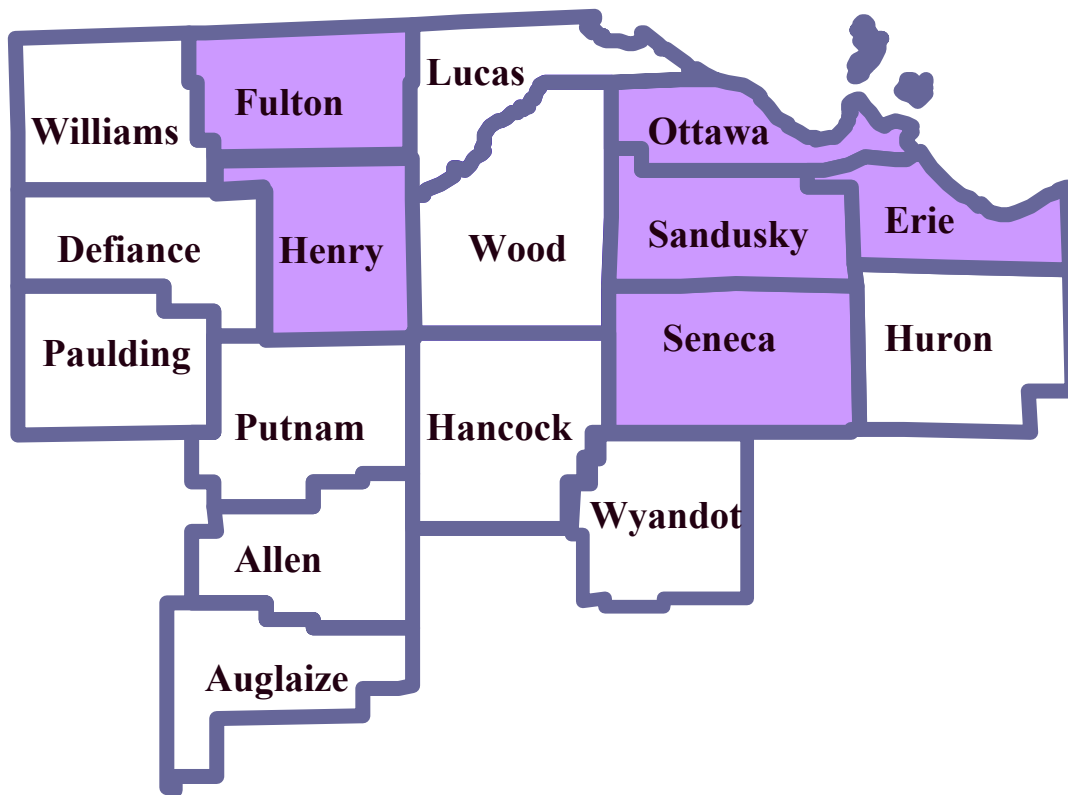


# NW Ohio Regional Report Community Health Assessment



Compiled by:  
Hospital Council of NW Ohio  
Released December 2006

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# Acknowledgments

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# Executive Summary

This executive summary provides an overview of health-related data for NW Ohio adults (19 years of age and older) and youth (ages 12 through 18) who participated in county-wide health assessment surveys in 2004-2006. The findings are based on self-administered surveys using a structured questionnaire. The questions were modeled after the survey instruments used by the Center for Disease Control and Prevention for their national and state Behavioral Risk Factor Surveillance System (BRFSS) and Youth Risk Behavior Surveillance Survey (YRBSS). The Healthy Communities Foundation of the Hospital Council of Northwest Ohio collected the data, guided the health assessment process and integrated sources of primary and secondary data into individual county reports. Data from the individual reports have been compiled from the following counties: Erie, Fulton, Henry, Ottawa, Sandusky, and Seneca.

## Primary Data Collection Methods

### Design

The community health assessments were cross-sectional in nature and included a written survey of both adults and adolescents. From the beginning, community leaders were actively engaged in the planning process and helped define the content, scope, and sequence of the study. Active engagement of community members throughout the planning process is regarded as an important step in completing a valid needs assessment.

### Instrument Development

Each county developed two survey instruments for this study: one for adults and one for adolescents. As a first step in the design process, health education researchers from the University of Toledo and staff members from the Hospital Council of NW Ohio met to discuss potential sources of valid and reliable survey items that would be appropriate for assessing the health status and health needs of adults and adolescents. The investigators decided to derive the majority of the adult survey items from the Center for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System Survey. The majority of the survey items for the adolescent survey were derived from the CDC Youth Risk Behavior Surveillance System survey. A core set of questions were used in each county to facilitate data comparisons with the neighboring NW Ohio counties.

The Project Coordinator from the Hospital Council of NW Ohio conducted a series of meetings with the planning committee for each county. During these meetings, banks of potential survey questions from the BRFSS and YRBSS surveys were reviewed and discussed. Based on input from the planning committees, the Project Coordinator composed a draft of an adult survey for each county containing between 110 and 115 items and a youth survey containing 70-110 questions. This draft was reviewed and approved by health education researchers at the University of Toledo.

### Sampling

#### *Adult Survey*

Adults ages 19 and over living in the various counties were used as the sampling frame for the adult survey. Since U.S. Census Bureau age categories do not correspond exactly to this age parameter, the investigators calculated the population of 15-74 year olds living in each county. The investigators conducted a power analysis to determine what sample size was needed to ensure a 95%

confidence level with a corresponding confidence interval of 5% (i.e., we can be 95% sure that the “true” population responses are within a 3% margin of error of the survey findings.) A sample size of at least 375 adults was needed to ensure this level of confidence. The random sample of mailing addresses of adults from each county was obtained from American Clearinghouse in Louisville, KY.

## **Procedure**

### *Adult Survey*

Prior to mailing the survey to adults, an advance letter was mailed to 800 adults in each county. This advance letter was personalized, printed on local stationery and was usually signed by the county health commissioner or CEO of a hospital. The letter introduced the county health assessment project and informed the readers that they may be randomly selected to receive the survey. The letter also explained that the respondents’ confidentiality would be protected and encouraged the readers to complete and return the survey promptly if they were selected.

Two weeks following the advance letter, a three-wave mailing procedure was implemented to maximize the survey return rate. The initial mailing included a personalized hand signed cover letter describing the purpose of the study; a questionnaire printed on colored paper; a self-addressed stamped return envelope; and a \$2 or \$5 incentive. Approximately two weeks after the first mailing, a second mailing was sent including: a second personalized cover letter to all potential respondents, a second copy of the questionnaire on colored paper, and a second reply envelope. A third wave reminder postcard was sent two weeks after the second mailing. Surveys returned as undeliverable were not replaced with another potential respondent.

Methodology for the adult survey was slightly different between 2004 and 2006. Initially, the return envelopes were coded and a second survey was only sent to those adults who had not yet responded. In June, 2005, the Hospital Council of NW Ohio hired Chesapeake Research and Review, Inc. of Columbia, Maryland as an independent internal review board (IRB) to oversee the health assessment methodology. The IRB directed Hospital Council of NW Ohio not to code the return envelopes and to send the four-wave mailing to everyone. This ensured the anonymity and confidentiality of the respondents. The IRB reviews and monitors the entire process and all documents relating to the health assessment including surveys and passive permission slips.

Response rates for the county assessments have ranged between 65% and 80% (see chart on page 6). These return rates mean that the responses in the health assessment should be representative of the entire county.

### *Adolescent Survey*

Schools and grade levels were randomly selected to obtain a youth balanced sample. To ensure that each student in the selected grade level had an equal chance of being in the classroom that was selected, a general English or health class are requested. Final classroom selections were determined by the school principal. Passive permission slips were mailed home to parents/guardians of any student whose class was selected to participate. Students who returned passive permission slips leave the classroom and work on homework in the library or study hall. To date, the response rates ranged from 96% to 100%. The number required to have adequate statistical power was between 333 and 375 depending on county population statistics. The surveys contained between 75 and 110 questions and had a multiple choice response format.

