



# CHRONIC DISEASE BURDEN UPDATE

■ This update focuses on the burden of chronic diseases on Illinois residents.

Chronic diseases accounts for seven out of 10 deaths and affects the quality of life of 6.7 million Illinois’ residents - more than half the state’s residents. These conditions shorten lives, reduce quality of life, create considerable burden for caregivers and costs more than \$56 billion a year in healthcare costs and loss of productivity. Chronic diseases are largely preventable conditions associated with lifestyle risk behaviors. Health-damaging behaviors, in particular tobacco use, lack of physical activity and poor nutrition are major contributors to heart disease and cancer, the nation’s leading causes of death.

## PREVALENCE AND MORTALITY

Table 1 shows the prevalence of select chronic diseases and risk factors among Illinois’ adults compared to the entire nation. Illinois mirrors the national prevalence for a number of chronic conditions (arthritis, asthma, cancer, coronary heart disease and diabetes) and risk factors for developing chronic disease (high cholesterol, obesity, physical activity and diet). Three-fourths of adults have unhealthy diets, and more than one third of adults have high cholesterol.

Table 2 shows the chronic disease impact based on mortality and places chronic diseases in rank order by disease mortality in Illinois. Heart disease (182.1 per 100,000) and malignant neoplasm (cancer) (181.4 per 100,000) are the leading causes of death in Illinois.

**Table 1:** Prevalence of Select Chronic Diseases and Risk Factors, Illinois vs. United States, 2010

Condition	Illinois Prevalence	U.S. Prevalence
Unhealthy Diet*^	77.4%	76.6%
High Cholesterol^	37.3%	37.5%
Obesity	27.6%	27.8%
Hypertension (High Blood Pressure)^	26.8%	30.8%
Arthritis^	26.3%	26.0%
Physically Inactive	25.4%	26.2%
Smoking	16.9%	21.2%
Asthma	9.3%	9.1%
Diabetes	8.5%	8.7%
Cancer^	8.1%	9.3%
Coronary Heart Disease/Angina	3.9%	4.1%

**Table 2:** Number of Deaths, Age-Adjusted Mortality Rate per 100,000 Population, Illinois, 2009

Cause of Death	Number of Deaths	Age-Adjusted Mortality Rate
Diseases of Heart	24,930	182.1
Malignant Neoplasms	24,182	181.4
Chronic Lower Respiratory Diseases	5,298	40.1
Cerebrovascular Diseases	5,257	38.6
Accidents	3,961	30.1
Alzheimer’s Disease	2,891	20.6
Diabetes Mellitus	2,741	20.5
Nephritis, Nephrotic Syndrome, and Nephrosis	2,695	20.0
Influenza and Pneumonia	2,416	17.6
Septicemia	2,000	17.6
All Deaths (all causes)	100,047	740.2

Sources: Illinois Behavioral Risk Factor Surveillance System, 2009-2010; Nationwide (States and DC) Behavioral Risk Factor Surveillance System (CDC), 2009-2010.

\*Unhealthy diet is defined as consuming less than five servings of fruits and vegetables per day.

^2009 BRFSS data used for ILL. and U.S., because 2010 data was not available.

Source: National Center for Health Statistics, 2009  
Rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population

## INFLUENCING FACTORS OF CHRONIC DISEASE

Many risk factors for developing chronic disease are related. Lifestyle behaviors like smoking, physical inactivity and unhealthy diets can increase risk of obesity, hypertension and high cholesterol. These risk factors increase risk of several different chronic conditions, such as cancer and diabetes. Table 3 shows the prevalence of chronic disease risk factors among Illinois residents with specific chronic conditions. To highlight a few data points:

- Of the adults with asthma, 27 percent are current smokers.
- Of the adults with coronary artery disease, 73 percent have hypertension and 74 percent have high cholesterol.
- Of the adults with diabetes, 57 percent are physically inactive and 86 percent are overweight or obese.

