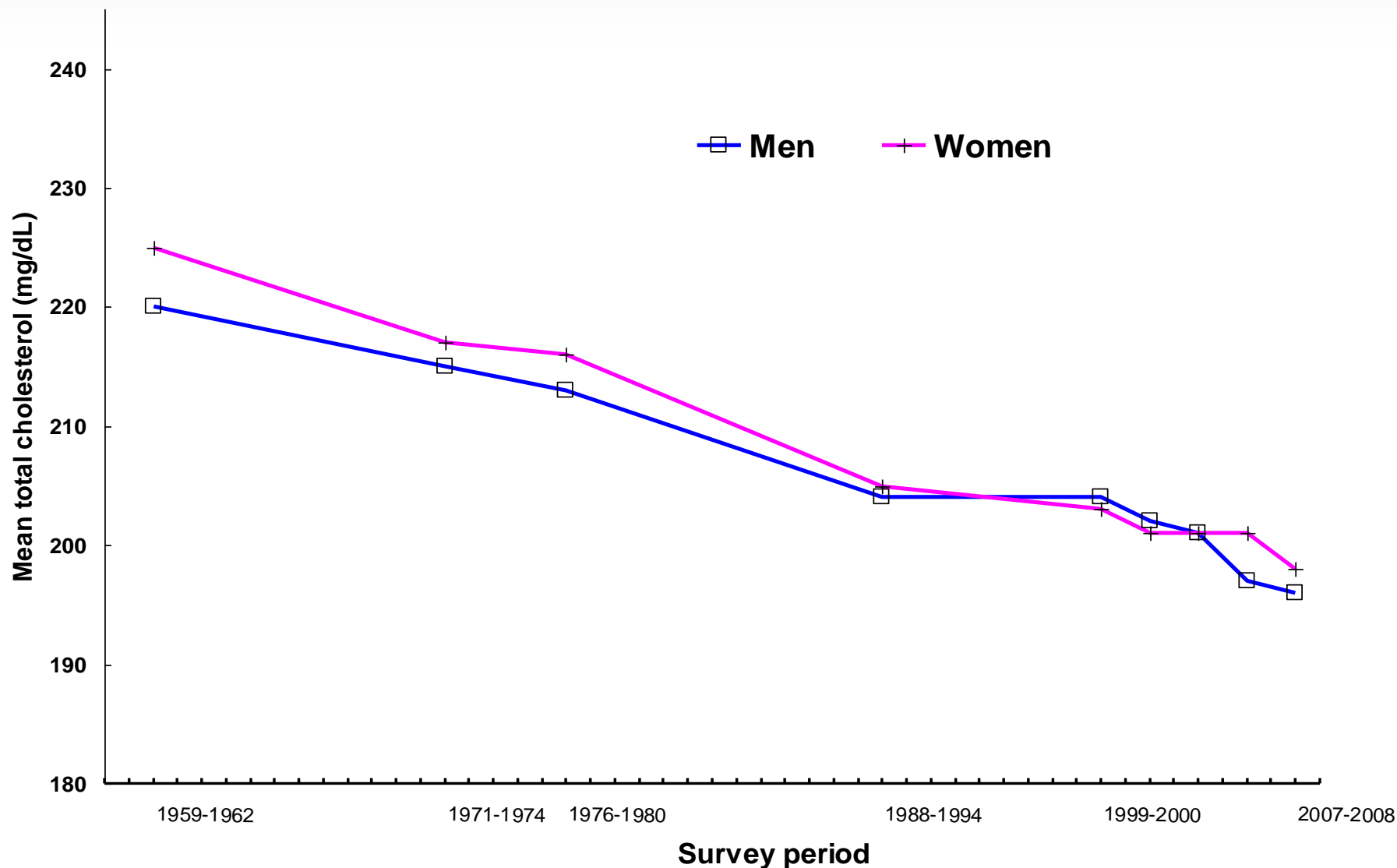
Stature (in.)

Weight (kg.)

Weight (lb.)



# Average total cholesterol among Men and Women 20-74 years of age—1959-1962 to 2007-2008







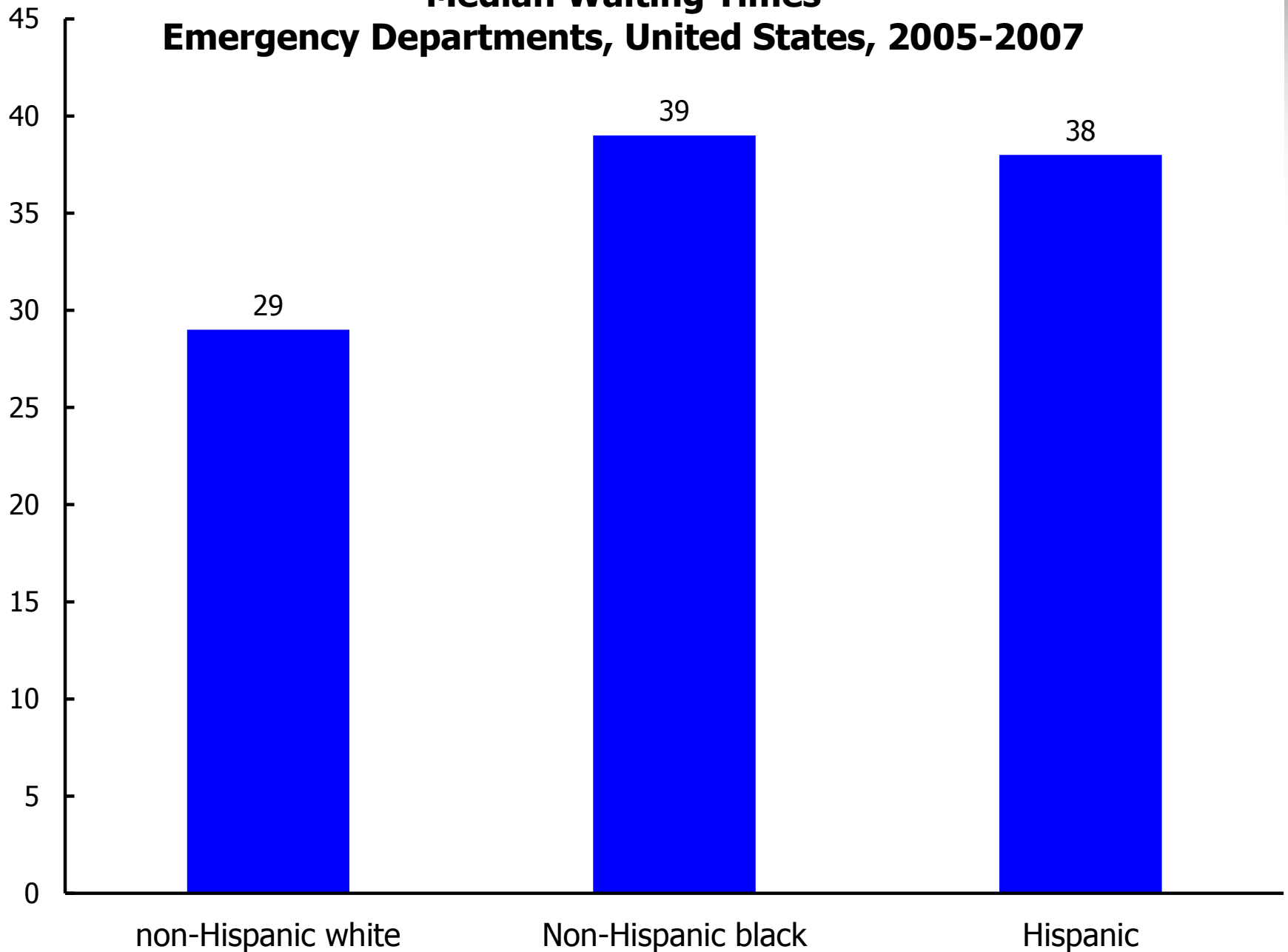
# National Health Care Surveys

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- Hospital Discharge Survey (NHDS)
- Ambulatory Medical Care Survey (NAMCS)
- Hospital Ambulatory Medical Care Survey (NHAMCS)
- Survey of Ambulatory Survey
- Nursing Home Survey (NHHS)
- Home and Hospice Care Survey (NHHCS)
- Residential Care Survey