## **Data Analysis**

Individual responses were anonymous and confidential. Only group data are available. All data were analyzed by health education researchers at the University of Toledo using SPSS 12.0. Crosstabs were used to calculate descriptive statistics for the data presented in this report. To be

representative of each county, the data collected was weighted by age, gender, race, and income using 2000 census data. Multiple weightings were created based on this information to account for different types of analyses. For more information on how the weightings were created and applied, see page 17.

**Limitations**

As with all county assessments, it is important to consider the findings in light of all possible limitations. First, the county adult assessments had a very high response rate (65% to 80%). However, if any important differences existed between the respondents and the non-respondents regarding the questions asked, this would represent a threat to the external validity of the results (the generalizability of the results to the population of each county). In other words, if the one-third of those who were sent the survey would have answered the questions significantly differently than the two-thirds who did respond, the results of this assessment would under-represent or over-represent their perceptions and behaviors. If there were little to no differences between respondents and non-respondents, then this would not be a limitation. Also, it is important to note that, although several questions were asked using the same wording as the CDC questionnaires, the adult data collection method differed. CDC adult data were collected using a set of questions from a large question bank and adults were asked the questions over the telephone rather versus the mail survey methodology utilized by HCNO. The youth CDC survey was administered in schools in a similar fashion as this county health assessment.

**Regional Adult Response Rates**

County	Date Surveyed	Response Rate	Sample Size (n)	Incentive Amount	Number of questions	Method
Erie	Jun-Aug 2004	80%	590	\$5	108	Coded
Henry	Feb-Apr 2005	71%	514	\$2	109	Coded
Fulton	Mar-May 2005	73%	541	\$5	112	Coded
Sandusky	Aug-Oct 2005	68%	565	\$2	105	Not Coded
Seneca	Sept-Oct 2005	67%	485	\$2	113	Not Coded
Ottawa	Apr-May 2006	67%	495	\$2	106	Not Coded

## School Participation by County

### **Erie** (n=373)

Adams Jr. High, Berlin-Milan Middle School, Edison High School, Margaretta High School, McCormick Middle School, Perkins High School, Perkins Middle School, Sandusky High School, Vermillion High School

### **Fulton** (n=454)

Delta Middle School, Delta High School, Evergreen Middle School, Evergreen High School, Swanton Middle School, Swanton High School, Burr Road Middle School, Wauseon High School  
\* Archbold, Pettisville, and Gorham Fayette School Districts chose not to participate.

### **Henry** (n=385)

Holgate Jr. High School, Holgate High School, Liberty Center Middle School, Liberty Center High School, Napoleon Middle School, Napoleon High School, Patrick Henry Middle School, Patrick Henry High School

### **Ottawa** (n=367)

Danbury High School, Genoa High School, Genoa Middle School, Jefferson Elementary School, Oak Harbor High School, Oak Harbor Middle School, Port Clinton High School, Port Clinton Middle School

### **Sandusky** (n=363)

Bellevue High School, Clyde High School, Fremont Middle School, Fremont Ross High School, Gibsonburg Middle School, Gibsonburg High School, Green Springs Elementary School, Lakota High School, McPherson Middle School

### **Seneca** (n=367)

Bettesville Middle School, Fostoria High School, Fostoria Middle School, Hopewell Loudon High School, Hopewell Loudon Middle School, New Riegel High School, Seneca East High School, Tiffin Columbian High School, Tiffin Middle School

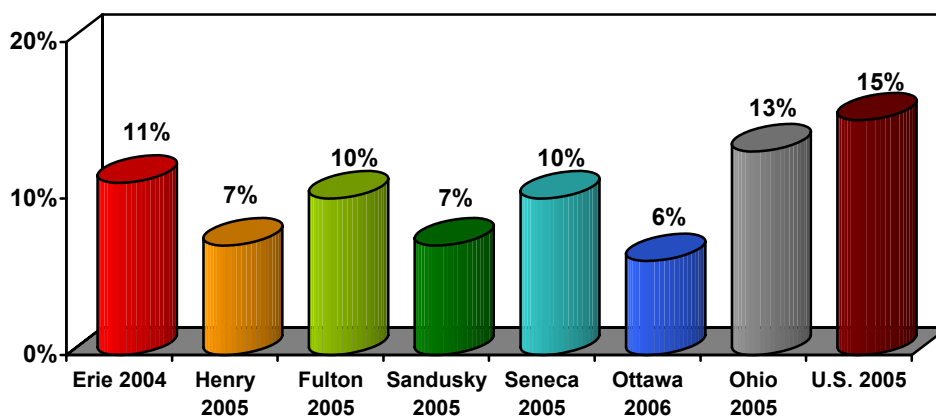
## Future Regional Report Releases

Future Regional Reports will be released as county assessments are completed and community events have taken place. The next regional report will be released in March, 2007. It will include both Wyandot and Williams Counties. In late 2007, another updated regional report will be released to include Lucas County and any other county assessment that is complete.

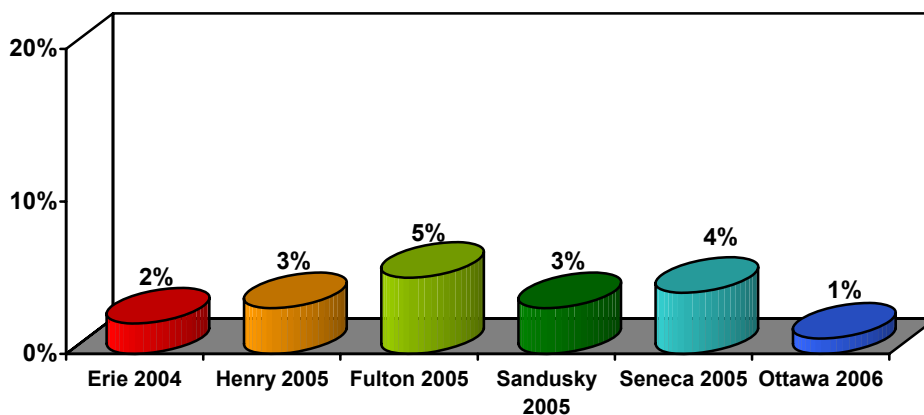
# Data Summary

All graphs represent a topic that was asked by most or all of the counties. If a column is missing, that county did not choose to ask that particular question. State, national, and Healthy People 2010 were included where available.

