How to Find and Use Data

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Objectives

1. To review the need, value and place of evaluation in public health tobacco control programs
2. To review and describe the use of logic models as a tool for evaluation
3. To demonstrate how logic models and objectives can assist in identifying outcomes
4. To review sources of data for evaluation of public health tobacco control programs

Overview of Evaluation

- Overview of Evaluation
  - Importance of Evaluation for local health department tobacco coordinators
  - Importance of Objectives in Evaluation

What is Program Evaluation?

- Program evaluation is the **systematic collection of information** about the activities, characteristics, and outcomes of programs to make judgments about the program, improve program effectiveness, and/or inform decisions about future program development.

Why Evaluate?

- Program evaluation can help to:
  - Determine where your program is now and how things are going
  - Determine if your program is making a difference and program participants are benefiting
  - Document your program activities
- Program evaluation can help you answer the question “Is our program making a difference?”

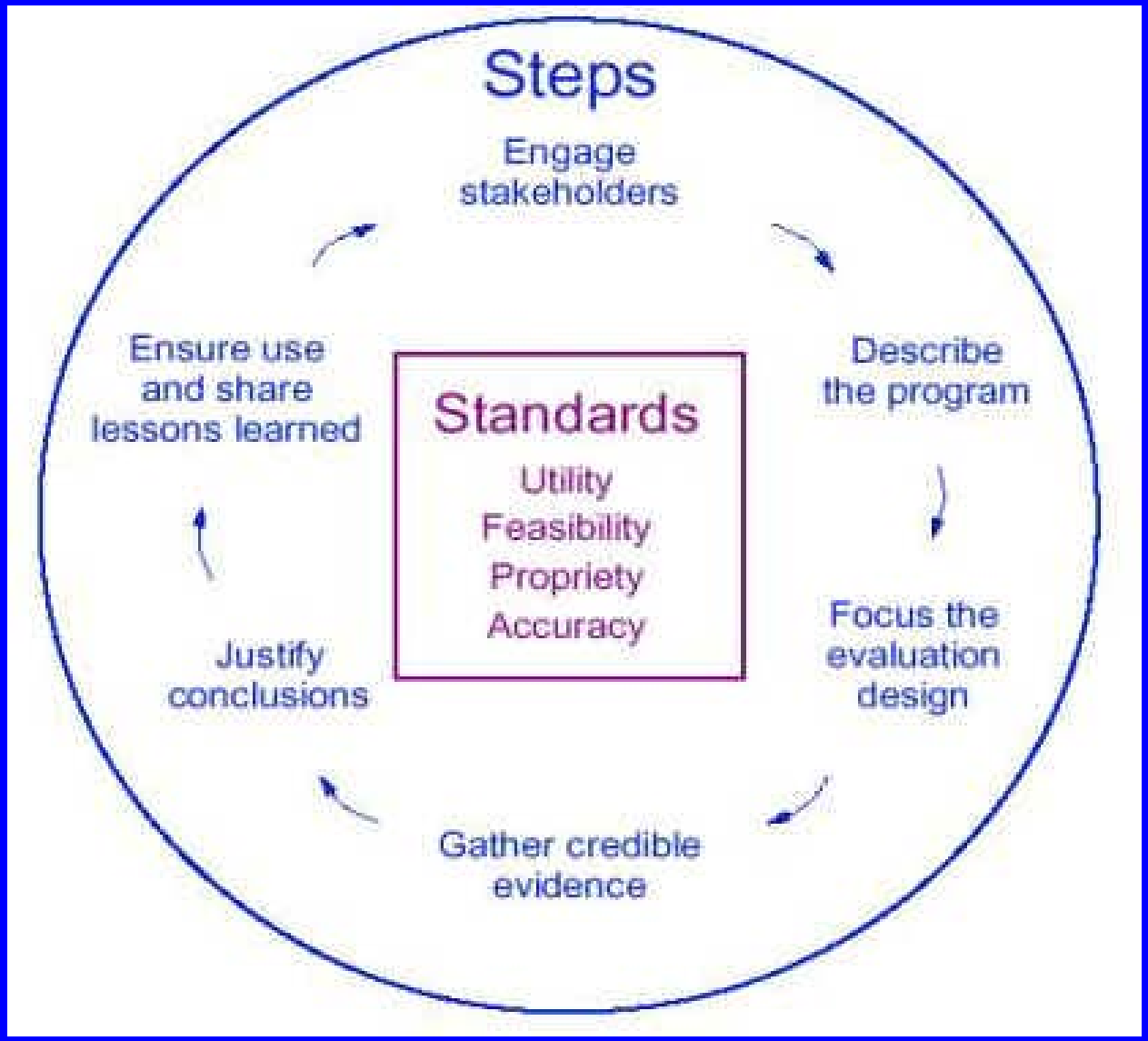
When to Evaluate?

- Evaluation is best done continuously
  - Begin at the beginning (in the program design phase)
  - Continue during (the implementation phase)
  - Finalize evaluation after the program has been going for a while (sustainability phase).

Building Blocks for Evaluation

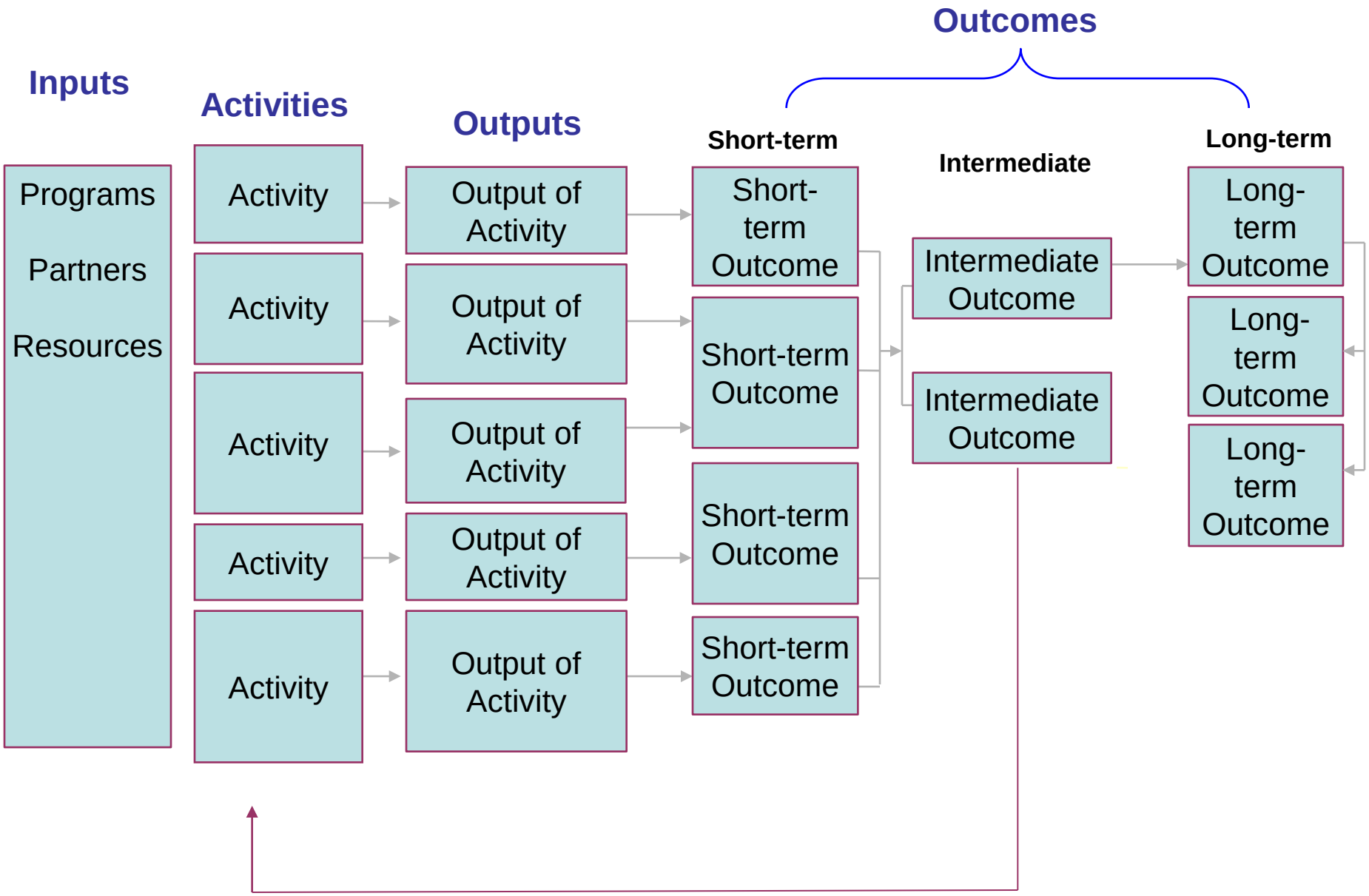
- Assessment of the context for evaluation
  - Purpose(s) of the evaluation
  - Stakeholders and expectations
- Review of the goals and objectives of the program
- Selection of evaluation methods
- Collection and analysis of evaluation data

