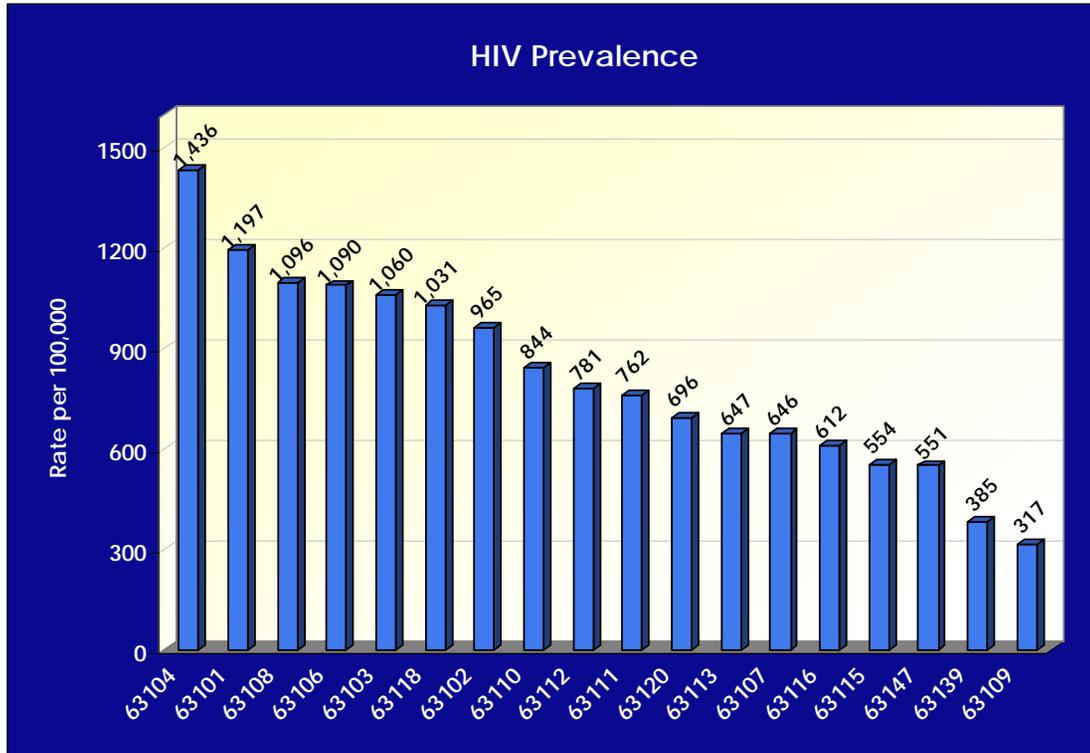


EPIDEMIC S



HIV Disease Prevalence



"Today's medical advances in HIV care have extended peoples lives and quality of life. But, we still have large numbers of people who are lost to care. Connecting individuals to care is just as important as getting people tested. Care services are also a prevention tool. When people know their status they can take better care of themselves and their partners."

-Rochelle Turner, Program Manager, City of St. Louis Department of Health

Definition

Human immunodeficiency virus (HIV) -infected individuals are individuals greater than 18 months of age who have a diagnosis of HIV infection documented by either a laboratory test or a physician. HIV Disease cases are individuals living with an HIV or AIDS infection at a particular point in time. The rates are presented as the number of cases per 100,000 population as of December 31, 2010.

Public Health Implications

Over time, persons with HIV infection who subsequently develop AIDS are reported as an AIDS case. In the St. Louis region, over 80% of HIV Disease cases are in men, 62% of cases report a mode of transmission as Men having sex with Men (MSM). Heterosexual transmission accounts for 15% of the reported mode of transmission as of December 31, 2010.

St. Louis Rates and Comparative Info

The rate in St. Louis City during 2010 is 5.0 times that in Missouri, and 1.9 times that seen in the United States. The ZIP Codes with the highest prevalence rates are 63104 and 63101. The ZIP Codes with the lowest rates are 63109 and 63139.

Black/White Disparity

Racial data is not available for St. Louis City but in both Missouri and nationally, blacks have much higher rates than whites. The HIV Disease rate in the St. Louis region is higher in the black community (676.8 per 100,000 vs. 141.7 per 100,000 in the white community).

Disparity Ratio: Data not available.

Potential Public Health Interventions

Prevention of HIV infection remains the best and most cost-effective tool for controlling the epidemic. The CDC has developed HIV prevention programs which are comprehensive, culturally competent and scientifically sound for use in communities and high-risk populations.