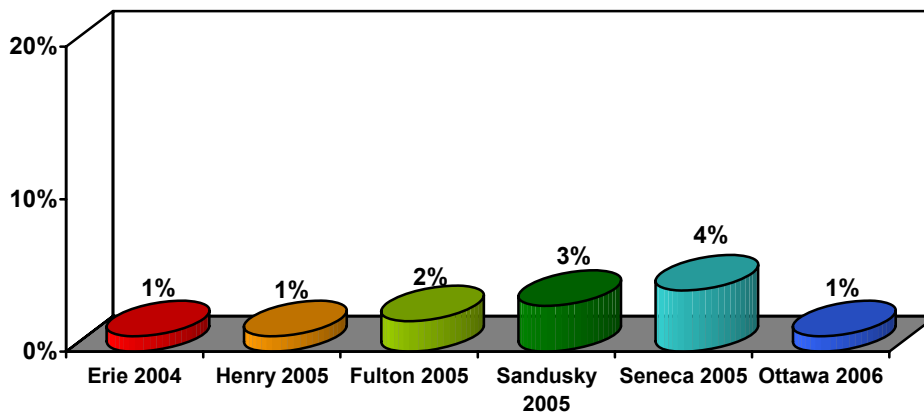
### Uninsured Adults



### Heart Attacks

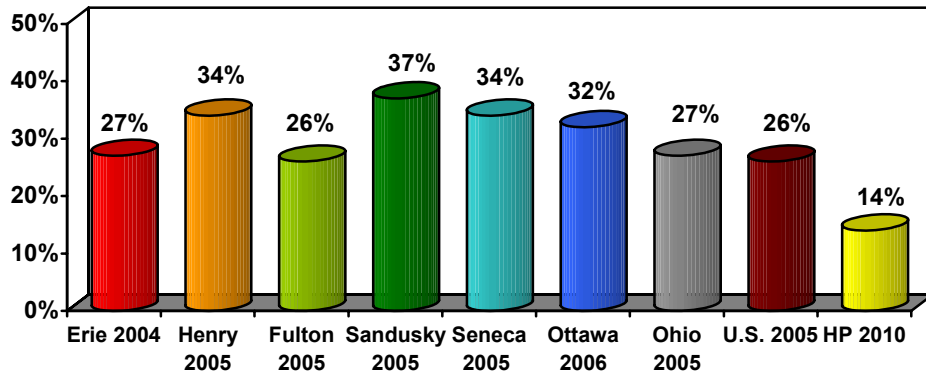


### Stroke

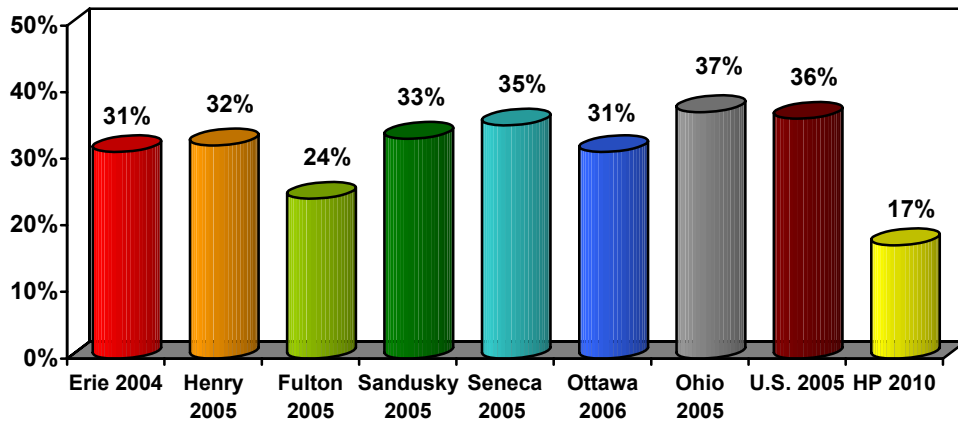


# Data Summary

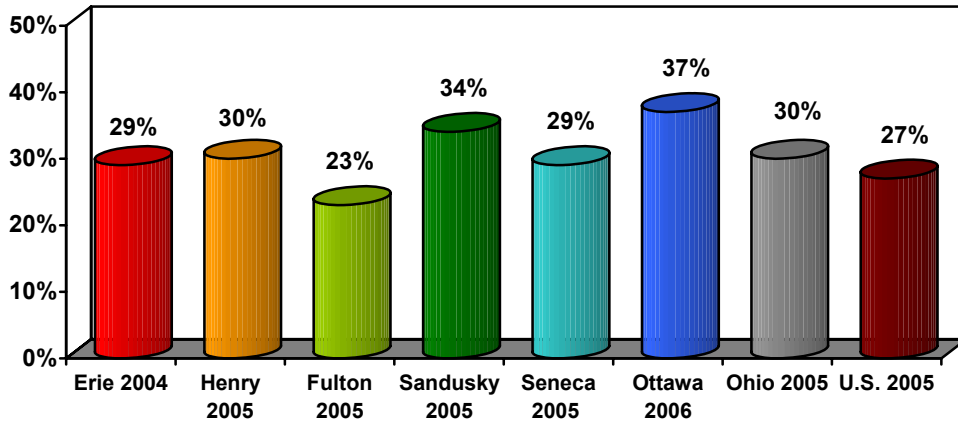
## Adults Diagnosed with High Blood Pressure



