# 40 Years of Progress in Cancer Control Monitoring: NHIS and NCI

Presented by: Nancy Breen, PhD

#### **Contributors:**

Tracy Layne, Frances Thompson, Andrew Freedman, Amy Subar, David Berrigan, Arnold Potosky, Judith Swan, Barry Graubard, Helen Meissner, Rachel Ballard-Barbash, Sue Krebs-Smith, Martin Brown, Karen Silver, Cathy Backinger, Stephen Marcus, Gary Giovino, Deborah Rose, Donald Shopland, Tim McNeel, James Cucinelli

NCI web link: <a href="http://appliedresearch.cancer.gov/surveys/nhis/">http://appliedresearch.cancer.gov/surveys/nhis/</a>

U.S. D EPARTMENT OF HEALTH AND HUMAN SERVICES

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## NCI Has Worked with the National Health Interview Survey to:

- Monitor trends and patterns
- Answer key research questions
- Provoke further scientific inquiry

## Three main topics of surveillance

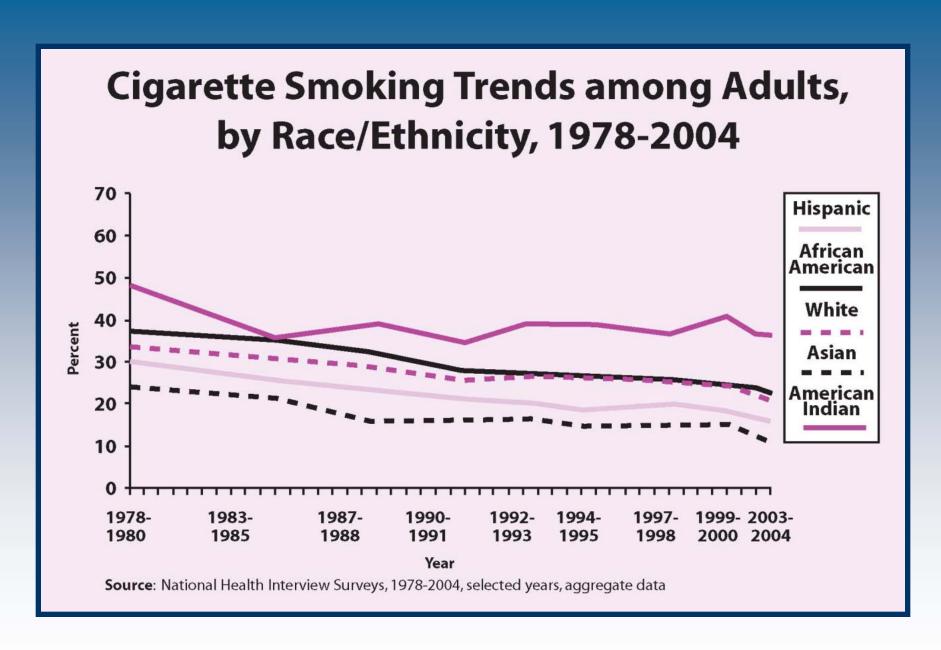
- Tobacco control
- Cancer screening
- Diet and physical activity

