

**Community Uses  
of the  
Behavioral Risk Factor Surveillance  
System (BRFSS) &  
County Adult Health Survey (CAHS)**

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# Presentation Outline

- Overview of BRFSS/CAHS survey
- History and purpose of BRFSS/CAHS
- Survey methods and process for adding questions
- Review of survey results
- Accessing BRFSS/CAHS data
- Examples of how data are used



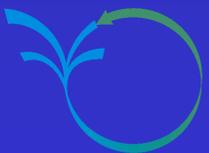
# What is BRFSS?

- Behavioral Risk Factor Surveillance System
- Random digit dial state based telephone survey
- Adults ages 18 and older
- Measures personal behaviors that put health at risk
- Collaboration between CDC and States/Territories
- Arkansas BRFSS participation since 1993



# BRFSS History

- In the 1980s research showed health behaviors play an important role in unnecessary deaths and diseases
- In 1984 CDC started the state-based BRFSS to collect health information on risk behaviors and health practices that affect health status
- By 1997 all states were participating



# What is CAHS?

- Is based on the BRFSS
- Used by Hometown Health Improvement
  - To collect, evaluate & monitor
  - Personal risk behaviors by adults in Arkansas communities
- Random digit dial state based telephone survey
- Adults ages 18 and older
- Participation since 1999



# BRFSS/CAHS Survey Design



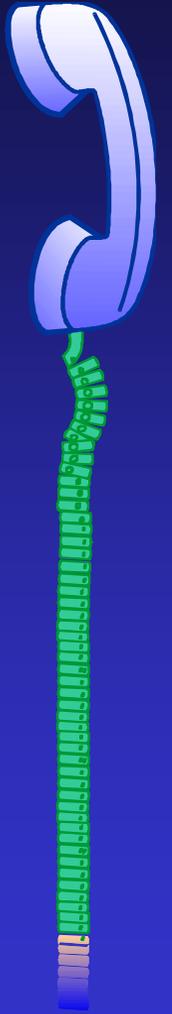
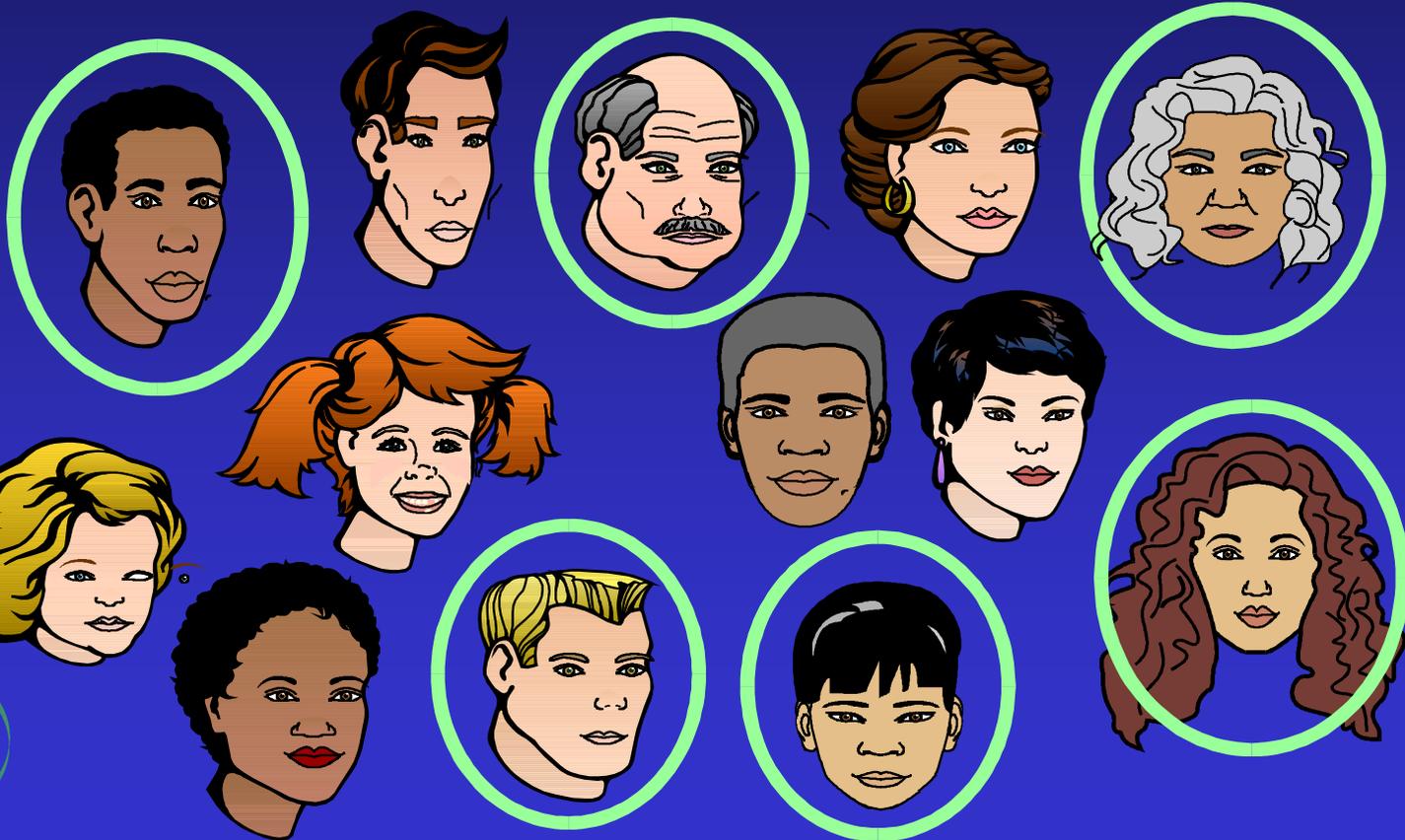
# Telephone Surveys

