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HEALTH DISTRICT

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The Health of Grant County

2006 Biennial Assessment

Introduction

Public health assessment is an important part of the process that identifies and predicts future needs based on the collection and analysis of existing data. This assessment continues the biennial assessment process started in January 2003. The report addresses Board of Health-approved topics, establishes areas for periodic review and, where applicable, examines the progress in responding to issues raised in past reports.

The assessment is intended to provide a “snapshot” of who we are and what our public health issues have been, and will be.

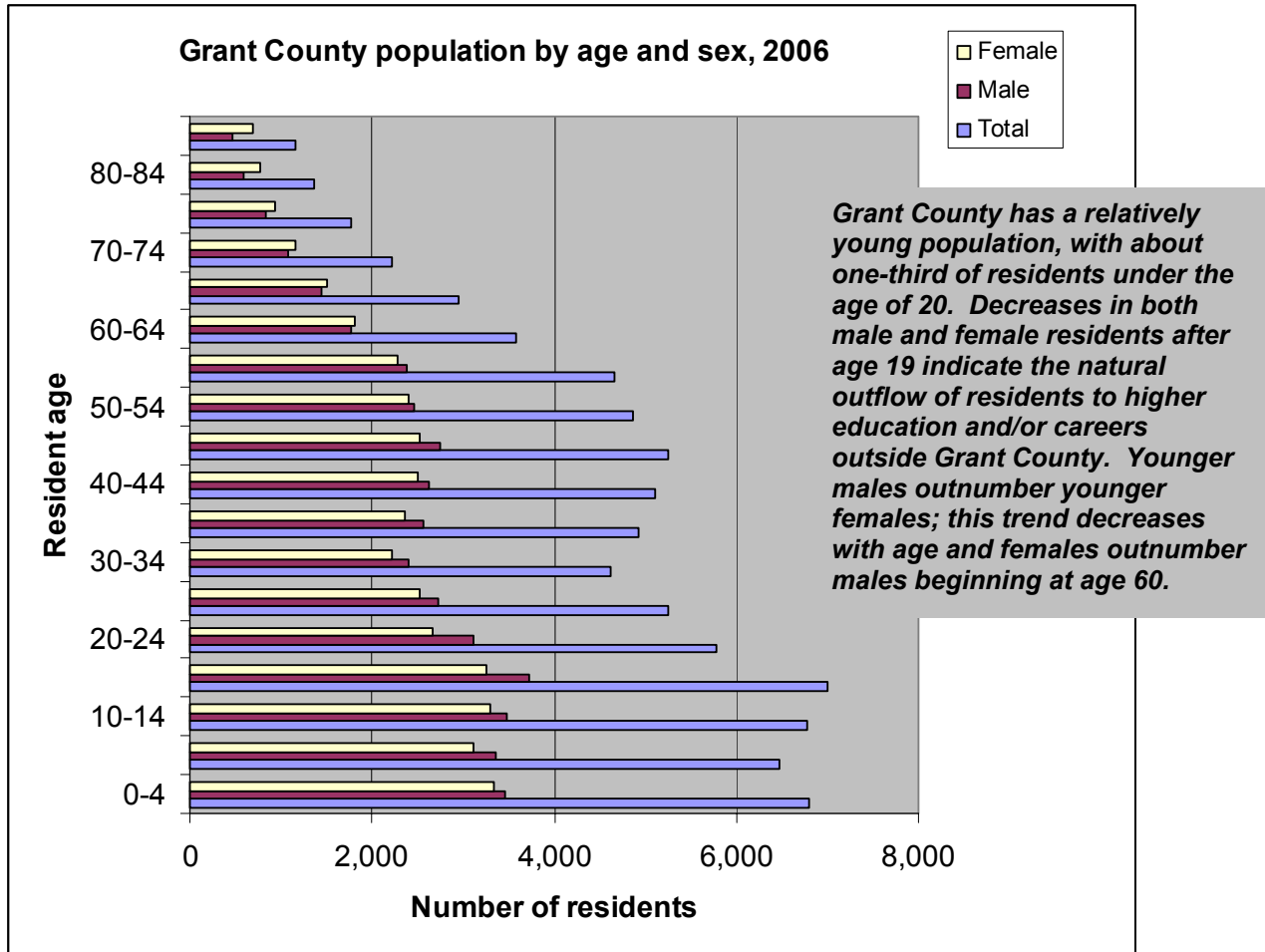
The Health of Grant County

Population

State figures estimate Grant County’s population in 2006 at 80,600, a 12 percent increase since the 2000 census. We are 96 percent white or Hispanic, with the remaining population evenly divided among African-American, Native American, and Asian/Pacific Islander residents.

Our Hispanic population is growing. Hispanics now make up 35 percent of Grant County’s population, up from 30.1 percent in 2000. There has been a corresponding decrease in our white population over the same time period, from 66 to 61.2 percent. This trend is also seen in neighboring counties. The Washington State Department of Health Office of Rural and Community Health Care also estimates an average of 12,000 undocumented residents in Grant County, the vast majority of which are Hispanic.

Grant County’s 2006 population, divided into age groups, is shown on the following page.



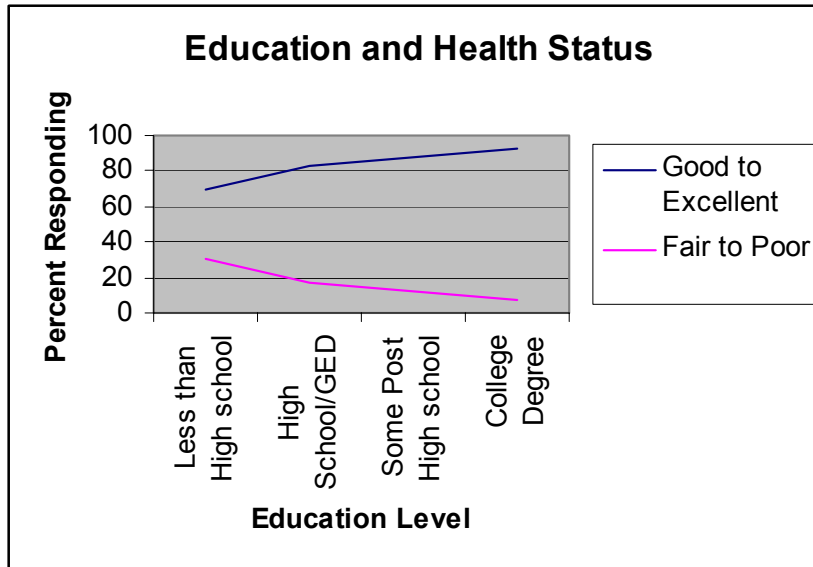
There is a significant population of Russian/Slavic residents in Grant County. This subgroup is not readily identifiable except by inference by the language spoken in the home. The Spokane Regional Health District used this inference in their August 2005 Slavic Community Health Survey. Using that methodology, we estimate approximately 2,000 Slavic residents in Grant County. We plan to replicate the Spokane survey in Grant County in 2007.

The Spokane work suggests that Slavic residents were less likely to self-report a good or excellent health status, were more likely to not have health insurance, and were more likely to not have a medical or dental “home.” They were less likely to have received health screenings or flu shots. They were also less likely to consume fruits and vegetables than their BRFSS comparison population.

If the findings of the Spokane Regional Health District’s study can be applied to our Slavic population, it suggests a need for more active outreach programs to deliver services to that community. The Moses Lake Community Health Center provides much of the medical support to the Slavic community, and assisted us in translating our Resources for Families Booklet into Russian. We have begun distribution of these booklets in the Soap Lake area, where anecdotal evidence suggests that the Grant County Slavic population is concentrated.

Education Level

We include the education level of our citizens in this assessment because there is a strong correlation between health status and socioeconomic status, and socioeconomic status is strongly correlated with education level. The following graph, representing statewide residents, demonstrates the relationship between the self-reporting of overall health and education level:



More education is associated with a higher level of self-reported good-to-excellent overall health.

Washington State Behavioral Risk Factor Surveillance System (BRFSS)

The table below reports the educational level of Grant County adults at the time of the 2000 census. This data will be used as a baseline for future trend analysis.

Less than 9 th grade	6,445
9 th to 12 th grade, no degree	5,581
High School or GED diploma	12,044
Some College	10,358
Associate of Arts Degree	2,935
Baccalaureate Degree	3,939
Graduate Degree	2,007

United States Census Bureau

Employment and Occupational Health

Grant County is predominately an agricultural producer and relies on agriculture and ancillary services. It is the State’s primary producer of agricultural goods and shows no signs of declining in the immediate future. Reliance on agriculture and agricultural support services has definite public health consequences. Exposure to farm chemicals for land owners, residents and workers has long-term health effects that are still being studied. Agricultural counties draw heavily on migrant seasonal labor as well, which increases health care costs for all citizens, as this population is primarily undocumented and uninsured.

We predict that the recent influx of technology firms into Grant County will have a positive affect on public health. Residents associated with technology firms are generally more highly educated with higher incomes; they are more likely to have health insurance, and may in turn draw more private providers into the county. The addition of these firms, primarily in the Quincy area, will increase the tax base of Grant County, with public health funding benefiting from that increase.

Tourism

The Grant County Tourism website provides details of tourism in Grant County. Tourism is significant from a public health standpoint because of the possibility of introduction of infectious diseases from outside our area. Because we are on the Interstate 90, Highway 2 and State Route 26 corridors, travelers make frequent stops to use our facilities. The Gorge Amphitheater draws thousands of visitors during the summer. There is an influx of hunters every fall for both upland game and waterfowl. The Moses Lake Airport draws international trainees, primarily from Asia. Each of these factors places Grant County at a somewhat higher risk for outbreaks from infectious diseases over which we have little control. Of particular concern is our location in the event of a pandemic influenza, both from the standpoint of waterfowl migration, and tourism considerations. We have taken steps to include the impacts of tourism and travel in our pandemic influenza plans.

Poverty

Poverty is the economic component of socioeconomic status (SES), and the lower the SES, the greater the health risk. The first measure of economic well-being is the measure of median income. Median income is the income level that indicates that half of the families are above that figure and half the families below that figure. The below table lists the median income for Grant County residents for the last eight years:

Grant County Median Income by Year	
Year	Median Income (dollars)
1999	35,276
2000	36,334
2001	36,242
2002	35,764
2003	36,179
2004	36,404
2005	35,561
2006	37,688

Washington State Office of Financial Management

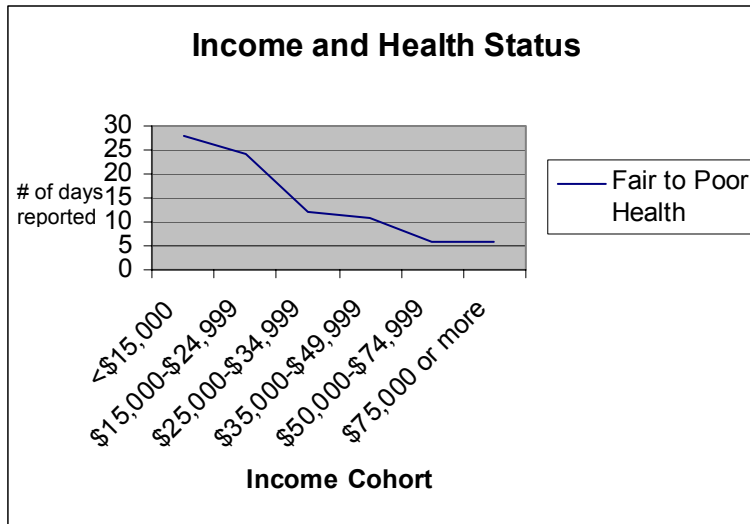
2000 census figures estimate that 17.4% percent of individuals (about 12,997 individuals) in Grant County were living below the poverty level. Of these, nearly half are under 18 years of age. The weighted average poverty threshold for a household of 3 persons in 2000 was less than or equal to \$13,738 per year.

