



Lewis County

Community Health Assessment

2014

Community Health Vision

“Lewis County is an engaged community that encourages and supports all of us to be healthy, educated, employed, resilient and accountable.”

Table of Contents

Introduction and Background	3
MAPP Assessment Process	3
Acknowledgements.....	4
Key Assessment Findings	5
Community Health Status Assessment	5
Community Themes and Strength Assessment	10
Forces of Change Assessment.....	15
Local Public Health Systems Assessment.....	18
Next Steps	23
Attachments.....	24
Attachment A: Lewis County Community Health Status Assessment Data.....	24
Attachment B: 2014 Lewis County Community Health Survey.....	55

Introduction and Background

In 2013 the Lewis County Community Health Improvement Plan (CHIP) Committee in partnership with Lewis County Public Health & Social Services began an initiative focused on understanding and improving the health of Lewis County residents. Using the Mobilizing for Action through Planning and Partnerships (MAPP) framework, a multi-phase process developed by the National Association of City County Health Officials, the CHIP Committee used a collaborative process of collecting and analyzing information with participation from community members and organizations.

This report is only the beginning of the community health improvement planning process for Lewis County. Conducted between January and April 2014, the results of the four assessments and this report provide a comprehensive look at current local health issues. Community partners will be able to use this report and data to identify the most important health priorities and strategic health issues for the county in preparation for the development of the Lewis County CHIP. Once health priority areas are identified, goals, objectives, and strategies will be formulated to address each one. The final phases of the process include planning, implementing and evaluating those strategies.

Community participation has been vital through the assessment process. By developing a shared vision and creating dialogue about health concerns, citizens and local partners gained a sense of responsibility for the future of Lewis County. It is hoped that the partnerships fostered by this process will continue to grow as the community works together to improve the health of Lewis County.

MAPP Assessment Process

The Lewis County Community Health Assessment was conducted using the (MAPP) process as a community-wide strategic planning approach for improving community health. This model framework is a method to help communities prioritize public health issues, identify resources for addressing them, and take action. MAPP is comprised of four key assessments that drive the community health improvement process (Figure 1):

1. Community Strengths and Themes Assessment
2. Forces of Change Assessment
3. Local Public Health systems Assessment
4. Community Health Status Assessment

Together, these four assessments provide a complete understanding of the factors that affect our local public health system, and ultimately, the health of Lewis County residents. This report is designed to provide an overview of the county and the results of each of the four MAPP assessments.



Figure 1: The MAPP Arrow Model

Acknowledgements

The community health improvement planning process has been a collaborative and community driven approach for Lewis County. We would like to acknowledge the following organizations and the numerous individuals from these organizations who supported and participated in the Lewis County Community Health Assessment:

CHIP Committee Core Partners

- Lewis County Public Health & Social Services
- United Way of Lewis County
- Valley View Health Centers
- Child and Family Studies at Centralia College
- CHOICE regional health network
- Lewis County Juvenile Court
- Morton Hospital
- Providence Health & Services Southwest Washington Region

Community Assessment Participants

- Lewis County CHIP core partners
- Lewis County Community Health Partnership
- Lewis County Mental Health Coalition
- Lewis County Thrives
- Love INC
- Lewis County Board Of Health
- Lewis County Chamber of Commerce
- Lewis County Community Development
- Community members at large in Pe El and Onalaska

We would like to also acknowledge Senator John Braun of the [20th Legislative District](#) for participating in the key leader interviews. Senator Braun was interviewed as an elected official, a Lewis County resident, and as a community business owner.

Lewis County Public Health & Social Services contracted with the Tacoma-Pierce County Health Department's Office of Assessment, Planning and Implementation to conduct the four assessments described in this report.

Key Assessment Findings

Community Health Status Assessment

The **Community Health Status Assessment** (CHSA) is a compilation of quantitative data that takes a comprehensive look at the health status of Lewis County and helps identify emerging health issues.

By reviewing data from a number of health indicators, the assessment answers the questions:

1. How healthy are our residents?
2. What health conditions exist in our community?

Method

The CHSA provides data for many indicators over nine broad-based categories. Those categories include:

- Demographic characteristics
- Socioeconomic characteristics
- Health resource availability
- Behavioral risk factors
- Communicable disease
- Death, illness and injury
- Maternal and child health
- Social and mental health
- Environmental health indicators

Health indicators used in the CHSA were chosen with the input of community stakeholders. Key data comes from secondary data that include national, state, and local data sources. Data sources include but are not limited to the US Census 2000 and 2010, the American Community Survey, the Behavior Risk Factor Surveillance System (BRFSS), Healthy People 2020, and the 2014 County Health Rankings. All data are cited throughout the report. When appropriate, five-year age-adjusting rolling rates were used to report health outcome data to stabilize the numbers and to provide greater accuracy.

Findings

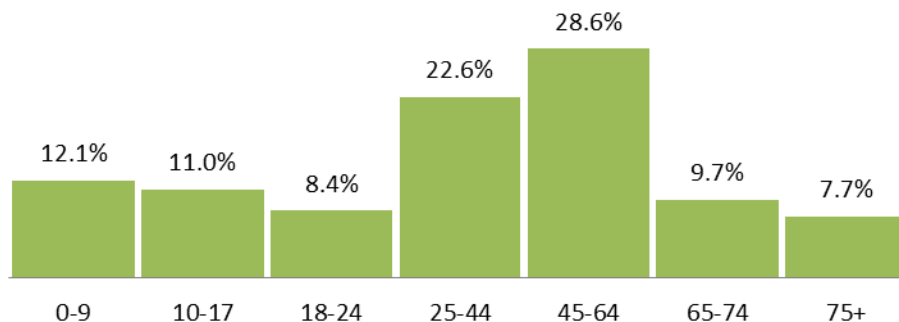
The following is a summary of key findings within each category. The full version of the Lewis County CHSA can be found in Attachment A.

Demographic and Socioeconomic Characteristics

The 2010 US Census places the population of Lewis County at 75,455 residents. Lewis County has a slightly older population than that of Washington state. Individuals who are over the age of 65 represent 17.4 percent of the Lewis County population, which is notably higher than the state average of 12.3

percent. Over the next two decades, it is estimated that the population over 65 will increase to 24 percent (or 20,458) of the county's total population.

Figure 1. Population by Age Range, 2010



Source: US Census Bureau, 2010

Race and Ethnicity

Lewis County is predominantly white (92.8%). Between 2000 and 2010, all racial groups in the county increased with the biggest increases in the proportion of residents who are black or Asian. However, these groups still comprise only 1.0 and 1.5 percent of the total population respectively.

Hispanics (who may be of any race) represent 8.7 percent of the county's population. In 2000, there were 3,684 residents who identified as Hispanic. By 2010, the number increased to 6,527 representing a 77 percent increase over 10 years.

Income and Poverty

In 2012, 15.9 percent of residents were living at or below the poverty threshold, which is higher than the Washington state rate (13.5%).

Poverty rates exceed the county average for the following groups of people: female householder families, people age 18 and under, blacks, American Indians/Alaska Natives, and Hispanics (based on 2008-2012 five-year estimates).

Education

In the year 2012, 86.4 percent of the adults over the age of 25 in Lewis County have obtained a high school diploma or higher education, which is lower than the state rate of 90.4 percent.

The four-year graduation rate was 70.8 percent for the class of 2013. High school graduation rates vary by race and gender. Hispanics, blacks, Native Hawaiian/Pacific Islanders, and American Indian/Alaska Natives have graduation rates that are lower than the county's average. Female students continue to graduate at a higher rate than male students; the gap between the two genders is 12.1 percentage points compared to 7.6 percentage points between Washington state male and female students.

Unemployment

In 2012, Lewis County's annual unemployment rate was 12.4 percent. Over the last decade, the unemployment rate in Lewis County has been higher than the average in Washington state.

Health Insurance

In 2012, about one out of every four Lewis County adults aged 18-64 (23.0%) did not have health insurance compared to 19.6 percent in Washington state. Among young adults aged 19 to 25, 30.9 percent do not have health insurance.

Behavioral Risk Factors

Tobacco Use

In Lewis County, one out of every four adults (25.0%) smokes. This is higher than the state rate of 17.0 percent and the nation (19.0%).

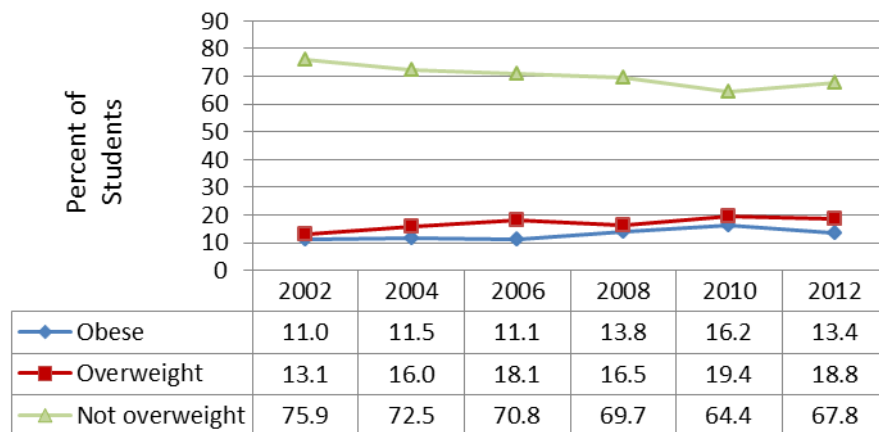
A high proportion of mothers reported smoking during their pregnancies; this rate has been significantly higher than the state's since 1998. Among pregnant teens, 17.7 percent reported smoking during their pregnancies, which is significantly higher than the state rate of 12.7 percent.

Obesity

About 40 percent of Lewis County adults are obese; however, two out of every 3 adults (66%) met both the aerobic and muscle strengthening recommendations for physical activity.

Lewis County's rate of overweight 10th graders (18.8 percent) is significantly higher than the state rate of 12.9 percent. When overweight and obesity is combined, one out of three (32.2 percent) 10th graders was overweight or obese and this is significantly higher than the state rate of 22.9 percent. There was a significant increasing trend for both obesity and overweight among Lewis County 10th graders between the years 2002 and 2012.

Figure 2. Weight Distribution Trends, Grade 10



Source: Health Youth Survey, 2012, Grade 10

Social and Mental Health

Reported Mental Health

Fourteen percent of Lewis County adults reported having poor mental health, which includes stress, depression, or problems with emotions, lasting two or more weeks in the past month. Depression is also high among high school students. One of three high school students (34.9% of 10th graders) reported

symptoms of depression over the past year. Female students (44.5%) were significantly more likely to be depressed than males (24.6%).

Domestic Violence

Rates for domestic violence have decreased significantly over the last ten years from a rate of 7.8 per 1,000 residents in 2002 to a rate of 6.4 per 1,000 residents in 2011. However, the county rate has remained higher than Washington state's rate since 2002.

Substance Abuse

Like much of the United States and Washington, Lewis County has seen increases in the use of and harms associated with heroin. Police evidence data over the past decade shows that heroin use is high in Lewis County (See Table 1). The number of first time admissions to treatment for prescription opiate and heroin use among Lewis County residents has increased dramatically since 1999. From 1999 to 2010, the number of residents admitted for heroin treatment increased six times; from 29 residents seeking treatment to 188. Likewise, the number of deaths involving prescription opiate use has increased over the last decade. Lewis County data for 2009-2011 indicate 26 prescription opiate involved deaths, up from 8 in 2000-2002.

Table 1. Police Evidence Testing Positive for Prescription Opiates and Heroin, Average Annual Rate per 100,000

	Rx Opiates		Heroin	
	2001-2002	2011-2012	2001	2012
Lewis County	5.1	68.1	17.4	124.9
Washington State	5.5	16.7	14.5	34.3

Source: Washington State Patrol, Forensic Laboratory Services Bureau, 2001-2012

Maternal and Child Health

Although Lewis County fares well overall in the areas of prenatal care and birth outcomes (rating at or better than state outcomes and national goals), the county remains high in risk factors for poor birth outcomes, specifically in teen births, births to unmarried mothers, and the percent of mothers who smoke during pregnancy.

Lewis County has a higher teen birth rate than Washington. This rate (18.5 births per 1,000) has remained steady since 2001 while teen births have been decreasing nationally and in Washington state.

Death, Illness and Injury

In 2011, there were 830 deaths in Lewis County. Table 2 shows the leading causes of death. The top five leading causes of death are the same for both males and females, though the ranking varies by gender. The first and second cause of death for males is heart disease followed by cancer. This order is reversed for females. Accidents (unintentional injuries) are the third leading cause of death for males, but the fifth leading cause for females. This category includes motor vehicle accidents and any other unintentional injury death that occurs as a result of a fall, drowning, firearm or other accidental cause.

Table 2. Leading Causes of Death in Lewis County, 2011

CAUSE OF DEATH	NUMBER OF DEATHS	PERCENT OF TOTAL DEATHS
All Causes	830	100.0%
1. Heart Disease	261	31.4%
2. Cancer	194	23.4%
3. Alzheimer's Disease	64	7.7%
4. Chronic Lower Respiratory Disease	60	7.2%
5. Accidents	48	5.8%
6. Diabetes	21	2.5%
7. Influenza/Pneumonia	13	1.6%
8. Suicide	9	1.1%
9. Parkinson's Disease	9	1.1%
10. Chronic Liver Disease and Cirrhosis	7	0.8%

Source: Death Certificate Database, WA State Dept of Health Center for Health Statistics, 2011

Lung Cancer

Lung cancer is the most common cause of cancer death among both men and women, accounting for 27.8 percent of all cancer deaths in Lewis County during 2011. Cigarette smoking is the number one risk factor for lung cancer. The lung cancer mortality rates for Lewis County have remained relatively steady over time, while the rates for Washington state have decreased significantly from 2001 to 2011.