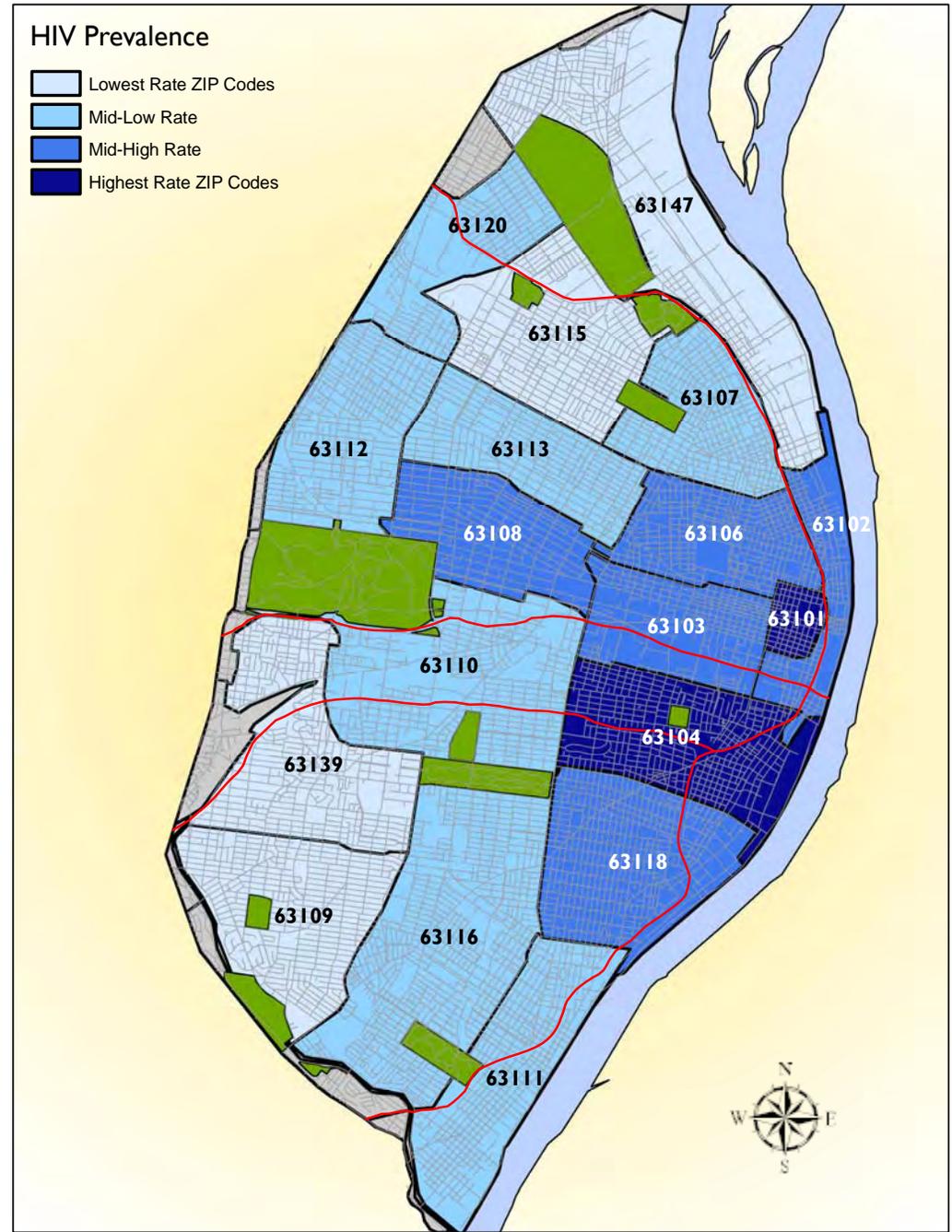
Data Source: City of St. Louis Department of Health, Bureau of Communicable Disease

Infections /100,000 Population

ZIP Code	HIV Prev	Map Quartile
63104	1435.7	4
63101**	1196.7	4
63108	1096.4	3
63106	1090.0	3
63103	1060.3	3
63118	1030.5	3
63102**	964.8	3
63110	843.5	2
63112	780.6	2
63111	761.8	2
63120	695.8	2
63113	647.3	2
63107	645.9	2
63116	612.1	2
63115	553.7	1
63147	551.1	1
63139	384.6	1
63109	316.7	1

STL City	900.2
STL Black	NAV
STL White	NAV
MO	181.4
MO Black	707.8
MO White	111.8
US	469.4
US Black	1819.0
US White	238.4

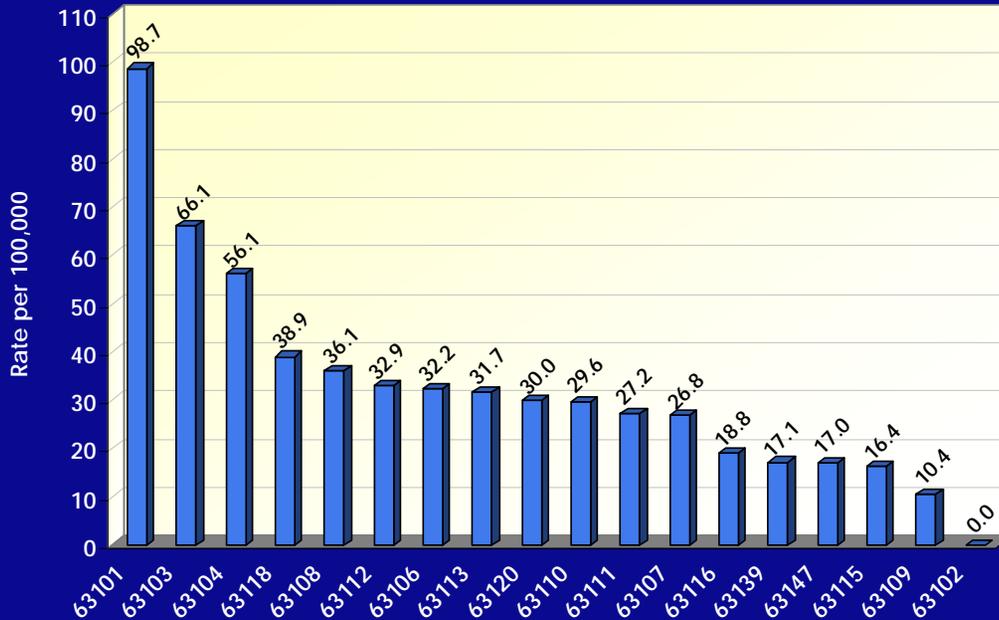
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HIV Disease Prevalence

