

# KITTITAS COUNTY COMMUNITY HEALTH PROFILE

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## About the Report

This report is intended to provide information on a wide range of health and safety issues relevant to Kittitas County. It is hoped that increased awareness of the factors that impact our well-being will empower more of us to work together to promote the overall health of our community.

## Citations

Data sources and other resources are listed at the end of each chapter. Those who wish to obtain a copy of publicly available materials may contact the source or the Kittitas County Health Department for assistance.

## Copying and Obtaining Additional Copies

Please feel free to copy any portion of this report. If using the report for documentation purposes, we request that you cite the information and source appropriately. To obtain additional copies of “Kittitas County: Community Health Profile”, contact us by mail, phone or fax at:

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## Questions About the Report

If you have questions about the data or information used in the report, please direct them to the Assessment Coordinator. We would be happy to discuss the information with you. Errors do occur; if you believe you have found *any* kind of error, please let us know.



“Kittitas County Health Department” by Sarah Stacey

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## **About Community Health Assessment**

### **The Document**

“Kittitas County: A Community Health Profile” is a comprehensive report, a “snapshot in time” that presents health and injury-related data specific to Kittitas County. The report was written using national, state and local data and whenever possible, comparisons are made to see where Kittitas County stands relative to other counties and Washington state as a whole. Intended to be a work in progress, this document will be amended and updated over time at its permanent home at the Kittitas County website ([www.co.kittitas.wa.us](http://www.co.kittitas.wa.us)). In this way current information about the issues that directly and indirectly affect the well-being of our people and communities can be easily accessed.

### **Goal**

The goal of making this information more widely available to the general public is to deepen people’s understanding of their community and facilitate continuing discussion about the health status of Kittitas County. It is hoped that community groups and organizations will find this information useful in program planning and prioritizing health and safety concerns.

### **Public Health Responsibility**

Though assessing and protecting the community’s health has long been

part of the mission of public health, the Washington State Public Health Improvement Plan (PHIP) of 1994 established clearer guidelines for the core functions of public health — assessment, policy development, and assurance. The PHIP legislation requires that local public health agencies improve their capacity to assess the community, use available data to shape the development of policy, and work with others in the community to assure that needed services are available and accessible.

### **Community Involvement**

Comprehensive assessment of the health status of a community requires the input and involvement of a myriad individuals, agencies, and organizations. Though there is always room for improvement, the health and social service agencies in Kittitas County communicate well with one another. Each individual and entity brings new information and a unique perspective to bear. As we continue to network, sponsor surveys and evaluate our work to identify and address health priorities, we have been successful at forging creative partnerships to address local needs in the most efficient way possible. It is our hope that wide distribution of this report will invite more input and that subsequent profiles will be more complete and inclusive.

## **Data Sources**

### **VISTA/PH**

A broad collection of resources were used to provide the information and data included in this report. Most of these resources are publicly available via published reports, documents and the Internet. However, there is one data assessment resource cited in this report that is not directly accessible to the public. This source is the VISTA/PH data assessment system. For those who have an interest in understanding the sources of information used in the report, a brief description of VISTA/PH is provided.

VISTA/PH is a computer software program provided to and used by many local public health jurisdictions in Washington State for community health assessment activities. The VISTA/PH system was designed by the Seattle-King County Department of Public Health. VISTA/PH system uses federal, state, and local health status data sets to allow those individuals working the public health community to analyze health-related issues and problems.

### **United States Census**

Every ten years, the US Census Bureau collects and compiles demographic, social and economic information pertaining to the US population. Though some populations are most likely not counted at census time (i.e., homeless people, undocumented immigrants), it is the best comprehensive information we have about the US population. The most recent census was completed in 1990. This report uses the 1990 census data as well as population estimates that are updated annually.

## **Vital Statistics**

Vital statistics are taken from birth, fetal death and death records. Birth and death certificates are designed to gather information that meets the federal reporting requirements of the National Center for Health Statistics. It is important to note that the information captured has changed somewhat over the years so that it may be difficult to look at trends or make comparisons on some indicators. Also, the quality of the data is directly related to the accuracy with which the forms are completed.

### **Infectious Disease Reports**

Washington State law requires that certain infectious diseases, over sixty in all, be reported to state and local health departments. Health care providers and laboratories report the diseases and the information is compiled and reported annually by the Washington State Department of Health.

### **Hospitalization Data**

Data for hospitalization rates comes from the CHARS (Comprehensive Hospital Abstracting Reporting System) database. This data can provide a broader view of the patterns of illness and injury in the community than birth and death data. Non-fatal conditions and conditions with low-fatality rates that can be overlooked in mortality data become more evident in hospitalization counts. The impact of certain conditions like chronic obstructive pulmonary disease (COPD) or suicide attempt events can be examined.

The limitations of this data and what is NOT included here should be understood.

- Coding of certain clinical conditions is discretionary and may not be consistent.

- The impact of some conditions such as AIDS or diabetes can be masked since the primary diagnosis is often listed as the specific complication being treated, not the underlying disease.
- The data includes only those admitted to the hospital, not emergency room visits.
- Visits to clinics, other private practices, discharges from the Veteran's Administration and state mental health institutions are not counted.

It should also be noted that medical technology and the health care delivery system have changed drastically over the past several years. Therefore, falling hospitalization rates may not indicate a real reduction in disease prevalence. Many treatments formerly done in the hospital, such as chemotherapy, are now being done at home or on an out patient basis.

### **1996 Health Behavior Survey**

Throughout the report there are references to the 1996 Health Department health behavior survey. The technical name for this survey is the Behavioral Risk Factor Surveillance System (BRFSS), which is a standardized telephone survey established by the Centers for Disease Control and Prevention (CDC). It asks questions about health risk behaviors, use of preventive services, use of health care, attitudes about health related behavior, and such things as age and income. Washington State collects data using BRFSS annually. In 1996, the Kittitas County Health Department contracted to have the BRFSS applied to 500 county residents over the age of 18. Those survey results are used extensively in this report. Because of the survey methods, this

system only reaches residents who have telephones, speak English, do not live in institutions, and agree to participate. In Kittitas County, the Central Washington University telephone exchange of 963 was not included in the program of random digit dialing that resulted in the survey sample. In addition, because the data is self-reported, some health risk behaviors may be underestimated due to the survey respondent's desire to answer in a socially acceptable way. The BRFSS does, however, provide an efficient way to assess the health related behaviors and attitudes of a large cross section of the population.

### **Healthy People 2000 Objectives**

When possible and appropriate, data in this report is compared to the *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*. These objectives, set forth at the national level in 1990 with input from states and local communities, are reviewed periodically to see how much progress has been made. The following website gives complete information and updates on the *Healthy People 2000 Objectives* <http://odphp.osophs.dhhs.gov/pubs/hp2000/>

### **What are those Gray Boxes?**

Throughout the report there are gray text boxes which include general information about community resources and programs available in Kittitas County that address the specific issue being discussed in that section. Call Crisis Line Information and Referral, a 24-hour service, at (509) 925-4168 or (509) 674-2881 in Upper Kittitas County to be linked to specific programs, services, or businesses.

## **Information and Cautions About the Data**

### **Central Washington University**

Unless otherwise noted or unless the data represents specific age groups younger or older than college-age, the Central Washington University student population is included in all the Kittitas County data.

### **Small Numbers**

In Kittitas County, the numbers of cases, events and individuals being discussed are often small enough so that a slight increase may appear great. For instance, if there is one case of a disease one year and two the next, it may appear that the rate has doubled. While it is true that the rate has doubled among the population, it does not indicate a serious health problem for the community. We attempt to lessen the impact of this problem by combining events for several years, but sometimes in Kittitas County data there are small numbers of events even when presented in five-year increments.

### **Place of Occurrence – Place of Residence**

Certain health issues can be described by using “*place of residence*” or “*place of occurrence*” data. Data by “place of residence” describes health issues for residents of a specified area only, regardless of where the event (i.e. death or injury) occurred. Data by “place of occurrence” allows us to look at the number of deaths occurring within an area’s boundaries and can include health events affecting residents and non-residents. The majority of community

health data included in this report is described by place of residence.

### **Drawing Conclusions and Making Comparisons**

Though health data is a powerful tool for assessing the health of communities, it can be difficult to pinpoint the causes of health problems in a population. Even the best data gives an incomplete picture of the complex mix of factors responsible for illness, injury and other indicators. Caution should be used in drawing conclusions about the true causes of health problems.

Comparing local rates to rates in other counties, the state or the nation can be interesting; however, it is important to remember the unique characteristics of Kittitas County when doing so. When appropriate, comparisons have been made to “counties like us” that have similar demographic characteristics.

### **Quantitative versus Qualitative Data**

Most of our data, even county-level data, is *quantitative data* from federal and state sources – that is a record of the number of events, cases or occurrences. Some quantitative data is available from local sources as well. Our quantitative numbers, however, do not reflect the whole picture. The puzzle can be filled out somewhat with *qualitative data*, that is data that relies on the observations of community members to describe the situations around them. For example, the number of violent crime arrests for children under age 18 (quantitative) does not tell us why young people commit these crimes or how we might prevent them (qualitative) which are puzzle pieces only the community can describe.

## **TERMS**

### **Age-Adjusted Rates:**

These are rates that have undergone statistical transformation to allow for an improved comparison between groups that may differ in a characteristic that could affect or skew the presence of disease or injury in a population. Rates are standardized using the 1940 US population. Cancer deaths are standardized using both the 1940 and 1970 US population.

### **Age-Specific Rates:**

These are rates for specific age groups rather than the population as a whole. The denominator used to calculate the rate includes the population for the age group of interest rather than the population as a whole.

### **Case or Crude Rates:**

These are rates that describe the number of reported cases/events in a population during a specified time period.

### **Incidence Rates:**

These are rates that describe the number of “new” cases of a disease or injury occurring within a population during a specified time period.

### **Incidence:**

The number or proportion of “new” cases, events, or conditions in a specified population during a specified time period.

### **Medicaid:**

State-funded health insurance, also referred to as “Title XIX” or “medical coupons” in Washington State. Income level, age, and health status (i.e. pregnancy) determine program eligibility.

### **Medicare:**

Federally-funded health insurance for Americans age 65 and over.

### **Median:**

The middle value in a distribution, above and below which lie an equal number of values.

### **Morbidity:**

This refers to a number of measures that indicate a departure from a state of physical and psychological well-being, whether subjective or objective.

### **Mortality:**

This is a measure of deaths occurring in a given population, location, or other group of interest during a specific period of time.

### **Prevalence:**

This is the “total” number or proportion of cases, events, or conditions in a specified population at a specific point in time. specified population during a specified time period.

### **Prevalence Rates:**

These are rates that describe or estimate the total number of events in a population at a specific point in time.

### **Rates:**

We use rates in addition to number of events (i.e. deaths, injuries, or cases) to allow for comparison between different populations. A rate reduces the impact of population differences in size and age structure and gives a clearer basis for determining whether one county is improving or declining on a measure of health or how they compare with another county or the state.



“Kids” by Elizabeth Witkowski

# CHAPTER 1

## THE HUMAN ENVIRONMENT

### FAST FACTS

- The current population of Kittitas County is 30,976, a 25% increase since 1980.
- The median age in the county is 25.
- Eighty-one percent of Kittitas County residents have completed high school.
- The median income in Kittitas County is \$21,500.
- In 1997, about 3,500 Kittitas County residents (2,200 children age 19 and under and 1,300 adults) received state-funded Medicaid to pay for health care services.
- In 1990, 20% of Kittitas County residents were living below 100% of the federal poverty level.
- The unemployment rate in Kittitas County dropped from 8.6% in 1996 to 6.0% in 1997; 76% of employed residents work for the government, the service industry, or in retail trade.
- In 1996, 205 marriages were performed in Kittitas County and 108 divorce decrees issued.

## Introduction

The most important factor of a community's health is the makeup of the people who live there and how they live their lives. Knowing how many people there are and whether they are young or old, rich or poor is an important first step in community health assessment.

## Location

Ranging from Snoqualmie Pass in the central Cascade Mountains eastward to the Columbia River, Kittitas is a mostly rural county covering 2,297 square miles. It is bordered to the west by King County, to the south by Yakima County, to the east by Grant County, and to the north by Chelan and Douglas Counties. Moving eastward from Snoqualmie Summit, the forests of western Kittitas County give way to a rich agricultural valley, bisected by the Yakima River. The diverse geography also includes range land and arid sagebrush.

Kittitas County is centrally located

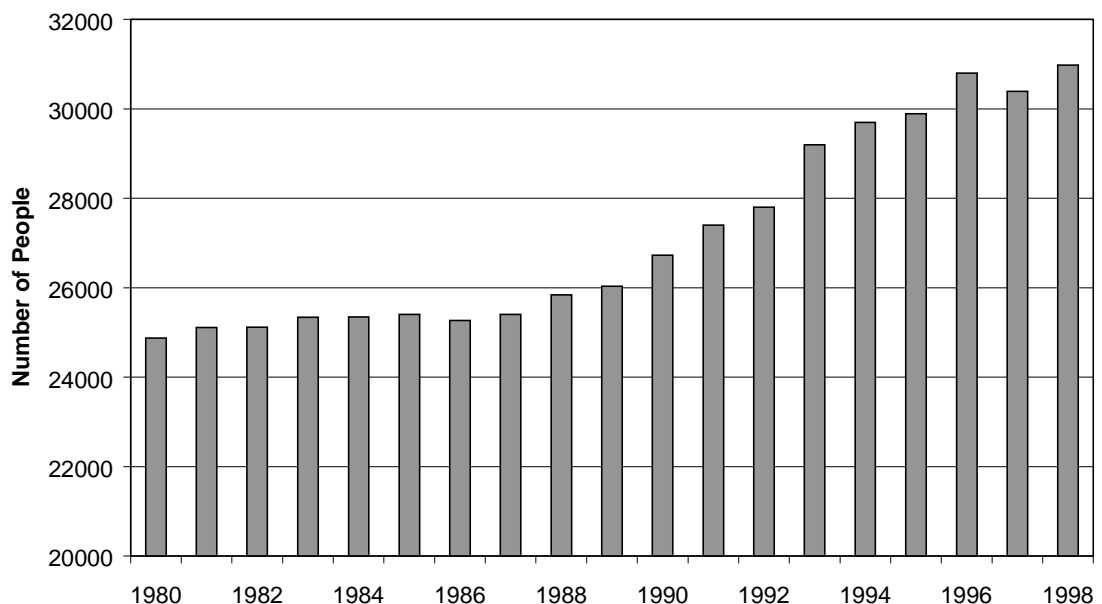
in the state, and several major interstates and state highways traverse the county. On Interstate-90 alone, an average of 22,000 vehicles per day move past the Ellensburg interchanges.<sup>1</sup> This ensures that thousands of people visit and pass through the county each year, a factor that impacts the economy, community services, and the quality of life.

## Population Trends

Between 1980 and 1998, Kittitas County's population grew 25%, from 24,877 to 30,976 people, with most of that growth happening between 1990 and 1998 (Figure 1.1). Between 1980 and 1998, Washington State grew 38% and Yakima County grew 22%.<sup>2</sup> Kittitas County ranks 29<sup>th</sup> out of 39 counties in population density with about 13 people per square mile.

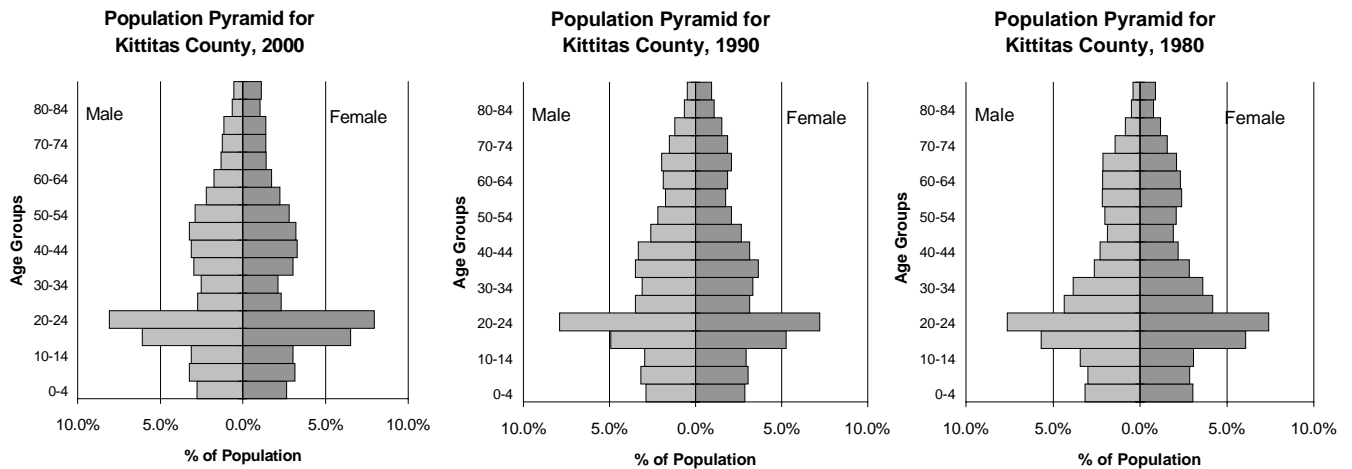
Population growth can occur because there are more births than deaths (natural increase) or because people move into an area (migration). Usually, both

**Figure 1.1**  
**Population Growth, Kittitas County, 1980-1998**



Source: VISTA/PH

**Figure 1.2**  
**Kittitas County Population Pyramids**



Source: VISTA/PH

natural increase and migration contribute to population growth. In Kittitas County, most of the population increase is due to migration.

### Age and Gender

Age is one of the most important characteristics of a population when evaluating health measures. Older populations (those with large proportions of people age 65 and older) tend to have higher death rates, while younger populations tend to have higher birth rates. The population profile of Kittitas County is typical of a county with a university, with larger than normal numbers in the 15-24 year-old age group (Figure 1.2). As the “baby boom” population has aged, the proportion of 25-34 year-olds has become smaller and the 35-54 year-old population has become larger. Due to the Central Washington University population, the median age in Kittitas County is 25.<sup>2</sup>

### Racial and Ethnic Composition

Community diversity requires the presence of culturally sensitive health services. The population of Kittitas County in 1980 was overwhelmingly white (96%), while 84% of the population

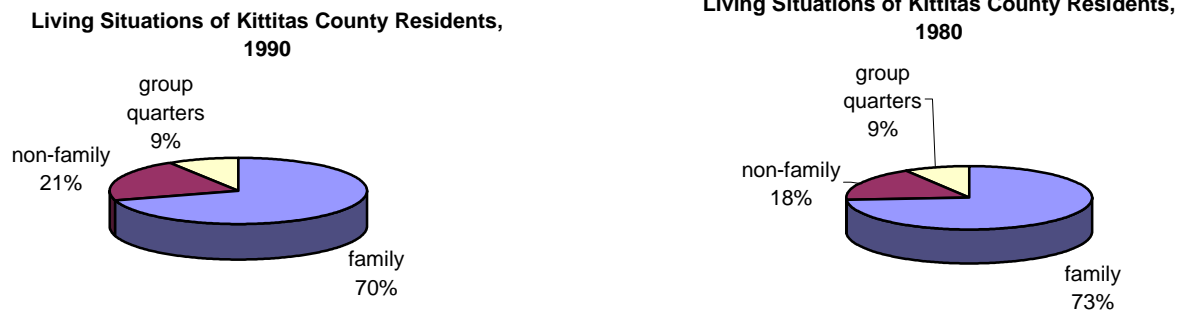
of Washington State was white. By 1998, the proportion of whites in the county had decreased to 91%, leading to a slightly more diverse population.

In the US, ethnicity is used to differentiate people of Hispanic origin (who may be of any race) from those who are not. In 1998, 4% of the county’s population was Hispanic.<sup>2</sup>

### Household Composition

Census data provide our most comprehensive look at the composition of households in the county. Demographers have noted a broad social trend toward fewer family households over the last forty years. The same trend is also seen in Kittitas County between 1980 and 1990 (Figure 1.3). *Family* households are defined as households in which every person is related by birth, marriage or adoption. Examples of *non-family* households include single-person households and homes where non-related people live together. *Group quarters* refers to institutional settings or a housing unit with ten or more unrelated people. Counties with large correctional facilities and colleges or universities have more than the average 1-2% of the population

**Figure 1.3**  
**Living Situations of Kittitas County Residents**



Source: US Census Bureau

living in group quarters. As expected, Kittitas County has an above average number of people living in group quarters due to the university students.