Community Themes and Strength Assessment

The **Community Strengths and Themes Assessment** identifies community issues and concerns that will be prioritized and addressed by the Lewis County CHIP. It will also help identify community assets that must be leveraged and the community challenges that the CHIP must overcome.

The assessment answers the questions:

- a. What factors do residents believe are most important to our community's health?
- b. What assets does Lewis County have that can be used to improve community health?
- c. What challenges exist in Lewis County that must be addressed to improve community health?
- d. What do residents believe are the most important health issues and risky behaviors impacting our community?

Method

To conduct this assessment, the CHIP Committee administered an online and paper survey during March and April of 2014. The survey was completed by 570 individuals who either live or work in Lewis County. Responses to the survey questions can be found in Appendix B. The following summary of community themes and strengths highlights results from the survey and results from 83 participants from seven community engagement meetings and four key leader interviews. Key leader interviews were conducted with representatives from community and business development organizations, a faith-based organization, and an elected official.

Findings

a. What is important to our community's health?

When asked to rate a list of factors according to how important they are to community health, survey respondents rated the following as most important (in order of number of responses):

- Good jobs and healthy economy
- Low crime and safe neighborhoods
- Good schools and quality education
- Good place to raise children
- Access to quality health care

In addition to the above survey responses, community meeting attendees and interviewees said that the following were also important:

- A welcoming community in which people and organizations are involved in making it a better place to live
- Access to recreational, social and cultural activities
- Public/social services and systems in place that support and promote community health

As part of the assessment, community engagement activities focused on reaching youth/young adults, elderly populations, and Hispanic/Latino community members. Survey responses, once ranked and themed, were filtered by age and ethnicity to compare how different populations responded. Their answers are in Tables 3-5 and show that different populations have common concerns and expectations of what a healthy community should be.

Table 3: 2014 Lewis County Community Health Survey Results

What is important to our community's health by subgroups? <i>(Factors below that are different from the overall combined responses are in bold.)</i>		
<u>Youth and young adults</u> <u>(under 18 to 24 years)</u>	<u>Elderly population</u> <u>(over 65 years)</u>	<u>Hispanic population</u>
▪ Low crime and safe neighborhoods ▪ Good place to raise children ▪ Good schools and quality education ▪ Good jobs and healthy economy ▪ Low level of child abuse	▪ Low crime and safe neighborhoods ▪ Good jobs and healthy economy ▪ Good place to raise children ▪ Good schools and quality education ▪ Access to health care	▪ Low crime and safe neighborhoods ▪ Good jobs and healthy economy ▪ Good place to raise children ▪ Health behaviors and lifestyles ▪ Good schools and quality education

b. What assets does Lewis County have that support and improve community health?

The majority (more than 60%) of Lewis County survey takers reported that:

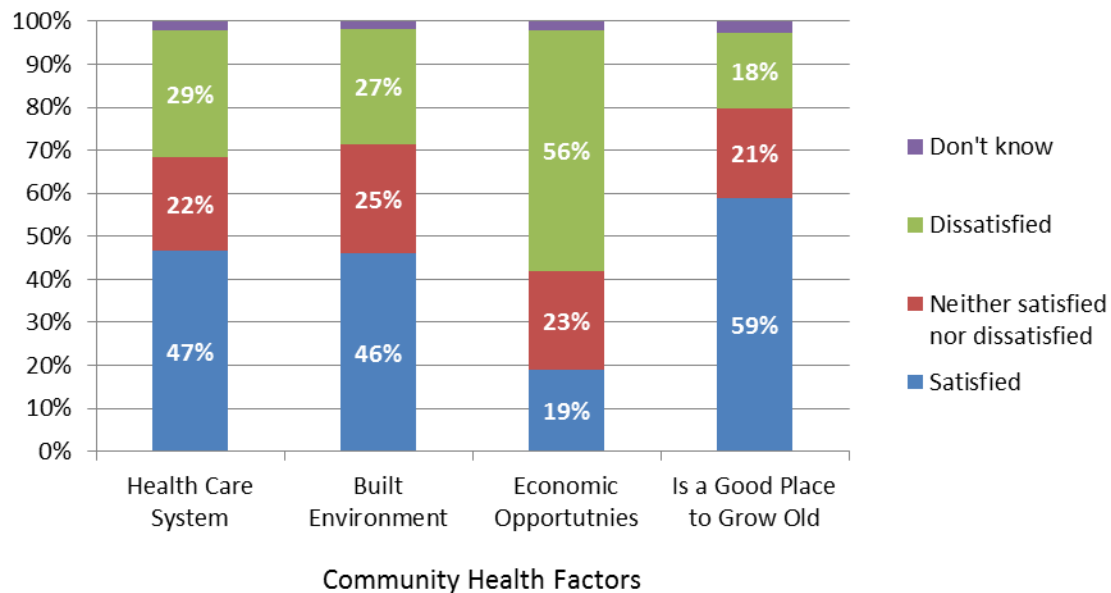
- Their personal health is “healthy to very healthy.”
- They are satisfied to very satisfied with the quality of life in Lewis County.
- They are satisfied to very satisfied with the natural environment in Lewis County.
- They are satisfied with the community support given to those in need.
- Lewis County is a safe place to live and raise a family.
- Residents feel they can make the community a better place to live.

Community meeting participants and interviewees expanded on the above themes and included the following community health assets:

1. **The natural environment:** inviting outdoor recreation opportunities, access to nature and natural spaces.
2. **Access to health care:** accessibility to Providence Centralia Hospital, Valley View Health Center, Morton General, and rural clinics.
3. **Good community, people and families:** Lewis County is a community that works well in the height of crisis and during times of need; it has a sense of community; people help people; people are involved in the community.
4. **Social and public resources and systems:** there are a number of services provided by local public health, non-profits, faith-based organizations, schools, hospitals, and libraries.
5. **Education:** there are good educational opportunities within public schools and libraries. Centralia Community College in Centralia and Morton provides academic and job training opportunities.

c. *What gaps or challenges exist within our community that must be addressed to improve community health? Or what factors exist that keep the community from being healthy?*

Figure 4: Lewis County Community Health Survey Results



Survey data from the graph in Figure 4 shows:

- Nearly one-third said they were dissatisfied with the health care system in Lewis County.
- Just over one-fourth said they were dissatisfied with the built environment in Lewis County.
- Over half said that they were dissatisfied with the economic opportunities in Lewis County.
- One in five reported not being satisfied with Lewis County as a good place to grow old.

Other questions about community health (survey data not shown in graph):

- One-fourth rated Lewis County as an overall “unhealthy” to “very unhealthy” community.
- Nearly one in three residents reported that they do not “always” have enough money to pay for basic essentials such as food, housing and medicine.

Community meeting attendees and interviewees expanded on the above themes:

1. **Lack of jobs/economic opportunity:** There are limited jobs, a lack of living wage jobs and locally-owned successful businesses, and an undiversified economy (i.e., decrease in logging industry and increase in lower paying retail /service jobs). This is a special concern for youth and young adults.
2. **Inadequate public transportation system:** There is a lack of infrastructure for safe walking and bicycling (shoulders, sidewalks and bike lanes), long commutes traveling in and out of the county to get to resources and jobs, limited public transportation (buses, shuttles, etc.), and geographical isolation that is made worse by lack of transportation (private and public).

3. **Built environment deficits:** This limits healthy living opportunities (e.g., trails, parks, sidewalks, bike lanes). It can be a barrier in connecting people to nature. It limits access to safe and affordable places to be active and healthy. There is also a lack of safe recreational opportunities for family activities and youth recreation when the weather is not good.
4. **Disconnections in the social/public health systems:** There is a lack of collaboration and communication between health care, public health, social services, faith-based organizations, non-profits, law enforcement and public officials. Many residents and other service organizations are unaware of what resources and services are in the community. There is a need to establish a community system for continuity of care and the need for community collaboration around a shared vision and priorities.
5. **Availability of quality health care:** Although there are a number of health care assets in Lewis County, there is a gap when it comes to specialized services (not general practice and emergency care), specifically mental health, substance abuse treatment and medical subspecialties. There is also a **lack of access to affordable health care and health insurance**. This limits access to medical care, and especially to mental health, substance abuse treatment and dental/oral health care. There is also a lack of coordination between healthcare providers and other services.
6. **Education/skill training:** There is a lack of educational programs in high school to prepare students for college or prepare them for good paying trade jobs. Local employers report that there is an inadequate job-ready workforce. There is a need to strengthen the community college's efforts in helping youth/young adults transition into the workforce (business programs, technical training and trade skills). There is also a gap in job training for older adults when a major labor industry leaves the community and new skills are needed. Rural communities in particular lack adequate educational /job training resources.

d. What are the most important health problems and risky behaviors that impact our community's health?

The Lewis County health concerns that were chosen most by survey takers:

- Alcohol/drug abuse
- Mental Health
- Obesity
- Child abuse/neglect
- Housing that is inadequate, unsafe or unaffordable

Table 4: 2014 Lewis County Community Health Survey Results

What are the most important health problems in Lewis County by survey subgroups? <i>(Factors below that are different from the overall combined responses are in bold.)</i>		
<u>Youth and young adults</u> <u>(under 18 to 24 years)</u>	<u>Elderly population</u> <u>(over 65 years)</u>	<u>Hispanic population</u>
- Alcohol/Drug abuse - Child abuse/neglect - Housing (inadequate, unsafe or unaffordable) Bullying Teenage pregnancy	- Alcohol/Drug abuse - Obesity Cancers Diabetes - Mental Health	- Alcohol/Drug abuse Bullying - Obesity - Mental Health Sexually transmitted diseases

The risky behaviors that were chosen the most by survey takers for having the greatest impact on community health:

- Alcohol/drug use
- Dropping out of school
- Texting/cell phone use while driving
- Poor diet
- Inactivity

Table 5: 2014 Lewis County Community Health Survey Results

What are the most risky behaviors by survey subgroups? <i>(Factors below that are different from the overall combined responses are in bold.)</i>		
<u>Youth and young adults</u> <u>(under 18 to 24 years)</u>	<u>Elderly population</u> <u>(over 65 years)</u>	<u>Hispanic population</u>
- Alcohol/Drug use - Dropping out of school Unsafe sex - Texting/cell phone use while driving - Poor diet	- Alcohol/Drug use - Texting/cell phone use while driving - Dropping out of school Tobacco use or e-cigarette use - Inactivity	- Alcohol/Drug use - Dropping out of school - Texting/cell phone use while driving - Poor diet - Inactivity

Forces of Change Assessment

The purpose of the **Forces of Change Assessment (FOC)** is to lay the foundation for identifying strategies that will help address Lewis County's community health priorities, leverage opportunities and avoid threats.

The assessment answers the following questions:

- a. What trends, factors, or events are occurring or might occur that affect Lewis County's community health or the local public health system?
- b. What are the specific opportunities created by each trend, factor, or event? In other words, in what ways could each trend, factor, or event improve community health in Lewis County?
- c. What are the specific threats created by each trend, factor, or event? In other words, in what ways could each trend, factor, or event do damage to community health in Lewis County?

Method

To conduct this assessment, participants at the seven community engagement meetings and four key leader interviews completed a FOC worksheet or answered interview questions. Their responses were themed and the FOC factors that were most closely associated with the health concerns from the *Community Themes and Strengths Assessment* are in this report.

Findings

Table 6: Lewis County Forces of Change Themes

Trends, factors, or events	Opportunities created	Threats created
1. Legalization of marijuana (Washington Initiative 502)	Opportunities for jobs and revenue (tax and business) due to retail and growing operations. It also may reduce impact to the legal system (fewer arrests, court appearances and jail time).	Increase in government regulation. It is a gateway to other drugs and could increase impaired driving, youth access, substance abuse and addiction. Social problems may occur caused by use and addiction.
2. 1/10th of 1% Tax (Lewis County Chemical Dependency- Mental Health - Therapeutic Courts Sales and Use Tax)	Dedicated funds for mental health and substance abuse treatment (out/ in-patient). With a dedicated advisory board, more thought will be put into program functions. Services could be available in jails and courts.	It could cause competition for funding between programs and services. A decrease in tax revenues will impact funding for services (tax dependency).