**Table 3:** Prevalence of Chronic Disease Risk Factors among Persons with Specific Chronic Conditions, Illinois Adults, 2011

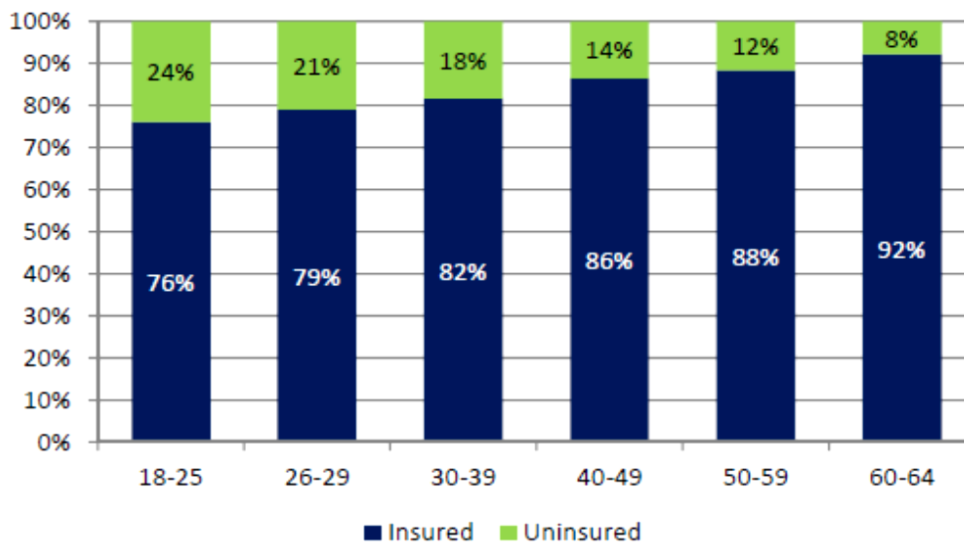
Chronic Condition	Risk Factor Prevalence Rates					
	Smoking	Physically Inactive	Unhealthy Diet	Overweight/ Obese	Hypertension	High Cholesterol
Arthritis	19.5%	47.0%	82.1%	75.2%	53.9%	53.0%
Asthma	27.3%	44.4%	88.2%	68.0%	34.5%	40.5%
Cancer	16.2%	42.3%	82.2%	62.9%	46.3%	50.1%
Coronary Artery Disease	17.3%	49.0%	83.9%	74.1%	73.0%	73.7%
Diabetes Mellitus	13.8%	56.7%	80.1%	86.4%	67.0%	62.5%

Source: Illinois Behavioral Risk Factor Surveillance System, 2011

## ACCESS TO CARE

Access to quality health care is an important factor in explaining the vulnerability of Illinois residents to chronic diseases. When access is limited, Illinois residents' ability to receive preventative care, proper chronic disease treatment or management, and health education about risk factors that increase susceptibility to different chronic diseases decreases. Access issues can be created by distance to, and scarcity of, medical services (as seen in rural regions). Lack of insurance can be attributed to unemployment, fewer companies offering insurance, or being deemed uninsurable. An in-depth analysis of healthcare in Illinois found, in urban areas, approximately 12 percent of individuals between the ages of 18 and 64 are uninsured. In rural areas, approximately 19 percent are uninsured, and statewide, approximately 13 percent of residents' 18 to 64 claim to be underinsured (Illinois Health Insurance Survey, 2011). Figure 1 shows the distribution of insurance coverage by age.

**Figure 1:** Distribution of Illinois (18-64) Population by Age, 2011



Source: Illinois Health Insurance Survey, 2011

## COMORBIDITY OF CHRONIC CONDITIONS

Table 5 shows the prevalence of a co-condition among Illinois adults who already have a chronic condition. To highlight a few data points:

- Of the adults with arthritis, 17 percent have asthma, and of those with asthma, 31 percent have arthritis.
- Arthritis is most prevalent among people with coronary artery disease (63.3%)
- Of the people with diabetes, 67 percent have high blood pressure, and of those with high blood pressure, 21 percent have diabetes.