CDC's Evaluation Framework



Evaluation should begin with developing a logic model

Logic Model Example



Parts of Logic Model

- Two Main Parts:
  1. What you plan on doing (activities) using the resources you have (inputs)
  2. What you expect to happen; your intended results (outputs and outcomes)
     - Outputs
       - Processes
     - Outcomes
       - Short-term
       - Intermediate
       - Long-term

Process Evaluation

- The outputs that occur from implemented activities
- Can generally be seen immediately

Outcome Evaluation

- Short-term Outcomes
  - changes in attitudes, knowledge, or skills
- Intermediate Outcomes
  - changes in individual behavior or policies
- Long-term Outcomes
  - significant results of events
  - may not be seen for many years

Indicator Table

Output	Indicator	Data Source	Target	Current
Activity	Specific measurement	Data source to measure indicator	What is expected	Current with date
Short-term Outcome	**Indicator**	**Data Source**	**Target**	**Current**
Intermediate Outcome	**Indicator**	**Data Source**	**Target**	**Current**
Long-term Outcome	**Indicator**	**Data Source**	**Target**	**Current**

Process Evaluation

Output	Indicator	Data Source	Target	Current
Distribute Quit Line toolkits to area physicians	Number of toolkits distributed	Program Notes	10	5 (4/1/2011)
Conduct Cooper Clayton Class	Number of Cooper Clayton Sessions Completed	Program Notes	12	

Short-term Evaluation

Short-term Outcome	Indicator	Data Source	Target	Current
Increased physician knowledge of Quit Line as cessation method	Number of targeted physicians who are aware of Quit Line	Physician Survey	10	
	Number of physicians using fax referrals for Quit Line in County	Quit Line Data	10	
Increased knowledge about quitting methods	Number of participants completing CC course	Class Data	7	

Intermediate Evaluation

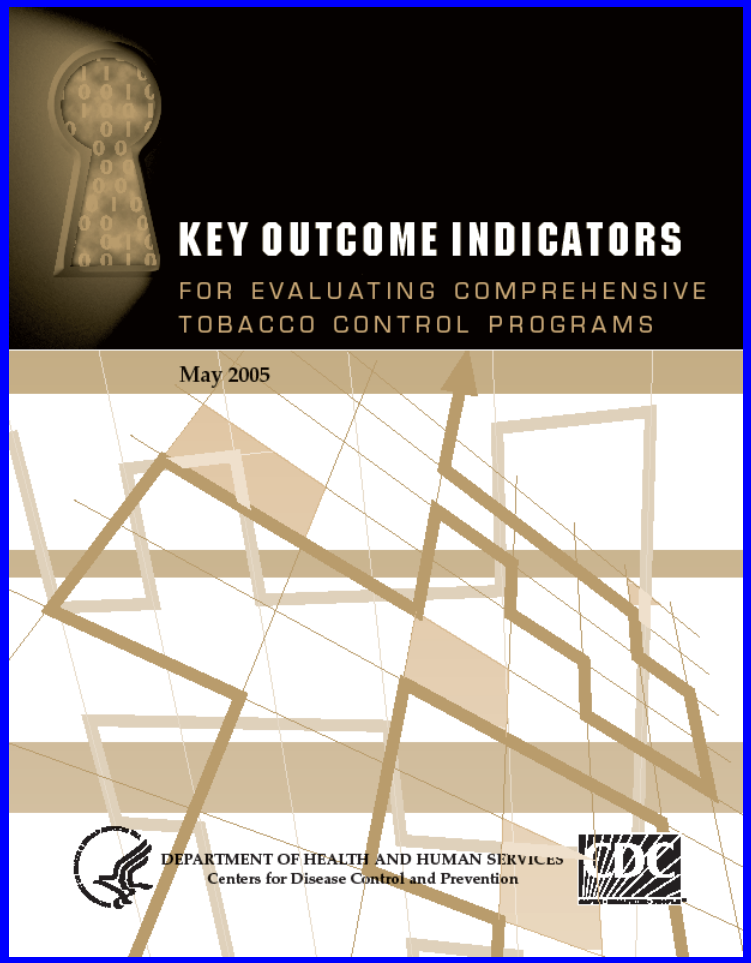
Intermediate Outcome	Indicator	Data Source	Target	Current
Increased calls to Quit Line	Number of calls to the Quit Line with physician referral in County	Quit Line Data		
Increased quit attempts	Number of QL callers who quit smoking for X months	Quit Line Data		
	Number of CC participants who quit smoking for X months	Cooper Clayton Class Data		

Long-Term Evaluation

Long-Term Outcome	Indicator	Data Source	Target	Current
Decrease in smoking prevalence	Percentage of adults who smoke in County	County Health Rankings		
Decrease in lung cancer	Age-adjusted lung cancer rate in County	KY Cancer Registry		