3. Affordable Care Act (ACA)	Will provide greater access to health insurance, more people will be covered. There could be growth in the healthcare industry, in turn more jobs. There will be behavioral health integration into the ACA resulting in more screenings.	There could be a provider shortage. There may be fewer benefits and increase in private costs, lower reimbursements and higher deductibles. A possibility of having increases in psychiatric holds and not enough in-patient beds.
4. Geographical disparities (rural vs. cities)	Consider different means to providing medicine in rural communities.	Access to services is a problem (issues with transportation). There is inequity in the amount of resources for cities vs. rural communities. There are fewer economic opportunities for rural communities. Communities In rural areas have to run public water systems on tighter budgets, they also face social and economic isolation.
5. Shift in employment industries due to closures and market changes (e.g., from higher paying skilled labor like logging to lower paying retail/ service industries)	TransAlta Centralia could bring solar power jobs. The logging industry provides jobs, but with layoffs, employees need opportunities to be retrained for other jobs. Educational opportunities and skill training to better prepare the workforce for higher paying labor and tech jobs.	Closure of TransAlta, resulting in loss of jobs. Reduction on logging jobs is an on-going event. Logging can be dangerous and unstable resulting in high unemployment rates. This overall trend can impact job and economic opportunities.
6. Demographic trends (changes in populations by age and ethnicity) Migration of young adults out of the community, and increases in aging populations and minority residents.	The aging and increasingly diverse population creates opportunity for new partnerships and can create ▪ chances to explore job training and educational opportunities that would keep young adults in the area. ▪ need for jobs and services to provide specialized care for aging population. ▪ cultural diversity and promotion of tolerance.	The aging population may result in increased health care costs, a different workforce, increased social isolation, and impact individual mobility. With the migration of young adults, there is less of a replacement workforce for skilled labor/ technical jobs. More minorities and immigration may increase difficult-to-reach populations who have language and culture barriers that keep them from accessing community resources and jobs.
7. Natural disasters (flooding, ice storms, earthquakes and volcano eruptions were all mentioned)	▪ Tourist attractions leading to revenue and employment opportunities. ▪ Development of a community response plan. ▪ Education on self-preparedness	There will be danger to life, homes habituate, businesses and personal property. There would be an environmental impact, e.g. polluted water, air, and soil and cut off access (I-5 and to rural communities). Also

	▪ Allows for non-historical partnership and integration ▪ Flood Authority-lower flood impact areas.	listed: impact on services (utilities, phone, fire dept, etc.) impact to logging industry; displacement of community members; impact on zoning and development issues.
8. Lack of political diversity/political polarization	Opportunities for discussion and creating shared vision and goals around economy, education and health.	Creates a status quo (nothing changes). This issue causes discord in the community. It disproportionately affects the county and fosters political silos, political dissent, resistance and polarization. There could be funding/funding cuts based on political party will.
9. Built environment needs/deficits	It would be an opportunity to place an emphasis on livability, providing more opportunity for communities to offer resources for healthy living.	Development may shift funds from other needs, harm freight mobility and economic development, and create communities that are not affordable for all.
10. Rapidly changing technology and access to information ▪ Communication (computers, internet, cell phones, mobile devices, etc) ▪ Patient health care (health education, treatment technology, electronic medical records) ▪ Workplace technology (non- traditional work spaces; remote work places and portable work devices)	This trend creates opportunities for collaboration across service sectors with the use of automated systems, health education applications, emphasis on research and data to correct misinformation and affect behavioral and policy change, and an inexpensive and easy way to reach people. It also provides new job opportunities, expands living location options, and creates industries. With this trend comes continuity of care and new job skills, training, and education.	Threats associated with this trend include social isolation, decreased physical activity, and widespread misinformation. Also loss of jobs, outsourcing jobs, theft of identity and money, and privacy risks. Costs could be a barrier, and there could be disparities in access to technology.

Local Public Health Systems Assessment

The **Local Public Health Systems Assessment** (LPHSA) focuses on the local public health system defined by the Centers for Disease Control and Prevention (CDC) as “all public, private, and voluntary entities that contribute to the delivery of essential public health services.” There are many different individuals, organizations, and agencies in Lewis County that contribute to its local public health system.

The assessment answers the following questions:

- How are public health essential services being provided to our community?
- What are the components, activities, and capacities of our local public health system?

Method

The LPHSA is assessed using the National Public Health Performance Standards. When gauging the public health system within a community, the community must identify the different entities that contribute to public health and how they address essential public health services. The Ten Essential Public Health Services outlined in this report describe the public health activities that all communities should undertake, per the National Public Health Performance Standards.

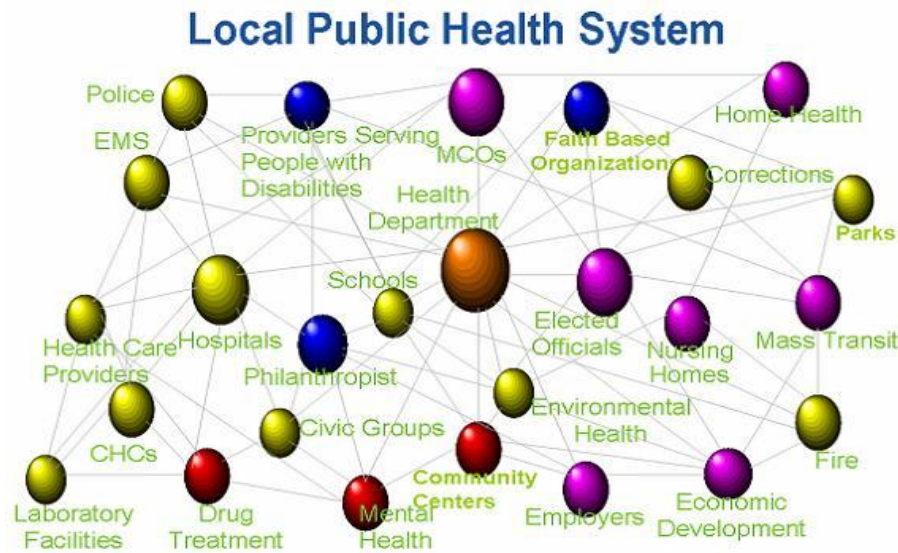
Findings

Strengths: The Lewis County public health system encompasses a wide web of critical service providers and partners (see Figure 5). Overall, Lewis County has a strong, well-connected public health system that includes the local public health agency and numerous community partners.

Currently Lewis County Public Health & Social Services (LCPHSS) has close working relationships with health, social service, and other government sectors. There may be additional opportunities to expand and strengthen partnerships and connections with education, business, media, community advocacy, faith-based organizations and other groups to address public health issues.

Challenges: As with other service systems, the public health system in Lewis County has experienced significant impacts due to the economic recession and budget reductions. This has led to program and staff reductions throughout the system and decreased the availability of health services and social supports during the past several years. Given the reductions and economic impact to the community, residents may not be aware of the services that are available or how to access them; this is especially true for those who have never had to access social and public health services before.

Figure 5: Lewis County Local Public Health System



Local Public Health System Illustration, CDC, <http://www.cdc.gov/od/ocphp/nphpsp/>

It takes more than healthcare providers and public health agencies to address the social, economic, environmental and individual factors that influence health in Lewis County. The local public health system is comprised of agencies, organizations, individuals and businesses that work together to create conditions for improved health in a community (as illustrated in Figure 5).

The public health system also includes:

- Public health agencies at state and local levels
- Social service and charity organizations
- Education and youth development organizations
- Recreation and arts-related organizations

During community engagement activities, participants identified the following agencies that address the Ten Essential Public Health Services. (This is not an extensive resource list but instead a list of partners and assets identified during the LPHSA exercise). For a complete community resource guide, go to: <http://mobile.4people.org/countydocs/Lewis.pdf>

1. Monitor Health Status to Identify Community Health Problems

- Hospitals/medical care: Valley View Health Center, Providence Centralia Hospital, CHOICE Regional Health Network, and Morton General Hospital (through electronic medical records)
- Lewis County Public Health & Social Services
- Public school nurses
- Private clinics

2. Diagnose and Investigate Health Problems and Health Hazards

- Lewis County Public Health & Social Services
- Hospitals' Infection Control

3. Inform, Educate, and Empower People about Health Issues

- Lewis County Public Health & Social Services
- Public schools
- Centralia College
- Hospitals
- Fitness/Sports programs and organizations
- Private businesses
- Insurance companies
- Non-profits
- Libraries
- United Way of Lewis County

4. Mobilize Community Partnerships to Identify and Solve Health Problems

- Lewis County Community Health Partnership
- Lewis County Public Health & Social Services
- Community Health Improvement Plan Committee
- Coalition for Alcohol & Substance Abuse Prevention in Morton
- East Lewis County Community Consortium (ELC3)
- Mental Health Coalition

5. Develop Policies and Plans That Support Individual and Community Health Efforts

- Lewis County Public Health & Social Services
- Hospitals

6. Enforce Laws and Regulations That Protect Health and Ensure Safety

- Lewis County Public Health & Social Services
- Law enforcement
- Lewis County Community Development

7. Link People to Needed Personal Health Services and Assure the Provision of Health Care when Otherwise Unavailable

- Catholic Community Services
- Valley View Health Center
- Providence Centralia Hospital-they have navigators and translators
- Morton General Hospital
- Lewis County Public Health & Social Services

8. Assure a Competent Public and Personal Health Care Workforce

- Providence Centralia Hospital
- Morton General Hospital
- Centralia College
- Chamber of Commerce
- Lewis County Thrives

- Lewis County Public Health & Social Services

9. Evaluate Effectiveness, Accessibility, and Quality of Personal and Population-Based Health Services

- Valley View Health Center
- Providence Centralia Hospital
- Washington State Department of Health (DOH)
- Parish nurses
- Public school nurses
- Lewis County Public Health & Social Services

10. Research for new Insights and Innovative Solutions to Health Problems

- Lewis County Community Health Partnership
- Providence Centralia Hospital
- Lewis County Public Health & Social Services

Lewis County Public Health & Social Services

The public health system has the responsibility to protect, promote and improve the health of residents and visitors in the community. A strong public health system is critical to address current and emerging health issues including public health emergencies—such as disease outbreaks, natural disasters, bioterrorism, and mass casualty events.

Lewis County Public Health & Social Services is located in Southwest Washington in the county seat of Chehalis and serves a population of over 75,000 residents. The total area of Lewis County is 2,436 square miles. The Department is comprised of five divisions as listed below along with their programs:

Community Services: Women, Infants, and Children (WIC), Immunizations, Maternal and Child Health, Emergency Preparedness, Communicable Disease Response, Chronic Disease Prevention, Assessment.

Environmental Services: Food Safety, Water Quality, On-Site Sewage, Solid Waste, Code Compliance.

Administrative Services: Vital Records, Customer Service, Notary Public, Personnel, Board of Health, Department Contracts, Veterans Relief Fund.

Social Services: Housing, Substance Abuse Prevention, Chemical Dependency Treatment, Community Mobilization, Mental Health, Developmental Disabilities, DUI Traffic Safety and Senior Services.

Animal Shelter: Animal Intake, Animal Adoptions, Reuniting Lost Animals with Owners.

For more information on Lewis County Public Health & Social Services, please refer to their 2013 Annual Report at: <http://lewiscountywa.gov/publichealth/2013-public-health-social-services-annual-report>

Lewis County Local Public Health System Performance

Method

Four key leader interviews were conducted involving six community leaders and service providers, a survey was completed by 570 individuals who either live and/or work in Lewis County, and seven community engagement meetings were held around the county. The following are a summary of themes and strengths from the community participation activities pertaining to the local public health system.

a. Awareness

Even if the service is being provided, do people know about it?

Those interviewed were unsure about what services their Public Health & Social Services agency provides. They could identify some basic services such as immunizations, food safety, and veterans services. Agencies that provide referrals to health and social services reported challenges with finding needed services; they acknowledge that they may be out there, but they are unaware of them. Residents also may not be aware of the services that are available or how to access them; this is especially true for those who have never had to access social and public health services before.

"I don't know what the health department does in rural communities."

Key Leader Interview Participant

b. Involvement

Are public health services provided within the system in a coordinated and efficient manner?

More than 60% of survey respondents are satisfied with the community support given to those in need.

Those interviewed thought it was encouraging that the health system partners were collaborating on this type of community-wide assessment and health improvement plan. There was general agreement that health care providers and other partners were involved with coordinating care. Although there is still the need to establish a community system for continuity of care and to collaborate around a shared vision and priorities.

c. Quality and Comprehensiveness

Is the service or activity provided in a comprehensive manner and based on established need?

Nearly one-third of survey respondents were dissatisfied with the health care system in Lewis County.

In general, residents felt that there was quality care for family practice, general medicine, and emergency care, but reported a lack of specialized care and services. Services for mental health, oral health,

"We have a wonderful facility, wonderful doctors, they live in our community and you know your doctors."

Key Leader Interview Participant

substance abuse treatment and specialized medical testing were the gaps most often mentioned.

d. Usability

Is the service provided across the county, and is it dispersed among programs or organizations?

Access to quality health care was selected by survey takers as one of the top factors for a “healthy community.”

Community members at both the community meetings and interviews identified accessing services within the public health system as an issue. One of the reasons mentioned was due to the distance that rural community members have to travel to get to services either in Centralia or Chehalis, or having to leave the county altogether to access services. Lack of both private and public transportation to services was a big issue. The complexity of health care insurance and systems was also mentioned as a barrier in using services.

Next Steps

The assessment summaries and the 2014 Lewis County Community Health Assessment report will be shared with the community by the Lewis County CHIP Committee in preparation for the next phases of the CHIP process. These final phases will have community partners continuing their work by identifying and prioritizing strategic issues, formulating goals and strategies, and then moving into the action cycle. The following are descriptions of the next phases/steps:

1. Identifying Strategic Issues

During this phase of the MAPP process, participants develop an ordered list of the most important issues facing the community. Strategic issues are identified by exploring the results of the four MAPP assessments and determining how those issues affect the achievement of the shared vision.

2. Formulating Goals and Strategies

During this phase of the MAPP process, participants take the strategic issues identified in the previous phase and formulate goal statements related to those issues. They then identify broad strategies for addressing issues and achieving goals related to the community's vision. The result is the development and adoption of an interrelated set of strategy statements.

3. Action Cycle

This phase links three activities—planning, implementation, and evaluation. Each of these activities builds upon the others in a continuous and interactive manner. While this is the final phase of MAPP, it is by no means the end of the process. The efforts of the previous phases begin to produce results as the local public health system develops and implements an action plan for addressing priority goals and objectives.

Attachments

Attachment A: Lewis County Community Health Status Assessment Data

County Health Rankings

The Robert Wood Johnson Foundation in partnership with the University of Wisconsin Population Health Institute have developed health rankings for every county in the nation by looking at a variety of measures that influence health. Counties are ranked relative to the health of other counties in their state on the following summary measures:

- I. Health Outcomes – represents how healthy a county is based on how long people live and how healthy people are while alive.
- II. Health Factors – represents what influences the health of a county based on four types of factors:
 - a. Health Behaviors
 - b. Clinical Care
 - c. Social and Economic
 - d. Physical environment

In the year 2014, among 39 counties in Washington, Lewis County ranked 21st overall for health outcomes and 28th overall for health factors (see Table 1).