## Cancer Control Data: Evolved Over Time to Meet Scientific, Program, and Policy Needs

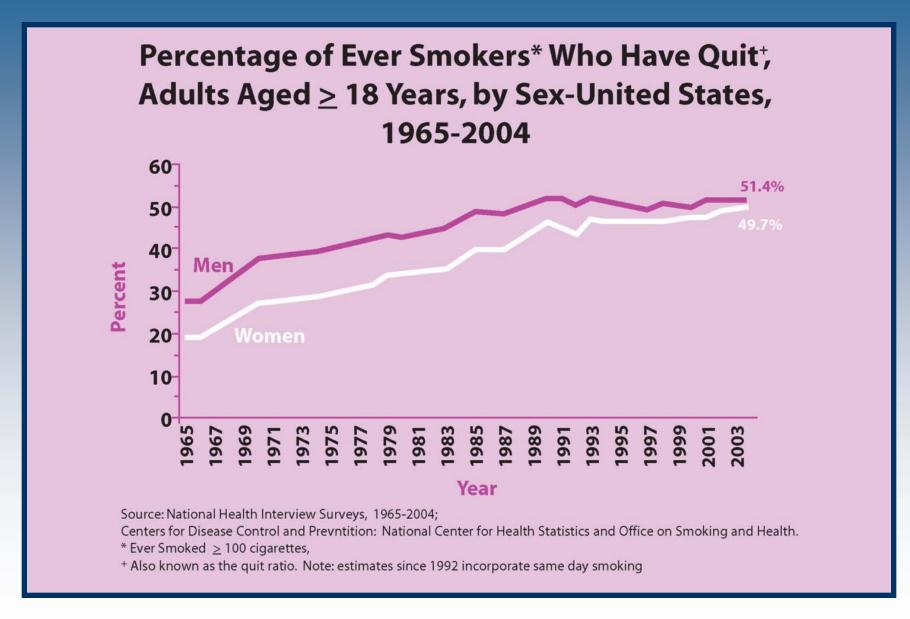
- Initiated cigarette monitoring in response to Surgeon General's report (1965)
- Initiated cancer control supplements in response to congressional mandate to understand patterns and trends in incidence, survival and mortality
- Monitor Healthy People 2010 objectives
- Established long-term agreement to promote sufficient sample size: 2000-2010

### **Tobacco Control Was First**

- NHIS is a major source of national tobacco control monitoring
  - NHIS routinely monitors cigarette smoking
  - NCI has sponsored questions on cigars, snuff, chewing tobacco, bidis, and tobacco control policies
- Over 100 publications



Slide provided by Gary Giovino, PhD, University of Buffalo and Stephen Marcus, PhD, NCI



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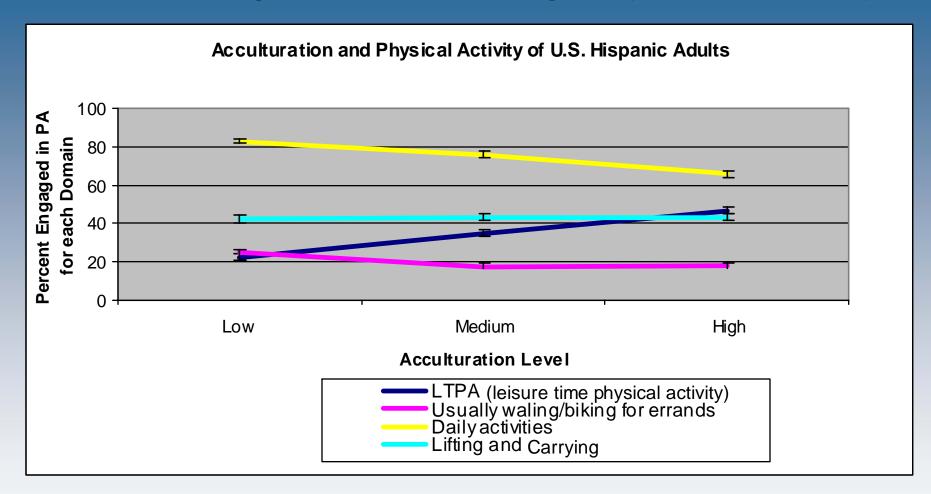
## Large Sample Size and Range of Covariates Are Key to the Utility of NHIS

- Collection of data on race-ethnicity, acculturation and translation
  - 1985 began over sampling African-Americans
  - 1995 Began over sampling Latinos
  - 2006 began over sampling Asians
  - Web-link:

http://www.cdc.gov/nchs/about/major/nhis/rhoi/rhoi.htm

 Covariates on demographic, socio-economic, insurance, health service use, health status, and medical conditions

## Measuring and Monitoring Physical Activity



Adapted from *Physical Activity and Acculturation Among Adult Hispanics in the United States.* David Berrigan; Kevin Dodd; Richard P. Troiano; Bryce B. Reeve; Rachel Ballard-Barbash. Research Quarterly for Exercise and Sport. 2006 Jun;77 (2):147-57.

