

Section 4: Chronic Conditions

Chronic diseases such as diseases of the heart, cancer and cerebrovascular disease are the leading causes of death and disability for Americans, including DuPage County residents. Other chronic conditions including diabetes, kidney disease, arthritis, osteoporosis and respiratory diseases decrease the quality of life of many residents and are leading causes of hospitalizations and mortality. As the county's population of individuals age 65 and older increases, the burden of these chronic conditions will be felt by the local public health system.

Healthy People 2010 established goals for many of these chronic conditions. Each goal is worthy of consideration even if local data is unavailable for setting targets and establishing morbidity and mortality baselines. HP 2010 objectives covering chronic illnesses are analyzed in the following pages.

Heart Disease

Heart disease remains the leading cause of death in DuPage County. In 2001, heart disease accounted for 28 percent of all deaths. Coronary heart disease accounted for the largest proportion of heart disease deaths – 21 percent. Heart disease continues to be a major cause of disability and a significant contributor to increases in health care costs.

Reduce coronary heart disease deaths.

HP 2010 Objective: 12-1.

Target: 166 deaths per 100,000 population.

Baseline: 208 coronary heart disease deaths per 100,000 population in 1998 (age adjusted to the year 2000 standard population).

Data source: IPLAN Data System.

In Table 4.1 we see **the DuPage County coronary heart disease mortality rate for the years 1999 through 2001 is below the HP 2010 objective of 166 deaths per 100,000 population.** However, the 2001 Illinois rate of 186.1 needs improvement.

Table 4.1

Coronary Heart Disease Mortality Rate per 100,000		
Year	DuPage County	Illinois
2001	128.2	186.1
2000	138.2	194.6
1999	144.1	210.5

Hospitalizations

Table 4.2

Hospitalizations for Heart Disease Rate per 100,000		
Year	DuPage County	Illinois
2001	1,067.5	1,438.4
2000	1,049.4	1,410.6
1999	961.1	1,393.0

Table 4.3

Hospitalizations for Hypertension (High Blood Pressure) Rate per 100,000		
Year	DuPage County	Illinois
2001	35.1	76.0
2000	32.7	68.1
1999	24.3	63.5

Table 4.4

Age Group	Percent of High BP Hospitalizations
75+	33.3%
65 to 74	20.4%
55 to 64	16.5%
45 to 54	14.2%
35 to 54	10.2%

Using a three-year average of hospitalizations in DuPage County, we find the majority (approximately 64.7 percent) of heart hospitalizations occur in residents aged 65 and older. However, with high blood pressure we find hospitalizations begin at a much younger age and then steadily increase until peaking at age 75 and older. This clearly illustrates that if this risk factor could be addressed in younger populations, the likelihood of reducing heart disease could be increased.

Risk Factors

Reduce the proportion of adults with high blood pressure.

HP 2010 Objective: 12-9.

Target: 16 percent.

Baseline: 28 percent of adults aged 20 years and older had high blood pressure in 1988–94 (age adjusted to the year 2000 standard population).

Data source: Behavioral Risk Factor Survey, 2000.

High blood pressure remains a major risk factor for coronary heart disease, stroke and heart failure. The prevalence of high blood pressure increases with age and is greater in African-Americans than whites, and in those with less education. High blood pressure is a major contributing factor in up to 70 percent of strokes. **In 2000, 8.5 percent of DuPage County residents were told by a health care professional that their blood pressure was high.** 58.5 percent were supposed to take medication, 14.1 percent were supposed to follow a special diet and 14.2 percent were supposed to exercise to control the high blood pressure. **The percent of DuPage County residents with high blood pressure is below the HP 2010 objective.**

Increase the proportion of adults who have had their blood pressure measured within the preceding 2 years and can state whether their blood pressure was normal or high.

HP 2010 Objective: 12-12.

Target: 95 percent.

Baseline: 90 percent of adults aged 18 years and older had their blood pressure measured in the past 2 years and could state whether it was normal or high in 1998 (age adjusted to the year 2000 standard population).

Data source: Behavioral Risk Factor Survey, 2000.

In 2000, 94.7 percent of DuPage County adults had their blood pressure measured within the past 2 years. DuPage County meets the HP 2010 target for this objective.

Reduce the proportion of adults with high total blood cholesterol levels.

HP 2010 Objective: 12-14.

Target: 17 percent.

Baseline: 21 percent of adults aged 20 years and older had total blood cholesterol levels of 240 mg/dL or greater in 1988–94 (age adjusted to the year 2000 standard population).

Data source: Behavioral Risk Factor Survey, 2000.

High cholesterol is another risk factor for heart disease, stroke and heart failure. In 2000, 13.2 percent of residents were told by a healthcare professional that their cholesterol reading was high. 34.2 percent were supposed to take medication, 24.6 percent were supposed to follow a special diet and 16 percent were supposed to exercise to control the high cholesterol. The percent of DuPage County residents with high cholesterol levels is better than the HP 2010 objective.

Increase the proportion of adults who have had their blood cholesterol checked within the preceding 5 years.

HP 2010 Objective: 12-15.

Target: 80 percent.

Baseline: 67 percent of adults aged 18 years and older had their blood cholesterol checked within the preceding 5 years in 1998 (age adjusted to the year 2000 U.S. standard population).

Data source: Behavioral Risk Factor Survey, 2000.

In 2000, 71.9 percent of DuPage County adults had their blood cholesterol checked within the preceding 5 years. DuPage County falls short of meeting this objective.

Tobacco Use in Population Groups

Reduce tobacco use by adults.

HP 2010 Objective: 27-1.

Target and baseline:

Objective	Reduction in Tobacco Use by Adults Aged 18 Years and Older	1998 Baseline*	2010 Target
<i>Percent</i>			
27-1a.	Cigarette smoking	24	12
27-1b.	Spit tobacco	2.6	0.4
27-1c.	Cigars	2.5	1.2
27-1d.	Other products	Developmental	

Data source: Behavioral Risk Factor Survey, 2000.

Smoking is a modifiable risk factor that increases the risk for heart disease and stroke. **In 2000, 19.2 percent of DuPage County adults smoked cigarettes.** Of those that smoke some days or every day, 6.6 percent considered themselves heavy smokers. 61.2 percent of heavy smokers were advised to quit smoking. Smoking cessation has major and immediate health benefits for men and women of all ages. For example, people who quit smoking before age 50 years have half the risk of dying in the next 15 years, compared with people who continue to smoke. **DuPage County does not meet this objective.**

Reduce the proportion of adults who are obese.

HP 2010 Objective: 19-2.

Target: 15 percent.

Baseline: 23 percent of adults aged 20 years and older were identified as obese (defined as a BMI of 30 or more) in 1988–94 (age adjusted to the year 2000 standard population).

Data source: Behavioral Risk Factor Survey, 2000.