Households with a telephone are selected



# Random Sample

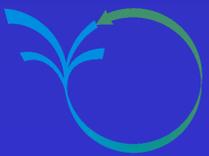
People 18 and older are randomly selected



# Interviewers are Trained



# Computer Assisted Telephone Interview (CATI)



# Telephone Interview and Data Entry



# Calls are made 7 days a week

- **BRFSS**
  - 2,300 – 2,500 calls per month
  - More than 100,000 calls nationwide per year
- **CAHS**
  - Approximately 800 households per county



# Data Collection/ BRFSS

- **Arkansas BRFSS contracts with Clearwater Research**
- **Interviews are monitored to maintain and ensure data quality**
- **Data are sent to state & CDC**
- **CDC aggregates monthly data for the entire year**
- **Final data are available by March of the following survey year**



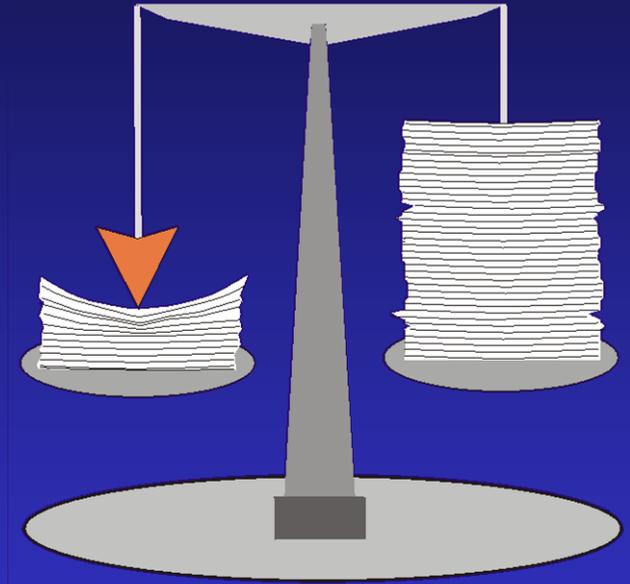
# Data Collection/ CAHS

- **ADH CAHS contracts with Survey Research Center at UALR**
- **Interviews are monitored to maintain and ensure data quality**
- **Data are sent ADH Health Statistics Branch**
- **Data are edited for consistencies**
- **Final report available 3-6 months after survey completed**



# Data are weighted...

- to compensate for unequal selection probability
- to ensure that data can be used to represent the Arkansas adult population



# Design of BRFSS Questionnaire

- **Core**
  - **Asked by all states**
- **Optional Modules**
  - **Specialized topic questions states can choose to include**
- **State-added questions**
  - **state specific questions to address state and local issues**



# Design of CAHS Questionnaire

- **Core**
  - **Asked in all counties**
- **State-added questions**
  - **state specific questions to address state and local issues**
- **Local added questions**
  - **Local specific questions to address local issues**



# Topics Included in the BRFSS/CAHS Questionnaire

## • Core: Demographics

- Age
- Sex
- Ethnicity
- Race
- Marital status
- Educational level
- Height
- Weight
- Employment status
- Income
- County of residence
- Children < 18 years in household



# Topics Included in the BRFSS/CAHS Questionnaire

- **Core: General Health**
  - Self-reported health status
  - Health insurance
  - Personal health provider
  - Quality of life & care giving
  - Disability



# Topics Included in the BRFSS/CAHS Questionnaire

- **Core: Health Conditions**

- **Diabetes**

- **Awareness of high blood pressure**

- **Awareness of high cholesterol**

- **Oral health**

- **Asthma history**

- **Cardiovascular disease**

- **Arthritis**



# Topics Included in the BRFSS/CAHS Questionnaire

## •Core: Risk Behaviors

### •Smoking

- Current smoking status

- Quit smoking attempt in past year

- Tobacco indicators

- Other tobacco products

- Alcohol use

- No leisure time physical activity

- HIV/AIDS

- Immunization

- Fruit & vegetable consumption

- Weight control



# Topics Included in the BRFSS/CAHS Questionnaire

## •Core: Health Services

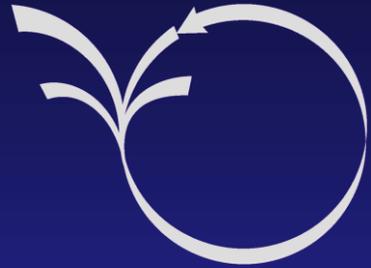
- Health care coverage and utilization
- Breast cancer screening
- Cervical cancer screening
- Prostate cancer screening
- Colorectal cancer screening
- Flu & pneumococcal vaccination