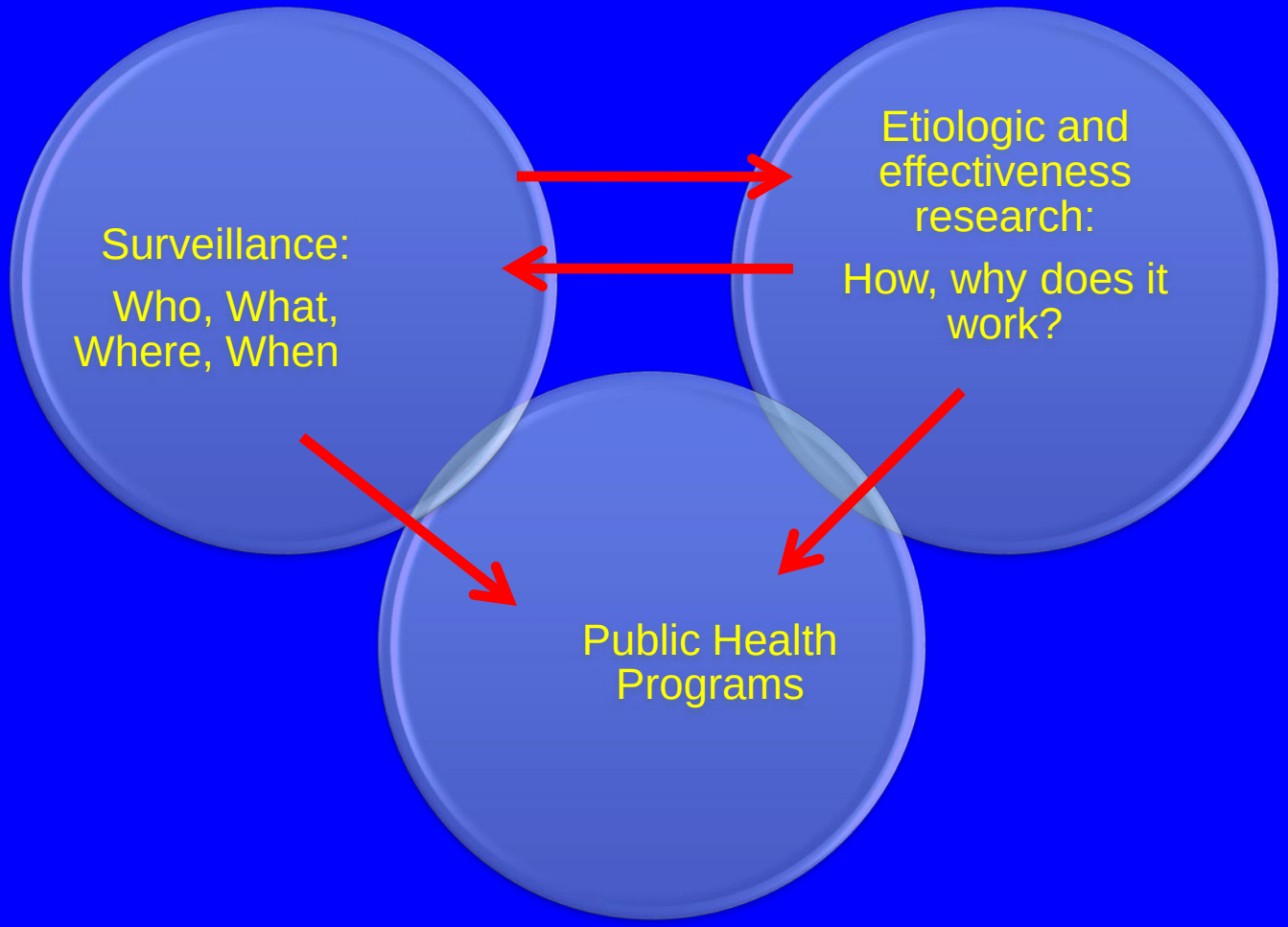
A Great Resource

- CDC's Key Outcome Indicator Report
  - Example logic models for each CDC tobacco prevention and cessation goal
  - Examples for ST, I, and LT outcomes
  - Search for "Key Outcome Indicators" on Google and download.



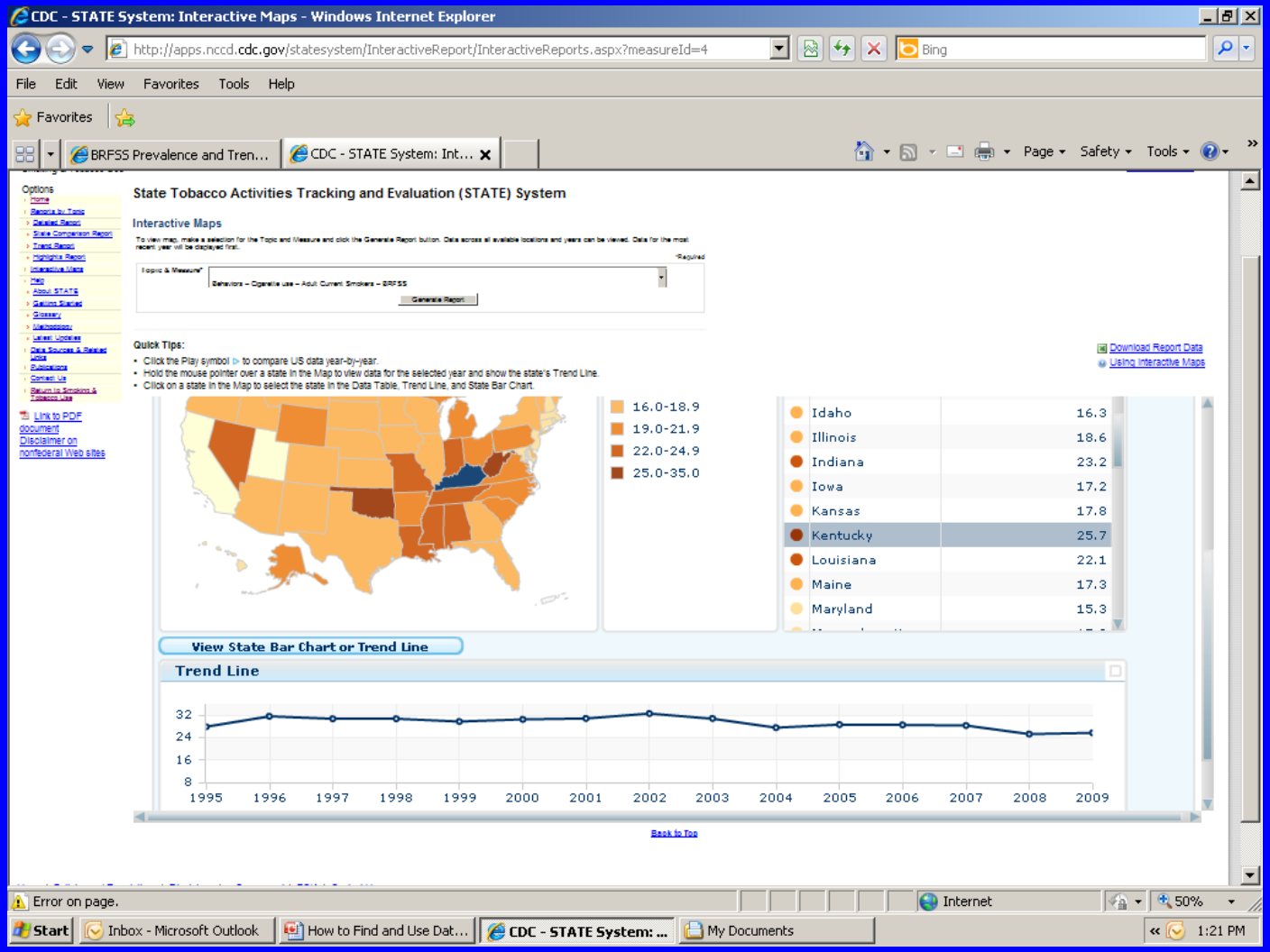
Main Objectives of Surveillance

- Monitor:
  - Detect new health problems
  - Assess and track magnitude of tobacco use and risk factors and status of care of the population.
- Prioritize:
  - Identify key problems and groups for intervention.
  - Set objectives for management and prevention.
  - Identify research gaps.
  - Plan, facilitate and justify rational use of available resources.
- Evaluate:
  - Evaluate and track the public health response to a problem
  - Examine progress on program objectives (i.e. Catalyst Tobacco Program workplan, Healthy People 2020)