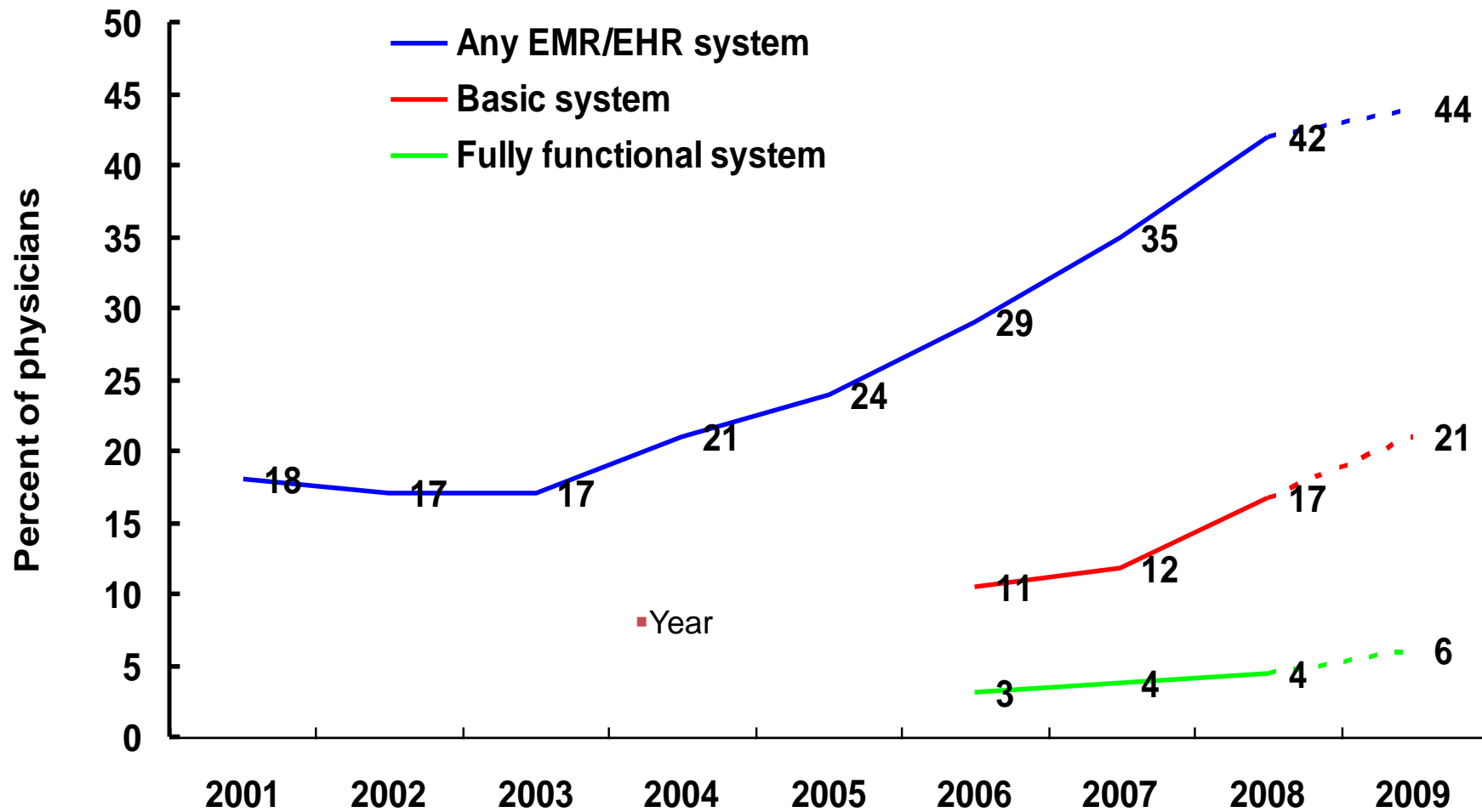
Minutes

# Median Waiting Times Emergency Departments, United States, 2005-2007





# Electronic Medical Records/Electronic Health Records (EMR/EHR): United States, 2001-2008, and preliminary 2009

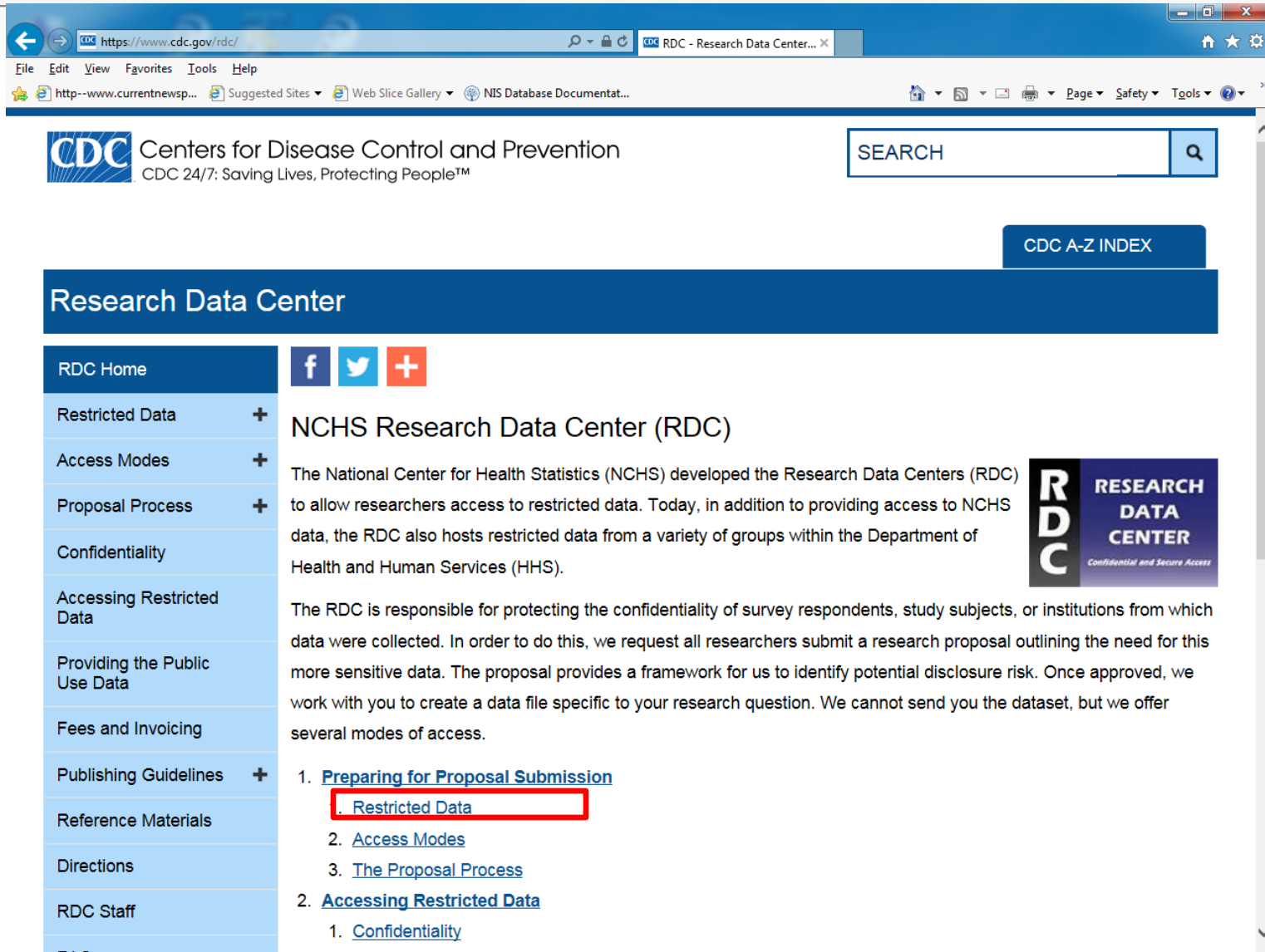


■ Note: Dashes indicate preliminary data

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The screenshot shows the NCHS Research Data Center (RDC) website. The browser address bar displays <https://www.cdc.gov/rdc/>. The page header includes the CDC logo, the text "Centers for Disease Control and Prevention" and "CDC 24/7: Saving Lives, Protecting People™", a search bar, and a "CDC A-Z INDEX" button. The main heading is "Research Data Center". On the left is a navigation menu with links: "RDC Home", "Restricted Data", "Access Modes", "Proposal Process", "Confidentiality", "Accessing Restricted Data", "Providing the Public Use Data", "Fees and Invoicing", "Publishing Guidelines", "Reference Materials", "Directions", and "RDC Staff". The main content area features social media icons (Facebook, Twitter, and a plus sign), the title "NCHS Research Data Center (RDC)", and a description: "The National Center for Health Statistics (NCHS) developed the Research Data Centers (RDC) to allow researchers access to restricted data. Today, in addition to providing access to NCHS data, the RDC also hosts restricted data from a variety of groups within the Department of Health and Human Services (HHS). The RDC is responsible for protecting the confidentiality of survey respondents, study subjects, or institutions from which data were collected. In order to do this, we request all researchers submit a research proposal outlining the need for this more sensitive data. The proposal provides a framework for us to identify potential disclosure risk. Once approved, we work with you to create a data file specific to your research question. We cannot send you the dataset, but we offer several modes of access." To the right of this text is a logo for the "RESEARCH DATA CENTER" with the tagline "Confidential and Secure Access". Below the description is a numbered list of links: 1. [Preparing for Proposal Submission](#), 2. [Accessing Restricted Data](#), and 3. [Confidentiality](#). The link "Restricted Data" under the first heading is highlighted with a red box. The browser's status bar at the bottom shows a zoom level of 125%.



# Geocodes

<https://www.cdc.gov/rdc/b1datatype/dt123geocod.htm>

RDC Home

Restricted Data -

NCHS Public Use

NCHS Restricted +

**NCHS Geocodes -**

NHANES Geocodes

NHCS Geocodes

NHIS Geocodes

NIS Geocodes

NSFG Geocodes

SLAITS Geocodes

Nativity Geocodes

Mortality Geocodes

DHHS Restricted +

Access Modes +

Proposal Process +

CDC > NCHS > RDC Home > Restricted Data > NCHS Geocodes

## Geocodes

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Researchers use geography in two different ways:

1. To merge variables from external sources of data to add context or policy. Typically, following the merge, these geographic variables are removed. However, if you need to keep these variables for analysis purposes as well, please explain so in your proposal.  
Example: Neighborhood characteristics from Census can be added to examine their relationship to obesity.
2. To answer a research question for a smaller geographical area, such as region.  
Example: To examine regional differences in the prevalence of asthma.


It is important to note that although smaller levels of geography are available for NCHS surveys, the majority of surveys (excluding SLAITS, Natality, and Mortality) are only representative at the regional and national level. It is inappropriate to make estimates based on NCHS data for areas smaller than the area for which the sample frame was designed. These smaller levels of data only exist for the purpose of adding contextual information from external sources of data.

### Geocodes by NCHS Survey

- [National Health and Nutrition Examination Survey \(NHANES\)](#)
- [National Health Care Surveys \(NHCS\)](#)
- [National Health Interview Survey \(NHIS\)](#)
- [National Immunization Survey \(NIS\)](#)



# For example, National Health and Nutrition Examination Survey (NHANES)



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Research Data Center

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National Health and Nutrition Examination Survey (NHANES) Geocodes



The following table lists the geographic variables in NHANES III and Continuous NHANES. The special project restricted use variables include geocodes that have been added to the regular restricted use datasets. When applying for access to this data through the RDC, please specify the variable name in your data dictionary.

	Restricted Variable Name	Restricted Variable Label
<b>Continuous NHANES</b> <a href="#">Documentation</a>	REGION	4 Census Regions created from STATE2K
	STD_5Zip	Zipcode
	RC2K	Census 2000 Geocodes General Return Code
	LVC2K	Census 2000 LAT/LON Geocoding Level
	LAT	Latitude in decimal format with up to 6 decimal precision
	LON	Longitude in decimal format with up to 6 decimal precision



# National Health Care Surveys - NAMCS

**National Ambulatory Medical Care Survey (cont.)**

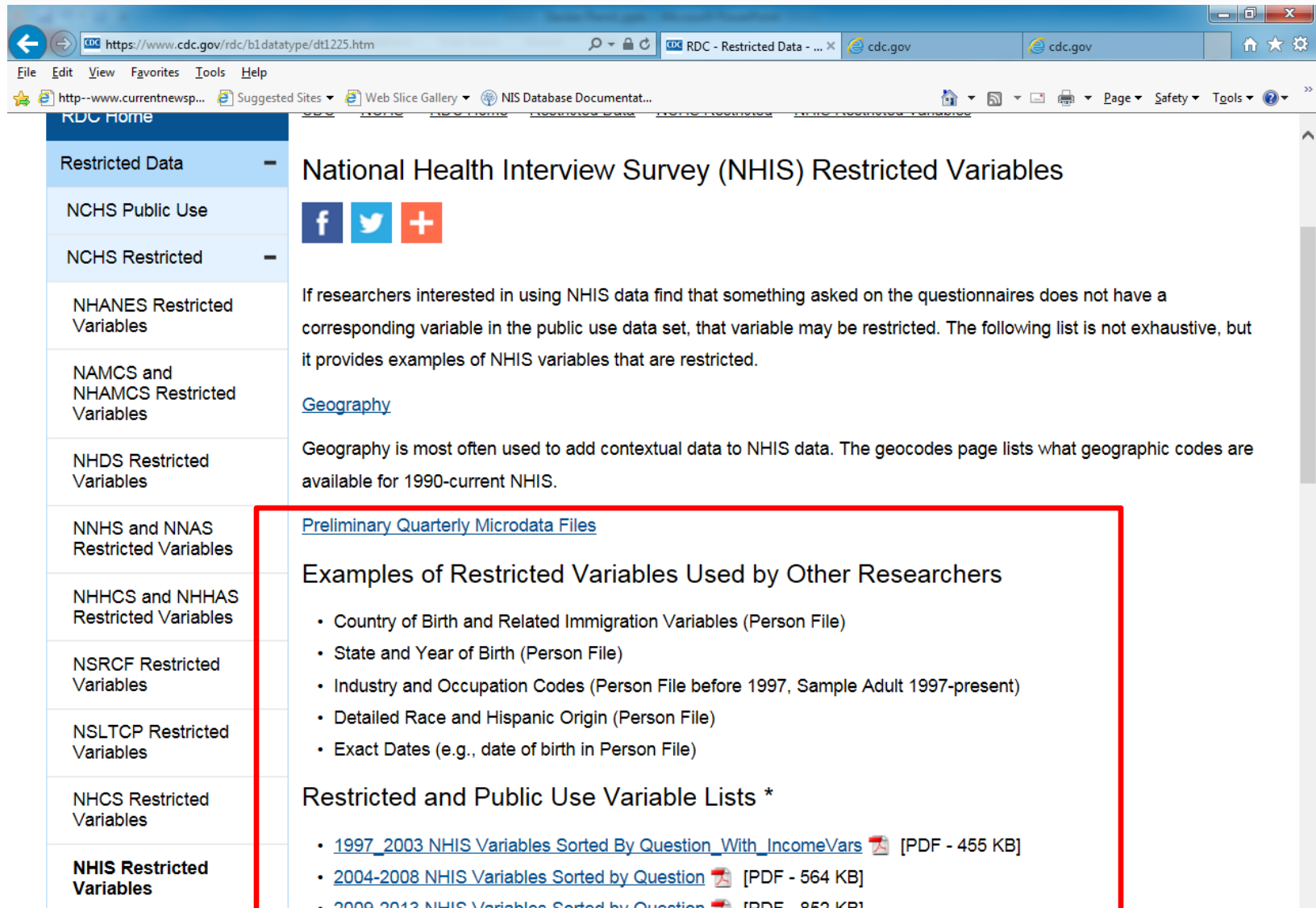
**Physician practice variables**

MULTI - Single or multi-specialty practice (2001-current)  
NUMPHYR - Number of physicians in this practice (2001-current)  
FGRAD - Did physician graduate from foreign medical school? (2001- current)  
PYOB - Physician year of birth  
PHYSEX - Physician sex  
PHYRACE - Physician race (added to the restricted file starting in 2001, but not available 2008-2009 except for community health center physicians; collected for all physicians 2010-current)  
SPEC - Physician's 3-digit alphanumeric specialty code (only available on the restricted file starting with the 2008 survey year; in previous years this variable was available on the public use file)