# Topics Included in the BRFSS Questionnaire

- **Emerging Core**
  - **Novel H1N1 Adult Immunization**
  - **Gastrointestinal Disease**





**BRFSS  
Optional  
Modules**

Diabetes

Weight Control

Access to Eye Care

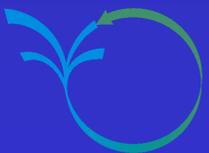
Heart Attack and Stroke

Women's Health

Actions to Control HBP

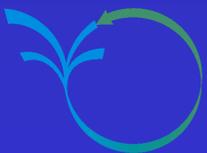
Intimate Partner Violence

Secondhand Smoke



# State Added Questions: Tobacco Control

**When you can't smoke cigarettes  
because of clean indoor  
air restrictions, do you use chewing  
tobacco or snuff?**



# State Added Questions: Women's Health

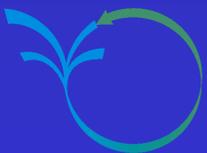
**Are you aware that the health Department offers free to low cost breast exams and mammograms?**



# State Added Questions: Disability



**What is the farthest distance that you can walk by yourself, without any special equipment or help from others?**



# Local Added Questions: Disability

**How much difficulty, if any, do you have in scheduling an appointment with your regular doctor, nurse, or other health professional? Would you say it is very difficult, somewhat difficult, a little difficult, or not at all difficult?**



# Who uses it?

- **State and Local Health Departments**
- **Students and Researchers**
- **Non-Profit Agencies**
- **Federal Agencies**
- **Research organizations**
- **Insurance companies**
- **Media**



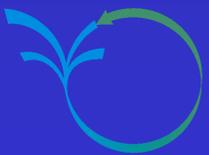
# How it is used?

- **Assess health needs and personal behaviors of the population**
- **Plan, implement, and evaluate public health strategies**
- **Identify health disparities**
- **Prepare grant proposals**
- **Publish scientific articles in professional journals**



# Scenario I

**Lucy is a college student living in Boone County. She needs data on current smoking status...**



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

Go to:  
CDC  
BRFSS  
website

...



BRFSS- CDC's Behavioral Risk Factor Surveillance System - Windows Internet Explorer

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

File Edit View Favorites Tools Help Convert Select

BRFSS- CDC's Behavioral Risk Factor Surveillance Syst... Home

CDC Home Search Health Topics A-Z

Office of Surveillance, Epidemiology, and Laboratory Services

**Behavioral Risk Factor Surveillance System**

[BRFSS Home](#) | [Contact Us](#)

**BRFSS**

**Turning Information Into Health**

The Behavioral Risk Factor Surveillance System (BRFSS) is the world's largest, on-going telephone health survey system, tracking health conditions and risk behaviors in the United States yearly since 1984. Currently, data are collected monthly in all 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and Guam.

[Learn More »](#)

**BRFSS CONTENTS**

- [Prevalence and Trends Data](#)
- [SMART: City and County Data](#)
- [BRFSS Maps](#)
- [Web Enabled Analysis Tool \(WEAT\)](#)
- [Chronic Disease Indicators \(CDI\)](#)

# Prevalence & Trends Data

1. Click on: Prevalence & Trends Data
2. Select year



The screenshot shows the CDC Behavioral Risk Factor Surveillance System (BRFSS) website. The top navigation bar includes 'CDC Home', 'Search', and 'Health Topics A-Z'. The main header identifies the 'Office of Surveillance, Epidemiology, and Laboratory Services' and the 'Behavioral Risk Factor Surveillance System'. A left-hand menu titled 'BRFSS CONTENTS' lists various data categories, with 'Prevalence and Trends Data' highlighted. The main content area features a title 'Prevalence and Trends Data', a note about confidence intervals, and a search form with dropdown menus for 'State' (set to 'List All'), 'Year' (set to '2009'), and 'Category'. A 'Go' button is located below the search form.

CDC  
SAFER • HEALTHIER • PEOPLE™  
GENTE • SEGURA • SALUDABLE™

BRFSS CONTENTS

- Prevalence and Trends Data
- SMART: City and County Data
- BRFSS Maps
- Web Enabled Analysis Tool (WEAT)
- Chronic Disease Indicators (CDI)
- About the BRFSS
- BRFSS Datasets (downloads and documentaion)
- Chronic Disease and the Environment
- Questionnaires

CDC Home | Search | Health Topics A-Z

Office of Surveillance, Epidemiology, and Laboratory Services  
**Behavioral Risk Factor Surveillance System**  
[BRFSS Home](#) | [Contact Us](#)

## Prevalence and Trends Data

**NOTE:** When comparing prevalence of variables across states or years, we recommend the use of confidence intervals. If the confidence intervals overlap, the difference is not statistically significant.