In recent years there has been an increase in the percentage of children living in single parent households. Demographers report that single parents are statistically more likely to be women and more likely to be poor. In Kittitas County, between 1980 and 1990, the percent of children living in a married couple household decreased slightly (from 77.7 % to 75.1 %), while the percent of children living in single parent households increased from 15.6 % to 18.7%.<sup>3</sup>

The number of marriages and divorces occurring in Kittitas County has fluctuated over the past several years. It is important to remember that not everyone represented by these numbers actually lives in Kittitas County (Table 1.1).<sup>4</sup>

**Table 1.1 Marriages and Divorces in Kittitas County, 1991-1996**

Year	Marriages	Divorces
1991	252	107
1992	198	95
1993	217	108
1994	210	105
1995	160	103
1996	205	108

Source: Washington State Center for Health Statistics

## Education

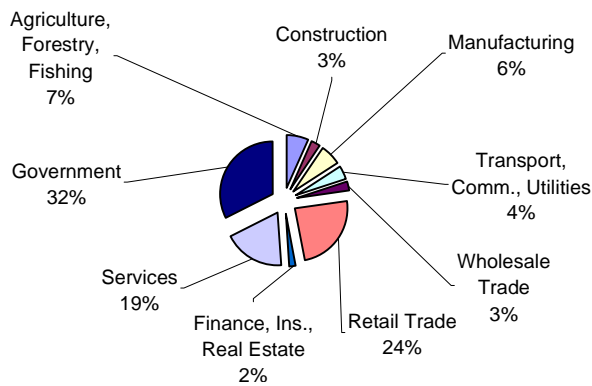
Increasingly, education is the key to economic success and a major determinant of good health. The educational attainment of Kittitas County residents age 25 and over improved from 1980 to 1990. The percentage of people in Kittitas County with less than a ninth-grade education dropped from 13.7% to 6.5%, while the percentage with four or more years of high school rose from 74.4% to 81.2%. The percentage of residents with four or more years of college also rose slightly, from 20.7% to 22.2%.<sup>3</sup>

Kittitas County has a high school dropout rate that is among the lowest of all counties in the state. In 1995-96, an average of 4.2% of high school students statewide dropped out, while only 25 (1.8%) Kittitas County high school students dropped out.<sup>5</sup>

## Central Washington University

As one of the six public universities in Washington State, Central Washington University (CWU) is influential in all areas of life in Kittitas County. An integral part of the county's economy, the University employs 391 faculty, 553 staff, and 160 administrators.<sup>6</sup> In addition, hundreds of part-time jobs and adjunct appointments are filled each year.

**Figure 1.4**  
**Kittitas County Employment by Industry - 1996**



Source: Washington State Office of Financial Management Forecasting Division

Student enrollment figures on the Ellensburg campus ranged from 6,911 to 7,373 students each year for the past seven years.<sup>7</sup> With an average age of 24, most of the students reside here much of the year, which affects nearly all county-specific data, from unemployment rates to sexually transmitted disease rates.

The ethnic diversity of the CWU student body increased slightly from 1990 to 1997. The percentage of white students declined from 90% to 81%, while the percentages of Native American, Asian, Hispanic, Black, and foreign origin have increased. Over the past seven years, between 7.4% and 9.8% of CWU students lived in Kittitas County prior to enrollment

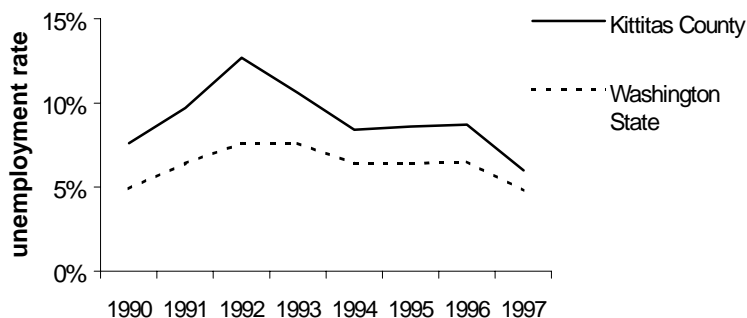
## Employment

Over 74% of all employment in Kittitas County can be accounted for by three economic sectors: government-32.6%, retail trade-24.1%, and services-18.5% (Figure 1.4).<sup>8</sup> Between 1980 and 1990, there was a decrease in the number of manufacturing jobs in the county and an increase in the number of agricultural and construction jobs.<sup>3</sup>

In 1989, a total of 16,315 persons over age 16 were employed in Kittitas County. Of those employed, 54% were men and 46% were women. From 1979 to 1989, the proportion of women working increased by 16%.<sup>3</sup>

Between 1980 and 1990 the

**Figure 1.5**  
**Unemployment Rates, Kittitas County and Washington State, 1990-1997**



Source: Washington State Employment Security Department

number of Kittitas County residents who commuted across county lines to work nearly doubled, from 578 (6.6%) to 1259 (10.8%), with King and Yakima Counties as the destinations. In the same period, the number of people who worked at home increased as well, from 543 to 776.<sup>3</sup>

Unemployment rates for Kittitas County for 1990-1997 ranged from an annual average of 6.0% to 12.7% (Figure 1.5). State unemployment rates ranged from 4.8% to 7.6% during this time.<sup>9</sup> Monthly unemployment figures fluctuate, with higher rates from December through February.

## Income

Household income plays an important role in the well-being of a community. In Kittitas County, the student population accounts for the especially high percentage of households in the lower income brackets in the 1980 and 1990 census results.<sup>3</sup> These data show that in 1990, over one-third of Kittitas County residents earned less than \$15,000 and 58% earned less than \$25,000. The median income for Kittitas County in 1990 was \$21,500, much lower than the median income of the state, which was nearly \$31,000.<sup>3</sup>

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“Our County” by Kevin Hamilton



“Water” by AJ Kibbe

## CHAPTER 2

# THE PHYSICAL ENVIRONMENT

### FAST FACTS

- Sixty-seven percent of the housing units in Kittitas County in 1990 were served by regulated public water systems, which is much less than the state overall.
- From 1993 through 1998, county residents properly disposed of 239,252 pounds of household hazardous waste and 26,520 gallons of oil through the county's annual collection events.
- Fifty-six percent of all households in the county have on-site sewage disposal systems, while the others are served by public sewer systems.
- Between 1993 and 1998, there was one E. coli outbreak involving 11 people and one case of histamine food-borne illness reported in the county.
- From 1994 through 1997, 25 inspections of water recreation facilities resulted in temporary closures of those facilities.
- No animals from Kittitas County have tested positive for rabies.

## Drinking Water

One of our most critical public health needs is a safe water supply. According to the 1998 Public Health Improvement Plan for Washington State, most people believe that our drinking water is very safe and plentiful. Yet each year thousands of Washington residents are exposed to potentially harmful levels of bacterial and chemical contaminants. Many of the 16,000 public water systems in the state are old and need to be upgraded.<sup>1</sup> The Washington State Department of Health (DOH), Department of Ecology (DOE) and the US Environmental Protection Agency (EPA) are working with communities to address specific water system issues and concerns. Fixing these systems while attempting to meet federal standards set forth in the Safe Drinking Water Act and address issues of water use priorities is stretching the resources of local and state public health.

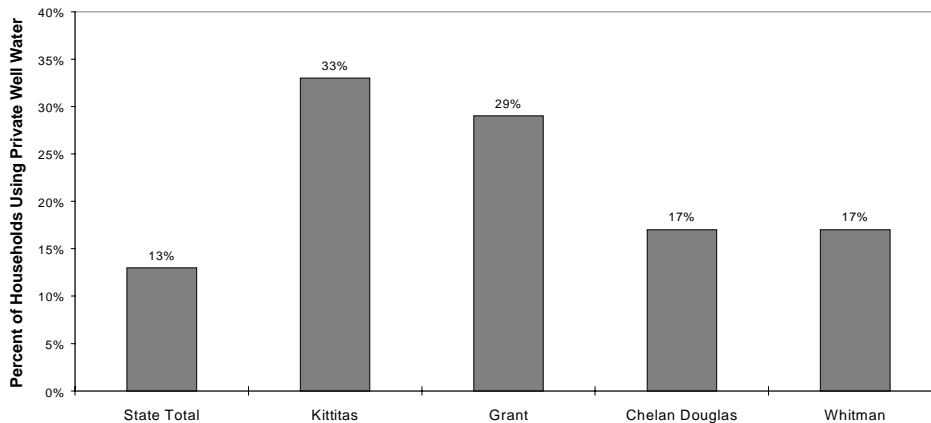
To ensure the safety of the drinking water supply, public water systems are tested regularly for bacteria and other contaminants. The EPA considers a water system to be unsafe if it is not monitored or if it exceeds maximum

contaminant levels. Only 67 of the housing units in Kittitas County in 1990 were served by regulated public water systems, which is much lower than the state. Conversely, 33% of residents in 1990 relied on individual wells for their drinking water, in which case the responsibility for testing lies with the well-owner (Figure 2.1).<sup>2</sup>

In 1997, 347 private wells were tested in Kittitas County by the state-approved water lab located at Central Washington University. Ninety-four of them tested positive for bacterial contamination.<sup>3</sup> When this occurs, the well-owner is instructed on the proper procedure for disinfecting and re-testing the well water.

Public water systems in Washington State are designated as *group A* or *group B* systems depending on the number of connections and the number of individuals served. Group A systems serve 15 or more connections, or 25 or more people, per day for 60 or more days per year. Group B systems serve fewer than 15 connections and fewer than 25 people, for 60 or more days per year (e.g., one well to service a short plat subdivision for a few

**Figure 2.1 Percentage of Households Using Well Water, Similar Counties and Washington State, 1990**



Source: U.S. Census Bureau

houses) or serve fewer than 25 connections and any number of people for 60 or fewer days per year (such as a bed-and-breakfast establishment).

The public water supply in Kittitas County is composed of 63 group A public water systems. Of these, 42 are considered *non-community water systems* that serve the transitory population in areas such as restaurants, rest stops, schools and recreational vehicle parks. In 1997, four group A systems accounted for 21 bacterial contamination violations.<sup>3</sup> Sometimes, temporary contamination can be caused by flooding or work on a water main. However, a violation indicates that problems may exist with the water system and that a health risk may be present. When this occurs, the DOH is notified and a rigorous protocol is followed for sampling, re-testing, and if necessary, user notification.

The DOH has delegated to the Kittitas County Health Department the duty of group B system approval. Before approval, group B systems must undergo both bacteriological analysis and a complete inorganic chemical analysis. After the initial approval, the system must undergo a test for nitrates every three years. To date, 119 such systems have been reviewed and approved.

The *Healthy People 2000* objective for drinking water is to increase to at least 85% the proportion of people who receive a supply of drinking water that meets the EPA's safe drinking water standards. Kittitas County has met this objective based on testing conducted or reviewed by the health department.

**Waterborne Diseases**

Giardiasis and cryptosporidiosis are protozoal diseases that can be transmitted through fecally-contaminated drinking water. Diarrhea is the most common symptom of both conditions.

Humans, domestic animals and some wild animals are thought to be reservoirs for both *Giardia lamblia* and *Cryptosporidium parvum*. Sporadic cases of giardiasis can occur when hikers and campers drink lake or stream water without filtering or treating it first. Though cryptosporidiosis is not a reportable condition, 13 cases of giardiasis have been reported in Kittitas County since 1993.<sup>4</sup>

**Solid Waste**

*Solid waste* includes all solid and semisolid wastes such as garbage, rubbish, ashes, industrial and commercial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts, discarded commodities and recyclable materials. The most current waste generation rate estimated for Kittitas County is 3.6 pounds per person per day, or 1,314 pounds per person per year, excluding industrial and business wastes.<sup>5</sup> With the growing population, the amount of solid waste continues to rise at a steady pace. (Table 2.1 )

**Table 2.1 Kittitas County  
Estimated Waste Generation**

Year	Population	Tonnage
1992	27,802	18,336
1995	30,100	21,973
2000	32,491	23,718
2005	34,714	25,341
2010	36,843	26,896
2015	39,449	28,798

*Source: Kittitas County Solid Waste Programs*

Two transfer stations in the county accept solid waste from private individuals and the franchise hauler, Waste Management of Ellensburg. One transfer station is located on Highway 903 between Cle Elum and Roslyn and the other in Ellensburg. After solid waste is received at

the transfer stations, it is hauled to the Greater Wenatchee Landfill operated by Waste Management, Inc.

From 1980 to 1998, the waste was baled and transported to the Ryegrass landfill east of Ellensburg. Over the last few years, leachate has become a major concern because the landfill is not lined. Leachate is the liquid that is generated when rain and snow percolate down through a landfill and contaminate the ground and surface waters. Currently, a leachate impoundment is being constructed on-site to collect and treat this material. Due to the exorbitant costs of upgrading the landfill from an unlined facility to a lined one, the decision was made to close the landfill following the recommendation of the Solid Waste Advisory Committee in 1998. The Washington State DOE has provided funding and now directs and provides oversight for the closure process. An independent contractor now operates the County's solid waste system and transports the waste directly to the Greater Wenatchee Landfill in Douglas County.

Still operating at the Ryegrass landfill are:

- An inert and demolition landfill that accepts wood wastes and other materials used in the building and demolition industry.
- Two liquid waste evaporation lagoons that accept "septage" from licensed in-county septic tank pumps.
- A privately owned and operated petroleum-contaminated soil recovery facility that processes material on-site.

Much can be done to reduce the waste stream. Kittitas County Solid Waste Programs has been progressive in implementing programs to educate consumers and provide opportunities to

separate and dispose of inert and demolition waste and to recycle oil, antifreeze, yard waste, tires, tin, aluminum, plastic milk jugs and pop bottles, magazines, vehicle and household batteries, newspapers, and cardboard.

## Hazardous Waste

Kittitas County Solid Waste Programs provides technical support to businesses and sponsors collection days for household hazardous waste to help curb the illegal disposal of hazardous waste within this county. Beginning in 1993, these events have allowed homeowners and businesses (with prior approval) to safely dispose of unwanted and unused portions of potentially hazardous material. Funding for these events is also provided in part by the DOE.

From 1993 to 1998, Kittitas County Solid Waste collected 239,252 pounds of household hazardous waste and small quantity generator waste. An example of a small quantity generator is an auto repair shop that collects used oil. The majority of material was unused paint, solvents and 26,520 gallons of used motor oil.<sup>5</sup>

The county has met the *Healthy People 2000* objectives regarding solid and hazardous waste: to reduce human exposure to solid waste-related air, water, and soil contamination, as measured by a reduction in average municipal solid waste produced per person each day to no more than 3.6 pounds and to establish programs for recyclable materials and household

Several county programs are aimed at increasing recycling, waste reduction and hazardous waste reduction. The goal for solid waste as expressed by the Kittitas County Solid Waste Advisory Committee in the "Kittitas County Solid Waste Management Plan" is to achieve a minimum 50% waste reduction/recycling goal within the next five years.

hazardous waste in at least 75% of counties.<sup>5</sup>

## Sewage

Diseases that may be spread through contact with untreated or inadequately treated sewage include shigellosis, salmonellosis, and hepatitis A. The two acceptable ways of treatment and disposal of human waste are public sewer systems and on-site sewage systems. Both are effective means of protecting public health when properly designed, installed, operated and maintained. Fortunately, no reported illnesses in Kittitas County have been directly related to inappropriate sewage waste disposal.

Public sewer systems are located in each of the incorporated areas of the county and serve 44% of the population. By comparison, 68% of the population in the state lives in homes served by public sewer systems.<sup>2</sup> In the unincorporated areas of the county, the health department is responsible for issuing permits and providing oversight for the installation of sewage systems. Since the health department began keeping records in 1967, there have been 5,077 new on-site sewage permits, 1,000 repair permits and 236 renewal permits issued.<sup>3</sup> (Figure 2.2) A renewal permit is issued when the original permit has expired and the work

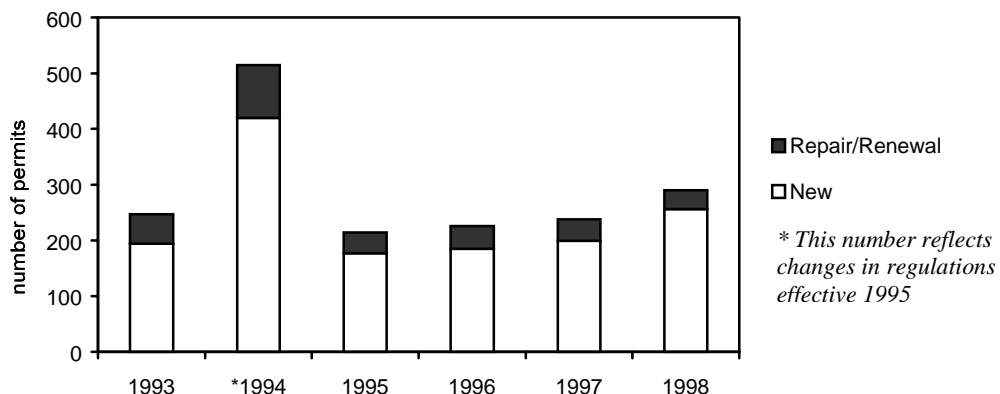
has yet to be completed.

## Food Safety

Foodborne illness includes all illnesses acquired through the consumption of contaminated food but more commonly refers to those caused by an infectious agent. The Washington State DOH estimates that there are between 250,000 and 1.5 million acute foodborne illnesses annually in the state, and most of these are unreported. Prevention is the most important element in controlling foodborne illness and includes education of foodhandlers, investigation of disease, and inspection of food service establishments. The health department inspects each food establishment at least annually in the county. In 1998, Kittitas County had 262 establishments selling food, including restaurants, bakeries, taverns, grocery stores, and temporary or mobile food services. Permit fees range from \$110 to \$325 per year, depending on the number of seats in the facility.<sup>3</sup>

In 1997, 67 food-related complaints were reported to the health department.<sup>3</sup> Some of the complaints involved illness but none were confirmed to be foodborne illnesses. Several intestinal diseases are reportable but they may not necessarily be foodborne. Both giardiasis and cryptosporidiosis can be

Figure 2.2 On-site Sewage Permits for Kittitas County, 1993-1998



Source: Kittitas County Health Department

foodborne, waterborne (more likely) or transmitted from person to person. Other intestinal diseases that are reportable include campylobacteriosis, *E. coli* 0157:H7, salmonellosis and shigellosis. From 1993 to 1997, 11 cases of salmonellosis, 3 cases of shigellosis, and 16 cases of *E. coli* 0157:H7 were reported in Kittitas County.<sup>3,4</sup> These numbers are well below the *Healthy People 2000* goals for these diseases of 8.9 cases per 100,000 for salmonellosis, 15.5 cases per 100,000 for campylobacteriosis, and 4.4 cases per 100,000 for *E. coli* 0157:H7.

## Recreational Water

Recreational water includes bodies of water, such as the Columbia River and Yakima River, that are sites for activities including boating, swimming, and fishing. Though recreational water may be a source of health hazards, this has not been a problem in the county. Inspections are not performed unless there is a suspected risk to human health. It is clear that Kittitas County has met the *Healthy People 2000* objective for recreational water, as measured by a decrease to no more than 15% the proportion of assessed rivers, lakes, and estuaries that do not support beneficial uses, such as fishing and swimming.

Also considered recreational water are the 25 public pools and spas that are inspected yearly. Permits are granted after 13 categories are reviewed for compliance, ranging from water quality to structural safety. From 1994 through 1997, there were 25 temporary closures of water recreation facilities.<sup>3</sup>

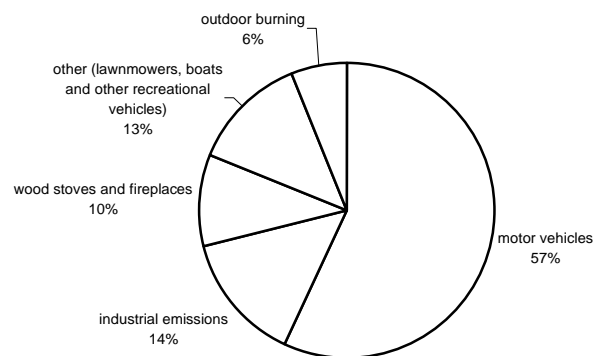
## Air Pollution

Outdoor air pollution is a major health concern in industrialized nations, especially in urban areas. Some of the health risks associated with air pollution include lung diseases (chronic bronchitis, emphysema, asthma), cancer, nerve disorders, headaches and eye irritation. The major sources of air pollution in Washington are motor vehicles and industrial emissions.<sup>6</sup> (Figure 2.3)

In Kittitas County, agricultural burning has been an accepted means of weed control that adds tremendous amounts of particulate materials into the air. Currently, a permit is required from the DOE in order to perform these burns. However, this practice is being reviewed by the DOE and may be discontinued in this county if other means of weed control can be achieved.

