



DEPARTMENT OF HEALTH AND HUMAN SERVICES  
CENTERS FOR DISEASE CONTROL AND PREVENTION



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# Use of State-Based Surveillance Data to Track Nutrition Behavior and Outcomes

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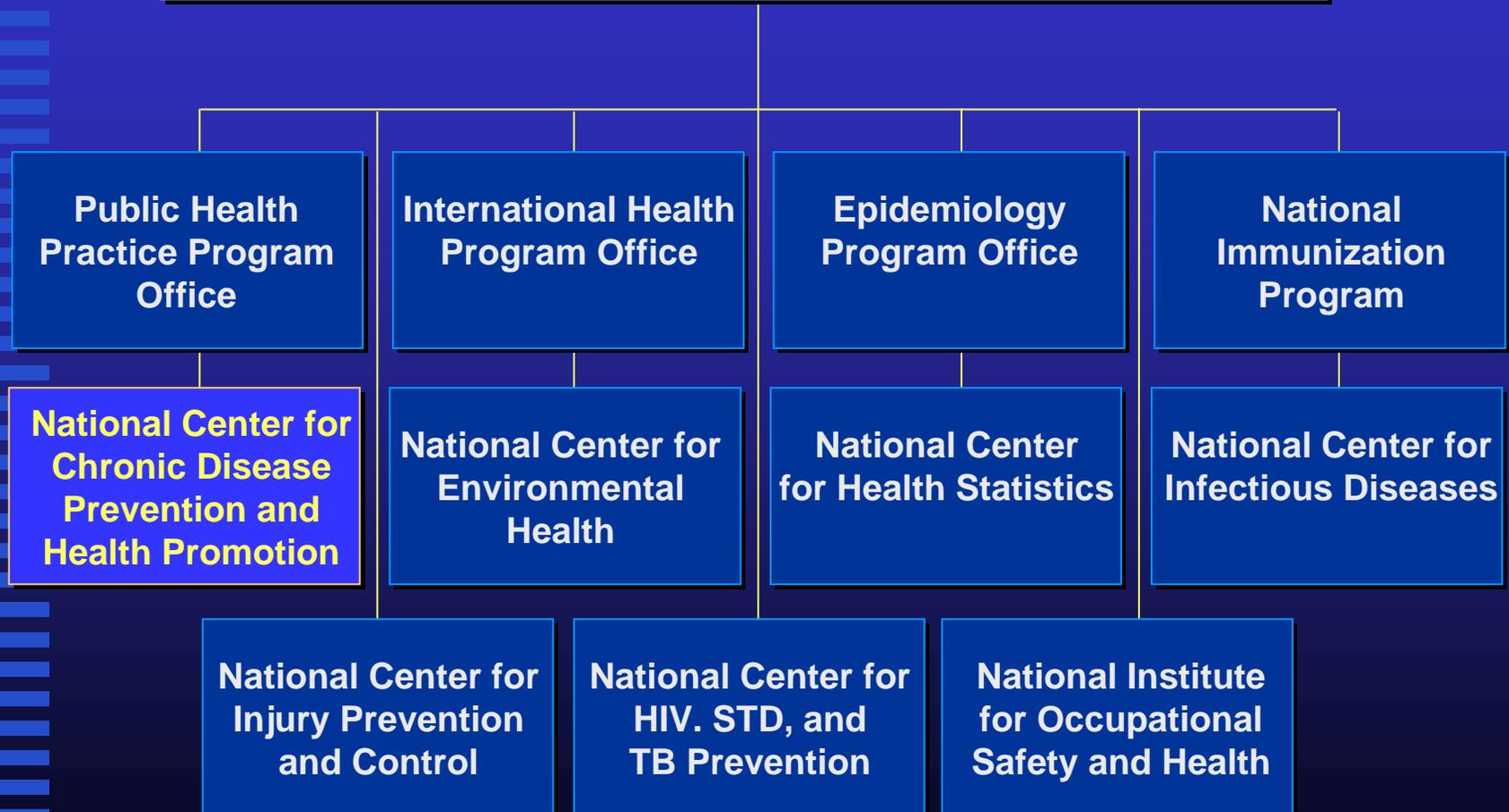
Division of Nutrition and Physical Activity  
Centers for Disease Control and Prevention

