The Nebraska Statewide Health Needs Assessment

Prepared by

The Office of Community and Rural Health
Division of Public Health

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Note

The assessment results were completed by January 31, 2012 and were used in the development of the Nebraska Public Health Improvement Plan and the Department of Health and Human Services, Division of Public Health Strategic Plan. The final written report was completed by August 2013.

Table of Contents

Section 1: Overview of the Statewide Health Needs Assessment Process 4
Purpose of the Assessment 4
Overview of the Assessment Process 4
Organization of the Assessment Report 5
The Steps of the MAPP Model 5
Overall Results 8
Next Steps 9
Section 2: Health Status Assessment 10
CHANGING POPULATION CHARACTERISTICS 10
GENERAL HEALTH STATUS 12
CHRONIC DISEASE 15
INJURIES 24
MATERNAL AND CHILD HEALTH 26
MENTAL HEALTH AND SUICIDE 29
SUBSTANCE ABUSE 31
COMMUNICABLE DISEASE 34
ORAL HEALTH 37
ENVIRONMENTAL HEALTH 38
HEALTH DISPARITIES 40
Section 3: Statewide Community Themes and Strengths Assessment 50
Community Domains 50
Community Health Issues 51
Overall Health and Quality of Life 54
Section 4: Forces of Change Assessment 55
Emerging Issues from Local Health Departments 58
Discussion 59
Conclusions 60
Section 5: State Public Health System Assessment 61
Purpose and Methods 61
Limitations 63
Results 63
Strengths and Weaknesses within the Essential Services 64
Scores and Comments by Model Standard 66
Conclusion 87
Appendices 88

Section 1: Overview of the Statewide Health Needs Assessment Process

Purpose of the Assessment

Although numerous state health needs assessments have been conducted in recent years, the last comprehensive assessment at the state level was completed in the mid-1980s under the National Health Planning and Resources Development Act. The purpose of this comprehensive needs assessment was to serve as the foundation for setting statewide health priorities, which were used to develop the Nebraska Public Health Improvement Plan. The information contained in this document can also be used by various partners (local health departments, non-profit agencies, state associations such as the Nebraska Medical Association and the Nebraska Hospital Association, academic partners, and others) as a reference document to examine statewide trends and compare them with local or regional trends. To provide accurate and current information, Division staff plan to update this assessment every five years.

Overview of the Assessment Process

The statewide assessment was based on the Mobilizing for Action through Planning and Partnerships (MAPP) planning model. This model was selected for several reasons. First, since it was developed by the National Association of County and City Officials in 1997, it has been used successfully by many local health departments across the nation and nearly all of the local health departments in Nebraska. It has also been successfully applied in some states (Washington and Illinois). A second reason is that this process involves interaction with a broad array of partners so that the priorities and key strategic decisions are not made by a small group of people. Another reason is that MAPP is a comprehensive approach that includes the collection and analysis of both qualitative and quantitative data. These data can be used by the State Health Agency (Division of Public Health) and its partners to assess statewide health trends and other conditions and issues that can impact the health and well-being of the population.

The MAPP process uses a comprehensive planning approach that includes four assessments to identify critical health challenges and opportunities. The four assessments are briefly described below:

- **The Health Status Assessment** examines several data sources (vital records, adult and youth risk factor surveys, cancer registry, and hospital discharge data) to describe the health of the population, including trends, health issues, behavioral factors, environmental hazards, and social and economic conditions. This assessment answers the following questions:

  (1) How healthy are our residents?

  (2) What does the health status of our state look like?

  (3) What are our greatest disparities?

- **The Statewide Community Themes and Strengths Assessment** is designed to highlight community issues that residents feel are important and how they perceive the health and quality of life in the state. In this assessment, the data were gathered through a statewide survey. This assessment answers the following questions:

  (1) What is important to our state?

  (2) How is quality of life perceived in our state?

- **The Forces of Change Assessment** focuses on the identification of forces (trends, factors, and events) such as legislation, technology, funding challenges and opportunities, and other impending changes that affect the context in which the state and the public health system operate. This assessment answers the following questions:

  (1) What is occurring or might occur that affects the health of our state or the public health system?

(2) What specific threats or opportunities are generated by these occurrences?

- **The State Public Health System Assessment** focuses on assessing the performance of the state public health system. The performance is analyzed against a set of standards developed by the Centers for Disease Control and Prevention and includes the entire public health system (i.e., all of the organizations and entities that contribute to public health). This assessment answers the following questions:

  (1) What are the activities, competencies, and capabilities of our state public health system?

  (2) How are the ten essential public health services being provided in our state?

Organization of the Assessment Report

This report is divided into five sections. The first section provides an introduction and background information on the four assessments in the MAPP model. Sections two through five provide the results of the four assessments: health status assessment, statewide community themes and strengths assessment, forces of change assessment, and the state public health system assessment.

The Steps of the MAPP Model

The MAPP model is a comprehensive planning process that provided the foundation for the Nebraska Public Health Improvement Plan. The steps or phases of the MAPP model are shown in Figure 1 and the conceptual model is shown in Figure 2. Briefly, the MAPP model includes the establishment of a state coalition that includes representation from several collaborative partners, a visioning phase, the completion of the four MAPP assessments, the identification of the priorities or strategic issues, the formulation of goals and strategies to address the priorities, and the development and implementation of an action plan and evaluation plan to move the process forward.

Figure 1. The MAPP Model

Phase of MAPP	Description
Organize for Success / Partnership Development	The first phase of MAPP involves two critical and interrelated activities: organizing the planning process and developing the planning partnership. The purpose of this phase is to structure a planning process that builds commitment, engages participants as active partners, uses participants' time well, and results in a plan that can be realistically implemented.
Visioning	The second phase of MAPP guides the community through a collaborative and creative process that leads to a shared community vision and common values. During this phase, the community answers questions such as "What would we like our community to look like in 10 years?"
Four MAPP Assessments	The four MAPP Assessments are conducted simultaneously and provide critical insights into challenges and opportunities throughout the community.
• Community Themes and Strengths Assessment	This assessment provides a deep understanding of the issues residents feel are important by answering the questions, "What is important to our community?" "How is quality of life perceived in our community?" and "What assets do we have that can be used to improve community health?"
• State Public Health System Assessment	This assessment should include all of the organizations and entities that contribute to the public's health. The SPHSA answers the questions, "What are the activities, competencies, and capacities of our state public health system?" and "How are the Essential Services being provided to our community?"
• Community Health Status Assessment	This assessment identifies priority community health and quality of life issues. Questions answered during the phase include, "How healthy are our residents?" and "What does the health status of our community look like?"
• Forces of Change Assessment	This assessment focuses on the identification of forces such as legislation, technology, and other impending changes that affect the context in which the community and its public health system operates. This answers the questions, "What is occurring or might occur that affects the health of our community or the state public health system?" and "What specific threats or opportunities are generated by these occurrences?"
Identify Strategic Issues	Once a list of challenges and opportunities has been generated from each of the four assessments, the next step is to identify strategic issues. During this phase, participants identify linkages between the MAPP assessments to determine the most critical issues that must be addressed for the community to achieve its vision.
Formulate Goals and Strategies	During this phase, participants take the strategic issues identified in the previous phase and formulate goal statements related to those issues. They, then, identify broad strategies for addressing issues and achieving goals related to the community's vision. The result is the development and adoption of an interrelated set of strategy statements.
The Action Cycle	The Action Cycle links three activities – planning, implementation, and evaluation. Each of these activities builds upon the others in a continuous and iterative manner. While the Action Cycle is the final phase of MAPP, it is by no means the "end" of the process. During this phase, the efforts of the previous phases begin to produce results, as the state public health system develops and implements an action plan for addressing priority goals and objectives. This is also one of the most challenging phases, as it may be difficult to sustain the process and continue implementation over time.

Figure 2. The Mobilizing for Action through Planning and Partnerships Model.[1]

[1] Source: National Association of County and City Health Officials, MAPP Project.

Overall Results

The results of the four MAPP assessments provided the foundation for setting the priorities that were developed by the State Public Health Improvement Plan Advisory Coalition. While not all of the significant health status or public health system challenges became priorities, they were considered during the priority setting process. The priorities that were established by the Coalition are listed below:

- Reduce heart disease and stroke morbidity, mortality, and associated risk factors.
- Reduce cancer morbidity, mortality, and associated risk factors.
- Expand health promotion capacity to deliver public health prevention programs and policies across the life span.
- Improve the integration of public health, behavioral health (mental health and substance abuse), environmental health, and primary health care services.
- Expand capacity to collect, analyze, and report health data.

The first two priorities relate to the health status of the population. Although heart disease and stroke deaths have decreased considerably in the decade of the 2000s, the lifetime diagnosis of high blood pressure and high cholesterol levels is rising. Also, the percentage of adults with diabetes has increased by 48 percent since 2001. All of these risk factors are directly linked to higher obesity levels which are rising at alarming rates. Between 2001 and 2010, obesity levels in Nebraska have increased from 20.7 percent to 27.5 percent.

A recent statewide survey also reinforced the problem of obesity as a major concern for Nebraskans. In response to the question of what do you think is the single most important health issue or health behavior that needs to be addressed in your community, over 24 percent of the 9,077 respondents indicated that overweight and obesity was the single most important health issue. Alcohol abuse was a distant second at 8.6 percent.

Although cancer deaths have declined gradually over the past decade, it is now the leading cause of death. Obesity levels and tobacco use are two of the major risk factors for cancer. While tobacco use is declining, the rates vary substantially based on the socioeconomic status. For example, upper income groups with high levels of education tend to smoke significantly less than their low income and lower educated counterparts. Also, screening levels for breast and colon cancer are considered low, especially in the rural areas of the state.

The other three priorities are focused on improving the effectiveness of the public health system as a whole. Building health promotion capacity reflects the growing emphasis on the importance of prevention programs and policies in addressing the high risk factors associated with heart disease, stroke, cancer, and other diseases. The most cost effective prevention programs and policies are evidence-based and are comprehensive across the life span.

The integration of public health, behavioral health, environmental health, and primary care reflects the changes that are occurring in the health care system. As the medical care system shifts from a focus on sick care to patient-centered care, there is a greater opportunity for public health with its emphasis on prevention and population health to collaborate with partners in behavioral health and primary care. This shifting focus has been reinforced by the goals of the Triple Aim (better health, better quality of care, and lower per capita costs) which were first introduced by the Institute for Healthcare Improvement (IHI).[2] These goals are the drivers of the new health care system and public health has the potential to play a key role in these new integrated efforts.

[2] More information about the Triple Aim can be found on the IHI website (http://www.ihi.org)

Finally, one of the key activities of an effective public health system is to collect, analyze, and report public health data. These activities are likely to become even more important in this new health care system that emphasizes improved quality of care and better health outcomes. Although the capacity of the current public health system has many strengths, the system must improve to take advantage of the new databases (e.g., syndromic surveillance data) and to meet national performance standards established by the Public Health Accreditation Board. The assessment of the public health system identified several areas where improvements are needed (e.g., workforce development, better analytical capacity, and more timely reporting).

Next Steps

The implementation of the MAPP model has produced three separate but integrated documents. The Nebraska Statewide Needs Assessment provided the foundation for the statewide Nebraska Public Health Improvement Plan and the results of this plan helped to shape the Strategic Plan for the Division of Public Health. The statewide Nebraska Public Health Improvement Plan is a blueprint for the state and the Strategic Plan identifies the strategic directions for the Division. The next steps are to begin implementing both plans, setting performance measures to monitor progress, and evaluate the impact on health outcomes as a result of these implementation efforts. All of these documents can be found on the DHHS website at http://dhhs.ne.gov/publichealth/Pages/puh_oph.aspx.

CHANGING POPULATION CHARACTERISTICS

Demographics

According to the U.S. Census, there were 1,826,341 persons living in Nebraska in 2010, an increase of 6.7 percent from the population in 2000. In comparison, the population of the United States was up 9.7 percent in 2010 from the previous census.

Population Changes by Age Group
Nebraskans aged 45 to 64 years experienced the greatest growth in population of any age group in the state during the past 10 years (+28.5%). They now account for 25.8 percent of the state's population.

The number of elderly Nebraskans (aged 85 and older) also showed strong growth, increasing by 15.8 percent between 2000 and 2010. In addition, the population of infants and young children (aged birth to 5 years) grew by 12.7 percent over the last decade.

The population of other age groups increased by less than 5.0 percent each and, in some cases, even decreased slightly.

Racial and Ethnic Minorities
Based on the U.S. Census, the minority population in Nebraska is growing much more rapidly than the white population of the state. Since 2000, the number of people who were classified as racial or ethnic minorities increased by 50.7 percent to 326,588 in 2010. In contrast, the non-Hispanic white population in Nebraska grew by only 0.4 percent over the 10-year period.

The Hispanic population was the fastest growing segment (+77.3%), followed by Asian Americans (+47.3%) in the state.

As of 2010, racial and ethnic minority residents comprised 17.9 percent of the population of Nebraska. There were 167,405 persons who identified themselves as Hispanic, accounting for 9.2 percent of the state's total population. African Americans made up 4.4 percent of the total, while smaller proportions of the population were Asian Americans (1.8%) or American Indians (0.8%).

Rural and Urban Trends
Much of the population is concentrated in the eastern third of the state, with the remainder of the state largely rural. In Nebraska, the population density was 23.8 people per square mile, compared to 87.4 nationwide in 2010.

In 2005, there were 28 "frontier" counties in Nebraska, each with a population density of <6 persons per square mile. By 2010, the number of frontier counties had increased to 34.

The population of the state continues to shift away from the rural counties to the metropolitan and micropolitan counties of the state. In 2010, the population living in the 9 metropolitan counties increased by 13.7 percent from 2000, while the population living in the 10 micropolitan counties increased by 3.1 percent. In contrast, the population living in the 74 rural counties decreased by 5.9 percent over the 10 year period.

One-fifth of the population of rural Nebraska counties (19.5%) was aged 65 or older in 2010, compared to only 10.8 percent in the metropolitan areas of the state.

Nebraska Population Characteristics (2000 vs. 2010)

	2000		2010		% Change in
	Population	% of Total	Population	% of Total	Population
Nebraska Total	1,711,263	100.0%	1,826,341	100.0%	6.7%
Gender					
Female	867,912	50.7%	920,045	50.4%	6.0%
Male	843,351	49.3%	906,296	49.6%	7.5%
Age					
Under 5 years	117,048	6.8%	131,908	7.2%	12.7%
5 - 14 years	252,379	14.7%	251,634	13.8%	-0.3%
15 - 24	255,240	14.9%	258,206	14.1%	1.2%
25 - 44	487,107	28.5%	466,014	25.5%	-4.3%
45 - 64	367,294	21.5%	471,902	25.8%	28.5%
65 - 84	198,242	11.6%	207,369	11.4%	4.6%
85 and older	33,953	2.0%	39,308	2.2%	15.8%
Race/Ethnicity					
White, NH	1,494,494	87.3%	1,499,753	82.1%	0.4%
African American, NH	67,537	3.9%	80,959	4.4%	19.9%
Native American, NH	13,460	0.8%	14,797	0.8%	9.9%
Asian/PI, NH	22,324	1.3%	32,885	1.8%	47.3%
Other, NH	1,327	0.1%	2,116	0.1%	59.5%
2+ Races, NH	17,696	1.0%	28,426	1.6%	60.6%
Hispanic*	94,425	5.5%	167,405	9.2%	77.3%
Minority	*216,769*	*12.7%*	*326,588*	*17.9%*	*50.7%*
Urban/Rural Status**					
Metropolitan Counties	942,503	55.1%	1,071,368	58.7%	13.7%
Micropolitan Counties	348,933	20.4%	359,772	19.7%	3.1%
Rural Counties	419,827	24.5%	395,201	21.6%	-5.9%

*Persons of Hispanic origin may be of any race.
**Metropolitan (9 counties) = county has a city with 50,000 or more residents or is metropolitan outlying county. Micropolitan (10 counties) = county has a city with 10,000 or more residents. Rural (74 counties) = largest city in county has less than 10,000 residents.
Source: U.S. Census

Household/Family Type
One-third of the more than 700,000 households in Nebraska have one or more children under age 18 years living in the home (>230,000 households).

Single-parent households are on the rise. In Nebraska, the proportion of family households headed by single parents increased from 23.9 percent in 2000 to 28.7 percent in 2010.

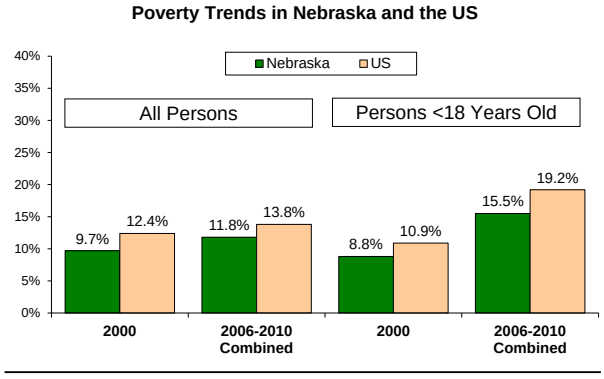
Educational Level of Nebraska Adults
Among persons aged 25 and older in Nebraska, 27.0 percent had obtained a bachelor's degree or higher, while 32.3 percent had some college or technical training, according to the 2010 U.S. Census. Three out of 10 adults in this age group (30.3%) had graduated from high school and 10.4 percent had less than a high school education. The pattern of educational attainment was similar nationwide.

Socioeconomic Trends

The median household income was $48,451 for Nebraska in 2010, very close to the U.S. median household income for that year ($49,445). Median incomes for Nebraska counties ranged from a low of $27,318 in Brown County to a high of $67,541 in Sarpy County.

Poverty
According to the American Community Survey and the U.S. Census Bureau, the poverty rate in Nebraska increased from 9.7 percent in 2000 to 11.8 percent in 2006-2010. The national rate was higher, increasing from 12.4 percent to 13.8 percent during this period.

An estimated 215,508 persons in Nebraska had incomes below the poverty level in 2006-2010 combined. Among children under age 18, 71,179 (15.5%) lived in poverty.



*Percentage below 100% of the federal poverty level
Sources: 2000 US Census (summary file 3); 2006-2010: American Community Survey (US Census)

Unemployment
According to the most recent information from the Nebraska Department of Labor, the state's seasonally-adjusted unemployment rate decreased to 4.0 percent in January 2012, down slightly from 4.3 percent in December 2010. Unemployment rates varied somewhat by county, ranging from a low of 2.3 percent in Banner County to a high of 8.8 percent in Thurston County in January.

Nebraska's rate was second-lowest of the 50 states and the District of Columbia and less than one-half the December 2011 rate for the United States overall (8.3%).

High School Graduation Rates
The method now being used to determine high school graduation rates is to estimate the proportion of public high school freshmen who graduate with a regular diploma 4 years after starting 9th grade, based on Current Population Survey data. Using this method, the "averaged freshman graduation rate" was 85.8 percent in Nebraska in 2010-2011.

National data are not yet available for comparison for this school year. However, Nebraska compared favorably to the nationwide rate of 75.5 percent in 2008-2009 (using the "old" method). Nebraska (82.9%) was one of 16 states with rates of 80 percent or greater for that school year.

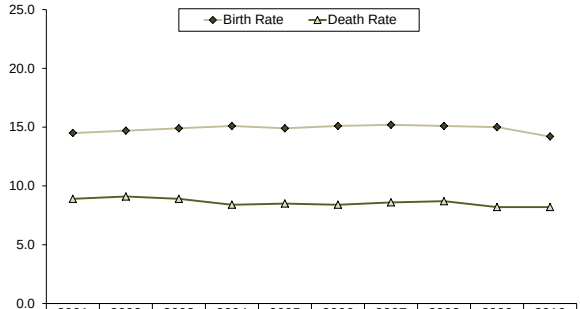
GENERAL HEALTH STATUS

Health Outcomes

Births

Overall, births and deaths in Nebraska have been fairly stable over the past 10 years. In 2010, there were 25,916 resident live births in Nebraska for a rate of 14.2 live births per 1,000 population. The number of births in 2010 decreased for the second year in a row and was the largest single-year decline since 1985-1986. The 2009 U.S. birth rate (13.5) was a little lower than the corresponding Nebraska rate (15.0).

Overall Birth and Death Rates in Nebraska (crude rate per 1,000 population), 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Birth Rate	14.5	14.7	14.9	15.1	14.9	15.1	15.2	15.1	15.0	14.2
Death Rate	8.9	9.1	8.9	8.4	8.5	8.4	8.6	8.7	8.2	8.2

Source: Nebraska Vital Records

Deaths

The number of Nebraska births exceeded the number of deaths in the state by more than 10,000 in 2010. A total of 15,171 deaths occurred among Nebraska residents that year, resulting in a crude mortality rate of 8.3 deaths per 1,000 residents. The 2010 total represents an increase of 2.5 percent in the number of deaths (from 14,803 deaths in 2009). The 2009 U.S. death rate (8.1) was slightly lower than the Nebraska rate for that year (8.7).

Leading Causes of Death in Nebraska

Nebraska's leading cause of death in 2010 was cancer, which accounted for 3,437 deaths (22.7% of all deaths in the state). This is the second consecutive year in which cancer has surpassed heart disease as the leading cause of death in Nebraska. This change is due largely to a substantial decrease in heart disease mortality.

Heart disease was the second leading cause of death among Nebraska residents in 2010, with 3,344 deaths, with the mortality rate for this cause declining by more than 25 percent since 2000. After heart disease and cancer, no other single cause of death comprised more than 10 percent of Nebraska resident deaths in 2010. Chronic lung disease, stroke, and accidents (unintentional injuries) ranked third through fifth in number of deaths.

Leading Causes of Death in Nebraska (2001 vs. 2010)

2001				2010			
Rank	Cause of Death	Number of Deaths	% of Total	Rank	Cause of Death	Number of Deaths	% of Total
1	Heart	4,151	27.4%	1	Cancer	3,437	22.7%
2	Cancer	3,389	22.3%	2	Heart	3,344	22.0%
3	Stroke	1,126	7.4%	3	Chronic Lung	903	6.0%
4	Chronic Lung	739	4.9%	4	Stroke	877	5.8%
5	Unintentional Injury	630	4.2%	5	Unintentional Injury	696	4.6%
6	Alzheimers	431	2.8%	6	Alzheimers	565	3.7%
7	Diabetes	400	2.6%	7	Diabetes	450	3.0%
8	Pneumonia	292	1.9%	8	Nephritis/Nephrosis	290	1.9%
9	Nephritis/Nephrosis	289	1.9%	9	Pneumonia	264	1.7%
10	Suicide	187	1.2%	10	Suicide	186	1.2%
	Nebraska Total	15,171	100.0%		*Nebraska Total*	15,171	100.0%

SOURCE: Nebraska Vital Records

Years of Potential Life Lost (YPLL)

Years of potential life lost (YPLL) is a measure of premature mortality. It is calculated by subtracting the age at death for those persons who died prior to a predetermined endpoint age (in this case, age 75). It is desirable to reduce YPLL since preventing deaths among younger persons is a major public health goal. In 2010, the 15,171 deaths occurring in Nebraska resulted in 102,488 YPLL, down 1.7 percent from 2001. However, the 2010 age-adjusted rate of 5,365.0 YPLL per 100,000 population was down 12.2 percent from the 2001 rate.

Among the leading causes of death, cancer had the greatest total YPLL (120,096), while all injuries combined had a high average YPLL per death (25.6). Birth defects resulted in the highest average YPLL per death (55.3).

Leading Causes of Years of Potential Life Lost (Before Age 75) in Nebraska, 2006-2010 Combined

Rank	Cause of Death	Total Deaths	Total YPLL	Average YPLL per Death
-	All Injury*	4,689	120,263	25.6
1	Cancer	17,053	120,096	7.0
2	Unintentional Injury	3,450	78,050	22.6
3	Heart Disease	17,075	70,024	4.1
4	Suicide	929	28,309	30.5
5	Birth Defects	344	19,024	55.3
6	Stroke	4,400	13,583	3.1
7	Homicide	310	13,905	44.9
8	Diabetes	2,273	12,545	5.5
9	Chronic Lung Disease	4,294	13,231	3.1
10	Pneumonia	1,500	5,840	3.9

Source: Nebraska Vital Records
*Includes unintentional injury, suicide, and homicide

Life Expectancy

Life expectancy at birth averaged 79.37 years in 2008, with females (81.65 years) expected to live longer than males (76.99 years) in Nebraska. In the United States, the most current data available (for 1998) show life expectancy of 73.8 for males and 79.5 for females. Comparable 1998 figures for Nebraska were 74.8 for males and 80.5 for females.

Health-Related Quality of Life

Health-related quality of life measures seek to determine how adults perceive their own health and how well they function physically, psychologically, and socially during their usual daily activities. These indicators are important because they can assess dysfunction and disability not measured by standard morbidity and mortality data.

General Health Ratings

In 2010, more than half of all adults in Nebraska said their general health was “excellent” or “very good” (56.2%). An additional 31.7 percent considered their health “good”. However, 12.0 percent rated it “fair” or “poor”, compared to the U.S. rate of 14.7 percent with fair or poor health.

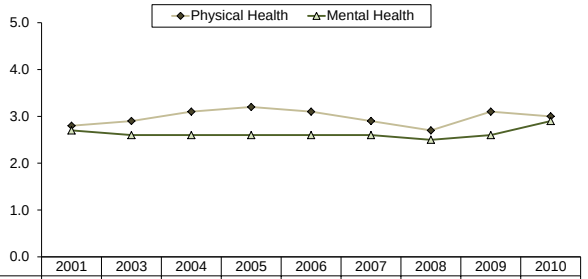
Over the last 10 years, prevalence of fair/poor health has remained stable in Nebraska and the United States.

Poor Physical/Mental Health Days

In Nebraska, the average number of poor physical health days in the past month (3.0 days) was nearly identical to the average number of poor mental health days (2.9 days) among adults in 2010.

Although these rates remained fairly steady for physical health over the 10-year period, the number of days when mental health was not good rose slightly from 2008 to 2010.

Average (mean) Number of Days among Adults, during past 30, in which Physical Health and Mental Health was Not Good*, 2001-2010



	2001	2003	2004	2005	2006	2007	2008	2009	2010
Physical Health	2.8	2.9	3.1	3.2	3.1	2.9	2.7	3.1	3.0
Mental Health	2.7	2.6	2.6	2.6	2.6	2.6	2.5	2.6	2.9

*Average number of days during the past 30 for which adults 18 and older report that (1) their physical health (illness and injury) was not good and (2) their mental health (including stress, depression, etc.) was not good
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Limited Activity Days

Respondents who reported in previous questions that either their physical or mental health or both were “not good” for one or more days in the past month were asked for how many days their activities were limited by these conditions. In 2010, Nebraska adults averaged 1.8 days in the last 30 days when their activities were limited due to poor physical and/or mental health. Adults nationwide in 2010 averaged slightly more days (2.3) of limited activities compared to Nebraska.

Health Care Access and Utilization

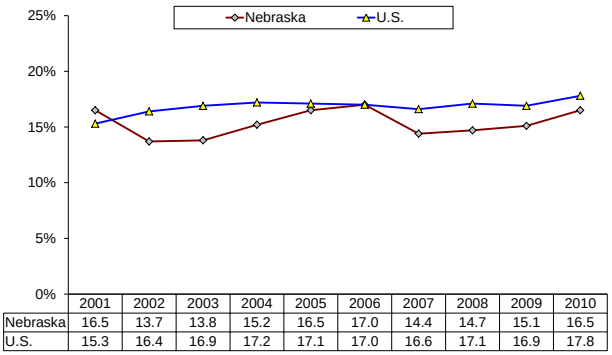
Persons with a primary care provider are more likely to have received appropriate preventive care, such as early prenatal care, immunizations, or health screening tests.

No Health Care Plan

Among 18- to 64-year-olds in Nebraska in 2010, 16.5 percent stated that they did not have any type of health care coverage (either private or public health insurance). From 1993 to 2000, the proportion of uninsured adults under age 65 remained fairly steady at 10 to 11 percent in Nebraska. Rates have been higher since then, ranging from 13.8 percent in 2003 to 17.0 percent in 2006.

The proportion of uninsured adults in the U.S. rose somewhat from 15.3 percent in 2001 to 17.8 percent in 2010.

No Health Care Coverage*, among Adults 18-64 year old, Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	16.5	13.7	13.8	15.2	16.5	17.0	14.4	14.7	15.1	16.5
U.S.	15.3	16.4	16.9	17.2	17.1	17.0	16.6	17.1	16.9	17.8

*Percentage of adults 18-64 year old who report that they do not have any healthcare coverage
Source: Behavioral Risk Factor Surveillance System (BRFSS)

No Personal Health Care Provider

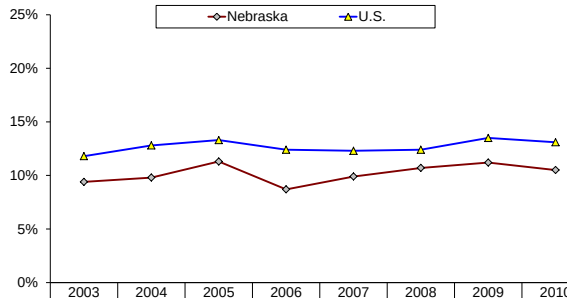
According to the Nebraska Behavioral Risk Factor Surveillance System (BRFSS), 14.5 percent of adults in 2010 said they do not have someone they consider their personal doctor or health care provider. This proportion has remained fairly stable since 2001. In the U.S. the proportion of adults with no personal physician decreased somewhat from 19.3 percent in 2001 to 16.7 percent in 2010.

Unable to See Doctor due to Cost

In 2010, 10.5 percent of adult Nebraskans reported that, at least once during the past 12 months, they had been unable to see a doctor due to potential cost of care. The percentage for year 2008-2010 was slightly higher than during years 2003-2007.

The national percentage (13.1%) was slightly higher than the Nebraska percentage (10.5%) in 2010.

Unable to See a Doctor due to Cost*, among Adults 18+, Nebraska and U.S., 2001-2010



	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	9.4	9.8	11.3	8.7	9.9	10.7	11.2	10.5
U.S.	11.8	12.8	13.3	12.4	12.3	12.4	13.5	13.1

*Percentage of adults 18 and older who report that there was a time during the past 12 months when they needed to see a doctor but could not because of the cost
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Hospitalizations

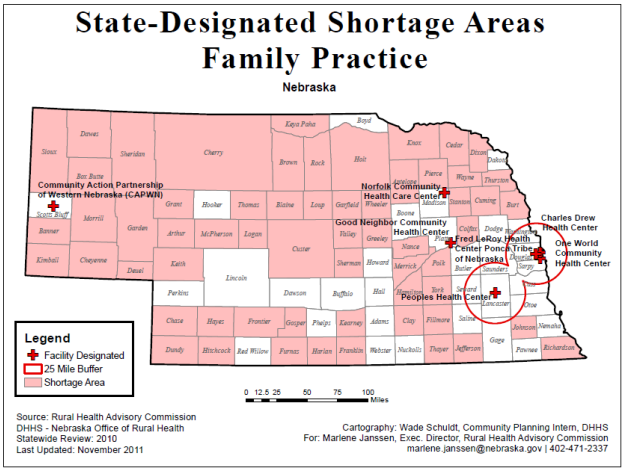
According to the Nebraska Hospital Discharge Data, the number of inpatient hospitalizations increased by 3.0 percent in Nebraska between 2006 (195,693) and 2010 (201,626).

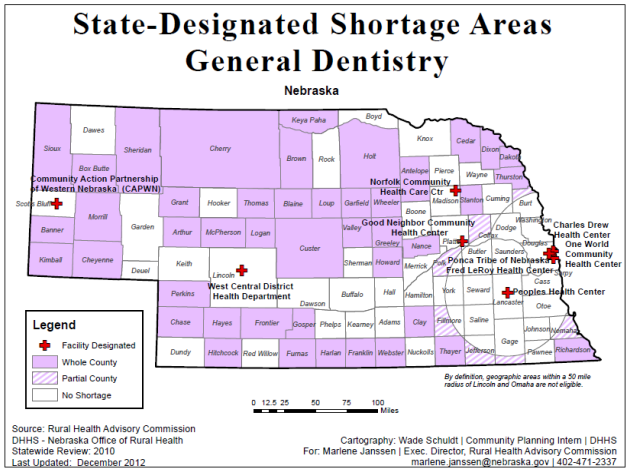
The most frequently occurring cause of hospitalizations in 2010 was related to births and care of the mother and infant (24.9%). Heart disease (8.8%), musculoskeletal conditions (6.5%), and mental illness (6.1%) were also frequent causes of hospitalization in Nebraska.

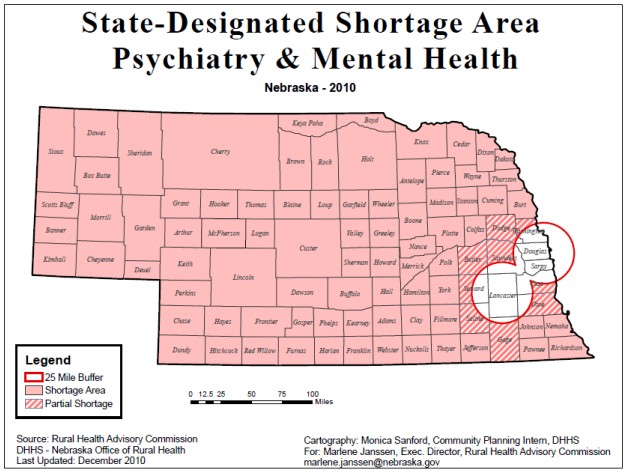
Shortage Area Designations

Access to physical health, mental health and dental services, especially specialty care, varies greatly across the state. Rural areas often have fewer health care resources so people must travel greater distances to reach health care providers. Since people tend to have greater need for health care as they age, access to health care services is likely to become more difficult in rural areas as the proportion of elderly in the population increases.

Much of the state has been designated as state or national shortage areas for specific physician specialties, for dentists, or for psychiatrists and mental health practitioners. In fact, for psychiatry and mental health practitioners, the entire state (with the exception of Lincoln and Omaha and their immediate surrounding areas) is a state-designated mental health shortage area. The maps below depict state-designated shortage areas.







CHRONIC DISEASE

Cardiovascular Disease (CVD)

Cardiovascular disease includes all diseases of the heart and blood vessels, including coronary heart disease, stroke, congestive heart failure, hypertensive disease, and atherosclerosis. CVD is a chronic disease, with an onset that often extends decades after exposure to one or more risk factors.

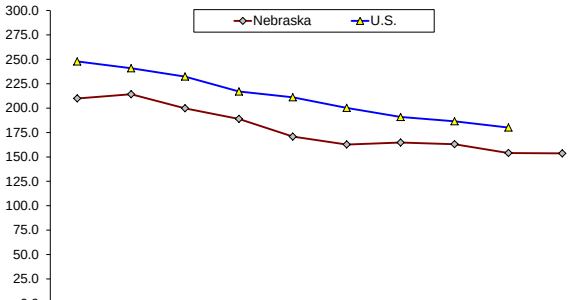
Heart Disease

Coronary heart disease (or coronary artery disease) is a narrowing of the small blood vessels that supply blood and oxygen to the heart (coronary arteries). Coronary heart disease usually results from the build-up of fatty material and plaque (atherosclerosis). As the coronary arteries narrow, the flow of blood to the heart can slow or stop. This disease can cause chest pain (stable angina), shortness of breath, heart attack, or other symptoms.

Mortality: There were 3,344 deaths due to heart disease in Nebraska during 2010, accounting for 22.0 percent of all deaths among Nebraska residents. After many years as the leading cause of death in the state, heart disease now ranks second. In 2009, cancer overtook heart disease as the leading cause of death in Nebraska. This shift is largely the result of a substantial decrease in heart disease mortality rather than changes in cancer mortality. In fact, the state's age-adjusted heart disease mortality rate declined from 209.9 in 2001 to 153.6 in 2010.

Nationwide, a similar trend was evident, with death rates due to heart disease declining by 27 percent from 247.8 in 2001 to 180.1 in 2009.

Heart Disease Death Rate per 100,000 population (age-adjusted), Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	209.9	214.2	199.8	188.9	170.8	162.7	164.7	163.0	154.0	153.6
U.S.	247.8	240.8	232.3	217.0	211.1	200.2	190.9	186.5	180.1	

Sources: Nebraska Vital Records; National Center for Health Statistics

Hospitalizations: With the exception of hospitalizations related to childbirth, heart disease was the leading cause of hospitalizations in Nebraska, with 17,670 recorded in 2010 (8.8% of the total).This translates into a crude rate of 96.8 hospitalizations per 10,000 Nebraskans.