HIV Incidence

HIV Incidence



“Each year the region continues to increase targeted outreach testing. Much of this testing is focused on those at highest risk and targets ZIP Code areas where disease is most prevalent. EFA's efforts to reach those who don't know their status continues to be of highest priority. Through partnership, added testing for other STD's, increased connections to those most at risk, and connections with those living with HIV/AIDS that are not in care, new infections can be reduced. Our goal is to get to zero new infections!”

-Cheryl Oliver, St. Louis Effort for AIDS

Definition

HIV incidence cases are persons who were diagnosed with an HIV infection for a particular length of time (not AIDS). The rates are presented as the average number of cases diagnosed per 100,000 between 2006 and 2009.

Public Health Implications

In the St. Louis region, over 50% of new HIV cases in 2009 reported MSM as the mode of transmission, 10% reported Heterosexual exposure. New advancements in the treatment of HIV disease, namely combination therapy, appear to increase not only the quality of life, but also the length of life for people with HIV infection. Over time, persons with HIV infection who subsequently develop AIDS are reported as an AIDS case.

St. Louis Rates and Comparative Info

The number of new HIV infections reported in St. Louis City has remain relatively stable over the last five years (2005 to 2009). The average rate of new HIV infections in St. Louis City from 2006 to 2009 is 4.0 times the average rate in Missouri, and 1.7 times the average rate in the United States. The ZIP Codes with the highest rates of HIV incidence are 63101, 63103 and 63104. The ZIP Codes with the lowest rates are 63115 and 63109.

Black/White Disparity

The average HIV incidence rate (2006-2009) is 1.6 times higher for blacks than it is for whites in St. Louis City.

Disparity Ratio: 1.6

Potential Public Health Interventions

Prevention of HIV infection remains the best and most cost-effective tool for controlling the epidemic. The CDC has developed HIV prevention programs which are comprehensive, culturally competent and scientifically sound for use in communities and high-risk populations.