DSHS contributions for public assistance and the number of children on free and reduced-price lunch in school programs provide another means of estimating poverty.

DSHS expends approximately \$55,831,004 dollars for medical reimbursement in Grant County for the 33 percent of citizens who are eligible for medical assistance benefits (MAA).

The state Office of the Superintendent of Public Instruction figures show that 63% of the 17,495 elementary and high school students, or 11,050 children, in Grant County are eligible for free and reduced-rate for school meals.

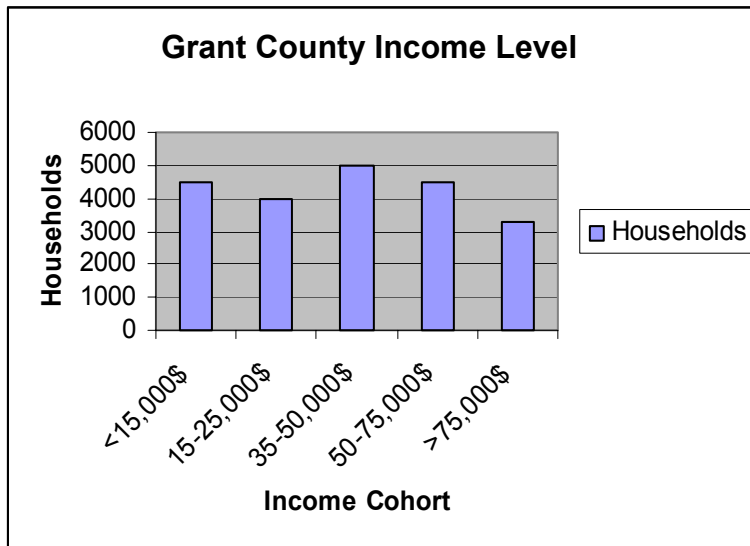
The following graph shows self-reported fair to poor health days as a function of income level. The chart shows clearly the relationship between income level and days of good health.



Washington State Behavioral Risk Factor Surveillance System (BRFSS)

As income increases, survey respondents report fewer days of fair-to-poor health.

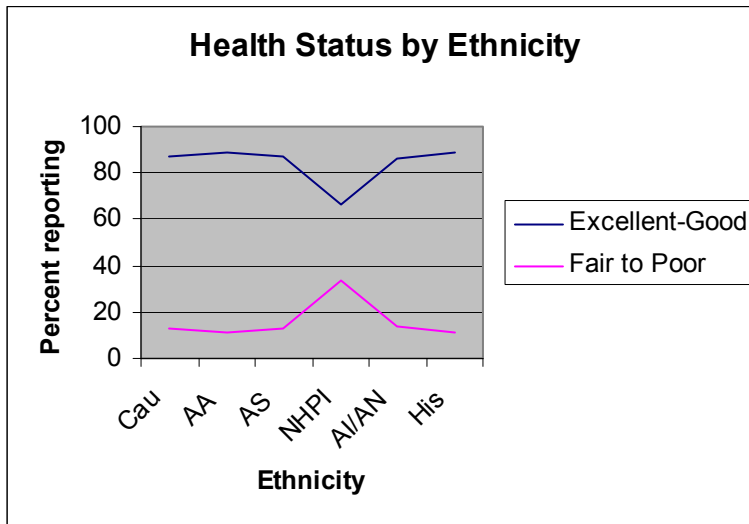
Grant County income is distributed as follows. Based on our income distribution we would anticipate generally good health self-reporting.



Washington State Office of Financial Management

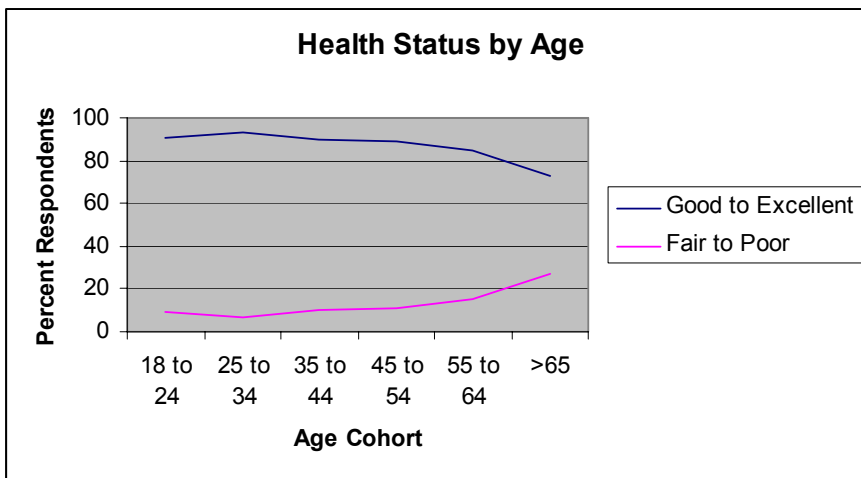
Health Status by Ethnicity and Age

The following graphs show self-reporting of health status based on the latest Behavioral Risk Factor Surveillance System (BRFSS). This is a random telephone survey conducted by the U.S. Centers for Disease Control and the Washington State Department of Health.



Washington State Behavioral Risk Factor Surveillance System (BRFSS)

With the striking exception of Native Hawaiian/Pacific Islanders (NHPI) there appear to be no significant differences in self reported health status based on ethnicity.



Washington State Behavioral Risk Factor Surveillance System (BRFSS)

As anticipated, the older the cohort the more physical problems start to arise, and the reporting reflects primarily the issues of aging. As our population ages, we should see the phenomenon continue.

Hospital capacity

Grant County has three hospitals designated as Critical Access Hospitals (Coulee Community, Quincy Valley, and Columbia Basin). These hospitals have been designated CAH hospitals as they are located in a county which has less than 100 residents per square mile, each are located in a city/town having a population less than 16,500, and each have a maximum of 25 inpatient or swing beds at any time. Othello Community Hospital is also designated a critical access hospital; it serves residents of Lower Grant

County. There are a total of 152 hospital beds available in Grant County; however, intensive care and ventilator services are quite limited. Our ability to surge health care capacity is similarly limited. Grant County is served by eighteen public and private ambulances for emergency care. **Thus, while our health care infrastructure is adequate for normal situations, these facilities will be inadequate in the event of a mass trauma situation or pandemic flu outbreak.**

Health Insurance

Public Health generally provides a disproportionate amount of services to non-insured and public insured citizens. Health insurance data is useful for estimating the capacity of our health care providers to get reimbursed payments, and for projecting the capacity of our clinics and other providers to provide services.

Sources of Health Insurance—Grant County

Source	Percentage of population
Medicare	11
Private/employer	24
Public Insurance	36
Non-insured	19
Unknown	10

Washington State Office of Financial Management

Up to two-thirds of Grant County's population may be either uninsured or reliant on public insurance.

Facilities for the Aging

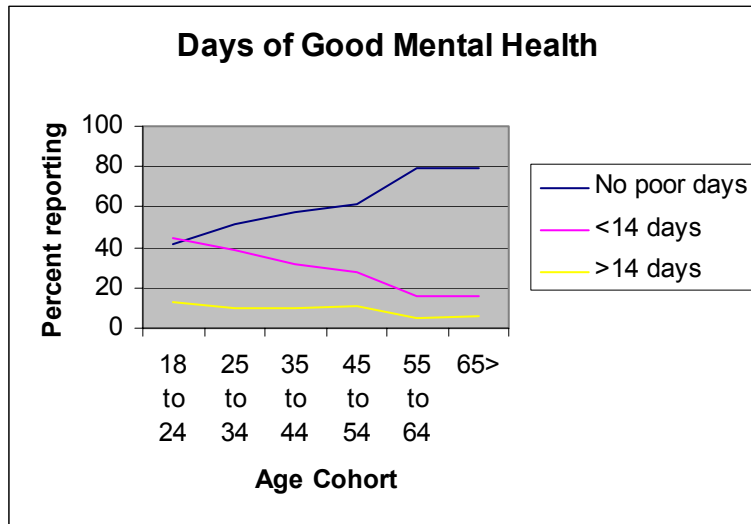
Grant County, like most locales, will be increasingly challenged by the health care needs of an aging population. The fastest growing age cohort of our national population is the 85 year old and older group. It is estimated that 43 percent of the population who turned 40 in 1990 will spend some time in a nursing home. The table below shows our three sources of elder care capacity as of November, 2006:

Type of Facility	Facilities	Beds
Adult Family Home	15	85
Boarding Home	7	365
Nursing Home	6	252

Washington State Office of Financial Management

Mental Health Issues

As age increases, more of our population reports having more good days of good mental health. Like much of the nation, health insurance programs serving Grant County residents are limiting counseling and mental health services to “brief counseling” sessions. These programs also restrict the pool of reimbursable counselors to Doctoral Psychologists or Certified Masters of Social Work.



Washington State Behavioral Risk Factor Surveillance System (BRFSS)

Children’s Mental Health

The mental health status of children is assessed by the Healthy Youth Survey, a biennial survey done in cooperation by the Office of the Superintendent of Public Instruction, and the Department of Health. The following chart demonstrates the degree to which 8th, 10th and 12th grade students have reported at least two weeks of depression or contemplated suicide. These figures are consistent with state-wide figures.

Grade Level	Percent of students reporting 14 consecutive days of depression	Percent of students who have contemplated suicide
8th	29.9	13.6
10 th	32.8	17.7
12th	34.8	17.5

Washington State Healthy Youth Survey

Again, the fundamental problem is the capacity of the mental health system to provide services for these students.

Suicide

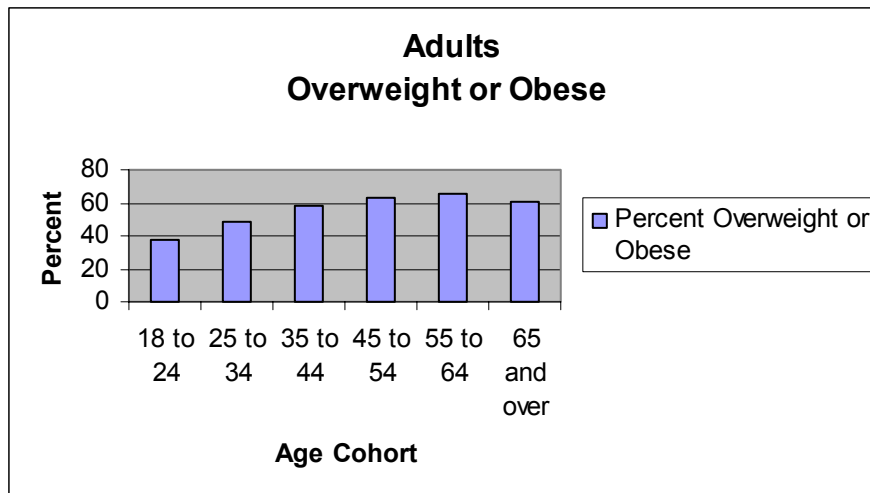
Please note above that there is a significant percentage of students who have contemplated suicide. Of those, however, only a very small percentage

acknowledge making actual plans or attempts for suicide. Refer to page 23 for more information on suicide as a leading cause of death.

