State of Wyoming

Department of Health

Older Adult Health in Wyoming

Results from the 2005 and 2006 Wyoming

Behavioral Risk Factor Surveillance System

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This document is available in alternative format upon request.

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Table of Contents

Executive Summary

Older Adult Health in Wyoming includes results on Wyoming adults age 60 and older as reported on the 2005 and 2006 Behavioral Risk Factor Surveillance System (BRFSS). From the measures available on those two surveys, health conditions were selected if they disproportionately affect older adults. In addition, other measures are included to better describe the epidemiology and health care issues related to the condition such as risk factors, access to health care, and utilization of preventive health services. The conditions selected for inclusion are: arthritis, high blood pressure, high cholesterol, diabetes, asthma, cardiovascular disease, and prostate cancer. An additional measure was defined as having any of the first six conditions which were all included on the 2005 survey. Because the BRFSS excludes institutions from the sample of telephones used to conduct the survey, older adults residing in nursing homes are not included in these results.

Key findings:

Prevalence and associations with other factors (e.g. other conditions, risk factors, health status, subgroups).

Health Conditions among Wyoming Older Adults (Age 60+)
BRFSS 2005-2006

	Prevalence	Est. Number
Arthritis	51.1%	45,000
High blood pressure	49.1%	43,000
High cholesterol	49.0%	43,000
Cardiovascular disease (CVD)	20.1%	17,600
Diabetes	14.3%	12,500
Asthma	8.6%	7,500
Any of the above 6:	84.6%	74,000
Prostate cancer (men)	8.8%	3,600

Six in ten older adults (59.1%) reported two or more of the six conditions, while 31.6% reported 3 or more and 10.6% reported 4 or more. Persons with CVD or diabetes were more likely than persons with the other conditions to report more other conditions. For example, 43% of older adults with diabetes and 40% of those with CVD reported a total of 4 or more of the six conditions.

Subgroups of Wyoming older adults who reported more of these conditions included persons age 70 and older, those in the lowest income groups, the unemployed or unable to work, the obese (BMI≥30), adults who ever smoked, and those not exercising.
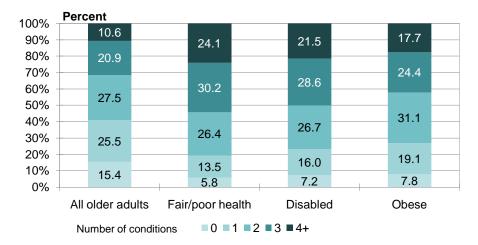
Trends. Worsening trends are seen for high blood pressure, high cholesterol, diabetes, asthma, cardiovascular disease, disability, obesity and overweight (BMI≥25). Improving trends are seen for tooth loss, pneumonia vaccination, sigmoidoscopy/colonoscopy and cholesterol testing.

Comparisons with other states. With the exception of current asthma, where Wyoming has the highest rate among all 50 states and D.C., prevalence rates for the other conditions among Wyoming older adults are low compared with the rest of the U.S. However, Wyoming older adults appear to have poorer access to health care and lower utilization of checkups and preventive health services, except for vaccinations and cholesterol testing.

Among adults of all ages, one fourth (26.0%) provided care or assistance in the past month to an adult age 60 or older and 20.5% of those providing such care did so for an older person with dementia or Alzheimer's disease.

The number of chronic conditions reported by older Wyoming adults was significantly associated with health status, disability, and obesity, as shown in the graph below. Looked at another way, persons with any of these chronic conditions were more likely than those without them to report a vast array of less desirable characteristics, including self-reported fair or poor health, frequent mental distress (14 or more of past 30 days when mental health was not good), being out of work or unable to work, dissatisfaction with life, obesity, and lack of exercise.

Number of Chronic Conditions and Other Measures
Adults Age 60+, WY BRFSS 2005

Percent	All older adults	Fair/poor health	Disabled	Obese
4+	10.6	24.1	21.5	17.7
3	20.9	30.2	28.6	24.4
2	27.5	26.4	26.7	31.1
1	25.5	13.5	16.0	19.1
0	15.4	5.8	7.2	7.8

Number of conditions ■ 0 ■ 1 ■ 2 ■ 3 ■ 4+

I.   Introduction

In 2004, Wyoming issued the report "Older Adult Health in Wyoming" which was based on results from the 2003 Behavioral Risk Factor Surveillance System (BRFSS). At that time it was noted that the population is aging, and the baby boom generation (those born between 1946 and 1964) are now entering their 60s. In Wyoming, this effect is seen by the increase in the median age from 27 years in 1980 to 36 year in 2000 and it is expected to reach 39 years by 2010.[1] In addition, the number of Wyoming residents who were age 60 or older increased from 81,500 in 2003 to 87,500 in 2006, a 7% increase in a period of just three years.

This report uses the same definition of older adult used in 2003 – adults age 60 and older – but includes a slightly different list of conditions because of the availability of data. Data for this report were obtained from the 2005 and 2006 BRFSS surveys and include arthritis, high blood pressure (HBP), high cholesterol, cardiovascular disease (CVD, including heart disease and stroke), diabetes, asthma, and prostate cancer. The first six of these were all measured in 2005 and persons who had any of the six, or combinations, are also included. Disability, falls, dental problems, and physical and mental health status are also addressed among older adults as they are often related to these conditions.   A section on preventive health is included which addresses access to care and receipt of cancer screening, immunizations, and cholesterol testing recommended for older adults. Access to health care is important because older persons and those with these conditions often require ongoing monitoring and/or medications, and are a priority group for adult immunization.

II.   Methods

The Behavioral Risk Factor Surveillance Survey (BRFSS) collects data from non-institutionalized adults, ages 18 and older, through monthly random digit dial telephone surveys. The BRFSS is coordinated and partially funded by the Centers for Disease Control and Prevention (CDC) and is conducted in all 50 states. Wyoming conducted 5,009 telephone interviews in 2005 and 4,993 in 2006. Of those, a total of 3,131 were with adults age 60 and older (1,533 in 2005 and 1,598 in 2006). Raw data were adjusted to account for different probabilities of selection and to be representative of the Wyoming adult population by age and sex.

Prevalence estimates and confidence intervals were determined with Stata version 9, which takes into account the complex sample design of the BRFSS. Respondents with missing values were excluded from analysis of that variable. With the exception of overweight and income measures, this usually had little effect on the results. The *95% confidence intervals,* or margin of error, define the range of values within which the true population prevalence rate would fall in 95 out of 100 samples taken from the population. Unless otherwise noted, results highlighted in the *Key Findings* (e.g. "more likely than" or "high") indicate a statistically significant association based on Chi square tests of association with P values <0.05. Confidence intervals and P values for selected results are presented in the Supplemental Tables S-1 through S-12 on pages 42-53 of the report. Additional tables supporting all results are available on request from the Wyoming BRFSS program.

As with all survey data, there are several limitations of these results that should be taken into consideration. First of all, the data are self-reported and in many cases the validity of the measure on the BRFSS has not been measured. As noted earlier, households without telephones (or only cell phones) were not included. In Wyoming, the rate of phone coverage is high, but more and more people are using cell phones only, which are currently excluded from the survey. Phone coverage may be an issue for deriving accurate estimates among lower income persons, certain demographic groups, or when the item of interest is likely to be much higher among those with no phones (such as lack of health insurance). Because the sample frame excludes institutions, older adults who were temporary or permanent residents of nursing homes were not included. An estimated 5% of the population age 65 and older, and 20% of those ages 85 and older, are in nursing homes.[2] Declining response rates for telephone surveys are another concern. Median BRFSS response rates have declined from about 70% ten years ago to less than 50% in recent years. Wyoming CASRO response rates were 55% for 2005 and 57% for 2006. Potential error (or bias) results if the adults not surveyed differ appreciably from those that do participate. However, the BRFSS data have been shown to be comparable to other surveys with higher response rates.[3] While many types of errors cannot easily be measured for a particular survey, the sampling error, which results because only a fraction of the target population answers the questions, can be estimated. The confidence interval, described above, estimates the sampling error and provides an indication of the precision of the survey results.

III.   Results

A. Demographics

Table 1: Demographics of Wyoming Adults 2005-2006

	Age 60+		All adults		
Gender	Percent	n	Percent	n	P value:age 60+/18-59
Males	46.5	1,160	50.1	3,992	0.0002
Females	53.5	1,971	49.9	5,928	
Total		3,131		9,920	
Age (years)					
60-69	49.0	1,491	11.0	1,491	
70+	51.0	1,640	11.4	1,640	
Race/ethnicity					
White	94.4	2,925	89.5	9,008	<0.0001
Hispanic	2.7	81	6.0	467	
Other	2.9	89	4.5	376	
Education					
<High School	8.6	271	7.2	619	<0.0001
High School	36.6	1,145	33.7	3,234	
Some college	25.7	827	30.6	3,035	
College grad	29.1	882	28.5	3,020	
Income					
<$25K	35.5	1,041	23.0	2,252	<0.0001
$25K-$49,999	36.5	918	32.4	2,925	
$50K-$74,999	14.4	323	21.2	1,764	
$75K+	13.7	306	23.4	1,903	
Population Density					
Counties >50K	27.0	850	27.6	2,702	<0.0001
Counties 10K-50K	34.6	1,064	40.5	3,842	
Counties <10,000	38.5	1,191	31.9	3,288	
Employment					
Employed/SE	26.8	801	69.6	6,238	<0.0001
Not working	4.9	162	6.9	620	
Homemaker	7.7	252	8.1	794	
Retired	60.5	1,894	15.5	2,056	
Health care coverage					
Insured	94.1	2,951	82.1	8,417	<0.0001
Uninsured	5.9	174	17.9	1,474	
Marital status					
Married	66.0	1,648	66.0	6,019	>0.999
Not married	34.0	1,478	34.0	3,878	

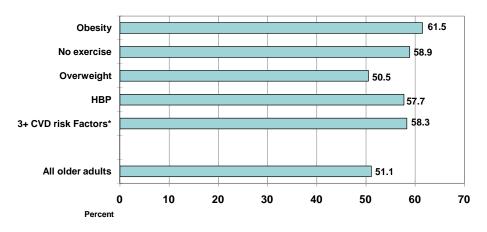## B. Health Conditions Affecting Older Adults

1. Arthritis

> Measure: The 2005 BRFSS limited the case definition of arthritis to persons who had been told by a doctor or other health professional that they had some form of arthritis. Other definitions will produce different estimates of the prevalence of this condition. Chronic joint pain (CJP) was also measured and defined as joint pain (other than the neck or back) that lasted 3 months or longer.

Key Findings:

- Over half of all Wyoming older adults (51.1%), representing an estimated 45,000 persons, reported they had been told they had arthritis. About the same number (48.9%) reported CJP.
- **Subgroups:** Subgroups of persons age 60 and older with higher rates of arthritis include: those with annual household incomes less than $25,000 (57.1%), counties with population less than 10,000 (55.7%), women (55.5%), and persons age 70+ (54.0%).
- **Risk factors, potential for behavior modification:** Overweight (and obesity) has been identified as a risk factor for arthritis, and physical activity has the potential to provide benefits to persons already diagnosed with the condition. High rates of arthritis were reported among the obese (61.5%) and those not engaging in any leisure time activity (58.9%). Arthritis rates were also elevated among older adults with risk factors for other conditions: those with high blood pressure (57.7%) and reporting 3 or more CVD risk factors (smoking, HBP, high cholesterol, overweight, diabetes, and not meeting recommendations for physical activity: 58.3%) (Figure 1).
- **Associations:** Older adults with arthritis were more likely than older adults without arthritis to be disabled, report fair or poor health, be overweight or obese, unable to work, inactive, and report frequent mental distress and dissatisfaction with life.
- **Trends**: Arthritis trends could not be measured because only 2003 and 2005 BRFSS results were available using this definition.
- **Other**: CJP and arthritis differed in their associations with age group (Figure 2); CJP was much more prevalent than diagnosed arthritis among younger Wyoming adults.
- One third of Wyoming older adults (33.6%) reported limitation in activities due to arthritis or CJP.
- **Comparison with other states**: Among the 50 states and D.C., arthritis rates among older adults ranged from 42.8% in Hawaii to 60.4% in Michigan, with Wyoming (51.1%) better than the median rate of 53.5%.

Figure 1.

Arthritis by Risk Factors, WY BRFSS 2005
Adults Age 60+

Obesity: 61.5
No exercise: 58.9
Overweight: 50.5
HBP: 57.7
3+ CVD risk Factors*: 58.3
All older adults: 51.1

Percent

* Current smoking, HBP, high cholesterol, diabetes, physical inactivity, overweight

Figure 2.

Arthritis and Chronic Joint Pain by Age Group,
WY BRFSS 2005

Percent

18-29: Arthritis 5.7, CJP 17.2
30-39: Arthritis 15.4, CJP 28.0
40-49: Arthritis 24.7, CJP 34.5
50-59: Arthritis 36.6, CJP 47.1
60-69: Arthritis 48.1, CJP 50.0
70+: Arthritis 54.0, CJP 47.8

■ Arthritis ■ CJP

2. High Blood Pressure

Measure: Respondents in 2005 who reported they had ever been told by a doctor, nurse or other health professional that they had high blood pressure (HBP) were considered to have HBP, although normally a diagnosis is made only after two or more elevated readings.