Overweight and obesity are growing public health problems affecting adults, adolescents, and children. Overweight and obese persons are at increased risk for heart disease and stroke. **In 2000, 16 percent of DuPage County residents were obese or morbidly obese, as defined by a BMI of 30 or more.** A number of studies

have shown that lifestyle interventions, such as physical activity, can help prevent high blood pressure, reduce blood cholesterol levels and reduce obesity. In 2000, 10.4 percent of residents reported fair or poor overall physical fitness and only 17 percent exercised 30 minutes or more five days per week. Our societal challenge is to engage more people in heart-healthy behaviors. **DuPage County is very close to meeting the HP 2010 target of 15 percent.**

Table 4.5

Risk Factors for Heart Disease		
Risk Factor	DuPage County	Illinois
High Blood Pressure		
Checked <= 1 yr. ago	90.2%	88.0%
Told BP is high	8.5%	24.2%
High Cholesterol		
Ever checked	82.7%	74.2%
Checked <= 1 yr. ago	66.1%	70.0%
Told cholesterol high	13.2%	29.4%
Overweight and Obese		
Adults	16.0%	21.7%

Cancer

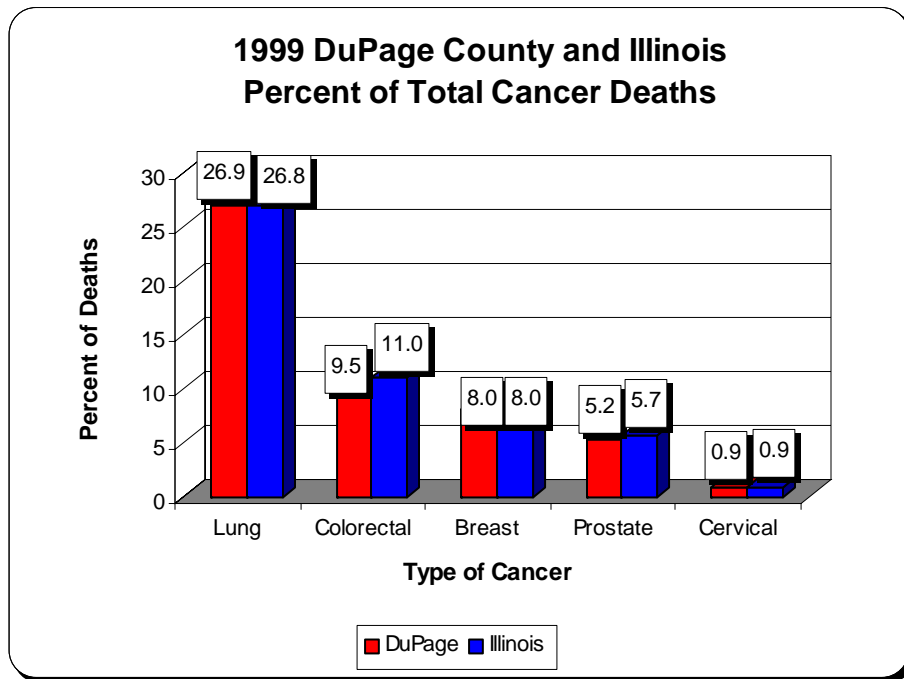
Cancer is the second leading cause of death in DuPage County, Illinois and the United States. One out of two men and one out of three women in the United States will develop some type of cancer during their lifetime. In 2002, approximately 1,284,900 Americans will be diagnosed with cancer. Nationally about 77% of all cancers are diagnosed in people age 55 and older.

One third of all cancer deaths are related to diet and activity factors. Up to one half of all cancers could be cured if caught early enough. Up to two thirds of all cancers could be prevented.

In 1999, cancer claimed the lives of 1,407 DuPage County residents. More than half of these cancer deaths were attributable to the following five causes:

- Lung Cancer – 378 deaths
- Colorectal Cancer – 134 deaths
- Breast Cancer – 112 deaths
- Prostate Cancer 73 deaths
- Cervical Cancer – 12 deaths

Graph 4.1



Reduce the overall cancer death rate.

HP 2010 Objective: 3-1

National Target: 159.9 deaths per 100,000 population.

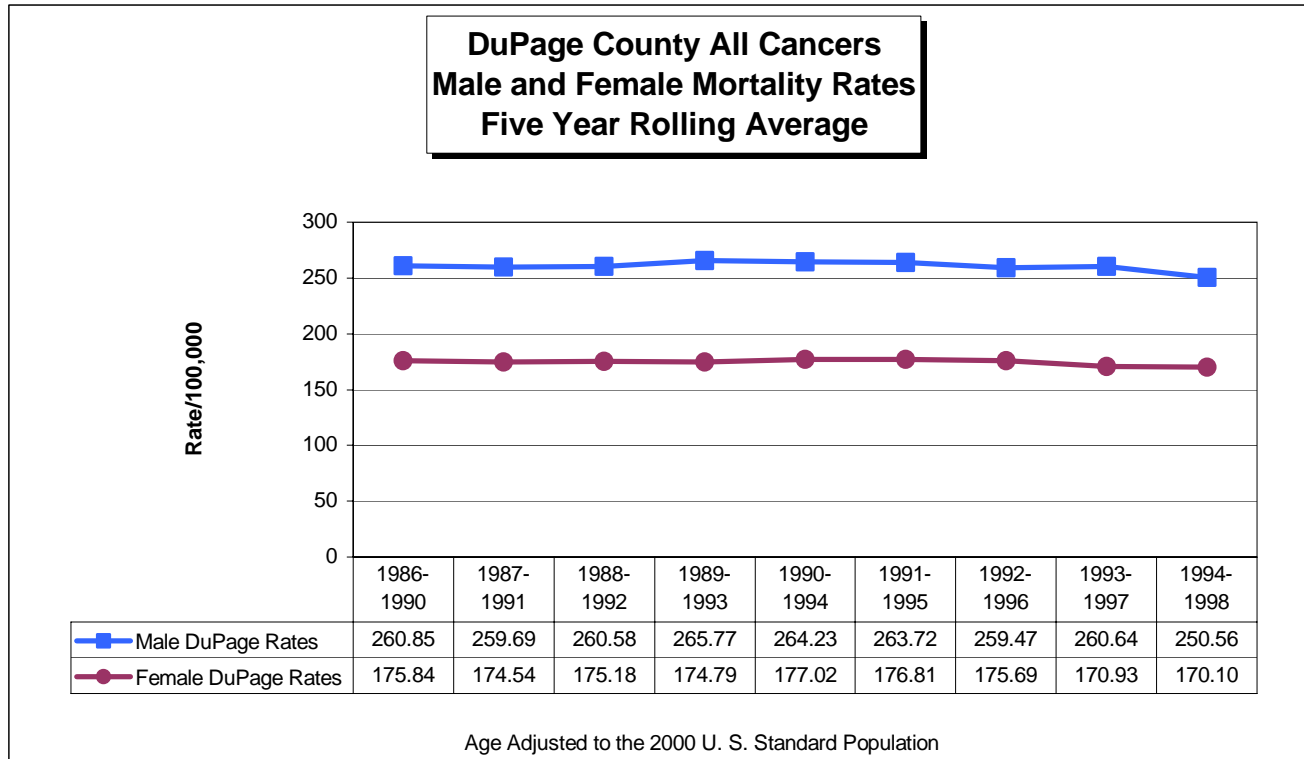
National Baseline: 202.4 cancer deaths per 100,000 population occurred in 1998 (age adjusted to the year 2000 U.S. standard population).

Data source: IPLAN Data System and HP 2010.

We can see from Graph 4.2 that, overall, DuPage County cancer mortality rates for males and females have remained relatively unchanged through the 1990s, although greater numbers of men than women die from all cancers combined. During the five-year period 1994 to 1998, the female DuPage County mortality rate was 170.1 deaths

per 100,000 population. The male DuPage County mortality rate was 250.6. **The combined (male and female) DuPage County cancer mortality rate for the five-year period 1994 to 1998 was 198.8.** The HP 2010 national target is 159.9 deaths per 100,000 population. DuPage County currently faces challenges in meeting this HP 2010 objective.

