

The Health Indicators Warehouse: Accessing aggregated population health data

A presentation to the NCHS Board of Scientific Counselors

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Centers for Disease Control and Prevention
National Center for Health Statistics**

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Internal and external forces

- NCHS often receives special requests for similar data runs
- NCHS needed to increase its efficiency and reduce redundant efforts
- HHS is encouraging its agencies to liberate as much Federal data as possible
- The developer community was increasing the demand for API accessible data sets
- Data users have a growing demand for aggregated measures of health and health determinants (i.e., indicators)

Health Data Initiative: A flagship initiative in the HHS Open Government Plan

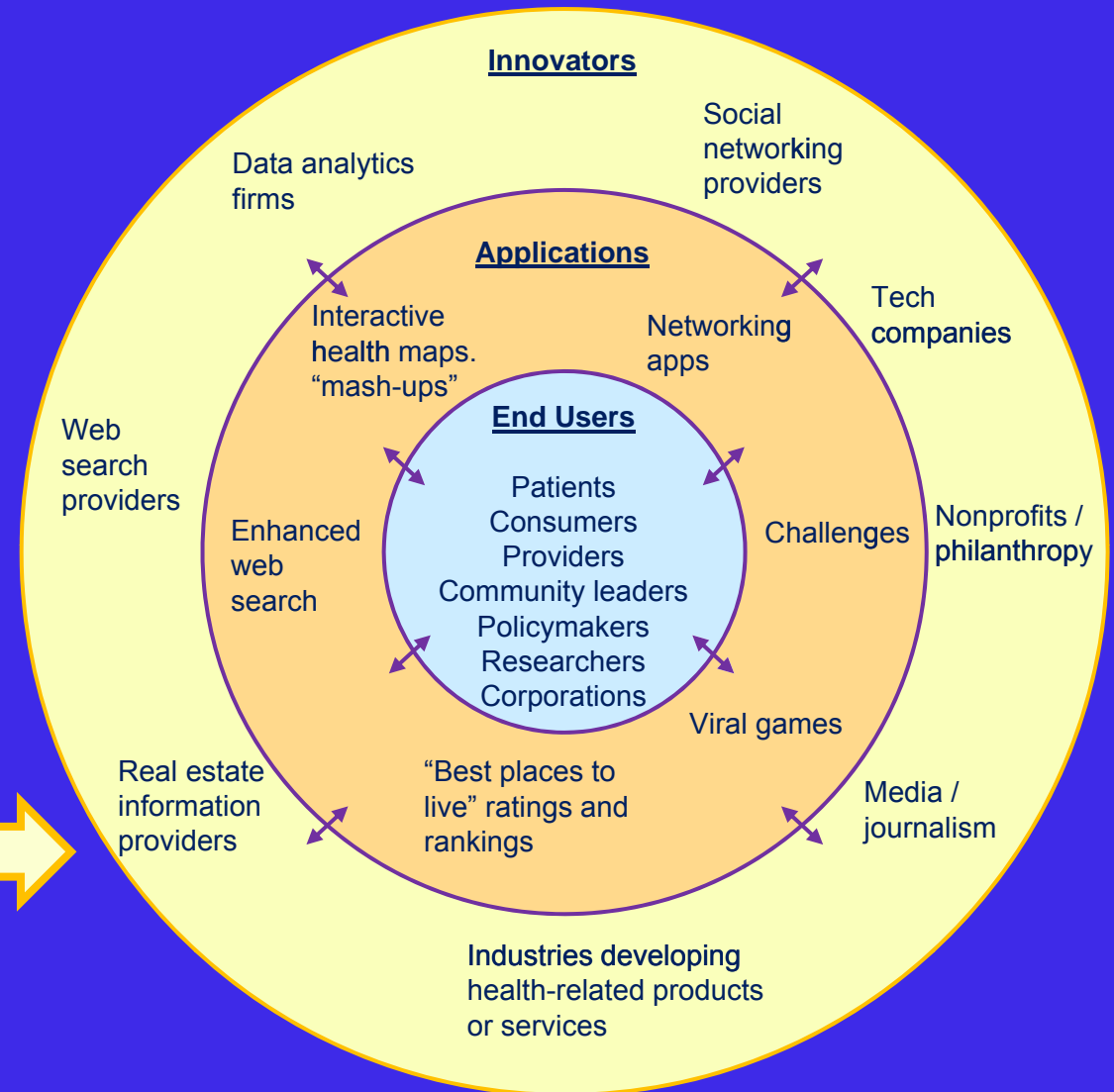
- **Objective**
 - Enhance understanding of health and health care system performance in communities
 - Spark and facilitate action to improve performance and value
- **Approach**
 - Catalyze evolving network of community health data suppliers, applications developers, and end users
 - Provide free, easily accessible, health indicator data
 - Recruit early adopters across an array of potential uses
 - Increase awareness of community performance; increase pressure for decision makers to respond; facilitate and inform actions