The climate, geography and air drainage patterns in the Kittitas Valley

Figure 2.3 Sources of Air Pollution in Washington State 1997



Source: Washington State Department of Ecology

predispose the area to periods of minimal air movement, especially during the fall and winter. This leads to trapping of particulate air pollution from burning in wood stoves and fireplaces that can be irritating and potentially life threatening, particularly to seniors, children, and individuals with heart or lung disease. Because there is currently no local air quality authority, the DOE is the regulating authority in Kittitas County and maintains equipment in Ellensburg for monitoring particulate matter in the air. The goal is to keep the particulate matter concentration below 75 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Data from the 1997 and 1998 winter months show that the air in the valley is usually 15-45  $\mu\text{g}/\text{m}^3$ , though levels have risen to near 70  $\mu\text{g}/\text{m}^3$  on some days. The DOE may impose burn bans during times of poor air quality.<sup>7</sup>

Respondents to the 1996 health behavior survey were asked about contributors to poor air quality in the area. The most frequently cited were wood stoves and agricultural dust. One in six respondents said they have experienced discomfort due to pollutants in the outside air. One in ten respondents said they have experienced discomfort from indoor air. About four in ten respondents said there were no contributors to poor air quality and think the air quality is good.<sup>8</sup>

## Vectors

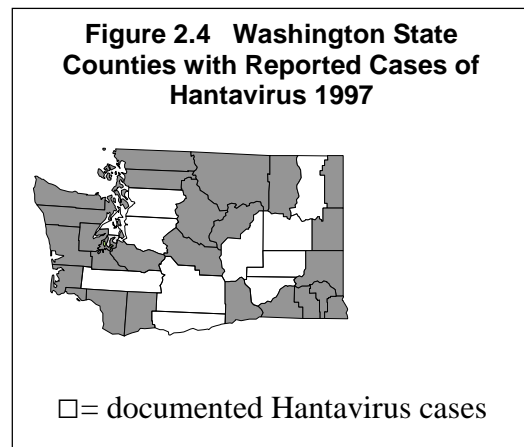
Many diseases are transmitted by vectors, or animals that carry pathogens from one host to another. The health department vector program is responsible for investigation of animal bites or exposures, specimen handling, shipping, and providing educational materials. The rabies virus and hantavirus are the two most important concerns.

Rabies is a severe viral disease that affects the central nervous system and is

almost always fatal. Rabies is contracted by exposure, usually from a bite, to the saliva of a rabid animal. Bats are the primary reservoir in the Northwest. In Washington State, rabies is rarely found in other animals, such as dogs, raccoons and skunks, that commonly carry the virus in other areas. To date, all specimens that have been shipped to the state laboratory from the county for rabies testing have been negative.

Hantavirus can cause serious respiratory illness and frequently death. The primary reservoir is the deer mouse. Exposure to hantavirus is through contact with droppings or objects that the deer mice have handled, eaten, or lived in. Although no human cases have been reported in the county, deer mice in the area have tested positive for the virus. Approximately 10-11% of deer mice statewide may carry the virus. Chipmunks and other rodents have been found to carry antibodies to hantavirus; however, there is no direct evidence that they are capable of transmitting the virus to humans.<sup>4</sup>

Counties in Washington State that have reported cases of hantavirus are Grant, Adams, Franklin, Lincoln, Yakima, Klickitat, King, Stevens, Snohomish, and Lewis. (Figure 2.4)



Source: Washington State Department of Health Communicable Disease Program

## Schools, Camps and Parks

The health department annually inspects all 22 primary and secondary schools in the county. Wood, metal and auto shops, art classrooms, and chemistry and biology labs are examined for physical and chemical hazards. Playgrounds of schools are also inspected by a local National Safety Playground Institute (NSPI) certified inspector. Fall zones, entrapment hazards, and other safety items are checked to ensure that equipment is constructed and well maintained to prevent injury.<sup>3</sup>

Eighteen nonfederal public camps and parks in the county are inspected by the health department. These establishments are issued permits annually after they are inspected for compliance with state regulations in areas such as potable water supply, solid waste, safety, and swimming facilities.<sup>3</sup>

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"Recycling" by Joseph Darda



“Students with a Positive Plan” by Tori Calkins

## CHAPTER 3

# THE SOCIAL ENVIRONMENT

### FAST FACTS

- In 1996, 19% of Kittitas County adults surveyed knew personally of an adult who had been physically or sexually abused, and 8% knew of a child or teen who had been physically or sexually abused in the past 12 months.
- From 1991-1995, the average rate for accepted child abuse and neglect referrals for Kittitas County was 63.7 per 1,000 children. This is greater than the state rate of 41.7 per 1,000.
- Calls to the local Crisis Line regarding a domestic violence crisis (as opposed to a call for resource or information) have been recorded as follows: 128 calls in 1995; 168 calls in 1996; 349 calls in 1997.
- A survey done in 1993-94 by the Department of Social and Health Services showed that 15% of Kittitas County adults (approximately 3,900 people) met the criteria for alcohol and/or drug abuse and dependence.
- Twenty people died of suicide from 1992-97 in Kittitas County. In 1997, there were thirty visits at the Kittitas Valley Community Hospital Emergency Room for suicide attempts.
- Kittitas County remains at or below the state rate for violent and property crime arrests, while arrest rates for alcohol-related crimes are higher than the state rate.
- In 1996, 36% of adults surveyed indicated that there was at least one day in the past month when their mental health was not good.

## Introduction

Social circumstances in childhood and in adulthood affect individual health outcomes. The social, cultural, and familial norms and environment combine to produce *risk factors* that may put individuals at risk for making unhealthy lifestyle choices, especially with regard to substance abuse and behaviors often linked to substance abuse. Conversely, *protective factors* serve to moderate the influence of risk factors.

Indicators of a population's health may be found in data on chronic mental illness, depression, suicide attempts and completed suicides, child abuse reports, drug and alcohol abuse, domestic violence, and crime. Data in these areas, however, can be woefully incomplete and difficult to compare due to inconsistent data collection, voluntary reporting policies, and program administration policies that differ from county to county and even within the same agency. So, it should be understood that each of the following social health topics is not comprehensive but a piece of a puzzle with many missing pieces.

## Mental Health

The incidence of mental illness and disorders is understandably difficult to estimate since many people may not seek or receive treatment. The Center for Mental Health Services estimates that 11.4 million adults (5.7 percent of the total population) in the United States have a serious mental illness. Applying federal estimates to Kittitas County, the prevalence of mental illness in a one-year period is:

- Adults with any diagnosable mental disorder: 24% or 5721 individuals
- Adults with a severe mental illness: 6% or 1430 individuals

- Adults with severe and persistent mental illness: 3% or 715 individuals
- Children and adolescents with mental illness: 10% or 548 individuals.<sup>1</sup>

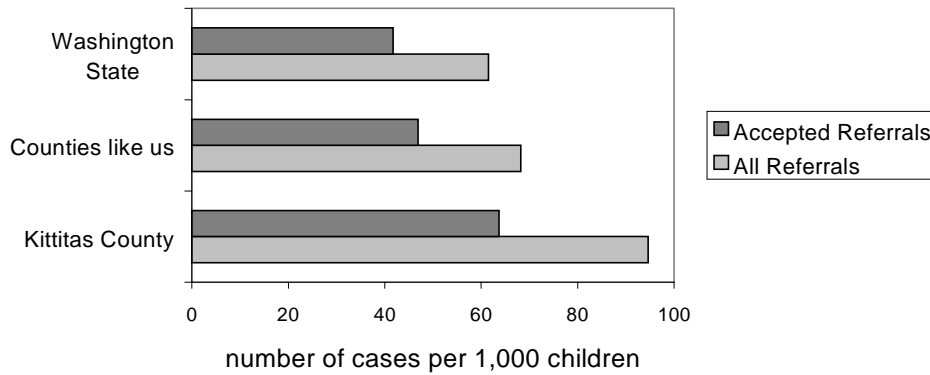
In 1996, 36% of adults in the Health Department behavior survey indicated that there was at least one day in the past month when their mental health was not good, including feelings of stress, depression or other emotional problems.<sup>2</sup>

Mental health services in Kittitas County are provided in varying degrees by several agencies and individuals. The array of programs and services ranges from individual counseling to support or therapy groups to group- or assisted-living situations. The general feeling among Kittitas County health and social service providers is that mental health services are difficult to access and/or unavailable to many, especially people with disabilities, limited English-speaking skills, and low incomes. Also, services may be under-utilized due to a lack of knowledge of the types of services available in the community or the stigma attached to the use of these services.

According to the 1997 *Annual Report* from Central Washington Comprehensive Mental Health, the county's largest provider of mental health services, the number of clients served increased from 982 in calendar year 1992 to 1176 in fiscal year 1997. The majority of their clients are between 25 and 59 years old.<sup>3</sup>

Mental health services are available in the community through agencies or individual counselors. CWU offers mental health services to students. Many support groups provide resources for issues ranging from bereavement to brain injury.

**Figure 3.1 Child Abuse and Neglect Referrals per 1,000 children (ages 0-17), 1991-1995**



Source: Washington State DSHS, DASA, ORDA

### Child Abuse and Neglect

Child abuse and neglect is the victimization of children through physical violence, sexual abuse, or neglect of basic needs. What is known about the prevalence of child abuse and neglect in Kittitas County is obtained from the records of reported abuse to the state Child Protective Services (CPS), a program within the Department of Social and Health Services, Division of Child and Family Services. As noted previously, data may be incomplete and inconsistent from county to county for a number of reasons.

A report of suspected child abuse or neglect is a *referral*. If there is enough information for CPS to investigate, the referral is *accepted*. Children are counted more than once if they are reported more than once during the year. Physical abuse is the most easily detected and documented form of child maltreatment. However, neglected children deprived of the basic necessities of family, home, and medical care may also suffer devastating effects in the long-term.<sup>4</sup>

The actual number of total child abuse and neglect reports made to CPS in Kittitas County over the last eight years reveals an upward trend peaking

in 1994 and decreasing but remaining high in subsequent years.<sup>5</sup> (Table 3.1)

**Table 3.1**

Year	Number of Child Abuse and Neglect Reports
1990	333
1991	419
1992	458
1993	506
1994	515
1995	476
1996	491
1997	473

Source: Kittitas County Substance Abuse Risk Assessment 1999-2001 biennium

For 1991-95, the Kittitas County rates of *total* numbers of child abuse and neglect referrals and *accepted* referrals are higher than the state and comparable county rates (Figure 3.1). Comparable counties are similar in geography, in the percentage of young people, and in the percentage of deaths related to alcohol and drugs. For Kittitas County, these include Adams, Asotin, Chelan, Columbia, Douglas, Garfield, Lincoln, Stevens, Walla Walla, and Whitman Counties.<sup>6</sup>

It is important to remember that the CPS divisions of DSHS may differ from

county to county in actual staff available to handle reports and in ways that influence the public perception of accessibility. Community norms may also differ in that what might be reported to CPS in one community may not be a concern in another area.

Children are placed in foster care as a last resort to protect the child from further abuse. The rate of Kittitas County children placed in foster care averaged 10.0 per 1,000 children age 17 and under during 1991-1994. This is lower than the state average of 12.9 per 1,000.<sup>6</sup> There is a chronic shortage of foster homes in Kittitas County.

Because abused children can grow up to need mental health services and can contribute to the problem of violent behavior as teenagers and adults, child abuse and neglect has an enormous, impact on the community, state, society as a whole, and future generations.

Several agencies and programs serve families at risk for child abuse and neglect. Examples of such programs include therapeutic daycare, home visits from Public Health nurses and case managers, parenting classes, a parenting skills therapy and mentoring program, and family mediation services.

## Domestic Violence

*Domestic violence* is any violence by one family member against another family member and affects men, women and children and all social classes. Dating partners and roommates are also covered under this state law. Violent acts include a pattern of controlling behavior that consists of physical, sexual and/or psychological assaults.

Though awareness of domestic violence and the damage it causes have been steadily increasing in our society, it is estimated that only 10% of domestic violence incidents are reported to police.<sup>4</sup>

Reasons for this are most likely the fear of social stigma and the complicated emotional relationship that exists between the abuser and the abused.

State and local trends show an increase in domestic violence arrests, as well as in the numbers of people seeking crisis help, resources and advocacy. These trends may be due to an increase in awareness and reporting rather than changes in the actual frequency of domestic violence. The average domestic violence arrest rate from 1990-94 for Kittitas County was 5.5 per 1,000 adults. This is slightly higher than the state rate for that period of 4.8 per 1,000 adults.<sup>6</sup> In 1996, 19% of county adults surveyed personally knew of an *adult* who had been physically or sexually abused, and 8% knew of a *child* or *teen* who had been physically or sexually abused in the past twelve months.<sup>2</sup>

Calls to the Kittitas County Crisis Line regarding a domestic violence crisis (as opposed to a call for resource or information) have been recorded as follows: 128 calls in 1995, 168 calls in 1996, and 349 calls in 1997.<sup>7</sup> Over the past few years, there has been a significant increase in the number of clients served by the local Domestic Violence/Sexual Assault (DV/SA) Program, which provides shelter, education and advocacy for victims of domestic violence and sexual assault and their families. In 1993-94, 947 new clients sought services, while by 1996-97, staff at DV/SA served a total of 2,200 clients (1,962 primary victims and 238 secondary victims).<sup>8</sup> Again, this may not be due to an increase in domestic violence but rather increasing community awareness that the program exists, changing community norms, and increased staff to serve more clients.

## Crime

When asked how safe from crime they consider their neighborhood to be, the majority of respondents to the 1996 Kittitas County behavior survey said extremely safe (31%) or quite safe (57%). Those with household incomes of \$50,000 or higher were more likely to rate their neighborhoods as extremely safe (45%) than were those with household incomes below \$50,000 (26%). About 13% said that they or a member of their household had been a victim of a property crime, such as theft or vandalism, in the past twelve months. Respondents 65 and older were much less likely to say this (1%) than were respondents under 65 (16%). Sixty-four percent of the victims reported the crime to the police or sheriff's department.<sup>2</sup>

While crime and arrest rates can be a helpful tool in assessing a community's health, the data may be incomplete. Arrest policies vary from one law enforcement jurisdiction to another. Also, not all law enforcement agencies report their crime and arrest statistics to state authorities because such reporting is voluntary. Finally, arrests are tracked by location of the crime, rather than where the perpetrator lives, and if multiple offenses occur in the same event, only the most serious offense is counted.

*Violent crime* includes murder, rape, robbery, and aggravated assault (assault with a weapon or with intent to cause severe injury). *Property crime* includes burglary, larceny-theft, motor vehicle theft, and arson. While Kittitas County remains at or below the state rate for violent and property crime arrests, this is not the case for alcohol- and drug-related arrests.

### Adult Crime

The 1990-93 rate for adult violent crime arrests in the county was 1.4 per

1,000 adults age 18 and over, which is lower than the state rate of 1.8 per 1,000. The rate for property crime arrests for the same period was 7.9 per 1,000 compared to 10.0 per 1,000 for the state.<sup>6</sup>

For 1990-1993, arrest rates for driving under the influence (DUI) for adults age 18 and older was 7.5 per 1,000 in the county compared to 6.9 per 1,000 for the state. However, over 70% of all Washington State Patrol DUI arrests are not included in these rates, because the arrests are not assigned to counties. The arrest rate for all alcohol crimes (DUIs, liquor license violations, and drunkenness) was higher in the county (14.4 per 1,000 adults) than in the state (12.0 per 1,000). The drug-related arrest rate for county adults was slightly lower than the state at 2.9 per 1,000 compared to 4.0 per 1,000.<sup>6</sup>

### Juvenile Crime

Approximately 7,000 youths age 17 and under live in Kittitas County, 3,400 of whom are ages 10-17. Statewide, the arrest rates for juveniles have been decreasing over the past few years.<sup>9</sup> In Kittitas County, however, the rate of juvenile arrests (ages 10-17) increased 30% from 1992-1996, with increases in arrests for violent crimes, property crimes, and drug and alcohol offenses.<sup>9</sup> For 1990-93, arrests of juveniles ages 10-17 for alcohol violations in Kittitas County was 12.9 per 1,000 as opposed to 9.0 per 1,000 for the state.<sup>6</sup>

### Intentional Injuries

Assault, suicide and homicide are classified as intentional injuries. From 1992 to 1996, a total of 12 hospitalizations occurred among county residents for non-fatal assault injuries. The overall county rate of 8.1 per 100,000 for assault-related hospitalizations was lower than the state rate of 33.3 per 100,000.(1)

From 1992-1996, Kittitas County had 20 suicides and 2 homicides. The average annual rate of suicide in the county during this time was 12.3 per 100,000, which is slightly lower than the state average of 13.1 per 100,000. The *Healthy People 2000* goal is to reduce the suicide rate to 10.5 or less per 100,000.<sup>10</sup> The average annual homicide rate for the state during this time was 5.8 per 100,000, which is better than the *Healthy People 2000* goal of 7.2 per 100,000.<sup>10</sup> Suicide is an underreported cause of death, because most jurisdictions require proof of intent, usually in the form of a note. Without evidence that an individual intended to take his or her own life, suicide is unlikely to be reported and the death is ruled as accidental.

Kittitas County Crisis Line received 36 suicide-related calls from January to June 1998, almost double the number for the same period in 1997.<sup>7</sup> In 1997, there were 30 visits to the Kittitas Valley Community Hospital Emergency Room for suicide attempts.<sup>11</sup>

## **Alcohol and Substance Abuse**

A survey done in 1993-94 by the Department of Social and Health Services (DSHS) showed that 15% of Kittitas County adults (approximately 3,900 people) met the criteria for alcohol and/or drug abuse and dependence. Additional information published by DSHS in 1996 reports that only 16% of the adults in the county who *need* treatment and are eligible for publicly funded alcohol and drug treatment actually *received* that treatment in 1991-1995. The state average was 21%. In 1994, Kittitas County ranked 34<sup>th</sup> out of 39 counties (with 39<sup>th</sup> being the poorest record) for this indicator.<sup>12</sup>

Statistics from Alcohol Drug Dependency Services (ADDS), the largest provider of alcohol assessments, outpatient

treatment, and prevention services in the county, show that the majority of their clients (approximately 90%) are publicly funded. In 1997, ADDS conducted 164 alcohol/drug assessments on 157 people, 56% of whom were under age 21.<sup>13</sup>

Not everyone who goes through an assessment goes into treatment. In 1997, 106 people were admitted for treatment with public funds. Of those, 72% were male, 28% were female, and 32% were under age 21. Statewide, the percentage under age 21 was 24% in 1997. Nearly 70% of the people entering publicly funded treatment in Kittitas County in 1997 indicated that alcohol was their drug of choice. This was followed by marijuana at 21%, cocaine at 5% and methamphetamine at 5%. State percentages were as follows: alcohol–52%; marijuana–20%; cocaine–10%; heroin–9%; methamphetamine–7%.<sup>13</sup>

In the 1996 health behavior survey, 63% of Kittitas County residents surveyed said they had consumed at least one drink of alcohol in the previous month. Two percent were “chronic drinkers,” in that they consumed more than 60 drinks in the previous month, and 16% reported “binge” drinking, or having more than 5 drinks on one occasion.<sup>2</sup> These percentages do not differ greatly from those of the state.

Hospitalization rates in Kittitas County for alcohol-related causes in 1992-96 were 249.0 per 100,000 and 57.1 per 100,000 for illicit drug-related causes. These are both lower than the state rates of 316.8 per 100,000 and 173.9 per 100,000 respectively for the same period.<sup>10</sup>

Qualitative and anecdotal data from key informant surveys, community forums, and the research of the Kittitas County Community Public Health and Safety Network, indicate that people feel that alcohol and substance abuse is a significant problem in this county and that

community norms exist that actually condone alcohol use and abuse.<sup>5</sup> The general perception is that there may be more substance abuse in Upper Kittitas County (Easton, Cle Elum, Roslyn, and Ronald) than in Lower Kittitas County (Thorp, Ellensburg, Kittitas, and Vantage). Hard data are incomplete; therefore, this perception is difficult to substantiate.

## Central Washington University Drug and Alcohol Survey

The Core Drug and Alcohol Survey, developed to measure attitudes and usage among college students, was conducted at Central Washington University (CWU) and results were reported in 1998. Despite general knowledge that the CWU campus has alcohol and drug policies and is concerned about the prevention of drug and alcohol use, 94% of 742 students surveyed believe the average student on campus uses alcohol at least once a week. Fifty-nine percent of students believe the average student on campus uses some illegal drug at least once a week.

When compared with a reference group of students from all over the country, a greater percentage of students at CWU reported actual use of tobacco, alcohol, and drugs as well as problematic experiences like public misconduct, personal injury and psychological problems due to drug and alcohol use.<sup>14</sup>

## Youth Substance Abuse and Tobacco Use

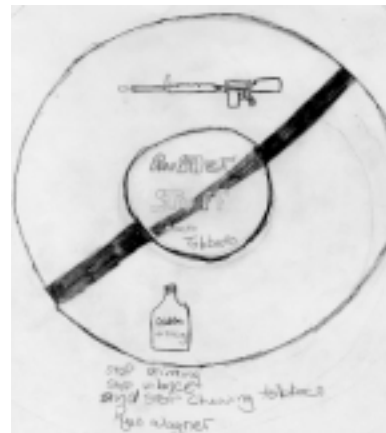
The perception also exists that underage drinking and other substance use is a problem in Kittitas County. Arrest data for alcohol-related crime validate this belief. Another source of data is the Health and Safety Promotion Survey given to eighth-, tenth-, and twelfth-grade students

in Kittitas County schools every two years. Results from Ellensburg High School and Cle Elum–Roslyn High School showed that the percentages of seniors reporting binge drinking, smoking tobacco, and marijuana use have all increased significantly from 1994 to 1998. (Table 3.2) (The 1996 data for Cle Elum-Roslyn was unavailable).<sup>15</sup>

The State of Washington Division of Alcohol and Substance Abuse has declared these same three areas—binge drinking, smoking tobacco, and marijuana use—as priority areas on which to focus prevention efforts.<sup>5</sup> In most categories, the percentages of reported use is higher by seniors in this county than by seniors statewide.<sup>16</sup>

Substance abuse prevention education is offered to youth in school settings. Treatment services for alcohol and other drugs are available in the community. In addition, a designated driver program and ride program is available to university students and community members.

