



2012

Louisville Metro Health Status Report



Louisville Metro Health Status Report 2012

Louisville Metro Department of Public Health and Wellness (LMPHW)
Director: LaQuandra Nesbitt, MD, MPH

Produced by:

Office of Policy Planning and Evaluation, LMPHW

Director: Makeda S. Harris, MPM

Epidemiologists: Carl Hall, PhD and Haritha Pallam, MS, MPH

Other Contributors:

Yu-Ting Chen, MPH

Acknowledgements:

Division of Environmental Health and Preparedness, LMPHW

Division of Community Health and Prevention, LMPHW

Kentucky Department for Public Health, Cabinet for Health and
Family Services

Kentucky Department of Education

Kentucky Police Department



LOUISVILLE, KENTUCKY

LOUISVILLE METRO PUBLIC HEALTH & WELLNESS

GREG FISHER
Mayor

LAQUANDRA NESBITT, MD, MPH
Director

To the Readers of this Report:

The field of public health is ever changing. We now know more about the root causes of illness, disease and disability than we did twenty years ago. In fact, we now understand that the social determinants of health such as education, income, race/ethnicity, and health behaviors like smoking, lack of physical activity, and poor nutrition; have a greater impact on our health than the care we receive in a hospital or a doctor's office. This knowledge helps the Louisville Metro Department of Public Health and Wellness (LMPHW) develop and implement policies, programs, and practices that lead to safer and healthier communities where we live, learn, work, play, and worship.

The 2012 Louisville Metro Health Status Report is designed to build community capacity to identify and address risks to health and well-being. It is a way for LMPHW to share information about the overall health and well-being of Louisville Metro with residents, healthcare providers, community leaders, and other key stakeholders. The report highlights the major health conditions that Louisville Metro residents face as well as key health behaviors that can be modified to increase our ability to become a healthier community. The report also identifies some of the significant health disparities that impact quality of life and prevent our most vulnerable residents from living healthy and productive lives.

It is our hope that this report will serve as a call to action for all readers to join with LMPHW in addressing our key health issues and make strides toward our goal of becoming the healthiest city in America!

For additional information or to share ideas on how this bi-annual report can be improved, please contact our Office of Policy Planning and Evaluation at 502-574-8270.

LaQuandra S. Nesbitt, MD, MPH
Director

LOUISVILLE METRO HEALTH STATUS REPORT 2012

TABLE OF CONTENTS

EXECUTIVE SUMMARY	5
METHODOLOGY	10
HEALTHY PEOPLE 2010	12
DEMOGRAPHIC AND SOCIO-ECONOMIC PROFILE	13
MATERNAL AND CHILD HEALTH	24
HOSPITAL DATA	38
CAUSES OF DEATH	41
CHRONIC DISEASES	45
BEHAVIORAL RISK FACTORS	61
MENTAL HEALTH	64
INJURY AND VIOLENCE	66
COMMUNICABLE DISEASES	78
GLOSSARY OF TERMS	95
ENDNOTES	96
APPENDIX	100

EXECUTIVE SUMMARY

One of the core functions of a public health department is to assess the health needs of the community. This report is part of our assessment of the Louisville Metro community and includes indicators in the following areas:

- Demographic and Socio-Economic Profile
- Maternal and Child Health
- Hospital Data
- Causes of Death
- Chronic Diseases
- Behavioral Risk Factors
- Mental Health
- Injury and violence
- Communicable Diseases

Demographic and Socio-Economic Profile

- As of 2010, Louisville Metro had a total population of 741,096. Over the past decade, the white population remained stagnant while other racial and ethnic groups steadily increased. Following the national trends, growth among the Hispanic population increased by 163.1%. Among the total population of Louisville metro, the black population increased from 17.3% in 2000 to 21% in 2010.
- In Louisville Metro population between year 2000 and 2010 there was a 15% decrease in the 35 to 44 year old age group and over 50% increase in the 55 to 64 year old age group.
- According to U.S. Census estimates, the median household income in Louisville Metro was \$44,437. This was lower than the national median income for the same year (\$50,303).
- Approximately 8.3% of Louisville Metro residents 25 years and older did not earn a high school diploma in 2009.
- The annual unemployment rate in Louisville Metro was 10.6% by the end of 2010.
- In 2009, 89% of Louisville Metro residents reported having some type of health care coverage. This was higher than the nation (85%) and the state of Kentucky (86%).

Maternal and Child Health

- The number of live births in Louisville Metro was 9,815 in 2009. This is a 7.5% decrease from the previous year.
- The infant mortality rate for Louisville Metro in 2009 (6.7 deaths per 1,000 live births) was higher than the Healthy People 2010 goal and the reported rates for Kentucky.
- In 2009, 9.1% of the births were classified as low birth weight and of these, 21% were very low birth weight.
- Blacks (38%) had the highest number of mothers that did not receive prenatal care in the first trimester, followed by Hispanics (31.4%).

- Black females 15 to 19 years of age had a teen birth rate approximately three times higher than that of white females (90.7 per 1,000 births compared to 33.6).
- Almost 24% of women who gave birth to a low birth weight infant reported smoking during pregnancy.

Childhood Lead Exposure

- Over 20,000 Louisville Metro children were screened for elevated blood lead levels by the Childhood Lead Poisoning Prevention Program (CLPPP) in 2009 and 2010.
- The percentage of children exhibiting elevated blood lead levels equal or greater than 10µg/dL steadily declined between 2000 and 2010.
- While mean blood lead levels have steadily declined for both black and white children over the past several years, the levels for black children remained higher.

Hospital Data

- In 2009, the top five primary health conditions responsible for inpatient hospitalizations in Louisville Metro were heart diseases, mental or emotional diagnosis, COPD, cancer and stroke.
- For youth below the age of 20 years old, mental or emotional diagnosis, unintentional injuries, COPD and asthma were the leading primary health conditions for inpatient hospitalizations.

Causes of Death

- The age-adjusted death rate from all causes in Louisville Metro was 1,137 per 100,000 population in 2009.
- For Louisville Metro blacks, the age-adjusted death rate from all causes was 17% higher when compared to Louisville Metro whites.
- The age-adjusted death rate for males was 36.5% higher than the rate for females.
- The top five leading causes of death for Louisville Metro as of 2009 remained the same as the previous year:
 1. Cancer (or Malignant Neoplasms)
 2. Heart Disease
 3. Chronic Lower Respiratory Disease
 4. Stroke (or Cerebrovascular Disease)
 5. Unintentional Injuries
- Louisville Metro black residents had a higher death rate from heart disease and cancer while white residents had a higher death rate from chronic lower respiratory diseases (including COPD) and unintentional injuries.

Chronic Diseases

Heart Disease

- The age-adjusted rate of death for heart disease in Louisville Metro during 2009 was 237.4 per 100,000 population.
- The age-adjusted death rate of Louisville Metro blacks for heart disease was 36% higher than the rate for whites.

Cancers (Malignant Neoplasms)

- The age-adjusted cancer death rate in Louisville Metro was 256.2 deaths per 100,000 population in 2009.
- The cancer death rate for blacks (327 per 100,000 population) was 31% higher than the rate for whites (250 per 100,000 population).

Chronic Obstructive Pulmonary Disease (COPD)

- The age-adjusted death rate for COPD in Louisville Metro during 2009 was 63 per 100,000 population.
- The age-adjusted death rate from COPD for whites was 79% higher than the death rate for blacks (68 compared to 38 per 100,000).

Stroke or Cerebrovascular Disease

- The age-adjusted death rate for strokes in Louisville Metro during 2009 was 67 per 100,000 population.
- The age-adjusted death rate from stroke for blacks was higher than the death rate for whites (73 compared to 67 per 100,000).

Diabetes

- The age-adjusted diabetes death rate was 35 per 100,000 population for Louisville Metro in 2009.
- For Louisville Metro blacks, the age-adjusted death rate from diabetes was more than double the rate for whites (76 compared to 28 per 100,000).

Asthma

- In 2009, 15% of adults surveyed in Louisville Metro reported they had asthma. This percentage was slightly higher than the state (14.9%) and national percentage (13.5%).

Behavioral Risk Factors

- According to the 2009 Behavioral Risk Factor Surveillance System (BRFSS) survey conducted by Kentucky Cabinet for Health and Family Services, the percentage of Louisville Metro adults either obese or overweight based on reported height and weight has continued to increase from previous years. As of 2009, approximately 65% were either obese or overweight.
- Seventy-four percent of Louisville Metro adults reported participating in any physical activities other than their regular job during the past month. Examples of physical activities include running, calisthenics, golf, gardening, or walking for exercise. This is higher than the percentage for Kentucky (69.5%)
- In 2009, Louisville Metro adults reported eating five or more servings of fruits and vegetables each day (24%) which was higher than Kentucky (21.1%) and the United States (23.4%).
- The percentage of Louisville Metro adults that reported they smoke tobacco decreased from 25.5 in 2004 to 23.9% in 2009.

Mental Health

- Fifteen percent of BRFSS respondents reported fourteen (14) or more days during the past month that were considered as “mentally unhealthy”.
- In 2009, higher percentage of females (9.4%) reported having “mentally unhealthy” days compared to men (5.2%).

Injury and Violence

Unintentional Injury

- In 2009, the age-adjusted death rate from unintentional injury was 56 per 100,000 population.
- The death rate from unintentional injury for males was twice the rate for females (80 compared to 37).
- The largest category of unintentional injury deaths was motor vehicle crashes (32%), followed by accidental poisonings (29.8%) and falls (21.6%).
- The Louisville Metro death rate from traffic-related motor vehicle crashes was 16 deaths per 100,000 population.

Bicycle and Pedestrian Collisions

- Between 2001 and 2010, the number of pedestrian collisions in Louisville Metro ranged from 382 to 431 and the number of pedestrian fatalities ranged from 10 to 19. During the same period, the number of bicycle collisions varied from 163 to 166 and the number of fatalities ranged from 1 to 3.
- One hundred percent of bicycle and 68.4% pedestrian collisions occurred during non-rush hours in 2010.

Homicide

- In 2009, the homicide death rate in Louisville Metro was 11 deaths per 100,000 population.
- The homicide death rate for blacks was approximately seven times that of whites.
- The death rate for males was four times that for females.

Suicide

- In 2009, the Louisville Metro death rate from suicide was 14 deaths per 100,000 population.
- Males in Louisville Metro had a suicide rate nearly three times greater than females (22 compared to 8).
- The suicide rate among Louisville Metro whites (16) was more than double that of blacks (7) and higher than the state and national rates.

Communicable Diseases

- There is no clear trend in the incidence of newly diagnosed HIV cases reported to the state from 2005 through 2009. Among those individuals with newly diagnosed HIV for whom a mode of exposure has been determined and reported, the predominant mode of exposure was men who have sex with men (37.4%) followed by injection drug use (6.1%). Blacks had an HIV incidence rate almost 4 times higher than that seen in Whites.
- Although the incidence of primary and secondary syphilis cases in Louisville Metro has varied over the past five years, the rate increased 50% from 3.8 to 5.7 per 100,000 population in 2009 compared to 2008. Males have much higher rates than females.
- Black rates for gonorrhea, Chlamydia, tuberculosis, and Pertussis are higher than the rates for Whites.

METHODOLOGY

Terminology

For purposes of this report, specific terms of reference were selected. For race and ethnic categories, the terms “white,” “black,” and “Hispanic” are used. White and black refer to race categories. Other race categories, such as Asian/Pacific Islander and American Indian, are included in the analysis if appropriate. However, Hispanic refers to an ethnic category and not one race. If the analysis combines race and ethnicity, the designations become, for example, “White Hispanic” or “Non-White, Hispanic.”

In 2003, the city of old Louisville merged with surrounding municipalities in Jefferson County to form a consolidated city-county government named Louisville Metro-Jefferson County Metro Government, commonly referred to as Louisville Metro. This report uses the term “Louisville Metro” to represent the entire Jefferson County region. This includes existing independent municipalities within the Louisville Metro area.

Data Analysis

Data sources utilized in this report includes data from vital statistics obtained from Kentucky Department for Public Health, U.S. Census, U.S. Centers for Disease Control and Prevention (CDC), as well as data collected and maintained at Louisville Metro Department of Public Health and Wellness (LMPHW). Comparisons to state and national data, Healthy People 2010, trends over time, and geographic distributions are included on selected indicators.

The report uses the most current data available at the time of publication. The 2009 data is the latest final birth and death statistics released by the Kentucky Cabinet for Health and Family Services Department for Public Health at the time this report was compiled. Data was also used from other sources when available.

Most sections provide bar charts showing the Louisville Metro rate compared to the state and national rates, in addition to Healthy People 2010 objectives from U.S. Department of Health and Human Services where one exists.

The rates for communicable disease incidence and for chronic disease-related hospitalizations are generally presented as a *crude (unadjusted) rate* per 100,000 population. For example, to compute a crude rate per 100,000 population for the year 2004 for gonorrhea, the steps are:

- Divide the number of new cases of gonorrhea reported during the year 2004 by the population of the area
- Multiply that result by 100,000

The above methodology also applies for inpatient hospitalizations rates. Rates were calculated using 2009 census population estimates.

The death (mortality) rates are computed as *age-adjusted rates*. The age-adjusted process compensates for the differences in the age composition of the population.

- First, a crude rate is calculated for each age category.
- Then the age-specific rate is multiplied by the proportion of the standard population that particular age category represents.
- These weighted age-specific rates are added together to make an age-adjusted rate for that population.

In addition to crude rates, age-specific rates and rates based on the number of live births are used in maternal and child health analysis.

Mortality trends presented in this report reflect reported cause of death based on the ICD-10 classification. Due to a change in coding cause of death in 1998, trends for pre-1999 data are not directly comparable to those for 1999 and later data.

Behavioral Risk Factor Surveillance System (BRFSS)

This year's report includes the Behavioral Risk Factor Surveillance System (BRFSS) phone survey conducted by the Kentucky Department for Public Health to gather information about these risk factors for Louisville Metro residents. The standardized questions were approved by the U.S. Centers for Disease Control and Prevention (CDC) and are used throughout the United States. Louisville Metro residents were selected for interviews by random dialing of phone numbers and remain anonymous.

Hospital Data

This report presents administrative claims data for inpatient hospital discharges from Louisville Metro hospitals with dates of service between January 1, 2009 and December 31, 2009. These data sets are maintained by the Kentucky Cabinet of Health and Family Services and have been analyzed by the Louisville Metro Department of Public Health and Wellness. Estimates of diagnoses and primary conditions are presented according to the International Classification of Diseases (ICD), ninth revision, Clinical Modification Codes (see Appendix).

Inpatient data represents a collection on records each of which describes a *single* inpatient stay in a Louisville Metro hospital. Therefore, because persons can have multiple discharges within the same year, they can be sampled more than once. As a result, the data cannot be used to directly measure the prevalence of a condition in the general population. Admissions to Louisville Metro hospitals do not include out-of-state residents. Federal, military, and Department of Veterans Affairs hospitals, state-owned mental hospitals, hospital units of institutions (such as prison hospitals), as well as hospitals with fewer than six beds staffed for patient use, are all excluded.

HEALTHY PEOPLE 2010

When applicable throughout this report, local data is compared to a set of health status indicators from the Healthy People (HP) 2010 national health objectives. Healthy People indicators are established by the U.S. Centers for Disease Control and Prevention (CDC) every ten years. Below is a table that compares major health indicators to HP 2010 objectives.

Table 1. Trends for Louisville Metro Key Health Indicators

Health Indicator	HP 2010 Objective	Louisville Metro	Compared to HP 2010	Compared to Previous Year
Injury				
Motor Vehicle Crash Death Rate	9.2	16	↑	↑
Unintentional Injury Death Rate	17	56	↑	↑
Suicide Death Rate	4.8	14	↑	↑
Homicide	3	11	↑	↑
Chronic Diseases				
All Cancers Death Rate	160	256	↑	↑
Lung Cancer Death Rate	44.9	79	↑	↑
Female Breast Cancer Death Rate	22.3	34	↑	↑
Prostate Cancer	28.8	31	↑	↑
Disease of Heart	166	237	↑	↓
Stroke Death Rate	48	67	↑	↑
Diabetes Death Rate	45	35	↓	↑
Maternal and Child Health				
Infant Death Rate	4.5	6.7	↑	↑
Birth Rate to Teens Aged 15-19	NRG	50.6	-	↔
Percentage Low Birth weight Infants	5	9.1	↑	↓
Communicable Disease				
AIDS Incidence Rate	1	18.2	↑	↑
Tuberculosis Incidence Rate	1	3.5	↑	↔
Primary or Secondary Syphilis	0.2	5.7	↑	↑
Gonorrhea	19	259	↑	↓
Chlamydia	NRG	561	-	↑
Pertussis	NRG	3.9	-	↑

NRG = No Related Goal

↑ = Increase

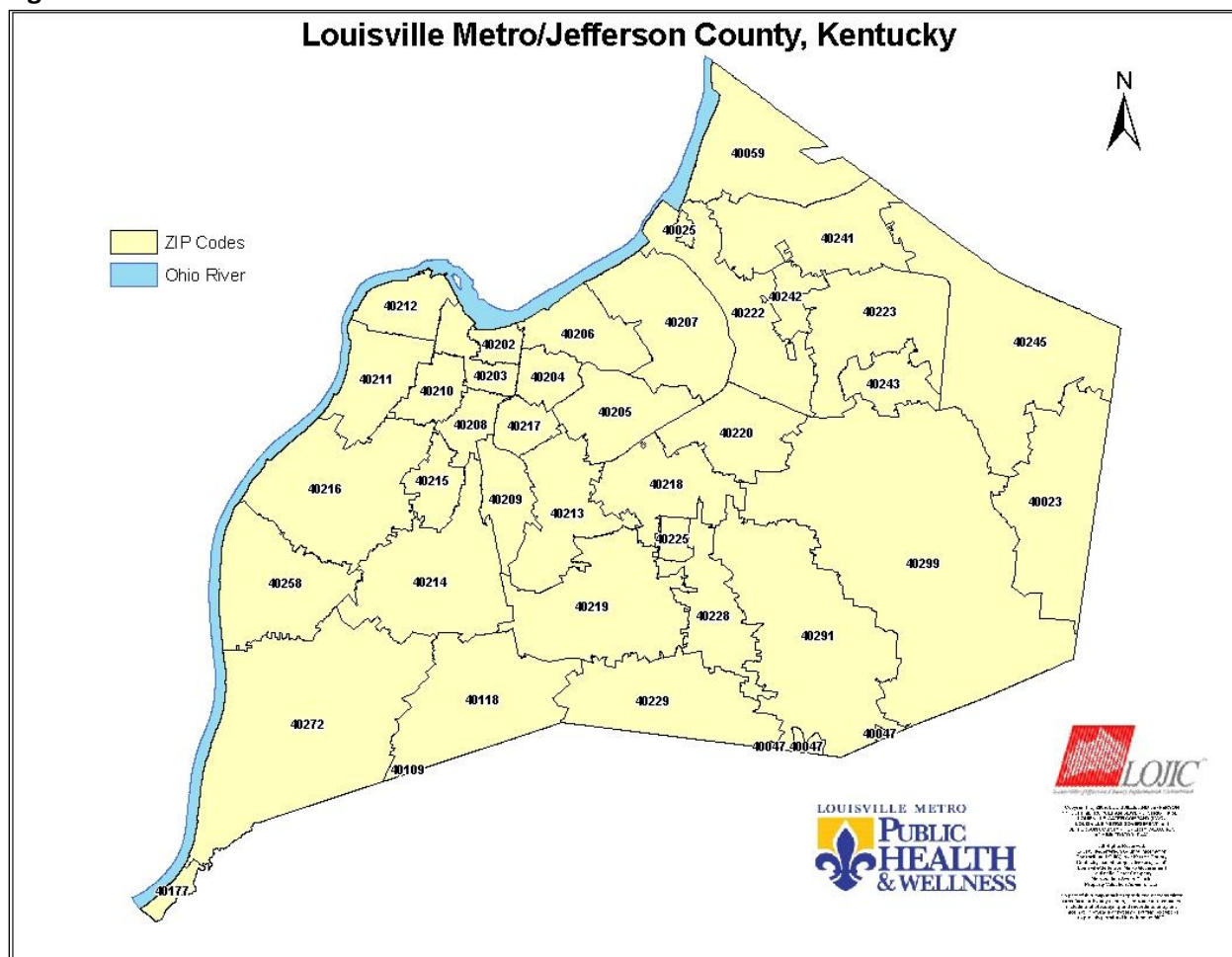
↓ = Decrease

↔ = Inconclusive; No clear trend

DEMOGRAPHIC AND SOCIO-ECONOMIC PROFILE

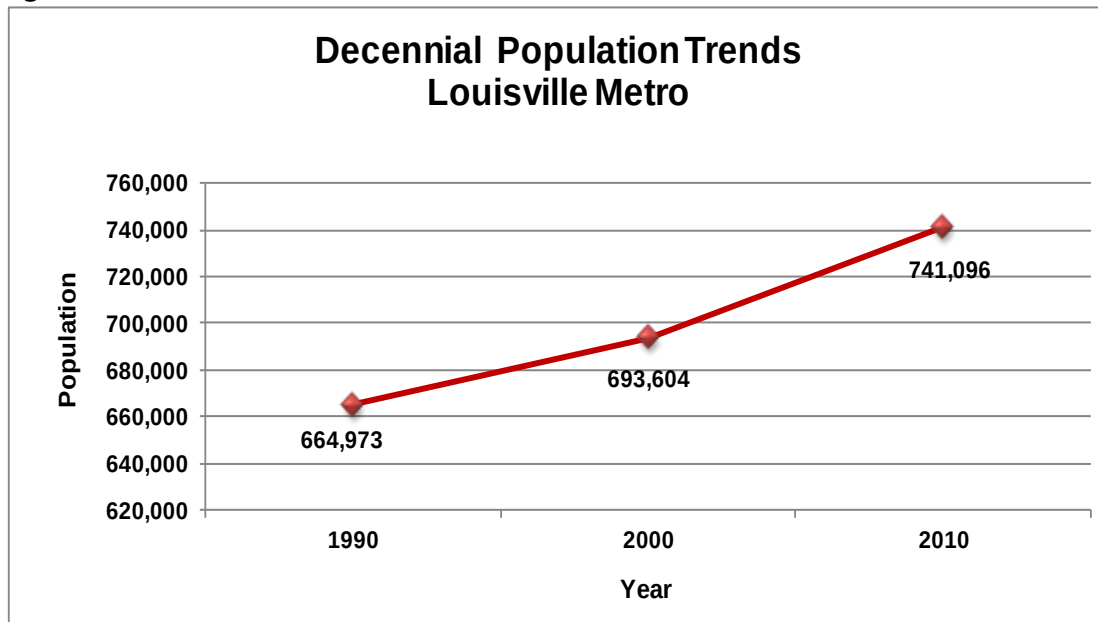
In 2003, the city of Louisville and Jefferson County (along with its 83 sub-urban incorporated cities) merged to create a consolidated local government and became Louisville Metro. As a result of this merger, population increased from 256,231 to 693,784 according to the 2000 U.S. Census.¹

Figure 1.



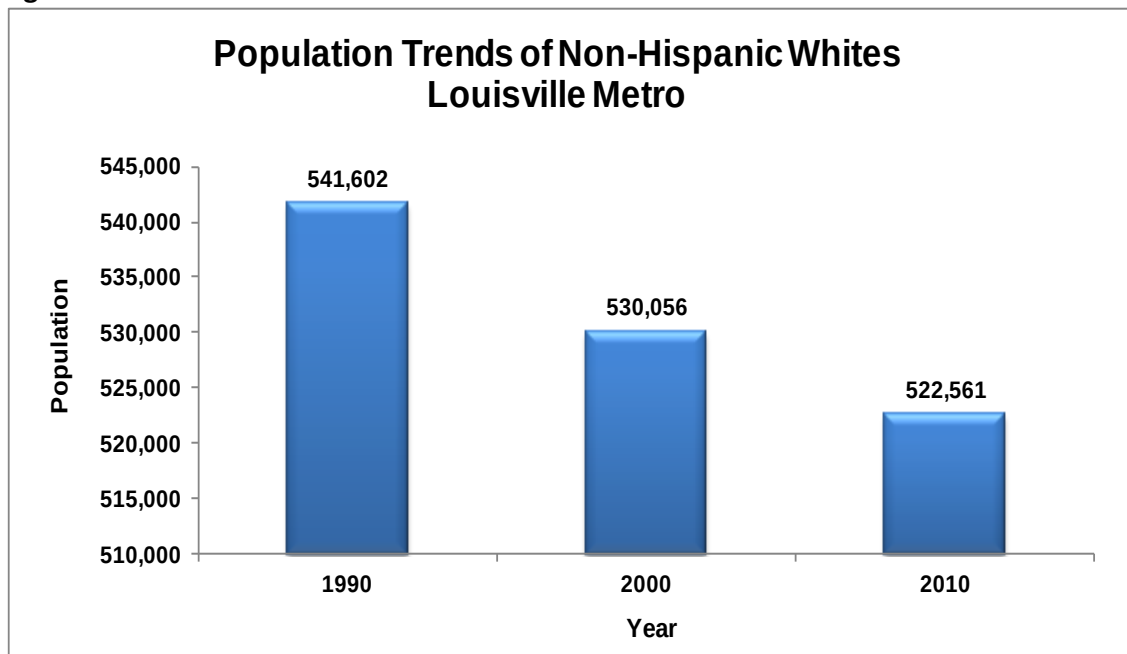
Overall, Louisville has experienced a slow but steady population growth over the past ten years. By 2010, population for Louisville Metro increased to 741,096. While the white population has decreased by 1.4%, other racial and ethnic groups showed significant increase over the same time period. Between 2000 and 2010, the black population increased by 17% and the Hispanic population has more than doubled.

Figure 2.



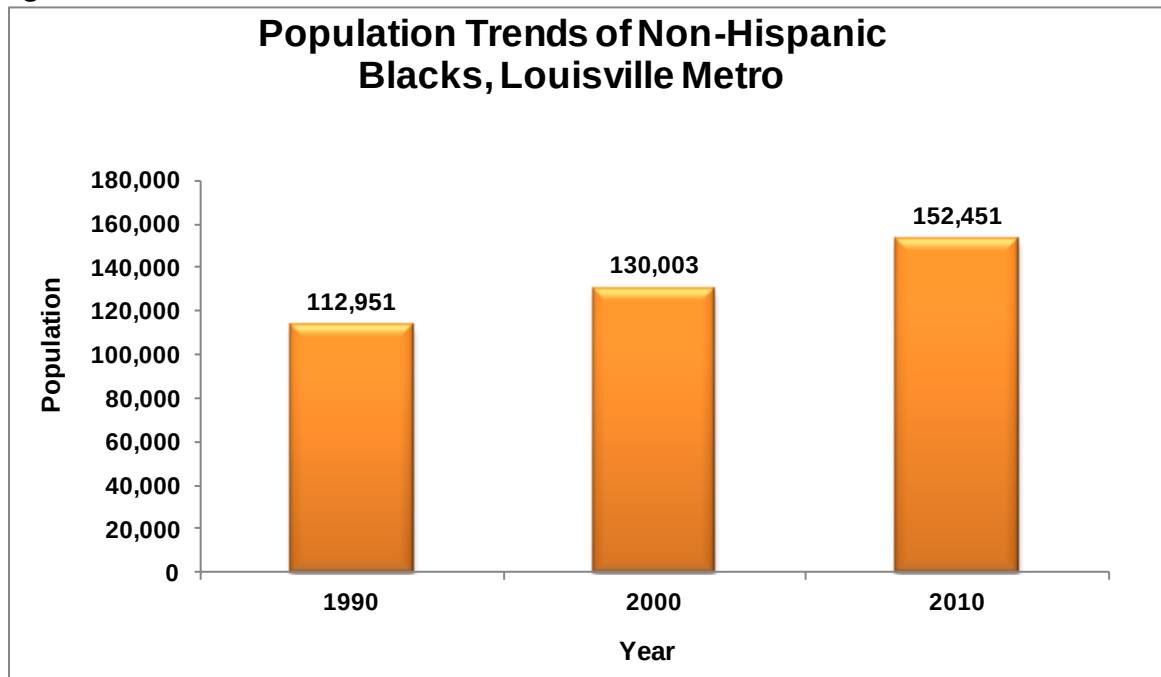
Source: U.S. Census Bureau

Figure 3.



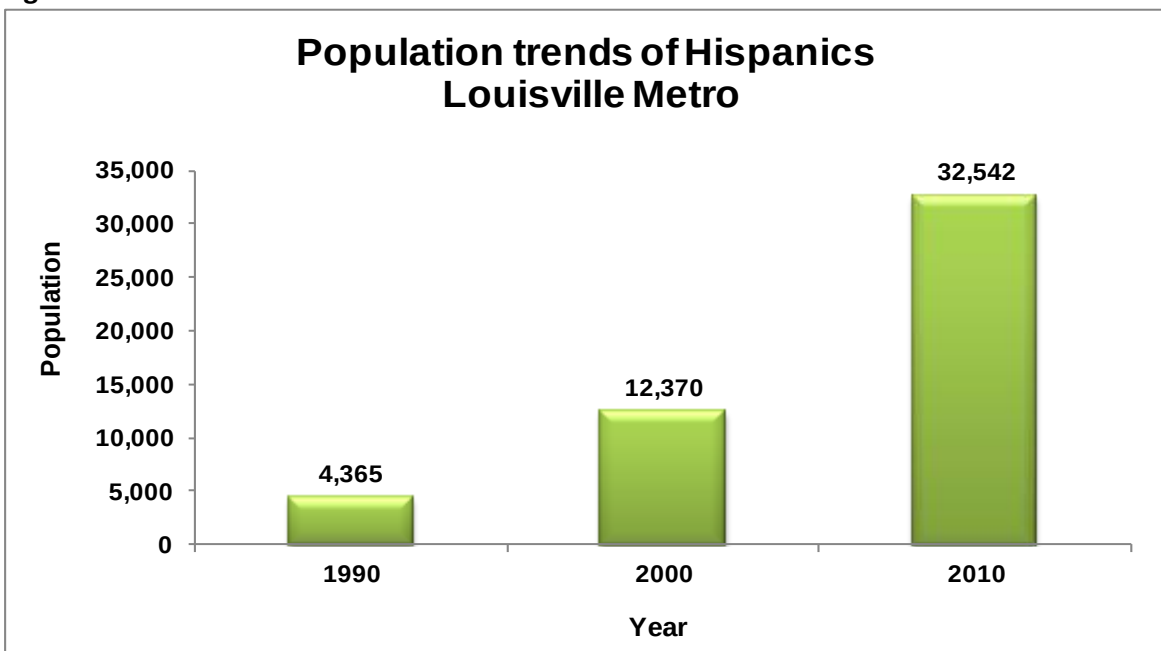
Source: U.S. Census Bureau

Figure 4.



Source: U.S. Census Bureau

Figure 5.

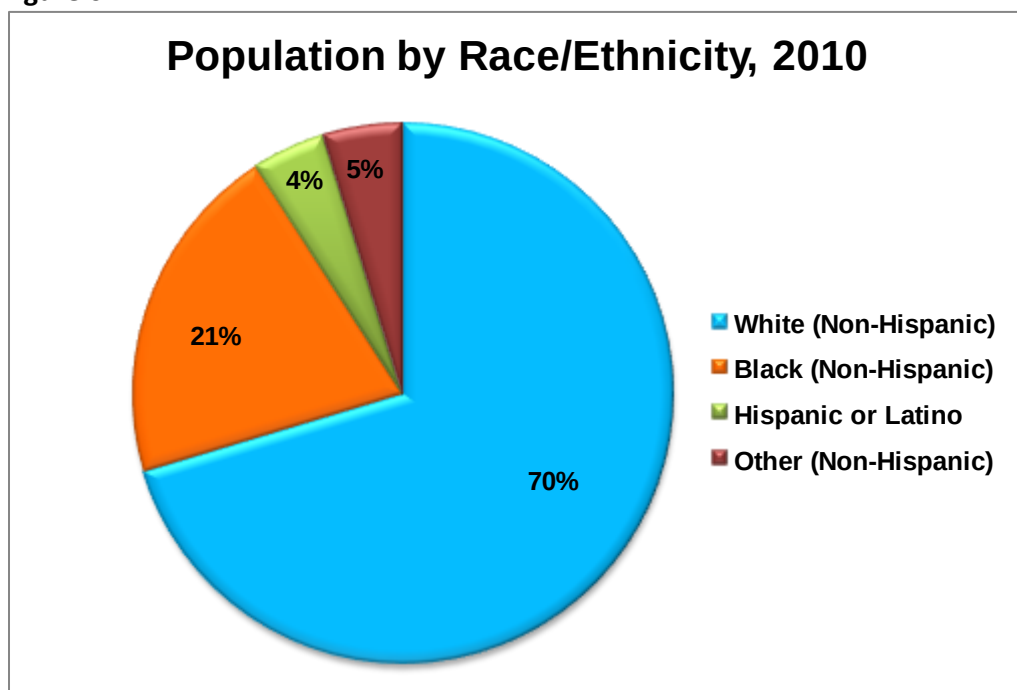


Source: U.S. Census Bureau

RACE AND ETHNICITY

Following national trends, the proportion of non-white residents in Louisville Metro continues to increase since 1990. According to the 2010 U.S. Census, Louisville Metro has a non-white population of 30%, with the largest portion being non-Hispanic black (21%). While 4% of Louisville Metro residents are of Hispanic or Latino origin, the remainder of the immigrant population is largely made up of groups from Africa, Asia and the Pacific Islands (5%).

Figure 6.



Source: U.S. Census Bureau

LANGUAGES SPOKEN

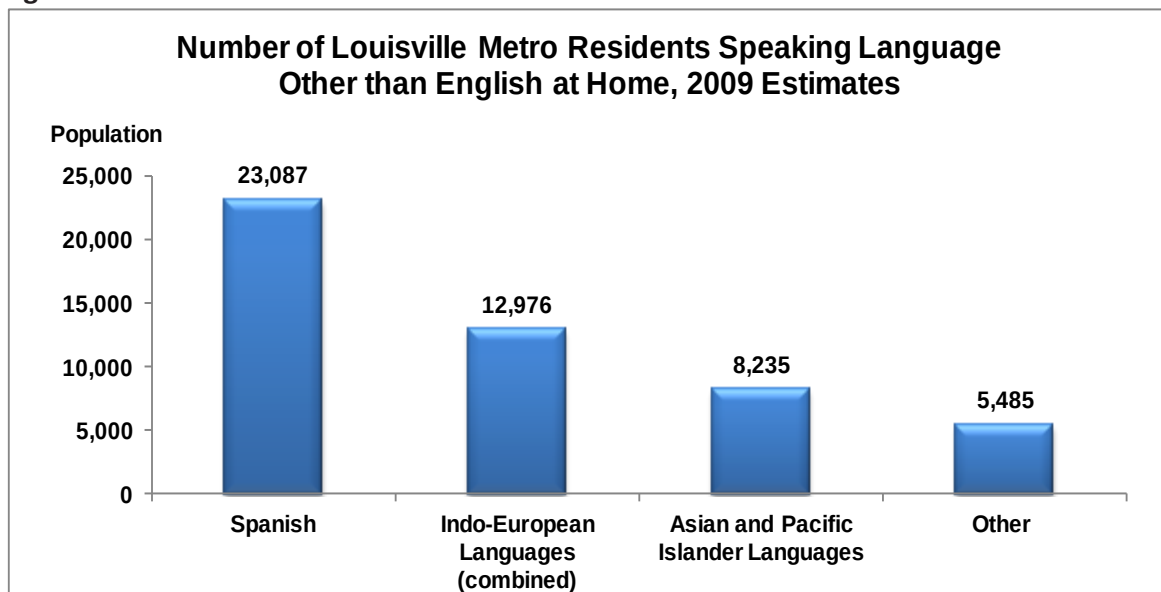
The percent of residents of Louisville Metro who do not speak English well or at all was estimated to be 1.6% in 2009, an increase from 1.2% reported in 2000. However, 7.4% of all residents speak a language other than English at home with the most common language being Spanish. In addition to Spanish, the next top five languages spoken by the Louisville Metro immigrant community included French (or Creole), German, Slavic languages such as Russian or Polish, Korean and Vietnamese. Indo-European languages can include languages of India including Hindi, as well as Baltic, Greek and Iranian languages.² The number of Louisville Metro residents that speak Indo-European languages combined is 12,976 and Asian/Pacific Islander languages combined is 8,235.

Table 2.

Number of Louisville Metro Residents Speaking Languages Other Than English 2009 Estimates		
	Estimate	Margin of Error
Total:	670,594	+/-181
Speak only English	620,811	+/-4,082
Spanish or Spanish Creole	23,087	+/-1,917
Slavic languages	4,184	+/-1,707
Other Indo-European languages	3,888	+/-1,576
French (including Patois, Creole, Cajun)	2,710	+/-1,620
German or other West Germanic languages	2,194	+/-696
Vietnamese	2,123	+/-1,414
Korean	1,899	+/-1,204
Chinese	1,354	+/-821
Tagalog	620	+/-697
Other Asian and Pacific Island languages	2,239	+/-944
Other and unspecified languages	5,485	+/-2,013

Source: U.S. Census Bureau, 2009 American Community Survey

Figure 7.