Graph 4.2



Reduce the lung cancer death rate.

HP 2010 Objective: 3-2

National Target: 44.9 deaths per 100,000 population.

National Baseline: 57.6 lung cancer deaths per 100,000 population occurred in 1998 (age adjusted to the year 2000 U.S. standard population).

Data source: Illinois Department of Public Health Death Files, HP 2010, IPLAN Data System, SEER*Stat Database and American Cancer Society.

Graph 4.3

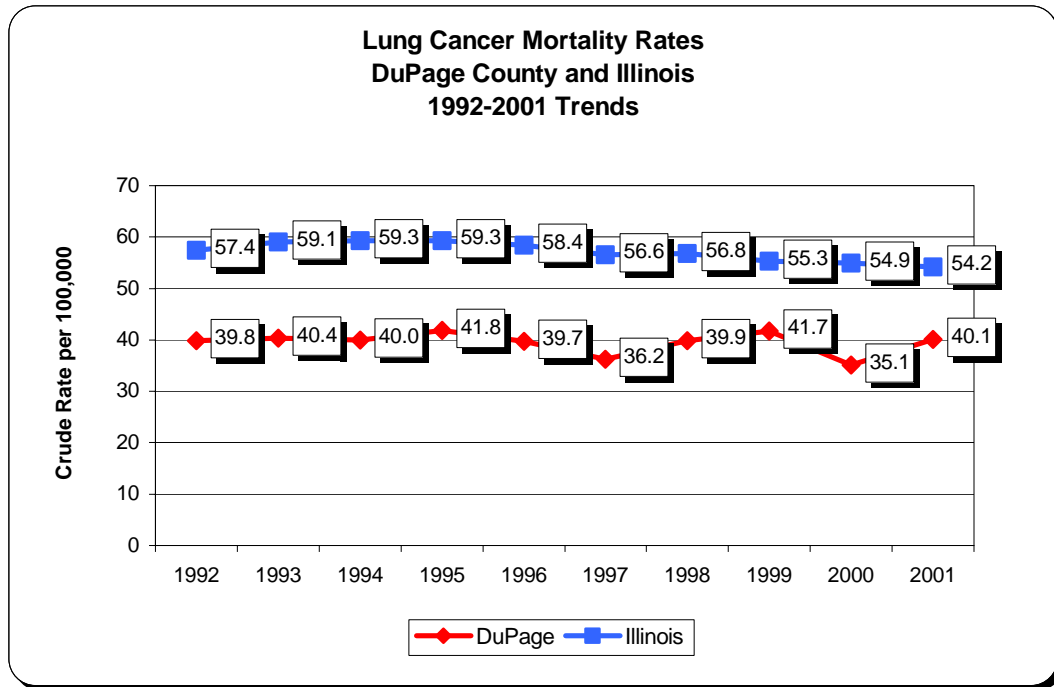


Table 4.6

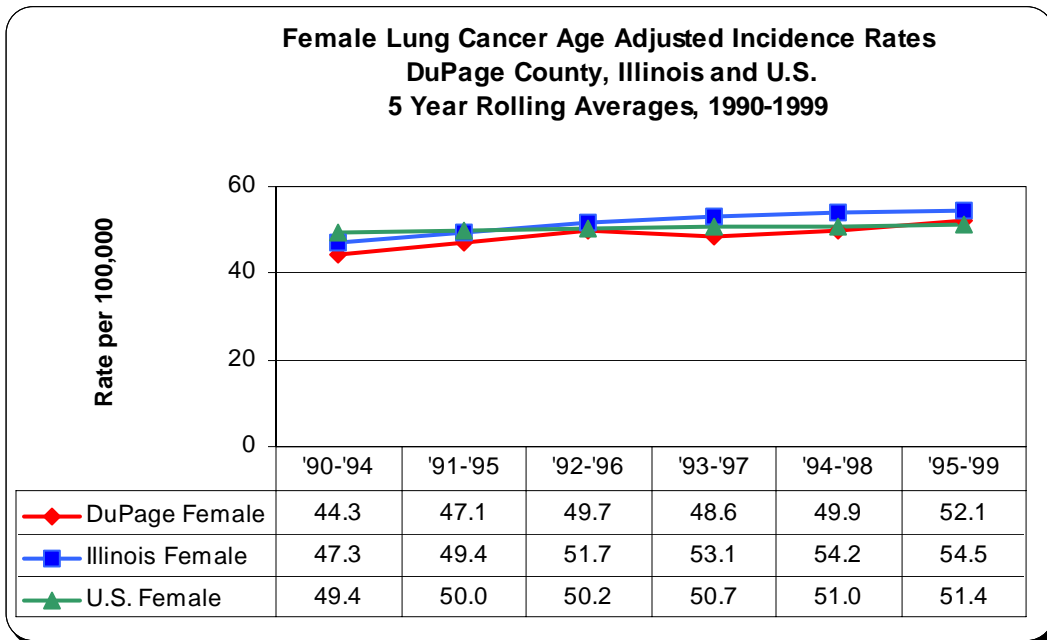
Lung Cancer Mortality 5 Year Rolling Averages					
	1984-1986	1987-1989	1990-1992	1993-1995	1996-2000
DuPage	38.7	36.3	39.0	34.2	28.8
Illinois	35.3	35.3	35.7	33.3	30.3
U.S.	32.9	33.0	32.5	30.9	27.7

Note: Age adjusted to year 2000 U.S. standard population. Rates per 100,000 population.

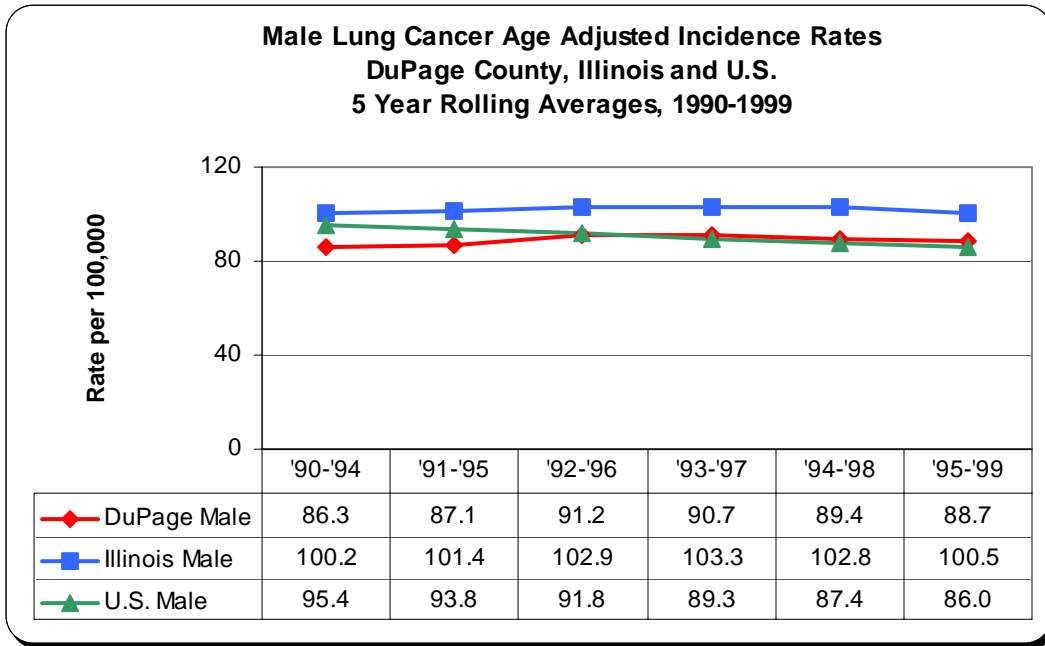
Lung cancer is the most common cause of cancer death among both females and males, accounting for approximately 28 percent of all cancer deaths. Cigarette smoking is the biggest risk factor for lung cancer. Other risk factors include environmental sources such as tobacco smoke and air pollution, radiation exposures, and occupational exposures to organic chemicals such as radon and asbestos. After 10 years of abstinence, smoking cessation decreases the risk of lung cancer by 30 to 50 percent compared to that of continuing smokers. Treatment for lung cancer is determined by type and the stage of the cancer. Treatments include surgery, radiation therapy, chemotherapy or any combination of the aforementioned.