Please choose from the following pull-down menus to search for BRFSS data.

**State:** List All

**Year:** 2009

**Category:**

Go



# Prevalence & Trends Data

Scroll  
down to  
"Tobacco  
Use" &  
select ...

Office of Surveillance, Epidemiology, and Laboratory Services  
**Behavioral Risk Factor Surveillance System**

[BRFSS Home](#) | [Contact Us](#)

## Prevalence and Trends Data

### All States - 2009

To change year or state, select from the lists and click

Year  State

All States data for 2009 are not available for the categories with this ? icon. Click on the icon, ?, beside the category interested in to find out when and where it was asked.

Select a category link to see its questions.

[Alcohol Consumption](#)

[Arthritis](#)

[Asthma](#)

[Cardiovascular Disease](#)

? [Colorectal Cancer Screening](#)

[Demographics](#)

[Diabetes](#)

[Disability](#)

[Exercise](#)

[Fruits and Vegetables](#)

[Health Care Access/Coverage](#)

[Health Status](#)

[Hypertension Awareness](#)

[Immunization](#)

? [Oral Health](#)

[Overweight and Obesity \(BMI\)](#)

[Physical Activity](#)

? [Prostate Cancer](#)

[Tobacco Use](#)

? [Women's Health](#)



# Prevalence & Trends Data

Lucy is looking for data on "current smokers"

[Tobacco Use](#)

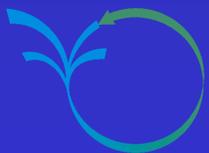
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Choose a question to view its data.

- [Four Level Smoking Status](#)
- [Adults who are current smokers](#)

[▲ Top of Page](#)

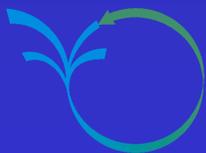
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# Prevalence & Trends Data

**21.5% of adults in Arkansas are current smokers**

...



## Prevalence and Trends Data

### Tobacco Use - 2009

#### Adults who are current smokers

ndly

To see a specific state's data, click on the state name.

State:	Yes	No
<a href="#">Nationwide (States, DC, and Territories)</a>	17.9	82.1
<a href="#">Nationwide (States and DC)</a>	17.9	82.1
<a href="#">Alabama</a>	22.5	77.5
<a href="#">Alaska</a>	20.6	79.4
<a href="#">Arizona</a>	16.1	83.9
<a href="#">Arkansas</a>	21.5	78.5



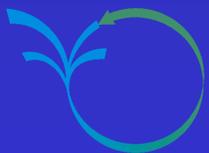
<http://www.healthy.arkansas.gov/programsServices/healthStatistics/Brfss/Pages/default.aspx>

Select  
"County  
Data  
Estimates"

...



The screenshot shows the Arkansas Department of Health website. At the top left is the state seal logo. To its right is the text "Arkansas Department of Health". Below this is a navigation bar with links for "Home", "About ADH", "Programs & Services", "Certificates, Licenses & Permits", and "News". A search bar is present with a "Go" button and an "A-Z Index" followed by letters A through U. The main content area has a left sidebar with a "Health Statistics Home" section containing a "BRFSS Home" sub-section. Under "BRFSS Home" is a list of links: "BRFSS Maps", "BRFSS Presentations", "County Data Estimates", "Optional Module", "Participants", "Publications", "Questionnaires", and "Quick Links". A red arrow points from the right side of the page to the "County Data Estimates" link. The main content area on the right has a breadcrumb trail: "Home > Programs & Services > Health Statistics > BRFSS". Below the breadcrumb is the heading "What is the Behavioral Risk Factor Surveillance" and the start of a paragraph: "The Behavioral Risk Factor Surveillance System (BRFSS) is a standard by each of the 50 states, Washington, D.C., and three U.S. territories Control and Prevention (CDC).".



<http://www.healthy.arkansas.gov/programsServices/healthStatistics/Brfss/Pages/default.aspx>

Scroll  
down to  
"Smoker"  
and select  
year ...

Home > Programs & Services > Health Statistics > BRFSS

### County Data Estimates

The Arkansas Center for Health Statistics develops county-level estimates are available for single years from 2000-2002.

- Methodology for County BRFSS Estimates

All documents are in PDF format unless otherwise noted.

**Downloads**

**Arthritis**  
2004 | 2005 | 2007

**Asthma**  
2007

**Binge Drinkers**  
2004 | 2005 | 2006 | 2007 | 2008

**Physical Health**  
2007

**Pneumonia**  
2004 | 2005 | 2006 | 2007 | 2008

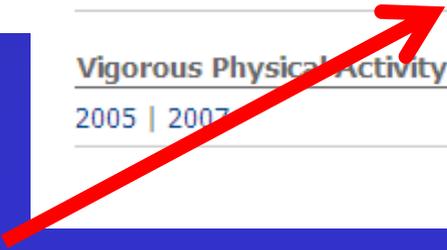
**Poor Physical and Mental Health**  
2007

**Prostate**  
2004

**PSA test**  
2006 | 2008

**Smoker**  
2004 | 2005 | 2006 | 2007 | 2008

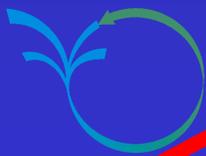
**Vigorous Physical Activity**  
2005 | 2007



<http://www.healthy.arkansas.gov/programsServices/healthStatistics/Brfss/Pages/default.aspx>

**22.6% of adults in Arkansas are current smokers**

...