Tobacco prevention for youth involves school as well as community-based programs. A recent law enabling minors to be cited and fined for possession of tobacco products is being implemented. Compliance checks to ensure stores are not selling tobacco products to minors also limit youth access.



“Stop Drinking, Violence and Chewing Tobacco” by Ryan Wagner

Table 3.2	<i>Ellensburg</i>			<i>Cle Elum-Roslyn</i>		<i>Statewide survey</i>
<b>Use by Seniors</b>	1994	1996	1998	1994	1998	1998
5 drinks in a row, past two weeks	37%	47%	45%	42%	51%	33%
Smoked in past 30 days	28%	44%	53%	37%	55%	29%
Marijuana in past 30 days	20%	27%	23%	22%	27%	28%
Cocaine at least once	6%	14%	14%	22%	8%	10%
Inhalants at least once	25%	5%	14%	40%	33%	13%
Chew tobacco at least once	44%	N/A	47%	62%	67%	35%

Sources: ESD 105 Health and Safety Promotion Survey; Ellensburg and Cle Elum/Roslyn School Districts. Washington State Survey of Adolescent Health Behaviors 1998, Analytic Report

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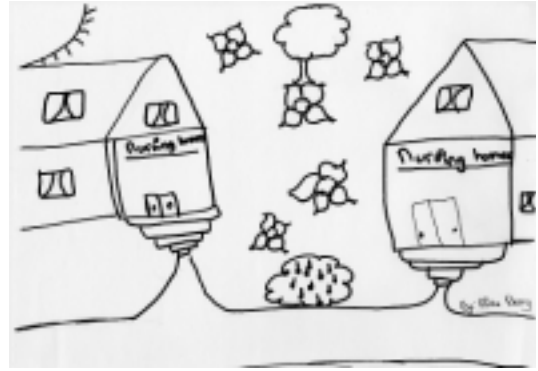
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The Violence Prevention Act passed by the Washington State Legislature in 1994 mandates state and local health departments to monitor violence and to participate in community-based violence reduction initiatives. Domestic violence and sexual assault services are available throughout the county. Education in the schools and general community is offered on anger management, impulse control and prevention and identification of domestic violence. Mediation programs for youth and the general public are available, and self-defense classes are also offered.



“Recreation” by Jeremy Carter



“Nursing Homes” by Alisha Berry

## CHAPTER 4

# GENERAL HEALTH

### FAST FACTS

- The life expectancy of the citizens of Kittitas County was 77.9 years in 1996.
- In the 1996 Kittitas County behavioral survey, most respondents (66%) rated their health as excellent or very good, while only 10% rated it poor or fair.
- The three most common causes of hospitalization in Kittitas County are unintentional injuries, heart disease and cancer.
- According to Washington Department of Health data for 1992-1996, the principal causes of death in Kittitas County for ages 1-64 years were largely preventable. These included unintentional injury, cancer, motor vehicle injury, heart disease firearms, and suicide.
- The top five *true* causes of death are tobacco use, alcohol use, physical inactivity, nutrition and obesity, and violence.
- Cancer, motor vehicle injury, unintentional injury, suicide, and heart disease impact the county the most in terms of killing people before or during their most productive years as measured by years of potential life lost.

## Introduction

In order to describe the health of a community, factors to explore include life expectancy, general health behaviors, causes of hospitalization and death, and years of potential life lost to premature death.

## Life Expectancy

Life expectancy is the number of years a person born in a given year could expect to live. Historically, life expectancy has increased over time. According to the U.S. Department of Health and Human Services publication *Prevention Report* :

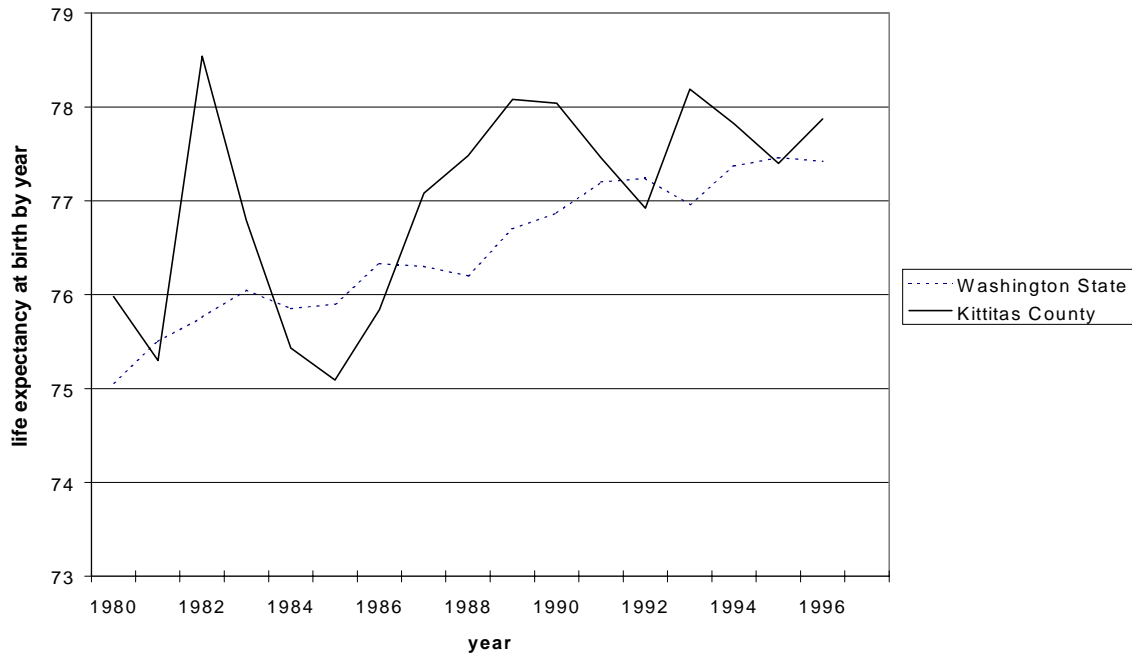
*At the beginning of the 20<sup>th</sup> century, the average American had a life expectancy of 45 years. Today the average lifespan has increased to 75 years. According to at least one study, 25 years of this 30-year gain in life*

*expectancy can be attributed to public health measures, only 5 years to curative medicine.*<sup>1</sup>

Major contributors to this increase in life expectancy are the eradication of certain childhood diseases through aggressive immunizations, improvements in water and air quality, and the appropriate management of solid and human waste. Advances in prevention, diagnosis and treatment of acute and chronic illnesses have also contributed significantly to the increase in life expectancy.

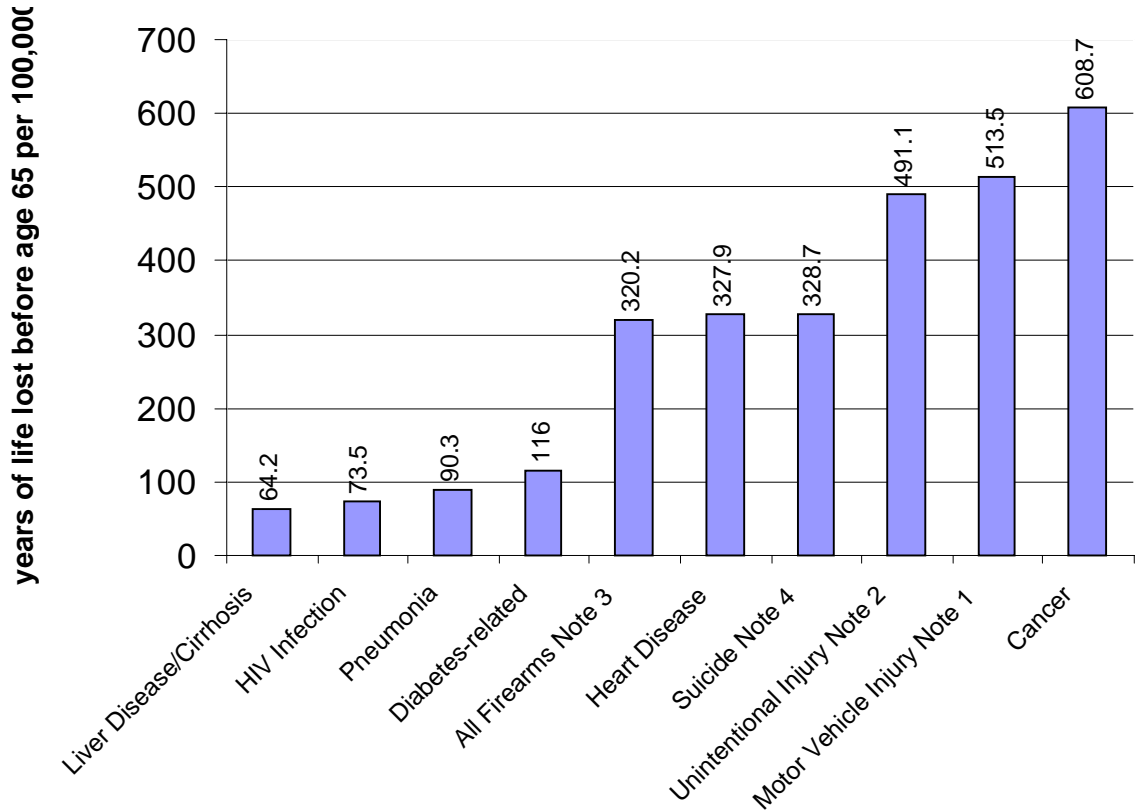
The life expectancy of the citizens of Kittitas County rose gradually from 1980 to 1996 as did that of the citizens of the state. In 1996, the average life expectancy for Kittitas County residents was 77.9 years compared to 77.4 years for the state.<sup>2</sup> (Figure 4.1)

Figure 4.1 Life Expectancy, Washington State and Kittitas County, 1980-1996



Source: VISTA/PH

**Figure 4.2 Years of Potential Life Lost Before age 65, Kittitas County, 1992-1996**



Source: VISTA/PH

## Years of Potential Life Lost

*Years of Potential Life Lost* (YPLL) before age 65 measures the impact on society of losing members before or during their most productive years. For each death under the age of 65, the number of years between the age of death and age 65 represents the years of potential life lost. As a result, diseases or injuries that cause more deaths among younger persons have a higher weight in YPLL. The rate is determined as years of

potential life lost relative to age 65 per 100,000 population in the age range 0-65 (Figure 4.2).<sup>2</sup>

## Self-reported General Health

An individual's perception of his or her health can offer valuable insight into the health of the community. In the 1996 Kittitas County behavior survey, the respondents were asked to rate their own health as excellent, very good, good, fair or poor. Most respondents (66%) rated their health as excellent or very good, while only 10% rated it poor or fair.

The subgroups of respondents who were most likely to rate their health as poor or fair were:

**Table 4.1**

Principle Causes of Death by Age Group, 1992-1996				
1-14	15-24	25-44	45-64	65 and over
1. unintentional injury <sup>1</sup>	1. unintentional injury <sup>1</sup> 2. motor vehicle injury <sup>2</sup>	1. unintentional injury <sup>1</sup> 2. cancer 3. firearms <sup>2</sup> 4. suicide <sup>3</sup> 5. motor vehicle injury <sup>2</sup>	1. cancer 2. diabetes 3. chronic obstructive pulmonary (COPD) 4. cerebrovascular disease and suicide (tied) 5. unintentional injury <sup>1</sup>	1. cancer 2. cerebrovascular disease 3. diabetes 4. COPD 5. pneumonia and influenza 6. unintentional injury

1. This category includes all deaths (minus motor vehicle deaths) of an accidental nature to include accidental poisoning, fall, fire/burn, explosion, and drowning.

2. Due to the significant number of deaths in this category, motor vehicle injury deaths were separated from unintentional injuries and includes deaths directly attributed to a motor vehicle.

3. Deaths in this category include all deaths attributed to a firearm, whether intentional or unintentional.

4. Deaths in this category include all self-inflicted deaths regardless of means of death.

Source: VISTA/PH

- Respondents 65 and older (of whom 20% rated their health as poor or fair), compared to respondents under 65 (7%); and
- Respondents with household incomes below \$35,000 (14%) compared to respondents with household incomes of \$35,000 or more (4%).

Additionally, 29% of the respondents said there was at least one day in the past month their physical health was not good, and 36% said there was at least one day when their mental health was not good. One in seven respondents (15%) said they were kept from normal activities for at least one day in the past month due to poor physical or mental health. The average number of days lost was 1.2 per person.<sup>3</sup>

## Causes of Death

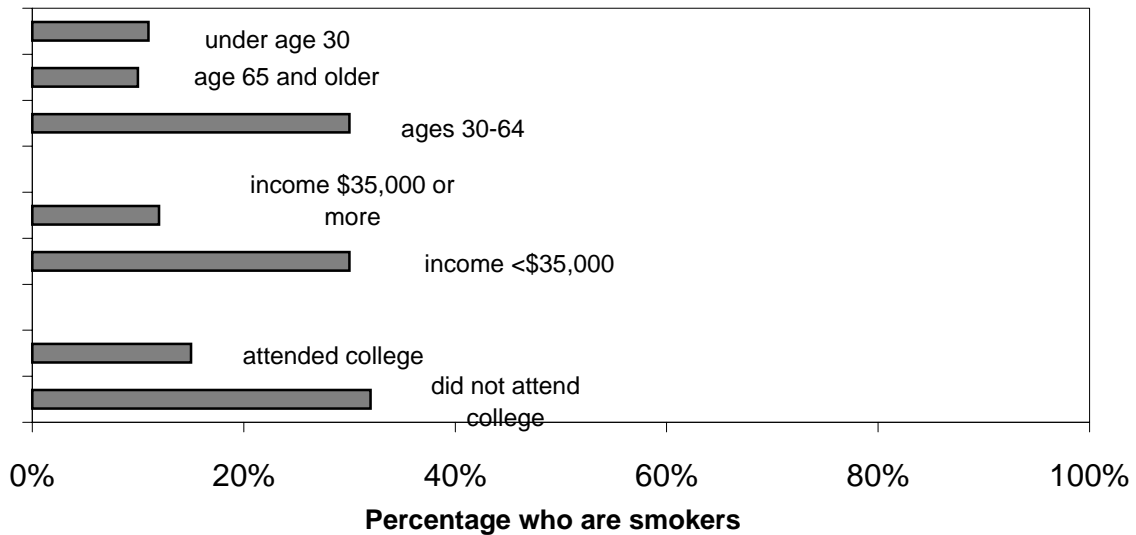
Identifying the causes of death allows us to determine which deaths were preventable. By doing so, health promotion programs can be targeted to effect changes in lifestyle, diet and exercise that contribute to life expectancy and enhance the quality of life.

During 1992-1996, the five leading causes of death in Kittitas County were (in order): cancer, heart disease, unintentional injuries, diabetes and cerebrovascular disease. In younger age groups, unintentional injuries are the leading cause of death, while cancer is the leading cause in older adults. The causes of death from early childhood to middle age are largely preventable, except cancer in the 25-44 year group (table 4.1). With increasing age, the causes of death change to reflect lifestyles and genetics. However, unintentional injury remains one of the principal causes of death even in the older age groups.<sup>2</sup>

## True Causes of Death

According to McGinnis and Foege, the actual causes of death in the United States in 1990 were tobacco use, diet and activity patterns, alcohol use, infectious agents, toxic agents, sexual risk-taking, motor vehicle accidents, and illicit drug use.<sup>4</sup> The 1996 Kittitas County behavior survey also polled respondents in these areas.

**Figure 4.3 Determinants of Smoking**



Source: Kittitas County Behavioral Risk Factor Survey

**Tobacco**

About one in five respondents (21%) said they currently smoke cigarettes, similar to the 20% found statewide in 1995. Another 26% said they do not smoke now but have smoked at least 100 cigarettes in the past.

Among respondents who smoke, half said they smoke at least one pack a day. About one in eight smokers (13%) said they do not smoke every day; on days they do smoke, they smoke a median of three cigarettes.

Among those who quit smoking, 62% said they quit smoking regularly five or more years ago. More than one-third of the daily smokers (39%) said they had quit for at least one day in the past twelve months. Almost half of these respondents said the longest they had quit was for less than three months.

Almost one-quarter of the respondents (23%) said they have tried chewing tobacco or snuff, and 6% said they currently use one or both products. All but one of the respondents who

reported current use were male, and almost all were under forty years old. Among the respondents who use smokeless tobacco, half (52%) said they have been doing so for ten years or more; 24% started less than five years ago.<sup>3</sup>

**Alcohol**

Almost two-thirds of the respondents (63%) said they had consumed at least one drink of alcohol in the month prior to the survey. This proportion is not significantly different from the 58% found statewide in 1995. The subgroups most likely to have consumed alcohol in the past month were:

- Respondents with incomes between \$25,000 and \$35,000 (80%), compared to those with lower incomes (54%) and higher incomes (68%).
- Respondents under 65 (68%), compared to respondents 65 and older (42%); and
- Respondents who attended college (67%), compared to respondents who did not attend college (56%).

Among all respondents, 2% were calculated to be chronic drinkers; that is, they drank more than 60 drinks in the month prior to the survey. This is similar to the 3% found statewide in 1995. The number of chronic drinkers was too small to detect any differences among the subgroups.

One in six of all respondents (16%) reported binge drinking at least once in the month prior to the survey. Binge drinking is having five or more drinks on one occasion. This proportion is not significantly different from the 13% found statewide in 1995. The subgroups most likely to have binged were:

- Respondents with household incomes between \$25,000 and \$35,000 (29%), compared to respondents with higher or lower incomes (15%);
- Respondents under age 40 (27%), compared to respondents age 40 and older (6%);
- Men (22%), compared to women (10%).<sup>3</sup>

### Physical Inactivity

Respondents to the survey were asked if they had engaged in any physical activity in the previous month. Almost nine out of every ten respondents (86%) said they had; 52% engaged in at least two types of activities. By far, the most frequently reported activity was walking; 31% said this was their most frequent activity, and 10% said it was the second most. The median distance walked was two miles. Other frequent activities include gardening, wood-chopping or yard work, and bicycling.

Overall, 34% of the respondents were calculated to have engaged in *regular and sustained* activity, defined as any physical activity done for thirty or more minutes per session, five or more

times per week. Twenty-three percent engaged in *regular* activity, which is any physical activity done for twenty or more minutes per session, three or more times per week. Twenty-five percent engaged in *irregular* activity, or that which is performed fewer than three times a week or for less than twenty minutes per session. About one in seven (14%) reported not engaging in any physical activity in the month prior to the survey.

No subgroups significantly differed from others in their likelihood to report engaging in regular and sustained activity in the past month. The subgroups most likely to report engaging in no activity in the past month were:

- Respondents who did not attend college (21%), compared to respondents who did attend college (10%); and
- Respondents with household incomes below \$50,000 (15%), compared to respondents with household incomes of \$50,000 or more (7%).<sup>3</sup>

Numerous programs and classes in Kittitas County offer opportunities for physical activity for every age group. These include gymnastics and swimming classes for toddlers; school and community sports teams for youngsters and adults; the City of Ellensburg Pool; private gyms; various organizations, such as 4H or Scouts; Senior Center activities; and special interest clubs.

### Nutrition and Obesity

Respondents were asked how often they consume fruit, fruit juice, potatoes, and various vegetables. Only 32% of the respondents reported consuming at least five servings of these foods per day. Among the foods studied, those most likely to be eaten at least daily were fruit,

vegetables other than salad, carrots and potatoes, and fruit juice. The subgroups most likely to say they consume at least five servings per day were:

- Respondents 65 and older (47%), compared to respondents under 65 (29%);
- Women (41%), compared to men (23%); and
- Respondents with household incomes of \$35,000 or more (36%), compared to respondents with household incomes below \$35,000 (27%).<sup>3</sup>

Programs through the hospital and the health department address the nutritional concerns of special groups such as pregnant or lactating women and people with diabetes. Several nutrition consultants are available for weight loss or other special concerns either privately or through the hospital or the university. There are also local chapters of national weight loss programs and support groups.

## Violence

When asked how safe from crime they consider their neighborhoods to be, the majority said either extremely safe (31%) or quite safe (57%). Respondents with household incomes of \$50,000 or higher were more likely to rate their neighborhoods as extremely safe (45%) than were respondents with household incomes below \$50,000 (26%).

About one in eight respondents (13%) said they or a member of their household had been a victim of a property crime, such as theft or vandalism, in the past twelve months. Respondents 65 and older were much less likely to say this (1%) than were respondents under 65 (16%). About two-thirds of the victims (64%) reported the crime to the police or sheriff's department.