When examining Table 4.6, we find the DuPage County lung cancer five-year average mortality rate to decrease from 1993 forward. Graph 4.3 shows the DuPage County and Illinois rates of lung cancer mortality, where DuPage is consistently lower than the state mortality rate. **The 2001 DuPage County lung cancer mortality rate of 40.1 is below the HP 2010 Target of 44.9**, however the Illinois rate of 54.2 needs improvement.

Graph 4.4



Graph 4.5



Throughout the 1990s, lung cancer incidence among men has remained unchanged, however incidence among women is increasing.

Reduce the colorectal cancer death rate.

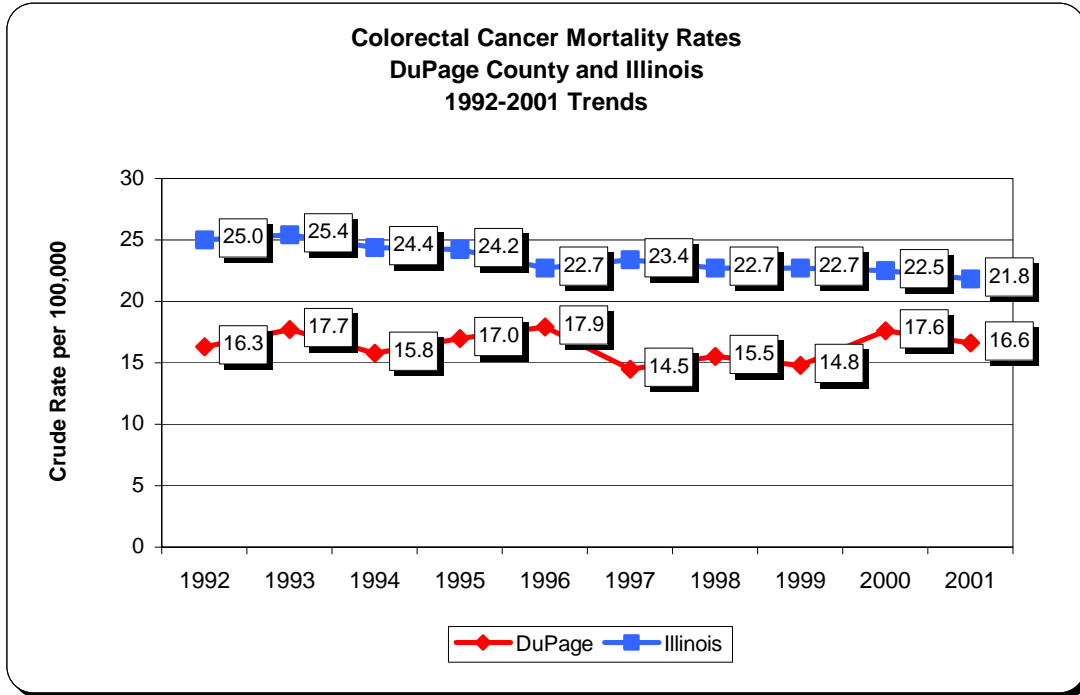
HP 2010 Objective: 3-5

National Target: 13.9 deaths per 100,000 population.

National Baseline: 21.2 colorectal cancer deaths per 100,000 population occurred in 1998 (age adjusted to the year 2000 standard population).

Data source: Illinois Department of Public Health Death Files, HP 2010, IPLAN Data System, SEER*Stat Database, American Cancer Society.

Graph 4.6



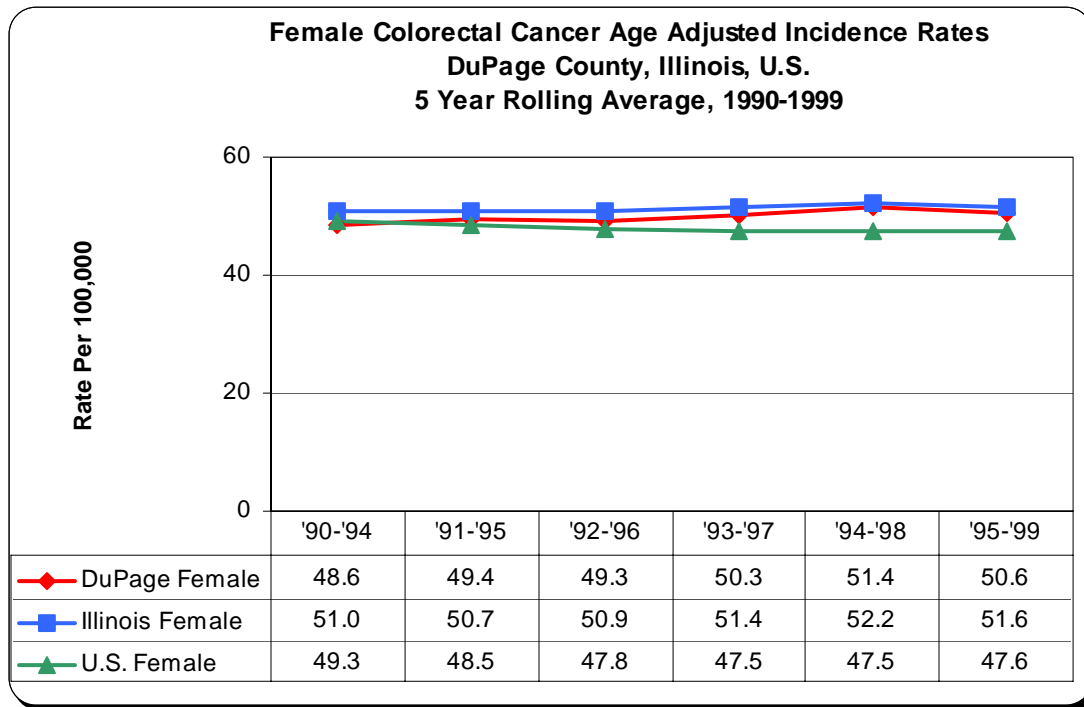
Colorectal cancer is the second leading cause of cancer deaths among men and women. While crude mortality rates have fluctuated, overall the rates have decreased. **Both the 2001 DuPage County (16.6) and Illinois (21.8) colorectal cancer mortality rates are higher than the HP 2010 target of 13.9 deaths per 100,000 population.**

