

Columbia County Health Department

2009 Community Health Assessment



Columbia County Health Department Community Health Assessment

2009 Columbia County Health Department Commissioners

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OUR MISSION

The Columbia County Health Department caring and working toward a healthier community by promoting health, safety, and well being through exceptional service.

VALUES

The Columbia County Health Department values:

- Prevention and promotion.
- Collaboration and Cooperation.
- Data-driven, science based services.
- Social justice and diversity.
- Skilled and innovative employees.

TABLE OF CONTENTS

Community Description	4
Introduction	4
Key Findings	5
Population	7
Demographics	9
Child Support	10
Voter Registration	11
Public Assistance Programs	12
Crime and Violence	13
School Performance	15
School Participation in Free/Reduced Lunch	18
School Enrollment by Race/Ethnicity	19
Access to Care	20
Health Status	23
Mental Health	26
Selected Health Behaviors	27
Sexually Transmitted Diseases	29
Substance Abuse	30
Hospitalizations	32
Mortality	33
Maternal and Child Health	34
Seniors	39
Appendix A: Data Sources and	42
Appendix B: Columbia Community Health Data	43
Appendix C: Methodology	44
Appendix D: References	45

COLUMBIA COUNTY – COMMUNITY DESCRIPTION

Columbia County, in southeastern Washington, has a population of 4,100 (in 2008), making it one of the more sparsely populated counties in Washington. At 868.8 square miles, it is the ninth-smallest county in the state. It is bordered by Columbia County and the Snake River to the north, Walla Walla County to the west, Garfield County to the east, and the Oregon state line to the south. The county was carved out of Walla Walla County in 1875. Prior to 1875 Walla Walla stretched across southeastern Washington to the Idaho border. In October 1869 the first attempt was made to create a new county from the eastern part of Walla Walla County, but this effort failed. A second effort in 1875 was successful, and Columbia County officially came into existence on November 29, 1875. The eastern border of Columbia County at that time was the Idaho state line; however in November 1881 the eastern part of Columbia County was separated to form Garfield County.¹

The county has a primarily agriculture history which remains a mainstay of Columbia County's economy. Columbia County is known for asparagus, green peas, and especially wheat. Ranching and logging also playing a significant role in the county's agriculture and food processing still dominates the economy, with manufacturing and government representing the majority of the county's nonagricultural employment. Dayton, the largest town and county seat, has a population of 2,735. Since 2000, Dayton has seen an increase in the population by 3%.^{1,2}

INTRODUCTION

This community health assessment examines and explores the health, well-being, demographics, and social characteristics of residents in Columbia County. The information in this report was compiled and assessed by Community Health Assessment staff at Spokane Regional Health District for individuals and organizations in Columbia County who are interested in addressing the health and community needs of its residents.

What is community health assessment?

Community health assessment refers to the range of activities that our public health system performs to learn about the health of our communities and to plan responses to local needs. Public health agencies conduct assessments by collecting, analyzing, and disseminating information, including statistics on health status and community health needs and strengths. Through this work, they learn where, when, and how health threats are occurring. With this data they can prioritize needs, generate resources, make service or program changes, and implement policies that improve public health.

Assessment is one of the three core functions of public health, as defined by national leaders in the 1980s. The core functions of assessment, policy development, and assurance are carried out to ensure that the basic mission of the public health system, keeping communities safe and healthy, is met.

The goal of community health assessment is to improve population health outcomes. If the activities of assessment are carried out effectively, they should contribute to data-driven public health decisions resulting in public health services that are aligned with the health needs of local communities.

KEY FINDINGS FOR COLUMBIA COUNTY

Population and Demographics

- Median age in 2008 was 45.5
- Approximately one-quarter of the population was between the ages of 0 to 19; approximately 20% of the population was between the ages of 50 to 59; approximately 20% of the population was 65 years of age and older
- Approximately 50% of adults have an annual household income between \$20,000 and \$50,000; approximately one-third of adults have an annual household income greater than \$50,000
- 60% of adults have more than a high school education; a quarter of adults are high school graduates or have a GED
- 48% of adults are not employed, which is comprised of individuals who are unemployed, retired, homemakers, students, and individuals unable to work; of these adults, one in five are retired
- Approximately 60% of adults are married; approximately one in five adults have never been married; one in ten adults are divorced or separated
- Approximately 70% of households do not have any children; one in ten households has three or more children
- The number of individuals participating in Temporary Assistance for Needy Families (TANF) and State Family Assistance significantly decreased from 2000 to 2007
- The proportion of the population that participated in the Basic Food Program significantly decreased from 2000 to 2007. The proportion participating in the Food Assistance Programs was significantly higher than in Washington State
- During 2000 to 2008, the overall crime rate was significantly lower than the state; 98% of the crimes were property crimes, specifically theft
- For the school year 2007 to 2008, approximately 92% of students who began the ninth grade graduated high school on time
- For school year 2008 to 2009, 89% of tenth grade students passed the reading examination of the WASL; 49% passed the math examination; 89% passed the writing examination; 67% passed the science examination
- For school year 2008 to 2009, two-thirds of elementary to high school students were eligible for free lunch; 10% of elementary to high school students were eligible for reduced lunch

- For school year 2008 to 2009, 87% of elementary to high school students were White; one in ten were Hispanic

Health Behaviors

- Approximately 35% of adults received an influenza immunization in the last year; approximately 80% of seniors received an influenza immunization last year
- Approximately 37% of adults received a pneumonia immunization in the last year; approximately three-fourths of seniors received a pneumonia immunization in the last year
- 18% of adults did not exercise in the last month; approximately one-third of seniors did not exercise in the last month
- 88% of the youth did not participate in physical education classes at school every day; 63% of the youth met the recommended level of physical activity
- 14% of the youth spent more than 3 hours each day watching TV, using the computer, or playing video games
- One in four youth ate the recommended 5 or more fruits and vegetables per day
- Approximately one in five adults smoked cigarettes in the last month
- Approximately one-quarter of adults binge alcohol in the past year
- Approximately one in ten adults used an illicit drug in the past year; 6% of adults used marijuana in the past year
- Two-thirds of youth usually eat dinner with their family
- 12% of youth smoked cigarettes in the last 30 days; 18% smoked cigars; 5% used smokeless tobacco
- One in ten youth used marijuana in the last 30 days
- One in ten youth used prescription pain killers in the last 30 days
- A significantly higher proportion of youth (29%) drank alcohol in the last 30 days compared to the state
- 37% of youth reported they had ridden in a car in the last month with a driver who had been drinking
- 16% of youth seriously considered attempting suicide

Healthcare and Conditions

- Approximately 17% of adults did not have health insurance; nearly one in four adults received medical insurance from the government; among adults, two-thirds of medical insurance is provided by employers
- Approximately 15% of adults reported they felt they needed to see a doctor, but did not because they could not afford to see one
- 84% of adults felt their health was excellent, very good, or good; slightly more than a quarter of seniors stated their general health was either fair or poor
- 17% of adults reported substantial impairment (physical health) for 14 or more days in the last 30 days
- Approximately one in ten adults reported substantial impairment (mental health) for 14 or more days in the last 30 days
- Approximately one in ten adults currently has asthma; one in four youth has asthma; one in ten youth had an asthma attack in the last year
- One in ten adults have diabetes (18 years and older); one in five seniors (65 years or older) have diabetes
- Approximately 40% of seniors reported having activity limitations because of physical, mental, or emotional problems
- 68% of adults were either overweight or obese
- One in four youth were either overweight or obese
- Slightly more than a quarter of youth were depressed

Morbidity and Mortality

- The hospitalization rate was significantly higher than in Washington State; among the five leading causes of hospitalization, Columbia County had a significantly higher rate for heart disease, unintentional injury, respiratory disease, digestive disorders, and fractures
- The hospitalization rate among seniors was significantly higher than in Washington State for heart disease, respiratory disease, unintentional injury, fractures, and digestive system disorders
- From 2000 to 2007, there was an average of 48 deaths per year
- The mortality rate was significantly higher than the state
- The leading causes of death were heart disease and cancer
- Among adults who died of cancer, 36% were diagnosed with lung, bronchus, or trachea cancer

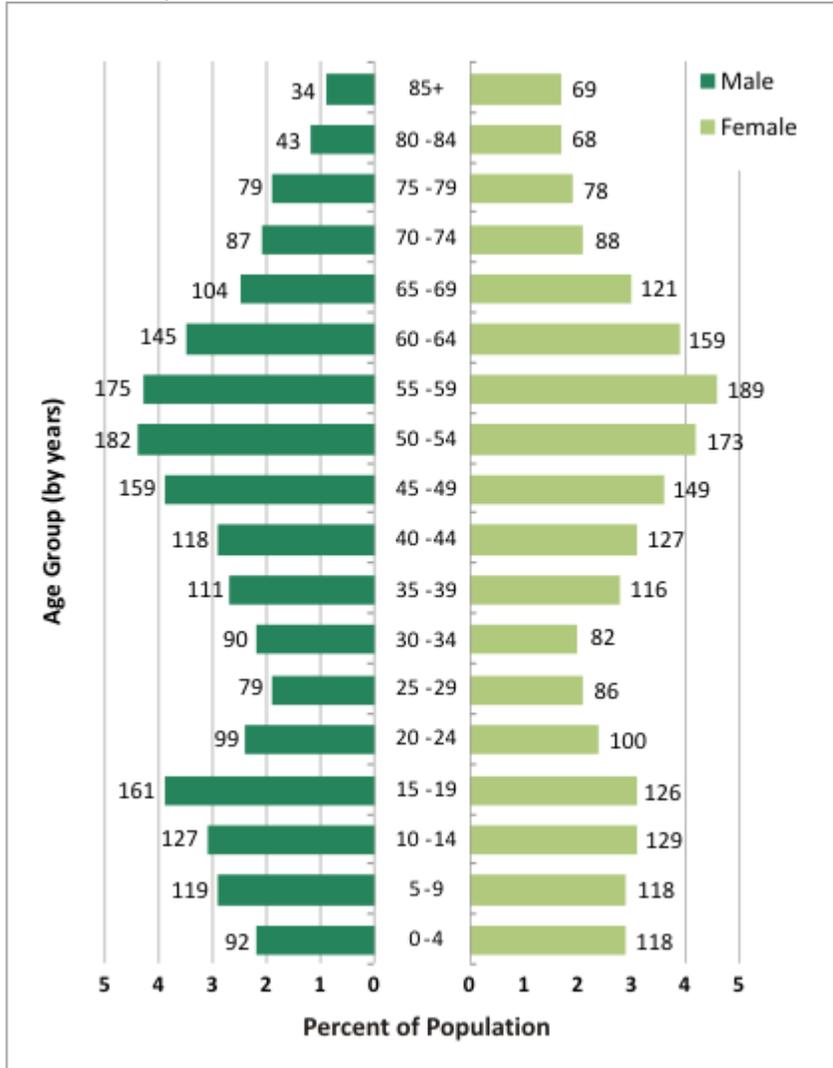
Maternal and Child Health

- There is an average of 36 births per year; 85% of births are to White women; 17% of births are to Hispanic women
- Two-thirds of births are to unmarried women
- 80% of pregnant women received timely prenatal care
- Approximately one in ten births was a premature birth
- The maternal smoking rate was significantly higher than in Washington State
- In 2007, the percent of infants served by the Women, Infant, and Children (WIC) program in Columbia County was 59%, whereas the state was 49%
- In 2007, 52% of WIC families were working families; however, 69% of these working families live in poverty

POPULATIONⁱ

In 2008, the population of Columbia County was 4,100 making it the third least populated county in Washington State. Men comprised 48.9% of the total population while women were 51.1% of the total population. The median age of residents in Columbia County was 45.5 years. This is higher than the median age for the state of Washington (35.3 years). Approximately one-quarter of the population was between the ages of 0 to 19 years. There were an equal proportion of males and females for this age group. Approximately one in five residents was 55 to 59 years of age. This age group is comprised of 48% male and 52% female. Approximately one in five individuals was a senior (65 years or older) in Columbia County. Among seniors, 45% were male and 55% were female. From 2003 to 2008, the population in Columbia County remained stable and there was no change in the population among men and women.

Distribution and Count of Population by Age and Gender
Columbia County, 2008



Source: Washington State Office of Financial Management, 2008

Population by Age and Gender
Columbia County, 2003-2008

Age Group	2003			2004			2005			2006			2007			2008		
	Total	Male	Female															
0-4	212	93	119	210	92	118	209	91	118	207	91	117	208	91	117	210	92	118
5-9	249	125	124	245	123	122	242	122	120	241	121	120	239	120	119	236	119	118
10-14	288	143	145	284	141	143	276	137	139	269	133	136	262	130	132	256	127	129
15-19	292	164	128	290	163	128	290	163	128	290	162	127	289	162	127	287	161	126
20-24	197	99	99	200	100	100	200	100	100	202	101	101	201	100	101	200	99	100
25-29	151	72	79	152	73	79	154	74	80	158	75	82	161	77	84	165	79	86
30-34	197	103	94	190	99	91	182	95	87	176	92	84	173	90	83	172	90	82
35-39	243	118	126	237	115	122	235	114	120	235	115	120	233	114	119	228	111	116
40-44	286	136	150	282	135	147	275	131	144	264	127	138	254	122	132	245	118	127
45-49	324	166	158	322	166	157	321	165	156	318	164	154	314	162	152	308	159	149
50-54	342	175	167	347	177	170	350	179	171	353	180	172	355	181	173	355	182	173
55-59	322	156	166	334	161	173	349	168	180	362	175	188	362	174	187	364	175	189
60-64	241	117	124	253	122	131	263	127	136	270	130	140	290	139	151	304	145	159
65-69	194	89	106	198	91	108	202	92	110	207	95	112	214	98	115	225	104	121
70-74	177	87	90	174	86	88	173	85	87	171	85	87	172	85	87	175	87	88
75-79	173	84	89	169	82	87	165	81	84	163	81	82	160	80	80	157	79	78
80-84	119	46	73	120	46	73	119	46	73	116	45	71	113	44	69	111	43	68
85+	90	29	61	92	30	62	95	31	64	98	32	66	101	33	68	103	34	69
Total	4,100	2,001	2,099	4,100	2,001	2,099	4,100	2,002	2,098	4,100	2,003	2,097	4,100	2,003	2,097	4,100	2,003	2,097
15	47	25	22	47	25	22	48	26	22	47	26	22	46	25	21	45	25	21
16	80	44	36	80	45	36	80	45	35	82	46	36	81	45	36	79	44	35
17	66	31	35	65	30	34	65	31	34	64	31	34	66	31	35	65	31	34
18	52	30	22	52	30	22	51	29	22	51	29	22	51	29	22	52	30	22
19	46	33	14	46	32	14	46	32	14	45	31	14	45	32	14	45	32	14
0-9	461	218	243	455	215	240	451	213	238	448	212	236	447	211	236	446	210	236
10-17	482	244	238	475	241	234	469	238	231	463	235	228	455	231	224	446	226	220
18-24	296	161	135	198	162	136	297	161	136	298	161	136	297	161	136	297	161	136
25-34	348	175	173	342	172	170	336	169	168	334	167	167	334	167	167	337	169	168
35-44	530	254	275	519	250	269	510	246	264	499	241	258	487	236	251	473	229	244
45-54	666	342	325	669	343	326	671	344	327	671	344	327	668	343	325	663	341	322
55-64	563	272	291	587	284	304	612	295	317	632	304	328	652	313	338	669	321	348
65+	754	334	419	753	335	418	754	336	418	755	337	417	760	341	419	770	347	424

Source: Washington State Office of Financial Management, 2003-2008

DEMOGRAPHICSⁱⁱ

Socioeconomic status (SES) is the social standing of an individual or group in terms of their income, education, and occupation. An individual's income, education, and occupational status are often closely interrelated. Research suggests that both physical and mental health is associated with SES. In particular, studies suggest that lower SES is linked to poorer health outcomes. Poor health may, in turn, decrease an individual's capacity to work, thus reducing their ability to improve their SES. Within families, economic hardship can lead to marital distress and disrupted parenting which, in turn, may increase mental health problems among children, such as depression, substance abuse, and behavior problems.³

- In Columbia County, approximately 50% of adults have an annual household income between \$20,001 and \$50,000, and approximately 35% have an annual income greater than \$50,000. Approximately 16% of adults have an annual income of \$20,000 or less.
- Approximately 60% of the adults in Columbia County have more than a high school education, while about 15% of adults do not have a high school education.
- Approximately 53% of adults in Columbia County are employed for wages, and approximately 5% are unemployed. Approximately one in ten adults are students and one in five are retired.
- Approximately 60% of adults in Columbia County are married and approximately 12% are either divorced or separated.
- Approximately 70% of households in Columbia County do not have any children.