### 2008 COUNTY ESTIMATES (BRFSS)

Question1:"Have you smoked at least 100 cigarettes in your entire life...?"

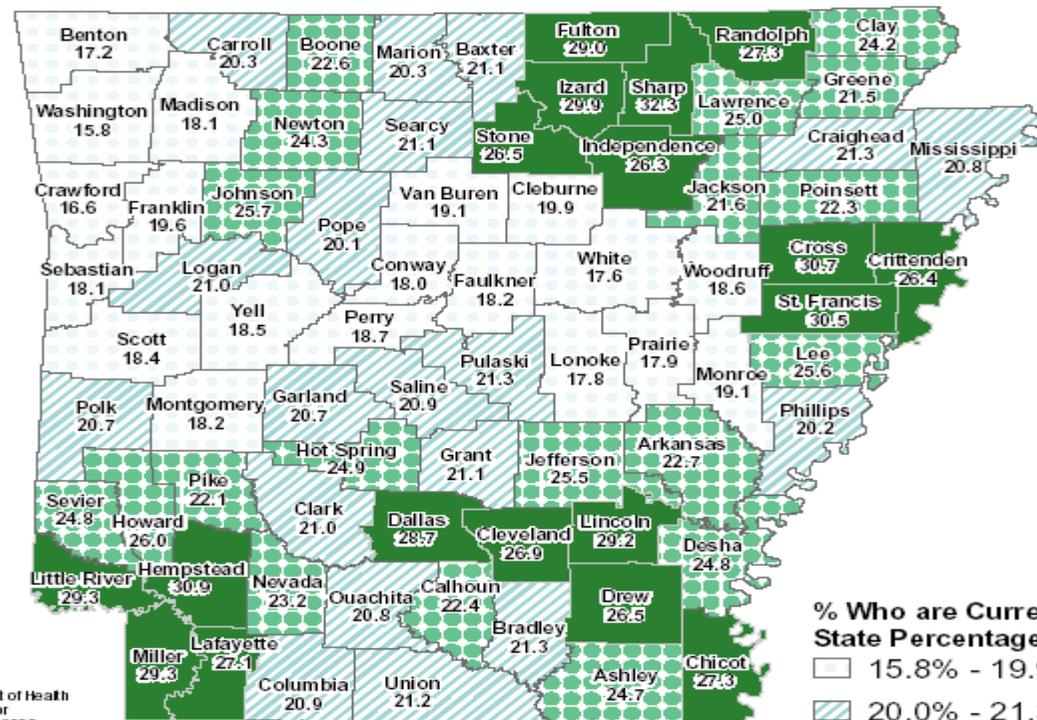
Question2:"Do you now smoke cigarettes everyday or somedays...?"

Health Status & Risk Factor: Arkansas Adults (Age 18+) Reporting Being Current Smokers

County Name	Adult (18+) Population Estimate (2008)	Current Smoker Number	Current Smoker %	Current Smoker Standard Error	Lower Confidence Limit	Upper Confidence Limit
U.S.	N/A	N/A	18.4	N/A	N/A	N/A
State: AR	2,152,909	455,275	22.3	0.9	20.6	24.0
Arkansas	14,778	3,348	22.7	2.7	17.3	28.0
Ashley	16,928	4,173	24.7	4.3	16.1	33.2
Baxter	34,207	7,229	21.1	3.3	14.6	27.7
Benton	150,971	25,961	17.2	1.9	13.5	20.9
Boone	28,481	6,450	22.6	3.5	15.7	29.6
Bradley	9,218	1,966	21.3	3.7	14.1	28.6
Calhoun	4,359	975	22.4	4.0	14.5	30.3
Carroll	21,208	4,228	20.2	2.6	15.2	25.2

# County BRFSS Prevalence for Arkansas Adults Who Are Current Smokers

Percentage of Adults 18+ Who are Current Smokers: Arkansas, 2008



% Who are Current Smokers  
 State Percentage: 22.3

- 15.8% - 19.9%
- ▨ 20.0% - 21.3%
- ▤ 21.4% - 26.0%
- 26.1% - 32.3%

Source:  
 Arkansas Department of Health  
 Behavioral Risk Factor  
 Surveillance System, 2008  
 Source Site: brfss.arkansas.gov  
 Author: Amanda Fincher, GISP  
 Date: December 4, 2009



Source: [www.healthy.ar.gov](http://www.healthy.ar.gov)

<http://www.healthy.arkansas.gov/programsServices/healthStatistics/Pages/default.aspx>

Select  
"County  
Health  
Surveys"

...