Table 4.7

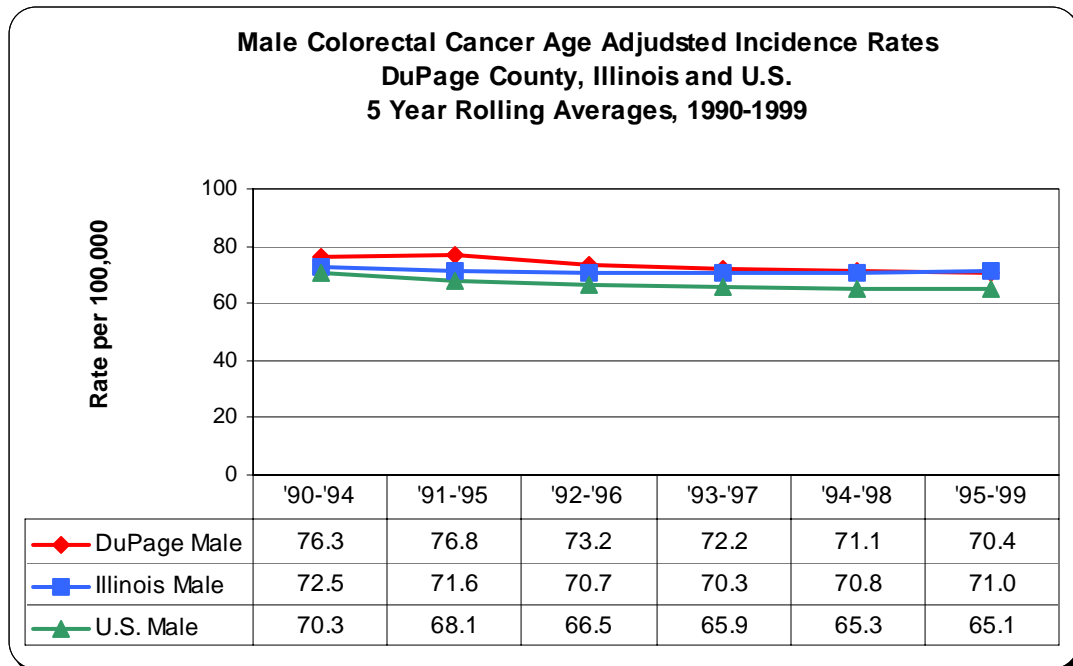
Colorectal Cancer Incidence 5 Year Rolling Averages										
	1992-1996		1993-1997		1994-1998		1995-1999		1996-2000	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
DuPage	47.4	70.9	48.1	69.6	48.8	68.2	48.0	67.2	47.6	66.4
Illinois	50.8	71.0	51.3	70.8	52.0	71.4	51.6	71.8	51.6	72.1
U.S.	47.7	66.8	47.5	66.3	47.6	66.0	47.6	65.7	47.4	65.4

Note: Age adjusted to year 2000 U.S. standard population. Rate per 100,000 population.

Graph 4.7



Graph 4.8



Risk factors for colorectal cancer include age, family history, physical inactivity, obesity, alcohol use and a diet high in fat and low in fruits and vegetables. Treatments for

colorectal cancer include early detection and removal of pre-cancerous colorectal polyps, surgery, radiation therapy and chemotherapy.

Reduce the breast cancer death rate.

HP 2010 Objective: 3-3

National Target: 22.3 deaths per 100,000 females.

National Baseline: 27.9 breast cancer deaths per 100,000 females occurred in 1998 (age adjusted to the year 2000 standard population).

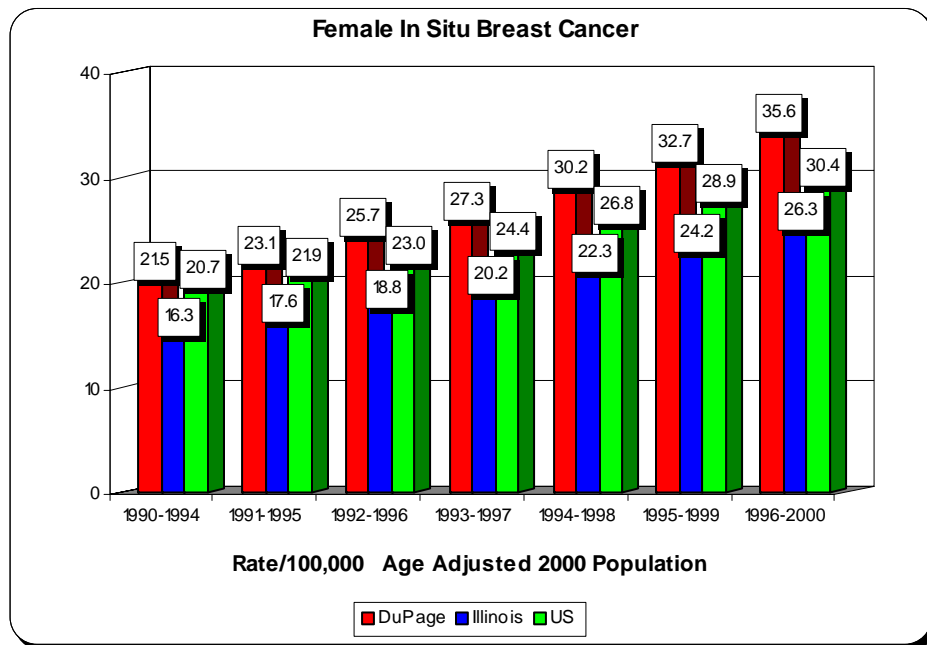
Data source: Illinois Department of Public Health Death Files, HP 2010, IPLAN Data System, SEER*Stat Database, American Cancer Society.

Table 4.8

	Female Breast Cancer Incidence 5 Year Rolling Averages				
	1992-1996	1993-1997	1994-1998	1995-1999	1996-2000
DuPage	142.3	145.7	147.7	147.4	147.0
Illinois	128.9	129.7	132.0	133.0	133.3
U.S.	131.4	132.5	134.7	136.5	137.1

Note: Age adjusted to year 2000 U.S. standard population. Rate per 100,000 population.