Columbia County, 2006-2008

Annual Household Income	Percent
< \$10,000	3.2%
\$10,000 - \$15,000	6.6%
\$15,001 - \$20,000	6.1%
\$20,001 - \$25,000	14.3%
\$25,001 - \$35,000	14.9%
\$35,001 - \$50,000	20.1%
\$50,001 - \$75,000	23.1%
\$75,001 or more	11.7%
Education	Percent
< High school graduate	14.4%
High school graduate/GED	26.8%
More than high school	58.8%
Employment	Percent
Employed for wages	52.2%
Unemployed	4.9%
Homemaker	7.0%
Student	8.4%
Retired	20.5%
Unable to work	7.0%
Marital Status	Percent
Married	57.2%
Divorced/Separated	11.5%
Widowed	7.8%
Never married	18.8%
Unmarried couple	4.7%
Number of Children in Household	Percent
None	68.1%
One	13.5%
Two	8.1%
Three or more	10.3%

Source: BRFSS, 2006-2008

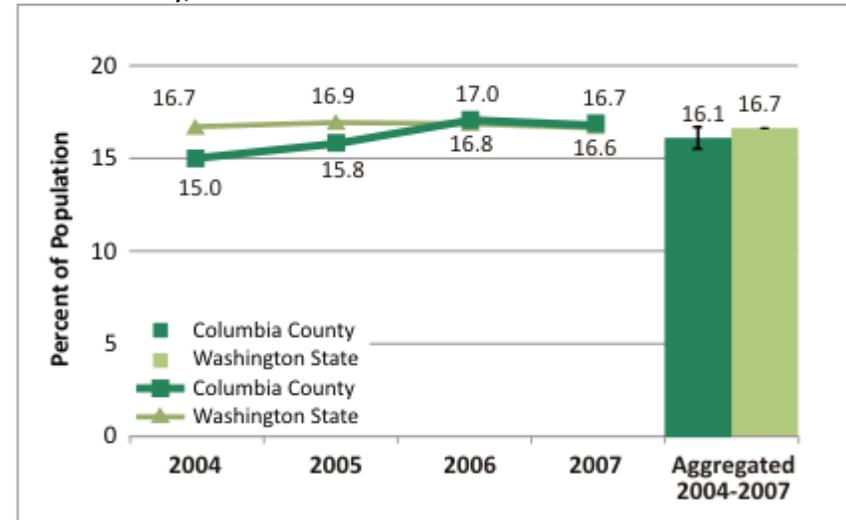
CHILD SUPPORTⁱⁱⁱ

The Division of Child Support services under the Economic Services Administration (ESA) for the Washington State Department of Social and Health Services provides services to establish paternity, locate non-custodial parents, and establish and enforce child support orders. This directly impacts custodial parents and the children under their supervision by establishing regular payments of child support for their families and medical support coverage for their children. Custodial parents who receive regular court ordered payments are less likely to use government assistance, specifically TANF and Medicaid programs. The impacts of Child Support services are substantial and make large contributions to family self-sufficiency, thus reducing public expenses for families. Currently in Washington State, only about one-half of the custodial parents due child support receive full payment. About twenty-five percent receive partial payment and twenty-five percent receive nothing.⁴

The proportion of the population receiving Child Support Services in Columbia County increased by 11% from 2004 to 2007; however, this was not a statistically significant increase. In Washington State the proportion remained stable from 2004 to 2007. Each year Columbia County and Washington State had similar rates and there was no difference in the overall proportion of clients utilizing Child Support Services during 2004 to 2007.

Child Support Services

Columbia County, 2004-2007



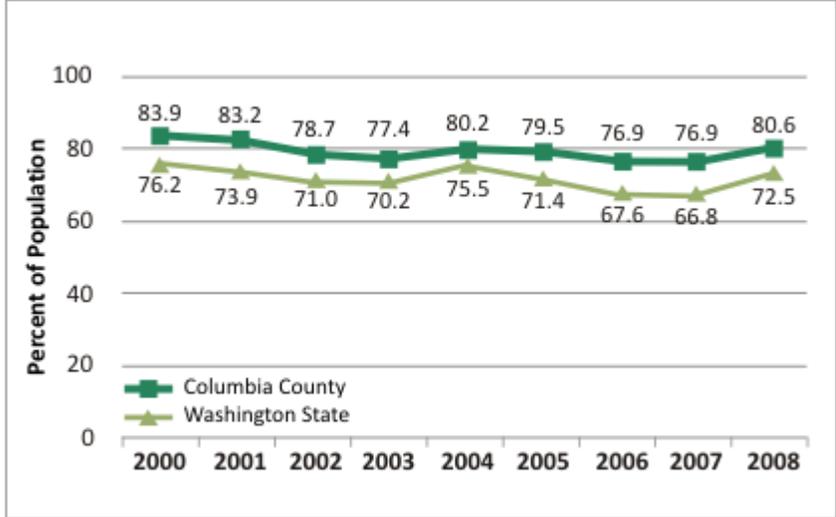
Source: Washington State Department of Social and Health Services, Research and Data Analysis Division, 2004-2007

VOTER REGISTRATION^{iv}

From 2000 to 2008, the proportion of the population who was eligible and registered to vote in Columbia County remained stable, while the proportion for Washington State decreased significantly by approximately 5%. From 2002 to 2008, the proportion of the population who was eligible and registered to vote consistently remained higher for Columbia County than the State of Washington. In 2008, during the last presidential election, 8 in 10 residents of Columbia County who were eligible to vote, registered to vote, compared to slightly more than 7 in 10 for the state. This was approximately 11% higher than the State of Washington.

Adults Registered to Vote

Columbia County, 2000-2008

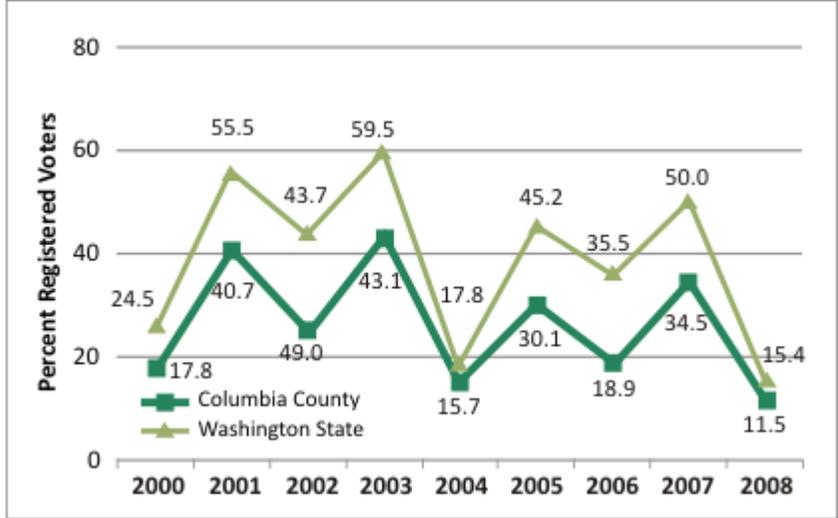


Source: Washington State, Office of the Secretary of State, 2000-2008

During non-presidential years, the proportion of registered voters who do not vote in the November elections increased significantly for both Columbia County and Washington State; however residents in Columbia County who are registered to vote, vote more in the November elections than registered voters in the state. In 2008, during the last presidential election, 89% of registered voters in Columbia County voted compared to 85% for the state.

Registered and Not Voting in the November Elections

Columbia County, 2000-2008



Source: Washington State, Office of the Secretary of State, 2000-2008

PUBLIC ASSISTANCE PROGRAMSⁱⁱⁱ

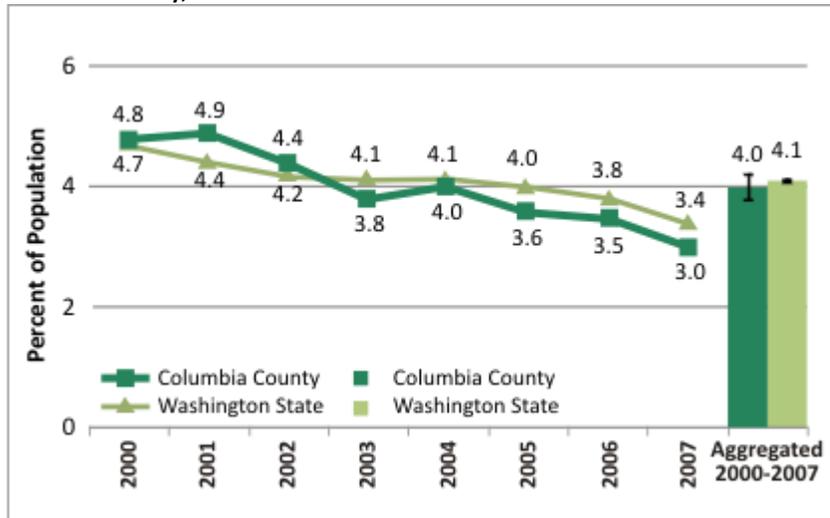
TEMPORARY ASSISTANCE TO NEEDY FAMILIES (TANF)

TANF is a federally funded program that provides monthly cash grants to children under age 18 (or under age 19 if attending high school or working towards a GED full-time), parents or caretaker relatives of these children, unmarried teen parents under the age of 18, and pregnant women.

The proportion of the population receiving TANF and State Family Assistance in Columbia County was similar to Washington State each year from 2000 to 2007. There was a significant decrease in the number of residents participating in TANF and State Family Assistance for both Columbia County and Washington State from 2000 to 2007. During 2000 to 2007, a similar proportion of the population participated in TANF and State Family Assistance for Columbia County (4.0%) and Washington State (4.1%).

Temporary Assistance to Needy Families (TANF) and State Family Assistance

Columbia County, 2000-2007



Source: Washington State Department of Social and Health Services, Research and Data Analysis Division, 2000-2007

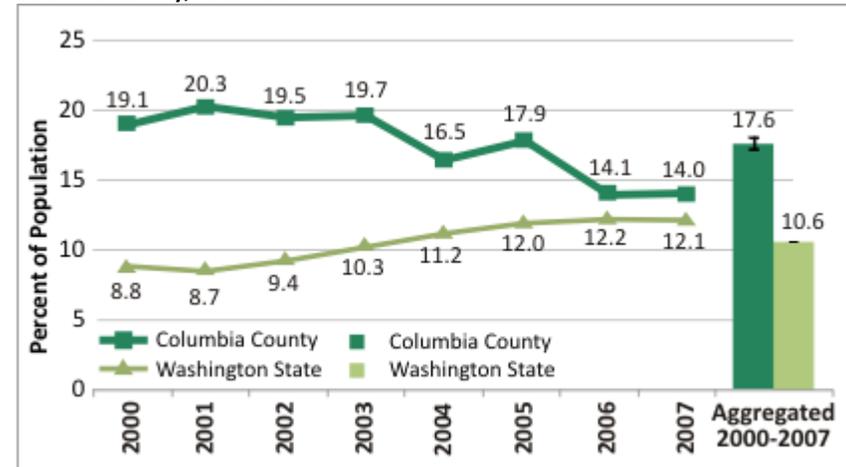
FOOD ASSISTANCE PROGRAM

The Basic Food Program provides benefits to individuals and families with incomes below 130% of the federal poverty level and whose resources are below established limits. The program is comprised of the federal Food Stamp Program (FSP) and the state Food Assistance Program for legal immigrants ineligible for the federal FSP. Basic Food benefits can only be used to purchase food items at participating stores.

The proportion of the population that participated in the Basic Food Program significantly decreased by 27% for Columbia County and increased significantly by 38% for Washington State from 2000 to 2007. The proportion of participants for Columbia County consistently remained above the state of Washington for each year from 2000 to 2007. During 2000 to 2007, the proportion of the population that participated in the Basic Food Program was significantly higher in Columbia County by 66% than in the state. Approximately 18% of the residents of Columbia County participated in the Basic Food Program compared to approximately 11% for the state.

Basic Food Program

Columbia County, 2000-2007



Source: Washington State Department of Social and Health Services, Research and Data Analysis Division, 2000-2007

CRIME AND VIOLENCE^v

REPORTED CRIMES

Reported crime statistics are collected monthly from participating law enforcement agencies by the Washington Association of Sheriffs and Police Chiefs (WASPC) who are part of the Federal Bureau of Investigation's (FBI) Uniform Crime Reporting (UCR) program. The UCR program limits the reporting of offenses to eight selected crime classifications separated into two categories; violent crimes and property crimes. Violent crimes consist of murder, rape, assault, and robbery. Property crimes consist of arson, burglary, theft, and motor vehicle theft.

During 2000 to 2008 in Columbia County, 98% of the crimes committed were property crimes and 2% were violent crimes. Approximately 80% of the property crimes committed were identified as theft and 17% were identified as burglary. Among the violent crimes, nine in ten were identified as assault.