The following 12 variables were added to the restricted file starting with 2006 data but were not collected after 2008:

CTSCAN - Does practice have ability to perform CT scans on site?  
CHEMO - Does practice have ability to perform chemotherapy on site?  
COLONSC - Does practice have ability to perform colonoscopy on site?  
EKGECG- Does practice have ability to perform EKG/ECG on site?  
MAMMOPII - Does practice have ability to perform mammography on site?  
MRIPII - Does practice have ability to perform MRI on site?  
PETSCAN - Does practice have ability to perform PET scans on site?  
RADITHR - Does practice have ability to perform radiation therapy on site? 3  
SIGMOID - Does practice have ability to perform sigmoidoscopy on site?  
SPIROM - Does practice have ability to perform spirometry on site?  
ULTPSND - Does practice have ability to perform ultrasound on site?





The screenshot shows a web browser window with the URL <https://www.cdc.gov/rdc/b1datatype/dt1225.htm>. The page title is "National Health Interview Survey (NHIS) Restricted Variables". The left sidebar contains a navigation menu with the following items: "RDC Home", "Restricted Data", "NCHS Public Use", "NCHS Restricted", "NHANES Restricted Variables", "NAMCS and NHAMCS Restricted Variables", "NHDS Restricted Variables", "NNHS and NNAS Restricted Variables", "NHHCS and NHHAS Restricted Variables", "NSRCF Restricted Variables", "NSLTCP Restricted Variables", "NHCS Restricted Variables", and "NHIS Restricted Variables". The main content area includes social media icons for Facebook, Twitter, and a plus sign. It contains a paragraph explaining that if researchers find a variable on questionnaires that is not in the public use data set, it may be restricted. A link for "Geography" is provided, followed by a paragraph stating that geocodes are used to add contextual data and are available for 1990-current NHIS. A red box highlights the "Preliminary Quarterly Microdata Files" link, the "Examples of Restricted Variables Used by Other Researchers" section (which lists: Country of Birth and Related Immigration Variables, State and Year of Birth, Industry and Occupation Codes, Detailed Race and Hispanic Origin, and Exact Dates), and the "Restricted and Public Use Variable Lists" section (which lists three PDF files: 1997-2003 NHIS Variables Sorted By Question With IncomeVars, 2004-2008 NHIS Variables Sorted by Question, and 2009-2013 NHIS Variables Sorted by Question).

## National Health Interview Survey (NHIS) Restricted Variables

If researchers interested in using NHIS data find that something asked on the questionnaires does not have a corresponding variable in the public use data set, that variable may be restricted. The following list is not exhaustive, but it provides examples of NHIS variables that are restricted.

[Geography](#)

Geography is most often used to add contextual data to NHIS data. The geocodes page lists what geographic codes are available for 1990-current NHIS.

[Preliminary Quarterly Microdata Files](#)

### Examples of Restricted Variables Used by Other Researchers

- Country of Birth and Related Immigration Variables (Person File)
- State and Year of Birth (Person File)
- Industry and Occupation Codes (Person File before 1997, Sample Adult 1997-present)
- Detailed Race and Hispanic Origin (Person File)
- Exact Dates (e.g., date of birth in Person File)

### Restricted and Public Use Variable Lists \*

- [1997-2003 NHIS Variables Sorted By Question With IncomeVars](#) [PDF - 455 KB]
- [2004-2008 NHIS Variables Sorted by Question](#) [PDF - 564 KB]
- [2009-2013 NHIS Variables Sorted by Question](#) [PDF - 852 KB]



# NHIS and NHIS Early Release Program

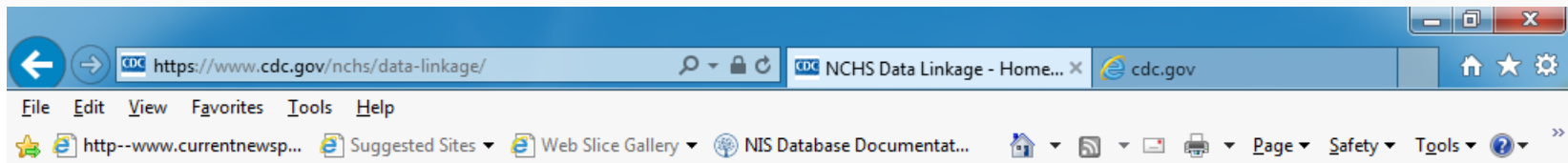
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- **Annual puf** released in late June of the following year. E.g., NHIS 2015 released in September 2016
  - Restricted data with state IDs usually available about one week later
  - Income imputations for that year usually available in August-September
- **Quarterly files**
  - Only select variables (see website)
  - Q1 available September of same year, Q2 available November of same year, Q3 available February of following year, Q4 available May of following year
  - For example, 2014 Q1 data available September 2014...full-year 2014 data available June 2015...



# NCHS Data Linkage

<https://www.cdc.gov/nchs/data-linkage/>



## NCHS Data Linkage

[CDC](#) > [NCHS](#)

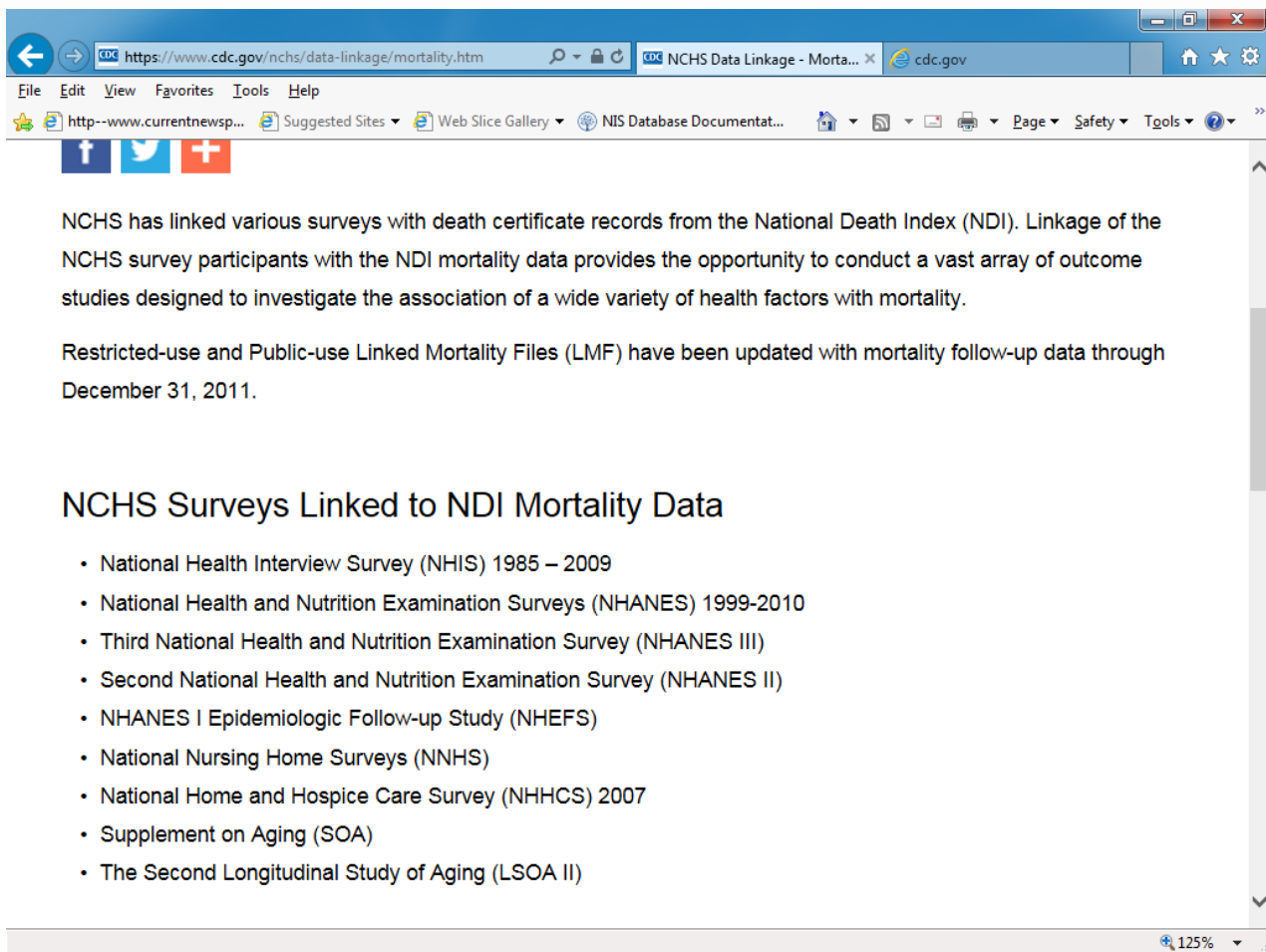
### NCHS Data Linkage Activities



NCHS has developed a record linkage program designed to maximize the scientific value of the Center's population-based surveys. Linked data files enable researchers to examine the factors that influence disability, chronic disease, health care utilization, morbidity, and mortality.

NCHS is currently linking various NCHS surveys with administrative data from the following:

- [National Death Index \(NDI\)](#)
- Centers for Medicare and Medicaid Services (CMS)
  - [Medicare](#)
  - [Medicaid/CHIP](#)
- [United States Renal Data System \(USRDS\)](#)
- [Social Security Administration \(SSA\)](#)
- [Department of Housing and Urban Development \(HUD\)](#)



The screenshot shows a web browser window with the address bar displaying <https://www.cdc.gov/nchs/data-linkage/mortality.htm>. The page content includes a paragraph about NCHS linking surveys with death certificate records from the NDI, a note about updated mortality follow-up data through December 31, 2011, and a section titled "NCHS Surveys Linked to NDI Mortality Data" with a bulleted list of surveys.

NCHS has linked various surveys with death certificate records from the National Death Index (NDI). Linkage of the NCHS survey participants with the NDI mortality data provides the opportunity to conduct a vast array of outcome studies designed to investigate the association of a wide variety of health factors with mortality.

Restricted-use and Public-use Linked Mortality Files (LMF) have been updated with mortality follow-up data through December 31, 2011.