Lewis County's lowest rank was in the area of health behaviors, which includes smoking, obesity, food environment index, physical inactivity, access to exercise opportunities, excessive drinking, alcohol-impaired driving deaths, sexually transmitted infections and teen birth rate. Lewis County scores significantly worse than the state of Washington as a whole on adult smoking and teen births. More data and information on the rankings can be found at www.countyhealthrankings.org.

Table A1. County Health Rankings, Lewis County, 2014

CATEGORY	RANK
Health Outcomes	21
Length of Life	23
Quality of Life	21
Health Factors	28
Health Behaviors	31
Clinical Care	28
Social and Economic Factors	30
Physical Environment	13

Demographic Characteristics

Demographic characteristics include measures of total population as well as percent of total population by age group, gender, race and ethnicity, where these populations and sub-populations are located, and the rate of change in population density over time, due to births, deaths, and migration patterns.

Population Growth and Estimates

- The 2010 Census places the population of Lewis County at 75,455 residents.
- Lewis County's population grew by 10 percent since the 2000 Census (68,600 in 2000 to 75,455 in 2010).
- By 2030, it is projected that the population in Lewis County will increase to 85,165 residents - an increase of more than 12 percent from 2010. Washington state as a whole is projected to grow at a higher rate of 21.3 percent over the same time period.

Table A2. Total population and projected populations

	Lewis County	Washington
Total Population 2000	68,600	5,894,121
Total Population 2010	75,455	6,724,540
Percent change from 2000 to 2010	10.0%	14.1%
2030 Projected Population	85,165	8,154,193
Percent change from 2010 to 2030	12.9%	21.3%

Source: U.S. Census Bureau, 2000 and 2010, and State of Washington Office of Financial Management Forecasting Division

Age and Sex Distribution of the Population

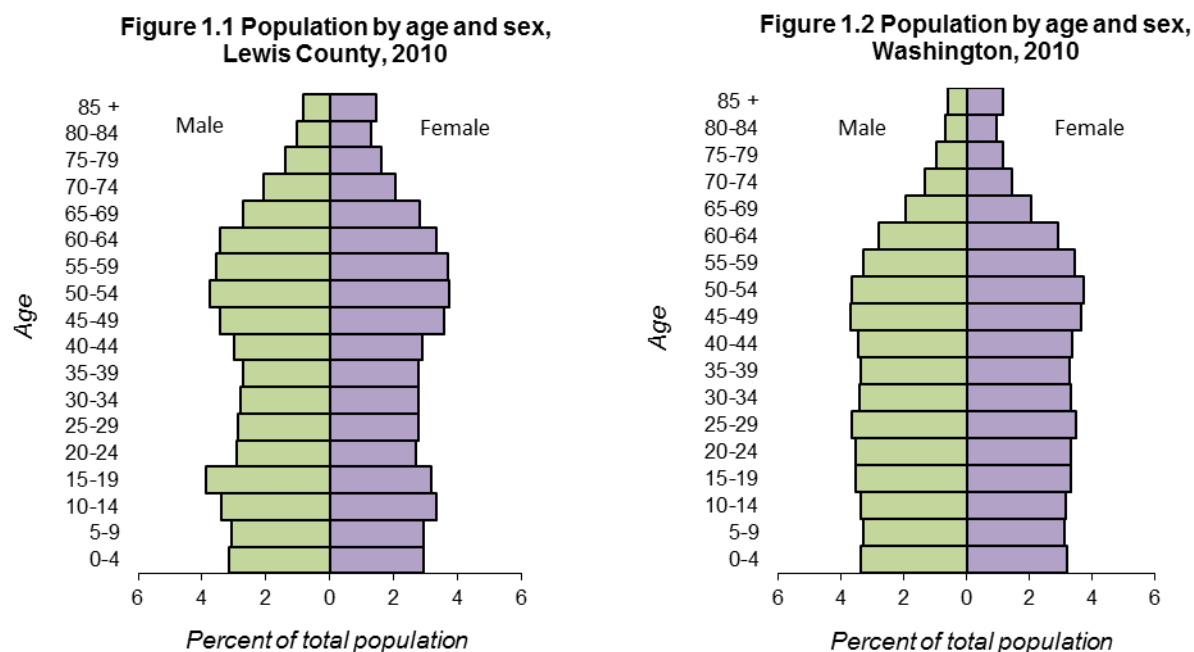
- Lewis County has a slightly older population than that of Washington. Individuals who are over the age of 65 represent 17.4 percent of the Lewis County population, which is notably higher than the state average of 12.3 percent. The population pyramids in Figures 1.1 and 1.2 show the difference in population structure.
- Over the next two decades, it is projected that the population over 65 will comprise more than 24 percent of the county's total population; a projected growth of 56% by 2030.
- In 2010, the median age for Lewis County was 41.5 years, compared to 37.3 years statewide.

Table A3. Population by age and gender (2010)

Age Group	Lewis County						Washington		
	Number			Percentage			Percentage		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Under 9	4,710	4,414	9,124	6.2	5.8	12.1	6.6	6.3	12.9
10 to 17	4,331	4,005	8,336	5.7	5.3	11.0	5.4	5.2	10.6
18 to 24	3,350	2,961	6,311	4.4	3.9	8.4	5.0	4.7	9.7
25 to 44	8,585	8,454	17,039	11.4	11.2	22.6	13.9	13.5	27.4
45 to 64	10,700	10,869	21,569	14.2	14.4	28.6	13.4	13.7	27.1
65 to 74	3,600	3,685	7,285	4.8	4.9	9.7	3.3	3.5	6.8
75 and older	2,474	3,317	5,791	3.3	4.4	7.7	2.2	3.3	5.5
Total	37,750	37,705	75,455	50.0	50.0				

Source: US Census Bureau, 2010

Figure A1.1 and A1.2 Population distributions by age and gender (2010)



Source: US Census Bureau, 2010

Race and Ethnic Composition of Population

- Lewis County has a higher percentage (92.8%) of residents who self-identify as white compared to Washington state as a whole (81.4%). All other race and ethnic groups represent a lower proportion of Lewis County's population than the state's.
- Hispanics are the next largest group representing 8.7 percent of the county's population. The Washington average is 11.2 percent.

Table A4. Population by race and ethnicity (2010)

Race and Ethnicity ¹	Lewis County		Washington
	Number	Percent (rates that exceed the WA average are bold)	Percent (rates that exceed the county average are bold)
White	70,050	92.8	81.4
Hispanic or Latino (of any race) ²	6,527	8.7	11.2
Some other race	3,484	4.6	6.0
American Indian and Alaska Native	2,310	3.1	3.0
Asian	1,122	1.5	9.0
Black	772	1.0	4.8
Native Hawaiian/Pacific Islander	273	0.4	1.0

Source: US Census Bureau, 2010

¹ In combination with one or more of the other races listed. The identified race categories may add to more than the total population and their percentages may add to more than 100 percent because individuals may identify as more than one race or ethnicity.

² People of Hispanic or Latino origin may be of any race.

Table A5 provides a breakdown by race and ethnicity and show the change in the population since 2000.

- Between 2000 and 2010, Lewis County experienced increases in all race and ethnic groups with the biggest increases in the proportion of residents who are black, Hispanic, and Asian.
- In 2000, there were 3,684 residents who identified as Hispanic. By 2010, 6,527 residents identified as Hispanic; a percent growth that has nearly doubled over 10 years.

Table A5. Lewis County population by race and ethnicity (2000 and 2010)

Race and Ethnicity ¹	Lewis County, 2000		Lewis County, 2010		Percent Change
	Number	Percent	Number	Percent	2000-2010
Total Population	68,600		75,455		10.0%
White	65,066	94.8%	70,050	92.8%	7.7%
Hispanic or Latino (of any race) ²	3,684	5.4%	6,527	8.7%	77.2%
Some other race	2,175	3.2%	3,484	4.6%	60.2%
American Indian and Alaska Native	1,505	2.2%	2,310	3.1%	53.5%
Asian	666	1.0%	1,122	1.5%	68.5%
Black	412	0.6%	772	1.0%	87.4%
Native Hawaiian/Pacific Islander	228	0.3%	273	0.4%	19.7%

Source: US Census Bureau, 2000 and 2010

Socioeconomic Characteristics

Socioeconomic characteristics include measures that have been shown to affect health status, such as income, education, and employment, and the proportion of the population represented by various levels of these variables.

Income

- For year 2012, Lewis County's per capita income (\$22,535) was 30.5 percent lower than the state of Washington.
- The median household income for Lewis County was \$42,927 – 34.1 percent lower than the state of Washington.

Table A6. Median household income and per capita income (2012)

	Median Household Income	Per Capita Income
Lewis County	\$42,927	\$22,535
Washington State	\$57,573	\$29,861

Source: American Community Survey 2012

Poverty

- In 2012, 15.9 percent of people were living at or below the poverty threshold, which is higher than the state rate of 13.5 percent.
- Childhood poverty in Lewis County is at 20.3 percent, which is also above the Washington rate.

Table A7. Number and percent of persons in poverty, by selected ages (2012)

	Total Population	Percent in Poverty	Number in Poverty
All Ages			
Lewis County	74,356	15.9%	11,834
Washington State	6,761,934	13.5%	915,278
Under Age 18			
Lewis County	16,323	20.3%	3,307
Washington State	1,556,116	18.5%	288,147
65 Years and Over			
Lewis County	13,834	6.5%	903
Washington State	887,823	7.8%	69,638

Source: American Community Survey 2012 1-Year Estimates

Table A8 details poverty status for Lewis County residents by sex, age, and race/ethnicity. In order to look at poverty rates by race and ethnicity, 5-year estimates were observed.

- Based on 2009-2015 5-year estimates, the following groups of people exhibited higher than average rates of poverty: female householder families, people under 18 years old, Blacks, American Indians / Alaska Natives, and Hispanics.

Table A8. Poverty status by sex, age, and race/ethnicity (2008-2012 5-Year estimates)

Poverty Status for Individuals	Total	Count below Poverty Level	Percent below Poverty Level (rates that exceed Lewis County average are bold)
By Sex			
Male	37,061	4,435	12.0
Female	37,131	5,875	15.8
By Age			
Under 18 years Old	16,732	2,986	17.8
18 to 64 Years Old	44,666	6,223	13.9
65 Years Old and over	12,794	1,101	8.6
By Race/Ethnicity			
Black	369	117	31.7
American Indian and Alaska Native	615	304	49.4
Hispanic or Latino origin (of any race)	6,317	1,104	17.5
Native Hawaiian/Pacific Islander	9	0	0
Asian	583	57	9.8
White	68,370	9,269	13.6
Population for Whom Individual Poverty Status is Determined	74,192	10,310	13.9

Source: American Community Survey, 2008-2012 5-year estimates

Unemployment

- In 2012, Lewis County's annual unemployment rate was **12.4 percent**.¹
- Over the last decade, the county unemployment rate has been higher than the state average.

Table A9. Unemployment rates by year in percent (2000 to 2012)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Lewis County	7.3	8.6	9.3	9.4	8.3	7.6	6.9	7.1	8.3	13.2	13.8	13.4	12.4
WA State	5.0	6.2	7.3	7.4	6.2	5.5	4.9	4.6	5.4	9.4	9.9	9.4	8.2

Source: Washington State Employment Security Department Labor Market and Economic Analysis Branch; averages not seasonally adjusted

¹ The unemployment rate is calculated for the population age 16 years and over who were in the labor force during the designated time period. Unemployment data come from the U.S. Department of Labor, Bureau of Labor Statistics, Local Area Unemployment Statistics.

Education

Educational attainment is considered a key driver of health status with low levels of education linked to poverty and poor health. On average, Lewis County has a lower level of education attainment relative to the state.

- In the year 2012, 86.4 percent of the adults over the age of 25 in Lewis County have obtained a high school diploma/GED or higher education, which is lower than the state rate of 90.4 percent.
- A higher percentage of Lewis County residents have completed high school but have no additional education (29.5%), compared to Washington state (23.7%).
- Eighteen percent of Lewis County residents 25 years and over has a bachelor's degree or higher which is lower than the state rate of 31.7 percent and the national rate of 29.1 percent.

Table A10. Educational attainment for residents age 25 and older (2012)

Educational Attainment	Lewis County Percent (n=52,117)	Washington Percent (n=4,645,859)
	(rates that exceeds the WA average is in bold)	(rates that exceeds the Lewis county average is in bold)
Did not complete high school	13.6	9.6
High school graduate / GED	29.5	23.7
Some College/associates degree	38.9	35.0
Bachelor's degree or higher	18.0	31.6

Source: American Community Survey 2012, 1-Year Estimates

2012-13 Four-Year Graduation Rate

The federal No Child Left Behind Act of 2001 (NCLB) requires public school districts and high schools to report a four year graduation rate. The 2012-13 four year cohort graduation rates is defined as the percentage of students who entered ninth grade for the first time during the 2009-10 school year and who earned a diploma by June of 2013. The cohort of entering ninth graders is "adjusted" for transfers in and out of high school through the next four and five years.

- The four year graduation rate is 70.8 percent for the Class of 2013. This is lower than the Class of 2012, which had a graduation rate of 77.8 percent. The four year graduation rate for the Class of 2013 in Washington State is 76.0 percent.
- Table A11 below displays countywide public school graduation rates by race/ethnicity and by program. Asians, whites, and students who identify with two or more races are the only groups with higher graduation rates than the county's average.

Table A11. High school graduation rates by race/ethnicity and program, Class of 2013

Cohort Outcomes, by Race/Ethnicity	Number of Cohort Students	Cohort Graduation Rate (rates below the Lewis County rate are bold)
American Indian / Alaska Native	9	22.2
Asian	9	100.0
Native Hawaiian/Pacific Islander	3	33.3
Blacks	30	30.0
Hispanic or Latino	156	56.4
White	784	75.4
Two or more races	62	74.2
Cohort Outcomes, by Program		
Special Education	141	36.2
Limited English	29	41.4
Low Income	711	69.2
Title I Migrant	19	57.9
504 Plan	17	58.8
Homeless	107	37.4
Foster Care	30	16.7
All Students	1053	70.8

Source: WA State Office of Superintendent of Public Instruction, 2012-2013

Table A12 and Figure A2 shows four-year cohort graduation rates over the last five years by gender.