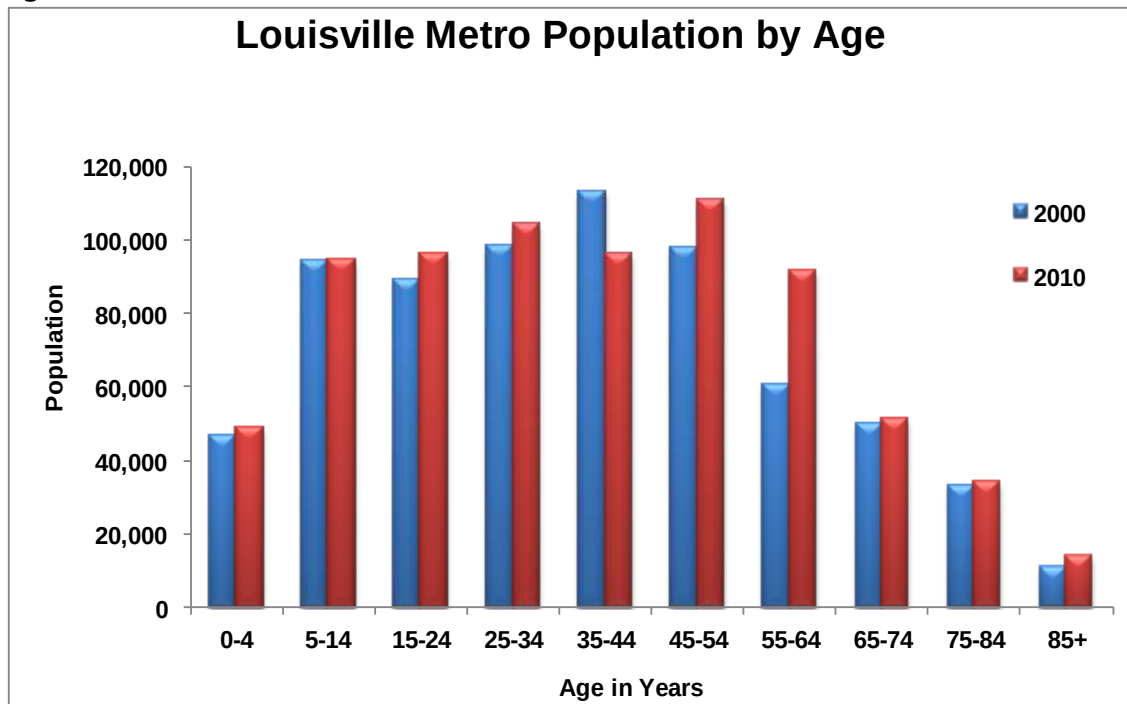


Source: U.S. Census Bureau, 2009 American Community Survey

AGE

In 2010, the largest group of residents in Louisville Metro by age is the 45 to 54 age group followed by the 25 to 34 age group. Since 2000, the age group of 35 to 44 decreased by 15% (95,930), while those in the age group 55 to 64 increased by 51% (91,401). The median age for Louisville Metro population is 37.9 years.

Figure 8.

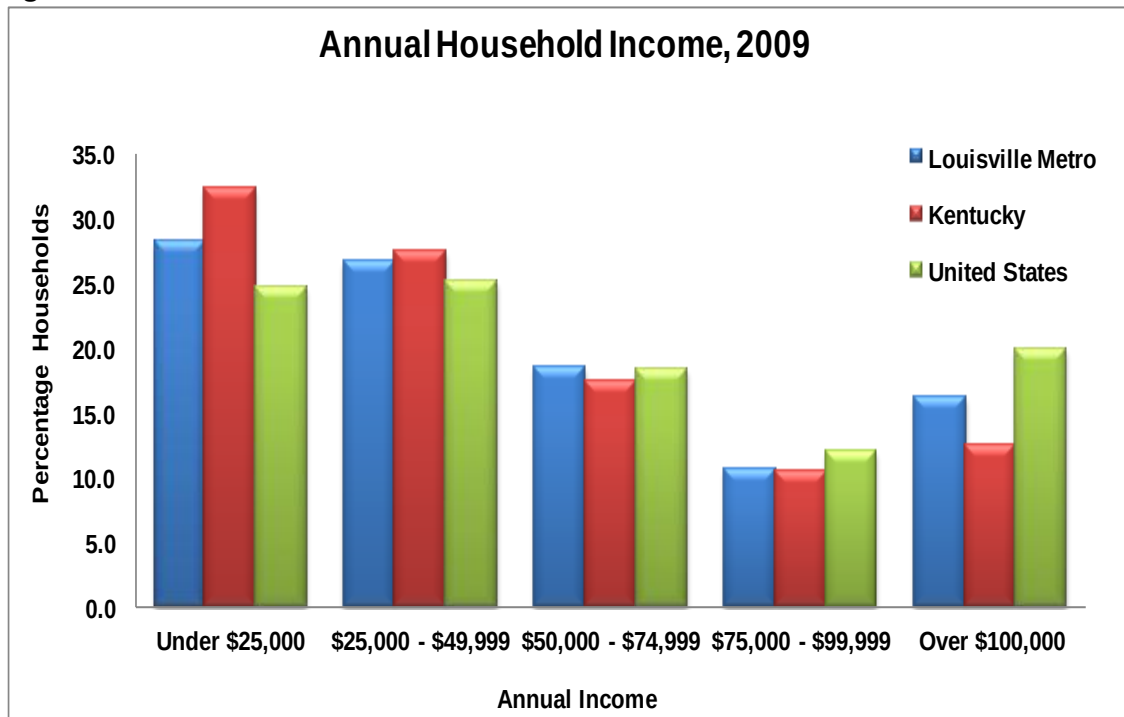


Source: U.S. Census Bureau

ECONOMIC STATUS

The median household income in Louisville Metro in 2009 was \$44,437 which is 11% lower than the median income for the nation of \$50,221. Approximately a third of the Louisville Metro households have annual incomes under \$25,000. According to 2009 U.S. Census estimates, Louisville Metro has higher percentages of household incomes under \$50,000 compared to the nation.

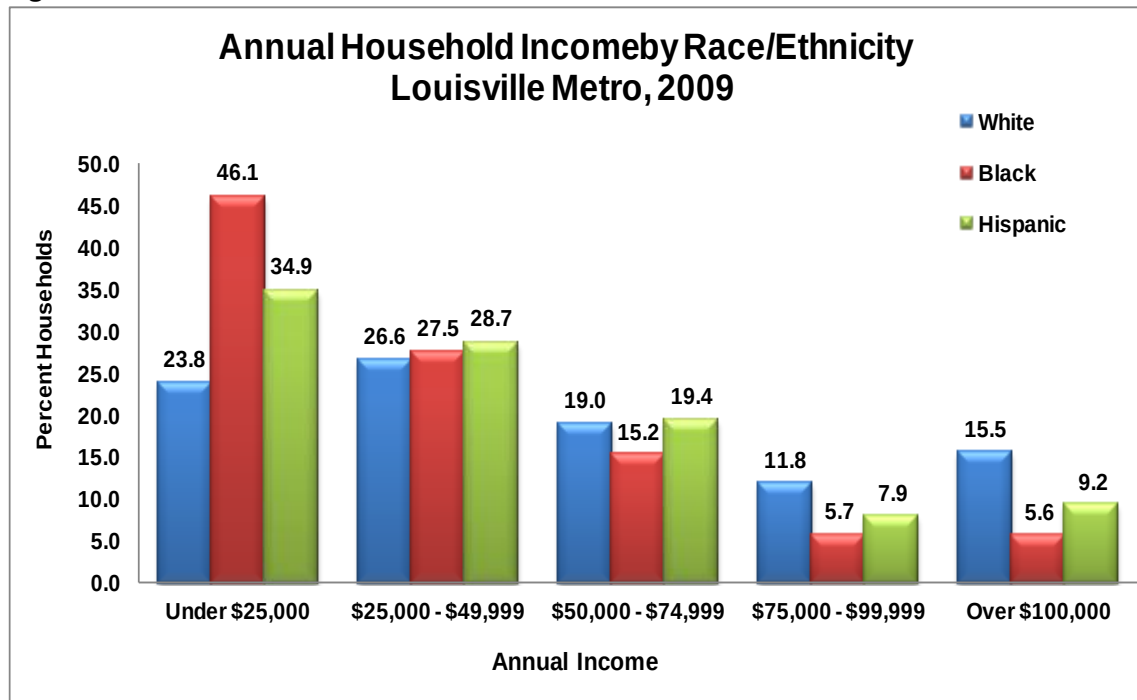
Figure 9.



Source: U.S. Census Bureau

Federal poverty thresholds are defined by the U.S. Department of Health and Human Services and vary by size and composition of the household. In 2009, a family of four was considered living below poverty level if their household income was less than \$22,050.³ According to the 2009 U.S. Census, approximately 4.8% of Louisville Metro families with children ages 5 to 17 were living below poverty, compared to 10.7% for Kentucky and 10.6% for the nation. A higher percentage of black and Hispanic households have incomes below \$25,000 than white households in Louisville Metro.

Figure 10.

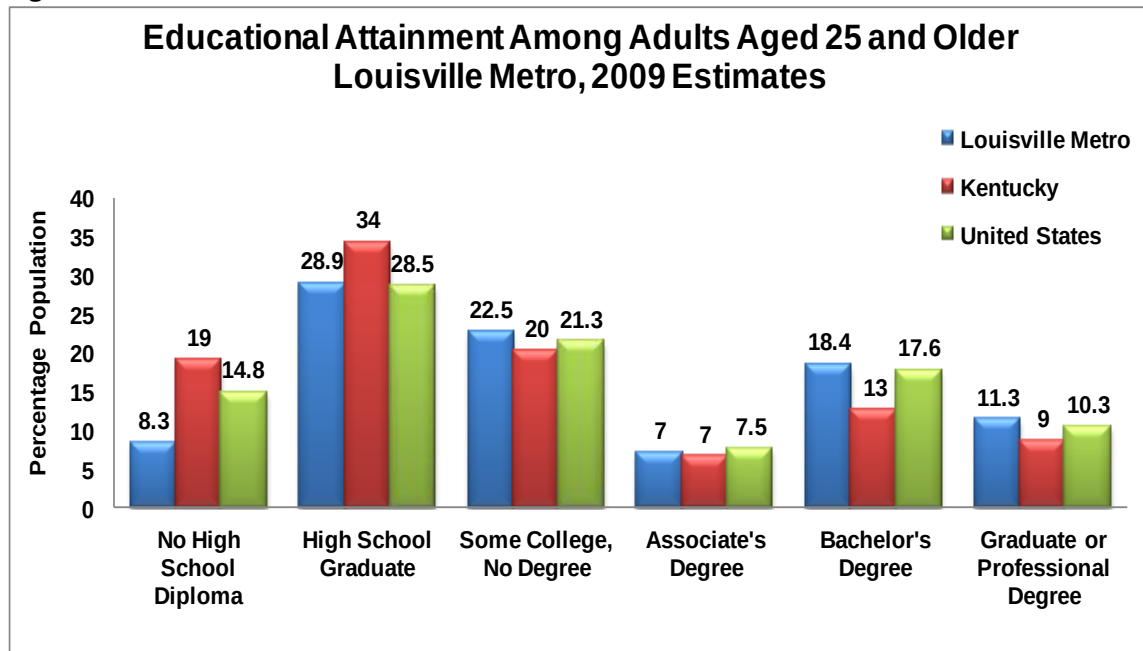


Source: U.S. Census Bureau

EDUCATION

Educational attainment of Louisville Metro residents has closer resemblance that of the nation than the state. According to 2009 estimates, 28.9% of Louisville Metro residents have at least a high school degree compared to U.S. with 28.5%. Approximately 8.3% of Louisville Metro residents 25 years and older did not earn a high school diploma, compared to 19% of the state. Louisville Metro had higher percentages of residents with some college education or degrees compared to the state and the nation. However, there are more than twice as many whites with Bachelor degrees compared to black and Hispanic.

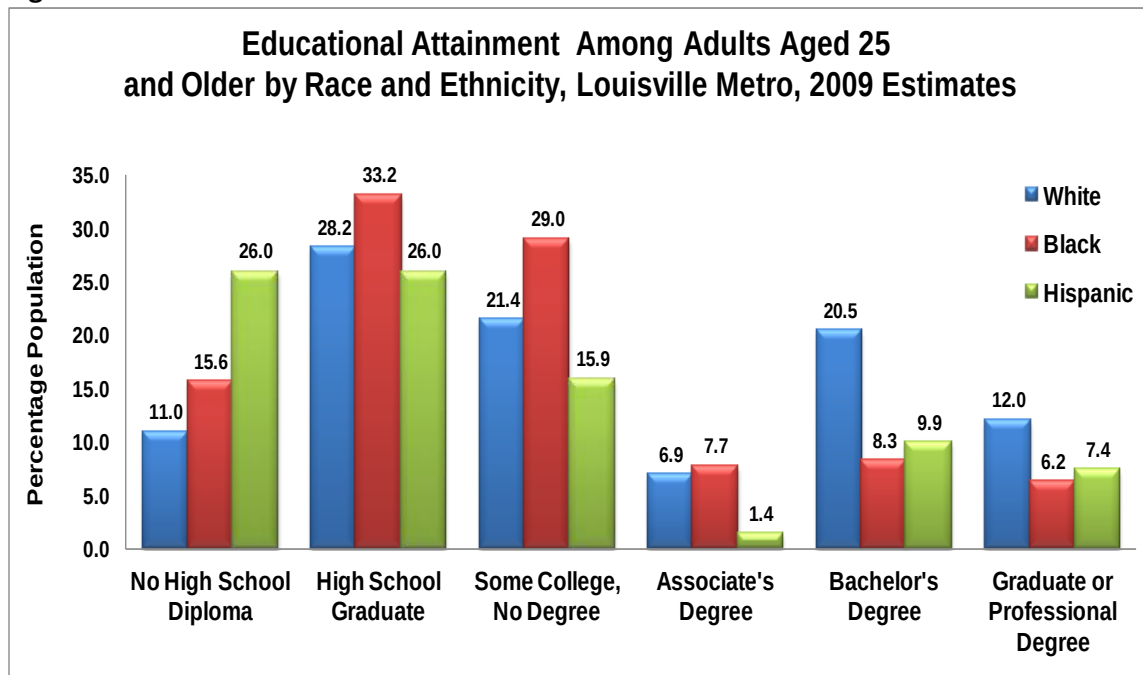
Figure 11.



Source:

U.S Census Bureau

Figure 12.

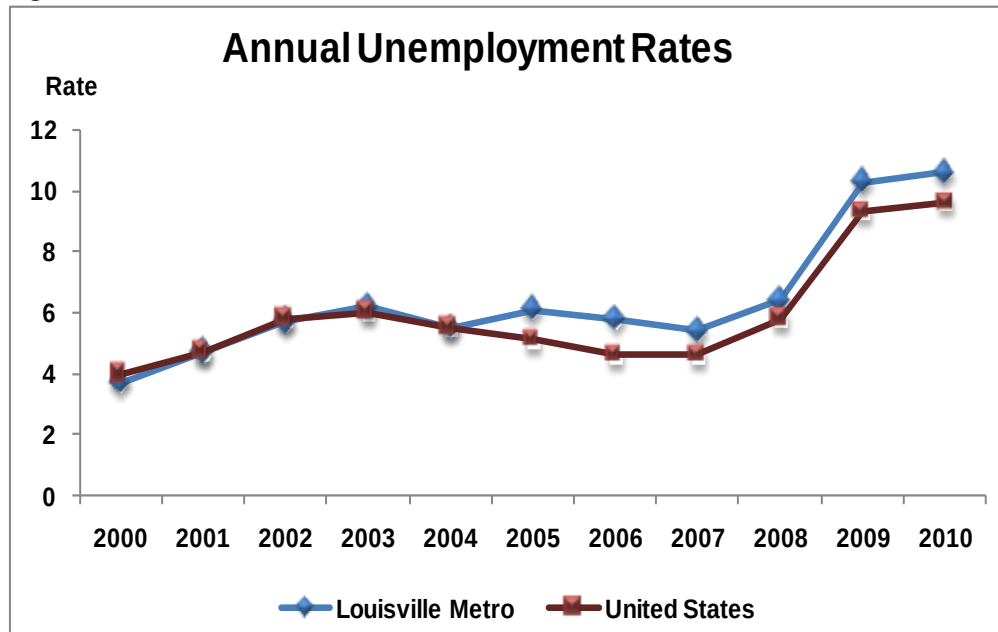


Source: U.S Census Bureau

UNEMPLOYMENT

While the nation's unemployment rate has nearly doubled over the past ten years, so has that of the Louisville Metro area; however, the unemployment rate for Louisville Metro has remained slightly higher compared to the U.S. since 2004. In 2000, the annual unemployment rate in Louisville Metro was 3.6. As of 2010, the unemployment rate for Louisville Metro was 10.6, compared to 9.6 for the nation.

Figure 13.

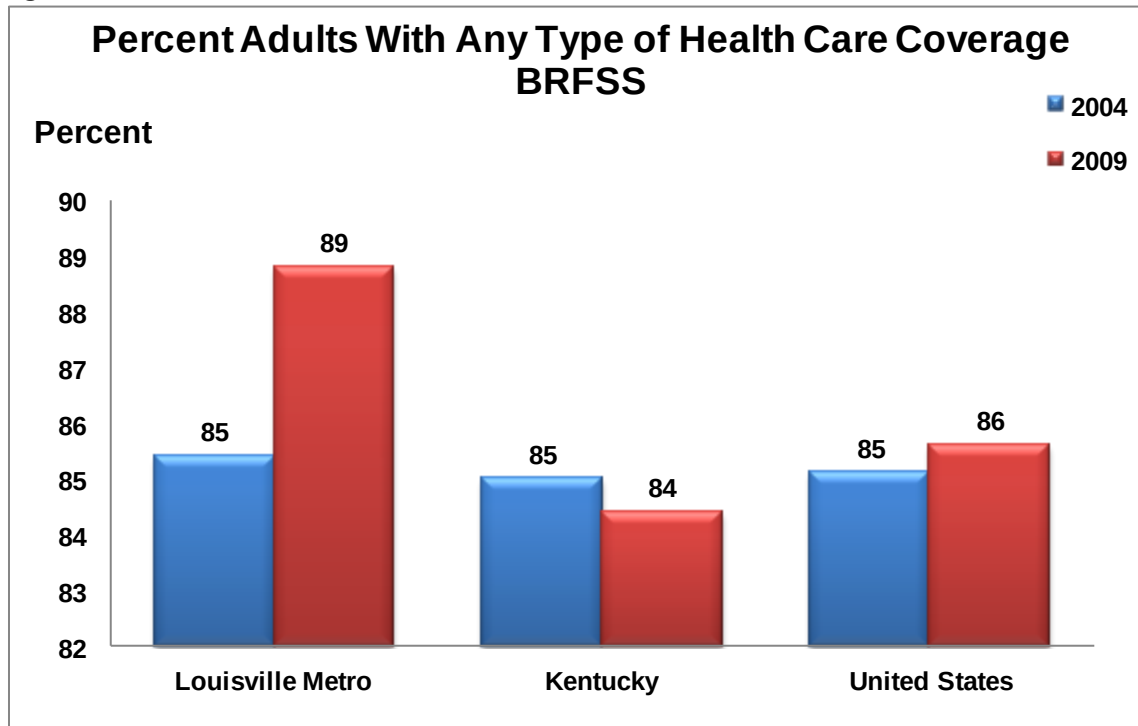


Source: Kentucky Department for Workforce Investment

HEALTH CARE COVERAGE

According to the 2009 Behavioral Risk Surveillance System (BRFSS) survey, the percentage of adults having health care coverage in Louisville Metro was higher than the state and nation. The percentage of adults with health care coverage rose from 85% in 2004 to 89% in 2009.

Figure 14.



Sources: Kentucky Department for Public Health; U.S. Centers for Disease Control and Prevention

MATERNAL AND CHILD HEALTH

BIRTH RATE

There were 9,815 live births in Louisville Metro in 2009. Most of these births occurred to white women, followed by black women (27.1%) and those of Hispanic ethnicity (7.1%).

Birth rate is calculated as the number of births per 1,000 people. The birth rate was 14.2 live births per 1,000 people in 2009, with the highest birth rate occurring among Asian and Pacific Islander women (30.8), followed by black women (20.3) and white women (11.4).

Table 3. Select Characteristics of Live Births to Louisville Metro Residents, 2000-2009

	Births	%	Birth Rate*
Year			
2000	10,120		14.6
2001	9,777		14.1
2002	9,708		14.0
2003	9,788		14.1
2004	9,896		14.3
2005	9,878		14.2
2006	10,353		14.9
2007***	10,628		15.3
2008***	10,554		15.2
2009***	9,815		14.2
Race of Mother			
White	6100	62.1%	11.4
Black	2659	27.1%	20.3
Asian/ Pacific Islander	305	3.1%	30.8
American Indian	11	0.1%	7.2
Other/Unknown	36	0.4%	2.5
Ethnicity of Mother			
Non-Hispanic	9,114	92.9%	
Hispanic	697	7.1%	
Age of Mother (years)			
15-19	1,113	11.3%	50.6**
20-34	7,548	76.9%	104.8**
35-44	1,116	11.4%	19.2**
Mothers with high school diploma or higher	7,761	79.1%	

Source: Louisville Metro Birth Records, Kentucky Department of Public Health

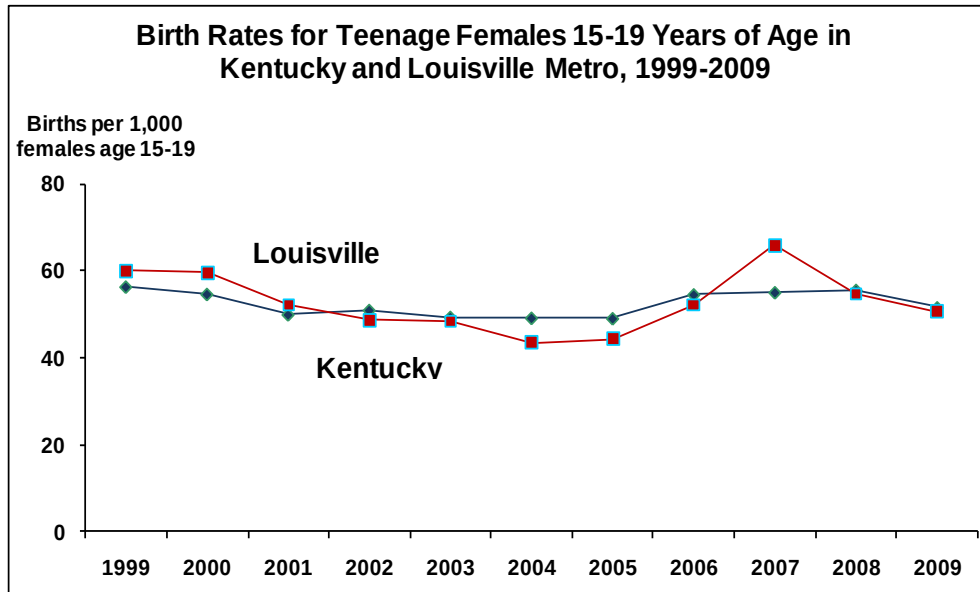
* Births per 1,000 population. Rates calculated using U.S Census 2000 data.

** Births per 1,000 women in that age group

*** Preliminary data

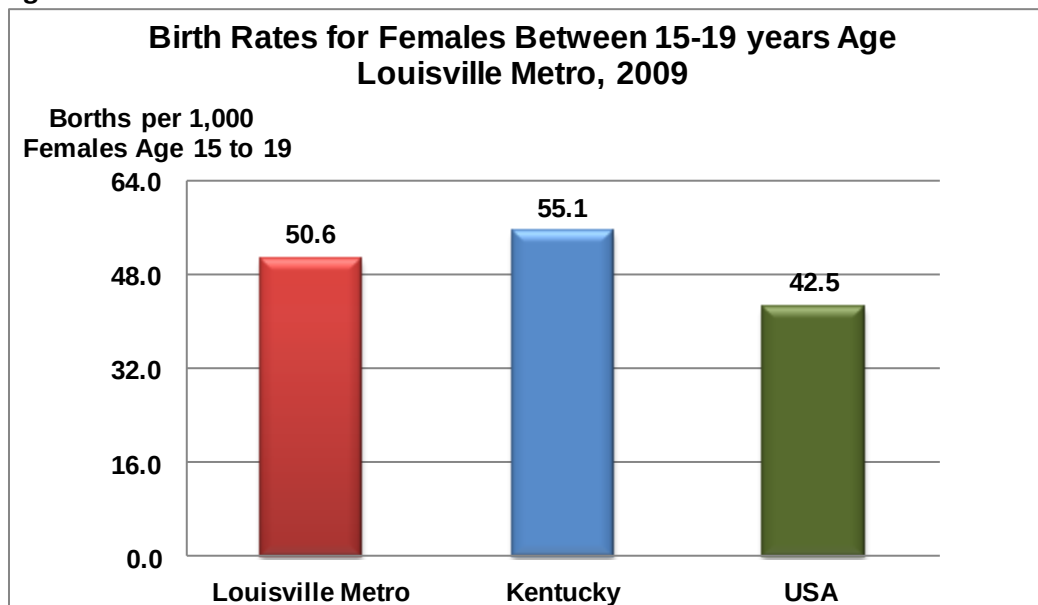
Approximately three-quarters of the live births (76.8%) were to women 20 to 34 years of age. Teenage females (age 15 to 19) accounted for 11.3% of the live births. Although teen birth rates saw a decline between 1999 and 2004, birth rates among this group have since increased from 43.5 in 2004 to 50.6 in 2009. Approximately 80% of mothers that gave birth in 2009 were high school graduates.

Figure 15.



Source: Louisville Metro Birth Records, Kentucky Department for Public Health

Figure 16.



Source: Louisville Metro Birth Records, Kentucky Department for Public Health

INFANT MORTALITY

What is it?

Infant mortality is the death of an infant before the date of the first birthday. The infant mortality rate (IMR) is calculated by dividing the number of newborns dying under a year of age by the number of live births during the year. The IMR is reported as the number of live newborns dying under a year of age per 1,000 live births.

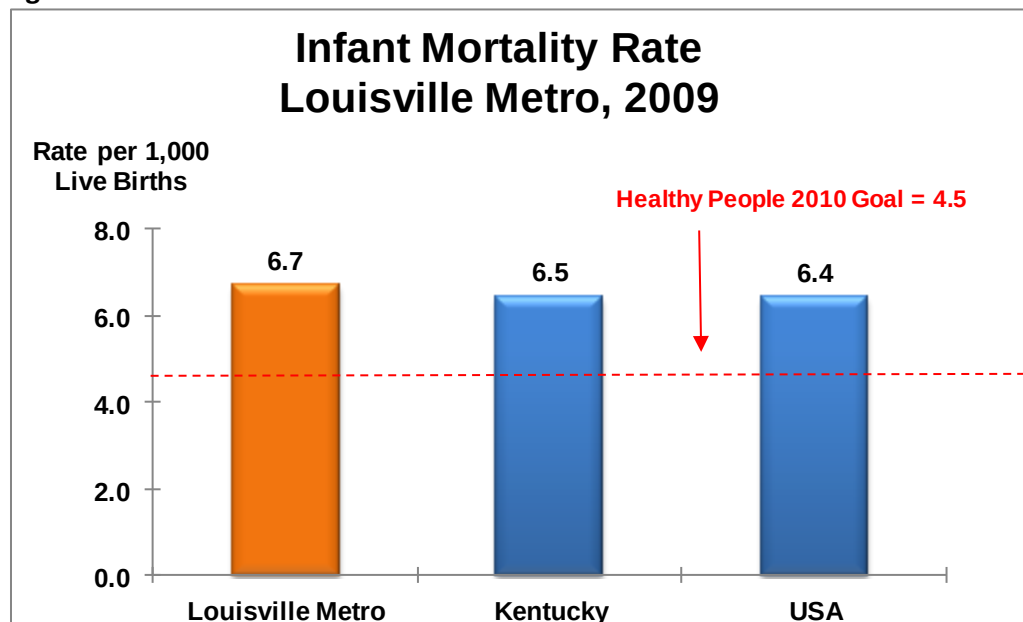
Why is it important?

Infant mortality is an important indicator of the health of a community and its mothers. There are many factors that affect infant deaths including the health of a pregnant woman, their ability to access prenatal care, the care that they receive during and after delivery, care provided to the newborn and the care the infant receives when he/she goes home.⁴

What's Louisville Metro's status?

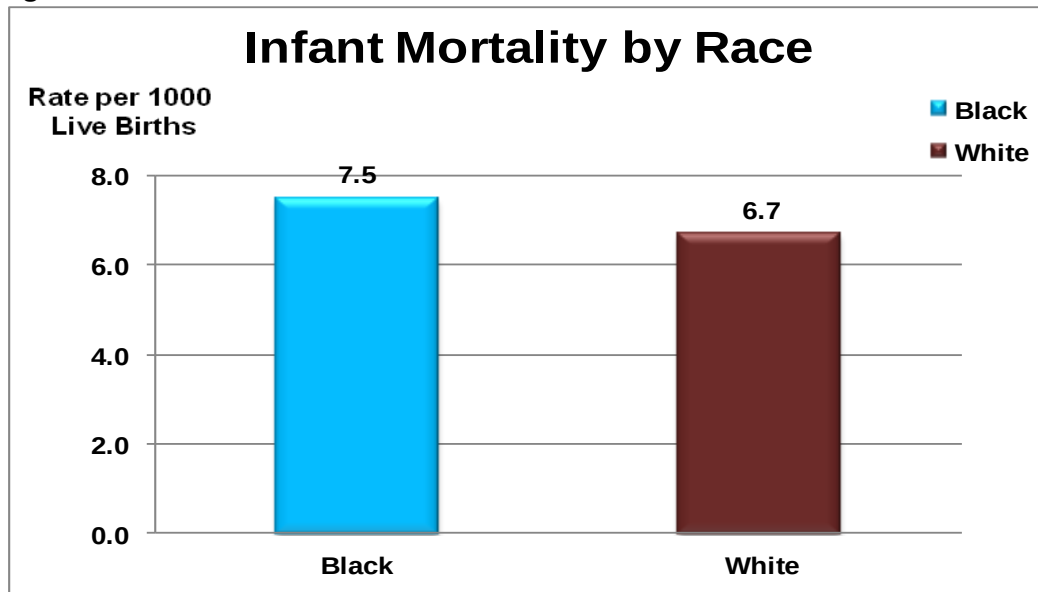
The IMR for Louisville Metro in 2009 was 6.7 deaths per 1,000 live births. This rate was higher than the reported rate for the state (6.45) and the nation (6.42). It also exceeded the Healthy People 2010 goal of no more than 4.5 deaths per 1,000 live births. IMR among whites was lower than the rate for blacks (6.7 per 1,000 live births compared to 7.5). In 2009, a total of 66 infants died before their first birthday in Louisville Metro. Of the infants who died, 62% were white, 30% black, and 4.6% were Hispanic.

Figure 17.



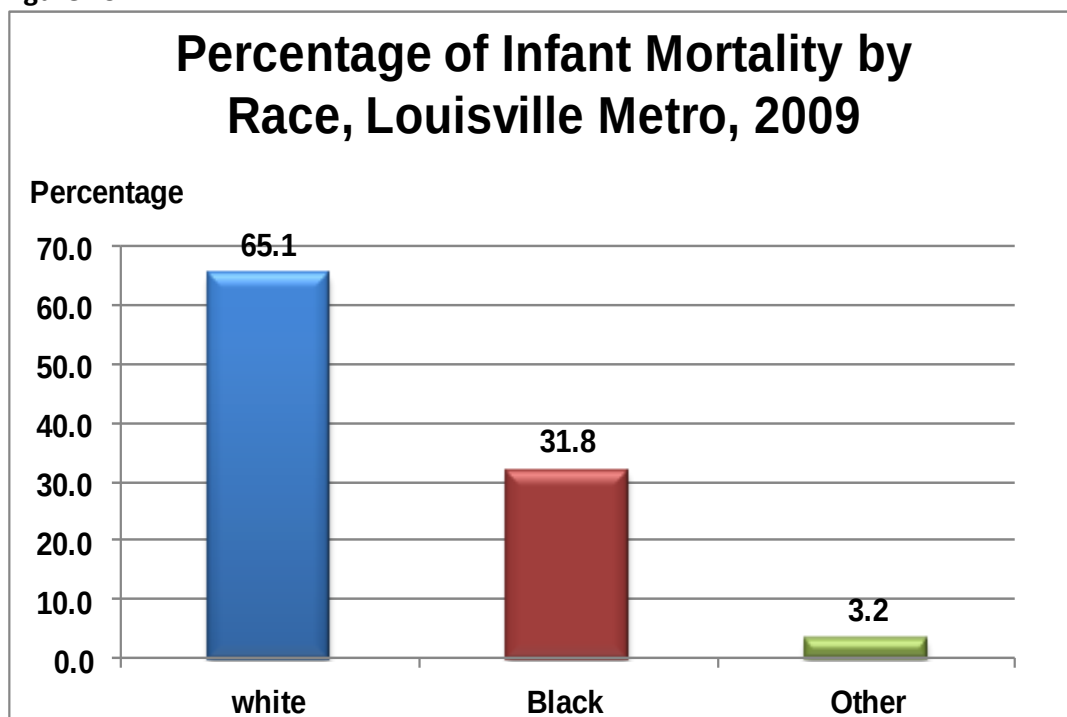
Source: 2009 Louisville Metro Birth Records, Kentucky Department for Public Health; National Vital Statistics Reports, U.S. Centers for Disease Control and Prevention

Figure 18.



Source: 2009 Louisville Metro Birth Records, Kentucky Department for Public Health

Figure 19.



Source: 2009 Louisville Metro Birth Records, Kentucky Department for Public Health

LOW BIRTH WEIGHT

What is it?

Babies who are low birth weight (LBW) weigh less than 2500 grams (or 5.5 pounds) at birth. Very low birth weight (VLBW) babies are classified as those weighing less than 1500 grams (or 3.3 pounds).

Why is it important?

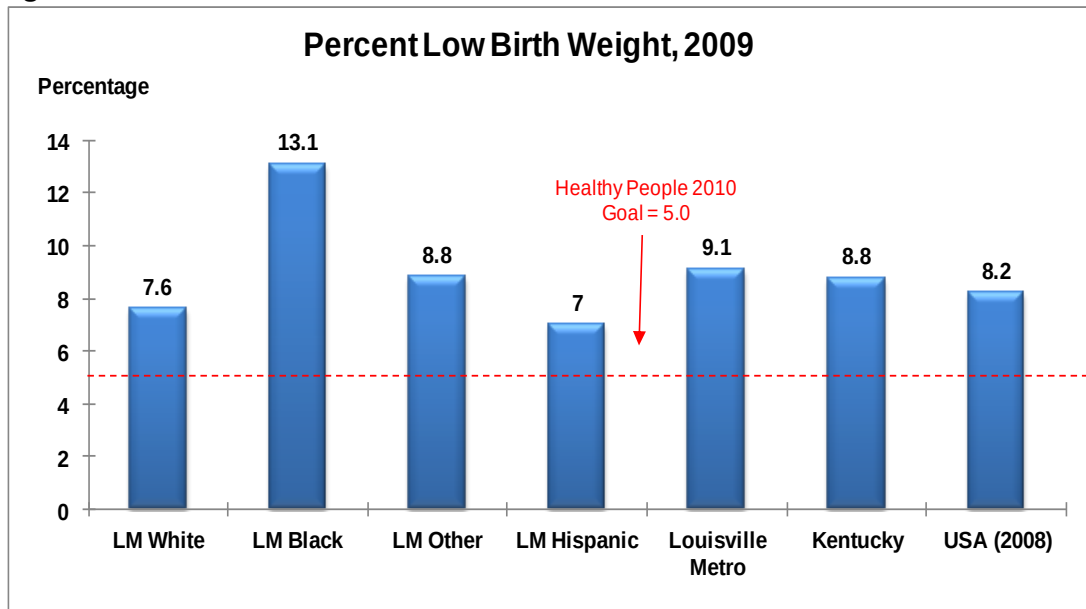
Birth weight is an important indicator of infant health. Children born with a very low birth weight are more likely to die in the first year of life than children of a healthy birth weight and those who survive face a higher risk for health complications. Low birth weight is the leading cause of infant death in the U.S.⁵ As a group, LBW children experience more health problems, such as asthma, upper and lower respiratory infections, and ear infections.⁶ Additionally, LBW children are at risk for lower scores on intelligence tests and for developmental delays.

There are also several social and medical factors that contribute to the risk of a low birth weight infant. Most important among these are pre-term (or early) labor and delivery, pregnancy associated hypertension (high blood pressure), maternal smoking and illicit drug use, young age of mother, poverty, decreased access to care, increased stress, poor maternal nutrition and the mother's level of education.⁷

What is Louisville Metro's status?

In 2009, 9% (or 894) of the 9815 live births in Louisville Metro were classified as low birth weight (LBW) and of these, 207 (or 21%) were very low birth weight (VLBW). The percentage of low birth weight infants in Louisville Metro (9.1%) was higher than state (8.8%) or national rate (8.2%). This rate also exceeded the Healthy People 2010 goal of 5%. The highest percentage of low birth weight babies was among black mothers (13%). White percentage of low birth weight babies was 7.6% and it was 8.8% for the all the other race combined category.

Figure 20.

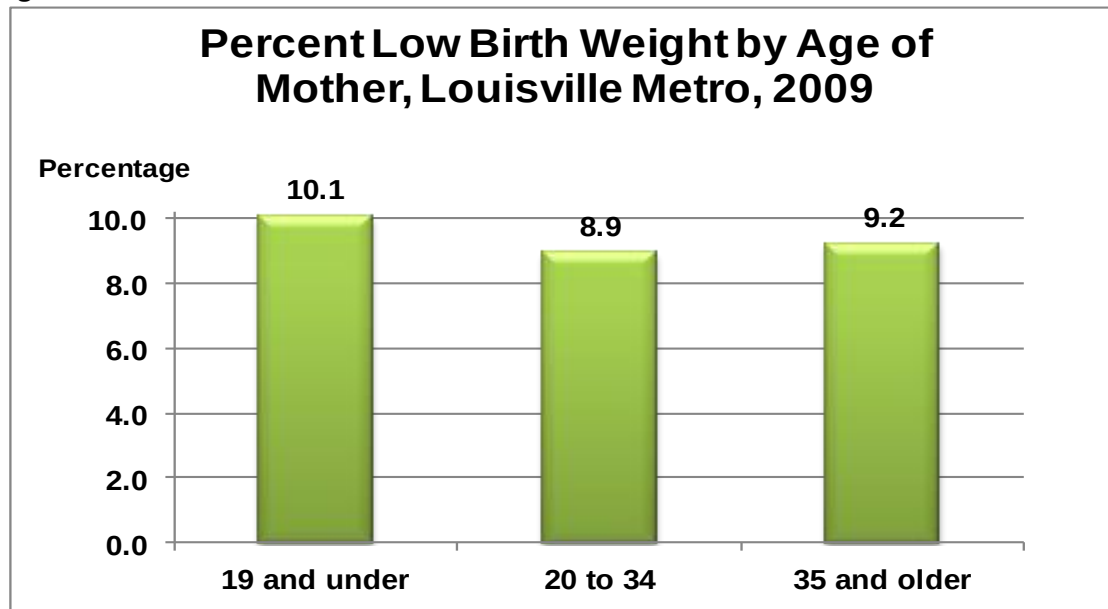


Source: 2009 Louisville Metro Birth Records, Kentucky Department for Public Health; 2008 National Vital Statistics Report, U.S. Centers for Disease Control and Prevention

As a group, mothers 19 years of age and under have the highest percentage of LBW infants (10.1%), followed by mothers 35 years of age and older (9.2%). The percentage of low birth weight births by mothers belonging to all age groups decreased from the previous years.