Stroke

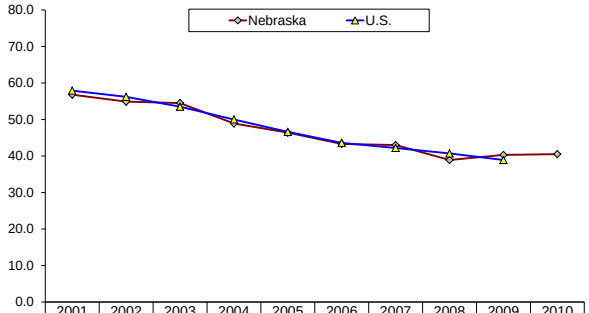
Stroke is another type of CVD. It affects the arteries leading to and within the brain. A stroke occurs when a blood vessel that carries oxygen and nutrients to the brain is either blocked by a clot or bursts. When that happens, part of the brain cannot get the blood and oxygen it needs, so brain tissue starts to die.

Mortality: Cerebrovascular disease (usually referred to as stroke) was the cause of 877 deaths in the state in 2010, or 5.8 percent of all deaths among Nebraska residents for the year.

Age-adjusted death rates due to stroke in Nebraska have declined from 56.8 in 2001 to 40.5 in 2010 (a decrease of 29%). As a result, stroke dropped from third to fourth in the rankings among leading causes of death in Nebraska beginning in 2008.

U.S. death rates due to stroke have experienced a similar decline, decreasing 33 percent from 57.9 in 2001 to 38.9 in 2009.

Stroke Death Rate per 100,000 population (age-adjusted), Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	56.8	54.9	54.5	48.9	46.4	43.3	43.0	38.9	40.3	40.5
U.S.	57.9	56.2	53.5	50.0	46.6	43.6	42.2	40.7	38.9	

Sources: Nebraska Vital Records; National Center for Health Statistics

Hospitalizations: Strokes accounted for 4,218 hospital discharges in Nebraska in 2010 (2.1% of the total), resulting in a hospitalization rate of 23.1 per 10,000 population.

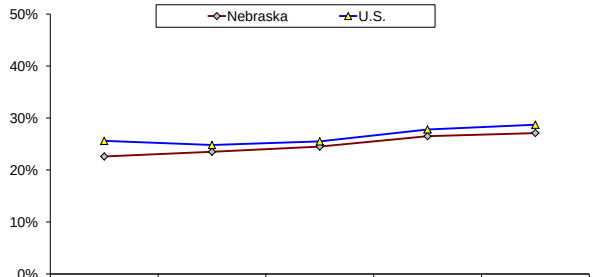
Risk Factors for Cardiovascular Disease

Risk factors for CVD include high blood pressure, smoking, high blood cholesterol, physical inactivity, unhealthy eating, being overweight or obese, and having diabetes.

High blood pressure (also referred to as hypertension) occurs when an individual has a systolic blood pressure of 140 mg/dL or higher or a diastolic blood pressure of 90 mg/dL or higher. Hypertension often goes undetected or is not properly controlled. According to the American Heart Association, 30 percent of Americans with high blood pressure are unaware that they have it. An additional 25 percent are on medication but their blood pressure is not under control.

In Nebraska and nationwide, prevalence of high blood pressure has increased in recent years. In Nebraska, the proportion of adults reporting they had ever been told by a health professional that they have high blood pressure increased from 22.6 percent of adults in 2001 to 27.1 percent in 2010, compared to an increase of 25.6 percent to 28.7 percent, respectively, among adults nationwide.

Ever Told they have High Blood Pressure*, among Adults 18+, Nebraska and U.S., 2001-2009



	2001	2003	2005	2007	2009
Nebraska	22.6	23.5	24.5	26.5	27.1
U.S.	25.6	24.8	25.5	27.8	28.7

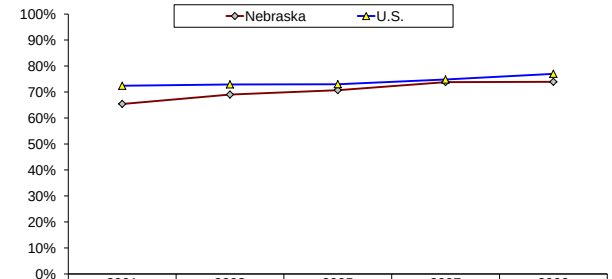
*Percentage of adults 18 and older who report that they have ever been told by a doctor, nurse, or other health professional that they have high blood pressure
Source: Behavioral Risk Factor Surveillance System (BRFSS)

The majority of adults who had been diagnosed with high blood pressure (79.3% in Nebraska and 79.2% in the U.S. in 2009) reported currently taking medication to control their hypertension.

High blood cholesterol is a major risk factor for coronary heart disease. Persons with elevated blood cholesterol levels (total cholesterol of 200 mg/dL or higher) are at increased risk of developing this disease. The National Institutes of Health recommend that blood cholesterol levels be checked at least once every five years in healthy adults. For many people with high cholesterol, diet and exercise alone are enough to bring it down to a satisfactory level. For the remainder, cholesterol-lowering drugs are available that may be effective.

In 2009, three-fourths of adults in Nebraska (73.9%) and in the U.S. (77.0%) had their blood cholesterol level checked in the past five years. Screening rates have increased in the state and the nation over the last 10 years. Though the gap has shrunk since 2001, the Nebraska rate continues to be slightly lower than the U.S. screening rate.

Current Cholesterol Screening*, among Adults 18+, Nebraska and U.S., 2001-2009

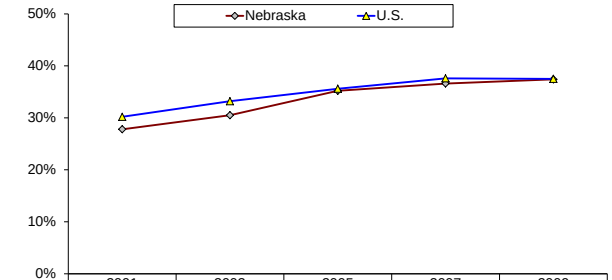


	2001	2003	2005	2007	2009
Nebraska	65.4	69.0	70.7	73.8	73.9
U.S.	72.4	72.9	73.0	74.8	77.0

*Percentage of adults 18 and older who report that they have had their blood cholesterol checked during the past five years
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Among those who ever had their cholesterol levels tested, an increasing proportion of adults were told by a health professional that it was high. In Nebraska, this rate rose by nearly 10 percentage points from 27.8 percent in 2001 to 37.4 percent in 2009. In the U.S., prevalence of elevated cholesterol also increased (from 30.2% in 2001 to 37.5% of adults in 2009).

Ever Told they have High Cholesterol, among Adults 18+ who have Ever Had it Checked*, Nebraska and U.S., 2001-2009



	2001	2003	2005	2007	2009
Nebraska	27.8	30.5	35.2	36.6	37.4
U.S.	30.2	33.2	35.6	37.6	37.5

*Percentage of adults 18 and older who report that they have ever been told by a doctor, nurse, or other health professional that they have high blood cholesterol, among those who have ever had it checked
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Diabetes

Diabetes is a chronic disease marked by elevated blood sugar levels caused by the body not producing or properly using insulin. Insulin helps glucose (sugar) to leave the blood and enter the body's cells. Type 1 diabetes occurs when the body does not produce insulin and is unable to provide the cells

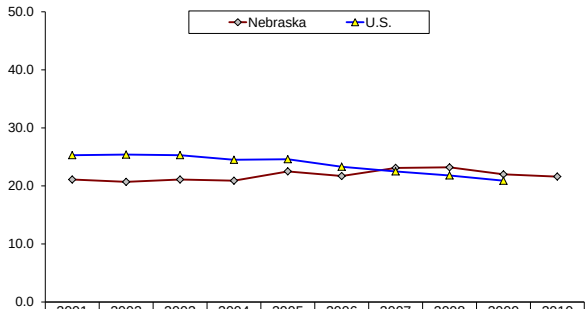
with the glucose they need to generate energy. About 5 to 10 percent of people with diabetes have type 1 diabetes. Type 2 diabetes develops when the body either does not make enough insulin or does not efficiently use insulin. About 90 to 95 percent of people with diabetes have type 2 diabetes.

Diabetes Mortality

Diabetes has been ranked among the top 10 leading causes of death in the United States since 1932, and it is now the nation's seventh leading cause of death. In recent years, over 70,000 deaths per year throughout the United States have been directly attributed to diabetes, and it has contributed to an additional 230,000 deaths per year.

Diabetes was the primary cause of 450 deaths in Nebraska in 2010, making it the seventh leading cause of death in Nebraska. Age-adjusted diabetes death rates in Nebraska increased significantly during the 1990's, but appear to have stabilized during the present decade with 21.6 deaths per 100,000 population in 2010. Since 2005, U.S. diabetes death rates have been similar to corresponding rates in Nebraska.

Diabetes Death Rate per 100,000 population (age-adjusted), Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	21.1	20.7	21.1	20.9	22.5	21.7	23.1	23.2	22.0	21.6
U.S.	25.3	25.4	25.3	24.5	24.6	23.3	22.5	21.8	20.9	

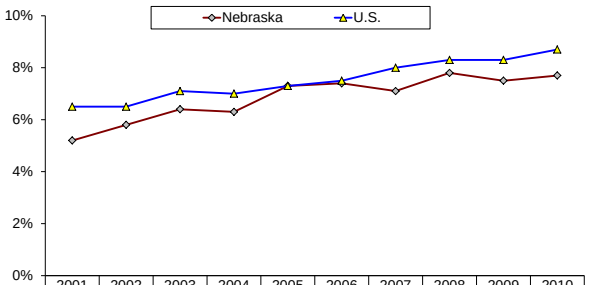
Sources: Nebraska Vital Records; National Center for Health Statistics

Prevalence of Diabetes

Prevalence of diagnosed diabetes among adults in Nebraska remained fairly constant at 4 to 5 percent between 1994 and 2001. Since then, prevalence has risen, reaching 7.7 percent in 2010. Based on the 2010 rate, more than 103,500 adult Nebraskans are estimated to have been diagnosed with this disease.

Among adults nationwide, 8.7 percent had been told by a physician or other health professional that they have diabetes. This rate is one percentage point higher than the Nebraska rate for 2010.

Ever Told they have Diabetes (excluding pregnancy)*, among Adults 18+, Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	5.2	5.8	6.4	6.3	7.3	7.4	7.1	7.8	7.5	7.7
U.S.	6.5	6.5	7.1	7.0	7.3	7.5	8.0	8.3	8.3	8.7

*Percentage of adults 18 and older who report that they have ever been told by a doctor that they have diabetes (excluding pregnancy)
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Risk Factors for Diabetes

Risk factors for developing diabetes include: family history of diabetes; history of gestational diabetes or giving birth to at least one baby weighing 9 lbs. or more; African American, Hispanic/Latino, American Indian, Native Hawaiian, or Pacific Islander heritage; physical inactivity; high blood pressure; being overweight or obese; being age 45 years or older; impaired glucose tolerance (IGT) and/or impaired fasting glucose (IFG); and low HDL cholesterol or high triglycerides.

Diabetes Management

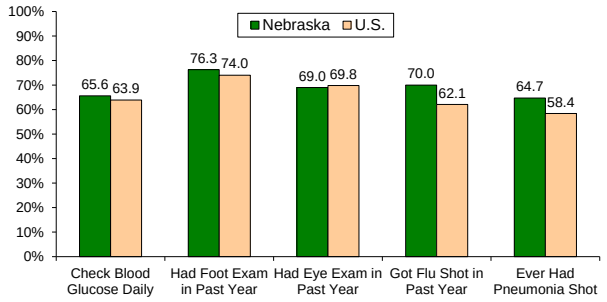
Factors like increasing age, age of onset of diabetes, and duration of diabetes all have an effect on health outcomes for persons with diabetes. Modifiable risk factors such as smoking, obesity, physical inactivity, hypertension and high cholesterol levels can also be addressed to improve the health of persons with diabetes.

In addition, the following good health practices are recommended to improve and maintain the health of persons with diabetes.

- Self-monitoring of blood glucose level at least once a day.
- Foot examination by a health professional to check for sores or irritations each year.
- Comprehensive dilated eye and visual exam each year.
- Immunizations for influenza (annually) and pneumonia.

In Nebraska in 2010, the majority of adults with diabetes (65.6%) reported checking their blood glucose level at least once a day. Three-fourths of Nebraska adults with diabetes had the recommended foot exam at least once in the past year (76.3%). Prevalence rates were stable in Nebraska and were similar to U.S. rates for these practices.

Diabetes Management Practices among Adults 18+ who have Ever been Diagnosed with Diabetes*, Nebraska and U.S., 2010



*Percentage of adults 18 and older with diagnosed diabetes (excluding pregnancy), who report self-monitoring their blood glucose at least once per day; receiving a foot exam and dilated eye exam by a health professional during the past year; receiving a flu vaccination during the past year; and having ever had a pneumonia vaccination.
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Prevalence of the comprehensive dilated eye exam declined among adults with diabetes in Nebraska from 80.6 percent in 2001 to 69.0 percent in 2010. For the U.S., rates were more stable and nearly matched the Nebraska rate in 2010 (69.8%).

In 2010, Nebraska adults with diabetes (70.0%) were more likely than their counterparts nationwide (62.1%) to have gotten a flu shot in the past year. Pneumonia immunization rates were somewhat lower than flu immunization rates for the state and the nation. However, the pneumonia immunization rate in Nebraska (64.7%) was higher than the U.S. rate (58.4%).

Cancer

Cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. If the spread is not controlled, it can result in death. Cancer is caused by both external factors (e.g., tobacco, infectious organisms, chemicals, and radiation) and internal factors (e.g., inherited mutations, hormones, immune conditions, and mutations that occur from metabolism). These causal factors may act together or in sequence to initiate or promote carcinogenesis. Ten or more years often pass between exposure to external factors and detectable cancer.

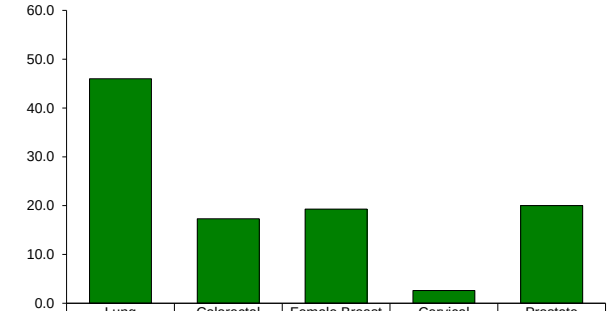
Cancer Mortality

Although declining gradually over the past decade, cancer overtook heart disease as the leading cause of death in 2009 and 2010 in Nebraska.

In 2010, there were 3,437 cancer deaths in Nebraska—nearly one-fourth of all deaths occurring among Nebraska residents that year (22.7%). The state's age-adjusted cancer mortality rate has declined from 184.0 deaths per 100,000 population in 2001 to 167.4 in 2010. The U.S. rate for cancer deaths has also decreased from 196.1 in 2001 to 175.8 in 2008.

Cancer of the lung was the leading cause of cancer deaths among both men and women in Nebraska, accounting for 928 deaths in 2010 (46.0 deaths per 100,000 population). Rates declined somewhat since 2001, both nationally and statewide.

Cancer Death Rates in Nebraska, by Type, per 100,000 population (age-adjusted), 2010



	Lung	Colorectal	Female Breast	Cervical	Prostate
Rate	46.0	17.3	19.3	2.6	20.0
# Deaths	928	358	225	24	167

Sources: Nebraska Vital Records

Colorectal cancer was Nebraska's second leading cause of cancer deaths overall in 2010, with 358 deaths (17.3 deaths/100,000). Age-adjusted rates have shown some decline since 2001 (20.0 in Nebraska). Nationwide, death rates due to colorectal cancer are slightly lower than the Nebraska rate and have followed a similar trend.

Breast cancer was the second leading cause of cancer deaths among Nebraska women, claiming 225 lives. Age-adjusted breast cancer mortality rates in the state decreased from 25.1 in 2001 to 19.3 in 2010. U.S. rates also moved downward between 2001 and 2008.

Prostate cancer accounted for 167 deaths among men in Nebraska in 2010, for an age-adjusted mortality rate of 20.0 per 100,000 men. These rates remained steady over the 10-year period. U.S. rates were similar with 22.0 prostate cancer deaths per 100,000 men in 2009.

Among Nebraska women, there were 24 deaths due to cervical cancer in 2010 (2.6 deaths per 100,000 women). This rate has been stable over the last decade and was similar to the national rate of 2.3 in 2009.

Hospitalizations Due to Cancer

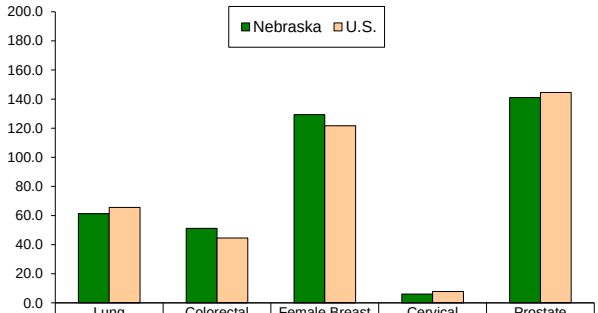
In Nebraska, there were 5,946 acute hospital discharges of persons with cancer in 2010 (3.0% of the total discharges for the year). However, it is

necessary to keep in mind that much of cancer care is now provided in outpatient settings.

Incidence of Cancer

In 2008, a total of 8,930 cases of cancer were recorded in Nebraska (an age-adjusted rate of 465.3 cases per 100,000 population). The most commonly diagnosed cancers (except cancers of the skin) among Nebraskans included cancers of the female breast (1,306 cases), prostate (1,248), lung and bronchus (1,170), and colon/rectum (1,001). Together, these cancers comprised 52.9 percent of all new cases diagnosed in 2008.

Cancer Incidence Rates, by Type, per 100,000 population, Nebraska and U.S., 2008



	Lung	Colorectal	Female Breast	Cervical	Prostate
Nebraska	61.3	51.2	129.3	6.1	141.1
U.S.	65.6	44.6	121.7	7.8	144.6

Sources: Nebraska Cancer Registry; National Center for Health Statistics

Incidence rates for cancer have remained stable or declined in Nebraska. Compared to the nation, Nebraska's age-adjusted incidence rates per 100,000 population were higher for colorectal cancer (51.2) and female breast cancer (129.3) in 2008. However, the incidence rate for lung cancer (61.3) was lower in Nebraska than nationwide.

Cancer Screening

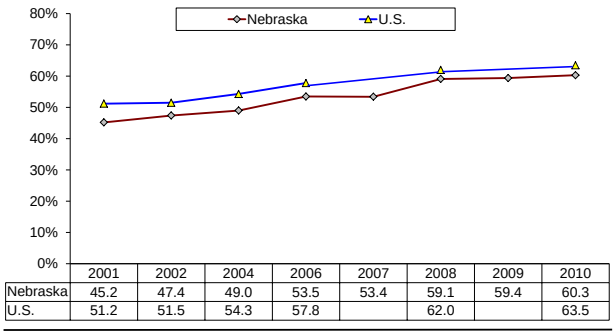
Regular screening examinations by a health care professional can result in the detection and removal of precancerous growths, as well as the diagnosis of cancers, at an early stage when they are most treatable.

Colorectal Cancer Screening: The U.S. Preventive Services Task Force recommends screening for colorectal cancer using fecal occult blood testing, sigmoidoscopy, or colonoscopy beginning at age 50 years and continuing until age 75 years.

Fecal occult blood testing (FOBT) checks for hidden blood in three consecutive stool samples. If this testing method is used, it should be administered every year. With flexible sigmoidoscopy, physicians use a flexible, lighted tube (sigmoidoscopy) to inspect visually the interior walls of the rectum and part of the colon. If this method is chosen, it should be done every five years. A colonoscopy is a similar procedure which permits inspection of the entire colon. If this method is used, it should be administered every 10 years.

In 2010, 60.3 percent of Nebraskans aged 50 to 75 reported they had a FOBT within the past year and/or a sigmoidoscopy/colonoscopy within the last 10 years. Prevalence of this testing increased from 45.2 percent in 2001 in Nebraska. Rates for adults nationwide experienced a similar increase (from 48.6% in 2002 to 65.3% in 2010). Despite the increase in Nebraska screening rates, national rates remain higher than comparable rates for Nebraska.

Current Colorectal Cancer Screening* among Adults 50-75, Nebraska and U.S., 2001-2010



	2001	2002	2004	2006	2007	2008	2009	2010
Nebraska	45.2	47.4	49.0	53.5	53.4	59.1	59.4	60.3
U.S.	51.2	51.5	54.3	57.8		62.0		63.5

*Percentage of adults 50-75 year old who report having had a FOBT during the previous year or a sigmoidoscopy or colonoscopy during the previous 10 years
Note: Nebraska added optional survey question in 2007 and 2009 not part of the core question for the U.S.
Source: Behavioral Risk Factor Surveillance System (BRFSS)

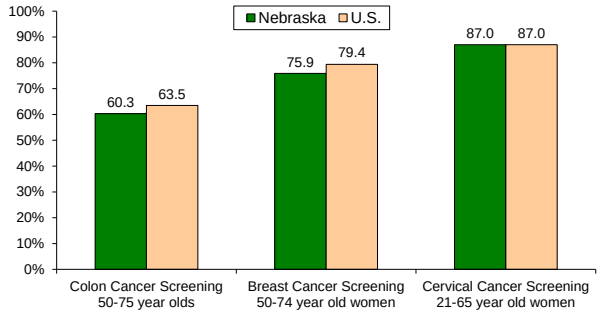
Breast Cancer Screening: Mammograms are considered the best method of detecting breast cancer early when it is easier to treat and before it is big enough to feel or cause symptoms. In 2009, the U.S. Preventive Services Task Force changed its breast cancer screening recommendations to mammograms every two years for women aged 50 to 74. The recommendations also stated that women aged 40 to 49 do not need to be screened routinely. (In 2002, the Task Force had recommended that women aged 40 years and older have a screening mammogram every one to two years, with or without a clinical breast exam).

Two-year screening rates for mammograms among Nebraska women aged 50 to 74 (75.9%) were lower than the nationwide rate of 79.4 percent in 2010. Nebraska rates were stable from 2001 to 2006, but declined between 2007 (81.1%) and 2010 (75.9%). A similar trend was noted in U.S. rates.

Cervical Cancer Screening: Pap tests are used to check for cell changes on the uterine cervix that could become cancerous if not treated appropriately. The American Cancer Society recommends that women should begin having Pap tests at age 21 and continue at three-year intervals through age 65.

In 2010, the majority of Nebraska women aged 21 to 65 (87.0%) reported having a Pap test in the past three years. This rate has decreased somewhat since 2002 when 91.7 percent of women in this age group stated they had this exam within the preceding three years. The national trend is similar.

Current Screening for Colorectal, Breast, and Cervical Cancer*, Nebraska and U.S., 2010



*Percentage of (1) adults 50-75 year old who report having a FOBT during the previous year or a sigmoidoscopy or colonoscopy during the past 10 years; (2) women 50-74 year old who report having a mammogram during the past 2 years; and (3) women 21-65 who report having a pap test during past 3 years
Source: Behavioral Risk Factor Surveillance System (BRFSS)

ARTHRITIS

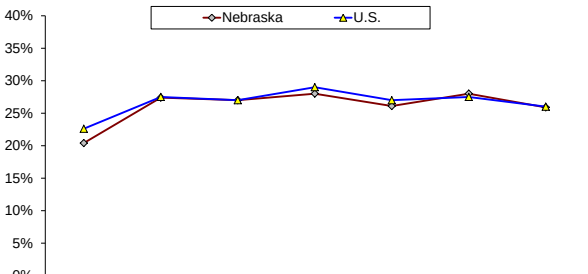
According to the National Institute of Arthritis and Musculoskeletal and Skin Diseases, arthritis and related conditions affect about 46 million Americans. By 2030, it is estimated that 67 million Americans will be affected by arthritis and one-third of these will have limited activity as a result of this condition.

Osteoarthritis is the most common type of arthritis, affecting about 26.9 million adults in the United States in 2005. It is characterized by deterioration of the cartilage cushioning the ends of the bones within the joint. The tissue lining of the joint can become inflamed, the ligaments looser, and muscles weaker, resulting in pain when the joint is used. Common symptoms of arthritis are: swelling in one or more joints; stiffness around the joints that lasts for at least one hour in the early morning; constant or recurring pain or tenderness in a joint; difficulty in using or moving a joint normally; and warmth or redness in a joint.

Prevalence: Arthritis affects a large number of people in Nebraska, with one in four adults having ever been diagnosed with this disease in 2009 (25.9%). Prevalence of diagnosed arthritis was similar nationwide at 26.0 percent in 2009.

More than one in 10 adults (11.2%) reported current activity limitations due to arthritis in 2009, which was similar to the U.S. overall at 11.9 percent. Trends were stable for Nebraska and the U.S. from 2002-2009.

Ever Told they have Arthritis*, among Adults 18+, Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2007	2009
Nebraska	20.4	27.4	27.0	28.0	26.1	28.0	25.9
U.S.	22.6	27.5	27	29	27	27.5	26.0

*Percentage of adults 18 and older who report that they have ever been told by a doctor or other health professional that they have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia
Source: Behavioral Risk Factor Surveillance System (BRFSS)

ASTHMA

Asthma is a chronic inflammatory disease of the airways that is characterized by recurring symptoms such as wheezing, breathlessness, chest tightness, and coughing. In persons with asthma, the airways are more responsive than normal to various stimuli, such as pollen, cigarette smoke, respiratory infections, or exercise. When exposed to these stimuli, the airways narrow or become obstructed, which results in respiratory symptoms.

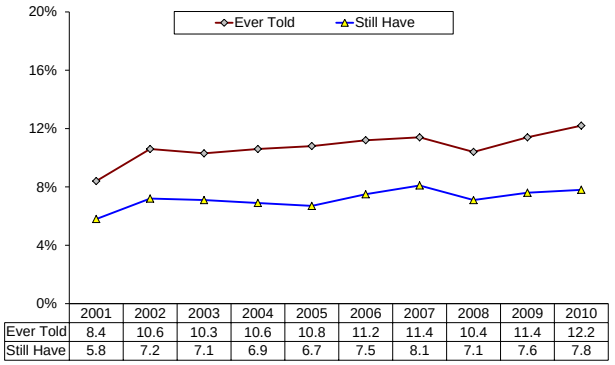
Asthma Mortality: Asthma is a serious health problem in the United States. In 2009, 3,388 people nationwide died from this disease. Asthma was the cause of 26 deaths in Nebraska in 2010.

Asthma Hospitalizations: In 2009, asthma was the cause of 479,300 hospitalizations and 1.9 million emergency department visits in the United States. Asthma resulted in more than 1,300 inpatient hospitalizations in Nebraska in 2010.

Prevalence of Asthma: According to CDC, the proportion of people with asthma in the United States has grown by nearly 15 percent over the last decade. In 2010, an estimated 18.7 million adults and 7 million children under age 18 in the United States had asthma.

In 2010, one in eight Nebraska adults (12.2%) reported having ever been told they have asthma, while 7.8 percent reported that they currently have asthma. Both of these rates are lower than the nation in 2010, 13.8 percent and 9.1 percent, respectively. Among Nebraska adults the trend in lifetime diagnosis of asthma has shown a gradual increase since 2001.

Lifetime and Current Asthma*, among Nebraska Adults 18+, 2001-2010

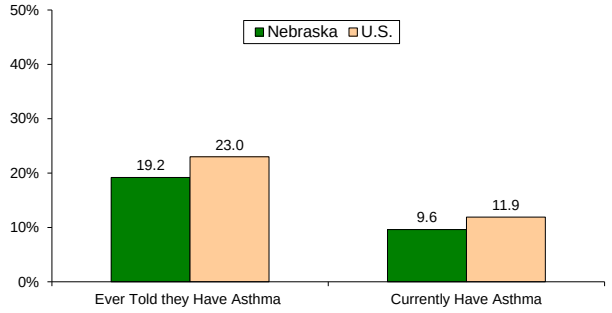


	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Ever Told	8.4	10.6	10.3	10.6	10.8	11.2	11.4	10.4	11.4	12.2
Still Have	5.8	7.2	7.1	6.9	6.7	7.5	8.1	7.1	7.6	7.8

*Percentage of adults 18 and older who report that they have ever been told by a doctor, nurse, or other health professional that they have asthma; and who report that they still have asthma
Source: Behavioral Risk Factor Surveillance System (BRFSS)

In 2011, one in five Nebraska high school students (19.2%) stated they have ever been told they have asthma, while 9.6 percent reported they currently have it. These rates are lower than 2011 U.S. prevalence estimates of 23.0 percent and 11.9 percent, respectively.

Lifetime and Current Asthma* among High School Students, Nebraska and U.S., 2011



*Percentage of high school students who reported that they have ever been told by a doctor or nurse that they have asthma; and who report that they still have asthma
Source: Youth Risk Behavior Survey (YRBS)

RISK AND PROTECTIVE FACTORS FOR CHRONIC DISEASE

Tobacco Use

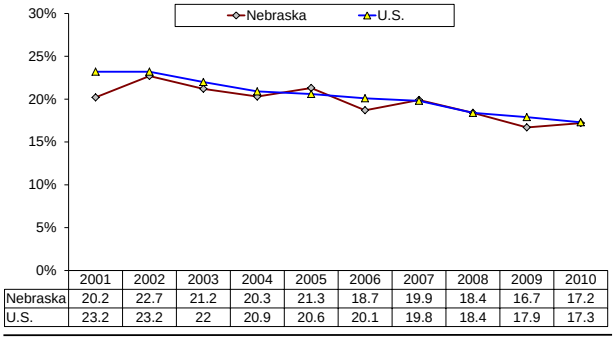
Tobacco use remains the single most preventable cause of disease and death in the United States today. An estimated 443,000 deaths result from cigarette smoking each year—about one-fifth of all deaths in this country. In addition, 8.6 million Americans have a serious illness caused by smoking. Secondhand smoke is responsible for an estimated 49,000 deaths among nonsmokers in the United States annually due to lung cancer, cardiovascular diseases and other causes.

In Nebraska each year, more than 2,200 adults die prematurely because of cigarette smoking. The economic costs of smoking are also substantial. Using 2004 Nebraska data, these costs were estimated using Smoking-Attributable Mortality, Morbidity, and Economic Costs statistical software from the Centers for Disease Control and Prevention (CDC). Smoking-related costs of medical care were estimated at $591 million annually in Nebraska, while the annual cost of smoking-related lost productivity in the state was estimated at an additional $500 million.

Prevalence of Tobacco Use among Adults
Cigarette Smoking: In 2010, 17.2 percent of Nebraska adults aged 18 and older and 17.3 percent of adults nationwide stated they currently smoke cigarettes. Based on these rates, it is estimated that more than 235,000 adults in Nebraska and over 40 million American adults are current smokers.

More than one-fifth of Nebraska adults reported currently smoking cigarettes during the first five years of the current decade (2001-2005). In 2006, prevalence dropped below 20 percent and has continued to decline over the last five-year period.

Cigarette Smoking* among Adults 18+, Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	20.2	22.7	21.2	20.3	21.3	18.7	19.9	18.4	16.7	17.2
U.S.	23.2	23.2	22	20.9	20.6	20.1	19.8	18.4	17.9	17.3

*Percentage of adults 18 and older who report that they currently smoke cigarettes (either every day or on some days)
Source: Behavioral Risk Factor Surveillance System (BRFSS)

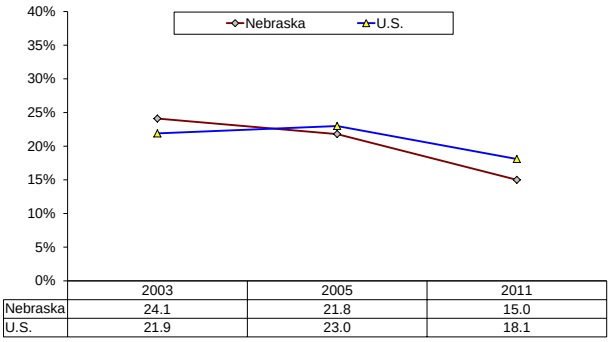
Smokeless Tobacco Use: Smokeless tobacco use among adults (5.3% in 2010) remained stable and was higher than the U.S. rate (4.0%).

Prevalence of Tobacco Use among Youth
Overall, 23.4 percent of Nebraska high school students in 2011 reported using tobacco products on one or more of the 30 days preceding the survey. That is, they smoked cigarettes or cigars or used chewing tobacco, snuff, or dip on one or more of the past 30 days. This rate is down from 30.8 percent in 2003.

Cigarette Smoking among Youth: In 2011, 15.0 percent of Nebraska high school students reported smoking cigarettes on one or more of the past 30 days. In 2011, 18.1 percent of high school students nationwide stated they smoked cigarettes during the last month.

The 2011 current smoking rate among Nebraska high school students represents a substantial decrease from 2003, when 24.1 percent said they smoked in the past month.

Smoked Cigarettes during the Past 30 Days*, among High School Students, Nebraska and U.S., 2003-2011



	2003	2005	2011
Nebraska	24.1	21.8	15.0
U.S.	21.9	23.0	18.1

*Percentage of high school students who reported smoking cigarettes on one or more of the past 30 days
Note: Nebraska data for years 2001, 2007, and 2009 were not representative due to low participation
Source: Youth Risk Behavior Survey (YRBS)

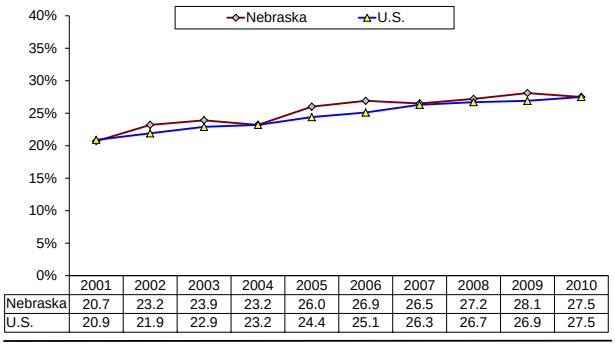
Smokeless Tobacco Use among Youth: In 2011, 6.4 percent of high school students in Nebraska used smokeless tobacco (chewing tobacco, snuff, or dip) in the past 30 days. In comparison, 7.7 percent of high school students nationally reported using these products in the past month in 2011.
The use of smokeless tobacco by Nebraska male youth has varied somewhat over the last 10 years, ranging from a high of 12.1 percent in 1999 to a low of 8.7 percent in 2005.

Obesity

Overweight and obesity are measured by an individual's body mass index (BMI) which is calculated as weight in kilograms divided by height in meters squared. Overweight (BMI=25.0-29.9) and obese (BMI=30.0+) individuals are at increased risk for many health conditions, including hypertension, type 2 diabetes, coronary heart disease, stroke, and some cancers. However, even modest weight loss (e.g., 5-10% of total body weight) is likely to produce health benefits.

Two-thirds of adult Nebraskans (64.9%) were overweight or obese in 2010. The proportion of adults who are at risk due to obesity has risen considerably in recent years, increasing by nearly 7 percentage points between 2001 and 2010 for both Nebraska and the nation. In 2010, 27.5 percent of persons aged 18 and older in the U.S. and in Nebraska reported heights and weights that placed them in the "obese" category.

Obesity* among Adults 18+, Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	20.7	23.2	23.9	23.2	26.0	26.9	26.5	27.2	28.1	27.5
U.S.	20.9	21.9	22.9	23.2	24.4	25.1	26.3	26.7	26.9	27.5

*Percentage of adults 18 and older with a body mass index (BMI) of 30.0 or greater, based on self-reported height and weight
Source: Behavioral Risk Factor Surveillance System (BRFSS)

According to the National Survey of Children's Health, 31.4 percent of Nebraska children aged 10 to 17 years were overweight or obese in 2007, up from 26.3 percent in 2003. About one-half of these children (15.8% of the total) were obese in 2007.

Nutrition

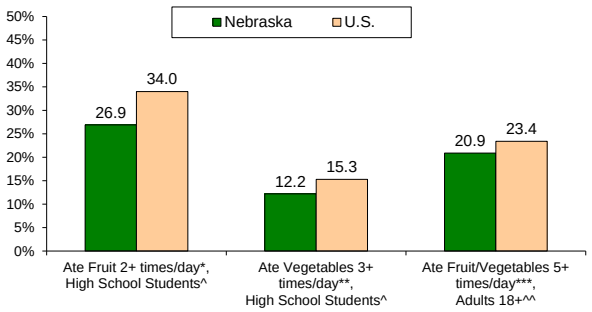
In 2010, the U.S. Department of Agriculture issued new guidelines for healthy eating for Americans. These guidelines seek to promote health, reduce the risk of chronic diseases, and reduce prevalence of overweight and obesity through improved nutrition and physical activity. Since more than one-third of children and two-thirds of adults in the United States are overweight or obese, the new guidelines emphasize reducing calorie consumption and increasing physical activity.