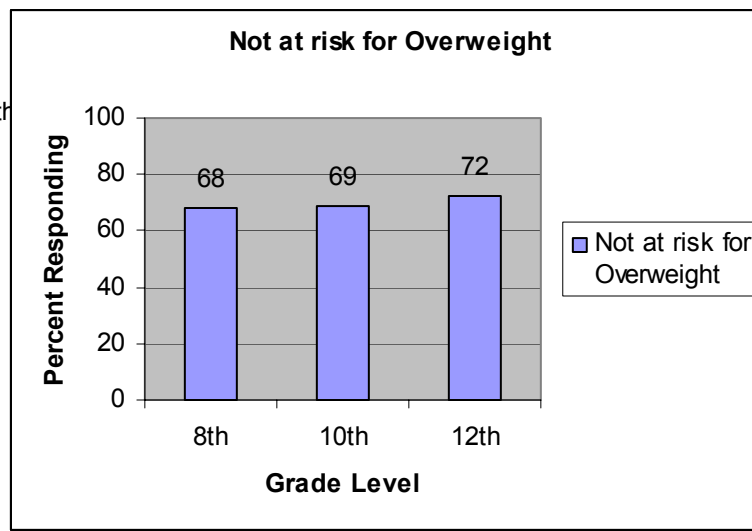
Physical Activity and Nutrition

Overweight—Adults and Children

2006 seems to be the year the American media discovered the problem of overweight and obesity as a public health risk. The statistics available to us confirm that we do have a problem in Grant County based on self reporting in the BRFSS for adults, and the Healthy Youth Survey for children. The following chart shows the number of adults and children who are overweight or obese. Being overweight is a significant risk factor for a variety of serious diseases including cardiovascular disease, diabetes, and high blood pressure among others. It is one element that can be controlled by behavior modification (good diet, portion control, moderation) for *most* residents. Thus, educational programs can have a significant public health benefit with respect to reducing this risk factor.



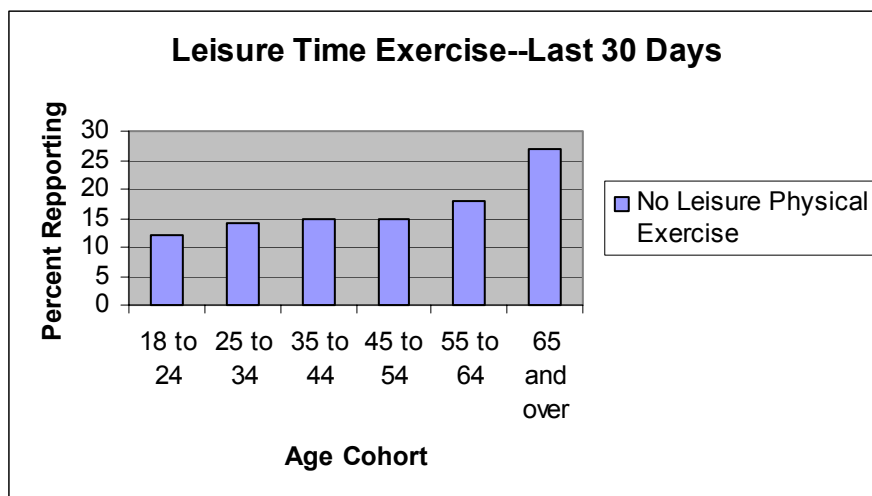
This chart shows the percentage of students from the 8th, 10th and 12th grades who reported themselves as not at risk for overweight. When comparing this chart with the physical activity chart, note that the students perceive themselves as not at risk as their level of physical activity and exercise decline. There is clearly a knowledge and perceptual issue surrounding the relationship of weight status to exercise status. Another problem concerns the diminishing amount of time devoted to physical education as the student progresses in grade level. There is simply less time available at the schools for physical education.

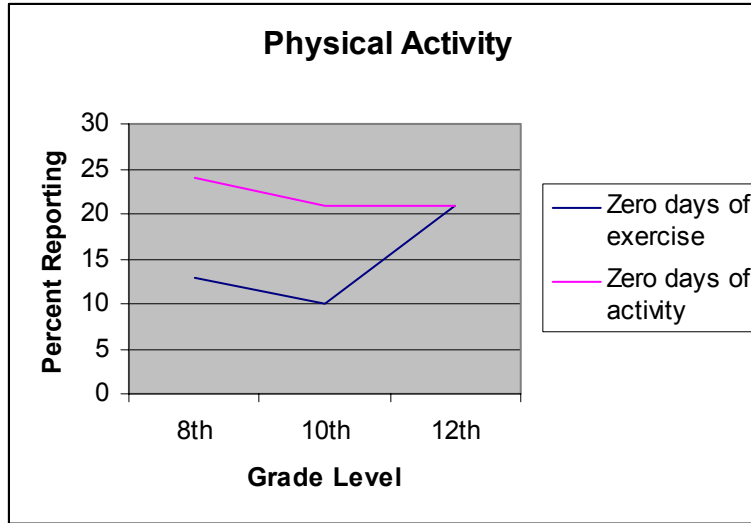


Finally, increasing demands on the school districts for progress in meeting educational objectives means less time is available for other important activities. We lack detailed data about Body Mass Indexes for our school age children, and privacy and other competing requirements are making those requests difficult to meet for school districts.

Level of Physical Activity—Adults and Children

The following charts demonstrate the degree to which our residents exercise or otherwise engage in strenuous activity. These figures show the percent that report no such exercise. Clearly, lack of exercise will be a risk factor for a variety of conditions, but lack of exercise can be addressed only with behavioral interventions.





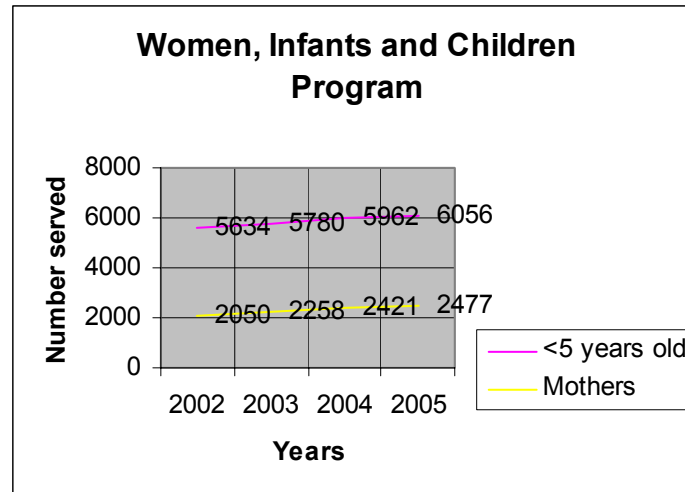
Free and Reduced Lunch

This figure shows the number of students in Grant County school districts who are eligible for free and reduced lunches. The free and reduced lunch program is a means based test and is useful in making judgments about poverty and nutrition. Only two school districts, Ephrata and Coulee-Hartline, have a majority of students who are consistently above the means test level. It also demonstrates population shifts and trends in population among families in certain areas.

	2001		2002		2003		2004		2005	
	Enrollment	%	Enrollment	%	Enrollment	%	Enrollment	%	Enrollment	%
WAHLUKE	1590	0.8	1,577	0.88	1,704	0.86	1,792	0.81	1,885	0.85
QUINCY	2293	0.61	2,289	0.64	2,201	0.64	2,317	0.71	2,348	0.72
WARDEN	965	0.7	1,021	0.70	1,005	0.72	956	0.71	946	0.72
COULEE-HARTLINE	241	0.35	225	0.30	219	0.32	228	0.42	193	0.34
SOAP LAKE	523	0.8	566	0.72	563	0.72	532	0.72	514	0.72
ROYAL	1323	0.72	1,396	0.79	1,396	0.79	1,644	0.71	1,592	0.73
MOSES LAKE	6527	0.48	6,656	0.52	6,719	0.53	6,846	0.54	6,931	0.57
EPHRATA	2251	0.4	2,149	0.40	2,120	0.41	2,108	0.44	2,186	0.47
WILSON CREEK	116	0.43	136	0.44	124	0.38	148	0.45	147	0.61
GRAND COULEE DAM	872	0.44	827	0.46	794	0.48	758	0.53	753	0.51
TOTAL	16701	0.55	16,842	0.59	16,845	0.60	17,329	0.60	17,495	0.63

WIC Statistics

The following chart demonstrates the numbers of participants in the Women, Infants and Children (WIC) nutrition program.



The program also provides nutrition and referral counseling. The program started to maintain statistics on the number of sessions and the number of outside referrals in 2004. Those figures will be included in future reports; but, as of 2005 the program provided 23,199 nutritional counseling sessions and 48,216 referrals to other social service agencies outside the WIC program. Our Resources for Families book is used extensively in the program to make outside referrals.

The program is run by Columbia Basin Health Association at sites in Royal City and Mattawa, by the Confederated Tribes of the Colville Nation in Grand Coulee, the Mattawa Community Health Center in Mattawa, and the Moses Lake Community Health Center at six sites in the central county area including Moses Lake, the Base, Quincy, Soap Lake, Coulee City and Warden. The Quincy Valley Community Health Center participated until the end of 2003. The Quincy and George areas are not currently served by local WIC programs.

Accidental Injury and Injury Prevention

Fatal Accidents

This chart shows unintentional fatal accidents including motor vehicle. Cells with an asterisk indicated data has been suppressed because of low numbers. Motor vehicle accidents and poisoning are the leading causes of fatal accidents. In Washington, males ages 35-54 had the highest rates of poisoning. In over 90% of poisoning cases resulting in death, drug overdose was the cause. About 74% of drug overdoses in 2005 were unintended. Prescription pain relievers, combined with anti-anxiety and anti-depressants was the most common combination. 2006 data is not available for Washington counties at this time.