### Diet and Nutrition

- Reduction in questions on sources of energy intake
  - Until 2000: Entire food frequency instrument administered
  - 2000 forward: Diet screeners used to determine key sources of energy
- From 40 minutes to 4.

#### Questions Asked on Multifactor Food Screener: NHIS 2000

#### How many times per day, week, or month did you USUALLY eat (or drink):

- cold cereals?
- bacon or sausage, not including low-fat, light, or turkey varieties?
- hot dogs made of beef or pork?
- whole-grain bread including toast, rolls, and in sandwiches? Whole-grain breads include whole wheat, rye, oatmeal, and pumper nickel.
- 100% fruit juice such as orange, grapefruit, apple, and grape juices? Do NOT count fruit drinks such as Kool-Aid, lemonade, cranberry juice cocktail, Hi-C, band Tang.
- fruit? COUNT fresh, frozen, or canned fruit. Do NOT count juices.
- regular-fat salad dressing or mayonnaise, including on salad and sandwiches?
- lettuce or green leafy salad, with or without other vegetables?
- french fries, home fries, or hash brown potatoes?
- other white potatoes? COUNT baked potatoes, boiled potatoes, mashed potatoes, and potato salad.
- cooked dried beans, such as refried beans, baked beans, bean soup, and pork and beans?
- not counting what you just indicated (about lettuce salads, white potatoes, cooked dried beans), and not counting rice ... OTHER vegetables?
- any kind of pasta? COUNT spaghetti, noodles, macaroni and cheese, pasta salad, and any other kind of pasta.
- peanuts, walnuts, seeds, or other nuts, not including nut butters.
- regular fat potato chips, tortilla chips, or corn chips? Do NOT include low-fat chips.

#### What kind of milk did you usually use?

- milk, either to drink or on cereal?
- Response categories were: whole milk, 2% fat, 1% fat, 1/2% milk, non fat or skim milk, or other.

(Additional help was given for individual questions as the need arose.)
Response categories were recorded for 1) Number of times (0 to 94; 95=95+) and 2) Time period (day, week, month, year)

Source: Frances E. Thompson; Douglas Midthune; Amy F. Subar; Timothy McNeel; David Berrigan; Victor Kipnis. J Am Diet Assoc. 2005 Mar; 105(3):352-363.

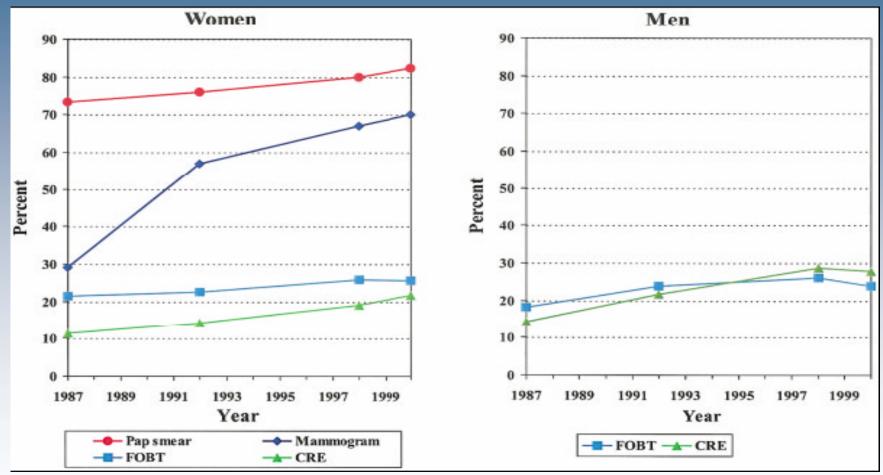
## Other 2000 NHIS Cancer Control Advances

- Narrowed focus of questions on behavior or practices
- Updated questions on colorectal cancer
- Added questions on PSA screening
- Condensed the nutrition section
- Added first-degree family history of cancer questions

#### Results

- Condensed supplement from 40 to 20 minutes
- Traded split sample design for full sample so that estimates were more robust

### Recent Use of Cancer Screening Tests: 1987, 1992, 1998, and 2000.



Percentages are standardized to the 2000 standard million. Pap smear: within the last 3 years, age 25 years; Mammogram: within the last 2 years, age 40 years; FOBT: fecal occult blood test within the last year, age 50 years; CRE: colorectal endoscopy within the last 3 years, age 50 years.