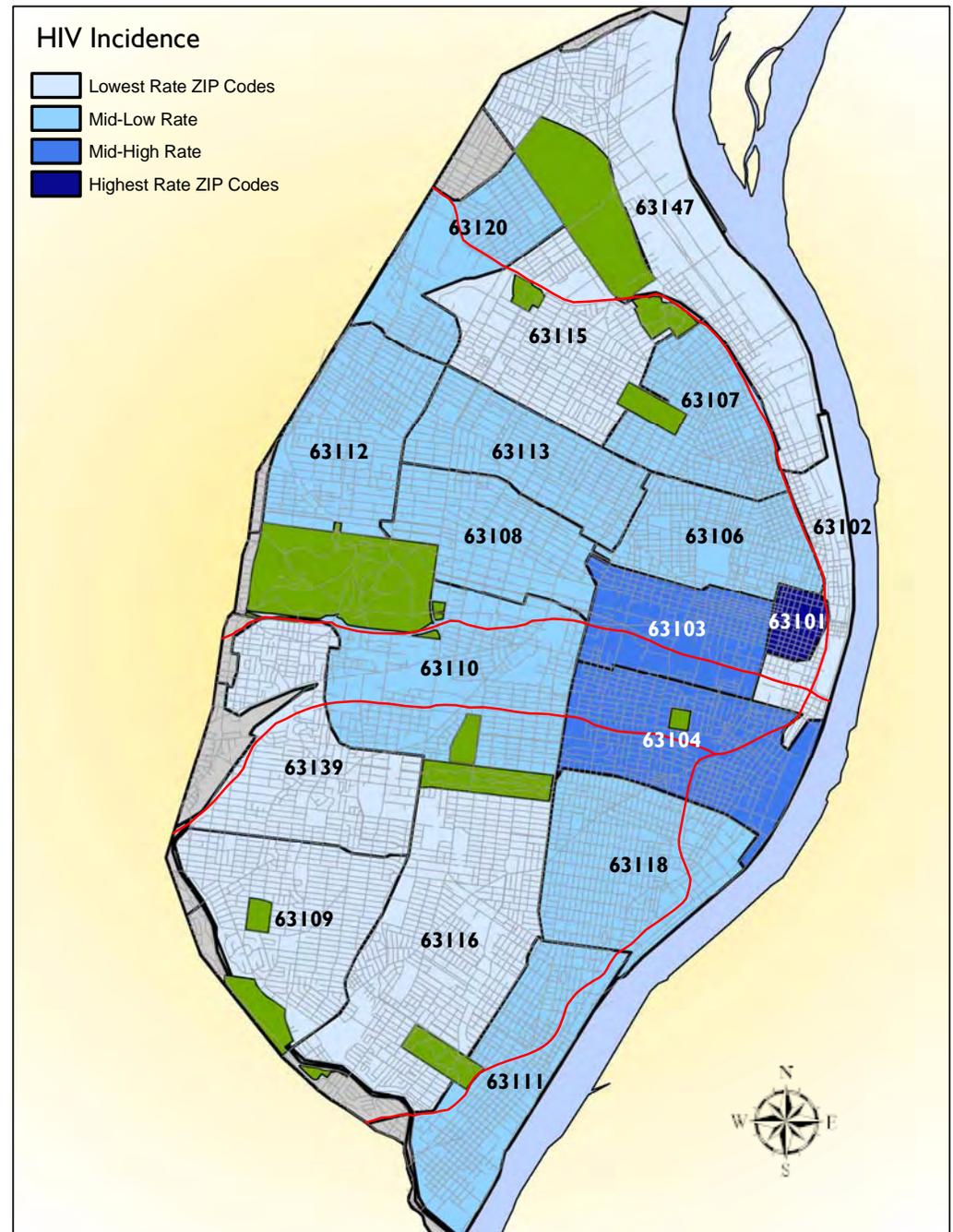
Infections /100,000 Population

ZIP Code	HIV Inc	Map Quartile
63101**	98.7	4*
63103	66.1	3*
63104	56.1	3
63118	38.9	2
63108	36.1	2*
63112	32.9	2*
63106	32.2	2*
63113	31.7	2*
63120	30.0	2*
63110	29.6	2*
63111	27.2	2*
63107	26.8	2*
63116	18.8	1*
63139	17.1	1*
63147	17.0	1*
63115	16.4	1*
63109	10.4	1*
63102**	0.0	1*

STL City	27.7
STL Black	33.6
STL White	20.7
MO	7.0
MO Black	30.2
MO White	3.7
US	16.7
US Black	63.0
US White	7.4

**small population-interpret with caution

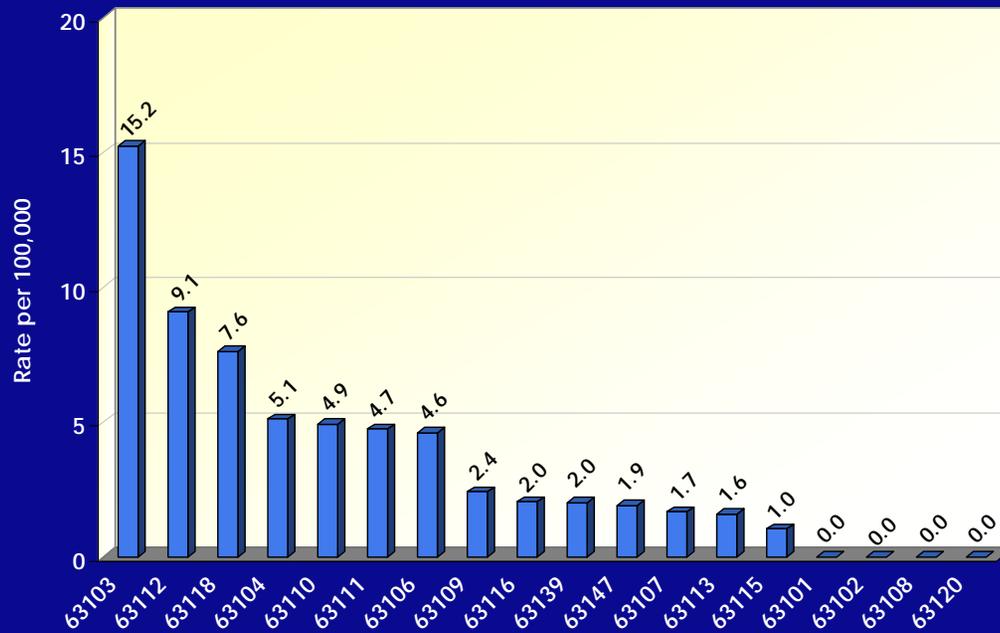
* < 20 health events-interpret with caution



HIV Incidence

AIDS Incidence

AIDS Incidence



“AIDS is the late stage of HIV infection, when a person’s immune system is severely damaged and has difficulty fighting diseases and certain cancers. Before the development of certain medications, people with HIV could progress to AIDS in just a few years. Currently, people can live much longer - even decades - with HIV before they develop AIDS.”