Number and Types of Crimes

Columbia County, 2000-2008

Type of Crime	Number	Percent
Violent Crimes (2.2%)	37	100%
Murder	1	2.7%
Rape	1	2.7%
Assault	34	91.9%
Robbery	1	2.7%
Property Crimes (97.8%)	1,649	100%
Arson	2	0.1%
Burglary	285	17.3%
Theft	1,302	79.0%
Motor Vehicle Theft	60	3.6%

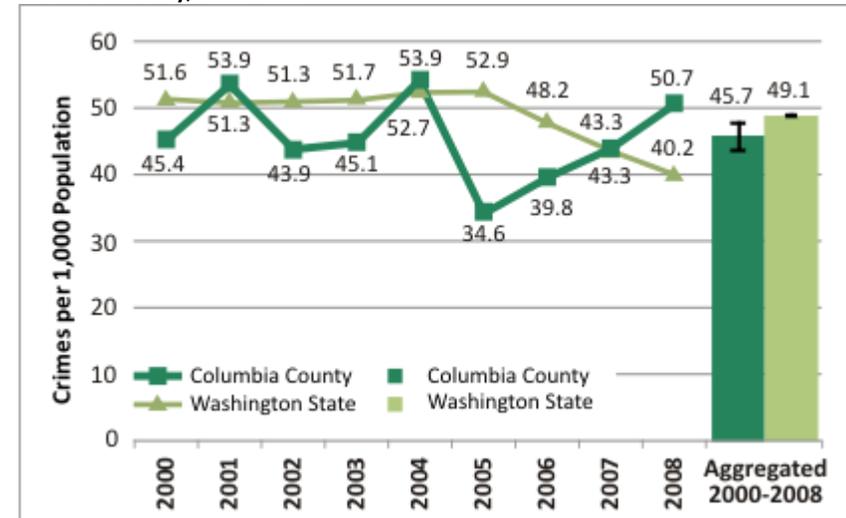
Source: State of Washington, Office of Financial Management, Criminal Justice, 2000-2008

OVERALL CRIME

The overall crime rate for Columbia County, which combines violent crime and property crime, remained stable from 2000 to 2008. The overall crime rate in Columbia County decreased from 2003 to 2006 and increased from 2006 to 2008; however, neither was statistically significant. Although Washington State experienced a decrease in the overall crime rate from 2000 to 2008, this reduction was only significant from 2005 to 2008. During 2000 to 2008, Columbia County had a significantly lower overall crime rate, 7% lower than Washington State.

Overall Crime Rate

Columbia County, 2000-2008



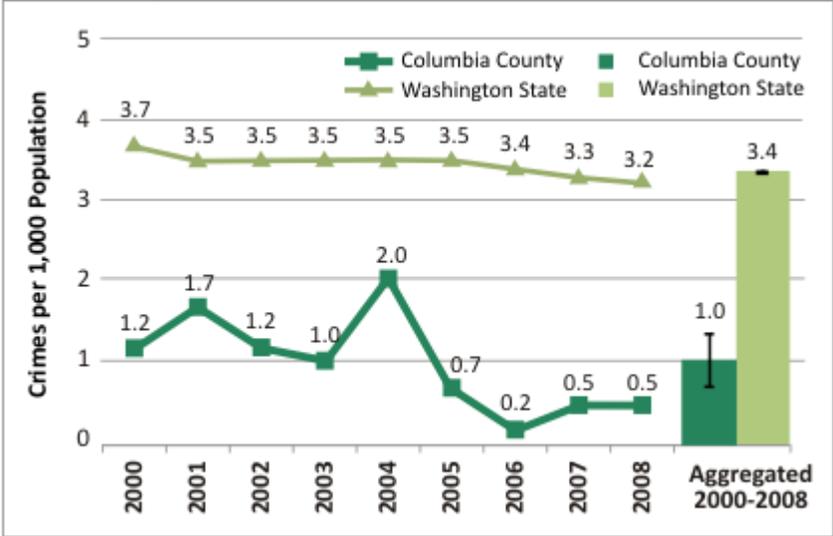
Source: State of Washington, Office of Financial Management, Criminal Justice, 2000-2008

VIOLENT CRIME

The violent crime rate for Columbia County was significantly lower than the state of Washington each year from 2000 to 2008. Although Columbia County experienced a downward trend in violent crimes from 2000 to 2008, it was not statistically significant. However, Washington State did experience a significant downward trend in violent crimes, a reduction of 14%. During 2000 to 2008, Columbia County’s overall violent crime rate was significantly lower by approximately 71% than Washington State’s overall violent crime rate.

Violent Crime Rate

Columbia County, 2000-2008



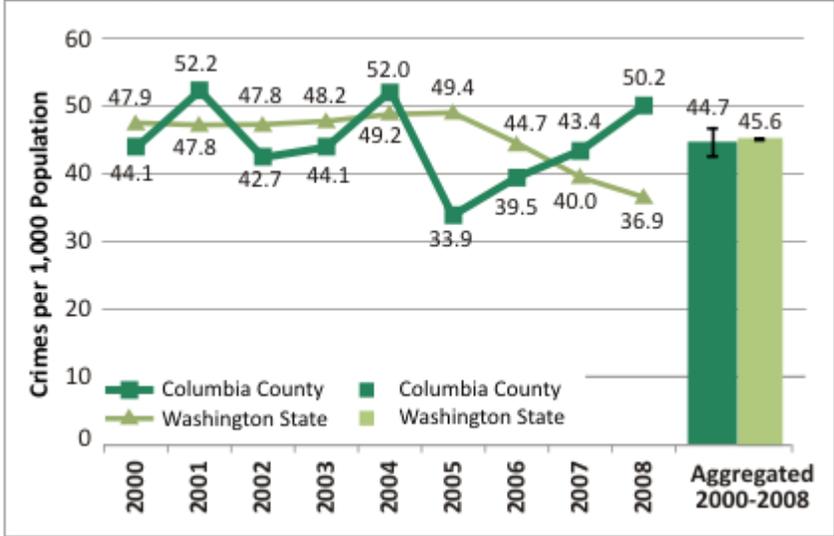
Source: State of Washington, Office of Financial Management, Criminal Justice, 2000-2008

PROPERTY CRIME

The property crime rate for Columbia County remained stable from 2000 to 2008. The overall property crime rate in Columbia County decreased from 2003 to 2006 and increased from 2006 to 2008; however, neither was significant. Washington State experienced a significant upward trend from 2000 to 2005 and a significant downward trend from 2005 to 2008. Since 2005, the property crime rate for Washington State has been reduced by 25%. During 2000 to 2008, Columbia County had a similar overall property crime rate to the state of Washington.

Property Crime Rate

Columbia County, 2000-2008



Source: State of Washington, Office of Financial Management, Criminal Justice, 2000-2008

SCHOOL PERFORMANCE^{vi}

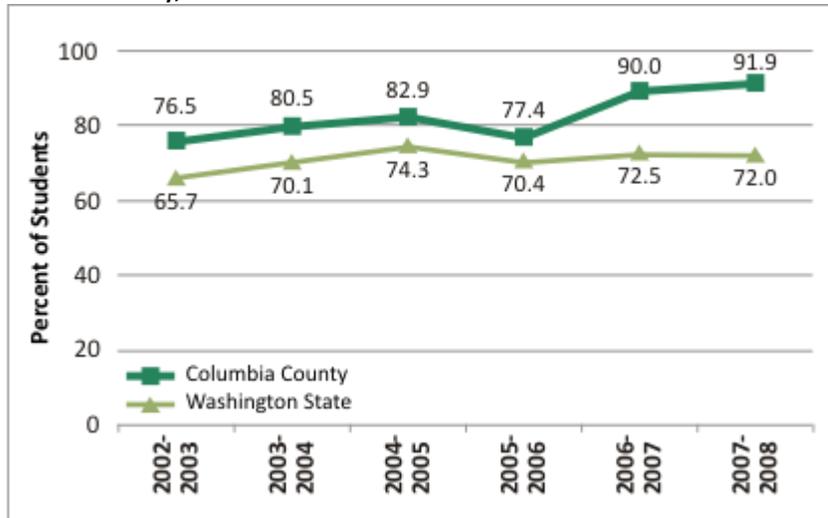
The Office of Superintendent of Public Instruction (OSPI) for Washington State calculates a cohort graduation rate for a given graduation class based on the Public Middle and High School Enrollment Status Form (P-210) submitted annually by the school districts. This calculated rate is based on only those students who begin 9th grade in the fall of a given year with an expected graduation date of four years later and accounts for transfers and other factors.

GRADUATION

The cohort on-time graduation rate for Columbia County from school year 2002 to 2003 to school year 2007 to 2008 increased by 20% and consistently remained above the cohort on-time graduation rate for Washington State. For the 2007 to 2008 school year in Columbia County, approximately nine in ten students who began the ninth grade four years prior graduated high school on-time, whereas approximately seven in ten students graduated on-time for the state of Washington.

Cohort On-Time Graduation Rate

Columbia County, 2002-2008



Source: State of Washington, Office of Superintendent of Public Instruction, 2002-2008

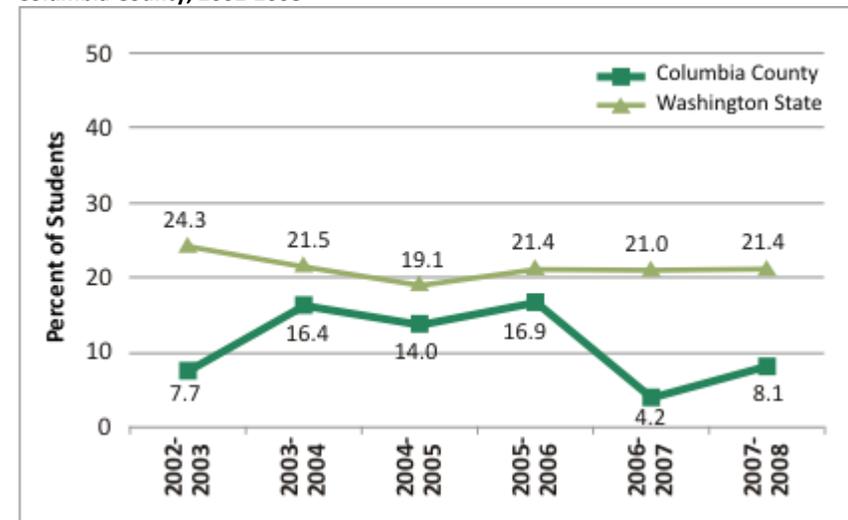
DROPOUT

The calculation for a cohort dropout rate is determined by dividing the total number of students, grade 9 through 12 that dropped out during the school year, by the total number of students grades 9 through 12 enrolled for the school year. In the dropout rate calculation, dropout includes “dropouts” as well as “moved, not knowing to be continuing.”

The cohort dropout rates for Columbia County from school year 2002 to 2003 to school year 2007 to 2008 consistently remained below the cohort dropout rates for Washington State. The Columbia County cohort dropout increased by 19% from the 2002 to 2003 to the 2005 to 2006 school year, and decreased by 52% from the 2005 to 2006 to the 2007 to 2008 school year. For the school year 2007 to 2008 in Columbia County, 8% of the cohort dropped out of school, whereas 21% dropped out for the state of Washington.

Cohort Dropout Rate

Columbia County, 2002-2008



Source: State of Washington, Office of Superintendent of Public Instruction, 2002-2008

THE WASHINGTON ASSESSMENT OF STUDENT LEARNING (WASL)^{vii}

The WASL was the standardized educational assessment test administered by the state of Washington from 1997 to 2009. It was Washington State's method for measuring the effect of the state's reading, writing, math, and science academic standards. The WASL measured students learning of skills and knowledge that are important to success in school and life. Students must demonstrate they have a certain level of skill in reading, writing, and math to be eligible to graduate.

READING

From school year 2000 to 2001 to school year 2008 to 2009, the WASL 10th grade performance for reading significantly increased by 104% for Columbia County and by 77% for Washington State. For school year 2008 to 2009, 89% of 10th grade students in Columbia County taking the reading examination passed compared to 81% for the state.

WASL 10th Grade Reading Performance

Columbia County, 2000-2009



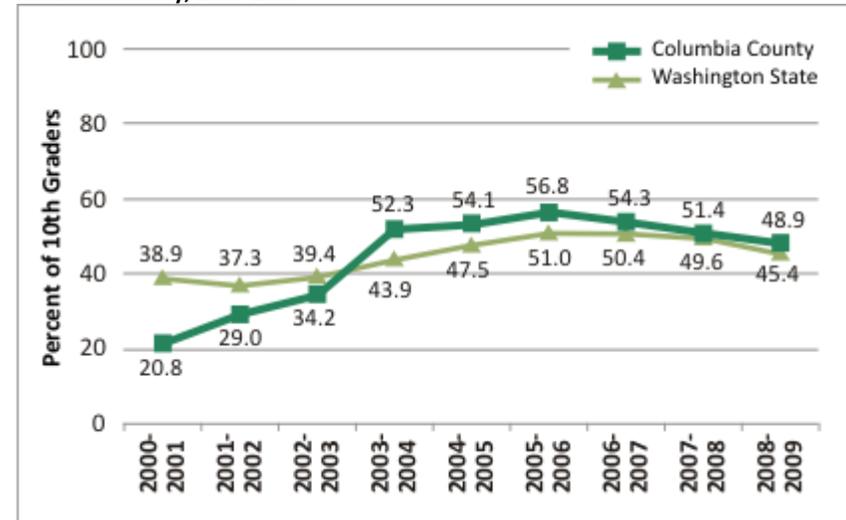
Source: State of Washington, Office of Superintendent of Public Instruction, 2000-2009

MATH

From school year 2000 to 2001 to school year 2008 to 2009 the WASL 10th grade performance for math significantly increased by 135% for Columbia County and by 17% for Washington State. For school year 2008 to 2009, 49% of 10th grade students in Columbia County taking the math examination passed, which was similar to the state (45%).

WASL 10th Grade Math Performance

Columbia County, 2000-2009



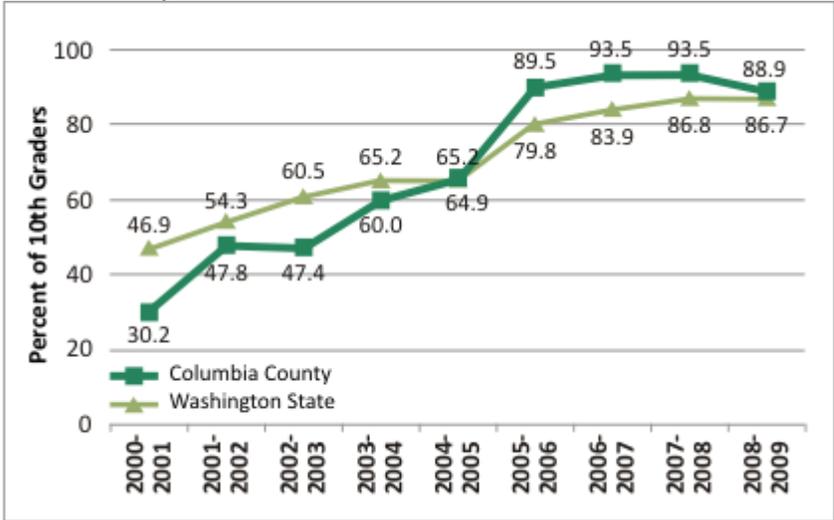
Source: State of Washington, Office of Superintendent of Public Instruction, 2000-2009

WRITING

From school year 2000 to 2001 to school year 2008 to 2009, the WASL 10th grade performance for writing significantly increased by 194% for Columbia County and by 84% for Washington State. For school year 2008 to 2009, 89% of 10th grade students in Columbia County taking the reading examination passed which was similar to the state (88%).

