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Behavioral Risk Factor Surveillance System Survey (BRFSS) Notes

Variable: Pneumonia vaccination ever

Years: 2004-2007

Survey question(s) :

Have you ever had a pneumonia shot? This shot is usually given only once or twice in a person's lifetime and is different from a flu shot. It is also called the pneumococcal vaccine.

Definition: Had a pneumonia vaccination ever

Data sources: Connecticut Department of Public Health

Population: Ages 50–64 and 65 years and older

BRFSS Methodology

Overview: BRFSS is a stratified, random-digit-dial telephone survey of non-institutionalized Connecticut adults living in a household with a land-line telephone. Telephone numbers are randomly selected, and multiple attempts are made to reach each selected number. Once the household is contacted, interviewers identify a randomly selected adult 18 years of age or older from all adults living in a household. No proxy respondents or substitutions are allowed. The survey is conducted in English and Spanish.

Limitations of BRFSS: BRFSS data are subject to some limitations. Households without a land-line phone do not have the opportunity to participate in the survey. Interviewers are occasionally unable to contact some households despite repeated attempts. Some adults refuse to participate in the survey. Weighting partially takes into account the non-response pattern. BRFSS data are self-reported and are subject to the limitations of all self-reported data.

Weighting: Data were weighted to reflect the probability that an individual will be selected to participate in the survey and differential participation by age and

gender. The weighted data reflect the age and gender distribution of the Connecticut population as a whole.

Methodology Used in This Report

Age-standardized Estimates: Where applicable, data presented are standardized to the age distribution of the 2000 U.S. population. Age-standardized estimates reflect the percentage of adults in a particular region that would have a health characteristic if residents in that region had the same age distribution as the U.S. population. For example, the age-standardized percentage of adults with diabetes in Health Reference Group (HRG) 1 is the percentage of adults in HRG 1 who would have diabetes if the age distribution of HRG 1 were the same as the age distribution of the United States as a whole. Age-standardized estimates are useful for comparing estimates from different regions; standardization removes the difference between estimates that is due to differences in age distribution between different regions.

Confidence Intervals: Since the BRFSS is a random sample of the Connecticut adult population, the percentage of adults in the survey with a given health characteristic may differ from the "true" prevalence of that characteristic in the Connecticut population simply by chance. The confidence interval reflects the uncertainty in the estimate that may be due to random fluctuations. The *95 percent confidence interval* is the range of values that 95 percent of the time, given the same sampling procedure, would include the prevalence of the characteristic in the population, as operationally defined and assuming no additional source of bias. The main factor affecting the width of the confidence interval is the sample size.

Data Analysis: Data were analyzed using survey procedures in SAS version 9.1 (SAS. Institute, Inc., Cary, NC) to take into account the weighting and complex sampling design of the BRFSS.

Connecticut Towns by Health Reference Group (HRG)

HRG 1 – Urban Centers

Bridgeport
Hartford
New Haven

HRG 2 – Manufacturing Centers

Danbury	New London	Waterbury
East Hartford	Norwalk	West Haven
Meriden	Stamford	Windham
New Britain		

HRG 3 – Diverse Suburbs

Ansonia	Groton	Norwich
Bloomfield	Hamden	Stratford
Bristol	Manchester	Vernon
Derby	Middletown	West Hartford
Enfield	Naugatuck	Windsor

HRG 4 – Wealthy Suburbs

Avon	Guilford	Ridgefield
Bridgewater	Killingworth	Roxbury
Brookfield	Lyme	Simsbury
Darien	Madison	Trumbull
Easton	New Canaan	Washington
Essex	New Fairfield	Weston
Fairfield	Newtown	Westport
Glastonbury	Old Lyme	Wilton
Greenwich	Redding	Woodbridge

HRG 5 – Mill Towns

Bethel	North Canaan	Sterling
Branford	North Haven	Stonington
Brooklyn	Plainfield	Thomaston
Cromwell	Plainville	Thompson
East Haven	Plymouth	Torrington
East Windsor	Putnam	Wallingford
Griswold	Rocky Hill	Waterford

Killingly	Seymour	Watertown
Lisbon	Shelton	Wethersfield
Mansfield	Somers	Willington
Milford	Southington	Winchester
Montville	Sprague	Windsor Locks
Newington	Stafford	Wolcott

HRG 6 – Rural Towns

Andover	East Granby	Norfolk
Ashford	East Haddam	North Branford
Barkhamsted	East Hampton	North Stonington
Beacon Falls	East Lyme	Old Saybrook
Berlin	Ellington	Orange
Bethany	Farmington	Oxford
Bethlehem	Franklin	Pomfret
Bolton	Goshen	Portland
Bozrah	Granby	Preston
Burlington	Haddam	Prospect
Canaan	Hampton	Salem
Canterbury	Hartland	Salisbury
Canton	Harwinton	Scotland
Chaplin	Hebron	Sharon
Cheshire	Kent	Sherman
Chester	Lebanon	South Windsor
Clinton	Ledyard	Southbury
Colchester	Litchfield	Suffield
Colebrook	Marlborough	Tolland
Columbia	Middlebury	Union
Cornwall	Middlefield	Voluntown
Coventry	Monroe	Warren
Deep River	Morris	Westbrook
Durham	New Hartford	Woodbury
Eastford	New Milford	Woodstock

For methodology of Health Reference Groups see: Community Health Data Scan for Connecticut published by Connecticut Health Foundation in March 2007 and available at www.cthealth.org

Race and Ethnicity Groups

"In 1977, the Office of Management and Budget (OMB) issued Race and Ethnicity Standards for Federal Statistics and Administrative Reporting in order to promote comparability of data among federal data systems. The 1977 standards called for the federal government's data systems to classify individuals into the following four racial groups:

- American Indian or Alaska Native
- Asian or Pacific Islander
- Black
- White

Depending on the data source, the classification by race was based on self-classification or on observation by an interviewer or other person filling out the questionnaire.

In 1997, new standards were announced for classification of individuals by race within the federal government's data systems. The 1997 standards have five racial groups:

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or other Pacific Islander
- White

These five categories are the minimum set for data on race for federal statistics. The 1997 standards also offer an opportunity for respondents to select more than one of the five groups, leading to many possible multiple-race categories. As with the single-race groups, data for the multiple-race groups are to be reported when estimates meet agency requirements for reliability and confidentiality. The 1997 standards allow for observer or proxy identification of race but clearly state a preference for self-classification. The federal government considers race and Hispanic origin to be two separate and distinct concepts. Thus Hispanics may be of any race. Federal data systems are required to comply with the 1997 Standards by 2003." (Source: National Center for Health Statistics. NCHS Definitions. On-line resource not currently available). For further background, see OMB Bulletin No. 00-02 at: <http://www.whitehouse.gov/omb/bulletins/b00-02.html> Accessed June 12, 2009.

BRFSS and Race/Ethnicity

Five mutually exclusive race/ethnicity categories were used for estimates derived from BRFSS data:

- White, Non-Hispanic
- Black, Non-Hispanic

Hispanic
Asian
Other

Race/ethnicity categories were derived from two questions: "Are you Hispanic or Latino?" and "What is your race?"

Starting in 2001 BRFSS respondents were allowed to select multiple race categories. Additionally, they were also asked to select one category that best represents their race. The latter question was used to create the mutually exclusive race/ethnicity categories for data from 2001 on.