Surveillance:
Who, What, Where, When
Etiologic and effectiveness research:
How, why does it work?
Public Health Programs

National Data Sources

CDC State Tobacco Activities Tracking and Evaluation (STATE) System



http://apps.nccd.cdc.gov/statesystem/Default/Default.aspx

CDC State Tobacco Activities Tracking and Evaluation (STATE) System

CDC - STATE System: Interactive Maps - Windows Internet Explorer

http://apps.nccd.cdc.gov/statesystem/InteractiveReport/InteractiveReports.aspx?measureId=4

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BRFSS Prevalence and Tren... | CDC - STATE System: Int...

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Smoking & Tobacco Use

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Disclaimer on

State Tobacco Activities Tracking and Evaluation (STATE) System

Interactive Maps

To view map, make a selection for the Topic and Measure and click the Generate Report button. Data across all available locations and years can be viewed. D
most recent year will be displayed first.

Topic & Measure* Behaviors – Cigarette use – Adult Current Smokers – BRFSS

- Select one
- Behaviors – Cigarette use – Adult Current Smokers – BRFSS
- Behaviors – Cigarette use – Youth Current Smokers – YRBSS
- Legislation – Excise Tax – Excise Tax Rates on Packs of Cigarettes – OSH
- Legislation – Preemption – Smokefree Indoor Air, Youth Access, Advertising – OSH
- Legislation – Smokefree Indoor Air – Private Worksites, Restaurants, Bars – OSH

Quick Tips:

- Click the Play symbol ▷ to compare US data year-by-year.
- Hold the mouse pointer over a state in the Map to view data for the selected year and show the state's Trend Line.
- Click on a state in the Map to select the state in the Data Table, Trend Line, and State Bar Chart.

STATE System Interactive Maps

Behaviors – Cigarette use – Adult Current Smokers – BRFSS

Play Data by Year

▷ < > 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008

Data for Year: 2000

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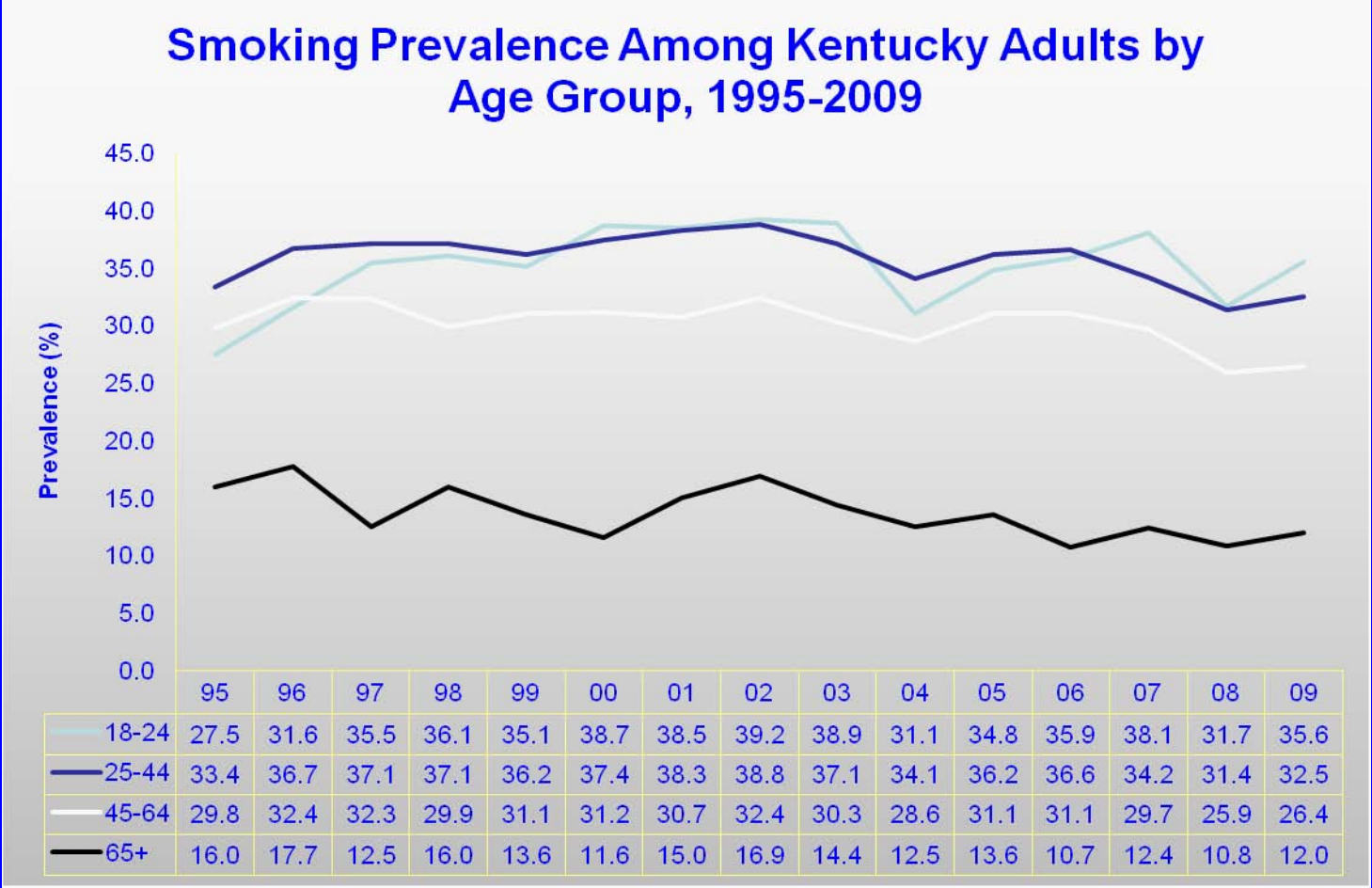
CDC State Tobacco Activities Tracking and Evaluation (STATE) System



	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09
18-24	27.5	31.6	35.5	36.1	35.1	38.7	38.5	39.2	38.9	31.1	34.8	35.9	38.1	31.7	35.6
25-44	33.4	36.7	37.1	37.1	36.2	37.4	38.3	38.8	37.1	34.1	36.2	36.6	34.2	31.4	32.5
45-64	29.8	32.4	32.3	29.9	31.1	31.2	30.7	32.4	30.3	28.6	31.1	31.1	29.7	25.9	26.4
65+	16.0	17.7	12.5	16.0	13.6	11.6	15.0	16.9	14.4	12.5	13.6	10.7	12.4	10.8	12.0