HHS' Health Data Initiative Concept

Health Indicators Warehouse

- Health, health care, determinants of health, health behaviors, and more
- Lowest geography possible
- Links to interventions by indicator
- Include data previously unreleased
- Delivered in a structured, standardized, machine-readable, easily accessible way
- Free of charge and intellectual property constraint

Feedback on types of data required, frequency of release, specific indicators, desired dimensions and breakouts, other



Why a Health Indicators Warehouse?

- No adequate web-based, user-friendly HHS-wide database with indicators of multiple dimensions of population health
- Most federal web-based indicator databases are program and condition/event specific
- Need for a vehicle for standardizing indicators to the extent possible across multiple initiatives

Why is HIW at NCHS?

Our mission

- Monitor the Nation's health by collecting, analyzing and disseminating health data
- To inform actions and policies to improve the health of the American people
 - Identify health problems, risk factors, and disease patterns
 - Compare across time, populations, providers and geographic areas

Challenges of creating a single warehouse

- **Many actual and potential data sources**
 - Surveys (national, state, local)
 - Government administrative records
 - EHRs, HIEs, crowd-sourcing, social media/text analysis, and more
- **Varying degrees of rigor and compatibility**
- **Desire for more and better community-level data**
- **Small sample survey sizes**
- **Large standard errors**
- **Limited covariate & subgroup information**
- **Comparability issues**
- **Multiple indicators addressing the same or similar concept using different data sources**

Health Indicators Warehouse (HIW)

www.healthindicators.gov

- **Approximately 1,200 unique indicators**
- **More than 160 data sources**
 - **Federal**: Census data, CMS, Other HHS, ED, Agriculture and other Federal Surveys, Surveillance Data, Medicare Administrative Data, EPA modeled data
 - **State**: BRFSS, Surveillance System Data
 - **Associations**: AMA, AHA, other health professions data
 - **NGOs**: ASTHO, NACCHO, other member surveys

Types of NCHS data sources

www.cdc.gov/nchs/data/factsheets/factsheet_summary.htm

- **National Vital Statistics System**
 - Births and deaths
- **Surveys of people**
 - National Health Interview Survey
 - National Health and Nutrition Examination Survey
 - National Survey of Family Growth
- **National Health Care Surveys**
 - **Ambulatory and Hospital Care**
 - Physician offices
 - Hospitals
 - Emergency departments
 - **Long Term Care**
 - Long term care
 - Residential care
 - Assisted living
 - Hospice care

HIW features

- National, state, and local level indicators
- Graph and map indicators (if data permit)
- Link from indicators to evidence-based interventions
- Supporting metadata to facilitate appropriate use of indicators
- Includes most indicators from
 - Healthy People 2020
 - County Health Rankings
 - Community Health Status Indicators
 - New community level Medicare utilization and quality indicators
- Web service—peer-to-peer/business application capability

HIW is not...

- **An analytic tool to allow users to manipulate data**
- **A table generating tool**
- **Designed for a specific target audience**
- **Designed to replace any existing web-based data tools**

Welcome to the Health Indicators Warehouse (HIW)

Indicators in the HIW are categorized by topic, geography, and initiative.

Select your starting point for exploring indicators in the HIW.

by Topic

Each indicator in the HIW is associated with one or more topic areas, such as disease, condition, age group or sociodemographic characteristics.