The screenshot shows the Arkansas Department of Health website. The header features the state seal and the text "Arkansas Department of Health". The navigation menu includes "Home", "About ADH", "Programs & Services", "Certificates, Licenses & Permits", "News", and "Local". A search bar and an "A-Z Index" are also present. The main content area is divided into a left sidebar and a right main section. The sidebar lists several categories with expandable arrows: "Health Statistics Home", "Data and Reports", "Health Professionals", "Hospital Discharge", "Registries" (with sub-items: Cancer Registry, STD/HIV Registry, Trauma Registry), and "Surveys" (with sub-items: BRFSS, County Health Surveys, PRAMS). A red arrow points from the "County Health Surveys" link in the sidebar to the right. The main section displays the "Health Statistics" page, which includes a breadcrumb trail "Home > Programs & Services > Health Statistics", a heading "Health Statistics", and introductory text about the Health Statistics Branch (HSB) and its various data collection methods.



<http://www.healthy.arkansas.gov/programsServices/healthStatistics/Pages/default.aspx>

Scroll  
down to  
find  
county ...

Home > Programs & Services > Health Statistics > BRFSS

## County Health Surveys

County Health Surveys: Presentations

### What is the County Health Survey?

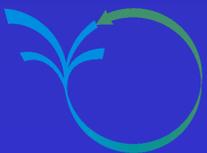
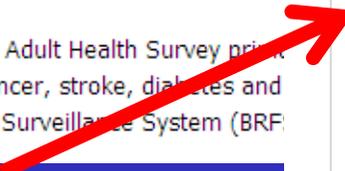
A County Health Survey is a questionr health of Arkansans. The County Heal County Youth Health Survey. The Cou Improvement (HHI) initiative.

### County Adult Health Survey (C

The County Adult Health Survey pri disease, cancer, stroke, diabetes and Risk Factor Surveillance System (BRF

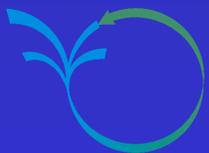
Select a county below to a view a survey

Arkansas	Dallas	Lee	Pope
Ashley	Desha	Lincoln	Prairie
Baxter	Drew	Little River	Pulaski
Benton	Faulkner	Logan	Randolph
Boone	Franklin	Lonoke	Saint Francis
Bradley	Fulton	Madison	Saline
Calhoun	Garland	Marion	Scott
Carroll	Grant	Miller	Searcy
Chicot	Greene	Mississippi	Sebastian
Clark	Hempstead	Monroe	Sevier
Clay	Hot Spring	Montgomery	Sharp
Cleburne	Howard	Nevada	Stone
Cleveland	Independence	Newton	Union
Columbia	Izard	Ouachita	Van Buren
Conway	Jackson	Perry	Washington
Craighead	Jefferson	Phillips	White
Crawford	Johnson	Pike	Woodruff
Crittenden	Lafayette	Poinsett	Yell
Cross	Lawrence	Polk	



<http://www.healthy.arkansas.gov/programsServices/healthStatistics/Pages/default.aspx>

1. Provides  
you with  
list of  
county  
surveys ...  
2. Select  
2008  
CAHS



A screenshot of a Windows Internet Explorer browser window displaying the 'ADH: Survey List' page. The browser's address bar shows the URL: http://www.healthy.arkansas.gov/programsServices/healthStatistics/Brfss/Pages/SurveyList.aspx#b. The page content is organized by county, with sections for Baxter, Benton, Boone, Bradley, and Calhoun. Each county section lists various surveys, including 'Adult Surveys' and 'Youth Surveys'. A prominent red arrow points from the text on the left towards the survey list on the right. The browser's status bar at the bottom indicates 'Done' and 'Internet'.