WASL 10th Grade Writing Performance

Columbia County, 2000-2009



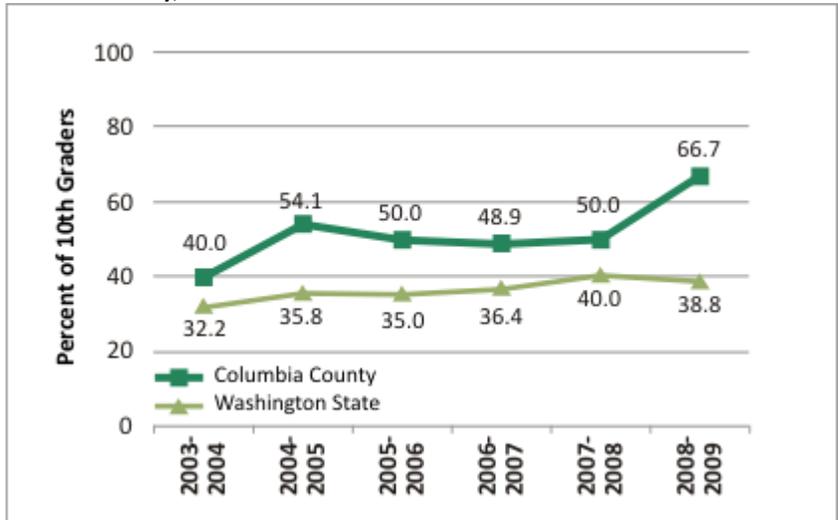
Source: State of Washington, Office of Superintendent of Public Instruction, 2000-2009

SCIENCE

From school year 2003 to 2004 to school year 2008 to 2009, the WASL 10th grade performance for science increased for both Columbia County and Washington State; however, the increase in performance was significant for Columbia County by 67% but not for the state. Tenth grade students for Columbia County consistently scored higher on the science performance than 10th grade students for the state. For the school year 2008 to 2009, approximately seven in ten students passed the science examination for Columbia County compared to the state where approximately four in ten passed the science examination.

WASL 10th Grade Science Performance

Columbia County, 2003-2009



Source: State of Washington, Office of Superintendent of Public Instruction, 2003-2009

FREE AND REDUCED LUNCH^{xi}

The National School Lunch Program (NSLP) is a federally assisted meal program operating in public and nonprofit private schools and residential child care institutions. It provides nutritionally balanced, low-cost or free lunches to children each school day. Any child at a participating school may purchase a meal through the NSLP. Children from families with incomes at or below 130% of the federal poverty level are eligible for free meals. Those with incomes between 130% and 185% of the poverty level are eligible for reduced-price meals, for which students can be charged no more than 40 cents.⁵

During the 2008 to 2009 school year, 46% of students applied for a free or reduced lunch for Columbia County compared to 40% of students for Washington State. A significantly higher proportion of students in Columbia County (36.4%) were eligible for a free lunch compared to the state (30.4%). Approximately 10% of elementary to high school students for both Columbia County and Washington State were eligible for a reduced lunch.

Among the Columbia County students, 87% were White and 13.5% were from another racial/ethnic group compared to Washington State where 65% were White and 35% were from another racial/ethnic group. Among the students in Columbia County, the largest minority group was Hispanic, comprising approximately 10% of the student population.

Free/Reduced Lunch

Columbia County, 2008-2009

Student Information	Columbia County	Washington State
Free and Reduced Lunch		
Percent of students eligible for free lunch	36.4%	30.4%
Percent of students eligible for reduced lunch	9.5%	9.1%

Source: State of Washington, Office of Superintendent of Public Instruction, 2008-2009

SCHOOL ENROLLMENT BY RACE/ETHNICITY^{xi}

Among the Columbia County students, 87% were White and 13.5% were from another racial/ethnic group compared to Washington State where 65% were White and 35% were from another racial/ethnic group. Among the students in Columbia County, the largest minority group was Hispanic, comprising approximately 10% of the student population.

Total Enrollment by Race/Ethnicity

Columbia County, 2008-2009

Student Information	Columbia County	Washington State
Race and Ethnicity		
White	86.5%	64.7%
Black	1.3%	5.5%
American Indian/Alaska Native	0.7%	2.6%
Asian Pacific Islander	1.7%	8.6%
Hispanic	9.6%	15.3%
Multiracial	0.2%	2.6%
Other	0.0%	0.7%

Source: State of Washington, Office of Superintendent of Public Instruction, 2008-2009

ACCESS TO CARE

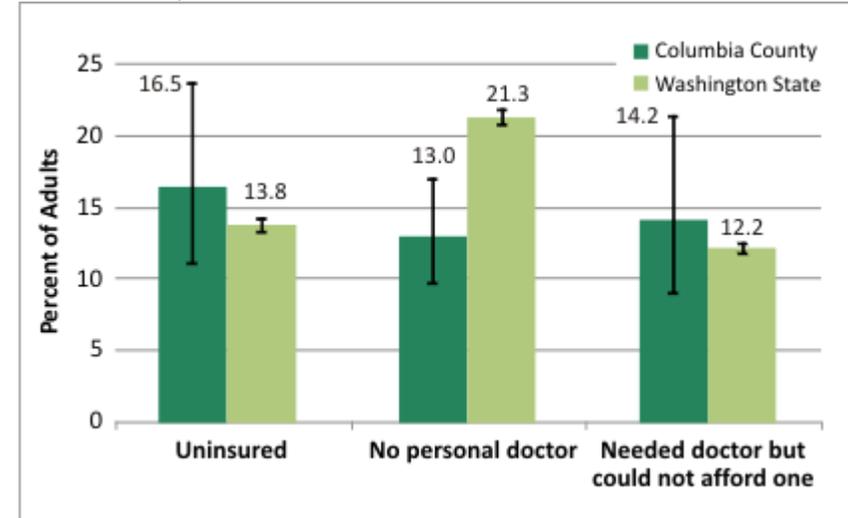
NO HEALTH INSURANCEⁱⁱ

Health insurance coverage improves access and quality of medical care and can contribute to the overall health of an individual.⁶ Compared to individuals who have healthcare insurance, individuals with no medical insurance are less likely to be satisfied with their health and their healthcare, and are less likely to have a choice of healthcare providers. In addition, people without insurance are more likely to dismiss minor problems until they become major, less likely to engage in preventive measures, more likely to visit an emergency room for maintenance of a chronic condition, and more likely to be admitted to a hospital for treatment of a chronic condition that could have been identified and treated in a physician's office if the patient had a personal doctor and had the ability to pay for medical services.

During 2006 to 2008, approximately 17% of adults in Columbia County did not have health insurance. This was similar to Washington State where approximately 14% of adults did not have health insurance. For Columbia County, 13% of adults did not have at least one doctor they considered their personal doctor, which was significantly lower than Washington State (21%). For the prior year from when a patient was surveyed, there was no difference between Columbia County (8%) and Washington State (12%) in the proportion of adults who reported they felt they needed to see a doctor, but did not because they could not afford to visit a physician.

Access to Care

Columbia County, 2006-2008



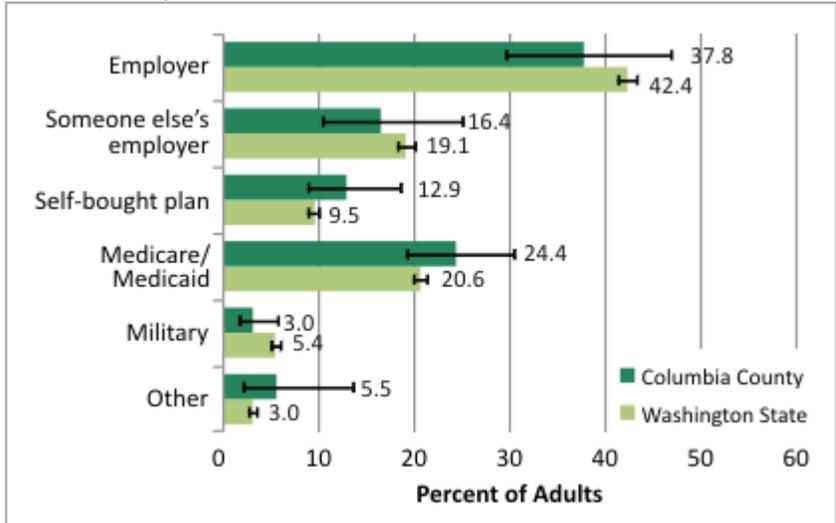
Source: BRFSS, 2006-2008

SOURCE OF HEALTH INSURANCEⁱⁱ

During 2006 to 2008, there was no difference in the proportion of adults in Columbia County who received health insurance from their employer (38%) compared to the proportion of adults in Washington State (42%). There was no difference in the proportion of adults who received their medical insurance from the government (i.e. Medicare, Medicaid) between Columbia County (24.4%) and Washington State (20.6%).

Source of Coverage for Healthcare Plan

Columbia County, 2006-2008



Source: BRFSS, 2006-2008

HOSPITALIZATION LOCATION^{viii}

In 2008, 501 Columbia County residents were hospitalized in Washington State. One in five was hospitalized within Columbia County at Dayton General Hospital. Approximately 55% were hospitalized at Walla Walla General Hospital in Walla Walla and slightly more than 10% were hospitalized at Spokane County hospitals.

Location of Hospitalizations Among Columbia County Residents, Columbia County, 2008

Percent	Count	County	Hospital*
54.7%	274	Walla Walla	Walla Walla General Hospital
20.4%	102	Columbia	Dayton General Hospital
11.0%	55	Spokane	Deaconess Medical Center Saint Luke's Rehabilitation Institute Sacred Heart Medical Center
5.8%	29	Benton	Kadlec Medical Center
2.8%	14	King	Swedish Medical Center Virginia Mason Hospital Harborview Medical Center University of Washington Medical Center
5.3%	27	Other WA State Counties	Other hospitals in other counties within Washington State
100.0%	501	Total	Total

Source: Washington State Department of Health, CHARS, 2008

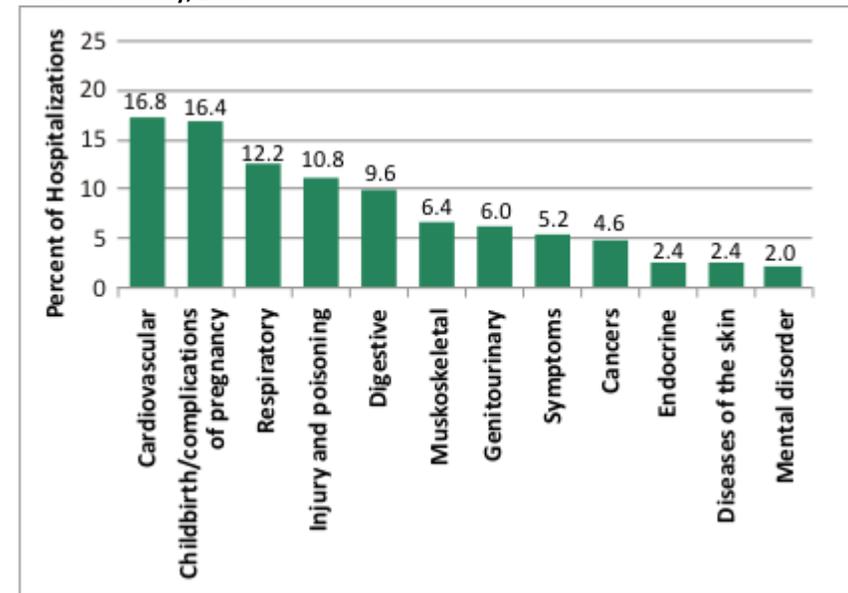
*Hospitals are in order of most hospitalizations

REASON FOR HOSPITALIZATION^{viii}

In 2008, 17% of hospitalizations for Columbia County residents to Dayton General Hospital were for cardiovascular disease and slightly more than 16% were for childbirth or complications with a pregnancy. Approximately 12% were for a respiratory system disease and 11% were for an injury and/or poisoning. Approximately one in ten hospitalizations were for a digestive system disease.

Reason for Hospitalization Among Residents (Columbia Community Hospital and Pullman Memorial Hospital)

Columbia County, 2008



Source: Washington State Department of Health, CHARS, 2008

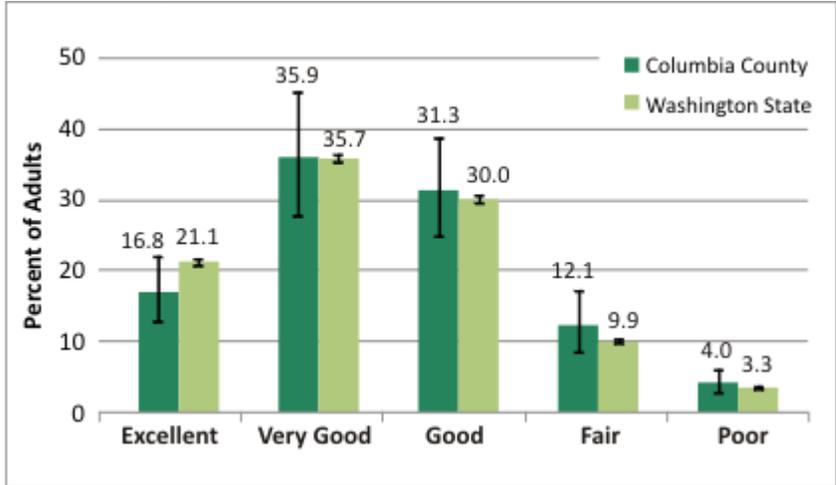
HEALTH STATUSⁱⁱ

Perceived health status measures individuals 18 years of age or older who self-reported their general health status as excellent, very good, or good compared to fair or poor. Response to this broad question covers one's perception of physical, mental, and social well-being, which has been shown to be a good predictor of mortality.

In Columbia County from 2006 to 2008, 84% of adults felt their health was excellent, very good, or good. This was similar for adults in Washington State (86.8%).

General Health Status

Columbia County, 2006-2008



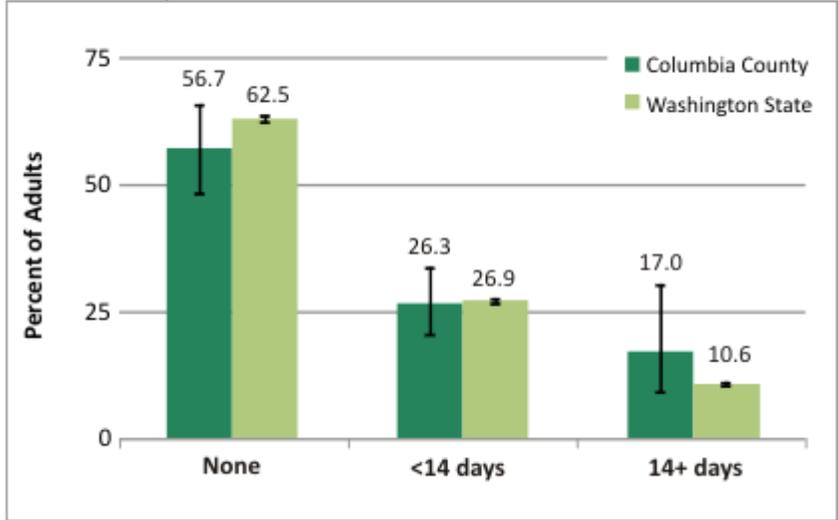
Source: BRFSS, 2006-2008

POOR PHYSICAL HEALTH

Forty-three percent of adults in Columbia County reported that their physical health was not good at least one day in the last 30 days from 2004 to 2006, which was similar to Washington State (36%). Substantial impairment (physical health not good for 14 or more days in the last 30 days) was reported by 17% adults in Columbia County which was similar to Washington State (11%).

Poor Physical Health in the Last 30 Days

Columbia County, 2006-2008



Source: BRFSS, 2006-2008

CHRONIC HEALTH CONDITIONS

Adults living with chronic health conditions may experience limitations with daily living that affect their overall well-being. Health damaging behaviors, particularly tobacco use, lack of physical activity, and poor eating habits are major contributors to chronic diseases.