Using the new "My Plate" theme, the guidelines suggest that people "build a healthy plate" by consuming more fruits, vegetables, whole grains, fat-free and low-fat dairy products, and seafood. The new dietary guidelines also suggest that consumers cut back on foods that are high in saturated and trans fats, added sugars, salt, and refined grains.

Only about one-fifth of Nebraska adults (20.9%) consumed fruits and vegetables five or more times per day in 2009, compared to 23.4 percent nationwide. Very little change in these rates has occurred during the last 10 years, with Nebraska consistently lower than the U.S.

Among high school students, the proportion who reported consuming fruits and vegetables five or more times per day changed little between 2003 (16.3%) and 2011 (16.5%). When comparing fruit and vegetable consumption separately Nebraska high school students consumed less fruit and fewer vegetables than their counterparts nationally.

Fruit and Vegetable Consumption among High School Students and Adults, Nebraska and U.S.



*Percentage of high school students who reported eating fruit 2+ times per day during the past 7 days
**Percentage of high school students who reported eating vegetables 3+ times/day during the past 7 days
***Percentage of adults 18 and older who reported consuming fruits and vegetables 5+ times per day
^Youth Risk Behavior Survey (YRBS), 2011
^^Behavioral Risk Factor Surveillance System (BRFSS), 2009

Youth also consumed large amounts of sugar-sweetened beverages. During 2011, one-fourth of high school students in Nebraska (26.2%) drank sugar-sweetened soda an average of one or more times a day during the week preceding the survey. Nearly two-thirds (65.9%) said they drank any sugar-sweetened beverage an average of one or more times per day during the last seven days.

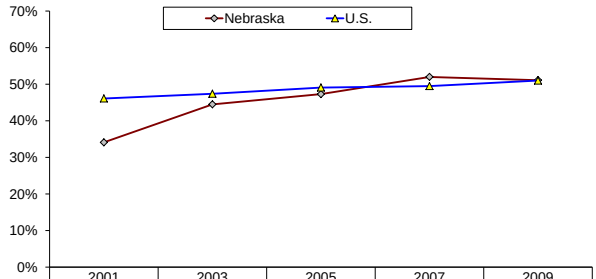
Physical Activity

Regular physical activity can help to control body weight and reduce the risk of cardiovascular disease, type 2 diabetes and some cancers. According to the 2008 Physical Activity Guidelines for Americans, adults aged 18-64 years should engage in muscle-strengthening activities on two or more days, plus 150 minutes per week of moderate physical activity or 75 minutes per week of vigorous physical activity or an equivalent combination of moderate and vigorous physical activity.

In Nebraska, the proportion of adults participating in recommended amount of physical activity using the old pre-2008 guidelines (moderate activity for 30 or more minutes per day on five or more days per week or vigorous activity for 20 or more minutes on three or more days per week) increased substantially between 2001 (34.1%) and 2009 (51.1%), according to the Nebraska BRFSS. The pre-2008 guidelines were used in this report since the majority of years being reported fell under these guidelines. In 2009, prevalence of this level of physical activity was nearly identical in the U.S. (51.0%) and Nebraska.

However, one in four adults in Nebraska (24.7% in 2010) reported no leisure-time physical activity. This proportion has changed little since 2001. A similar trend in evident nationwide, with 23.9 percent of adult Americans in 2010 stating they participated in no leisure-time physical activity in the past month.

Recommended Physical Activity (using pre-2008 guidelines)*, among Adults 18+, Nebraska and U.S., 2001-2009

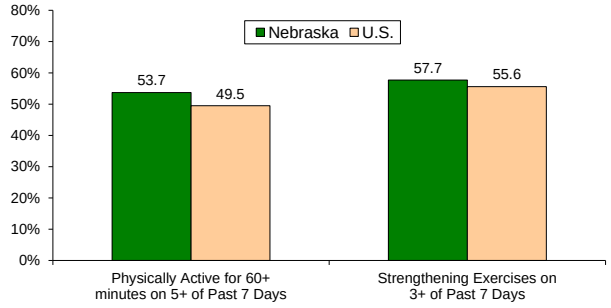


	2001	2003	2005	2007	2009
Nebraska	34.1	44.5	47.3	52.0	51.1
U.S.	46.1	47.4	49.1	49.5	51.0

*Percentage of adults 18 and older who report engaging in moderate physical activity for 30 or more minutes on 5 or more days per week and/or vigorous physical activity for 20 or more minutes on 3 or more days per week, during an average week (Note: Recommendation prior to 2008)
Source: Behavioral Risk Factor Surveillance System (BRFSS)

The 2008 Physical Activity Guidelines recommend that youth be physically active for 60 minutes or more daily. This should include exercises to strengthen muscles (e.g., push-ups, sit-ups, or weight lifting) at least three days a week. In 2011, 53.7 percent of Nebraska high school students reported an hour or more of physical activity on at least five of the past seven days. Similarly, nearly six in 10 students (57.7%) did exercises to tone or strengthen their muscles on three or more of the last seven days during 2011. Percentages for Nebraska students were slightly higher than the nation overall, 49.5 percent and 55.6 percent, respectively.

Physical Activity* among High School Students, Nebraska and U.S., 2011



*Percentage of high school students who reported that they participated in 60+ minutes of physical activity per day on 5+ of the past 7 days; and who reported that they did exercises to strengthen or tone their muscles (such as push-ups, sit-ups, weight lifting) on 3+ of the past 7 days.
Source: Youth Risk Behavior Survey (YRBS)

However, youth also spend a lot of time engaged in sedentary activities, with about one-half (50.1%) reporting spending three or more hours on an average school day watching TV, playing video games, or using the computer for non-school work.

INJURIES

According to the National Center for Injury Prevention and Control, injuries are the leading cause of death for people aged 1 through 44 in the United States. Injuries (both intentional and unintentional) are the cause of more than 180,000 deaths in the United States each year. The cost of injuries in the United States is more than $406 billion annually, including medical expenses and productivity losses, according to the Centers for Disease Control and Prevention.

Nationwide, injuries resulted in an average of 80.0 million ambulatory care visits to physician offices and to hospital outpatient and emergency departments annually in 2006-2007. According to the National Hospital Discharge Survey, there were more than 2.4 million inpatient hospital discharges due to injury in 2009.

Two-thirds of all injury deaths in the United States are due to unintentional injuries (i.e., those resulting from motor vehicle crashes, falls, residential fires, poisoning, and drowning, etc.). However, violent and abusive behaviors (such as suicides, homicides, assaults, child abuse and neglect, and domestic violence) are responsible for nearly all of the remaining injury deaths.

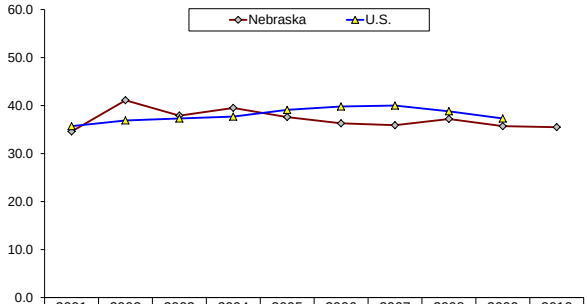
On average, more than two Nebraskans die each day as a result of an injury. In Nebraska there were 696 unintentional injury deaths, 186 suicides, and 58 homicides in 2010. Over the past five years, unintentional injuries ranked fifth as a leading cause of death in Nebraska, while suicides ranked tenth.

Deaths due to injury in 2006-2010 accounted for 120,263 years of potential life lost (YPLL) in the state. This translates into an average of 25.6 YPLL per death due to injury.

Unintentional Injuries

Deaths: In Nebraska, unintentional injuries accounted for 696 deaths in 2010, making it the fifth leading cause of death in Nebraska. However, these injuries ranked second in YPLL, averaging 22.6 YPLL per death, due to the relatively young age of many unintentional injury victims. The age-adjusted unintentional injury death rate in Nebraska remained relatively stable between 2001 and 2010 and was similar to the national rate.

Unintentional Injury Death Rate per 100,000 population (age-adjusted), Nebraska and U.S., 2001-2010

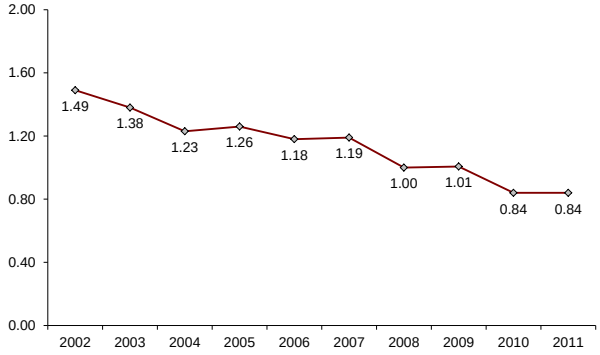


	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	34.6	41.1	37.9	39.5	37.6	36.3	35.9	37.2	35.7	35.5
U.S.	35.7	36.9	37.3	37.7	39.1	39.8	40	38.8	37.3	

Sources: Nebraska Vital Records; National Center for Health Statistics

Motor Vehicle Crashes: In 2011, there were 164 fatal motor vehicle crashes (0.84 fatal crashes per 100 million motor vehicle miles traveled). In 2010, 209 deaths resulted from motor vehicle crashes in Nebraska (an age-adjusted rate of 11.2 deaths per 100,000 population). Although the mortality rate for this cause of death is improving, it remains the most frequent cause of unintentional injury deaths.

Nebraska Fatal Motor Vehicle Crashes per 100 Million Vehicle Miles Traveled, 2002-2011



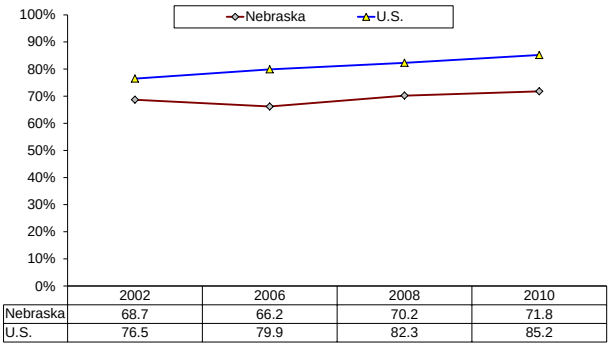
Source: Nebraska Department of Roads, Nebraska Office of Highway Safety

Injuries due to motor vehicle crashes were the cause of 1,005 hospitalizations in Nebraska in 2010 (a rate of 5.5 hospitalizations per 10,000 population).

Seatbelt Usage: Both adults and high school students in Nebraska are less likely to report seat belt use than their counterparts nationally.

Among Nebraska adults surveyed in 2010, 71.8 percent reported always wearing their seatbelt when driving or riding in a car, compared to 85.2 percent of adults nationwide, a 13.4 percentage point difference. Adult seatbelt usage has improved in recent years in Nebraska. However, the proportion of adults at risk due to lack of consistent seatbelt use remains high.

Always Wear a Seatbelt when Driving or Riding in a Car* among Adults 18+, Nebraska and U.S., 2002-2010



	2002	2006	2008	2010
Nebraska	68.7	66.2	70.2	71.8
U.S.	76.5	79.9	82.3	85.2

*Percentage of adults 18 and older who report that they always use a seatbelt when driving or riding in a car
Source: Behavioral Risk Factor Surveillance System (BRFSS)

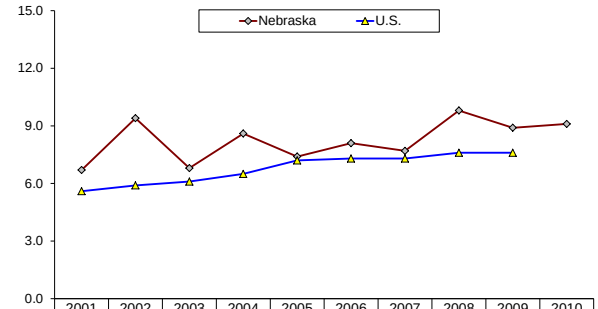
Among Nebraska high school students in 2011, 15.7 percent stated they rarely or never wear a seatbelt while riding in a car driven by someone else. Although this prevalence rate has improved over the decade, it still remains higher than the nationwide rate of 7.7 percent among high school students.

Distracted Driving: Nearly one-half of the high school students responding to the 2011 Youth Risk Behavior Survey in Nebraska (49.4%) said they talked on a cell phone while driving a motor vehicle at least once in the past 30 days.

Nearly as many (45.0%) stated that they had texted or e-mailed someone while driving one or more times in the past 30 days.

Falls: Falls were the second leading cause of unintentional injury deaths in Nebraska in 2010, with 199 deaths due to unintentional falls (an age-adjusted rate of 9.1 deaths per 100,000 population). The death rate due to falls has remained stable over the 10-year period (2001-2010). The Nebraska rate is higher than the national rate of 7.5 deaths due to falls per 100,000 in 2009.

Unintentional Fall Death Rate per 100,000 population (age-adjusted), Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	6.7	9.4	6.8	8.6	7.4	8.1	7.7	9.8	8.9	9.1
U.S.	5.6	5.9	6.1	6.5	7.2	7.3	7.3	7.6	7.6	

Sources: Nebraska Vital Records; National Center for Health Statistics

Falls are also the most common non-fatal injury in Nebraska, accounting for more than 5,000 hospitalizations in 2010 (an age-adjusted rate of 24.3 hospitalizations per 10,000 population).

Nearly one in 20 Nebraska adults aged 45 and older (4.8% in 2010) reported being injured due to a fall during the past three months. The U.S. rate was similar (5.2% in 2010). The proportion of adult Nebraskans aged 45 and older who reported falling and sustaining an injury during the last three months has gradually increased from 3.5 percent in 2003.

Intentional Injuries

Intentional injuries include those resulting from violent and abusive behaviors (such as suicides, homicides, assaults, child abuse and neglect, and domestic violence). Suicides will be discussed in the Mental Health section of this report.

Homicide: In 2010, there were 58 deaths in Nebraska resulting from homicide (an age-adjusted rate of 3.3 deaths per 100,000 population). This rate has been stable over the past 10 years. The Nebraska rate is lower than the U.S. rate of 5.5 in 2009.

Assault: According to E-code data, there were 318 hospitalizations in Nebraska resulting from assault in 2010 (an age-adjusted rate of 1.8 hospitalizations per 10,000 population).

MATERNAL AND CHILD HEALTH

The well-being of mothers, infants, and children is an important indicator of the overall health of a community, state or nation. It also determines the health of the next generation and can help predict future public health challenges for families, communities, and the health care system.

Approximately 26,000 babies are born every year in Nebraska. The health of these infants and their mothers can be improved by increasing women's access to quality preconception (before pregnancy), prenatal (during pregnancy) and interconception (between pregnancies) care. Moreover, early identification and treatment of health conditions among infants can prevent death or disability and enable children to reach their full potential.

At the individual level, many factors can affect pregnancy and childbirth, including preconception health status, maternal age, stress and poverty. Infant and child health are similarly influenced by these sociodemographic factors, but are also linked to the physical and mental health of parents and caregivers. Persistent racial and ethnic disparities in mortality and morbidity for mothers and children are also related to community-level factors such as availability of quality health care services and health insurance coverage.

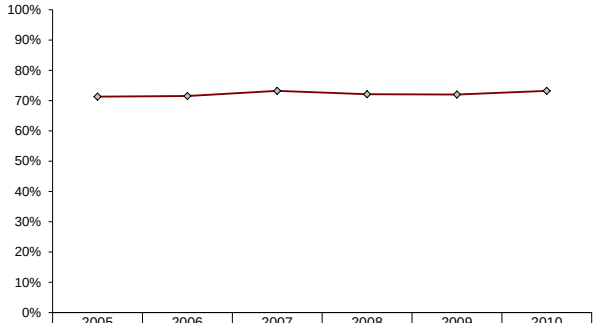
Births

In Nebraska, there were 25,916 live births in 2010. Overall, the crude birth rate has been fairly stable during the past decade, with a slight decline occurring in in 2009 and 2010 compared to previous years.

Prenatal Care: Early and continuing prenatal care is essential to the health and well-being of both infant and mother. There are three major components to prenatal care: risk assessment, treatment of medical conditions (or reduction of risks), and education of the pregnant woman regarding needed care and behavioral risks such as smoking or alcohol use.

Three-fourths (73.2%) of Nebraska mothers in 2010 initiated prenatal care in the first trimester, with this rate remaining stable since 2005.

First Trimester Prenatal Care in Nebraska*, 2005-2010



	2005	2006	2007	2008	2009	2010
Nebraska	71.3	71.5	73.2	72.1	72.0	73.2

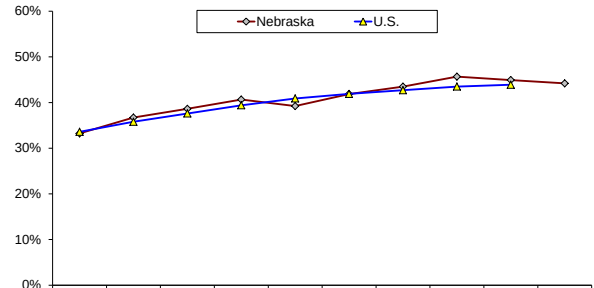
*The percentage of infants born to women receiving prenatal care beginning in the first trimester. Note that data reporting for this indicator changed from self-report to medical record in 2005.
Source: Nebraska Vital Records

Induction of Labor: Although there may be disadvantages to inducing labor in certain circumstances (particularly when it is elective), induction of labor has become more common in the United States over the last 20 years. In 2009, 23.3 percent of pregnant women (under age 35) in the U.S. had labor induced.

Labor was induced in 28.9 percent of Nebraska women under 35 years of age giving birth in 2009. This proportion has been stable over the 10-year period in Nebraska.

Caesarean Delivery: Among Nebraska pregnant women aged 35 and older, 44.2 percent of deliveries in 2010 were accomplished by caesarean section. This rate has been increasing in Nebraska over the last 10 years, with 33.2 percent of mothers in this age group delivering via C-section in 2001. The U.S. rate is similar (43.9% in 2009).

Caesarean Births among Women 35 and Older*, Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	33.2	36.7	38.6	40.7	39.2	41.9	43.5	45.7	44.9	44.2
U.S.	33.6	35.8	37.6	39.4	40.9	41.9	42.7	43.5	43.9	

*Percentage of live births delivered by caesarean section among women 35 and older.
Sources: Nebraska Vital Records; National Center for Health Statistics

Preterm and Low Weight Births

Preterm birth is the leading cause of neonatal deaths that are not associated with birth defects. In addition to increasing the infant's risk of death in its first few days of life, preterm birth and low birth weight can lead to devastating and lifelong disabilities for the child. Primary among these are visual and hearing impairments, developmental delays, and behavioral and emotional problems that range from mild to severe.

Preterm Births: Preterm births are those occurring before the 37th week of pregnancy. Modifiable risk factors associated with preterm delivery include: use of alcohol, tobacco, or other drugs during pregnancy; low pre-pregnancy weight; or low weight gain during pregnancy.

Another factor increasing the rate of premature births is the increase in multiple-fetus pregnancies. (Infants in these pregnancies tend to be born earlier and weigh less than singletons). Increasing use of fertility treatments that heighten the probability of twins, triplets, or other higher-order pregnancies have contributed to the number of preterm births. Women over age 35 are also at higher risk for preterm delivery due to greater prevalence of pre-existing health conditions such as high blood pressure.

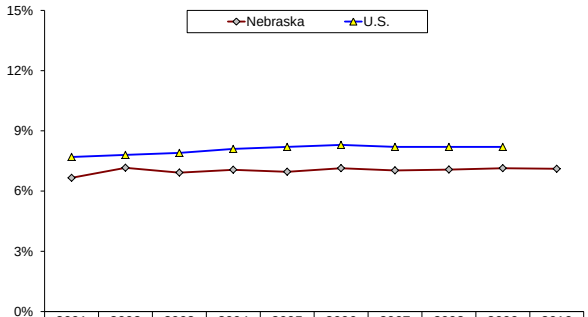
The proportion of Nebraska births that were preterm (9.7%) was lower in 2009 than the nationwide rate (12.2%). These Nebraska rates have been stable since 2001.

Low Weight Births: Infants are classified as low birth weight (LBW) infants if they weigh less than 2,500 grams (or 5 lb. 8 oz.) at birth. LBW infants include those born early (preterm deliveries) and those born at full term, but who are small for their gestational age (due to intrauterine growth retardation).

Risk factors associated with intrauterine growth retardation include: maternal low birth weight, prior LBW birth history, low pre-pregnancy weight, cigarette smoking, multiple births, and low pregnancy weight gain.

In 2009, the proportion of births that were low birth weight (7.1%) was lower in Nebraska than in the U.S. overall (8.2%). LBW rates have remained stable in Nebraska over the last decade.

Low Birth Weight Births*, Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	6.7	7.2	6.9	7.1	7.0	7.1	7.0	7.1	7.1	7.1
U.S.	7.7	7.8	7.9	8.1	8.2	8.3	8.2	8.2	8.2	

*Percentage of live births weighing less than 2,500 grams.
Sources: Nebraska Vital Records; National Center for Health Statistics

Unintended Births

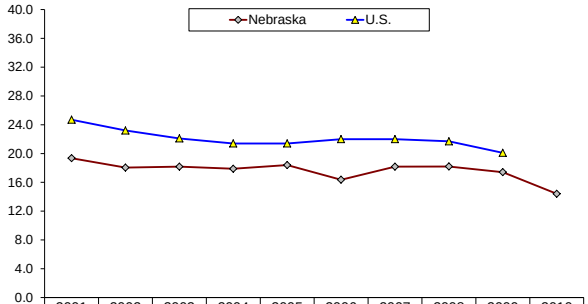
Women of all ages may have unintended pregnancies, but some groups (such as teenagers) are at higher risk. The CDC reported that 49 percent of all pregnancies in the United States were unintended in 2006. Among teens aged 19 and younger, four out of five pregnancies nationally were unintended.

Unintended pregnancy is associated with an increased risk of problems for mother and baby. Medically, if the pregnancy is not planned before conception, a woman may not be in optimal health for pregnancy and childbearing. In addition, a woman who is not planning to become pregnant might delay prenatal care that could affect the health of the infant.

The Pregnancy Risk Assessment Monitoring System (PRAMS) collects data from mothers who have recently given birth. According to this survey, 4 of every 10 births in Nebraska (39.9%) in 2009 were unintended at the time of conception. This rate has changed little over the past 10 years.

Teen Births: In 2010, there were 544 births in Nebraska among females 15 to 17 years old. The 2010 birth rate for these teens was 14.4 per 100,000 population, down from 19.4 in 2001. Although the 2009 U.S. birth rate for teens in this age group has also declined since 2001, it remains higher than the corresponding Nebraska rate (17.4 in 2009).

Teen Birth Rate among 15-17 year old females per 100,000 population, Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	19.4	18.0	18.2	17.9	18.4	16.4	18.2	18.2	17.4	14.4
U.S.	24.7	23.2	22.1	21.4	21.4	22.0	22.0	21.7	20.1	

Sources: Nebraska Vital Records; National Center for Health Statistics

Maternal Depression

Maternal (or postpartum) depression is depression that occurs after having a baby. According to a recent CDC survey, 11 percent to 18 percent of women reported having frequent depressive symptoms. According to the CDC, a variety of factors can impact new mothers and increase their risk of depression, including infertility, having multiple babies (e.g., twins, triplets), losing a baby, being a teen mom, or having pregnancy or birth complications.
Among new mothers responding to the 2009 PRAMS survey in Nebraska, 12.5 percent reported experiencing maternal depression. Prevalence of maternal depression has remained stable since 2004.

Breastfeeding

The American Academy of Pediatrics recommends breastfeeding as the best feeding choice for infants. Breastfeeding provides ideal nutrition for the first six months of life and is recommended to continue for the second six months, then as long as mutually desired. Even a few weeks or months of breastfeeding benefit the baby. Some of the benefits of breastfeeding for infants may include a lower risk of food allergies, colic and asthma, as well as reduced risk of SIDS.

Breastfeeding also benefits the mother by helping the uterus to return to normal size quickly and reduces bleeding after giving birth. In addition, breastfeeding may help some mothers lose weight. It also helps form a special bond between mother and infant.

According to PRAMS data, the proportion of infants who were still being breastfed at the age of six months has increased somewhat between 2000 (40.4%) and 2009 (43.8%) in Nebraska.

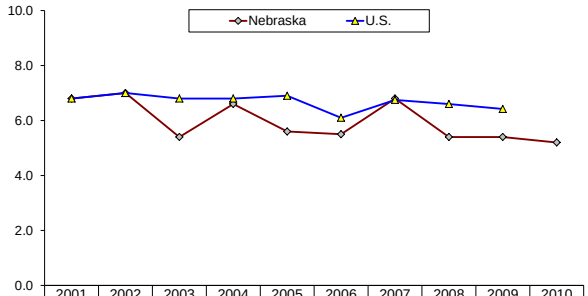
Infant Deaths

In addition to the impact it has on individuals and families, infant mortality is an important measure of a population's health and an indicator of social well-being. It reflects the overall state of maternal health and the quality and accessibility of primary health care that is available to pregnant women and infants.

In 2010, there were 136 deaths of infants less than 1 year old in Nebraska (5.2 deaths per 1,000 live births).This rate has gradually declined over the past 10 years from a high of 7.0 infant deaths per 1,000 live births in 2002.

Although the latest U.S. infant mortality rate (6.4 in 2009) was down slightly from 2001 (6.8), the 2009 Nebraska rate (5.4) was lower, as were most years from 2001 through 2009.

Infant Mortality Rate* per 1,000 Live Births Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	6.8	7.0	5.4	6.6	5.6	5.5	6.8	5.4	5.4	5.2
U.S.	6.8	7.0	6.8	6.8	6.9	6.1	6.8	6.6	6.4	

*Number of deaths to infants (less than 12 months old) per 1,000 live births
Sources: Nebraska Vital Records; National Center for Health Statistics

Preterm birth (occurring before 37 weeks gestation) and birth defects are the leading causes of neonatal deaths in Nebraska and the United States.

MENTAL HEALTH AND SUICIDE

According to the World Health Organization, in developed countries such as the United States, mental illnesses account for more disability than any other group of illnesses, including cancer and heart disease. The Centers for Disease Control and Prevention estimate that one-fourth of adults in the United States currently have a mental illness and nearly one-half will develop at least one mental illness during their lifetime.

The effects of mental illness range from minor disruptions in daily functioning to personal, social, and occupational impairments that can be incapacitating, and even lead to premature death.

Mental illness is also associated with increased morbidity from a number of chronic diseases, including cardiovascular disease, diabetes, cancer, asthma and obesity. Injury rates are two to six times higher for persons with a mental illness than they are for the overall population. This includes both unintentional injuries and intentional injuries (such as homicides and suicides). Mental illness also is associated with use of tobacco products and alcohol abuse, which are harmful to a person's health.

Suicide

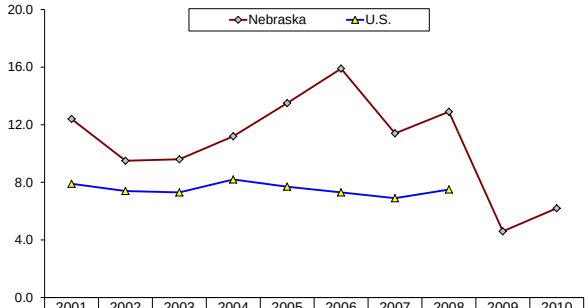
Suicide was the tenth leading cause of death in Nebraska during 2010, claiming 186 lives. This translates into a death rate of 10.1 per 100,000 population for the year. The U.S. rate was a little higher, at 11.8 per 100,000 in 2009.

Hospitalizations: In 2010 there were 4.7 hospitalizations due to self-inflicted injuries per 10,000 population in Nebraska. There were also 54,983 mental health treatment admissions among 21,829 Nebraska residents between July 2010 and June 2011.

Of those admissions, 2.9 percent were for attempted suicide. More than 2,400 people were taken into emergency protective custody as a result of being dangerous to themselves or to others.

Suicides and Suicide-Related Behaviors among Youth: Death rates due to suicide among Nebraska youth aged 15 to19 years increased from 9.5 deaths per 100,000 youth in 2002 to a high of 15.9 in 2006. Rates decreased somewhat in 2007 and 2008, then declined sharply to 4.6 in 2009 and 6.2 in 2010.

Suicide Death Rate among 15-19 year olds per 100,000 population, Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	12.4	9.5	9.6	11.2	13.5	15.9	11.4	12.9	4.6	6.2
U.S.	7.9	7.4	7.3	8.2	7.7	7.3	6.9	7.5		

Sources: Nebraska Vital Records; National Center for Health Statistics

Among Nebraska high school students, 21.0 percent had symptoms of depression during the past 12 months. One in seven (14.2%) reported considering suicide and one in thirteen (7.7%) actually attempted suicide, according to the Nebraska 2011 YRBS.

Although prevalence of past-year depression and suicide ideation declined among Nebraska high school students between 2003 and 2011, the proportion of students making suicide attempts remained stable over this period at about 8 to 9 percent each year.

Emotional Support and Life Satisfaction

Studies have shown associations between lack of social and emotional support and increased prevalence of depressive and/or anxiety symptoms, more days when physical health was not good, and more days when activities were limited due to poor health.

Although the majority of adults in Nebraska say they "always" or "usually" get the "social and emotional support they need", 7.3 percent of adults responding to the 2010 Nebraska BRFSS stated they "rarely" or "never" get this level of support.

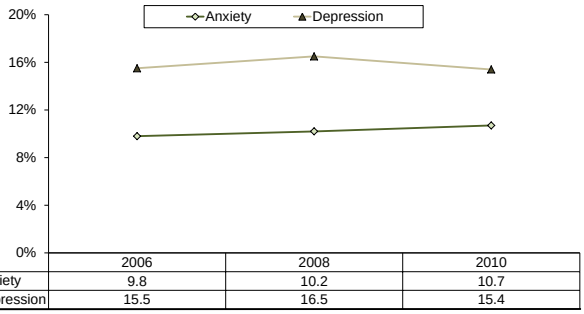
When asked to rate their satisfaction with their life, more than 90 percent of adult Nebraskans reported being "satisfied" or "very satisfied" with their lives. However, 4.0 percent said they were either "dissatisfied" or "very dissatisfied" with their lives.

Prevalence of Anxiety/Depression in Nebraska Adults

Anxiety in Adults: More than 16 million adults in the United States suffer from anxiety disorders, including panic disorder, obsessive-compulsive disorder (OCD), post-traumatic stress disorder (PTSD), social phobia, and generalized anxiety disorder.

In 2010, 10.7 percent of adults responding to the Nebraska BRFSS stated they had ever been told by a physician or other health care provider that they have an anxiety disorder. This prevalence rate has changed little since 2006.

Ever Told you have Anxiety* and Depression among Nebraska Adults 18+, 2006-2010**



	2006	2008	2010
Anxiety	9.8	10.2	10.7
Depression	15.5	16.5	15.4

*Percentage of adults 18 and older who report that they ever been told by a doctor or other healthcare provider that they have an anxiety disorder
**Percentage of adults 18 and older who report that they have ever been told by a doctor or other healthcare provider that they have a depressive disorder
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Depression in Adults: Depressive illness, including major depression, bipolar disorder, and dysthymia, is the most common mental illness, affecting more than 19 million Americans each year.

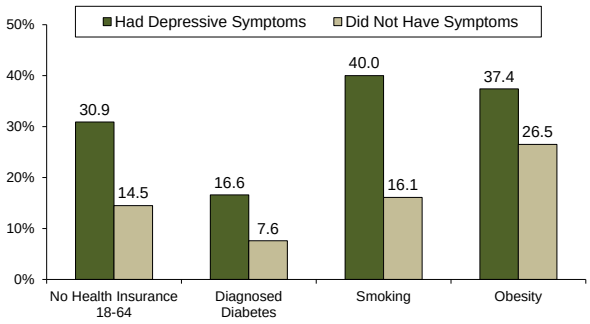
In 2010, 15.4 percent of adult Nebraskans said they had ever been diagnosed with a depressive disorder. Prevalence rates for depression among adult Nebraskans have been stable since 2006.

Nebraska BRFSS respondents were also asked a series of eight questions comprising a "depression scale". Based on their responses, 6.6 percent reported having clinically significant depressive symptoms during the past 14 days. Among adults with these depressive symptoms, only 43.0 percent said they had ever been told they have a depressive disorder. This finding suggests that a substantial proportion of adults with depressive symptoms are either not seeking care for them or are not being diagnosed with depression by their physician or other health care provider.

Depression in High School Students: According to the 2011 Youth Risk Behavior Survey (YRBS), 21.0 percent of Nebraska high school students reported that they "felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during the past 12 months" (i.e., were depressed). This rate has shown some improvement since 2003 and is lower than the national rate of 28.5 percent.

Co-Occurrence of Depressive Symptoms and Physical Health Issues among Adults: The presence of clinically-significant depressive symptoms in the past 14 days was strongly correlated with certain physical health risk factors for adults. For example, 40.0 percent of adults with depressive symptoms said they currently smoked cigarettes, while only 16.1 percent of those without depressive symptoms reported currently smoking cigarettes.

Relationship between Clinically Significant Depressive Symptoms in Past 14 Days* and Select Health Indicators, Adults 18+, 2008 and 2010 Combined (Age-Adjusted)



*Percentage of adults 18 and older reporting answers to eight depression questions that categorizes the respondent as having clinically significant depressive symptoms during the past 14 days
Source: Behavioral Risk Factor Surveillance System (BRFSS)

More than one-third (37.4%) of persons with depressive symptoms reported heights and weights that placed them in the obese category. Among respondents who did not have depressive symptoms, 26.5 percent were obese.

Depressed adults (30.9%) were also more likely than persons without these symptoms (14.5%) to lack health insurance.

Prevalence of diagnosed diabetes was also significantly higher among adults who were depressed (16.6%), compared to only 7.6 percent among those who did not have clinically significant depressive symptoms.

SUBSTANCE ABUSE

Alcohol Misuse

The CDC report that there were approximately 79,000 preventable deaths and 2.3 million years of potential life lost (YPLL) due to excessive alcohol consumption in the United States in 2005. Excessive use of alcohol is currently the third leading lifestyle-related cause of death for people in the United States each year.

According to the CDC, there were an average of 388 alcohol-related deaths annually in Nebraska between 2001 and 2005.

Alcohol was listed as the primary drug of choice in nearly 11,000 substance abuse treatment admissions in Nebraska between July 2010 and July 2011, accounting for 68.1 percent of all admissions. In addition, alcohol was listed as one the top three drugs of choice in 83.9 percent of all substance abuse treatment admissions during this time period.

Alcohol-Related Injuries and Deaths: Alcohol abuse is associated with injuries and deaths due to motor vehicle crashes, falls, fires and drowning. Alcohol abuse is also a factor in a substantial proportion of homicides, suicides, domestic violence, and child abuse and neglect cases. Long-term heavy drinking can lead to heart disease, cancer, alcohol-related liver disease, and pancreatitis. Alcohol use during pregnancy is known to cause fetal alcohol syndrome, a leading cause of mental retardation.

According to the Nebraska Trauma Registry, 7.9 percent of all trauma center admissions in the state in 2010 (from the seven lead trauma hospitals) involved patients with a blood alcohol content of 0.08 percent or higher at the time of admission, the level at which someone is legally intoxicated. This rate has declined somewhat over the last five-year period.

Alcohol was involved in nearly one-third (32.2%) of all fatal motor vehicle crashes in Nebraska in 2011. This proportion has remained stable since 2001. However, in terms of alcohol-related fatal crash rates per 100 million vehicle miles traveled, there has been some improvement over the last 10 years. In 2011, there were 0.27 fatal alcohol-related crashes in Nebraska per 100 million miles traveled.

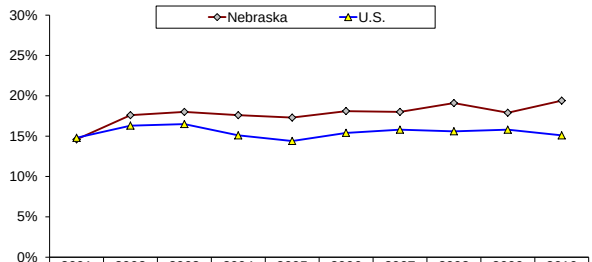
Alcohol Use – Adults: In 2010, 59.0 percent of adults responding to the Nebraska BRFSS reported consuming at least one drink of an alcoholic beverage (such as beer, wine, wine coolers, liquor or cocktails) during the past month. This rate has remained stable over the last 10 years. The proportion of adults who described patterns of consumption indicating abuse of alcohol was much smaller. However high-risk alcohol use, such as binge drinking and alcohol-impaired driving, is more common among adults in Nebraska than among adults nationally. Trends are stable for alcohol use but are decreasing for alcohol-impaired driving.