-Centers for Disease Control, Basic Information About HIV and AIDS

Definition

The surveillance case definition for acquired immunodeficiency syndrome (AIDS), as defined by the Centers for Disease Control, is based on the case’s (1) clinical condition, (2) human immunodeficiency virus (HIV) antibody test results and (3) laboratory measures of the effect of the virus on the immune system (CD4+ test results). This report presents the number incidence AIDS cases on average from 2006-2009. The rates are presented as the number of cases per 100,000 population and are averaged over the 2006 through 2009 time period.

Public Health Implications

In the St. Louis region, 40% of new AIDS cases in 2009 reported MSM exposure, 1% reported heterosexual exposure. Over 50% did not report or exposure was unknown in 2009. Having an unknown mode of transmission makes HIV outreach and prevention programs difficult to tailor to the population.

St. Louis Rates and Comparative Info

AIDS cases were highest in St. Louis City in 1996, and have declined since then. U.S. rates have been declining consistently since 1994. There were 38 new cases of AIDS reported in the City in 2009. The incidence rate for AIDS cases in St. Louis City is 3.8 times that seen in Missouri averaged over the same time period and slightly lower than the U.S. rate. The ZIP Codes with the highest rates occurring in 63103 and 63112. Four ZIP Codes had no new AIDS cases reported between 2006-2009.

Black/White Disparity

The St. Louis City rate among blacks is 2.4 times the St. Louis average white rate. The AIDS case rate in St. Louis City continues to be higher in the black community.

Disparity Ratio: 2.4

Potential Public Health Interventions

Prevention case management encourages infected individuals to disclose their status to potential partners and to always practice protected sex or to choose other expressions of sexuality that do not potentially expose partners to the virus.

Data Source: City of St. Louis Department of Health, Bureau of Communicable Disease