### NCHS Surveys Linked to NDI Mortality Data

- National Health Interview Survey (NHIS) 1985 – 2009
- National Health and Nutrition Examination Surveys (NHANES) 1999-2010
- Third National Health and Nutrition Examination Survey (NHANES III)
- Second National Health and Nutrition Examination Survey (NHANES II)
- NHANES I Epidemiologic Follow-up Study (NHEFS)
- National Nursing Home Surveys (NNHS)
- National Home and Hospice Care Survey (NHHCS) 2007
- Supplement on Aging (SOA)
- The Second Longitudinal Study of Aging (LSOA II)



# Medicare link

The screenshot shows a web browser window with the URL <https://www.cdc.gov/nchs/data-linkage/medicare.htm>. The page title is "NCHS Data Linkage - Medicare". The left sidebar contains a list of products: NDI Mortality Data, CMS Medicare Enrollment and Claims Data (selected), Public-Use Feasibility Files, Restricted-Use Data, Linkage Methods / Analytic Support, CMS Medicaid Enrollment and Claims Data, USRDS End-Stage Renal Disease Data, SSA Benefit History Data, HUD Housing Assistance Program Data, and FAQs. Below the sidebar is a "Related Sites" section with a link to "Research Data Center". The main content area has the heading "NCHS Data Linked to CMS Medicare Enrollment and Claims Files" with social media icons for Facebook, Twitter, and a plus sign. The text explains that NCHS has linked various surveys with Medicare enrollment and claims records collected from the Centers for Medicare and Medicaid Services (CMS). It states that linkage of the NCHS survey participants with the CMS Medicare data provides the opportunity to study changes in health status, health care utilization, and expenditures in the elderly and disabled U.S. population. It further details that Medicare enrollment and claims data are available for those NCHS respondents who agreed to provide personal identification data to NCHS and for whom NCHS was able to match with Medicare administrative records. CMS provided NCHS with Medicare benefit claims data for 1999 through 2013 for all successfully matched NCHS survey participants. For certain NCHS surveys, the Medicare administrative files include data from before and after the survey year of interview. CMS also provided to NCHS Medicare Part D data for 2006-2013. Below this is the heading "NCHS Surveys Linked to 1999- 2013\* CMS Medicare Data" followed by a bulleted list of surveys: 1994-2013 National Health Interview Survey (NHIS), 1999-2012 National Health and Nutrition Examination Survey (NHANES), NHANES I Epidemiologic Follow-up Study (NHEFS), Third National Health and Nutrition Examination Survey (NHANES III), The Second Longitudinal Study of Aging (LSOA II), 2004 National Nursing Home Survey (NNHS), and 2007 National Home and Hospice Care Survey (NHHCS). A footnote states: "\* 1991-1998 linked NCHS-CMS Medicare data are available from a previous linkage for some of the surveys listed. Please contact the NCHS Data Linkage Team for more information." The browser window shows multiple tabs, including "NCHS Data Linkage - Medicare..." and "cdc.gov". The status bar at the bottom indicates a zoom level of 125%.

Products

- NDI Mortality Data +
- CMS Medicare Enrollment and Claims Data -**
- Public-Use Feasibility Files
- Restricted-Use Data
- Linkage Methods / Analytic Support
- CMS Medicaid Enrollment and Claims Data +
- USRDS End-Stage Renal Disease Data +
- SSA Benefit History Data +
- HUD Housing Assistance Program Data +
- FAQs

**Related Sites**

- [Research Data Center](#)

## NCHS Data Linked to CMS Medicare Enrollment and Claims Files

NCHS has linked various surveys with Medicare enrollment and claims records collected from the Centers for Medicare and Medicaid Services (CMS). Linkage of the NCHS survey participants with the CMS Medicare data provides the opportunity to study changes in health status, health care utilization, and expenditures in the elderly and disabled U.S. population.

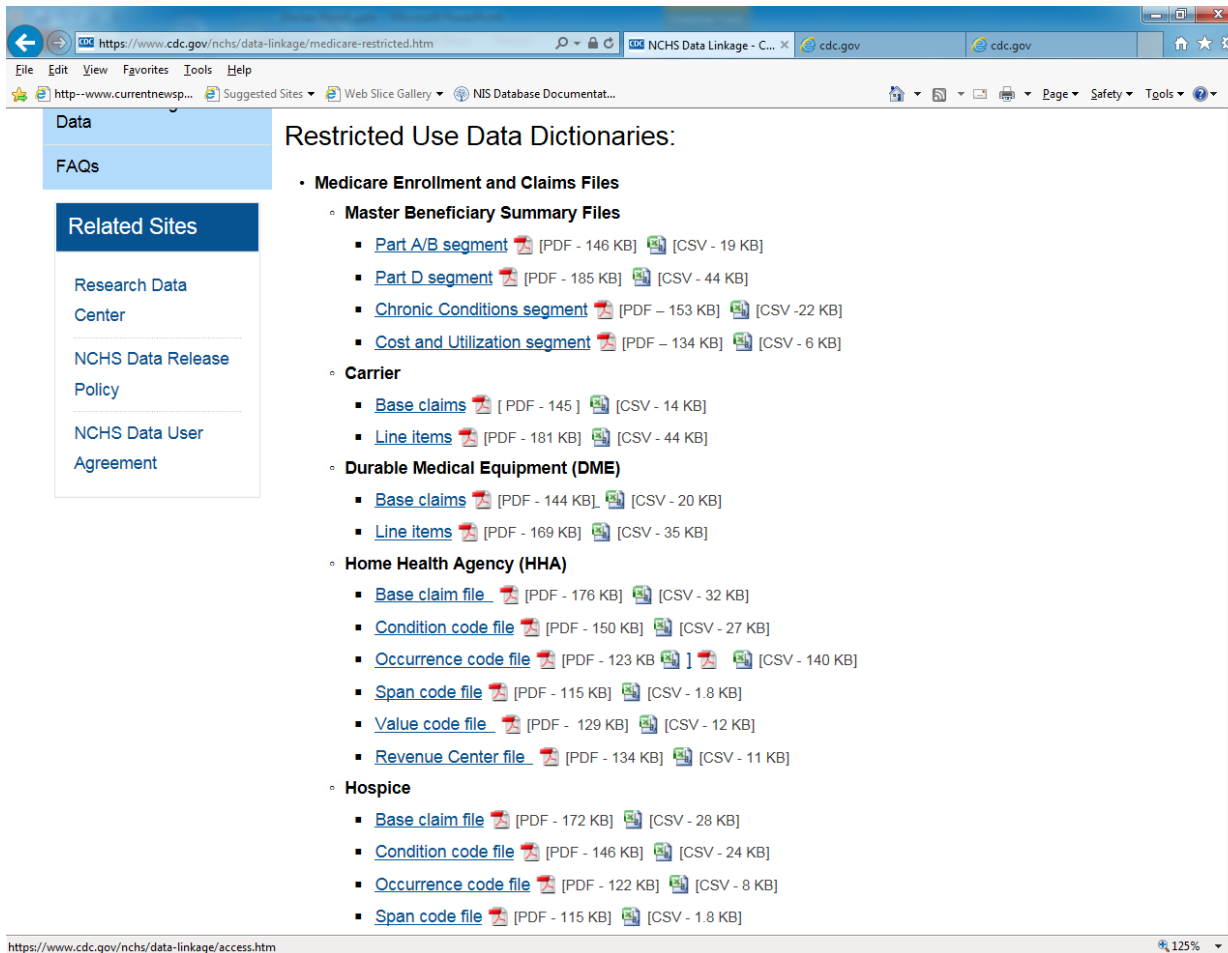
Medicare enrollment and claims data are available for those NCHS respondents who agreed to provide personal identification data to NCHS and for whom NCHS was able to match with Medicare administrative records. CMS provided NCHS with Medicare benefit claims data for 1999 through 2013 for all successfully matched NCHS survey participants. For certain NCHS surveys, the Medicare administrative files include data from before and after the survey year of interview. CMS also provided to NCHS Medicare Part D data for 2006-2013.

## NCHS Surveys Linked to 1999- 2013\* CMS Medicare Data

- 1994-2013 National Health Interview Survey (NHIS)
- 1999-2012 National Health and Nutrition Examination Survey (NHANES)
- NHANES I Epidemiologic Follow-up Study (NHEFS)
- Third National Health and Nutrition Examination Survey (NHANES III)
- The Second Longitudinal Study of Aging (LSOA II)
- 2004 National Nursing Home Survey (NNHS)
- 2007 National Home and Hospice Care Survey (NHHCS)

\* 1991-1998 linked NCHS-CMS Medicare data are available from a previous linkage for some of the surveys listed. Please contact the NCHS Data Linkage Team for more information.

# Medicare Variables



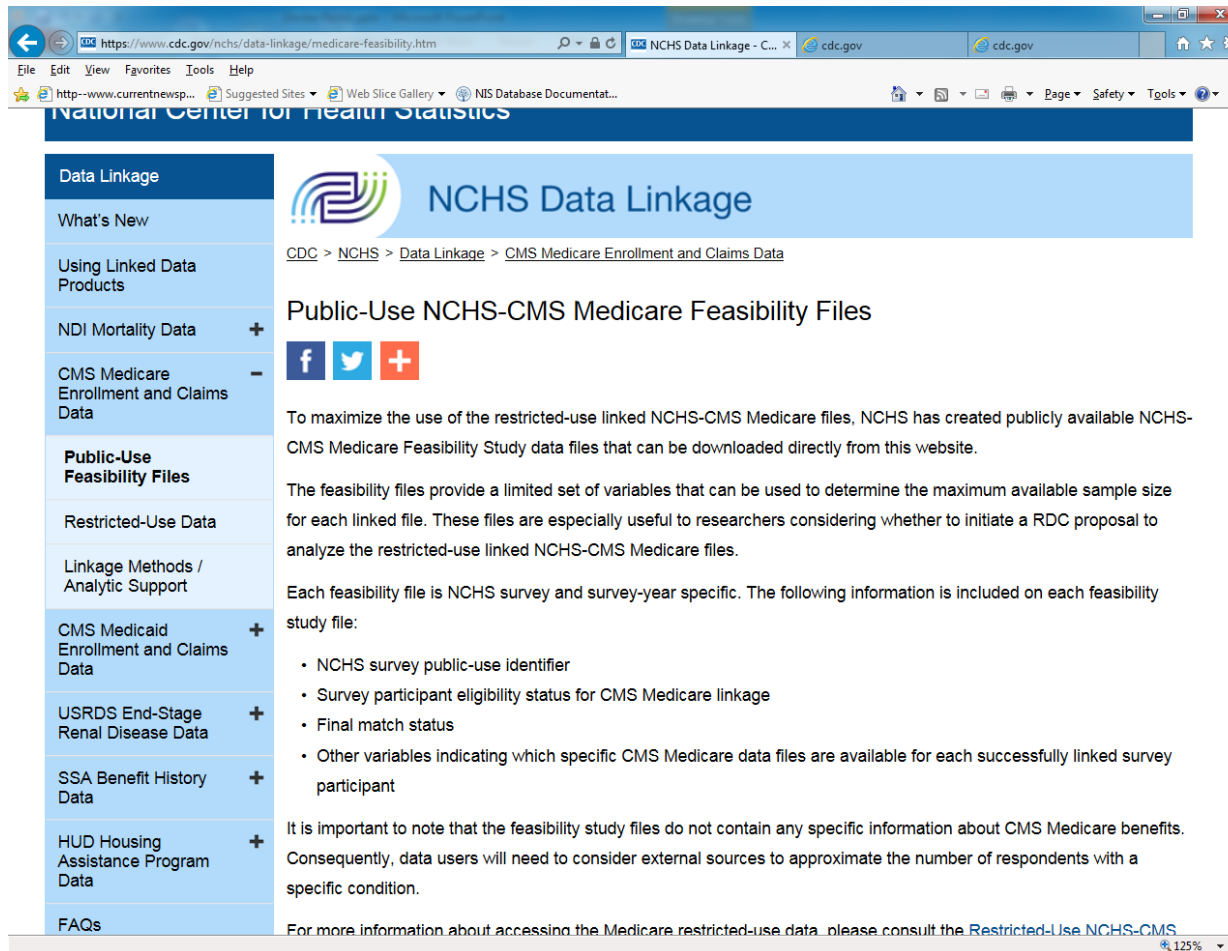
The screenshot shows a web browser window with the URL <https://www.cdc.gov/nchs/data-linkage/medicare-restricted.htm>. The page title is "Restricted Use Data Dictionaries:". On the left, there is a sidebar with a "Data" menu, "FAQs", and a "Related Sites" section containing links to "Research Data Center", "NCHS Data Release Policy", and "NCHS Data User Agreement". The main content area lists several categories of data dictionaries, each with a list of specific files and their formats and sizes.