Priorities and Planning Workshop  
Future FSNEP Research and Evaluation Activities  
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# Centers for Disease Control and Prevention





# Current Surveillance Systems Used by DNPA to Monitor Nutrition Behavior

- Behavioral Risk Factor Surveillance System
- National Health and Nutrition Examination Survey
- Youth Risk Behavior System
- Pediatric Nutrition Surveillance System
- Pregnancy Nutrition Surveillance System
- School Health Policies and Programs





A Federal-State Partnership

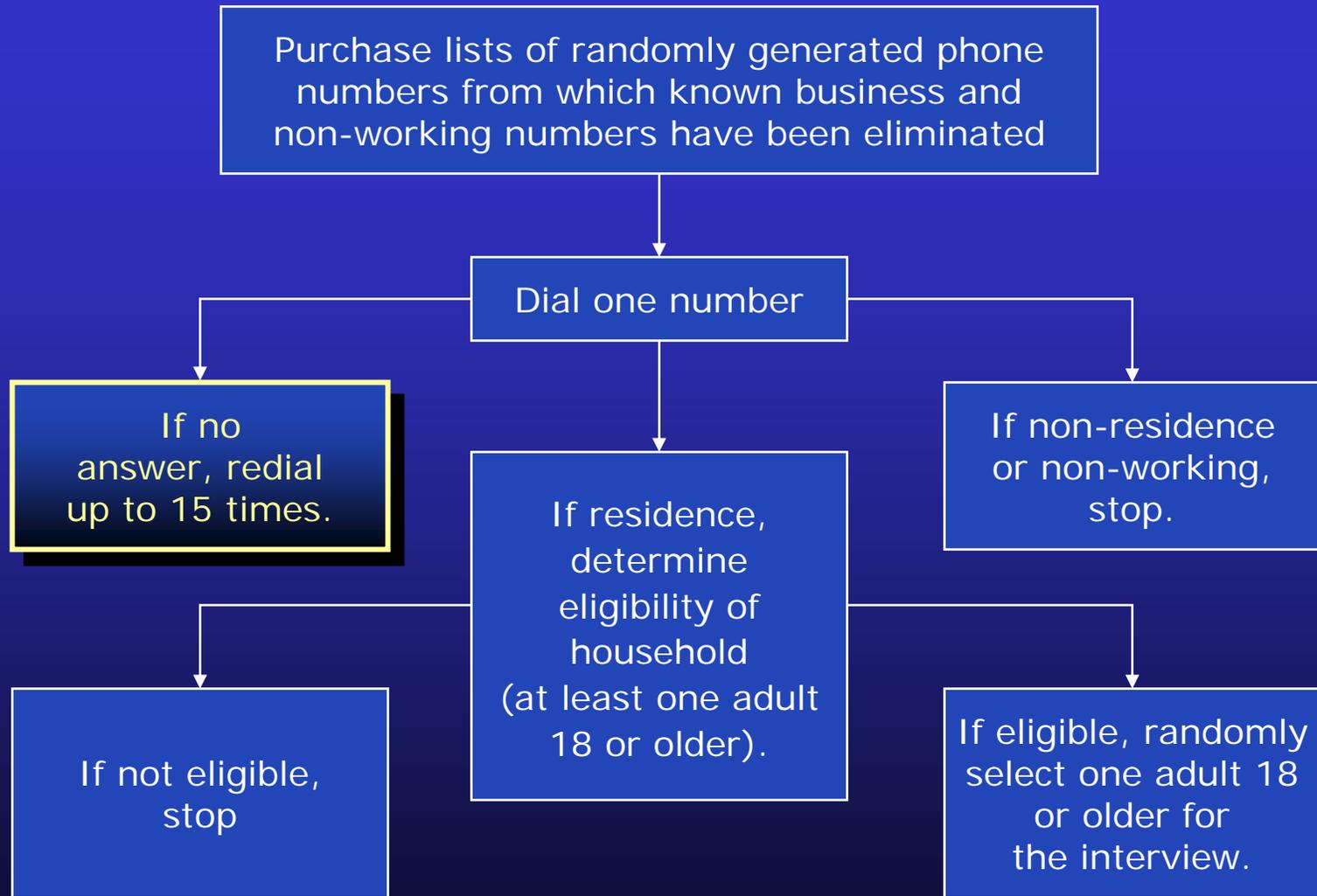


# Description of BRFSS

- State-based surveillance, yearly telephone survey
- Conducted by all 50 states, standard protocol
- Non-institutionalized, adults ( $\geq 18$ )
- Complex survey design (sampling) –
  - Disproportionate Stratified Sampling Design
- Self-reported health behaviors
- Fixed core, rotating core, emerging core, optional modules, state-added questions
- State-specific and national data