Binge Drinking – Adults: Binge drinking is defined here, for men, as five or more drinks of alcohol (beer, wine, wine coolers, cocktails, or liquor) during one occasion, one or more times during the past 30 days. For women, four or more drinks of alcohol on an occasion is considered binge drinking. Prior to 2006, binge drinking was defined as five or more drinks among both genders.

In 2010, 19.4 percent of adults in Nebraska reported binge drinking at least once in the past month. Prevalence has remained stable during the last 10 years.

The proportion of adults nationwide who reported binge drinking in the month prior to the survey was smaller, at 15.1 percent in 2010.

Binge Drank during the Past 30 Days* among Adults 18+, Nebraska and U.S., 2001-2010

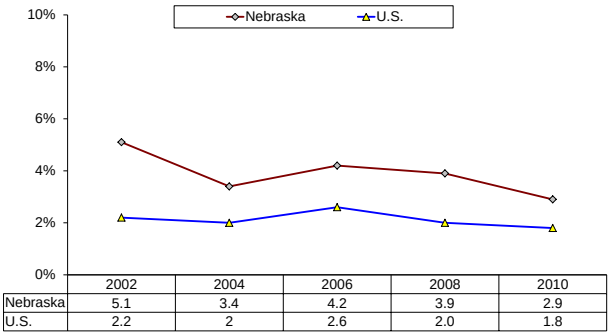


	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	14.6	17.6	18.0	17.6	17.3	18.1	18.0	19.1	17.9	19.4
U.S.	14.8	16.3	16.5	15.1	14.4	15.4	15.8	15.6	15.8	15.1

*Percentage of adults 18 and older who report having five or more drinks for men/four or more drinks for women on at least one occasion during the past 30 days. (*Note: prior to 2006 the definition consisted of five or more drinks among both genders)*
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Drinking and Driving – Adults: Binge drinking was much more prevalent than drinking and driving among survey respondents in Nebraska. In 2010, only 2.9 percent of adults said they drove a motor vehicle after drinking alcohol in the month prior to the survey. The rate of drinking and driving among Nebraska adults has decreased since 2002 when 5.1 percent reported driving after drinking alcohol. However, alcohol-impaired driving remains more prevalent in Nebraska than nationwide (1.8%).

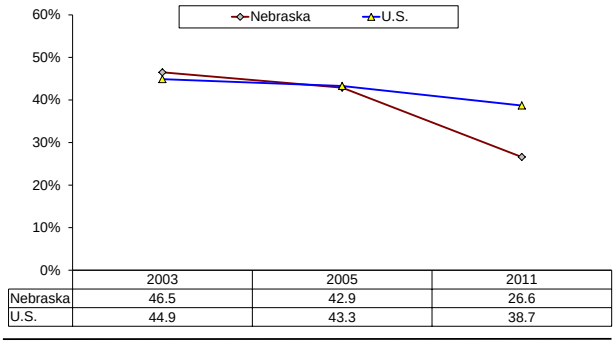
Alcohol Impaired Driving during the Past 30 Days* among Adults 18+, Nebraska and U.S., 2001-2010



	2002	2004	2006	2008	2010
Nebraska	5.1	3.4	4.2	3.9	2.9
U.S.	2.2	2	2.6	2.0	1.8

*Percentage of adults 18 and older who report driving after having had perhaps too much to drink during the past 30 days
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Drank Alcohol during the Past 30 Days*, among High School Students, Nebraska and U.S., 2003-2011



	2003	2005	2011
Nebraska	46.5	42.9	26.6
U.S.	44.9	43.3	38.7

*Percentage of students who reported having at least one drink of alcohol on one or more of the past 30 days
Note: Nebraska data for years 2001, 2007, and 2009 were not representative due to low participation
Source: Youth Risk Behavior Survey (YRBS)

Alcohol-related Arrests: "Driving under the influence" (DUI) is the leading arrest offense in Nebraska. According to the Nebraska Crime Commission, 15.0 percent of all arrests reported to the Commission were the result of driving under the influence of alcohol in 2010. This amounts to 12,614 arrests for DUI in 2010, with the number increasing over the past 10 years.

In addition to the arrests for DUI, the Nebraska Crime Commission reported 10,636 arrests for non-DUI alcohol-related offenses (12.7% of total arrests) in 2010. This percentage has remained stable over the 10-year period.

Alcohol Use – High School Students: High school students in Nebraska were also surveyed as to their use of alcohol and drugs via the Youth Risk Behavior Survey. Trend data for all of the alcohol-related indicators showed improvement in these behaviors for Nebraska youth since 2003. In addition, rates for Nebraska youth are generally lower than corresponding 2011 national rates. However, Nebraska youth have traditionally had higher rates of alcohol use compared to youth nationally, especially during the early 1990s.

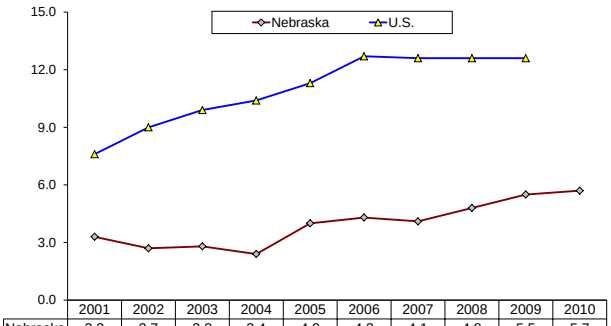
In the 2011 school year, 60.6 percent of students in grades nine through 12 reported having ever drunk alcohol. More than one-fourth of Nebraska high school students (26.6%) reported drinking alcohol during the past 30 days. Prevalence of current drinking has improved substantially since 2003, when 46.5 percent reported this behavior.

A much smaller proportion (7.2%) reported driving after drinking during the last 30 days. This rate has also improved from the 2003 YRBS, when 20.9 percent of high school students stated they drove after drinking alcohol.

Drug Use

Deaths and Trauma Related to Drug Use: The drug-induced death rate in Nebraska increased steadily between 2002 and 2010, with 98 deaths from this cause reported in 2010 (an age-adjusted rate of 5.7 deaths per 100,000 population). The U.S. rate (12.6) was more than double the Nebraska rate (5.5) in 2009. Experts believe that this increase is most likely driven by rising numbers of opioid analgesic overdose deaths (i.e., prescription drug abuse).

Drug-Induced Death Rate per 100,000 population (age-adjusted), Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	3.3	2.7	2.8	2.4	4.0	4.3	4.1	4.8	5.5	5.7
U.S.	7.6	9.0	9.9	10.4	11.3	12.7	12.6	12.6	12.6	

Sources: Nebraska Vital Records; National Center for Health Statistics

The Nebraska Trauma Registry reports that, in 6.8 percent of admissions to the seven lead trauma centers in 2010, the patient had an illicit drug (not including opiates) in their system at the time of admission.

Marijuana: According to the National Survey on Drug Use and Health, marijuana is the most commonly used illicit drug in Nebraska, with 5.9 percent of all persons aged 12 and older reporting use during the past month in 2009/2010. The U.S. rate for that period was slightly higher (6.8%).

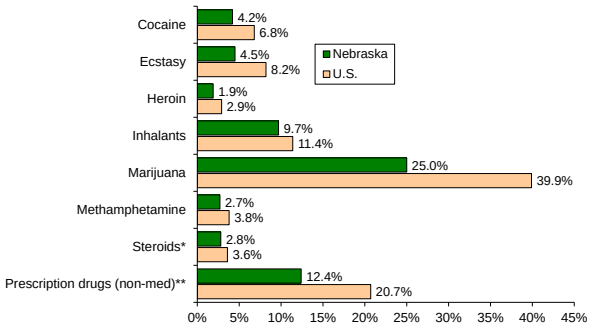
Among Nebraska high school students responding to the YRBS in 2011, 12.7 percent stated they had used this drug in the past 30 days. This prevalence rate represents a decrease from 18.3 percent in 2003. Nationwide, prevalence was much higher at 23.1 percent in 2011.

Marijuana is the most common drug of choice (excluding alcohol) in substance abuse treatment admissions, accounting for 10.8 percent of all "first choices". This drug was listed as one of the top three drugs of choice for 35.0 percent of persons admitted to substance abuse treatment programs.

Any Illicit Drug: According to the 2009-2010 National Survey on Drug Use and Health, 7.0 percent of persons aged 12 and older in Nebraska reported using "any illicit drug" during the past month. This rate has been stable since 2002. The 2010 national rate was higher at 8.9 percent.

According to the 2011 Nebraska YRBS, the most common drugs reported by Nebraska high school students during their lifetime were: marijuana (25.0%), inhalants (9.7%), ecstasy (4.5%), and cocaine/crack (4.2%). Less than 3 percent each mentioned ever using steroids, methamphetamine, or heroin. The proportion of high school students ever using each of these drugs was higher for the U.S. than for Nebraska.

Lifetime Illicit Drug Use among High School Students, Nebraska and U.S., by Drug Type, 2011



*Includes steroid pills or shots taken without a doctor's prescription
**taking a prescription drug (such as OxyContin, Percocet, Vicodin, codeine, Adderall, Ritalin, or Xanax) without a doctor's prescription
Source: Youth Risk Behavior Survey (YRBS)

According to the Magellan Treatment Database, as a percentage of all treatment admissions, admissions for cocaine and methamphetamine are decreasing in Nebraska. Admissions for non-heroin opioids are increasing.

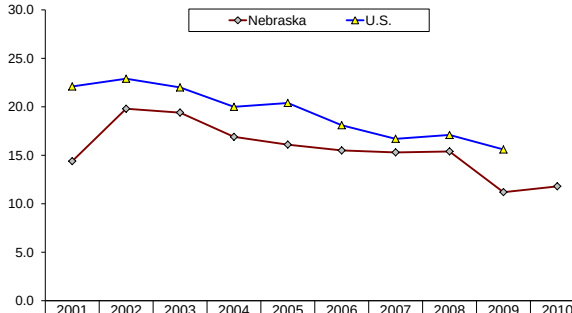
Prescription Drugs: In the 2011 YRBS, 12.4 percent of Nebraska high school students said they had ever used prescription drugs for non-medical reasons. This category includes opioid analgesics available by a physician's prescription. In comparison, 20.7 percent of youth nationwide reported ever taking a prescription drug without a doctor's prescription.

COMMUNICABLE DISEASE

Influenza and Pneumonia

Mortality: Pneumonia was the ninth leading cause of death in Nebraska in 2010, claiming 264 lives and accounting for 1.7 percent of all deaths in the state that year. Nationwide, there were 50,774 deaths due to pneumonia in 2009. The death rate for pneumonia has declined in Nebraska and the U.S. over the period from 2001-2010, with Nebraska having a slightly lower rate than the nation as a whole.

Pneumonia Death Rate per 100,000 population (age-adjusted), Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	14.4	19.8	19.4	16.9	16.1	15.5	15.3	15.4	11.2	11.8
U.S.	22.1	22.9	22	20	20.4	18.1	16.7	17.1	15.6	

Sources: Nebraska Vital Records; National Center for Health Statistics

Compared to pneumonia, influenza was the cause of fewer deaths in Nebraska, with the number of deaths ranging between 36 in 2008 and 1 in 2010. For the nation, 2,918 deaths due to influenza were reported in 2009.

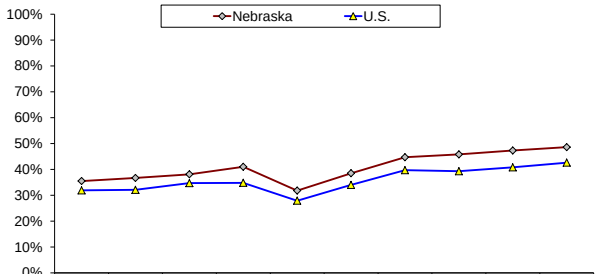
Morbidity: In Nebraska, pneumonia resulted in 7,200 hospitalizations in 2010, more than some of the more common chronic conditions such as stroke, COPD, cancer, and diabetes.

In comparison, only 34 hospitalizations were reported for influenza in 2010.

Immunizations: Influenza vaccine (i.e., a "flu shot" or the nasal spray vaccine) can be very effective in preventing illness from the flu. According to the Centers for Disease Control and Prevention (CDC), in years when the vaccine strains and the virus strains are well-matched, the vaccine can reduce the chances of getting the flu by 70 to 90 percent in healthy adults. The CDC currently recommends flu shots for everyone 6 months or older. The nasal spray flu vaccine is recommended for healthy people aged 2 to 49 years. The nasal flu vaccine is not recommended for pregnant women.

Prevalence of flu vaccination increased in Nebraska from 35.5 percent in 2001 to 48.6 percent in 2010 among adults aged 18 and older, with the Nebraska rate being slightly higher than the nation overall. Among Nebraskans aged 65 and older, prevalence rates were also slightly higher compared to the nation overall, and more common than among younger adults; however, the trend between 2007 and 2010 showed a gradual decline from 76.8 percent to 71.1 percent, respectively.

Flu Vaccination during the Past 12 Months* among Adults 18+, Nebraska and U.S., 2001-2010



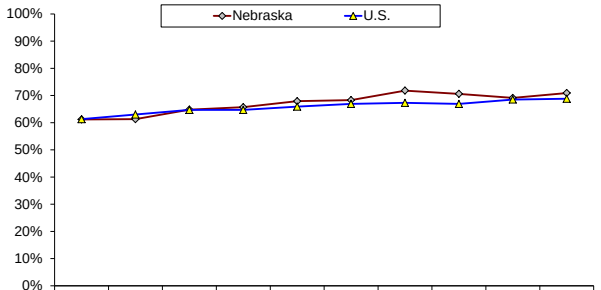
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	35.5	36.7	38.1	41.0	31.8	38.5	44.7	45.8	47.3	48.6
U.S.	31.9	32.1	34.7	34.8	27.9	34.0	39.7	39.3	40.8	42.6

*Percentage of adults 18 and older who report that they received an influenza vaccination (shot or mist) during the past 12 months
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Pneumonia vaccine can prevent more than one-half of all pneumococcal infections, although it will not protect against other types of pneumonia. It is recommended that adults aged 65 and older receive a one-time immunization against pneumococcal disease.

Prevalence of pneumonia vaccinations also increased among adults aged 65 and older in the state, with rates moving from 61.2 percent in 2001 to 70.9 percent in 2010.

Pneumonia Vaccination during the Past 12 Months* among Adults 65 and Older, Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	61.2	61.3	64.8	65.7	67.9	68.3	71.8	70.6	69.1	70.9
U.S.	61.3	63.0	64.7	64.7	65.9	66.9	67.3	66.9	68.5	68.8

*Percentage of adults 65 and older who report that they have ever received an pneumonia vaccination
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Sexually Transmitted Diseases

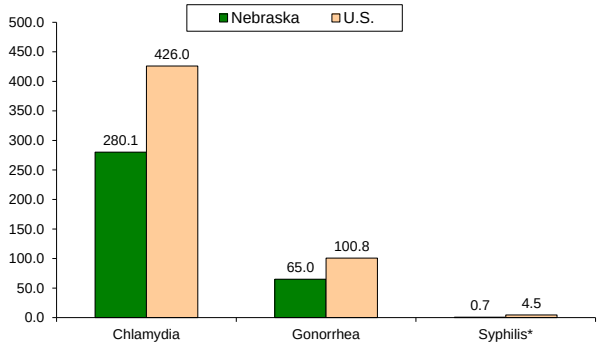
Sexually transmitted diseases (STDs) remain a major public health challenge in the United States. Although progress has been made in preventing, diagnosing, and treating some STDs, CDC estimates that 19 million new infections occur each year in the United States. Nearly one-half of these infections are among young people aged 15 to 24.

STDs are also the cause of many harmful and often irreversible complications, such as reproductive health problems and fetal/ perinatal health problems. Studies also suggest that people with gonorrhea, chlamydia, or syphilis are at increased risk for HIV. In addition to the physical and psychological consequences of STDs, these diseases also result in costs of $17 billion annually to the health care system in the United States.

Incidence of STDs: More than 7,000 cases of STDs were newly diagnosed in Nebraska in 2010. STD rates have remained fairly stable during the past decade in Nebraska and are generally lower than comparable national rates.

Chlamydia is the most common STD in Nebraska, accounting for nearly three-fourths of all STD cases in the state in 2010 (72.8%). Incidence of chlamydia in Nebraska (280.1 new cases per 100,000 population) was much lower than the U.S. rate of 426.0 per 100,000.

STD Incidence Rates, by Type, per 100,000 population, Nebraska and U.S., 2010



*Includes Primary and Secondary Syphilis
Sources: Nebraska Vital Records; National Center for Health Statistics

Gonorrhea ranked second in incidence among STDs in Nebraska, accounting for 16.9 percent of all STD cases in 2010. Incidence of gonorrhea was also much lower in Nebraska (65.0 new cases/100,000) than nationwide (100.8/100,000).

In comparison, incidence of primary and secondary syphilis was much lower, with 0.7 new cases per 100,000. National rates were also low, with 4.5 new cases per 100,000 in 2010.

HIV/AIDS

AIDS (acquired immunodeficiency syndrome) is a chronic, life-threatening condition caused by the human immunodeficiency virus (HIV). By damaging or destroying the cells of a person's immune system, HIV interferes with the body's ability to effectively fight off bacteria, viruses, and fungi that cause disease. This makes the person more susceptible to opportunistic infections that the body would normally be able to resist.

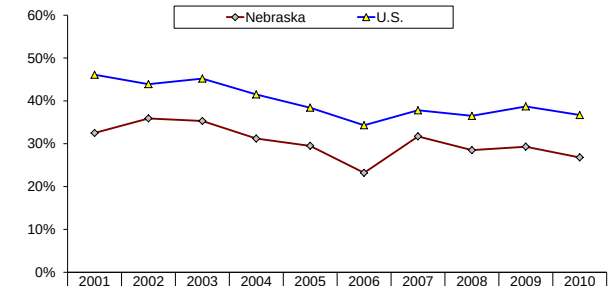
At the end of 2008, an estimated 1,178,350 persons aged 13 and older were living with HIV infection in the United States. Of those, 20 percent were undiagnosed. The CDC estimates that approximately 50,000 people are newly infected with HIV each year in the U.S.

In 2009, the estimated number of persons diagnosed with AIDS in the United States was 34,993. Nationwide, there were 16,605 deaths due to AIDS that year.

On average, about 100 new cases of HIV were diagnosed each year between 2001 and 2010 in Nebraska. The 2010 HIV incidence rate for the state was 6.0 cases per 100,000 population—much lower than the national rate of 17.4 cases per 100,000.

The proportion of Nebraska adults self-reporting that they had HIV testing performed (other than when donating blood) has declined from 32.5 percent in 2001 to 26.8 percent in 2010.The U.S. rate has also declined (from 46.1% in 2001 to 36.7% in 2010), but remains nearly 10 percentage points higher than the Nebraska rate.

Ever been Tested for HIV (other than blood donations)* among Adults 18+, Nebraska and U.S., 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nebraska	32.5	35.9	35.3	31.2	29.5	23.2	31.7	28.5	29.3	26.8
U.S.	46.1	43.9	45.2	41.5	38.4	34.3	37.8	36.5	38.7	36.7

*Percentage of adults 18 and older who report that they have ever been tested for HIV/AIDS other than testing that may have occurred during a blood donation
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Other Reportable Diseases

Vaccine-Preventable Diseases: The incidence of many vaccine-preventable diseases continues to be low in Nebraska. Very few cases of acute hepatitis B have been reported in recent years. Chronic hepatitis B, however, is more common with 243 cases in Nebraska in 2009. Incidence of this disease has remained stable since 2003.

Cases of pertussis have been cyclical over the last 10 years, with incidence ranging from a high of 311 new cases in 2005 to a low of 11 new cases in 2001.

Hepatitis C (acute or chronic) is more common in Nebraska with 1,209 cases in 2009. Incidence of this disease has declined gradually since 2003.

Nebraska experienced an outbreak of mumps in 2006 (362 cases). Otherwise, less than 10 cases of this disease per year have been reported in the state.

Foodborne Illness: Though food in the United States is generally considered safe, outbreaks of foodborne illness do occur. Foodborne infections are estimated to cause approximately 1,000 reported disease outbreaks and 48 million illnesses each year in this country, resulting in 128,000 hospitalizations and 3,000 deaths annually. Direct medical expenditures resulting from *Salmonella* infections alone are estimated to be about $365 million per year in the United States.
In Nebraska, 344 new cases of Salmonellosis were reported in 2009. Incidence rates for this infection have been gradually decreasing over the past decade in the state.

There were 377 new cases of Campylobacter infection in Nebraska in 2009. The number of new cases was fairly stable over the last 10 years.

In 2009, there were 88 new cases of infection due to E. coli in the state. Trend data are unavailable for illness due to this pathogen because of changes in laboratory procedures involved in testing.

West Nile Virus: The number of new cases of West Nile virus dropped sharply in the last few years in Nebraska, declining from nearly 2,000 in 2003 to 29 in 2011. However, some variation is apparent in the number of cases of West Nile infection from year to year in Nebraska, with 176 cases reported in 2012.

ORAL HEALTH

Millions of people nationwide experience dental cavities and periodontal disease. Many have lost all their teeth. Early tooth loss caused by dental decay in children can result in failure to thrive, impaired speech development, absence from/inability to perform well in school, and reduced self-esteem.

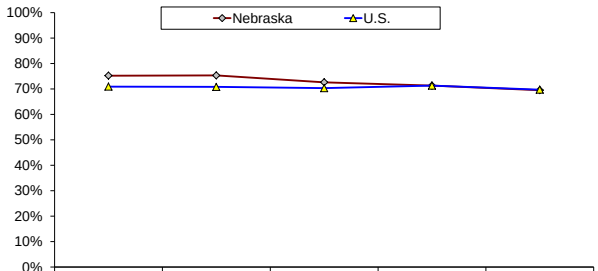
Untreated dental decay in older persons can lead to pain, abscesses, and loss of teeth. Periodontal disease is a leading cause of bleeding, pain, infection, and tooth loss. It is also a chronic inflammatory disease linked to other serious health risks, such as diabetes, cardiovascular disease, and preterm/low-weight births.

Dental disease is one of the most preventable of health problems. Proper dental hygiene and good eating habits, along with regular professional dental care, decrease the risk of developing cavities and periodontal disease.

Visits to the Dentist

According to the 2010 BRFSS, seven out of 10 adults in Nebraska (69.5%) and nationwide (69.7%) had visited the dentist in the past year. The proportion of Nebraska adults visiting the dentist during the last 12 months remained steady at about 75 percent from 2001 through 2004, then declined somewhat to the current rate. The U.S. rates remained stable over the 10-year period.

Visited a Dentist during the Past Year* among Adults 18+, Nebraska and U.S., 2002-2010



	2002	2004	2006	2008	2010
Nebraska	75.2	75.3	72.6	71.3	69.5
U.S.	70.9	70.8	70.3	71.3	69.7

*Percentage of adults 18 and older who report that they visited a dentist or dental clinic within the past year for any reason
Source: Behavioral Risk Factor Surveillance System (BRFSS)

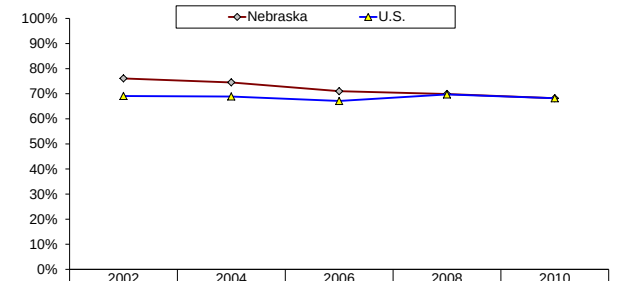
Among Nebraska high school students in 2011, 75.0 percent reported that they had a dental visit in the past year. Thus, one-fourth of high school students had not seen a dentist in the last year, leaving them at risk for untreated dental problems.

In 2010, there were 42.7 percent of early and periodic screening, diagnostic, and treatment (EPSDT) eligible children (aged 1 to 9 years) covered by Medicaid who received preventive dental services. This proportion has improved somewhat since 2003.

Teeth Cleaning

In 2010, among Nebraska and U.S. adults with one or more permanent teeth, two-thirds (68.2%) had their teeth cleaned by a dental health professional in the past 12 months. For both Nebraska and the U.S., this proportion represents a decrease from 2001 when 77.0 percent of Nebraskans and 72.5 percent of adults nationwide reported having their teeth cleaned.

Had Teeth Cleaned during the Past Year* among Adults 18+ with one or more permanent teeth, Nebraska and U.S., 2001-2010



	2002	2004	2006	2008	2010
Nebraska	76.1	74.5	71.0	69.9	68.2
U.S.	69.1	68.9	67.1	69.7	68.2

*Percentage of adults 18 and older who report that they had their teeth cleaned during the past 12 months, among those with one or more permanent teeth
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Loss of Permanent Teeth

In 2010, 39.8 percent of adults in the state said they had lost one or more teeth due to tooth decay or gum disease, down from 46.0 percent in 2001. In comparison, 43.6 percent of adults nationwide in 2010 reported having had one or more permanent teeth extracted, down slightly from 46.1 percent in 2001.

For persons aged 65 and older, the proportion who had all their natural teeth extracted declined by more than 12 percentage points between 2001 (27.5%) and 2010 (15.2%). Rates of loss of all permanent teeth among adults in this age group nationwide decreased from 24.3 percent in 2001 to 16.9 percent in 2010.

ENVIRONMENTAL HEALTH

The environment has a great impact on human health and plays an important role in health and disease; therefore, protecting the environment has long been a mainstay of public health practice. Exposures to hazardous agents in air, water, soil, and food and to physical hazards in the environment are major contributors to illness, disability, and death worldwide. Efforts continue at the national, state, and local levels to ensure clean air, safe supplies of water/food, and management of wastes and to control or eliminate vector-borne illnesses. These efforts have contributed a great deal to improvement in public health in the United States.

Outdoor Air Quality

Air pollution continues to be a public health and environmental problem in the United States, causing premature death, cancer, and long-term damage to respiratory and cardiovascular systems among Americans.

In Nebraska, 2008 and 2009 data show no testing sites that were in violation of Environmental Protection Agency air quality standards. However, it is necessary to continue monitoring air quality to assure that this level is maintained.

Water Quality

Americans have one of the safest water supplies in the world and safe drinking water is the first line of defense in protecting human health. It is estimated that 286 million Americans get their drinking water from public water systems. In Nebraska, an estimated 1.1 million people (81.1% of the state's population) receive their drinking water from public systems.

While most drinking water is very safe, occasional violations of pollutant standards are of concern because of the large number of people that can be exposed to toxic chemicals or biological contaminants.

Another water quality characteristic impacting the health of Americans is availability of fluoridated drinking water. Water containing adequate levels of fluoride provides protection against tooth decay. Tooth decay has negative effects on the health of the population. Among children, tooth loss caused by dental decay can result in failure to thrive, impaired speech development, absence from and inability to concentrate in school, and reduced self-esteem. Children may also develop permanent disabilities that affect their ability to learn and grow. Untreated dental decay in older persons can lead to pain, abscesses, and eventual loss of teeth.

In Nebraska, one in three persons served by community water systems (31.8%) in 2010 did not have optimally fluoridated drinking water. This percentage has changed little since 2003. A somewhat smaller proportion of U.S. residents (27.6%) were at risk due to drinking water that was not optimally fluoridated.

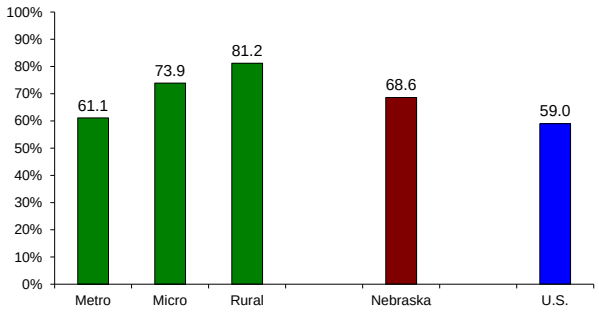
Age of Housing

While homes of any age and value can harbor serious environmental hazards, older homes are more likely to contain toxic substances, such as asbestos or lead-based paint.

Older properties that are also in substandard condition typically present the greatest risks. If maintenance has been deferred, moisture and water leaks may develop that encourage infestations of mold**,** mildew, rodents, cockroaches**,** and other pests. Low-income families living in physically substandard homes may have insufficient income to support basic property maintenance or to move to housing that is newer and/or in better condition.

According to the 2006-2010 American Community Survey, age of housing in Nebraska is generally older than age of housing units nationwide. In Nebraska, 68.6 percent of housing units were built before 1980, compared to 59.0 percent in the United States overall.

Percentage of Housing Units built Prior to 1980, Nebraska and U.S., by Urban/Rural*



*Metropolitan (9 counties) = county has a city with 50,000 or more residents or is metropolitan outlying county. Micropolitan (10 counties) = county has a city with 10,000 or more residents. Rural (74 counties) = largest city in county has less than 10,000 residents.
Source: 2006-2010 American Community Survey, U.S. Census

The majority of housing in rural areas of Nebraska (81.2%) was built prior to 1980, compared to 73.9 percent in micropolitan areas and 61.1 percent in metropolitan areas of the state.

Blood Lead Levels in Children

Lead is highly toxic, especially to young children. Lead poisoning affects nearly every system in the human body, including the child's brain, kidneys, bone marrow, and other body systems. At high levels, it can lead to comas, convulsions and death. Even low levels of lead in blood have been shown to affect IQ, ability to pay attention, and academic achievement. In addition, the effects of lead exposure cannot be reversed.

However, lead poisoning can be prevented by eliminating lead paint hazards in older housing and other potential sources of lead exposure.

Until recently, children were identified as having a blood level of concern if testing showed 10 or more micrograms per deciliter (µg/dL) of lead in their blood. There are at least 4 million households in the United States with children living in them that are being exposed to lead and approximately half a million U.S. children aged one to five years who have blood lead levels above 5 µg/dL.

A new reference level is now in place to identify children aged one to five years who have blood lead levels that are higher than most children's levels. The new reference level of 5 µg/dL is based on the U.S. population of children aged one to five years who are in the top 2.5 percent of children when tested for lead in their blood.

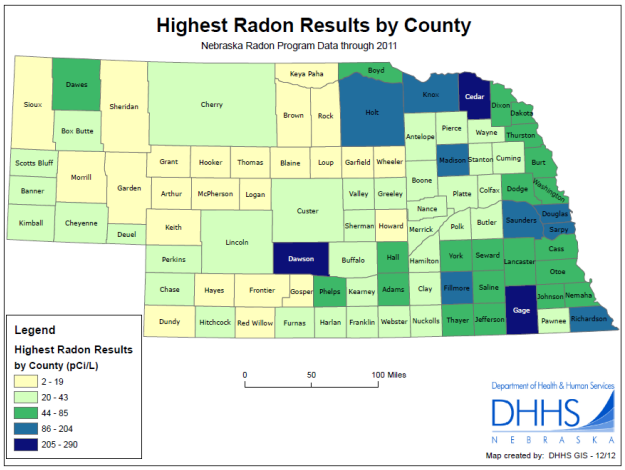
In 2011, of the 26,155 Nebraska children aged one to six years old who received a blood lead test and had the data reported to DHHS, 393 (1.5%) had an elevated blood lead level of at least 5 µg/dL.

Radon Levels

Radon is an odorless, colorless, radioactive gas. It is also the second leading cause of lung cancer in the United States. The U.S. Environmental Protection Agency and the Surgeon General's office estimate that radon is responsible for more than 20,000 lung cancer deaths each year in the United States.

Radon is a gas that occurs naturally from the breakdown (or radioactive decay) of uranium in the earth's crust. Since it is odorless, colorless, and tasteless, the only way to know the level of radon present in homes is to have it tested. Radon gas enters through cracks in buildings and easily increases to dangerous levels. Exposure to radon for a long period of time increases the risk of developing lung cancer.

In Nebraska, radon levels are generally high, with 59 percent of all homes test for radon by state of local public health (over 48,000 by 2011) having an elevated value (above 4.0 pCi/L).



HEALTH DISPARITIES

In recent years, progress has been made in improving the health of Nebraskans overall and in reducing health disparities. However, disparities in health status still exist in Nebraska and the nation.

Some population subgroups are at greater risk for premature death and disability than the population as a whole. Persons who are members of racial and ethnic minority groups, young adults, persons with little education, and persons with low household incomes are more likely to be at risk due to illness or injury, unhealthy behaviors, and reduced access to health care. Differences in health status may also be related to their place of residence (i.e., urban/rural).

Note: See Tables 1-5 below and Appendix C for detailed results.

Disparities by Race/Ethnicity

Mortality by Race/Ethnicity

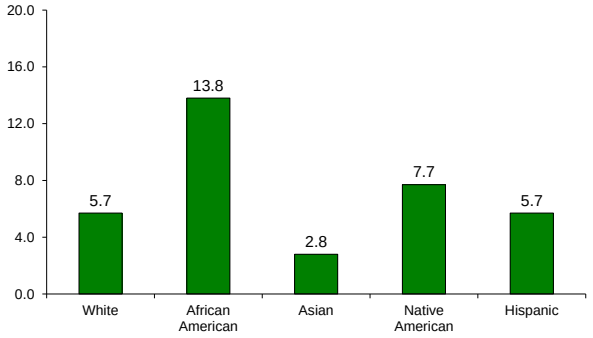
Over the five-year period 2006-2010, the overall age-adjusted death rate in Nebraska averaged 736.0 deaths per 100,000 population.

- Compared to the White Nebraskans (727.8 deaths per 100,000 population, age-adjusted), the overall death rate in Nebraska was higher for African Americans (1,024.8 deaths/100,000) and Native Americans (924.3) and was lower for Hispanics (444.4) and Asians (383.2).

Large disparities occurred in Nebraska for infant mortality by race/ethnicity.

- During the combined years of 2006-2010, the Native American infant mortality rate was 2.4 times higher than Whites. Compared to Whites, the rate was higher for Native Americans, similar for Hispanics, and lower for Asians.

Infant Mortality Rate* per 1,000 Live Births in Nebraska, by Race/Ethnicity, 2006-2010 Combined



*Number of deaths to infants (less than 12 months old) per 1,000 live births
Sources: Nebraska Vital Records

African Americans compared to Whites in Nebraska experienced significantly higher mortality rates (age-adjusted) for several leading causes of death during 2006-2010, including infant mortality, heart disease, stroke, diabetes, cancer (overall as well as lung, prostate, and colorectal), hypertension, nephritis/nephrosis, homicide, and drug-induced deaths (see Table 1 for more information). Some of the largest disparities included (followed by the relative risk, or rate-ratio, for African Americans to Whites): infant mortality (2.42), diabetes (2.94), hypertension (2.33), nephritis/nephrosis (2.78), and homicide (12.24)

Native Americans compared to Whites in Nebraska also experienced significantly higher mortality rates (age-adjusted) for several leading causes of death during this time period, including diabetes (relative risk of 4.42), nephritis/ nephrosis (2.48), chronic liver disease (7.54), and homicide (6.48), and may be more likely to die from other causes (such as pneumonia and drug-induced deaths) but the small number of deaths from these causes made the rates less stable and more difficult to interpret.

Asians in contrast to African Americans and Native Americans, tended to have lower mortality rates (age-adjusted) compared to their White counterparts. For example, Asians had significantly lower death rates for heart disease, cancer, and unintentional injury during the period of 2006-2010, and had lower rates for other conditions where the small number of deaths made the rates less stable and more difficult to interpret.

Hispanics compared to Whites in Nebraska experienced significantly higher mortality rates (age-adjusted) for some causes of death and lower rates for others between 2006 and 2010. Hispanics had higher mortality rates for diabetes (relative risk of 1.36) and homicide (2.57), and lower rates for heart disease (0.56), stroke (0.56), cancer (0.58), unintentional injury (0.82), suicide (0.44), and pneumonia (0.59).

Behavioral Risk Factors by Race/Ethnicity

The following results are from the Behavioral Risk Factor Surveillance System, a survey of adults 18 and older, and were age-adjusted to minimize the influence of age when interpreting differences by race/ethnicity. Only statistically significant differences between each non-Hispanic minority group compared to non-Hispanic Whites are noted.

African Americans compared to Whites were more likely to report poor general heath as well as chronic disease conditions and associated risk factors, and

less likely to report that they have access to and utilize physical and dental health services.

- African American adults compared to White adults were twice as likely to report their general health as “fair” or “poor” (19.8% and 10.9%, respectively).
- They were also twice as likely to have no health care coverage among 18-64 year olds (24.0% and 12.8%, respectively) and to have had a time during the last 12 months when they needed to see a doctor but could not because of the cost (21.1% and 9.4%, respectively).
- African Americans were more likely than their White counterparts to report having diabetes (13.9% and 6.8%, respectively) and high blood pressure (35.6% and 25.6%, respectively), to be obese (38.0% and 26.6%, respectively), to smoke cigarettes (25.0% and 18.0%, respectively), and less likely to participate in the recommended amount of physical activity (56.3% and 68.2%, respectively).
- African Americans were also less likely than Whites to have visited a dentist for any reason during the past 12 months (59.1% and 71.5%, respectively).