# State Reports

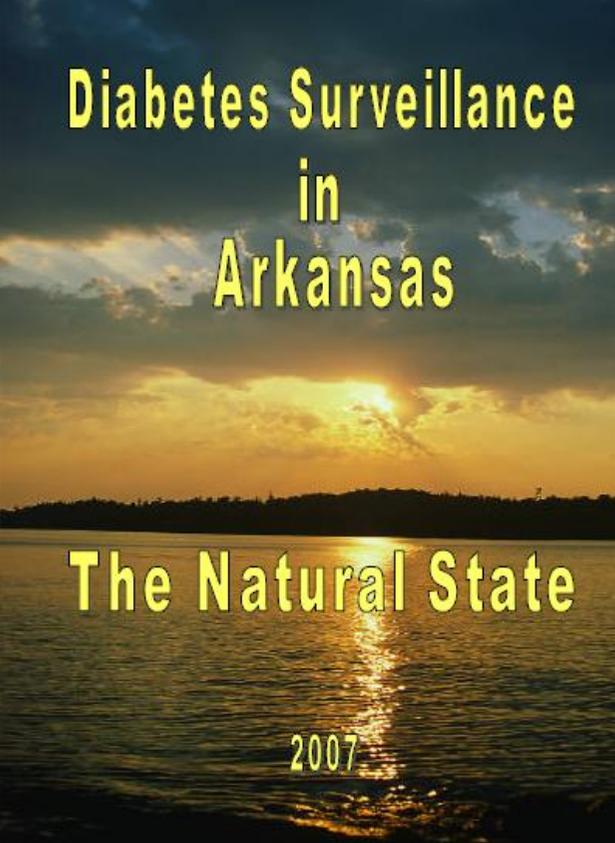

 Legislative Briefing on Breast and Cervical Cancer








## Diabetes Surveillance in Arkansas



## The Natural State

2007

MEMBERS OF THE TOBACCO PREVENTION AND CESSATION ADVISORY COMMITTEE AND THE ORGANIZATIONS THEY REPRESENT

Connie Ash  
 Arkansas Nurses Association  
 Mary Benjamin, Ph.D.  
 University of Arkansas at Pine Bluff  
 David Covey, M.D.  
 Senate Appointment  
 Craig Scotts, Ph.D.  
 Arkansas Center for Health Improvement  
 Clifton Johnson, M.D.  
 Arkansas Medical, Dental & Pharmaceutical Association  
 Genine Perez  
 Family Service Agency  
 Jeffrey Blackwell  
 Arkansas Medical Society  
 Barbara Kumpe  
 American Heart Association  
 Jimmy Leopard  
 Arkansas Hospital Association  
 Lynn Russell, Ph.D.  
 U of A Cooperative Extension Service  
 Jim Shenep  
 American Lung Association  
 Cynthia Gregory  
 Minority Health Commission  
 Wilma Houston  
 Coalition for a Tobacco-Free Arkansas  
 Jill Cox  
 American Cancer Association  
 David Busby, M.D.  
 Arkansas Association of Area Agencies on Aging  
 Gary Wheeler, M.D.  
 House of Representatives Appointment




STAMP OUT SMOKING  
 ARKANSAS DEPARTMENT OF  
 HEALTH AND HUMAN SERVICES

## TOBACCO PREVENTION IN ARKANSAS



BE THE CHAMPION OF YOUR OWN HEALTH  
 BE A REBEL  
 BE FREE

PROGRESS REPORT  
2006

Tobacco Prevention and  
 Cessation Program  
 Division of Health  
 501-661-2953



# State Factsheets

October 2008

## An Arkansas EPI-gram

THE STATE EPIDEMIOLOGICAL WORKGROUP BRINGS YOU THE FACTS ABOUT RISK BEHAVIORS IN ARKANSAS  
SPONSORED BY THE OFFICE OF ALCOHOL AND DRUG ABUSE PREVENTION

### Drinking and Pre-pregnancy Risks

In 1981 the Office of the Surgeon General advised pregnant women to limit alcohol consumption. Additional research led the Surgeon General to update this advisory. Today, pregnant women or women who may become pregnant are advised to abstain from all alcohol consumption. New studies show that:

- There is no known safe level of alcohol consumption.
- Alcohol can impact fetal development in early weeks of pregnancy.
- Fetal impacts are irreversible and life-long.<sup>1</sup>

Analysis of national 2004 Behavioral Risk Factor Surveillance System (BRFSS) data concluded that 53.9% of women with the highest potential for becoming pregnant in the immediate future reported consuming alcohol in the previous month. Of these women, 10.7% reported binge drinking (any occasion of 5+ drinks) and 12.9% reported binge drinking or consuming one or more drinks per day. These high potential pregnancy respondents were those women between the ages of 18 and 44 who were considering becoming pregnant within 12 months, were not using contraception, were not sterile, or were not currently pregnant.<sup>2</sup> In Arkansas, the Department of Health administers the BRFSS. The state BRFSS does not currently include questions about the intent to become pregnant, sterility or contraceptive use. However, the drinking patterns of all Arkansas women of childbearing age (see figure at right) indicate that a majority of women ages 18 to 44 consume alcohol, most only occasionally. Nonetheless, a significant number of these women report heavy consumption of alcohol and binge drinking.<sup>3</sup> These data, taken together with the high rate of unintended pregnancies (as many as half

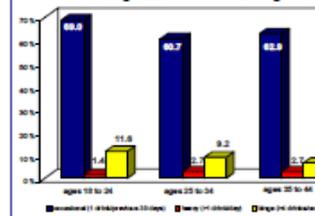
according to the Centers for Disease Control and Prevention), and the initial detection of most pregnancies occurring several weeks after conception, could indicate that many Arkansas women may be unknowingly consuming high levels of alcohol in the earliest weeks of pregnancy.

Prevention messages addressing abstinence from alcohol during pregnancy have been effective. Data indicate that once pregnancy is confirmed, the overwhelming majority of women abstain from alcohol consumption or greatly decrease consumption. However, new strategies may need to be developed to address alcohol consumption in the earliest weeks of pregnancy before pregnancy is known.

#### Prenatal Exposure

Prenatal exposure to alcohol can cause a range of disorders in offspring known as fetal alcohol spectrum disorders (FASDs), an umbrella term describing such lifelong effects as physical, mental, behavioral, and/or learning disability. One of the most severe of drinking during pregnancy is fetal alcohol syndrome (FAS), a leading preventable cause of mental retardation and birth defects.<sup>4</sup> All FAS is 100% preventable if pregnant women or women who become pregnant avoid alcohol consumption.