Graph 4.9



Graph 4.10

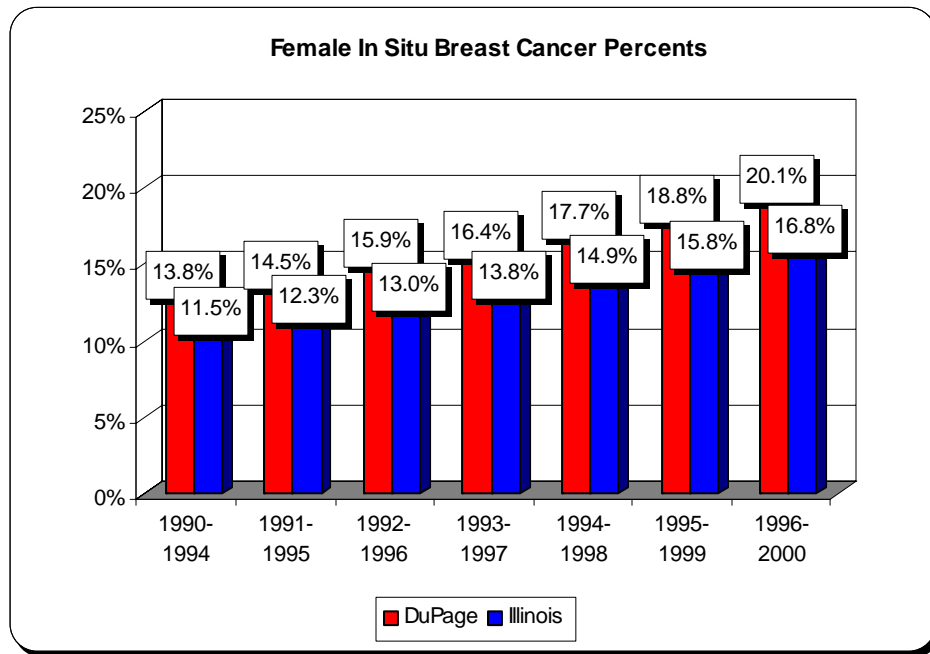


Table 4.9

	Female Breast Cancer Mortality 5 Year Rolling Averages				
	1984-1986	1987-1989	1990-1992	1993-1995	1996-2000
DuPage	38.7	36.3	39.0	34.2	28.8
Illinois	35.3	35.3	35.7	33.3	30.3
U.S.	32.9	33.0	32.5	30.9	27.7

Note: Age adjusted to year 2000 U.S. standard population. Rate per 100,000 population.

Breast cancer is the most common cause of cancer among women. Breast cancer incidence in DuPage County has consistently remained substantially higher than the Illinois and U.S. five-year averages since 1992; however, the higher rates confirm successful countywide mammography screening efforts. Death from breast cancer can be reduced substantially if the tumor is discovered at an early stage, and mammography is the most effective method for detecting these early malignancies. Clinical breast exams and monthly breast self-examination also prove beneficial in early detection.

Mortality rates have declined steadily since 1990. The current mortality rate of 28.8 deaths per 100,000 females is the lowest DuPage County has seen in over 30 years. **Nevertheless, the 1996-2001 DuPage County breast cancer mortality rate of 28.8 is higher than the HP 2010 Target of 22.3 deaths per 100,000 females.**

Graph 4.10 shows an increase with in situ incidence percents, which again proves early detection efforts have been successful.

Many breast cancer risk factors, such as age, family history of breast cancer, long menstrual history, mammographic densities, previous breast disease, and race and ethnicity, are unchangeable. However, obesity and smoking are well-established breast cancer risks for postmenopausal women that can be addressed. A healthy diet, vigorous physical activity and maintaining a healthy body weight are associated with lowering the risk of developing breast cancer.

Increase the proportion of women aged 40 years and older who have received a mammogram within the preceding 2 years.

HP 2010 Objective: 3-13

National Target: 70 percent.

National Baseline: 67 percent of women aged 40 years and older received a mammogram within the preceding 2 years in 1998 (age adjusted to the year 2000 standard population).

Data source: Behavioral Risk Factor Survey, 2000.

According to the 2000 Behavioral Risk Factor Survey, approximately 82.1 percent of DuPage County women aged 40 years and over ever had a mammogram.

Approximately 69.8 percent of women had the mammogram in the past 12 months.

DuPage County essentially meets this HP 2010 Target.

Reduce the prostate cancer death rate.

HP 2010 Objective: 3-7

National Target: 28.8 deaths per 100,000 males.

National Baseline: 32.0 prostate cancer deaths per 100,000 males occurred in 1998 (age adjusted to the year 2000 standard population).

Data source: Illinois Department of Public Health Death Files, HP 2010, IPLAN Data System, SEER*Stat Database, American Cancer Society.

In 1999, there were 73 prostate cancer deaths in DuPage County. In 2000, there were 82 deaths, and in 2001 there were 74 prostate cancer deaths in DuPage County.

DuPage County and Illinois prostate cancer percents diagnosed at local stage are shown in table 4.10.

Table 4.10

	Prostate Cancer Percent Diagnosed at Local Stage 5 Year Rolling Averages				
	1992-1996	1993-1997	1994-1998	1995-1999	1996-2000
DuPage	77.2	78.2	80.2	81.7	83.5
Illinois	74.8	76.5	77.9	79.8	81.4

Table 4.11

	Prostate Cancer Incidence 5 Year Rolling Averages				
	1992-1996	1993-1997	1994-1998	1995-1999	1996-2000
DuPage	171.2	161.0	154.8	156.4	157.8
Illinois	168.9	163.2	158.9	157.1	156.8
U.S.	191.4	178.8	171.0	171.1	172.8

Note: Age adjusted to year 2000 U.S. standard population. Rate per 100,000 population.

Table 4.12

	Prostate Cancer Mortality 5 Year Rolling Averages				
	1984-1986	1987-1989	1990-1992	1993-1995	1996-2000
DuPage	34.9	30.6	41.1	35.9	33.1
Illinois	33.5	36.0	39.8	38.8	34.7
U.S.	34.3	36.0	39.0	38.4	32.9

Note: Age adjusted to year 2000 U.S. standard population. Rate per 100,000 population.

Prostate cancer is the most commonly diagnosed cancer among men, and is the second leading cause of male cancer death. The incidence of prostate cancer has decreased from 1990 through 2000. Prostate cancer mortality has also declined.

Risk factors for prostate cancer include age, ethnicity, family history and dietary fat. 80 percent of all prostate cancer occurs in men aged 65 years and older. African American men have the highest incidence rates of prostate cancer in the world.

Prevention of prostate cancer is most successful when detected early. The digital rectal exam (DRE) and the prostate-specific antigen (PSA) blood test are two methods used for the early detection of prostate cancer. Studies regarding these tests continue, as both are considered controversial. The benefits and limitations of these tests must be considered.

Reduce the death rate from cancer of the uterine cervix.

HP 2010 Objective: 3-4

National Target: 2.0 deaths per 100,000 females.

National Baseline: 3.0 cervical cancer deaths per 100,000 females occurred in 1998 (age adjusted to the year 2000 standard population).

Data source: Illinois Department of Public Health Death Files, HP 2010, IPLAN Data System, SEER*Stat Database, American Cancer Society.

Table 4.13

	Cervical Cancer Incidence 5 Year Rolling Averages				
	1992-1996	1993-1997	1994-1998	1995-1999	1996-2000
DuPage	7.5	7.7	7.5	7.8	7.6
Illinois	11.7	11.7	11.6	11.6	11.4
U.S.	9.5	9.3	9.2	8.9	8.7

Note: Age adjusted to year 2000 U.S. standard population. Rate per 100,000 population.

Table 4.14

	Cervical Cancer Mortality 5 Year Rolling Averages				
	1984-1986	1987-1989	1990-1992	1993-1995	1996-2000
DuPage	2.7	3.2	2.3	1.8	2.2
Illinois	4.3	3.9	3.9	3.4	3.4
U.S.	3.9	3.6	3.6	3.3	3.0

Note: Age adjusted to year 2000 U.S. standard population. Rate per 100,000 population.

Cervical cancer is the tenth most common cause of cancer among women in the United States. It is the seventh most common cause of cancer among DuPage County female residents. Between 1992 and 2000, the incidence of cervical cancer has remained stable in DuPage County. Cervical cancer mortality rates are very low. In 1999, there were 12 cervical cancer deaths. In 2000, there were 6 deaths, and in 2001 there were 8 cervical cancer deaths in DuPage County. Cervical cancer deaths represent less than one percent of all cancer deaths. Even though our cancer rate is very low, DuPage County does not meet the HP 2010 Target.