Native Americans compared to Whites were more likely to report poor general heath as well as chronic disease conditions and associated risk factors and depression, and less likely to report that they have access to and utilize physical and dental health services.

- Native American adults compared to White adults were more than twice as likely to report their general health as “fair” or “poor” (23.5% and 10.9%, respectively) and 2.5 times more likely to report that they have no health care coverage among 18-64 year olds (32.3% and 12.8%, respectively). They were also more likely to report cost as a barrier to receiving needed care and not having a personal doctor or health care provider.
- Native American women 50-74 years old were less likely to report having had a mammogram during the past two years (60.8% and 78.0%, respectively) and among all 50-75 year olds were less likely to have had a current screening for colorectal cancer (44.4% and 60.1%, respectively).
- Native Americans were also less likely than Whites to have visited a dentist for any reason during the past 12 months (59.9% and 71.5%, respectively).
- They were more likely than their White counterparts to report having diabetes (13.5% and 6.8%, respectively), high blood pressure (34.8% and 25.6%, respectively), high blood cholesterol among those who have ever had it checked (48.1% and 32.0%, respectively), and asthma (13.2% and 7.8%), to be obese (40.0% and 26.6%, respectively), to smoke cigarettes (43.4% and 18.0%, respectively), and to have had significant depressive symptoms during the past 14 days (17.8% and 7.2%, respectively).

Asian Americans compared to Whites reported less chronic disease and fewer risky behaviors, but less social and emotional support. However, the small number of Asian respondents on the BRFSS limited findings for the Asian population and comparability to Whites.

- Asians adults compared to White adults were less likely to be obese (9.5% and 26.6%, respectively), to have ever been diagnosed with arthritis (12.3% and 26.3%, respectively), and more likely to always wear their seatbelt when driving or riding in a car (85.4% and 70.4%, respectively) and consume fruits and vegetables five or more times per day (40.8% and 21.9%, respectively).
- They were however more likely to report that they never get the social and emotional support they need (20.3% and 5.5%, respectively).

Hispanics compared to Whites were more likely to report poor general heath as well as chronic disease conditions and associated risk factors, and less likely to report that they have access to and utilize physical and dental health services, thought they were less likely to report high risk alcohol use.

- Hispanic adults compared to White adults were more than twice as likely to report their general health as “fair” or “poor” (26.1% and 10.9%, respectively) and 3.5 times more likely to report that they have no health care coverage among 18-64 year olds (44.5% and 12.8%, respectively). They were also more likely to report cost as a barrier to receiving needed care and not having a personal doctor or health care provider.
- Hispanics were also less likely to have had their cholesterol checked during the past five years, a current screening for colorectal cancer among 50-75 year olds, a flu vaccination during the past 12 months, and to have visited a dentist during the past 12 months.
- They were more likely to report having diabetes (14.9% and 6.8%, respectively) and to be obese (32.9% and 26.6%, respectively), and less likely to participate in the recommended amount of physical activity (56.5% and 68.2%, respectively).
- Hispanics were however less likely than Whites to report binge drinking during the past 30 days (10.9% and 20.2%, respectively).

Disparities by Urban/Rural

The following is a summary of differences in mortality and behavioral risk factors by urban/rural residence in Nebraska. Here urban/rural is defined by three categories consisting of Metropolitan, Micropolitan, and Rural. "Metropolitan" includes nine counties, two of which have a city of 50,000 or more residents and seven that are metropolitan "outlying" counties. "Micropolitan" areas consist of the 10 Nebraska counties that are not metropolitan and have at least one city of 10,000 or more residents. "Rural" areas include all of the remaining 74 counties in Nebraska.

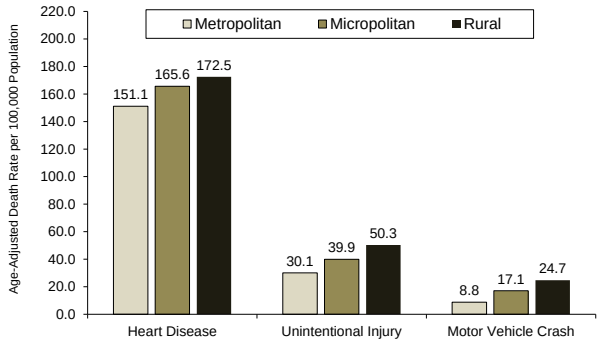
Mortality by Urban/Rural

Over the five-year period 2006-2010, the overall age-adjusted death rate in Nebraska averaged 736.0 deaths per 100,000 population.

- The rate showed little difference for Metropolitan (734.5 deaths per 100,000 population, age-adjusted), Micropolitan (748.6), and Rural (736.0) areas of the state.

Some of the causes of death where rural residents are at greater risk for mortality include heart disease, unintentional injury overall, and motor vehicle crashes.

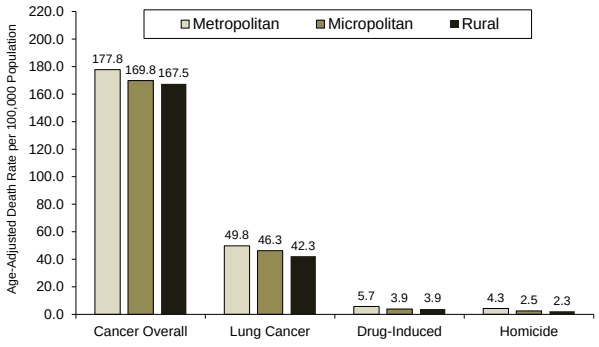
Causes of Death where Rural Residents in Nebraska are at Greater Risk, by Urban/Rural, 2006-2010 Combined



Source: Nebraska Vital Records

Some of the causes of death where residents in more urban areas are at greater risk for mortality include cancer overall, lung cancer, homicide, and drug-related deaths.

Causes of Death where Urban Residents in Nebraska are at Greater Risk, by Urban/Rural, 2006-2010 Combined



Source: Nebraska Vital Records

Behavioral Risk Factors by Urban/Rural

The following results are from the Behavioral Risk Factor Surveillance System, a survey of adults 18 and older, and were age-adjusted to minimize the influence of age when interpreting differences by urban/rural. For the each of the three urban/rural areas presented below, only statistically significant differences are noted (unless otherwise stated).

General health status: Urban residents were less likely than rural residents to report poor general health and lack of social and emotional support:

- Micropolitan (13.4%) and rural (12.9%) residents were more likely than those from metropolitan areas (10.9%) to state that their health was "fair" or "poor".
- Rural respondents (7.4%) were more likely than metropolitan respondents (6.0%) to say they never get the social and emotional support they need.

Access to health care services: Urban residents were more likely than rural residents to utilize health care services, including preventive health screenings and oral health services:

- Among Nebraskans aged 18-64, a greater proportion of micropolitan (13.4%) and rural (12.9%) residents reported having no health care coverage, compared to metropolitan residents (10.9%).
- In the metropolitan areas of the state, 61.7% of adults stated they had a routine checkup in the past 12 months, which was significantly higher than residents in micropolitan (56.4%) and rural (56.6%) areas of the state.
- Three-fourths (75.5%) of metropolitan residents surveyed had their cholesterol level checked in the past five years, compared to only about two-thirds of those living in micropolitan (68.4%) or rural (67.8%) areas.

- Rates for other kinds of health screenings (mammograms, Pap tests, and colorectal cancer screening) were also significantly higher among metropolitan residents than among micropolitan and rural residents.
- Influenza vaccination rates for older adults (aged 65+) were significantly higher among metropolitan residents (77.1%) than among rural respondents (71.0%). Pneumonia vaccination rates for persons aged 65 and older were also higher in metropolitan areas (74.0%) than in micropolitan (68.8%) and rural (67.2%).
- A greater proportion of metropolitan residents aged 18 to 64 (32.5%) said they had ever been tested for HIV, compared to 25.9 percent in micropolitan areas and 23.7 percent in rural areas.
- Adults in metropolitan areas were more likely to have had a dental visit in the last 12 months (73.9%), compared to 66.9 percent of micropolitan and 65.4 percent of rural residents.

Chronic diseases and/or risk factors: Urban residents compared to rural residents were less likely to be obese and use smokeless tobacco and more likely to wear their seatbelts.

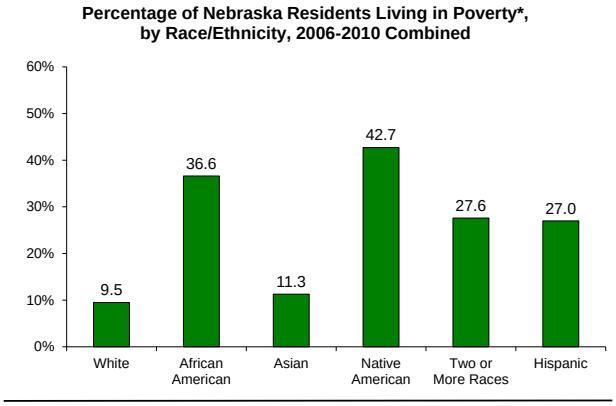
- The proportion of adults who were obese was higher among rural (28.9%) and micropolitan (28.8%) Nebraskans compared to those living in metropolitan areas (26.0%).
- Metro residents (80.2%) were significantly more likely than rural (53.2%) or micro (63.5%) respondents to state they always wear their seatbelts when riding in or driving a car.
- Greater proportions of rural (8.3%) and micropolitan (5.6%) residents currently use smokeless tobacco, compared to metropolitan residents (3.7%).

Disparities by Socioeconomic Status

According to the Centers for Disease Control and Prevention's 2011 Health Disparities and Inequalities Report, people who are living in unfavorable socioeconomic circumstances are at increased risk for illness, death, unhealthy behaviors, reduced access to health care, and inadequate quality of care.

Poverty

Compared to non-Hispanic Whites (9.5%), greater proportions of racial/ethnic minority groups had incomes that fell below 100 percent of the federally-designated poverty level. Between 2006 and 2010, the poverty rate for Native Americans in Nebraska was 42.7 percent and for African Americans was 36.6 percent. Among Hispanics, 27.0 percent had incomes below the poverty level, as did 27.6 percent of persons of two or more races. One in nine Asians (11.3%) lived in poverty between 2006 and 2010.

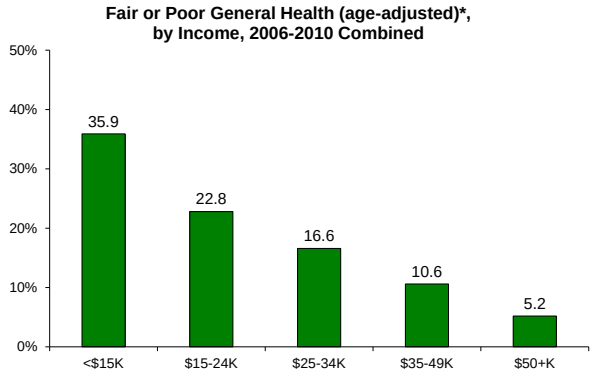


*Percentage below 100% of the federal poverty level
Note: Each race represents non-Hispanic residents
Source: 2006-2010 American Community Survey (US Census)

Behavioral Risk Factors by Income

The following results are from the Behavioral Risk Factor Surveillance System, a survey of adults 18 and older, and were age-adjusted to minimize the influence of age when interpreting differences by income. For the results by level of household income presented below, only statistically significant differences are noted (unless otherwise stated).

General health status: Beyond differences in age, self-reported general health status was significantly worse for people with low incomes.



*Percentage of adults 18 and older who report their general health as "fair" or "poor" on a five-point scale
Note: Income represents self-reported annual household income
Source: Behavioral Risk Factor Surveillance System (BRFSS)

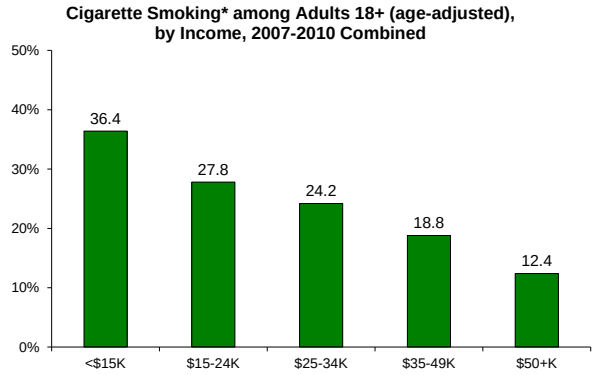
Access to health care services: Persons with less income were less likely than those with higher income have health care coverage and to utilize health care services, including preventive health screenings and oral health services:

- Among Nebraskans aged 18-64, a greater proportion of persons with a household income of less than $15,000 (41.4%) reported having no

health care coverage, compared 4.2 percent among those earning $50,000 or more per year.

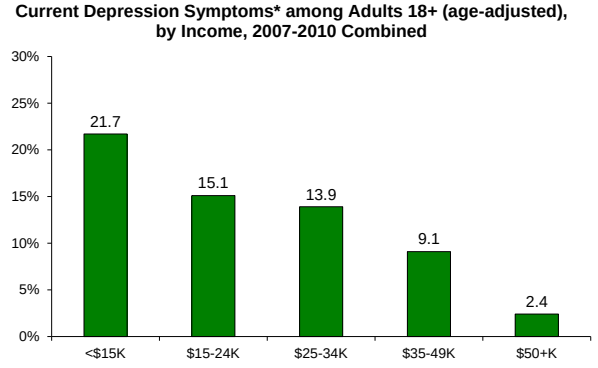
- As income increased adults were more likely to have a personal health care provider and less likely to report cost as a barrier to care.
- Those with higher incomes were also more likely having had a recent cholesterol, breast cancer, cervical cancer, and colorectal cancer screening, and to have visited a dentist during the past 12 months. Only slight differences occurred however for the percentage reporting influenza and pneumonia vaccination.

Chronic diseases and/or risk factors: Those with lower incomes were more likely to report various chronic diseases including diabetes, arthritis, asthma, obesity, and to smoke cigarettes. Persons with lower income levels were however less likely to consume alcohol and to binge drink.



*Percentage of adults 18 and older who report that they currently smoke cigarettes (every day or some days)
Note: Income represents self-reported annual household income
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Mental health and social support: Those with lower incomes were more likely to report having been diagnosed with anxiety or depression, to have had significant depression symptoms during the past 14 days, to lack the social and emotional support that they need, and to be dissatisfied with their life.



*Percentage of adults 18 and older reporting answers to eight depression questions that categorizes the respondent as having clinically significant depressive symptoms during the past 14 days
Note: Income represents self-reported annual household income
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Table 1: Mortality Results (age-adjusted) by Race/Ethnicity for Select Causes of Death, 2006-2010 combined

Causes of Death (ICD-10 Code)	White		African American		Asian		Native American		Hispanic*	
	n^	rate^^	n^	rate^^	n^	rate^^	n^	rate^^	n^	rate^^
All mortality (any cause of death)	71,938	727.8	2,591	1,024.8	273	383.2	495	924.3	1,289	444.4
Infant mortality (any cause of death)**	592	5.7	123	13.8	9	2.8	18	7.7	117	5.7
Heart disease (I00-I09, I11, I13, I20-I51)	16,439	160.2	492	214.2	36	64.5	66	131.7	193	89.7
Stroke (I60-I69)	4,192	40.8	156	66.6	20	28.4	18	38.7	59	23.0
Essential hypertension or hypertensive renal disease (I10, I12)	841	7.9	41	18.4	3	5.7	2	5.1	10	5.9
Diabetes (E10-E14)	2,061	21.1	143	62.1	9	18.7	48	93.2	60	28.8
Cancer: overall (C00-C97)	16,293	171.8	569	238.3	83	99.9	71	153.2	240	99.5
Cancer: lung/bronchus (C34)	4,338	46.5	148	63.1	21	25.2	21	54.2	37	17.8
Cancer: colorectal (C18-C21)	1,721	17.8	66	30.4	10	12.7	8	12.1	15	6.2
Cancer: female breast (C50)	1,064	20.2	41	28.3	6	12.4	4	12.6	26	19.3
Cancer: cervical (C53)	82	1.8	4	2.7	0	0.0	0	0.0	5	2.7
Cancer: prostate (C61)	894	23.3	32	39.8	1	5.6	2	8.2	17	22.1
Chronic lung disease (J44, J47)	4,187	43.1	73	32.9	9	16.5	22	58.2	16	8.7
Nephritis/Nephrosis (N00-N07, N17-N19, N25-N27)	1,235	12.0	73	33.4	5	11.8	14	29.7	21	11.3
Chronic liver disease (K70, K73-K74)	609	6.8	16	5.5	31	8.9	34	51.3	31	8.9
Alzheimer's (G30)	2,700	24.8	45	25.8	5	9.9	3	8.1	13	8.3
Unintentional injury: overall (V01-X59, Y85-Y86)	3,213	35.9	111	32.6	21	21.6	39	49.2	180	29.5
Unintentional injury: falls (W00-W19)	897	8.7	14	7.0	7	11.5	3	4.1	19	4.5
Unintentional injury: motor vehicle crash***	1,149	13.7	47	11.8	10	5.8	13	16.1	97	13.8
Homicide (X85-Y09,Y87.1)	163	2.1	119	25.7	3	1.5	16	13.6	43	5.4
Suicide (X60-X84, Y87.0)	886	10.7	21	5.0	6	3.7	13	12.7	26	4.7
Drug induced (F11-F16, F18-F19, X40-X44, X85, Y10-Y14)	373	4.8	31	8.6	1	0.5	8	9.7	10	1.7
Influenza (J10-J11)	59	0.5	1	0.6	0	0.0	0	0.0	1	0.1
Pneumonia (J12-J18)	1,452	13.8	30	11.8	2	2.6	12	27.6	21	8.1

* Persons of Hispanic Origin may be any race.

** Number of deaths to infants (less than 12 months old) per 1,000 live births

*** Includes codes V02-V04, V090, V092, V12-V14, V190-V192, V194-V196, V20-V79, V803-V805, V810-V811, V820-V821, V83-V86, V870-V878, V880-V888, V890, V892

^ Number of deaths

^^ Death rate, age-adjusted to the 2000 U.S. standard population, per 100,000 population (unless otherwise noted)

Table 2: BRFSS Survey Results (age-adjusted) by Race/Ethnicity for Select Health Indicators, Adults 18 and older, 2007-2010 combined

Health Indicators	White		African American		Asian		Native American		Other		Hispanic	
	n [a]	mean or % [b]	n [a]	mean or % [b]	n [a]	mean or % [b]	n [a]	mean or % [b]	n [a]	mean or % [b]	n [a]	mean or % [b]
General Health Fair or Poor	55,436	10.9%	438	19.8%	216	12.7%	441	23.5%	301	14.9%	2,057	26.1%
Average days physical health not good in past 30	54,414	2.8	434	4.0	209	4.2	428	4.3	280	3.9	2,012	3.4
Average days mental health not good in past 30	54,729	2.7	433	3.4	210	2.1	437	3.9	293	3.2	2,023	2.5
Average days poor physical/mental health limited activity in past 30	55,024	1.5	438	2.6	213	2.2	438	3.9	292	1.8	2,037	1.8
No healthcare coverage among 18-64 year olds	35,241	12.8%	348	24.0%	178	17.4%	350	32.3%	170	18.8%	1,800	44.5%
No personal doctor or healthcare provider	55,435	13.7%	439	17.9%	216	13.8%	444	21.3%	298	20.0%	2,060	34.2%
Needed to see a doctor but could not due to cost in past 12 months	55,436	9.4%	440	21.1%	216	12.0%	443	14.8%	299	22.9%	2,063	22.9%
Ever told they have high blood pressure	25,077	25.6%	198	35.6%	90	24.0%	212	34.8%	147	21.2%	918	21.9%
Cholesterol checked in past 5 years	24,503	73.2%	196	80.9%	86	74.9%	200	77.6%	138	67.5%	908	57.1%
Ever told they have high cholesterol, among those who have ever had it checked	21,312	32.0%	164	28.2%	64	44.2%	150	48.1%	115	45.1%	512	29.1%
Ever told they have diabetes (excluding pregnancy)	55,504	6.8%	440	13.9%	216	7.7%	445	13.5%	301	7.5%	2,062	14.9%
Had FOBT in past year or sigmoidoscopy or colonoscopy in past 10 years, adults 50-75	22,226	60.1%	143	65.2%	63	55.6%	126	44.4%	105	67.1%	434	42.2%
Had mammogram in past 2 years, women 50-74	10,176	78.1%	62	76.7%	-*	-*	56	60.8%	-*	-*	206	71.7%
Had a pap test in past 3 years, women 21-65	10,135	86.5%	105	86.3%	-*	-*	100	88.6%	-*	-*	638	66.8%
Ever told they have arthritis	24,534	26.3%	190	27.3%	87	12.3%	209	23.8%	143	27.3%	893	18.1%
Ever told they have asthma	55,382	11.5%	440	14.8%	215	8.3%	444	18.1%	296	20.5%	2,058	8.4%
Current cigarette smokers	55,393	18.0%	439	25.1%	214	16.8%	445	43.4%	300	19.8%	2,058	15.9%
Current smokeless tobacco users	44,998	5.4%	347	1.2%	175	4.2%	349	4.4%	247	3.2%	1,626	1.9%
Obese (BMI 30.0+)	53,898	26.6%	423	38.0%	213	9.5%	434	40.0%	287	24.6%	1,769	32.9%
Overweight or obese (BMI 25.0+)	53,898	64.0%	423	65.8%	213	46.8%	434	80.8%	287	52.7%	1,769	72.3%
Consume fruits and vegetables 5+ times per day	24,439	21.9%	191	24.0%	86	40.8%	207	17.9%	141	26.6%	886	20.4%
Recommended physical activity (using pre-2008 guidelines)	23,177	52.8%	175	43.7%	81	43.0%	192	65.5%	135	53.5%	841	40.8%
Always wear a seatbelt when driving or riding in a car	30,024	70.4%	230	73.3%	123	85.4%	227	66.1%	148	78.0%	1,120	72.2%
Injured due to a fall during the past 3 months, adults 45+	23,338	4.7%	145	5.5%	66	5.0%	132	4.5%	122	3.8%	491	5.7%
Never get the social and emotional support they need	53,107	5.5%	406	18.0%	198	20.3%	417	9.9%	278	11.8%	1,906	18.7%
Dissatisfied with their life	53,534	3.6%	403	7.4%	202	8.1%	422	6.5%	286	4.6%	1,950	4.7%
Had significant depressive symptoms in past 14 days	9,121	7.2%	75	16.5%	-*	-*	59	17.8%	-*	-*	339	9.9%
Binge drank in past 30 days	54,656	20.2%	422	14.6%	212	10.9%	436	19.5%	297	10.0%	2,028	10.9%
Alcohol impaired driving in past 30 days	30,044	3.8%	230	2.6%	124	1.9%	227	2.9%	152	0.7%	1,132	1.2%
Had flu vaccination during past 12 months	54,764	46.0%	422	41.8%	210	48.7%	439	48.0%	294	42.3%	2,019	40.1%
Had flu vaccination during past 12 months, adults 65+	19,865	74.8%	88	62.5%	-*	-*	92	75.6%	125	67.5%	252	62.8%
Ever had pneumonia vaccination, adults 65+	19,506	70.8%	84	72.0%	-*	-*	90	55.4%	122	64.0%	241	63.0%
Ever been tested for HIV, adults 18-64	33,790	27.6%	318	55.5%	165	28.8%	337	49.9%	158	50.8%	1,719	37.4%
Had any permanent teeth extracted	29,898	36.7%	238	55.2%	124	37.8%	230	57.5%	149	46.1%	1,133	48.2%
Saw dentist for any reason in past 12 months	30,317	71.5%	241	59.1%	123	73.0%	233	59.9%	151	69.3%	1,139	60.6%

[a] Non-weighted sample size for each indicator

[b] Weighted mean or percentage.

[c] Low% and Upper% are the lower and upper limits for the 95% confidence interval, respectively.

* Insufficient data to report results (fewer than 50 respondents)

Note: Each race represents non-Hispanic respondents while Hispanic represents Hispanic respondents regardless of what race they identified

Source: Behavioral Risk Factor Surveillance System (BRFSS)

**Table 3: Mortality Results (age-adjusted) by Urban/Rural*
for Select Causes of Death, 2006-2010 combined**

Causes of Death (ICD-10 Code)	Metropolitan		Micropolitan		Rural	
	n^	rate^^	n^	rate^^	n^	rate^^
All mortality (any cause of death)	35,217	734.5	17,303	748.6	23,053	738.4
Infant mortality (any cause of death)**	472	5.7	159	6.0	127	5.4
Heart disease (I00-I09, I11, I13, I20-I51)	7,232	151.1	4,020	165.6	5,823	172.5
Stroke (I60-I69)	1,947	41.1	968	39.5	1,485	43.1
Essential hypertension or hypertensive renal disease (I10, I12)	415	8.6	231	9.0	243	6.9
Diabetes (E10-E14)	1,035	22.0	499	21.7	739	24.3
Cancer: overall (C00-C97)	8,432	177.8	3,693	169.8	4,928	167.5
Cancer: lung/bronchus (C34)	2,337	49.8	992	46.3	1,208	42.3
Cancer: colorectal (C18-C21)	800	16.8	419	18.8	588	19.2
Cancer: female breast (C50)	550	20.3	258	22.3	307	18.4
Cancer: cervical (C53)	52	2.0	19	1.9	16	1.4
Cancer: prostate (C61)	429	24.2	177	19.8	325	24.9
Chronic lung disease (J44, J47)	2,029	44.2	1,002	43.8	1,263	40.1
Nephritis/Nephrosis (N00-N07, N17-N19, N25-N27)	560	11.8	307	12.8	464	13.6
Chronic liver disease (K70, K73-K74)	342	6.9	148	7.5	176	7.3
Alzheimer's (G30)	1,152	24.2	734	27.7	871	23.2
Unintentional injury: overall (V01-X59, Y85-Y86)	1,513	30.1	786	39.9	1,151	50.3
Unintentional injury: falls (W00-W19)	423	8.8	207	8.5	297	8.8
Unintentional injury: motor vehicle crash***	466	8.8	307	17.1	481	24.7
Homicide (X85-Y09,Y87.1)	231	4.3	42	2.5	37	2.3
Suicide (X60-X84, Y87.0)	515	10.0	195	11.1	219	11.1
Drug induced (F11-F16, F18-F19, X40-X44, X85, Y10-Y14)	287	5.7	63	3.9	66	3.9
Influenza (J10-J11)	19	0.4	20	0.7	21	0.5
Pneumonia (J12-J18)	666	13.7	341	13.6	493	14.3

* See page 42 of this report for a definition of the urban/rural categories used in this report.

** Number of deaths to infants (less than 12 months old) per 1,000 live births

*** Includes codes V02-V04, V090, V092, V12-V14, V190-V192, V194-V196, V20-V79, V803-V805, V810-V811, V820-V821, V83-V86, V870-V878, V880-V888, V890, V892.

^ Number of deaths

^^ Death rate, age-adjusted to the 2000 U.S. standard population, per 100,000 population (unless otherwise noted)

Table 4: BRFSS Survey Results (age-adjusted) by Urban/Rural*
for Select Health Indicators, Adults 18 and older, 2007-2010 combined

Health Indicators	Metropolitan n [a]	Metropolitan mean or % [b]	Micropolitan n [a]	Micropolitan mean or % [b]	Rural n [a]	Rural mean or % [b]
General Health Fair or Poor	15,152	10.9%	16,212	13.4%	27,430	12.9%
Average days physical health not good in past 30	14,926	2.8	15,916	3.0	26,841	2.8
Average days mental health not good in past 30	14,998	2.7	15,999	2.7	27,029	2.5
Average days poor physical/mental health limited activity in past 30	15,064	1.6	16,082	1.6	27,197	1.6
No healthcare coverage among 18-64 year olds	10,730	14.3%	10,317	16.9%	16,908	16.8%
No personal doctor or healthcare provider	15,145	15.5%	16,219	13.8%	27,430	14.7%
Needed to see a doctor but could not due to cost in past 12 months	15,143	10.4%	16,230	11.4%	27,428	10.7%
Ever told they have high blood pressure	6,706	25.8%	7,395	26.0%	12,511	25.7%
Cholesterol checked in past 5 years	6,543	75.5%	7,249	68.4%	12,203	67.8%
Ever told they have high cholesterol, among those who have ever had it checked	5,654	32.5%	6,275	34.1%	10,387	31.2%
Ever told they have diabetes (excluding pregnancy)	15,159	7.3%	16,245	7.5%	27,469	6.7%
Had FOBT in past year or sigmoidoscopy or colonoscopy in past 10 years, adults 50-75	5,735	65.7%	6,454	55.6%	10,879	51.5%
Had mammogram in past 2 years, women 50-74	2,645	81.0%	2,982	76.0%	4,905	73.0%
Had a pap test in past 3 years, women 21-65	3,203	87.0%	2,955	81.8%	4,821	83.5%
Ever told they have arthritis	6,572	25.8%	7,224	25.5%	12,236	26.4%
Ever told they have asthma	15,131	11.9%	16,205	11.1%	27,401	10.9%
Current cigarette smokers	15,125	18.5%	16,211	18.3%	27,415	17.2%
Current smokeless tobacco users	12,387	3.7%	13,103	5.6%	22,195	8.3%
Obese (BMI 30.0+)	14,651	26.0%	15,694	28.8%	26,650	28.9%
Overweight or obese (BMI 25.0+)	14,651	62.2%	15,694	66.8%	26,650	67.2%
Consume fruits and vegetables 5+ times per day	6,550	22.4%	7,191	21.0%	12,182	22.4%
Recommended physical activity (using pre-2008 guidelines)	6,266	53.3%	6,804	50.7%	11,498	50.2%
Always wear a seatbelt when driving or riding in a car	8,338	80.2%	8,710	63.5%	14,765	53.2%
Injured due to a fall during the past 3 months, adults 45+	5,906	4.3%	6,809	5.0%	11,568	5.4%
Never get the social and emotional support they need	14,514	6.0%	15,489	7.2%	26,213	7.4%
Dissatisfied with their life	14,617	4.2%	15,626	3.8%	26,468	3.5%
Had significant depressive symptoms in past 14 days	2,545	7.4%	2,570	8.9%	4,519	7.2%
Binge drank in past 30 days	14,924	19.3%	15,994	17.6%	27,043	20.4%
Alcohol impaired driving in past 30 days	8,340	3.4%	8,732	3.3%	14,778	4.0%
Had flu vaccination during past 12 months	14,947	47.7%	16,015	45.1%	27,096	41.1%
Had flu vaccination during past 12 months, adults 65+	4,339	77.1%	5,798	74.0%	10,356	71.0%
Ever had pneumonia vaccination, adults 65+	4,268	74.0%	5,703	68.8%	10,144	67.2%
Ever been tested for HIV, adults 18-64	10,244	32.5%	9,905	25.9%	16,213	23.7%
Had any permanent teeth extracted	8,333	36.5%	8,689	40.0%	14,683	40.6%
Saw dentist for any reason in past 12 months	8,435	73.9%	8,817	66.9%	14,887	65.4%

* See page 42 of this report for a definition of the urban/rural categories used in this report.

[a] Non-weighted sample size for each indicator

[b] Weighted mean or percentage.

[c] Low% and Upper% are the lower and upper limits for the 95% confidence interval, respectively.

Source: Behavioral Risk Factor Surveillance System (BRFSS)

Table 5: BRFSS Survey Results (age-adjusted) by Annual Household Income for Select Health Indicators, Adults 18 and older, 2007-2010 combined

	<$15,000		$15,000 - $24,999		$25,000 - $34,999		$35,000 - $49,999		$50,000+	
Health Indicators	n [a]	mean or % [b]	n [a]	mean or % [b]	n [a]	mean or % [b]	n [a]	mean or % [b]	n [a]	mean or % [b]
General Health Fair or Poor	5,217	35.9%	9,826	22.8%	7,531	16.6%	9,722	10.6%	20,186	5.2%
Average days physical health not good in past 30	4,994	8.0%	9,564	4.3%	7,413	3.2%	9,633	2.8%	20,092	1.8%
Average days mental health not good in past 30	5,070	6.8%	9,683	4.0%	7,445	3.3%	9,662	2.6%	20,113	1.8%
Average days poor physical/mental health limited activity in past 30	5,096	6.2%	9,728	2.5%	7,485	1.9%	9,692	1.4%	20,173	0.9%
No healthcare coverage among 18-64 year olds	2,368	41.4%	4,472	39.5%	4,344	24.0%	6,849	14.1%	17,266	4.2%
No personal doctor or healthcare provider	5,218	22.3%	9,827	25.9%	7,527	20.7%	9,724	12.1%	20,182	10.9%
Needed to see a doctor but could not due to cost in past 12 months	5,209	30.4%	9,837	28.0%	7,530	17.6%	9,727	11.3%	20,186	3.0%
Ever told they have high blood pressure	2,366	32.9%	4,536	27.7%	3,461	28.0%	4,454	25.8%	8,898	23.3%
Cholesterol checked in past 5 years	2,284	59.1%	4,427	62.7%	3,379	65.5%	4,385	71.2%	8,790	78.6%
Ever told they have high cholesterol, among those who have ever had it checked	1,902	40.0%	3,696	34.7%	2,805	35.9%	3,739	30.3%	7,814	30.5%
Ever told they have diabetes (excluding pregnancy)	5,228	13.9%	9,840	10.6%	7,538	8.4%	9,731	6.6%	20,196	5.5%
Had FOBT in past year or sigmoidoscopy or colonoscopy in past 10 years, adults 50-75	1,842	48.4%	3,581	52.8%	3,058	51.3%	4,168	57.4%	8,298	67.1%
Had mammogram in past 2 years, women 50-74	971	60.0%	1,758	62.7%	1,366	71.7%	1,794	79.5%	3,370	85.9%
Had a pap test in past 3 years, women 21-65	693	65.3%	1,376	77.8%	1,252	78.8%	1,952	85.9%	4,878	92.0%
Ever told they have arthritis	2,316	36.9%	4,443	29.5%	3,402	27.9%	4,375	28.5%	8,753	22.2%
Ever told they have asthma	5,206	21.3%	9,816	13.8%	7,521	11.5%	9,722	11.4%	20,164	9.9%
Current cigarette smokers	5,216	36.4%	9,821	27.8%	7,523	24.2%	9,717	18.8%	20,159	12.4%
Current smokeless tobacco users	4,182	3.0%	7,982	4.9%	6,092	5.5%	7,832	5.6%	16,535	5.4%
Obese (BMI 30.0+)	5,056	37.7%	9,516	34.2%	7,361	31.5%	9,510	29.8%	19,817	23.4%
Overweight or obese (BMI 25.0+)	5,056	68.5%	9,516	66.4%	7,361	66.9%	9,510	66.2%	19,817	63.1%
Consume fruits and vegetables 5+ times per day	2,305	21.9%	4,422	18.8%	3,400	18.9%	4,357	24.1%	8,720	22.3%
Recommended physical activity (using pre-2008 guidelines)	2,141	37.5%	4,121	44.1%	3,225	48.8%	4,196	53.3%	8,501	59.0%
Always wear a seatbelt when driving or riding in a car	2,818	70.7%	5,234	65.6%	4,025	67.9%	5,224	65.9%	11,174	73.2%
Injured due to a fall during the past 3 months, adults 45+	2,374	11.1%	4,323	7.2%	3,163	5.7%	3,948	4.2%	7,642	3.5%
Never get the social and emotional support they need	4,942	20.9%	9,356	12.9%	7,240	9.2%	9,391	6.1%	19,574	3.1%
Dissatisfied with their life	4,979	16.8%	9,481	8.5%	7,302	5.7%	9,444	3.0%	19,666	1.8%
Had significant depressive symptoms in past 14 days	840	21.7%	1,601	15.1%	1,247	13.9%	1,578	9.1%	3,527	2.4%
Binge drank in past 30 days	5,153	13.1%	9,684	15.2%	7,446	20.7%	9,618	17.5%	19,964	22.7%
Alcohol impaired driving in past 30 days	2,834	1.1%	5,238	2.0%	4,037	5.1%	5,219	3.3%	11,158	4.5%
Had flu vaccination during past 12 months	5,146	40.3%	9,709	38.1%	7,459	40.4%	9,628	43.6%	19,997	49.6%
Had flu vaccination during past 12 months, adults 65+	2,811	68.7%	5,291	73.8%	3,157	75.7%	2,847	74.5%	2,880	76.5%
Ever had pneumonia vaccination, adults 65+	2,754	70.3%	5,222	71.7%	3,092	71.5%	2,799	69.8%	2,810	69.5%
Ever been tested for HIV, adults 18-64	2,239	40.9%	4,281	31.8%	4,144	29.8%	6,579	27.4%	16,652	28.3%
Had any permanent teeth extracted	2,783	60.8%	5,187	53.5%	4,025	50.1%	5,223	41.3%	11,222	28.7%
Saw dentist for any reason in past 12 months	2,839	53.0%	5,281	51.7%	4,062	56.2%	5,267	71.8%	11,291	81.3%

[a] Non-weighted sample size for each indicator

[b] Weighted mean or percentage.