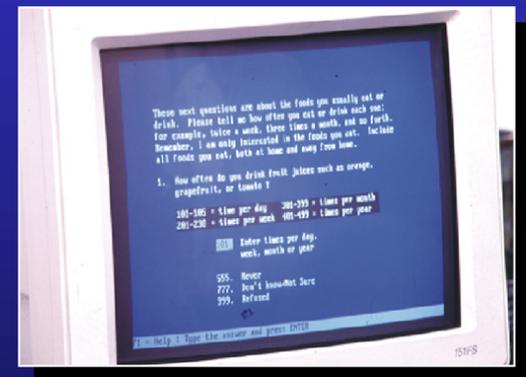
# Disproportionate Stratified Sample





# Calls are made 7 days a week

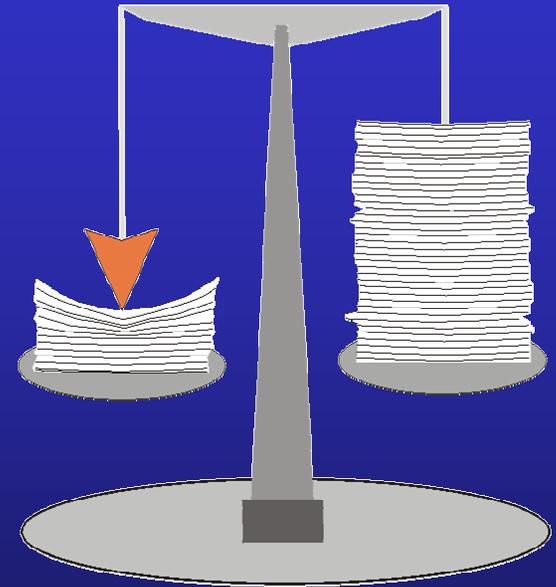
About 210,000 interviews are conducted each year.





# Data are weighted...

- to compensate for unequal selection probability
- to ensure that data can be used to develop population estimates
- sex, race/ethnicity, age
- use Sudaan/SAS for analyses





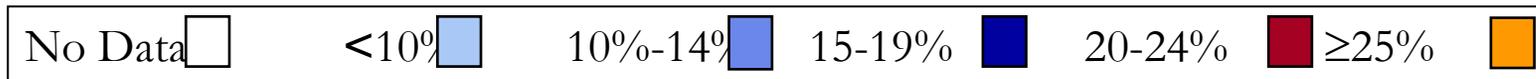
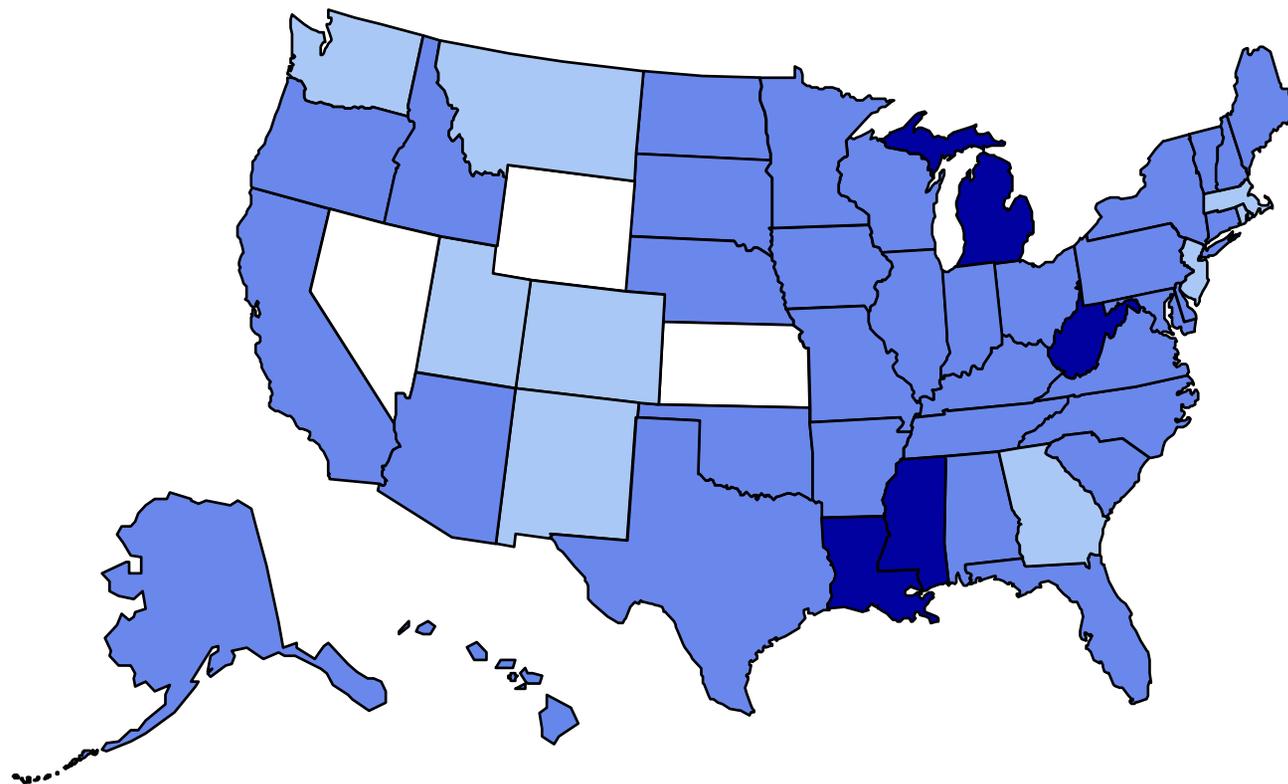
# How are the data used?