Key Findings:

- Nearly half of all Wyoming older adults (49.1%), representing an estimated 43,000 persons, reported they had been told they had high blood pressure.
- **Subgroups:** HBP among Wyoming adults age 60+ was less prevalent among those with higher household incomes (37.6% for $75,000 or more), employed persons (39.0%), and those age 60-69 (44.7% vs. 53.3% for those age 70+). HBP was not associated with any other demographic groups among older adults in Wyoming.
- **Risk factors, potential for behavior modification:** Risk factors for HBP include overweight (and obesity) and heavy drinking, while exercise and smoking cessation can be beneficial in lowering blood pressure. HBP itself is one of the six major modifiable risk factors for cardiovascular disease. High blood pressure rates were significantly higher among Wyoming older adults who were obese (62.1%), those not engaging in any leisure time physical activity (57.2%), those who already had CVD (66.0%), and those reporting a total of 3 or more CVD risk factors (HBP plus at least 2 others: 78.3%) (Figure 3). High blood pressure was not significantly associated with heavy drinking among Wyoming older adults in 2005.
- **Associations:** Older adults with HBP were more likely than older adults without HBP to be disabled, report fair or poor health, be overweight or obese, unable to work, inactive, and report dissatisfaction with life.
- **Trends**: High blood pressure among older Wyoming adults appears to have increased between 1995 and 2005 (Figure 4).
- **Other**: Over 90% of older adults with HBP, or 45.7% of all Wyoming older adults, reported taking medication for their high blood pressure.
- **Comparison with other states**: Among the 50 states and D.C., HBP rates among older adults ranged from 45.7% in Alaska to 61.2% in D.C., with Wyoming at 49.1% better than the median rate of 52.5%.
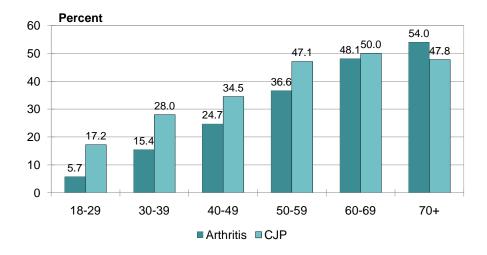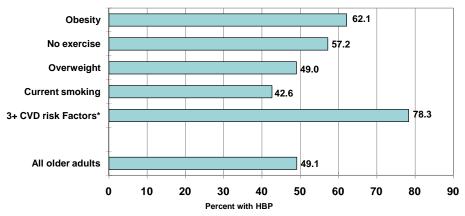
Figure 3.

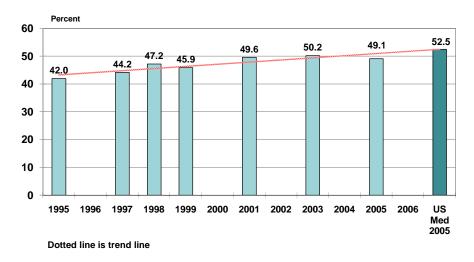**High Blood Pressure by Risk Factors, WY BRFSS 2005**
Adults Age 60+

* Current smoking, HBP, high cholesterol, diabetes, physical inactivity, overweight/obese; note that HBP is one of the 3 in the "3 or more". Current smoking was not significantly associated with HBP.

Figure 4.

High Blood Pressure, Adults Age 60+
by Year, WY BRFSS

Dotted line is trend line

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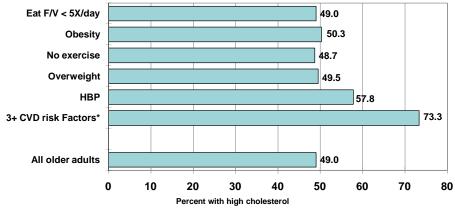
3. High Cholesterol

Measure: Respondents in 2005 who reported they had been told by a doctor, nurse or other health professional that their blood cholesterol was high were considered to have high cholesterol. This is reported as a percentage of all adults, not just those tested. In 2005, 94.7% of all Wyoming older adults had had their cholesterol checked.

Key Findings:

- Nearly half of all Wyoming older adults (49.0%), representing an estimated 43,000 persons, reported being told they had high cholesterol.
- **Subgroups:** High cholesterol did not significantly differ among any older adult demographic groups in Wyoming (i.e. rates were similar by gender, age, race, income, education, marital status, region, and employment status).
- **Risk factors, potential for behavior modification:** Risk factors for high cholesterol include overweight (and obesity), poor diet (measured on the BRFSS as inadequate fruit and vegetable consumption) and physical inactivity. High cholesterol is one of the six major modifiable risk factors for CVD. Only older adults with HBP (57.8%) or 3 or more CVD risk factors (73.3%) were significantly more likely to report high cholesterol levels (Figure 5).
- **Associations:** Older adults with high cholesterol were more likely than other older adults to report fair or poor health and dissatisfaction with life, but were not more likely to report other measures of poor health status such as disability, being out of work, or frequent mental distress.
- **Trends**: High blood cholesterol rates among older Wyoming adults have increased from 34.1% in 1995 to 49.0% in 2005, although some of that increase may reflect increased rates of testing (Figure 6).
- **Other**: Over one fourth (28.2%) of all older Wyoming adults reported both HBP and high cholesterol.
- **Comparison with other states**: In 2005, among the 50 states and D.C., high cholesterol among older adults ranged from 38.9% in Louisiana to 54.0% in Michigan, with Wyoming at 49.0% very near the median rate of 48.9%.

Figure 5.

High Cholesterol by Risk Factors, WY BRFSS 2005
Adults Age 60+

	Percent with high cholesterol
Eat F/V < 5X/day	49.0
Obesity	50.3
No exercise	48.7
Overweight	49.5
HBP	57.8
3+ CVD risk Factors*	73.3
All older adults	49.0

* Current smoking, HBP, high cholesterol, diabetes, physical inactivity, overweight/obese; note that high cholesterol is one of the 3 in the "3 or more". Only 3+ CVD risks and HBP were significantly associated with high cholesterol.

Figure 6.

High Cholesterol, Adults Age 60+
by Year, WY BRFSS

Percent

1995	1997	1998	1999	2001	2003	2005	US Med 2005
34.1	37.3	35.4	39.7	40.2	46.7	49.0	48.9

Dotted line is trend line

9
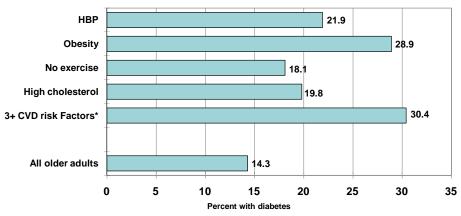
4. Diabetes

> Measure: Respondents in 2005 and 2006 were asked if they had ever been told by a doctor that they had diabetes. Women who had only been told they had diabetes during pregnancy were not included as having had diabetes, nor were persons who reported borderline or pre-diabetes. No distinction was made between other types of diabetes.

Key Findings:

- Among older Wyoming adult respondents, 14.3% reported diabetes, representing an estimated 12,500 older adults.
- **Subgroups:** Diabetes rates were significantly higher among older adult men (16.0%), Hispanics (25%), those with less than a high school education (23.2%), not working (26%), and those with income less than $25,000 (19.4% vs. 8.5% for $75,000 or more).
- **Risk factors, potential for behavior modification:** Diabetes risk factors include overweight or obesity, physical inactivity, high blood pressure and high cholesterol, which are four of the six major CVD risk factors. Older adults who reported these risk factors either singly or in combination were significantly more likely to report diabetes (Figure 7).
- **Associations:** Wyoming older adults with diabetes were more likely than those without diabetes to report fair or poor health, disability, being unable to work, frequent mental distress and dissatisfaction with life.
- **Trends**: Diabetes rates among older Wyoming adults have steadily increased between 1995 through 2006 (Figure 8).
- **Other**: In addition to persons with diabetes, 1.6% of older Wyoming adults, or an estimated 1,400 persons, reported borderline or pre-diabetes.
- **Comparison with other states**: In 2006, Wyoming had the lowest rate of diabetes among older adults of the 50 states and D.C., with a rate of 13.2%. Rates ranged from this rate of 13.2% to a high of 23.3% in West Virginia, with a median rate of 17.3%.

Figure 7.
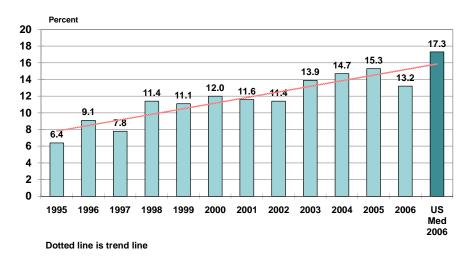
Diabetes by Risk Factors, WY BRFSS 2005-2006

Adults Age 60+

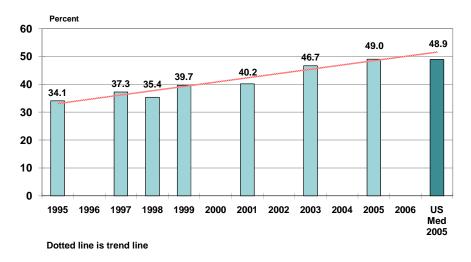|	Percent with diabetes
HBP	21.9
Obesity	28.9
No exercise	18.1
High cholesterol	19.8
3+ CVD risk Factors*	30.4
All older adults	14.3

* Current smoking, HBP, high cholesterol, diabetes, physical inactivity, overweight; note that diabetes is one of the 3 in the "3+".

Figure 8.

Diabetes, Adults Age 60+
by Year, WY BRFSS

Percent

Year	Value
1995	6.4
1996	9.1
1997	7.8
1998	11.4
1999	11.1
2000	12.0
2001	11.6
2002	11.4
2003	13.9
2004	14.7
2005	15.3
2006	13.2
US Med 2006	17.3

Dotted line is trend line

11

5. Asthma

Measure: Respondents in 2005 and 2006 were asked if they had ever been told by a doctor or other health professional that they had asthma, and if so, did they still have asthma. Only current asthma was included in this measure.

Key Findings:

- Approximately 7,500 older Wyoming adults, or 8.6%, reported asthma in 2005 and 2006. Wyoming asthma rates were not significantly associated with age in 2005 and 2006. The rate among older adults was similar to the rate for all adults of 8.3%.
- **Subgroups:** Asthma rates were significantly higher among older adults with less than a high school education (14.0%), those with income less than $25,000 (11.4%) and those living in the Southeast region (10.0%).
- **Risk factors, potential for behavior modification:** Asthma risk factors include overweight or obesity, smoking, and exposure to environmental tobacco smoke. In Wyoming, older adults who were obese, those who ever smoked, and those exposed to environmental tobacco smoke were more likely to have asthma (this latter not statistically significant likely due to small numbers) (Figure 9).
- **Associations:** Wyoming older adults with asthma were more likely than those without asthma to report fair or poor health, disability, being unable to work, frequent mental distress, and dissatisfaction with life.
- **Trends**: Asthma rates among older Wyoming adults appear to have increased between 1999 and 2006 (Figure 10).
- **Comparison with other states**: In 2006, Wyoming had the highest rate of asthma among older adults of the 50 states and D.C., with a rate of 9.8%. Rates ranged from a low of 5.8% in Louisiana to this rate of 9.8%, with a median rate of 8.0%.

Figure 9.

Asthma by Risk Factors, WY BRFSS 2005-2006
Adults Age 60+

Current smoking, overweight, and exposure to ETS were not significantly associated with asthma.

Figure 10.

Current Asthma, Adults Age 60+
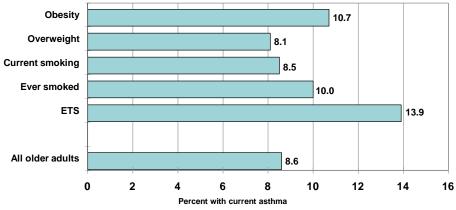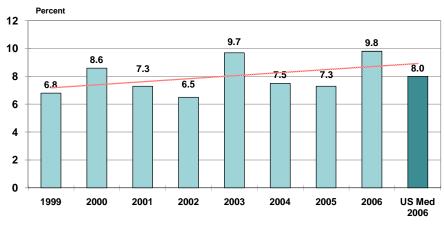## by Year, WY BRFSS

Dotted line is trend line
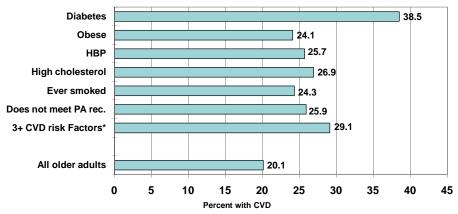
6. Cardiovascular Disease

> Measure: Respondents in 2005 and 2006 were asked if they had ever been told by a doctor or other health professional that they had 1) a heart attack, also called a myocardial infarction, 2) angina or coronary heart disease, or 3) a stroke. The first two are considered heart disease, while persons reporting any of the three are considered to have cardiovascular disease (CVD).