[c] Low% and Upper% are the lower and upper limits for the 95% confidence interval, respectively.

Note: Annual household income had 11.6% missing data for years 2007-2010

Source: Behavioral Risk Factor Surveillance System (BRFSS)

Section 3: Statewide Community Themes and Strengths Assessment

The Community Themes and Strengths Assessment (CTSA) was designed to gather information from community residents related to what they feel are areas of importance to their community as well as perceptions related to quality of life, community issues and concerns, and community assets. To meet the CTSA component of the MAPP process, DHHS contracted with the University of Nebraska Medical Center to conduct a telephone survey of Nebraska adults. The purpose of this survey was to assess the attitudes and perceptions of Nebraska residents related to various health factors and health issues impacting Nebraska communities.

The survey was administered by telephone to a random sample of Nebraska adults between July and October 2011. To assist with state and local planning efforts, the survey was stratified by 18 regions in Nebraska, which allowed interested local health departments (LHDs) to have representative local data. A total of 9,077 surveys were collected, with a minimum of 500 being targeted in each region.

The questionnaire was 78 questions long and was based on a 2008 paper and pencil survey developed in collaboration between the LHDs in Nebraska and DHHS. Survey topics included questions related to eight broad community domains as well as important health issues impacting Nebraska communities.

For further details on the survey methods, to obtain a copy of the survey questionnaire, or to see further detailed tables of the results, including demographic differences, please visit the DHHS website at http://dhhs.ne.gov/publichealth/Pages/puh_oph.aspx.

Community Domains

There were eight community domains covered on the survey. For this survey, community was defined as the city, town or metropolitan area that you live in. All questions across the eight domains asked about the respondents' community, with the exception of some of the questions under the health care domain that asked about the respondents' region, which was defined as the areas within a one hour drive of your home. The eight domains followed by the survey topics covered within each domain, include:

- Health care (availability of general health care services and specialists, quality of hospital care and health care services; asked separately for their community and region)
- Supports for raising children (childcare, schools, after school programs)
- Supports for older adults (housing, transportation, meals, social networks)
- Recreational and leisure options (physical activity, arts/music/culture, leisure time activities for young and middle-age adults)
- Jobs and the economy (job availability, advancement, benefits, overall economy)
- Housing (availability and affordability of quality housing)
- Safety and security (safety, crime, trust/support from neighbors)
- Social support and civic responsibility (social support, volunteerism)

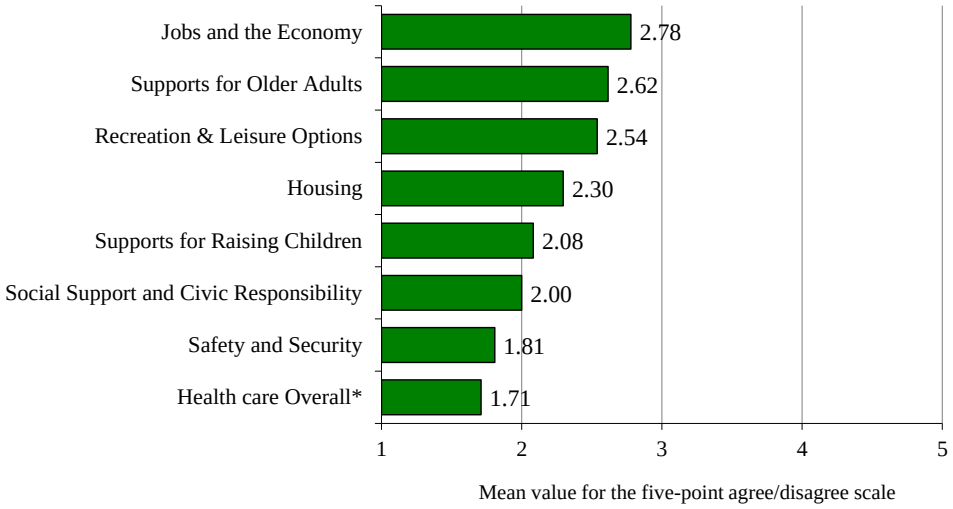
For each domain, there were multiple questions asked on a bi-directional five-point scale ranging from 1=strongly agree to 5=strongly disagree. For each domain, the questions were combined and an average score was generated for the domain, allowing the domains to be compared to one another. Lower scores are reflective of more positive feelings while higher scores are reflective of less positive feelings about the domain.

When comparing the eight domains to one another, health care had the most positive feedback. The mean score of 1.71 for health care suggests that, overall, respondents felt positive about the availability and quality of health care services in their community and region. Health care was followed closely by safety and security at 1.81. The domain having the least positive feedback was jobs and the economy at

2.78. It should be noted that all eight domains fell onto the agree side of the five-point scale, suggesting that each domain had more positive than negative feelings. Figure 1 provides the mean scores for all eight domains.

Figure 1: Overall Mean Scores Across the Eight Domains

Mean values based on a scale raning from1=Strongly Agree to 5=Strongly Disagree with the positive statements asked across each domain



*For the healthcare section only respondents were asked to answer each question twice, once while thinking about their community (the town, city, or metro area that they live in) and once while thinking about their region (the area within a one hour drive of their home). Community had a mean of 1.85, region had a mean of 1.56.
Source: 2011 Nebraska Community Themes and Strengths Assessment Survey

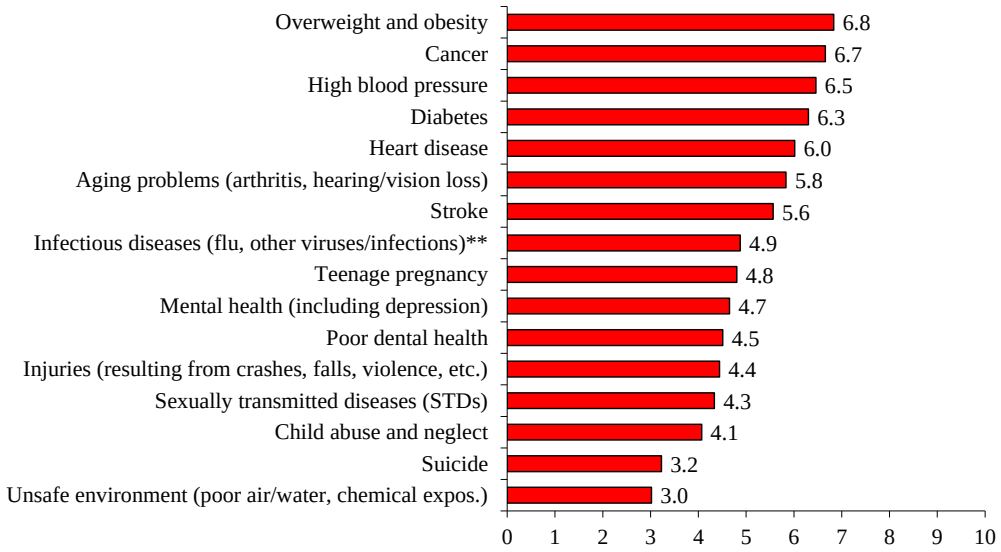
When looking at all of the individual survey questions asked across all of the domains, "There are enough health care services, such as hospitals, emergency rooms, doctors' offices, health clinics, and so forth, available within your region" had the most positive responses with a mean of 1.36. However, when removing the questions asking about the respondents' region, which were only included in the health care domain, "There are enough health care services, such as hospitals, emergency rooms, doctors' offices, health clinics, and so forth, available within your community" had the most positive responses with a mean of 1.59, which was followed closely by "Your community is a safe place to live, work, and play" at 1.60. In contrast, "The jobs in your community offer opportunities for advancement (such as promotions and on the job training)" had the least positive responses with a mean of 2.99.

Community Health Issues

The survey asked respondents about different health issues and health behaviors in their community. First, respondents were asked to indicate how serious 16 health issues are in their community on an 11-point scale ranging from 0 being not serious at all in your community to 10 being extremely serious in your community.

Overweight and obesity was seen as the most serious health issue among the 16 asked about on the survey, with a mean of 6.8 out of 10.0. Overweight and obesity was followed by cancer, high blood pressure, diabetes, and heart disease, all of which are chronic diseases. Suicide and an unsafe environment were seen as the least serious with mean scores of 3.2 and 3.0, respectively. Figure 2 provides the mean score for each of the 16 health issues.

Figure 2: Mean Score for How Serious each of the following 16 Health Issues are in the Community, based on an 11-point scale*

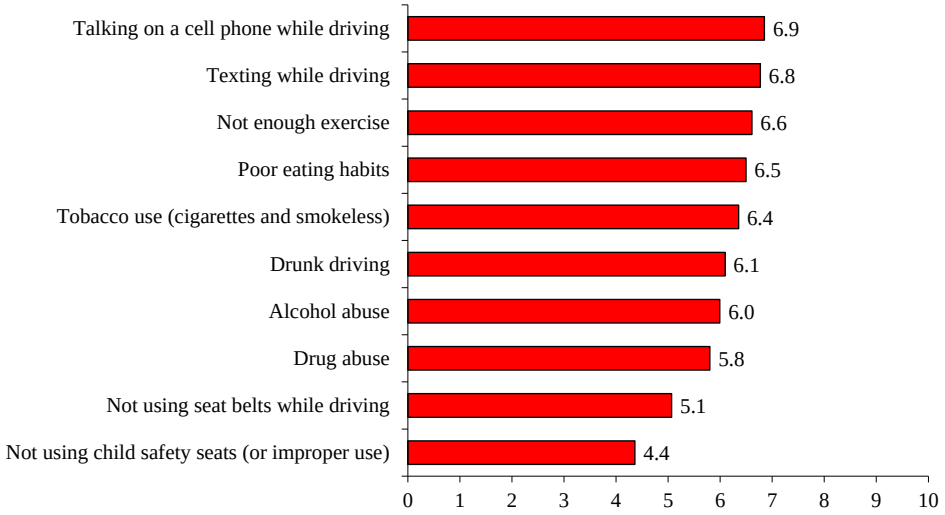


*The 11-point scale from 0=not serious at all in the community to 10=extremely serious in the community
**Includes viruses and infectons that are transmitted from person-to-person excluding STDs
Note: Missing data ranged from 2.1% for a health issue to 27.5% for a health issue.
Source: 2011 Nebraska Community Themes and Strengths Assessment Survey

Next, respondents were asked to indicate how much 12 different behaviors impact overall health in their community (such as death, disease, and injuries) on an 11-point scale ranging from 0 being no impact on overall health in our community to 10 being a huge impact on overall health in your community.

Talking on a cell phone while driving and texting while driving were seen as the health behaviors that have the greatest impact on overall health in the community out of the 12 asked about on the survey, with mean scores of 6.9 and 6.8 respectively. Talking and texting while driving were followed closely by not enough exercise, poor eating habits, and tobacco use. Not using seat belts while driving and not using child safety seats (or using them improperly) were seen as the behaviors having the least impact on overall health in the community with mean scores of 5.1 and 4.4, respectively. Figure 3 provides the mean score for each of the 12 health behaviors.

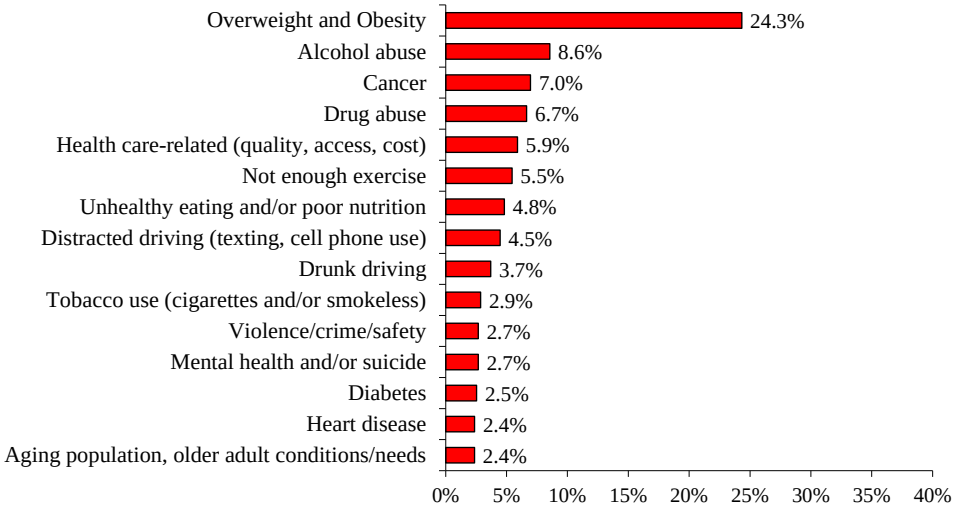
Figure 3: Mean Score for How Much each of the following 12 Health Behaviors Impacts Overall Health in the Community, based on an 11-point scale*



*The 11-point scale from 0=no impact on overall health in the community to 10=huge impact on overall health in the community
Note: Missing data ranged from 2.1% for a health issue to 27.5% for a health issue.
Source: 2011 Nebraska Community Themes and Strengths Assessment Survey

Lastly, respondents were asked, in an open-ended question, what they see as the single most important health issue or health behavior that needs to be addressed in their community. Overweight and obesity was the top response at 24.3 percent, which was three times higher than the second most common response, alcohol abuse at 8.6 percent. Cancer came in at number three, followed by drug abuse, health care-related issues, not enough exercise, and poor diet. Figure 4 lists the top 15 responses.

Figure 4: Top 15 Responses to "What do you think is the single most important health issues or health behavior that needs to be addressed in your community?"

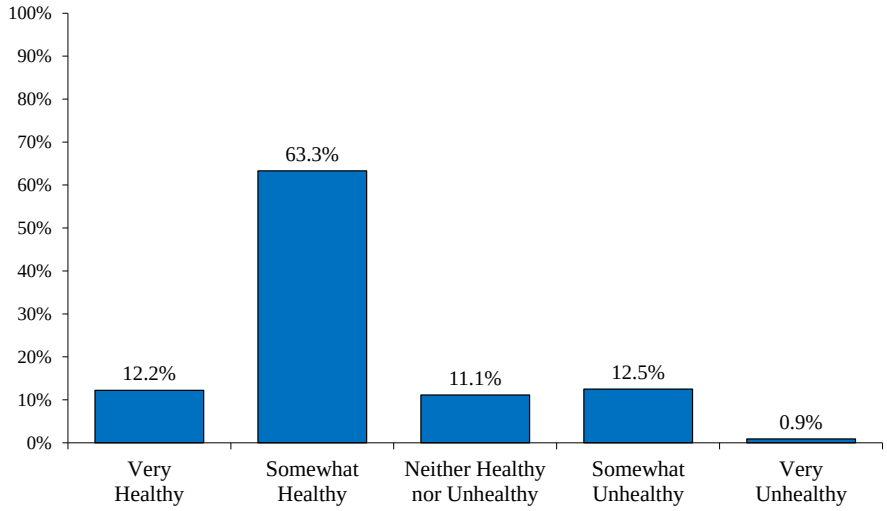


Note: This survey question was open-ended, meaning that respondents could provide any response they wanted without prompt. However, 28 fields were pre-populated for interviewer coding, which reflected the health issues and behaviors asked about in survey questions 33-60.
n=7,377 (missing data=18.7%) *Small number of cases (<1%) overlap with another top 15 category
Source: 2011 Nebraska Community Themes and Strengths Assessment Survey

Overall Health and Quality of Life

The survey asked respondents to indicate how healthy their community is as well as the overall quality of life in their community. When asked about how healthy their community is overall, the majority of respondents, 3 in 4 (75.5%), answered somewhat or very healthy compared to 1 in 7 (13.4%) who answered somewhat or very unhealthy. However, just 1 in 8 answered very healthy (12.2%). Figure 5 provides a breakdown of results by response option.

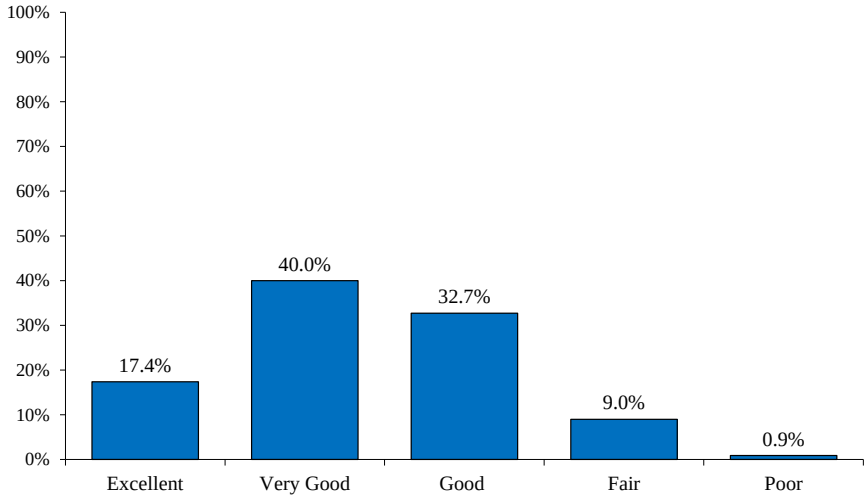
Figure 5: Responses to the question "How healthy is your community overall?"



n=8,933 (missing data=1.6%)
Source: 2011 Nebraska Community Themes and Strengths Assessment Survey

When asked to rate the overall quality of life in their community, 9 in 10 respondents (90.1%) indicated good or better, compared to 1 in 10 (9.9%) who indicated fair or poor. However, just 1 in 6 indicated that the quality of life was excellent (17.4%). Figure 6 provides a breakdown of results by response option.

Figure 6: Responses to the question "How would you rate the overall quality of life in your community?"



n=9,035 (missing data=0.5%)
Source: 2011 Nebraska Community Themes and Strengths Assessment Survey

Section 4: Forces of Change Assessment

The purpose of the Forces of Change Assessment is to provide a statewide perspective on the forces of change impacting the health and well-being of Nebraskans. In order to identify the major forces of change, individuals with diverse backgrounds (e.g., representatives from local public health departments, the Nebraska Hospital Association, Emergency Medical Services, non-profit organizations, the Public Health Association of Nebraska, the College of Public Health, and businesses) were invited to participate in the discussion in either North Platte or Lincoln in November 2011. A list of the participants is shown in Appendix A.

The participants were asked to identify what trends, factors, and events are or will be influencing the health and quality of life in our communities and the work of Nebraska's public health system. Trends, factors, and events were defined as follows:

- **TRENDS** are patterns over time, such as migration in and out of a community or a growing disillusionment with government.
- **FACTORS** are discrete elements, such as a community's large ethnic population, an urban setting, or a jurisdiction's proximity to a major waterway.
- **EVENTS** are one-time occurrences, such as a hospital closure, a natural disaster, or the passage of new legislation.

Each participant was also encouraged to consider various types of forces, including social, political, economic, technological, environmental, scientific, legal, and ethical.

Although each group answered the question about what trends, factors, and events are or will be influencing the health and quality of life in our communities and the work of the public health system, there were many similarities and duplications, so the results of the two groups have been combined. These results are shown in Table 1 below.

TABLE 1

Forces of Change Focus Question:
What trends, factors, and events are or will be influencing the health and quality of life in our communities and/or the work of Nebraska's public health system?

Shifting family dynamics	Cultural dynamics and demographic shifts	Increased coordination of public health systems	Decrease in funding/economic instability	Political insecurity and its influence on communities	Increased momentum & leadership in public health	Increased accountability
• Changes in family life (more working parents, single parent families)	• Increases in the immigrant and refugee populations • Population changes (increases in elderly population, racial/ethnic minority groups, and a shift from rural to urban) • Strong resistance to the growing ethnic diversity in our communities • Older rural population with lower income levels • Continued culture of "prairie pride" and self reliance	• Knowledge of the MAPP process at a local level • Increase in community participation • Better overall understanding of public health • Siloed funding (e.g., community health centers, Area Health Education Centers) has reduced coordination • Public Health agencies and Boards of Health • Increased opportunities for partnerships between hospitals and local health departments (LHDs) and between LHDs and the College of Public Health • Medical Response Systems and Medical Reserve Corps are working in communities to prepare for disasters	• Decrease in federal and state funding of public programs • More income inequality • Increased use of public assistance programs • Potential decreases in payments to Critical Access Hospitals • Do more with less philosophy • Impact of deficit reduction could lead to deep cuts • Impact of economic downturn on foundations, volunteerism, non-profits, and charities • Creates turf battles and more silos rather than a system perspective	• Dissatisfaction with Congress, Wall Street, and economy – 99% • Term limits of state legislators • General philosophy of decreasing role of government • Outcome of European debt crisis • Political realignments • Controversial nutrition policies ("pizza is a vegetable") • Less centralization and more privatization • 2012 national and state elections • Increasing political influence on decision-making	• Need to develop priority Public Health issues • Increased awareness of the value of Public Health • Need to continue to develop Public Health infrastructure • Strategically build Public Health system through leadership development	• Movement to accreditation • New laws & regulations • Increased focus on public accountability • Increased emphasis on evidence-based programs and outcomes • Complexity of whole system

*A list of the focus group participants is shown in Appendix A.

What trends, factors and events are or will be influencing the health and quality of life in our communities and/or the work of Nebraska's public health system? (continued...)					
Greater focus on prevention	**Health Care Reform**	**Workforce change (Human capital)**	**Access to care**	**Impact of technology and access to information**	**Environmental challenges**
• Growing popularity & expectations of worksite wellness programs • Increased smoke-free policies (multi housing, campus-wide, outdoor areas) • Licensing of food service workers • Increased emphasis on prevention and reducing chronic diseases	• Uncertainty of Affordable Care Act • Attempts to strip prevention from health reform law • Refusal to invest in prevention will lead to lower health status in the long run • Health reform law encourages local health departments to provide community education on healthy living • Health care reform law changes Medicaid and Medicare • Greater emphasis on quality for Public Health and health care services • Medicaid changes create more demand for general funds	• Continued shortages of health professionals, especially in rural areas • Aging health care workers • Experience and knowledge of workforce is increasing • Increase work responsibilities due to retirements • Lack of volunteers • More highly trained public health workforce due to College of Public Health • Rural flight (outmigration) • Relatively low wages for public health workers	• DHHS reduces number of offices (call centers) • Transportation challenges • Child Advocacy Centers, Federally Qualified Health Center dental clinics, and urgent care clinics improve access • Growing number of uninsured and under-insured • EMS system changes have led to better coordination • Less access to mental health treatment • A stronger telehealth network improves access to care.	• Advances in technology produce positive and negative effects • Adoption of electronic health records • Cultural gap created by technology • Greater use of social media • Greater influence of the media • Speed of communication greatly increased	• Impact of climate change and natural disasters on the environment • Greater awareness of environmental issues
Outcomes: **1. Economic impact -- new opportunities, but also greater uncertainty** **2. Increase in stress for providers, organizations, and individuals**					

*A list of the focus group participants is shown in Appendix A.

Emerging Issues from Local Health Departments

Several local health departments have also completed a Forces of Change Assessment as part of their MAPP process. While there are many similarities, some different trends, factors, and events emerged from these assessments. Some of the more prominent issues include:

Family Issues

- Unsupervised children and youth as parents work multiple jobs
- Increased divorce rates
- Domestic violence

Technology

- Instant sharing of information
- Internet predators, cyber-crimes, and cyber-bullying
- Telehealth improves access to care
- Potential to reach more people with accurate, credible information

Rural Economy and Poverty

- Lack of public transportation in rural Nebraska
- Relatively low unemployment
- High cost of insurance and health care services
- Growing income inequality
- Rising number of homeless people
- Lack of adequate housing in some areas

Substance Abuse

- Increased use of illegal and prescription drugs, alcohol, and tobacco
- Resistance of community members, including parents, to enforcement of laws related to underage drinking
- Increased use of marijuana and K2-like substances

Environment

- Aging infrastructure in small towns (water, sewer)
- Strong green movement promotes health

Crime

- Easy access to guns
- Incarceration rates, especially among certain population groups

Medical Innovations/Changes

- New medical home model
- Behavioral health breakthroughs (less need for hospital care due to better medications)
- Greater emphasis on self-care

Access to Care

- Some physicians restrict number of Medicare patients
- Increasing number of uninsured and underinsured
- Use of emergency room for regular care

Discussion

The Forces of Change Assessment at both the state and local level has identified several trends, factors, and events that will have both positive and negative influence on the health and quality of life in Nebraska communities and the work of the public health system. Some of the trends and factors that will have a positive influence include:

- Greater community participation and a better understanding of public health.
- Greater opportunities for collaborative partnerships between public health agencies and hospitals, non-profit agencies, and academic institutions.
- A greater focus on accountability (e.g., accreditation of public health agencies) and the emphasis on implementing evidence-based programs and practices.
- A greater focus on prevention in schools, worksites, and the community.
- A more knowledgeable and educated public health workforce due to more experience and public health programs in academic institutions.
- Some reduced access barriers resulting from the development of child advocacy centers, Federally Qualified Health Centers (FQHCs), and urgent care clinics.
- Advances in technology have improved communication through the electronic medical record and various types of social media.
- A greater awareness of environmental issues (e.g., Keystone Pipeline and climate change) and their impact on the quality of life.
- New medical breakthroughs (e.g., medications) to reduce the need to hospitalize mental health patients and innovative health system delivery changes (e.g., medical home model).

There are also several forces that could have a negative impact on the health and quality of life in Nebraska communities and the public health system. Some of these forces include:

- Greater instability because of changes in family dynamics (e.g., more working parents).
- Changes in population and socioeconomic status in rural areas (more older people with lower incomes).
- Greater economic instability because the debt crisis could lead to sharp declines in funding for valuable personal and public health programs.
- Greater political insecurity (e.g., term limits for state legislators and 2012 presidential election).
- Growing need to continue to build the public health infrastructure and develop more public health leaders.
- Uncertainty of the legality and funding of the health reform law (Affordable Care Act).
- Continued shortages of health professionals, especially in rural areas and the potential impact of an aging workforce.
- Greater access to care barriers (e.g., number of uninsured/underinsured and transportation challenges).
- Increased use of prescription drugs and alcohol.

Conclusions

Many of the positive and negative forces of change are likely to have a major influence on the health of the population and the work of the public health system. Although there does not appear to be a single overriding trend or factor, the participants seemed to be most concerned about the potential funding cuts to public financing (e.g., Medicare and Medicaid) and to public health programs. A major reduction in funding could reverse the progress that has been made in building the public health infrastructure. However, there are many positive forces and opportunities, including collaborative partnerships with hospitals, physician clinics, and insurers through the medical home model, a more highly trained public health workforce with more formal degrees in public health, and a general recognition that prevention programs and activities are critical to controlling spiraling health care costs and improving the health and quality of life of the population.

Section 5: State Public Health System Assessment

The state public health system assessment was conducted on October 4, 2011 by 113 state and local representatives that had expertise and knowledge in one or more of the Ten Essential Public Health Services. These individuals represented a variety of organizations including local health departments, the Department of Health and Human Services, academic institutions, a Native American Tribe, the Nebraska Hospital Association, the Department of Environmental Quality, and the Public Health Association of Nebraska. A list of all of the participants is included in Appendix B.

Purpose and Methods

The purpose of the assessment is to improve the quality of public health practice and the performance of the public health system. This assessment was based on the application of the draft Version 3.0 of the National Public Health Performance Standards. All of the standards are designed around the Ten Essential Public Health Services shown below. The standards focus on the overall public health system which includes state and local governmental public health related agencies, other state agencies such as the Department of Agriculture, nonprofit organizations such as community action agencies and substance abuse prevention coalitions, hospitals and physician clinics, faith-based organizations, colleges and universities, private and public insurers, tribes, businesses, and advocacy groups such as the Public Health Association of Nebraska.

The Ten Essential Public Health Services

1. Monitor health status to identify and solve community health problems.
2. Diagnose and investigate health problems and health hazards in the community.
3. Inform, educate, and empower people about health issues.
4. Mobilize community partnerships and action to identify and solve health problems.
5. Develop policies and plans that support individual and community health efforts.
6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. Assure competent public and personal health care workforce.
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
10. Research for new insights and innovative solutions to health problems.

There are four model standards for each of the Essential Public Health Services. These model standards focus on the following main areas:

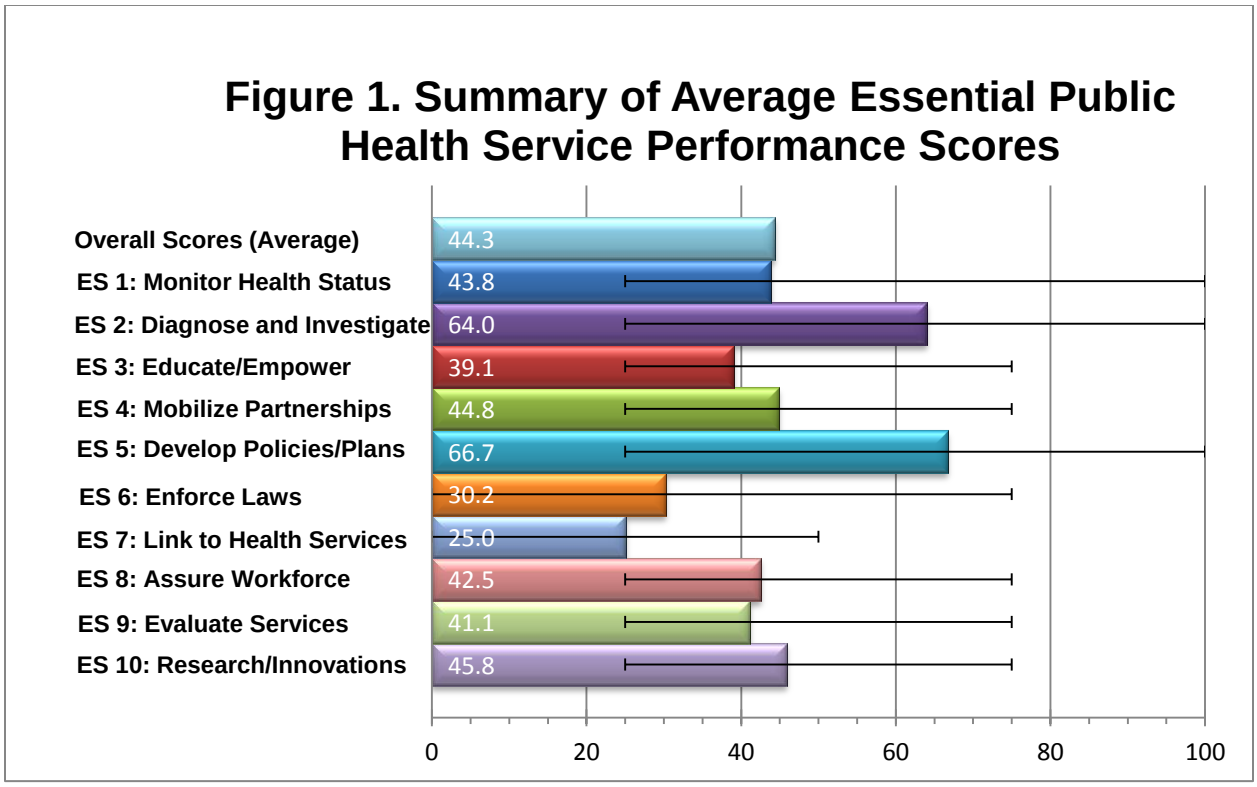
SPHS Assessment Model Standards	
Model Standard 1:	Planning and Implementation
Model Standard 2:	State-Local Relationships
Model Standard 3:	Performance Management and Quality Improvement
Model Standard 4:	Public Health Capacity and Resources

For each of the model standards under the Ten Essential Services, a group of 8 to 14 people discussed and then voted on how effective the state public health system partners performed each standard. There were five response options associated with each measure, including:

No Activity	**0% or absolutely no activity**
Minimal Activity	**Greater than zero, but no more than 25% of the activity described within the question is met.**
Moderate Activity	**Greater than 25%, but no more than 50% of the activity described within the question is met.**
Significant Activity	**Greater than 50%, but no more than 75% of the activity described within the question is met.**
Optimal Activity	**Greater than 75% of the activity described within the question is met.**

The overall results of the assessment are revealed in Figure 1. Using the responses to all of the assessment questions, a scoring process generates scores (performance scores). Each Essential Service score can be interpreted as the overall degree to which the public health system meets the performance standards (quality indicators) for each Essential Service. Scores can range from a minimum value of 0 percent (no activity is performed pursuant to the standards) to a maximum value of 100 percent (all activities associated with the standards are performed at optimal levels). Figure 1 displays the average score for each Essential Service, along with an overall average assessment score across all Ten Essential Services. Note the black bars that identify the range of performance score responses within each Essential Service.

Based on the findings, the state public health system was most effective in providing Essential Service 2 (Diagnose and investigate health problems and health hazards in the community) and Essential Service 5 (Develop policies and plans that support individuals and community health efforts). In contrast, there were some essential services at the lower end of the spectrum. For example, Essential Service 7 (Link people to needed personal health services and assure the provision of health care when otherwise unavailable) and Essential Service 6 (Enforce laws and regulations that protect health and ensure safety) were rated lower.



Limitations

Because this is a new version of the National Public Health Performance Standards, it was not possible to make any comparisons with the national average or the previous assessment that was conducted in 2005. The responses to the questions within the assessment are based upon input from diverse participants with different experiences and perspectives. The gathering of the assessment responses for each question required a certain amount of subjectivity. The assessment methods are not fully standardized and differences in administration may introduce an element of measurement error. Finally, there were differences in knowledge about the public health system among assessment participants. This may lead to some interpretation differences and issues for some of the questions.

Because of the limitations noted, the Centers for Disease Control and Prevention recommends that the results and recommendations should be used for quality improvement purposes. More specifically, results should be utilized for guiding an overall public health infrastructure and performance improvement process for the public health system.

Results

In the assessment of the state public health system, several strengths and weaknesses were identified. Although the scores for eight of the ten essential services were rated as moderate activity (i.e., greater than 25 percent but less than 50 percent), significant variations were observed within the four model standards. As previously discussed, planning and implementation activities were rated considerably higher than the activities associated with performance management and quality improvement.

The relatively low overall rankings and the wide variation in the scores of the four model standards indicate that several changes are needed to strengthen and transform the state public health system. In Essential Service 1 (monitor health status), one of the major strengths of the state public health system is

the collection of quality health data, but the lack of staff significantly limits the system's ability to analyze the data in a timely manner. However, there are several opportunities to build data capacity, including:

- Using partners at both the state and local levels (academic institutions, local health departments)
- Accessing nonidentifiable health data electronically through electronic health records
- Developing more standardized data collection and release procedures

This assessment also found that there is a strong need to address the shortage of both the public health workers and health professionals. For example, it is difficult to thoroughly diagnose and investigate health problems and health hazards across the state because of the limited supply of epidemiologists. Within the public health system, the capacity of the workforce to evaluate public health programs and policies and the expertise to conduct research is severely limited. The lack of personal health care providers in rural areas makes it difficult to link people to needed personal health care services. These linkages have also been adversely impacted by a reduction in Medicaid reimbursement and the lack of public transportation. The increase in the number of Federally Qualified Health Centers and the expanded use of telehealth services has produced a positive impact on access.

The assessment also identified several other major weaknesses, including:

- There is limited data to pinpoint many of the racial/ethnic minority disparities.
- Communication among agencies that impact public health can be improved.
- Siloed funding leads to isolation rather than collaborative partnerships.
- Public health laws often lag behind the science and there is no formal process for changing outdated and inconsistent laws.
- Consistent measures to assess the performance of the public health system must be developed.
- Further coordination and support are needed for public health leadership and workforce development.