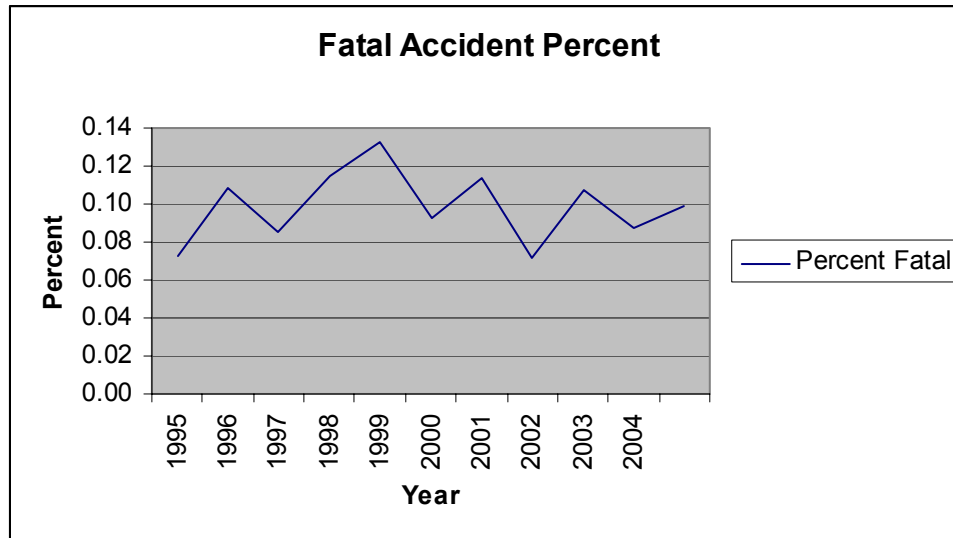
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total
Unintentional											
Bites/Stings	*	*	*	*	*	*	*	*	*	*	*
Drowning	*	*	*	*	10.9	*	*	*	7.8	6.4	4.5
Falls	*	*	*	*	*	*	7.9	*	*	*	3.7
Fire/Flame/Hot Object/Substance	*	8.7	*	*	*	*	*	*	*	*	1.2
Firearm	*	*	*	*	*	*	*	*	*	*	*
MVT-(occupant)	12.0	42.2	25.6	33.2	38.1	28.1	23.7	19.6	25.9	12.8	26.0
MVT-(motorcyclist)	*	*	*	*	*	*	*	*	*	*	1.0
MVT-(pedal cyclist)	*	*	*	*	*	*	*	*	*	*	*
MVT-(pedestrian)	*	*	*	*	*	*	*	*	*	*	2.3
Pedal-cylist(Other)	*	*	*	*	*	*	*	*	*	*	*
Pedestrian(Other)	*	*	*	*	*	*	*	*	*	*	*
Poisoning	*	*	*	*	8.2	6.7	6.6	7.9	10.4	17.9	7.2
Struck by or against	*	*	*	*	*	*	*	*	*	*	*
Suffocation & obstructing	*	*	*	*	*	*	*	*	*	*	0.8
Total	39.1	58.2	45.4	60.9	69.3	50.9	63.2	39.3	57.1	48.5	53.3

Non-fatal Accidents

The below table shows non-fatal accidents over the last 10 years by category. Falls produce the highest number of accidents followed by motor vehicle accidents and poisoning.

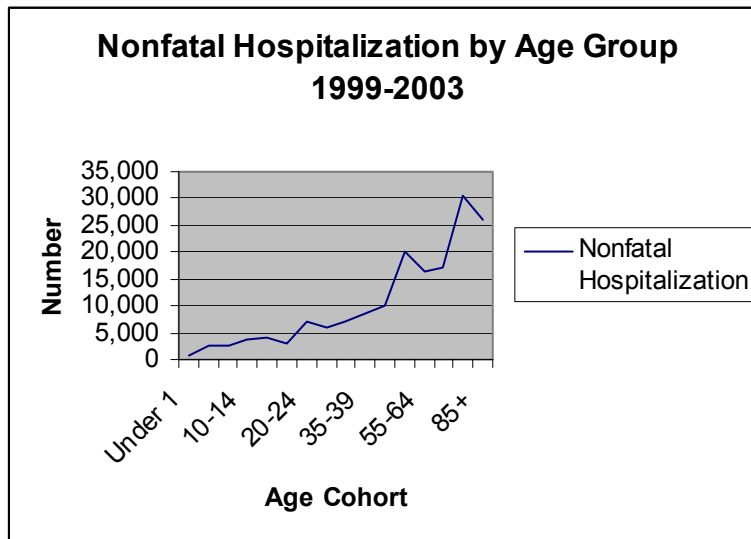
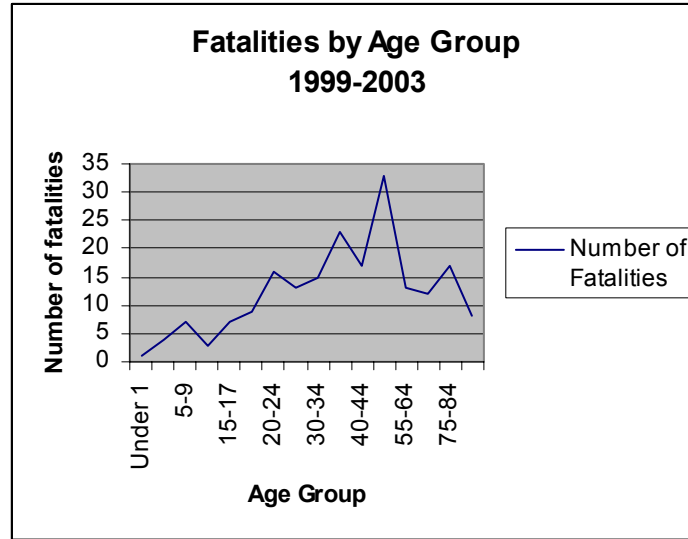
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total
Unintentional											
Bites/Stings	4.6	5.3	6.1	6.0	5.7	6.2	7.1	6.7	7.2	8.4	6.4
Drowning	1.0	1.2	1.1	1.1	0.8	1.1	0.8	0.7	0.6	0.8	0.9
Falls	266.4	274.6	273.7	276.0	275.8	281.2	285.6	286.1	271.5	282.2	277.5
Fire/Flame/Hot Object/Substance	11.2	9.9	9.6	9.3	9.7	10.8	10.7	9.2	9.7	9.9	10.0
Firearm	2.5	2.0	1.9	1.6	1.1	1.5	1.2	1.4	1.6	1.7	1.6
MVT-(occupant)	52.3	50.7	49.6	48.6	45.5	46.9	47.4	43.9	39.4	39.3	46.2
MVT-(motorcyclist)	9.3	7.2	7.4	7.6	6.9	8.2	8.6	8.4	9.3	10.5	8.4
MVT-(pedal cyclist)	1.9	1.7	2.2	2.1	1.8	1.8	1.5	1.5	1.8	1.8	1.8
MVT-(pedestrian)	8.3	8.2	8.2	7.7	8.2	7.1	6.6	7.0	6.0	6.7	7.4
Pedal-cylist(Other)	7.0	6.4	6.4	6.8	6.5	6.9	6.1	7.3	6.9	7.3	6.8
Pedestrian(Other)	1.4	1.0	1.0	0.8	1.1	1.2	1.1	1.0	1.1	1.0	1.1
Poisoning	24.1	23.4	21.9	22.5	22.9	26.1	26.9	28.3	28.8	30.8	25.7
Struck by or against	16.7	16.4	15.3	15.4	15.1	15.6	15.3	15.1	14.1	16.0	15.5
Suffocation & obstructing	3.9	3.7	3.7	4.0	4.6	4.7	4.6	4.8	4.0	4.2	4.2
Total (including other unintentional)	536.2	535.7	530.6	530.6	524.1	551.4	556.7	552.1	532.1	557.6	541.0

A key measure of the lethality of accidents is the ratio of fatal to non fatal. The following chart demonstrates that ratio over the 10 year period



Thus, about 10 percent of all accidents result in fatalities. To the extent that accidents are eliminated, county wide mortality can be reduced. Accident prevention programs are inexpensive ways to save lives and reduce health care costs.

The next two charts depict the age groups most affected by accidents. The first chart deals with fatalities by age group, and the second non-fatalities. Both charts demonstrate that it is older age groups most likely to have accidents. Falls constitute the leading cause of non-fatal accidents and the age groups most likely to be a victim are the elderly. The decline in fatalities in the older age cohorts also suggests that this population has stopped driving. These charts also underscore the need for examining our senior programs to ensure seniors are receiving their "fair share" or public health efforts.



Finally, it is clear that the impact of motor vehicle accidents is disproportionate in causing injuries and fatalities. We have two serious sections of highways in Grant County, only one of which has been designated as a safety corridor: State Highway 17. The other section of road with a disproportionately high accident rate is State Highway 243 along the Columbia River in the South County area. During the second half of calendar year 2006, Coulee City at Hwy. 2 had the highest percentage of vehicles traveling 90+ miles per hour. It has not been determined if this increased accidents in this area. There were no fatalities or disabling injuries from motor vehicle – pedalcyclist collisions in calendar year 2005. Grant County is part of the North Central Region, based on a boundary determined by the WA State Department of Transportation. Within this region the number one fatal collision type is vehicle overturn, second is hitting a fixed object and entering at an angle, and third is opposite direction collisions. The top object struck in this region is guardrails, and second is earth/rock banks or ledges.

Action in these areas is not the primary responsibility of the health district, but we can play a role in public advocacy in mitigating the hazards on those routes. Because Grant County is a “one Urban Center Rural County,” our residents are more likely to spend more time on the road. Figures from the 2000 census suggest that 21 percent, or 5805 residents of working age population routinely drive more than 30 minutes one way to their work site. That increased length of travel may increase the exposure of our residents to traffic accidents.

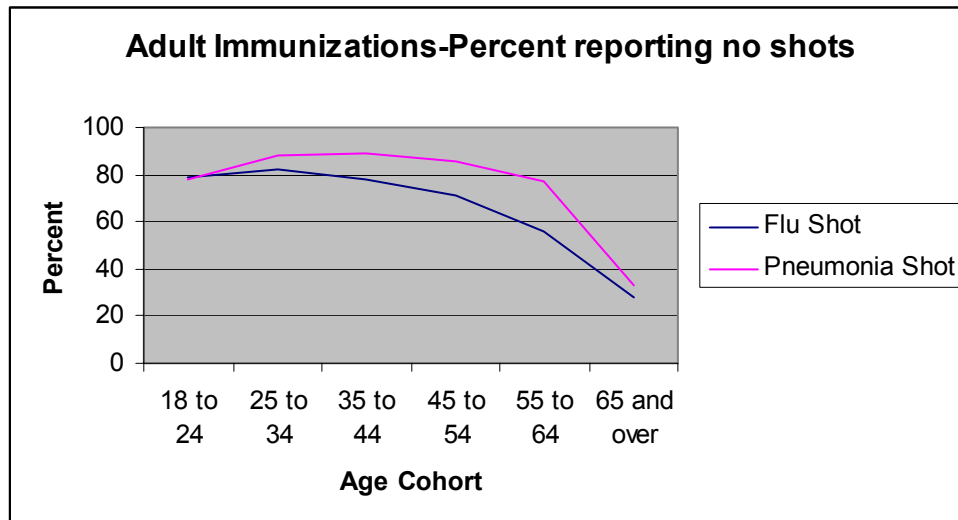
Infectious Disease

The Personal Health reports for preceding years summarize the cases that were reported. Refer to those reports for detailed information. Infectious disease outbreaks are not predictable except over longevity. Any outbreak can easily involve unprogrammed expenditures and those can be quite costly. To the extent that morbidity can be controlled by education and vaccination, those are expenditures the Health District can avoid.

Adult Immunizations/clients served

The following chart shows the number of adults receiving annual influenza vaccinations and adults reporting receiving a one-time pneumonia vaccination. Influenza is a disease with serious health implications that kills approximately 36,000 Americans a year, mostly the young and elderly. An annual influenza vaccination provides inexpensive protective measure for these populations.

Pneumonia vaccination, effective against some, but not all types of pneumonia, is also an important vaccination for those 65 and older, as some diseases of the elderly result in pneumonia which becomes the proximate form of mortality. As anticipated we would not expect younger citizens to receive a pneumonia vaccination; the figure of concern is the approximately 30 percent of the 65 and older group whose immunization would be covered by Medicare.



This table shows the number of adult immunizations provided in 2004 and 2005. For more detailed information on the types of vaccinations refer to the Annual Reports. We should see this figure rise rather than remain flat or decline to match the corresponding increase in population. This trend should continue to be watched closely in future assessment reports.