Key Findings:

- One in every five (20.1%) older Wyoming adults, or an estimated 17,600, reported some form of cardiovascular disease in 2005 and 2006. This includes 16.7% who reported heart disease and 5.5% who had had a stroke.
- **Subgroups:** CVD rates were significantly higher among older men (23.9%), persons age 70+ (24.9%), those with less than a high school education (31.1%), those with income less than $25,000 (26.8%), those not working (40.8%), and the unmarried (23.2%). Patterns for heart disease, which comprises most CVD, were similar, as were those for stroke except that rates for stroke were similar for older men and women.
- **Risk factors, potential for behavior modification:** Major modifiable risk factors for CVD include overweight or obesity, smoking, high blood pressure, high cholesterol, diabetes, and physical inactivity (measured as those not meeting recommendations). In Wyoming, older adults who were obese, had ever smoked, had HBP, high cholesterol, diabetes, or were physically inactive, or reported three or more CVD risk factors were more likely to report some form of CVD (Figure 11).
- **Associations:** Wyoming older adults with some form of CVD were more likely than those without CVD to report fair or poor health, disability, being unable to work, frequent mental distress, and dissatisfaction with life.
- **Trends**: CVD rates among older Wyoming adults show a slight upward trend from 1996 to 2006 (Figure 12). Heart disease and stroke rates show similar trends.
- **Comparison with other states**: In 2006, CVD rates among older adults in the 50 states and D.C., ranged from 18.2% in Hawaii to 32.8% in West Virginia, with a median rate of 23.3%. Wyoming's rate of 20.1% was much better than the median. Similar results were seen for heart disease and stroke.

Figure 11.

CVD by Risk Factors, WY BRFSS 2005-2006
Adults Age 60+
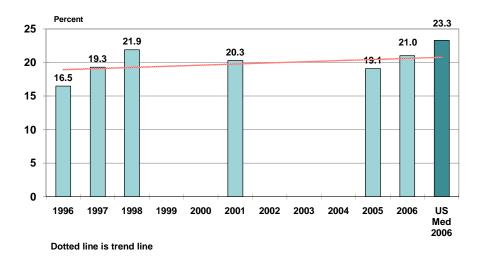
* Current smoking, HBP, high cholesterol, diabetes, physical inactivity, overweight; Overweight (which includes obese) and current smoking were not significantly associated with CVD.

Figure 12.

Any Cardiovascular Disease, Adults Age 60+
by Year, WY BRFSS

Dotted line is trend line
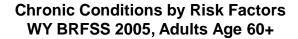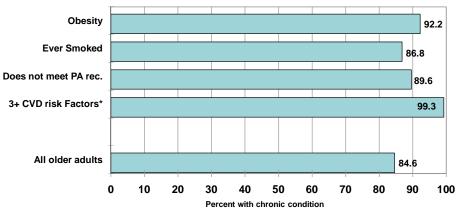
7. Any Chronic Disease/Condition

Measure: Respondents in 2005 who reported any of the health conditions above (arthritis, high blood pressure, high cholesterol, diabetes, asthma, or cardiovascular disease (heart disease or stroke)) were included in this measure.

Key Findings:

- At least one of the six chronic conditions was reported by 84.6% of older adults, representing an estimated 74,000 Wyoming older adults. Nearly six in ten older adults (59.1%) reported two or more of the conditions, 31.6% had three or more, and 10.6% reported four or more.
- **Subgroups:** Rates for this measure were significantly higher among persons age 70+ (87.4%) and those not working (95.8%).
- **Risk factors, potential for behavior modification:** Modifiable risk factors for chronic diseases include all the CVD risk factors (overweight or obesity, smoking, high blood pressure, high cholesterol, diabetes, and physical inactivity) plus poor diet and exposure to environmental tobacco smoke. In Wyoming, older adults who were obese (92.2%), had ever smoked (86.8%), were physically inactive (89.6%), or reported three or more CVD risk factors (99.3%) were more likely to report a chronic condition (Figure 13). Note that the CVD risk factors include three of the chronic conditions incorporated in the measure.
- **Associations:** Among Wyoming older adults, there were associations between the *number* of chronic conditions reported and reporting fair or poor health, disability, frequent mental distress (Figure 14), not working, and dissatisfaction with life.
- **Trends**: Trends could not be measured because different chronic conditions and/or different definitions have been used over the years.
- **Comparison with other states**: In 2005, rates of reporting any chronic condition among older adults in the 50 states and D.C., ranged from 82.1% in Hawaii to 89.6% in Michigan, with a median rate of 86.0%. Wyoming's rate of 84.6% was better than the median.

Figure 13.
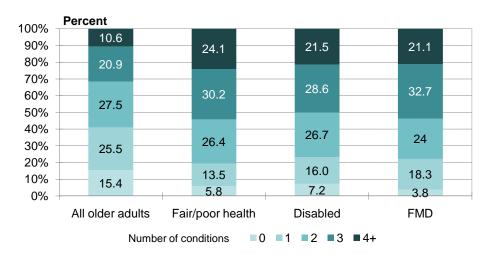
Chronic Conditions by Risk Factors
WY BRFSS 2005, Adults Age 60+

Obesity	92.2
Ever Smoked	86.8
Does not meet PA rec.	89.6
3+ CVD risk Factors*	99.3
All older adults	84.6

Percent with chronic condition

* Current smoking, HBP, high cholesterol, diabetes, physical inactivity, overweight; note that diabetes, HBP and high cholesterol are chronic conditions that each count as one of the CVD risk factors.

Figure 14.

Number of Chronic Conditions and Health,
Adults Age 60+, WY BRFSS 2005

Number of conditions	All older adults	Fair/poor health	Disabled	FMD
4+	10.6	24.1	21.5	21.1
3	20.9	30.2	28.6	32.7
2	27.5	26.4	26.7	24
1	25.5	13.5	16.0	18.3
0	15.4	5.8	7.2	3.8

Number of conditions ☐ 0 ☐ 1 ☐ 2 ☐ 3 ■ 4+

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8. Prostate Cancer (2006)

> Measure: In 2006, male respondents age 40 and older were asked if they had ever been told by a doctor or other health professional that they had prostate cancer.

Key Findings:

- About one in every 11 (8.8%) older men reported prostate cancer, representing an estimated 3,600 older Wyoming men.
- **Subgroups:** Prostate cancer rates were about three times higher among men 70 and older compared with Wyoming men aged 60-69 (13.6% vs. 4.3%). There was no significant variation in prostate cancer rates among other demographic subgroups.
- **Risk factors, potential for behavior modification:** The strongest risk factor for prostate cancer is age. The role of modifiable risk factors such as obesity, poor diet, and lack of exercise in the development or worsening of prostate cancer is unclear.
- **Associations:** Wyoming older men with prostate cancer were no more likely than other older men to be disabled, in fair or poor health, or report frequent mental distress.
- **Trends**: Prostate cancer rates appear to be constant between 2001 and 2006. Data from 2000 are excluded as only 9 older Wyoming men reported prostate cancer on that survey.
- **Other**: Although no major medical associations support routine testing for prostate cancer at this time, either the prostate-specific antigen (PSA) test or digital rectal exam (DRE) may detect the disease at an early stage. Several medical groups recommend that health professionals offer these tests to men age 50 and older and/or discuss the pros and cons with them. Nearly 90% of older Wyoming men reported having these tests, and over half reported each test within the past 2 years. Rates for testing were much higher among older men who had a regular doctor (Figure 15). Trends in testing do not show any consistent upward or downward pattern between 2001 and 2006 (Figure 16).
- **Comparison with other states**: In 2006, prostate cancer rates among older adults in the 50 states and D.C., ranged from 6.2% in Alaska to 11.8% in Utah, with a median rate of 9.6%. Wyoming's rate of 8.8% was better than the median. Compared with older men in other states, Wyoming men were much more likely to have PSA testing, but less likely to have had a digital rectal exam.

Figure 15.

Prostate Cancer Screening, WY BRFSS 2005
Men Age 60+

Category	Have MD	No MD	All men 60+
DRE 2yr	64	36	60
DRE ever	91	68	87
PSA 2yr	84	56	80
PSA ever	92	69	89

Percent
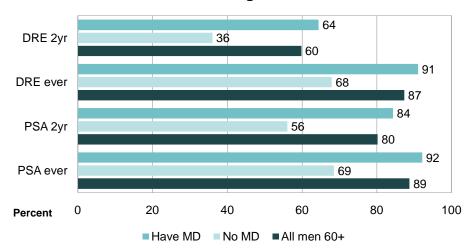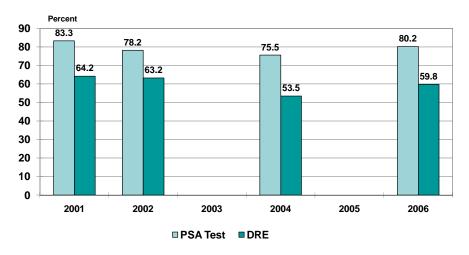
Figure 16.

Prostate Exam in 2 Years, Men Age 60+
by Year, WY BRFSS

Year	PSA Test	DRE
2001	83.3	64.2
2002	78.2	63.2
2004	75.5	53.5
2006	80.2	59.8

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9. Associations and comparisons

Many of the conditions affecting older adults were associated; that is, they tended to occur together in the same person. Table 2 illustrates these associations among the conditions that were addressed in 2005, with those that were significantly more likely to occur together indicated by shading. Note that each condition was associated with at least one of the other five, and that CVD was strongly associated with the three recognized CVD risk factors which are also being considered conditions. Such information can be useful in planning programs that address multiple health issues.

Table 2
Associations between Conditions among Older Adults (Age 60+)

Of those in this risk group:	Prevalence of this condition					
	Arthritis	HBP	High Chol. As % of all	Diabetes	CVD	Asthma
All older adults	51.1	49.1	49.0	14.3	20.1	8.6
Arthritis						
Yes		55.3	51.6	17.0	20.7	9.8
No		42.6	46.3	13.7	17.7	4.9
High Blood Pressure						
(HBP) Yes	57.7		57.8	21.9	25.7	8.2
No	44.9		40.5	9.0	12.7	6.4
High cholesterol						
Yes	54.1	57.7		19.8	26.9	6.2
No	48.8	40.4		10.4	11.9	8.3
Diabetes						
Yes	57.7	70.0	64.5		38.5	9.9
No	50.3	45.2	46.2		17.1	8.4
CVD						
Yes	55.0	66.0	68.0	27.2		9.8
No	50.1	44.8	43.8	10.9		8.4
Asthma						
Yes	67.6	54.9	41.9	16.5	22.7	
No	49.7	48.4	49.5	14.1	19.8	

Guide to reading table: Select a condition from the left hand column and compare those with the condition (yes), to those without the condition (no). Example: 55.3% of older adults with arthritis had high blood pressure, compared with 42.6% of those who did not have arthritis. Conditions that were associated (p<0.05) are indicated by shading.

Conditions addressed in 2005 are compared on a number of common health measures in Table 3.

Table 3

Conditions Measured in 2005 Compared
Wyoming Adults Age 60+
(Data from 2005 and 2006 included)

Wyoming older adults with >>>>	Arthritis	HBP	High cholesterol	Diabetes	CVD	Asthma	Any CD*	All age 60+
Percent reporting measures below	n=801	n=773	n=739	n=442	n=599	n=270	n=1,303	n=3,131
Measure	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Disabled	40.4	33.9	30.5	49	49.8	56	31.9	31.3
Fair or poor health	30.9	30.8	28.6	47	47.7	42	27.3	23.8
Obesity	29.0	30.4	24.5	45	27.1	29	25.9	22.6
No leisure time physical activity	35.7	36.4	30.1	40	40.5	38	33.1	31.2
Cigarette smoking	11.1	11	11.2	8	13.2	11	12.1	11.4
Ever smoked	59.6	58.8	59.4	59	66.9	65	59.8	55.6
Frequent mental distress	9.4	7.8	6.8	12	10.9	11	7.7	6.1
Physical health not good 8+ days past month	29.2	25.9	24	37	37.6	38	23.3	19.9
Activities limited 8+ days per month	16.2	13.6	13	21	21.9	20	12.6	10.8
Unable to work	5.0	4.6	3.9	8	9.0	7	4.2	3.8
Dissatisfied with life	4.6	4.4	4.1	5	4.7	6	3.6	3.2
Limited emotional support	8.2	8.2	7.1	11	10.9	10	7.4	8.5

Shading indicates P value <0.05 (blue indicates that value is better than for those without the condition)
In each case, persons with the condition were compared with those without the condition.
    *Any of the 6 conditions measured in 2005.

C. Related Issues

1. Disability

> Measure: Respondents in 2005 and 2006 who indicated they were limited in any way in any activities because of physical, mental, or emotional problems were considered disabled. Results exclude persons whose disability precluded survey participation (e.g. hearing loss, cognitive impairment).