Risk factors for cervical cancer include having sex at an early age, many sexual partners, or having sexual partners who have had many sexual partners, having contracted sexually transmitted diseases (STDs), and cigarette smoking.

The most effective treatment for cervical cancer is early detection. A Pap test is a simple screening tool that can reduce the number of deaths associated with cervical cancer. Screenings should begin about three years after a woman begins having sexual intercourse, but no later than age 21. The risk for cervical cancer is substantially decreased among former smokers in comparison to those who continue to smoke.

Increase the proportion of women who receive a Pap test.

HP 2010 Objective: 3-11

National Targets and baselines:

Objective	Increase in Pap Testing	1998 Baseline*	2010 Target
		<i>Percent</i>	
3-11a.	Women aged 18 years and older who have ever received a Pap test	92	97
3-11b.	Women aged 18 years and older who received a Pap test within the preceding 3 years	79	90

Data source: Behavioral Risk Factor Survey, 2000.

Approximately 94.7 percent of DuPage County adult women ever received a Pap test. Approximately 90.7 percent of adult women had the Pap test within the previous three years. DuPage County meets objective 3-11b.

Increase the proportion of cancer survivors who are living 5 years or longer after diagnosis.

HP 2010 Objective: 3-15

National Target: 70 percent.

National Baseline: 59 percent of persons with invasive cancer of any type were living 5 years or longer after diagnosis in 1989–95.

Data source: Illinois Department of Public Health Death Files, HP 2010, IPLAN Data System, SEER*Stat Database, American Cancer Society.

- **Breast:** DuPage County and Illinois breast cancer percents diagnosed in situ are shown in the following table.

Table 4.15

	Female Breast Cancer Percent Diagnosed In Situ 5 Year Rolling Averages				
	1992-1996	1993-1997	1994-1998	1995-1999	1996-2000
DuPage	15.9	16.4	17.7	18.8	20.1
Illinois	13.0	13.8	14.9	15.8	16.8

The five-year relative survival rate for localized breast cancer is **97 percent**. **DuPage County exceeds the Target for this objective.** Survival rate is 78 percent for cases in which the cancer is spread regionally. For women with distant metastases, the five-year survival rate is dramatically reduced to 23 percent.

- **Cervical:** Nationally, the 5-year relative survival rate when lesions are diagnosed as pre-invasive is nearly **100 percent**. **DuPage County exceeds the Target for this objective.** The five-year relative survival rate for women diagnosed in the early stage is 92 percent. 89 percent of cervical cancer patients survive one year after diagnosis. The overall (all stages combined) five-year survival rate for cervical cancer is about 71 percent.

DuPage County and Illinois cervical cancer percents diagnosed at late stage are shown in table 4.16.

Table 4.16

	Cervical Cancer Percent Diagnosed at Late Stage 5 Year Rolling Averages				
	1992-1996	1993-1997	1994-1998	1995-1999	1996-2000
DuPage	35.8	39.1	44.6	42.1	43.1
Illinois	41.9	42.3	43.3	43.0	43.3

- **Colorectal:** Nationally, **nine out of 10** people whose colorectal cancer is found and treated at an early stage, before it has spread, live at least five years. **DuPage County exceeds the Target for this objective.** Once the cancer has spread to nearby organs or lymph nodes, the 5-year survival rate goes down to

65 percent. If the cancer has already spread to distant parts of the body such as the liver or lungs, the 5-year survival rate is 8 percent.

DuPage County and Illinois colorectal cancer percents diagnosed at local stage are shown in the following table.

Table 4.17

	Colorectal Cancer Percent Diagnosed at Local Stage 5 Year Rolling Averages				
	1992-1996	1993-1997	1994-1998	1995-1999	1996-2000
DuPage	34.4	32.9	33.7	35.9	36.8
Illinois	34.0	33.8	34.1	34.6	35.1

- Prostate:** Nationally, **97 percent** of men diagnosed with prostate cancer survive at least 5 years. **DuPage County exceeds the Target for this objective.** Further, 79 percent survive at least 10 years, and 57 percent survive at least 15 years.

Eighty-five percent of all prostate cancers are found while they are still within the prostate or only in nearby areas. The 5-year relative survival rate for these men is nearly 100%. For the small number of men (about 6%) whose cancer has already spread to distant parts of the body when it is found, 34% will survive at least 5 years.

Stroke

Stroke is the third leading cause of death, accounting for 7 percent of all DuPage County deaths. Stroke continues to be major causes of disability and a significant contributor to increases in health care costs.

Reduce stroke deaths.

HP 2010 Objective: 12-7.

Target: 48 deaths per 100,000 population.

Baseline: 60 deaths from stroke per 100,000 population occurred in 1998 (age adjusted to the year 2000 standard population).

Data source: IPLAN Data System.

Table 4.18

Stroke Mortality Rate per 100,000		
Year	DuPage County	Illinois
2001	45.2	57.6
2000	53.1	59.7
1999	44.9	63.5

In 2001, DuPage County’s death rate was below the Target of 48 deaths per 100,000 population.

Hospitalizations

Table 4.19

Hospitalizations for Stroke Rate per 100,000		
Year	DuPage County	Illinois
2001	282.8	348.8
2000	291.7	348.2
1999	280.8	347.1

With stroke, we find an even greater percentage (74.8 percent) of hospitalizations occur in residents aged 65 and older. This clearly illustrates that if this risk factor for stroke could be addressed in younger populations, the likelihood of reducing stroke could be increased.

Other Chronic Conditions

Reduce deaths from chronic obstructive pulmonary disease (COPD) among adults.

HP 2010 Objective: 24-10

Target: 60 deaths per 100,000 adults.

Baseline: 119.4 deaths from COPD per 100,000 persons aged 45 years and older occurred in 1998 (age adjusted to the year 2000 standard population).

Data source: Illinois Department of Public Health Death Files, 1999 – 2001.

Table 4.20

Number of COPD Deaths in DuPage County		
1999	2000	2001
251	239	258

In 2000, the rate of COPD deaths per 100,000 adults was approximately 36, **well below the HP 2010 Target of 60 deaths per 100,000.**

Arthritis

The various forms of arthritis affect more than 15 percent of the U.S. population—over 43 million persons—and more than 20 percent of the adult population, making arthritis one of the most common conditions in the United States.

The significant public health impact of arthritis is reflected in a variety of measures. First, arthritis is the leading cause of disability. Arthritis limits the major activities (for example, working, housekeeping, school) of nearly 3 percent of the entire U.S. population (7 million persons), including nearly 1 out of every 5 persons with arthritis. Arthritis trails only heart disease as a cause of work disability. As a consequence, arthritis limits the independence of affected persons and disrupts the lives of family members and other caregivers.

Second, health-related quality-of-life measures are consistently worse for persons with arthritis, whether the measure is healthy days in the past 30 days, days without severe pain, “ability days” (that is, days without activity limitations), or difficulty in performing personal care activities.

Reduce the proportion of adults with chronic joint symptoms who experience a limitation in activity due to arthritis.

HP 2010 Objective: 2-2

Target: 21 percent.

Baseline: 27 percent of adults aged 18 years and older with chronic joint symptoms experienced a limitation in activity due to arthritis in 1997 (age adjusted to the year 2000 standard population).

Data source: None.

This indicator is included in the Community Health Profile because of the significant disabling impact of arthritis, although no local data is available.

Reduce the proportion of adults with osteoporosis.