Approximately 71% of LBW infants born in Louisville Metro were pre-term (or premature) births. This was a 12% increase from the previous year.

Figure 21.

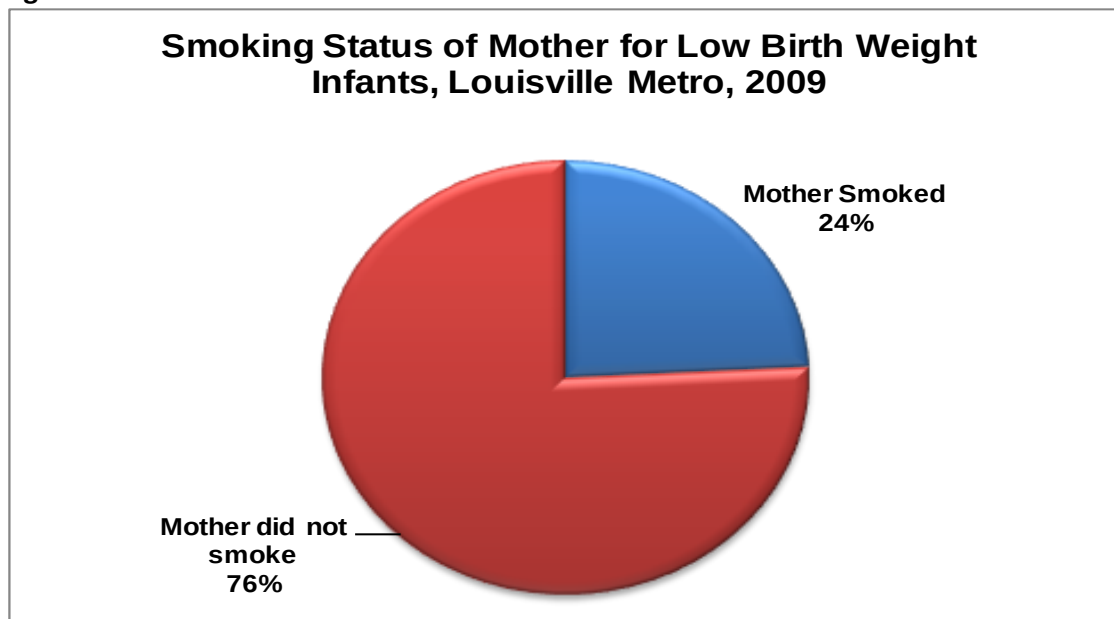


Source: 2009 Louisville Metro Birth Records, Kentucky Department for Public Health

SMOKING DURING PREGNANCY AND LOW BIRTH WEIGHT

Of the 54 largest metropolitan areas in the U.S., the percentage of women who smoke during pregnancy in Louisville Metro has been reported as among the highest.⁸ Approximately one quarter of the women who gave birth to a low birth weight infant in Louisville Metro in 2009 reported smoking during the last three months of pregnancy. This far exceeded the Healthy People goal of 99% of females abstaining from cigarette smoking while pregnant.

Figure 22.



Source: 2009 Louisville Metro Birth Records, Kentucky Department for Public Health

PRENATAL CARE

What is it?

Prenatal care is defined as health care and other services available to women during pregnancy. Adequate prenatal care is usually defined as starting care in the first three months (first trimester) of pregnancy with at least nine (9) visits for women giving birth to full-term infants (after 37 weeks of pregnancy).⁹

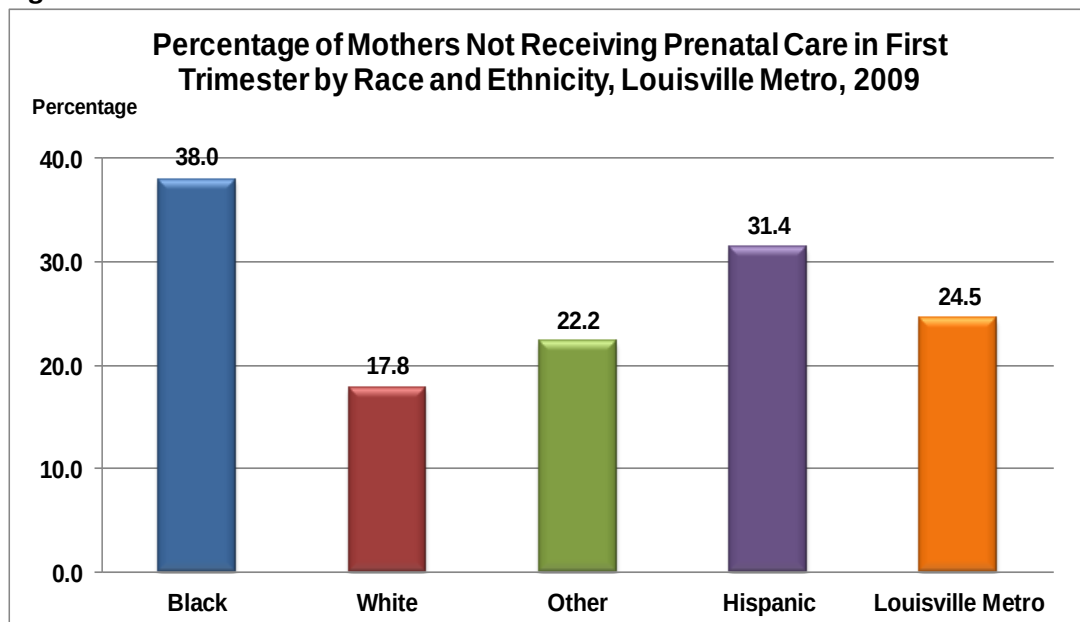
Why is it important?

It is important that mothers receive adequate prenatal care because it provides an opportunity to identify and treat problems early, improving the birth outcome. The purpose of prenatal care is to decrease the number of infants born too early (pre-term birth) and too small (low birth weight), and to prevent mother and infant sickness and death.

What is Louisville Metro's status?

Approximately 25% of Louisville Metro and 27.5% of Kentucky women who gave birth did not receive prenatal care during the first trimester in 2009. Both the Louisville Metro and state rates exceed the Healthy People 2010 goal of not more than 10% of pregnant women failing to receive prenatal care in the first trimester. Women of color were less likely to receive prenatal care. In 2009, black (38%) had the highest number of mothers that did not receive prenatal care in the first trimester, followed by Hispanics (31.4%).

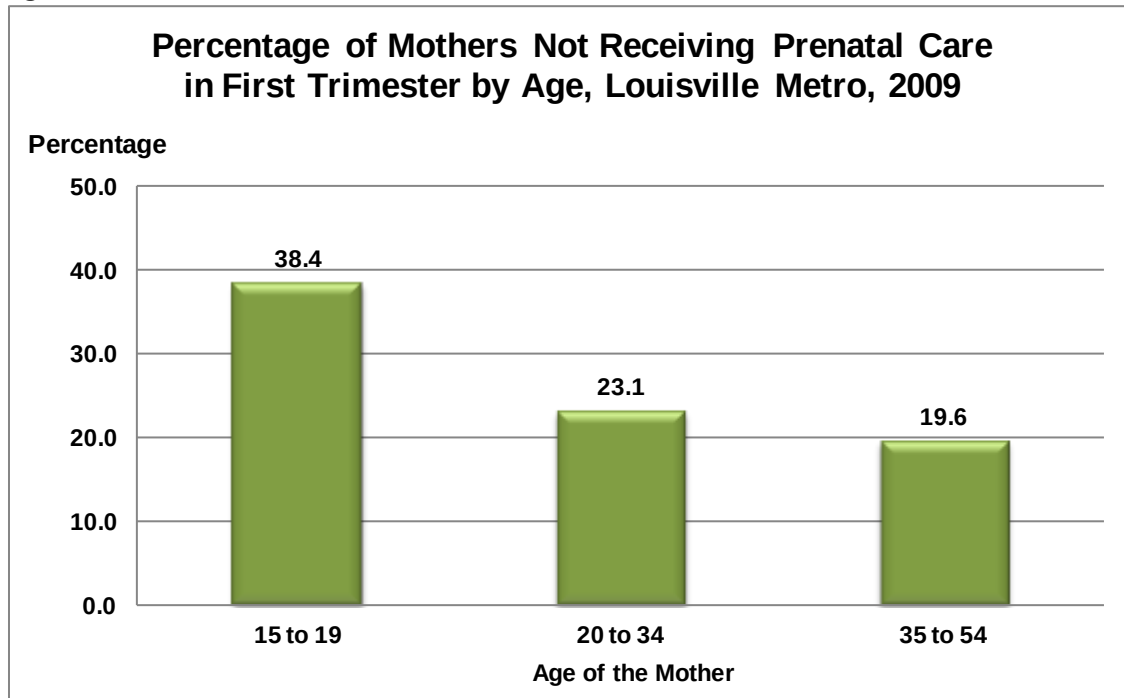
Figure 23.



Source: 2009 Louisville Metro Birth Records, Kentucky Department for Public Health

Women 19 years of age or younger were the least likely to receive prenatal care during the first trimester, with 38.4% not receiving such care. Women 35 years of age and older were most likely to receive prenatal care, with only 19.6% not receiving care during the first trimester.

Figure 24.



Source: 2009 Louisville Metro Birth Records, Kentucky Department for Public Health

TEEN BIRTHS

What is it?

The teen birth rate is defined as the number of live births per 1,000 women 15 to 19 years of age. It is important to note that teen pregnancy rates differ from teen birth rates. Teen pregnancy rates represent the number of live births, induced abortions, and fetal deaths combined.

Why is it important?

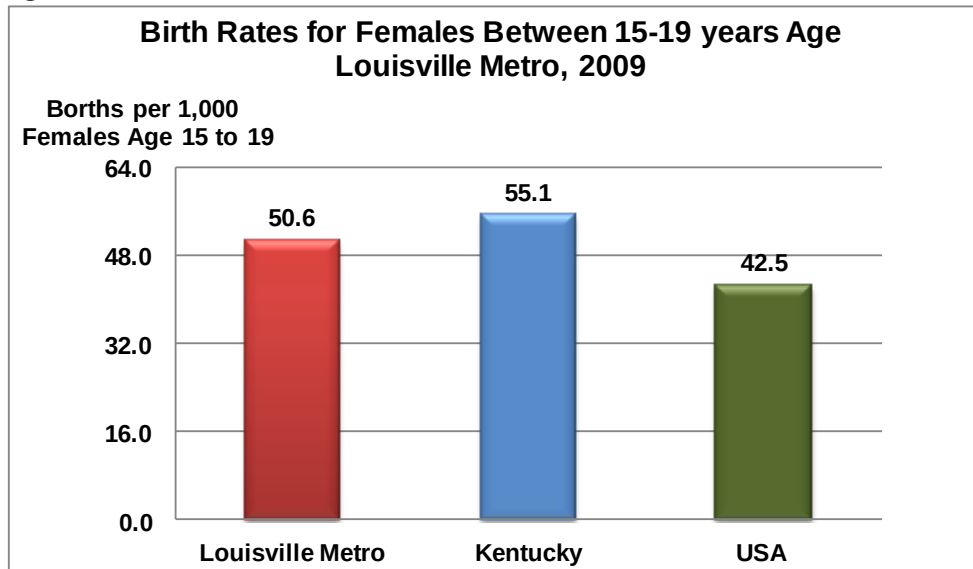
High teen birth rates are an important concern for a community because teen mothers and their babies face increased health risks and diminished opportunities to build a future. Babies born to teenage mothers face a higher risk for premature birth, low birth weight, developmental problems and death.

Teen births can have adverse long-term social and economic impacts on teen parents, their children and the community. According to CDC, children of teenage mothers are more likely to have lower school achievement and drop out of high school, have more health problems, be incarcerated at some time during adolescence, give birth as a teenager, and face unemployment as a young adult.¹⁰

What is Louisville Metro's status?

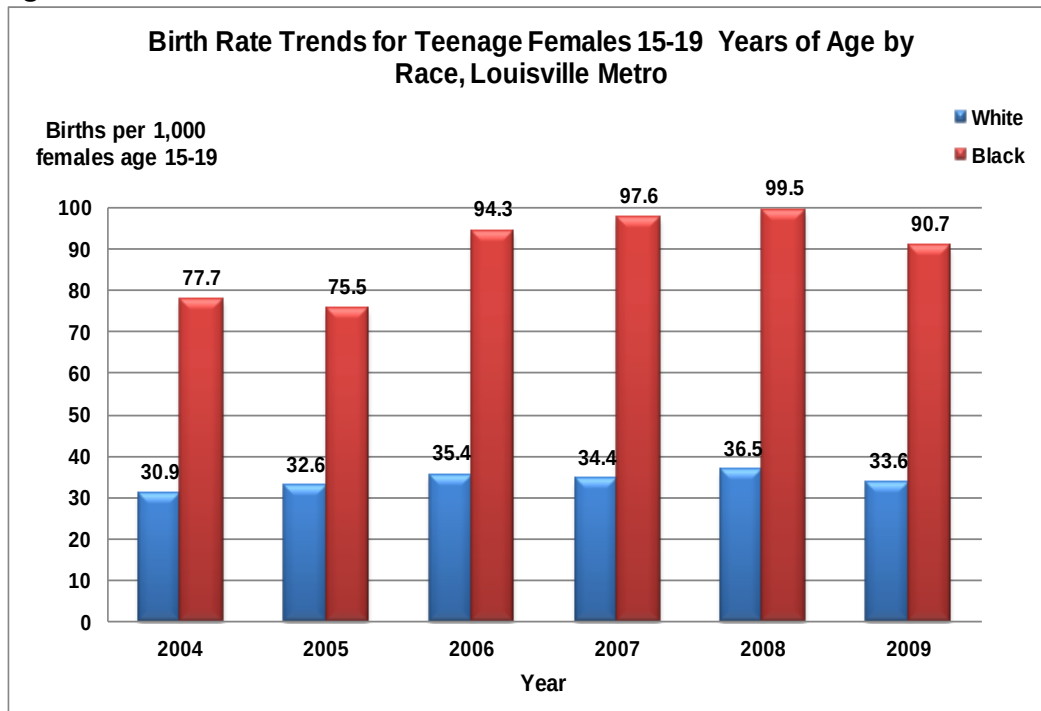
The teen birth rate in the Louisville Metro is 50.6. This is lower than the state (55.1), but remained higher than the national rate (42.5) in 2009.

Figure 25.



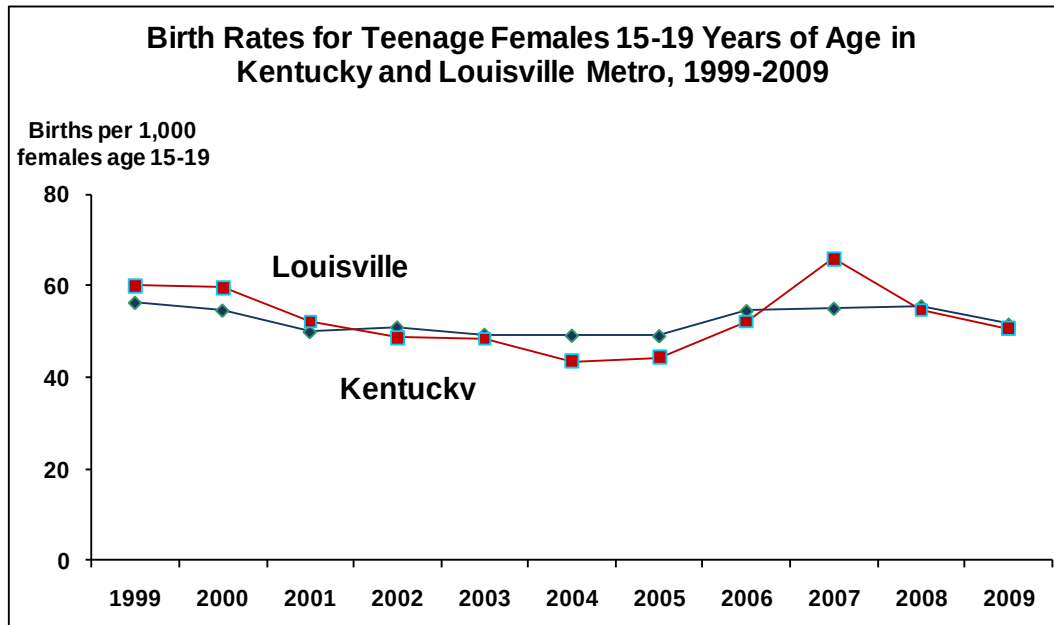
Source: 2009 Louisville Metro Preliminary Birth Records, Kentucky Department for Public Health

Figure 26.



Source: Louisville Metro Birth Records, Kentucky Department for Public Health

FIGURE 27.



Source: 2009 Louisville Metro Preliminary Birth Records, Kentucky Department for Public Health

CHILDHOOD LEAD EXPOSURE

What is it?

Children with blood lead levels (BLLs) greater than or equal to 10 micrograms of lead per deciliter of blood ($\mu\text{g}/\text{dL}$) are considered having elevated blood lead levels.

Why is it important?

Approximately 250,000 U.S. children aged 1-5 years have blood lead levels greater than 10 micrograms of lead per deciliter of blood.¹¹ Elevated lead blood levels in children are associated with adverse effects including abnormal cognitive development, behavior problems, decreased intelligence and poor school performance.¹²

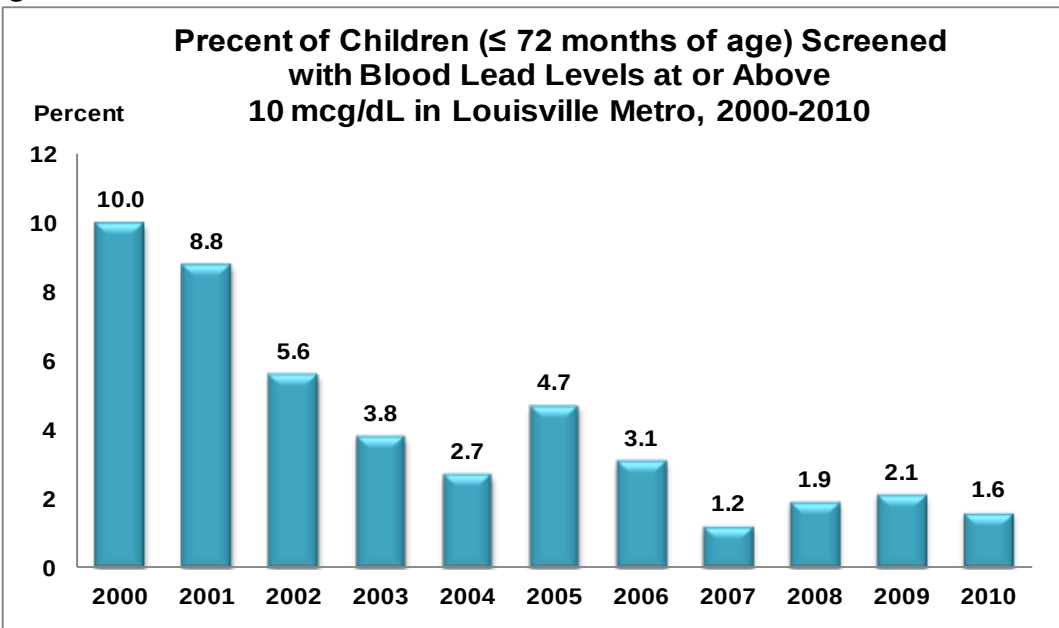
Lead poisoning is a result of ingestion or inhalation of lead based paint. For young children, exposure to lead is most frequently from dust and paint chips from old surfaces painted with lead-based paint, most commonly where they live and play. Therefore, children who reside in older housing are at greater risk of becoming lead poisoned. Age and condition of housing units, not the geographic location, are the most important predictors for the presence of hazards related to lead-based paint.

In 1997, CDC proposed new guidelines recommending state and local health officials target their efforts to children who live in older homes and children from low-income families, including children who receive Medicaid benefits. Although young children living in poverty are at a higher risk for elevated BLLs, lead poisoning is an issue that crosses all socioeconomic groups, geographic locations, racial and ethnic populations.

What's Louisville Metro's Status?

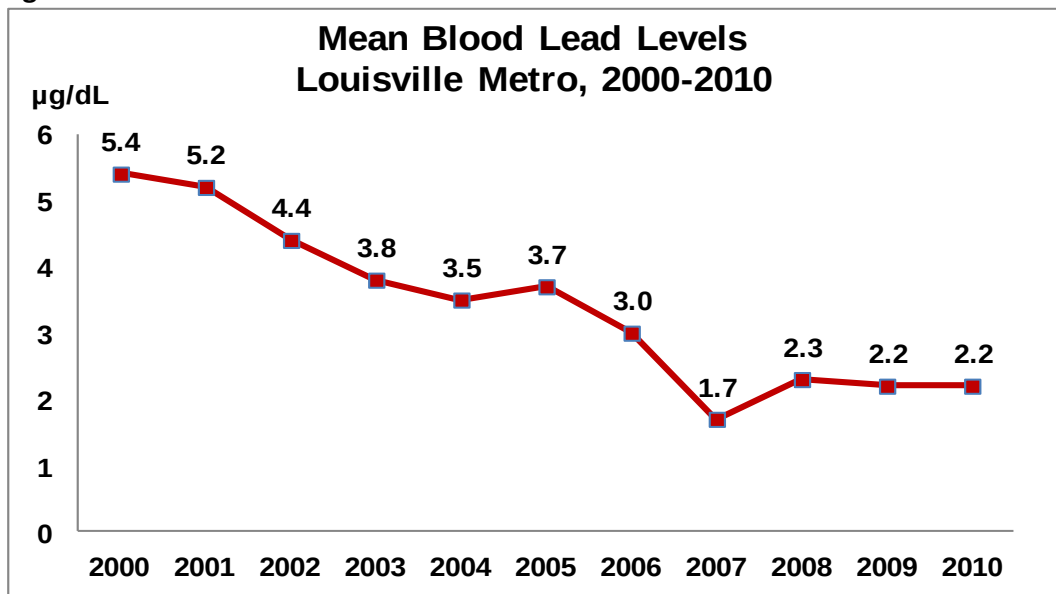
A total of 21,867 children were screened by the health department's Childhood Lead Poisoning Prevention Program in 2009 and 2010. The percentage of children screened with blood levels equal or greater than 10 $\mu\text{g}/\text{dL}$ has decreased from 10% in 2000 to 1.6% in 2009. While an increase occurred in 2005, with 4.7% of the children exhibiting elevated blood lead levels, the percentage began to decline again during subsequent years.

Figure 28.



Source: Childhood Lead Poisoning Prevention Program, LMPHW

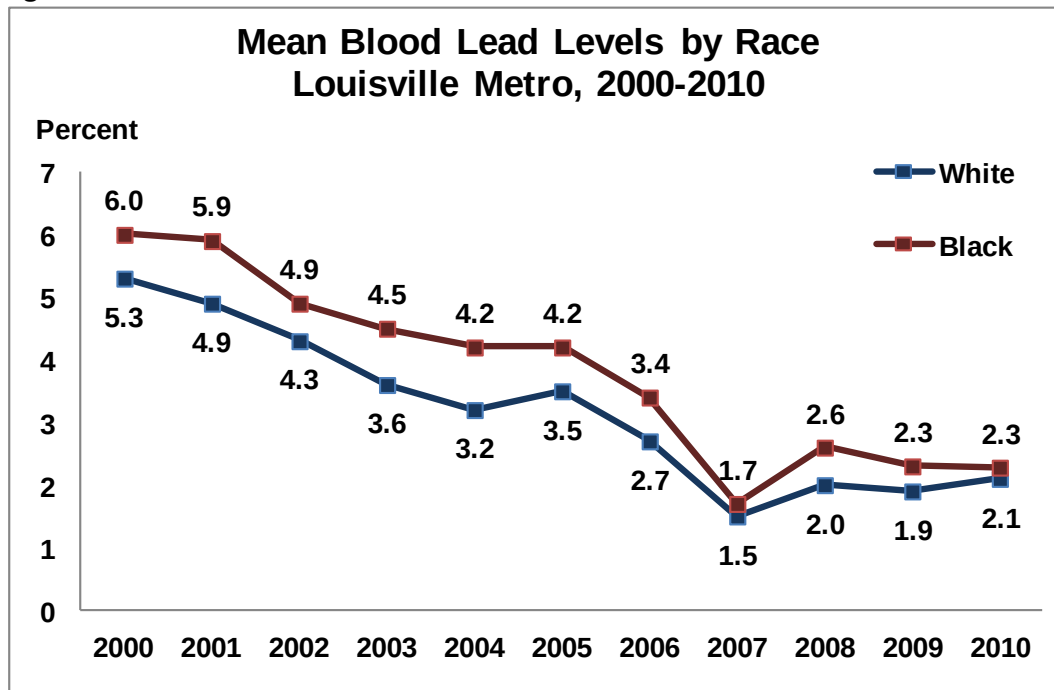
Figure 29.



Source: Childhood Lead Poisoning Prevention Program, LMPHW

The mean blood lead levels in Louisville Metro have steadily declined over the past decade. This is true for both whites and blacks. Although the disparity between whites and blacks has narrowed over the past several years, mean blood lead levels for blacks remain consistently higher than that of whites.

Figure 30.



Source: Childhood Lead Poisoning Prevention Program, LMPHW

HOSPITAL DATA

What is it?

An inpatient discharge occurs when a patient is admitted overnight to a hospital and leaves that hospital. Thus, an individual who is transferred from hospital A to hospital B would be included in the discharges from hospital A with a second discharge from hospital B.

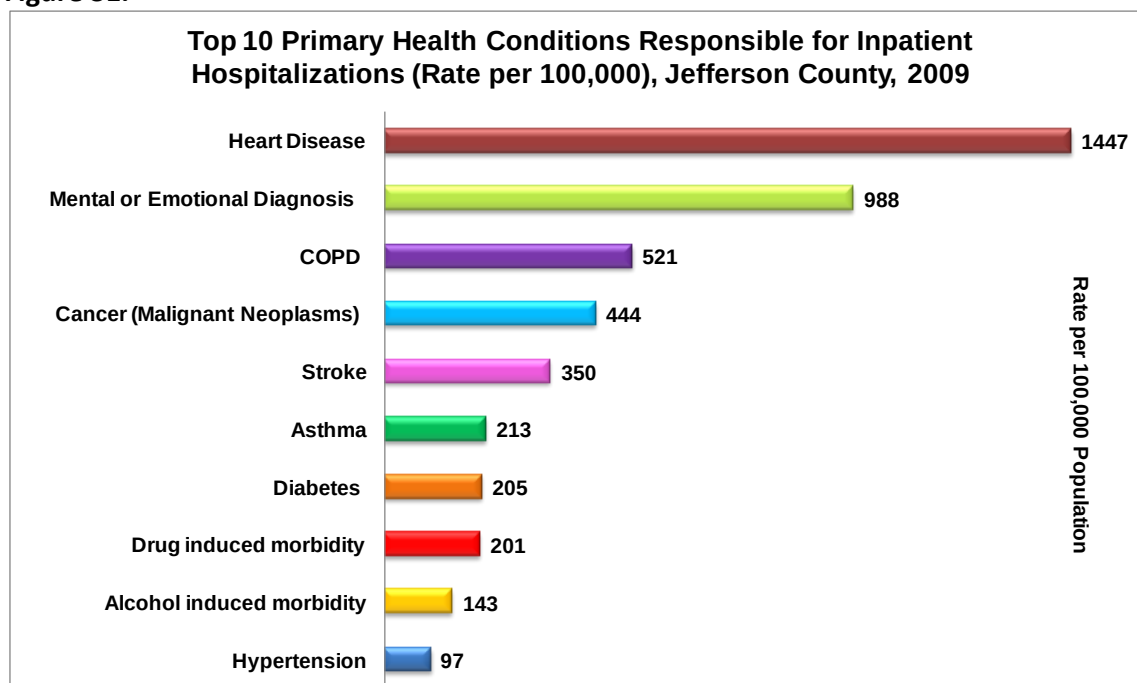
Why is it important?

Hospital data provides valuable information regarding the most frequent health conditions residents are diagnosed when they are admitted to local hospitals. This information helps to identify and prioritize health issues for the community, design public health programs and develop public health policy.

What's Louisville Metro's status?

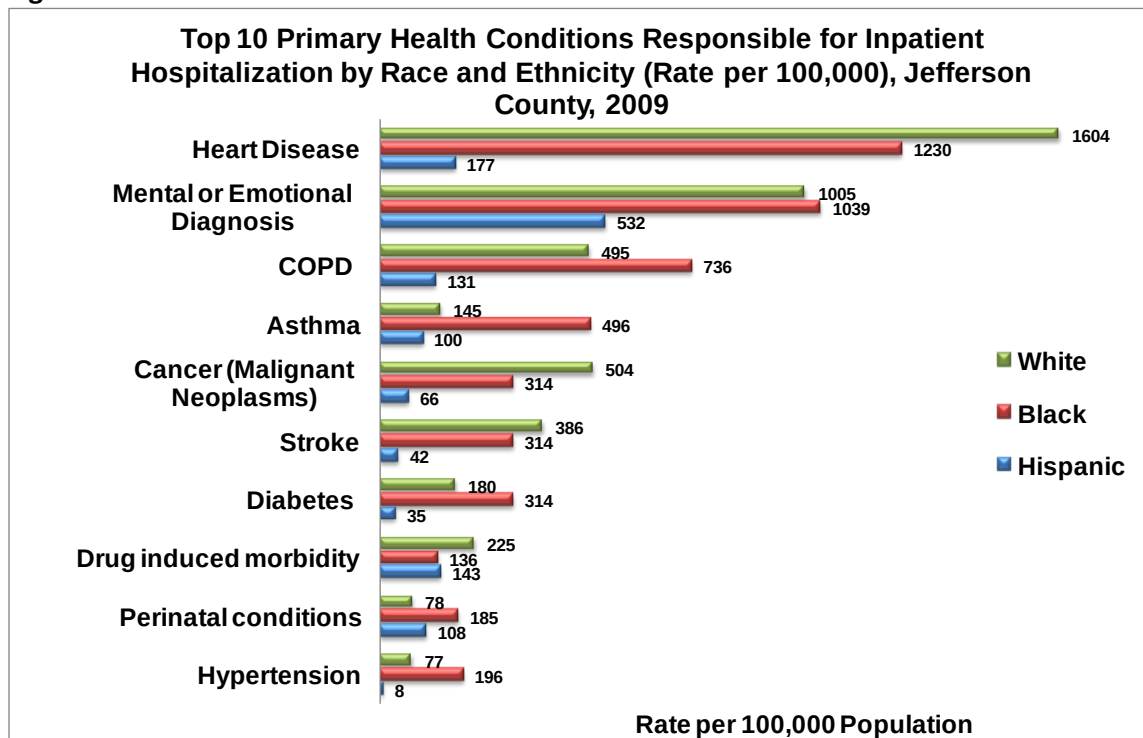
The top primary health condition responsible for inpatient hospitalizations in 2009 was heart disease (1447), followed by mental or emotional illness (988). COPD, cancer and stroke were the remaining leading conditions for inpatient hospitalization. The leading health condition for whites (1604) and blacks (1230) was heart disease and the leading cause of hospitalization for Hispanics (532) was mental or emotional illness. Mental or emotional diagnosis was the second leading cause for inpatient hospitalization for whites and blacks.

Figure 31.



Source: Kentucky Inpatient Hospitalization Claims Files, Kentucky Department for Public Health

Figure 32.

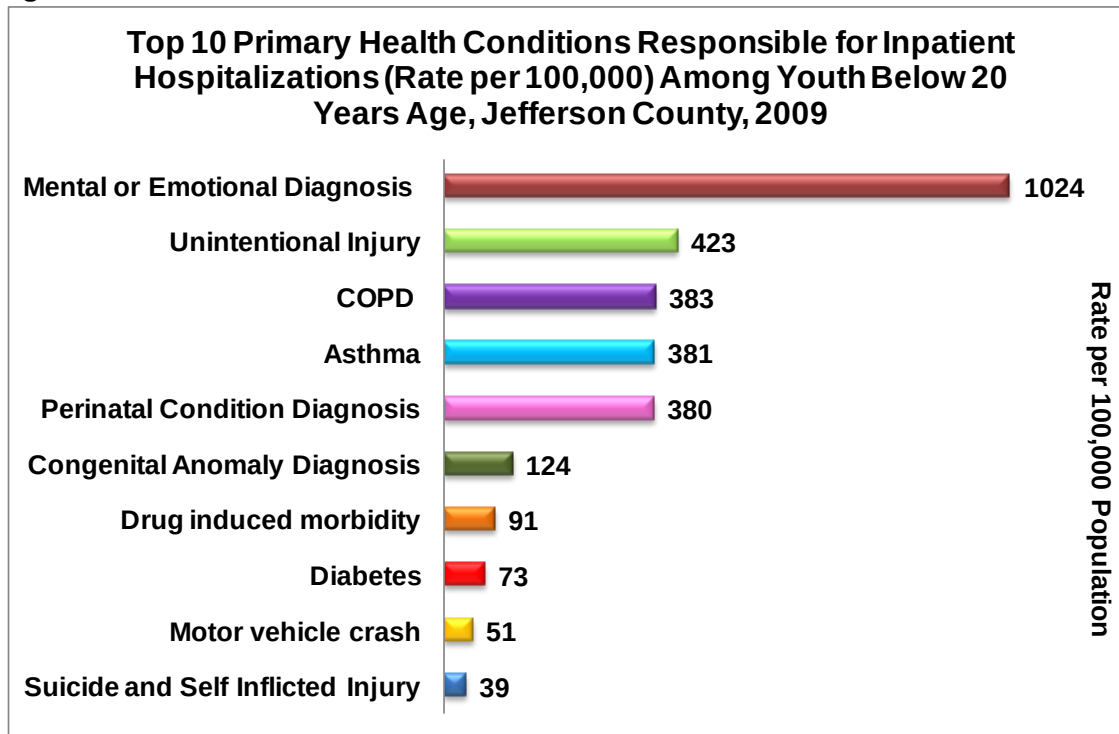


Source: Kentucky Inpatient Hospitalization Claims Files, Kentucky Department for Public Health

The leading four causes for inpatient hospitalization among Louisville Metro residents below 20 years of age in 2009 were mental or emotional diagnosis, unintentional injury, COPD and asthma. Childbirth, pregnancy or puerperiums are also leading causes for hospitalization. This is often due to multiple pregnancy, child birth related or neonatal hospital visits throughout a calendar year. However, for youth below the age of 20 the inpatient hospital rate for health conditions related to pregnancy, childbirth or neonatal visits (973) exceeds that of all other conditions other than mental or emotional diagnosis.

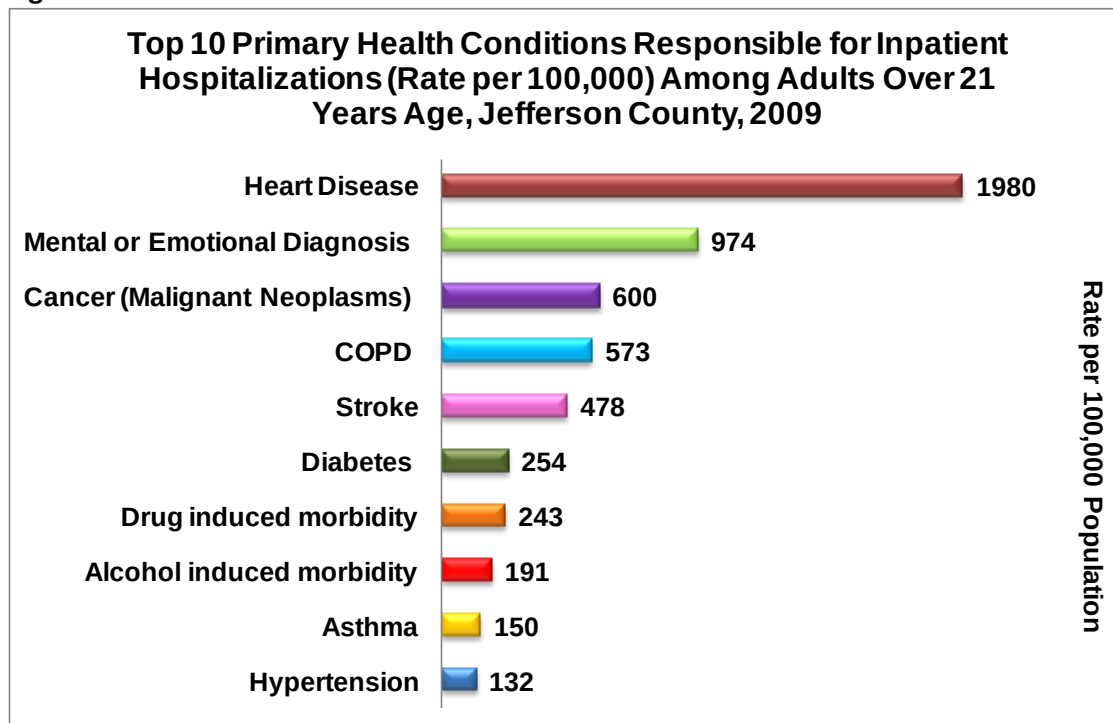
For adults above 20 years of age heart disease is the top primary health condition of inpatient hospitalization, followed by mental or emotional diagnosis.