Year	2004	2005
Adult Vaccinations	1045	1041

Childhood Immunizations/rates

The chart on the following page reflects the incidence of vaccination preventable diseases. There are several issues of concern that are not reflected in this chart. Note the statewide increase of pertussis. There is some evidence that past vaccination programs, while successful, are also starting to lose their ability to protect. Research did not foresee this situation years ago. The implication is that diseases such as pertussis may be significantly more serious. We will continue to monitor this situation, but the need for major revaccination programs is likely to be expensive.

Similarly, there are some childhood diseases such as varicella that are not reportable, and can be prevented with immunizations. Recent outbreaks in Ephrata have necessitated mass vaccination programs; and the failure of some parents (and private providers) to support vaccinations may be placing children at risk for more serious complications of childhood diseases. Immunization programs applied as a response instead of preventive care, are generally expensive and constitute unplanned demands on our scarce resources.

Rates of Vaccination Preventable Disease

Hepatitis A		1997	1998	1999	2000	2001	2002	2003	2004	2005
State		17.34	17.46	8.40	5.03	3.07	2.7	1.2	1.1	1.0
Grant		18.85	9.17	9.79	17.33	2.48	1.3	3.9	1.3	6.3
Hepatitis B										
State		1.91	2.30	1.79	2.18	2.77	1.4	1.5	1.0	1.3
Grant		0	0	1.40	3.06	1.39	0	0	1.3	1.3
Mumps										
State		0.36	0.19	0.03	0.17	0.03	0	.2	0	0
Grant		2.75	0	0	0	0	0	11.67	0	0
Pertussis										
State		8.38	7.01	12.56	7.85	2.98	9.5	13.8	13.7	16.4
Grant		4.73	2.36	1.57	1.02	0	1.3	0	0	5.1

Sexually Transmitted Disease Rates and Trends

The following chart shows County rates compared to state rates. The Chlamydia rate is troublesome because it suggests that there is a significant amount of unprotected sexual activity occurring. On the other hand, there is preliminary evidence that the Chlamydia rate may have peaked in 2004. Unintended pregnancy and other STDs are the potential results of such activity.

Year	2001	2002	2003	2004	2005
Gonorrhea - All					
State	48.67	48.4	45.2	45.6	59.7
Grant	17.17	5.2	16.9	19.2	16.4
Syphilis - All					
State	2.86	1.2	1.3	2.4	2.4
Grant	0.00	0.00	0.00	0.00	0.00
Chlamydia - All					
State	221.77	247.2	275.42	285.9	297.6
Grant	189.91	221.2	280.16	298.9	237.7
Herpes					
State	29.15	31.7	34.0		
Grant	20.45	17.0	19.5		
HIV					
State (rate)	n/r	n/r	5.2	5.3	6.0
Grant (cases)	n/r	n/r	0	2	1
AIDS					
State (rate)	2.6	2.6	3.0	2.5	1.5
Grant (cases)	1	1	1	4	0

TB including clients served by GCHD

Year	2001	2002	2003	2004	2005
State (rate)	4.4	4.2	4.1	3.9	4.0
Grant (cases)	7	2	3	0	3

As of 1/27/06 GCHD was treating 3 patients for active TB, 88 patients for latent TB, and had referred 113 LTBI cases to other primary care providers.

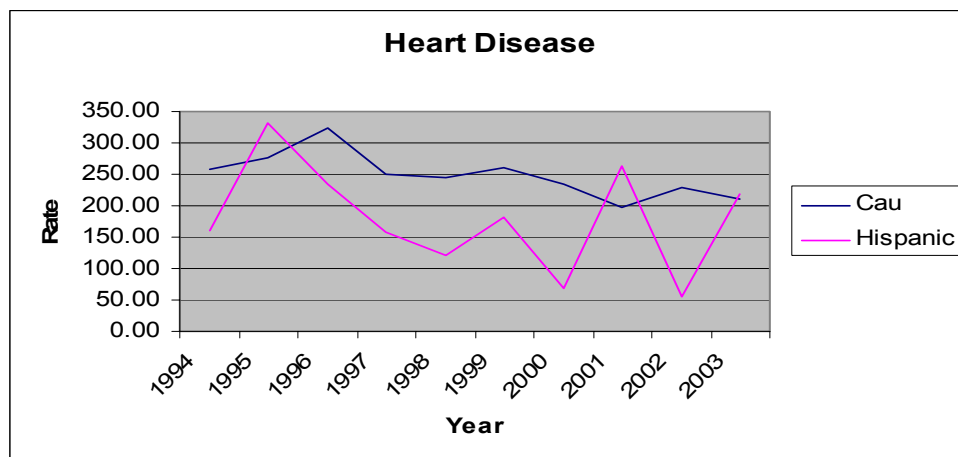
Hepatitis

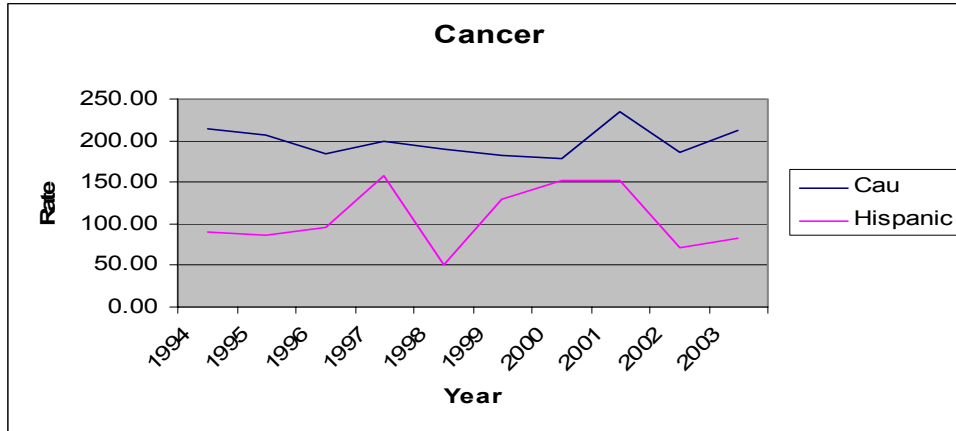
Referring to the vaccination chart above, Grant County is not out of line with state figures for Hepatitis. One aspect of Hepatitis requiring further investigation is the role played by travel in hepatitis outbreaks in the County. Several of our outbreaks can be traced to acquisition of hepatitis in the course of out-of-country travel, particularly to Mexico. Given our large Hispanic population, both documented and undocumented, and their practice of holiday traveling to Mexico there is a need for special education programs and immunization outreach. Those two preventative measures could have prevented several hepatitis outbreaks in Grant County.

Top Ten Causes of Death

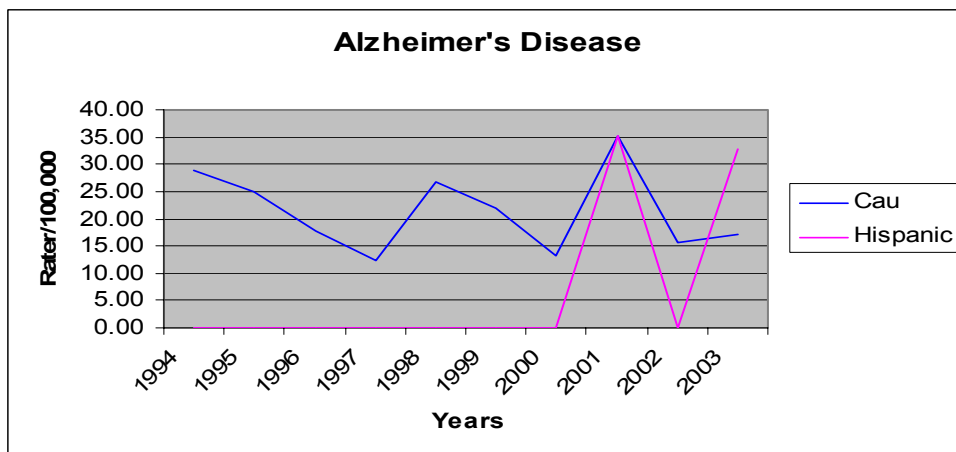
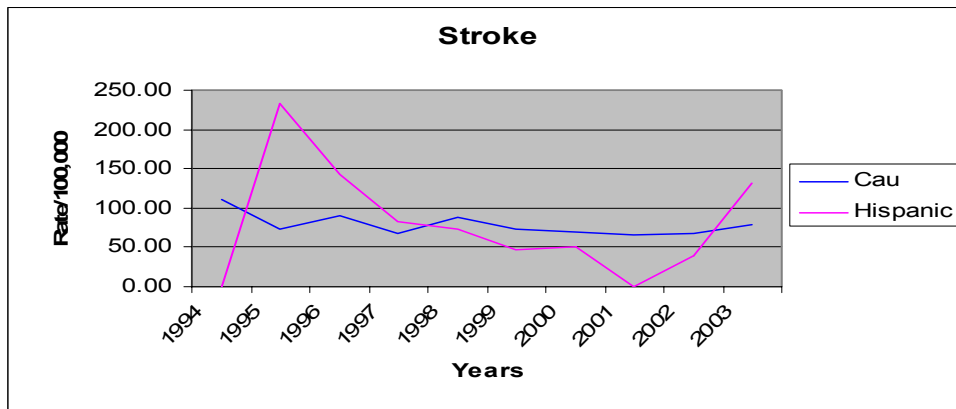
The following tables show the top ten causes of death in Grant County and compare the trends over time between the two largest components of our population: Caucasian and Hispanic. The significant point in looking at these causes of death is that there is a significant behavioral component to them. Diet, exercise, moderation in use of alcohol, smoking cessation, and healthy lifestyle choices will result in a 50% reduction in mortality. That is a low cost intervention and it suggests a vigorous Health District Education program could be very effective and relatively low cost in terms of the returns.