**Table 5:** Percent of Population with Two Chronic Conditions, Illinois Adults, 2011

Chronic Condition	Co-Condition						
	Arthritis	Asthma	Cancer	CAD	Diabetes	High BP	High Chol
Arthritis	.	17.3%	18.1%	8.7%	17.7%	54.0%	53.0%
Asthma	30.9%	.	10.3%	4.2%	10.9%	34.5%	40.5%
Cancer	44.8%	14.2%	.	10.0%	17.2%	46.3%	50.1%
Coronary Artery Disease (CAD)	63.3%	16.8%	28.9%	.	28.7%	73.0%	73.7%
Diabetes	44.1%	15.2%	17.3%	10.0%	.	66.9%	62.5%
High Blood Pressure	42.0%	15.1%	14.6%	8.0%	20.9%	.	57.6%
High Cholesterol	40.6%	14.5%	15.7%	8.5%	19.9%	55.9%	.

Source: Illinois Behavioral Risk Factor Surveillance System, 2011.

## DISPARATE POPULATIONS

The burden of the chronic diseases (arthritis, asthma, cancer, diabetes and heart disease) of interest in this report greatly affects individuals based on different determinants of health, such as education, income, age, race and ethnicity, and disability. The following determinants of health represent the highest prevalence rates for arthritis, diabetes and heart disease.

- Over the age of 65
- Black race
- Less than a high school degree
- Having a disability

Arthritis has increased from 21 percent in 2000 to 26 percent in 2009. The following determinants of health represent the largest variations of arthritis prevalence:

- By age, persons over the age of 65 have the highest prevalence (59.4%) compared to persons between the ages of 45 and 64 (33.8%).
- By race, blacks have the highest prevalence (32.7%).
- By income, persons who make less than \$15,000 a year have the highest prevalence (36.8%) compared to those who make greater than \$50,000 (21.6%).
- By education, persons without a high school diploma have the highest prevalence (34.7%) compared to college graduates (22%).
- There is a higher prevalence of arthritis in those who are disabled (59%) compared to those who are not disabled (19.2%).

## ILLINOIS CHRONIC DISEASE BURDEN UPDATE

Asthma has increased from 8 percent in 2000 to 9 percent in 2010. The following determinants of health represent the largest variations for adults who currently have asthma.

- By age, persons between the ages of 18 and 24 (14.8%) and persons between the ages of 34 and 44 (10.0%) have the highest prevalence compared to persons 65 and older (7.4%).
- By race, blacks have the highest prevalence (13.9%).
- By income, persons who make less than \$15,000 a year have the highest prevalence (14.0%) compared to those who make greater than \$50,000 (7.5%).
- There is a higher prevalence of asthma in those who are disabled (22.0%) compared to those who are not disabled (12.1%)

In 2009, the prevalence of cancer was 8 percent. The following determinants of health represent the largest variations of cancer prevalence:

- By age, persons over the age of 65 have the highest prevalence (25%).
- By education, high school graduates have the highest prevalence rate (9.7%) compared to persons with some college (6.8%).
- By income, persons with an income between \$35,000 and \$50,000 have the highest prevalence rate (11%) compared to persons with an income of greater than \$50,000 (6.9%).
- There is a higher prevalence of cancer in those who are disabled (15%) compared to those who are not disabled (6.6%).

Diabetes among adults has increased from 5 percent in 2000 to 9 percent in 2010. The following determinants of health represent the largest variations of diabetes prevalence:

- By race, blacks have the highest prevalence (12.4%).
- By education, persons without a high school diploma have the highest prevalence rate (17.1%) compared to college graduates (5.9%).
- By income, persons with an income of less than \$15,000 have the highest prevalence rate (15%) compared to individuals who make more than \$50,000 (5.6%).
- There is a higher prevalence of diabetes in those who are disabled (15.2%) compared to those who are not disabled (6.8%).

In 2010, the overall prevalence of heart disease was 4 percent. The following determinants of health represent the largest variations of heart disease prevalence:

- By race, blacks have the highest prevalence (4.5%).
- By education, persons without a high school diploma have the highest prevalence (7.3%) compared to persons with a college degree (3%).
- By income, persons with an income between \$15,000 and \$34,999 have the highest prevalence rate (6%) compared to persons with an income of greater than \$50,000 (2.7%).
- There is a higher prevalence of heart disease in those who are disabled (19.3%) compared to those who are not disabled (3.2%).