Asthma has emerged as a major public health problem in the United States over the past 20 years.⁷ Approximately 16.4 million adults currently have asthma in the United States.⁸

Heart disease is the leading cause of death for both men and women in the United States.⁹ One in five deaths is caused by a heart attack. More than 1.2 million heart attacks occur each year in the United States and about 460,000 of these are fatal.¹⁰

During the past 20 years, there has been a dramatic increase in obesity in the United States. Obesity increases the risk of respiratory problems and chronic health conditions, such as hypertension and type II diabetes.

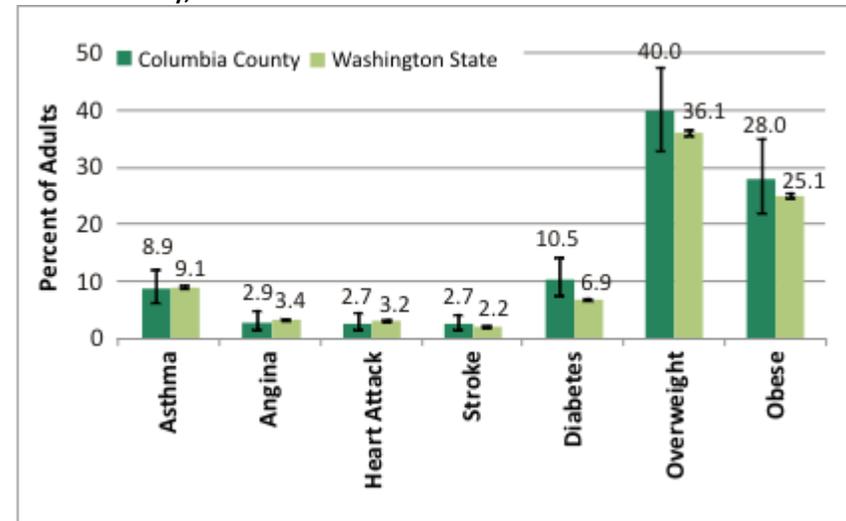
Diabetes is a serious chronic disease that affects more than 23.6 million people in the United States (7.8% of the total population). Of these, 2.7 million are undiagnosed. Diabetes is the seventh leading cause of death in the United States.¹¹

From 2006 to 2008, one in ten adults currently has asthma in both Columbia County and Washington State. Similar to the state, 3% of adults in Columbia County had a cardiovascular problem. A significantly higher proportion of adults in Columbia County have diabetes (11%) compared to Washington State (7%).

Sixty-eight percent of adults in Columbia County are either overweight or obese, which is similar to Washington State's proportion (61%).

Health Conditions

Columbia County, 2006-2008



Source: BRFSS, 2006-2008

YOUTH HEALTH CONDITIONS^{ix}

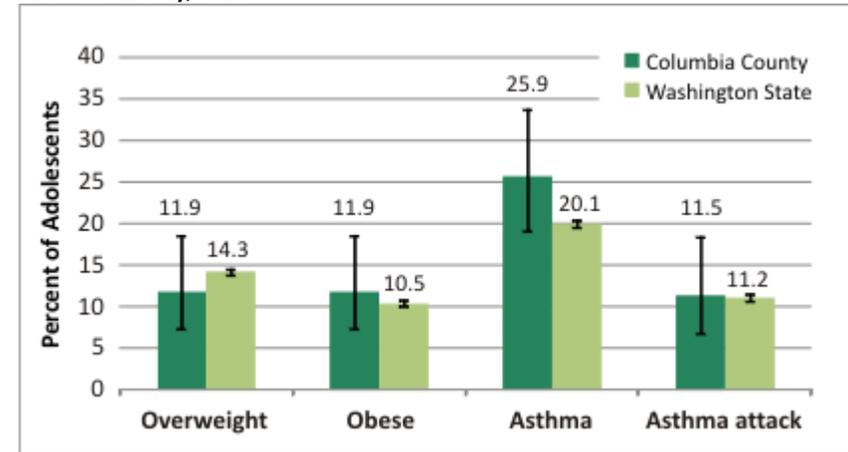
Obese youth include individuals in grades 8, 10, and 12 who are in the top 5th percentile of the body mass index (BMI) for age range and overweight youth includes individuals in grades 8, 10, and 12 who are in the top 5th to 15th percentile of the BMI for age and range. Youth who are obese and overweight are at greater risk for physical, social, and psychological problems and are more likely to become overweight or obese adults.¹²

Asthma has become the leading chronic illness among children and youth in the United States. In 2007, 5.6 million school-aged children and youth (5 to 17 years old) were reported to have had asthma; 2.9 million had an asthma episode or attack within the previous year.¹³ On average, in a classroom of 30 children, about 3 are likely to have asthma.¹⁴ In addition, asthma is one of the leading causes of school absenteeism.¹⁵ Low-income populations, minorities, and children living in inner cities experience more emergency department visits, hospitalizations, and deaths due to asthma than the general population.¹⁶ The estimated cost of treating asthma in those less than 18 years of age is \$3.2 billion per year.¹⁷

In 2008, approximately one in four adolescents in Columbia County were either overweight or obese, one in four has asthma, and approximately one in ten had an asthma attack in the last year. These proportions were similar to Washington State.

Adolescent Health Conditions

Columbia County, 2008



Source: Healthy Youth Survey, 8th, 10th, and 12th grade, 2008

MENTAL HEALTH

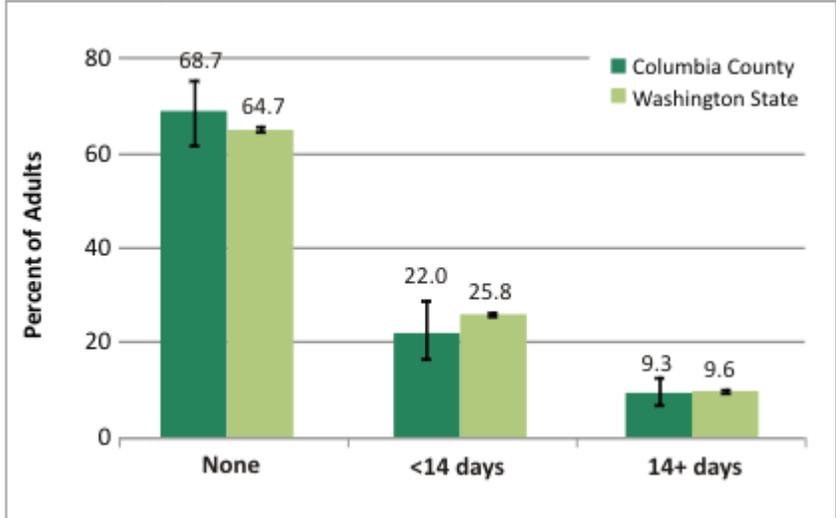
ADULTSⁱⁱ

Good mental health enables a person to think and act productively, to cope with adversity, and to build strong relationships. Individuals with 14 or more days of poor mental health in a 30 day period would likely benefit from an intervention.¹⁸

During 2006 to 2008, a similar proportion of adults reported poor mental health at least one day in the last 30 days for Columbia County (31%) and Washington State (35%). Substantial impairment (poor mental health for 14 days or more in the last 30 days) was reported by one in ten adults for both Columbia County and Washington State.

Poor Mental Health in the Last 30 Days

Columbia County, 2006-2008



Source: BRFSS, 2006-2008

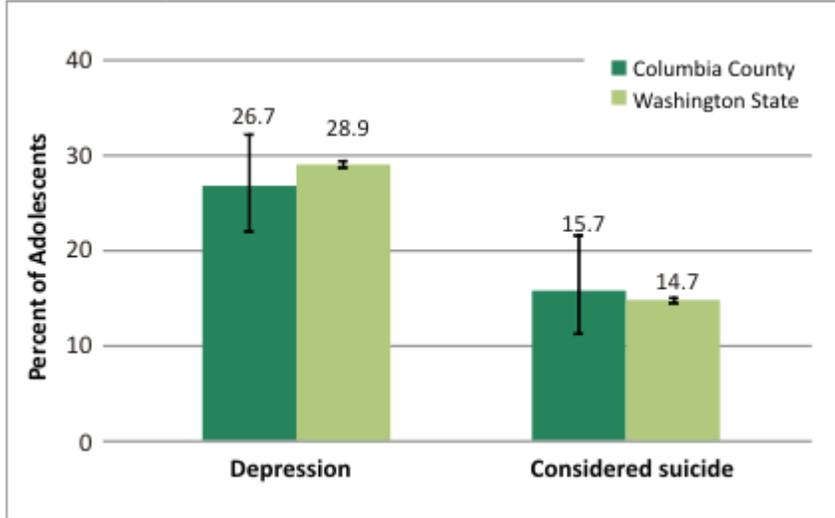
YOUTH^{ix}

Youth with depression included individuals in grade 10 who felt so sad or hopeless, almost every day for 2 weeks or more in a row, that they stopped doing some of their usual activities. Depression among youth may lead to failure in school, alcohol or drug use, suicide, or other negative outcomes. Although depression is treatable, research estimates two-thirds of children with mental health problems do not get the help they need.¹⁹

In 2008, roughly one in four adolescents in Columbia County were depressed, and 16% considered suicide. These proportions were similar to Washington State.

Adolescent Mental Health

Columbia County, 2008



Source: Healthy Youth Survey, 8th, 10th, and 12th grade, 2008

SELECTED HEALTH BEHAVIORS

ADULTSⁱⁱ

The development and manifestation of disease are linked to unhealthy behaviors. These behaviors are important contributors to morbidity and premature death. Public health's role in promoting healthy behavior requires helping people to understand that changing their unhealthy behaviors and sustaining these changes over time can reduce the risk of disease.

The flu is a contagious respiratory illness caused by the influenza virus. The best way to prevent seasonal flu is by getting a seasonal flu vaccination each year.

Pneumonia is a bacterial infection of the lungs that can affect people of all ages.²⁰ It is a leading cause of vaccine-preventable illness and death in the United States.²¹

Regular physical activity reduces the risk of chronic disease, helps control weight, reduces symptoms of anxiety and depression, and improves physical health.

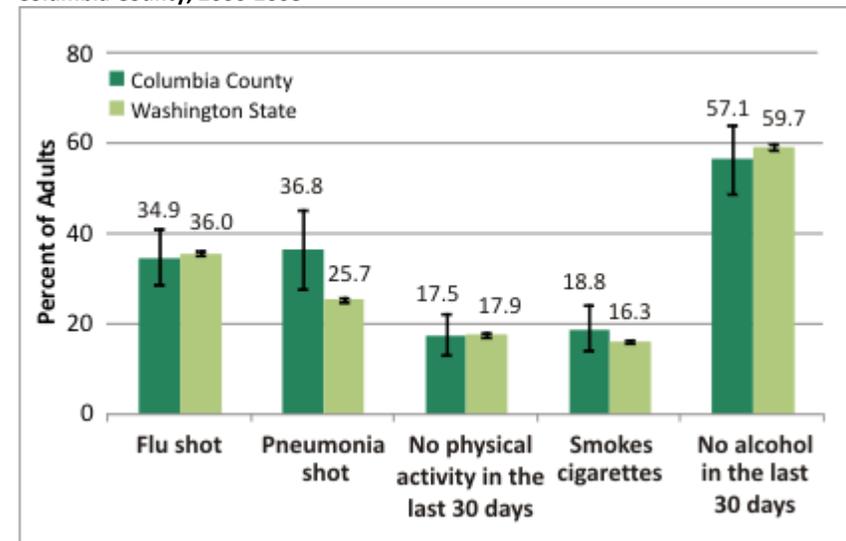
Tobacco use is the leading cause of preventable death. Public health promotes a healthy lifestyle through efforts to help prevent youth from starting to smoke by providing smoking cessation assistance, monitoring sales of cigarettes to youth, and working for environmental changes to limit exposure to second-hand smoke.

Alcohol abuse and dependence are marked by patterns of alcohol consumption that contribute to significant impairment or distress. These disorders lead to a variety of negative consequences, including car crashes, domestic violence, birth defects, and economic costs.²²

Among Columbia County adults from 2006 to 2008, 35% received a flu shot in the last year, which was similar to Washington State (36%). A significantly higher proportion of adults received a pneumonia shot for Columbia County (37%) than for Washington State (26%). In Columbia County, 83% of adults were physically active within the last 30 days, which is similar to the state. A similar proportion of adults smoked cigarettes in Columbia County (19%) and Washington State (16%). Fifty-seven percent of adults in Columbia County stated they had no alcohol in the last 30 days, which was similar to the state (60%).

Adult Health Behaviors

Columbia County, 2006-2008



Source: BRFSS, 2006-2008

YOUTH^{ix}

Promoting and establishing healthy behaviors among adolescents can improve their health and well-being. Research studies provide evidence that promoting and establishing healthy behaviors for younger people are more effective, and often easier, than efforts to change unhealthy behaviors already established in adult populations.²³

Youth physical activity is measured by the percent of adolescents who engage in any level of physical activity for 60 minutes per day for five or more days per week. Regular physical activity during adolescence helps build healthy bones and muscles, increases self-esteem, controls weight, reduces symptoms of anxiety and depression, and lowers the risk of chronic disease later in life.

The frequency with which a teen eats family meals appears to be associated with a variety of psycho-social and behavioral variables, including cigarette smoking, alcohol and marijuana use, grades in school, depressive symptoms, suicidal ideation and suicide attempts. Studies show that family mealtime is a protective factor in the lives of adolescents, particularly among girls. Specifically, kids who reported eating more family meals per week reported significantly less substance use, performed significantly better academically, and had better mental health than those eating fewer meals with their family.²⁴

Fruit and vegetable intake is measured by the percent of youth who ate the recommended five or more servings per day. A healthy diet in adolescence is important for proper growth and development and can help prevent some health problems such as obesity, dental caries, and iron-deficiency anemia.

Nationally, motor vehicle crashes are the leading cause of death for teens, accounting for more than one in three deaths in this age group.²⁵ In 2007, eleven teens aged 16 to 19 died every day from motor vehicle injuries.²⁶ In 2007, more than 4,200 teens aged 15 to 19 were killed and almost 400,000 were treated in emergency departments for injuries suffered in motor vehicle crashes.²⁷ Compared with other age groups, teens have the lowest rate of seat belt use. In 2005, 10% of high school students reported they rarely or never wear seat belts when riding with someone else.²⁸

Among Columbia County adolescents in 2008, 63% met the recommendations for physical activity, which was significantly higher than the proportion for the state (43%). However, a significantly lower proportion of adolescents in Columbia County (12%) participated in daily physical education classes than adolescents in the state (38%). Fourteen percent of adolescents in Columbia

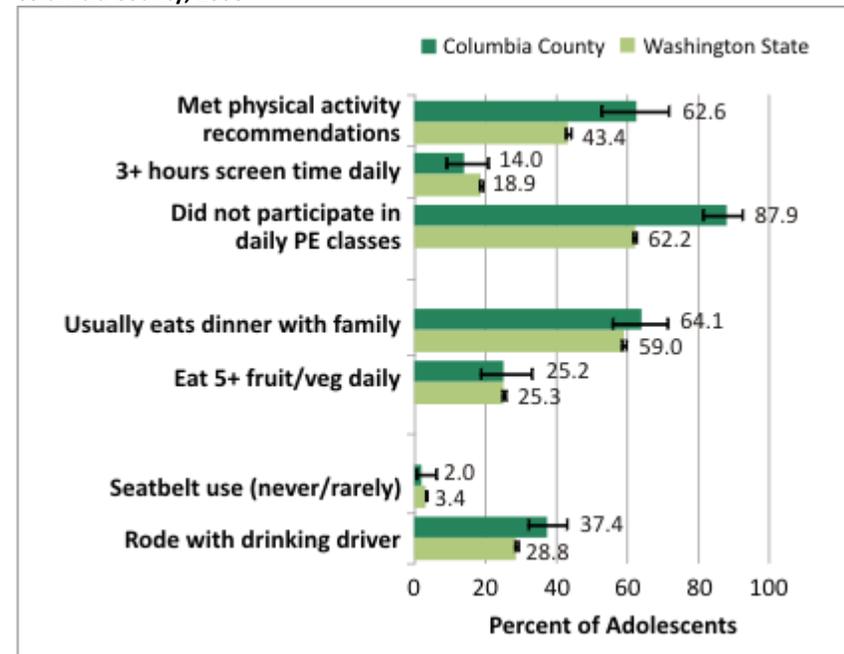
County and Washington State spent three or more hours each day watching television, using the computer, or playing video games.