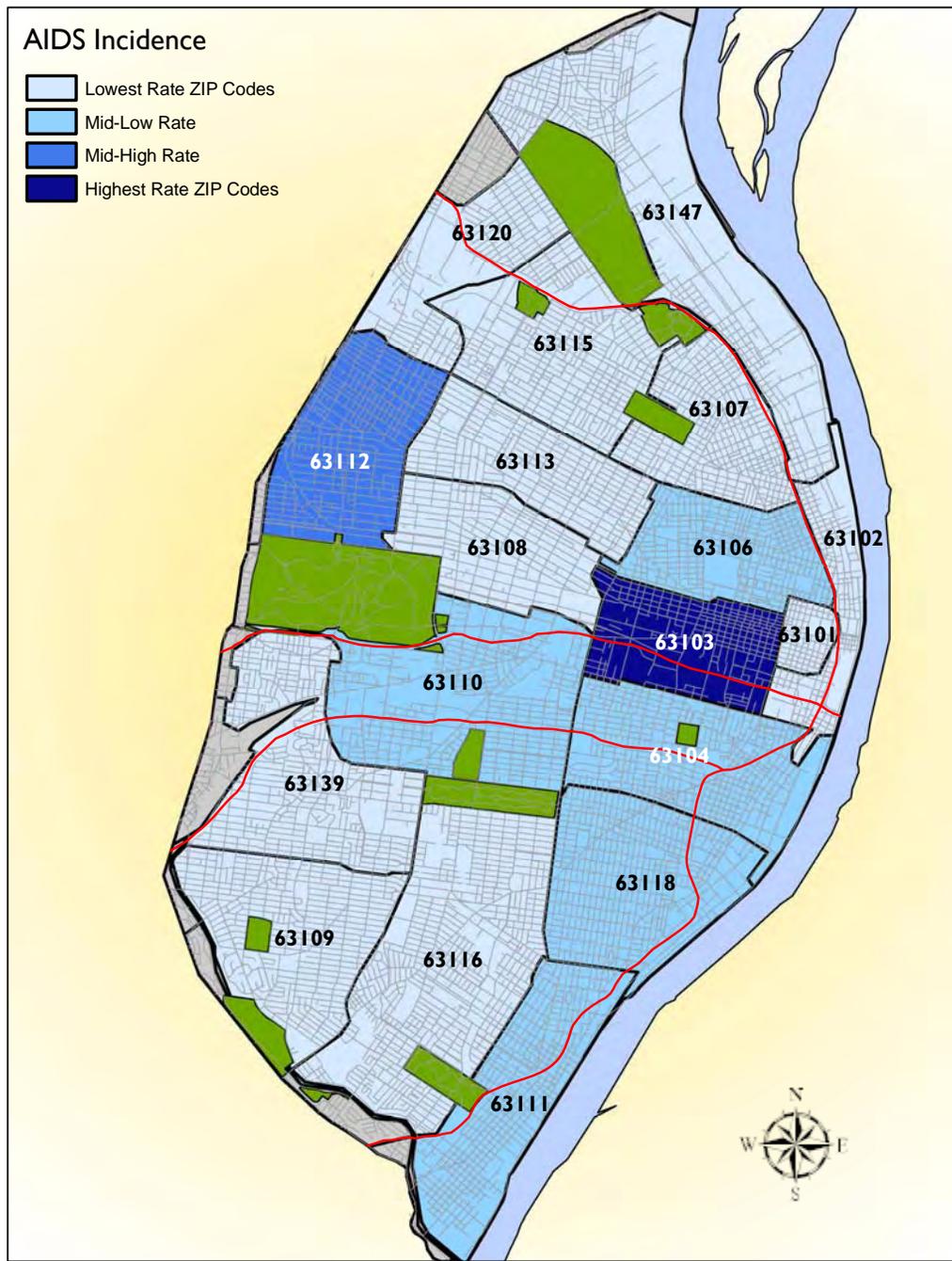
Cases /100,000 Population

ZIP Code	AIDS Inc	Map Quartile
63103	15.2	4*
63112	9.1	3*
63118	7.6	2*
63104	5.1	2*
63110	4.9	2*
63111	4.7	2*
63106	4.6	2*
63109	2.4	1*
63116	2.0	1*
63139	2.0	1*
63147	1.9	1*
63107	1.7	1*
63113	1.6	1*
63115	1.0	1*
63101**	0.0	1*
63102**	0.0	1*
63108	0.0	1*
63120	0.0	1*

STL City	9.4
STL Black	13.4
STL White	5.7
MO	2.5
MO Black	10.9
MO White	1.3
US	11.3
US Black	44.6
US White	4.9

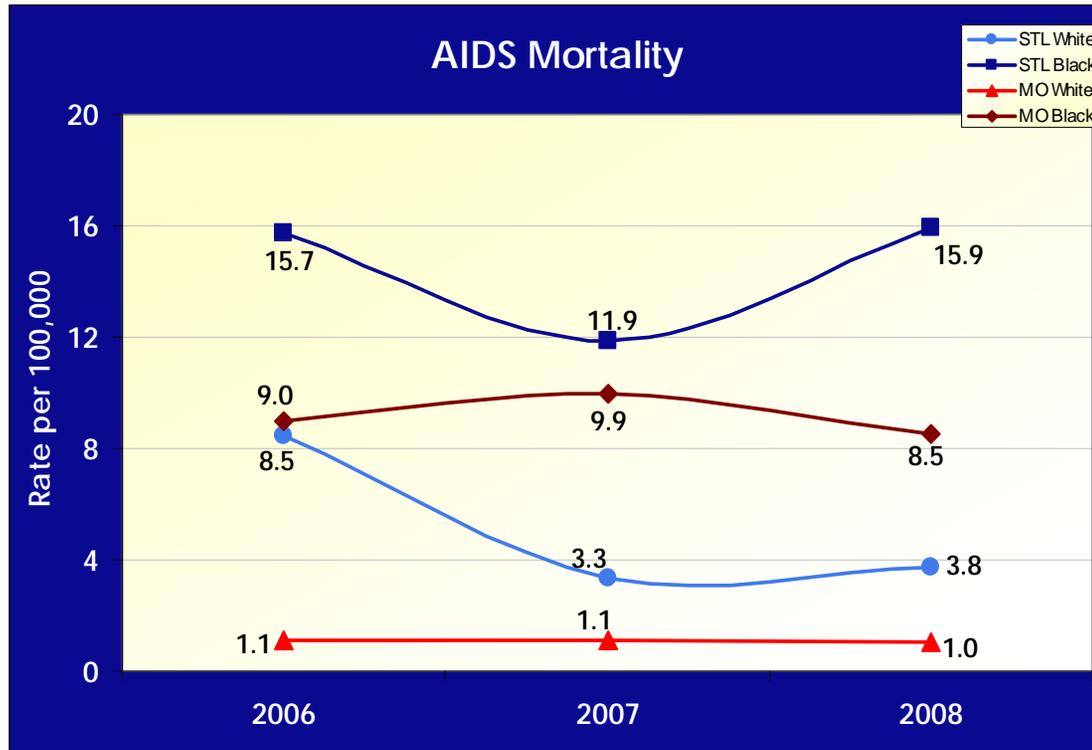
**small population-interpret with caution

* < 20 health events-interpret with caution



AIDS Incidence

AIDS Mortality



Definition

AIDS stands for “acquired immunodeficiency syndrome”. HIV (human immunodeficiency virus) is the virus that causes AIDS. An HIV-infected person receives a diagnosis of AIDS after developing one of the CDC-defined AIDS indicator illnesses. An HIV-positive person who has not had any serious illnesses also can receive an AIDS diagnosis on the basis of certain blood tests (CD4+ counts). Age-adjusted rates are presented per 100,000 population and are averaged over the 2006 through 2008 time period.

Public Health Implications

New advancements in the treatment of HIV disease, namely combination therapy, appear to increase the quality of and prolong life for people with HIV infection. However, in 2007, HIV was the ninth leading cause of death among blacks and the third leading cause of death for black women and black men aged 35–44.

St. Louis Rates and Comparative Info

In St. Louis City in the time period 2006 through 2008, the average AIDS mortality rate is 1.7 times the U.S. rate and 4.7 times the rate in Missouri. In 2008, there were 34 deaths due to AIDS in St. Louis City. The ZIP Codes with the highest rates are 63113 and 63147. The ZIP Codes with the lowest rates are the downtown ZIP codes, 63109 and 63139.

Black/White Disparity

The St. Louis City AIDS death rate in the black population is 2.8 times the white population.