About one in five respondents (19%) said they personally knew of an adult in Kittitas County who had been physically or sexually abused by a spouse, ex-spouse, adult family member or intimate partner in the past twelve months. Eight percent said they knew of a child or adolescent in Kittitas County who had been physically or sexually abused by a parent or family member in the past twelve months.<sup>3</sup>

## Firearms

Fifty-three percent of respondents keep guns in or around their homes, the most common reason being for hunting or sport. Among gun owners, eleven percent have a firearm in or around the home that is loaded and unlocked. The subgroups most likely to have firearms were:

- Respondents with household incomes of \$25,000 or more (of whom 69% reported having firearms), compared to those with incomes under \$25,000 (34%);
- Respondents who did not attend college (60%), compared to those who attended college (49%);
- Respondents age 30 and older (59%), compared to respondents under age 30 (39%);
- Men (58%), compared to women (48%).<sup>3</sup>

Each year, fewer than five injuries and deaths in the county are attributable to firearms.

Firearm safety classes are offered in the community each year by law enforcement and local hunting organizations.

## Hospitalizations

Hospitalization rates for some conditions have declined drastically in the last decade or two due to advances in technology (such as laparoscopy taking the place of open surgeries), changing views on patient care (such as more home care, earlier post-operative activity) and changing methods and rates of reimbursement by insurance companies. The emergency department is designated as a Level-IV trauma service. Emergency visits totaled 8,419 in 1998, up 20% since 1994. Nearly 80% of all surgeries at Kittitas Valley Community Hospital are performed on an outpatient basis.<sup>5</sup>

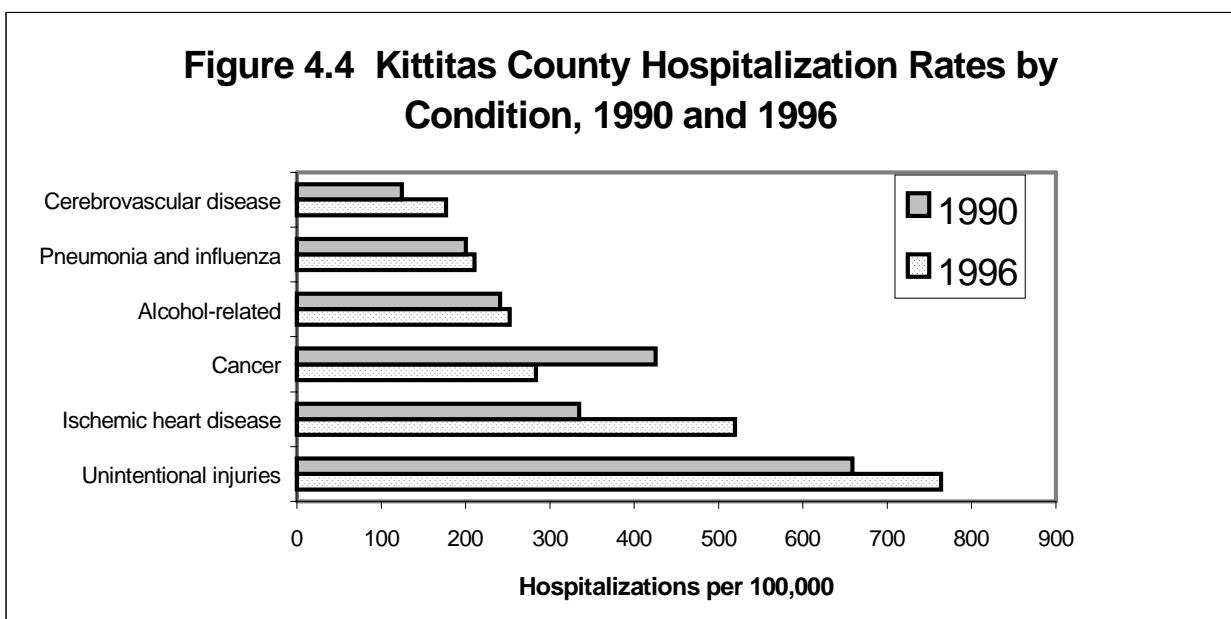
## Senior Citizens

In February 1998, senior residential areas were surveyed by a team of researchers and students from the University of Washington and Central Washington University in cooperation with selected social services agencies of Kittitas County. The study does not necessarily reflect the status or needs of those seniors living in private housing,

except for the small number attending the lunches at the residential areas. For example, the seniors in the residential facilities are more likely to be older than seniors who live in private homes. Furthermore, in the study sample, the majority of women (69%) were widowed, while the percentage of widowed women over age 60 is likely to be much smaller outside these facilities. It is not possible to predict how the answers of respondents in residential units would differ from persons living in private homes who were not interviewed.

Despite these limitations, the data from the study does give a good picture of those living in the housing units. Most were female and older, with nearly all being over 80 years of age. Most had a regular physician (87%), and most had insurance, principally Medicare (85%). Hypertension (28%) and heart disease (21%) were the most common medical conditions.

The group as a whole was fairly mobile, with the majority (60%) being able to walk outside on their own. Most could do their own shopping. However,



Source: VISTA/PH

28% needed assist devices for walking and 32% indicated they had fallen in the past year. About half reported taking walks as a regular activity, but the most commonly reported activities were fairly sedentary, including watching television and reading. Lack of a convenient location was cited as a barrier to physical activity by 45% of the respondents.

In terms of social support, the majority (72%) had relatives in town. However, it is important to note that 41% reported feeling lonely some or most of the time and 18% reported depression as a health problem.<sup>6</sup>

## Oral health

Two-thirds of the respondents said they had visited a dentist or dental clinic in the past year (similar to the 68% who reported this statewide in 1995); another 13% said they visited one in the past two years. The subgroups *least* likely to have visited a dentist in the past year were:

- Respondents without dental coverage (45% did not visit a dentist), compared to those with coverage (21%);
- Respondents with household incomes below \$35,000 (42%), compared to respondents with household incomes of \$35,000 or more (22%); and
- Respondents who did not graduate from college (37%), compared to those who did graduate from college (23%).

Cost is a major barrier to dental care. Among the respondents who did not visit a dentist in the past year, 42% reported cost as the reason. The other common answer was having no reason to go to the dentist (34%).

Half of the respondents (51%) said they have dental coverage, while 49% said

they do not. The subgroups most likely to lack dental coverage were:

- Respondents 65 and older (of whom 84% said they lack dental coverage), compared to respondents under 65 (42%);
- Respondents with household incomes below \$35,000 (64%), compared to respondents with household incomes of \$35,000 or more (27%); and
- Respondents who did not graduate from college (53%), compared to college graduates (38%).<sup>3</sup>

Access to dental care for children who are uninsured and/or from low-income families has long been a problem in Kittitas County. In April and May 1998, the Kittitas County Health Department, in conjunction with the non-profit dental group SmileSavers, conducted oral health care clinics for elementary school students. Of the 128 children seen, 46% had cavities, 18% had rampant decay, and 47% had untreated cavities. Nine percent were referred for urgent treatment, 88% for routine treatment, and only 3% did not need treatment. Early dental examinations are able to identify potential problems before extensive treatment is required. Also, primary prevention measures in the form of sealants and fluoride can be administered.<sup>7</sup>

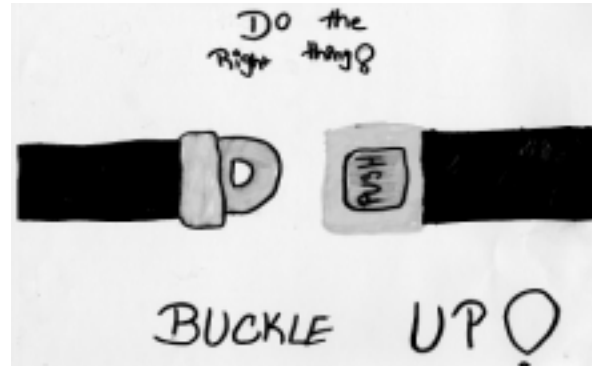
In May 1998, SmileSavers also initiated monthly oral health clinics for clients of the Women, Infant, and Children (WIC) program. Held in the Kittitas County Health Department, these clinics serve all family members of the WIC clients. This program has begun to address the needs of a population that is otherwise unable to obtain consistent dental care locally.

In addition to the SmileSavers program, local health and social service providers have worked out a rotating referral system with certain local dentists who are willing to take care of uninsured and/or Medicaid patients.

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As the health care delivery system continues to evolve and as our knowledge of medicine and health grows exponentially, it becomes increasingly important for us to be active participants in our own health care. Kittitas County is fortunate to have a Community Health Library that opened in April 1998. A service of Kittitas Valley Community Hospital (KVCH) and collaboratively supported by many other community partners, the library is located on the KVCH campus. The library makes current health-related information accessible to patients and families, students, health care professionals and the general public. In addition to housing print and video reference materials, the library provides access to comprehensive on-line health databases. Trained staff is available to help. For library hours, call 509-933-7533 or visit the website at <http://www.eburg.com/~hlthlib/>



“Seat Belts” by Christina Riley

## CHAPTER 5

# UNINTENTIONAL INJURIES

### FAST FACTS

- From 1992 to 1996, unintentional injuries caused 6% of all deaths in Kittitas County compared to 5% of all deaths for Washington State.
- Forty-two percent of emergency room visits in 1997 were due to injuries.
- Motor vehicle crashes are the leading cause of injury deaths for county residents under the age of 65.
- In 1996, the percentage of collisions in the county that were drinking driver-related was one of the lowest in the state.
- Thirty-seven percent of county adults do not always wear seat belts, and 20% of children are not always belted in.
- Seventy percent of the children in the county do not always wear a bike helmet.
- In 1996, Kittitas County had the second highest rate in the state for traffic collisions involving bicycles at 3.9 per 10,000 people.

## Introduction

Because risk factors and preventive measures differ, injuries are classified as either *unintentional* or *intentional*. Unintentional injuries include occupational injuries, motor vehicle crashes, falls and drowning. Intentional injuries include assault, homicide and suicide and are discussed in the social environment chapter of this report.

Unintentional injury was the leading cause of death among Kittitas County residents ages 1-44 from 1991 through 1995. Unintentional injury was also the leading cause of potential life lost before age 65, accounting for nearly 30% of all years of potential life lost.<sup>1</sup>

The incidence of unintentional injury is highest among men and younger people, because these two populations engage in high-risk behaviors more often, both at work and during recreation. As is true for Washington State and the nation, men in Kittitas County have higher death rates associated with unintentional injury than women.

Injuries are a significant cause of hospitalization, and account for more physician visits than any other health condition in the United States. Frequently, injuries are not fatal but leave survivors in need of considerable assistance and often unable to work. Some of the tremendous economic and social costs of injuries are associated with the rehabilitation needs of survivors. The largest costs occur because those killed and injured are typically young adults, whose inability or decreased ability to function socially and economically affects both their families and society. Because most injuries can be avoided and because injury-related costs are so high, injury prevention has become a major health focus.

The Kittitas County Emergency Medical Service (EMS) responded to

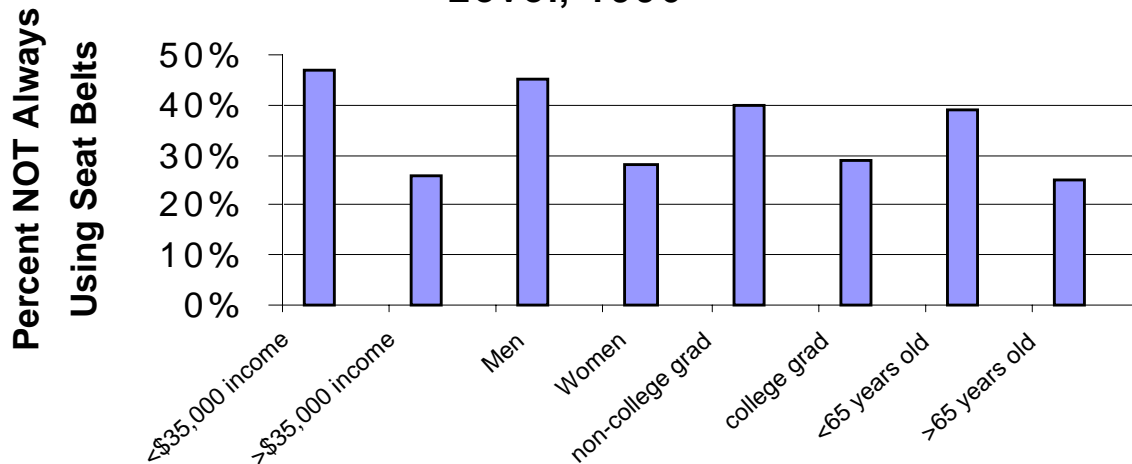
1,973 pre-hospital medical incident calls in 1997.<sup>2</sup> Kittitas Valley Community Hospital's (KVCH) emergency department had 8,068 visits in 1997, of which 3,355 were injury-related.<sup>3</sup> The emergency room operated by Kittitas County Hospital District #2 in Cle Elum had 1,938 visits in 1996, 1,930 visits in 1997 and 2,046 visits in 1998.<sup>4</sup>

## Motor Vehicle Injuries and Deaths

Motor vehicle crash deaths are highest in rural areas. Seventy-three percent of all fatal collisions and 39% of injury collisions occur in rural areas. This may be related to poor road conditions, higher driving speeds, greater emergency trauma care response time, and lower rates of seat belt usage. Occupants not wearing seat belts are fifteen times as likely to be fatally injured and six times as likely to sustain a disabling injury than those who are restrained.<sup>5</sup> The greatest percentage of unintentional injury emergency calls to the Kittitas County EMS is due to motor vehicle crashes.<sup>2</sup> In 1996, the KVCH emergency room had 281 motor vehicle injury visits, and in 1997 the number rose to 294.<sup>3</sup> In 1996, 6% of collisions in Kittitas County were drinking driver-related, one of the lowest rates in the state.<sup>6</sup>

Of the 64 injury-related deaths between 1992 and 1996, 22 were due to motor vehicle injuries. The 1992-1996 motor vehicle injury death rate among Kittitas County residents was 13.4 per 100,000. This rate is slightly lower than the Washington State rate in 1992 (13.9 deaths) and the US rate (15.9 in 1994).<sup>1</sup> The *Healthy People 2000* objective is to reduce deaths caused by motor vehicle crashes to no more than 14.2 per 100,000 people.

**Figure 5.1 Seat Belt Use in Kittitas County, by Income, Sex, Age, and Education Level, 1996**



*Source: 1996 Kittitas County Health Department Survey*

In 1996, Kittitas County had the second highest rate in the state for traffic collisions involving bicycles with 12 cases, (3.9 per 10,000). The city of Ellensburg had the highest rate of any city in the state with 12 cases (9.1 per 10,000). In 1996, Kittitas County had the fifth highest rate in the state for traffic collisions involving pedestrians with 10 cases (3.2 per 10,000).<sup>6</sup>

According to the 1996 Kittitas County health behavior survey, 37% of respondents do not always wear seat belts. This is a much higher rate than the state's rate of 22% in 1995. Residents with annual incomes under \$35,000 were more likely to not always wear seat belts. Forty-five percent of men did not always wear seat belts compared to 28% of women (Figure 5.1).<sup>7</sup> Motor vehicle fatalities have declined in the past fifteen years due to reductions in risk-taking behavior (such as drinking and driving), improved roads, seatbelt usage, safer automobiles, and improved trauma care. However, motor vehicle crashes continue to be a leading cause of injury deaths.

### **Fall Injuries and Deaths**

More hospitalizations for fall-related injuries occurred among county residents than any other non-fatal unintentional injury. Between 1992 and 1996, 433 hospitalizations were recorded for county residents due to a fall-related incident and 316 of these falls were in residents over the age of 65. The county rate of 274.8 per 100,000 was slightly less than the state rate of 280.0 per 100,000 for this period.<sup>1</sup> Unintentional falls among women over the age of 65 accounted for the second greatest number of calls to the Kittitas County EMS.<sup>2</sup>

Of the 19 residents who died due to falls, 18 of them were over the age of 65. The county rate of 4.9 per 100,000 was more than the state rate of 3.1 per 100,000 for 1992-1996.<sup>1</sup>

### **Poisoning Injuries and Deaths**

Of the twenty hospitalizations due to poisoning from 1992 to 1996, thirteen of the residents were over the age of 45. The county rate for non-fatal poisoning

was 11.2 per 100,000 compared to the state rate of 21.7 per 100,000. Six of the seven deaths due to poisoning in Kittitas County between 1992 and 1996 were in residents between the ages of 25 and 44. The county rate for fatal poisonings of 5.5 per 100,000 was higher than the state rate of 4.0 per 100,000.<sup>1</sup> Although many poisonings are accidental, suicides are also included in these totals.

## **Recreational Injuries and Deaths**

Kittitas Valley residents and visitors enjoy a variety of outdoor recreational activities year round. The KVCH emergency room had ten snow vehicle injury visits in 1996 and eight in 1997 during the four-month snowmobile season. In comparison, there were four summer watercraft recreational injuries in 1996 and six in 1997.<sup>3</sup> From 1992 to 1996, there were a total of four drowning deaths in the county.<sup>8</sup> While this is well below the Healthy People 2000 goal of 1.3 drowning deaths per 100,000 per year, the rate of 2.1 per 100,000 for Washington State is one of the highest in the nation.<sup>9</sup>

Many residents own and ride horses for recreation and for working stock. The KVCH emergency room had 49 horse-related injury visits in 1996, of which 4 were head injuries. In 1997, of 42 horse-related injury visits, 7 were head injuries.<sup>3</sup> The 4-H Clubs now require members to wear riding helmets at horse shows and training days, but many other clubs do not.

In 1996 and 1997, the KVCH emergency department had 72 bicycle-related injury visits each year.<sup>3</sup> In 1997, Kittitas County EMS responded to 20 bicycle-related injuries, 9 of which were in boys under the age of 15.<sup>2</sup> In 1997, the

Washington Traffic Safety Commission conducted a bicycle helmet observational survey in several counties. Of all the counties surveyed, Kittitas had the lowest rate of helmet usage (13.3%) and King had the highest rate (79.9%) (Table 5.1). The City of Ellensburg had a rate of 32.9%. The National Center for Injury Prevention and Control reports that wearing helmets while riding a bicycle can reduce the risk of head injury by 85%.

In 1996, 140 KVCH emergency room visits were by people who were struck by an object or person while participating in a sports activity. In 1997, the number rose to 162. There were 10 KVCH emergency room visits due to falls from playground equipment in each of 1996 and 1997.<sup>3</sup> In 1998, an Environmental Health Specialist from the Kittitas County Health Department was certified by the National Playground Safety Institute and the National Parks and Recreation Association to perform in-depth playground inspections.

From time to time, service clubs, health and social service agencies and law enforcement have all sponsored bicycle helmet safety education programs for youth and adults. When grant money is available, these programs also provide low-cost or free helmets.

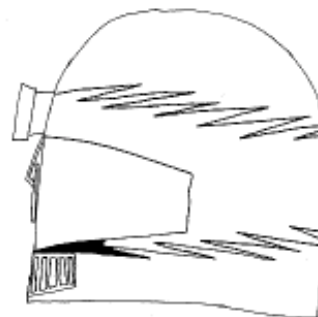
**Table 5.1 1997 Bicycle Helmet Observational Survey of Washington State, Washington Traffic Safety Commission**

West		59.7%	East		32.8%
King		79.9%	Chelan		54.8%
Snohomish		72.6%	Whitman		53.5%
Pierce		61.2%	Walla Walla		41.6%
Thurston		50.0%	Spokane		35.4%
Clallam		42.9%	Grant		27.3%
Clark		38.4%	Yakima		23.9%
Cowlitz		32.9%	Kittitas		13.3%
Whatcom		25.4%			

Source: Washington Traffic Safety Commission

## References

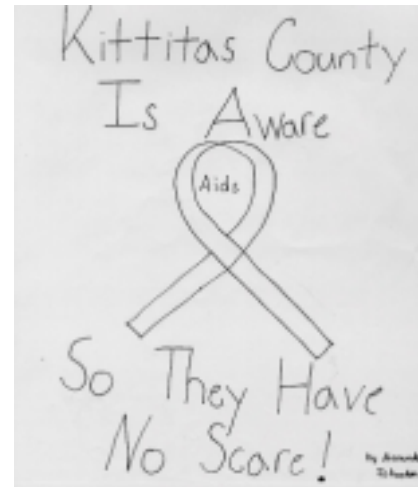
1. VISTA/PH Data Assessment System. Developed by the Seattle-King County Department of Public Health using state and other public health related data sets.
2. Unpublished data, Kittitas County Emergency Medical Services, October 1998.
3. Unpublished data. Kittitas Valley Community Hospital, Emergency Department. October 1998.
4. Unpublished data, Kittitas County Hospital District #2, March 1999.
5. *The Health of Washington State*. Washington State Department of Health, September 1996.
6. *1996 Traffic Collisions in Washington State*. Washington Traffic Safety Commission, September 1997.
7. *Kittitas County Behavioral Risk Factor Survey*. Gilmore Research for the Kittitas County Health Department, September 1996.
8. Washington State Department of Health, Center for Health Statistics. 15 December 1998 <<http://www.doh.wa.gov/EHSPHL/CHS/default.htm>>.
9. Washington Health Foundation. 18 August, 1998 <[http://208.151.102.233/wsha/county/select\\_report.cfm?selecte\\_d\\_county=Kittitas](http://208.151.102.233/wsha/county/select_report.cfm?selecte_d_county=Kittitas)>.