- Rates for both males and females students declined in 2012-2013 from the previous years.
- Female students continue to graduate at a higher rate than male students, and the gap between the two genders is 12.1 percentage points compared to 7.6 percentage points between Washington state male and female students.

Table A12. High school four-Year graduation rates by gender (2008 to 2013, 2-year estimates)

Overall Rate	Lewis County			WA State		
	Male	Female	Total	Male	Female	Total
2008-2009	54.9	79.7	65.9	70.2	77.0	73.5
2009-2010	67.5	82.2	74.2	73.7	79.3	76.5
2010-2011	69.5	82.2	75.3	73.3	80.1	76.6
2011-2012	75.7	80.0	77.8	73.7	80.7	77.2
2012-2013	65.4	77.5	70.8	72.3	79.9	76.0

Source: WA State Office of Superintendent of Public Instruction, 2008-2013, 2-year estimates

Figure A2. High school four-year graduation rates by gender, Lewis County



Source: WA State Office of Superintendent of Public Instruction, 2008-2013, 2-year estimates

National School Lunch Program, Special Education and Students with a Disability

Table A13 below shows the number and Percent of students by School District who received a free or reduced price lunch (FRPL); were enrolled in special education or met the definition of an individual with a disability.

The National School Lunch Program provides low cost or free lunches to students, based on the student's family size and income. Children from families with incomes at or below 130 percent of the poverty level are eligible for free meals. Those with incomes between 130 and 185 percent of the poverty level are eligible for reduced-price meals.

Students who met the definition of an individual with a disability are those who: have a physical or mental impairment which substantially limits one or more life activities; have a record of such impairment; or are regarded as having such an impairment.

Table A13. Number and percent of students receiving FRPL, special education or have a disability, by school district (2012-2013 School Year)

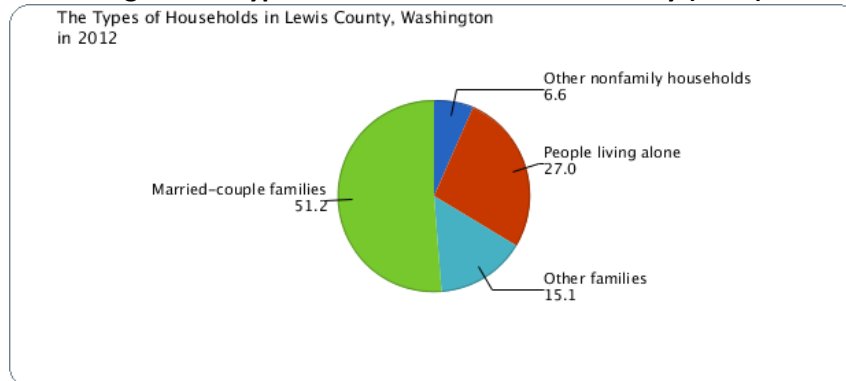
School District	FRPL		Special Education		Student with a Disability	
	Number	Percent	Number	Percent	Number	Percent
Adna	170	29.8	43	7.5	12	2.1
Boistfort	60	63.8	26	27.7	0	0
Castle Rock	676	51.1	239	18.1	62	4.7
Centralia	2,595	72.2	609	16.9	16	0.4
Chehalis	1,462	49.5	455	15.4	10	0.3
Eatonville	378	19.7	190	9.9	17	0.9
Evaline	0	0	6	12.2	0	0
Morton	180	58.1	55	17.7	4	1.3
Mossyrock	315	59.9	96	18.3	0	0
Napavine	384	48.9	98	12.5	0	0
Oakville	190	73.6	52	20.2	0	0
Onalaska	420	56.5	95	12.8	0	0
Pe Ell	184	65.9	44	15.8	0	0
Rochester	1,215	54.5	337	15.1	66	3.0
Toledo	426	53.3	150	18.8	13	1.6
White Pass	269	65.6	66	16.1	8	2.0
Winlock	487	70.3	128	18.5	18	2.6

Source: WA State Office of Superintendent of Public Instruction, 2012-2013 School Year

Households and Families

In 2012, families made up 66.4 percent of the households in Lewis County, Washington. This figure includes both married-couple families (51.2 percent) and other families (15 percent). Of other families, 4.9 percent are female householder families with children under 18 but no husband present. Nonfamily households made up 33.6 percent of all households in Lewis County. Most of the nonfamily households were people living alone (27.0 percent), but some were composed of people living in households in which no one was related to the householder. Of those living alone, 11.5 percent were adults 65 years and over.

Figure A3. Types of households in Lewis County (2012)



Source: American Community Survey 2012, 1-Year Estimates

Disability Status

- In 2012, among the civilian non-institutionalized population, 17.8 percent reported a disability.
- The likelihood of having a disability varied by age - from 7.5 percent of people under 18 years old, to 17.0 percent of people 18 to 64 years old, and to 32.8 percent of those 65 and over. (Source: American Community Survey 2012, 1-Year Estimates).

Veteran Status

- 12.4 percent of the population 18 years and older are veterans. This is higher than the percentage of veterans found in the state (11.2 percent) (Source: American Community Survey 2012, 1-Year Estimates).

Health Insurance Coverage

Health insurance is vital to ensuring that people get adequate health care. The data below represents the percent of Lewis County residents in 2012 who have no health insurance coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare.

- About one out of every four Lewis County adults ages 18-64 (23.0%) do not have some type of health care coverage compared to 19.6 percent in the state.
- The Healthy People 2020 objective is to have 100 percent of adults on health insurance coverage.

Table A14. Estimated percent of uninsured non elderly (2012)

	Lewis	WA
Adults Ages 18-64	23.0%	19.6%
19-25 years	30.9%	27.1%

Source: American Community Survey 2012, 1-Year Estimates

Health Resource Availability

Factors associated with health system capacity, which may include both the number of licensed and credentialed health personnel and the physical capacity of health facilities. In addition, the health

resources category includes measures of access, utilization, and cost and quality of health care and prevention services. Service delivery patterns and roles of public and private sectors as payers and/or providers may also be relevant.

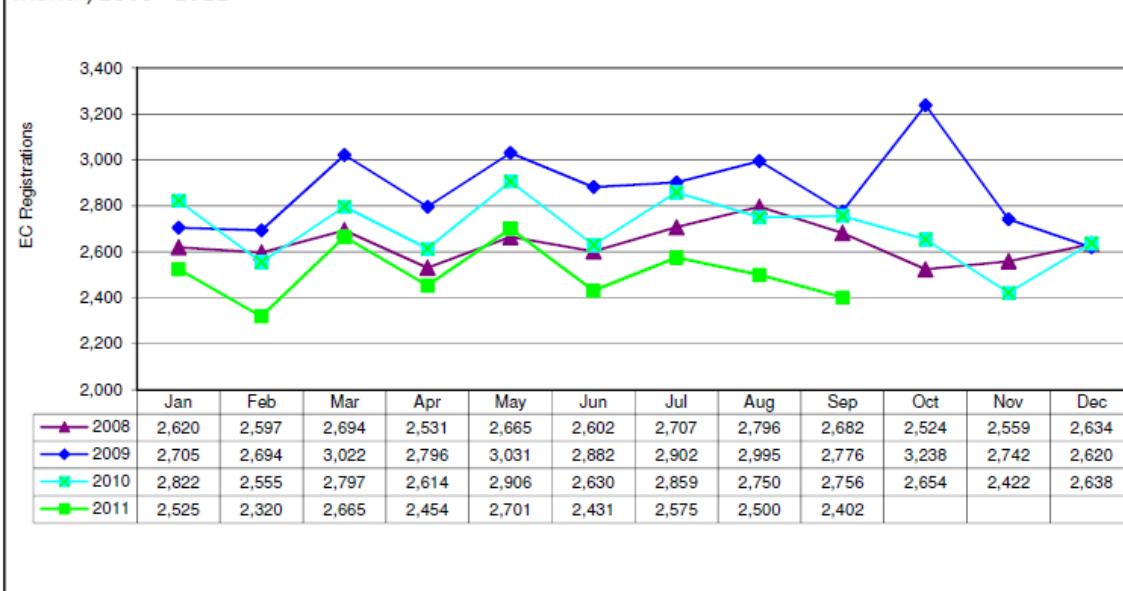
Medical Resources

There are two hospitals located within Lewis County – Providence Centralia Hospital (Centralia) and Morton General Hospital (Morton). Lewis County has been designated a Health Professional Shortage Area (HPSA) for mental health care and dental care services. For primary care health services, all of east Lewis County (Mineral, Morton, Big Bottom and Mossyrock) is designated a HPSA, as well as West Lewis County (Centralia, Chehalis, Winlock, Pe Ell) for low income and migrant/homeless individuals only.

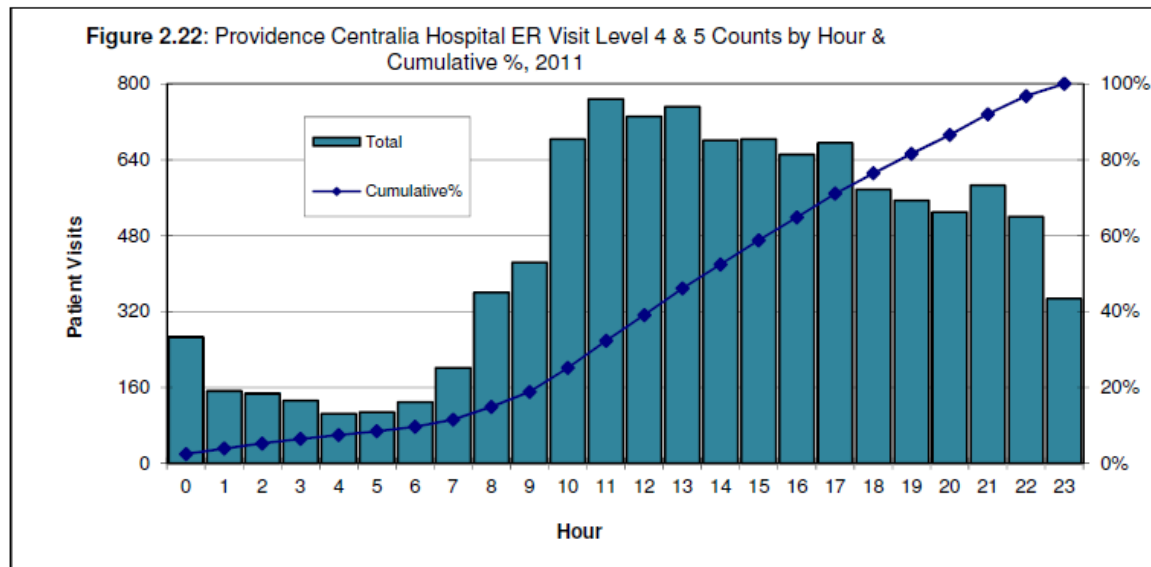
Emergency Room Utilization

Emergency room utilization data was taken from the Valley View Health Center Needs Assessment completed in April 2012. Emergency room utilization for Providence Centralia Hospital decreased steadily between 2008 and 2011.

Figure 2.21: Providence Centralia Hospital Emergency Care (EC) Total Visits by Month, 2008 - 2011



Patients that are non-emergent are more likely to use the emergency room between the hours of 10 am and 11 pm. In 2011, the ER was utilized for non-emergent care needs more often on Saturdays (31 patients), Sundays (32 patients), and Mondays (32 patients) than on other days of the week.



Adult Dental Care

Dental care can include visiting a dentist, dental hygienist or dental clinic.

Table A15. Percent of adults who received dental care within the past year (2012)

	Lewis County	Washington
Dental Care	60.0%	67.0%

Source: Behavioral Risk Factor Surveillance System, 2012

- Almost two-thirds of Lewis County residents (60%) received dental care within the past year, which is comparable to the Washington state rate (67.05).

Behavioral Risk Factors

Risk factors in this category include behaviors that are believed to cause, or to be contributing factors to most accidents, injuries, disease, and death during youth and adolescence as well as significant morbidity and mortality in later life.

Overweight and Obesity

In adults, obesity is considered to be a body mass index (BMI) that is greater than or equal to 30 kg/m². Overweight is a BMI between 25 kg/m² and less than 30 kg/m².²

- Forty percent of adults in Lewis County are obese, which is above the Healthy People 2020 objective of reducing the proportion of adults who are obese to less than 30.5 percent.

² Estimations of the prevalence of obesity in this report are based on BMI determined from self-reported weight and height. Obese youth include students in grade 10 who are in the top 5th percentile of the body mass index for age range, based on sex and age specific reference data from the 2000 CDC growth charts. Overweight youth include students in grade 10 who are at or above the 85th percentile but less than 95th percentile for body mass index based on sex and age specific reference data from the 2000 CDC growth charts.

- Lewis County residents were more likely to be obese compared to Washington state (27.5%) and the U.S. (27.8%).
- Lewis County's rate of overweight 10th graders (18.8 percent) is significantly higher than the state rate of 12.9 percent. When the overweight and obesity categories are combined, one out of three (32.2 percent) 10th graders was overweight or obese, and this is significantly higher than the state rate of 22.9 percent.
- There was a significant increasing trend for both obesity and overweight among Lewis County 10th graders between the years 2002 and 2012.

Table A16. Percent of residents who are obese or overweight (2012)

	Lewis County	Washington
Adult Obesity [†]	40.0%*	27.5%
Youth Obesity ^β	13.4%	10.0%
Youth Overweight ^β	18.8%*	12.9%

[†]Source: Behavioral Risk Factor Surveillance System, 2011-2012, 2-year estimate.