**Restricted Use Data Dictionaries:**

- **Medicare Enrollment and Claims Files**
  - **Master Beneficiary Summary Files**
    - [Part A/B segment](#) [PDF - 146 KB] [CSV - 19 KB]
    - [Part D segment](#) [PDF - 185 KB] [CSV - 44 KB]
    - [Chronic Conditions segment](#) [PDF - 153 KB] [CSV - 22 KB]
    - [Cost and Utilization segment](#) [PDF - 134 KB] [CSV - 6 KB]
  - **Carrier**
    - [Base claims](#) [PDF - 145] [CSV - 14 KB]
    - [Line items](#) [PDF - 181 KB] [CSV - 44 KB]
  - **Durable Medical Equipment (DME)**
    - [Base claims](#) [PDF - 144 KB] [CSV - 20 KB]
    - [Line items](#) [PDF - 169 KB] [CSV - 35 KB]
  - **Home Health Agency (HHA)**
    - [Base claim file](#) [PDF - 176 KB] [CSV - 32 KB]
    - [Condition code file](#) [PDF - 150 KB] [CSV - 27 KB]
    - [Occurrence code file](#) [PDF - 123 KB] [CSV - 140 KB]
    - [Span code file](#) [PDF - 115 KB] [CSV - 1.8 KB]
    - [Value code file](#) [PDF - 129 KB] [CSV - 12 KB]
    - [Revenue Center file](#) [PDF - 134 KB] [CSV - 11 KB]
  - **Hospice**
    - [Base claim file](#) [PDF - 172 KB] [CSV - 28 KB]
    - [Condition code file](#) [PDF - 146 KB] [CSV - 24 KB]
    - [Occurrence code file](#) [PDF - 122 KB] [CSV - 8 KB]
    - [Span code file](#) [PDF - 115 KB] [CSV - 1.8 KB]

<https://www.cdc.gov/nchs/data-linkage/access.htm>

# Feasibility files



The screenshot shows a web browser window displaying the NCHS Data Linkage website. The URL bar shows <https://www.cdc.gov/nchs/data-linkage/medicare-feasibility.htm>. The page title is "NCHS Data Linkage". The left sidebar contains a navigation menu with the following items: Data Linkage, What's New, Using Linked Data Products, NDI Mortality Data (+), CMS Medicare Enrollment and Claims Data (-), **Public-Use Feasibility Files**, Restricted-Use Data, Linkage Methods / Analytic Support, CMS Medicaid Enrollment and Claims Data (+), USRDS End-Stage Renal Disease Data (+), SSA Benefit History Data (+), HUD Housing Assistance Program Data (+), and FAQs.

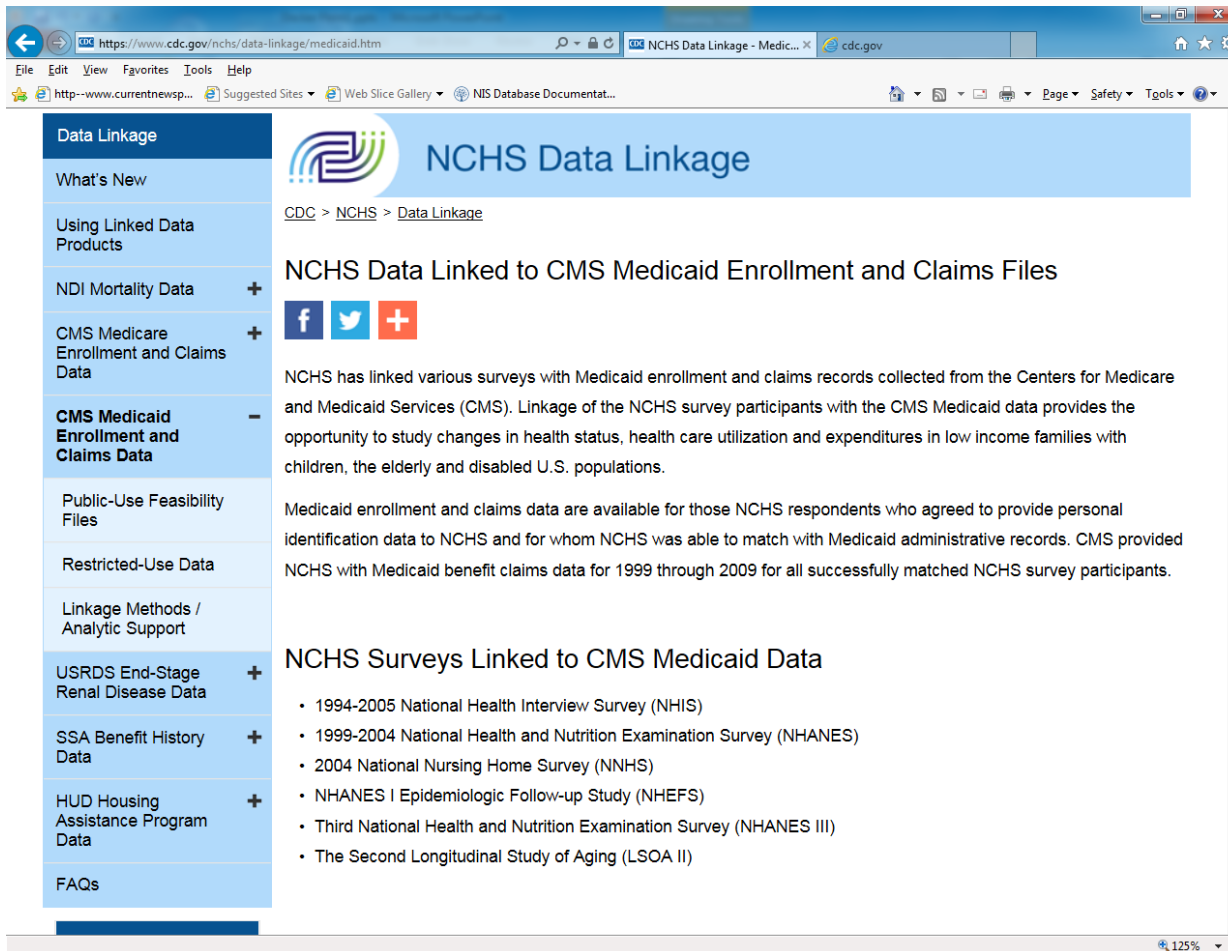
The main content area is titled "Public-Use NCHS-CMS Medicare Feasibility Files" and includes social media icons for Facebook, Twitter, and a general share button. The text explains that to maximize the use of the restricted-use linked NCHS-CMS Medicare files, NCHS has created publicly available NCHS-CMS Medicare Feasibility Study data files that can be downloaded directly from this website. It further states that the feasibility files provide a limited set of variables that can be used to determine the maximum available sample size for each linked file. These files are especially useful to researchers considering whether to initiate a RDC proposal to analyze the restricted-use linked NCHS-CMS Medicare files. Each feasibility file is NCHS survey and survey-year specific. The following information is included on each feasibility study file:

- NCHS survey public-use identifier
- Survey participant eligibility status for CMS Medicare linkage
- Final match status
- Other variables indicating which specific CMS Medicare data files are available for each successfully linked survey participant

It is important to note that the feasibility study files do not contain any specific information about CMS Medicare benefits. Consequently, data users will need to consider external sources to approximate the number of respondents with a specific condition.

For more information about accessing the Medicare restricted-use data, please consult the [Restricted-Use NCHS-CMS](#)

# Medicaid Link



The screenshot shows a web browser window displaying the NCHS Data Linkage website. The address bar shows the URL <https://www.cdc.gov/nchs/data-linkage/medicaid.htm>. The page has a blue header with the NCHS Data Linkage logo and navigation links. A left sidebar contains a table of contents with expandable sections. The main content area features the title "NCHS Data Linked to CMS Medicaid Enrollment and Claims Files" and a detailed description of the data linkage project.

Data Linkage	
What's New	
Using Linked Data Products	
NDI Mortality Data	+
CMS Medicare Enrollment and Claims Data	+
<b>CMS Medicaid Enrollment and Claims Data</b>	-
Public-Use Feasibility Files	
Restricted-Use Data	
Linkage Methods / Analytic Support	
USRDS End-Stage Renal Disease Data	+
SSA Benefit History Data	+
HUD Housing Assistance Program Data	+
FAQs	

## NCHS Data Linkage

CDC > NCHS > Data Linkage

### NCHS Data Linked to CMS Medicaid Enrollment and Claims Files

[f](#) [t](#) [+](#)

NCHS has linked various surveys with Medicaid enrollment and claims records collected from the Centers for Medicare and Medicaid Services (CMS). Linkage of the NCHS survey participants with the CMS Medicaid data provides the opportunity to study changes in health status, health care utilization and expenditures in low income families with children, the elderly and disabled U.S. populations.

Medicaid enrollment and claims data are available for those NCHS respondents who agreed to provide personal identification data to NCHS and for whom NCHS was able to match with Medicaid administrative records. CMS provided NCHS with Medicaid benefit claims data for 1999 through 2009 for all successfully matched NCHS survey participants.

### NCHS Surveys Linked to CMS Medicaid Data

- 1994-2005 National Health Interview Survey (NHIS)
- 1999-2004 National Health and Nutrition Examination Survey (NHANES)
- 2004 National Nursing Home Survey (NNHS)
- NHANES I Epidemiologic Follow-up Study (NHEFS)
- Third National Health and Nutrition Examination Survey (NHANES III)
- The Second Longitudinal Study of Aging (LSOA II)





# HUD Link

What's New

Using Linked Data Products

NDI Mortality Data +

CMS Medicare Enrollment and Claims Data +

CMS Medicaid Enrollment and Claims Data +

USRDS End-Stage Renal Disease Data +

SSA Benefit History Data +

**HUD Housing Assistance Program Data** -

Public-Use Feasibility Files

Restricted-Use Data

Linkage Methods / Analytic Support

FAQs

**Related Sites**

CDC > NCHS > Data Linkage

## NCHS Data Linked to HUD Housing Assistance Program Files

[f](#) [t](#) [+](#)

NCHS has linked 1999-2012 National Health Interview Survey (NHIS) and 1999-2012 National Health and Nutrition Examination Survey (NHANES) to administrative data through 2014 for the Department of Housing and Urban Development's (HUD) largest housing assistance programs: the Housing Choice Voucher program, public housing, and privately owned, subsidized multifamily housing. Linkage of NCHS survey participants with HUD administrative records provides the opportunity to examine relationships between housing and health.

### NCHS Surveys Linked to HUD Administrative Data

- 1999-2012 National Health Interview Survey (NHIS)
- 1999-2012 National Health and Nutrition Examination Survey (NHANES)

### Questions

The details of the linked data, linkage methods, and analysis considerations, are available from the links on the navigation menu.

For questions about HUD programs and/or data, contact the HUD Office of Policy Development and Research at [NCHS\\_HUD\\_DataLinkage@hud.gov](mailto:NCHS_HUD_DataLinkage@hud.gov) or visit the [HUD User website](#).