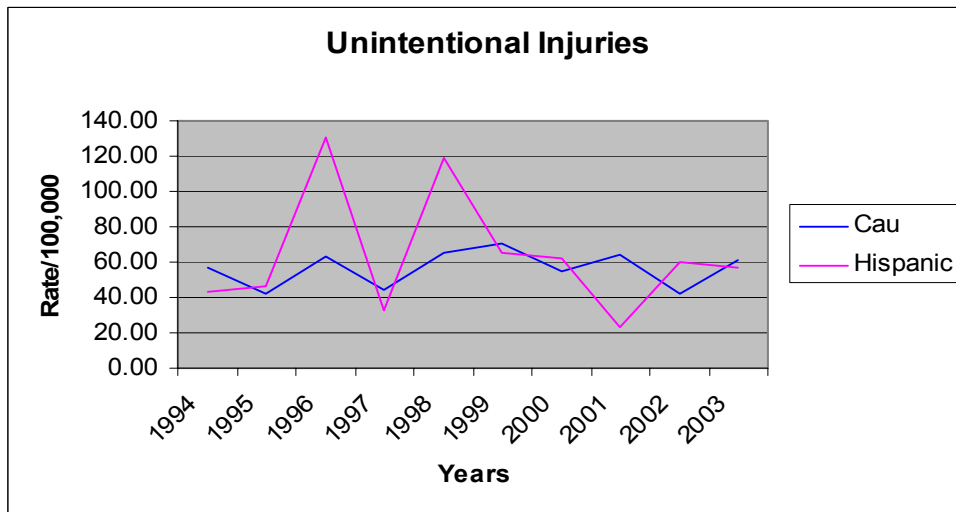
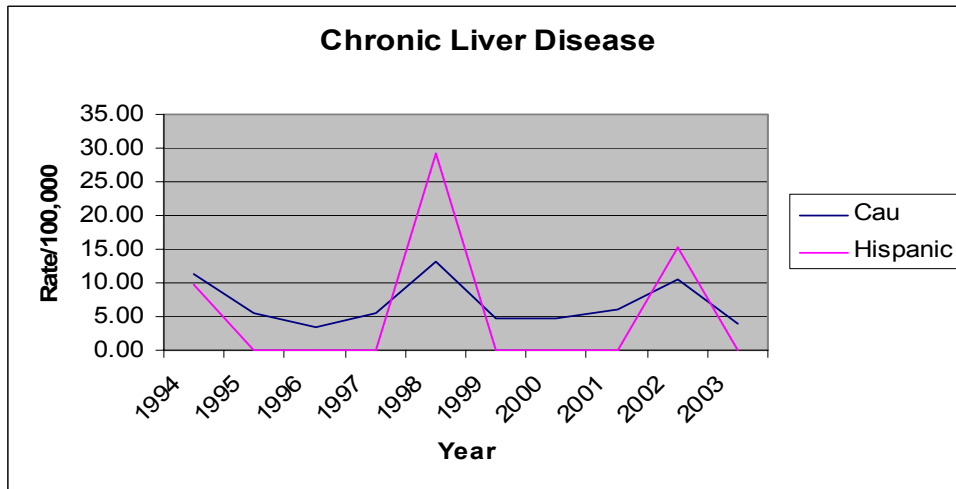
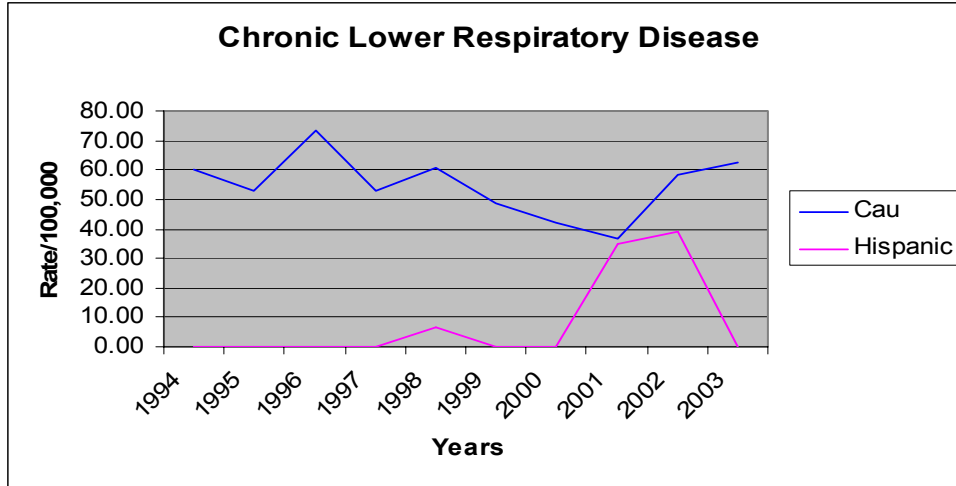
As can be seen by some conditions such as Heart Disease, the overall trend is clearly down. That trend correlates positively to smoking cessation in general. Less than 20 percent of our population now smoke compared to closer to 30 percent ten years ago. The issue of smoking will be discussed in more detail below.

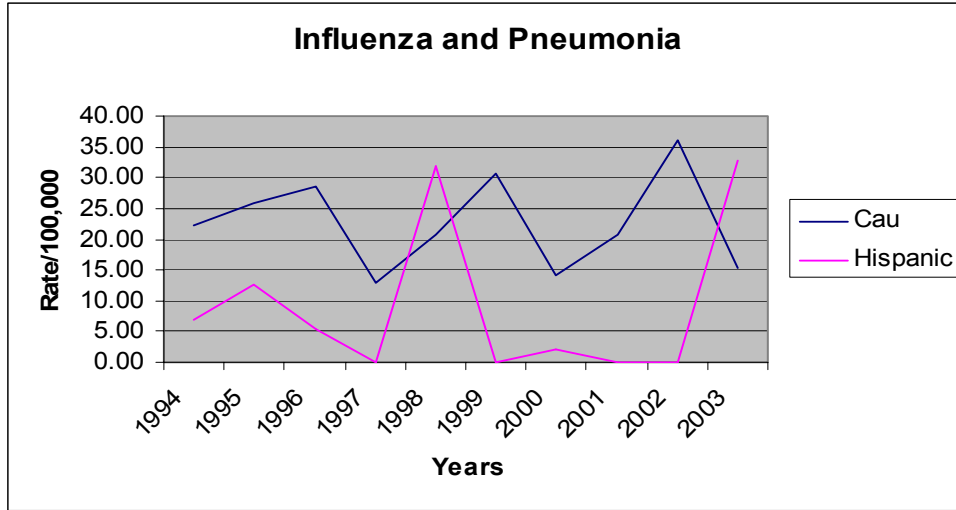




Conditions such as Stroke and Alzheimer’s shown below are significant because of their long term implications. The American health care system spends most of its dollars in the last year of one’s life. Stroke and Alzheimer’s both have significant rehabilitation costs in the case of stroke, and palliative care in the case of Alzheimer’s and other dementias. Grant County lacks those long term care options, in terms of facilities and staff, and that gap is anticipated to widen as our population continues to age.

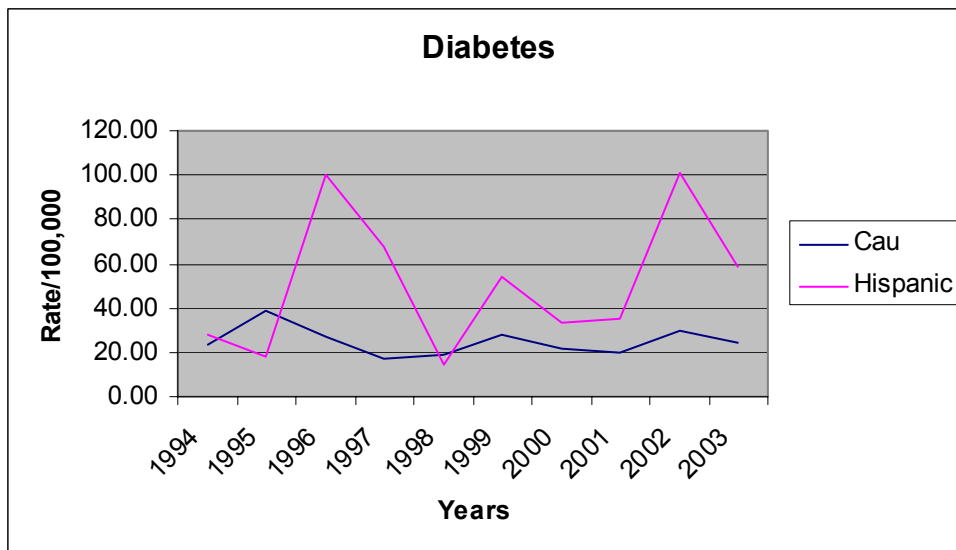






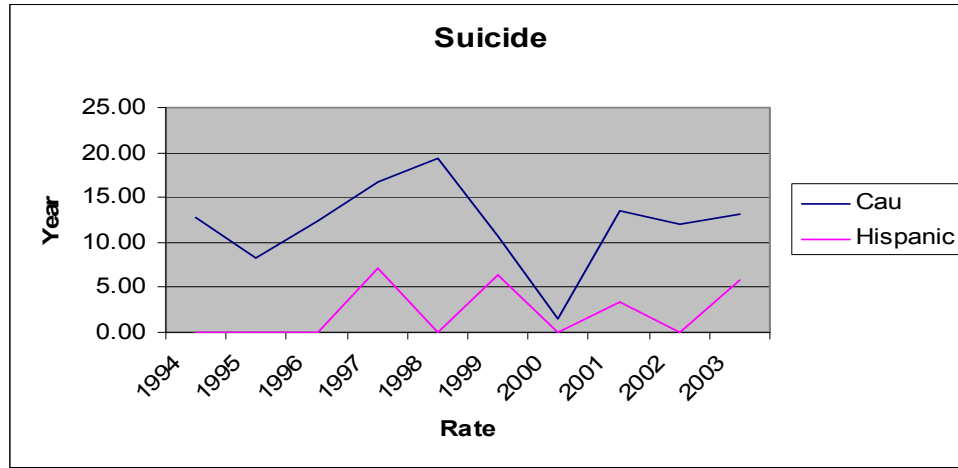
Diabetes is a cause of that death that has a significant population disparity that is of concern. The disparity is most attributable to a genetic phenomenon that predisposes Hispanics with Native American genetic backgrounds (Most of our Mexican immigrants) to diabetes. Diabetes is also linked to obesity, and regrettably, many of our Hispanic women tend to be overweight. In fact, that population subgroup is at a 50 percent higher risk for acquiring diabetes. Based upon census numbers alone, approximately 600 Hispanic women over 50 at risk for diabetes; and in five years, that number will rise to 840.

Diabetes is a condition that lends itself to early detection with vigorous screening programs, and the progression can be controlled with dietary interventions. Given the costs of progressive, untreated diabetes, screening and education are much lower cost alternatives.



The following table demonstrates suicide rates. Suicide is not often thought of by the public as a leading cause of death, and is not usually considered a public

health issue. Clearly, the prominence of suicide as one of the 10 leading causes of death underscores the need for good mental health capacity and the need for public health to have cooperative programs with mental health agencies.



It is important to note that these are death rates over a 10-year period. However, looking at the past five years these are the top ten causes of death in Grant County, in the following order for the combined years 2000-2005: heart disease, cancer, stroke, unintentional injuries, chronic lower-respiratory diseases, diabetes, Alzheimer’s, influenza and pneumonia, suicide, and chronic liver disease. These cannot be compared to the 10-year period since four of the years would overlap. More research and analysis is needed in this area.

Maternal and Child Health

Pregnancy

This table shows births by age of mother and marital status. In general, single mothers are more likely to be in poverty, have poorer health outcomes, and more likely to seek public assistance.

Age of Mother	2002 Total Births	2002 Single	2003 Total Births	2003 Single	2004 Total Births	2004 Single	2005 Births Total	2005 Single
<15	3	3	3	3	5	5	6	6
15-19	239	87	202	156	225	172	208	155
20-24	426	94	459	184	468	225	454	219
25-29	370	190	377	107	386	119	398	115
30-34	237	94	265	55	241	51	251	62
35-39	94	46	105	16	92	17	112	22
40-45	25	20	19	3	22	2	21	4
>45	0	4	1	0	2	0	1	0
Total	1394	538	1431	524	1441	591	1451	583

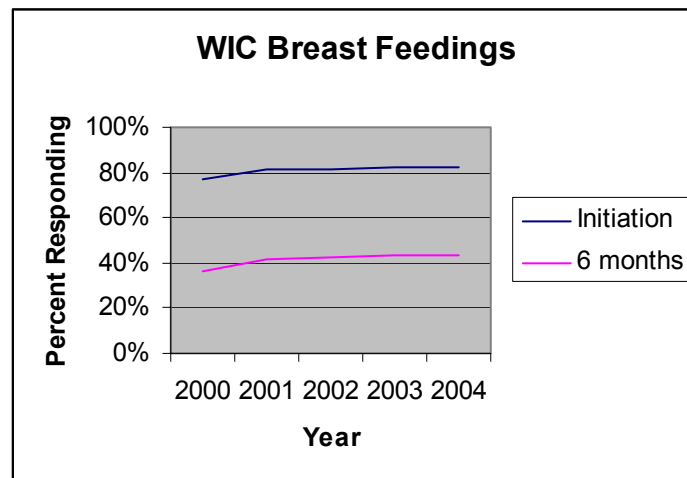
Prenatal Care

The following chart shows the month that mothers (regardless of marital status) began prenatal care. This is an important measure to assess the pregnancy outcome.