CDC Wonder

Compressed Mortality, 1999-2007 Results Form - Windows Internet Explorer

http://wonder.cdc.gov/controller/datarequest/D53;jsessionid=BE777623D956FFB4D1A7C7524E5D534F

CDC Home | Search | Health Topics A-Z

CDC WONDER

WONDER Home | FAQ | Help | Contact Us | Search

Compressed Mortality, 1999-2007 Results

Request Form | Results | Map | Chart | About

Compressed Mortality Data | Dataset Documentation | Help for Results | Printing Tips | Help with Exports

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Export results to a file

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Race	Deaths	Population	Crude Rate Per 100,000	Age Adjusted Rate Per 100,000 (95% Confidence Interval)
American Indian or Alaska Native	11	88,742	12.4 (Unreliable)	23.0 (Unreliable) (11.0 - 42.3)
Asian or Pacific Islander	30	353,414	8.5	25.9 (16.8 - 38.3)
Black or African American	1,711	2,881,947	59.4	84.1 (80.1 - 88.1)
White	36,671	33,737,110	108.7	104.7 (103.7 - 105.8)
Total	**38,423**	**37,061,213**	**103.7**	**103.3 (102.3 - 104.3)**

/controller/datarequest/D53;jsessionid=BE777623D956FFB4D1A7C7524E5D534F

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http://wonder.cdc.gov

Smoking-Attributable Mortality, Morbidity, and Economic Costs

SAMMEC - Adult SAMMEC — One-Year Report - Smoking-Attributable Mortality - Windows Internet Explorer

https://apps.nccd.cdc.gov/sammec/sam_reports.asp

Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC)

Printer-friendly version

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Disclaimer on nonfederal Web sites

Data Elements

State: United States

Year: 2004 Go

- Smoking Prevalence — KY 2004 Smoking Prevalence
- Number of Deaths — KY 2004 Number of Deaths
- Relative Risk — CPS–II(82-88)
- Life Expectancy — U.S. 2004 Life Expectancy
- Present Value of Future Earnings — U.S. 2004 PVFE

Adult SAMMEC — One-Year Report

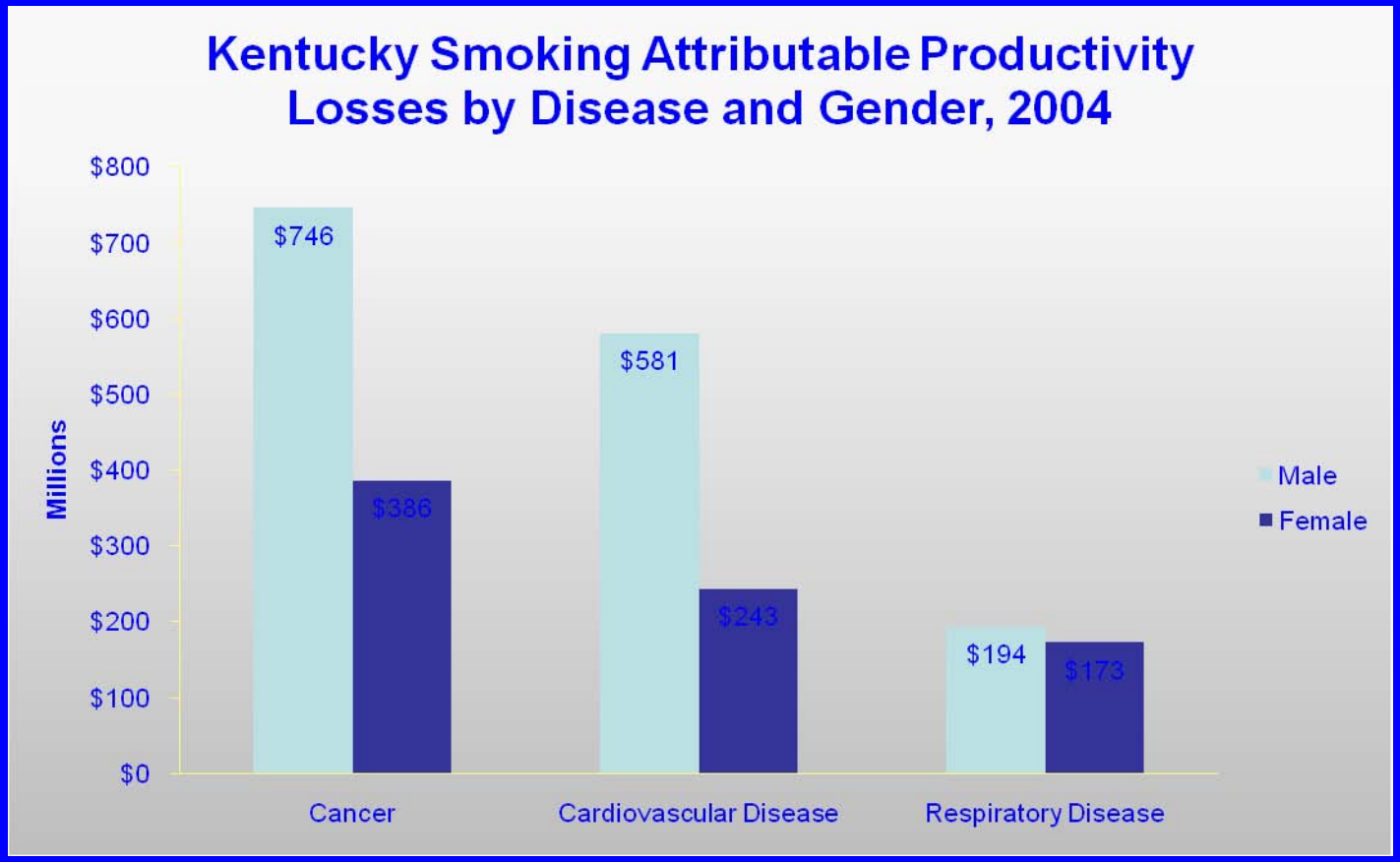
Return to Adult SAMMEC — Reports

Smoking-Attributable Mortality (Kentucky, 2004)[1,2]

Disease Category	Male	Female	Total
Malignant Neoplasms			
Lip, Oral Cavity, Pharynx	54	23	77
Esophagus	106	24	130
Stomach	24	5	29
Pancreas	51	58	109
Larynx	46	8	54
Trachea, Lung, Bronchus	1,715	1,000	2,715
Cervix Uteri	0	5	5
Kidney and Renal Pelvis	50	4	54
Urinary Bladder	59	22	81
Acute Myeloid Leukemia	9	4	13
Subtotal	**2,114**	**1,153**	**3,267**
Cardiovascular Diseases			
Ischemic Heart Disease	850	456	1,306
Other Heart Disease	264	178	442
Cerebrovascular Disease	126	149	275
Atherosclerosis	13	5	18
Aortic Aneurysm	84	45	129
Other Arterial Disease	8	16	24
Subtotal	**1,345**	**849**	**2,194**
Respiratory Diseases			
Pneumonia, Influenza	94	81	175
Bronchitis, Emphysema	125	96	221
Chronic Airway Obstruction	751	766	1,517
Subtotal	**970**	**943**	**1,913**
Total	**4,429**	**2,945**	**7,374**

http://apps.nccd.cdc.gov/sammec/

SAMMEC Data


Kentucky Smoking Attributable Productivity Losses by Disease and Gender, 2004
Millions
$800
$700
$600
$500
$400
$300
$200
$100
$0
$746
$386
$581
$243
$194
$173
Cancer
Cardiovascular Disease
Respiratory Disease
Male
Female

SAMMEC Data

•Provided are the direct expenditures on medical care attributable to smoking and smoking-related events in Kentucky.