Victor

Bike Helmets / Victor

"Bike Helmets" by Victor Bernal



"AIDS" by Alexandra Johnston

## CHAPTER 6

# INFECTIOUS AND COMMUNICABLE DISEASE

### FAST FACTS

- The pertussis (whooping cough) rate has risen in Kittitas County and in Washington State over the past five years.
- Chlamydia is the most commonly reported sexually transmitted disease in the county with over 80% of the cases occurring among those ages 15-24.
- Reported cases of viral hepatitis have been relatively low in Kittitas County.
- Between 1990 and 1997, three cases of active tuberculosis were reported in the county.
- From 1980 through December 1998, 13 cases of AIDS were reported in the county.
- Children should receive fifteen immunizations by age two.

## Introduction

Control of infectious disease has been a major reason for declining death rates in the nineteenth and twentieth centuries. Advances in medical technology, such as the development of vaccines and antimicrobial drugs, and in public health practices, such as the treatment and protection of drinking water, and the proper storage, handling, and preparation of food, have vastly improved the ability to identify, treat and control the spread of many infectious diseases. Despite great progress in controlling infectious disease, emerging diseases, such as HIV/AIDS, and traditional diseases, such as TB, that have become increasingly resistant to drug therapy are still of great concern and a potential threat to the public's health.

The occurrence of infectious disease is measured by reports from local health care providers and labs, who are required by Washington State law to report over sixty communicable diseases. Prompt reporting enables health department staff to identify exposed persons who are at risk of acquiring disease, detect outbreaks, follow trends, and limit the spread of disease. Although the law *requires* reporting, there are often inconsistencies in reporting, documentation and diagnosis among different providers, and it is believed that many communicable diseases, especially those that are less severe or are associated with sexual contact, are seriously under-reported.

## Childhood Vaccine-Preventable Diseases

Washington State law requires that students have certain recommended immunizations before they enter school. Over the past several years, immunization

rates of school-aged children in Washington have been near 95%. However, immunization rates for children under the age of two are significantly lower—only about half of all two-year-olds in Washington were fully protected against preventable disease in the late 1980s and early 1990s.<sup>1</sup> Because this is when children are most susceptible to communicable diseases, 80% of childhood vaccinations are recommended during a child's first two years of life.

The Centers for Disease Control and Prevention's (CDC) National Immunization Survey provides ongoing national estimates of vaccination coverage among children aged 19-35 months. The 1997 survey showed that only 76% of those children surveyed had received the initial primary series of vaccines.<sup>2</sup> This includes four or more doses of diphtheria and tetanus toxoids and pertussis vaccine/diphtheria and tetanus toxoids (DTP/DT), three or more doses of poliovirus vaccine, one or more doses of measles-containing vaccine (MCV) and three or more doses of *Haemophilus influenzae* type b vaccine. In Washington State during that same year, 80% of the children surveyed had received this series, compared to the *Healthy People 2000* goal of 90%.<sup>2</sup>

### Measles

Measles is a highly contagious viral illness with signs and symptoms including a rash, fever, headache and sensitivity to light. Complications of measles are more common among children under age five and adults over age twenty.<sup>3</sup> Serious complications from measles include pneumonia, ear infections, encephalitis and seizures that can lead to death or lifelong consequences of brain damage or hearing or vision impairment.

The incidence of measles in the United States steadily declined after the

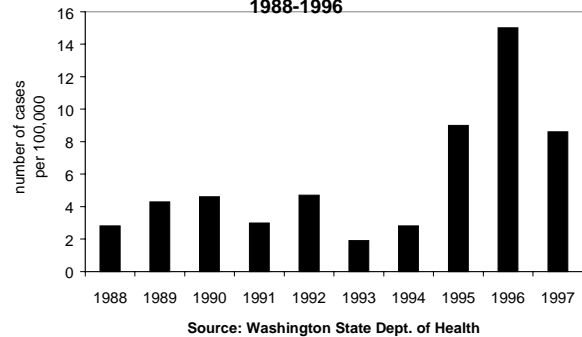
introduction of measles vaccine in 1958. However, in the latter half of the 1980s and early 1990s, a disturbing increase in the number of cases was observed. Nationally, the overall rate for measles was 40% higher in 1990 than in 1989, with nearly half of the cases occurring in preschoolers.<sup>3</sup> The primary cause for measles epidemics may be the failure to immunize children at the recommended age.

Kittitas County has not had confirmed cases of measles reported since 1990, when there were four cases.<sup>4</sup> However, the recent experiences in Clark County and British Columbia clearly demonstrate the potential vulnerability of a population that is not appropriately immunized. In Clark County, between the months of March and July of 1996, there were thirty-one cases of laboratory-confirmed measles and two other probable cases—a total of thirty-three. Between January and March of 1997, British Columbia had an outbreak of 283 cases.<sup>5</sup> Because a number of Central Washington University students were exposed to these cases, the Health Department and the University worked together to vaccinate those believed to be at risk. Fortunately, no cases were reported in Kittitas County.

#### **Pertussis (Whooping Cough)**

Pertussis is an acute bacterial disease that may range from mild respiratory symptoms to a full-blown syndrome characterized by episodes of repeated violent coughing with intervening high-pitched whoops. Highly contagious during the early stage before coughing begins, the bacteria are transmitted primarily by airborne droplets. Infants under six months of age, adolescents and adults often do not have the characteristic whoop and may not be accurately diagnosed. Most deaths from pertussis

**Figure 6.1 Pertussis Rates, Washington State, 1988-1996**



occur in infants under one year of age, primarily from pneumonia.

In the United States, pertussis incidence decreased from the 1940s, when the vaccine became widely available, until the mid-1970s when the incidence began to rise. A leading hypothesis is that natural, longer lasting immunity, which resulted from widespread childhood infection in the pre-vaccine era, has been replaced by twelve years of artificial immunity provided by the vaccine. During a pertussis outbreak in Seattle-King County in 1995, 40% of the cases were adults.<sup>6</sup>

In Washington, the annual incidence of pertussis rose from 4.7 per 100,000 in 1990 to 15 per 100,000 in 1996, the highest rate since 1962.<sup>4</sup> (Figure 6.1) In Kittitas County, 15 cases of pertussis were reported from 1990-1997. Seven cases were reported from 1990-1996, with 0-2 cases each year (annual rate of 0 to 7.3 per 100,000), while 8 cases were reported in 1997 alone (or 25.4 per 100,000).<sup>4,7</sup>

#### **Haemophilus influenzae type b (Hib)**

Meningitis is the most common form of Hib disease, accounting for 50-65% of the cases. Even with appropriate treatment, the mortality rate is 2-5%, and 15-30% of survivors have hearing impairment or residual neurologic effects.<sup>3</sup>

Since the Hib vaccine began being widely used in 1987, there has been a

dramatic decrease in cases of Hib disease statewide. Kittitas County has seen only three cases of Hib disease between 1990 and June 1998.<sup>5</sup>

## **Other Vaccine-Preventable Diseases**

### **Influenza and Pneumonia**

Influenza, commonly called “the flu,” is a viral respiratory disease that usually occurs in the winter. Because the strains of influenza change from year to year, health experts are continually tracking which strains pose the most serious threat worldwide in order to determine which three need to be included in the yearly flu vaccine. The viruses in the vaccine are inactivated so that no one can get influenza from the vaccine. Mid-October through November is the best time to get the shot.

Pneumonia is not a single disease either, as there are over 30 different causes. Prevention for some types of pneumonia is possible, and a vaccine is available to help prevent pneumococcal pneumonia.

Both the influenza and pneumonia vaccines are recommended for people over age 65 and for those with chronic illness, because these populations are especially susceptible to complications from illness. Vaccination levels are estimated to be at only 58% of people over 65 and less than 30% of people under 65 who are at high risk.<sup>8</sup>

Between 1992 and 1996, Kittitas County’s rates for hospital admissions related to pneumonia and influenza at 222.7 per 100,000 were higher than that of Washington State at 193.9 per 100,000. Kittitas County’s age-adjusted death rate from pneumonia and influenza between those same years at 13.6 per 100,000 was also slightly higher than the State’s 11.9 per 100,000.<sup>9</sup>

Washington State makes vaccine available to providers at low or no cost. Several times a year, immunization clinics are held throughout the county at schools and other public sites. Flu and pneumonia shots are made available at several accessible locations each fall.

### **Viral Hepatitis**

Several distinct diseases are grouped together under the heading of viral hepatitis. Though they are all caused by viruses and have similar symptoms, their modes of transmission, epidemiology, disease courses, and prevention methods differ.

#### **Hepatitis A**

Hepatitis A is spread through fecal-oral transmission (ingesting contaminated feces), which generally occurs through direct contact (including casual and sexual). It may also be transmitted by consuming contaminated water or food, or raw or undercooked shellfish. Hepatitis A is generally an acute disease characterized by fever, nausea, abdominal discomfort and jaundice. Recovery is complete but may be prolonged, especially in adults, often contributing to lost work time.

When the general public hears about hepatitis A, it is often through a public health alert in association with an infected restaurant employee. If a food handler is identified with hepatitis A, the health department makes a determination of public risk and may issue an alert advising patrons of the affected food establishment to obtain immune globulin injections in order to prevent hepatitis A.

In Washington, annual hepatitis A rates have fluctuated widely over the past 15 years. In Kittitas County the number of cases between 1992 and 1997 has averaged about three per year.<sup>4</sup> A vaccine

is now available for Hepatitis A and is recommended for those at increased risk.

### **Hepatitis B**

Hepatitis B is transmitted through sexual contact, injection drug use, occupational exposure, household contact, transfusion of contaminated blood, or at birth from an infected mother to her child. About 6-10% of newly infected adults become chronic carriers who are potentially infectious to others. As high as 30-90% of infected young children may become chronic carriers and go on to develop liver cirrhosis or liver cancer.<sup>10</sup>

Since 1992, hepatitis B vaccination has been recommended for all children beginning at birth. In 1996, these recommendations for vaccination were extended to include all 11 and 12-year-olds not previously vaccinated. In 1997 Washington State law began requiring that all children entering childcare or kindergarten be vaccinated.

All pregnant women should be screened for hepatitis B to prevent transmission to their infants. Vaccination is also recommended for injection drug users, sexually active homosexual and bisexual men, heterosexual men and women with multiple sex partners or exposure to prostitutes, inmates of long-term correctional facilities, health care and public safety workers who may be exposed to blood or blood products, hemodialysis patients, patients with bleeding disorders who may receive blood products, household contacts and sexual partners of hepatitis B carriers, and some international travelers. Washington State Labor and Industry regulations require that workers with significant risk for exposure receive education regarding hepatitis B and other blood-borne pathogens in addition to being offered vaccination.

Only the acute form of hepatitis B is reportable in Washington State.

Reported cases therefore underestimate the true number of cases of this disease, since chronic carriers are often asymptomatic and not counted. Since 1992 there have been a total of seven reported cases of hepatitis B in Kittitas County.<sup>5</sup>

In the fall of 1996, the Kittitas County Health Department began implementing school-based hepatitis B clinics for middle school children, vaccinating a total of 387 students by the end of the 1997-98 school year.

### **Hepatitis C**

Of the other non-A non-B hepatitis, hepatitis C is the most common. Prior to screening of donor blood, hepatitis C was believed to be responsible for 90% of post-transfusion hepatitis infections in the United States. In Washington, injection drug users are a particular risk group. The magnitude of transmission risk from person to person or through sexual contact has not been well documented.

In the United States, almost 4 million Americans are infected with the hepatitis C virus.<sup>11</sup> Approximately 600 persons die each year of liver failure shortly after contracting hepatitis C.<sup>12</sup> Almost half of all persons who get hepatitis C never fully recover and are carriers of the disease for the rest of their lives. A specific test has only been available since 1990. There is currently no vaccine for hepatitis C.

Kittitas County has a relatively low incidence of hepatitis C with only five cases reported between 1993 and 1997.<sup>7</sup>

## Sexually Transmitted Diseases (STDs)

Sexually transmitted diseases are a serious concern to public health because they are highly infectious and can result in long-term consequences. The most prevalent reportable STDs are chlamydia, genital herpes, gonorrhea and nongonococcal urethritis (NGU). The incidence of STDs is indicative of sexual risk-taking behavior. Populations with high rates of STDs are at greater risk for HIV, hepatitis B, sterility and pelvic inflammatory disease (PID). Also, STDs can be passed from mother to baby during childbirth.

The sensitive nature and social stigma of STDs contribute to problems in diagnosing and reporting. Therefore, it is expected that the rates of STDs are underestimated. For confidentiality reasons, people may travel outside their county of residence to be treated and may not use their actual name and address. Also sexual contact tracing and partner notification may be incomplete, leading to undiagnosed and untreated cases. Lapses in reporting by health care providers and labs may also occur.

### Chlamydia

Approximately 70% of women with chlamydia have few or no symptoms.<sup>10</sup> If untreated, chlamydia is a major cause of PID in women, which may lead to ectopic pregnancy, chronic pelvic pain and infertility. Men are more likely than women to have symptoms. Left untreated, chlamydia may progress to sterility in men.

In Kittitas County, an average of 46 cases are reported per year.<sup>7</sup> Over 80% of these cases are in those ages 15-24. The *Healthy People 2000* goal is to decrease the chlamydia rate to less than 170 per 100,000. In 1997, the rate per 100,000 for Washington State was 169.8,

while the rate for Kittitas County was 92.1. However, the case rate for Kittitas County in 1996 was much higher at 188.3 cases per 100,000.<sup>7</sup>

In 1988 chlamydia screening and prevalence monitoring activities were initiated in Washington through the federally funded Region X Chlamydia Project. Women under age 24 who receive a pelvic exam are eligible for screening as well as women who have certain symptoms, sexual practices, a history of an STD within the past 12 months or are pregnant or planning a pregnancy. Men who are contacts to laboratory-diagnosed cases of chlamydia are also eligible.

### Gonorrhea

Common symptoms of gonorrhea are abnormal discharge and/or painful urination for both men and women. Approximately 50% of women who are infected do not experience symptoms. Left untreated, gonorrhea can also cause PID in women and sterility in men.

In Washington, the reported incidence of gonorrhea has been declining since the 1980s and the early 1990s. From 1993 to 1997, the number of gonorrhea cases in Kittitas County ranged from 0 to 4 per year.<sup>5,7</sup>

Prevention and education in schools, university residence halls, clinics, and health fairs are just a few of the avenues that STD education and prevention is made available.

### Tuberculosis

Tuberculosis (TB) is a mycobacterial disease that usually involves the lungs, although it can occur in almost any part of the body. TB is spread through exposure to airborne droplets from the sputum of people with infectious TB.

After a decades-long decrease in TB cases reported in Washington and the

United States, TB has re-emerged as an important communicable disease. Contributing factors include immigration to the US from countries with epidemic HIV and transmission of TB in congregate settings, such as correctional facilities, health care facilities, and homeless shelters.<sup>7</sup>

In 1997, 305 cases (5.4 cases per 100,000) of TB were reported in the state. This was a 10% increase in TB cases from 1996. In Kittitas County since 1990, there have been three cases of TB reported.<sup>5,7</sup>

A major concern in the treatment of TB is the emergence of drug-resistant strains. In 1994, 15% of all TB case specimens in Washington were resistant to at least one anti-tuberculosis drug, and in 1997, that number increased to 17%. Multiple-drug resistant TB, however, was found in only 2% of cases in Washington.<sup>7</sup> Treatment for multiple drug-resistant TB is longer and more expensive and can be less effective.

TB surveillance and prevention efforts have increased in Washington State. People at high risk—some immigrants, as well as those in alcohol/drug treatment settings, jails, health care settings and shelters—are tested regularly. A positive skin test indicates that the person has been exposed to TB and is in need of further testing to determine if the disease is active. Positive skin tests are referred to the Public Health Department for further evaluation. In the event of active disease, Public Health communicable disease nurses investigate contacts and supervise treatment. Some individuals without active disease are also treated with antibiotics to prevent activation and transmission of the disease.

## **Human Immunodeficiency Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS)**

HIV, the virus that causes AIDS, is transmitted from person to person through blood, semen, vaginal fluids and, rarely, breast milk. Most frequently, the routes of transmission are unprotected sexual intercourse, the sharing of contaminated needles and other equipment used by injection drug users. Transmission can also occur from mother to baby during childbirth. Once infected with HIV, most people do not develop symptoms for an average of ten years. However, an HIV test will reveal infection within six to twelve weeks after exposure. Advances in early detection, monitoring and developments in drug therapy to slow the progress of the virus have resulted in increased survival rates and improved quality of life.

Because HIV infection has not been a notifiable condition in Washington, cases are reported only after there is a diagnosis of AIDS. Therefore, the epidemic is measured in terms of individuals who have been infected with HIV for a number of years. Those recently infected or not yet diagnosed with AIDS are not reflected in the count. Pierce County has recently made HIV a reportable condition, and the issue is also being debated by the State Board of Health.

Approximately 30.5 million people worldwide are currently living with HIV, with 90% of those infections in developing countries. In the United States, through December 1997, there have been 641,086 cases of AIDS. Estimates are that 650,000-900,000 people are living with HIV and that there are 40,000 new infections per year. In Washington, through September

1998, 8,486 cases of AIDS had been reported, with another 9,000-14,000 people estimated to be HIV-positive.<sup>14</sup> Since the mid-1990s, the number of AIDS cases reported each year in the United States has declined. It is difficult to determine whether it is a true decline, a lag in reporting, or whether improved drug therapies for those infected have delayed the onset of AIDS. However, any decline is encouraging.

Men having sex with men (MSM) account for the majority of AIDS cases in the United States, although the number of cases among injection drug users and female sex partners of males with HIV is increasing more rapidly than among MSM. In 1988, 8% of AIDS cases were in women, and in 1998 the percentage had risen to 16%. Young people under the age of 25 represent 50% of all new infections.<sup>13</sup>

In Kittitas County, through September 1998, 13 cases of AIDS had been reported with an estimated 20-30 people living with HIV.<sup>5,14</sup> In the 1996 health behavior survey, 32% of Kittitas County adults surveyed said they had been tested for HIV.<sup>15</sup>

HIV education is covered within the community, in the schools, and at the university. Education and prevention involve one-on-one education as well as group presentations. Education covers topics ranging from occupational exposure to safer sex. HIV testing and counseling are available in many clinics in the county. Case management is available to HIV-positive individuals and their families through the local health department.

**Table 6.1 Washington State AIDS Surveillance Report as of December 31, 1998**

<i>Resident county at diagnosis</i>	<i>Number of cumulative cases</i>	<i>Number presumed living</i>
	2	2
Adams		
Asotin	12	7
Benton	58	31
Chelan	29	10
Clallam	37	19
Clark	298	129
Columbia	3	1
Cowlitz	74	34
Douglas	2	0
Ferry	5	2
Franklin	16	8
Garfield	0	0
Grant	24	7
Grays Harbor	36	16
Island	47	16
Jefferson	20	9
King	5647	2219
Kitsap	146	54
Kittitas	13	6
Klickitat	10	2
Lewis	32	9
Lincoln	2	0
Mason	52	40
Okanogan	16	10
Pacific	11	3
Pend Oreille	8	4
Pierce	739	322
San Juan	14	5
Skagit	42	15
Skamania	7	2
Snohomish	442	193
Spokane	338	141
Stevens	14	8
Thurston	122	58
Wahkiakum	1	1
Walla Walla	47	24
Whatcom	122	60
Whitman	7	3
Yakima	115	56
<b>TOTAL</b>	<b>8610</b>	<b>3526</b>

Source: Washington State Department of Health

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“Pregnant Lady” by Alisha Berry

## CHAPTER 7

# MATERNAL AND CHILD HEALTH

### FAST FACTS

- Abortion rates for county residents and in the state have fallen gradually from 1991 to 1996.
- In 1996, 93% of pregnant women in Kittitas County obtained prenatal care in their first trimester, compared to 83% statewide.
- Though the rate of alcohol use by pregnant women in the county meets the state and national goals for the year 2000, the rate of tobacco use in pregnancy remains high.
- From 1993 to 1996, an average of 22.6% of births in Kittitas County were to unmarried women, compared to 26.5% for the state.
- In 1998 there were 329 live births at Kittitas Valley Community Hospital. An additional 24 births occurred in private homes.

## Introduction

An important measure of the health of a community is the health of its mothers and children, who are the building blocks for future generations.

This can be measured in several ways: unintended pregnancy, total pregnancy and abortion rates may indicate the availability of family planning services; prenatal care rates may indicate the availability of prenatal care services as well as the state of social services; maternal behaviors during pregnancy and pregnancy outcomes are clear indicators of health. All of these are modifiable, and changes can still be made to improve the health of mothers and children. As with other health measures, both national and state guidelines have been developed with target rates set for the year 2000. Overall, Kittitas County has had lower birth rates than the state average and higher rates of prenatal care.