Select a topic ▾

by Geography

Most of the indicators in the HIW have national level data. Many indicators also have data available by state, county, and hospital referral regions.

Select a state ▾

by Initiative

The HIW contains indicators derived from and in support of several state and federal health indicator initiatives.

Select an initiative ▾

What's New

4 Release of Version 1.4.5.1

OCT

We are pleased to announce that on October 4th, 2011 the latest version of the Health Indicators Warehouse was released. This release includes new indicator definitions and associated data for 2009 County-Level Bridged Race data by sociodemographic characteristics, 2009 SAIGE Income and Poverty data, and several additional years of data and stratifications by age, sex and race/ethnicity for mortality data from the National Vital Statistics System (NVSS-M). Also, data from CMS was refreshed and updates were made to selected Healthy People 2020 indicators. For the HIW system itself, various minor system and interface bugs were addressed. (more)

For Developers

The HIW provides access to the underlying data through the use of an Application Programming Interface (API) which is designed to present information to systems with disparate architectures and underlying technologies.

[More information for developers >](#)

HIW: Methods for stroke death rates

Stroke deaths (per 100,000 population)

Stroke death rate

Overview

Data

Data Source and Additional Information

Numerator

Number of stroke deaths (ICD-10 codes I60-I69)

Population

Number of persons

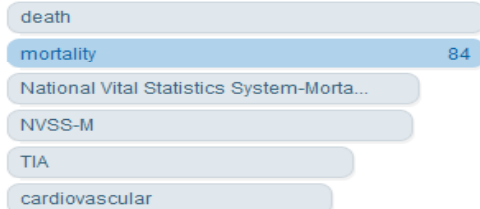
Methodology

Death due to cerebrovascular diseases, ICD-9 codes: 430-438. ICD-10 codes: I60-I69.

Single-year rates are calculated based on the resident population of the data year involved. For census years, April 1 census counts are used (e.g. 2000). For postcensal years, July 1 estimates from the postcensal Vintage that matches the data year are used (e.g. July 1, 2004 resident population estimates from Vintage 2004 are used to calculate rates for 2004). For intercensal years, intercensal population estimates are used in rate calculations (e.g. 1991-1999). Population estimates for 1991 and later have bridged-race categories.

Multiple-year rates are calculated based on the sum of the resident populations for each of the data years involved (e.g. the denominator of a rate for 2004-2006 combined involves population estimates for 2004, 2005, and 2006). For census years, April 1 census counts are used (e.g. 2000). For postcensal years, July 1 estimates from the postcensal Vintage that matches the data year are used (e.g. July 1, 2004 resident population estimates from Vintage 2004). For intercensal years, intercensal population estimates are used in rate calculations (e.g. 1991-1999). Population estimates for 1991 and later have bridged-race categories.

Related Keywords



Indicator Information

Data Source

NVSS-M (CDC, NCHS)

Initiative

CHSI2008

HP2020

Geographic Levels

State and County

Data Years

2001, 2002, 2003, 2004, 2005, 2006, 2007

Dimensions

HIW: Stroke death rates map

This indicator contains **State and County** data.

