

Jefferson County Adult Tobacco Use: Comparison and Explanation of Available Rates

Data Source: Washington State Behavioral Risk Factor Surveillance System (BRFSS) adult phone survey

PURPOSE: The intent of this document is to describe adult smoking prevalence rates available from three online sources; considering and explaining the statistical analysis methods for each rate and overall survey limitations.

SUMMARY: Readily available online Jefferson County smoking prevalence rates must be interpreted with caution --

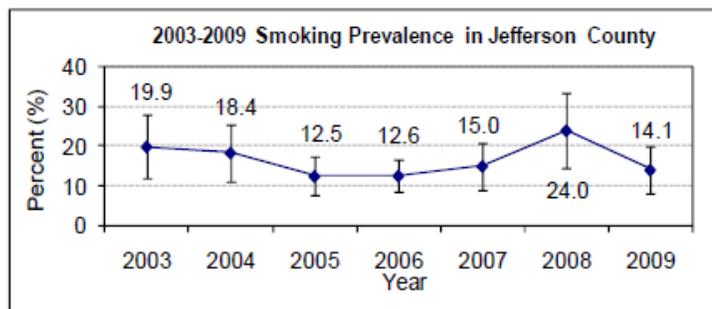
- ✓ Small survey sample size results in potential for wide variation in rates year-to-year, best to look at trend over time
- ✓ Multiple statistical methods are useful for different purposes, best to look at unadjusted, age specific and age adjusted rates to understand smoking prevalence

Source 1:

WA State Dept. of Health: "JEFFERSON COUNTY Tobacco Use Statistics" released: 3/10/2011. Available at: http://www.doh.wa.gov/tobacco/data_evaluation/Fact_Sheets/JeffTobStat.pdf

STATISTICAL RESULTS SUMMARY:

- ✓ **Adult smoking prevalence in Jefferson County NOT statistically changed over time**
- ✓ **2008 percent strange (very high) compared to other years**



DEFINITION: The unadjusted percent of adults who report having smoked at least 100 cigarettes in their lifetime and now smoke some days or every day; single years 2003 through 2009

DATA NOTES:

- Data represent the estimated local percent at the time of the survey (single year point estimate)
- Unadjusted rate comparisons with other places must be made with caution as differences in the distribution of population by age can influence local rates and limit comparability

Source 2:

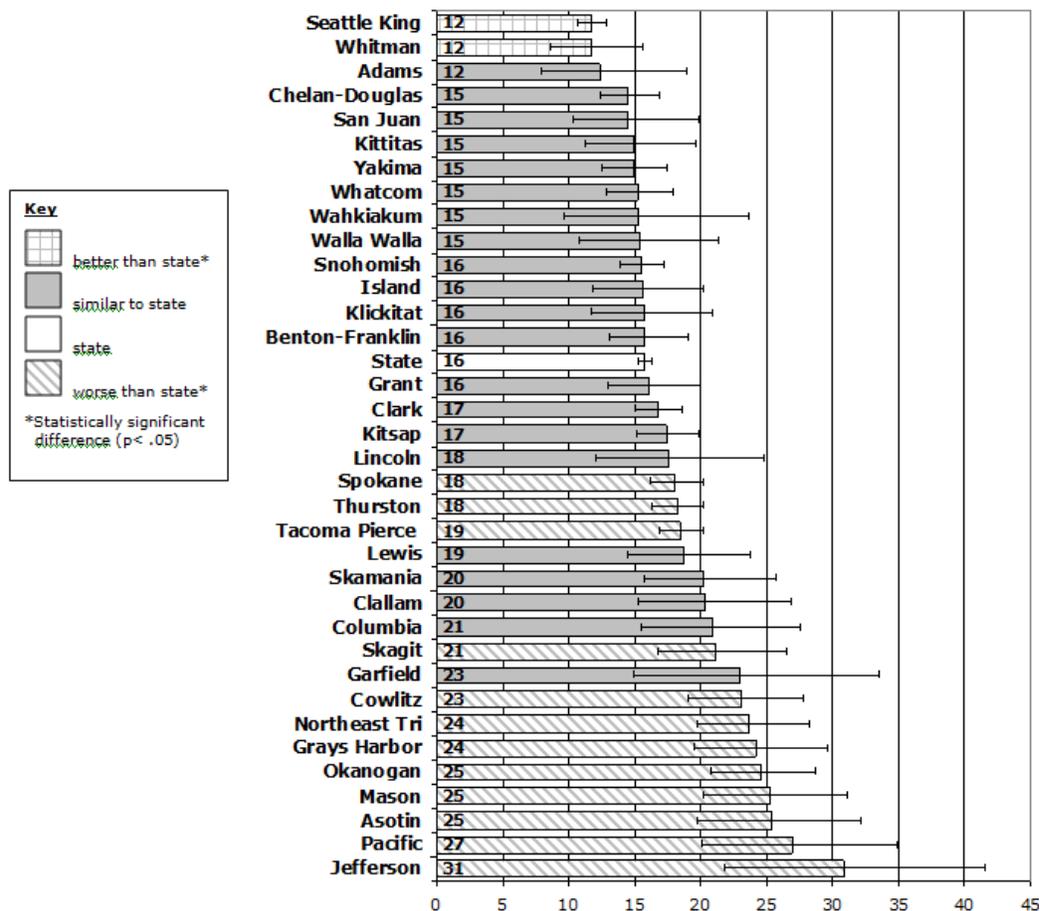
WA State Dept. of Health, Local Public Health Indicators "Adult Cigarette Smoking." Available at: <http://www.doh.wa.gov/hiph/khi/lphi>