Key Findings:

- About three in ten older Wyoming adults (31.3%) reported a limitation in activity because of physical, mental or emotional problems. This represents an estimated 27,000 older Wyoming adults.
- **Subgroups:** Subgroups of Wyoming adults age 60 and older with higher rates of disability include: those not working (76.3%), those with household income less than $25,000 (41.7%), unmarried persons (37.1%), and persons age 70+ (34.2%). Lowest disability rates were among the employed (19.9%).
- **Risk factors:** Disability could result from a range of causes with a wide variety of risk factors. These data indicate that disability rates were significantly higher among older adults who were obese (43.8%), inactive (46.6%), reported 3 or more CVD risk factors (37.8%), and had ever smoked (35.0%).
- **Associations:** Disability was strongly associated with the first six conditions addressed in the previous section (but not prostate cancer), and with the number of those conditions reported (Figure 17).
- **Trends**: Disability among older Wyoming adults appears to have increased between 2001 and 2006 (Figure 18).
- **Other**: Disability was strongly associated with increasing age, increasing from 9.1% for 18-24 year olds to 34.2% for adults age 70 and older.
- Wyoming disability rates for older adults were significantly different for 2005 (29.1%) and 2006 (33.5%).
- **Comparison with other states**: In 2006, for the 50 states and D.C., disability rates among older adults ranged from 22.0% in Hawaii to 39.1% in Michigan. The Wyoming rate of 33.5% was somewhat worse than the median rate of 31.4%.

Figure 17.

**Number of Chronic Conditions and Disability
Adults Age 60+, WY BRFSS 2005**

% disabled

Number of conditions	% disabled
0	13.5
1	18.4
2	28.4
3	39.4
4+	58.4

Number of conditions
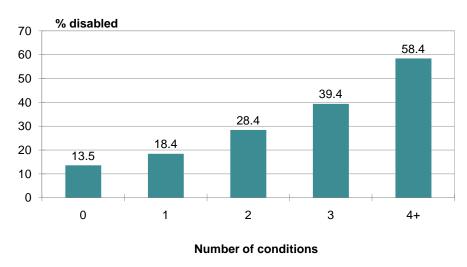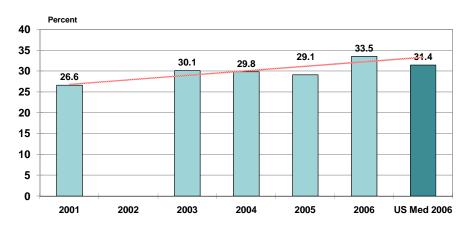
Figure 18.

**Disability, Adults Age 60+
by Year, WY BRFSS**

Percent

Year	Percent
2001	26.6
2002	
2003	30.1
2004	29.8
2005	29.1
2006	33.5
US Med 2006	31.4

Dotted line is trend line

2. Falls

Measure: In 2006, respondents age 45 and older were asked how many falls they had in the past 3 months. A fall was defined as when a person unintentionally comes to rest on the ground or another lower level. Persons who reported a fall were asked how many caused an injury, which was defined as causing you to limit your regular activities for at least a day or to go see a doctor.

Key Findings:

- Nearly one in five (18.8%) older Wyoming adults reported a recent fall, representing an estimated 16,000 older adults and an estimated 30,800 total falls. One fourth (25%) of all falls among these older adults resulted in an injury, representing an estimated 7,800 fall-related injuries.
- **Subgroups:** For Wyoming adults age 60 and older, high rates of falls were found in those not working (34%) (including those unable to work (39%)), those with household income less than $25,000 (25.0%), and those with incomes of $75,000 and above (24.6%). Lowest rates were among the middle income groups (12.3-12.7%). Fall rates were consistent across age groups among adults age 45 and older.
- **Risk factors:** Higher rates of falls were reported by older adults who were obese (23.9%), inactive (23.9%) and those who have cardiovascular disease (26.3%), asthma (27.8%), and diabetes (25.9%).
- **Associations:** The most striking associations with recent falls were with mental health indicators. Older adults who reported dissatisfaction with life and frequent mental distress had the highest rates of falls (45% and 35% respectively). Rates of recent falls were also high among older adults reporting fair or poor general health (26.8%) or disability (26.0%) (Figure 19).
- **Trends**: Data on falls were only collected in 2003 and 2006, which do not provide enough data points to determine trends.
- **Other**: The mean number of falls was 0.35 among all older adults (which includes persons with zero falls), and was highest among those with frequent mental distress (1.2), followed by those unable to work (0.9), those who had a stroke (0.9), those reporting any depression (0.8), those in fair or poor health (0.7) and those with household incomes less than $25,000 (0.6). Rates of injury among older adults who had a fall were also highest among those with frequent mental distress (44%), those unable to work (58%), the disabled (34%), the obese (34%) and those in fair or poor health (35%) (Figure 19).
- **Comparison with other states**: In 2006, for the 50 states and D.C., rates of recent falls among older adults ranged from 12.0% in Hawaii to 20.3% in Idaho, with a median of 15.8%. The Wyoming rate of 18.8% was the fourth highest (4th worst) among the 51 participants (Figure 20).

Figure 19.

Falls and Fall Injuries and Associated Factors
Adults Age 60+, WY BRFSS 2005

Percent

Category	Falls	Falls resulting in injury (as % of all falls)
Unable to work	39	58
Dissat w/life	45	41
FMD	35	44
Fair/poor health	27	35
Disabled	26	34
Obese	24	34
All age60+	18.8	25

■ Falls   ■ Falls resulting in injury (as % of all falls)
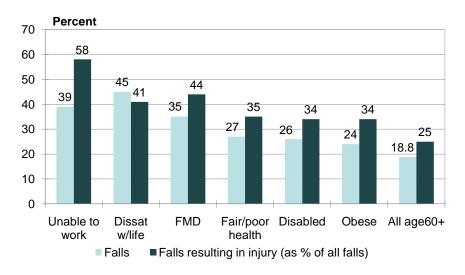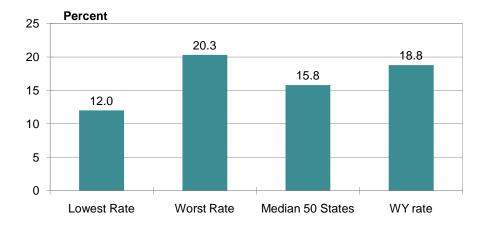
Figure 20.

Falls Among Adults Age 60+ Compared
2006 BRFSS

Percent

	Percent
Lowest Rate	12.0
Worst Rate	20.3
Median 50 States	15.8
WY rate	18.8
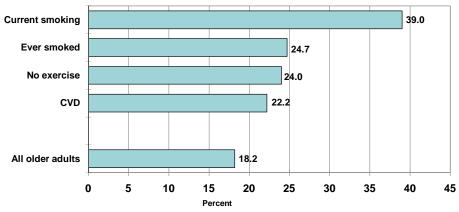
3. Missing Teeth

Measure: In 2006, respondents were asked how many permanent teeth had been removed because of tooth decay or gum disease. The measure used here is persons who reported that all of their teeth were removed.

Key Findings:

- Nearly one in five (18.2%) older Wyoming adults reported that all their teeth had been removed, representing an estimated nearly16,000 older adults.
- **Subgroups:** Older Wyoming adults with higher rates of tooth loss include persons with less than a high school education (34.1%), those with household income less than $25,000 (28.1%), unmarried persons (23.8%) and persons age 70+ (21.3%). Lowest rates were among those with household income of $75,000 or more (3.9%).
- **Risk factors:** For potential risk factors, highest rates of tooth loss were found among older adults who currently smoked (39.2%), those who ever smoked (24.7%), those who didn't exercise (24.0%), and persons reporting CVD (22.2%) (Figure 21).
- **Associations:** Rates of reported tooth loss were high among older Wyoming adults who reported fair or poor health (27.7%), disability (22.6%), and dissatisfaction with life (26.3%).
- **Trends**: The percent of older Wyoming adults with all their teeth removed has been decreasing (improving) since 1995 (Figure 22).
- **Comparison with other states**: In 2006, rates of reporting all teeth had been removed varied greatly among older adults in the 50 states and D.C.. Rates ranged from 8.4% in Hawaii to 36.1% in West Virginia, with the Wyoming rate of 18.2% worse than the median of 16.9%.

Figure 21.

Tooth Loss* by Risk Factors, WY BRFSS 2006
Adults Age 60+
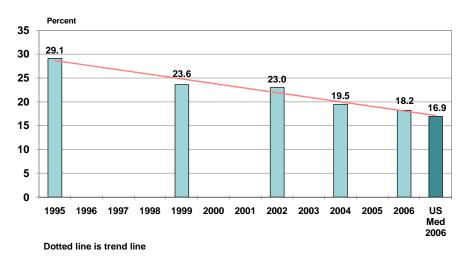
•All teeth were removed because of tooth decay or gum disease.

Figure 22.

Lost All Natural Teeth, Adults Age 60+
by Year, WY BRFSS

Dotted line is trend line

4.   Physical and mental health

Measure: Four measures were used: 1) general health status (fair or poor compared with excellent/very good/good); 2) frequent mental distress (FMD): 14 or more days of poor mental health in past 30 days; 3) dissatisfied/very dissatisfied with life (compared with satisfied/very satisfied); 4) rarely/never get social or emotional support you need (compared with always/usually/sometimes).

Key Findings:

- In general, compared with Wyoming adults age 18-59 years, older adults were more likely to report fair or poor general health and not getting the emotional support they needed, but were *less* likely to report FMD and dissatisfaction with life (Figure 23).
- **Subgroups:** Older Wyoming adults with higher rates for each of the measures were similar and will be reported for fair/poor general health and FMD only (in that order). These include those with less than a high school education (45.7% and 9.3%), current smoking (32.8% and 12.8%), 3+ CVD risk factors (35.5% and 9.7%), obesity (32.7% and 10.2%), and CVD (47.7% and 10.9%). These rates compare with rates of 23.8% and 6.1% respectively for all older adults. In addition, FMD was high among Hispanics (13.3%) and those with fair or poor health (15.6%) and fair or poor health was high among those with FMD (59.6%) (Figure 24).
- **Associations:** As noted above, the measures were associated with each other and they were also associated with disability.
- **Trends**: Trends in fair or poor health status among older Wyoming adults have been fairly constant since 1994 although there may be a slight downward trend. For FMD, the trend since 1994 appears to be increasing.
- **Comparison with other states**: In 2006, for the 50 states and D.C., rates of fair or poor health among older adults ranged from 19.1% in Colorado to 41.7% in Mississippi, with a median of 24.7%. Rates for FMD ranged from 4.1% in North Dakota to 11.1% in Alaska, with a median of 6.7%. For both measures, the Wyoming rate was better than the median, at 23.1% for fair or poor health and 5.5% for FMD.

Figure 23.

**Physical and Mental Health Measures
by Age Group, WY BRFSS 2005-2006**

Percent

☐F/P health ■FMD ☐Dissat w/life ■Rare emotional support
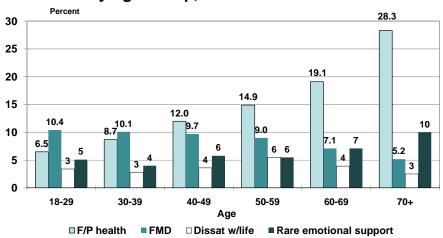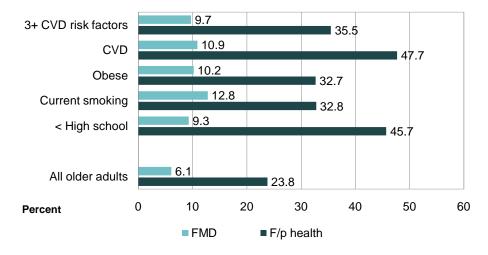
Figure 24.

**Fair/poor Health and FMD
WY BRFSS 2005-2006, Adults Age 60+**

Percent

■FMD ■F/p health

29

5.   Anxiety and depression (2006)

Measure: In 2006, Wyoming was among 34 states that included a module on anxiety and depression. Respondents were asked if they had ever been diagnosed with an anxiety disorder or with depression, and were also asked a series of questions to measure depression level. Measures used here include ever diagnosed with anxiety, ever diagnosed with depression, and any degree of current depression.

Key Findings:

- In general, older Wyoming adults were less likely to report each of the three anxiety and depression measures than were younger adults. Prevalence rates among older adults were 8.3% for diagnosed anxiety disorder, 15.2% for diagnosed depression, and 16.7% for any current depression (Figure 25).
- **Subgroups**: Because a previous diagnosis of anxiety or depression may not affect current quality of life, only current depression will be addressed here. Subgroups of older Wyoming adults who were more likely to have any level of current depression included women (18.6%), Hispanics (34%), those with less than a high school education (22.6%), income less than $25,000 (25.6%), those not working (37.7%), and unmarried persons (21.9%).
- **Risk factors:** Among the older Wyoming adults who were significantly more likely to report current depression were current smokers (26.0%), the obese (24.6%), the inactive (24.4%), and those with cardiovascular disease (24.8%) (Figure 26).
- **Associations:** There were very strong associations between this 2006 measure of any current depression and other measures of physical and mental health measured on the BRFSS. Notably high rates of current depression were reported by older adults who also reported dissatisfaction with life (86.3%) and FMD (69.0%). High rates of current depression were also reported by older adults in fair or poor health (37.4%) or those who were disabled (28.7%).
- **Trends**: Trends could not be measured as these measures were only asked in 2006.
- **Comparison with other states**: Among older adults in the 34 states that included the anxiety and depression questions, rates of diagnosed anxiety ranged from 6.6% in Hawaii to 11.9% in West Virginia, with a median of 8.8%. Rates for diagnosed depression ranged from 6.3% in Hawaii to 16.3% in Oregon, with a median of 13.0% and current depression ranged from 14.5% in Delaware to 26.6% in West Virginia, with a median of 19.3%. Wyoming's rates were better than the median for diagnosed anxiety and current depression and worse than the median for diagnosed depression.