^βSource: Health Youth Survey, 2012, Grade 10

*Significantly higher than WA state.

Physical Activity

The recommended level of aerobic physical activity for adults is defined as either regular moderate physical activity (30 minutes a day, 5 times a week) or regular vigorous physical activity (20 minutes a day, 3 times a week). The recommended frequency for muscle strengthening activity for adults is at least twice a week.

Youth physical activity is based on the percent of 10th graders who were physically active for five days per week for a total of at least 60 minutes per day. The Dietary Guidelines for America and the National Association for Sports and Physical Education recommend that children and adolescents participate in at least 60 minutes of physical activity most days of the week, preferably daily.

Table A17. Percent of residents who met physical activity recommendations (2012)

	Lewis County	Washington
Adults [†]	66.0%	69.0%
Youth ^β	62.0%*	51.4%

Source: Behavioral Risk Factor Surveillance System, 2012.

Source: Health Youth Survey, 2012, Grade 10

*Significantly higher than WA state.

- Two out of every three (66.0%) adults in Lewis County met both the aerobic and muscle strengthening recommendations for physical activity.
- In 2012, 62.0% of 10th graders in Lewis County met the recommendations for 60 minutes of physical activity daily.

Tobacco Use

Adult tobacco use is based on the percent of adults who currently smoke every day or most days, and have smoked at least 100 cigarettes in their lifetime.

Youth smoking is based on the percent of 10th graders who self reported they smoked cigarettes during the past 30 days.

- In Lewis County, one out of every four adults (25.0%) smokes, compared to 17.0 percent statewide.
- Lewis County is above the Healthy People 2020 target of reducing the percent of adults who smoke to 12.0 percent. The current 2011 U.S. rate for adult smokers is 19.0 percent.
- In 2012, 10.1 percent of 10th graders in Lewis County smoked cigarettes in the past 30 days.

Table A18. Percent of residents who smoke

	Lewis County	Washington
Adults [†]	25.0%*	17.0%
Youth [‡]	10.1%	9.5%

[†]Source: Behavioral Risk Factor Surveillance System, 2011-2012, 2-year estimate.

[‡]Source: Healthy Youth Survey, 2012, Grade 10

*Significantly higher than WA state.

Alcohol Use

Binge drinking reflects the percent of adults that report binge drinking in the past 30 days. Binge drinking is defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days.

Youth alcohol use is based on the percent of 10th graders who self-reported having had an alcoholic drink during the past 30 days. A drink is defined as a glass, can or bottle of alcohol (beer, wine, wine coolers, hard liquor).

Youth drug use is based on the percent of 10th graders who self reported they used any illegal drugs in the past 30 days, not including tobacco, alcohol or marijuana.

- The percent of Lewis County adults who reported binge drinking in the past 30 days (12.0%) is comparable to Washington state (18.0%) and the U.S. (18.3%).
- In 2012, 24.3 percent of 10th graders in Lewis County had an alcoholic drink in the past 30 days.
- In 2012, 6.3 percent of Lewis County 10th graders reported using illegal drugs in the past 30 days.

Table A19. Percent of residents who report alcohol and drug use

	Lewis County	Washington
Adult Binge Drinking [†]	12.0%	18.0%
Youth Alcohol Use [‡]	24.3%	23.3%
Youth Drug Use [‡]	6.3%	7.3%

[†]Source: Behavioral Risk Factor Surveillance System, 2011-2012, 2-year estimate

[‡]Source: Healthy Youth Survey, 2012, Grade 10

Substance Abuse

Like much of the United States and Washington, Lewis County has seen increases in the use of and harms associated with heroin. Police evidence data over the past decade shows that heroin use is high in Lewis County (See Table A20). The number of first time admission to treatment for prescription opiate and heroin use among Lewis County residents has increased dramatically since 1999 (See Table A21). From 1999 to 2010, the number of residents admitted for heroin treatment increased six times; from 29 residents seeking treatment to 188. The number of deaths involving prescription opiate use has increased over the last decade as well. Lewis County data for 2009-2011 indicate 26 prescription opiate involved deaths, up from 8 in 2000-2002 (Table A22).

Table A20. Police evidence testing positive for prescription opiates and heroin, average annual rate per 100,000

	Rx Opiate		Heroin	
	2001-2002	2011-2012	2001	2012
Lewis County	5.1	68.1	17.4	124.9
Washington State	5.5	16.7	14.5	34.3

Source: Washington State Patrol, Forensic Laboratory Services Bureau, 2001-2012

Table A21. Treatment admissions – heroin primary drug – first time admission to treatment, counts and rate per 100,000

	Rx Opiate			Heroin		
	1999 Count	2010 Count	2010 Rate	1999 Count	2010 Count	2010 Rate
Lewis County	2	87	116.4	29	188	157.9
Washington State	318	4898	73.5	4152	6914	103.7

Source: Methadone maintenance, in-patient, out-patient, WA State Department of Health, Division of Behavioral Health and Recovery, TARGET Data, 1999 and 2010

Table A22. Prescription opiate related deaths, counts and rate per 100,000

	2000-2002		2003-2005		2006-2008		2009-2011	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Lewis County	8	4.0	16	8.0	19	9.0	26	10.7
Washington State	931	5.1	1409	7.3	1839	9.4	1821	8.7

Source: Center for Health Statistics, Washington State Department of Health, 2000-2011

The following table identifies risk factors associated with substance abuse for Lewis County residents compared to Washington state residents.

Table A23. Risk factors for substance abuse (2011)

	Lewis County	Washington
Alcohol- or Drug-Related Deaths, per 100 deaths	11.9	12.7
Clients of state-funded alcohol or drug services (age 18+) per 1,000 adults	15.0	13.0
Clients of state-funded alcohol or drug services (age 10-17) per 1,000 adolescents	18.9	11.4
Arrests (age 18+), Alcohol Related, per 1,000 adults	5.2*	9.5
Arrests (age 18+), Drug Law Violation, per 1,000 adults	7.7	4.6
Arrests (age 10-17), Alcohol Related, per 1,000 adolescents	4.8	3.9
Arrests (age 10-17), Drug Law Violation, per 1,000 adolescents	6.6	5.1

Source: WA State Department of Social and Health Services Risk and Protection Profile for Substance Abuse Prevention, 2012.

*Significantly lower than WA state.

- The risk of alcohol related arrests for adults in Lewis County is significantly lower than that in Washington state.
- The risk of drug related arrests for adults in Lewis County is 7.7 per 1,000 adults, and is comparable to the Washington state rate.
- There were no significant differences between Lewis County and Washington state on any of the other risk factors identified.

Environmental Health Indicators

The physical environment directly impacts health and quality of life. Clean air, water, and safely prepared food are essential to physical health. Exposure to environmental substances, such as lead or hazardous waste, increases risk for preventable disease. Unintentional home, workplace, or recreational injuries affect all age groups and may result in premature disability or mortality.

Healthy Air Days

This indicator reports the percentage of days the air quality in Lewis County has met the Washington State Department of Ecology 24-hour average healthy air goal of 20 µg/m³ for particulate matter 2.5

microns in diameter or less (PM_{2.5}). This indicator is relevant because poor air quality contributes to respiratory issues and overall poor health.

Fine particulate matter (PM_{2.5}) is defined as particles of air pollutants (dust, dirt, soot, smoke and liquid droplets) with an aerodynamic diameter less than 2.5 micrometers. Exposure to PM_{2.5} is linked to a variety of health effects, including: decreased lung function, chronic bronchitis, asthmas, and other adverse pulmonary effects.³ Those at risk from breathing are people with heart and lung disease, diabetes, and infants and children. The Department of Ecology has established a daily healthy air goal of 20 µg/m³.

Table A24. Air Pollution – Particulate Matter (2012)

Lewis County	
Air Pollution – Fine Particulate Matter	99.0%

Source: Washington Tracking Network, 2012

Social and Mental Health

This data category represents social and mental factors and conditions, which directly or indirectly influence overall health status and individual and community quality of life.

Reported Mental Health

Poor mental health is based on the proportion of adults in the BRFSS survey who reported having poor mental health (which includes stress, depression, and problems with emotions) for 14 or more days in the past 30 days.

- Fourteen percent of Lewis County adults report 14 or more days of poor mental health in the past month.

Table A25. Percent of adults with poor mental health on 14 or more days in the past 30 days (2011-2012)

	Lewis County	Washington
Adults with Poor Mental Health	14.0%	12.0%

Source: Behavioral Risk Factor Surveillance System, 2011-2012, 2-year estimate

Youth depression is based on the percent of youth in 10th grade who reported that they felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some of their usual activities during the past year.

- In 2012, 34.9 percent of 10th graders in Lewis County felt so sad or hopeless for two weeks or more that they stopped doing their usual activities.
- Female students (44.5%) were significantly more likely to be depressed than males (24.6%).

³ Pope CA, Dockery DW, Schwartz J. Review of epidemiological evidence of health-effects of particulate air-pollution. *Inhal Toxicology*. 1995;7(1):1-18.

Table A26. Percent of youth reporting depression (2012)

	Lewis County	Washington
Youth Depression	34.9%	30.9%

Source: Healthy Youth Survey, 2012, Grade 10

Violent Crime

Violent crime is a crime in which the offender uses or threatens to use violent force upon the victim. Violent crimes include murder and non-negligent manslaughter, rape, robbery and assault.

Table A27. Violent crime rate per 1,000 (2012)

	Lewis County	Washington
Violent Crime	1.9*	2.9

Source: WA Association of Sheriffs and Police Chiefs, Uniform Crime Report, 2012

*Significantly lower than WA state

- Lewis County has a rate of 1.9 violent crimes per 1,000 persons. This is lower than the state rate of 2.9 violent crimes per 1000 and the U.S. Rate of 4.0 per 1,000⁴.
- The cities of Centralia and Winlock had the highest rate of violent crime in all of Lewis County (6.6 and 4.5 per 1000 residents, respectively). See Table A28.

Table A28. Violent crime rate by police department per 1,000 population (2012)

Rank	Police Department	Violent Crime Rate
1	Centralia	6.6
2	Winlock	4.5
3	Morton	3.6
4	Chehalis	3.4
5	Napavine	0.6

Source: WA Association of Sheriffs and Police Chiefs, Uniform Crime Report, 2012

Domestic Violence Offenses

Domestic violence includes any violence of one family member against another family member. Family can include spouses, former spouses, parents who have children in common regardless of marital status, adults who live in the same household, as well as parents and their children. Offenses are not arrests but incidents reported.

⁴ U.S. Department of Justice Federal Bureau of Investigation, Crime in the United States, 2010

Table A29. Domestic violence offense rate per 1,000 (2011)

	Lewis County	Washington
Domestic Violence Offenses	6.4*	5.7

Source: WA State Department of Social and Health Services Risk and Protection Profile for Substance Abuse Prevention, 2012

*Significantly higher than WA state.

- Lewis County has a significantly higher rate of domestic violence offences (6.4 per 1,000) compared with Washington state (5.7 per 1,000).
- Rates for domestic violence offenses in the county have decreased significantly over the last ten years from a rate of 7.8 in 2002.
- Since, 2002, domestic violence offence rates for Lewis County have been trending downwards.

Child Abuse

Child abuse is measured as the number of children, birth-17 years of age, who were reported to Child Protective Services (CPS) as suspected victims of abuse or neglect and were accepted for further action. The rate is reported per 1,000 children (aged birth-17). Children are counted more than once if they are reported as a suspected victim more than once during the year.

Table A30. Child abuse rate per 1,000 (2011)

	Lewis County	Washington
Child Abuse	46.5*	33.7

Source: WA State Department of Social and Health Services Risk and Protection Profile for Substance Abuse Prevention, 2012

*Significantly higher than WA state.

- Lewis County has a significantly higher rate for victims of child abuse and neglect in accepted referrals (46.5 per 1,000) compared with Washington state (33.7 per 1,000).

Maternal and Child Health

This is a set of programs and policies focusing on birth data and outcomes as well as mortality data for infants and children. Because maternal care is correlated with birth outcomes, measures of maternal access to, or utilization of, care is included. One of the most significant areas for monitoring and comparison relates to the health of a vulnerable population: infants and children. Births to teen mothers are a critical indicator of increased risk for both mother and child.

Infant Mortality

Infant mortality is the death of an infant less than one year of age (0 to 364 days). Infant mortality is defined as the number of infant deaths per 1,000 live births. Due to the small number of deaths (less than 5 cases in some single years), five-year rolling rates were used in order to examine infant mortality.

- Lewis County has a relatively low infant mortality rate overall at 2.6 infant deaths per 1,000 births from 2008-2012, compared with 4.9 per 1,000 births in Washington overall.

Table A31. Infant mortality rate per 1,000 live births

	Count	Rate
Lewis County	12	2.6
Washington State	2,146	4.9

Source: Death Certificate Database, WA State Department of Health, Center for Health Statistics, 2008-2012, 5-year estimates

Low Birth Weight

Low birth weight is the percent of live births for which the infant weighed less than 2,500 grams (5 lbs. 8oz.) at birth. The rate includes all births in the county. Due to the small numbers, five-year rates were used.

- With 5.8% of births weighing in at less than 2,500 grams from 2008-2012, Lewis County does not differ from the state average at 6.2%. The rates have remained similar and fairly constant over the past decade.
- Lewis County meets the Healthy People 2020 objective of less than 7.8 percent of all births to be of low birth weight.

Table A32. Percentage of births less than 2500 grams

	Lewis County	Washington
Lewis County	5.8%	6.2%

Source: Birth Certificate Database, WA State Department of Health, Center for Health Statistics, 2008-2012, 5-year estimates

First Trimester Prenatal Care

First trimester prenatal care is the percent of women giving birth who received prenatal care starting in the first trimester of pregnancy. Five-year rates were used.