Figure 33.



Source: Kentucky Inpatient Hospitalization Claims Files, Kentucky Department for Public Health

Figure 34.

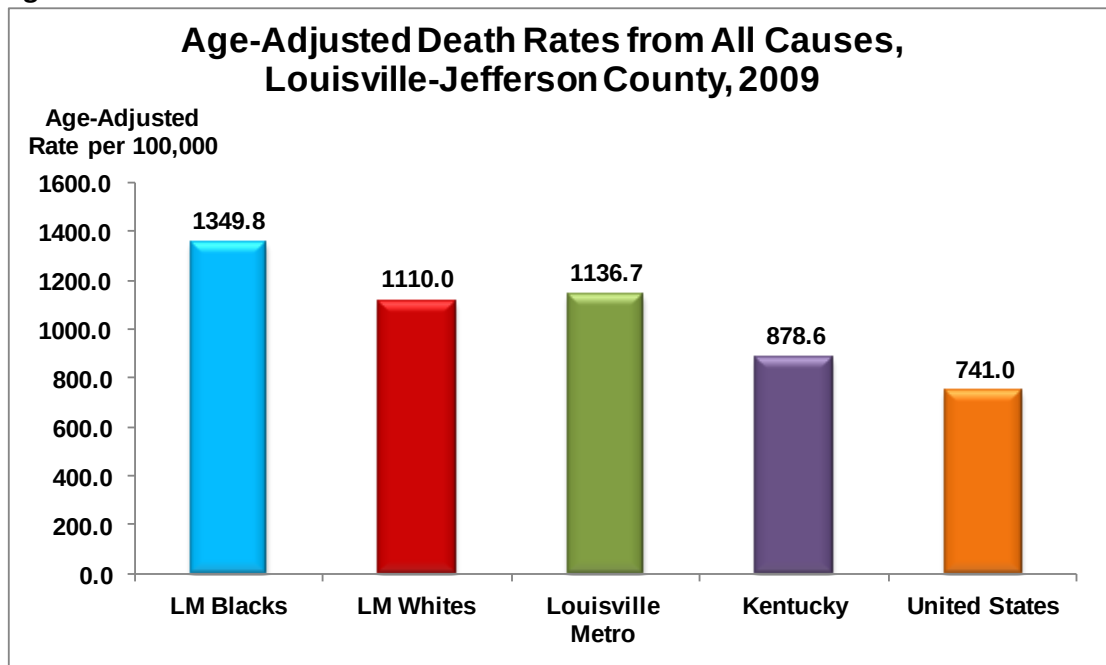


Source: Kentucky Inpatient Hospitalization Claims Files, Kentucky Department for Public Health

CAUSES OF DEATH

The total number of deaths in Louisville Metro in 2009 was 8,177. The age-adjusted death rate from all causes was 1136.7 per 100,000 population. This rate was higher than the state (878.6) and national (741.0) rates. The age-adjusted death rate from all causes for Louisville Metro blacks was 17% higher than the rate for Louisville Metro whites.

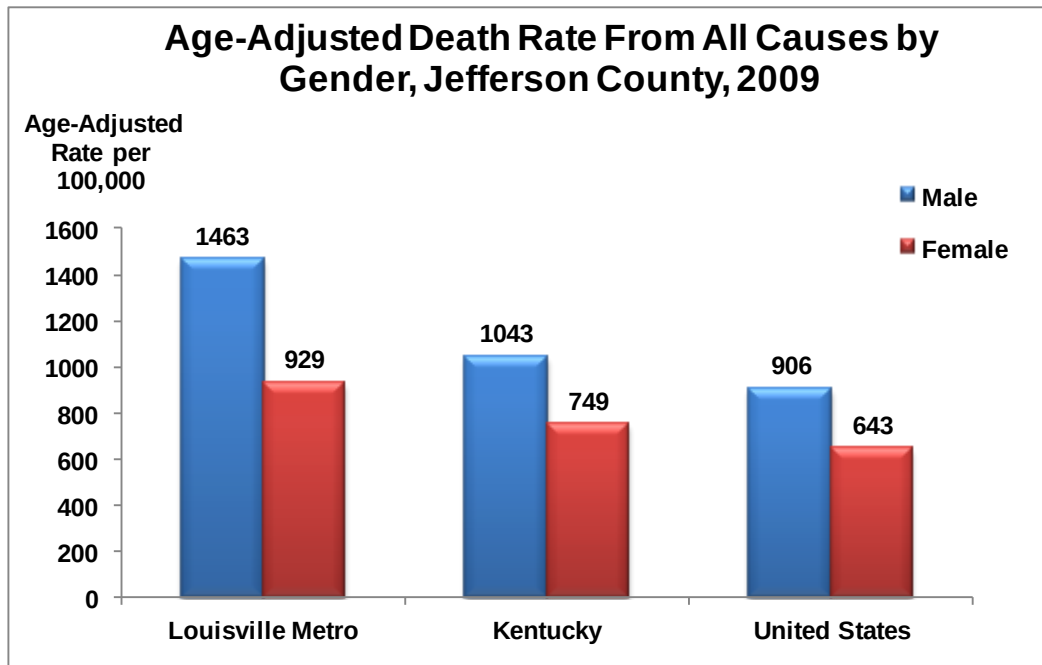
Figure 35.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

In 2009, the male age-adjusted death rate was 36.5% higher than the rate for females (1463 compared to 928.5 per 100,000 population). Louisville Metro death rates for both genders, however, were higher than both the state and national death rates.

Figure 36.

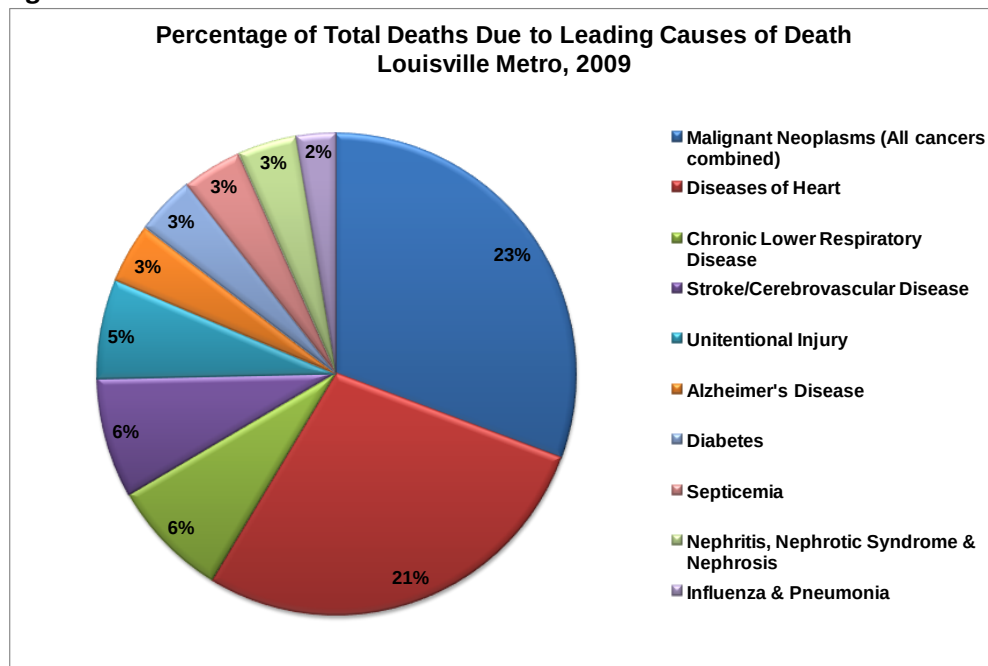


Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health, National Center for Health Statistics

LEADING CAUSES OF DEATH

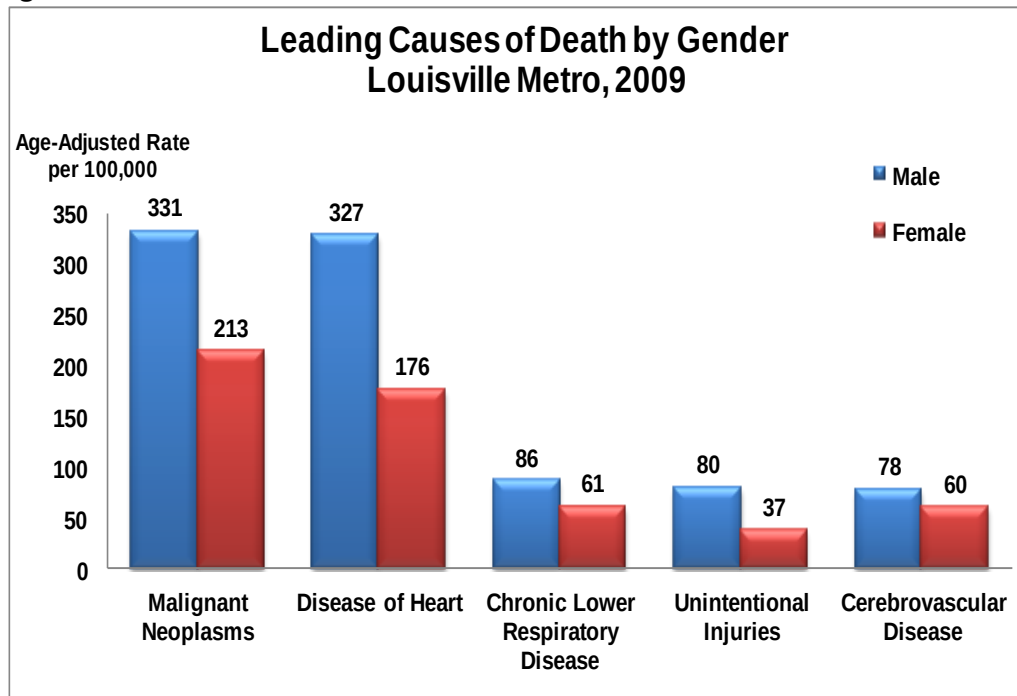
Malignant neoplasm, commonly known as cancer, was the number one cause of death in Louisville Metro during 2009, accounting for 23% of all deaths. In addition to cancer, the other top causes of death are heart disease, chronic lower respiratory disease (including COPD), stroke/cerebrovascular disease and unintentional injuries.

Figure 37.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health

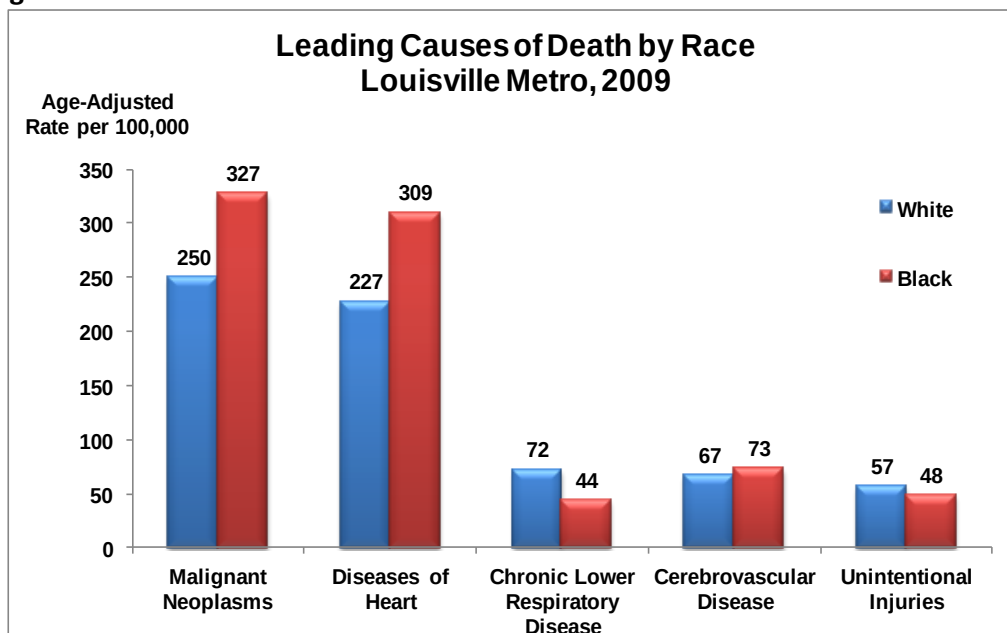
Figure 38.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health

Louisville metro males had higher death rates than females for each of the top five causes of death in Louisville Metro during 2009. Blacks had a higher death rate from malignant neoplasms (cancers), heart disease and stroke/cerebrovascular disease, while whites had higher rates in chronic lower respiratory disease (including COPD) and unintentional injuries.

Figure 39.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health

CHRONIC DISEASES

DISEASE OF THE HEART

What is it?

Diseases of the heart consist of a variety of disorders and conditions including coronary heart disease, hypertensive heart disease, arrhythmia (irregularity in heartbeats), and cardiomyopathy (enlargement of the heart).¹³

Coronary heart disease is the most common type of diseases of the heart. The word 'coronary' means crown and is the name given to the arteries that circle the heart like a crown.¹⁴ The coronary arteries supply the heart muscle with oxygen and nutrients. Coronary heart disease develops when one or more of the coronary arteries that supply the blood to the heart become narrowed, impairing the blood flow to the heart muscle. This occurs due to a buildup of cholesterol or other fatty substances in the blood vessels of the heart.

Why is it important?

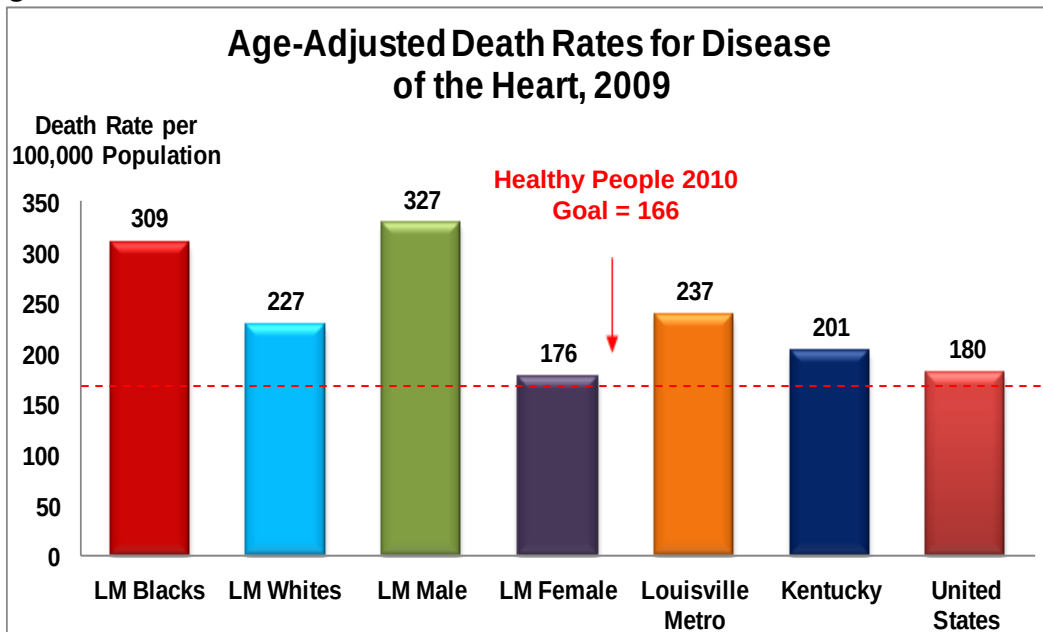
Coronary heart disease is the nation's leading cause of death, killing more than one in every four of Americans.¹⁵ There are several risk factors associated with heart disease. Some of these risk factors can be modified, treated or controlled while others cannot. Risk factors that cannot be controlled include heredity, age and gender. Research has shown that men have a greater risk of heart attack than women, and over 80% of deaths from heart disease occur among people that are 65 years or older.¹⁶ Risk factors that can be modified and controlled include smoking, lack of exercise, stress and obesity. Obesity increases blood pressure, blood cholesterol levels, risk of diabetes and other conditions that directly contribute to heart disease. Stress is also known to be a contributing factor. Healthy diet and regular exercise are proven lifestyle changes known to decrease the risk of heart disease.

What is Louisville Metro's status?

In 2009, the age-adjusted rate of death for diseases of the heart in Louisville Metro (237 per 100,000) was higher than Kentucky's rate of 201, as well as the Healthy People 2010 goal (166 deaths per 100,000) and the national rate (180).

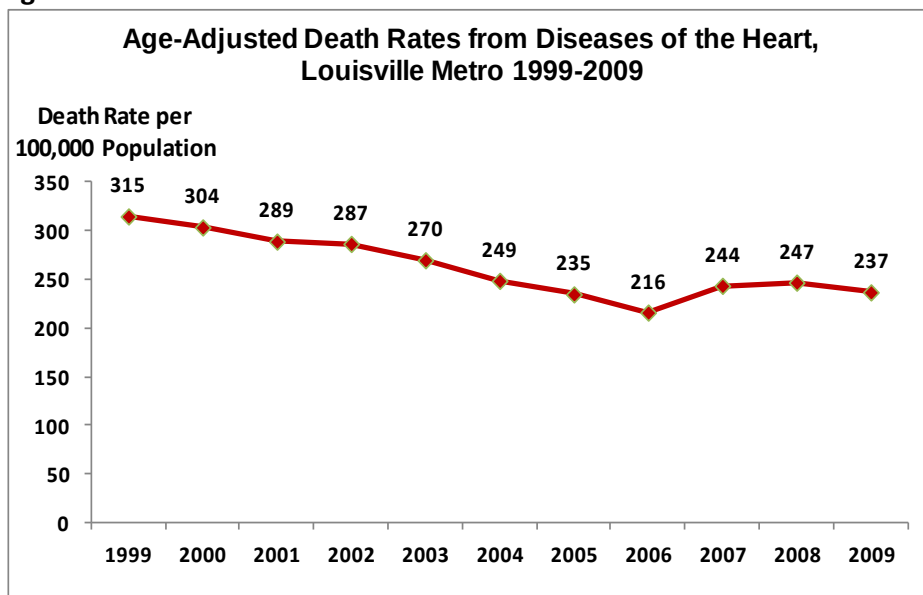
The age-adjusted death rate for heart disease among Louisville Metro blacks (309 per 100,000) continues to be higher than the rate for Louisville Metro whites (227 per 100,000). When compared to 2008, the death rate from heart disease for blacks increased to 309 (compared to 283) and for whites it decreased to 227 (compared to 243) in 2009. From 1999 to 2006, the age-adjusted death rate for diseases of the heart gradually declined, but began to rise again thereafter.

Figure 40.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

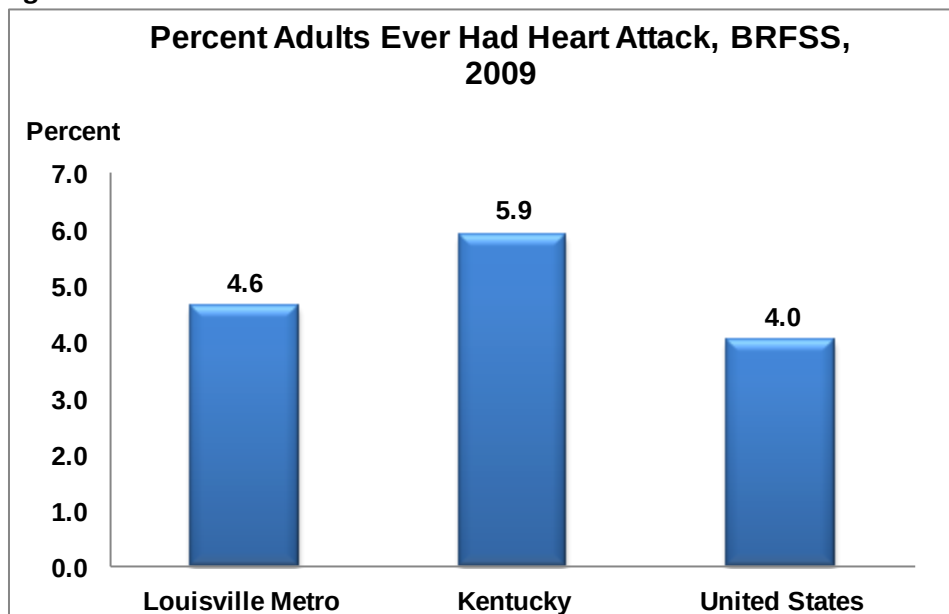
Figure 41.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

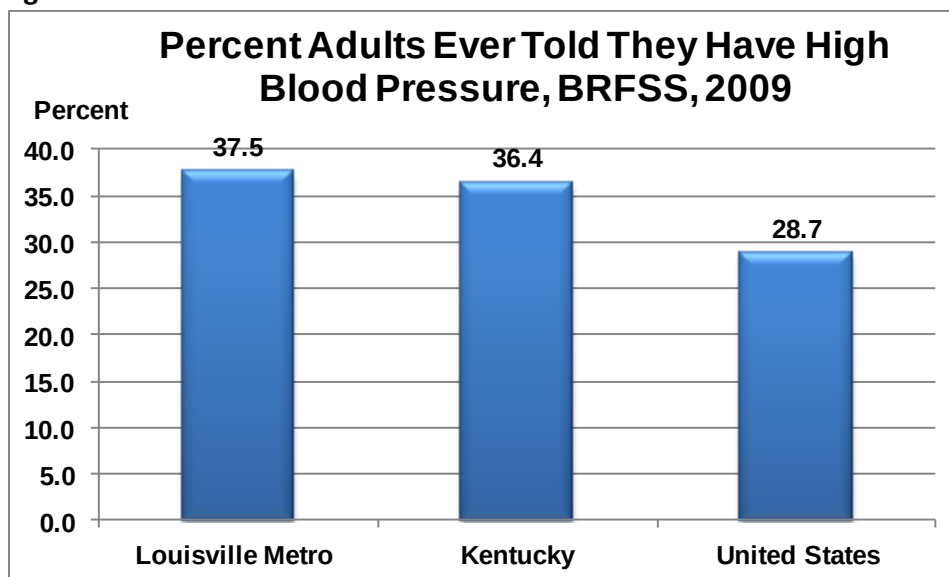
According to the 2009 Behavioral Risk Factor Surveillance System (BRFSS), 4.6% of Louisville Metro respondents of the survey reported having a heart attack. While this was lower than the state, it was higher than the U.S. percentage in the same year. Common risk factors associated with cardiovascular disease include high blood pressure and high cholesterol. Thirty-seven percent of respondents reported that they have been told by a doctor that they have high blood pressure and 36.8% reported having high cholesterol levels.

Figure 42.



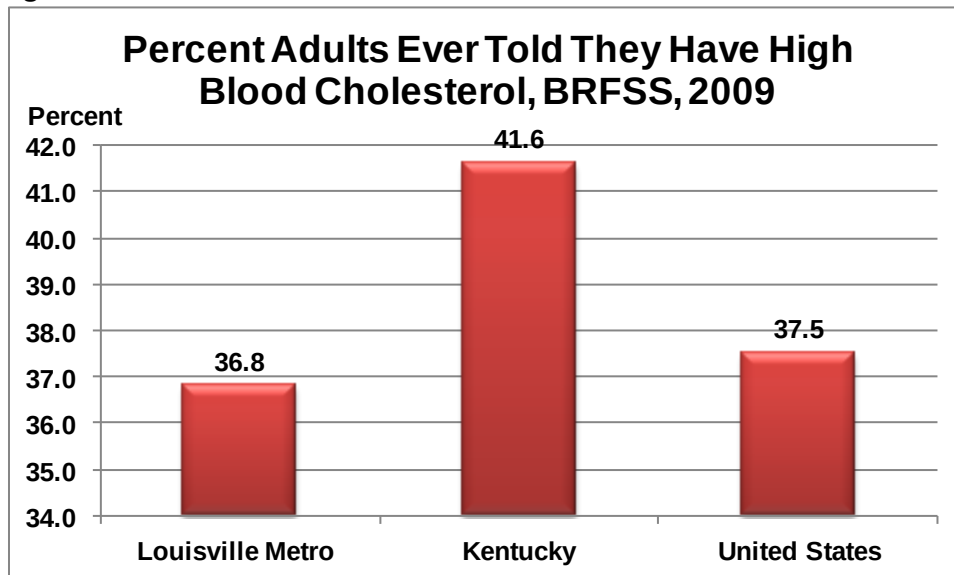
Source: 2009 Behavioral Risk Factor Surveillance System, Kentucky Department for Public Health; National Center for Health Statistics

Figure 43.



Source: 2009 Behavioral Risk Factor Surveillance System, Kentucky Department for Public Health; National Center for Health Statistics

Figure 44.



Source: 2009 Behavioral Risk Factor Surveillance System, Kentucky Department for Public Health; National Center for Health Statistics

CANCER

What is it?

Malignant neoplasms, commonly known as cancer, are diseases in which abnormal cells divide without control and are able to invade other tissues. Cancer cells can spread to other parts of the body through the blood and lymph systems. There are over 100 different types of cancer.¹⁷

Why is it important?

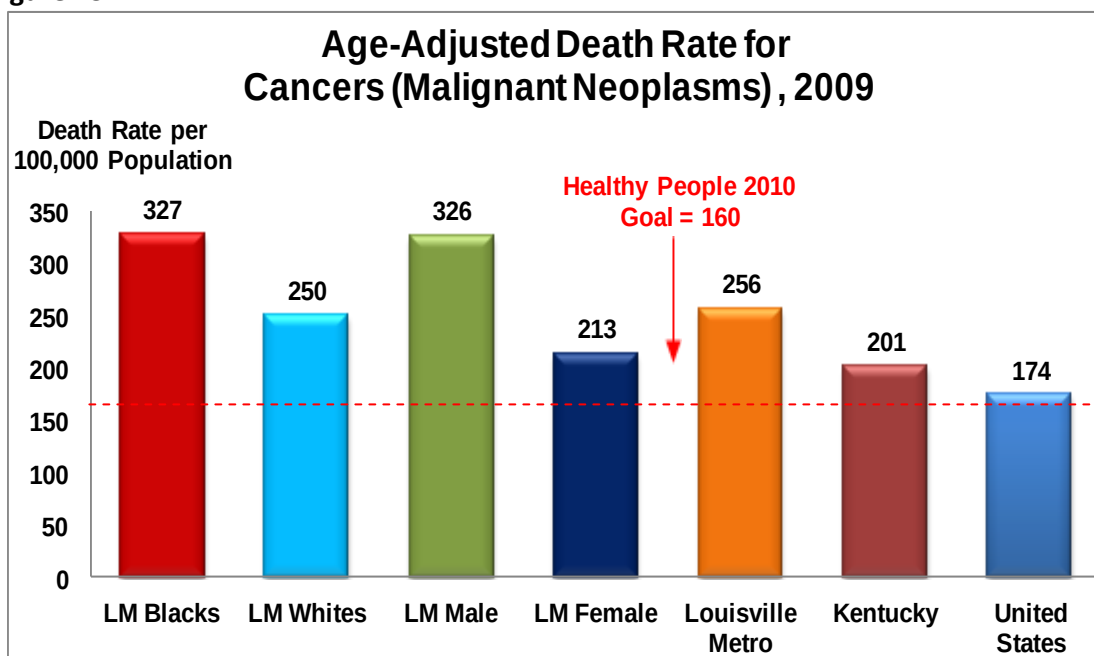
Cancer is the second leading cause of death in the U.S. An estimated 570,000 cancer deaths and over 1.5 million new cases of cancer were reported in 2011.¹⁸ The three most common cancers among men are prostate cancer, lung cancer and colorectal cancer. For women, the most common cancers are breast cancer, lung cancer and colorectal cancer. Lung cancer is the leading cause of cancer death for both genders in the country.

About 30% of cancer deaths are due to five leading behavioral and dietary risks. They are obesity, low fruit and vegetable intake, lack of physical activity, tobacco use and alcohol use. Avoiding excessive exposure to ultraviolet rays from the sun and tanning beds can help reduce the risk of skin cancer. For some cancers such as colorectal and breast cancer early screenings have been proven to prevent deaths. Vaccines can also help reduce cancer risk. For example, the human papillomavirus (HPV) vaccine helps prevent most cervical cancers and some vaginal and vulvar cancers, and the hepatitis B vaccine may reduce liver cancer risk. CDC has identified regular cancer screenings, information about cancer and referral services that are available and accessible as effective strategies to reduce cancer incidence and deaths.

What's Louisville Metro's Status?

In 2009, the age-adjusted rate of death from all cancer deaths combined in Louisville Metro (256 per 100,000) was higher than Kentucky's rate of 201. This rate is higher than the Healthy People 2010 goal of no more than 160 deaths per 100,000 and the national rate of 174. Although there are more than 100 different types of known cancers, cancer of the lung/bronchus, prostate and breast are the most prevalent.

Figure 45.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health; U.S. National Center for Health Statistics

LUNG CANCER

What is it?

Lung cancer is the uncontrolled growth of abnormal cells in the lung. Cells multiply abnormally and form a mass of cells called a tumor. As the tumor grows, it impairs the exchange of oxygen and causes tissue damage.

Why is it important?

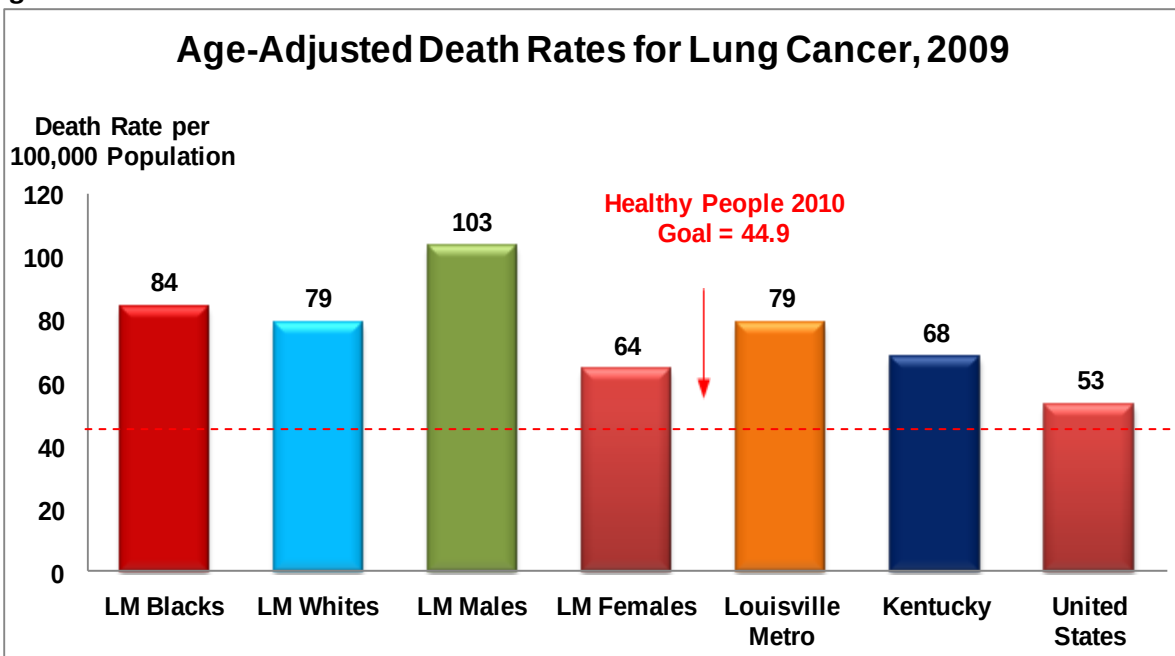
More people in the United States die from lung cancer than any other type of cancer.¹⁹ The majority of people who develop lung cancer are cigarette smokers. People who smoke are 10 to 20 times more likely to get lung cancer or die from lung cancer than people who do not smoke.²⁰ Non-smokers are also at risk of developing lung cancer from sharing an environment with someone who smokes. An estimated 3,000 non-smokers die from lung cancer as a result of secondhand smoke

exposure each year.²¹ Lung cancer can be prevented through smoking cessation and a healthy diet that consists of a reduction of fat and an increase in fruit and vegetables.

What is Louisville Metro's status?

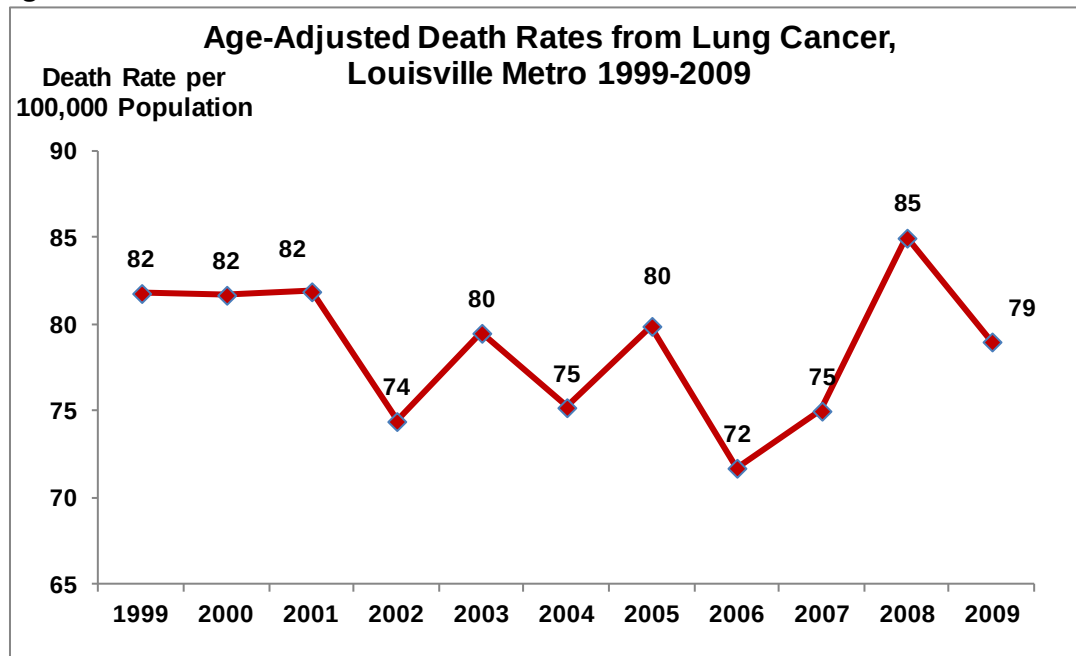
The age-adjusted death rate for lung cancer in Louisville Metro decreased from 85 per 100,000 population in 2008 to 79 per 100,000 in 2009. Yet, it remains higher than the age-adjusted rate for the state (68) and approximately 74% higher than the Healthy People 2010 goal (44.9). The age-adjusted death rate from lung cancer among Louisville Metro blacks was higher than Louisville Metro whites (84 compared to 79).

Figure 46.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

Figure 47.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health

BREAST CANCER

What is it?

Female breast cancer is a malignant tumor that starts in the cells of the breast. A malignant tumor is a group of cancer cells that can grow into (invade) surrounding tissues or spread (metastasize) to distant areas of the body. Although breast cancer occurs most often in women, men can also suffer from the disease.

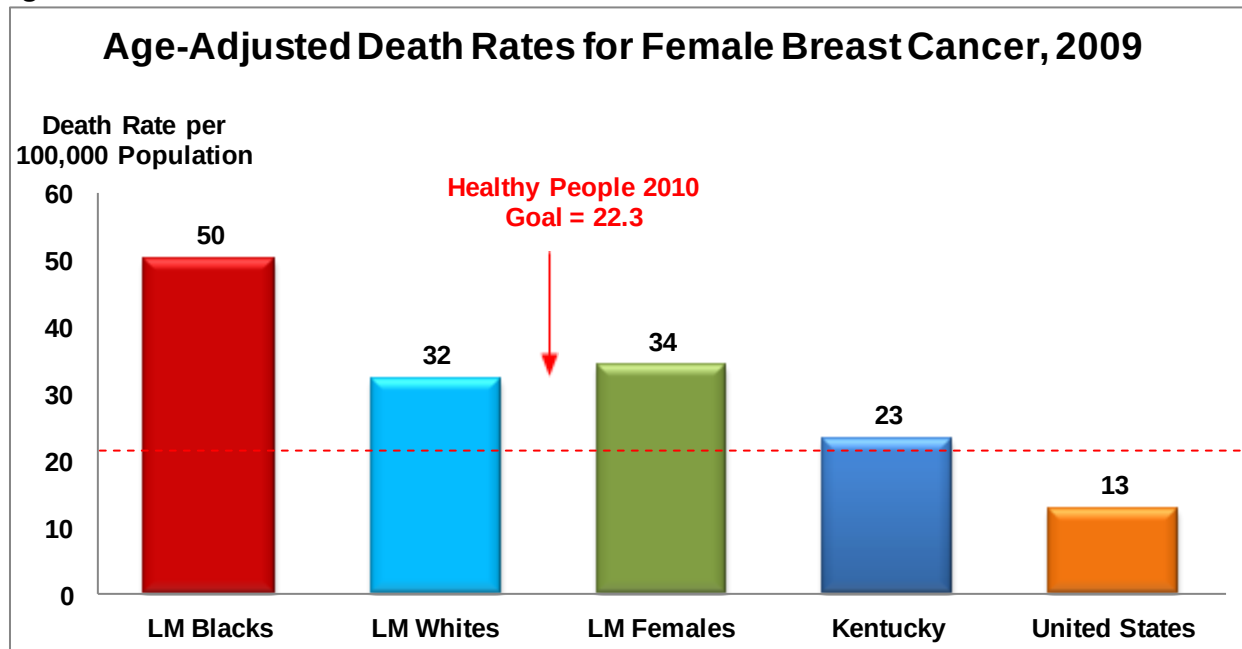
Why is it important?