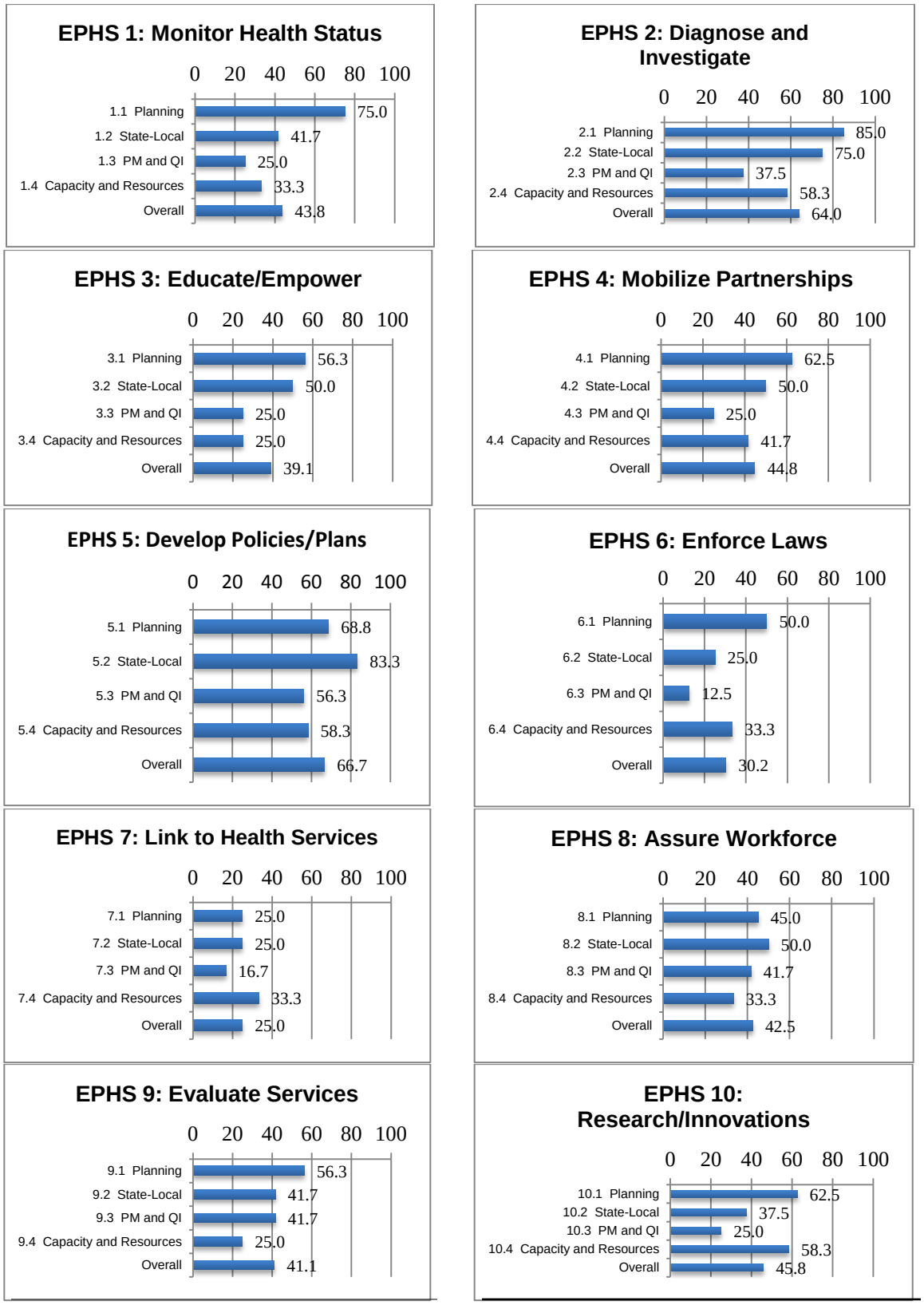
The next section provides a list of the major strengths and weaknesses under each standard for all of the Ten Essential Services. This list is based on the comments made before voting on the effectiveness of each standard.

Strengths and Weaknesses within the Essential Services

In Figure 2, the performance scores are shown for each of the four model standards included in the ten essential services. These scores indicate that in general, the statewide public health system is stronger in the area of planning and implementation than any other area. For example, the planning and implementation standards were rated the highest in seven of the ten essential services. A second relatively strong area is the development of state and local relationships (Model Standard 2). State and local relationships ranked first or second in six of the ten essential services. The scores for the capacity and resources model standard varied considerably from a low of 25 percent in Essential Service 7 (link people to needed health services) to a high of 58 percent in Essential Service 2 (diagnose and investigate), Essential Service 5 (develop policies and plans), and Essential Service 10 (research/innovations).

For most of the essential services, the ability to conduct performance management and quality improvement services (Model Standard 3) ranked below the other standards in eight out of the ten essential services. This ranking is not surprising given that performance management and quality improvement activities are in the early stages of development in comparison to planning and implementation and state and local relationships.

Figure 2
Performance Scores by Essential Service for Each Model Standard



Scores and Comments by Model Standard

In this section, the major strengths and weaknesses for each essential service are presented. These findings reflect the comments made during the assessment process as well as the ranking of the standards by participants. (Note: Each Essential Service score can be interpreted as the overall degree to which the public health system meets the performance standards for each Essential Service.)

Essential Service 1: Monitor Health Status to Identify Community Health Problems

Overall Score: 44 out of 100

Model Standard 1.1 – How well do the State Public Health System (SPHS) partners measure the health status of the population, make data available, and work together to maintain a data reporting system that identifies potential threats to the public's health?

Major Strengths

- Most key indicators are addressed, but some need greater focus.
- Local health departments (LHDs), The Public Health Association of Nebraska (PHAN), and the Office of Community Health and Performance Management are working on a dashboard that displays relevant results from specific data indicators.
- The overall quality of the data is excellent.
- The Division of Public Health is working on a data warehouse.
- Resources are available to analyze data for injuries and to consult with LHDs.
- The state is willing to work with tribes to address data needs.
- Reports and factsheets are being prepared by different partners on a regular basis.

Major Weaknesses

- State and national indicators are not always consistent.
- More data should be collected on chronic diseases.
- More data analysis is needed.
- The lack of staff and resources leads to less data analysis and delays the time when the data are available.
- The Nebraska Heath Information Initiative (NeHII) needs to move forward quickly.

Opportunities for Improvement

- There could be a better use of expertise and resources (e.g., a dedicated epidemiologist to assist local and regional agencies).
- The potential exists to use the expertise at universities and colleges to assist in data collection and analysis.
- There should be more standardized data collection and release procedures.
- More registries could be added.

*See Appendix B for a list of assessment participants.

Model standard 1.2 – How well do the SPHS partners assist (e.g., training) local public health systems in the interpretation, use, and dissemination of health-related data, work to provide on a regular basis local public health systems with a uniform set of data, and provide technical assistance in the development of information systems needed to monitor health status at the local level?

Major Strengths

- The Division of Public Health (DPH) has made data available to LHDs.
- PHAN has created a data workgroup consisting of representatives from LHDs and the DPH.
- The DPH has filled data requests from tribes.
- Injury data are analyzed by LHD region and BRFSS surveys are conducted for each LHD.
- An epidemiology position was recently created in the DPH to assist LHDs with their data analysis.

Major Weaknesses

- Other than LHDs, there is only limited funding available for data collection and analysis in other local health agencies (e.g., nonprofit organizations and community action agencies).
- Annual data reports are usually two or three years behind schedule.
- Hospital discharge data are not disseminated.
- There is a need for more disease registries and geocoded information.

Model Standard 1.3 – How well do the SPHS partners work together to review the effectiveness of their efforts to monitor health status and actively manage and improve their collective performance in health status monitoring?

Major Strengths

- BRFSS data are used to show improvements over time.
- There is a new epidemiology server that contains most databases.
- Maternal and Child Health data are used effectively.
- Efforts have focused on improving data quality and completeness of reporting.

Major Weaknesses

- There are insufficient data to monitor the subpopulations.
- Resources are limited.
- Surveillance process evaluation efforts are not a priority.
- Monitoring efforts are not timely.

Model Standard 1.4 – To what extent do SPHS partners collectively have the professional expertise to carry out health status monitoring activities?

Major Strengths

- LB 692 passed in 2001 provides funds to support LHDs.
- State staff have gained knowledge and expertise over the past few years.

*See Appendix B for a list of assessment participants.

Major Weaknesses

- More funding and other resources are needed to increase staff.
- A plan of action is needed.
- There are insufficient resources to support data collection to monitor the health status of tribes.
- There is high turnover of data staff in the DPH.

*See Appendix B for a list of assessment participants.

Essential Service 2: Diagnose and Investigate Health Problems and Health Hazards

Overall Score: 65 out of 100

Model Standards 2.1 and 2.2 – How well do the SPHS partners work together and operate surveillance and epidemiology activities that identify health problems and health threats and how well does it maintain the capability to rapidly initiate enhanced surveillance when needed for a statewide regional health threat? How well does the state lab system operate?

Major Strengths

- The collaboration between state and local public health agencies is very good.
- More user-friendly data are available.
- The state public health lab is very responsive to the needs of its partners.

Major Weaknesses

- Potential turnover of staff and budget cuts could impact the system.
- The DPH may need more capacity to handle future data demands.
- Documentation at both the local and state levels needs to be improved.

Model Standard 2.3 – How well do the SPHS partners periodically review the effectiveness of the state surveillance and investigation system and then actively manage and improve performance?

Major Strengths

- Local and state public health agencies work together to follow up on lab reports; most rural LHDs do not have an epidemiologist, so they work with the DPH and the state lab.
- The DPH conducts surveillance and coordinates multi-county investigations. They also step in to assist LHDs that may not have the resources to thoroughly investigate an outbreak.

Major Weaknesses

- Only limited capacity exists to conduct occupational/environmental health surveillance.
- There is a shortage of epidemiologists at the state and local levels.
- Some LHDs have only limited capacity to deal with an outbreak.
- There is a need for more extensive education and training.
- Although statistical analysis is usually done, there is rarely enough time to develop a plan of improvement.

Model Standard 2.4 – How do the SPHS partners work together to commit financial resources to support the diagnosis and investigation of health problems and coordinate their efforts? Do they collectively have the professional expertise to identify and analyze these problems?

Major Strengths

- Data from the Department of Environmental Quality is used by the DPH to develop strategic plans.

*See Appendix B for a list of assessment participants.

- The DPH provides the communication infrastructure through the Health Alert Network, maintains the Nebraska Electronic Disease Surveillance System (NEDSS), and coordinates the Strategic National Stockpile.

Major Weaknesses

- Limited staffing leads to reactive rather than proactive situations.
- The state environmental radiological lab lacks the capacity to provide all of the needed services so they must rely on a commercial lab.
- From a local perspective, it is difficult to know which person should be contacted at the state level about data.

*See Appendix B for a list of assessment participants.

Essential Service 3 – Inform, Educate, and Empower People About Health Issues

Overall Score: 39 out of 100

Model Standard 3.1 – How well do the SPHS partners implement health education and health promotion programs and services designed to promote healthy behaviors? How well does the system implement health communications designed to enable people to make healthy choices and maintain a crisis communication plan that can be used in an emergency situation?

Major Strengths

- There are many collaborative health education and health promotion efforts under way at the state and local levels that are based on evidence-based strategies.
- The communication between agencies is adequate.
- Many diverse populations are being reached, including refugees and immigrants.

Major Weaknesses

- There is some fragmentation of programs and coordination that can be improved.
- While the communication between the DPH and LHDs is adequate, it can be improved.
- It is difficult to implement programs and practices that focus on system changes with grants that are funded for only short time periods.
- The communication infrastructure needs to be improved.
- Potential funding cuts will have a major negative impact.
- Disenfranchised populations do not have a voice and minority programs have the least funding to reach the most at-risk populations.
- Siloed funding has led to fragmentation and a lack of coordination.
- A media strategy with more targeted messages is needed.

Model Standard 3.2 – How well do the SPHS partners provide technical assistance to local public health systems to develop skills and strategies and to conduct health communication, health education, and health promotion?

Major Strengths

- None recorded.

Major Weaknesses

- Constraints within DHHS limit the dissemination of some important, time-sensitive information.
- Evaluation capacity at the DPH is limited.
- Little is known about how youth connect to health information – what works culturally, linguistically, and socially.
- The evaluation efforts of health communication strategies are weak.
- Communications with underserved populations is often not effective because it is a retrofit from mainstream communication strategies.

*See Appendix B for a list of assessment participants.

Opportunities for Improvement

- Consideration should be given to organizing a statewide youth summit.
- Health education and health promotion programs should be connected to the Healthy People 2020 Objectives.
- More staff training should be focused on learning and applying cultural competency skills.

Model Standard 3.3 – How well do the SPHS partners periodically review the effectiveness of health communications, health education, and health promotion services, and actively manage and improve their performance?

Major Strengths

- Several messages are reviewed on a regular basis.
- The Tobacco-Free Nebraska Program in the DPH does an excellent job of assessing the effectiveness of its programs and interventions using the recommendations from the Guide to Community Preventive Services.

Major Weaknesses

- None recorded

*See Appendix B for a list of assessment participants.

Essential Service 4 – Mobilize Community Partnerships to Identify and Solve Health Problems

Overall Score: 45 out of 100

Model Standard 4.1 – How well does the SPHS mobilize task forces and coalitions to build statewide support for public health issues?

Major Strengths

- Several task forces and coalitions have been formed in many areas.

Major Weaknesses

- It is difficult to recruit community representatives, racial/ethnic minority members, and other non-traditional partners (e.g., insurers).
- There is coalition fatigue (some members serving on multiple coalitions) and lack of interaction between coalitions.
- Sustaining coalitions over a long period of time is a challenge.
- Most agencies use data, but it is also important to share the stories behind the data.

Opportunities for Improvement

- It would be helpful to organize a training session about how to develop and share success stories.

Model Standard 4.2 – How well do the SPHS partners provide assistance and incentives to local public health systems to build broad-based partnerships?

Major Strengths

- None recorded.

Major Weaknesses

- It is difficult to provide strong incentives to form broad-based coalitions at the local level because most federal funding is categorical.
- Many of the same individuals serve on multiple coalitions.

Model Standard 4.3 – How well do the SPHS partners review their partnership development activities and actively manage and improve their collective performance?

Major Strengths

- None recorded.

Major Weaknesses

- Partnership development activities are generally not reviewed.

*See Appendix B for a list of assessment participants.

Opportunities for Improvement

- It would be helpful to develop a broad-based tool that could be used by several programs.

Model Standard 4.4 – How well do the SPHS partners do in committing financial resources to sustain partnerships and align and coordinate their efforts to mobilize partnerships? Is there adequate professional expertise?

Major Strengths

- The funds associated with the healthy communities grants encourage partnerships.
- A facilitated training process called Technology of Participation has improved the effectiveness of meetings.

Major Weaknesses

- There is a need to coordinate resources.
- More staff and resources are needed to support partner activities.
- Siloed funding leads to isolation rather than alignment.

*See Appendix B for a list of assessment participants.

Essential Service 5: Develop Policies and Plans that Support Individual and Community Health Efforts

Overall Score: 67 out of 100

Model Standard 5.1 – How well do the SPHS partners implement statewide health improvement processes that convene coalitions to develop a State Health Improvement Plan and an All-Hazards Preparedness Plan?

Major Strengths

- Significant planning using data analysis has been done at the local and state level.
- The Healthy People 2010 objectives have been used effectively.

Major Weaknesses

- Collaborative planning needs to include all segments of the population (senior citizens, young families, etc.)
- Term limits for senators have made it difficult to increase their understanding of health needs in the state.
- Planning is not done on a continuous basis – only when funds are available.
- Some plans are placed on a shelf and not used very often.
- Preparedness plans are driven by the availability of funds (e.g., H1N1) and the needs of special population groups are not always addressed.
- Some issues are politically sensitive which makes it difficult to address them statewide.
- Indicators to measure the performance of the public health system have not been developed.

Model Standard 5.2 – How well does the SPHS provide technical assistance to local public health systems for developing local public health improvement plans, all hazards preparedness plans, and local health policy development?

Major Strengths

- The Healthy Communities grants support MAPP and other policy development activities.
- The technical assistance provided by the state has been effective.
- A health data book has been prepared and distributed to local health departments.
- There have been important legislative policy changes in the use of alcohol, tobacco, and breastfeeding.

Major Weaknesses

- Some LHDs need more experience and expertise in policy development.
- Additional local data are needed to support policy changes.

Model Standard 5.3 – How well do the SPHS partners review progress toward accomplishing health improvement across the state, review new and existing policies to determine their public health impact, and actively improve performance in statewide planning and policy development?

*See Appendix B for a list of assessment participants.

Major Strengths

- There have been some improvements in planning and policy development activities.

Major Weaknesses

- The process for developing the State Public Health Improvement Plan is not highly visible.
- There is sporadic reporting on some policy issues at the state level.
- Performance measures have not been developed at the state level.

Model Standard 5.4 – How well do the SPHS partners work together to commit financial resources and align and coordinate their efforts to implement health planning and policy development? Is there adequate professional expertise?

Major Strengths

- Chronic disease, injury prevention, and physical activity plans are either in progress or have been developed.
- The partners share data very well.
- The use of mentors has been beneficial.

Major Weaknesses

- Financial resources are limited.
- Early childhood systems are valued, but they are not aligned and coordinated.

*See Appendix B for a list of assessment participants.

Essential Service 6: Enforce Laws and Regulations that Protect Health and Ensure Safety

Overall Score: 30 out of 100

Model Standard 6.1 – How well do the SPHS partners assure that existing and proposed state laws are designed to protect the public's health and ensure safety, and provide state and local authorities with the power and ability to prevent, detect, and contain emergency health threats? Are there cooperative relationships between regulatory bodies to encourage compliance and assure that administrative processes are customer-centered?

Major Strengths

- It is easier for non-government state partners to get legislative bills introduced and passed.
- The DPH does a thorough job of investigating issues.
- A national Model State Public Health Law can be used to assess the adequacy of the state's current public health laws.
- The Legal area of DHHS reviews the gaps in state and local laws and policies.
- A national Model Emergency Management Act can assist in identifying gaps at the state and local levels.
- At the local level, ordinances requiring Responsible Beverage Server training have been passed.

Major Weaknesses

- There is no formal process for reviewing public health laws.
- Some laws are enacted without input from those that are most affected.
- Many laws lag behind the science. It is difficult to change public health laws.
- Term limits have affected the types of laws that are passed.
- Because of the infrequency of public health crises, some county attorneys are not as familiar with public health laws as they are with other laws.
- Because Nebraska is an all-hazards response state, a public health emergency can only be declared by the Governor. Some saw value in a separate power to declare a public health emergency.
- A regional compact that allows states to share resources would be helpful.
- The mass fatality plan is difficult to implement in rural areas.
- The interaction between state agencies (e.g., DHHS, DEQ, and the Department of Agriculture) could be improved.
- Information for minority groups is not always customer-centered, especially in rural areas.

Model Standard 6.2 – How well do the SPHS partners provide technical assistance and training to local public health systems on best practices in compliance and enforcement of laws and assist local governing bodies in incorporating current scientific practice in local laws?

Major Strengths

- The State Patrol conducts compliance checks on a regular basis.
- The Tobacco Free Nebraska Program has provided training to LHDs.

*See Appendix B for a list of assessment participants.

Major Weaknesses

- The SPHS provides very limited assistance at the local level.
- Resources are needed to review public health laws and ordinances.

Model Standard 6.3 – How well do the SPHS partners review the effectiveness of their regulating compliance and enforcement activities and actively manage and improve their collective performance?

Major Strengths

- None recorded

Major Weaknesses

- The DPH is only in the beginning stages of examining performance.

Model Standard 6.4 – How well do SPHS partners commit financial resources and align and coordinate their efforts to the enforcement of laws and regulations? Is there adequate professional expertise available?

Major Strengths

- There is support for tobacco and alcohol compliance checks.
- The EPA does asbestos and lead inspections

Major Weaknesses

- Partnerships need to be strengthened at the state and local level (e.g., coordination with water well testing and swimming pool inspections).
- There is insufficient staffing for regulatory programs; new staff may need to be hired when new programs are added.

*See Appendix B for a list of assessment participants.

Essential Service 7: Link People to Needed Personal Health Services and Assure the Provision of Health Care When Otherwise Unavailable

Overall Score: 25 out of 100

Model Standard 7.1 – How well do SPHS partners assess the availability of and access to personal health services, collectively take policy and programmatic action to eliminate access barriers, work together to establish a statewide health insurance exchange, and mobilize their assets to reduce health disparities in the state?

Major Strengths

- Several areas assess access to personal health services, but it is not an integrated, comprehensive approach.
- Assessments are occurring at the local level.
- Non-profit hospitals are required to conduct a community health assessment under the Affordable Care Act.
- FQHCs conduct a comprehensive needs assessment every three years.
- Some access barriers have been eliminated because of the hospital telehealth system.

Major Weaknesses

- A stronger partnership between the DPH and Medicaid could be developed. The policies of the two Divisions are not always consistent.
- The databases need to be improved to pinpoint access barriers.
- There is a need for more community health centers in the state.
- Some private providers have not been using the new immunization registry system.
- Many hospitals and clinics cannot link their data together.
- There is not a public transportation system in rural areas.
- There is only limited emphasis on care for the disabled population.

Model Standard 7.2 – How well do the SPHS partners provide technical assistance to local public health systems on methods for meeting the needs of underserved populations and to providers who deliver services to underserved populations?

Major Strengths

- Data are shared with local public health systems.
- There are some mental health grants and some resources provided by private foundations.

Major Weaknesses

- Very limited education regarding underserved populations is available to health care providers.
- There is a lack of resources in rural areas.
- ACCESS Nebraska creates barriers because of the time and skill that it takes to navigate the system.

*See Appendix B for a list of assessment participants.

Model Standard 7.3 – How well do the SPHS partners work together to review the changes in the quality of and barriers to personal health care services? Do they actively manage and improve their collective performance in linking people to needed personal health services?

Major Strengths

- The Federally Qualified Community Health Centers are actively involved in performance management of health indicators through quality improvement and quality assurance processes.
- There is more collaboration with non-traditional partners such as Blue Cross and Blue Shield of Nebraska and CIMRO.
- Wide River, which is part of CIMRO, is providing technical assistance to hospitals and physician clinics to help them achieve meaningful use.

Major Weaknesses

- The data on health care quality are reviewed on only a limited basis.
- It is difficult to review quality because most of the data are tied to categorical federal programs.
- The cost and availability of training opportunities is a barrier.
- Performance evaluation efforts are somewhat ineffective.

Model Standard 7.4 – How well do SPHS partners work together to commit financial resources and align and coordinate their efforts to provide needed personal health care services? Is there adequate professional expertise?

Major Strengths

- Funds from the Tobacco Settlement Fund have added financial resources and capacity at the local level.
- The capacity of several FQHCs has been enhanced in the past few years.

Major Weaknesses

- More coordination from state leadership is needed and there are inadequate resources (e.g., cuts in the Medicaid program).
- It has been difficult to find good tools that can be used across agencies.

*See Appendix B for a list of assessment participants.

Essential Service 8: Assure a Competent Public Health and Personal Health Care Workforce

Overall Score: 43 out of 100

Model Standard 8.1 – How well do the SPHS partners work together to develop a statewide workforce plan that guides improvement activities in population-based workforce development? How well do these organizations provide training to enhance the technical and professional competencies of the workforce?

Major Strengths

- The Great Plains Public Health Leadership Institute and the new College of Public Health at the University of Nebraska Medical Center are major assets.
- The Nebraska Educational Alliance for Public Health Impact, which has evolved into Public Health Practice Council, has done some workforce planning for about 10 years.
- The Office of Rural Health and hospitals assess workforce needs on a regular basis.
- The Health Professions Tracking Center provides accurate information on many licensed health professionals.
- The Turning Point Plan developed in 2008 has an entire section devoted to workforce development.
- A few organizations promote lifelong learning opportunities.

Major Weaknesses

- Workforce development efforts are fragmented because of limited funding and limited understanding of public health by many policymakers.
- There are not enough opportunities and encouragement for cultural competency training.
- More colleges and universities now offer training in public health (e.g., Methodist), but they have not participated in workforce planning.
- Predictive models are not being used to estimate future public health workforce needs.
- A more unified strategy for workforce development is needed (e.g., the training and recruitment of new health professionals).
- There is a lack of formalized training for “lay” health workers.

Opportunities for Improvement

- Workforce development should be part of the Chronic Disease State Plan.
- The Public Health Training Center in the College of Public Health can coordinate the workforce planning efforts.

Model Standard 8.2 – How well do SPHS partners assist local public health organizations with workforce development and in planning for their future needs for population-based and personal health care workforces?

Major Strengths

- The Great Plains Public Health Leadership Institute (GPPHLI) helps to develop the local and state public health system workforce.

*See Appendix B for a list of assessment participants.

Major Weaknesses

- More training is needed to develop and enhance the skills and knowledge of the public health workforce.

Model Standard 8.3 – How well do SPHS partners review their workforce development activities and evaluate the preparation of personnel entering the workforce?

Major Strengths

- Public health agencies are moving toward accreditation, which includes standards for workforce development.
- The GPPHLI is reviewed every year.

Major Weaknesses

- There are several state agencies that do not have workers who are formally trained in or are familiar with public health.
- There are limited training opportunities for some health professionals in rural areas.

Model Standard 8.4 – How well do SPHS partners commit financial resources and coordinate their workforce development activities? Do these organizations collectively have adequate professional expertise?

Major Strengths

- There is grant funding to help newly graduated RNs and LPNs to transition into their first position.
- Many organizations have committed some funds to support workforce development efforts.

Major Weaknesses

- Better coordination and support are needed for public health and personal health care workforce development efforts. For example, there is no statewide initiative to encourage more individuals to study nursing.

*See Appendix B for a list of assessment participants.

Essential Service 9: Evaluate Effectiveness, Accessibility, and Quality of Personal and Population-Based Health Services

Overall Score: 41 out of 100

Model Standard 9.1 – How well do the SPHS partners evaluate the effectiveness of population-based and personal health care services in the state? How well do these organizations evaluate the performance of the state public health system and seek appropriate certifications, accreditation, or licensure?

Major Strengths

- The public health system is beginning to evaluate its performance.
- The Nebraska Health Information Initiative will provide useful data for evaluation when it is fully functioning.
- Many public health programs are conducting more rigorous evaluations based on Centers for Disease Control and Prevention requirements.

Major Weaknesses

- There are still very limited resources for evaluation activities.
- Evaluation planning generally is not done at the beginning of the program implementation.
- The evaluation results are generally not shared with others and are program specific.
- A broad-based population perspective has not been done.

Model Standard 9.2 – How well do SPHS partners provide technical assistance to local public health systems in their evaluation activities, share results of state-level performance evaluations with local organizations, and assist them in achieving accreditation or licensure?

Major Strengths

- The system is farther along in licensure than public health interventions.
- Technical assistance and data have been provided to local public health organizations for accreditation.

Major Weaknesses

- State partners are less able to provide technical assistance on evaluation.
- The expertise to conduct evaluations at the local level needs to be improved.
- Some agencies do not use an evaluator effectively.
- It is difficult to get all of the state partners on the same page.
- Cost effectiveness evaluation is very weak at the state level.

Model Standard 9.3 – How well do the SPHS partners work together to regularly review the effectiveness of their evaluation activities? Do they actively manage and improve their collective performance and promote systematic quality improvement processes throughout the state public health system?

Major Strengths

- The Division of Public Health has designated a Performance Improvement Manager and formed a Performance Management Advisory Council.
- Some programs have done an excellent job applying, implementing, and documenting evidence-based practices.

*See Appendix B for a list of assessment participants.

Major Weaknesses

- Quality and performance improvement have not been integrated into most aspects of the state public health system.

Model Standard 9.4 – How well do the SPHS partners work together to commit financial resources and coordinate their efforts for evaluation activities? Is there adequate professional expertise to carry out evaluation activities?

Major Strengths

- Process evaluations are usually done well, but not outcome evaluations (e.g., Strategic Prevention Framework State Incentive Grant project).

Major Weaknesses

- It is difficult to obtain sufficient resources to conduct evaluations.
- It is sometimes difficult and expensive to collect reliable data.
- The results of an evaluation are not always communicated in a meaningful way.
- Often the evaluation results are not used to make improvements.

*See Appendix B for a list of assessment participants.

Essential Service 10 – Research for New Insights and Innovative Solutions to Health Problems

Overall Score: 46 out of 100

Model Standard 10.1 – To what extent do SPHS partners organize research activities and disseminate and use innovative research findings in practice through the work of active academic and practice collaborations

Majors Strengths

- The Nebraska Public Health Practice-Based Research Network (PBRN) was organized in 2009 and has produced several research papers that have benefitted the practice community.

Major Weaknesses

- It is sometimes challenging to find research topics that are of interest to both the research and the practice community.
- Research topics are often selected based on the priorities of funders.
- A detailed research agenda has not been developed by the PBRN.
- The findings from research studies need to be distributed more widely.

Opportunities for Improvement

- A detailed public health research agenda should be developed by the PBRN.
- A more comprehensive dissemination process should be developed by the PBRN.
- A tribal representative should be included in the PBRN.
- The PBRN should be expanded to other colleges and universities.

Model Standard 10.2 – How well do SPHS partners provide technical assistance to local public health systems in research activities using research findings?

Major Strengths

- In the past three years, there has been a major emphasis on working with local public health organizations.

Major Weaknesses

- Limited research is being conducted in local health departments.
- More assistance is needed to help local health systems use research findings.

Model Standard 10.3 – How well do SPHS partners work together to review their public health research activities?

Major Strengths

- None recorded

Major Weaknesses

- Only a limited amount of activity has occurred in this area.

*See Appendix B for a list of assessment participants.

Model Standard 10.4 – How well do SPHS partners work together to commit financial resources to research relevant public health improvements? Do they align and coordinate their efforts?

Major Strengths

- The College of Public Health makes it a priority to work in communities with local public health organizations.
- The PBRN identifies and conducts research studies that are useful to the practice community.
- Many new faculty have been hired in the College of Public Health
- The Douglas County Health Department in Omaha helps train students interested in public health.
- Although the Division of Public Health conducts only limited research, it assists researchers by making various databases available to them.

Major Weaknesses

- There are limited financial resources available.
- The funding for research grants is only available for relatively short periods of time.

*See Appendix B for a list of assessment participants.

Conclusion

This report has presented the major findings from the assessment of the state public health system based on the model standards for the ten essential services that have been developed by CDC. While the current public health system in Nebraska has many strengths, the scores for eight out of the ten essential services were below 50 percent. In general, planning and implementation and state and local relationship activities are relatively strong. In many of the essential services the lack of capacity and resources limits the ability of the public health system to provide the core functions. In addition, the state public health system has only recently begun to address how to integrate performance management and quality improvement activities into all aspects of the system.

Although this assessment identified several weaknesses in the state public health system, there are many opportunities to strengthen and perhaps transform the system. These changes will be accomplished through visionary leadership and strong state and local collaborative partnerships. It will also require a skilled and knowledgeable workforce and a more effective data and information system. Finally, the public health system must become more accountable by developing measures to assess the performance and quality of the system.

Appendices

Appendix A. Forces of Change Assessment Participant Lists

Forces of Change Assessment
Participant List
November 21, 2011
North Platte, Nebraska

Name		Organization
Mahaila	Botts	West Central District Health Department
Mandy	Brandes	West Central District Health Department
Chuck	Cone	Loup Basin Public Health Department
Kim	Engel	Panhandle Public Health District
Cindy	Glos	West Central District Health Department
Kerry	Hansel	Central Nebraska Community Services
Maria	Hines	NE Division of Public Health, Health Disparities and Health Equity
Rich	Hoaglund	North Platte Police Department
Rhonda	Johnson	Phelps Memorial Health Center
Jamey	Keen	Southwest Nebraska Public Health Department
Terry	Krohn	Two Rivers Public Health Department
Michelle	McNea	North Platte City Council/ Great Plains Regional Medical Center Employee Health
Dave	Palm	NE Division of Public Health, Community Health and Performance Management
Josie	Rodriguez	NE Division of Public Health, Health Disparities and Health Equity
Pat	Samway	Lexington Regional Health Center
Jodi	Schall	General Manager, Applebee's
Melissa	Smith	NE DHHS, Children and Family Services
Rhonda	Theiler	Sandhills District Health Department
Shannon	Vanderheiden	West Central District Health Department
Laurie	Walrod	Perkins County Health Services
Roger	Wiese	North Central District Health Department

Forces of Change Assessment
Participant List
November 22, 2011
Lincoln, Nebraska

Name		Organization
Jeff	Armitage	NE Division of Public Health, Community Health and Performance Management
Michele	Bever	South Heartland District Health Department
Margaret	Brink	Four Corners Health Department, Board of Health
Charlotte	Burke	Lincoln-Lancaster County Health Department
Vicki	Duey	Four Corners Health Department
Paula	Eurek	NE Division of Public Health, Lifespan Health Unit
Marty	Fattig	Nemaha County Hospital
Jamie	Hahn	NE Division of Public Health, Heart Disease and Stroke Program
Erin	Johnson	Central District Health Department
Carol	Jorgensen	NE Division of Public Health, Emergency Medical Services
Ryan	King	Central District Health Department
Pat	Lopez	Public Health Association of Nebraska
Diane	Lowe	NE Division of Public Health, Health Disparities and Health Equity
Judy	Martin	NE Division of Public Health, Tobacco Free Nebraska
Sue	Medinger	NE Division of Public Health, Community Health Planning and Protection Unit
Kay	Oestmann	Southeast District Health Department
Lyndsay	Osborn	Three Rivers Public Health Department
Dave	Palm	NE Division of Public Health, Community Health and Performance Management
Sally	Pieper	Elkhorn Logan Valley Public Health Department
Bruce	Rieker	Nebraska Hospital Association
John	Roberts	Nebraska Rural Health Association
Julie	Rother	Northeast Nebraska Public Health Department
Alice	Schumaker	UNMC, College of Public Health
Colleen	Svoboda	NE Division of Public Health, Community Health and Performance Management
Dianne	Travers Gustafson	Creighton University, Three Rivers Public Health Department, Board of Health
Kathy	Ward	NE Division of Public Health, Women's and Men's Health
Sherri	Wren	NE Division of Public Health, Emergency Medical Services
Margo	Minnich	Creighton University
David	Holmquist	American Cancer Society
Richard	Mettler	NE DHHS, Staff Development
Lori	Vidlak	Bluestem Interactive, Inc.