Figure 25.

**Anxiety and Depression Measures
by Age Group, WY BRFSS 2006**

Percent

	Anxiety ever	Depression ever	Current depression
Age 18-59	11.2	19.1	24.0
Age 60+	8.3	15.2	16.7

□ Age 18-59 ■ Age 60+
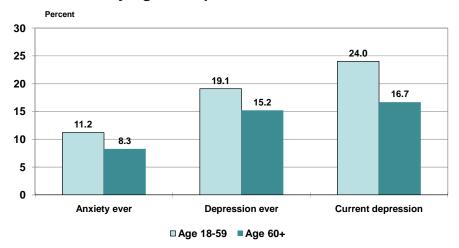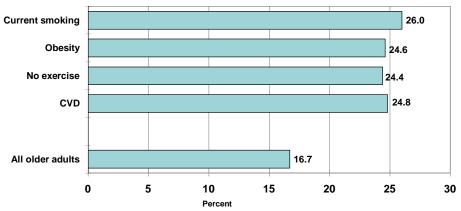
Figure 26.

**Current Depression* by Risk Factors
WY BRFSS 2006, Adults Age 60+**

	Percent
Current smoking	26.0
Obesity	24.6
No exercise	24.4
CVD	24.8
All older adults	16.7

* Persons who scored 5 (for mild depression) or above on a scale of 0-24 based on a series of questions measuring depression severity.

6. Caregiving (2006)

Measure: In 2006, Wyoming included state added questions about providing care or assistance to a family member or friend age 60 or older, or to someone with dementia or Alzheimer's disease. Results are presented for adults of all ages who provided care to an older adult.

Key Findings:

- One in every four adults (26.0%) in Wyoming, or an estimated 102,000 adults, provided regular care or assistance to an adult age 60 or older. That is more than the 87,563 adults age 60 and older in Wyoming, indicating that some older adults received assistance from more than one adult. One fifth of those who provided such care (5.3% of all adults) indicated they provided care for someone with dementia or Alzheimer's disease. This latter group represents an estimated 20,900 Wyoming adults providing care to an older adult with Alzheimer's disease or dementia.
- **Subgroups**: Demographic subgroups who were significantly more likely to report giving care to an elder include women (28.0%), 45-54 year olds (30.4%), the out of work (37.6%), married persons (27.3%), those living in counties with less than 10,000 population (29.0%) and those in the northwest region of the state (29.6%) (Figure 27).
- **Associations:** Adults who were currently depressed (29.8%), disabled (29.7%), or had ever been diagnosed with an anxiety disorder (31.2%) or depression (30.1%) reported significantly higher rates of providing elder care or assistance. Adults who reported a stroke, cardiovascular disease, diabetes or asthma were just as likely as adults without these conditions to be providing elder care. Results were similar for adults providing care to an elder with dementia.
- **Trends**: Caregiving has been measured on the Wyoming BRFSS in 2000, 2004 and 2006 and shows a clear upward trend over that time period, nearly doubling from 13.9% in 2000 to the 2006 rate of 26.0% (Figure 28).
- **Comparison with other states**: No comparison could be made with other states because this was a state specific question.

Figure 27.

Caregiving to Persons Age 60+, WY BRFSS 2006
All Adults Age 18+

	Percent
Out of work	37.6
Women	28.0
Ages 45-54	30.4
Counties < 10K	29.0
Married	27.3
All adults	26.0
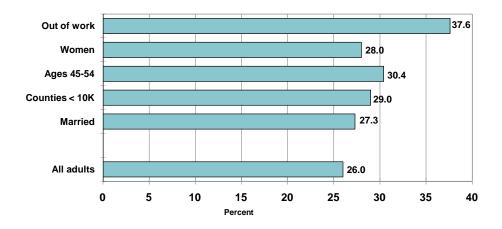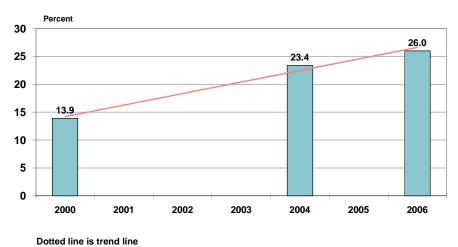
Figure 28.

Provide Care to Person Age 60+, Adults Age 18+
by Year, WY BRFSS

Percent

2000	2004	2006
13.9	23.4	26.0

Dotted line is trend line

33

D. Risk Factors/Health Promotion

As is the case with many conditions that develop over time, there are modifiable risk factors associated with most of the conditions addressed in this report. Reducing the prevalence of the risk factors may help prevent the development of these conditions among older adults. In addition, once the condition has developed, there are behavior modifications that have been shown to be beneficial in reducing negative consequences of the condition, improving quality of life, or reducing the chance of further complication. The conditions and their associated factors are shown in Table 4, with risk factors indicated by "RF". Factors indicated as "B" indicate a benefit might be achieved by modifying behavior to reduce or eliminate the risk factor.

Table 4
Six Conditions and Related Risk Factors

Risk Factor	Arthritis	HBP	High cholesterol	Diabetes	CVD	Asthma
Overweight	RF	RF, B	RF, B	RF, B	RF	RF
Physical inactivity	B	B	RF, B	RF	RF, B	
Smoking		B	B	B	RF	RF, B
Inadequate fruit & vegetable consumption			RF, B	B		
HBP		-------		B	RF	
High cholesterol			------		RF	
Diabetes				------	RF	
Heavy alcohol use		RF				
Environmental tobacco smoke						RF, B

RF=risk factor
B=benefit if behavior is modified so that RF is reduced or no long exists

Prevalence of the risk factors among the older adult population and among those age 18-59 are shown in Table 5. Risk factors that were significantly more prevalent among older adults are shown in blue; those that were significantly less prevalent among older adults are shown in gray.

Table 5
Risk Factors for Age 60+ Compared with Those Age <60
Wyoming BRFSS 2005-2006

	Age 18-59			Age 60+			P value
	Percent	CI	n	Percent	CI	n	
Blue indicates risk is worse among those age 60+; gray shows where risk higher among age <60.							
Overweight status							
Overweight	61.0	59.5-62.4	3,987	63.2	61.3-65.1	1,865	0.067
Obese (BMI ≥30)	24.1	22.9-25.3	1,578	22.6	21.0-24.3	681	0.155
Extreme obese (BMI≥40)	2.6	2.2-3.0	188	1.8	1.3-2.4	53	0.046
Physical Inactivity							
Does not meet recom.	41.0	39.0-43.0	1,419	54.0	51.1-56.9	770	<0.0001
No leisure time activity	19.2	18.1-20.3	1,359	31.2	29.5-33.0	995	<0.0001
Smoking							
Current smoking	24.4	23.1-25.7	1,611	11.4	10.3-12.7	382	<0.0001
Ever smoked	44.8	43.4-46.3	3,103	55.6	53.7-57.5	1,688	<0.0001
Current tobacco use	32.8	31.5-34.2	2,026	14.5	13.2-15.9	453	<0.0001
Eat f/v < 5X/day	79.7	78.1-81.3	2,687	73.0	70.6-75.3	1,077	<0.0001
High blood pressure	15.8	14.5-17.1	595	49.1	46.3-51.8	773	<0.0001
High cholesterol	21.6	20.1-23.1	834	49.0	46.2-51.8	739	<0.0001
Any alcohol use	58.7	57.3-60.1	3,923	44.2	42.3-46.2	1,331	<0.0001
Binge drinking	18.7	17.5-20.0	1,079	4.6	3.8-5.5	124	<0.0001
Heavy drinking	5.5	4.9-6.3	347	3.3	2.7-4.0	103	<0.0001
Drink & drive	3.1	2.5-3.9	106	0.6	0.3-1.1	10	<0.0001
ETS exposure	11.5	10.1-13.0	296	13.3	9.8-17.9	50	0.37
(non-smokers who work indoors)							
CVD risk factors (smoking, HBP, high cholesterol, diabetes, no exercise, overweight)							
3 or more	21.3	19.8-22.8	792	45.7	42.9-48.4	707	<0.0001
Any of the six	82.8	81.2-84.3	2,892	93.9	92.5-95.1	1,436	<0.0001

F. Preventive Health
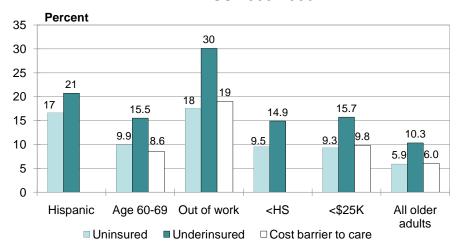
1. Access to Health Care

Measures include lack of health insurance, not having a regular doctor, being unable to see a doctor in the past year due to cost, being underinsured (no insurance or having insurance but being unable to see doctor due to cost), having a check-up within 2 years, and receiving any health care in the past year.

Key Findings:

- Compared with adults younger than age 60, those age 60 and older were significantly less likely to report any of the potential barriers to health care and more likely to report receiving care and/or a check-up. Among older Wyoming adults, 5.9% were uninsured, 11.9% had no regular doctor, 6.0% reported cost prevented them from seeing a doctor, 10.3% were underinsured, 82.2% reported a check-up in 2 years, and 85.5% received some health care in the past year.
- **Subgroups**: Results for the potential barriers to care were fairly consistent, with Hispanics, those of other race/ethnicities, adults age 60-69, the out of work, those with less than a high school education, and those with income less than $25,000 more likely to report the four measures for poor access to care (Figure 29). Women and adults age 70+ were more likely to get any health care and older adults with incomes $75,000 or more were more likely to have had a recent check-up.
- **Associations:** The potential barriers to health care were highly associated with one another and were sometimes better for older adults with chronic conditions. For example, older adults with a chronic condition were usually more likely to have a regular doctor than those without the condition. However, older adults in fair or poor health or with asthma or CVD were more likely to have been unable to see a doctor due to cost. The factors with the largest effect on getting any health care and/or a check-up were having a regular doctor and health insurance, and reporting a health condition or fair or poor health.
- **Trends**: Lack of health insurance and being unable to see a doctor due to cost have been increasing (worsening) since 1994, while not having a regular doctor appears to have improved since 2001. Check-up rates among older adults appear steady since 1994.
- **Comparison with other states**: In 2006, rates for the four measures of poor health access were worse among Wyoming older adults than the U.S. median (Figure 30).

Figure 29.
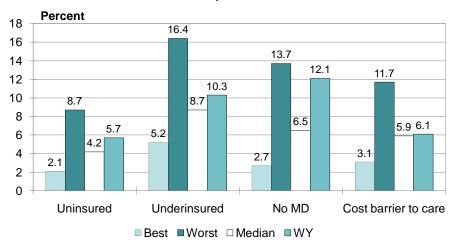
Health Care Access by Subgroup, Adults Age 60+
WY BRFSS 2005-2006

Percent

Data omitted if statistically similar to all older adults

Figure 30.

Health Care Access, Adults Age 60+
BRFSS 2006, 50 States + DC

Percent
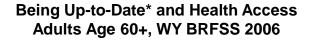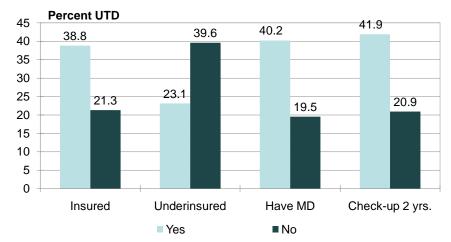
2.   Preventive Health Services

Measures included receipt of a flu shot in past year, ever getting a pneumonia vaccination, colon cancer screening per guidelines, cholesterol test in 5 years, and for older women, mammography in 2 years, and a Pap test in the past 3 years. A composite measure addressed receipt of the cancer screens and immunizations within the recommended time intervals (2006 only). Cholesterol testing was excluded from the composite measure because it was not measured in 2006.

Key Findings:

- While receipt of each of the individual services was relatively high (over 50% for all except home blood stool test, and over 90% for cholesterol testing in 5 years), in 2006 only 37.7% of older Wyoming adults were up-to-date (UTD) with the cancer screenings and immunizations according to U.S. Preventive Health Services Task Force Guidelines. Cholesterol testing would likely not change the result appreciably due to the high rate of receipt of that test.
- **Subgroups:** Older Wyoming adults with even lower rates of being UTD include persons age 60-69 (32.2%), Hispanics (19%), those with less than a high school education (26.7%), and current smokers (22.7%).
- **Associations:** Receipt of clinical preventive services was closely associated with access to health care and receipt of a recent check-up. Low rates of being UTD were reported for uninsured persons (21%), those without a regular doctor (19.5%), and those not reporting a recent check-up (20.9%). Even among older adults who had a check-up in the past 2 years, the rate of being UTD was only 41.9% (Figure 31).
- **Trends**: Trends in Wyoming for Pap test in 3 years, mammogram in 2 years, flu shot, pneumonia vaccination, colonoscopy/sigmoidoscopy (ever), and cholesterol test in 5 years have been improving, while results for home blood stool test have stayed fairy constant.
- **Comparison with other states**: Wyoming ranks above (better than) the median for flu shot and pneumonia vaccination, near the median for being UTD and cholesterol testing, and below the median for the individual cancer screenings (Pap, mammogram, colonoscopy and home blood stool test) (Figure 32).