For any additional questions about the NCHS-HUD linked files, contact the NCHS Data Linkage Team:

Data Linkage Team



# Plan for Presentation

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- **Description of AHRQ data (MEPS)**
- **Description of NCHS datasets**
- **Description of restricted data**
  - Geocodes
  - Other restricted variables
  - Early release data (NHIS)
  - Linked administrative records
- **Examples of use of restricted data**
- **Some proposal tips**

# Example of use of NHIS and NHANES restricted data

Journal of Health Economics 44 (2015) 212–225



Contents lists available at ScienceDirect

Journal of Health Economics

journal homepage: [www.elsevier.com/locate/econbase](http://www.elsevier.com/locate/econbase)



## Do Medicaid benefit expansions have teeth? The effect of Medicaid adult dental coverage on the use of dental services and oral health<sup>☆</sup>



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I11, I13, I18Medicaid  
Health insurance expansions  
Oral health

### ABSTRACT

This article examines the effect of Medicaid adult dental coverage on use of dental care and dental health outcomes using state-level variation in dental coverage during 2000–2012. Our findings imply that dental coverage is associated with an increase in the likelihood of a recent dental visit, with the size of the effect increasing with Medicaid payment rates to dentists, and a reduction in the likelihood of untreated dental caries. We are among the first to detect an effect of Medicaid coverage on a clinical health outcome other than mortality. These findings may have implications for states expanding Medicaid coverage to adults with incomes of up to 138% of the federal poverty threshold under the Affordable Care Act as most of these states offer an adult dental benefit.

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# Background and Objective

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- **Medicaid coverage of dental services for adults is optional**
- **Most states cover emergency services, but only 26 states provided preventive and/or restorative services in 2012**
- **Dental health is associated with systemic health: cardiovascular disease (e.g., Oliveira et al. 2010), respiratory infections (Sjogren et al. 2008), metabolic control for diabetes patients (Simpson et al. 2010)**

**The objective of this paper is to assess the relationship between optional coverage of adult dental services and the use of dental care and oral health outcomes for adults on Medicaid**



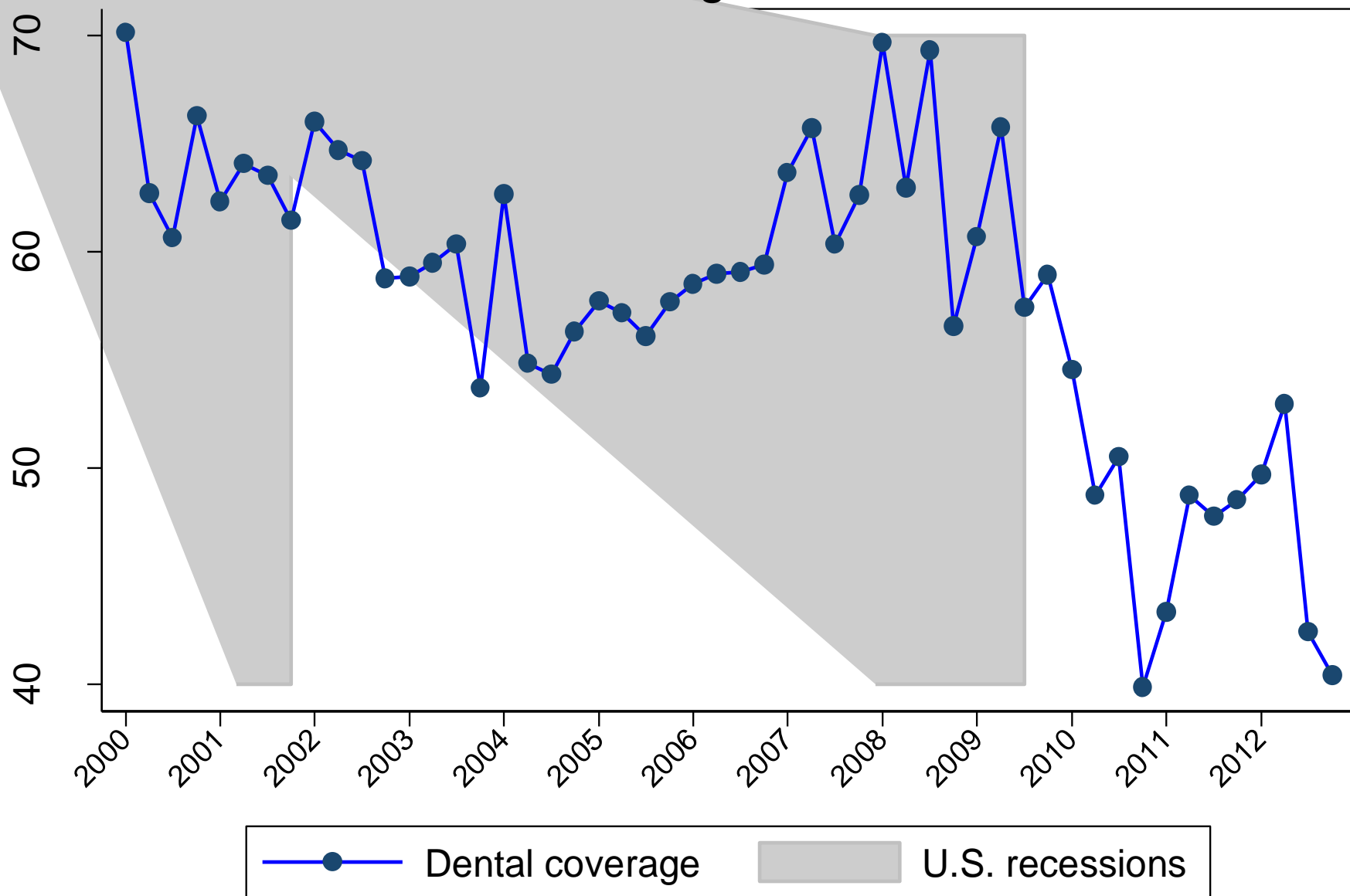


# Our contribution

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- One published national study estimates the effect of Medicaid dental coverage on the likelihood of having a dental visit (Choi, 2011)
- We expand this analysis by using changes within states over time to identify the effect of dental coverage on dental utilization
- In addition, we are the first to:
  - Analyze the effect of **payment rates** to dentists on dental utilization outcomes
  - Analyze the effect of coverage on **dental health** outcomes

Percentage of Medicaid beneficiaries with dental coverage, NHIS, 2000-2012





# Data and Outcome Measures

---

- **NHIS (2000-2012)**
  - **Main analysis includes 14,673 Medicaid beneficiaries aged 22-64 and 89,496 low income adults aged 22-64 not on Medicaid as a control group**
- **NHANES (2000, 2001/2002, 2003/2004, 2005/2006, 2007/2008, 2011/2012)**
  - **Main analysis includes 756 Medicaid beneficiaries aged 22-64 and 6,580 low income adults not on Medicaid as a control group**
- **Medicaid coverage of adult dental 2000-2012**
- **Medicaid reimbursement of adult prophylaxis**
  - **Lewin Group (2000/2001), Urban Institute (2008/2009)**





# Data and Outcome Measures

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- **Dental utilization**

- **NHIS 2000-2012**: Seen dentist past 6 mos., seen dentist past year, needing but not receiving dental care due to cost
- **NHANES 2000-2004, 2011-2012**: Seen dentist past 6 mos., seen dentist past year

- **Dental Health**

- **NHIS 2008**: broken/missing teeth, stained teeth, loose teeth, broken/missing fillings
- **NHANES**: untreated caries (2000-2008, 2011-2012), teeth missing without replacement (2000-2004, 2011-2012)



# Methodology – Effect of Dental Coverage on Outcomes

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$$Y_{ist} = \beta_1 \text{Dental}_{st} + \beta_2 \text{Medicaid}_{it} + \beta_3 \text{Dental}_{st} \\ \times \text{Medicaid}_{it} + \beta_4 X_{ist} + \gamma_{0s} + \gamma_{1s}t + \tau_t + \varepsilon_{ist}$$

- $\beta_1$  estimates the effect of dental coverage for the control group
- $\beta_2$  estimates the effect of having Medicaid coverage in states without dental coverage
- $\beta_3$  is the DDD estimate
- $X_{ist}$  is a vector of controls including age, age squared, race, sex, education, marital status, health status, ratio of family income to the poverty level, an urban area indicator, local supply of dentists per 1,000 population, and the annual local unemployment rate



## Regression estimates of the effect of Medicaid coverage of adult dental services on dental utilization outcomes, NHIS and NHANES (2000-2012)

	Medicaid beneficiaries, outcome means			Regression estimates, percentage point difference, dental coverage vs. no dental coverage		DDD Estimate
	Dental coverage	No dental coverage	Difference	Low income adults	Medicaid beneficiaries	
NHIS						
Seen dentist past year	56.48 (0.745)	38.01 (0.838)	18.47*** (1.109)	0.84 (1.348)	13.72*** (1.935)	12.88*** (1.742)
Seen dentist, past 6 months	35.49 (0.688)	21.53 (0.615)	13.96*** (0.908)	1.45 (1.153)	10.91*** (1.989)	9.46*** (1.412)
Did not get dental care because of cost	12.77 (0.563)	27.06 (0.837)	-14.29*** (0.981)	-0.54 (1.327)	-12.60*** (2.230)	-12.06*** (1.928)
NHANES						
Seen dentist past year	52.06 (3.480)	36.08 (3.744)	15.98*** (4.895)	4.92* (2.675)	17.86** (4.757)	12.95** (4.914)
Seen dentist, past 6 months	34.68 (2.985)	18.74 (3.495)	15.95*** (4.623)	1.95 (3.076)	13.74*** (4.028)	11.79** (4.810)



# Regression estimates of the effect of Medicaid coverage of adult dental services on dental health outcomes, NHIS (2008) and NHANES (2000-2012)

Medicaid beneficiaries, outcome means				Regression estimates, Percentage point difference, dental coverage vs. no dental coverage		DiD Estimate
Dental coverage	No dental coverage	Difference	Low income adults	Medicaid beneficiaries		
NHIS (2008) <sup>b</sup>						
Broken or missing teeth, past year	27.77 (2.353)	46.42 (3.661)	-18.65*** (4.362)	-0.71 (1.498)	-15.19*** (4.711)	-14.48*** (4.983)
Stained teeth, past year	26.17 (2.953)	43.95 (3.889)	-17.78*** (4.884)	0.13 (2.004)	-15.27*** (-26.29, -4.25)	-14.51*** -5.559
Loose teeth, past year	11.28 (2.062)	13.88 (2.591)	-2.61 (3.320)	0.60 (1.009)	-4.03 (-11.38, 3.32)	-2.70 (3.634)
Broken/missing fillings, past year	16.21 (2.013)	25.98 (4.220)	-9.77** (4.688)	0.34 (1.635)	-8.22 (5.273)	-8.57* (4.902)
NHANES <sup>c</sup>						
Any untreated caries	34.69 (2.890)	46.93 (3.270)	-12.24*** (4.490)	-3.25 (2.311)	-12.77*** (4.214)	-9.52*** (3.383)
Any missing teeth, not replaced	56.05 (4.521)	58.50 (4.958)	-2.40 (6.684)	-1.34 (4.630)	-3.80 (6.830)	-2.46 (6.121)
Any missing teeth due to dental disease, not replaced	53.09 (4.006)	55.14 (5.435)	-2.04 (6.995)	-0.54 (4.269)	-3.02 (6.537)	-2.48 (5.829)

# Conclusions

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- **Our study found that Medicaid coverage of adult dental was associated with increased utilization of dental services and reduced the likelihood of negative oral health outcomes.**
- **Further, payment rates to dentists were associated with the size of the effect of dental coverage.**
- **Effective January 2014, 26 states expanded Medicaid eligibility, and 20 of these states offer at least limited dental services.**
- **The positive association between coverage and utilization of dental services will increase Medicaid spending in the short run, while the reduction in oral health problems may reduce spending in the long run.**
  - ▶ **This work may aid in determining the magnitude of these opposing effects**



# Example of use of NHIS linked to Medicare claims

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HEALTH ECONOMICS

*Health Econ.* 21: 1155–1168 (2012)

Published online 24 August 2011 in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/hec.1780

## HEALTH SERVICE USE AMONG THE PREVIOUSLY UNINSURED: IS SUBSIDIZED HEALTH INSURANCE ENOUGH?

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### SUMMARY

Although it has been shown that gaining Medicare coverage at age 65 years increases health service use among the uninsured, difficulty in changing habits or differences in the characteristics of previously uninsured compared with insured individuals may mean that the previously uninsured continue to use the healthcare system differently from others. This study uses Medicare claims data linked to two different surveys—the National Health Interview Survey and the Health and Retirement Study—to describe the relationship between insurance status before age 65 years and the use of Medicare-covered services beginning at age 65 years. Although we do not find statistically significant differences in Medicare expenditures or in the number of hospitalizations by previous insurance status, we do find that individuals who were uninsured before age 65 years continue to use the healthcare system differently from those who were privately insured. Specifically, they have 16% fewer visits to office-based physicians but make 18% and 43% more visits to hospital emergency and outpatient departments, respectively. A key question for the future may be why the previously uninsured seem to continue to use the healthcare system differently from the previously insured. This question may be important to consider as health coverage expansions are implemented. Copyright © 2011 John Wiley & Sons, Ltd.