## Adults Diagnosed with High Blood Cholesterol

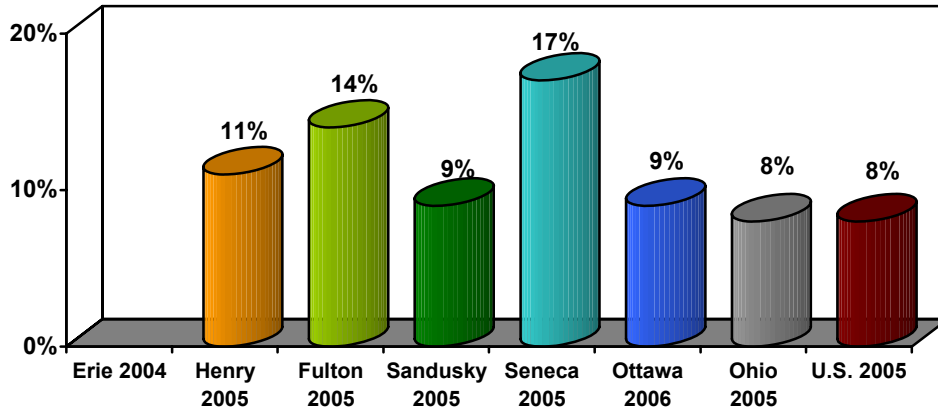


## Adults Diagnosed with Arthritis

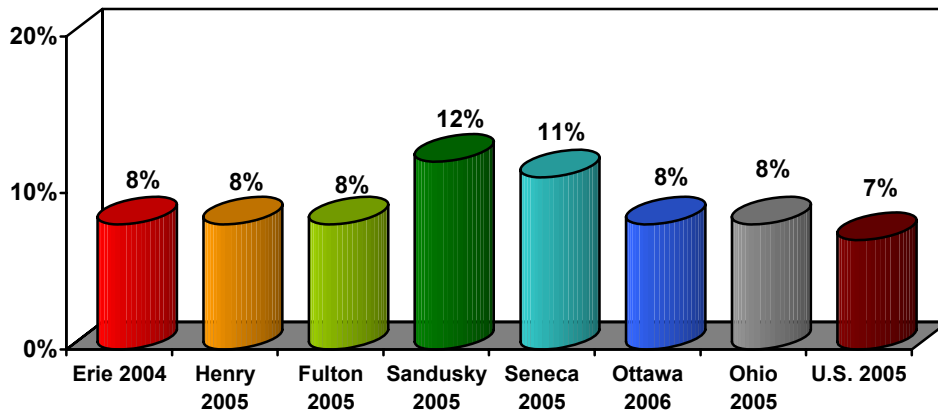


# Data Summary

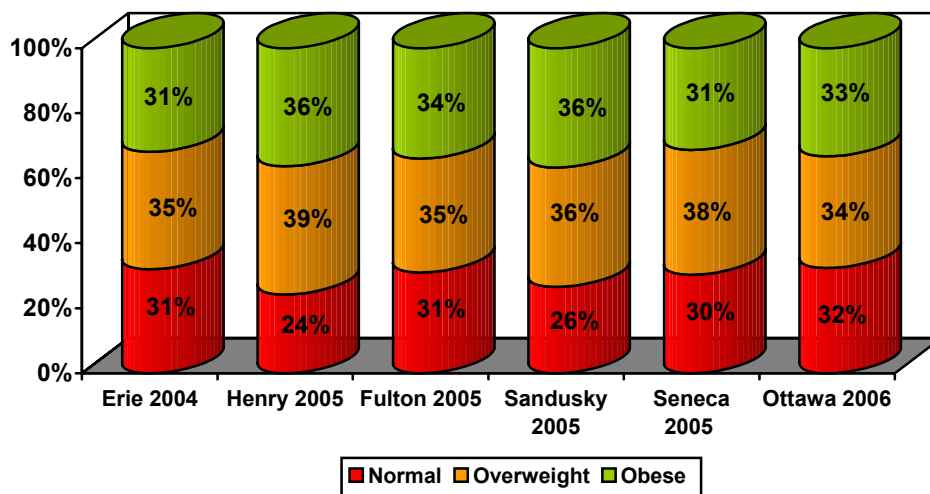
## Adults Diagnosed with Asthma



## Adults Diagnosed with Diabetes



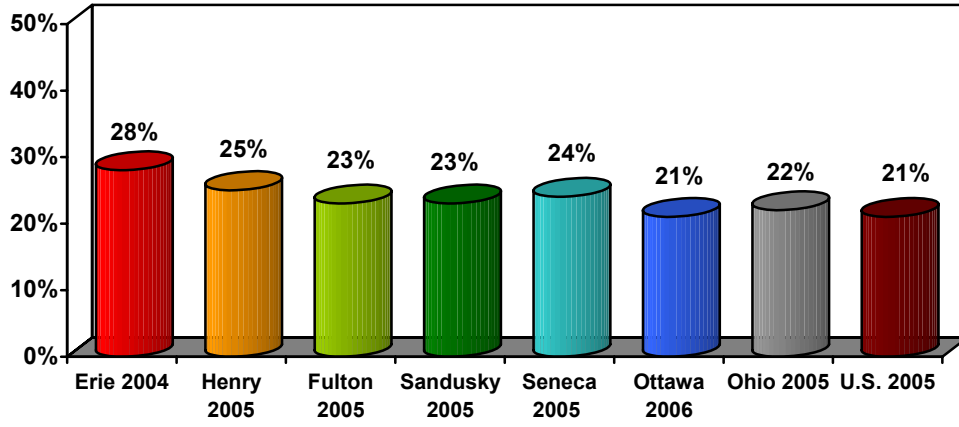
## Adult BMI



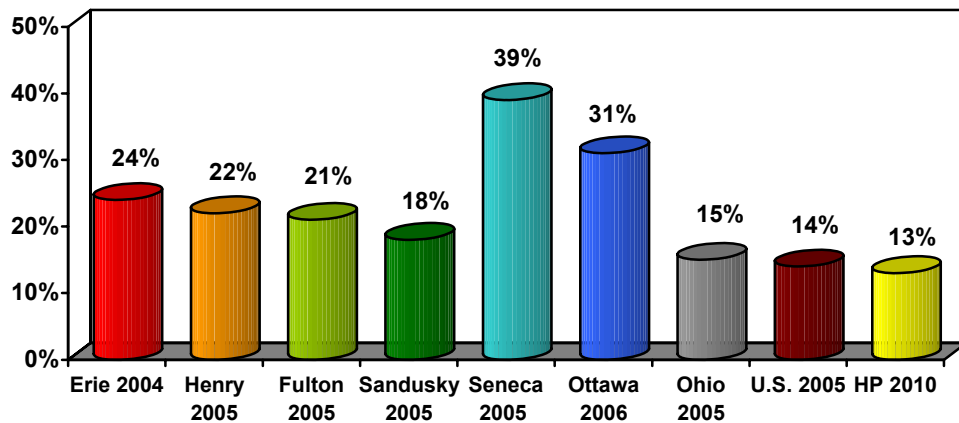
■ Normal ■ Overweight ■ Obese

# Data Summary

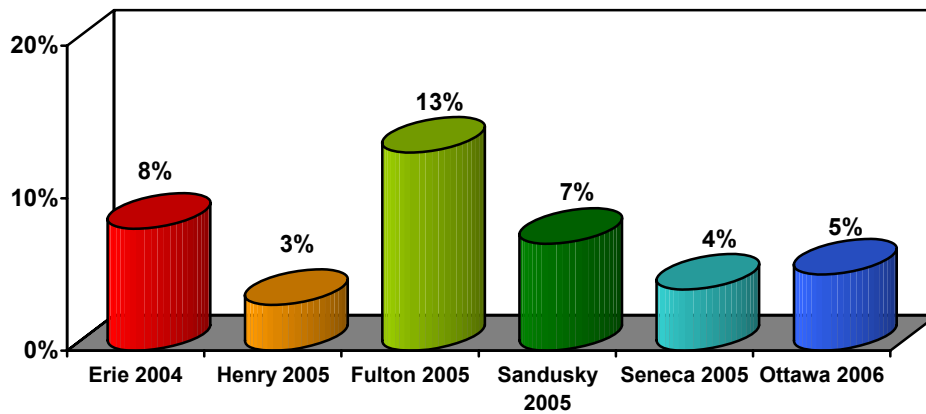
## Adults Who Are Current Smokers



## Adults Who Binge Drink

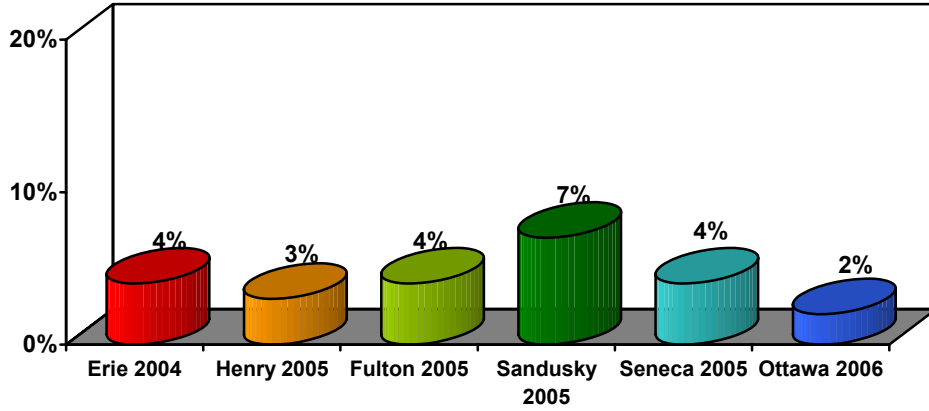