Appendix B. State Public Health Assessment Participant Lists

Work Group Participants

Essential Service 1: Monitor Health Status to Identify Community Health Problems

Participants
Melissa Breazile, Research Coordinator, Voices for Children (Nebraska)
Caitlin Pardue, Policy Associate, Voices for Children (Nebraska)
Larry Voegele, Data Analyst, Ponca Tribe of Nebraska
Deb Scholten, Health Director, Northeast Nebraska Public Health Department
Steve Frederick, Epidemiologist, Lincoln-Lancaster County Health Department
Jennifer Severe-Oforah, Epidemiologist, Nebraska Division of Public Health, Lifespan Health
Ming Qu, Administrator, Nebraska Division of Public Health, Public Health Support
Jeff Armitage, Epidemiologist, Nebraska Division of Public Health, Community Health and Performance Management
Lei Zhang, Epidemiologist, Nebraska Division of Public Health, Public Health Support
Debbi Barnes-Josiah, Epidemiologist, Nebraska Division of Public Health, Lifespan Health and University of Nebraska Medical Center
Carol Allensworth, Douglas County Health Department
Dan Hoyt, Professor and Chair, University of Nebraska—Lincoln, Department of Sociology

Essential Service 2: Diagnose and Investigate Health Problems and Health Hazards

Participants
Rita Parris, Executive Director, Public Health Association of Nebraska
Anne O'Keefe, Epidemiologist, Douglas County Health Department
Myra Stoney, Health Director, Southwest Nebraska Public Health Department
Brandi Tumbleson, Health Director, Three Rivers Public Health Department
Julia Schmitt, Nebraska Division of Public Health, Environmental Health
Grey Borden, Nebraska Division of Public Health, Emergency Response
Lisa Bloss, Assistant Director, Southeast District Health Department
Chuck Cone, Health Director, Loup Basin Public Health Department
Chris Newlon, Nebraska Division of Public Health, Emergency Response
Joe Francis, Nebraska Department of Environmental Quality
Teresa Anderson, Health Director, Central District Health Department

Essential Service 3: Inform, Educate, and Empower People about Health Issues

Participants
Adi Pour, Health Director, Douglas County Health Department
David Corbin, Professor, University of Nebraska—Omaha, Health Education
Diane Lowe, Nebraska Division of Public Health, Health Disparities and Health Equity
Denise Zwiener, Director, Buffalo County Community Partners
Holly Dingman, Nutrition Coordinator, Nebraska Division of Public Health, Nutrition and Activity for Health
Julane Hill, Nebraska Department of Education, School Health
Kathy Karsting, Nebraska Division of Public Health, Lifespan Health
Kathy Ward, Nebraska Division of Public Health, Women's and Men's Health
Laura Hilty, Central Nebraska Community Services
Monica Pribil, Nebraska Division of Public Health, Tobacco Free Nebraska Program
Sue Medinger, Nebraska Division of Public Health, Community Health Planning and Protection
Terry Krohn, Health Director, Two Rivers Public Health Department
Shannon Vanderheiden, Health Director, West Central District Health Department
David Humm, Lincoln-Lancaster County Health Department

Essential Service 4: Mobilize Partnerships to Identify and Solve Health Problems

Participants
Brian Coyle, Nebraska Division of Public Health, Nutrition and Activity for Health
Diane Riibe, Director, Project Extra Mile
Carol Jorgensen, Nebraska Division of Public Health Emergency Medical Services
Liz Green, Nebraska Division of Public Health, Comprehensive Cancer Control
Fred Zwonechek, Nebraska Department of Roads, Highway Safety
Jane Ford-Witthoff, Director, Public Health Solutions District Health Department
Josie Rodriguez, Nebraska Division of Public Health, Health Disparities
Jennifer Skala, Children and Families Foundation
Kathy Burklund, Nebraska Division of Public Health, Tobacco
Kim Engel, Director, Panhandle Public Health District
Melissa Leypoldt, Nebraska Division of Public Health, Every Woman Matters
Becky Rayman, Director, East Central District Health Department
Sue Spanhake, Nebraska Division of Public Health, Lifespan Health
Sandy Morrisey, Region V Behavioral Health Systems

Essential Service 5: Develop Policies and Plans that Support Individual and Statewide Health Efforts

Participants
Paula Eurek, Nebraska Division of Public Health, Lifespan Health
Barbara Pearson, Nebraska Division of Public Health, Health Promotion
Mary Balluff, Douglas County Health Department
Pat Lopez, Public Health Association of Nebraska
Margaret Brink, Board of Health Member, Four Corners Health Department
Joe Acierno, Deputy Chief Medical Officer, Nebraska Division of Public Health
Jenifer Roberts-Johnson, Chief Administrator, Nebraska Division of Public Health
Ed Schneider, Board of Health Member, Lincoln-Lancaster County Health Department
Dave Palm, Nebraska Division of Public Health, Community Health Planning
Bruce Rieker, Nebraska Hospital Association
Charlotte Burke, Lincoln-Lancaster County Health Department
Bruce Rowe, Nebraska Division of Public Health, Nutrition and Activity for Health

Essential Service 6: Enforce Laws and Regulations that Protect Health and Ensure Safety

Participants
Judy Halstead, Director, Lincoln-Lancaster County Health Department
Lisa Bloss, Assistant Director, Southeast District Health Department
Julia Schmitt, Nebraska Division of Public Health, Radon Program
Sue Medinger, Nebraska Division of Public Health, Community Health Planning
Denise Zwiener, Director, Buffalo County Community Partners
Adi Pour, Director, Douglas County Health Department
Pat Lopez, Public Health Association of Nebraska
Darrell Klein, Attorney, Nebraska Division of Public Health
Teresa Anderson, Director, Central District Health Department
Laura Meyers, Director, Nebraska Association of Local Health Departments

Essential Service 7: Link People to Needed Personal Health Services and Assure the Provision of Health Care When Otherwise Unavailable

Participants
Diane Lowe, Nebraska Division of Public Health, Health Disparities and Health Equity
Laura Hilty, Central Nebraska Community Services

Mary Gordon, Nebraska Division of Public Health, Developmental Disabilities
Melissa Leypoldt, Nebraska Division of Public Health, Every Woman Matters
Paula Eurek, Nebraska Division of Public Health, Lifespan Health
Becky Rayman, Director, East Central District Health Department and Good Neighbor Community Health Center
Sue Adams, Nebraska Division of Behavioral Health
Tom Rauner, Nebraska Division of Public Health, Rural Health

Essential Service 8: Assure a Competent Public and Personal Health Care Workforce

Participants
Alice Schumaker, University of Nebraska—Omaha
Barbara Pearson, Nebraska Division of Public Health, Health Promotion
Brandon Grimm, University of Nebraska Medical Center, College of Public Health, Great Plains Public Health Leadership Institute
Brandi Tumbleson, Health Director, Three Rivers Public Health Department
Claire Titus, Nebraska Division of Public Health, Regulation and Licensure
David Corbin, Professor, University of Nebraska—Omaha, Health Promotion
Myra Stoney, Health Director, Southwest Nebraska Public Health Department
Josie Rodriguez, Nebraska Division of Public Health, Health Disparities and Health Equity
Deb Scholten, Health Director, Northeast Nebraska Public Health Department
Julane Hill, Nebraska Department of Education, School Health
Kathy Karsting, Nebraska Division of Public Health, Lifespan Health
Kathy Ward, Nebraska Division of Public Health, Women's and Men's Health
Rita Parris, Executive Director, Public Health Association of Nebraska
Grey Borden, Nebraska Division of Public Health, Emergency Preparedness

Essential Service 9: Evaluate Effectiveness, Accessibility, and Quality of Personal and Population-Based Health Services

Participants
Jane Ford-Witthoff, Director, Public Health Solutions District Health Department
Jennifer Marcum, Nebraska Division of Public Health, Public Health Support
Steve Frederick, Lincoln-Lancaster County Health Department
Jeff Armitage, Nebraska Division of Public Health, Community Health and Performance Management
Joyce Schmeeckle, Schmeeckle Research
Jennifer Severe-Oforah, Nebraska Division of Public Health, Lifespan Health
Kim Galt, Evaluator and Professor, Creighton University
Shannon Vanderheiden, Director, West Central District Health Department
Liz Green, Nebraska Division of Public Health, Comprehensive Cancer Control

Essential Service 10: Research for New Insights and Innovative Solutions to Health Problems

Participants
Larry Voegele, Ponca Tribe of Nebraska
Ian Newman, University of Nebraska at Lincoln
Debbi Barnes-Josiah, Nebraska Division of Public Health and University of Nebraska Medical Center
Mary Balluff, Douglas County Health Department
Margaret Brink, Community and Public Health Advocate, Four Corners Health Department
Li-Wu Chen, UNMC College of Public Health
Janelle Jacobson, Graduate Researcher, UNMC College of Public Health
Kim Engel, Director, Panhandle Public Health District
Dave Palm, Nebraska Division of Public Health, Community Health and Performance Management

Appendix C. Health Status Assessment BRFSS Data Tables Expanded to include 95% Confidence Intervals for all Percentage and Mean Values

Table 2: BRFSS Survey Results (age-adjusted) by Race/Ethnicity for Select Health Indicators, Adults 18 and older, 2007-2010 combined

	White			African American			Asian			Native American			Other			Hispanic		
Health Indicators	n [a]	mean or % [b]	95% C.I.[c] (Low - High)	n [a]	mean or % [b]	95% C.I.[c] (Low - High)	n [a]	mean or % [b]	95% C.I.[c] (Low - High)	n [a]	mean or % [b]	95% C.I.[c] (Low - High)	n [a]	mean or % [b]	95% C.I.[c] (Low - High)	n [a]	mean or % [b]	95% C.I.[c] (Low - High)
General Health Fair or Poor	55,436	10.9%	(10.4 - 11.4)	438	19.8%	(16.2 - 24.0)	216	12.7%	(7.5 - 20.8)	441	23.5%	(18.1 - 29.9)	301	14.9%	(10.0 - 21.7)	2,057	26.1%	(23.0 - 29.4)
Average days physical health not good in past 30	54,414	2.8	(2.7 - 2.9)	434	4.0	(3.1 - 4.9)	209	4.2	(2.1 - 6.3)	428	4.3	(3.2 - 5.5)	280	3.9	(2.1 - 5.6)	2,012	3.4	(2.9 - 3.9)
Average days mental health not good in past 30	54,729	2.7	(2.5 - 2.8)	433	3.4	(2.4 - 4.5)	210	2.1	(0.8 - 3.4)	437	3.9	(2.6 - 5.2)	293	3.2	(1.9 - 4.4)	2,023	2.5	(2.1 - 2.9)
Average days poor physical/mental health limited activity in past 30	55,024	1.5	(1.5 - 1.6)	438	2.6	(1.8 - 3.5)	213	2.2	(0.7 - 3.6)	438	3.9	(2.8 - 5.0)	292	1.8	(1.1 - 2.6)	2,037	1.8	(1.4 - 2.2)
No healthcare coverage among 18-64 year olds	35,241	12.8%	(11.9 - 13.7)	348	24.0%	(17.9 - 31.4)	178	17.4%	(10.4 - 27.7)	350	32.3%	(24.9 - 40.7)	170	18.8%	(11.1 - 30.0)	1,800	44.5%	(40.3 - 48.8)
No personal doctor or healthcare provider	55,435	13.7%	(12.9 - 14.6)	439	17.9%	(13.1 - 23.9)	216	13.8%	(8.1 - 22.6)	444	21.3%	(16.3 - 27.4)	298	20.0%	(12.3 - 30.8)	2,060	34.2%	(30.5 - 38.0)
Needed to see a doctor but could not due to cost in past 12 months	55,436	9.4%	(8.8 - 10.0)	440	21.1%	(16.0 - 27.3)	216	12.0%	(6.9 - 20.0)	443	14.8%	(10.0 - 21.3)	299	22.9%	(15.4 - 32.6)	2,063	22.9%	(19.8 - 26.4)
Ever told they have high blood pressure	25,077	25.6%	(24.7 - 26.6)	198	35.6%	(29.0 - 42.9)	90	24.0%	(14.8 - 36.6)	212	34.8%	(26.9 - 43.7)	147	21.2%	(13.3 - 31.8)	918	21.9%	(18.4 - 25.9)
Cholesterol checked in past 5 years	24,503	73.2%	(71.8 - 74.5)	196	80.9%	(72.7 - 87.0)	86	74.9%	(64.9 - 82.8)	200	77.6%	(68.4 - 84.7)	138	67.5%	(54.8 - 78.1)	908	57.1%	(51.9 - 62.1)
Ever told they have high cholesterol, among those who have ever had it checked	21,312	32.0%	(30.8 - 33.2)	164	28.2%	(21.5 - 36.1)	64	44.2%	(31.2 - 58.0)	150	48.1%	(39.6 - 56.7)	115	45.1%	(30.1 - 61.1)	512	29.1%	(23.5 - 35.4)
Ever told they have diabetes (excluding pregnancy)	55,504	6.8%	(6.4 - 7.1)	440	13.9%	(10.5 - 18.2)	216	7.7%	(3.4 - 16.8)	445	13.5%	(10.2 - 17.7)	301	7.5%	(5.0 - 11.0)	2,062	14.9%	(12.5 - 17.6)
Had FOBT in past year or sigmoidoscopy or colonoscopy in past 10 years, adults 50-75	22,226	60.1%	(59.0 - 61.2)	143	65.2%	(54.7 - 74.4)	63	55.6%	(38.8 - 71.2)	126	44.4%	(33.7 - 55.7)	105	67.1%	(51.9 - 79.3)	434	42.2%	(35.3 - 49.4)
Had mammogram in past 2 years, women 50-74	10,176	78.1%	(76.8 - 79.4)	62	76.7%	(61.6 - 87.1)	-*	-*	(- - -)	56	60.8%	(45.2 - 74.4)	-*	-*	(- - -)	206	71.7%	(61.9 - 79.8)
Had a pap test in past 3 years, women 21-65	10,135	86.5%	(84.4 - 88.3)	105	86.3%	(74.1 - 93.2)	-*	-*	(- - -)	100	88.6%	(74.3 - 95.4)	-*	-*	(- - -)	638	66.8%	(59.7 - 73.2)
Ever told they have arthritis	24,534	26.3%	(25.4 - 27.2)	190	27.3%	(21.0 - 34.8)	87	12.3%	(6.7 - 21.3)	209	23.8%	(17.9 - 31.0)	143	27.3%	(18.0 - 39.1)	893	18.1%	(14.3 - 22.6)
Ever told they have asthma	55,382	11.5%	(10.9 - 12.2)	440	14.8%	(10.9 - 19.8)	215	8.3%	(5.0 - 13.7)	444	18.1%	(12.8 - 25.0)	296	20.5%	(13.6 - 29.7)	2,058	8.4%	(6.5 - 10.8)
Current cigarette smokers	55,393	18.0%	(17.2 - 18.8)	439	25.1%	(19.9 - 31.1)	214	16.8%	(10.3 - 26.2)	445	43.4%	(36.1 - 51.0)	300	19.8%	(13.4 - 28.3)	2,058	15.9%	(13.0 - 19.3)
Current smokeless tobacco users	44,998	5.4%	(5.0 - 5.9)	347	1.2%	(0.5 - 3.0)	175	4.2%	(1.8 - 9.8)	349	4.4%	(2.6 - 7.5)	247	3.2%	(1.3 - 7.5)	1,626	1.9%	(1.1 - 3.3)
Obese (BMI 30.0+)	53,898	26.6%	(25.9 - 27.5)	423	38.0%	(32.2 - 44.2)	213	9.5%	(5.5 - 16.0)	434	40.0%	(32.9 - 47.4)	287	24.6%	(17.9 - 32.8)	1,769	32.9%	(29.3 - 36.8)
Overweight or obese (BMI 25.0+)	53,898	64.0%	(63.0 - 64.9)	423	65.8%	(59.4 - 71.7)	213	46.8%	(36.7 - 57.1)	434	80.8%	(74.4 - 85.9)	287	52.7%	(42.8 - 62.4)	1,769	72.3%	(68.5 - 75.9)
Consume fruits and vegetables 5+ times per day	24,439	21.9%	(20.8 - 23.1)	191	24.0%	(16.9 - 32.8)	86	40.8%	(26.9 - 56.3)	207	17.9%	(12.1 - 25.6)	141	26.6%	(15.4 - 41.9)	886	20.4%	(15.6 - 26.1)
Recommended physical activity (using pre-2008 guidelines)	23,177	52.8%	(51.4 - 54.2)	175	43.7%	(34.3 - 53.7)	81	43.0%	(30.1 - 57.0)	192	65.5%	(56.6 - 73.3)	135	53.5%	(42.6 - 64.1)	841	40.8%	(34.8 - 47.0)
Always wear a seatbelt when driving or riding in a car	30,024	70.4%	(69.3 - 71.5)	230	73.3%	(64.3 - 80.7)	123	85.4%	(74.1 - 92.2)	227	66.1%	(56.1 - 74.9)	148	78.0%	(67.4 - 85.9)	1,120	72.2%	(67.2 - 76.6)
Injured due to a fall during the past 3 months, adults 45+	23,338	4.7%	(4.3 - 5.1)	145	5.5%	(2.6 - 11.2)	66	5.0%	(1.7 - 14.2)	132	4.5%	(2.0 - 9.9)	122	3.8%	(1.0 - 13.5)	491	5.7%	(3.6 - 8.7)
Never get the social and emotional support they need	53,107	5.5%	(5.1 - 5.9)	406	18.0%	(13.1 - 24.2)	198	20.3%	(13.2 - 30.0)	417	9.9%	(7.0 - 13.9)	278	11.8%	(7.5 - 18.3)	1,906	18.7%	(15.6 - 22.3)
Dissatisfied with their life	53,534	3.6%	(3.3 - 4.0)	403	7.4%	(4.3 - 12.5)	202	8.1%	(3.7 - 16.9)	422	6.5%	(4.1 - 10.3)	286	4.6%	(2.3 - 8.8)	1,950	4.7%	(3.3 - 6.8)
Had significant depressive symptoms in past 14 days	9,121	7.2%	(6.1 - 8.5)	75	16.5%	(8.5 - 29.8)	-*	-*	(- - -)	59	17.8%	(9.1 - 32.0)	-*	-*	(- - -)	339	9.9%	(6.3 - 15.3)
Binge drank in past 30 days	54,656	20.2%	(19.3 - 21.0)	422	14.6%	(10.4 - 20.2)	212	10.9%	(5.5 - 20.4)	436	19.5%	(14.2 - 26.2)	297	10.0%	(5.5 - 17.3)	2,028	10.9%	(8.6 - 13.7)
Alcohol impaired driving in past 30 days	30,044	3.8%	(3.3 - 4.5)	230	2.6%	(0.9 - 7.2)	124	1.9%	(0.3 - 11.3)	227	2.9%	(1.0 - 8.0)	152	0.7%	(0.1 - 3.4)	1,132	1.2%	(0.5 - 2.8)
Had flu vaccination during past 12 months	54,764	46.0%	(45.0 - 46.9)	422	41.8%	(35.2 - 48.7)	210	48.7%	(38.3 - 59.1)	439	48.0%	(41.4 - 54.6)	294	42.3%	(33.4 - 51.8)	2,019	40.1%	(36.2 - 44.1)
Had flu vaccination during past 12 months, adults 65+	19,865	74.8%	(73.8 - 75.8)	88	62.5%	(47.7 - 75.3)	-*	-*	(- - -)	92	75.6%	(61.9 - 85.5)	125	67.5%	(53.5 - 78.9)	252	62.8%	(54.0 - 70.9)
Ever had pneumonia vaccination, adults 65+	19,506	70.8%	(69.8 - 71.8)	84	72.0%	(58.9 - 82.2)	-*	-*	(- - -)	90	55.4%	(36.7 - 72.7)	122	64.0%	(48.9 - 76.7)	241	63.0%	(54.2 - 71.0)
Ever been tested for HIV, adults 18-64	33,790	27.6%	(26.5 - 28.6)	318	55.5%	(48.0 - 62.7)	165	28.8%	(19.9 - 39.7)	337	49.9%	(40.4 - 59.4)	158	50.8%	(38.5 - 62.9)	1,719	37.4%	(33.0 - 42.0)
Had any permanent teeth extracted	29,898	36.7%	(35.7 - 37.8)	238	55.2%	(47.2 - 62.9)	124	37.8%	(29.3 - 47.1)	230	57.5%	(48.0 - 66.5)	149	46.1%	(37.8 - 54.8)	1,133	48.2%	(43.6 - 52.8)
Saw dentist for any reason in past 12 months	30,317	71.5%	(70.4 - 72.7)	241	59.1%	(50.2 - 67.5)	123	73.0%	(60.2 - 82.9)	233	59.9%	(49.6 - 69.5)	151	69.3%	(54.4 - 81.0)	1,139	60.6%	(55.6 - 65.4)

[a] Non-weighted sample size for each indicator

[b] Weighted mean or percentage.

[c] Low% and Upper% are the lower and upper limits for the 95% confidence interval, respectively.

* Insufficient data to report results (fewer than 50 respondents)

Note: Each race represents non-Hispanic respondents while Hispanic represents Hispanic respondents regardless of what race they identified

Source: Behavioral Risk Factor Surveillance System (BRFSS)

Table 4: BRFSS Survey Results (age-adjusted) by Urban/Rural* for Select Health Indicators, Adults 18 and older, 2007-2010 combined

Health Indicators	Metropolitan			Micropolitan			Rural		
	n [a]	mean or % [b]	95% C.I.[c] (Low - High)	n [a]	mean or % [b]	95% C.I.[c] (Low - High)	n [a]	mean or % [b]	95% C.I.[c] (Low - High)
General Health Fair or Poor	15,152	10.9%	(10.2 - 11.7)	16,212	13.4%	(12.8 - 14.1)	27,430	12.9%	(12.3 - 13.4)
Average days physical health not good in past 30	14,926	2.8	(2.7 - 3.0)	15,916	3.0	(2.9 - 3.2)	26,841	2.8	(2.7 - 2.9)
Average days mental health not good in past 30	14,998	2.7	(2.5 - 2.9)	15,999	2.7	(2.6 - 2.9)	27,029	2.5	(2.4 - 2.6)
Average days poor physical/mental health limited activity in past 30	15,064	1.6	(1.5 - 1.7)	16,082	1.6	(1.5 - 1.7)	27,197	1.6	(1.5 - 1.7)
No healthcare coverage among 18-64 year olds	10,730	14.3%	(13.0 - 15.6)	10,317	16.9%	(15.7 - 18.2)	16,908	16.8%	(15.9 - 17.7)
No personal doctor or healthcare provider	15,145	15.5%	(14.4 - 16.7)	16,219	13.8%	(12.9 - 14.8)	27,430	14.7%	(14.0 - 15.5)
Needed to see a doctor but could not due to cost in past 12 months	15,143	10.4%	(9.5 - 11.4)	16,230	11.4%	(10.6 - 12.2)	27,428	10.7%	(10.1 - 11.3)
Ever told they have high blood pressure	6,706	25.8%	(24.4 - 27.3)	7,395	26.0%	(24.8 - 27.3)	12,511	25.7%	(24.8 - 26.7)
Cholesterol checked in past 5 years	6,543	75.5%	(73.5 - 77.3)	7,249	68.4%	(66.8 - 70.0)	12,203	67.8%	(66.5 - 69.1)
Ever told they have high cholesterol, among those who have ever had it checked	5,654	32.5%	(30.7 - 34.4)	6,275	34.1%	(31.8 - 36.5)	10,387	31.2%	(29.9 - 32.6)
Ever told they have diabetes (excluding pregnancy)	15,159	7.3%	(6.8 - 7.9)	16,245	7.5%	(7.0 - 8.0)	27,469	6.7%	(6.3 - 7.0)
Had FOBT in past year or sigmoidoscopy or colonoscopy in past 10 years, adults 50-75	5,735	65.7%	(63.9 - 67.6)	6,454	55.6%	(54.2 - 52.6)	10,879	51.5%	(50.4 - 52.6)
Had mammogram in past 2 years, women 50-74	2,645	81.0%	(78.7 - 83.0)	2,982	76.0%	(74.2 - 77.7)	4,905	73.0%	(71.6 - 74.3)
Had a pap test in past 3 years, women 21-65	3,203	87.0%	(83.3 - 90.0)	2,955	81.8%	(78.8 - 84.5)	4,821	83.5%	(81.7 - 85.2)
Ever told they have arthritis	6,572	25.8%	(24.4 - 27.2)	7,224	25.5%	(24.2 - 26.7)	12,236	26.4%	(25.5 - 27.3)
Ever told they have asthma	15,131	11.9%	(11.0 - 12.9)	16,205	11.1%	(10.3 - 12.0)	27,401	10.9%	(10.2 - 11.5)
Current cigarette smokers	15,125	18.5%	(17.3 - 19.7)	16,211	18.3%	(17.3 - 19.3)	27,415	17.2%	(16.5 - 18.0)
Current smokeless tobacco users	12,387	3.7%	(3.1 - 4.4)	13,103	5.6%	(5.0 - 6.4)	22,195	8.3%	(7.6 - 9.0)
Obese (BMI 30.0+)	14,651	26.0%	(24.8 - 27.2)	15,694	28.8%	(27.7 - 29.8)	26,650	28.9%	(28.1 - 29.7)
Overweight or obese (BMI 25.0+)	14,651	62.2%	(60.8 - 63.6)	15,694	66.8%	(65.6 - 68.0)	26,650	67.2%	(66.3 - 68.1)
Consume fruits and vegetables 5+ times per day	6,550	22.4%	(20.7 - 24.2)	7,191	21.0%	(19.5 - 22.5)	12,182	22.4%	(21.3 - 23.5)
Recommended physical activity (using pre-2008 guidelines)	6,266	53.3%	(51.2 - 55.3)	6,804	50.7%	(48.8 - 52.6)	11,498	50.2%	(48.8 - 51.6)
Always wear a seatbelt when driving or riding in a car	8,338	80.2%	(78.6 - 81.7)	8,710	63.5%	(61.9 - 65.1)	14,765	53.2%	(51.9 - 54.5)
Injured due to a fall during the past 3 months, adults 45+	5,906	4.3%	(3.6 - 5.1)	6,809	5.0%	(4.4 - 5.6)	11,568	5.4%	(4.9 - 5.9)
Never get the social and emotional support they need	14,514	6.0%	(5.4 - 6.7)	15,489	7.2%	(6.7 - 7.8)	26,213	7.4%	(6.9 - 7.9)
Dissatisfied with their life	14,617	4.2%	(3.6 - 4.8)	15,626	3.8%	(3.4 - 4.3)	26,468	3.5%	(3.1 - 3.8)
Had significant depressive symptoms in past 14 days	2,545	7.4%	(5.8 - 9.4)	2,570	8.9%	(7.1 - 11.2)	4,519	7.2%	(6.0 - 8.5)
Binge drank in past 30 days	14,924	19.3%	(18.1 - 20.5)	15,994	17.6%	(16.6 - 18.7)	27,043	20.4%	(19.6 - 21.2)
Alcohol impaired driving in past 30 days	8,340	3.4%	(2.7 - 4.3)	8,732	3.3%	(2.7 - 4.1)	14,778	4.0%	(3.5 - 4.6)
Had flu vaccination during past 12 months	14,947	47.7%	(46.4 - 49.1)	16,015	45.1%	(44.0 - 46.3)	27,096	41.1%	(40.2 - 42.0)
Had flu vaccination during past 12 months, adults 65+	4,339	77.1%	(75.2 - 78.9)	5,798	74.0%	(72.7 - 75.3)	10,356	71.0%	(70.0 - 72.0)
Ever had pneumonia vaccination, adults 65+	4,268	74.0%	(71.9 - 75.9)	5,703	68.8%	(67.4 - 70.2)	10,144	67.2%	(66.1 - 68.2)
Ever been tested for HIV, adults 18-64	10,244	32.5%	(31.0 - 34.0)	9,905	25.9%	(24.6 - 27.1)	16,213	23.7%	(22.8 - 24.7)
Had any permanent teeth extracted	8,333	36.5%	(35.0 - 38.1)	8,689	40.0%	(38.6 - 41.4)	14,683	40.6%	(39.6 - 41.6)
Saw dentist for any reason in past 12 months	8,435	73.9%	(72.1 - 75.5)	8,817	66.9%	(65.3 - 68.5)	14,887	65.4%	(64.1 - 66.6)

* See page 42 of this report for a definition of the urban/rural categories used in this report.

[a] Non-weighted sample size for each indicator

[b] Weighted mean or percentage.

[c] Low% and Upper% are the lower and upper limits for the 95% confidence interval, respectively.

Source: Behavioral Risk Factor Surveillance System (BRFSS)

Table 5: BRFSS Survey Results (age-adjusted) by Annual Household Income for Select Health Indicators, Adults 18 and older, 2007-2010 combined

	<$15,000			$15,000 - $24,999			$25,000 - $34,999			$35,000 - $49,999			$50,000+		
Health Indicators	n [a]	mean or % [b]	95% C.I.[c] (Low - High)	n [a]	mean or % [b]	95% C.I.[c] (Low - High)	n [a]	mean or % [b]	95% C.I.[c] (Low - High)	n [a]	mean or % [b]	95% C.I.[c] (Low - High)	n [a]	mean or % [b]	95% C.I.[c] (Low - High)
General Health Fair or Poor	5,217	35.9%	(32.9 - 38.9)	9,826	22.8%	(21.1 - 24.6)	7,531	16.6%	(14.6 - 18.9)	9,722	10.6%	(9.5 - 11.8)	20,186	5.2%	(4.7 - 5.9)
Average days physical health not good in past 30	4,994	8.0%	(7.3 - 8.7)	9,564	4.3%	(3.9 - 4.6)	7,413	3.2%	(2.8 - 3.6)	9,633	2.8%	(2.5 - 3.0)	20,092	1.8%	(1.7 - 2.0)
Average days mental health not good in past 30	5,070	6.8%	(6.1 - 7.6)	9,683	4.0%	(3.6 - 4.3)	7,445	3.3%	(2.9 - 3.8)	9,662	2.6%	(2.3 - 2.9)	20,113	1.8%	(1.7 - 2.0)
Average days poor physical/mental health limited activity in past 30	5,096	6.2%	(5.4 - 6.9)	9,728	2.5%	(2.3 - 2.8)	7,485	1.9%	(1.5 - 2.4)	9,692	1.4%	(1.3 - 1.6)	20,173	0.9%	(0.8 - 1.1)
No healthcare coverage among 18-64 year olds	2,368	41.4%	(37.2 - 45.8)	4,472	39.5%	(36.5 - 42.5)	4,344	24.0%	(21.0 - 27.1)	6,849	14.1%	(11.8 - 16.8)	17,266	4.2%	(3.4 - 5.1)
No personal doctor or healthcare provider	5,218	22.3%	(19.2 - 25.8)	9,827	25.9%	(23.4 - 28.4)	7,527	20.7%	(18.2 - 23.4)	9,724	12.1%	(10.5 - 13.9)	20,182	10.9%	(9.8 - 12.2)
Needed to see a doctor but could not due to cost in past 12 months	5,209	30.4%	(27.0 - 34.1)	9,837	28.0%	(25.6 - 30.6)	7,530	17.6%	(15.4 - 20.1)	9,727	11.3%	(9.6 - 13.2)	20,186	3.0%	(2.5 - 3.5)
Ever told they have high blood pressure	2,366	32.9%	(29.4 - 36.7)	4,536	27.7%	(25.2 - 30.3)	3,461	28.0%	(25.4 - 30.9)	4,454	25.8%	(23.8 - 27.9)	8,898	23.3%	(21.9 - 24.8)
Cholesterol checked in past 5 years	2,284	59.1%	(54.5 - 63.6)	4,427	62.7%	(58.9 - 66.3)	3,379	65.5%	(61.7 - 69.2)	4,385	71.2%	(67.8 - 74.3)	8,790	78.6%	(76.5 - 80.6)
Ever told they have high cholesterol, among those who have ever had it checked	1,902	40.0%	(34.7 - 45.5)	3,696	34.7%	(31.3 - 38.3)	2,805	35.9%	(31.8 - 40.2)	3,739	30.3%	(28.0 - 32.7)	7,814	30.5%	(28.9 - 32.2)
Ever told they have diabetes (excluding pregnancy)	5,228	13.9%	(12.1 - 15.9)	9,840	10.6%	(9.3 - 12.1)	7,538	8.4%	(7.3 - 9.8)	9,731	6.6%	(5.9 - 7.3)	20,196	5.5%	(5.0 - 6.1)
Had FOBT in past year or sigmoidoscopy or colonoscopy in past 10 years, adults 50-75	1,842	48.4%	(44.2 - 52.6)	3,581	52.8%	(49.8 - 55.7)	3,058	51.3%	(48.4 - 54.2)	4,168	57.4%	(54.8 - 59.9)	8,298	67.1%	(65.5 - 68.7)
Had mammogram in past 2 years, women 50-74	971	60.0%	(53.5 - 66.0)	1,758	62.7%	(58.7 - 66.5)	1,366	71.7%	(67.3 - 75.7)	1,794	79.5%	(76.5 - 82.2)	3,370	85.9%	(84.0 - 87.6)
Had a pap test in past 3 years, women 21-65	693	65.3%	(57.0 - 72.7)	1,376	77.8%	(73.4 - 81.7)	1,252	78.8%	(71.9 - 84.3)	1,952	85.9%	(79.6 - 90.5)	4,878	92.0%	(89.3 - 94.0)
Ever told they have arthritis	2,316	36.9%	(33.4 - 40.5)	4,443	29.5%	(26.6 - 32.6)	3,402	27.9%	(25.5 - 30.5)	4,375	28.5%	(26.1 - 31.1)	8,753	22.2%	(20.9 - 23.5)
Ever told they have asthma	5,206	21.3%	(18.2 - 24.8)	9,816	13.8%	(12.1 - 15.8)	7,521	11.5%	(9.9 - 13.4)	9,722	11.4%	(9.9 - 13.1)	20,164	9.9%	(9.0 - 10.9)
Current cigarette smokers	5,216	36.4%	(32.9 - 40.0)	9,821	27.8%	(25.5 - 30.2)	7,523	24.2%	(21.6 - 27.0)	9,717	18.8%	(16.9 - 20.9)	20,159	12.4%	(11.4 - 13.6)
Current smokeless tobacco users	4,182	3.0%	(2.2 - 4.1)	7,982	4.9%	(3.9 - 6.2)	6,092	5.5%	(4.4 - 6.8)	7,832	5.6%	(4.7 - 6.5)	16,535	5.4%	(4.7 - 6.2)
Obese (BMI 30.0+)	5,056	37.7%	(34.4 - 41.1)	9,516	34.2%	(31.8 - 36.7)	7,361	31.5%	(29.2 - 33.8)	9,510	29.8%	(27.9 - 31.8)	19,817	23.4%	(22.3 - 24.6)
Overweight or obese (BMI 25.0+)	5,056	68.5%	(65.2 - 71.7)	9,516	66.4%	(63.8 - 68.9)	7,361	66.9%	(64.1 - 69.6)	9,510	66.2%	(63.9 - 68.5)	19,817	63.1%	(61.6 - 64.6)
Consume fruits and vegetables 5+ times per day	2,305	21.9%	(17.9 - 26.4)	4,422	18.8%	(16.3 - 21.5)	3,400	18.9%	(16.4 - 21.8)	4,357	24.1%	(21.1 - 27.5)	8,720	22.3%	(20.6 - 24.0)
Recommended physical activity (using pre-2008 guidelines)	2,141	37.5%	(32.9 - 42.4)	4,121	44.1%	(40.4 - 47.9)	3,225	48.8%	(45.0 - 52.7)	4,196	53.3%	(50.3 - 56.3)	8,501	59.0%	(56.9 - 61.0)
Always wear a seatbelt when driving or riding in a car	2,818	70.7%	(66.4 - 74.6)	5,234	65.6%	(62.3 - 68.8)	4,025	67.9%	(64.7 - 71.0)	5,224	65.9%	(63.1 - 68.5)	11,174	73.2%	(71.3 - 75.1)
Injured due to a fall during the past 3 months, adults 45+	2,374	11.1%	(9.2 - 13.4)	4,323	7.2%	(5.8 - 8.9)	3,163	5.7%	(4.2 - 7.7)	3,948	4.2%	(3.4 - 5.2)	7,642	3.5%	(2.9 - 4.2)
Never get the social and emotional support they need	4,942	20.9%	(18.1 - 24.0)	9,356	12.9%	(11.3 - 14.6)	7,240	9.2%	(7.6 - 11.0)	9,391	6.1%	(5.0 - 7.4)	19,574	3.1%	(2.7 - 3.6)
Dissatisfied with their life	4,979	16.8%	(14.2 - 19.8)	9,481	8.5%	(7.2 - 10.1)	7,302	5.7%	(4.7 - 6.8)	9,444	3.0%	(2.4 - 3.9)	19,666	1.8%	(1.3 - 2.3)
Had significant depressive symptoms in past 14 days	840	21.7%	(16.0 - 28.8)	1,601	15.1%	(11.7 - 19.3)	1,247	13.9%	(9.5 - 20.0)	1,578	9.1%	(6.2 - 13.1)	3,527	2.4%	(1.8 - 3.1)
Binge drank in past 30 days	5,153	13.1%	(10.7 - 16.1)	9,684	15.2%	(13.3 - 17.3)	7,446	20.7%	(18.3 - 23.3)	9,618	17.5%	(15.6 - 19.6)	19,964	22.7%	(21.3 - 24.1)
Alcohol impaired driving in past 30 days	2,834	1.1%	(0.6 - 2.1)	5,238	2.0%	(1.3 - 3.0)	4,037	5.1%	(3.1 - 8.2)	5,219	3.3%	(2.4 - 4.5)	11,158	4.5%	(3.5 - 5.8)
Had flu vaccination during past 12 months	5,146	40.3%	(36.7 - 44.0)	9,709	38.1%	(35.7 - 40.4)	7,459	40.4%	(37.8 - 43.1)	9,628	43.6%	(41.3 - 45.9)	19,997	49.6%	(48.2 - 51.0)
Had flu vaccination during past 12 months, adults 65+	2,811	68.7%	(65.6 - 71.6)	5,291	73.8%	(71.9 - 75.6)	3,157	75.7%	(73.4 - 77.9)	2,847	74.5%	(71.8 - 77.1)	2,880	76.5%	(74.1 - 78.7)
Ever had pneumonia vaccination, adults 65+	2,754	70.3%	(67.4 - 73.0)	5,222	71.7%	(69.7 - 73.6)	3,092	71.5%	(68.9 - 73.9)	2,799	69.8%	(66.9 - 72.5)	2,810	69.5%	(66.9 - 72.0)
Ever been tested for HIV, adults 18-64	2,239	40.9%	(36.7 - 45.3)	4,281	31.8%	(29.0 - 34.7)	4,144	29.8%	(26.7 - 33.2)	6,579	27.4%	(24.9 - 30.1)	16,652	28.3%	(26.8 - 29.8)
Had any permanent teeth extracted	2,783	60.8%	(56.1 - 65.3)	5,187	53.5%	(50.5 - 56.5)	4,025	50.1%	(46.5 - 53.6)	5,223	41.3%	(39.2 - 43.4)	11,222	28.7%	(27.4 - 29.9)
Saw dentist for any reason in past 12 months	2,839	53.0%	(48.4 - 57.6)	5,281	51.7%	(48.2 - 55.1)	4,062	56.2%	(52.4 - 59.9)	5,267	71.8%	(69.5 - 74.0)	11,291	81.3%	(79.5 - 82.9)

[a] Non-weighted sample size for each indicator

[b] Weighted mean or percentage.

[c] Low% and Upper% are the lower and upper limits for the 95% confidence interval, respectively.

Note: Annual household income had 11.6% missing data for years 2007-2010

Source: Behavioral Risk Factor Surveillance System (BRFSS)