## Research Question and Motivation

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**Is Medicare spending after age 65 higher for those who were uninsured prior to age 65?**

**If so, then maybe Medicare spending for these individuals beginning at age 65 would be lower if they had been insured before the age of 65.**



# Policy Considerations

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- **Medicare eligibility that begins at age 65 does imply that some of the uninsured before the age of 65 go untreated for certain conditions until they become Medicare eligible**
- **This problem would be exacerbated if the age of Medicare eligibility were raised**
- **This problem would be alleviated if the age of Medicare eligibility were lowered**





Table I. Percent characteristics of HRS and NHIS records that match to Medicare records by insurance status before age 65

	NHIS-Medicare			HRS-Medicare		
	Uninsured	Publicly insured	Privately insured	Uninsured	Publicly insured	Privately insured
<b>Attributes before age 65</b>						
Female	59.9	53.0	52.7	57.4	51.3	50.3
Married	55.4	63.3	79.6	60.8	56.7	79.3
Non-Hispanic Black	13.3	14.3	5.7	21.2	27.0	9.9
Hispanic	16.1	8.7	3.7	19.0	14.7	3.3
Non-Hispanic and Non-Black or non-White	6.4	4.2	1.9	3.0	2.2	1.2
Less than high school	48.2	36.6	16.3	48.8	48.9	16.5
High school degree	29.8	32.1	38.5	33.2	34.1	41.9
Some college	13.0	20.0	24.0	10.4	11.9	20.1
Income < \$20,000	69.1	68.9	46.6	51.6	57.8	11.6
Income ≥ \$20,000, <\$45,000	28.3	31.3	42.2	29.6	23.2	27.5
Health - very good	21.0	17.8	34.3	19.2	9.8	35.4
Health - good	32.5	29.2	30.0	31.0	23.0	32.6
Health - fair	21.4	25.1	8.8	28.0	34.8	13.1
Health - poor	6.2	16.6	1.6	10.8	28.2	3.0

Table II. Use of Medicare services beginning at age 65 according to insurance status before age 65

	Mean for privately insured	Difference relative to privately insured					
		Unadjusted		Adjusted		Adjusted including supplemental insurance and extra health controls	
		Uninsured	Publicly insured	Uninsured	Publicly insured	Uninsured	Publicly insured
<b>NHIS—Medicare</b>							
Expenditures	4930.84	416.49 (570.70)	2349.22*** (391.96)	−609.40 (430.10)	504.79* (289.58)	—	—
Inpatient stays	0.20	0.08* (0.04)	0.13*** (0.02)	0.02 (0.03)	0.04*** (0.01)	—	—
Physician visits	7.29	−1.64*** (0.47)	0.94** (0.29)	−2.02*** (0.44)	0.09 (0.29)	—	—
<b>HRS—Medicare</b>							
Expenditures	4148.46	330.29 (365.60)	3274.15*** (291.57)	−88.50 (386.30)	1809.65*** (315.21)	−59.66 (352.24)	1275.52*** (308.87)
Inpatient stays	0.18	0.07*** (0.02)	0.19*** (0.02)	0.04* (0.02)	0.10*** (0.02)	0.04* (0.02)	0.07*** (0.02)
Physician visits	6.50	−0.38 (0.38)	2.57*** (0.29)	−1.07*** (0.34)	1.32*** (0.31)	−0.70** (0.30)	0.84*** (0.28)

Table III. Use of physician services beginning at age 65 according to insurance status before age 65

		Difference (uninsured – privately insured)		
	Mean for privately insured	Unadjusted	Adjusted	Adjusted including supplemental insurance and extra health controls
<b>NHIS–Medicare</b>				
Physician visits	7.29	–1.64*** (0.47)	–2.02*** (0.44)	–
Office based	6.67	–2.42*** (0.42)	–2.37*** (0.39)	–
General	3.07	–0.34 (0.24)	–0.64*** (0.19)	–
Specialist	3.10	–0.62 (0.09)	–1.39*** (0.27)	–
Other and nonphysician	0.50	–0.20** (0.09)	–0.13** (0.06)	–
Hospital outpatient department	0.33	0.39*** (0.09)	0.17** (0.08)	–
Emergency room	0.29	0.20*** (0.05)	0.08* (0.04)	–
<b>HRS–Medicare</b>				
Physician visits	6.50	–0.38 (0.38)	–1.07*** (0.34)	–0.70** (0.30)
Office based	6.03	–1.10*** (0.35)	–1.39*** (0.31)	–0.97*** (0.28)
General	2.69	–0.35* (0.19)	–0.70*** (0.18)	–0.53*** (0.17)
Specialist	2.87	–0.58** (0.28)	–0.42* (0.26)	–0.21 (0.23)
Other and nonphysician	0.48	–0.18** (0.07)	–0.21*** (0.06)	–0.17*** (0.05)
Hospital outpatient department	0.30	0.41*** (0.07)	0.15** (0.07)	0.13** (0.06)
Emergency room	0.17	0.10*** (0.02)	0.03** (0.02)	0.03** (0.01)



# Example of use of MEPS restricted data

## INSURANCE COVERAGE & THE ACA

By Jessica P. Vistnes and Joel W. Cohen

### DATAWATCH

## Gaining Coverage In 2014: New Estimates Of Marketplace And Medicaid Transitions

*We used data from the Medical Expenditure Panel Survey–Household Component to examine coverage transitions for nonelderly US adults. We found that 71.5 percent of Marketplace enrollees in 2014 had some period of uninsurance before enrollment. In Medicaid expansion states, 17.4 percent of adults who were uninsured throughout 2013 gained Medicaid coverage in 2014, compared with only 5.6 percent in those states between 2012 and 2013.*

**T**here is growing evidence that implementation of major coverage provisions of the Affordable Care Act (ACA) in 2014, such as the expansion of eligibility for Medicaid and the introduction of the federal and state-based Marketplaces, has reduced the number of uninsured people in the United States.<sup>1</sup> However, little is known about insurance transitions associated with the ACA's coverage provisions. This analysis uses newly available nationally rep-

ing that period (Exhibit 1). In states that expanded eligibility for Medicaid, 17.4 percent of adults uninsured in 2013 gained Medicaid coverage in 2014, compared with only 5.6 percent in those states between 2012 and 2013 (Exhibit 2).

### Study Data And Methods

We examined transitions in coverage by using the longitudinal panels in the Medical Expenditure Panel Survey–Household Component

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**Jessica P. Vistnes** (Jessica.Vistnes@ahrq.hhs.gov) is a senior economist in the Center for Financing, Access, and Cost Trends at the Agency for Healthcare Research and Quality (AHRQ), in Rockville, Maryland.

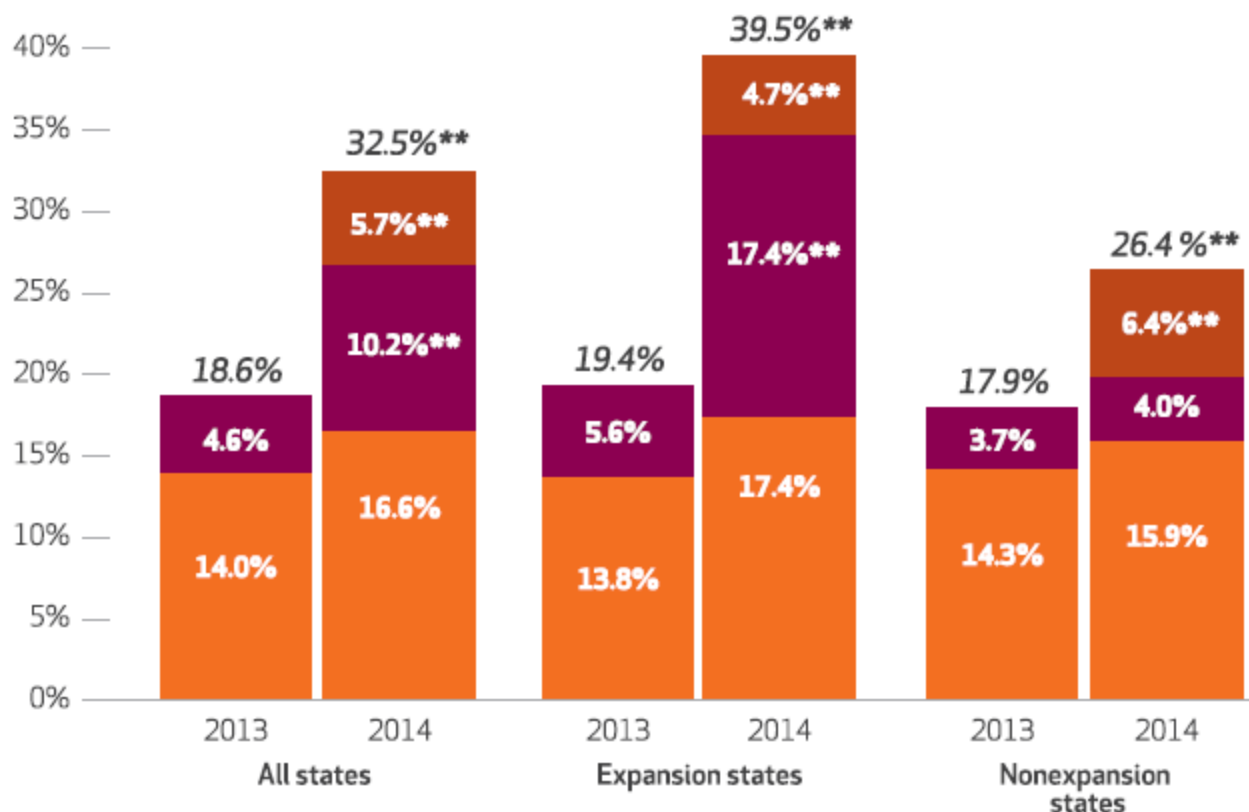
**Joel W. Cohen** is director of the Center for Financing Access and Cost Trends at AHRQ.