Source: Judith Swan; Nancy Breen; Ralph Coates; Barbara Rimer; Nancy Lee. Cancer 2003; 97:1528-40

## Cancer Screening in the US: Where Are the Disparities?

#### **2000 National Health Interview Survey**

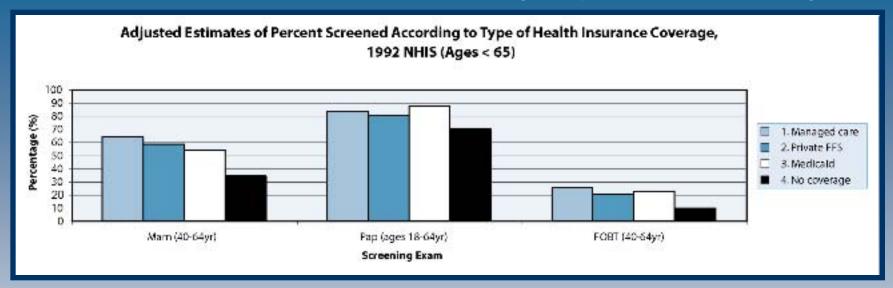
	Pap Test	Mammogram	Colorectal (Women)	Colorectal (Men)
Total	82%	70%	38%	41%
No health insurance	62%	38%	18%	20%
No usual source of care	58%	35%	13%	14%
Recent immigration	61%	39%	16%	20%

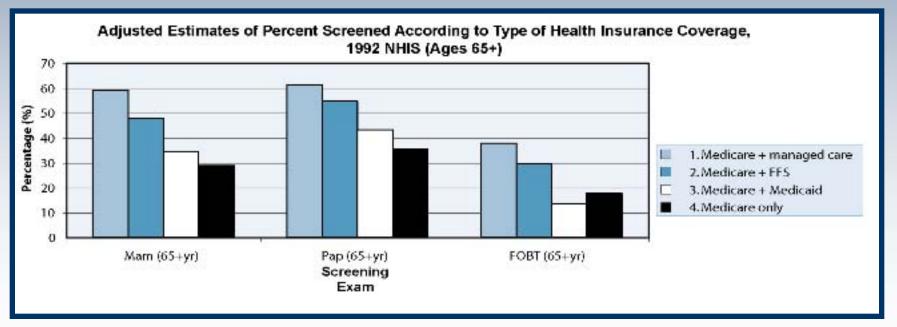
Source: Swan et al., Cancer 2003:1528-1540

## Health Insurance Coverage

In response to findings that less extensive health care coverage and greater out-of-pocket payments were associated with lower use of preventive services, NCHS and NCI staff collaborated on questions to obtain detailed health insurance coverage information.

#### Estimates of Percent Screened According to Type of Health Coverage





Adapted from *The Association Between Health Care Coverage and the Use of Cancer Screening Tests:* Results from the 1992 NHIS. Arnold Potosky; Nancy Breen; Barry Graubard; Ellen Parsons. Med Care 1998;36(3):257-70.

## National Data is National Data (a rose is a rose...)

- What we need is national data based on local data.
- A move toward more local data collection would increase the sample of respondents representing the US population and allow local level data to better inform health care delivery and interventions.





### **Future**

- NCI plans for next fielding
  - 2008 HPV knowledge and vaccine acceptability
  - 2010 Cancer Control Supplement
    - May include module on racial-ethnic discrimination being tested on the 2007 California Health Interview Survey (CHIS)