Breast cancer is the second leading cause of cancer death for women. According to the American Cancer Society, the chance that breast cancer will be responsible for a woman's death is about 1 in 36.²² However, death rates from breast cancer have decreased since 1990. This is particularly true among women under the age of 50 years old. This decline has been attributed to the increase in earlier screenings, public awareness and improved treatment.

What's Louisville Metro status?

The age-adjusted death rate for female breast cancer in 2009 was 34 deaths per 100,000 female population, meeting the Healthy People 2010 goal of 22.3. However, the age-adjusted death rate for black females (50) was more than a third higher than for whites.

Figure 48.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

PROSTATE CANCER

What is it?

Prostate cancer forms in tissues of the prostate, occurring most common among older men. The prostate is a gland in the male reproductive system found below the bladder and in front of the rectum.

Why is it important?

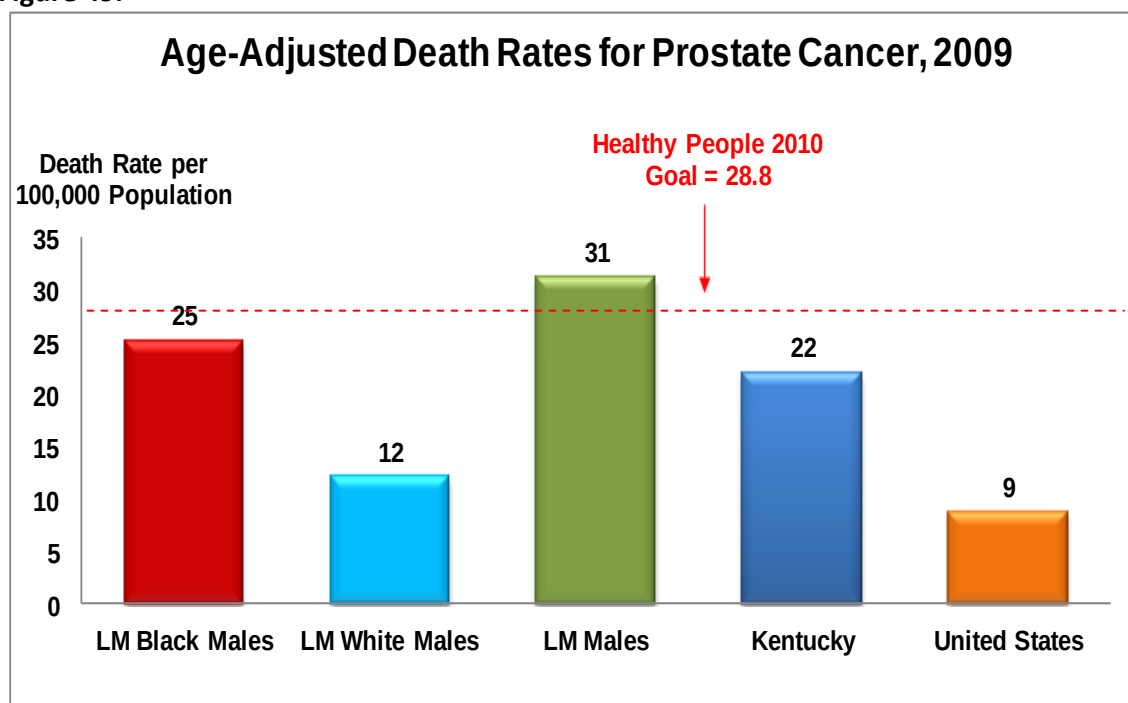
Prostate cancer is the second leading cause of cancer deaths among men in the U.S., exceeded only by lung cancer. An estimated 33,720 deaths and 240,000 new cases will occur from prostate cancer by the end of 2011.²³ According to the American Cancer Society, more than 2 million men in the U.S. count themselves as prostate cancer survivors.²⁴

Unlike other cancers, there are no definite risk factors known for prostate cancer. However, men 50 years of age or older are at a higher risk of being diagnosed with prostate cancer, as well as African-American men or those that have a close relative who has had prostate cancer.²⁵

What's Louisville Metro's status?

The age-adjusted death rate for prostate cancer in Louisville Metro was 31 per 100,000 male population. The rate for black males was double that of white males. The Louisville Metro rate for prostate cancer was also higher than the rate for the state, nation, as well as Healthy People 2010 goal.

Figure 49.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

COPD

What is it?

Chronic obstructive pulmonary disease, or COPD, refers to a group of diseases that cause airflow blockage and breathing-related problems. It includes emphysema, chronic bronchitis, and in some cases asthma.

Why is it important?

COPD is the fourth leading cause of death in the United States and causes serious, long-term disability among its survivors. According to the U.S. Centers for Disease Control and Prevention, 120,000 Americans die each year from COPD, and the numbers are increasing.²⁶

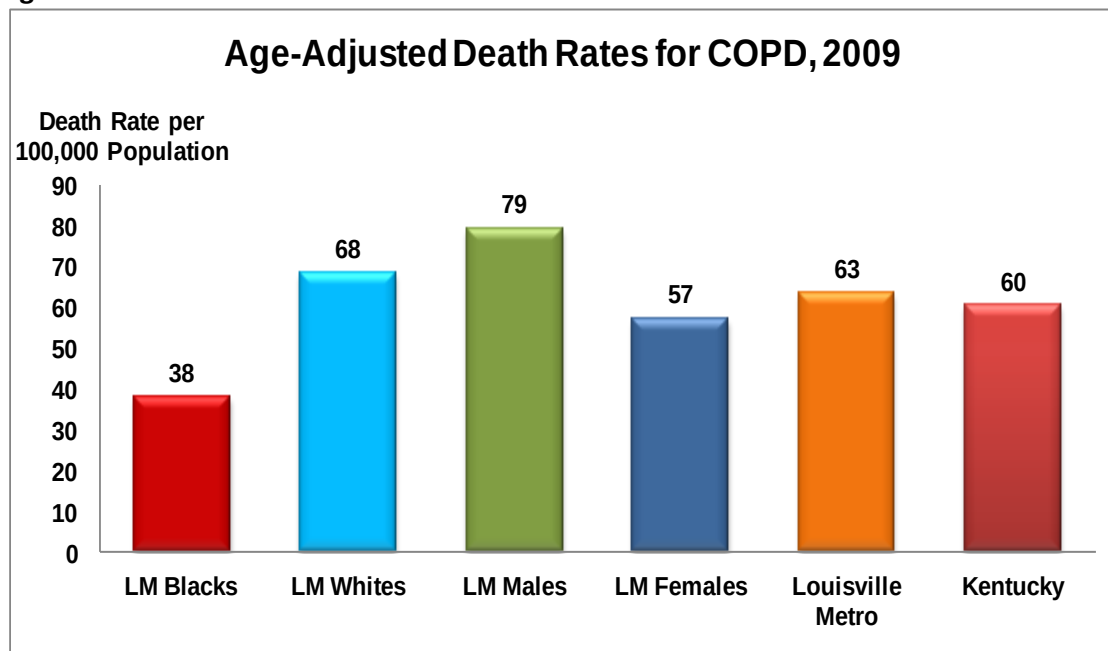
Tobacco use is a key factor in the development and progression of COPD; however asthma, exposure to air pollutants in the home and workplace, genetic factors and respiratory infections also play a role.

Early detection of COPD might alter its course and progress. A simple test can be used to measure pulmonary function and detect COPD in current and former smokers aged 45 and over and anyone with respiratory problems. Avoiding tobacco smoke, home and workplace air pollutants, and respiratory infections are all key to preventing the initial development of COPD.

What's Louisville Metro's status?

In 2009, the Louisville Metro age-adjusted rate of chronic obstructive pulmonary disease (COPD) deaths was 63 deaths per 100,000 population. However, this rate was almost double for whites than it was for blacks. Local rates were also higher than the state (60 per 100,000 population). Louisville Metro males had higher rates when compared to females (79 compared to 57 per 100,000 population).

Figure 50.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health

STROKE/CEREBROVASCULAR DISEASE

What is it?

A stroke, also called a "cerebrovascular accident," results from an interruption of the blood supply to a portion of the brain.²⁷ A stroke can be due to an insufficient supply of blood caused by a vessel becoming smaller, a blood clot, or an accumulation of fat blocking the vessel. A stroke also can be caused by a blood vessel rupturing that bleeds into the brain. This interruption in blood flow decreases the supply of oxygen and other nutrients to the cells in that part of the brain causing these cells to die.

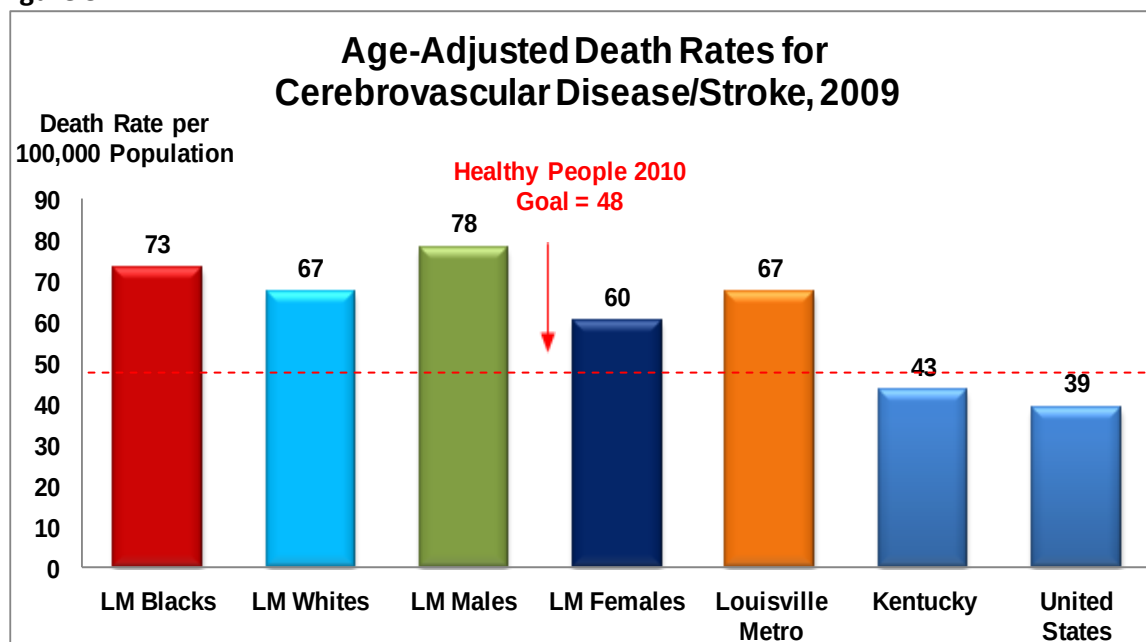
Why is it important?

Stroke remains the third leading cause of death in the United States.²⁸ Depending on the part of the brain affected, damage can result in the loss of speech, vision, movement in an arm or leg, or even death. While anyone can suffer from a stroke, there are certain factors that increase a person's risk. Uncontrollable risk factors may include increase in age and having a family history of stroke. Controllable risk factors include smoking, drinking alcohol, being overweight, lack of exercise and unhealthy diet. Taking steps toward a healthier lifestyle such as controlling blood pressure, smoking cessation, eating a healthy diet and regular exercise can lower the chances of suffering from a stroke.

What's Louisville Metro's status?

The age-adjusted death rate for stroke, or cerebrovascular disease, was 67 deaths per 100,000 population. This rate exceeds the Healthy People 2010 goal and the state rate of 48 deaths per 100,000 population. Louisville Metro blacks had a higher age-adjusted death rate from stroke (73 per 100,000 population) than whites (67 per 100,000 population).

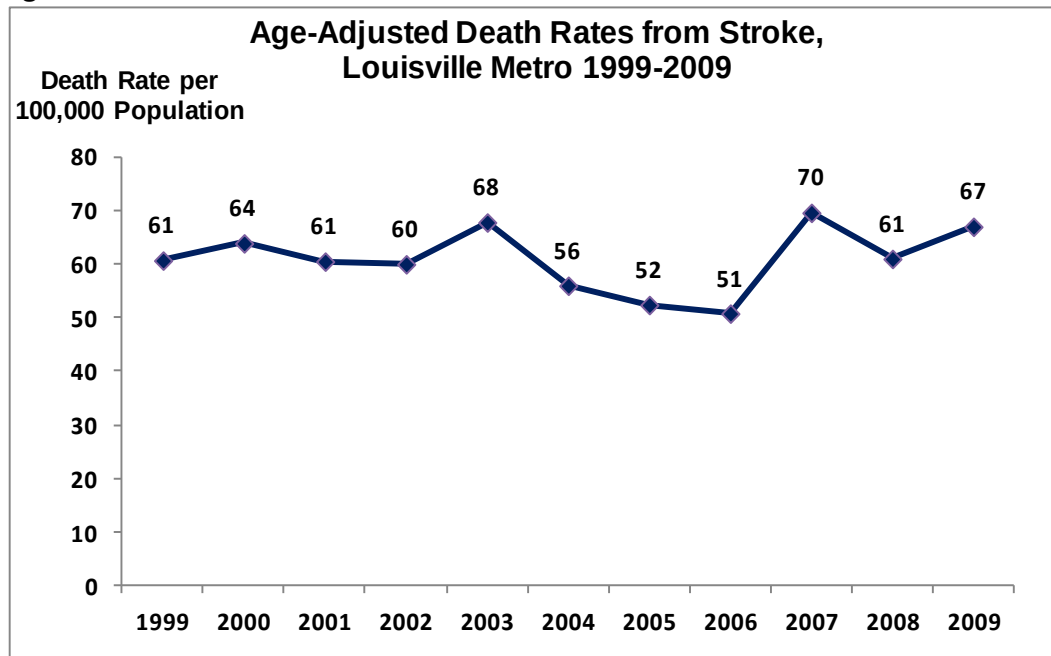
Figure 51.



Source: 2009 Louisville Metro Death Records, CHFS Department for Public Health; National Center for Health Statistics

The overall age-adjusted death rate from stroke in Louisville Metro has varied from 1999 to 2009. The rate declined from 2003 to 2006, but returned to higher rates in 2007.

Figure 52.



Source: 1999-2009 Louisville Metro Death Records, Kentucky Department for Public Health

DIABETES

What is it?

Diabetes mellitus is a group of diseases (type I, type II and gestational diabetes) characterized by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. Insulin is a hormone produced by the pancreas to regulate blood sugar. Type I diabetes, often called juvenile diabetes, usually starts early in life. Type II diabetes, sometimes called adult-onset diabetes, accounts for up to 95% of all diagnosed cases of the disease. In people with type II diabetes, the pancreas either produces little or no insulin, or the body does not respond appropriately to the insulin that is produced. Gestational diabetes occurs during pregnancy.

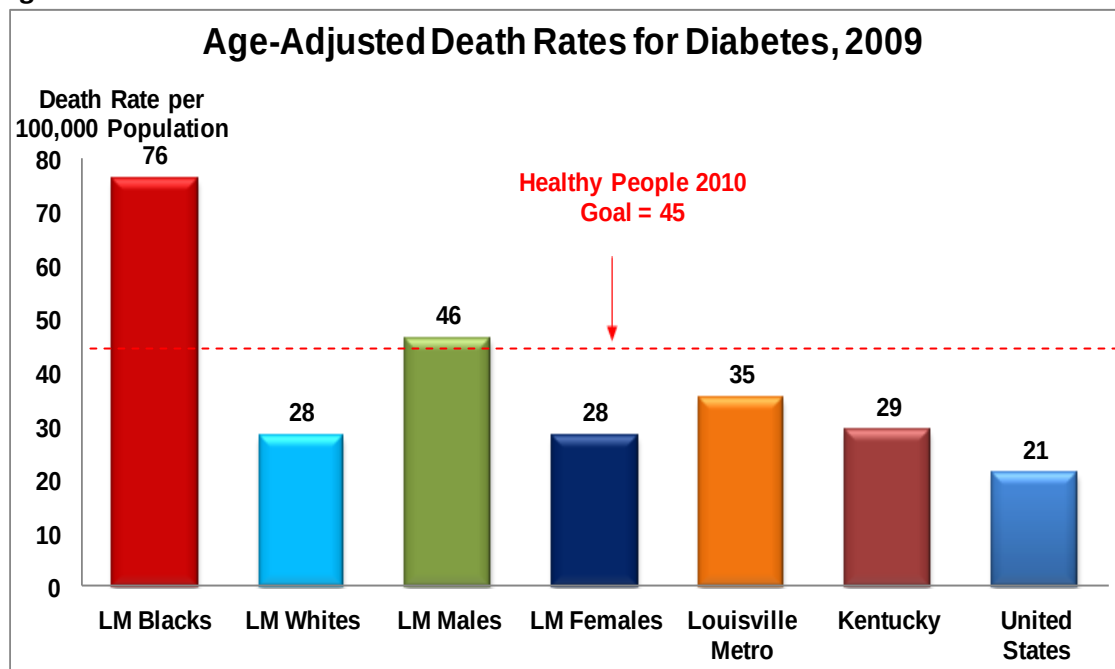
Why is it important?

Diabetes is one of the most preventable leading causes of death. According to the American Diabetes Association, 25.8 million children and adults are living with diabetes in the U.S.²⁹ Diabetes can trigger eye, heart, and kidney diseases, as well as other life-threatening health conditions. Elderly people with diabetes are more susceptible to these complications. Controlling blood glucose, blood pressure, and cholesterol levels can reduce the chance of disability. There were 1.9 million new cases of diabetes in people 20 years and older in 2010.³⁰ Several factors account for this increase in the incidence of diabetes. These include lifestyle and behavioral factors such as a high in fat diet, physical inactivity and obesity.

What's Louisville Metro's status?

The age-adjusted diabetes mortality rate was 35 deaths per 100,000 population for Louisville Metro in 2009. This rate was higher than state and national rates of 29 and 21, respectively. For Louisville Metro African Americans, the age-adjusted death rate from diabetes (76 per 100,000 population) was approximately three times the rate for Louisville Metro Whites. The age-adjusted death rate from diabetes was almost twice as high for Louisville Metro males than for females.

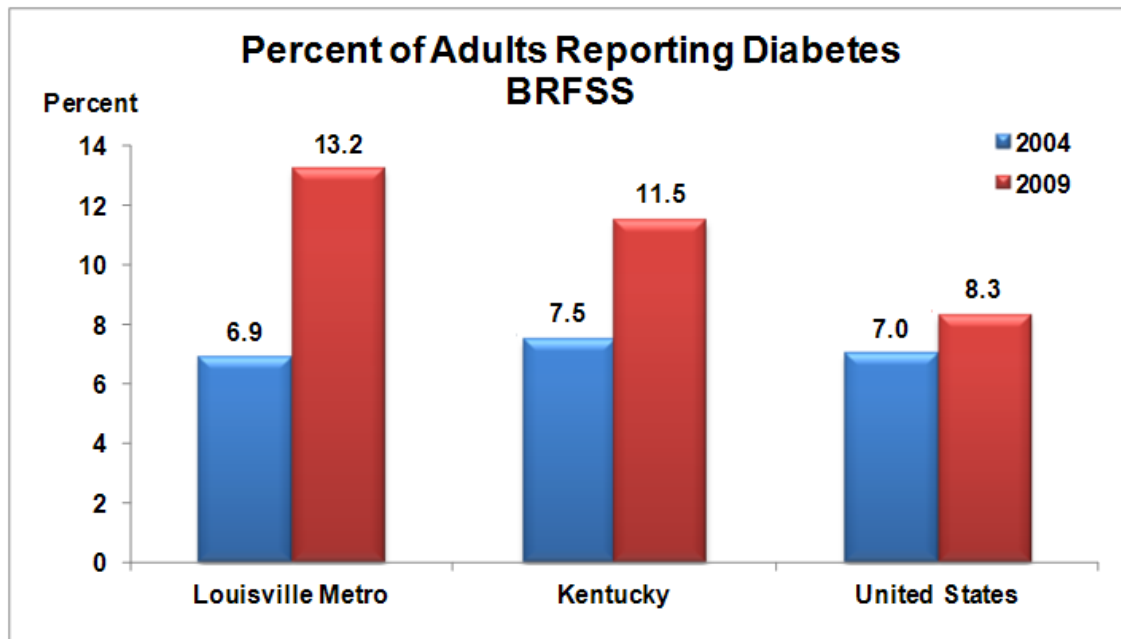
Figure 53.



Source: 2009 Louisville Metro Death Records, CHFS Department for Public Health; National Center for Health Statistics

According to the BRFSS survey, the number Louisville Metro adults that reported having diabetes increased from 6.9% in 2004 to 13.2% in 2009.

Figure 54.



ASTHMA

What is it?

Asthma is a chronic disease of the airways that carry air to the lungs. Asthma causes inflammation of these airways resulting in the obstruction of airflow and mucus production. When this occurs, people can experience episodes of breathlessness, wheezing, and coughing that can be distressing and even fatal.

Why is it important?

According to the U.S. Centers for Disease Control and Prevention, the number of people with asthma in the U.S. grew by 4.3 million from 2001 to 2009.³¹ About 25 million Americans (8% of the population) had asthma in 2009. Asthma rates are higher among certain racial and ethnic groups. From 2001 to 2009, asthma rates rose among black children by almost 50%. As the number of people living with asthma increases so has the economic burden. Asthma related costs in the U.S. grew from about \$53 billion in 2002 to about \$56 billion in 2007.

Asthma can have a negative effect on the physical, cognitive, social, and emotional development of a child. It is also the leading cause of school absenteeism. In 2003, an estimated 12.8 million school days were missed due to asthma and it is the third ranking cause of hospitalization among children under 15 years of age.³²

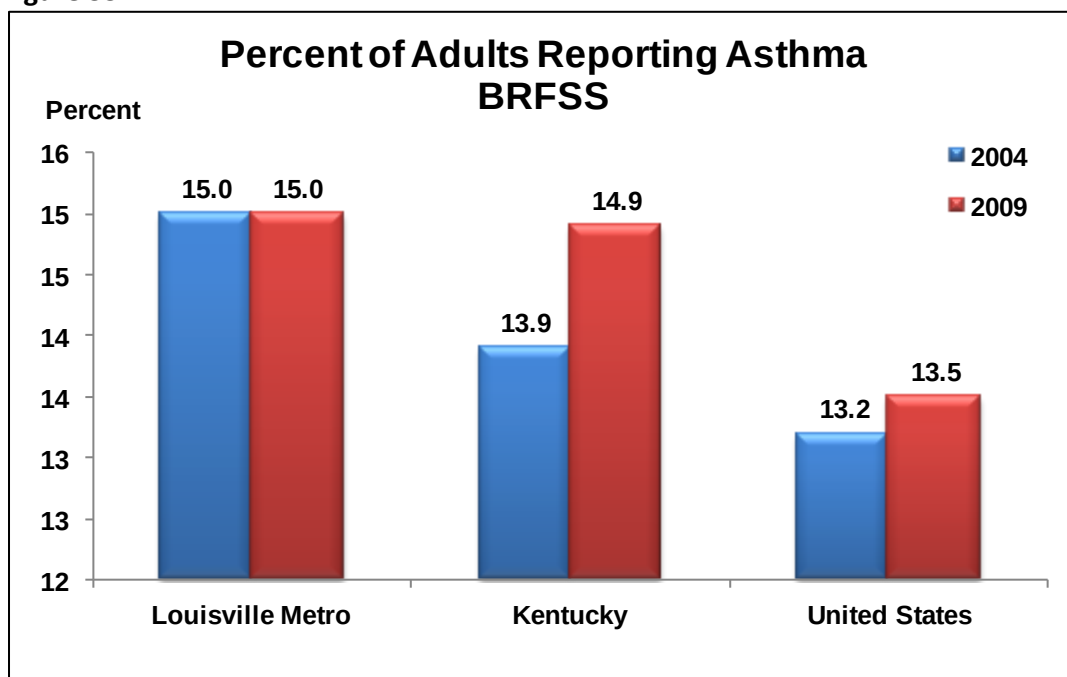
Asthma is a lifelong disease that affects the lungs and there is no cure.³³ Therefore, effective management is essential. Most people with asthma can control their symptoms and prevent asthma attacks by avoiding asthma triggers and correctly using prescribed medicine, such as inhaled

corticosteroids. Triggers for asthma can be found at school, work, home, outdoors, and elsewhere. These triggers can include tobacco smoke, mold, outdoor air pollution, and infections linked to influenza, colds, and other viruses.³⁴

What's Louisville Metro's status?

Fifteen percent of Louisville Metro adults participating in the BRFSS survey reported being told that they have asthma by a physician or other health professional. This was slightly higher compared to the state and national percentage.

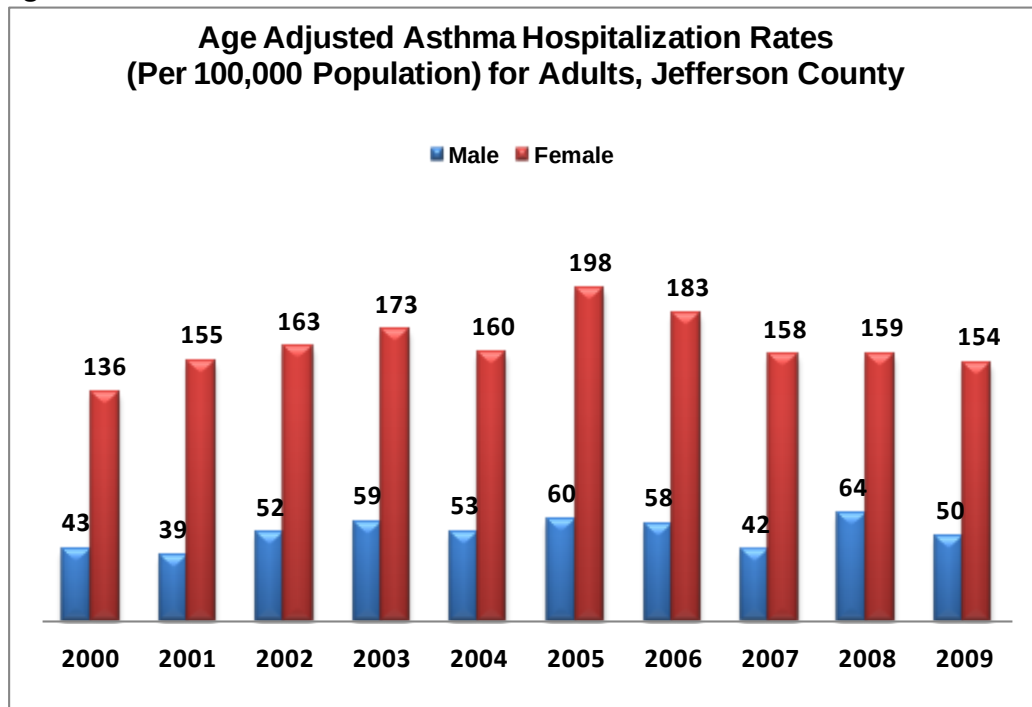
Figure 55.



Source: Kentucky Department for Public Health; U.S. Centers for Disease Control and Prevention.

The age-adjusted hospitalization rates for asthma were higher for males than females in Louisville Metro and Kentucky from year 2000 to 2009. In 2000, the age-adjusted asthma hospitalization rate for females was 43 and for males was 136 in Louisville Metro. These rates increased for both genders in 2009 to 50 for females and 154 for males but remained lower than the state rate for females (69) and males (205).

Figure 56.



Source: Kentucky Department for Public Health

BEHAVIORAL RISK FACTORS

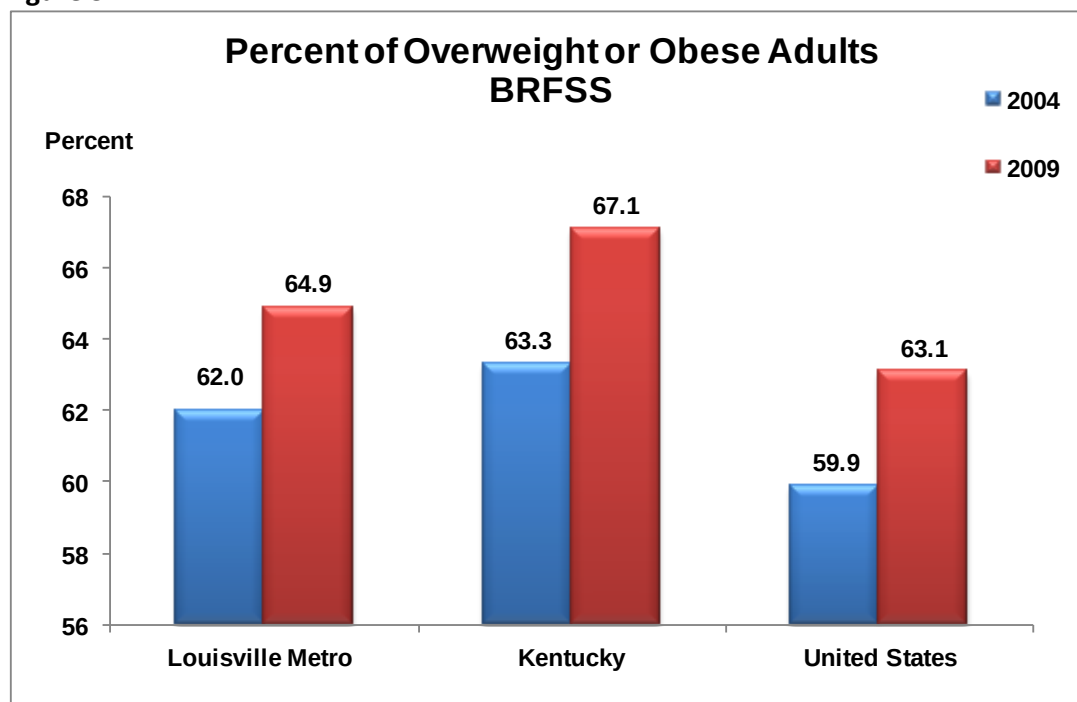
Chronic diseases have certain risk factors associated with them. Modifications in a person's lifestyle can decrease the risk of some of these factors. The Behavioral Risk Factor Surveillance System (BRFSS) gathers information about these risk factors for Louisville Metro residents from a random telephone survey.

Obesity and Overweight

Being overweight increases your risk of having a stroke, heart disease, high blood pressure, and type II diabetes.³⁵ The BRFSS survey asked participants for their height and weight to compute a Body Mass Index (BMI). The BMI is a calculated index that attempts to normalize weight for height as an indirect measurement of body fat. A BMI of 25 to 29 is classified as overweight and a BMI of 30 or more indicates obesity.³⁶

In 2004, 62% percent of Louisville Metro adults indicated they were overweight or obese. This increased to 64.9% in 2009. Thirty-three percent of Louisville Metro adults are obese. This was more than twice the Healthy People 2010 goal (15%).

Figure 57.



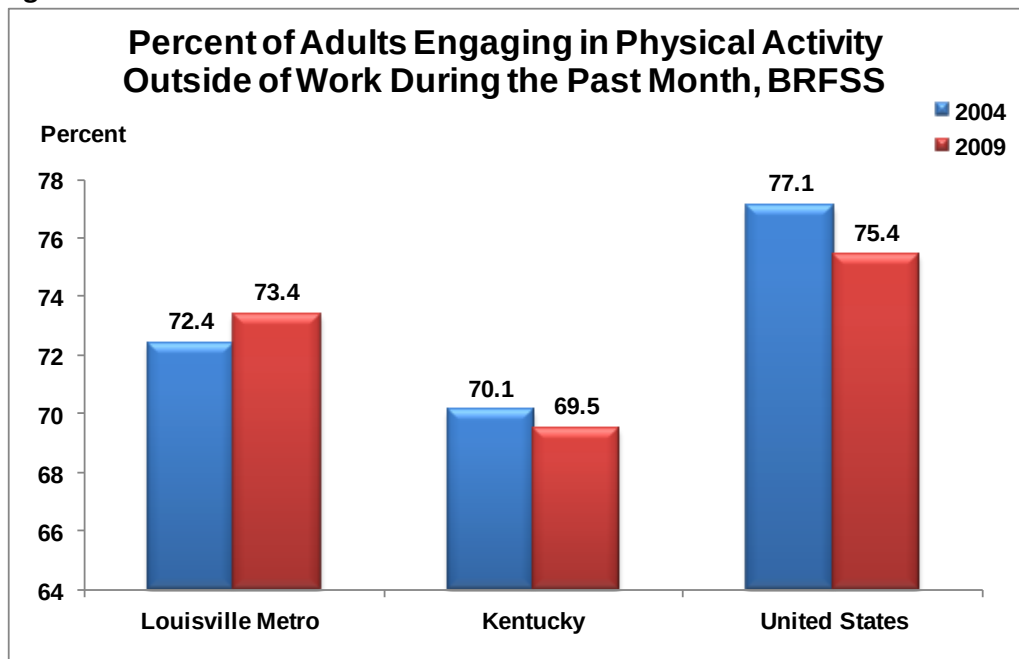
Source: Kentucky Department for Public Health; U.S. Centers for Disease Control and Prevention

Physical Activity

Moderate exercise (i.e., walking at a brisk pace, bicycling, aerobics or yoga) helps keep blood pressure and cholesterol levels within normal ranges, thereby reducing the risk of heart disease, stroke, and diabetes.³⁷ Obesity occurs when the amount of calories consumed in a diet increases while the level of activity does not. Moderate activity is needed to maintain a healthy weight.

The percentage of Louisville Metro adults engaging in some physical activity outside of work in the past month remained nearly the same from 2004 and 2009. The Healthy People 2010 goal for adults engaging in moderate or vigorous physical activity was 50%.

Figure 58.



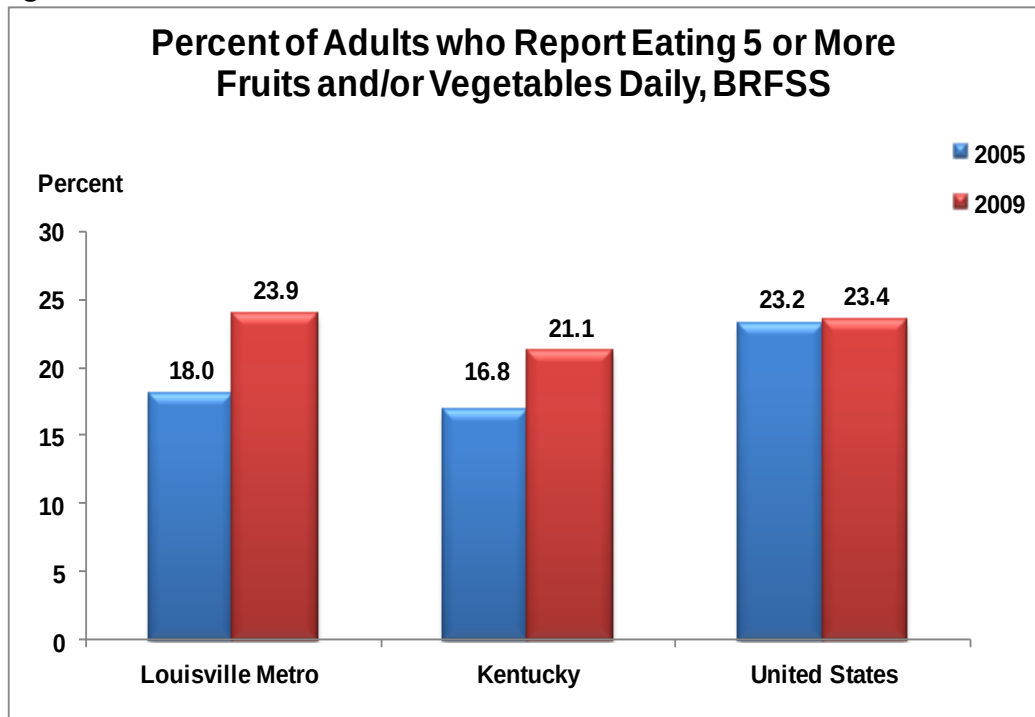
Source: Kentucky Department for Public Health; U.S. Centers for Disease Control and Prevention

Nutrition

A diet high in fat and cholesterol increases the risk of heart disease, stroke, and diabetes. For optimal health, it is recommended that you eat five or more servings of fruits and vegetables every day.³⁸ In 2011, the U.S. Department of Agriculture (USDA) modified its nutritional guidelines and replaced the nutritional pyramid with an image of a plate that is divided into four sections – fruits, vegetables, grains and protein. The USDA “My Plate” is intended to be an easier guide to a healthy diet.

The percentage of Louisville Metro residents that reported eating five or more servings of fruits and vegetables each day (23.9%) was greater than the percentages for Kentucky and United States in 2009. While respondents reported eating more fruits and vegetables from 2005 to 2009, the data suggests that the majority of Louisville Metro residents are still not eating the recommended amount.

Figure 59.