- Tracking health risk trends
- Program development
- Policy development
- Program evaluation

# Obesity\* Trends Among U.S. Adults

## BRFSS, 1991

(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5'4" person)

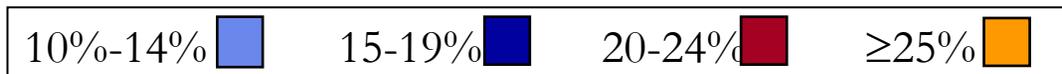
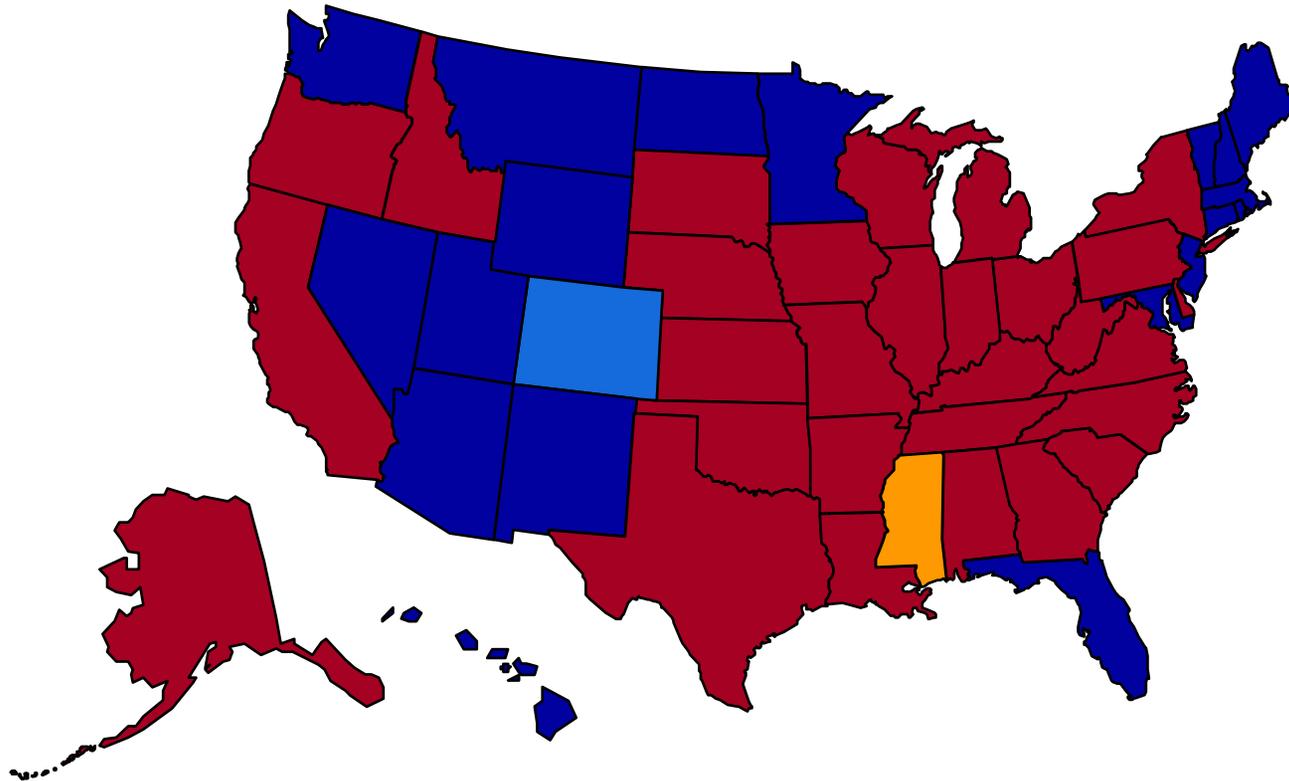