Figure 31.

Being Up-to-Date* and Health Access
Adults Age 60+, WY BRFSS 2006

Percent UTD

	Insured	Underinsured	Have MD	Check-up 2 yrs.
Yes	38.8	23.1	40.2	41.9
No	21.3	39.6	19.5	20.9

■ Yes   ■ No
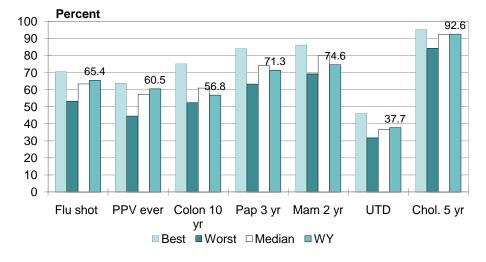
*Flu shot, PPV, Pap, mammogram & colon screen within recommended intervals
for age and gender

Figure 32.

Clinical Preventive Services, Adults Age 60+

BRFSS 2006, 50 States + DC

Percent

WY values: Flu shot 65.4, PPV ever 60.5, Colon 10 yr 56.8, Pap 3 yr 71.3, Mam 2 yr 74.6, UTD 37.7, Chol. 5 yr 92.6

■ Best ■ Worst □ Median ■ WY

IV.   SUMMARY

Key Findings:

- Large numbers of Wyoming older adults (age 60 and older) are affected by chronic conditions, disability, falls, and missing teeth (Table 6).

Table 6
Summary of Health Conditions among Older Adults (Age 60+)
Wyoming BRFSS 2005-2006

	Prevalence (%)	Estimated number
Arthritis	51.1	45,000
High blood pressure	49.1	43,000
High Cholesterol	49.0	43,000
Cardiovascular disease (CVD)	20.1	17,600
Diabetes	14.3	12,500
Asthma	8.6	7,500
Prostate cancer (men)	8.8	3,600
Disability	31.3	27,400
Recent fall (3 months)	18.8	16,500
All teeth removed	18.2	16,000

Highlighted conditions measured in 2005, considered "chronic conditions" in bullets below.

- **Subgroups:** Older adults most at risk include persons age 70 and older, lower income older adults, and the unemployed and unable to work.
- **Risk factors**: The importance of risk factors is indicated by higher rates of chronic conditions among obese older adults, those who ever smoked (or still do), those not exercising, and those reporting 3 or more of the 6 major modifiable CVD risk factors.
- All highlighted chronic conditions were associated with fair or poor health, days of activity limitation in the past month, and dissatisfaction with life. All except high cholesterol were associated with obesity, no leisure time exercise, and being unable to work.
- **Associations**: Many of the chronic conditions are associated with one another, that is, older adults often had more than one (Table 7).

Table 7
Number of Chronic Conditions* among Older Adults (Age 60+)
Wyoming BRFSSS 2005

	Prevalence	Estimated number
None	15.4	13,500
Any	84.6	74,000
One	25.5	22,300
Two (2 or more)	27.5 (59.1)	24,000 (51,600)
Three (3 or more)	20.9 (31.6)	18,300 (27,600)
Four or more	10.6	9,300
* Arthritis, high blood pressure, high cholesterol, CVD, diabetes, asthma.		

- Older adults reporting a greater number of conditions were also more likely to report fair or poor health, frequent mental distress, and disability.
- **Preventive health**: Only 37.7% of older Wyoming adults are up-to-date with the cancer screenings and immunizations recommended for their age and gender.
- **Trends:** Worsening trends are seen for high blood pressure, high cholesterol, diabetes, asthma, cardiovascular disease, disability, obesity and overweight. Improving trends are seen for tooth loss, pneumonia vaccination, sigmoidoscopy/colonoscopy and cholesterol testing.
- **Comparisons with other states:** Wyoming older adults appear to have poorer access to health care and lower utilization of check-ups and preventive health services, except for vaccinations and cholesterol testing. Wyoming older adults seem to report more falls than older adults in other states. Rates of chronic conditions except asthma are lower among older adults in Wyoming compared with rates in other states.
- **Societal and economic implications**: One fourth of all Wyoming adults (26.0%) provided care or assistance in the past month to an adult age 60 or older, representing more than one caregiver per older adult in the state. One fifth of those providing such care did so for an older person with dementia or Alzheimer's disease.
- The highlighted chronic conditions can be expected to require ongoing monitoring and/or medications, contributing to health care costs and putting additional burdens on Medicare.
- The aging of the population as baby boomers reach elder status and the increase in obesity rates in the U.S. suggest that the situation will not improve in the near future.

Health Conditions; Prevalence Rates and Confidence Intervals by Demographics
Adults age 60+, Wyoming BRFSS, 2005

	Arthritis		High Blood Pressure		High Cholesterol	
	Prevalence	95% CI	Prevalence	95% CI	Prevalence	95% CI
Total age 60+	51.1	48.4-53.9	49.1	46.3-51.8	49.0	46.2-51.8
Gender						
Males	46.3	42.0-50.8	48.3	43.9-52.7	47.9	43.5-52.3
Females	55.5	52.0-58.9	49.8	46.4-53.2	50.0	46.5-53.5
P value	0.002		0.604		0.46	
Age (years)						
60-69	48.1	44.1-52.2	44.7	40.7-48.7	48.7	44.7-52.7
70+	54.0	50.2-57.8	53.3	49.5-57.1	49.3	45.5-53.2
	0.038		0.002		0.815	
Race/ethnicity						
White	51.7	48.8-54.5	49.2	46.4-52.0	49.3	46.4-52.1
Hispanic	46.1	29.5-63.6	39.0	23.5-57.0	33.2	18.5-52.2
Other	42.3	25.8-60.7	54.9	36.3-72.2	42.4	27.1-59.3
P value	0.506		0.46		0.156	
Education						
<High School	49.7	40.1-59.4	56.4	46.7-65.7	53.8	44.0-63.3
High School	50.9	46.3-55.4	50.1	45.6-54.7	49.2	44.7-53.8
Some college	57.3	52.0-62.4	50.0	44.8-55.2	46.0	40.8-51.3
College grad	46.7	41.5-52.0	45.1	40.0-50.4	50.3	45.0-55.5
P value	0.052		0.18		0.504	
Income						
<$25K	57.1	52.3-61.9	52.4	47.6-57.2	47.4	42.6-52.3
$25K-$49,999	51.8	46.7-57.0	51.7	46.6-56.7	53.8	48.7-58.9
$50K-$74,999	43.5	35.6-51.8	45.8	37.8-54.0	44.8	36.8-53.1
$75K+	47.4	38.5-56.5	37.6	29.4-46.6	42.0	33.4-51.0
P value	0.029		0.021		0.07	
Employment						
Employed/SE	43.7	38.3-49.2	39.0	33.7-44.5	46.6	41.2-52.1
Not working	67.1	54.3-77.8	57.4	44.7-69.2	52.7	40.2-64.9
Homemaker	53.5	43.2-63.4	53.7	43.6-63.4	49.7	39.7-59.6
Retired	52.9	49.3-56.4	51.9	48.4-55.4	49.9	46.4-53.5
P value	0.002		0.0003		0.698	
Disability						
Yes	70.9	66.0-75.3	57.3	52.2-62.2	51.2	46.1-56.2
No	43.1	39.9-46.4	45.7	42.4-49.0	48.2	44.9-51.6
P value	<0.0001		0.0002		0.345	
Health Status						
Fair or poor	64.1	58.6-69.3	61.9	56.4-67.1	57.6	52.0-62.9
Good or better	46.9	43.7-50.1	44.9	41.8-48.1	46.3	43.1-49.6
P value	<0.0001		<0.0001		0.0006	

Table S-2

Health Conditions; Prevalence Rates and Confidence Intervals by Demographics
Adults age 60+, Wyoming BRFSS, 2005-2006

	Diabetes		Asthma		CVD	
	Prevalence	95% CI	Prevalence	95% CI	Prevalence	95% CI
Total age 60+	14.3	13.0-15.7	8.6	7.5-9.7	20.1	18.5-21.7
Gender						
Males	16.0	13.9-18.5	7.6	6.0-9.5	23.9	21.3-26.8
Females	12.8	11.3-14.4	9.4	8.1-10.9	16.7	15.0-18.6
P value	0.017		0.104		<0.0001	
Age (years)						
60-69	13.2	11.4-15.2	8.7	7.2-10.5	15.1	13.1-17.3
70+	15.3	13.5-17.3	8.4	7.1-10.0	24.9	22.6-27.3
	0.124		0.807		<0.0001	
Race/ethnicity						
White	13.9	12.6-15.3	8.6	7.5-9.8	20.1	18.5-21.8
Hispanic	25.1	15.9-37.3	6.7	2.6-15.8	21.7	12.8-34.3
Other	12.2	7.0-20.6	10.5	5.6-18.7	21.8	13.6-33.1
P value	0.024		0.695		0.9	
Education						
<High School	23.2	18.0-29.4	14.0	10.2-18.9	31.3	25.5-37.8
High School	14.0	11.9-16.3	7.6	6.0-9.7	21.4	18.8-24.3
Some college	14.5	12.1-17.3	8.7	6.8-11.0	20.4	17.5-23.6
College grad	11.9	9.7-14.5	8.1	6.4-10.3	14.9	12.3-17.9
P value	0.0005		0.023		<0.0001	
Income						
<$25K	19.4	16.9-22.2	11.4	9.5-13.7	26.8	23.9-30.0
$25K-$49,999	11.9	9.7-14.3	6.8	5.2-8.8	18.8	16.1-21.9
$50K-$74,999	15.5	11.5-20.6	7.7	5.0-11.5	19.1	14.6-24.5
$75K+	8.5	5.7-12.4	6.8	4.2-11.0	10.5	7.1-15.2
P value	<0.0001		0.011		<0.0001	
Employment						
Employed/SE	8.1	6.2-10.4	7.9	6.0-10.3	15.2	12.4-18.5
Not working	26.0	19.2-34.2	12.9	8.5-19.1	40.8	32.4-49.7
Homemaker	10.4	7.1-15.1	6.3	3.9-10.1	16.9	12.5-22.3
Retired	16.6	14.9-18.6	8.8	7.4-10.3	20.8	18.8-22.9
P value	<0.0001		0.15		<0.0001	
Disability						
Yes	22.0	19.3-25.0	15.2	12.8-17.9	32.2	29.0-35.6
No	10.7	9.3-12.2	5.4	4.5-6.5	14.6	12.9-16.4
P value	<0.0001		<0.0001		<0.0001	
Health Status						
Fair or poor	27.9	24.5-31.6	15.1	12.4-18.3	40.8	36.9-44.8
Good or better	10.0	8.7-11.4	6.4	5.4-7.6	13.7	12.2-15.3
P value	<0.0001		<0.0001		<0.0001	

Table S-3

Health Conditions; Prevalence Rates and Confidence Intervals by Demographics
Adults age 60+, Wyoming BRFSS, 2005-2006

	Any Chronic Condition		Heart Disease		Prostate Cancer	
	Prevalence	95% CI	Prevalence	95% CI	Prevalence	95% CI
Total age 60+	84.6	82.5-86.5	16.7	15.3-18.3	8.8	6.6-11.7
Gender						
Males	83.6	80.2-86.5	21.0	18.5-23.8	8.8	6.6-11.7
Females	85.5	82.8-87.8	13.0	11.5-14.6		
P value	0.352		<0.0001			
Age (years)						
60-69	81.7	78.4-84.6	12.8	10.9-14.9	4.3	2.4-7.7
70+	87.4	84.7-89.7	20.6	18.4-22.8	13.6	9.8-18.7
	0.005		<0.0001		0.0003	
Race/ethnicity						
White	84.9	82.8-86.9	16.7	15.2-18.3	9.3	6.9-12.4
Hispanic	72.9	53.7-86.1	16.1	9.1-26.9	6.8	1.6-24.1
Other	83.4	66.6-92.7	19.5	11.6-30.8	3.1	0.4-19.3
P value	0.191		0.82		0.445	
Education						
<High School	90.2	83.0-94.5	27.5	22.1-33.8	11.2	4.1-27.1
High School	84.4	80.8-87.4	17.2	14.9-19.9	5.4	2.9-9.9
Some college	87.0	83.1-90.1	17.1	14.5-20.2	14.2	8.8-22.0
College grad	81.5	77.0-85.2	12.6	10.2-15.5	8.4	5.1-13.7
P value	0.075		<0.0001		0.116	
Income						
<$25K	87.1	83.6-90.0	21.8	19.1-24.7	9.0	5.1-15.4
$25K-$49,999	87.2	83.4-90.3	15.6	13.0-18.5	8.0	4.7-13.3
$50K-$74,999	80.5	73.1-86.2	16.0	11.9-21.2	5.7	1.9-16.1
$75K+	80.4	72.3-86.5	10.2	6.8-14.9	7.3	3.3-15.1
P value	0.062		0.0002		0.883	
Employment						
Employed/SE	78.1	73.4-82.2	14.0	11.3-17.2	5.5	2.9-10.1
Not working	95.8	90.2-98.3	28.9	21.7-37.4	0	
Homemaker	82.7	73.1-89.3	12.9	9.1-18.0		
Retired	86.6	84.0-88.9	17.4	15.6-19.4	11.4	8.2-15.5
P value	0.0001		0.0003		NA	
Disability						
Yes	92.8	89.6-95.1	26.7	23.7-29.9	9.9	6.1-15.7
No	81.2	78.5-83.6	12.1	10.6-13.8	8.5	5.9-12.1
P value	<0.0001		<0.0001		0.599	
Health Status						
Fair or poor	94.2	91.3-96.2	34.1	30.4-38.1	10.5	5.9-18.1
Good or better	81.5	78.9-83.8	11.3	9.9-12.9	8.4	6.0-11.6
P value	<0.0001		<0.0001		0.498	