2007 Drinking Patterns of Women Ages 18



<sup>1</sup> Information from the Office of the Surgeon General, U.S. Department of Health and Human Services, <http://www.surgeongeneral.gov>  
<sup>2</sup> Anderson, J.E., Eberhart, S., Floyd, L., Abma, H. (2005). "Prevalence of Risk Factors for Pregnancy Outcomes During Pregnancy and the Preconception Period—United States, 20 National and Child Health Journal, 10, 510-519.  
<sup>3</sup> Information from the Arkansas Behavioral Risk Factor Surveillance System. <http://brfss.doh.state.ar.us>  
<sup>4</sup> Information from the Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. <http://www.cdc.gov/od/odc/fas/>

Coming next month:  
**Task Force on Substance Abuse Annual Report**



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In Arkansas,  
1 in 4 men  
smoke  
cigarettes.

Arkansas  
Behavioral  
Risk Factor  
Surveillance  
System

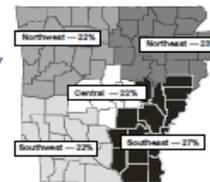
### CIGARETTE SMOKING AMONG ADULTS IN ARKANSAS, 2007

#### THE BURDEN OF CIGARETTE SMOKING

- Adults who report currently smoking every day or some days are considered current smokers.
- According to the U.S. Surgeon General, cigarette smoking causes numerous types of cancers, as well as lung and heart diseases.
- The Centers for Disease Control and Prevention estimate that one in five deaths in the U.S. is smoking related.
- About 477,000 (22%) Arkansas adults currently smoke cigarettes.
- Adults in Arkansas are more likely (22%) to smoke cigarettes compared to U.S. adults (19%).

#### PUBLIC HEALTH REGION

The map to the right shows how smoking rates vary by public health region in Arkansas.

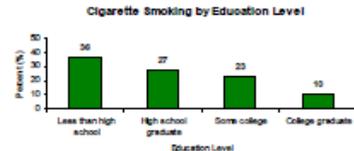


#### GENDER

Men are more likely to smoke (25%) compared with women (20%).

#### EDUCATION

Adults with less education are more likely to smoke, as shown in the graph below.



### Fact Sheet: Recognition of Major Symptoms of Heart Attack and Stroke Among Arkansans

#### Introduction:

Coronary heart disease is the leading cause of death in Arkansas. Stroke is the third leading cause of death and serious disability in Arkansas. In 2003, 27.8 percent of all deaths in Arkansas were due to heart disease and 7.6 percent were due to stroke. Reducing deaths due to heart disease and stroke requires knowing the warning signs and knowing how to respond quickly and properly if warning signs occur<sup>1</sup>.

#### Methods:

The Behavioral Risk Factor Surveillance System (BRFSS) is a state-based telephone survey of adults aged 18 years and over. It was developed to collect and monitor information on personal risk behaviors that affect adult health. In 2001, 2,938 adults participated in the Arkansas BRFSS survey. Respondents were asked about their knowledge of the signs and symptoms of a heart attack and stroke. For each question, the answer choices were 'yes', 'no', 'not sure', or 'don't know'.

#### Symptoms included for heart attack:

- Pain or discomfort in the jaw, neck or back
- Feeling weak, lightheaded, or faint
- Chest pain or discomfort
- Sudden trouble seeing in one or both eyes\*
- Pain or discomfort in the arms or shoulder
- Shortness of breath

#### Symptoms included for stroke:

- Sudden confusion or trouble speaking
- Sudden numbness or weakness of face, arm, or leg, especially on one side
- Sudden trouble seeing in one or both eyes
- Sudden chest pain or discomfort\*
- Sudden trouble walking, dizziness, or loss of balance
- Severe headache with no known cause

Additionally, respondents were also asked, "If you thought someone was having a heart attack or a stroke, what is the first thing you would do?" Respondents chose from a list of choices that included the following:

- Take them to the hospital
- Tell them to call their doctor
- Call 911
- Call their spouse or a family member
- Do something else
- Don't know/not sure
- Refused

\* Deney Symptoms, a 'yes' answer is incorrect.

#### Highlights of this Issue

- Eighty percent of adults surveyed correctly recognized at least three heart attack symptoms.
- Seventy-three percent of adults surveyed correctly recognized at least three stroke symptoms.
- Ten percent of the respondents correctly identified all heart attack symptoms and indicated that they would call 911 if they thought someone was having heart attack.
- Thirteen percent recognized all stroke symptoms and indicated that they would call 911 if they thought someone was having stroke.
- Eighty-three percent of survey respondents indicated that they would call 911 if they thought someone was having heart attack or stroke.



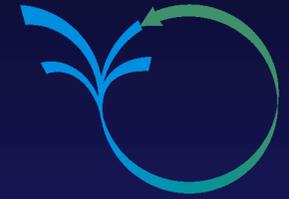


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health professionals.**



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