HP 2010 Objective: 2-9

Target: 8 percent.

Baseline: 10 percent of adults aged 50 years and older had osteoporosis as measured by low total femur bone mineral density (BMD) in 1988–94 (age adjusted to the year 2000 standard population).

Data source: Behavioral Risk Factor Survey, 2000.

According to the Behavioral Risk Factor Survey, approximately 14.1 percent of DuPage County residents have osteoporosis. DuPage County does not meet this HP 2010 objective. 44.8 percent are supposed to take medication and 28.5 percent are supposed to follow a diet. 49.5 percent are supposed to take calcium supplements and 15.6 percent are supposed to exercise to strengthen their bones.

The major health consequence of osteoporosis is an increased risk of fractures. Nationally, approximately 1.5 million fractures per year are attributed to osteoporosis. One in three women and one in eight men aged 50 years and older will experience an osteoporotic-related fracture in their lifetime. Nationally health care costs for these fractures are estimated at \$13.8 billion per year in 1996 dollars.

The risk of any fracture increases with the presence of osteoporosis, but hip fractures represent the most serious impact in terms of health care costs and consequences for the individual. In the United States in 1994, there were 281,000 hospital discharges for hip fracture among people aged 45 years and older. Of these, 74,000, or 26 percent, were among men. In all, 1 out of 6 white women and 1 out of 17 white men will experience a hip fracture by the time they reach age 90 years. Although the hip fracture rate among women seems relatively constant, the rate among men seems to be increasing over time.

An average of 24 percent of hip fracture patients aged 50 years and older die in the year following fracture, with higher death rates among men than among women. Also, hip fracture is more likely to lead to functional impairment than are other serious medical conditions, including heart attack, stroke, and cancer. For example, half of all hip fracture patients will be unable to walk without assistance.

Diabetes

Diabetes poses a significant public health challenge for the United States. Some 800,000 new cases are diagnosed each year, or 2,200 per day. The changing demographic patterns in the United States are expected to increase the number of people who are at risk for diabetes and who eventually develop the disease. Diabetes is

a chronic disease that usually manifests itself as one of two major types: type 1, mainly occurring in children and adolescents 18 years and younger, in which the body does not produce insulin and thus insulin administration is required to sustain life; or type 2, occurring usually in adults over 30 years of age, in which the body's tissues become unable to use its own limited amount of insulin effectively. While all persons with diabetes require self-management training, treatment for type 2 diabetes usually consists of a combination of physical activity, proper nutrition, oral tablets, and insulin.

The occurrence of diabetes, especially type 2 diabetes, as well as associated diabetes complications, is on the increase. The number of persons with diabetes has increased steadily over the past decade; nationally, 10.5 million persons have been diagnosed with diabetes, while 5.5 million persons are estimated to have the disease but are undiagnosed. This increase in the number of cases of diabetes has occurred particularly within certain racial and ethnic groups.

Prevalence of Diabetes

Estimates of the total number of people with diabetes and the prevalence of diabetes are estimates calculated from the National Health Interview Survey and the National Health and Nutrition Examination Survey data applied to Census Bureau population estimates for DuPage County. While these numbers have limitations, they are the best current estimates of the burden of diabetes available.

Table 4.21

Prevalence of Diabetes			
Year	DuPage Adult Population	Percent	Number of Adults
2002	674,949	5.0	33,747
2001	665,792	4.8	31,958
2000	662,329	4.7	31,129
1999	651,559	4.6	29,972
1998	645,770	4.8	30,997

The prevalence of adult diabetes by race/ethnicity for the year 2000 is difficult to calculate. However the estimated percent of new adult cases is estimated as follows: White comprise 8.4 percent, Black comprise 11.4 percent, Hispanic comprise 8.2 percent and American Indian / Alaskan Natives comprise 14.9 percent.

Reduce the diabetes death rate.

HP 2010 Objective: 5-5

Target: 45 deaths per 100,000 population.

Baseline: 75 deaths per 100,000 population were related to diabetes in 1997 (age adjusted to the year 2000 standard population).

Data source: Illinois Department of Public Health Death Files, 1999 – 2001, National Diabetes Information Clearinghouse, National Center for Chronic Disease prevention and Health Promotion, Center for Disease Control and Prevention, National Health Interview Survey, and the National Health and Nutrition Examination Surveys.

Table 4.22

Number of Diabetes Deaths in DuPage County		
1999	2000	2001
130	101	108

Over the past decade, diabetes has remained the seventh leading cause of death in the United States, and the eighth leading cause of death in DuPage County. **In DuPage County in 2000, the rate of diabetes deaths per 100,000 was approximately 11, well below the HP2010 target of 45 deaths per 100,000.** However, this number may be misleading as the deaths show in Table 4.23 are deaths solely from diabetes (as the primary cause of death.)

Diabetes is likely to be underreported as a cause of death. Studies have found that only about 35 to 40 percent of decedents with diabetes have diabetes listed anywhere on the death certificate and only about 10 percent to 15 percent have it listed as the underlying cause of death. Risks of associated complications from diabetes, such as cardiovascular disease, coronary heart disease, non-traumatic lower-extremity amputations, and end stage renal disease, are generally the final conditions that result in death.

Hospitalizations

Diabetes is a costly disease. Hospitalizations for diabetes-associated cardiovascular disease account for the largest component of direct diabetes' costs. Table 4.24 shows hospitalization rates per 100,000 population for diabetes' only hospitalizations.

Table 4.23

Diabetes Hospitalization Rates Per 100,000		
Year	DuPage County	Illinois
2001	99.9	174.2
2000	91.8	164.0
1999	72.6	116.2
1998	84.8	155.9
1997	79.6	154.5

Reduce asthma deaths.

HP 2010 Objective: 24-1

Target and baseline:

Objective	Age Group	1998 Baseline	2010 Target
<i>Rate per Million</i>			
24-1a.	Children under age 5 years	2.1	1.0
24-1b.	Children aged 5 to 14 years	3.3	1.0
24-1c.	Adolescents and adults aged 15 to 34 years	5.0	2.0
24-1d.	Adults aged 35 to 64 years	17.8	9.0
24-1e.	Adults aged 65 years and older	86.3	60.0

Data source: Illinois Department of Public Health Death Files, 1999 - 2001.

Table 4.24

Number of Asthma Deaths in DuPage County		
1999	2000	2001
8	7	7

The number of asthma deaths in DuPage County is too small to calculate a reliable rate per million. Age specific data is not available to compare with the HP 2010 Targets listed above.

Hospitalizations

Table 4.25

Number of Hospitalizations for Asthma Children (1 – 14 years)		
Year	DuPage County	Illinois
2001	231	6,314
2000	293	8,136
1999	251	6,657
1998	187	7,642
1997	377	10,866
1996	265	7,925
1995	290	8,782

According to the 2000 Behavioral Risk Factor Survey, approximately 5 percent of DuPage County adults had asthma during the last 12 months. 27.9 percent of these adults are currently not being treated for asthma.

Reduce the rate of new cases of end-stage renal disease (ESRD).

HP 2010 Objective: 4-1

Target: 217 new cases per million population.

Baseline: 289 new cases of end-stage renal disease per million population were reported in 1997.

Data source: Illinois Department of Public Health Death Files, 1999-2001.

Table 4.26

Number of Nephrosis Deaths in DuPage County		
1999	2000	2001
94	113	128