Only one in four adolescents in Columbia County ate the recommended five or more fruits and vegetables per day, which was similar to the state. Approximately two-thirds of adolescents in Columbia County usually eat dinner with their family, which is similar to adolescents for Washington State (59%).

The majority of adolescents in Columbia County and Washington State usually or always use a seatbelt. Thirty-seven percent of adolescents reported they rode in a car within the last month with a driver who had been drinking, which is significantly higher than adolescents for the state (29%). This behavior significantly increased as the adolescent's grade increased for both Columbia County and Washington State.

Adolescent Health Behaviors

Columbia County, 2008



Source: Healthy Youth Survey, 8th, 10th, and 12th grade, 2008

SEXUALLY TRANSMITTED DISEASES (STDs)^x

STDs are hidden epidemics of enormous health and economic consequence in the United States. Because the most common STDs are “silent”, in that they are often asymptomatic, estimates of the incidence (new cases) and prevalence (total existing cases) of most STDs are difficult. Individuals infected with an STD can have both physical and psychological consequences. In addition, STDs have an economic burden that affects our communities. In the United States about 19 million new STDs are thought to occur each year. Direct medical costs of STDs in the United States are an estimated \$14 billion per year. These infections affect men and women of all backgrounds and economic levels. Almost half of new infections are among young people ages 15 to 24. Women are more severely affected by STDs than men; infections can cause more serious health problems among women.²⁹ In addition, high community prevalence of STDs can be a symptom of other problems in the community, such as a lack of access to health care, poverty, unemployment, and other persistent social and economic discrimination.³⁰

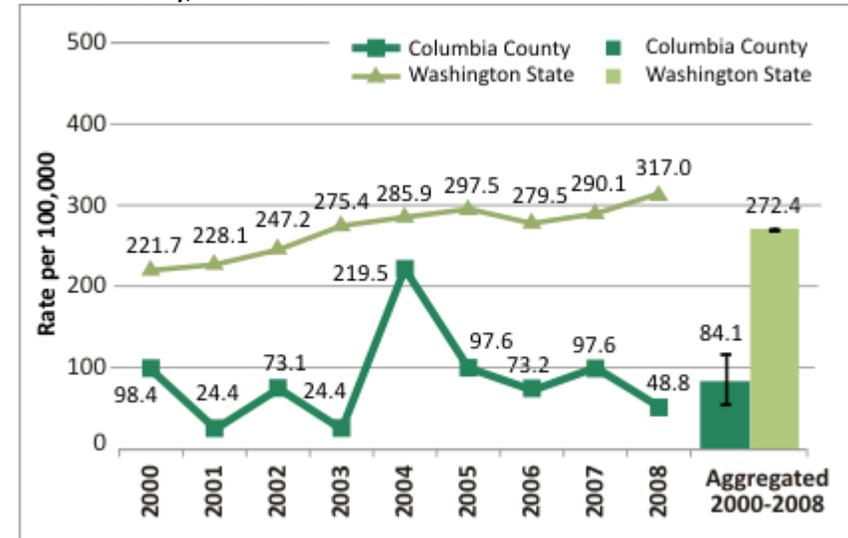
CHLAMYDIA

The most common STD in Columbia County from 2000 to 2008 was chlamydia. Though chlamydia is the most frequently reported STD, the prevalence is likely much higher as approximately three-quarters of infected women and 50% of infected men have no symptoms.³¹

From 2000 to 2008 the rate of chlamydia remained stable for Columbia County and increased significantly for Washington State by 43%. In Columbia County, the rate increased from 2000 to 2004 and decreased from 2004 to 2008; however, neither was statistically significant. Chlamydia rates for Columbia County remained consistently lower than the state from 2000 to 2008. During 2000 to 2008, the overall rate for chlamydia was significantly lower for Columbia County than Washington State.

Chlamydia

Columbia County, 2000-2008



Source: Washington State Department of Health, STD/TB Services, 2000-2008

SUBSTANCE ABUSE

ADULTS^{xiii}

Adult substance use is defined as individuals 18 years of age or older who used any illicit drug and/or alcohol in the past 12 months. Consequences of drug use and/or alcohol may include unintentional injuries, crime, domestic violence, and illness. Additionally, drug and/or alcohol use affects workplace productivity and stresses family members.³²

The current need for substance abuse treatment over the past year among adults in Columbia County remained stable from 2003 to 2008 at 9.5%. The proportion of adults in Columbia County who were identified with a substance abuse disorder (the abuse or dependence on alcohol or drugs) within the past year remained stable from 2003 to 2008. Six percent of adults in Columbia County had a substance use disorder with alcohol and 1.5% with drugs.

The use of different substances among adult household residents in Columbia County within the past year remained stable from 2003 to 2008. In the past year, slightly more than seven in ten adults drank alcohol, two in ten binged alcohol, and approximately 8% used illicit drugs. The drug of choice among Columbia County adults who have used illicit drugs was marijuana. Approximately, one in ten adults in Columbia County used marijuana.

Estimates for the Need of Substance Abuse Treatment and Prevalence of Substance Use (Adult Household Residents) in the Past Year, Columbia County, 2003-2008

	2003	2004	2005	2006	2007	2008
Current need for treatment (past year)	9.6%	9.5%	9.5%	9.5%	9.5%	9.5%
Substance Use Disorder (past year)						
Alcohol	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Drug	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Alcohol or drug	6.6%	6.6%	6.6%	6.6%	6.6%	6.6%
Use of Substance (past year)						
Alcohol	71.7%	71.6%	71.5%	71.5%	71.4%	71.4%
Binge alcohol	22.7%	22.5%	22.5%	22.5%	22.5%	22.4%
Any illicit drug	8.1%	8.0%	8.0%	8.0%	8.0%	8.0%
Illicit drug other than marijuana	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%
Marijuana	6.2%	6.1%	6.1%	6.1%	6.1%	6.1%
Cocaine or crack	0.8%	0.8%	0.8%	0.8%	0.7%	0.7%
Any stimulant (includes methamphetamine)	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Methamphetamine	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Hallucinogens	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
Heroin	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Opiates other than heroin	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%
Inhalants	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Tranquilizers	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Sedatives	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%

Source: Washington State Department of Social and Health Services, Research and Data Analysis Division, 2003-2008

YOUTH^{ix}

Current youth smokers are measured by the percent of adolescents who smoked one or more cigarettes in the last 30 days. Tobacco use is the leading cause of preventable death. The majority of adult smokers began smoking before the age of 18.

Marijuana is the most commonly used illicit drug among youth in the United States.³³ Current marijuana use decreased from 27% in 1999 to 20% in 2007.³⁴

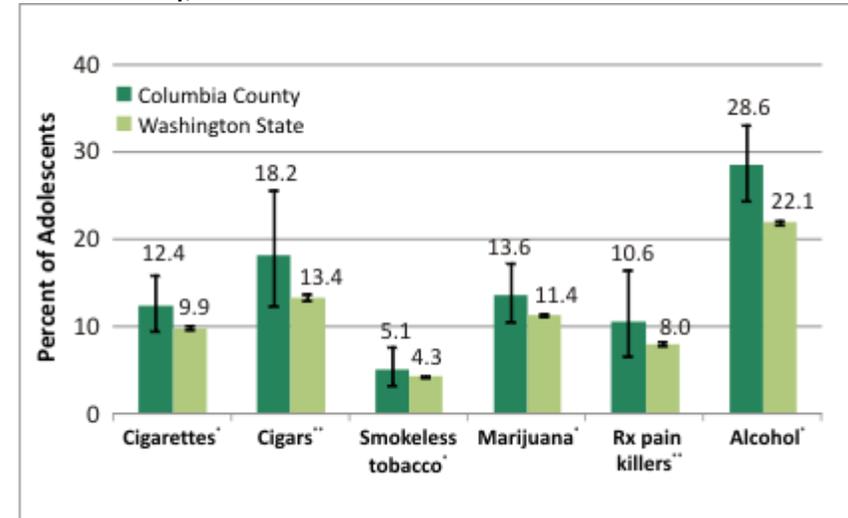
While illicit drug use has declined among youth, rates of nonmedical use of prescription and over-the-counter (OTC) medication remain high. Prescription medications most commonly abused by youth include pain relievers, tranquilizers, stimulants, and depressants.³⁵ Prescription and OTC medications are widely available, free or inexpensive, and falsely believed to be safer than illicit drugs. Misuse of prescription and OTC medications can cause serious health effects, addiction, and death.^{36,37}

Alcohol is used by more young people in the United States than tobacco or illicit drugs.³⁸ Excessive alcohol consumption is associated with approximately 75,000 deaths per year.³⁹ Alcohol is a factor in approximately 41% of all deaths from motor vehicle crashes.⁴⁰ Among youth, the use of alcohol and other drugs has also been linked to unintentional injuries, physical fights, academic and occupational problems, and illegal behavior.⁴¹

Among Columbia County adolescents in 2008, 12% smoked cigarettes and approximately 18% smoked cigars in the last 30 days. These proportions were similar to the state. Five percent of adolescents in Columbia County used smokeless tobacco in the last 30 days, which was similar to the proportion of Washington State adolescents (4.3%). Slightly more than one in ten adolescents in Columbia County and Washington State used marijuana in the last 30 days. Approximately one in ten adolescents for both Columbia County and Washington State used prescription pain killers in the last 30 days. A significantly higher proportion of Columbia County adolescents (29%) drank alcohol in the last 30 days compared to adolescents for Washington State (22%).

Adolescent Substance Use

Columbia County, 2008



Source: Healthy Youth Survey, 6th, 8th, 10th, and 12th grade

Rx=Prescription

Source: Healthy Youth Survey, 10th grade, 2008

*Includes 6th, 8th, 10th, and 12th grade

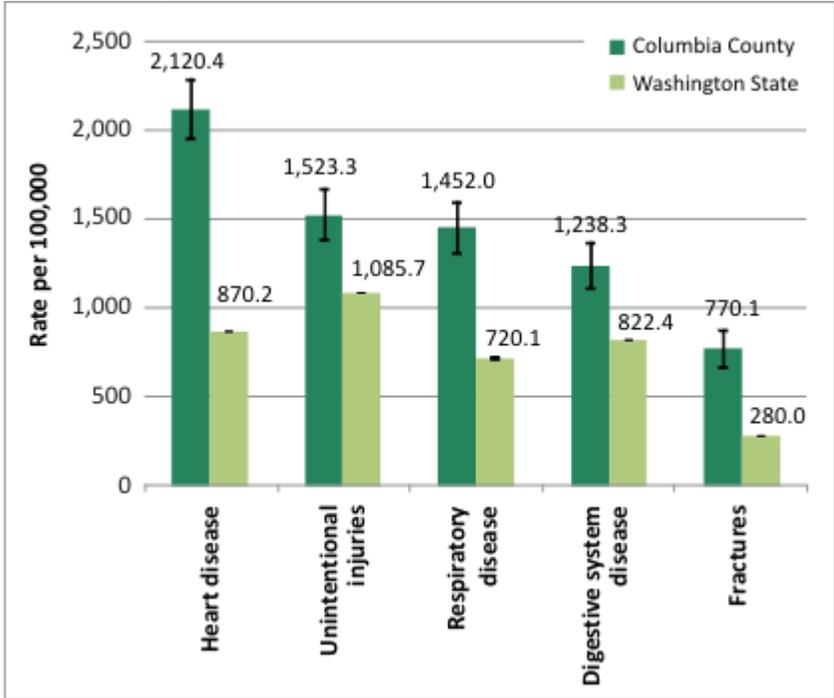
**Includes 8th, 10th, and 12th grade

HOSPITALIZATION^{viii}

Hospitalizations are counted as the number of inpatient discharges, excluding childbirth and newborn infants, per 100,000 individuals. Hospitalizations represent morbidity in our community that requires a higher level of medical care.

During 2000 to 2007, Columbia County had a significantly higher overall hospitalization rate than Washington State. Columbia County had a significantly higher rate for the five leading causes of hospitalizations. Rates for Columbia County were approximately 144% higher than the state for heart disease, 40% higher for unintentional injuries, 102% higher for respiratory disorders, 51% higher for digestive system disorders, and 175% higher for fractures.

Leading Causes of Hospitalizations (All Ages) Columbia County, 2000-2007



Source: CHARS, 2000-2007

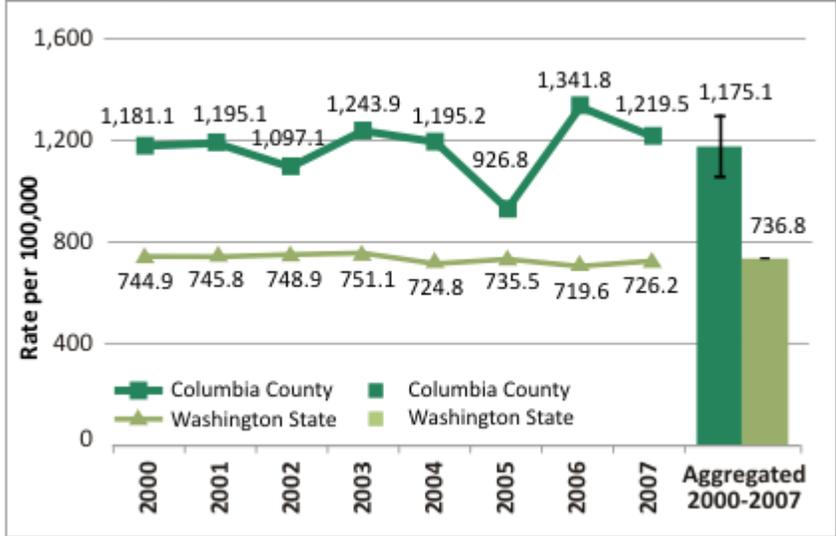
MORTALITY^{xiii}

DEATH RATE

Deaths are reported as the number of deaths per 100,000 individuals. From 2000 to 2007, there was an average of 48 deaths per year in Columbia County and the death rate remained consistently and significantly higher than Washington State, with the exception of 2005 where the rates were similar. After adjusting for age difference, mortality rates for Columbia County were similar to Washington State. The mortality rate for Columbia County remained stable from 2000 to 2007; however, there was a significant downward trend for Washington State. During 2000 to 2007 the mortality rate in Columbia County was significantly higher compared to the state by approximately 60%.