Disparity Ratio: 2.8

Potential Public Health Interventions

Prevention of HIV infection remains the best and most cost-effective tool for saving lives. The Centers for Disease Control funds HIV prevention programs for high-risk populations that are comprehensive, culturally competent and scientifically sound.

“AIDS mortality has been greatly reduced because of better drug therapy. People are living longer and we are beginning to view HIV/AIDS as a chronic disease. People will live 30+ years if they are on medicine and undergoing regular treatment.”

-Dale Wrigley, Bureau Chief of Communicable Diseases at the Center for HIV/STD/Hepatitis A Services, City of St. Louis Department of Health

Data Source: Missouri Department of Health and Senior Services; Vital Records Data

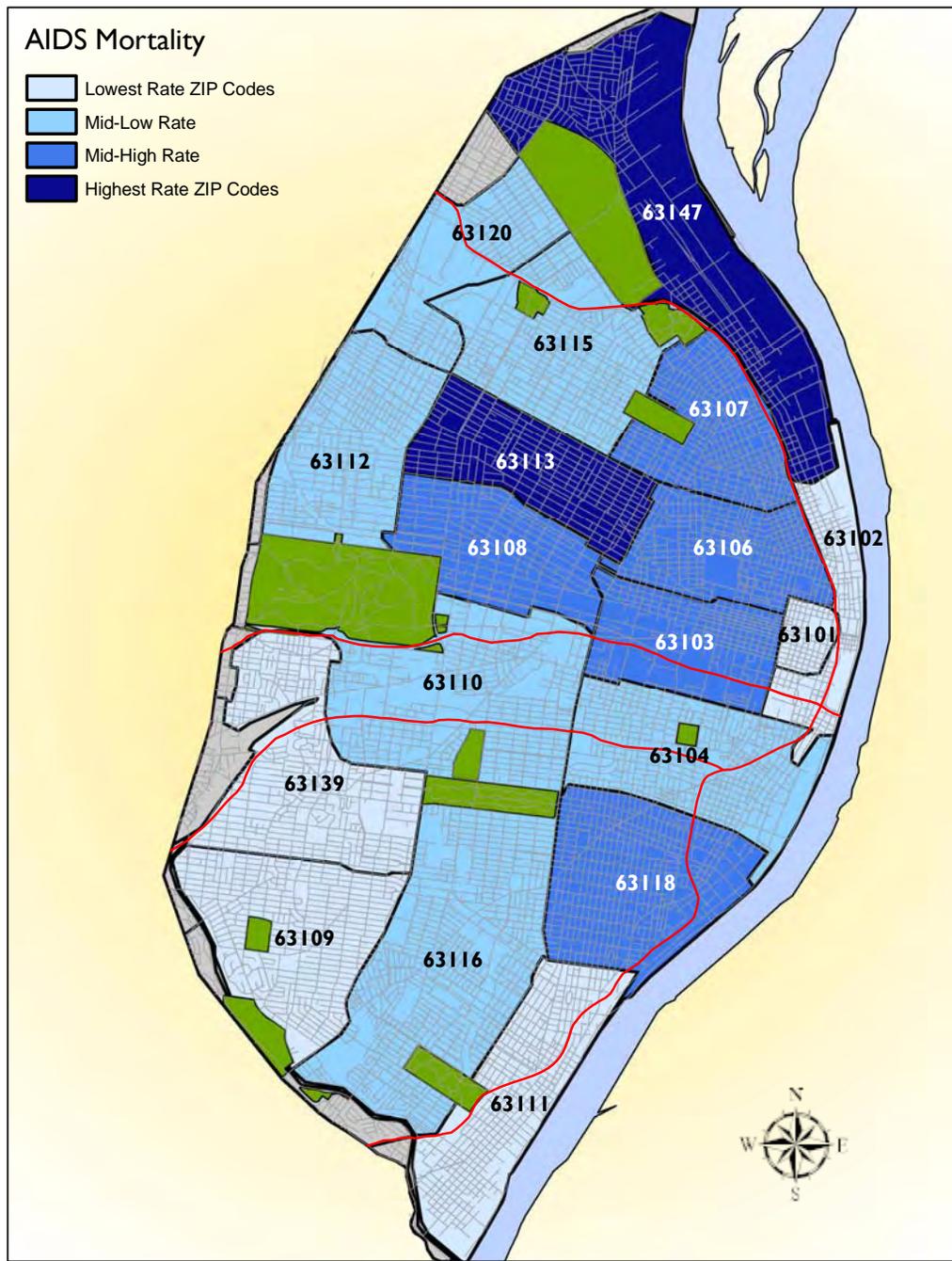
Deaths /100,000 Population

ZIP Code	AIDS Mortality	Map Quartile
63113	21.3	4*
63147	19.4	4*
63106	14.1	3*
63107	13.7	3*
63103	13.5	3*
63118	12.6	3*
63108	11.3	3*
63115	10.6	2*
63110	10.3	2*
63112	9.0	2*
63120	8.3	2*
63116	7.8	2*
63104	6.5	2*
63111	4.7	1*
63139	2.5	1*
63109	0.9	1*
63101**	0.0	1*
63102**	0.0	1*