Table S-4

Health Conditions; Prevalence Rates and Confidence Intervals by Risk Factors
Adults age 60+, Wyoming BRFSS, 2005

	Arthritis		High Blood Pressure		High Cholesterol	
	Prevalence	95% CI	Prevalence	95% CI	Prevalence	95% CI
Weight status						
Not overweight	43.9	39.4-48.6	38.9	34.5-43.5	46.9	42.2-51.6
Overweight only	50.5	46.1-54.9	49.0	44.7-53.4	49.5	45.1-54.0
Obese	61.5	55.6-67.1	62.1	56.3-67.7	50.3	44.6-56.1
P value	<0.0001		<0.0001		0.613	
Leisure time activity						
Yes	47.7	44.3-51.0	45.4	42.1-48.8	49.1	45.8-52.5
No	58.9	53.9-63.7	57.2	52.3-61.9	48.7	43.8-53.6
P value	0.0003		0.0001		0.882	
Current smoker						
No	52.2	49.3-55.2	50.3	47.3-53.2	49.7	46.7-52.6
Yes	44.6	37.1-52.4	42.6	35.1-50.5	44.0	36.6-51.6
P value	0.073		0.074		0.174	
Ever smoked						
Yes	52.3	48.6-56.0	49.7	46.1-53.4	50.2	46.5-53.9
No	49.8	45.6-54.0	48.7	44.6-52.9	47.3	43.1-51.5
P value	0.38		0.713		0.306	
Any CVD						
Yes	55.0	48.3-61.4	66.0	59.4-72.0	68.0	61.5-73.9
No	50.1	47.0-53.2	44.8	41.8-47.9	43.8	40.7-46.9
P value	0.19		<0.0001		<0.0001	
2005 measures						
Meets exercise recom.						
Yes	46.3	42.0-50.7	43.4	39.2-47.8	49.3	45.0-53.7
No	56.4	52.4-60.3	53.8	49.8-57.6	49.1	45.2-53.1
P value	0.0008		0.0006		0.937	
Eats F/V 5X/day						
Yes	50.3	45.2-55.4	50.0	44.9-55.1	49.4	44.3-54.6
No	51.6	48.2-54.9	48.3	45.0-51.6	49.0	45.6-52.3
P value	0.692		0.582		0.878	
High blood pressure						
Yes	57.7	53.7-61.6	N/A		57.8	53.9-61.6
No	44.9	41.1-48.8			40.5	36.8-44.4
P value	<0.0001				<0.0001	
3+ CVD risk factors						
Yes	58.3	54.1-62.4	78.3	74.7-81.5	73.3	69.5-76.8
No	45.0	41.3-48.8	24.6	21.6-27.8	28.6	25.4-32.1
P value	<0.0001		<0.0001		<0.0001	

45

Table S-5

Health Conditions; Prevalence Rates and Confidence Intervals by Risk Factors
Adults age 60+, Wyoming BRFSS, 2005-2006

		Diabetes		Asthma		CVD	
		Prevalence	95% CI	Prevalence	95% CI	Prevalence	95% CI
Weight status							
Not overweight		6.7	5.3-8.5	7.1	5.6-9.0	18.8	16.3-21.5
Overweight only		13.2	11.1-15.5	8.1	6.5-9.9	19.1	16.7-21.7
Obese		28.9	25.3-32.7	10.7	8.4-13.6	24.1	20.6-28.1
	P value	<0.0001		0.052		0.033	
Leisure time activity							
Yes		12.6	11.1-14.2	7.7	6.5-9.1	17.3	15.5-19.3
No		18.1	15.7-20.9	10.4	8.5-12.7	26.3	23.3-29.4
	P value	0.0002		0.021		<0.0001	
Current smoker							
No		14.8	13.4-16.3	8.6	7.5-9.9	19.7	18.0-21.5
Yes		10.3	7.4-14.1	8.5	6.0-12.0	23.5	19.2-28.5
	P value	0.029		0.949		0.117	
Ever smoked							
Yes		15.2	13.4-17.2	10.0	8.5-11.7	24.3	22.0-26.7
No		13.1	11.3-15.1	6.9	5.6-8.4	14.9	13.0-17.1
	P value	0.124		0.005		<0.0001	
Any CVD							
Yes		27.2	23.4-31.4	9.8	7.4-12.8	N/A	
No		10.9	9.7-12.3	8.4	7.3-9.7		
	P value	<0.0001		0.326			
2005 measures							
Meets exercise recom.							
Yes		13.7	11.0-17.0	6.2	4.3-8.8	11.8	9.4-14.9
No		17.7	14.8-20.9	8.6	6.7-11.0	25.9	22.5-29.7
	P value	0.07		0.138		<0.0001	
Eats F/V 5X/day							
Yes		16.9	13.4-21.2	5.8	4.0-8.3	16.2	12.6-20.5
No		14.8	12.7-17.3	7.9	6.2-9.9	20.2	17.6-23.0
	P value	0.358		0.166		0.115	
High blood pressure							
Yes		21.9	18.9-25.3	8.2	6.2-10.7	25.7	22.4-29.3
No		9.0	7.0-11.6	6.4	4.8-8.6	12.6	10.1-15.7
	P value	<0.0001		0.228		<0.0001	
3+ CVD risk factors							
Yes		30.4	26.8-34.3	7.7	5.8-10.2	29.1	25.4-33.1
No		2.8	1.8-4.2	7.0	5.3-9.1	10.9	8.7-13.5
	P value	<0.0001		0.62		<0.0001	

Table S-6

Health Conditions; Prevalence Rates and Confidence Intervals by Risk Factors
Adults age 60+, Wyoming BRFSS, 2005-2006

		Any Chronic Condition		Heart Disease		Prostate Cancer	
		Prevalence	95% CI	Prevalence	95% CI	Prevalence	95% CI
Weight status							
Not overweight		80.0	76.0-83.5	15.2	13.0-17.7	9.1	5.5-14.7
Overweight only		83.9	80.4-86.9	16.2	14.0-18.7	9.6	6.3-14.3
Obese		92.2	88.4-94.8	20.8	17.4-24.6	7.0	3.4-14.0
	P value	0.0001		0.022		0.738	
Leisure time activity							
Yes		82.3	79.7-84.7	14.5	12.8-16.3	9.9	7.1-13.6
No		89.7	86.3-92.3	21.9	19.1-24.9	6.5	3.5-11.7
	P value	0.0008		<0.0001		0.223	
Current smoker							
No		85.2	83.0-87.2	16.4	14.9-18.1	9.6	7.1-12.8
Yes		81.0	74.0-86.5	19.7	15.7-24.4	2.0	0.3-13.2
	P value	0.176		0.147		0.078	
Ever smoked							
Yes		86.8	84.1-89.1	20.7	18.6-23.0	9.0	6.4-12.7
No		81.7	78.2-84.7	11.9	10.2-14.0	8.4	4.9-14.1
	P value	0.012		<0.0001		0.834	
Any CVD							
Yes		100		83.9	80.4-86.9	11.3	6.6-18.8
No		80.7	78.1-83.0	0		8.1	5.7-11.3
	P value	<0.0001		<0.0001		0.295	
2005 measures						not measured in 2005	
Meets exercise recom.							
Yes		79.6	75.9-82.9	9.6	7.4-12.4		
No		89.6	86.9-91.7	22.0	18.9-25.6		
	P value	<0.0001		<0.0001			
Eats F/V 5X/day							
Yes		83.3	79.1-86.9	13.2	10.1-17.2		
No		85.1	82.6-87.3	17.1	14.7-19.8		
	P value	0.445		0.097			
High blood pressure							
Yes		100		21.7	18.6-25.1		
No		69.7	66.0-73.1	10.5	8.2-13.3		
	P value	<0.0001		<0.0001			
3+ CVD risk factors							
Yes		99.3	98.2-99.7	24.3	21.0-28.1		
No		72.3	68.8-75.5	9.2	7.2-11.6		
	P value	<0.0001		<0.0001			

Table S-7

Other Issues; Prevalence Rates and Confidence Intervals by Demographics
Adults age 60+, Wyoming BRFSS, 2005-2006

	Disability		Recent Fall		All Teeth Removed	
	Prevalence	95% CI	Prevalence	95% CI	Prevalence	95% CI
Total age 60+	31.3	29.6-33.1	18.8	16.8-21.1	18.2	16.2-20.4
Gender						
Males	31.3	28.5-34.2	18.9	15.7-22.6	16.7	13.7-20.3
Females	31.3	29.2-33.6	18.8	16.3-21.6	19.5	17.0-22.4
P value	0.964		0.956		0.199	
Age (years)						
60-69	28.3	25.9-30.9	18.2	15.4-21.5	15.1	12.4-18.1
70+	34.2	31.7-36.8	19.4	16.6-22.6	21.3	18.4-24.6
	0.001		0.58		0.004	
Race/ethnicity						
White	31.0	29.2-32.9	18.9	16.8-21.2	18.1	16.0-20.4
Hispanic	38.0	27.3-50.1	17.2	8.2-32.7	12.6	5.6-25.9
Other	37.5	27.1-49.3	12.5	6.1-24.0	19.3	10.9-32.0
P value	0.25		0.512		0.633	
Education						
<High School	37.5	31.3-44.1	22.9	16.2-31.2	34.1	26.1-43.0
High School	31.4	28.6-34.5	17.7	14.3-21.6	24.8	20.9-29.1
Some college	32.6	29.2-36.2	18.7	15.0-23.1	17.1	13.6-21.4
College grad	28.2	25.1-31.6	19.3	15.8-23.5	6.7	4.6-9.6
P value	0.051		0.639		<0.0001	
Income						
<$25K	41.7	38.5-45.1	25.0	21.1-29.4	28.1	24.1-32.5
$25K-$49,999	27.7	24.7-31.0	12.3	9.5-15.7	15.9	12.5-20.0
$50K-$74,999	26.1	21.1-31.8	12.7	8.1-19.3	13.5	8.9-20.1
$75K+	23.6	18.8-29.2	24.6	18.3-32.3	3.9	1.7-8.5
P value	<0.0001		<0.0001		<0.0001	
Employment						
Employed/SE	19.9	17.1-23.2	20.4	16.3-25.3	15.1	11.4-19.6
Not working	76.3	68.1-82.9	34.3	24.1-46.3	28.2	19.5-38.9
Homemaker	32.8	27.0-39.1	17.6	11.7-25.5	18.8	13.0-26.4
Retired	32.4	30.2-34.8	17.0	14.6-19.8	19.0	16.4-21.9
P value	<0.0001		0.007		0.066	
Disability						
Yes			26.0	22.1-30.3	22.6	19.0-26.8
No			14.9	12.7-17.4	15.8	13.5-18.3
P value			<0.0001		0.002	
Health Status						
Fair or poor	65.0	61.2-68.7	26.8	22.0-32.3	27.7	22.7-33.2
Good or better	20.8	19.1-22.6	16.5	14.4-18.9	15.4	13.3-17.7
P value	<0.0001		0.0001		<0.0001	

Other Issues; Prevalence Rates and Confidence Intervals by Risk Factors
Adults age 60+, Wyoming BRFSS, 2005-2006