Cost Component	Total	Per Pack	Per Smoker
Adult Expenditures			
Ambulatory	$270,111,896	$0.48	$297.90
Hospital Care	$895,124,176	$1.59	$987.20
Rx	$354,900,384	$0.63	$391.41
Nursing Home	$135,661,580	$0.24	$149.62
Other Care	$116,281,354	$0.21	$128.24
Total	$1,772,079,391	$3.15	$1,954.35
Neonatal Expenditures	$5,614,639	$0.01	$6.19
Total Expenditures	$1,777,694,030	$3.16	$1,960.55

State and Local Data

kentuckyhealthfacts.org

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- [ ] Senior Health

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Meade County

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- Breckinridge Memorial Hospital (Hardinsburg)

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Location: Breckinridge County

Key Indicators

Social & Behavioral Indicators

Lack of Physical Activity (percent adults)	Breckinridge	Meade
County	40%	22%
County Group	32%	25%

About the Indicator: Percent of adults who did not participate in any physical activity or exercise during the past month.

Data Source: BRFSS

Prevalence of Obesity (percent adults)	Breckinridge	Meade
County	25% (17.0 - 34.8)	21% (14.2 - 29.4)
County Group	25% (20.2 - 31.2)	26% (21.8 - 30.8)

About the Indicator: The percentage of adults estimated to be obese, defined as having a Body Mass Index (BMI) of 30.0 or higher. BMI is equal to weight in pounds divide by height in inches squared and then multiplied by 703.

Data Source: BRFSS

Prevalence of Overweight (percent adults)	Breckinridge	Meade
County	69% (39.4 - 77.9)	74% (63.9 - 82.0)
County Group	68% (62.4 - 73.8)	63% (58.1 - 68.1)

About the Indicator: The percentage of adults estimated to be overweight, defined as having a Body Mass Index (BMI) of 25.0 or higher. This category includes those adults estimated to be obese, defined as having a BMI of 30.0 or greater. BMI is equal to weight in pounds divide by height in inches squared and then multiplied by 703.

Data Source: BRFSS

Recommended Fruit and Vegetable Intake (percent adults)	Breckinridge	Meade
County Group	19.7% (15.6 - 24.5)	21.2% (17.3 - 25.7)
County	22.6% (14.2 - 34.0)	19.7% (12.9 - 29.0)

About the Indicator: Percent of adults who consume five or more servings of fruits and vegetables per day.

Data Source: BRFSS

Prevalence of Smoking (percent adults)	Breckinridge	Meade
County	35% (26.6 - 45.3)	27% (19.2 - 37.5)

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http://www.kentuckyhealthfacts.org

County Health Rankings

Kentucky

Overall Rankings

Maps

Health Outcomes Map

Health Factors Map

Rankings

Health Outcomes Rankings

Health Factors Rankings

Compare Counties

State Downloads, Links, & Data Guide

Related News and Information

April 12, 2011 | Update
Save the Date: 2011 County Health Rankings Congressional Briefing

February 17, 2011 | Related News
The Seattle Times: Federal government finds a lethargy belt in South, Appalachia

Related Links

County Facts from US Census Bureau

County Facts from Health and Human Services (CHSI)

2011 | BOONE, KENTUCKY

Snapshot | Additional Measures | Find Programs and Policies

To see more details, click on a measure.

	Boone County	Error Margin	National Benchmark*	Kentucky	Rank (of 120)
Health Outcomes					1
▼ Mortality					2
Premature death	5,949	5,473-6,425	5,564	8,859	
▼ Morbidity					6
Poor or fair health	15%	13-18%	10%	22%	
Poor physical health days	3.9	3.2-4.6	2.6	4.7	
Poor mental health days	3.6	2.9-4.2	2.3	4.3	
Low birthweight	6.8%	6.4-7.3%	6.0%	8.9%	
Health Factors					2
▼ Health Behaviors					4
Adult smoking	19%	16-23%	15%	28%	
Adult obesity	30%	25-35%	25%	31%	
Excessive drinking	16%	12-20%	8%	11%	
Motor vehicle crash death rate	11	8-13	12	22	
Sexually transmitted infections	241		83	287	
Teen birth rate	34	31-36	22	52	
▼ Clinical Care					11
Uninsured adults	19%	16-22%	13%	19%	
Primary care providers	847:1		631:1	922:1	
Preventable hospital stays	90	86-95	52	105	
Diabetic screening	81%	72-90%	89%	82%	
Mammography screening	67%	58-76%	74%	62%	
▼ Social & Economic Factors					2
High school graduation	90%		92%	84%	
Some college	65%		68%	54%	
Unemployment	9.2%	8.9-9.4%	5.3%	10.5%	
Children in poverty	8%	6-10%	11%	23%	