Death Rate

Columbia County, 2000-2007



Source: Death Certificates, 2000-2007

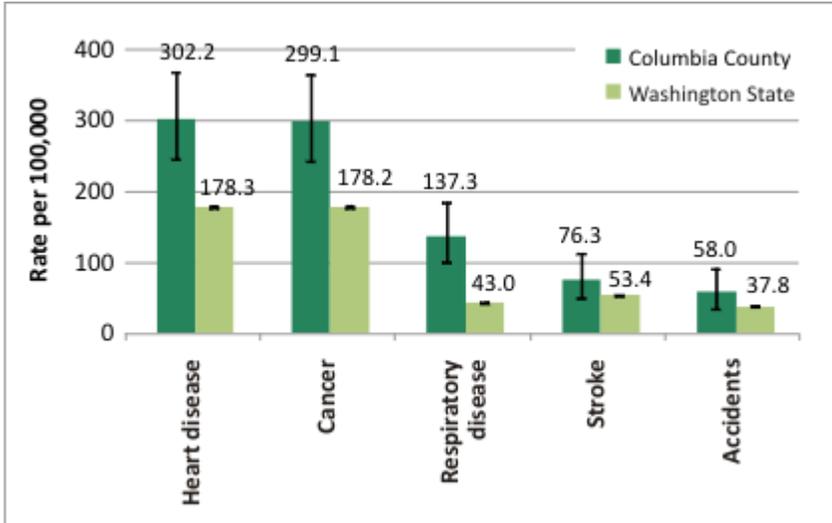
LEADING CAUSES OF DEATH

During 2000 to 2007, the five leading causes of death in Columbia County accounted for 74% of all deaths. The rates for mortality due to heart disease, cancer, and respiratory disorders were significantly higher than Washington State. There was no difference in the mortality rates due to stroke and accidents between Columbia County and Washington State.

Among residents of Columbia County who died from cancer: 36% were diagnosed with lung, bronchus, or trachea cancer; 13% were diagnosed with colon, rectum, or anus cancer; and 11% were diagnosed with lymphatic cancer, which includes leukemia and Hodgkin's disease. Among the women who died of cancer, approximately 18% were diagnosed with breast cancer.

Leading Causes of Death

Columbia County, 2000-2007



Source: Death Certificates, 2000-2007

MATERNAL AND CHILD HEALTH^{xiv}

BIRTH RISK FACTORS

Prenatal care refers to the medical attention received by women before and during their pregnancy, specifically addressing the mother’s well-being during her pregnancy and caring for the development of her baby. The goal of prenatal care is to detect potential problems early on in the pregnancy, and to prevent potential complications. Early prenatal care is a significant component in ensuring a good pregnancy outcome.⁴²

Late prenatal care is defined as births where the pregnant mother began prenatal care in the third trimester. Late or no prenatal care significantly decreases the likelihood of a pregnant mother delivering a healthy infant of normal birth weight and can result in severe maternal morbidity and mortality. Moreover, serious consequences may result to the unborn infant including low birth weight, premature birth, morbidity, and mortality. In addition, late or no prenatal care postpones or eliminates the opportunity for healthcare providers to educate expectant mothers on high-risk behaviors and to detect and treat pregnancy-related conditions or complications that may affect fetal development.⁴⁴

Low birth weight is defined as <2,500 grams (5.5 pounds). About 1 in every 13 infants born in the United States is born with low birth weight (approximately 8%) and 67% of low birth weight infants are born prematurely.⁴³ Infants who are low birth weight have a 25% chance of dying before the age of one.⁴⁴ They are also at an increased risk of serious health problems as newborns, of developmental problems, and of lasting disabilities.⁴⁵

Preterm births are measured by the percent of births with an estimated gestational age of less than 37 weeks. Preterm births are a leading cause of infant mortality and morbidity, which includes respiratory, gastrointestinal, immune system, central nervous system, hearing, and vision problems.

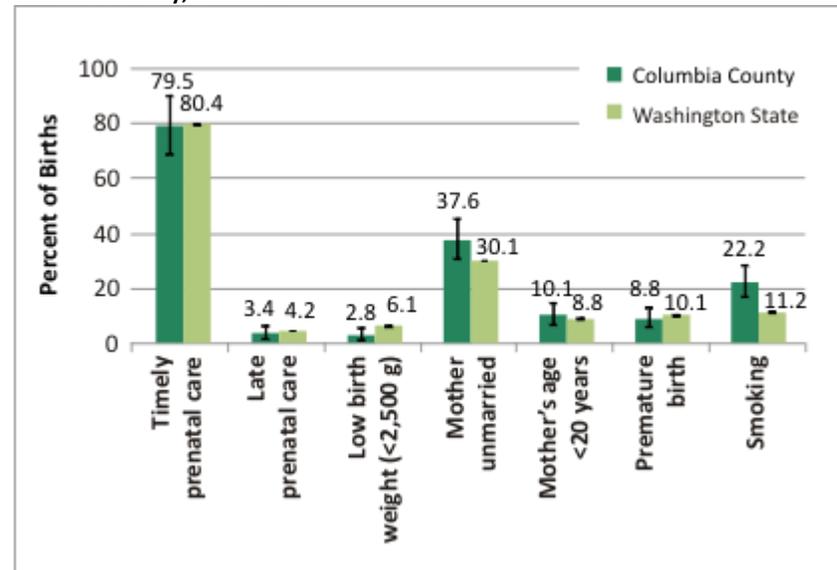
Maternal smoking is measured by the percent of births to women who smoked cigarettes at any time during pregnancy. Not only is smoking harmful to the mother, smoking during pregnancy increases the risk of poor birth outcomes, such as low birth weight and preterm birth.

During 2000 to 2007, Columbia County averaged approximately 36 births per year. In 2007, there were a total of 32 births in Columbia County; males accounted for 59% and females accounted for 41%. All infants born to Columbia County residents were born in Columbia County at Dayton General Hospital.

During 2000 to 2007, eight in ten pregnant women in Columbia County received timely prenatal care and approximately one in ten births were premature. In addition, 38% of births were to unmarried women and 22% of pregnant mothers smoked during their pregnancy. Compared to Washington State, Columbia County had a significantly lower proportion of low birth weight infants and significantly higher rates of births to mothers who were unmarried and smoked while pregnant. Rates were similar for Columbia County and the state for late or no prenatal care, for women whose maternal age was less than 20 years, and for premature births.

Birth Risk Factors

Columbia County, 2000-2007



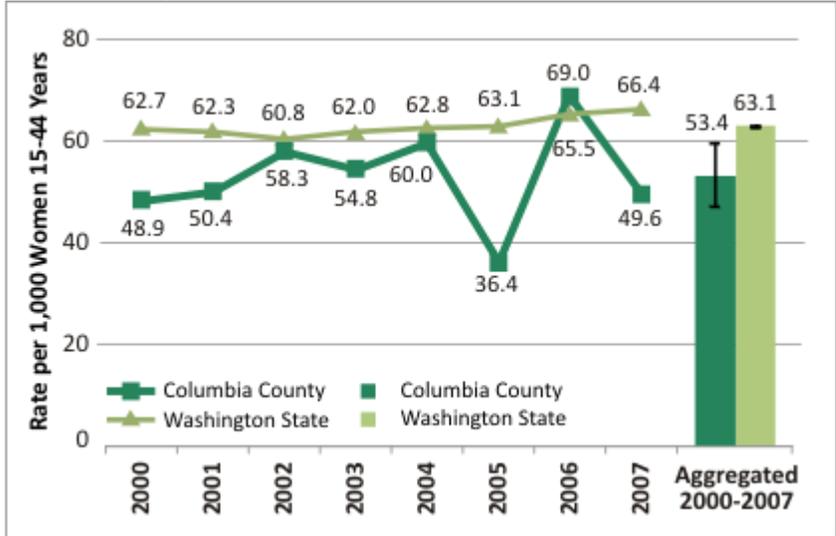
Source: Birth Certificates, 2000-2007

GENERAL FERTILITY RATE

The general fertility rate is defined as the number of births per 1,000 women 15 to 44 years of age in the population. The general fertility rate for Columbia County from 2000 to 2007 has been stable and has been similar to the fertility rate for Washington State, with the exception of 2005 where it was significantly lower. Washington State has experienced a significant upward trend from 2000 to 2007. During 2000 to 2007, the fertility rate for Columbia County was significantly lower by 15% compared to the state of Washington.

General Fertility Rate

Columbia County, 2000-2007



Source: Birth Certificates, 2000-2007

MATERNAL AGE

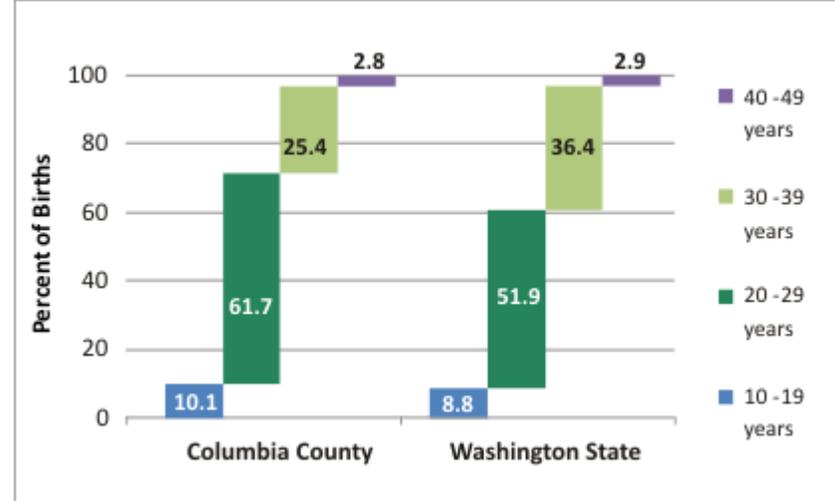
Teenage pregnancy and childbearing at an early age have become pressing social issues and concerns in the United States. Approximately one million teenagers become pregnant each year, and half of those give birth. An enormous quantity of research has shown that teenage childbearing is linked to a host of negative social, economic, and medical consequences for both mother and child.⁴⁶ Research has documented that teenage mothers are at high risk for poor birth outcomes. Babies born to teenagers are more likely than those born to women in their 20s to be born preterm, to weigh less than 2,500 grams at birth, or to die before age one. Further research suggests that these risks vary by age even among teenage mothers, with those younger than 15 having the worst outcomes.⁴⁷

On the other end of the age spectrum, while women who give birth relatively late in their reproductive lives have fewer socioeconomic disadvantages than teenagers, they nonetheless share increased risks for poor birth outcomes. Delayed childbearing poses its own biological risks, such as an increased likelihood of medical conditions such as hypertension and diabetes.⁴⁸ In addition, women 35 years of age or older, like teenagers, have higher rates of unintended pregnancy than do women in their 20s and early 30s.⁴⁹ Moreover, risks for poor birth outcomes increase further with age, with women 40 years of age or older being at greater risk than women 35 to 39 years of age.⁵⁰

During 2000 to 2007 in Columbia County, one in ten births were to women 10 to 19 years of age, which was similar to Washington State (8.8%). Approximately 62% of all births in Columbia County were to women 20 to 29 years of age, which was significantly higher than Washington State (52%). In Columbia County, births to women in their 30s and 40s accounted for approximately 30% of all births, which was significantly lower than Washington State (40%).

Births by Maternal Age Groups

Columbia County, 2000-2007



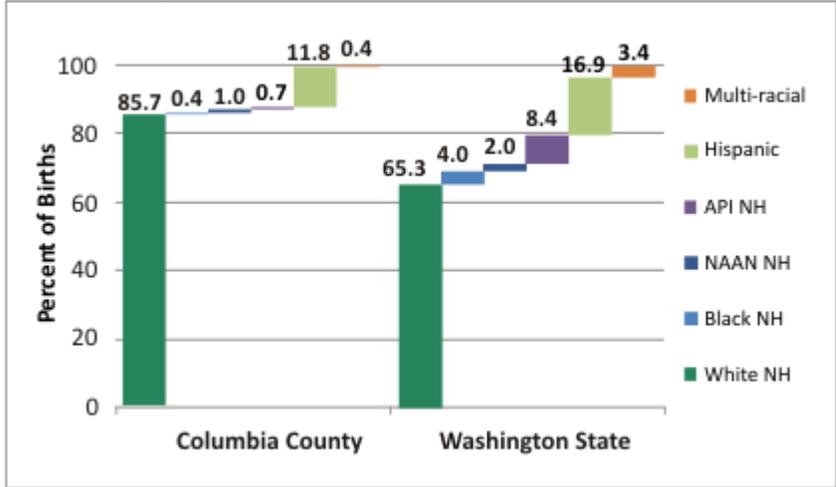
Source: Birth Certificates, 2000-2007

MATERNAL RACE/ETHNICITY

During 2000 to 2007, the proportion of all births in Columbia County to White non-Hispanic (NH) women was 86%, which was significantly higher than Washington State (65%). Only 14% of all births in Columbia County were to women who were non-White, Hispanic, or multi-racial which is significantly less than the state (34.7%). In Columbia County, Hispanics comprise the largest proportion of minority births (11.8%), which is significantly lower than the state (16.9%).

Births by Maternal Race/Ethnicity

Columbia County, 2000-2007



Source: Birth Certificates, 2000-2007
NH=Non-Hispanic, NAAN=Native American/Alaska Native, API=Asian/Pacific Islander

WOMEN, INFANTS AND CHILDREN^{xv}

The Women, Infants, and Children program, better known as WIC, serves low to moderate income pregnant women and families with children younger than 5 years of age. WIC provides education and counseling on nutrition, breastfeeding, and accessing healthcare or other social services. Its goal is to encourage healthy diets for optimal growth and development. The WIC program has been shown to have many benefits. Pregnant women access prenatal care earlier in pregnancy and have fewer preterm births, low birth weight infants, and infant deaths. Children on WIC are more likely to have normal childhood growth.⁵¹

The percent of infants served by Women Infants and Children (WIC) in Columbia County increased from 54% in 2006 to 59% in 2007; whereas, the percent of infants in Washington State served by WIC remained stable. Among Columbia County clients served by WIC, approximately three-fourths are infants and children under five years of age and one-quarter are pregnant, breastfeeding, and postpartum women. More than one-half of WIC families in Columbia County are working families; however, approximately two-thirds of these working families live in poverty.

Columbia County WIC Facts	2006	2007
Percent of Infants Born Served by WIC		
Columbia County	54%	59%
Washington State	50%	49%
Number of Women, Infants, and Children Served –Columbia County		
Total	161	155
Infants and children under five	119	114
Pregnant, breastfeeding, and postpartum women	42	41
WIC Families – Columbia County		
Percent working families	57%	52%
Percent families living in poverty	67%	69%

Source: Washington State Department of Health, Community and Family Health, WIC Program, 2006-2007

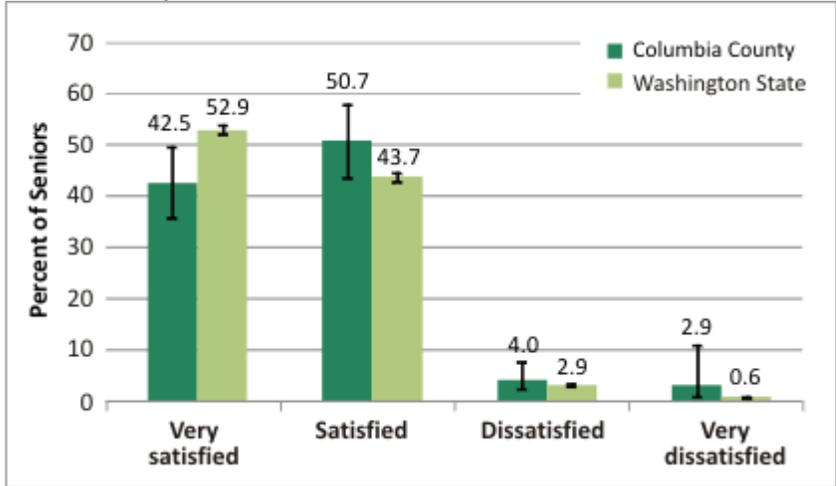
SENIORSⁱⁱ

LIFE SATISFACTION

Seniors were defined as individuals 65 years of age or older. During 2006 to 2008, 93.2% of seniors in Columbia County reported they were very satisfied or satisfied with their life, which was similar to Washington State (96.6%).