Source: Mokdad AH, et al. *JAMA* 1999;282:16.

# Obesity\* Trends Among U.S. Adults

## BRFSS, 2001

(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5'4" person)



Source: Mokdad A H, et al. *JAMA* 2003;289:1.



# BRFSS Core Questions

- Demographics
- General health measures
  - Ht, Wt, QOL, Pregnancy, Disability
- Health conditions
  - Diabetes, Asthma, HIV/AIDS
- Risk behaviors
  - PA, Tobacco, Alcohol
- Health services
  - Insurance, Personal doctor, Cost as barrier



# Topics Included in the BRFSS Questionnaire: *Demographics*

- Age
- Sex
- Ethnicity
- Race
- Marital status
- Education level
- Employment status
- **Income**
- County of residence
- Pregnancy status
- Children <18 in household



# Topics Included in the BRFSS Questionnaire: *Rotating Core*

- Fruits and vegetables
- Weight control
- Arthritis
- Women's health
- Family planning
- Screening – colorectal and prostate cancer
- Oral Health
- Sun Exposure
- Injury (seatbelt, falls, drink/drive)
- Awareness of high blood pressure
- Awareness of high cholesterol
- Immunization



# State-added questions



# State-added questions

Food Consumption

2002

New Hampshire

2000

Montana

Puerto Rico

South Carolina

West Virginia

1999

New York

Washington

1998

Idaho

New York

Washington



## State-added questions

The next few questions are about hunger, or not having enough food to eat.

1. In the past 30 days, have you been concerned about having enough food for you or your family?
2. In the past 30 days, did you skip any meals because there wasn't enough food or money to buy food?
3. In the past 30 days, were there any days when you did not eat at all because there wasn't any food or money to buy food?



# Including State-Added Questions

States are encouraged to gather data on additional topics through the use of state-added questions. Questions should be evaluated for reliability, validity, and suitability for use in a telephone survey.

## Process

- 1. Identify health data needs within your state.**
- 2. Develop, identify, or solicit appropriate questions.**
- 3. Be aware of limitations on the number of questions you can use —**
  - length limitation (long surveys may result in premature call termination)**
  - administrative costs**
  - analysis costs**
  - CATI programming costs.**



## Including State-Added Questions

Costs:

About \$1500-\$3750 per question

E.g. SAQ Module

5 questions at \$2500 = \$12,500 per state

5 states = \$62,500

Yield n=2500-7000 per state

5 states – about 25,000 responses

- ?Prevalence



## Including State-Added Questions

4. Proposed state-added questions should be carefully evaluated by using the Question Appraisal System, pretesting, or both. Questions from existing instruments that have already been tested can also be used.
5. State-added questions must adhere to the BRFSS question layout and be restricted to the columns reserved for state-added questions. If the layout is not followed, CDC will not process the state data.
6. States must notify CDC prior to making any changes to questionnaire during the year to discuss the impact of modifications.



## BRFSS Web Site

<http://www.cdc.gov/brfss>

<http://www2.cdc.gov/nccdphp/brfss2/coordinator.asp>



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