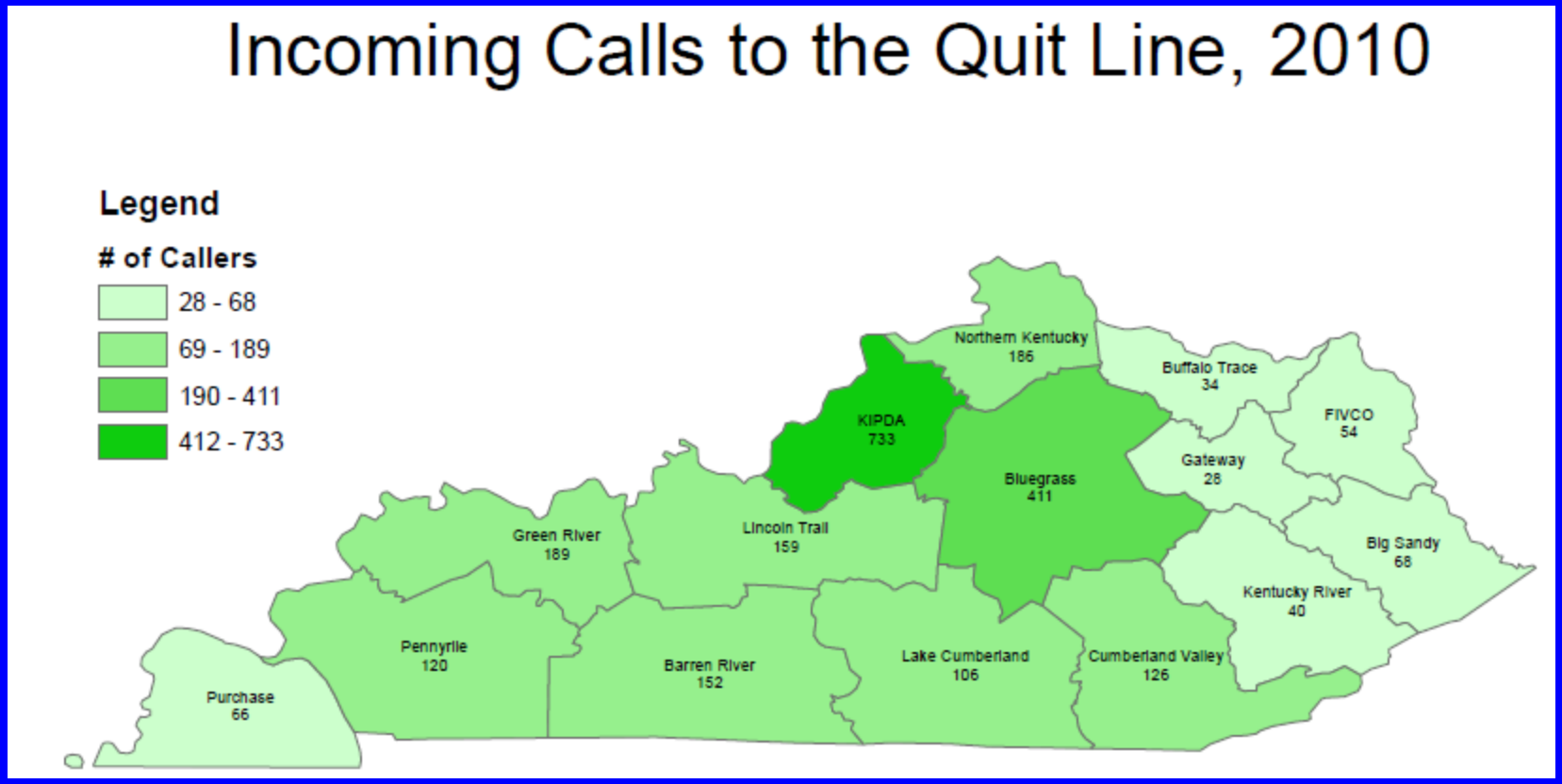
Internet 75%

http://www.countyhealthrankings.org/kentucky

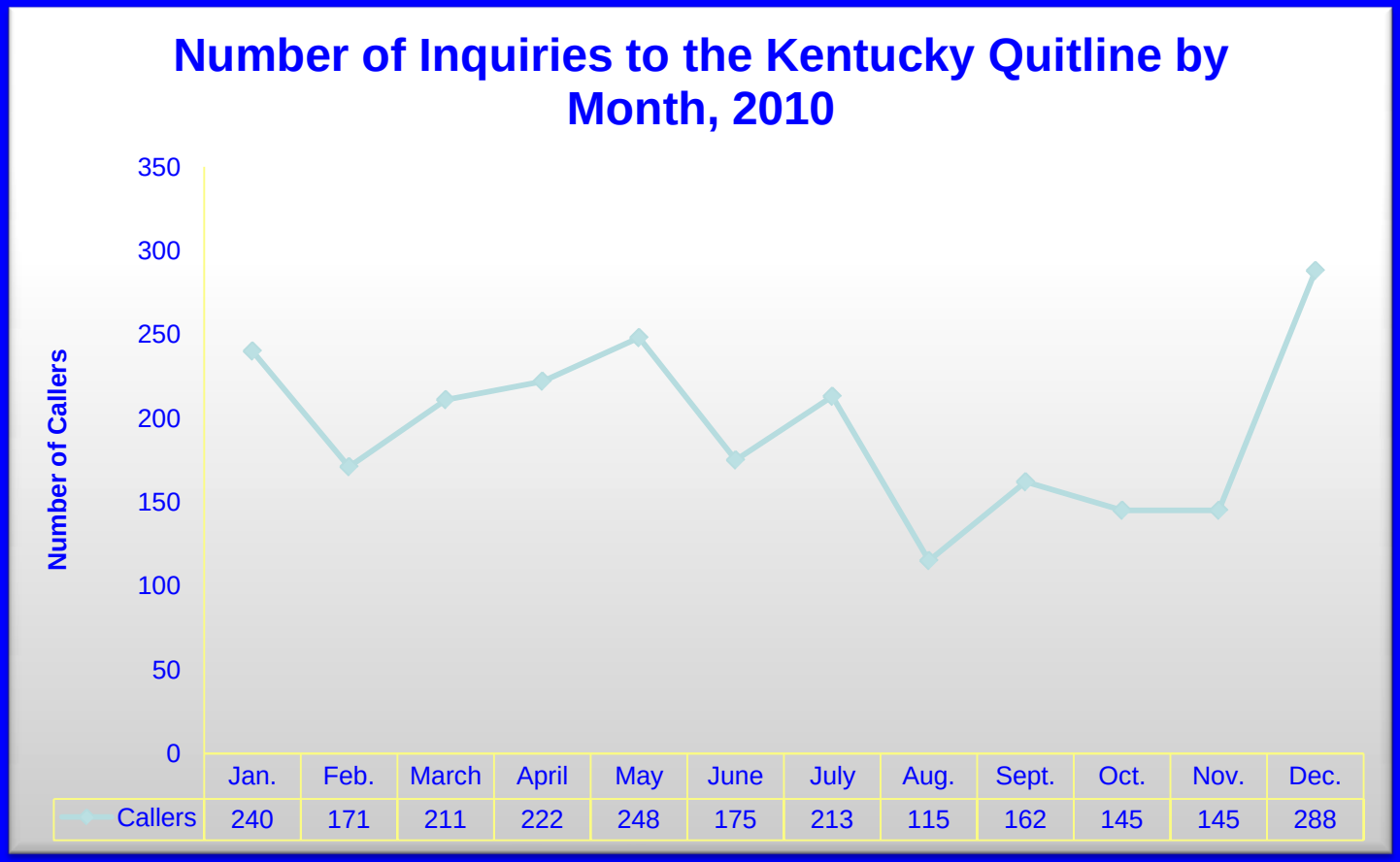
KY Tobacco Program Data

- Data available at state and county level:
  - QuitLine
  - BRFSS
  - KYTS
  - National Adult Tobacco Survey
  - Vital Statistics