A. STATISTICAL RESULTS SUMMARY (2007-2008):

- ✓ **Jefferson age adjusted percent statistically higher than WA State**
- ✓ **Jefferson age adjusted percent the highest of WA counties**
- ✓ **Jefferson age adjusted percent statistically higher than 22 other WA counties**

Category: **PREVENTION AND HEALTH PROMOTION**
 Indicator: **Adult cigarette smoking -**
 Percent of adults age 18 or older who smoked at least 100 cigarettes in their lifetime and are current smokers

2007 - 2008



A. **DEFINITION:** The age adjusted percent of adults who report having smoked at least 100 cigarettes in their lifetime and now smoke some days or every day; 2-year period 2007-2008

DATA NOTES:

- Age adjusted estimates adjust for differences in age distribution in different places
- Age adjusted percent is not an actual local percent but a percent for comparison purposes only
- Age adjusted percents are calculated by taking the age specific percents for a place, applying those to standard populations for the same age groups, and summing those to get an age-adjusted percent that is comparable across places
- While comparable across places, the Jefferson County age adjusted rate has limitations – because Jefferson County has a small population of younger adults and an even smaller population of younger adults with landline telephones to participate in the survey - the age specific percent used to create the adjusted percent has an especially wide range of values

B. STATISTICAL RESULTS SUMMARY (2004-2006 and 2007-2008):

- ✓ **Jefferson age adjusted percent is statistically higher in 2007-2008 compared to 2004-2006**
- ✓ **Jefferson is the only WA county with an age adjusted percent that is statistically higher over time – however, in 8 other counties, the age adjusted percent also increased over time**
- ✓ **Jefferson rate ranked #1 in 2007-2008, #20 in 2004-2006**

Category: **Prevention and Health Promotion**

Indicator: **Adult Cigarette Smoking**

Percent of adults age 18 or older who smoked at least 100 cigarettes in their lifetime and are current smokers

	2004-2006 (Baseline)		2007-2008		Key
	Percent	95% Confidence Interval	Percent	95% Confidence Interval	
State Total	17.7	(17.2, 18.1)	15.8	(15.3, 16.3)	<p>Key</p> <p> better over time*</p> <p> similar over time*</p> <p> worse over time*</p> <p>*Statistically significant difference (p < .05)</p> <p>Suppressed Data None</p> <p>Source State and local data: DOH, Behavioral Risk Factor Surveillance System</p> <p>Technical Notes</p>
Adams	13.5	(10.0, 17.9)	12.4	(7.9, 18.9)	
Asotin	24.3	(20.6, 28.5)	25.4	(19.7, 32.2)	
Benton-Franklin	17.3	(15.1, 19.7)	15.8	(13.1, 19.0)	
Chelan-Douglas	18.8	(16.8, 21.0)	15.0	(12.5, 16.9)	
Clallam	18.6	(15.3, 22.4)	20.4	(15.2, 26.8)	
Clark	18.9	(17.4, 20.4)	16.7	(15.0, 18.6)	
Columbia	19.9	(15.4, 25.4)	20.9	(15.5, 27.6)	
Cowlitz	24.5	(21.1, 28.2)	23.1	(19.0, 27.8)	
Garfield	17.9	(13.7, 23.0)	22.9	(14.9, 33.5)	
Grant	20.3	(17.2, 23.8)	16.1	(12.9, 20.0)	
Grays Harbor	27.5	(24.0, 31.3)	24.2	(19.5, 29.6)	
Island	17.7	(14.8, 21.2)	15.6	(11.8, 20.3)	
Jefferson	19.0	(14.3, 24.8)	30.8	(21.8, 41.5)	
Kitsap	18.4	(16.7, 20.2)	17.4	(15.1, 19.9)	
Kittitas	15.3	(12.5, 18.5)	14.9	(11.2, 19.6)	
Klickitat	19.5	(15.8, 23.9)	15.7	(11.7, 20.9)	
Lewis	23.1	(19.7, 26.8)	18.7	(14.5, 23.8)	
Lincoln	25.0	(18.8, 32.4)	17.6	(12.1, 24.8)	
Mason	28.9	(24.7, 33.6)	25.3	(20.2, 31.1)	
NE Tri-County	29.1	(25.4, 33.2)	23.7	(19.7, 28.3)	
Okanogan	23.6	(20.7, 26.9)	24.5	(20.7, 28.7)	
Pacific	30.7	(25.8, 36.0)	26.9	(20.1, 34.9)	
San Juan	19.5	(14.9, 25.0)	14.5	(10.4, 19.9)	
Seattle-King	13.3	(12.5, 14.2)	11.7	(10.7, 12.8)	
Skagit	16.5	(13.7, 19.8)	21.1	(16.7, 26.5)	
Skamania	19.3	(14.8, 24.8)	20.3	(15.8, 25.7)	
Snohomish	19.2	(17.9, 20.7)	15.5	(13.9, 17.2)	
Spokane	22.3	(20.6, 24.2)	18.1	(16.2, 20.2)	
Tacoma-Pierce	20.1	(18.7, 21.5)	18.5	(16.9, 20.3)	
Thurston	20.2	(18.7, 21.8)	18.3	(16.4, 20.2)	
Wahkiakum	19.8	(14.3, 26.8)	15.3	(9.6, 23.7)	
Walla Walla	11.9	(9.5, 14.9)	15.4	(10.8, 21.3)	
Whatcom	15.9	(13.5, 18.6)	15.2	(12.8, 17.9)	
Whitman	12.8	(10.4, 15.7)	11.7	(8.7, 15.6)	
Yakima	17.1	(15.2, 19.2)	14.9	(12.6, 17.5)	