		Disability		Recent Fall		All Teeth Removed	
		Prevalence	95% CI	Prevalence	95% CI	Prevalence	95% CI
Weight status							
Not overweight		28.6	25.8-31.6	18.2	15.0-21.8	17.9	14.7-21.5
Overweight only		26.8	24.1-29.6	16.9	13.8-20.4	19.2	15.9-22.9
Obese		43.8	39.7-48.0	23.9	19.0-29.6	16.9	12.8-22.1
	P value	<0.0001		0.056		0.73	
Leisure time activity							
Yes		24.4	22.4-26.4	16.7	14.3-19.3	15.7	13.4-18.3
No		46.6	43.2-50.1	23.9	20.0-28.2	24.0	20.2-28.3
	P value	<0.0001		0.002		0.0003	
Current smoker							
No		30.4	28.5-32.3	19.3	17.1-21.7	16.0	13.9-18.2
Yes		39.1	33.9-44.7	15.4	10.6-22.0	39.2	31.7-47.3
	P value	0.002		0.247		<0.0001	
Ever smoked							
Yes		35.0	32.5-37.5	18.2	15.5-21.3	24.7	21.6-28.2
No		26.9	24.4-29.4	19.7	16.8-23.1	11.1	8.9-13.7
	P value	<0.0001		0.477		<0.0001	
Any CVD							
Yes		49.8	45.4-54.3	26.3	21.1-32.2	22.2	17.6-27.6
No		26.3	24.4-28.2	16.9	14.7-19.3	16.9	14.7-19.4
	P value	<0.0001		0.0008		0.047	
2005 measures							
Meets exercise recom.				not measured in 2005		not measured in 2005	
Yes		21.2	17.9-24.9				
No		37.9	34.1-41.7				
	P value	<0.0001					
Eats F/V 5X/day							
Yes		27.9	23.6-32.6				
No		29.6	26.7-32.7				
	P value	0.54					
High blood pressure							
Yes		33.9	30.4-37.7				
No		24.3	21.1-27.9				
	P value	0.0002					
3+ CVD risk factors							
Yes		37.8	34.0-41.9				
No		21.7	18.8-24.9				
	P value	<0.0001					

Table S-9

Physical and Mental Health; Prevalence Rates and Confidence Intervals by Demographics
Adults age 60+, Wyoming BRFSS, 2005-2006

	Fair or Poor Health		Freq. Mental Distress		Poor Emotional Support	
	Prevalence	95% CI	Prevalence	95% CI	Prevalence	95% CI
Total age 60+	23.8	22.2-25.5	6.1	5.3-7.1	8.5	7.5-9.7
Gender						
Males	23.7	21.1-26.4	5.4	4.1-7.1	10.9	9.1-13.0
Females	23.9	22.0-26.0	6.8	5.7-8.0	6.5	5.4-7.8
P value	0.873		0.173		0.0001	
Age (years)						
60-69	19.1	17.0-21.4	7.1	5.7-8.7	7.1	5.7-8.7
70+	28.3	26.0-30.8	5.2	4.2-6.5	10.0	8.5-11.7
	<0.0001		0.053		0.011	
Race/ethnicity						
White	23.0	21.4-24.7	6.0	5.1-7.0	7.9	6.9-9.1
Hispanic	44.6	33.1-56.6	13.3	6.8-24.2	10.6	5.1-20.8
Other	27.2	18.4-38.3	5.8	2.5-13.1	21.5	13.0-33.3
P value	0.0002		0.043		0.0003	
Education						
<High School	45.7	39.3-52.3	9.3	6.2-13.7	14.0	10.1-19.1
High School	28.1	25.4-31.1	6.8	5.3-8.6	11.6	9.6-14.0
Some college	23.4	20.3-26.7	6.7	5.0-8.8	8.0	6.2-10.3
College grad	12.2	10.0-14.8	4.0	2.7-5.8	3.8	2.7-5.3
P value	<0.0001		0.014		<0.0001	
Income						
<$25K	38.0	34.8-41.3	9.0	7.2-11.0	13.3	11.1-15.8
$25K-$49,999	19.3	16.6-22.2	5.6	4.1-7.5	7.3	5.7-9.5
$50K-$74,999	15.7	11.7-20.9	4.9	2.6-9.0	4.5	2.6-7.8
$75K+	8.0	5.4-11.8	3.8	1.9-7.4	4.6	2.8-7.6
P value	<0.0001		0.016		<0.0001	
Employment						
Employed/SE	11.6	9.3-14.4	5.2	3.8-7.2	8.5	6.5-11.1
Not working	66.7	58.2-74.2	23.7	17.0-31.9	15.0	9.8-22.3
Homemaker	27.9	22.4-34.1	5.1	2.8-9.0	6.7	4.1-10.8
Retired	25.1	23.0-27.3	5.2	4.2-6.4	8.3	7.0-9.8
P value	<0.0001		<0.0001		0.054	
Disability						
Yes	49.3	45.9-52.7	12.4	10.2-14.9	9.7	7.8-11.9
No	12.1	10.6-13.6	3.3	2.6-4.2	7.8	6.6-9.2
P value	<0.0001		<0.0001		0.11	
Health Status						
Fair or poor	N/A		15.6	12.8-18.8	14.3	11.6-17.5
Good or better			3.2	2.6-4.1	6.8	5.8-8.0
P value			<0.0001		<0.0001	

Table S-10

Physical and Mental Health; Prevalence Rates and Confidence Intervals by Risk Factors
Adults age 60+, Wyoming BRFSS, 2005-2006

		Fair or Poor Health		Freq. Mental Distress		Poor Emotional Support	
		Prevalence	95% CI	Prevalence	95% CI	Prevalence	95% CI
Weight status							
Not overweight		21.1	18.6-23.8	5.4	4.1-7.0	8.6	6.9-10.6
Overweight only		21.3	18.9-24.0	4.7	3.5-6.3	8.1	6.6-9.9
Obese		32.7	29.0-36.8	10.2	7.9-13.0	9.6	7.2-12.5
	P value	<0.0001		0.0001		0.63	
Leisure time activity							
Yes		16.5	14.8-18.3	4.5	3.6-5.6	7.2	6.0-8.6
No		39.9	36.6-43.2	9.7	7.9-12.0	11.6	9.6-14.0
	P value	<0.0001		<0.0001		0.0003	
Current smoker							
No		22.7	21.0-24.5	5.3	4.4-6.3	7.8	6.7-9.0
Yes		32.8	27.9-38.2	12.8	9.4-17.2	14.4	10.7-18.9
	P value	0.0001		<0.0001		0.0002	
Ever smoked							
Yes		27.6	25.4-30.0	6.7	5.5-8.1	9.8	8.3-11.5
No		19.1	17.0-21.4	5.4	4.2-7.0	6.9	5.6-8.5
	P value	<0.0001		0.19		0.011	
Any CVD							
Yes		47.7	43.2-52.2	10.9	8.4-14.0	10.9	8.3-14.2
No		17.3	15.8-19.0	4.9	4.0-5.9	8.1	7.0-9.3
	P value	<0.0001		<0.0001		0.057	
2005 measures							
Meets exercise recom.							
Yes		13.5	10.9-16.6	3.9	2.5-6.0	5.8	4.1-8.2
No		33.9	30.3-37.7	9.4	7.2-12.1	8.4	6.5-10.8
	P value	<0.0001		0.0004		0.094	
Eats F/V 5X/day							
Yes		20.2	16.3-24.7	5.9	3.9-8.8	6.1	4.0-9.2
No		25.9	23.2-28.9	7.0	5.4-8.9	8.0	6.4-9.9
	P value	0.032		0.493		0.264	
High blood pressure							
Yes		30.8	27.3-34.5	7.8	5.9-10.1	8.2	6.2-10.7
No		18.3	15.5-21.5	5.9	4.2-8.3	6.8	5.2-8.9
	P value	<0.0001		0.216		0.339	
3+ CVD risk factors							
Yes		35.5	31.7-39.5	9.7	7.5-12.6	9.3	7.1-12.1
No		15.2	12.8-18.0	4.3	3.0-6.3	5.9	4.4-7.8
	P value	<0.0001		0.0003		0.02	

Table S-11

Anxiety and Depression; Prevalence Rates and Confidence Intervals by Demographics
Adults age 60+, Wyoming BRFSS, 2006

	Anxiety Diagnosis		Depression Diag.		Current Depression	
	Prevalence	95% CI	Prevalence	95% CI	Prevalence	95% CI
Total age 60+	8.3	7.0-9.9	15.2	13.4-17.2	16.7	14.7-19.0
Gender						
Males	6.6	4.8-9.0	12.2	9.6-15.3	14.6	11.6-18.2
Females	9.8	8.0-12.1	17.8	15.4-20.4	18.6	15.9-21.6
P value	0.039		0.006		0.08	
Age (years)						
60-69	8.6	6.7-10.8	18.4	15.7-21.6	16.7	13.8-20.1
70+	8.1	6.3-10.6	12.1	9.9-14.7	16.7	13.9-20.0
	0.789		0.001		0.995	
Race/ethnicity						
White	8.6	7.2-10.3	15.2	13.4-17.3	16.3	14.2-18.7
Hispanic	6.2	1.9-18.4	15.4	6.7-31.6	34.1	19.4-52.7
Other	6.8	2.7-16.1	17.0	8.8-30.3	16.3	7.5-31.7
P value	0.753		0.951		0.034	
Education						
<High School	11.4	6.8-18.6	20.1	13.8-28.4	22.6	14.6-33.2
High School	8.2	6.0-11.1	13.4	10.6-16.7	21.5	17.7-26.0
Some college	9.8	7.1-13.4	17.4	13.8-21.6	16.5	12.9-21.0
College grad	6.5	4.6-9.2	14.3	11.2-18.1	10.0	7.3-13.4
P value	0.237		0.171		0.0001	
Income						
<$25K	10.4	7.8-13.7	18.1	14.8-21.9	25.6	21.3-30.4
$25K-$49,999	6.3	4.3-9.0	12.3	9.5-15.9	12.5	9.5-16.2
$50K-$74,999	9.4	5.6-15.3	14.3	9.3-21.5	11.6	7.1-18.3
$75K+	4.8	2.4-9.3	16.2	11.2-22.9	11.8	7.6-17.9
P value	0.055		0.159		<0.0001	
Employment						
Employed/SE	7.1	4.9-10.0	16.4	12.8-20.8	12.8	9.3-17.2
Not working	20.5	12.2-32.3	32.7	22.8-44.4	37.7	26.1-50.8
Homemaker	6.9	3.6-13.1	12.6	7.9-19.5	19.2	12.9-27.7
Retired	8.2	6.4-10.3	13.4	11.2-15.9	16.6	14.0-19.6
P value	0.003		0.0002		0.0001	
Disability						
Yes	13.3	10.5-16.9	24.7	20.9-28.9	28.7	24.3-33.6
No	6.0	4.6-7.7	10.6	8.8-12.8	10.2	8.3-12.4
P value	<0.0001		0.0001		<0.0001	
Health Status						
Fair or poor	14.0	10.6-18.4	22.2	18.0-27.0	37.4	31.3-43.9
Good or better	6.7	5.3-8.4	13.0	11.1-15.2	11.2	9.4-13.3
P value	<0.0001		0.0001		<0.0001	

Table S-12

Anxiety and Depression; Prevalence Rates and Confidence Intervals by Risk Factors
Adults age 60+, Wyoming BRFSS, 2006

		Anxiety Diagnosis		Depression Diag.		Current Depression	
		Prevalence	95% CI	Prevalence	95% CI	Prevalence	95% CI
Weight status							
Not overweight		10.8	8.3-13.9	13.6	10.9-16.8	13.8	10.9-17.3
Overweight only		6.3	4.6-8.6	15.7	12.8-19.2	14.4	11.5-17.8
Obese		7.7	5.1-11.4	17.4	13.4-22.1	24.6	19.4-30.7
	P value	0.028		0.329		0.0004	
Leisure time activity							
Yes		8.1	6.5-10.0	14.5	12.4-16.9	13.6	11.4-16.2
No		8.7	6.4-11.8	16.6	13.4-20.5	24.4	20.1-29.3
	P value	0.7		0.312		<0.0001	
Current smoker							
No		7.5	6.1-9.1	14.5	12.6-16.6	15.8	13.7-18.2
Yes		15.7	10.6-22.5	21.4	15.5-28.8	26.0	19.0-34.4
	P value	0.0008		0.027		0.004	
Ever smoked							
Yes		9.4	7.4-11.7	15.7	13.2-18.5	18.0	15.1-21.4
No		7.1	5.4-9.5	14.7	12.2-17.6	15.3	12.7-18.5
	P value	0.145		0.606		0.221	
Any CVD							
Yes		14.5	10.6-19.5	21.6	16.9-27.1	24.8	19.3-31.3
No		6.6	5.3-8.2	13.6	11.7-15.7	14.4	12.3-16.8
	P value	<0.0001		0.001		0.0003	
FMD							
Yes		28.7	19.2-40.6	51.1	39.8-62.2	69.0	56.1-79.5
No		7.2	5.9-8.8	13.1	11.3-15.1	13.7	11.7-15.9
	P value	<0.0001		<0.0001		<0.0001	
Life Satisfaction							
Very satisfied		5.4	4.0-7.3	9.9	7.8-12.4	6.2	4.6-8.4
Satisfied		9.9	7.8-12.6	18.7	15.9-22.0	24.5	20.9-28.4
Dissatisfied/v. dis.		29.9	18.1-45.2	49.0	34.0-64.2	86.3	71.4-94.1
	P value	<0.0001		<0.0001		<0.0001	
Emotional Support							
Always/usually		6.7	5.4-8.3	13.5	11.6-15.7	12.4	10.4-14.6
Sometimes		20.2	13.5-29.2	29.0	21.5-37.8	43.2	33.7-53.2
Rarely/never		11.6	7.1-18.5	17.3	11.9-24.5	29.8	21.3-40.0
	P value	<0.0001		<0.0001		<0.0001	

V.   References

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[3] Nelson DE, Holtzman D, Bolen J, Stanwyck C. Reliability and Validity of Measures from the Behavioral Risk Factor Surveillance System (BRFSS). Int J Public Health 2001;46: 1-42.