## Recreational Drug Use Among Adults

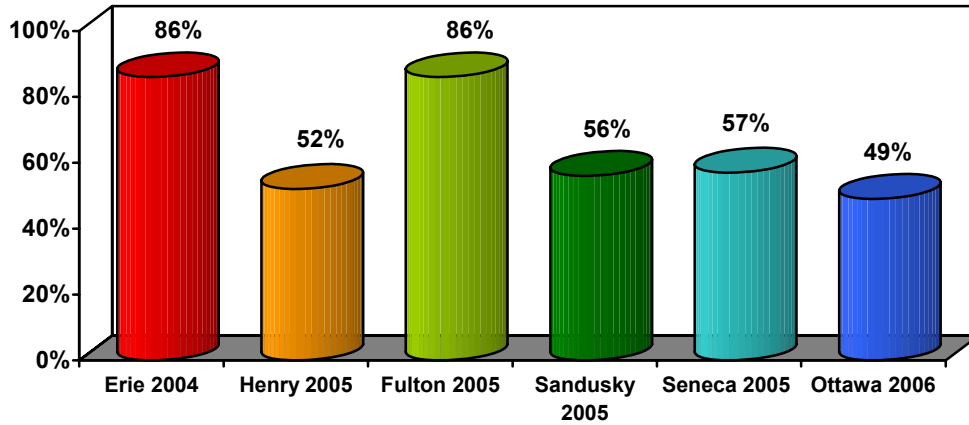


# Data Summary

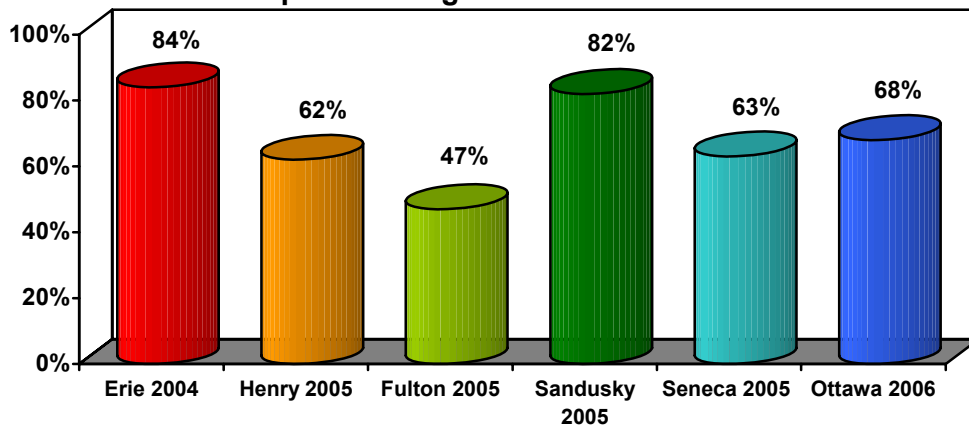
## Marijuana Use For Adults



## Women 40 Years Old and Older Who Have Had A Mammogram Within the Past Year

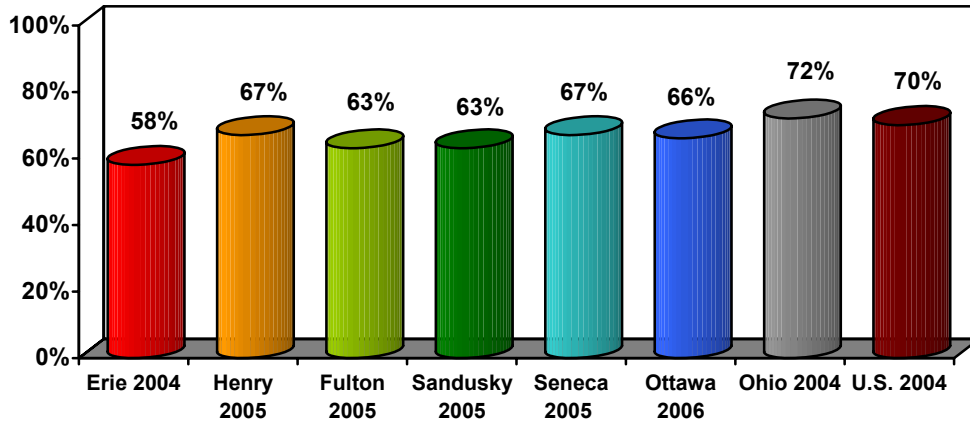


## Men 60 Years Old and Older Who Have Had A Prostate Specific Antigen Test Within the Past Year

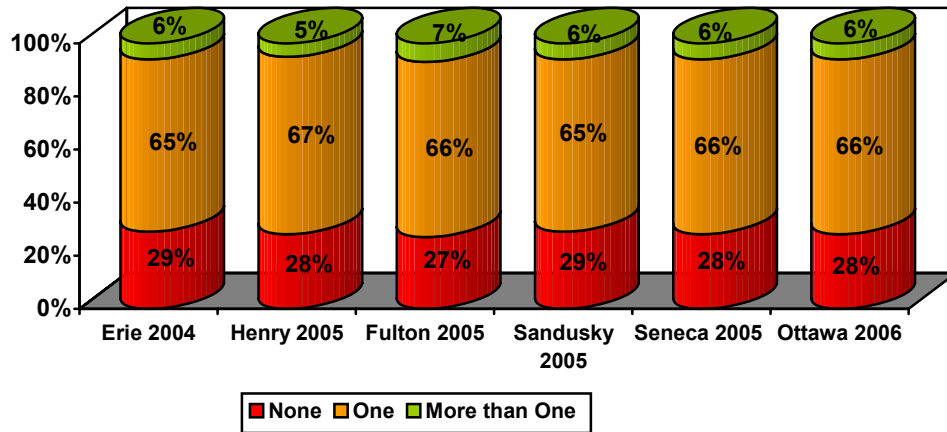


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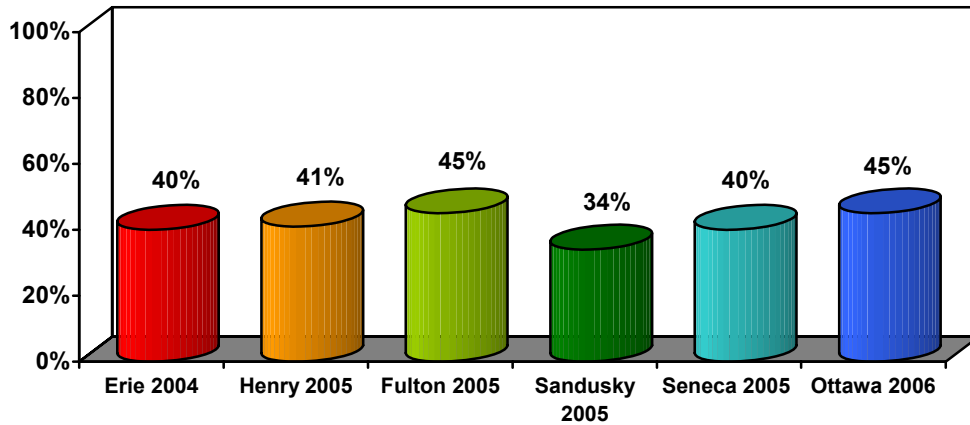
## Adults Who Have Been to a Dentist Within the Past Year