Month of Pregnancy	2000	2001	2002	2003	2004	2005
1	88	103	73	168	156	167
2	509	491	573	534	575	571
3	427	363	365	345	287	288
4	165	146	166	144	112	129
5	103	74	81	70	75	69
6	43	47	50	53	53	51
7	31	26	23	28	34	31
8	22	19	18	15	41	32

Breastfeeding Rates

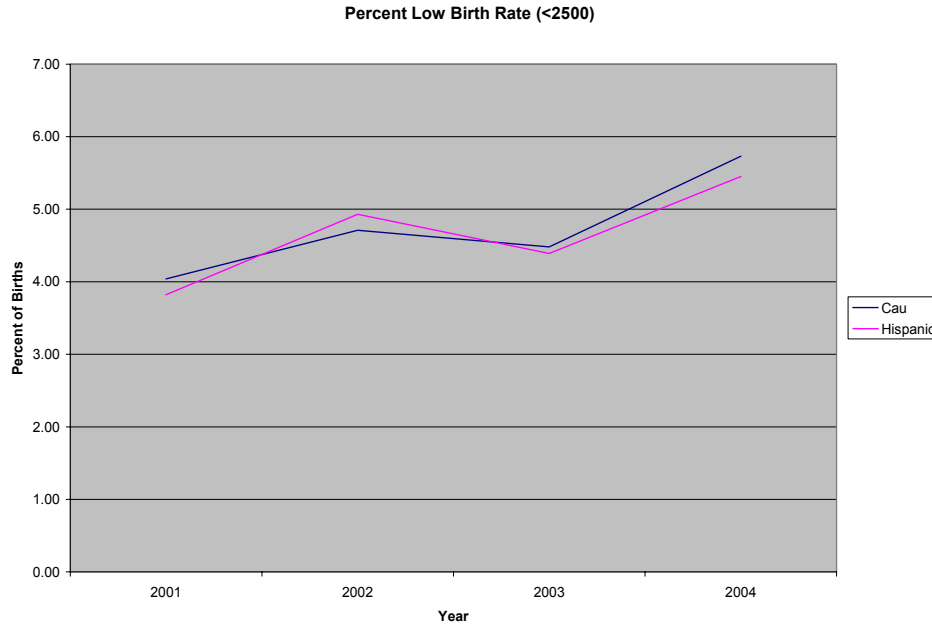
The chart below shows the number of WIC mothers who report breast feeding and the percent still breast feeding after six months. Our figures are well above the national averages which suggest that 64 percent of women breast feed right after birth; but, by the end of six months, only 29 percent breast feed. Our Breast Feeding Coalition continues to be a major resource for promoting breast feeding and working to ensure we have a breast feeding friendly environment in Grant County.



Pregnancy Risk Factors including Obesity and Maternal Smoking

There are several risk factors that affect low birth weight. This chart depicts the number of 2500 gram and below birth weights in Grant County and compares our

two primary population groups in Grant County. It does appear that the percentage of low birth weight babies in the county is rising slightly, and that there are no significant disparities between the two population groups.



There are, of course, several factors that can lead to lower birth weight babies. Of particular concern are the factors of maternal smoking, alcohol use, overweight, or some chronic or acute condition during pregnancy. Most of the issues can be controlled through behavioral interventions and, thus, cost the health care system less than control of the consequences of poor birth outcomes. The following charts demonstrate maternal prenatal risk factors in Grant County by predominant population groups:

Percent of Mothers by Body Mass Index Category

Year	Overweight		Obese		Morbidly obese	
	Cau	Hispanic	Cau	Hispanic	Cau	Hispanic
2003	29.26	30.97	23.99	24.92	3.64	2.87
2004	29.41	35.21	24.61	22.80	4.72	4.04

There are no significant differences in body mass index (BMI) by ethnicity; however, the bad news is that far too many mothers are overweight during pregnancy. These figures also serve to underscore concerns about overweight as an emerging public health issue. See the section above on overweight and obesity.

Percent of Self-Reported Smoking by Trimester

Year	Smoking 1st Trimester		Smoking 2d Trimester		Smoking 3d Trimester	
	Cau	Hispanic	Cau	Hispanic	Cau	Hispanic
2003	8.63	2.17	8.05	1.76	7.55	1.49
2004	9.90	2.17	8.83	1.91	8.55	1.78

Significantly, Caucasian mothers are more likely to smoke during pregnancy than are their Hispanic counterparts.

Children with Special Health Care Needs

The latest county profile data for children with special health care needs is for the years 2002 – 2004. There were 703 children served in Grant County by the Children with Special Health Care Needs program for the three years combined.

This table provides figures for those enrolled in Special Education Services in Grant County. Some of these children are supported by our Children with Special Health Care Needs program.

Diagnostic Category	Number of Children
Developmental Delay Preschool	417
Serious Behavioral Disability	25
Orthopedic Impairment	22
Health Impairment	177
Specific Learning Disability	754
Mental Retardation	125
Multiple Disabilities	34
Deaf	*
Hearing Impairment	16
Visually Impaired	6
Deaf-Blindness	*
Communication Disorder	388
Autism	28
Traumatic Brain Injury	5
Total	1,1999
*Fewer than five or no cases reported	

Office of Superintendent of Public Instruction
Data as of December 1, 2004

Home and Child Care Capacity

The latest figures on Child Care facilities are in the 2005 DSHS report. Based on those figures, Grant County child care costs \$461.00 a month per child. We have 16 child care slots per 100 children which is slightly worse than the

statewide average of 17. 50 percent of our children, approximately 4,000, are in state subsidized programs in licensed care facilities. Grant County licensed facilities have an average 24 percent vacancy rate. The issue facing Grant County parents is not capacity; rather, it is the cost for the programs. Subsidized programs are limited with federal Temporary Aid to Needy Families (TANF) accounting for only 20 percent of those children in subsidized programs. The long term projections are for these costs to continue to rise disproportionately to inflation thus making it more difficult for working parents to have their children in child care.

Environmental Health

Rates of Selected Foodborne and Waterborne Disease in Grant County

The following chart demonstrates some selected food and waterborne diseases incident rates in Grant County. These are conditions that can be mitigated by ensuring safe water supplies, and good food handling techniques: those things that are the responsibility of our Environmental Health program. Like other outbreaks such as measles or mumps, these conditions are costly for the Health District in terms of investigating, controlling and responding to them. One outbreak alone can cost several scores of thousands of dollars. Again, education and prevention are the preferred solutions.

Condition	2001	2002	2003	2004	2005
Campylobacteriosis					
State	16.6	17.1	15.5	14.0	16.7
Grant	11.9	14.4	31.1	23.0	24.0
Giardia					
State	8.6	8.4	7.1	7.2	7.0
Grant	5.3	2.6	1.3	2.6	7.6
E-Coli					
State (rate)	2.5	2.7	2.1	2.5	2.4
Grant (cases)	2	1	0	0	0
Salmonellosis					
State	11.4	10.8	11.5	10.7	10.0
Grant	7.9	28.8	9.1	6.4	6.3
Shigellosis					
State	3.9	3.8	3.1	2.2	3.0
Grant	1.3	2.6	5	1	3

Consultations and Complaints by Program

This chart shows the numbers of consultations performed by environmental health staff for the last two years by environmental health program. Consultations are our primary mechanism for insuring adherence to code and good public health practice. Complaints are only one measure of public dissatisfaction and the quality of our service should not be inferred from the number of complaints without more detailed investigation on an incident by incident basis.

Consultations		
Program	2004	2005
Water	555	429
Solid Waste	581	575
On Site Sewage	2222	1819
Vectors	378	359
Food	2212	1797
Chemical/Physical	167	59
Epidemiology	81	128
Living Environment	277	171

Complaints		
Program	2004	2005
Water	25	34
Solid Waste	75	76
On Site Sewage	54	46
Vectors	65	114
Food	83	70
Chemical/Physical	3	1
Living Environment	8	11

To put the issue of complaints in perspective it is worthwhile to look at the ratio of complaints to consultation by program year. That ratio is shown in the chart below.

Ratio of Complaints to Consultations		
Program	2004	2005
Water	0.05	0.08
Solid Waste	0.13	0.13
On Site Sewage	0.02	0.03
Vectors	0.17	0.32
Food	0.04	0.04
Chemical/Physical	0.02	0.02
Living Environment	0.03	0.06

Methamphetamine Labs/Dump Sites

The following table shows the number of methamphetamine labs in Grant County by year. The trend in methamphetamine labs is down which is following the statewide pattern reported by the Washington State Department of Ecology; however, preliminary figures for 2006 are trending upward. These incidents should continue to be monitored closely.

Year	2001	2002	2003	2004	2005	2006
Incidents	27	46	34	14	11	15

Food Establishment Inspections

In 2006, Grant County had 287 food establishments needing to be inspected two times per year. Of those, 270 were inspected twice amounting to a 94% inspection rate for those establishments. The remaining 6% were inspected once. In the same year, there were 285 food establishments needing to be inspected one time per year. Of those, 240 were inspected amounting to an 84% of those establishments receiving that inspection.

Animal Bites and Bird Collection

Vector control helps investigate animal bites, collects birds, test for rabies, and monitors certain situations such as West Nile Virus.

Animal bites reported in Grant County, 2006:

Animal:	Dogs	Cats	Bats	Ferrets	Rats	Unknown Animals
Bites:	126	15	1	1	1	1
Total Bites:						145

Eight of these animals, because of the unique circumstances, were tested for rabies. This includes 5 dogs, 1 cat, 1 bat, and 1 ferret. The only post-exposure rabies prophylaxis was recommended in only one case, which was the individual bitten by an unknown animal.

The most common breed of dog involved in dog bites were Labradors or mixed-breed Labradors. This does not necessarily suggest that biting with Labradors is statistically significant. Labradors are a very popular breed, so the numbers may only be reflecting a high number of that breeds' presence in Grant County. The second most common breed of dog involved in bites was the Pit Bull.

There were 23 dead birds reported and only 1 was submitted for testing of West Nile Virus. Again this is due to unique circumstances and is based on the collectors' professional judgments. There was no positive test related to West

Nile Virus in Grant County in 2006, but this does not mean the virus is not present.

Septic Inspection Information

The goal with septic permit work is to avoid illness resulting from exposure to on-site sewage effluent. In 2006, 433 new permits were given for septic systems. There were 52 repairs and 173 site evaluations. Some septic systems are quite large, requiring significantly more time to address.

Air Quality Issues on the local level

By all measures the quality of air in Washington State and Grant County has improved dramatically over the past 20 years. Motor vehicles account for approximately 55 percent of air pollution, with agricultural crop burning accounting for about 4 percent. There is a real-time air quality monitoring site located in Moses Lake that provides Grant County Residents a current “snap shot” of conditions: <https://fortress.wa.gov/ecy/aqp/Public/html/grant.html>. Long term county data by all pollutants, however, are not yet available but will eventually be on line at the Federal Department of Ecology AIRnow web site.