QuitLine Data

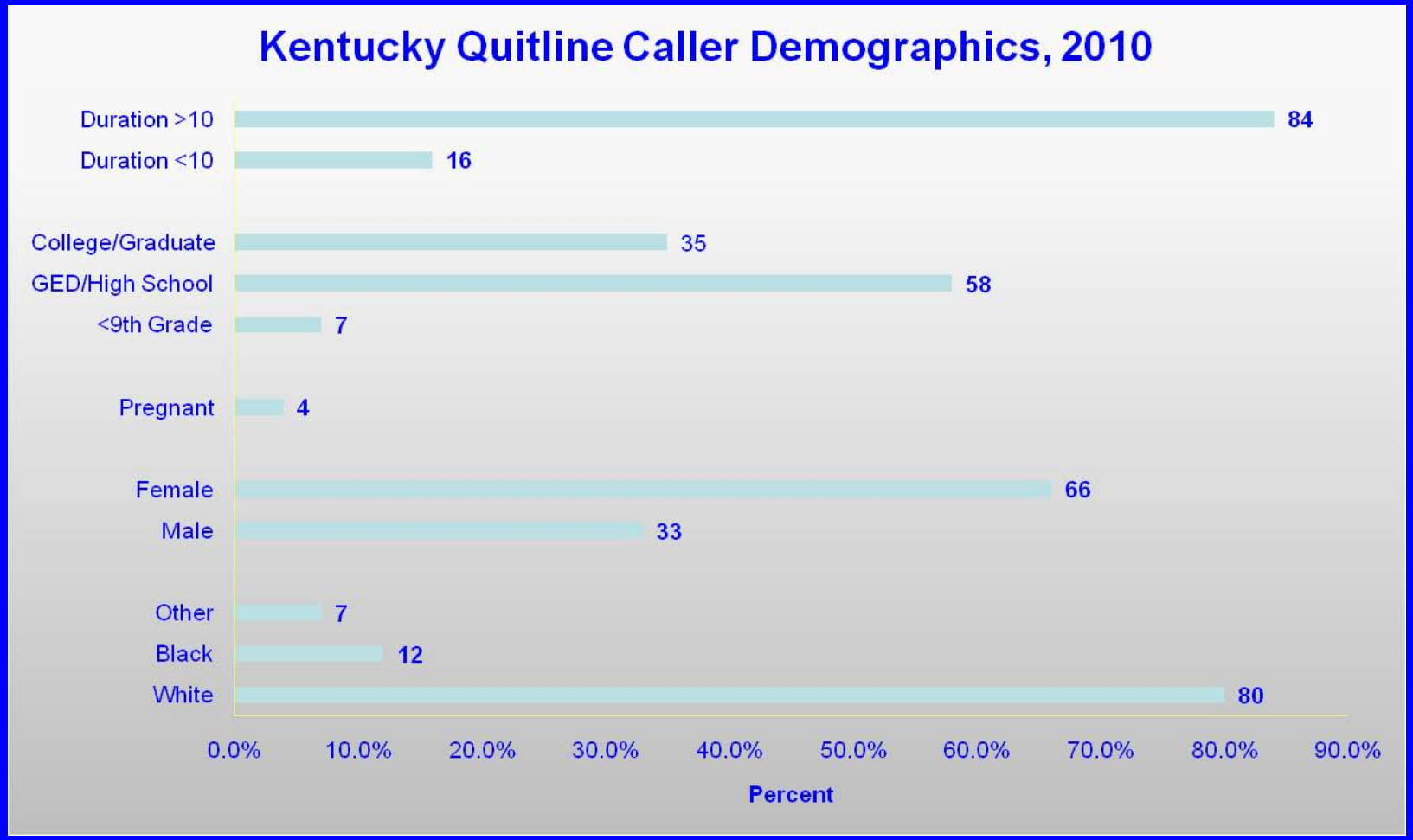


QuitLine Data

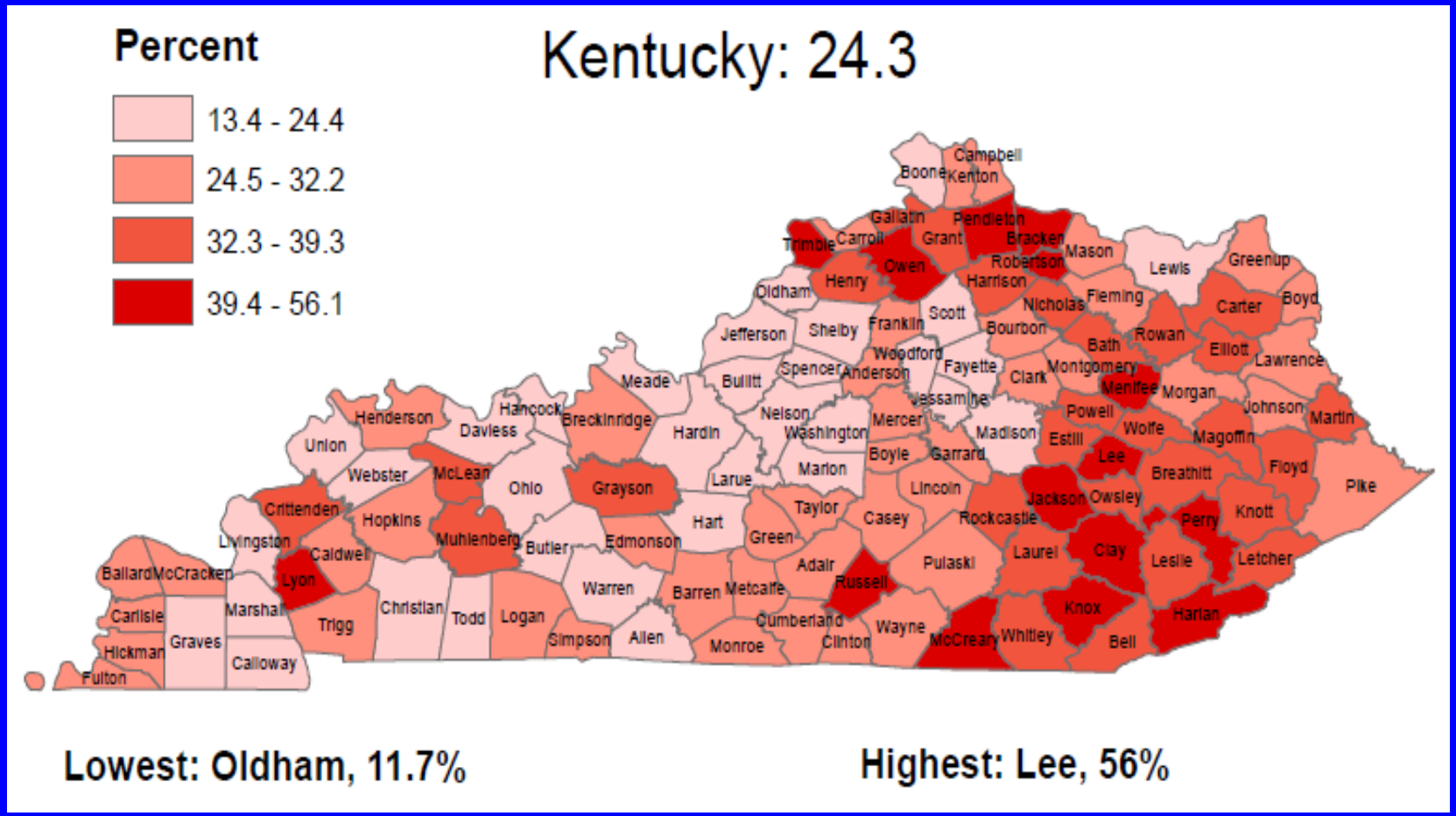


	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Callers	240	171	211	222	248	175	213	115	162	145	145	288

QuitLine Data



Smoking During Pregnancy by County in Kentucky, 2009



Source: Kentucky Vital Statistics Files;
Live Birth Certificate Files, 2009

Where are you going?

- Alice: “Would you tell me, please, which way I ought to go from here?”
- Cat: “That depends a great deal on where you want to get to.”
- Alice: “I don’t much care where--”
- Cat: “Then it doesn’t matter which way you go.”

Lewis Carroll

Alice in Wonderland

Questions?