Life Satisfaction Among Seniors

Columbia County, 2006-2008



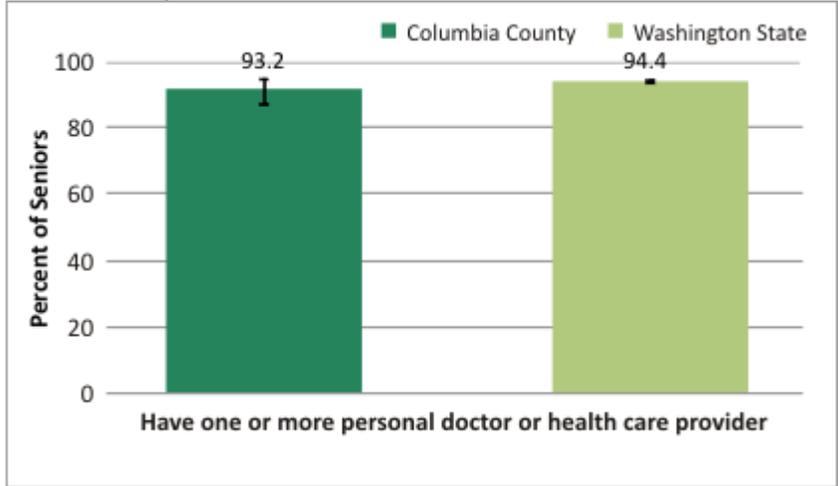
Source: BRFSS, 2006-2008

HEALTHCARE

During 2006 to 2008 very few seniors in Columbia County and Washington State reported they did not have at least one person they considered their personal doctor or healthcare provider. In Columbia County, 93.2% of seniors stated they had one or more persons they thought of as their personal doctor or healthcare provider, which was similar to the state (94.4%).

Healthcare Access Among Seniors

Columbia County, 2006-2008



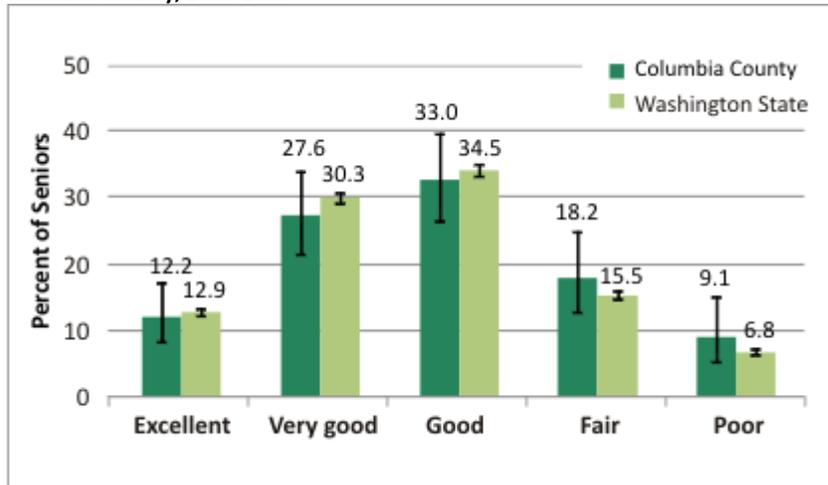
Source: BRFSS, 2006-2008

GENERAL HEALTH

During 2006 to 2008 in Columbia County, slightly more than one in ten seniors reported their general health as excellent, which was similar to the state. Approximately 25% of seniors for Columbia County and Washington State stated their general health was either fair or poor.

General Health Status Among Seniors

Columbia County, 2006-2008



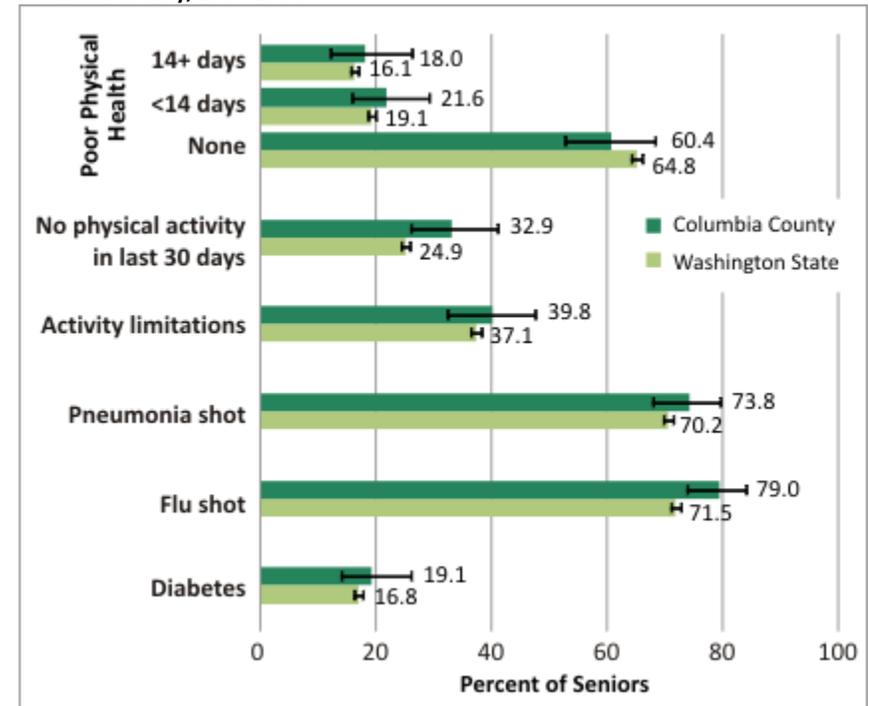
Source: BRFSS, 2006-2008

HEALTH STATUS

During 2006 to 2008 for Columbia County, 60% of seniors reported they had zero days in the past 30 days where they felt their physical health was not good, which was similar to the state. However, 18% of seniors in Columbia County stated they had 14 to 30 days in the past month where their physical health was not good, which was similar to the state. Approximately two-thirds of seniors in Columbia County did not participate in any physical activity in the past 30 days, which was significantly higher than the state (24.9%). Approximately one-third of seniors in Columbia County and Washington State reported they have activity limitations because of poor physical and mental health. More than two-thirds of seniors in Columbia County and Washington State received a pneumonia shot and a significantly higher proportion of seniors for Columbia County (79%) reported that they received a flu shot compared to the state (71.5%). Approximately one in five seniors in Columbia County has diabetes, which is similar to the state.

Health Status Among Seniors

Columbia County, 2006-2008



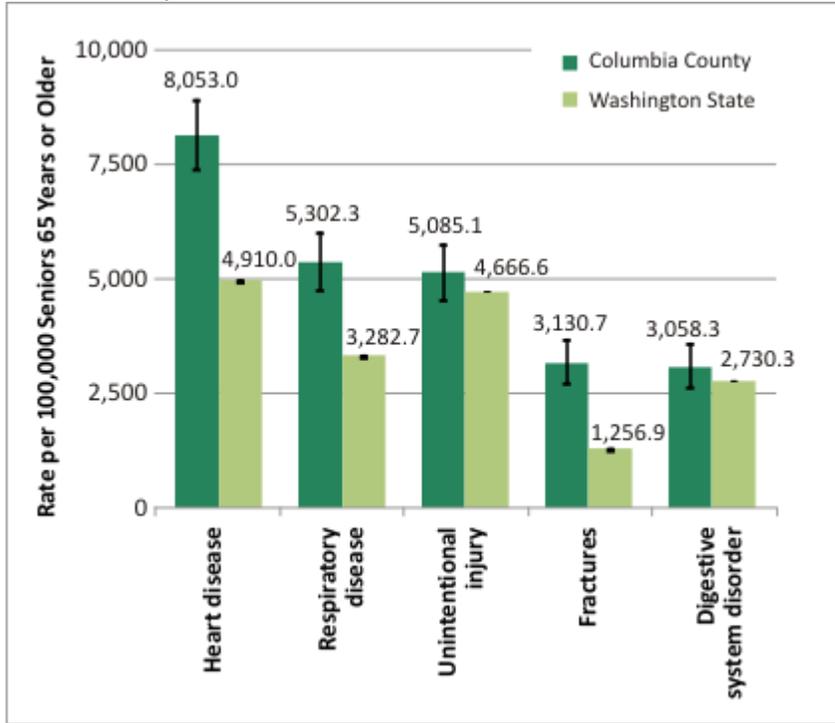
Source: BRFSS, 2006-2008

HOSPITALIZATIONS^{viii}

During 2000 to 2007 in Columbia County, the rates for the leading causes of hospitalizations among seniors were significantly higher than Washington State. The rate for heart disease was approximately 64% higher; the rate for respiratory disease was approximately 62% higher; the rate for unintentional injury was approximately 9% higher; the rate for fractures was approximately 149% higher; and the rate for digestive system disorder was 12% higher.

Leading Causes of Hospitalizations for Columbia County, 60 Years of Age or Older

Columbia County, 2000-2007



Source: CHARS, 2000-2007

APPENDIX A

DATA SOURCES

- i. **Washington State Office of Financial Management (OFM)**, Forecasting Division, Age and Historical Data, Intercensal and Postcensal Estimates of April 1 County Population by Age and Sex: 1980-2008.
- ii. **Washington State Department of Health (DOH)**, Center for Health Statistics, Behavioral Risk Factor Surveillance System, supported in part by Centers for Disease Control and Prevention Cooperative Agreements U58/CCU022819-3 (2006), U58/CCU022819-4 (2007), U58/CCU022819-5 (2008). Calculations and presentation of data by Spokane Regional Health District, Community Health Assessment.
- iii. **Washington State Department of Social and Health Services (DSHS)**, Research and Data Analysis, Economic Services Administration, Temporary Aid to Needy Families and State Family Assistance 2000-2007; Basic Food Program 2000-2007; Child Support Services 2004-2007. Calculations and presentation of data by Spokane Regional Health District, Community Health Assessment.
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- v. **Office of Financial Management, Statistical Analysis Center Washington State**, Uniform Crime Report 2000-2008. Calculations and presentation of data by Spokane Regional Health District, Community Health Assessment.
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- ix. **Washington State Department of Health, Healthy Youth Survey, 2008**. Calculations and presentation of data by Spokane Regional Health District, Community Health Assessment.
- x. **Washington State Department of Health, STD/TB Services, 2000-2008**. Calculations and presentation of data by Spokane Regional Health District, Community Health Assessment.
- xi. **State of Washington**, Office of Superintendent of Public Instruction, 2008-2009. Calculations and presentation of data by Spokane Regional Health District, Community Health Assessment.
- xii. **Washington State Department of Social and Health Services, 2003 Needs Survey**, 2007 Updates and Forecasts Through 2010. Presentation of data by Spokane Regional Health District, Community Health Assessment.
- xiii. **Washington State Department of Health, Center for Health Statistics, Death Certificates, 2000-2007**. Calculations and presentation of data by Spokane Regional Health District, Community Health Assessment.
- xiv. **Washington State Department of Health, Center for Health Statistics, Birth Certificates, 2000-2007**. Calculations and presentation of data by Spokane Regional Health District, Community Health Assessment.
- xv. **Washington State Department of Health, Community and Family Health**, Women Infant and Children Nutrition Program, Annual Reports and County Fact Sheets 2006 and 2007, Calculations and presentation of data by Spokane Regional Health District, Community Health Assessment.

APPENDIX B

COLUMBIA COMMUNITY HEALTH DATA

Data Available at County Level:

Demographics

Population trends (by age group, gender, and year)
 Annual household income-adults
 Education-adults
 Employment status-adults
 Marital status-adults
 Number of children in household-adults
 Child Support Services
 Registered voters
 Registered and not voting
 Temporary Assistance to Needy Families (TANF)
 Basic Food Program
 Crime rates

School Performance

Graduation rate
 Dropout rate
 Washington Assessment of Student Learning
 (WASL) performance
 Eligibility for free lunch or reduced lunch
 Student race and ethnicity

Healthcare Access

Uninsured-adults
 No personal doctor-adults/seniors
 Needed a doctor but couldn't afford-adults
 Source of coverage for health insurance-adults
 Location of hospitalizations for Columbia County
 residents
 Reasons for hospitalizations at local hospital

Mental Health

Mental health status-adults
 Depression-youth
 Considered a suicide-youth

Health Status

General health status-adults/seniors
 Physical health status-adults/seniors
 Asthma-adults/youth
 Asthma attack-youth
 Angina-adults
 Heart attack-adults
 Stroke-adults
 Diabetes-adults/seniors
 Overweight-adults/youth
 Obesity-adults/youth
 Life satisfaction-seniors

Health Behaviors

Flu and pneumonia shot-adults/seniors
 Exercise and physical activity-adults/seniors
 Activity limitations-seniors
 Tobacco use-adults/youth
 Alcohol use-adults/youth
 Substance use-adults/youth
 Youth attending daily PE classes
 Recommended physical activity for youth
 Youth who spent three or more hours in front of
 screen
 Fruit and vegetable consumption-youth
 Family dinners-youth
 Seatbelt use-youth
 Riding with alcohol impaired driver-youth

Sexually Transmitted Diseases

Chlamydia

Morbidity and Mortality

Leading causes of hospitalizations-adults/seniors
 Mortality rate
 Leading causes of death

Maternal and Child Health

Maternal age
 Use of WIC services
 Prenatal care
 Low birth weight
 Unmarried mothers
 Teen mothers
 Premature births
 Maternal smoking
 Fertility rate
 Maternal race/ethnicity

Data Not Available or Reportable at County Level:

Abortions
 Child abuse
 Demographics by racial/ethnic groups
 Emergency room data
 Immunization status
 Herpes
 Gonorrhea
 Communicable diseases
 Infant mortality
 Maternal alcohol use

Appendix C

METHODOLOGY

Statistical Analysis

Confidence intervals are ranges of numbers used to assess the accuracy of point estimate. The point estimate may be a rate, such as a death rate, or a frequency, such as the percent of individuals who are overweight. Confidence intervals account for natural variations and, for sample surveys, the difference between a sample of a population and the total population.

The range of a confidence interval shows the variability of the point estimate. Given similar underlying conditions, the point estimate could fall within the confidence interval range. For the analysis of this report, confidence intervals were calculated at the 95 percent confidence level. This means that 95 times out of a 100, the confidence interval captures the true value for the population.

Differences between the indicator rates for Columbia County and those for Washington State were determined by using confidence intervals. If the confidence intervals did not overlap, a significant difference between Columbia County and Washington State was reported.

Appendix D

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