## Pregnancy and Fertility Rates

The pregnancy rate is the number of pregnancies per 1000 women aged 15-44 in the community. The pregnancy rate is the sum of the number of births and the number of induced abortions. Fetal deaths

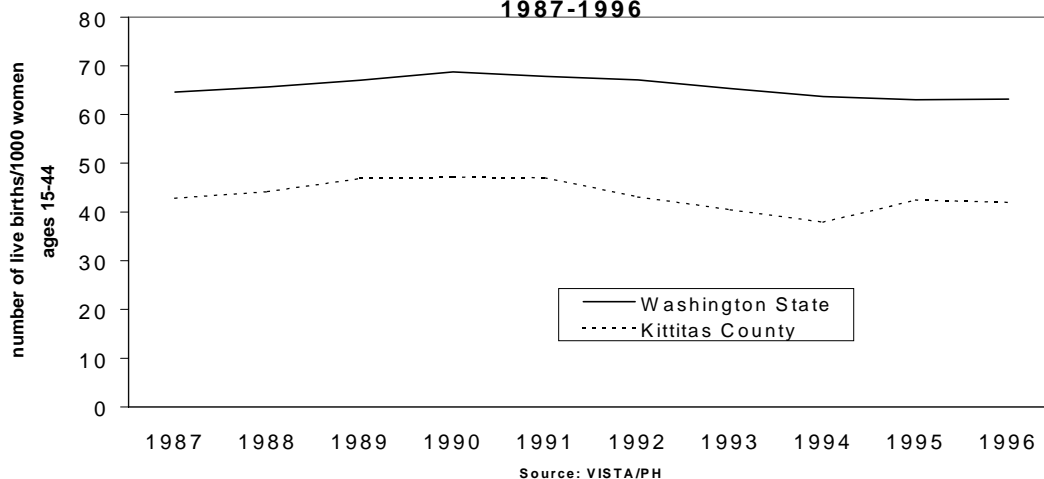
are not included in this number. Over the five years for which data are available, the pregnancy rate in both the state and the county have remained steady or fallen, with Kittitas County remaining well below the state average. The rate for Washington State fell from 94 per 1000 women aged 15-44 in 1991 to 84 per 1000 women aged 15-44 in 1996; in Kittitas County the rate fell from 66 in 1991 to 56 in 1996.<sup>1</sup>

The general fertility rate (GFR), or the number of live births per 1000 women aged 15-44, is frequently used to measure how quickly a population is reproducing itself. Kittitas County's GFR has remained consistently below that of the state. However, neither has changed significantly over the past ten years (Figure 7.1).<sup>1</sup> In 1998 there were 329 live births at Kittitas Valley Community Hospital. An additional 24 births occurred in private homes.<sup>2</sup>

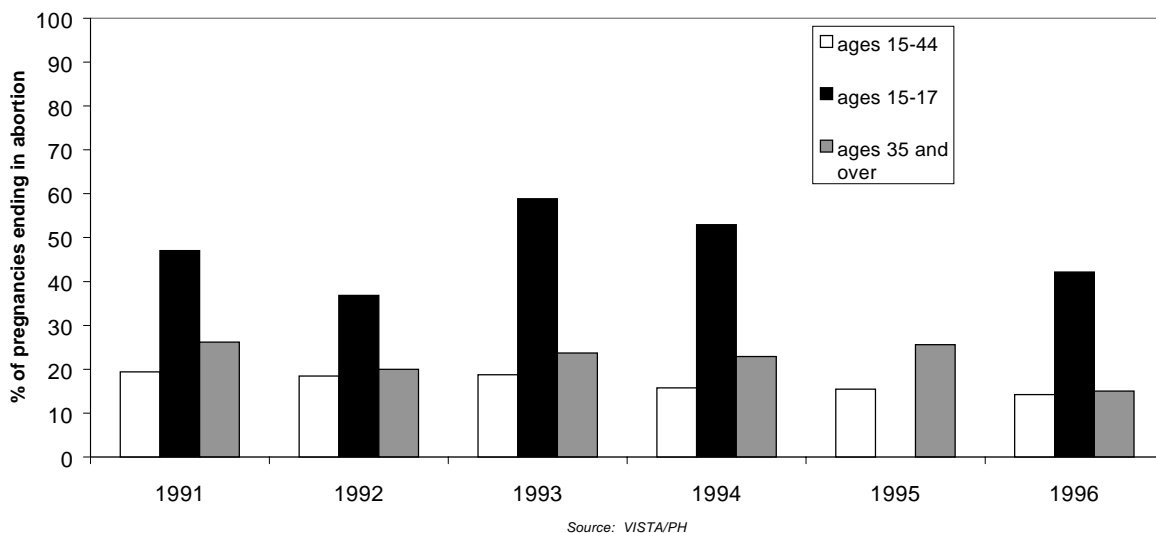
## Unintended Pregnancy

Unintended pregnancy numbers are often an indication of access to family planning services in a community. When family planning services are easily accessible, rates of unintended pregnancy and resulting abortion are generally lower.

**Figure 7.1 General Fertility Rate, Washington State and Kittitas County  
1987-1996**



**Figure 7.2 Abortion Percentages, Kittitas County, 1991-1996**

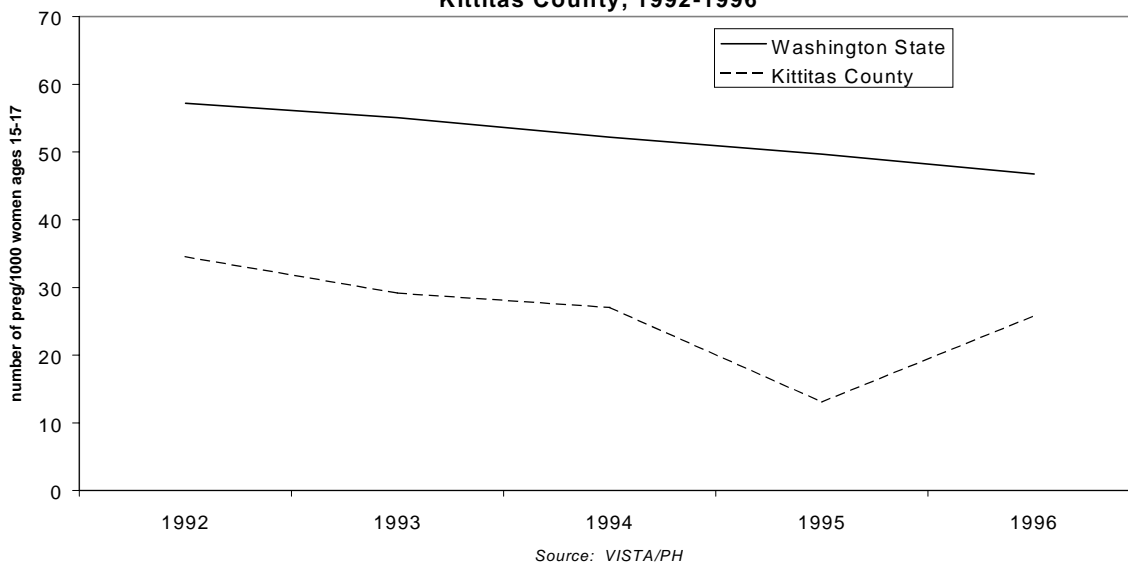


Abortion rates in the nation have been following a general downward trend over the past few years. In Washington State, the abortion percentage, or the percentage of pregnancies that ended in abortion, went from 27.5% in 1991 to 25.3% in 1996. Likewise, the abortion rate, or the number of abortions per 1000 women aged 15-44, dropped from 25.9 in 1991 to 21.5 in 1996. In Kittitas County, the abortion percentage dropped from 29.2% in 1991 to 25.3% in 1996, while the abortion rate dropped from 19.4 per 1000 in 1991 to 14.2 per 1000 in 1996 (Figure 7.2).<sup>1</sup>

issues of adolescents, women in the later years of their reproductive lives are also at risk. Sometimes, women in this group believe that it is not possible for them to become pregnant, while at other times, their healthcare providers do not raise issues of fertility and contraception. Almost half of pregnancies in 15-17-year olds end in abortion, while over one-quarter of pregnancies in women age 35 and older end in abortion. Though these numbers have fallen slightly over the past few years, the percentages for the county can fluctuate widely because of the small number of pregnancies in these age groups.

Although unintended pregnancy and abortion are frequently viewed as

**Figure 7.3 Teenage Pregnancy Rates (ages 15-17), Washington State and Kittitas County, 1992-1996**



## Teenage Pregnancy and Childbirth Rates

Teenage pregnancy has long been a social problem. Teenagers who become pregnant are more likely to terminate their pregnancies than other women and for those who do choose to proceed with the pregnancy, both mother and child experience a higher rate of medical complications and socioeconomic consequences. However, not all teenage pregnancies are at the same level of risk. Eighteen- to nineteen-year-olds who become pregnant are often in stable long-term relationships, while this is not the case for fifteen- to seventeen-year-olds. Teenage pregnancy rates have been falling overall, and Kittitas County has a lower rate than the state (Figure 7.3). Likewise, births to teenagers have also fallen slightly over the past few years, and Kittitas County's rate is below that of the state.<sup>1</sup>

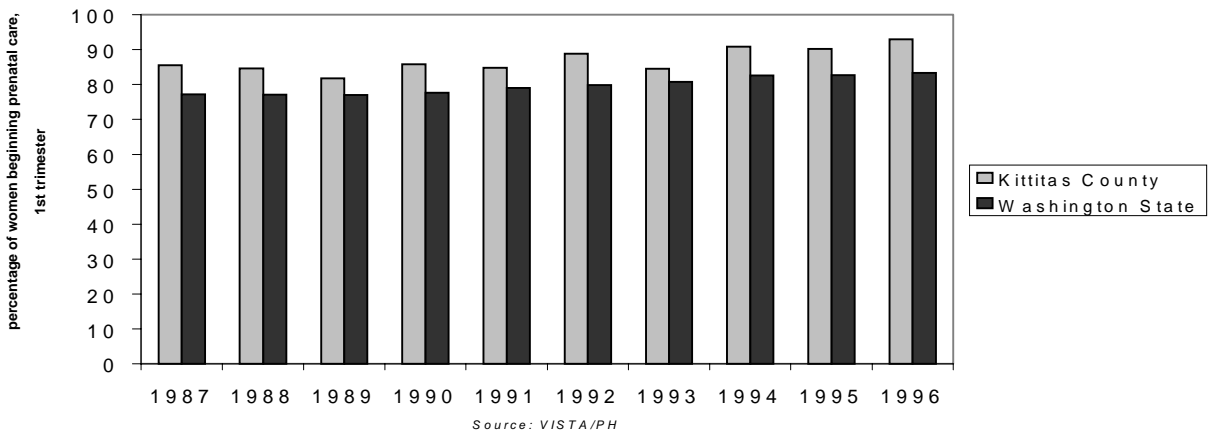
## Prenatal Care

Prenatal care is one of the first and most important steps for healthy mothers and children. Research has demonstrated that pregnant women who receive prenatal care and their newborns are at lower risk for complications during pregnancy and

during childhood. Kittitas County has consistently had much higher rates of early prenatal care (and lower rates of no prenatal care) than the state total. From 1987 to 1996, the rates of prenatal care beginning in the first trimester of pregnancy rose in both the state and the county. The state total of 77% in 1987 rose to 83% in 1996. During this same period, Kittitas County had a rate of 85% in 1986 that rose to 93% in 1996 (Figure 7.4).<sup>1</sup> At the current rate, Kittitas County has surpassed the *Healthy People 2000* objective and the Washington State Public Health Improvement Plan's (PHIP) Year 2000 Target of increasing to at least 90% the proportion of pregnant women who receive prenatal care in the first trimester of pregnancy.

Various programs offer support to pregnant women during and after their pregnancies. Health care providers help ensure that women are connected with the appropriate programs. Good communication among health and social service agencies county-wide enables women to be referred to childbirth classes (also held in Spanish), visiting nurse maternity support, teen parent advocacy, nutrition education and supplemental food, as well as mental health counseling and crisis intervention.

Figure 7.4 First-trimester Prenatal Care Rates, Washington State and Kittitas County, 1987-1996



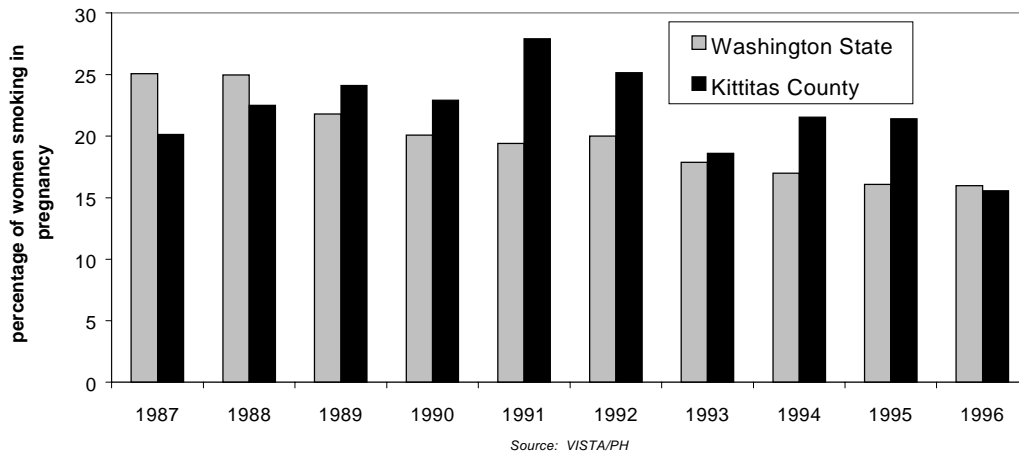
## Substance Use in Pregnancy

Smoking and alcohol use are two entirely preventable causes of pregnancy complications. All pregnant women should be advised to abstain from the use of tobacco and alcohol during pregnancy. The rate of women who report smoking during pregnancy has fluctuated over the past ten years but has been slow to show a significant drop. In Kittitas County, the rate dropped from 20 per 100 births in 1987 to 16 per 100 births in 1996; however, the rate rose to 28 per 100 births

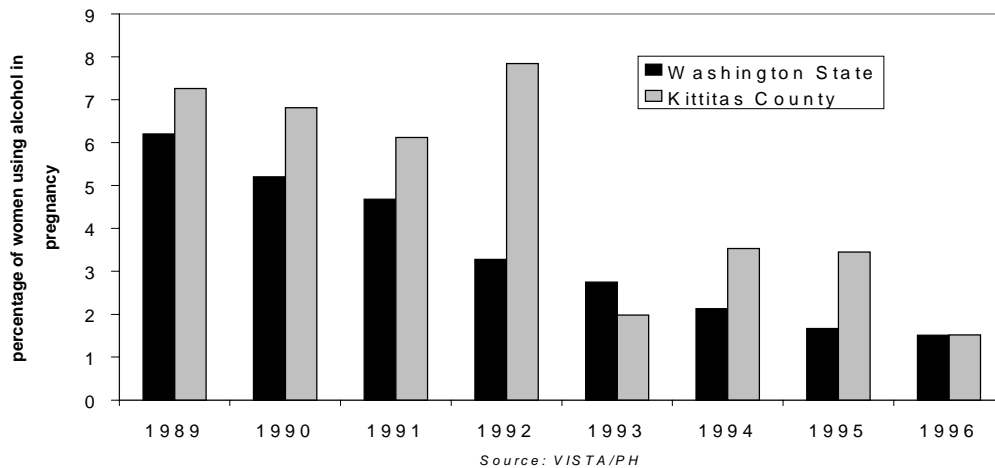
in 1991. The rate for the state dropped from 25 per 100 births in 1987 to 16 per 100 births in 1996 (Figure 7.5).<sup>1</sup> This still falls short of the *Healthy People 2000* goal of increasing abstinence from tobacco use by pregnant women to at least 90%.

The rate of alcohol use during pregnancy in the county has often been higher than the state total. However, for data available from 1989 to 1996, the rates have dropped for both the state and the county. The state total dropped from 6 per 100 births in 1989 to 2 per 100 births in 1996. The county rate dropped from 7 per

**Figure 7.5 Maternal Smoking, Kittitas County and Washington State, 1987-1996**



**Figure 7.6 Maternal Alcohol Use, Washington State and Kittitas County, 1989-1996**



100 births in 1989 to 2 per 100 births in 1996 (Figure 7.6).<sup>1</sup> The *Healthy People 2000* goal is to increase abstinence from alcohol use by pregnant women to at least 90%, while the Washington State Year 2000 Target is at least 94%.

## **Adverse Pregnancy Outcomes**

Two of the most important measures of pregnancy outcome are low birthweight and infant mortality. Low birthweight infants are those who are born weighing less than 2500 grams (5.5 pounds) and are at higher risk of illness and death. Low birthweight is frequently due to prematurity but can also be due to intrauterine growth restriction from conditions such as maternal diseases, smoking and infection. Other risk factors for prematurity and low birth weight include being unmarried, young and low-income, as well as inadequate weight gain, poor nutritional status, and a prior history of premature deliveries. Unfortunately, the rate of prematurity and low birth weight infants has not changed significantly in the last ten years, either in the state or the county. From 1987 to 1996, there have been from 5 to 6 low birth weight infants per 100 births each year in both the state and the county.<sup>1</sup> The *Healthy People 2000* goal is to reduce the incidence of low birth weight to no more than 5% of live births, while the Washington State Year 2000 Target is no more than 4.2%.

Fortunately, infant mortality (any death in a child less than one year of age), the other widely used measure of pregnancy outcome, is uncommon in Kittitas County. From 1987 to 1996, there were less than five infant deaths each year except in 1989 when there were five (or a rate of 16 per 1000 births). The state total has dropped from 10 per 1000 births in 1987 to 6 per 1000 births in 1996.<sup>1</sup> The

*Healthy People 2000* goal is to reduce infant mortality to no more than 7 deaths per 1000 live births, while the Washington State Year 2000 Target is no more than 6.5 deaths per 1000.

## **Socioeconomic Factors**

Poverty is a risk factor for many of the undesirable circumstances discussed in this chapter. Data collected from 1993-1995 by the Centers for Disease Control and Prevention and by the state show striking differences between women with different income levels on several important health indicators. The women with lowest incomes are consistently at greatest risk. Infants born to single mothers are also at higher risk for medical problems and socioeconomic consequences.<sup>3,4</sup> (Table 7.1) From 1993 to 1996, an average of 22.6% of births in Kittitas County were to unmarried women, compared to 26.5% for the state.<sup>1</sup>

Several community programs work with families and children at risk for child abuse and neglect or with those who need low-cost childcare and/or educational opportunities for parents and children. Therapeutic daycare, Head Start, pre-school, parenting classes and an intensive parenting mentor program are available.

<b>Table 7.1 Income and Health Risks Indicator</b>	<b>Medicaid/ receiving cash grant (lowest income)</b>	<b>Medicaid/non- grant receiving (low income)</b>	<b>Non-Medicaid (Higher income)</b>
Births from unintended pregnancy	67%	53%	28%
Smoking 3 months prior to pregnancy	55%	27%	19%
Smoking in 3 <sup>rd</sup> -trimester of pregnancy	40%	16%	10%
Smoking after pregnancy	50%	21%	13%
Hurt by husband/partner (within year prior to delivery)	17%	6%	2%

Source: Washington State Dept. of Health (PRAMS)

## Childcare

The availability of affordable high-quality childcare remains limited. Although many childcare providers are licensed by the state, a significant number of parents choose to place their children with unlicensed providers. Reasons include the provider being a friend, and the lower cost or more convenient hours. Licensing can ensure that published standards are met and that the providers have received education on child development and safety.

In the 1996 Kittitas County health behavior survey, to which 103 local residents with children age 12 or younger responded, about one in five reported at least one of their children being in a childcare center on a regular basis with non-relatives. In 70% of these cases, the provider was licensed.<sup>5</sup>

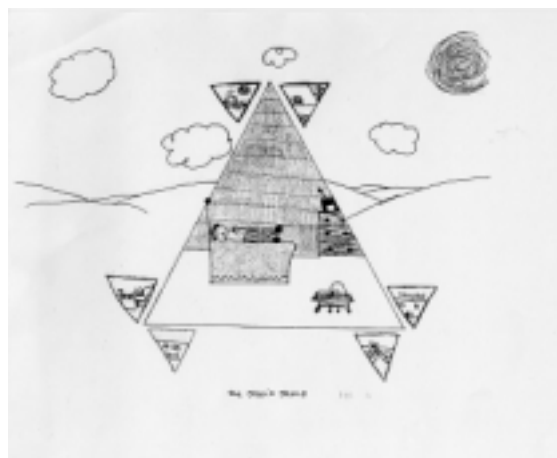
Kittitas County has 7 licensed childcare centers and 55 licensed home providers. A childcare health promotion and disease prevention program provides mini-grants, educational programs, a newsletter, and a public health nurse consultant. Classes in first aid, CPR, and HIV/AIDS/Blood-borne Pathogens are offered regularly.<sup>2</sup>

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"Disco Queen" by Kia Eden



"Illness" by Stacie Stump

## CHAPTER 8

# CHRONIC DISEASE AND DISABILITY

### FAST FACTS

- Cancer was the leading cause of death in Kittitas County for 1992-96, accounting for 32% of all deaths.
- The heart disease death rate in Kittitas County for 1992-96 was lower than the state rate.
- Kittitas County has had higher death rates of cerebrovascular disease, or stroke, than the state for seven of the past ten years.
- Though diabetes-related deaths were the fourth leading cause of death in Kittitas County for 1992-96, local diabetes-related death and hospitalization rates for 1992-96 are lower than state rates.
- According to a 1997 survey, people with disabilities in Kittitas County who are recipients of state services have reasonable access to health care services, although mental health services and transportation are lacking for this population.
- Rates of hospitalization for asthma in Kittitas County rose from 33.4 per 100,000 in 1990 to 93.5 per 100,000 in 1996.