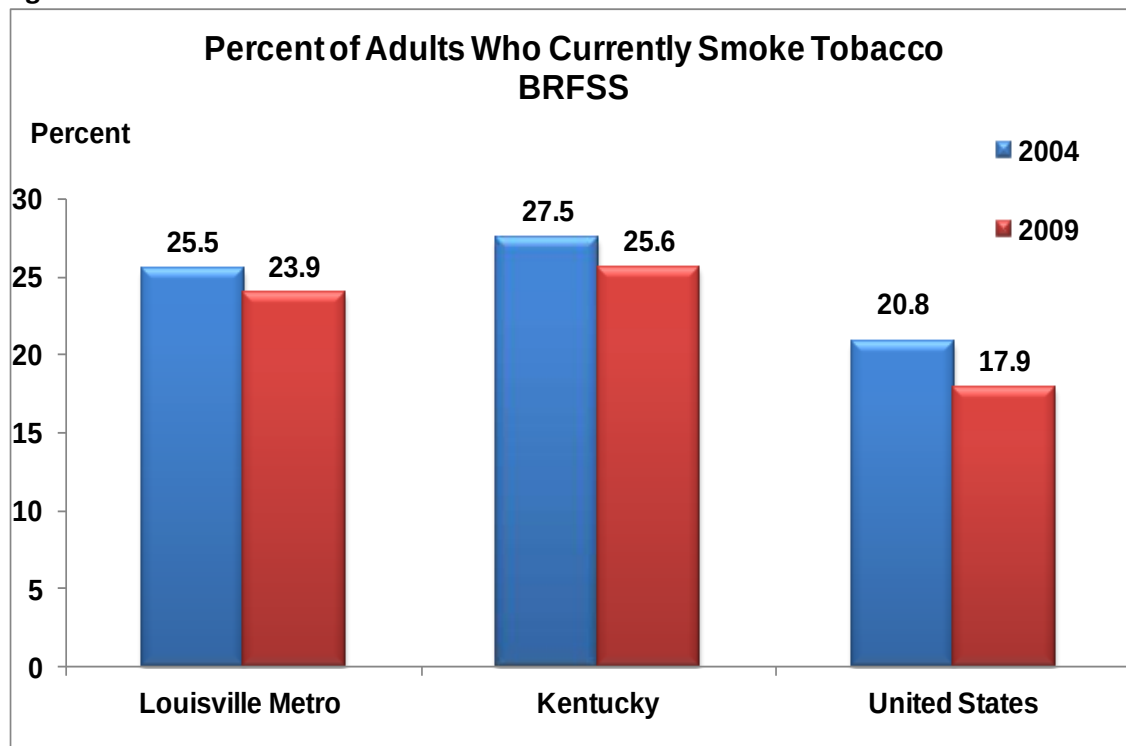
Source: Kentucky Department for Public Health; U.S. Centers for Disease Control and Prevention

Cigarette Smoking

Cigarette smoking has been linked to heart attacks, strokes, artery disease in the legs, preterm birth and lung cancer.³⁹ Secondhand smoke also can result in the same problems for the person inhaling the smoke from smokers, as well as increased emergency room visits and hospitalizations for children with asthma.

Following the state and national trend, the percent of adults that smoke decreased from 25.5% in 2004 to 23.9% in 2009. This remained above the Healthy People 2010 goal for cigarette smoking prevalence (12%).

Figure 60.



Source: Kentucky Department for Public Health; Centers for Disease Control and Prevention

MENTAL HEALTH

What is it?

The World Health Organization (WHO) defines mental health as a “state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.”⁴⁰

Mental health is a term used as in reference to mental illness. Mental illnesses are medical conditions that disrupt a person's thinking, feeling, mood, ability to relate to others and daily functioning. Very often it results in a diminished capacity for coping with the ordinary demands of life and may be caused by a reaction to environmental or internal stresses, genetic factors, biochemical imbalances, or a combination of these factors. There are more than 200 classified forms of mental illness with depression being the most common.⁴¹

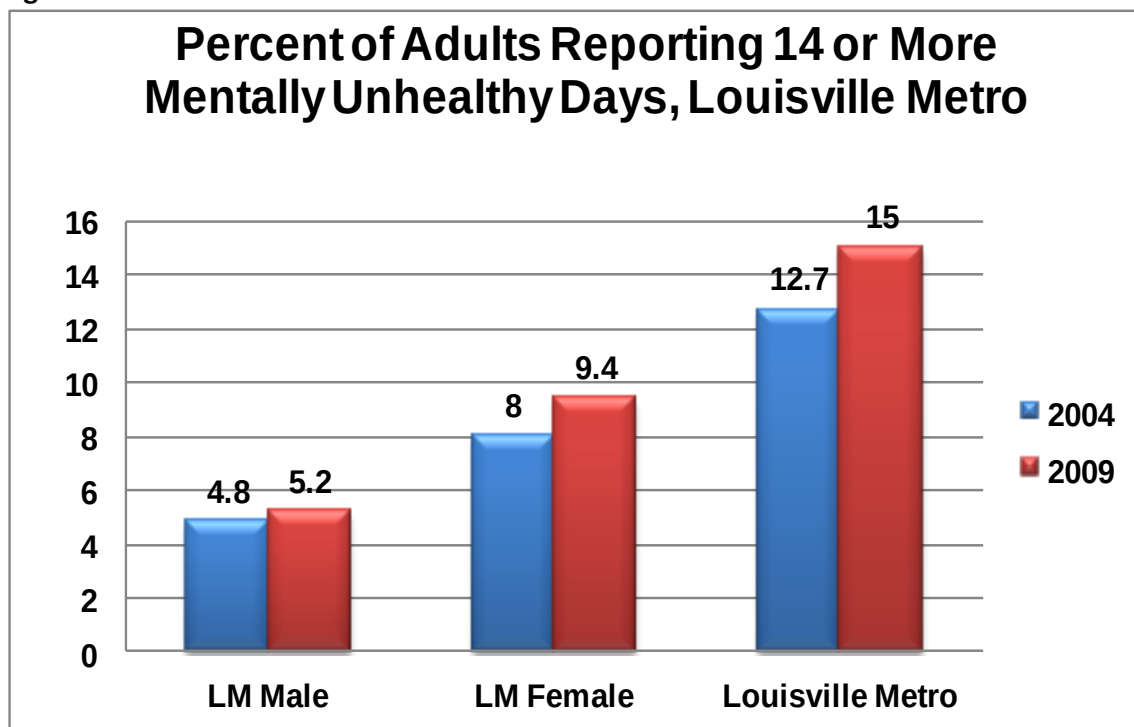
Why is it important?

According to the U.S. Centers for Disease Control and Prevention, depression will be the second leading cause of disability in the world by the year 2020.⁴² Research has shown that mental illness, particularly depressive disorders, is related to the occurrence of chronic diseases such as diabetes, cancer and heart disease. It can also be strong drivers of many risk behaviors including smoking, drug use and physical inactivity.⁴³

What is Louisville Metro's status?

The percentage of adults reporting 14 or more “mentally unhealthy” days increased from 12.7% in 2004 to 15% in 2009. More females (9.4%) reported mentally unhealthy days compared to males (5.2%).

Figure 61.



Source: 2009 Behavioral Risk Factor Surveillance Survey, Kentucky Department for Public Health

INJURY AND VIOLENCE

UNINTENTIONAL INJURIES

Injuries can be “unintentional” or “intentional”. The distinction is whether the person causing the injury did so accidentally or on purpose.

What is it?

An unintentional injury occurs when there is physical or bodily harm that was not purposefully inflicted.

Why is it important?

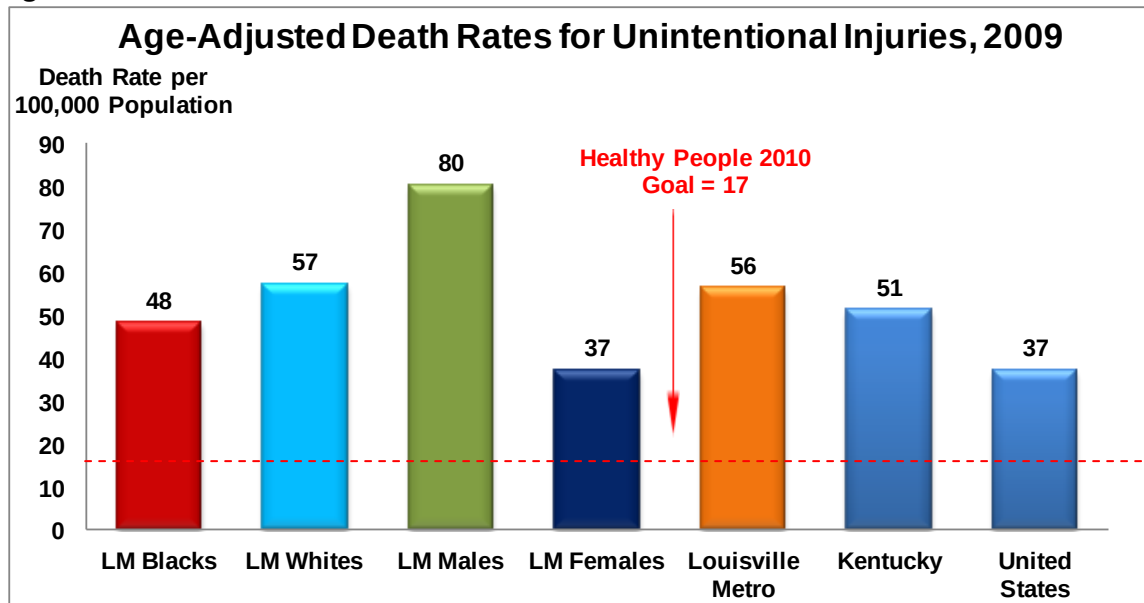
Unintentional injuries are the leading cause of death among those ages 5 to 34 years old in the U.S. Unintentional injuries include motor vehicle accidents, pedestrian and bicycle collisions, burns, falls, drowning, poisoning and suffocation. Such injuries pose a serious public health concern because they impact premature mortality. Reducing unintentional injuries also create safer communities, resulting in healthier communities.

Unintentional injuries affect not only the individual, but society as well. Medical care, rehabilitation, lost wages and lost productivity associated with injuries costs billions of dollars each year in the U.S. A study released by U.S. Centers for Disease Control and Prevention reported the cost of motor vehicle crash related deaths in Kentucky totaled \$871 million in 2005.

What is Louisville Metro’s status?

There were 395 unintentional injury deaths in Louisville Metro in 2009. The age-adjusted mortality rate from unintentional injuries for all ages was 56 deaths per 100,000 population. This was higher than the national rate (37) and the Healthy People 2020 goal of 36 deaths per 100,000 population. For Louisville Metro whites, the age-adjusted death rate was 57 per 100,000 population and for blacks it was 48 per 100,000 population.

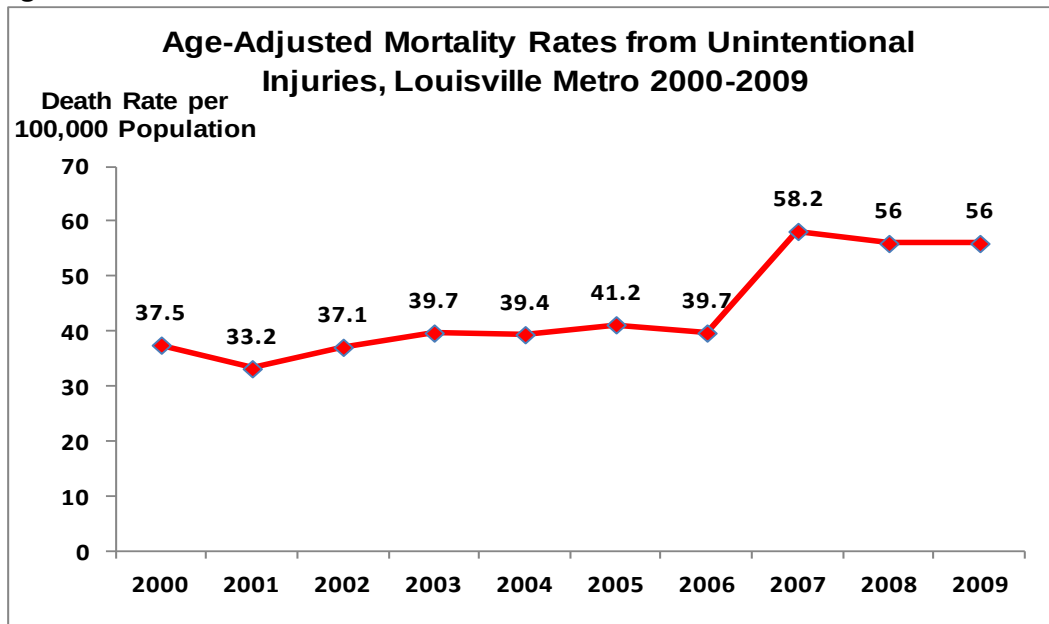
Figure 62.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

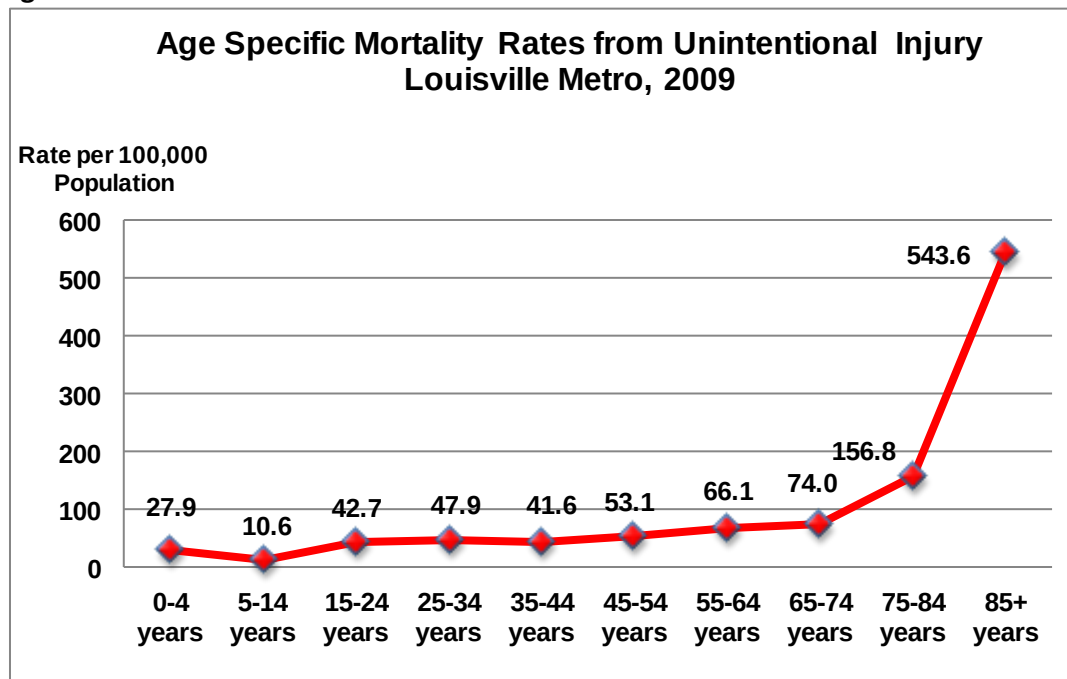
For the first half of the past decade, the mortality rate for unintentional injury remained stagnant. The rate peaked from 39.7 in 2006 to 58.2 in 2007. As of 2009, the age-adjusted mortality rate for unintentional injury was highest among males (80) when compared to females and local rates were higher than the state. Senior citizens continue to have the highest death rate from unintentional injuries (543.6).

Figure 63.



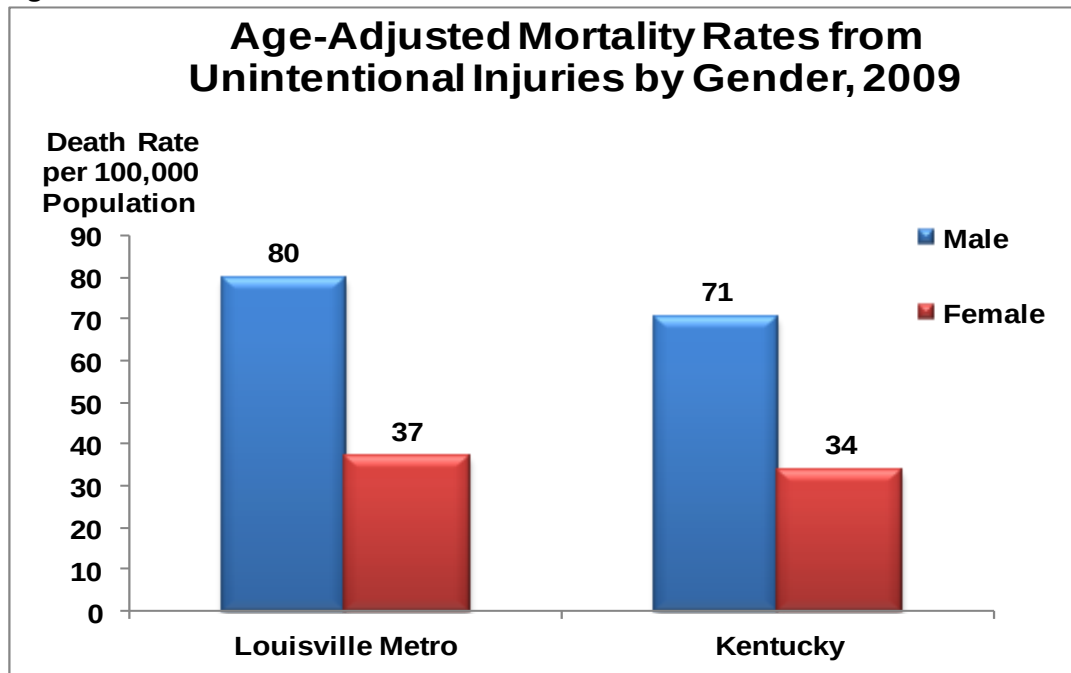
Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health

Figure 64.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health

Figure 65.

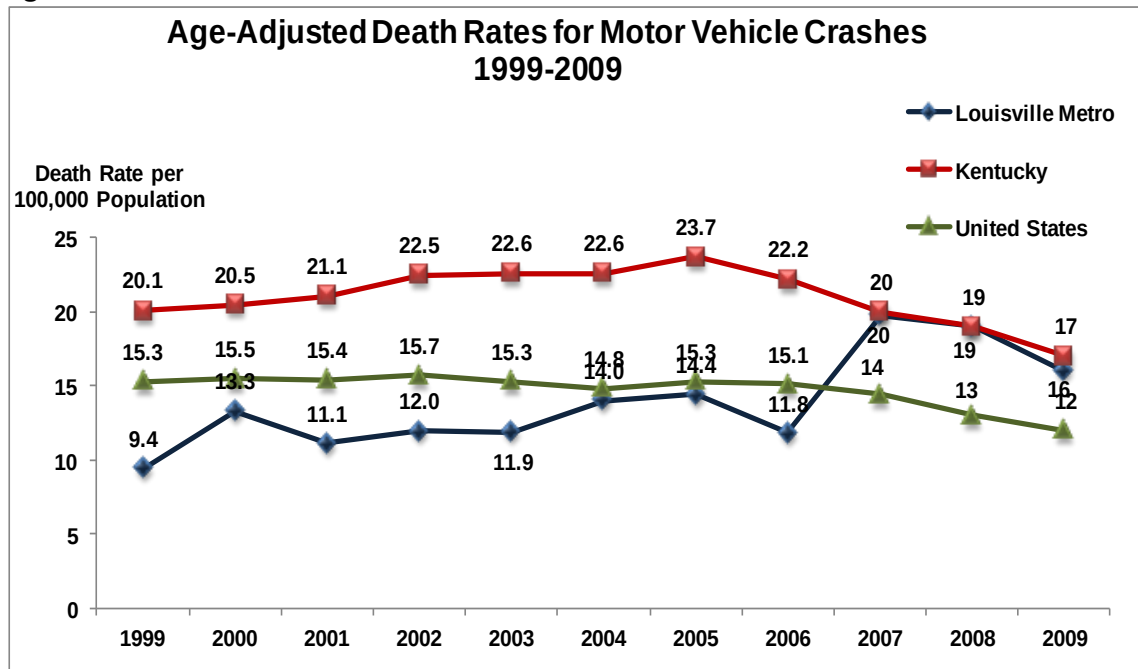


Sources: 2009 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

MOTOR VEHICLE CRASHES

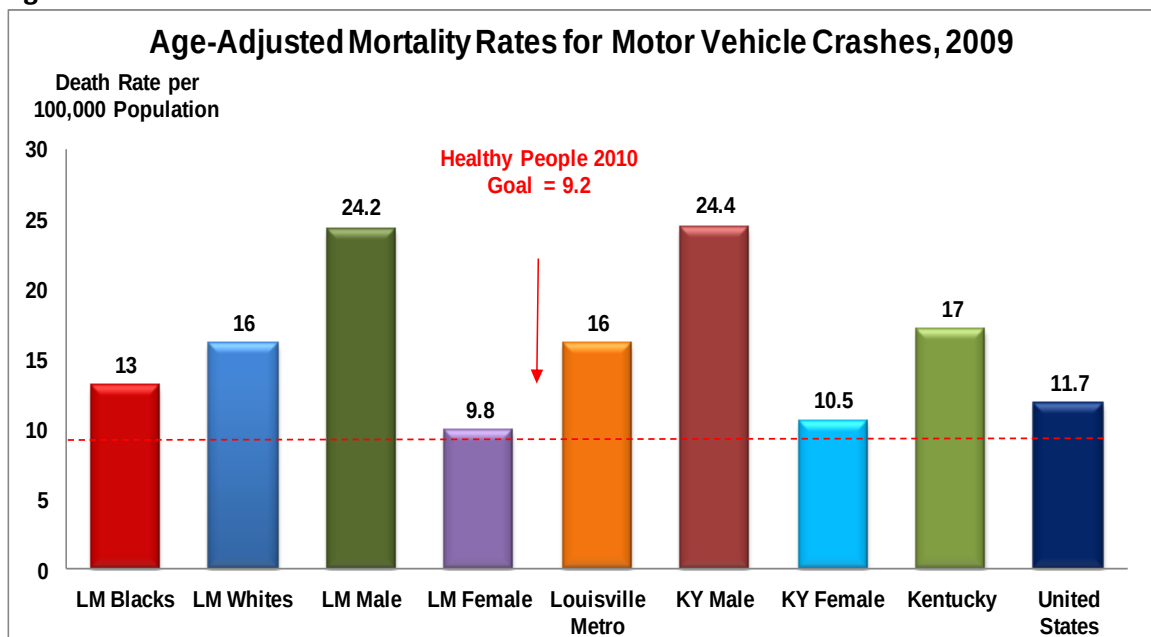
In 2009, the Louisville Metro age-adjusted mortality rate from motor vehicle crashes was higher than the national rate and Healthy People 2010 goal of 9.2. As with previous years, Louisville Metro whites exhibited a higher age-adjusted death rate from motor vehicle crashes than blacks. Males exhibited a greater age-adjusted mortality rate from motor vehicle crashes than females. Between 2000 and 2006, Louisville Metro had lower age-adjusted death rates for motor vehicle crashes. However, in 2007 Louisville Metro rates increased, surpassing the national average to 20 per 100,000.

Figure 66.



Source: 2009 Louisville Metro Death Records; Kentucky Department for Public Health; National Center for Health Statistics

Figure 67.

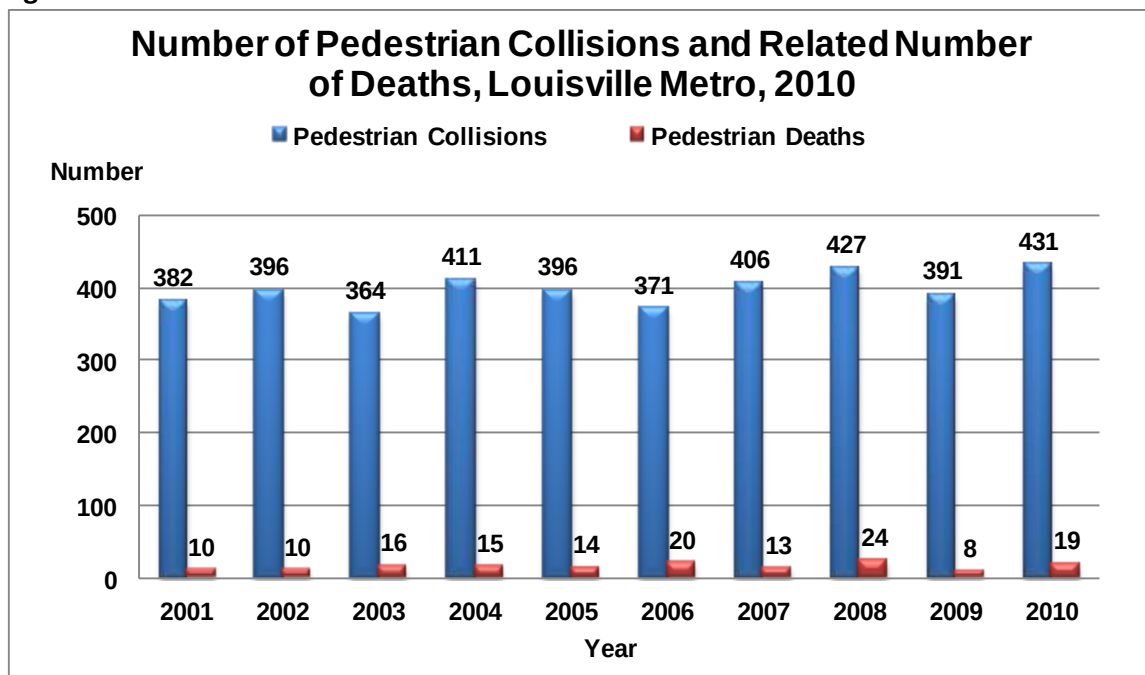


Source: 2009 Louisville Metro Death Records; Kentucky Department for Public Health; National Center for Health Statistics

PEDESTRIAN AND BICYCLE CRASHES

For Louisville Metro, the number of bicycle and pedestrian collisions did not substantially change between 2000 and 2010. However, for the past ten years, pedestrian collisions occurred more frequently than bicycle. As of 2010, there were 166 bicycle collisions and 431 pedestrian collisions.

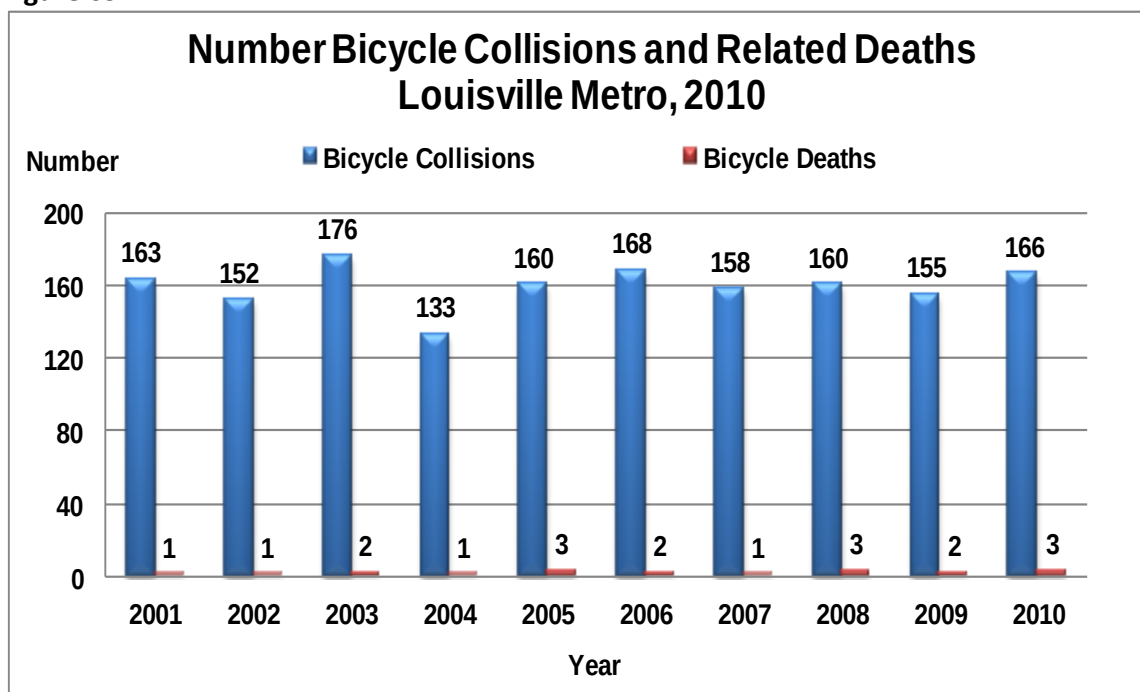
Figure 68.



Source: 2000-2010 Kentucky Uniform Police Traffic Collision Reports

Although there was a decline in the number of bicycle collisions from 2003 to 2004, bicycle collisions have increased since 2001 to 166 in 2010. Bicycle deaths also increased from 1 in 2001 to 3 in 2010.

Figure 69.



Source: Kentucky Uniform Police Traffic Collision Reports, 2001-2010

INTENTIONAL INJURIES

What is it?

An intentional injury occurs when there is physical or bodily harm that was purposefully inflicted. This includes injuries as the result of violence or suicide. For purposes of this report, non-fatal intentional injuries are not included.

Why is it important?

Homicide is one of the top-five causes of death in the age groups between 1 and 34 years in the U.S. In 2007, there were 18,361 homicides, with an age-adjusted mortality rate of 6.1.⁴⁴ Black men have a disproportionately higher rate of homicide in the U.S. Homicide was the fourth leading cause of death for black men in the U.S. and the sixth leading cause of death for Hispanics in 2006.⁴⁵

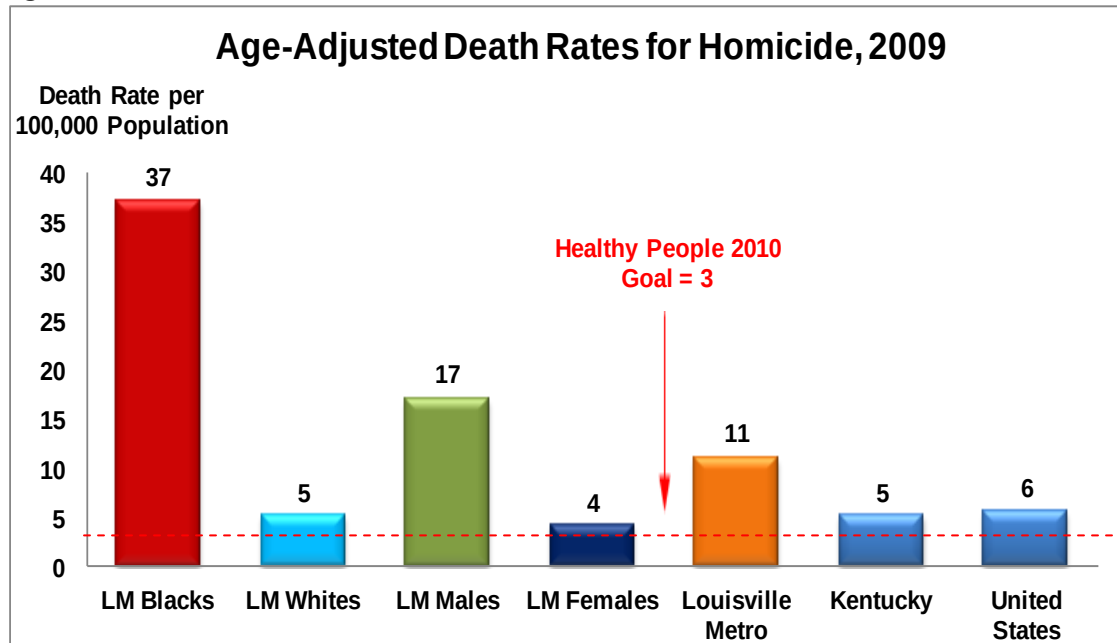
Like homicide, suicide is a serious public health issue that has a lasting impact on communities. In 2006, suicide was ranked as the 11th leading cause of death among persons ages 10 years and older, accounting for 33,289 deaths.⁴⁶ Causes of suicide are complex and determined by multiple factors. They can include mental health issues, substance abuse, alcoholism, a history of abuse or loss. However, protective factors such as clinical care for mental, physical and substance abuse disorders are designed to “buffer” individuals from suicidal thoughts and behavior. These protective factors are considered to be effective prevention.⁴⁷

What's Louisville Metro's status?

HOMICIDE

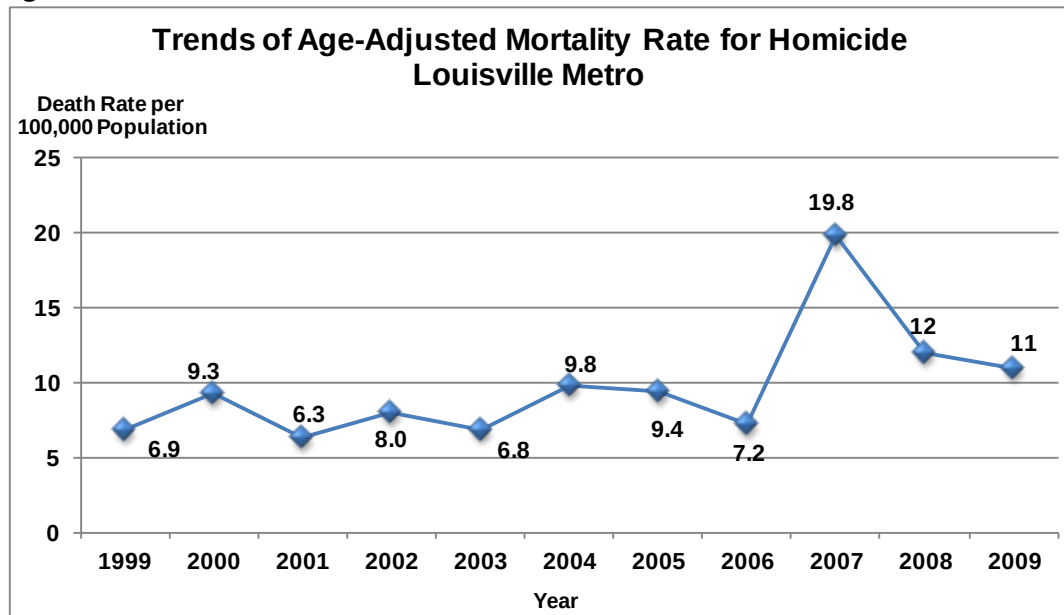
In 2009, the age-adjusted mortality rate from homicide in Louisville was 11 deaths per 100,000 population. This rate was more than double to the state (5) and nation (5.5) for the same year. It also exceeds the Healthy People 2010 goal of 3 deaths per 100,000 population. Age-adjusted death rates for blacks (37) remained higher than for whites (5) in Louisville Metro.

Figure 70.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

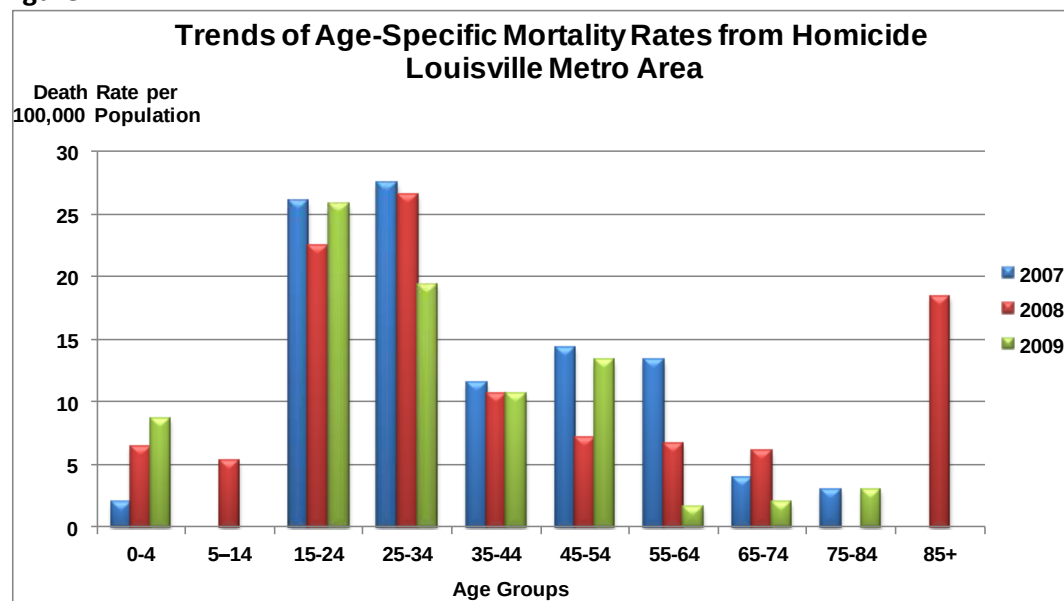
Figure 71.



Source: Louisville Metro Death Records, Kentucky Department for Public Health

Since 1999, homicide death rates ranged from 6.9 to 11 per 100,000 population, with a sharp rise occurring between 2006 and 2007. Death rates by age from homicide are the highest among age groups of 15 to 24 years and 25 to 34 years. However, homicide rates for the age group 45 to 54 years also increased from the previous year. For the age group 85 years and older, homicide death rates decreased from the previous year. Age-adjusted homicide death rate for males was more than four times that for females.

Figure 72.