A significant source of particulate pollution in Grant County is crop burning, and that figure trended up slightly: There were 6,127 acres of crop burning in 2003 and 6,548 acres in 2004. A second source of particulate air pollution in Grant County is seasonal windblown dust. Individuals with respiratory conditions should avoid being outside during such windstorms.

Oral Health

Fluoridation is a proven solution to improving childhood oral health and preventing dental disease. The Grant County Health District’s Health Officer has brought this issue to the Board of Health which, in turn, submitted to municipalities for local resolution. The problem of fluoridation is both financial and political with the latter probably determining the former. The Moses Lake area is fortunate in having a high level of natural fluoridation; however, given the number of private wells in Grant County, even if fluoridation were mandated, many citizens would not receive any benefits. Finally, the rise in interest in bottled water has meant that tap water is less used for drinking than in the past. This issue needs more research, however.

Access to primary dental care

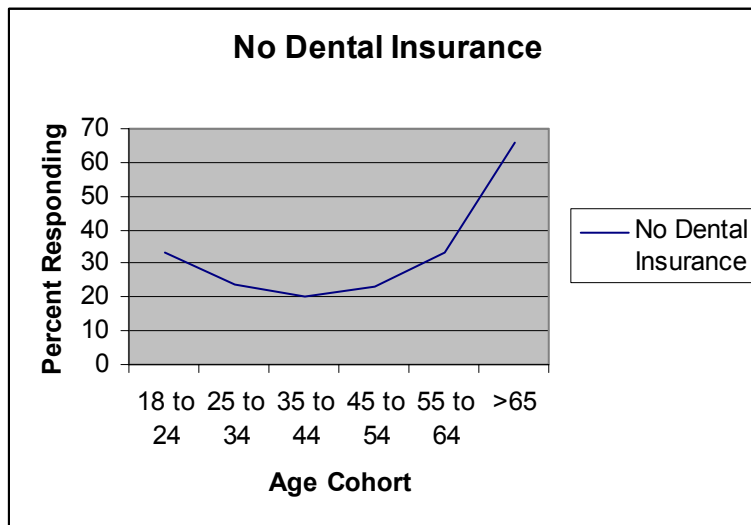
Primary dental care in Grant County meets guidelines for ratio of providers per population except for two areas. The lower Grant County area (Southern Slopes-Royal City and Mattawa) continues to be designed a geographic dental care Health Professional Shortage Area (HPSA). There are no providers in Royal City

and in Mattawa, there is a periodic visit by Dr. Greg Norwood who brings a mobile unit from Sunnyside to provide services to the Mattawa Clinic. In addition, Upper and Lower Grant County have been designated a new low income/migrant dental Healthcare Professional Shortage Area. Even though the central part of Grant County has an adequate number of providers.

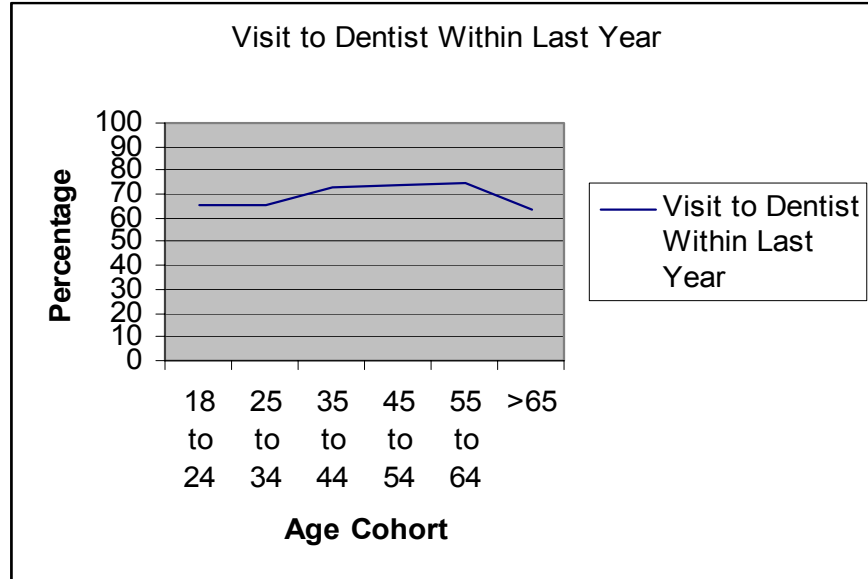
Senior Oral Health

We have not been able to do any significant research on oral health status of seniors. This group is not covered by any specifically funded programs by the state or federal agencies; the focus of oral health has been children and pregnant mothers through maternal and child health programs. We have some anecdotal evidence that seniors are in need of services; to that end we have worked with the Moses Lake Senior Center to provide some supplies.

One item of concern is the lack of seniors who report having dental insurance. The graph below examines dental insurance by age, and the lack of dental insurance in the senior cohort suggests a much larger Medicare program issue.



On the other hand, the chart below suggests that seniors are still receiving dental checkups.



Childhood oral health and sealant program

The following table indicates the results of our pilot sealant program conducted at two elementary schools in the Moses Lake area in 2006. We partnered with the Moses Lake Community Health Center and applied sealants as part of a larger oral health education program. A total of 66 children responded to some part of the program. These were third grade children and significantly only 27 of 66, indicated they had a dental “home.” Children without a dental home are less likely to receive appropriate examinations and preventative services such as sealants. We chose a low income area to conduct the program; thus, the disproportionate number of Medicaid recipients. Significantly, though, even with some type of dental insurance, the Grant County Dental Society, and DSHS figures suggest, that nearly 60 percent of people with insurance still do not use dental services. We have done some preliminary work with focus groups to understand why, because while adequate services are not available in some areas, overall there are low rates of utilization.

# Teeth Sealed	Sealants Applied	No Sealants Applied	Declined Services	Total Responses	Private Insurance	Medicaid	Dental Home
33	10	7	7	24	5	8	12
66	22	8	12	42	6	19	15

Substance Abuse

The following table was developed from a 2003 Washington State Department of Health and Human Services survey of the state, by county. This data was developed to determine the degree to which reported users were receiving treatment. These figures are consistent with BRFSS data and Healthy Youth

Survey Data. In general, usage rates of drugs are below state averages. Tobacco use (all kinds) seems to have reached a point of diminishing returns. Those currently using may reflect that population that is not going to quit; if that is, in fact, true, then our dollars spent on youth prevention continue to be the best use of resources. Tobacco settlement money is running out, however, and the GCHD will be facing a decision on whether to maintain the program, and in what form.

Grant County Substance Abuse Reported Use in the last 30 days

Substance	Percent Reporting Use within 30 days
Alcohol	53.7
Any Illicit Drug	5.6
Illicit Drug other than MJ	2.2
Marijuana	4.4
Cocaine/Crack	0.4
Stimulants	0.2
Hallucinogens	0.3
Heroin	0.0
Opiates	0.9
Tranquilizers	0.2
Sedatives	0.6
Tobacco	18.5

See the Environmental Health Section for a further discussion of Methamphetamine labs and dump sites. These sites are significant ecological hazards and have long term health effects.

Emergency Preparedness

Emergency preparedness has become an increasingly important aspect of the public health mission. Public health personnel are now recognized as “first responders,” just as are firefighters and law enforcement. Grant County has used its contract funds to expand its public health preparedness role in several important areas discussed below. Those contract funds are probably going to decline if the nation is successful in thwarting any terrorist attacks. Some special state funds have been provided for pandemic flu preparation, but the emergency preparedness function is increasingly likely to become an unfunded mandate in future federal budget cycles.

Plans

Grant County Health District now has an all hazards Emergency Response Plan that covers natural disaster, chemical hazards, radiological hazards, and bioterrorism. The plan is under near constant revision as we practice our response to local outbreaks and other exercises. Currently, the effort is focused on planning for a pandemic influenza outbreak. The plan as been coordinated

with the County Emergency Management Department and corresponds in format to the Comprehensive Emergency Management Plan.

Training and Exercises

Our emergency response plan has been implemented to respond to several local outbreaks. During the 2005 Influenza outbreak at the Job Corps center, the Health District actually operated out of the County Emergency Operations Center. Nearly all staff have received training in the Incident Command System (ICS) and we routinely use the ICS for our response to public health events including shot clinics and outbreak investigation including such larger scale events as the Meningitis prophylaxis in Moses Lake, Chicken Pox outbreak in Ephrata, and others. For the past two years our influenza shot clinics and our chicken pox shot clinic has been organized using our Strategic National Stockpile distribution procedures. Finally, we have participated in two radiological exercises and three pandemic influenza exercises.

The area that requires more detailed assessment and training is in the area of chemical hazard response. Given the train traffic through Quincy and Ephrata, and the truck traffic along the Interstate 90 corridor, and Highways 2 and 26 in the North and South county respectively, we believe the dangers of an accident involving truck or train derailment are significant. Those types of incidents require more study, planning and exercising. Through a contract with WSU, the County Emergency Management Department, in conjunction with the Local Emergency Planning Committee is participating in a commodity flow study performed by WSU students. The outcomes of the study, which should be available in the last quarter of 2007 should provide the pertinent data to conduct more thorough hazardous materials planning. Finally, given the air traffic over the Moses Lake area, we believe our chances of having a mass casualty event caused by an air accident are somewhat increased. While public health is not the lead agency in mass casualty incidents or chemical spills, we do have a role as a first responder in the areas of accessing resources, providing protective action recommendations, and providing the appropriate public health services for the situation.

Community Partnerships related to local health issues

Partnerships and coalitions are one way we can leverage scarce resources. The Annual Reports summarize the partnerships in which we participate. These partnerships and coalitions, however, are not without their challenges. There is some degree of administrative costs to putting them together, conducting meetings, contacting participants, and doing the administrative actions necessary to hold them together. It is recommended that coalitions be examined from time to time to ensure costs of maintaining a coalition are commensurate with the returns from that coalition.

Public Health Capacity

The ability of the Health District is limited by the financial contribution of the district members. The table below shows the dollar contribution to public health by Grant County and does not include the special grants provided by individual cities.

Year	County Contribution	Population	County Contribution/person
2003	140,000	77,100	\$1.51
2004	90,202	78,300	1.15
2005	156,503	79,200	1.98
2006	158,200	80,600	1.96

The figures in this table include the dollars earmarked for the TB program but do not include the dollar value of county in-kind contributions such as office space and administrative support. Population figures do not include the estimated 12,000 undocumented residents. 2004 was an outlier; funding has increased in 2005 and 2006; part of that increase includes earmarked TB funds. In-kind contributions from the county were estimated by the county at \$141,165, which is used for office space in the Ephrata and Moses Lake offices, utilities, and janitorial services.

The Joint Select Committee on Public Health Finance studied public health funding in Washington State and subsequently provided a report for the legislature in the spring of 2006, identifying specific gaps and priorities. Funding has been allocated in 2007, for the next biennium, to increase the capacity of the public health system, including local public health jurisdictions across the State. Identified priority strategies include:

- Stop communicable diseases;
- Reduce the impact of chronic diseases;
- Invest in healthy families;
- Protect safe drinking water, food and air;
- Use health information to guide decisions;
- Help people access health care services.

Funds must be used to support new activities that will provide measurable changes in the health status of people in the jurisdictions. Both allowable activities and the required outcomes to be measured will be specified through a process mandated by the legislature. While the allocated new funding level offers a small percentage of what the study indicates would be needed to remediate the current gap, it offers an opportunity to improve the capacity to provide public health services that will make a difference.