## Adult Sexual Partners

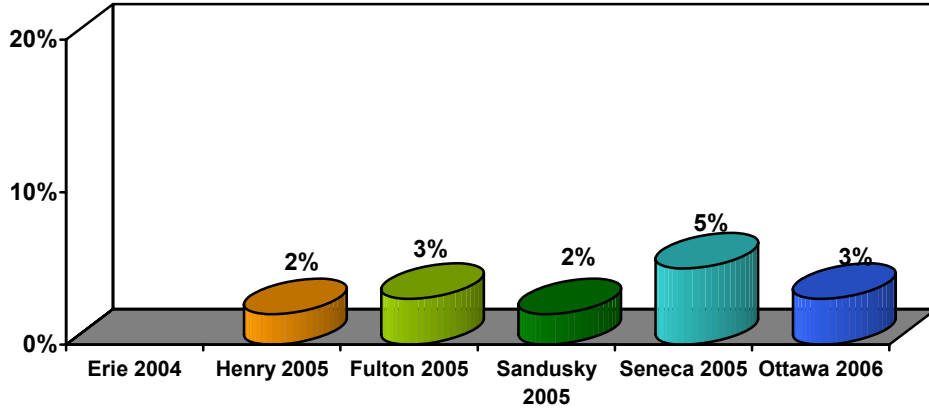


## Adults Who Own A Firearm

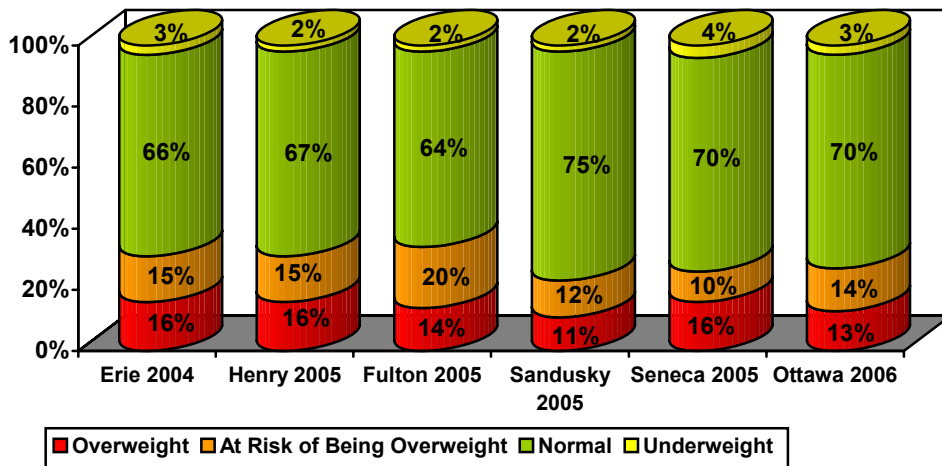


# Data Summary

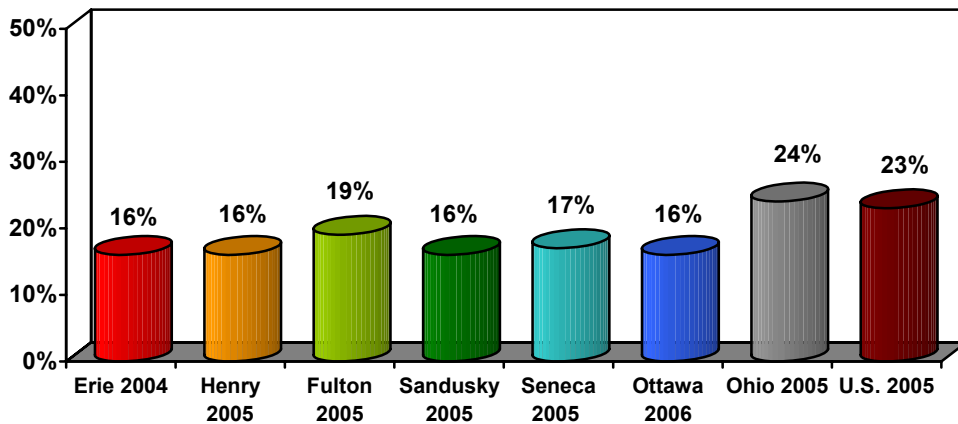
## Adults Who Have Contemplated Suicide



## Youth BMI

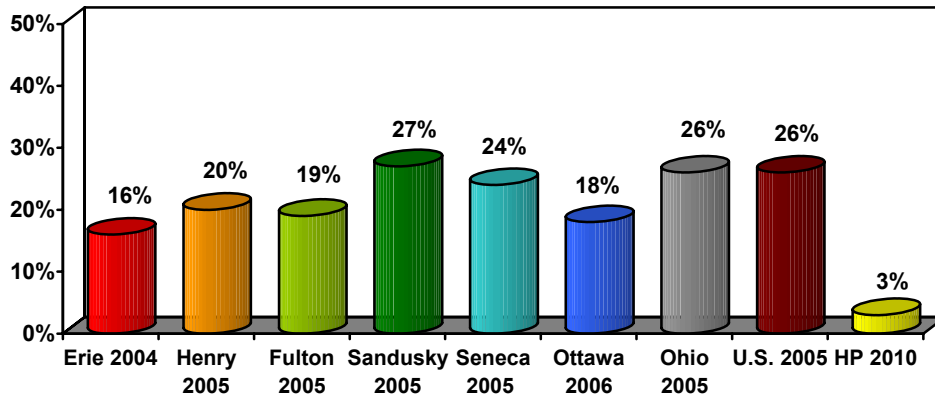


## Youth Who Are Current Smokers

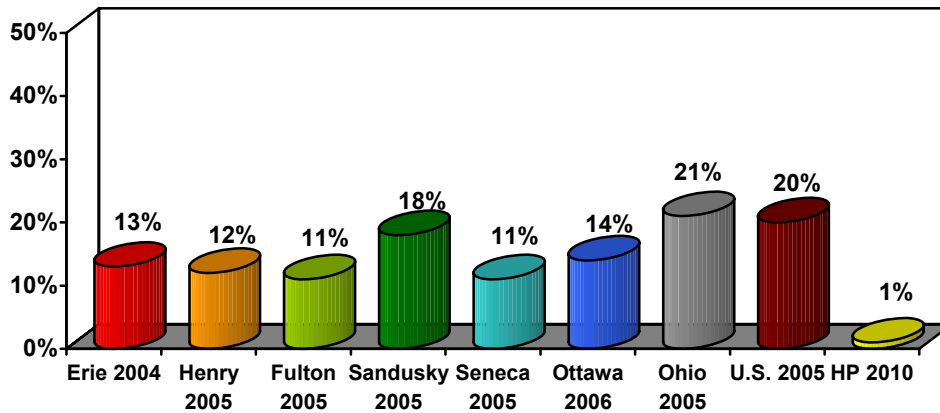


# Data Summary

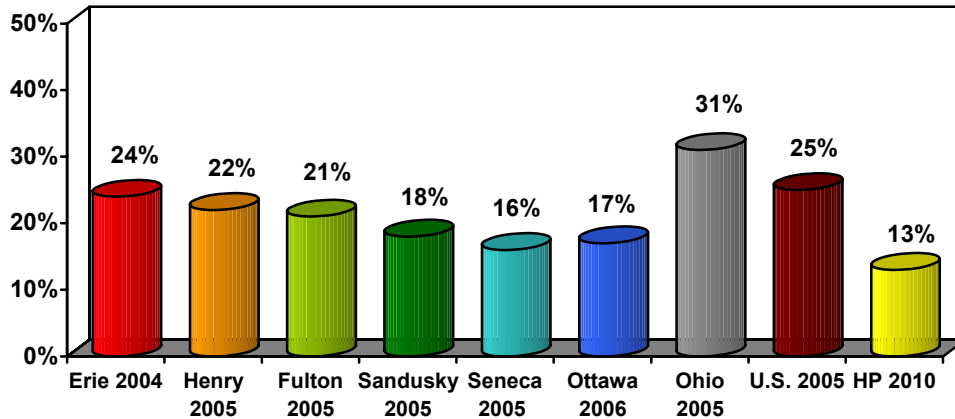
## Youth Who Binge Drink



## Marijuana Use For Youth

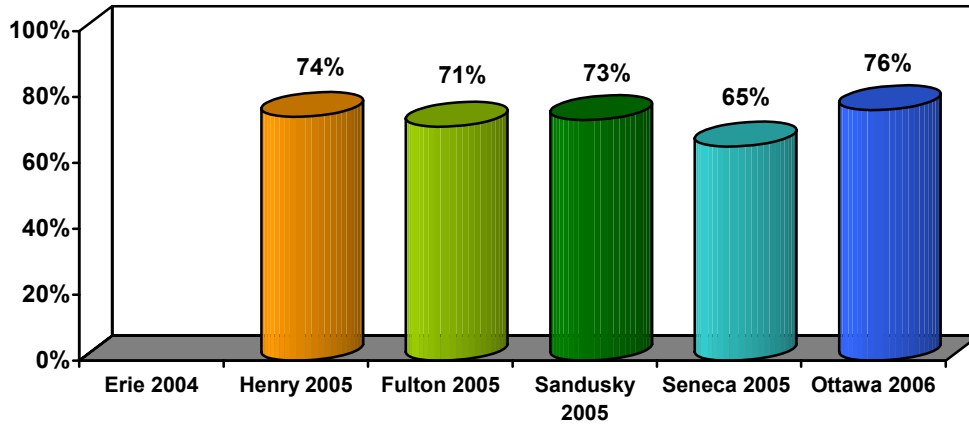


## Youth who have been Offered, Sold or Given Drugs on School Property Within the past 12 Months

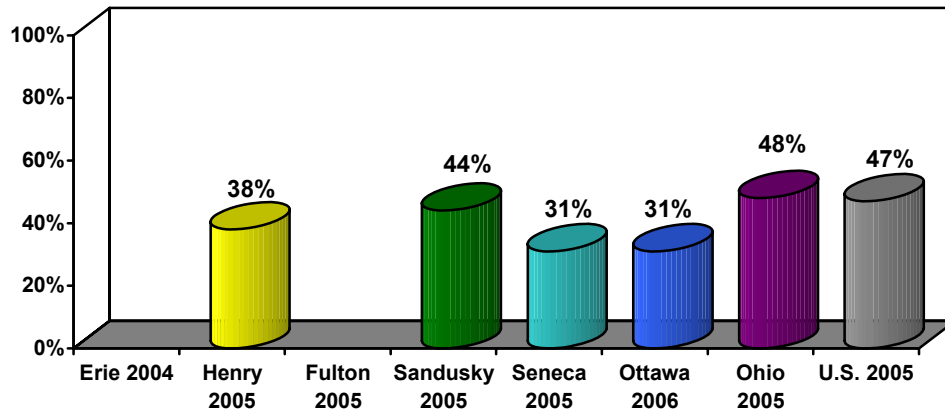


# Data Summary

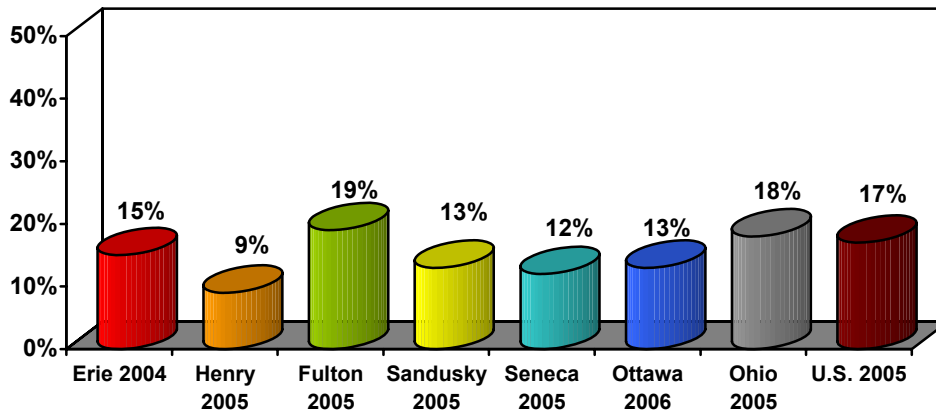
## Youth Who Have Been to a Dentist Within the Past Year



## Youth Who Have Had Sex

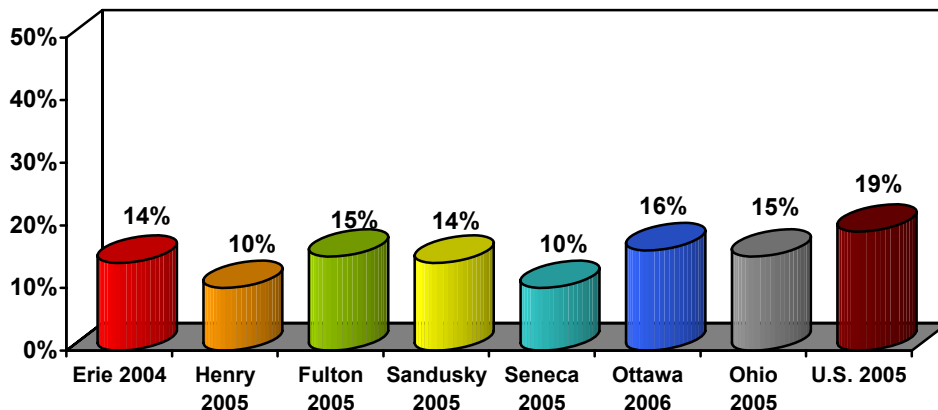


## Youth Who Have Seriously Contemplated Suicide

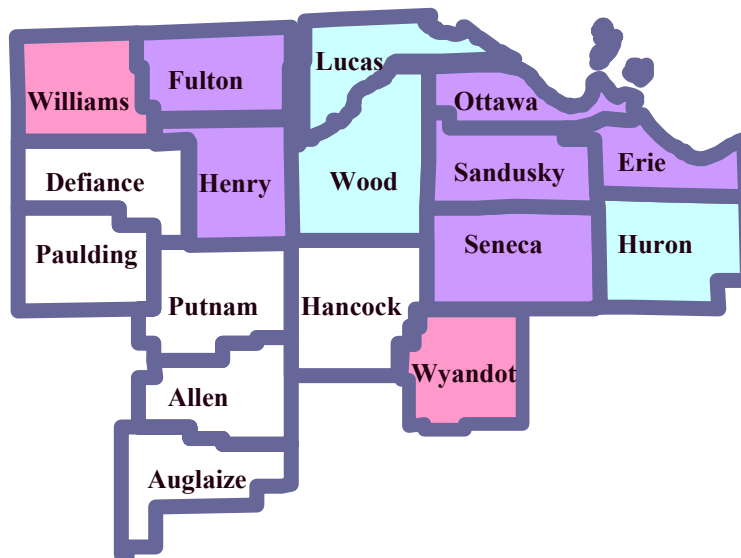


## Data Summary

Youth Who Have Carried a Weapon Within the Past 30 Days



## Regional Participation Map



Light purple- Counties completed health assessment  
 Light pink- Counties completed health assessment but have not released results  
 Light blue- Counties slated to complete health assessment in 2007  
 White- Future counties to approach

## Methods for Weighting Data

Data from sample surveys have the potential for bias if there are different rates of response for different segments of the population. In other words, some subgroups of the population may be more represented in the completed surveys than they are in the population from which those surveys are sampled. If a sample has 25% of its respondents being male and 75% being female, then the sample is biased towards the views of females (if females respond differently than males). This same phenomenon holds true for any possible characteristic that may alter how an individual responds to survey items.

In some cases, the procedures of the survey methods may purposefully over-sample a segment of the population in order to gain an appropriate number of responses from that subgroup for appropriate data analysis when investigating them separately (this is often done for minority groups). Whether the over-sampling is done inadvertently or purposefully, the data needs to be weighted so that the proportioned characteristics of the sample accurately reflect the proportioned characteristics of the population. A weighting was applied prior to the analysis that weighted the survey respondents to reflect the actual distribution of each county based on age, sex, race, and income.