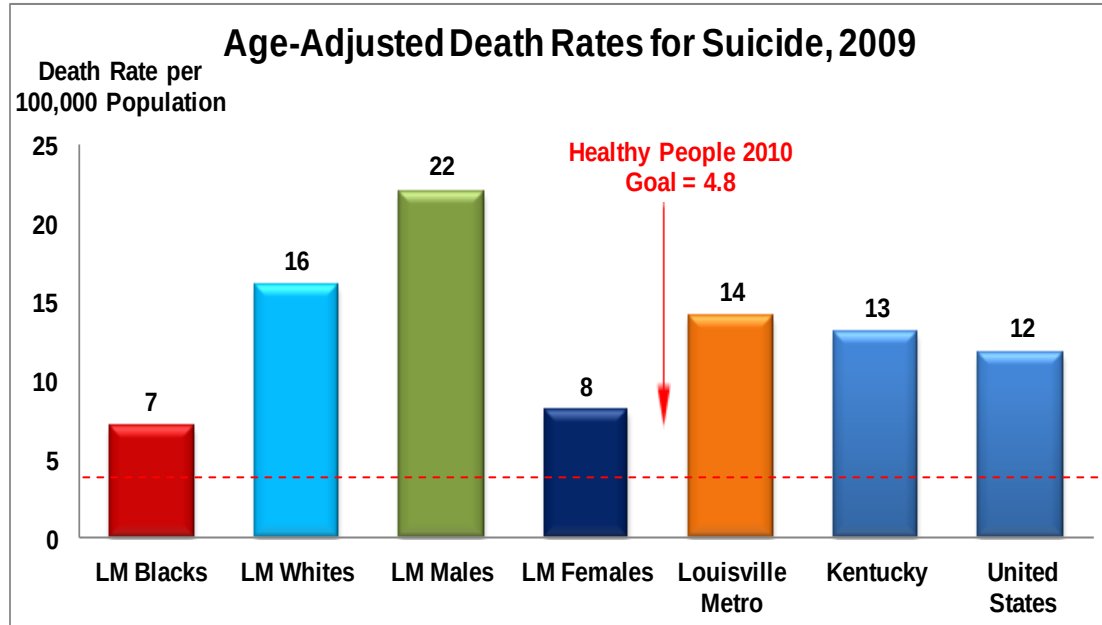


Source: 2008, 2009 Louisville Metro Death Records, Kentucky Department of Public Health

SUICIDE

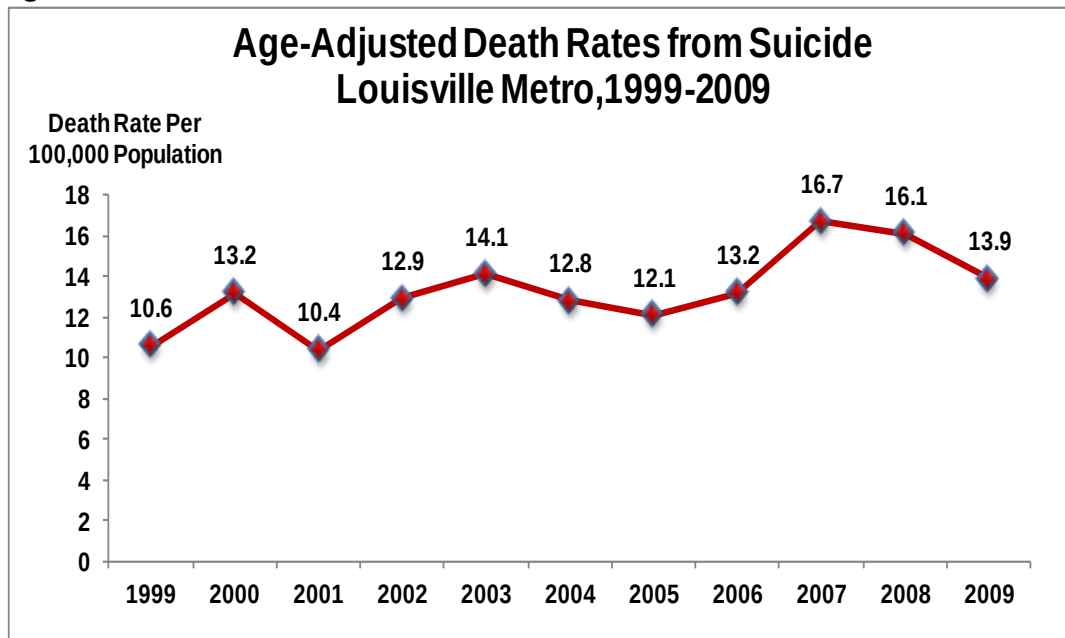
The number and rate of suicide deaths in Louisville Metro have fluctuated since 1996 with no consistent trend. Ninety-eight suicide deaths occurred in Louisville Metro in 2009. The age-adjusted mortality rate of 13.9 per 100,000 population was higher than the state rate of 13 and national rate (12). Suicide deaths decreased from the previous year (16 per 100,000). Whites have higher rates for suicide than blacks.

Figure 73.



Source: 2009 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

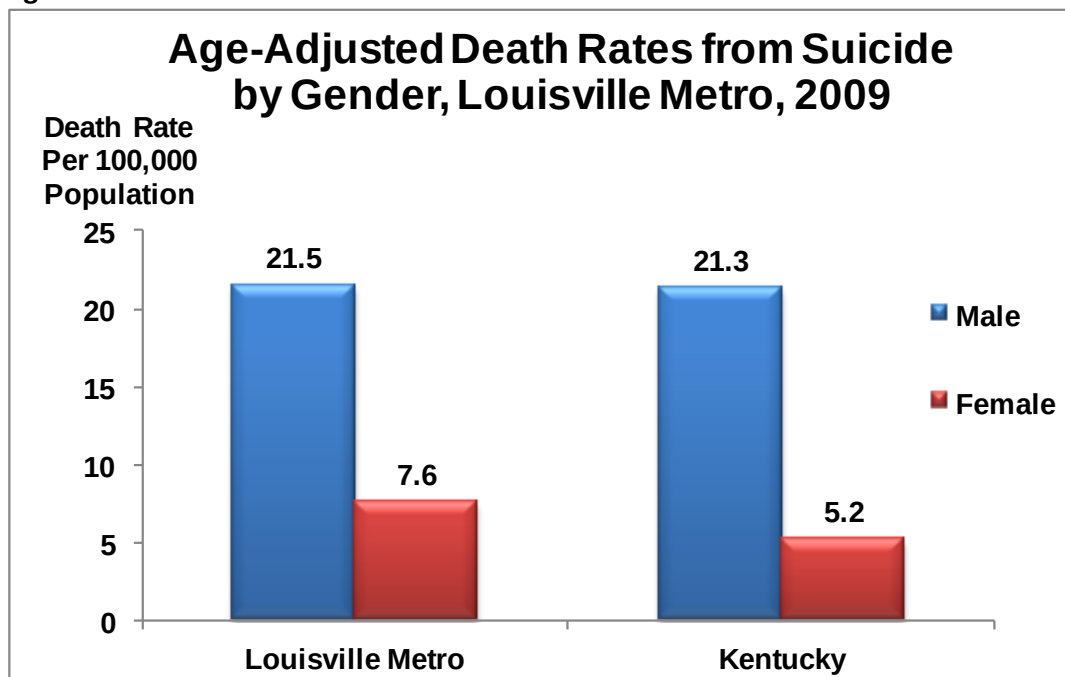
Figure 74.



Source: Louisville Metro Death Records, Kentucky Department for Public Health

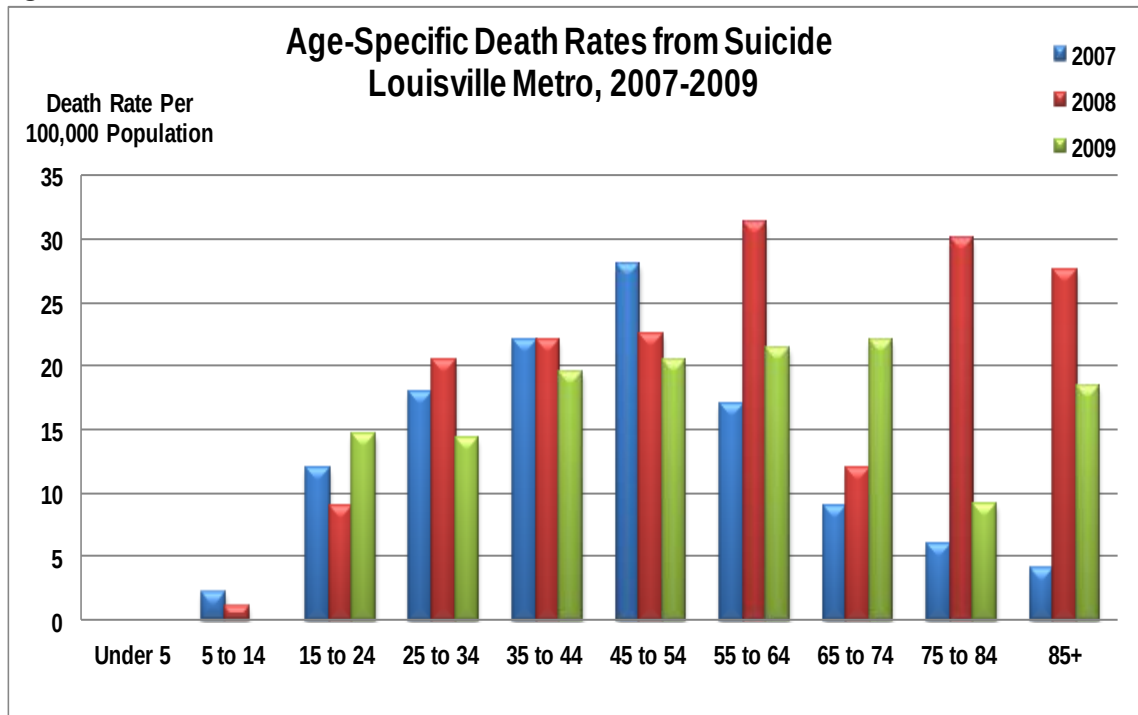
In 2009, the highest rate of suicide was among those aged 65 to 74 years old, followed by those aged 55 to 64 years old. During 2009, the Louisville Metro age-adjusted suicide mortality rate for males was approximately three times higher than females.

Figure 75.



Source: 2009 Louisville Metro Death Records, Kentucky Department of Public Health

Figure 76.



Source: 2009 Louisville Metro Death Records, Kentucky Department of Public Health

COMMUNICABLE DISEASES

The incidence (number of new cases reported) of communicable diseases is often used as an important indicator of the status of a community's health. The table below contains the number of new case reports and the rates per 100,000 population during calendar year 2009 for selected communicable diseases for Louisville Metro, Kentucky, and the United States. It also includes for comparison purposes, the rate for Healthy People 2010 were applicable. Calendar year 2009 data is the most recent year of data available that allows comparisons between local, state, and national case rates.

Table 4.

Communicable Disease Rates, 2009 (Rate=incidence per 100,000)				
	Louisville Metro	Kentucky	U.S.	HP 2010
Population Estimates (denominator)	721,594	4,314,113	307,006,550	
HIV (Rate)	18.2	9.1	17.4	NRG
HIV (Case Count)	131	393	42,959	
Primary and Secondary Syphilis (Rate)	5.7	2.2	4.6	0.2
Primary and Secondary Syphilis (Case Count)	41	92	13,997	
Gonorrhea (Rate)	259.8	89.6	99.1	19.0
Gonorrhea (Case Count)	1,875	3,827	301,174	
Chlamydia (Rate)	561.0	311.4	409.2	NRG
Chlamydia (Case Count)	4,048	13,293	1,244,180	
Tuberculosis (Rate)	3.5	1.8	3.8	1.0
Tuberculosis (Case Count)	25	77	11,545	
Pertussis (Rate)	3.9	5.2	5.5	NRG
Pertussis (Case Count)	28	226	16,858	
Measles (Rate)	0.0	0	0.05	0.0
Measles (Case Count)	0	0	71	

NRG = No Related Goal

The HIV case count for 2009 is provisional due to reporting delays and is subject to change

HIV/AIDS

What is it?

Acquired Immunodeficiency Syndrome (AIDS) is the most advanced stage of illness that occurs following infection with the human immunodeficiency virus (HIV). HIV infection progressively destroys a body's ability to protect itself from infection. A person with HIV infection is diagnosed as having AIDS when their body produces abnormally low numbers of white blood cells. A person with AIDS thus becomes ill with opportunistic infections, develops diseases that affect the central and peripheral nervous system, develops malignancies, or displays a wasting syndrome not usually seen in people without HIV infection.

Why is it important?

An estimated 1.2 million people in the U.S. are living with HIV infection, 20% of whom are unaware of their infection.⁴⁸ Approximately 50,000 Americans become infected with HIV each year. CDC estimates that over one million people in the U.S. have been diagnosed with AIDS since the epidemic began. Blacks face the most severe burden of HIV of all racial and ethnic groups in the U.S. Despite representing 14% of the population in 2009, blacks accounted for 44% of all new HIV infections in the same year.⁴⁹

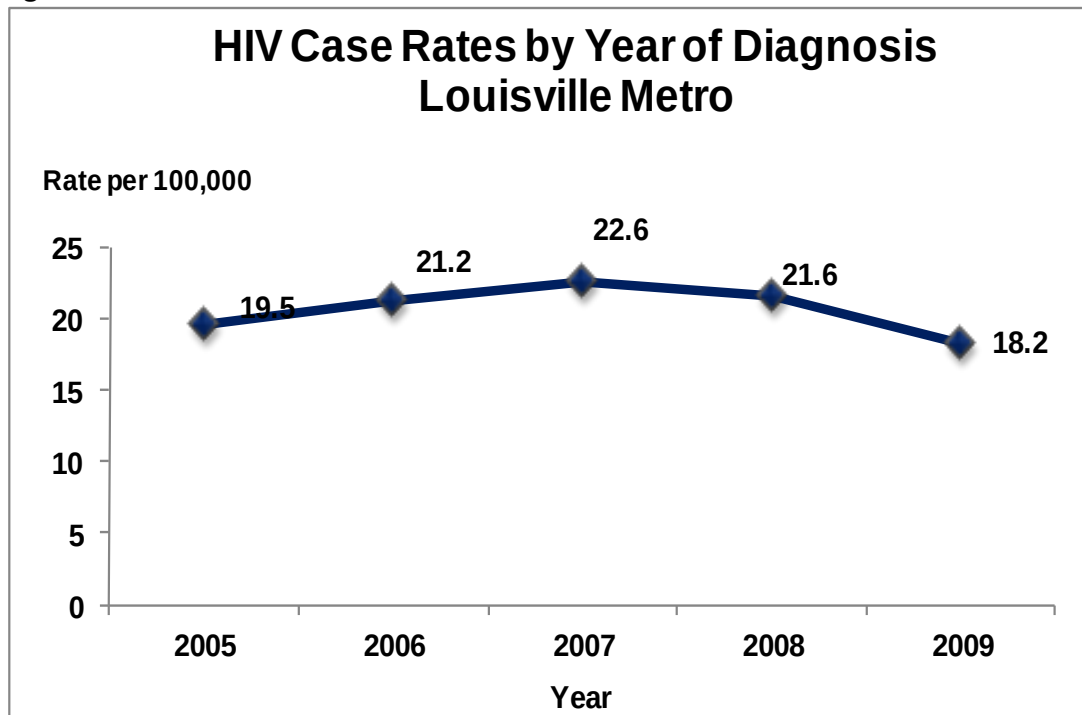
HIV is transmitted from person to person through contact with body fluids, including blood, semen, vaginal secretions, and breast milk. The most common behaviors associated with a risk for infection (modes of exposure) are sexual contact with or sharing needles or syringes used by HIV infected people.⁵⁰ HIV can also be transmitted from women to their babies during pregnancy, delivery, or through breast-feeding. It cannot be transmitted through sweat, tears, saliva or casual contact.⁵¹

There is no cure for HIV/AIDS or vaccine to prevent HIV infection. Antiretroviral medications can prevent the worsening of the disease, but these therapies do not cure the infection and can have severe side effects. Knowing whether one is positive or negative through testing is essential to reducing the spread of HIV. Studies have found that once infected persons are informed of their positive HIV status, they tend to decrease behaviors that transmit the infection to others.

What is Louisville Metro's status?

The first full year of confidential name-based HIV reporting in Kentucky was 2005. From 2005 to 2007, HIV incidence rates in Louisville Metro were trending upward, but began to fall in 2007 from a high of 22.6 per 100,000 population (171 cases) to 18.2 per 100,000 population (131 cases) in 2009.

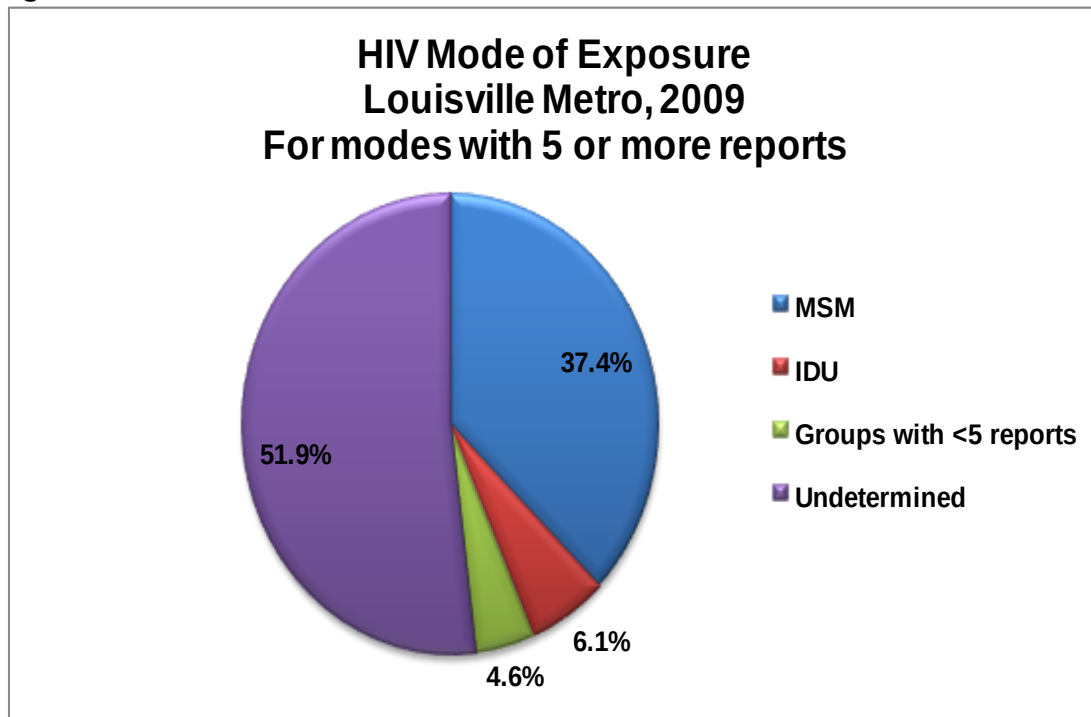
Figure 77.



Source: Kentucky Department for Public Health

Of the total number of new HIV cases diagnosed in 2009, men who have sex with men (MSM) remains the predominant mode of exposure (37.4%), followed by injection drug use (IDU) at 6.1%. Some modes of exposure were identified by less than 5 individuals during 2009. All of those low frequency groups combined account for 4.6% of the exposures. No exposure mode was determined/identified for approximately 52% of the new HIV cases.

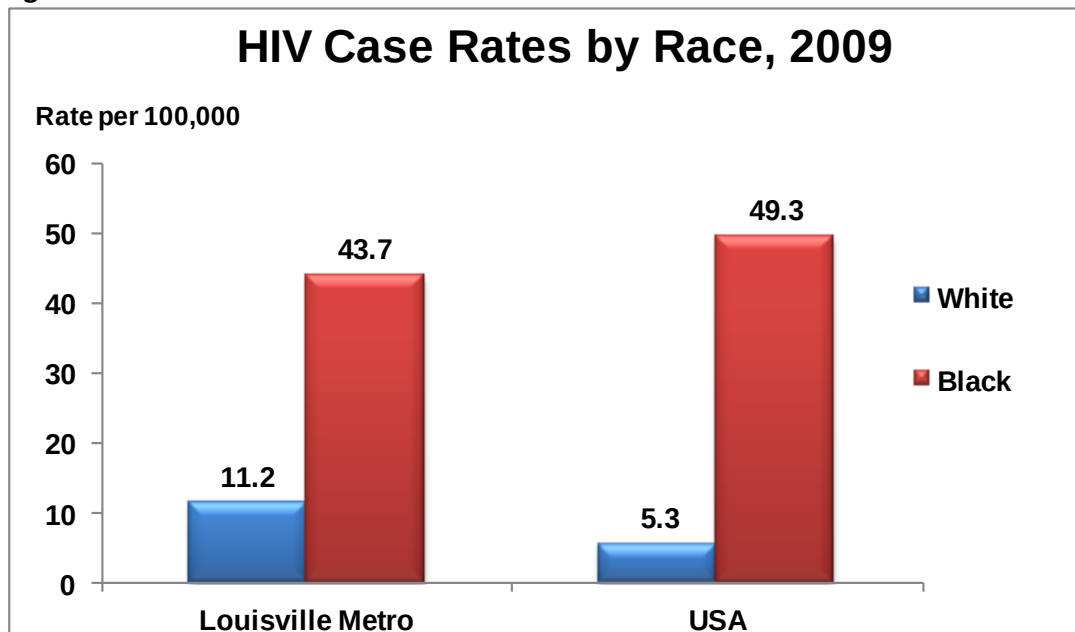
Figure 78.



Source: Kentucky Department for Public Health

Following national trends, blacks have a higher rate of reported cases of HIV than whites in Louisville Metro. The rate of new HIV cases reported in 2009 for Louisville Metro white males was higher than the national rate for white males. Although lower than the national rates, rates for Louisville Metro blacks were higher than those for Louisville Metro whites.

Figure 79.



Source: Kentucky Department for Public Health

PRIMARY AND SECONDARY SYPHILIS

What is it?

Syphilis is a sexually transmitted disease caused by the *Treponem.pallidum* bacterium. The organism is transmitted from an infected individual when one has direct contact with an infected person's sores.⁵² The sores can be found on the external genitals, the vagina, anus, rectum, mouth, or lips. Unprotected anal, oral, or vaginal sex with an infected individual is a mode of exposure for syphilis. In addition, pregnant infected women can transmit the disease to their babies. The number of primary and secondary syphilis cases is an important community health indicator because it represents individuals recently infected with syphilis who are capable of transmitting the disease to uninfected people.

Why is it important?

Syphilis is a sexually transmitted disease that has resulted in devastating epidemics. If the disease is untreated, the signs and symptoms that can develop as a result of a late stage of syphilis infection include difficulty coordinating muscle movements, paralysis, numbness, gradual blindness, dementia, and even death.

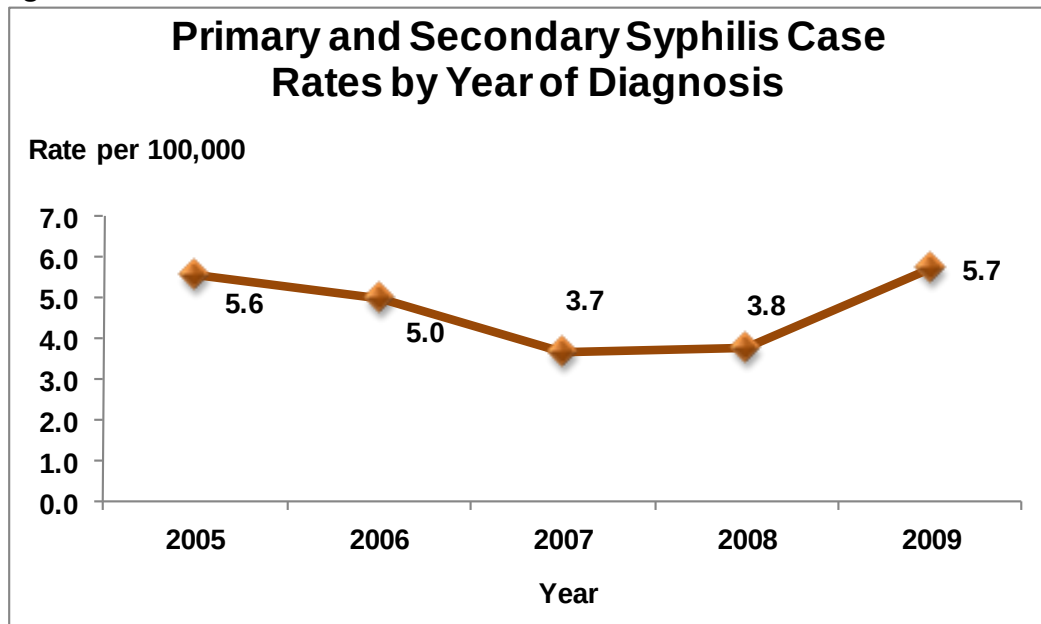
According to the CDC, the most effective prevention against syphilis and other sexually transmitted diseases is to abstain from sexual contact or to be in a long-term mutually monogamous relationship with a partner who has been tested and is known to be uninfected. Avoiding alcohol and drug use which can lead to risky behavior can also prevent transmission. Although the use of condoms during sex is also a preventive method, the infected area or site of potential exposure must also be covered.

What is Louisville Metro's status?

The number of new cases of primary and secondary syphilis in Louisville Metro increased substantially from 27 cases (3.8 per 100,000 population) in 2008 to 41 (5.7 per 100,000 population) in 2009. Men who have sex with men (MSM) and in particular HIV infected MSM are the most frequent exposure risks that have been documented in syphilis cases seen in Louisville Metro in 2009.

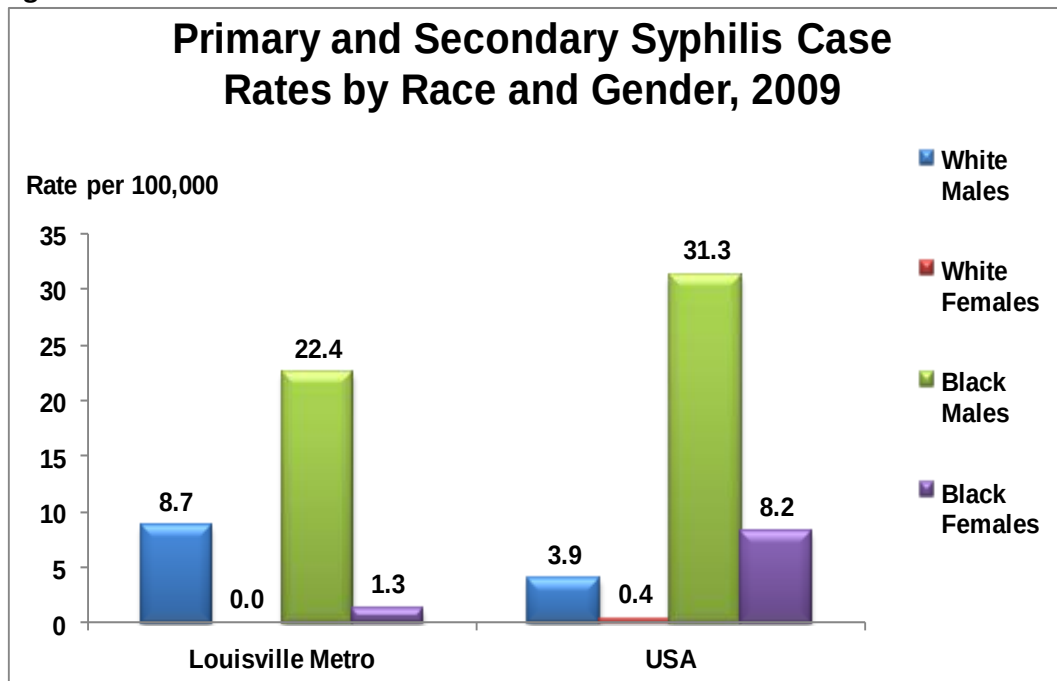
Nationally during 2009 the rates of reported cases for black males and females were higher than the rates seen in white males and females. This pattern is mirrored in Louisville Metro, however the rates for white males were higher than national rates while local black males and females had rates less than this demographic group nationally.

Figure 80.



Source: Kentucky Department for Public Health

Figure 81.



Source: Kentucky Department for Public Health

CHLAMYDIA

What is it?

Chlamydial infections are the most common reportable disease in the United States. These infections are caused by the *Chlamydia.trachomatis* bacterium. Approximately 50% of infections in men and 75% in women did not involve obvious symptoms in the early stages. Individuals in the 15 to 24 year age group show the highest rates of infection.

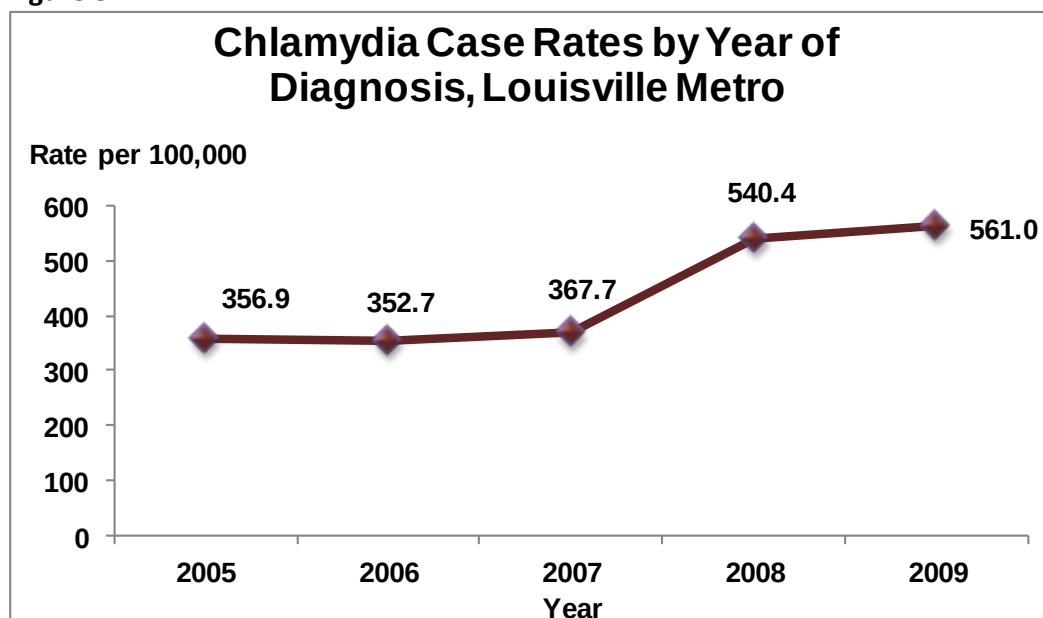
Why is it important?

In women, chlamydial infections may result in pelvic inflammatory disease which can lead to infertility, ectopic pregnancy, and chronic pelvic pain. As with other inflammatory, sexually transmitted diseases, chlamydial infections can increase the transmission of HIV infection. In addition, pregnant women infected with chlamydia can pass the infection to their infants during delivery, causing eye infections and pneumonia.⁵³ Chlamydia can be easily treated and cured with antibiotics.

What is Louisville Metro's status?

The number of new chlamydial infections per 100,000 population in Louisville Metro increased in 2009 (561.0 per 100,000 population) compared to 2008 (540.4 per 100,000 population). The rate of new chlamydial infections seen in Louisville Metro for 2009 (561.0 per 100,000) was higher than the rate seen in Kentucky (approximately 311 per 100,000) and the national rate (approximately 409 per 100,000).

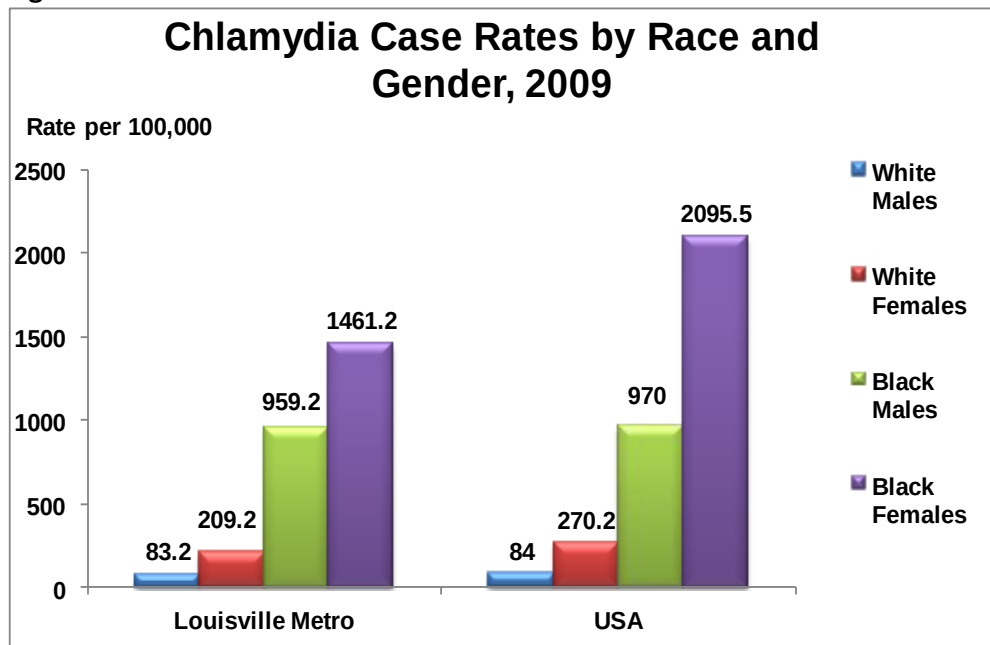
Figure 82.



Source: Kentucky Department for Public Health

When examining reported cases of chlamydia, blacks have higher rates than whites and females show higher rates than males at both the local and national level. Local rates for white and black males were similar to rates seen nationally, while local rates for white and black women were lower than those seen in the corresponding national categories.

Figure 83.



Source: Kentucky Department for Public Health

GONORRHEA

What is it?

Gonorrhea is a sexually transmitted disease caused by the *Neisseria.gonorrhoeae* bacterium. *Neisseria.gonorrhoeae* can live and grow in parts of a male's or female's reproductive tract, anus, rectum, mouth, throat or eyes.

Why is it important?

Like chlamydia, gonorrhea is the most commonly reported infectious disease in the U.S. Gonorrhea is a cause of pelvic inflammatory disease in women, a major cause of infertility, ectopic pregnancy, and chronic pelvic pain. It can also be transmitted from mother to child during pregnancy. In men, gonorrhea infections can produce painful testicular infections that can lead to infertility. Gonorrhea can also facilitate the transmission of HIV infection for both men and women. It occasionally spreads to a person's blood or joints and becomes a life-threatening infection.

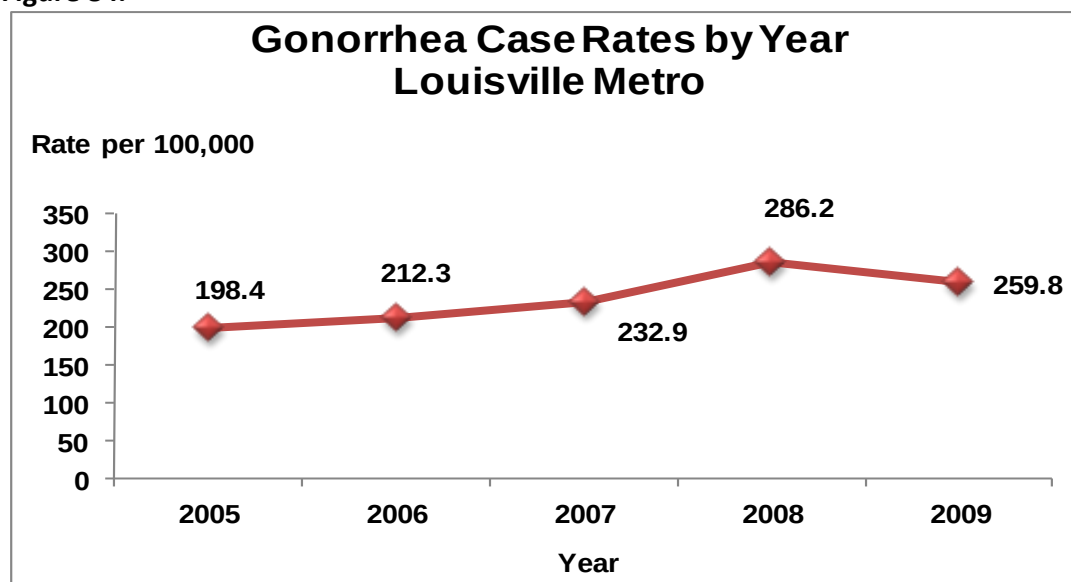
CDC urges STD screening particularly among young people aged 15-24 years.⁵⁴ Screening has been identified as one of the most effective, but underutilized, methods to identify and treat those who are infected and to help prevent the further spread of STDs such as gonorrhea.

What is Louisville Metro's status?

Nationally, the reported rate for gonorrhea in 2009 declined compared to the previous year, 112 new cases per 100,000 population in 2008 to 99.1 per 100,000 in 2009. The number of new gonorrhea cases per 100,000 population in Louisville Metro increased steadily from 2005 to 2008. In 2009, the local rate began to mirror the trend seen at the national level by recording a 9% decrease in rate.

The rate of new gonorrhea cases seen in 2009 (259.8 per 100,000) in Louisville Metro was almost three times greater than the rate seen in Kentucky and more than thirteen times greater than the national Healthy People 2010 goal of 19 per 100,000 population. The overall rate for gonorrhea in 2009 is more than two times higher for Louisville Metro compared to the national rate.

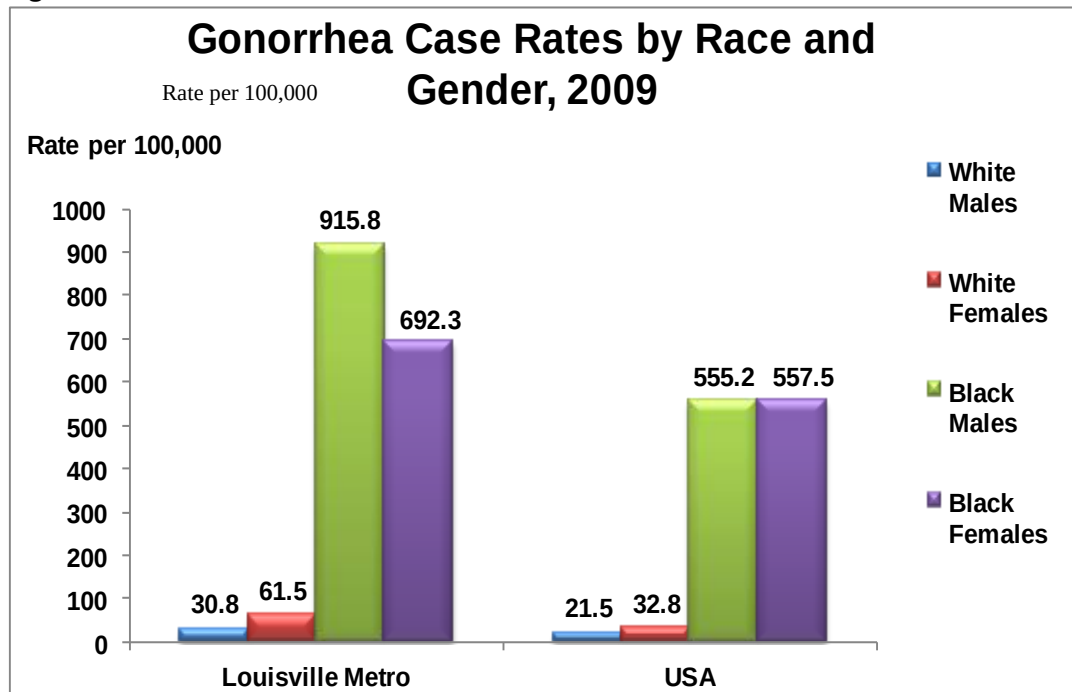
Figure 84.