- In Lewis County, 81.5% of women giving birth in 2008-2012 had their first visit for prenatal care in their first trimester. This rate has remained relatively stable in Lewis County over the last decade.
- Lewis County's rate is comparable to Washington state (79.1%).
- The National Healthy People 2020 goal is for 77.95 of pregnant woman to begin prenatal care in their first trimester of pregnancy.

Table A33. Percentage of mothers who initiated prenatal care in the first trimester

	Lewis County	Washington
Prenatal Care in First Trimester	81.5%	79.1%

Source: Birth Certificate Database, WA State Department of Health, Center for Health Statistics, 2008-2012, 5-year estimates

Teen Births

The teen birth rate is based on the number of births per 1000 young women age 15-17 per the total population of young women age 15-17 years. This is different than pregnancy rate which includes abortions and miscarriages plus births.

- Lewis County has a higher teen birth rate than Washington. This rate (18.5 births per 1,000) has remained steady since 2001 while teen births have been decreasing nationally and in Washington state.

Table A34. Birth to mothers age 15-17 per 1,000 women age 15-17

	Lewis County	Washington
Teen Births	18.5*	14.1

Source: Birth Certificate Database, WA State Department of Health, Center for Health Statistics, 2007-2011, 5-year estimates

*Significantly higher than WA State

Risk Behaviors during Pregnancy

Although Lewis County fares well overall in the areas of prenatal care and birth outcomes (rating at or better than state outcomes and national goals), the county remains high in risk factors for poor birth outcomes, specifically in teen births, births to unmarried mothers, and the percent of mothers who smoke during pregnancy.

- Lewis County has a high percentage of pregnant women who smoke during pregnancy, especially when compared to the state average. In 2012, more than 17% of births in Lewis County were to women who smoked during pregnancy compared to 8.7 percent statewide.
- The percentage of births to unmarried mothers in Lewis County was 9.4 to 14.1 points above the WA state percentage from years 2008 to 2012.

Table A35. Percent of mothers who smoked during pregnancy (2012)

	Lewis County	Washington
Mothers who smoked during pregnancy	17.7*	8.7

Source: Birth Certificate Database, WA State Department of Health, Center for Health Statistics, 2012

*Significantly higher than WA State

Table A36. Percent of birth to unmarried mothers (2012)

	Lewis County	Washington
Births to unmarried mothers	46.5*	32.4

Source: Birth Certificate Database, WA State Department of Health, Center for Health Statistics, 2012

*Significantly higher than WA State

Death, Illness and Injury

Health status in a community is measured in terms of mortality (rates of death within a population) and morbidity (rates of the incidence and prevalence of disease). Mortality may be represented by crude

rates or age-adjusted rates; by degree of premature death (Years of Productive Life Lost); and by cause (disease—cancer and non-cancer or injury—intentional, unintentional). Morbidity may be represented by age-adjusted incidence of cancer and chronic disease.

Self Reported Health Status

Self-reported health status is a simple measure of health-related quality of life that has also been related to general happiness and life satisfaction.⁵ This measure is based on survey responses to the Behavioral Risk Factors Surveillance System question: “In general, would you say that your health is excellent, very good, good, fair, or poor?” The value reported is the percent of adult respondents who rate their health “fair” or “poor”.

- Overall 16.9 percent of individuals identified themselves as having fair or poor health; this is significantly higher than the Washington state rate of 13.7%.

Table A37. Percent of adults rating their health “Fair” or “Poor”

	Lewis County	Washington
Fair or Poor Self-Rated Health	16.9%*	13.7%

Source: Behavioral Risk Factor Surveillance System, 2006-2012

*Significantly higher than WA state

Life Expectancy

Life expectancy summarizes the mortality experience of a population by estimating the average number of years a person can expect to live if the age-specific death rates of the population remain unchanged.

- Average life expectancy at birth in Lewis County is 77.8 years. Substantial differences in life expectancy are evident between men and women, with women outliving men by an average of 4.7 years (75.5 years for males; 80.3 years for females).
- Overall, the estimated life expectancy of Lewis County residents was approximately 2.4 years lower than the state average (80.2) and 0.9 years lower than the US average (78.7)⁶
- Average life expectancy at age 65 in Lewis County is 18.4 years; 17.1 years for males and 18.9 years for females.

Table A38. Life expectancy (2012)

	Lewis County	Washington
Life Expectancy at Birth	77.8*	80.2
Life Expectancy at Age 65	18.4*	19.8

Source: Death Certificate Database, WA State Dept of Health Center for Health Statistics, 2012

*Significantly lower than WA state

⁵ Siahpush M, Spittal M, Singh GK. Happiness and life satisfaction prospectively predict self-rated health, physical health, and the presence of limiting, long-term health conditions. Am J Health Promot 2008; 23:18-26.

⁶ Hoyert DL, Xu JQ. Deaths; Preliminary data for 2011. National vital statistics reports; vol 61 no 6. Hyattsville, MD; National center for Health Statistics. 2012.

Years of Healthy Life expected at age 20

Years of healthy life is a global measure of a population's health closely related to life expectancy. However, it also considers health-related quality of life. Life expectancy for people of a particular age is the number of additional years they can expect to live. Years of healthy life is the number of those additional expected years of life that will be free of physically or mentally debilitating conditions. This indicator looks at years of healthy life a Lewis County resident can expect at the age of 20.

Table A39. Years of healthy life expected at age 20

	Lewis County	Washington
Years of healthy life	47	50

Source: 1) Death Certificate Data: Washington State Dept of Health Center for Health Statistics, 2011-2012. 2) Behavioral Risk Factor Surveillance System, 2011-2012, 2-year estimate

Mortality

- The top ten causes for mortality were responsible for 82.6 percent of all deaths in 2011. More than half of all deaths (54.8%) in Lewis County were caused by heart disease and cancer.
- Lewis County's mortality rate for heart disease is significantly higher than that reported for Washington state (246.8 vs. 196.8 per 100,000, respectively).
- Lewis County's mortality rate for cancer is above the Healthy People 2020 objective of 160.6 cancer deaths per 100,000.

Table A40. Top ten leading causes of death (2011)

Cause of Death	Number of deaths	Percent of total deaths	2011 Lewis County age-adjusted death rate per 100,000	2011 WA State age-adjusted death rate per 100,000
All Causes	830	100.0%	806.3*	694.5
Heart Disease	261	31.4%	246.8*	196.8
Cancer	194	23.4%	185.6	166.93
Alzheimer's Disease	64	7.7%	59.0	44.0
Chronic Lower Respiratory Disease	60	7.2%	58.8	44.7
Accidents	48	5.8%	53.5	37.9
Diabetes	21	2.5%	21.1	22.43
Influenza/Pneumonia	13	1.6%	12.9	10.2
Suicide	9	1.1%	10.2	14.0
Parkinson's Disease	9	1.1%	9.0	8.9
Chronic Liver Disease and Cirrhosis	7	0.8%	6.8	10.1

Source: Death Certificate Database, WA State Dept of Health Center for Health Statistics, 2011 age-adjusted per 100,000

Cancer Incidence

Cancer incidence represents new diagnoses. Rates are age-adjusted per 100,000 population.

Table A41. Cancer incidence per 100,000 (2010)

	Lewis County	Washington
All Cancer Incidence	461.8*	528.6
Breast Cancer Incidence (females)	129.9*	169.6
Colorectal Cancer Incidence	38.8	39.6
Lung Cancer Incidence	64.2	62.5

Source: Cancer Registry, WA State Department of Health, 2010. Age-adjusted rates.

*Significantly lower than WA state.

Table A42. Cancer incidence by gender per 100,000 (2007-2011)

	Cases	Rate	95% CI
Males	1,088	469.3*	441.3-499.0
Females	1,135	460.4*	433.0-489.3
Total	2,224	461.8*	442.3-482.0

Source: Cancer Registry, WA State Department of Health, 2007-2011. Age-adjusted rates.

*Significantly lower than WA state for males.

- From 2007-2011, 2,224 new cases of cancer were diagnosed in Lewis County.
- The age-adjusted rate of new cases of cancer was significantly lower in Lewis County (461.8 per 100,000) than Washington state's (528.6 per 100,000).
- Males in the county had significantly lower rates of cancer incidence cases (469.3 per 100,000) than males statewide (567.6 per 100,000).
- Females in the county had significantly lower rates of cancer incidence cases (460.4 per 100,000) than females statewide (504.8 per 100,000).

Diabetes

The prevalence of diagnosed diabetes in Lewis County is based on the 2011-2012 BRFSS survey where adult respondents indicated if they have ever been told by a physician that they have diabetes.

Table A43. Diabetes prevalence (2011-2012)

	Lewis County	Washington
Adults with Diabetes	8.0%	8.0%

Source: Behavioral Risk Factor Surveillance System, 2011-2012, 2-year estimate.

- Eight percent of adults reported ever being told by a physician that they had diabetes, which is comparable to the Washington state rate (8.0%) and the U.S. (10.0%).

Communicable Diseases

Chlamydia, Gonorrhea, and HIV are communicable disease that can be transmitted from one individual to another through sexual contact. All are reportable conditions in Washington state.

Table A44. Sexually transmitted disease incidence rates per 100,000 (2012)

	Lewis County	Washington
Chlamydia [†]	305.4	360.8
Gonorrhea [†]	15.7	48.1
HIV [§]	Too small to estimate	7.5

[†] Source: Public Health Information Management System – Sexually Transmitted Diseases, 2012, per 100,000

[§] Source: HIV/AIDS Surveillance Reports, WA State Department of Health, 2012, per 100,000

Chlamydia

- In 2012, there were 233 cases of Chlamydia reported in Lewis County. The county had a lower rate of Chlamydia (305.4 per 100,000) than the state (360.8 per 100,000).
- Almost three quarters of the cases (72.6%) occurred among those ages 15-24. The greatest percentage of Chlamydia cases was among those 20-24 (38.6%), followed by 15-19 (34.1%).
- Females had a significantly higher rate of Chlamydia (501.2 per 100,000) compared to males (110.0 per 100,000).
- Chlamydia has been steadily increasing in Lewis County for the past several years, which may be due to increased testing.

Gonorrhea

- In 2012, there were 12 cases of gonorrhea reported in Lewis County. The county's rate is lower than Washington state's rate, which was 48.1 cases per 100,000 in 2012.

HIV

- In 2012, there was one newly diagnosed case of HIV disease in Lewis County.
- As of December 31, 2012, there were 11 people living with HIV and 23 people living with AIDS – a total prevalence of 44.3 per 100,000 people in Lewis County living with HIV Disease.

Immunization

In Washington State, all children entering kindergarten are required to be vaccinated against measles, mumps, rubella, diphtheria, tetanus, and pertussis, Hepatitis B, polio and chickenpox. Kindergarten enrollees are up-to-date for each vaccine requirement if they have received all the doses required for school entry in Lewis County.

Table A45. Percent of kindergarten students with complete immunizations (2012-2013)

	Lewis County	Washington
Kindergarten Enrollees with Complete Immunizations	90.1%	85.6%

Source: School Immunization Data, Washington State Department of Health Office of Immunization and Child Profile, 2012-13

- The percentage of students in Lewis County entering kindergarten who were fully immunized has increased over the past two years – 90.1 percent for the 2012-2013 school year and 87.2 percent for the previous year.
- Countywide, 0.15 percent of Kindergarten enrollees had a medical exemption for vaccination and another 3.1 percent claimed a philosophical or religious exemption.
- The Healthy People 2020 objective is for 95 percent or greater of Kindergarten enrollees to be immunized on schedule.
- For Lewis County adults aged 18 years and older, twenty seven percent reported receiving a flu shot in the last year (BRFSS, 2011-2012, 2-year estimate). The Healthy People 2020 goal is to increase the percentage of adults aged 18 to 64 years who are vaccinated annually against seasonal influenza to 80 percent.

Data Collection Methods and Data Sources

Selection of Health Indicators

Health indicators refer to quantitative data from secondary data sources. Data availability was the primary driver to determine which specific measures were included in this report. Thus, important health concerns may have been omitted because reliable data were not available. Health indicators used in the CHSA were chosen with the input of community stakeholders.

We applied the following criteria to a long list of possible health indicators:

1. Indicator accurately measures what it is designed to measure.
2. Availability of high-quality data that is statistically sound (i.e. large enough sample size, frequency of collecting / reporting)
3. Indicator is linked to the strategic plan, LCCHIP vision statement, accreditation, policy, or emerging issues of Lewis County's core partners.
4. Indicators that will allow for trends and comparisons (historically collected).
5. Indicator is actionable by MAPP coalition.
6. Indicator is available at the national, state and county level. (For comparisons to be made)
7. Indicator was raised during the qualitative data collection/assessment as a top concern of importance to the community.
8. Indicator is included in the Robert Wood Johnson Foundation County Health Rankings.
9. Indicator is included in Healthy People 2020.

Calculating and Interpreting Rates

Rates

Most health data are reported as proportions (%). In other cases, we use rates to compare risk between groups. A rate converts a count of events (e.g., number of births per year) in a target population to a ratio that represents the number of same events in a standard population. This removes the variability associated with the size of the sample. Each rate has its own standard denominator that is specified (e.g., 1,000 women, 100,000 residents, etc.) for that rate.

Age-Adjustment

All age-adjusted mortality and disease rates in this report are adjusted to the 2000 U.S. population. The risk of death and disease is affected primarily by age. As a population ages, its collective risk of death and disease increases. As a result, a population with a higher proportion of older residents will have higher crude death and disease rates. To control for differences in the age compositions of the communities being compared, death and disease rates are age-adjusted. This aids in making comparisons across populations.