Weightings were created for each category within sex (male, female), race (White, Non-White), Age (7 different age categories), and income (7 different income categories). The numerical value of the weight for each category was calculated by taking the percent of the county within the specific category and dividing that by the percent of the sample within that same specific category.

Multiple sets of weightings were created and used in the statistical software package (SPSS 12.0) when calculating frequencies. For analyses done for the entire sample and analyses done based on subgroups other than age, race, sex, or income – the weightings that were calculated based on the product of the four weighting variables (age, race, sex, income) for each individual. When analyses were done comparing groups within one of the four weighting variables (e.g., smoking status by race/ethnicity), that specific variable was not used in the weighting score that was applied in the software package. In the example smoking status by race, the weighting score that was applied during analysis included only age, sex, and income. Thus a total of eight weighting scores for each individual were created and applied depending on the analysis conducted. The weight categories were as follows:

- 1) **Total weight** (product of 4 weights) – for all analyses that did not separate age, race, sex, or income.
- 2) **Weight without sex** (product of age, race, and income weights) – used when analyzing by sex.
- 3) **Weight without age** (product of sex, race, and income weights) – used when analyzing by age.
- 4) **Weight without race** (product of age, sex, and income weights) – used when analyzing by race.
- 5) **Weight without income** (product of age, race, and sex weights) – used when analyzing by income.
- 6) **Weight without sex or age** (product of race and income weights) – used when analyzing by sex and age.
- 7) **Weight without sex or race** (product of age and income weights) – used when analyzing by sex and race.
- 8) **Weight without sex or income** (product of age and race weights) – used when analyzing by sex and income.