## INSURANCE COVERAGE & THE ACA

### EXHIBIT 2

Continuously uninsured adults who gained coverage in 2013 or 2014, by type of coverage gained and state Medicaid expansion status

Marketplace Medicaid Other





# Example of use of restricted data - NAMCS

## MEDICAID EXPANSION

By Sandra L. Decker

### In 2011 Nearly One-Third Of Physicians Said They Would Not Accept New Medicaid Patients, But Rising Fees May Help

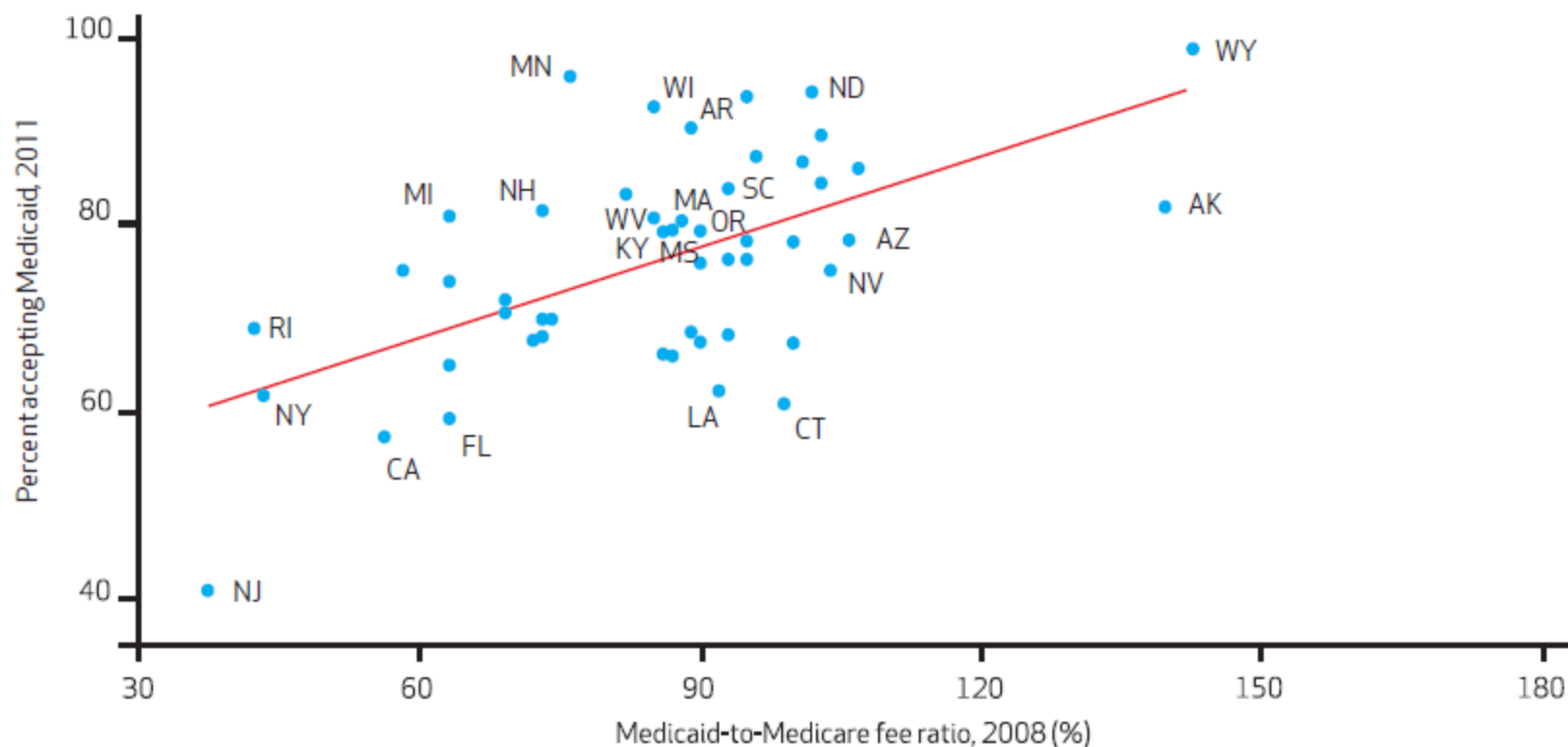
DOI: 10.1377/hlthaff.2012.0294  
HEALTH AFFAIRS 31,  
NO. 8 (2012): 1673-1679  
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Foundation, Inc.

**ABSTRACT** When fully implemented, the Affordable Care Act will expand the number of people with health insurance. This raises questions about the capacity of the health care workforce to meet increased demand. I used data on office-based physicians from the 2011 National Ambulatory Medical Care Survey Electronic Medical Records Supplement to summarize the percentage of physicians currently accepting any new patients. Although 96 percent of physicians accepted new patients in 2011, rates varied by payment source: 31 percent of physicians were unwilling to accept any new Medicaid patients; 17 percent would not accept new Medicare patients; and 18 percent of physicians would not accept new privately insured patients. Physicians in smaller practices and those in metropolitan areas were less likely than others to accept new Medicaid patients. Higher state Medicaid-to-Medicare fee ratios were

**Sandra L. Decker** (sdecker@cdc.gov) is an economist at the National Center for Health Statistics, in Hyattsville, Maryland.

# EXHIBIT 4

Percentage Of US Office-Based Physicians Accepting New Medicaid Patients In 2011 And The Medicaid-To-Medicare Fee Ratio



# Plan for Presentation

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- **Description of AHRQ data (MEPS)**
- **Description of NCHS datasets**
- **Description of restricted data**
  - **Geocodes**
  - **Other restricted variables**
  - **Early release data (NHIS)**
  - **Linked administrative records**
- **Examples of use of restricted data**
- **Some proposal tips**





# RDC

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Page Safety

RDC Staff

FAQs

## Related Sites

[National Center for Health Statistics](#)

[U.S. Census Bureau, Center for Economic Studies](#)

## NCHS RDC Analyst

- Facilitates review of your proposal
- Creates your analytic data set
- Accepts NCHS payment
- Accepts your NCHS Confidentiality requirements
- Transfers your dataset to Census
- Reviews your output for disclosure risk
- At any time, if you have questions, please contact your NCHS RDC Analyst.

## Census RDC Administrators

- Answer logistical questions about the FSRDC such as, statistical software availability, and Census Fees
- Ensure you have completed all the Census Bureau Security requirements
- Accepts Census payments
- Census transfers your output to NCHS for a review

## Before Submitting a Proposal

Researchers interested in accessing NCHS data through a Federal Statistical RDC must submit their proposals dire to NCHS. You will not have to submit a separate proposal to the FSRDC but, in addition to the NCHS requirements, will be required to follow all requirements that the Census Bureau imposes to protect the security and confidentiality the data. If you are considering using an FSRDC, contact your FSRDC Administrator to discuss access requirement how to obtain Special Sworn Status (SSS), and fees for using the FSRDC as well as any other logistical concerns. Please note NCHS and Census fees are independent of each other.

## Before Your Visit

In addition, to the NCHS requirements outlined by your RDC Analyst, the following steps should occur after you rec an approval email from your RDC Analyst:

Restricted Data	+
Access Modes	+
Proposal Process	+
Confidentiality	
Accessing Restricted Data	
<b>Providing the Public Use Data</b>	
Fees and Invoicing	
Publishing Guidelines	+
Reference Materials	
Directions	
RDC Staff	
FAQs	

## Related Sites

[National Center for Health Statistics](#)

[U.S. Census Bureau, Center for Economic](#)

## Providing the Public Use Data



Researchers are responsible for providing the NCHS public dataset as well as any non-NCHS data. Compiling the use dataset provides you the opportunity to become familiar with the data and expedite the data creation process.

- Exception: For NHDS, NAMCS, NHAMCS, and other DHHS data hosted by the RDC, you do not need to provide a public dataset. Your RDC Analyst will provide an extract from the restricted files that includes all of the variables specified in your proposal.
- Non-NCHS Data includes any data collected by the researcher, another government agency, or a private institution that the researcher wishes to merge with NCHS data, often using geographic codes. Examples for policy researchers have included air pollution data, proximity of fast food restaurants, or location of health care providers.

## Instructions:

1. Create a public data set that includes only the variables specified in your proposal.
2. Original NCHS variables must retain the name they are given in the public data set. If you would like to rename variables, include the original variable name in the variable description.
3. If you choose to create derived variables prior to working with the data onsite or via remote access, make sure variables are clearly defined. The variable description should include the original variable name(s) from which derived and any arithmetic manipulation must be explained. Please save the code you used to create these variables as your RDC Analyst may request it.
4. If you are also sending another source of data, for example Census data, this data set should only include the variables specified in your proposal.
5. Discuss with your RDC Analyst the preferred format for any merge variables. This is especially important for merges that involve multiple data sets and multiple merge variables. Create the variables as your RDC Analyst



# RDC Proposal

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**A. Abstract:** Please limit the abstract to 300 words.

**B. Research Question:** Include study purpose, hypotheses, goals, or research questions.

**C. Background:** Include a short literature review, no more than 2 pages, focusing on papers that discuss your topic or address the methodology that you plan to use. Please limit your reference list to 10 items or less.

**D. Public Health Benefit:** In one paragraph, how does your research benefit public health?

**E. Data Requirements:**

Remember to provide an explanation to “yes/checked” responses from the Data Requirements Summary.

**1. Survey, Years, Files:**

For examples, NHIS 2005-2007 Household, Person and Sample Adult Files, NAMCS 2005-2006 Provider and Patient Visit Files, or NHANES 2005-2006 Examination and Demographic Files.

**2. Restricted Data:**

List and describe the restricted variables that you will need. These variables must be listed in the Data Dictionary section as well. Explain why each variable is needed and how you will include them in your analysis. Specify how geographic variables, if applicable, will be used to merge files, analyze the data and/or presented in output.

**3. Non-NCHS Data:**

Will you provide data from another source (such as Census or EPA)? If yes, describe the source, list the files, and provide a general description of the data. These variables must be listed in the Data Dictionary section.



# RDC Proposal

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## **F. Methodology:**

We highly recommend you familiarize yourself with the analytic guidelines of the data you intend to use. Any deviations from the methodology suggested in the guidelines will require explanation as it may pose a disclosure risk.

- 1. Unit or Level of Analysis and Subpopulation(s):**

There can be many levels of analysis: be as detailed as possible. A common example for an analysis of NHANES is where the unit of analysis is the person while the subpopulation is adults ages 18-64. A common example involving geography is when you aggregate persons to the state level so you can compare states with policy A to states with policy B.

- 2. Analysis Plan:** Provide an overall analysis plan that specifies what analytic procedures or models you will use, such as prevalence estimates, logistic regression, or log-linear modeling, or list specific statistical package procedures.

- 3. Complex Survey Design:** Indicate how you will address sample weights, design variables, and other adjustments for the use of complex survey data, if applicable, using the statistical software listed in the General Information area. A detailed description per weight, design variables, and other adjustments are required and central to understanding the limitation of the data. This is a critical element during the proposal review process.



# RDC Proposal

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## **H. Data Dictionary:**

Include a data dictionary for each data source. Provide a public and restricted data dictionary for NCHS. This should simply be a listing of variables you would like in your dataset. See instructions and example [creating the data dictionary](#). When asking for multiple years of data, make sure to reflect the public use layout for each year as variable names can change over years. Include all explanations in Section E. Data Requirements.

- 1. NHDS, NAMCS/NHAMCS, Mortality, Natality, and DHHS Hosted Data Users:** Provide a single dictionary that includes all the variables (public and restricted) you would like extracted for your data set.

**I. References:** Please limit the list to 10 items or less.

**J. Resumes/C.V.:** Please include a 2-page C.V. for each member of the research team listed in the initial proposal (not as attachments).



# **Workshop on Restricted Health Data available at the Philadelphia FSRDC**

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**University of Pennsylvania**  
**March 22, 2017**