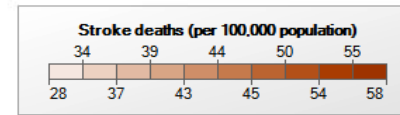
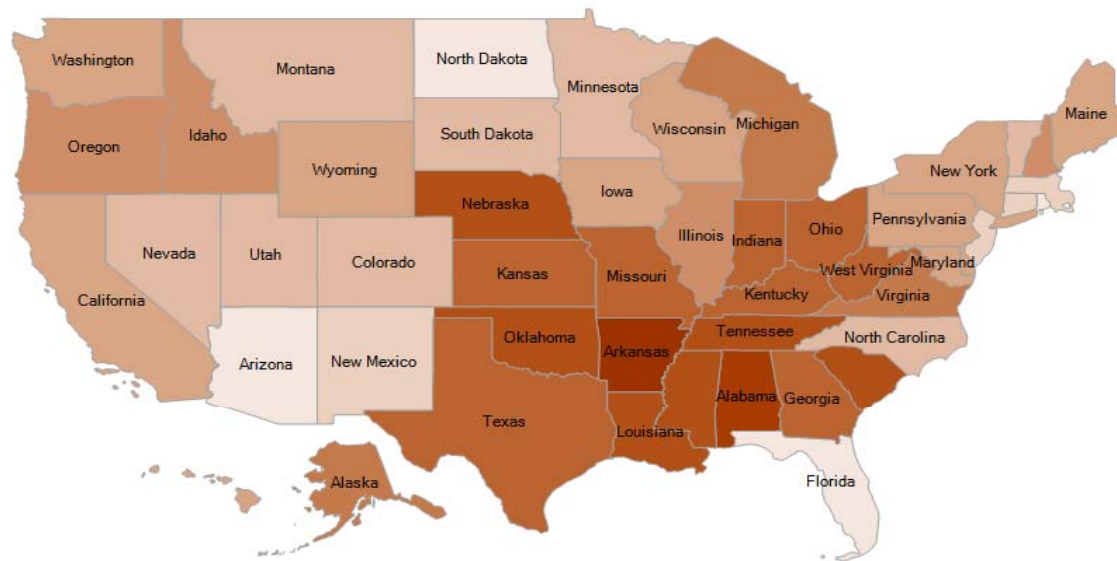
You are here: National

View Data As:

Geography:

Year:

Show:



Recent traffic

- Averaging about 10,000 unique visitors/month
- Top accessed indicators in 2012
 1. Cigarette smoking: adults (percent)
 2. Obesity: adults (percent) (Source: NHANES)
 3. Diabetes: adults (percent)
 4. Suicide deaths (per 100,000)
 5. Obesity: adult (percent) (Source: BRFSS)
 6. Health insurance: < 65 years (percent)
 7. Breast cancer deaths (per 100,000)
 8. Hypertension: adults (percent)
 9. Breastfeeding, ever (percent)
 10. Obesity: children 2-19 (percent)

Early HIW 2013 updates

Recently updated

- **ACS data (2009 to 2011)**
 - College-Educated adults
 - Gini coefficient
- **Area Resource File (2008 and 2010)**
 - Dentist rate
 - Primary care physician rate
- **BRFSS data (2004 to 2011)**
 - Binge drinking: adults
 - Chronic excess drinking
 - Fair/poor health: adults
 - Mentally unhealthy days: adults
 - Physically unhealthy days: adults
 - Smoking: adults
- **CMS indicators (2007 to 2011)**
- **HIV prevalence (2009)**
- **Mortality indicators (2010)**
- **SAIPE (2011)**
 - Childhood poverty
 - Median income
 - Poverty
- **Unemployment: Small area unemployment statistics (2010, 2011)**

Recently added

- **CMS indicators (2007 to 2011)**
 - Alzheimer's disease Medicare beneficiaries (count; percent)
 - Arthritis Medicare beneficiaries (count; percent)
 - High cholesterol Medicare beneficiaries (count; percent)
 - Osteoporosis Medicare beneficiaries (count; percent)
 - Stroke Medicare beneficiaries (count; percent)
 - Transplant Centers (number)

Future HIW 2013 updates

- **BRFSS data (7-year estimates, 2005-2011)**
 - Binge drinking: adults
 - Chronic excess drinking
 - Diabetes: adults
 - Excessive drinking: adults
 - Fair/poor health: adults
 - Flu vaccination: adults 65+
 - High blood pressure: adults
 - Mentally unhealthy days: adults
 - No exercise: adults
 - Physically or mentally unhealthy days: adults
 - Physically unhealthy days: adults
 - Physician use delayed due to cost: adults
 - Pneumococcal vaccination: adults 65+
 - Smoking: adults
 - Social-emotional support lacking: adults
- **County Health Rankings**
 - Free Lunch
 - Single parent households
 - A1C testing of diabetic Medicare beneficiaries
 - Preventable hospitalizations of Medicare beneficiaries
- **Minor corrections to CMS and Healthy People indicators**

Contact for more information

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