<b>Adult Variables</b>	<b>Eric County 2004</b>	<b>Henry County 2005</b>	<b>Fulton County 2005</b>	<b>Seneca County 2005</b>	<b>Sandusky County 2005</b>	<b>Ottawa County 2006</b>	<b>Ohio</b>	<b>U.S.</b>
<b>Alcohol Consumption (comparative data from 2005)</b>								
Had at least one alcoholic beverage in past month	47%	47%	51%	43%	N/A	55%	55%	56%
Binged in past month (5 or more drinks in a couple of hours on an occasion)	24%	22%	21%	39%	58%	31%	15%	14%
<b>Tobacco Use (comparative data from 1999, 2000 &amp; 2005)</b>								
Current smoker (currently smoke some or all days)	28%	25%	23%	24%	23%	21%	22%	21%
Former smoker (smoked 100 cigarettes in lifetime & now do not smoke)	25%	26%	33%	27%	25%	33%	26%	24%
Used smokeless tobacco in the past 30 days	3%	4%	9%	2%	3%	3%	20%	22%
<b>Arthritis, Asthma and Diabetes (comparative data from 2005)</b>								
Has been diagnosed with arthritis	29%	30%	23%	29%	34%	37%	30%	27%
Has been diagnosed with asthma	N/A	11%	14%	17%	9%	9%	8%	8%
Has been diagnosed with diabetes	8%	8%	8%	11%	12%	8%	8%	7%
<b>Hypertension and Cholesterol Awareness (comparative data from 1999, 2001, &amp; 2005)</b>								
Had blood pressure checked in past year	N/A	N/A	N/A	86%	86%	90%	91%	89%
Has been diagnosed with high blood pressure	27%	34%	26%	34%	37%	32%	27%	26%
Has had blood cholesterol checked in past year	N/A	46%	N/A	46%	43%	50%	72%	72%
Has been diagnosed with high blood cholesterol	31%	32%	24%	35%	33%	31%	37%	36%
<b>Health Care Access (comparative data from 2005)</b>								
Has health care coverage	89%	93%	90%	90%	93%	94%	87%	86%
Visited a doctor for a routine checkup in past year	N/A	N/A	58%	63%	64%	73%	74%	72%
<b>Health Status (comparative data from 2005)</b>								
Rated general health as fair or poor	19%	11%	13%	14%	15%	11%	15%	15%
<b>HIV/AIDS (comparative data from 2000)</b>								
Has been tested for HIV in lifetime	N/A	18%	N/A	18%	25%	15%	43%	46%
<b>Preventive Behaviors (comparative data from 2000, 2001 &amp; 2004)</b>								
Has had a flu shot in past 12 months	33%	N/A	N/A	25%	28%	37%	30%	32%
Has had a pneumonia vaccine in lifetime	21%	14%	17%	19%	18%	27%	21%	22%
Dental visit within past year	63%	67%	63%	67%	57%	66%	72%	70%
Had mammogram in past year	50%	33%	30%	29%	43%	37%	72%	69%
Had clinical breast exam in past year	58%	59%	54%	57%	58%	61%	76%	78%
<b>Weight Control (comparative data from 2000)</b>								
Trying to lose weight	N/A	N/A	N/A	48%	46%	47%	38%	38%

N/A – Not asked on survey

<b>Youth Variables – 9-12<sup>th</sup> Grade Only</b>	<b>Eric County 2004</b>	<b>Henry County 2005</b>	<b>Fulton County 2005</b>	<b>Seneca County 2005</b>	<b>Sandusky County 2005</b>	<b>Ottawa County 2006</b>	<b>Ohio 2005</b>	<b>U.S. 2005</b>
<b>Injury-Related Behaviors</b>								
Rode with a drunk driver in past 30 days	18%	26%	24%	28%	24%	24%	21%	29%
Carried a weapon in past 30 days	14%	10%	15%	10%	14%	16%	15%	19%
Involved in a physical fight in past 12 months	31%	31%	N/A	33%	24%	30%	30%	36%
Involved in a physical fight on school property in past 12 months	N/A	N/A	N/A	15%	9%	11%	10%	14%
Threatened or injured with a weapon on school property in past 12 months	7%	5%	10%	5%	4%	N/A	8%	8%
Seriously considered suicide in past 12 months	15%	9%	19%	12%	13%	13%	18%	17%
Attempted suicide in past 12 months	8%	4%	9%	8%	8%	6%	9%	8%
<b>Alcohol Use</b>								
Ever had at least one drink of alcohol in lifetime	60%	55%	58%	65%	80%	66%	77%	74%
Used alcohol during past 30 days	30%	29%	29%	35%	43%	32%	42%	43%
Used alcohol on school property during past 30 days	N/A	N/A	N/A	2%	1%	1%	3%	4%
Binged during past 30 days (5 or more drinks in a couple of hours on an occasion)	N/A	20%	19%	24%	27%	18%	26%	26%
<b>Tobacco Use</b>								
Lifetime cigarette use (ever tried cigarette smoking, even 1 or 2 puffs)	58%	38%	42%	43%	58%	37%	55%	54%
Used cigarettes on one or more of the past 30 days	16%	16%	19%	17%	19%	16%	24%	23%
Smoked cigarettes on school property in past 30 days	N/A	N/A	N/A	2%	4%	5%	8%	7%
Used smokeless tobacco in past 30 days	8%	5%	6%	7%	4%	8%	8%	8%
<b>Sexual Behaviors</b>								
Ever had sexual intercourse	N/A	38%	N/A	31%	44%	31%	48%	47%
Had four or more sexual partners	N/A	6%	N/A	6%	9%	11%	17%	14%
Used a condom at last sexual intercourse	N/A	57%	N/A	66%	55%	76%	62%	63%
Used birth control pills at last sexual intercourse	N/A	16%	N/A	21%	22%	26%	20%	18%
<b>Physical Activity</b>								
Has exercised or participated in physical activities for at least 20 minutes that made them sweat and breathe hard on three or more of the past seven days	73%	49%	75%	65%	84%	68%	63%	64%
<b>Drug Use</b>								
Used marijuana in the past 30 days	13%	12%	11%	11%	18%	14%	21%	20%
Used cocaine in their lifetime	4%	6%	5%	5%	5%	6%	9%	8%
Used heroin in their lifetime	0%	2%	2%	1%	2%	1%	2%	2%
Used methamphetamines in their lifetime	N/A	3%	4%	3%	5%	1%	8%	6%
Used steroids in their lifetime	4%	3%	3%	2%	3%	3%	4%	4%
Used inhalants such as glue, aerosol, or inhaled paints or sprays to get high one or more times in their lifetime	11%	12%	11%	N/A	15%	13%	12%	12%
Used prescription medication in order to get high or feel good	N/A	37%	N/A	12%	N/A	15%	N/A	N/A
Used a needle to inject any illegal drug into their body in their lifetime	1%	N/A	3%	1%	1%	0%	2%	2%
Offered, sold or given an illegal drug on school property during the past 12 months	24%	22%	26%	16%	20%	17%	31%	25%

N/A – Not asked on survey

## Information Sources

Center for Disease Control and Prevention: Behavioral Risk Factor Surveillance System. (2006). Retrieved from <http://www.cdc.gov/brfss/>

Center for Disease Control and Prevention: CDC Wonder Data2010. (2006). Retrieved from <http://wonder.cdc.gov/data2010/>

Ohio Department of Health: Information Warehouse. (2004). Retrieved from <http://dwarehouse.odh.ohio.gov/datawarehousev2.htm>

## Acronyms and Terms

<b>Adult</b>	Defined as 19 years of age and older
<b>Binge drinking</b>	Consumption of five alcoholic beverages or more on one occasion
<b>BMI</b>	Body Mass Index is defined as the contrasting measurement/relationship of weight to height
<b>BRFSS</b>	Behavior Risk Factor Surveillance System, an adult survey conducted by the CDC
<b>CDC</b>	Centers for Disease Control and Prevention
<b>Current Smoker</b>	Individual who has smoked at least 100 cigarettes in their lifetime and now smokes daily or on some days
<b>HP 2010</b>	Healthy People 2010, a comprehensive set of health objectives published by the Office of Disease Prevention and Health Promotion, U.S. Department of Health and Human Services
<b>High Blood Cholesterol</b>	240 mg/dL and above
<b>High Blood Pressure</b>	Systolic $\geq 140$ and Diastolic $\geq 90$
<b>N/A</b>	Data not available
<b>ODH</b>	Ohio Department of Health
<b>Weapon</b>	Defined in the YBRSS as “a weapon such as a gun, knife, or club”
<b>Youth</b>	Defined as 12 through 18 years of age
<b>Youth BMI Classifications</b>	<b>Underweight</b> is defined as BMI-for-age $\leq 5^{\text{th}}$ percentile. <b>At risk for overweight</b> is defined as BMI-for-age 85 <sup>th</sup> percentile to 95 <sup>th</sup> percentile. <b>Overweight</b> is defined as $\geq 95^{\text{th}}$ percentile.
<b>YBRSS</b>	Youth Risk Behavior Surveillance System, a youth survey conducted by the CDC