Analysis of Trends

In this report we sometimes use three-year or five-year averages to examine time trends. This method involves grouping years of data sequentially to create overlapping time periods. The effect of this method is to smooth out yearly fluctuations in the data due to small numbers by making the rates more stable. To test for significance of trends, Joinpoint Regression models was used.

Confidence Intervals

Lewis County comparisons to Washington state and comparisons among subpopulations were calculated using 95 percent confidence intervals. Confidence intervals indicate the margin of error for the value estimated by describing an upper and lower limit of an estimate. Using confidence Intervals is a conservative approach to determine if differences among groups are statistically significant. If the confidence interval of two different estimates do not overlap, we can most often conclude that the difference is statistically significant and not due to chance.

Data Sources

This attachment includes both secondary data sources. Primary data consists of new information gathered directly from the community through surveys, interviews, or focus groups. These sources and their limitations are briefly described below.

Decennial United States Census

The census, unlike other surveys, includes responses from the entire population, not just a representative sample. The census collects limited demographic information (age, sex, race, ethnicity, family and housing).

Washington State Office of Financial Management

The Office of Financial Management produces annual population estimates based on Census data by age, gender and race at the state and county levels.

Washington State Office of the Superintendent of Public Instruction

School Districts provide student information to The Office of the Superintendent of Public Instruction through the Comprehensive Education Data and Research System (CEDARS) - an online system that captures information regarding which students completed school via graduation and transferred out of a school or dropped out. The adjusted cohort graduation results presented in this report are calculated using the methodologies mandated under the Non-Regulatory Guidance issued by the No Child Left Behind for all states that began with the school year 2010-11. The adjusted cohort methodology follows a single cohort of students for four years based on when they first entered ninth grade. The cohort is “adjusted” by adding in students that transfer into the school and by subtracting students who transfer out of the school.

Bureau of Labor Statistics and Local Area Unemployment Statistics program

The Local Area Unemployment Statistics program is a Federal-State cooperative effort in which estimates of unemployment are prepared.

Washington State Association of Sheriff and Police Chiefs

The Crime in Washington report is compiled from monthly reports submitted by individual law enforcement agencies. These data have some limitations, specifically that the amount and type of crime reported may differ due to reporting practices, law enforcement policies, population characteristics and attitudes.

Washington State Department of Social and Health Services – Risk and Protection Profile

Risk and Protection Profile for Substance Abuse Prevention is produced annually at the State, county and School District Levels. This includes indicators of child, family, adult and community well-being.

Death Certificate Data

For death certificates, funeral directors collect information about the deceased person, including race and ethnicity, from an informant who is usually a family member or close personal friend of the deceased person. A certifying physician, medical examiner, or coroner generally provides cause-of-death information. Cause-of-death data come from underlying causes of death and not immediate causes. For example, if a person dies of a complication or metastasis of breast cancer, breast cancer would be the underlying cause of death. Data are compiled by the Washington State Department of Health, Center for Health Statistics.

Healthy Youth Survey

This school-based survey is administered in even numbered years throughout Washington state. The survey includes grades 6, 8, 10 and 12. Topics include health risk behaviors, family and community risk and protective factors, and current health conditions. Like other survey data, it is subject to social desirability bias and recall error.

Behavioral Risk Factor Surveillance System (BRFSS)

The Behavioral Risk Factor Surveillance System is an ongoing voluntary and anonymous national telephone survey conducted by the Centers for Disease Control and Prevention. The survey includes a random sample of adults age 18 years and older and provides state- and county-level data for each calendar year. Topics are wide ranging and include disease prevalence, health care access and use, health behaviors and demographics. Data are weighted to represent the age, race and ethnicity, and gender distributions of adults in Lewis County. Beginning in 2011, new methods were used in order to make the BRFSS results more representative of the population. First, the sample includes respondents who have cell phones but no landline; this group was not included in previous surveys. Second, the data were weighted by various demographic characteristics to compensate for underrepresentation of certain demographic subgroups. Both these changes should improve the accuracy of the BRFSS results. Because of these methodological changes, however, the BRFSS data values between 2010 and 2011 are not comparable.

Washington State Department of Health – Cancer Registry

The Cancer Registry includes all newly diagnosed cases of cancer by type among Washington state residents.

Birth Certificate Data

The birth certificate system contains records on all births occurring in the state and nearly all births to residents of the state. Information is gathered about the mother, the father, the pregnancy, and the child. The information is collected in hospitals and birth centers from worksheets completed by parents or medical staff, from medical charts, or by a combination of these sources. Midwives and family members who deliver a baby complete the birth certificate and collect the information from a parent or from their records.

Public Health Issue Management System (PHIMS) – WA State Department of Health

PHIMS is Washington state's standardized internet reporting system for reportable conditions data. PHIMS provides all local public health agencies a way to collect, manage and report notifiable conditions, disease outbreaks and disease investigations.

Healthy People 2020

Sponsored by the U.S. Department of Health and Human Services, Healthy People 2020 are a set of science-based, measurable disease prevention and health promotion objectives to be achieved by 2020. Individuals, groups, and organizations are encouraged to use Healthy People 2020 to monitor community health improvement over time.

School Immunization Data

The Immunization and Child Profile Office collects data and produces reports on the immunization status of students who attend public and private schools in Washington state. Per state law, all schools are required to send the Department their annual School Immunization Status Report by November 1st for that school year. Immunization status is parent-reported and is not health care provider verified. Therefore, numbers might be under or overestimates as parents might not recall or know the exact immunization status for their child.

Attachment B: 2014 Lewis County Community Health Survey

2014 Lewis County Community Health Survey

Q1 How satisfied are you with the following community factors in Lewis County:

Answered: 569 Skipped: 1

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	Don't know	Total
The overall quality of life (Consider your sense of safety, well-being, participation in community life, etc.)	22.93% 130	53.44% 303	14.11% 80	7.23% 41	0.88% 5	1.41% 8	567
The health care system (Consider access, cost, availability, quality, options in health care, etc.)	9.45% 53	37.08% 208	21.93% 123	22.99% 129	6.42% 36	2.14% 12	561
The natural environment (Consider air, water, and trash)	24.20% 136	50.53% 284	13.52% 76	8.36% 47	2.49% 14	0.89% 5	562
The built environment (Consider parks, sidewalks, trails, bike lanes, and roads)	8.78% 49	37.28% 208	25.45% 142	20.61% 115	5.91% 33	1.97% 11	558
The economic opportunities (Consider job availability, job training, career growth, amount of locally-owned businesses, affordable housing, reasonable commute, etc.)	3.76% 21	15.21% 85	22.90% 128	35.96% 201	20.04% 112	2.15% 12	559
Community support for individuals or families during times of need (Consider neighbors, support groups, faith community, agencies and organizations)	17.32% 97	45.00% 252	23.21% 130	9.29% 52	2.32% 13	2.86% 16	560

Q2 When it comes to living in Lewis County, please indicate your level of agreement with each of the following statements:

Answered: 562 Skipped: 8

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know	Total
It is a good place to raise a family (Consider school quality, day care, after school programs, recreation, etc.).	18.43% 103	49.73% 278	17.35% 97	9.66% 54	1.97% 11	2.86% 16	559
It is a good place to grow old (Consider elder-friendly housing, transportation to medical services, churches, shopping, social support, services for the elderly living alone, etc.).	14.64% 82	44.11% 247	21.07% 118	14.64% 82	2.86% 16	2.68% 15	560
It is a safe place to live (Consider safety in the home, the workplace, schools, playgrounds, parks, at stores. Do neighbors look out for one another?).	16.46% 91	52.08% 288	18.63% 103	9.40% 52	2.35% 13	1.08% 6	553
Residents feel that they can make the community a better place to live.	14.21% 79	46.94% 261	26.62% 148	8.27% 46	1.80% 10	2.16% 12	556

Q3 From the following lists, what do you think are the THREE MOST IMPORTANT factors for a "Healthy community?" (Please select only three.)

Answered: 557 Skipped: 13

Answer Choices	Responses	
Arts and cultural events	3.77%	21
Good place to raise children	29.26%	163
Low Crime/safe neighborhoods	45.42%	253
Low level of child abuse	6.82%	38
Good Schools	39.50%	220
Access to health care	26.75%	149
Access to healthy food	9.69%	54
Parks and recreational opportunities	9.69%	54
Clean environment	10.95%	61
Community involvement	13.82%	77
Affordable housing	17.24%	96
Good jobs and healthy economy	52.60%	293
Healthy behaviors and lifestyles	16.70%	93
Low death and disease rates	2.69%	15
Low infant deaths	1.26%	7
Religious or spiritual values	13.82%	77
Tolerances for diversity	8.26%	46
Other (please specify)	3.23%	18
Total Respondents: 557		

**Q4 From the following list, what do you think are the THREE MOST IMPORTANT "health problems" in Lewis County?
(Please select only three.)**

Answered: 553 Skipped: 17

Answer Choices	Responses	
Alcohol/Drug abuse	76.31%	422
Bullying	5.06%	28
Cancer	11.93%	66
Child abuse/neglect	19.35%	107
Crime	10.67%	59
Dental problems	6.15%	34
Diabetes	8.50%	47
Domestic violence	13.74%	76
Firearm-related injuries	1.27%	7
Farming-related injuries	6.72%	4
Heart disease and stroke	7.59%	42
High blood pressure	6.33%	35
Housing that is inadequate, unsafe or unaffordable	18.66%	100
Homelessness	9.58%	53
Hunger	5.06%	28
Infant death	6.18%	1
Infectious diseases	6.90%	5
Issues and conditions of aging	6.87%	38
Lack of access to health care	10.13%	56
Mental health issues	30.38%	168
Motor vehicle crash injuries	2.89%	16
Obesity	26.76%	148
Respiratory/lung disease/asthma	1.99%	11
Sexually transmitted diseases (STDs) and HIV/AIDS	2.71%	15
Suicide	6.96%	5
Teenage pregnancy	7.78%	43
Violence (includes assault, homicide and rape/sexual assault)	8.14%	45
Other (please specify)	4.52%	25
Total Respondents: 553		

Q5 Out of the three "health problems" you selected, which ONE would you most like to see worked on?

Answered: 465 Skipped: 105

Q6 From the following list, what do you think are the THREE MOST IMPORTANT "risky behaviors" in Lewis County? (Those behaviors that have the greatest impact on overall community health.)

Answered: 550 Skipped: 20

Answer Choices	Responses	
Alcohol/drug use	87.64%	482
Dropping out of school	37.27%	205
Inactivity	20.73%	114
Overeating	12.91%	71
Not getting "shots" to prevent disease	6.36%	35
Not using birth control	14.91%	82
Not using seat belts/child safety seats	4.55%	25
Poor diet	22.55%	124
Racism and intolerance	8.91%	49
Texting/cell phone use while driving	32.36%	178
Tobacco use or e-cigarette use	19.64%	108
Unsafe driving	11.27%	62
Unsafe sex	14.00%	77
Unsafe firearm practices	5.45%	30
Other (please specify)	2.73%	15
Total Respondents: 550		

Q7 Out of the three "risky behaviors" you selected, which ONE would you most like to see worked on?

Answered: 471 Skipped: 99

Q8 How would you rate Lewis County as a "healthy community?"

Answered: 554 Skipped: 16

Answer Choices	Responses
Very Healthy	0.90% 5
Healthy	17.33% 96
Somewhat Healthy	56.14% 311
Unhealthy	22.56% 125
Very Unhealthy	3.07% 17
Total	554

Q9 Do you live inside city limits?

Answered: 552 Skipped: 18

Answer Choices	Responses
Yes	39.13% 216
No	59.78% 330
Don't Know	1.09% 6
Total	552

Q10 What is your zipcode (based on where you live)?

Answered: 538 Skipped: 32

Q11 Your gender:

Answered: 536 Skipped: 34

Answer Choices	Responses	
Male	28.54%	153
Female	71.46%	383
Total		536

Q12 Your age:

Answered: 550 Skipped: 20

Answer Choices	Responses	
Under 18	2.18%	12
18-25 years	6.36%	35
26-39 years	18.91%	104
40-54 years	28.91%	159
55-64 years	20.55%	113
65-80 years	16.18%	89
Over 80	6.91%	38
Total		550

Q13 Your marital status:

Answered: 545 Skipped: 25

Answer Choices	Responses	
Married/cohabitating	62.94%	343
Divorced	9.91%	54
Never married	13.39%	73
Separated	2.20%	12
Widowed	9.54%	52
Other (please specify)	2.02%	11
Total		545

Q14 Are you Hispanic or Latino?

Answered: 521 Skipped: 49

Answer Choices	Responses	
Yes	3.45%	18
No	96.55%	503
Total		521

Q15 Which of these groups would you say best represents your race?

Answered: 546 Skipped: 24

Answer Choices	Responses	
White	93.59%	511
Asian	0.18%	1
American Indian or Alaskan Native	2.38%	13
Black or African American	0.00%	0
Native Hawaiian or Other Pacific Islander	0.00%	0
Two or more races	2.75%	15
Some other race (please specify)	2.01%	11
Total Respondents: 546		

Q16 Your highest education level:

Answered: 541 Skipped: 29

Answer Choices	Responses	
Less than high school graduate	6.84%	37
High school diploma	14.97%	81
Some college	27.73%	150
College degree or higher	48.61%	263
Other (please specify)	1.85%	10
Total		541

Q17 Do you have enough money to pay for essentials such as food, clothing, housing and medicine?

Answered: 537 Skipped: 33

Answer Choices	Responses	
Always	70.39%	378
Sometimes	23.28%	125
No	6.33%	34
Total		537

Q18 How would you rate your personal health?

Answered: 538 Skipped: 32

Answer Choices	Responses	
Very Healthy	14.31%	77
Healthy	51.12%	275
Somewhat Healthy	28.62%	154
Unhealthy	5.76%	31
Very Unhealthy	0.19%	1
Total		538

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