Source: Kentucky Department for Public Health

The distribution of gonorrhea cases during 2009 by race and gender in Louisville Metro follows the pattern seen nationally, with rates much higher in blacks than in whites. Gonorrhea incidence rates for all local race/gender combinations are higher locally than they are for the corresponding groups nationally.

Figure 85.



Source: Kentucky Department for Public Health

TUBERCULOSIS

What is it?

Tuberculosis (TB) is a disease caused by the *Mycobacterium.tuberculosis* bacterium. The bacteria can infect any part of the body, but they are commonly found in the lungs. TB can be spread through the air from one person to another. The bacteria are put into the air when a person with TB disease of the lungs or throat coughs or sneezes. People who are physically close to the infected individual may breathe in these bacteria and become infected.

Although no safe exposure time to *M.tuberculosis* has been established, it is clear that a number of factors influence the probability that a person will develop TB after an exposure to the bacterium. Those factors include the extent of the disease in the TB case, the duration of contact and the proximity of contact between the TB case and exposed individuals, and the contact's general health and immune status.

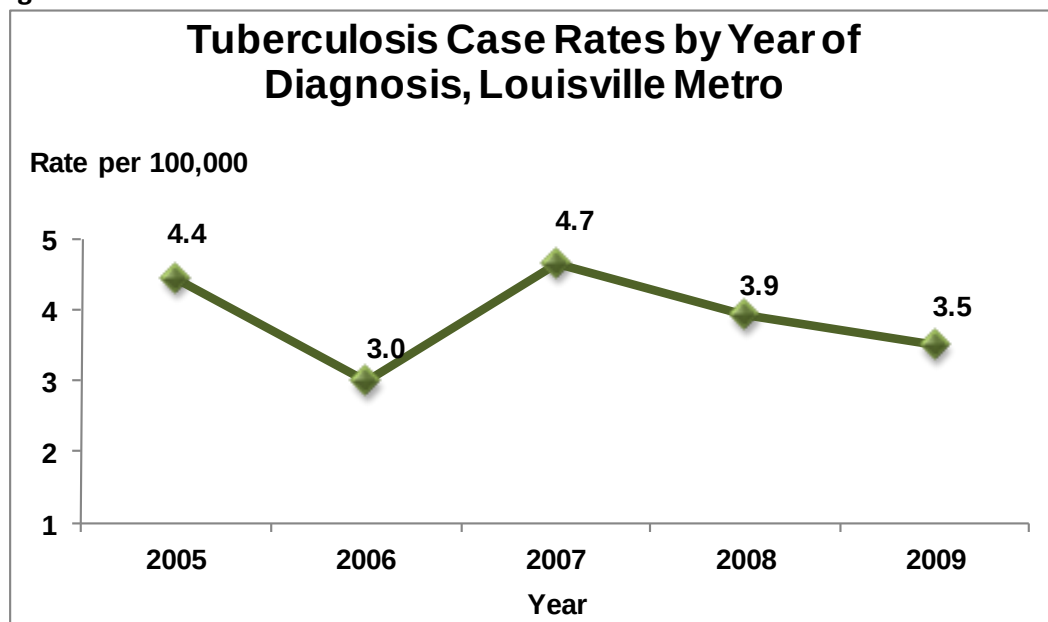
Why is it important?

TB was once the leading cause of death in the United States. Although TB case rates declined after World War II, they increased, nationally, between 1985 and 1992. National TB case rates have been declining since then, but there were still nearly 13,000 cases in the United States in 2008.

What is Louisville Metro's status?

The rate of new cases of TB in Louisville Metro has fluctuated over the past five years and in 2009 was below the average of case counts for the past 5 calendar years. The Louisville Metro case rate (3.5 per 100,000) was higher than the rate seen for Kentucky (1.8 per 100,000) and slightly less than the national rate (3.8 per 100,000). The rate of new TB cases in Louisville Metro for 2009 was 3.5 times higher than the goal of one (1) new case per 100,000 persons set by the Healthy Kentuckians 2010 and Healthy People 2010 reports.

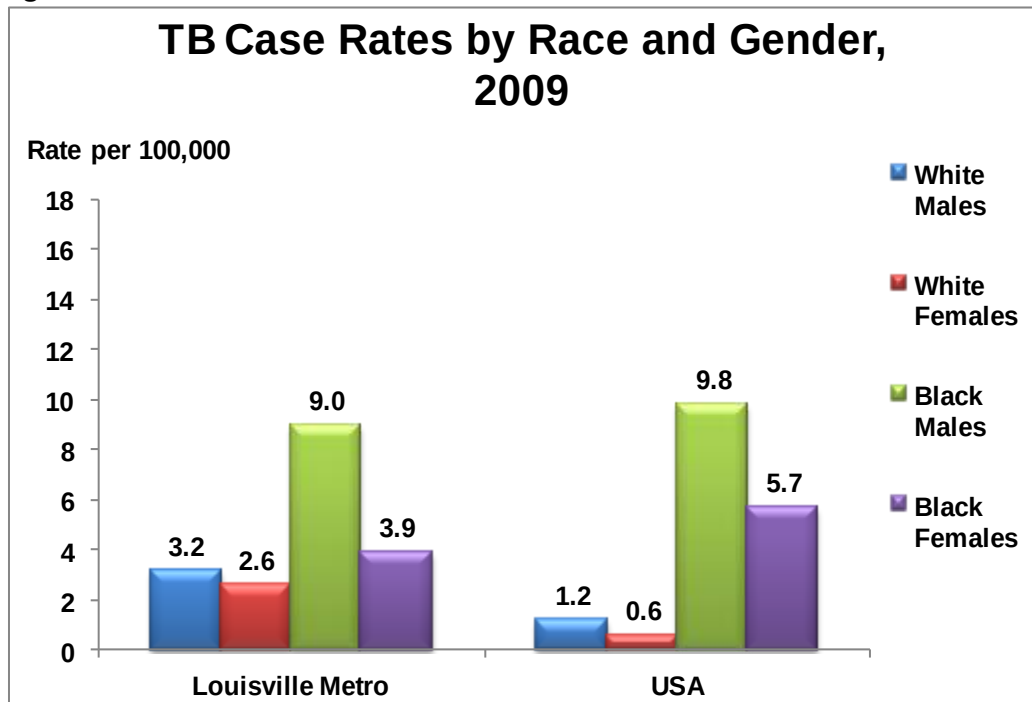
Figure 86.



Source: Kentucky Department for Public Health

Case rates in 2009 for Louisville Metro were higher for white males, and white females compared to national rates. Although blacks have more cases of TB than would be predicted based on their population counts at a national and local level, the disparity between blacks and whites is smaller in Louisville Metro than it is in the country as a whole and TB rates among black males and females in Louisville Metro are less than those seen nationally.

Figure 87.



Source: Kentucky Department for Public Health

MEASLES

What is it?

Measles is a highly contagious respiratory disease caused by a virus. Symptoms include rash, high fever, runny nose, and eyes.

Why is it important?

Before 1963, there were an average of 3 to 4 million cases and 450 deaths caused by measles in the United States each year. In addition to death, other complications following measles infection include encephalitis (inflammation of the brain), which can lead to deafness; mental retardation; or miscarriage, premature birth, and birth of low weight babies in pregnant women who are infected.

What is Louisville Metro's status?

Although there were 71 cases of measles in the United States (51 indigenous and 20 imported), no new cases were reported in Louisville Metro or Kentucky in 2009. In the past five years Louisville Metro has not recorded any new cases of measles. The last local measles reports were two cases in 1999. A nearly universal childhood vaccination program using a very effective vaccine coupled with effective reporting and surveillance programs have contributed to these very low new case rates locally and nationally.

PERTUSSIS

What is it?

Pertussis, commonly known as whooping cough, is a highly contagious respiratory infection caused by the *Bordetella.pertussis* bacterium. Symptoms often last for many weeks and in young children may include severe bouts of coughing with a “whooping” sound as the child tries to inhale between coughs. The child may vomit after a coughing spasm. Symptoms in adolescents and adults may not be as severe as they are in young children.⁵⁵

Why is it important?

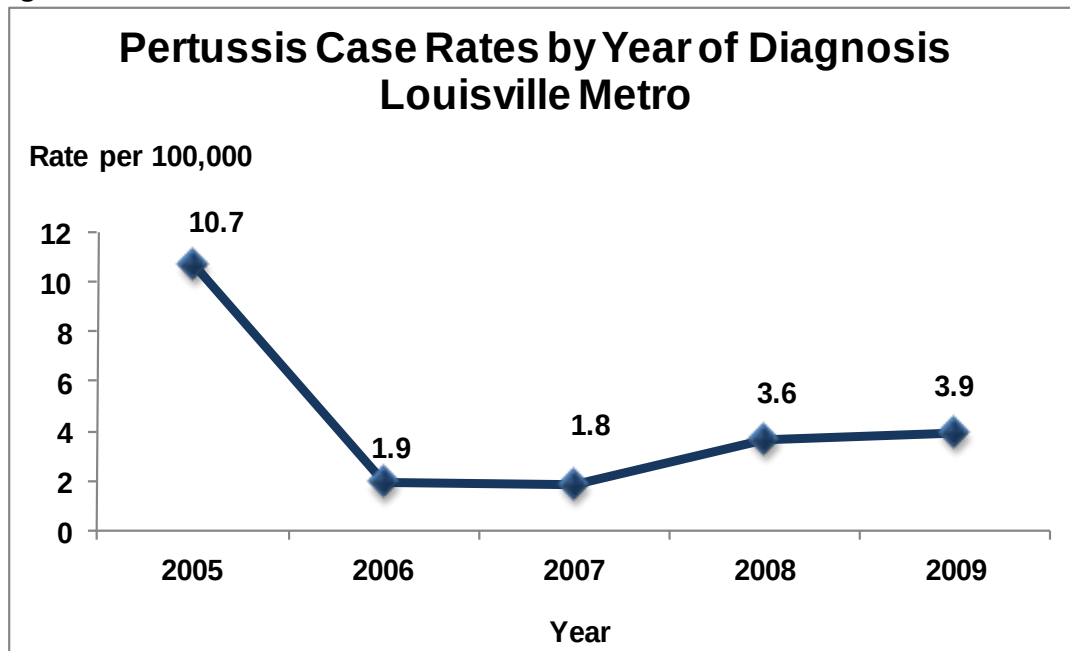
Complications resulting from the initial infection can occur (particularly in young children) and may be life threatening. Immunization can prevent, or at least reduce the severity of, the infection. However, children who are too young to be vaccinated or who have started the vaccination series, but have not had the time to develop immunity are at risk for the infection.

Immunity to B.pertussis wanes over time. A Tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) vaccine has been licensed for use in adolescents and adults. Since this population has, historically, been a continuing reservoir of infection in the community, the use of Tdap in this population could reduce pertussis incidence substantially.

What is Louisville Metro’s status?

The rate of new pertussis cases per 100,000 population in Louisville Metro has fluctuated over the past five years but, like national and state trends, has increased in the last year. In 2009 the local rate increased from the 2008 rate of 3.6 cases per 100,000 to 3.9 per 100,000 population.

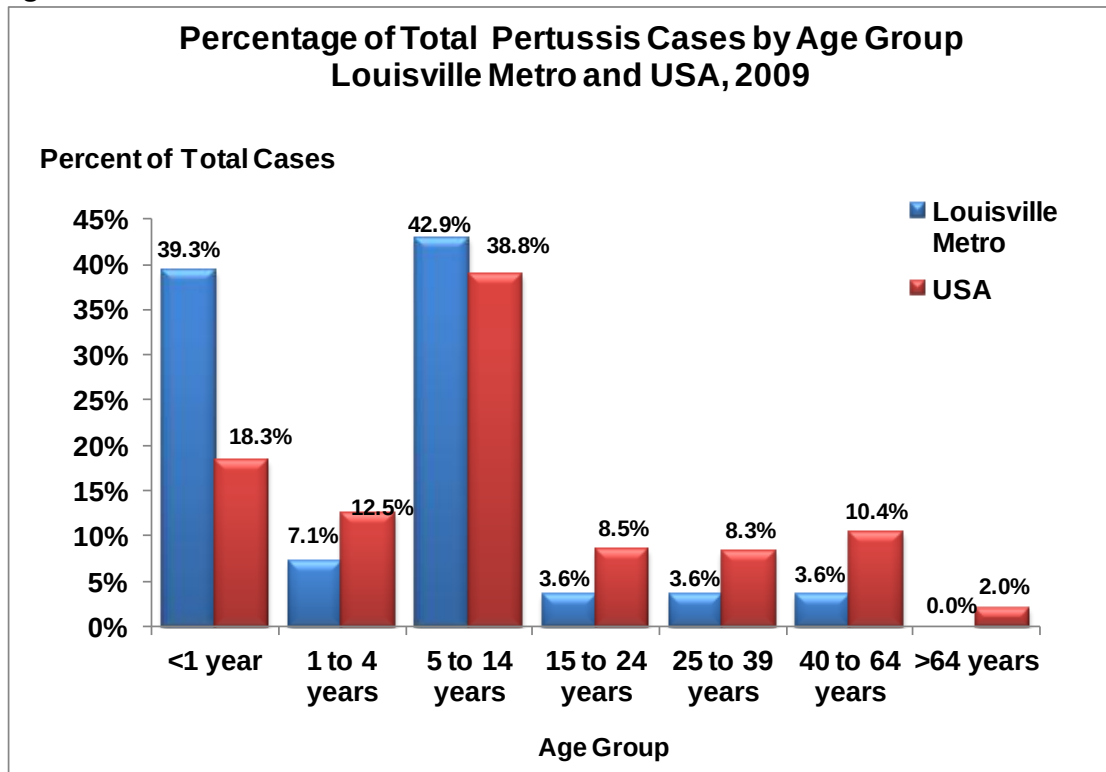
Figure 88.



Source: Kentucky Department for Public Health

The distribution of the 28 cases of pertussis reported in Louisville Metro during 2009 approximated national trends. In Louisville and nationally the largest percentage of cases fell in the 5 to 14 year age group with the second highest percentage in the less than 1 year age group. No local cases appeared in Louisville Metro residents older than 64 year age group and a smaller than expected percentage appeared in the other groups, compared to national percentages.

Figure 89.

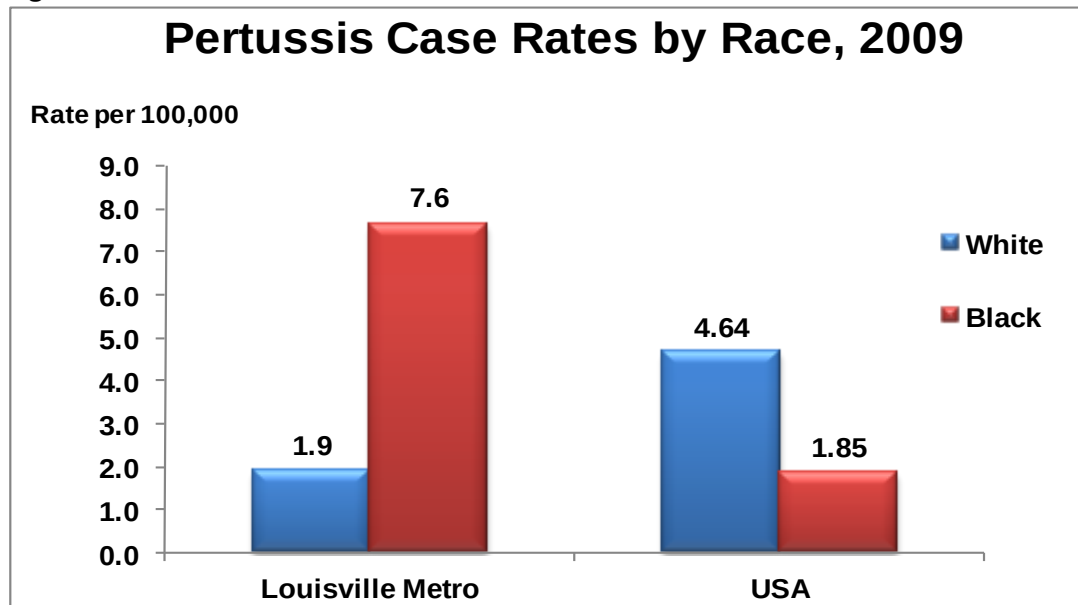


Source: Kentucky Department for Public Health

Louisville Metro is fortunate to have a children's hospital in the community that has been a pioneer in the screening and diagnosis of pertussis cases in their patient population. The consistent surveillance and reporting from that hospital could help to explain the observation that at a local level 89.3% of cases are reported in children less than 1 year of age through 14 years of age.

Nationally, pertussis rates are higher in Whites than in blacks. Historically, a similar pattern has been seen in Louisville Metro, but in 2009 blacks had a higher case rate than Whites.

Figure 90.



Source: Kentucky Department for Public Health

INFLUENZA AND THE 2009/2010 PANDEMIC

What is it?

Influenza is a contagious respiratory disease caused by influenza viruses. Symptoms can include fever, cough, sore throat, runny or stuffy nose, muscle or body aches, headaches, fatigue, and, more commonly in children than adults, vomiting and diarrhea.

Certain groups of people are at greater risk for serious complications if they get the flu. These groups typically include older people, young children, pregnant women and people with certain health conditions (such as asthma, diabetes, or heart disease).

Why is it important?

During 2009-2010, a new and very different flu virus (called 2009 H1N1) spread worldwide causing the first flu pandemic in more than 40 years. CDC estimated that the 2009 H1N1 pandemic resulted in more than 12,000 flu-related deaths in the U.S. In contrast to deaths attributed to seasonal flu, nearly 90 percent of the 2009 H1N1 associated deaths occurred among people younger than 65 years of age.⁵⁶

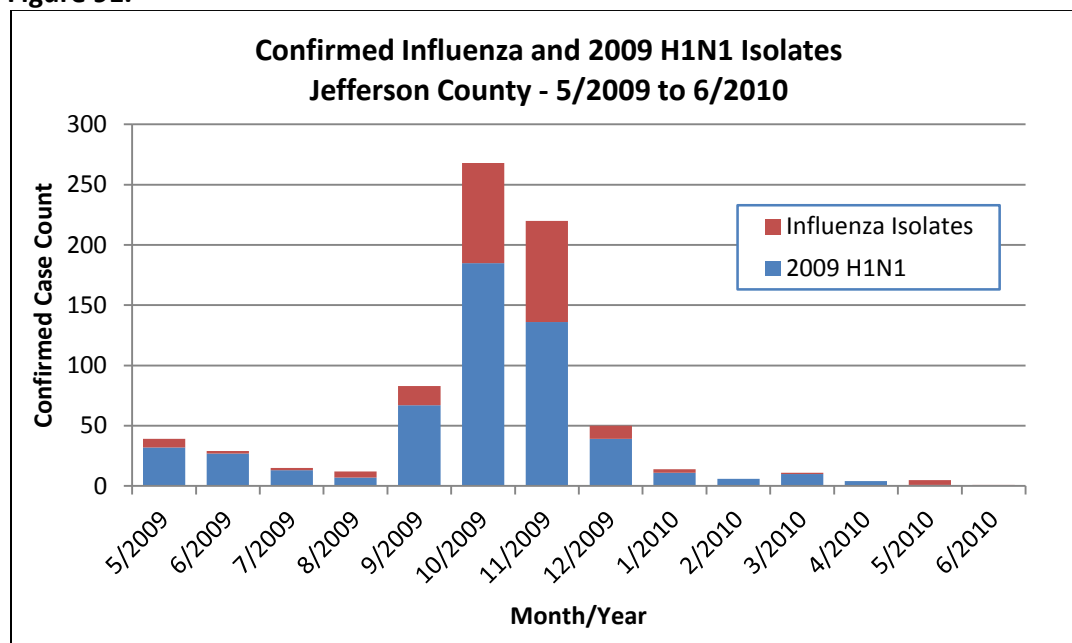
The illness is so mild for many people with influenza that they use over the counter medications to treat symptoms and they are never seen by a health care professional. Among those people who have influenza with symptoms severe enough to seek treatment from a medical professional, many are diagnosed based on clinical signs and symptoms and are never tested to confirm the diagnosis. Some of the people who are diagnosed with "Flu-like" or "Influenza like" illness may be tested using rapid influenza test kits that don't meet the requirements demanded by the case definition for

influenza. The small subset of patients seen by health care providers with a diagnosis confirmed by an approved laboratory test for influenza are the only individuals counted as confirmed influenza cases each year and they represent the tip of the iceberg of disease actually present in the community.

What is Louisville Metro's status?

The total disease burden cannot be determined by a count of culture confirmed cases, however by tracking the number of cases we can determine the start, the high point(s), and end of the influenza season in our community. A typical influenza season lasts a month or two. The count of confirmed influenza cases for 2009 and the first half of 2010 is unusual in that there were culture confirmed reports of Influenza and/or 2009 H1N1 for 13 consecutive months. The H1N1 season began in May 2009 in Louisville. Peak report months were September, October and November, 2009. Influenza reports and illness continued in the county until June, 2010.

Figure 91.



Source: Kentucky Department for Public Health

GLOSSARY OF TERMS

Age-adjusted death rate: The ratio of total number of expected deaths in a standard population by total standard population (based on 2000 U.S standard population) belonging to the same specific age category and multiply this result by 100,000.

Birth rate: The number of births per 1,000 resident population.

Cause specific hospitalization rate: The total number of adult and pediatric hospital separations (discharges, transfers and deaths) due to a selected cause per 100,000 population during a calendar year.

Crude Hospitalization Rate: is the total number of adult and pediatric hospital separations (discharges, transfers and deaths) during a calendar year per total population (per 100,000).

Healthy People: Healthy People provide science-based, 10-year national objectives for improving the health of all Americans. Healthy People serves as the foundation for prevention efforts across the U.S. Department of Health and Human Services (HHS).

Incidence: The number of newly diagnosed cases during a specific time period.

Infant mortality rate: The number of newborns dying in a calendar year of age divided by the number of live births registered during the same year.

In-patient hospitalizations: Number of adult and pediatric hospital separations (discharges, transfers and deaths), excluding newborn days of care, rendered during the calendar year.

Low birth weight: Infants who weigh less than 2500 grams (or 5.8 pounds) at birth.

Median household income: level of income at which half of all households are above and half are below.

Morbidity: A diseased condition or state in a person or population.

Percentage: A proportion stated in terms of one-hundredths that is calculated by multiplying a fraction by 100.

Prenatal care: Health care and other services available to pregnant women as a fetus develops within her uterus.

Very low birth weight: Infants classified as those weighing less than 1500 grams (or 3.5 pounds).

ENDNOTES

-
- ¹ *Louisville/Jefferson County Merger*. (n.d.). Retrieved Nov 15, 2011, from Louisvilleky.gov: <http://www.louisvilleky.gov/YourGovernment/Merger.htm>
- ² Hyon, B. R. (2003, Oct). *Language Use and English Speaking Ability*. Retrieved Nov 16, 2011, from U.S.Census Bureau: <http://www.census.gov/prod/2003pubs/c2kbr-29.pdf>
- ³ *THE 2009 HHS POVERTY GUIDELINES*. (2009, Jan 23). Retrieved 2010, from U.S.Department of Health and Family Services: <http://aspe.hhs.gov/poverty/09poverty.shtml>
- ⁴ *Eliminate Disparities in Infant Mortality*. (n.d.). Retrieved Nov 2011, from Centers for Diseases Control and Prevention: <http://www.cdc.gov/omhd/AMH/factsheets/infant.htm#Risk>
- ⁵ *Birth Defects: Leading Cause of Infant Death*. (n.d.). Retrieved Oct 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/Features/dsInfantDeaths/>
- ⁶ Russo, C. E. (2007, Jan). *Hospitalizations for Birth Defects, 2004*. Retrieved 2010, from Health Care Cost and Utilization Project: <http://www.hcup-us.ahrq.gov/reports/statbriefs/sb24.pdf>
- ⁷ *Birth Defects: Leading Cause of Infant Death*. (n.d.). Retrieved Oct 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/Features/dsInfantDeaths/>
- ⁸ Benbow, N. (2007). *Big cities Health Inventory, The Health of Urban USA*. Washington, DC: National Association of County and City Health officials.
- ⁹ Health, U. D. (n.d.). *Prenatal Care factsheet*. Retrieved 2011, from Womens Health.gov: <http://www.womenshealth.gov/publications/our-publications/fact-sheet/prenatal-care.cfm#d>
- ¹⁰ *Teen Pregnancy*:(2009). Retrieved Nov 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/TeenPregnancy/AboutTeenPreg.htm>
- ¹¹ *Lead*. (2010). Retrieved Nov 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/nceh/lead/>
- ¹² *Children and Lead Health Effects*. (n.d.). Retrieved 2010, from Coalition to end childhood lead poisoning: http://www.leadsafe.org/content/kids_and_lead/index.cfm?pagelid=31
- ¹³ *What is Cardiovascular Disease?*. (2011). Retrieved Nov 2011, from American Heart Association: http://www.heart.org/HEARTORG/Caregiver/Resources/WhatisCardiovascularDisease/What-is-Cardiovascular-Disease_UCM_301852_Article.jsp
- ¹⁴ *Blood Vessels in Your Heart*. (n.d.). Retrieved Nov 2011, from Boston Scientific: http://www.bostonscientific.com/templatedata/imports/HTML/CRM/heart/heart_vessels.html
- ¹⁵ *Heart Disease: Heart Disease Facts*. (n.d.). Retrieved 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/heartdisease/facts.htm>
- ¹⁶ *Understand Your Risk of Heart Attack*. (2011, Nov 22). Retrieved 2011, from American Heart Association: http://www.heart.org/HEARTORG/Conditions/HeartAttack/UnderstandYourRiskofHeartAttack/Understand-Your-Risk-of-Heart-Attack_UCM_002040_Article.jsp#
- ¹⁷ *What is Cancer: Defining Cancer*. (2011, July 29). Retrieved 2011, from National Cancer Institute: <http://www.cancer.gov/cancertopics/cancerlibrary/what-is-cancer>

-
- ¹⁸ *Estimated New Cancer Cases and Deaths by Sex for All Sites, US, 2011**. (2011). Retrieved Nov 2011, from American Cancer Society: <http://www.cancer.org/acs/groups/content/@epidemiologysurveillance/documents/document/acspc-029817.pdf>
- ¹⁹ *Lung Cancer*. Retrieved 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/cancer/lung/>
- ²⁰ *Lung Cancer:Risk Factors*. Retrieved 2011, from Centers for Disease Control and Prevention: http://www.cdc.gov/cancer/lung/basic_info/risk_factors.htm
- ²¹ *Lung Cancer:Risk Factors*. Retrieved 2011, from Centers for Disease Control and Prevention: http://www.cdc.gov/cancer/lung/basic_info/risk_factors.htm
- ²² *Breast Cancer: What are the key statistics about breast cancer?* (2011, Nov 18). Retrieved 2011, from American Cancer Society: <http://www.cancer.org/Cancer/BreastCancer/DetailedGuide/breast-cancer-key-statistics>
- ²³ *Estimated New Cancer Cases and Deaths by Sex for All Sites, US, 2011**. (2011). Retrieved Nov 2011, from American Cancer Society: <http://www.cancer.org/acs/groups/content/@epidemiologysurveillance/documents/document/acspc-029817.pdf>
- ²⁴ *Prostate Cancer*. (n.d.). Retrieved 2011, from American Cancer Society: <http://www.cancer.org/Cancer/ProstateCancer/index>
- ²⁵ *Prostate Cancer*. (n.d.). Retrieved 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/Features/ProstateCancer/>
- ²⁶ *Chronic Obstructive Pulmonary Disease (COPD)*. (n.d.). Retrieved 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/Features/COPD/>
- ²⁷ *Stroke, Cerebrovascular accident*. (n.d.). Retrieved 2011, from World Health Organization: http://www.who.int/topics/cerebrovascular_accident/en/
- ²⁸ *Features: Stroke*. (n.d.). Retrieved 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/Features/Stroke/>
- ²⁹ *Diabetes Basics*. (2011, Jan 26). Retrieved 2011, from American Diabetes Association: <http://www.diabetes.org/diabetes-basics/diabetes-statistics/>
- ³⁰ *Diabetes Basics*. (2011, Jan 26). Retrieved Nov 2011, from American Diabetes Association: <http://www.diabetes.org/diabetes-basics/diabetes-statistics/>
- ³¹ *Asthma in the US*. (2011, May). Retrieved 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/vitalsigns/Asthma/>
- ³² *Healthy Youth: Asthma*. (n.d.). Retrieved 2011, from National Center for Chronic Disease Prevention and Health Promotion: Centers for Disease Control and Prevention: <http://www.cdc.gov/HealthyYouth/asthma/>
- ³³ *More Americans Living with Asthma Every Year*. (n.d.). Retrieved 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/Features/VitalSigns/Asthma/>
- ³⁴ *More Americans Living with Asthma Every Year*. (2011, April 04). Retrieved 2011 from Centers for Disease Control and Prevention: <http://www.cdc.gov/Features/VitalSigns/Asthma/>
- ³⁵ *The Health Effects of Overweight and Obesity*. (n.d.). Retrieved 2010, from Centers for Disease Control and Prevention: <http://www.cdc.gov/healthyweight/effects/index.html>

-
- ³⁶ *Obesity and overweight*. (2011, March). Retrieved 2011, from Whorld Health Organization: <http://www.who.int/mediacentre/factsheets/fs311/en/>
- ³⁷ *Physical Activity and Blood Pressure*. (n.d.). Retrieved 2010 2011, from American Heart Association: http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/PreventionTreatmentofHighBloodPressure/Physical-Activity-and-Blood-Pressure_UCM_301882_Article.jsp
- ³⁸ *The Nutrition Source: Vegetables and Fruits*. (n.d.). Retrieved 2011, from Harvard School of Public Health: <http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/vegetables-and-fruits/index.html>
- ³⁹ *Smoking and Tobacco Use: Health Effects of Cigarette Smoking*. (n.d.). Retrieved 2010, from Centers for Disease Control and Prevention: http://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/#children
- ⁴⁰ *What is Mental Health?* (2007, Sep 03). Retrieved 2010, from World Health Organization: <http://www.who.int/features/qa/62/en/index.html>
- ⁴¹ *Mental Illness and the Family: Recognizing Warning Signs and How to Cope*. (n.d.). Retrieved 2011, from Mental Health America: <http://www.nmha.org/go/information/get-info/mi-and-the-family/recognizing-warning-signs-and-how-to-cope>
- ⁴² *Mental Health: Mental Health Basics*. (n.d.). Retrieved Nov 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/mentalhealth/basics.htm>
- ⁴³ *Mental Health: Depression*. (n.d.). Retrieved Nov 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/mentalhealth/basics/mental-illness/depression.htm>
- ⁴⁴ *Assault or Homicide*. (n.d.). Retrieved 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/nchs/fastats/homicide.htm>
- ⁴⁵ *Men's Health: Leading Causes of Death for Men, 2006*. Retrieved Nov 2011, from <http://www.cdc.gov/men/lcod/index.htm>
- ⁴⁶ *Injury center: Suicide Prevention*. (n.d.). Retrieved 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/ViolencePrevention/suicide/>
- ⁴⁷ *Suicide: Prevention Strategies*. (n.d.). Retrieved 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/ViolencePrevention/suicide/prevention.html>
- ⁴⁸ *HIV in the United States*. (n.d.). Retrieved 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/hiv/resources/factsheets/us.htm>
- ⁴⁹ *HIV among African Americans**. (n.d.). Retrieved 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/hiv/topics/aa/index.htm>
- ⁵⁰ *Sexual Risk Factors*. (n.d.). Retrieved 2010, from AIDS.gov: <http://www.aids.gov/hiv-aids-basics/prevention/reduce-your-risk/sexual-risk-factors/>
- ⁵¹ *Basic Information about HIV and AIDS*. (n.d.). Retrieved 2011, from Department of Health and Human Services, Centers for Disease Control and Prevention: <http://www.cdc.gov/hiv/topics/basic/#spread>
- ⁵² *Sexually Transmitted Diseases (STDs), Syphilis - CDC Fact Sheet*. (n.d.). Retrieved 2010, from Centers for Diseases Control and Prevention: <http://www.cdc.gov/std/syphilis/STDFact-Syphilis.htm>
- ⁵³ *Sexually Transmitted Diseases (STDs), STDs & Pregnancy - CDC Fact Sheet*. (n.d.). Retrieved 2010, from Centers for Disease Control and Prevention: <http://www.cdc.gov/std/pregnancy/STDFact-Pregnancy.htm>

⁵⁴ *STDs are a major public health issue*:. (2011, April 20). Retrieved 2011, from Centers for Disease Control and Prevention: <http://www.cdc.gov/Features/STDAwareness/>

⁵⁵ *Pertussis (Whooping Cough): Signs & Symptoms*. (n.d.). Retrieved 2010, from Centers for Disease Control and Prevention: <http://www.cdc.gov/pertussis/about/signs-symptoms.html>

⁵⁶ *H1N1 Flu: Updated CDC Estimates of 2009 H1N1 Influenza Cases, Hospitalizations and Deaths in the United States*. (2009, April 10). Retrieved 2010, from Centers for Disease Control and Prevention: http://www.cdc.gov/h1n1flu/estimates_2009_h1n1.htm

APPENDIX

ICD-10 CODES FOR MORTALITY DATA

Cause of Death	ICD-10 Code
All Cancer	C00-C97
All Causes	A00-Y89
Alzheimer's Disease	G30
Asthma	J45-J46
Certain Conditions Originating in the Perinatal Period	P00-P96
Chronic Liver Disease and Cirrhosis	K70, K73-K74
Chronic Lower Respiratory Diseases	J40-J47
Congenital Malformations, Deformations, and Chromosomal Abnormalities	Q00-Q99
Coronary Heart Disease	I11, I20-I25
Diabetes	E10-E14
Diseases of Heart	I01-I09, I11, I13, I20-I51
Disorders Related to Short Gestation and Low Birth Weight, Not Elsewhere Classified	P07
Essential (primary) Hypertension and Hypertensive Renal Disease	I10, I12
Female Breast Cancer	C50
Homicide	X85-Y09, Y87.1
Human Immunodeficiency Virus (HIV) Disease	B20-B24
Influenza & Pneumonia	J10-J18
Lung Cancer	C33-C34
Motor Vehicle Crash	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2
Newborn Affected by Maternal Complication of Pregnancy	P01
Prostate Cancer	C61
Respiratory Distress of Newborn	P22
Stroke	I60-I69
Sudden Infant Death Syndrome (SIDS)	R95
Suicide	X60-X84, Y87.0
Unintentional Injury	V01-X59, Y85-Y86

ICD-10 CODES FOR INJURY MORTALITY DATA

Mechanism	All Injury	Unintentional	Suicide	Homicide
All Injury	V01-Y36, Y85-Y87, Y89	V01-X59, Y85-Y86	X60-X84, Y87.0	X85-Y09, Y87.1
Cut/Pierce	W25-W29, W45, X78, X99, Y28, Y35.4	W25-W29, W45	X78	X99
Drowning	V90-V90.9, W65-W74, X71, X92, Y21	V90-V90.9, W65-W74	X71	X92
Fall	W00-W19, X80, Y01, Y30	W00-W19	X80	Y01
Fire/Hot object or substance	X00-X19, X76-77, X97-X98, Y26-Y27, Y35.0	X00-X19	X76-77	X97-X98
Firearm	W32-W34, W72-74, X93-X95, Y22-Y27, Y36.3	W32-W34	X72-74	X93-X95
Machinery	W24, 230-W31	W24, W30-W31		
All transport	V01-V99, X82, Y03, Y32, Y36.1	V01-V99	X82	Y03
Motor Vehicle Crash	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2	X82	Y03
All other transport-related	V01, V05-V06, V09.1, V09.3, V09.9, V10, V11, V15-V18, V19.3, V19.8, V19.9, V80.0-V80.2, V80.6-V80.9, V81.2-V81.9, V82.2-V82.9, V87.9, V88.9, V89.1, V89.3, V89.9, V90-V99, X82, Y03, Y32, Y36.1	V01, V05-V06, V09.1, V09.3, V09.9, V10, V11, V15-V18, V19.3, V19.8, V19.9, V80.0-V80.2, V80.6-V80.9, V81.2-V81.9, V82.2-V82.9, V87.9, V88.9, V89.1, V89.3, V89.9, V90-V99	X82	Y03
Natural/environmental	W42, S45, S53-S64	W42, W43, S53-S64		
Overexertion	X50	X50		
Poisoning	X40-X49, X60-X69, X85-X90, Y10-Y19, Y35.2	X40-X49	X50-X69	X85-X90
Struck by or against	W20-W22, W50-W52, X79, Y00, Y04, Y29, Y35.3	W20-W22, W50-W52	X79	Y00, Y04
Suffocation	W75-W84, X70, X91, Y20	W75-W84	X70	X91

ICD-9 CODES FOR IN-PATIENT HOSPITALIZATION DATA

Cause	ICD-9 Code
Acquired Immunodeficiency Syndrome (AIDS)	042-044
Alcohol induced morbidity	291,303,305.0,357.5,425.5,535.5,571.0-571.3,572.8,7903,E860
All Cancer	140-208
All Causes	001-E999
Asthma	493
Breast Cancer	174
Coronary Heart Disease	402, 41-414, 429.2
Chronic Obstructive Pulmonary Disease	490-496
COPD	490-496
Diabetes	250
Diseases of the Heart	390-398, 402, 404-429
Drug induced morbidity	292,304,305.2-305.9,E850-E858,E950.0-E950.5,E962.0,E980.0-E980.5
Heart Disease	391-392.0,393-398,402,404,410-416,420-429
Homicide /Assault	E960-E969
Lung Cancer (bronchitis and lung)	162.2-162.9
Mental Disorders	290-319
Motor Vehicle Crashes	E810-E825
Neuroses, Personality Disorders and Other Nonpsychotic Mental Disorders	300-316
Perinatal conditions	760-779
Prostate Cancer	185
Psychoses	290-299
Stroke	430-438
Suicide/Self-Inflicted Injury	E950-E959
Unintentional Injury	E800-E949