B. **DEFINITION:** The age adjusted percent of adults who report having smoked at least 100 cigarettes in their lifetime and now smoke some days or every day; 3-year period 2004-2006 compared to 2-year period 2007-2008

DATA NOTES:

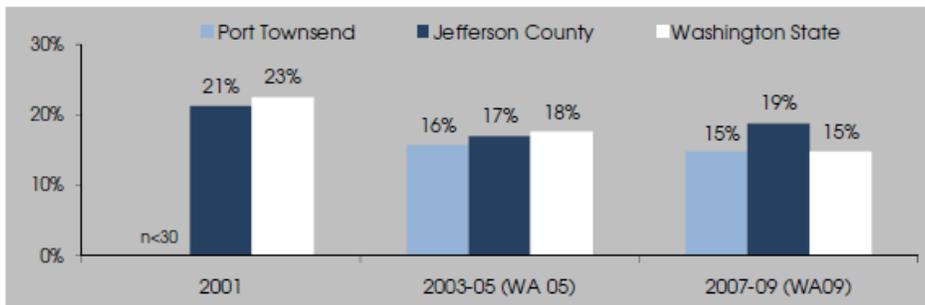
➤ See notes in A. above (bottom of page 2)

Source 3:

Jefferson County Public Health “Adult Current Smokers” Available at:
http://www.jeffersoncountypublichealth.org/pdf/Pt4_Data_Births_Quality_Deaths.pdf

STATISTICAL RESULTS SUMMARY:

- ✓ **Jefferson unadjusted percent statistically unchanged since 2001**
- ✓ **WA unadjusted percent statistically lower in 2009 compared to 2005 and 2001**
- ✓ **Port Townsend and Jefferson County not statistically different**
- ✓ **Port Townsend and Jefferson County not statistically different than Washington State**



DEFINITION: The unadjusted percent of adults who report having smoked at least 100 cigarettes in their lifetime and now smoke some days or every day; Port Townsend/Jefferson County: 1-year period 2001; two 3-year periods 2003-2005, 2007-2009; Washington State three 1-year periods 2001, 2005, 2009

DATA NOTES:

- Data represent the estimated local percent at the time of the survey (single year and combined 3-year estimates)
- Unadjusted rate comparisons with other places must be made with caution as differences in the distribution of population by age can influence local rates and limit comparability

Data Source Notes: Washington State Behavioral Risk Factor Surveillance System (BRFSS)

- ✓ Data are self-reported responses weighted to represent the Jefferson County population by age and gender
 - Weights are calculated using population estimates produced by the WA State Office of Financial Management
 - Weighted survey data are designed to represent the age and gender distribution of the population not just those who participated in the survey
- ✓ Survey has some limitations:
 - sample of households with telephone landlines (unlisted numbers are included but as more and more people only have cell phones, sample becomes less representative of total adult population);
 - sample does not include cell phones (cell phone sample began in 2008 but not available at county level);
 - survey only available in English and Spanish
- ✓ The sample size is determined by population size – because the population of Jefferson County is small, the BRFSS sample is small
 - Small sample size impacts rates in two notable ways: 1) each individual's responses have more influence over the combined estimate; 2) estimates are not very precise - have a wide range of possible values (the confidence interval)
 - Sample size is increased by combining more than one year of survey data