## Chronic Disease

Chronic diseases and disabilities affect our quality of life as individuals, families, and communities. As the population ages with the slow rise in life expectancy since 1970, it is important to understand the extent and impact of these conditions on the community and the health and social service infrastructure.

### Heart Disease

Heart disease is the leading cause of death in the United States, Washington State and, until recently, in Kittitas County as well. From 1981-1985, heart disease accounted for 37% of the deaths in Kittitas County; by 1992-96, the percentage of deaths from heart disease had dropped to 29%.<sup>1</sup> With a heart disease death rate of 106.5 per 100,000 for 1992-96, we are nearing the *Healthy People 2000* goal of 100 deaths per 100,000.

Generally, 75-80% of all heart disease deaths can be attributed to *ischemic* heart disease or coronary heart disease, which is caused by the blockage of the blood vessels supplying the heart with oxygen. Risk factors associated with the increased probability of developing coronary heart disease include: heredity, hypertension (high blood pressure), smoking, diabetes, and high cholesterol levels. Being overweight and inactive are also risks associated with heart disease.

The 1996 Health Department behavior survey of Kittitas County adults addressed some of these risk factors.

- Sixty-three percent of the respondents said they had had their blood pressure checked in the past six months and 17% more said they had it checked between seven months and a year ago. Eighteen percent said they had been advised at least once that their blood pressure was high; twelve percent

said they had been advised of this more than once.

- Forty-three percent of respondents said they had their cholesterol checked within the past year and another 21% said it was examined one to five years ago. The *Healthy People 2000* goal is that 75% of people over 18 will have had their cholesterol checked within the past five years. Twenty-one percent of respondents said that they had been told that their cholesterol was high.
- Twenty-one percent of respondents reported being current cigarette smokers while 6% reported being smokeless tobacco users. The *Healthy People 2000* goal is to have no more than 15% of people over 18 who smoke.
- Thirty percent of respondents were computed to be overweight. The *Healthy People 2000* goal is to reduce overweight prevalence to no more than 20% among people age 20 and older and to no more than 15% among adolescents aged 12-19.
- Though 57% of respondents reported getting regular exercise during the month before the survey, 39% reported little or no physical activity.<sup>2</sup>

### Cerebrovascular Disease

Cerebrovascular disease or stroke occurs when the blood vessels supplying the brain rupture or become blocked. Stroke is a leading cause of death nationally, statewide, and in Kittitas County. The factors which put people at risk for stroke are the same as those for coronary heart disease. An average of 3,226 residents of Washington State died of strokes each year from 1992-1996 for a rate of 27.4 per 100,000.<sup>1</sup> In Kittitas County for the same time period, there

were an average of 17 deaths annually for a rate of 26.6 per 100,000.<sup>1</sup> The *Healthy People 2000* goal is to have no more than 20 stroke deaths per 100,000 people.

### **Cancer**

It is estimated that some form of cancer will likely strike one in three Washington residents in their lifetime.<sup>3</sup> Screening and treatment for certain cancers continues to evolve, leading to improved outcomes in many cases.

Cancer was the leading cause of death in Kittitas County for the years 1992-96, accounting for 32% of all deaths.<sup>1</sup> The most common cancers in Kittitas County for 1993-95 in order of most to least frequent were: prostate, breast, lung, colorectal, and endometrial. This is somewhat different from those that *caused the most deaths* in Kittitas County for the same period. In order of most to least common, they were: lung, breast, prostate, colorectal, and non-Hodgkin's lymphoma.<sup>3</sup>

Risk factors known or suspected to contribute to cancer development include: tobacco use, physical inactivity, hormones, chemicals, radiation, poor nutrition, and alcohol use.<sup>4</sup> From what is known about certain behavioral risk factors for Kittitas County residents, there are improvements that need to be made in most of these areas in order to reach the *Healthy People 2000* goals. In addition to the responses to the behavior survey listed above, replies indicated that only 32% of Kittitas County adults consumed the recommended five or more servings of fruits and vegetables per day.<sup>2</sup>

The 1996 health behavior survey also inquired about cancer screenings and found that 77% of women over 50 had had a mammogram within the past two years. This is similar to the percentage found in the state in 1995.<sup>2</sup> The most recent American Cancer Society recommendation

is for every woman over age 40 to have a yearly mammogram. Responses regarding colorectal cancer screenings by digital rectal and proctoscopic exams were highly related to age. Among respondents over age 40, 65% said they had had a digital rectal exam within the past two years. Ninety-two percent of respondents age 40-49 said they had *never* had a proctoscopic exam compared to 63% of those age 50-59 and 32% of those 65 and older.<sup>2</sup> The most recent American Cancer Society recommendation is that every adult over age 50 have a yearly test for fecal occult blood and a combination of a digital rectal exam and one of three types of proctoscopic exam every 5 or 10 years (depending on the type of exam).<sup>5</sup>

Several local organizations provide education on the prevention, screening, and treatment of cancer. Information is disseminated through community health fairs, newspaper, radio, billboards, health care providers, and others. A special screening program for women promotes the early detection of breast and cervical cancer. Also, there are support groups for cancer patients and their families.

### **Diabetes**

Diabetes is a chronic condition characterized by the body's inability to produce or properly utilize insulin, which plays a major role in the breakdown of sugar in the bloodstream. Diabetics are at increased risk of chronic infections of the legs and feet, eye damage, kidney failure and heart disease.

Diabetes has no cure and it is estimated that 15.7 million people in the US have diabetes. Unfortunately, 5.4 million of these people are unaware of their condition. Diabetes-related deaths are the seventh leading cause of death in Washington State and the nation.<sup>6</sup> In Kittitas County, diabetes-related deaths

were the fourth leading cause of death for 1992-96 with a rate of 33.8 per 100,000, which is similar to the state rate of 34.5 per 100,000.<sup>1</sup> This barely meets the *Healthy People 2000* goal of 34 per 100,000. Hospitalizations due to diabetes for the same time period were lower in Kittitas County at 60.9 per 100,000 than in the state at 72.4 per 100,000.<sup>1</sup>

### **Asthma**

Asthma is a chronic lung disease that affects 14.6 million Americans. Lately much attention has been focused on asthma because mortality and prevalence rates have increased over the last decade.<sup>7</sup> Health experts believe there are several factors that may be contributing to this rise. These include industrial emissions, wood smoke, tighter new construction which inhibits indoor air flow allowing tobacco smoke and allergens to remain trapped, decreased access to medical care for some populations, and increasingly more accurate diagnosis of asthma by physicians.

People who suffer from asthma experience episodes that make breathing difficult and can even be life-threatening. Symptoms such as wheezing, congestion, and coughing can be triggered by exercise, cold weather, allergies, infections or other irritants.

In Kittitas County, the hospitalization rate for asthma rose from 33.4 per 100,000 (8 hospitalizations) in 1990 to 93.5 per 100,000 (26 hospitalizations) in 1996. This is close to the state rate of 93.9 per 100,000 for 1996.<sup>1</sup>

Local classes and support groups are available for people with diabetes, asthma, head injuries, and other chronic and disabling conditions. Programs that address risk factors for heart disease, stroke, and cancer are also available. There are smoking cessation classes for adults and youth, organized exercise classes for all ages, and a number of options for nutrition education and counseling.

## **Disability**

Disability, defined as a limitation in the ability to perform major activities due to chronic health conditions and impairments, affects an increasing number of Americans. According to 1990 census data, Washington counties vary greatly with respect to the percentage of the population with *any disabilities* (from 14.6%-32.9%) and with *severe disabilities* (from 6.7%-16.9%). Kittitas County ranks on the lower end of both of these categories with an estimated 21.1% of the population with *any disability* and 10.2% with a *severe disability*. These figures are still higher than the *Healthy People 2000* goal of 8% of the population with a limitation in major activities due to a chronic condition.

### **Behavior Survey**

Seventeen percent of respondents to the Health Department behavior survey in 1996 answered yes to the question, "Are you limited in any activities because of an impairment or health problem?" Respondents most likely to have reported a disability were people aged 65 and older and people with household incomes under \$25,000. Back and neck problems were the most frequent source of impairment (3%), followed by arthritis or rheumatism (2%) and bone or joint injuries (2%).<sup>2</sup>

### **Kittitas County Disability Assessment Project**

In 1997-98, a partnership was formed to assess the needs of people with disabilities in Kittitas County. Members included the Kittitas County Health Department, the University of Washington Center for Disability Policy and Research, the Washington State Department of Social and Health Services, Aging and Longterm Care, Elmview (an agency serving people with disabilities) and several other local agencies.

Focus groups, consisting of service providers and people with disabilities, pointed to mental health services, interpreter services (sign language), and transportation as major areas of concern.

A formal survey was conducted to assess how people with disabilities in Kittitas County feel about their access to health care and to other services known to promote independent living and improved quality of life. From August through December 1997, 180 people with disabilities between the ages 3-85 or their representatives were surveyed. A control group of 82 people without disabilities was also surveyed for comparison. Participants were recruited through agencies from which they received services, through the schools, and by word of mouth.

- Demographics: The groups did not differ in race or ethnicity (96% white for people with disabilities, 98% for the control group). Roughly equal proportions lived alone (24% of people with disabilities, 16% of the control group). The groups of people with disabilities and the control group differed in some ways that reflected the ways the groups were selected. The group of people with disabilities ranged more broadly in age, and contained more children (recruited through the schools) and more people over age 65. To compare education levels, only people age 25 and older were included, because most education is complete by this age. Education levels were significantly higher in people without disabilities. All members of the control group had graduated from high school, and one-third had completed college. In contrast, one-third of the people

with disabilities had not completed high school, and one-third were high school graduates. This is consistent with other state-level information showing that people with disabilities generally have less formal education. People with disabilities were more likely to have household incomes below the federal poverty level: 28% compared to 6% of the control group. This is a larger income differential than that of the state, in which 15% of families with a disabled member have incomes below poverty versus 8% of families without a disabled member.

- Community Description: When asked what one thing they liked best about their community, both groups listed the small-town atmosphere with its community spirit and helpfulness. Both groups also wished for more shopping opportunities and recreation for youth; the control group also wished for a slower rate of growth for the community. Both groups indicated a strong feeling of belonging to their community, though 59% of people with disabilities indicated that they had difficulty finding a job and 42% of people with disabilities said it was difficult to get what they wanted due to communication problems.
- Health and Disability: The group without disabilities felt they were healthier than did the group with disabilities. Almost everyone in the control group (96%) rated their health as excellent, very good, or good, while 66% of the people with disabilities felt this way. When asked what conditions or

- impairments produced their disability, developmental disabilities were listed most frequently, followed by mobility impairment, orthopedic conditions, learning disabilities, mental retardation, hearing and vision loss, heart disease, stroke, asthma, and diabetes.
- **Work and Usual Activities:** Working-age people (18-65) in the sample with disabilities were less likely to be employed (47% versus 72% of the control group), and the majority of those who were working (76%) said that they were limited by their disability. For people of all ages, most people with disabilities were likely to report that they were limited in some life activities (78% versus 12% for the control group). As might be expected, people with disabilities were more likely to need help with personal care, routine chores and personal business.
  - **Health care:** Despite the many ways in which the groups differed in age, education, income and need for help, there were no significant differences in access to or use of health care. Almost all had some type of health care coverage (97% of people with disabilities, 91% of the control group), and most had a particular clinic or doctor's office where they regularly sought advice. Equal proportions had been unable to see a doctor when they wanted to in the last month (approximately 20%), and their reasons were similar (inability to get an appointment, lack of transportation). Both groups reported difficulty obtaining dental care, citing as reasons cost and inability to find a dentist who accepts Medicaid.
  - Twenty-four percent of the people with disabilities and 15% of the control group indicated that they needed special equipment or aids, like canes, walkers, eyeglasses, hearing aids and dentures that they currently do NOT have.
  - People in both groups were generally satisfied with the type and quality of the care they received. Eighty-eight percent of the people with disabilities and 80% of the control group said they had one person whom they considered to be their personal doctor or health care provider; most of these are family practitioners or internists. Eighty percent of the people with disabilities and 76% of the control group said their doctor or nurse has a good understanding of the way their health problems affect their daily lives. Most (over 70% in both groups) feel their provider has enough experience in treating their specific condition. The average rating on a scale of 1-10 with 10 being "as good as health care can be," people with disabilities rated their care an average of 8.0 and the control group rated their care an average of 7.7.
  - **Summary:** People with disabilities in Kittitas County were generally positive about their community and their lives there. However, they reported more barriers to finding a job and more limitations on their ability to communicate.
- The survey was intended to examine access to health care, and findings showed few differences between

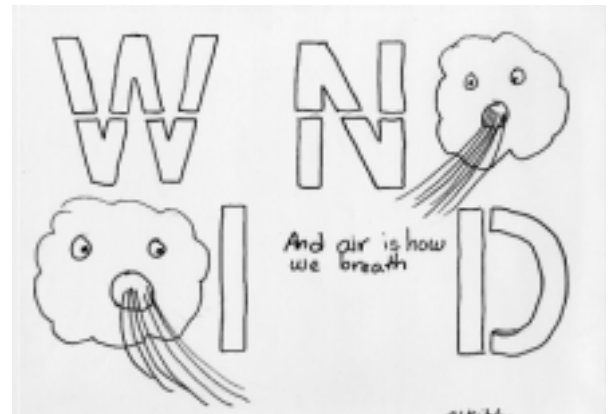
people with disabilities and their neighbors without disabilities in these areas. Many of the people with disabilities were recipients of state services, so the findings suggest that there is reasonable access to health services (except mental health) for these people. The findings, however, may not apply to people with disabilities who are NOT clients of state programs.<sup>8</sup>

Several local agencies and schools provide special activities for people with disabilities as well as respite for caregivers. Transportation for people with wheelchairs is available but limited to certain hours and days.

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"Wind" by AJ Kibbe



"911" by Jamie Buckley

## CHAPTER 9

# HEALTH CARE SERVICES

### FAST FACTS

- Twenty-five physicians, four advanced registered nurse practitioners and five physician assistants practiced here in 1997.
- Eight pharmacies with 17 registered pharmacists presently operate in the county.
- Seventy percent of the Emergency Medical Personnel in the county are trained volunteers.
- Eleven dentists and one orthodontist currently practice in Kittitas County.
- Of the 150 nursing home beds in Kittitas County, about 20% are designated for patients with Medicare and the others for patients with Medicaid or private insurance.

## **Introduction**

Kittitas County is fortunate to have reasonable access to most major medical services. For those services not available in the county, excellent tertiary care services can be found within 100 miles in Yakima, Wenatchee or Seattle.

## **Access to Health Care**

According to the 1996 health department survey, 82% of 500 respondents stated they currently had health insurance coverage. This is less than the 88% found statewide in 1995, and the actual percentage may be even less, because this was a telephone survey that reached only households with phones. Among those respondents without coverage, one-third had lost coverage within the past year. The subgroups most likely to lack coverage were respondents under age 30 (30%) compared to respondents ages 31-64 (16%) and respondents age 65 and older (3%). Of those covered, 54% had private insurance, and 16% had Medicare.<sup>1</sup>

According to State Department of Health data, the rate of first trimester prenatal care for women in Kittitas County was 93% in 1996. Not only was this higher than the state average of 83%, it was also one of the highest in the state.<sup>2</sup>

Another measure of health care access is the rate of avoidable hospitalizations. Hospitalization for conditions such as congestive heart failure, diabetic ketoacidosis, asthma, pneumonia, cellulitis and several others are often avoidable if the patient had had access to good outpatient care. The rate of hospitalization for such causes is a proxy for lack of access to general medical care. The rate of hospitalizations for such conditions in Kittitas County in 1994 and 1995 was not significantly different from

the rate for Washington State during the same period.<sup>2</sup>

## **Medical Services**

In 1997, 25 physicians practiced in Kittitas County. Many medical specialties are represented—surgery, orthopedics, pediatrics, obstetrics, internal medicine, family medicine and ophthalmology. Other specialists from the Yakima area have regular office hours in Kittitas County. A shortage of openings to new patients in the family medicine practices in the county indicates the need for more providers.<sup>3</sup>

Nine midlevel practitioners, including four advanced registered nurse practitioners and five physician assistants, currently practice in Kittitas County under physician supervision. Although there are no certified nurse midwives in the county, a lay midwife cares for women who desire home births.<sup>3</sup>

## **Central Washington University**

The Central Washington University Student Health and Counseling Center provides physical and mental health services to a student population of approximately 7,000. The full- and part-time employees at the center include seven counselors, two physicians, two physician assistants, and one nurse practitioner as well as nurses and other support staff.<sup>3</sup>

## **Other Health Services**

Seven chiropractors, eleven dentists, one orthodontist and four podiatrists currently practice in Kittitas County. Additionally, approximately thirty mental health professionals are available to county residents.<sup>3</sup>

Traditional alternative medicine options, recently more widely accepted,

include acupuncture, naturopathic medicine and massage therapy. These services are available locally to people looking for a broader approach to health care.

## **Public Health**

Three divisions comprise the Kittitas County Public Health Department: Personal Health, Environmental Health, and Community Outreach and Assessment. Personal Health services include immunizations for travelers and children, communicable disease control, the federally-funded Women, Infants and Children nutrition program, and First Steps maternity support for mothers at risk during their pregnancies. Environmental Health performs inspections for on-site sewage systems, wells, restaurants and playgrounds, and enforces other environmental ordinances (see The Physical Environment). Community Outreach and Assessment services include health education presentations on a wide variety of topics, the HIV/AIDS program, the Youth Tobacco Prevention Program, the Breast and Cervical Health Program and involvement in community partnerships to assess and address health priorities. In addition to the administrator and a part-time health officer, there are 20 employees.

## **Hospital Services**

Kittitas Valley Community Hospital (KVCH) is the only hospital in Kittitas County. This acute-care facility is licensed for 50 beds, employs 274 people (187 full-time equivalents) and is operated by Kittitas County Public Hospital District #1. Established in 1964, KVCH offers inpatient and outpatient, medical, surgical, pediatric, and obstetrical services. It houses a six-bed critical care unit and operates an emergency department, which

is designated a Level IV trauma service, staffed by physicians 24 hours a day.<sup>3</sup>

The hospital provides a broad range of imaging services, including a CT-scanner, MRI scanner, echocardiography, and mammography, with radiologist support around-the-clock. Extensive laboratory and pharmacy capabilities are provided on-site. In addition to Home Care of Kittitas County, KVCH is committed to numerous services accessible to outpatients and the general public: physical rehabilitation, respiratory therapy, the Community Health Library, *Life Track* classes and support groups, and Meals on Wheels.

Kittitas County Hospital District #2 operates a Level V trauma service, 24 - hour emergency room in Cle Elum.

## **Long Term Care and Home Health Services**

Two licensed nursing homes with 150 beds currently operate in Kittitas County. Of these beds, 20% are designated for Medicare patients with the balance designated for Medicaid or private pay.<sup>3</sup>

Four organizations provide hospice services, or in-home care for terminally ill people. Three of them also offer home health care services such as post-operative wound care, intravenous medications and blood pressure monitoring.<sup>3</sup>

## **Emergency Services**

Nine licensed pre-hospital emergency medical service (EMS) agencies comprise the tiered EMS response system for Kittitas County residents and visitors. There are a total of 140 pre-hospital providers affiliated with one or more of these agencies. These providers fall into one of three categories, based on their training, knowledge base

and skills that they are able to practice in the field. *Basic Life Support* providers include 35 first responders and 83 emergency medical technicians, who differ somewhat in their training and scope of practice. The six *Intermediate Life Support* providers are further trained in intravenous (IV) techniques. There are 16 paramedics who are qualified to perform *Advanced Life Support*. Seventy percent of these EMS personnel are volunteers.<sup>4</sup>

Ambulance service in the county is provided by Ellensburg Fire Department, Cle Elum Fire Department, Roslyn Fire Department and Kittitas County Hospital District #2.

## Other Services

There are 8 pharmacies with 17 registered pharmacists practicing in the county. This includes the pharmacy in Kittitas Valley Community Hospital. Two of these pharmacies are located in Upper

County in Cle Elum, while the others are in Ellensburg.<sup>3</sup>

Ancillary services such as optometry, audiology, physical therapy, occupational therapy, speech/language pathology and nutrition counseling are also available locally.

## Emerging Issues

In recent months, full medical practices have had to turn away new patients. In order to meet the need for additional coverage, recruitment for additional family practitioners, a pediatrician and at least one internist is under way. The hospital and an existing clinic are working together to provide space to house incoming physicians. The feasibility of opening a community-based clinic is actively under review. In order not to upset the delicate balance of services in the community, it will be important to keep current service providers in mind when introducing new providers.

## References

1. *Kittitas County Behavioral Risk Factor Survey*. Gilmore Research for the Kittitas County Health Department, September 1996.
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“Skier” by Joseph Savidge