STL City	9.4
STL Black	14.5
STL White	5.1
MO	2.0
MO Black	9.1
MO White	1.1
US	5.5
US Black	23.0
US White	2.4

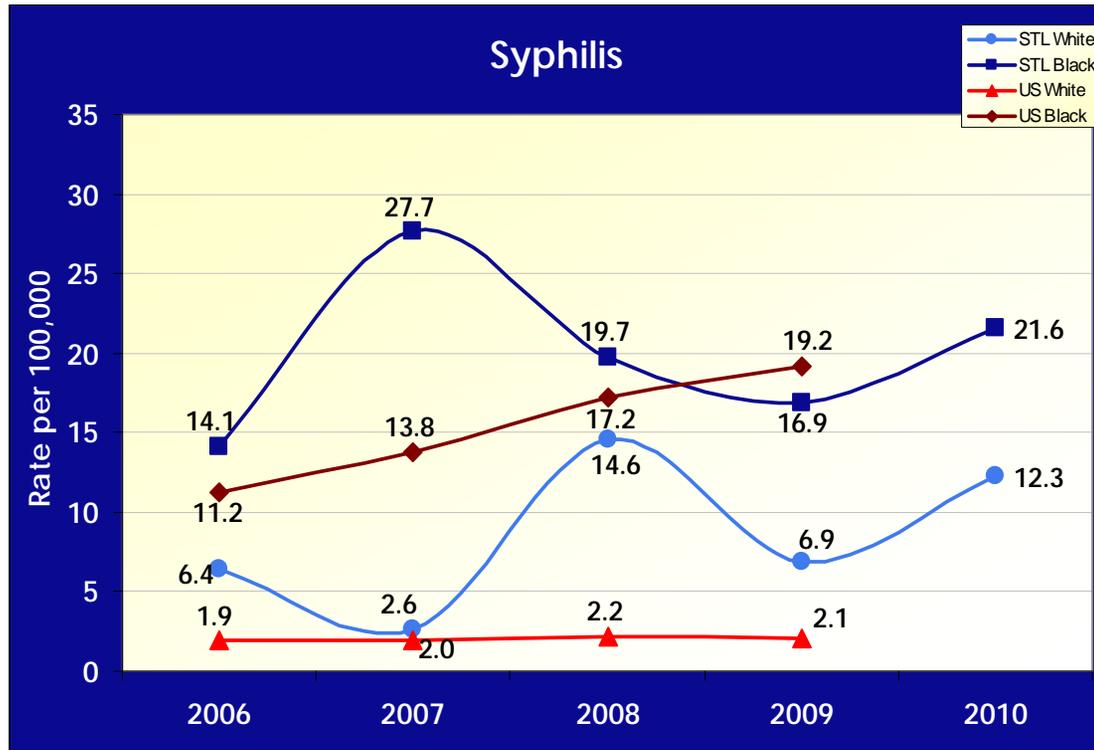
**small population-interpret with caution

* < 20 health events-interpret with caution



AIDS Mortality

Syphilis



Definition

Syphilis is a systemic, sexually-transmitted disease caused by the bacterium *Treponema pallidum*. Infections may be detected by signs or symptoms of the infection, or by serologic testing during the latent stage of the disease. Rates described here are for primary and secondary syphilis together. The rates are presented as cases per 100,000 population and are averaged over the 2006-2010 time period.

Public Health Implications

Syphilis remains a problem in certain geographic areas and populations, particularly among MSM. Persons infected with an STD may be at a greater risk of contracting HIV. The Healthy People 2010 national objective for syphilis was .02 cases per 100,000 persons.

St. Louis Rates and Comparative Info

Syphilis rates in St. Louis City have decreased dramatically since 1995; from 100.6 per 100,000 to 14.0 averaged for 2006-2010. St. Louis experienced a syphilis epidemic starting in 1992. Comparing average rates from 2006 through 2010, the St. Louis City rate is 4.4 times that seen in Missouri, and 3.7 times the U.S. rate. In 2010, there were 56 cases of primary and secondary syphilis in St. Louis City.

Black/White Disparity

The rate of syphilis was 2.3 times greater in St. Louis City black population compared to the white population.

Disparity Ratio: 2.3

Potential Public Health Interventions

Prevention of STD's is based on changing the sexual behaviors that place persons at risk for infection. For individuals diagnosed with syphilis, Disease Intervention Specialists (DIS) aggressively interview patients for their contacts and then locate them for examination and preventative treatment. Extensive risk reduction counseling to avoid future infection is also provided.

“Since St. Louis has the highest syphilis rates in Missouri, and 47% of new syphilis cases were co-infected with HIV in 2011, it is imperative that the St. Louis community become aware that syphilis is preventable and treatable. EFA’s syphilis elimination program includes testing and targeted promotion to the most at-risk populations. It provides an amazing opportunity for raising awareness through marketing and education.”

-Cheryl Oliver, St. Louis Effort for AIDS

Data Source: City of St. Louis Department of Health, Bureau of Communicable Disease

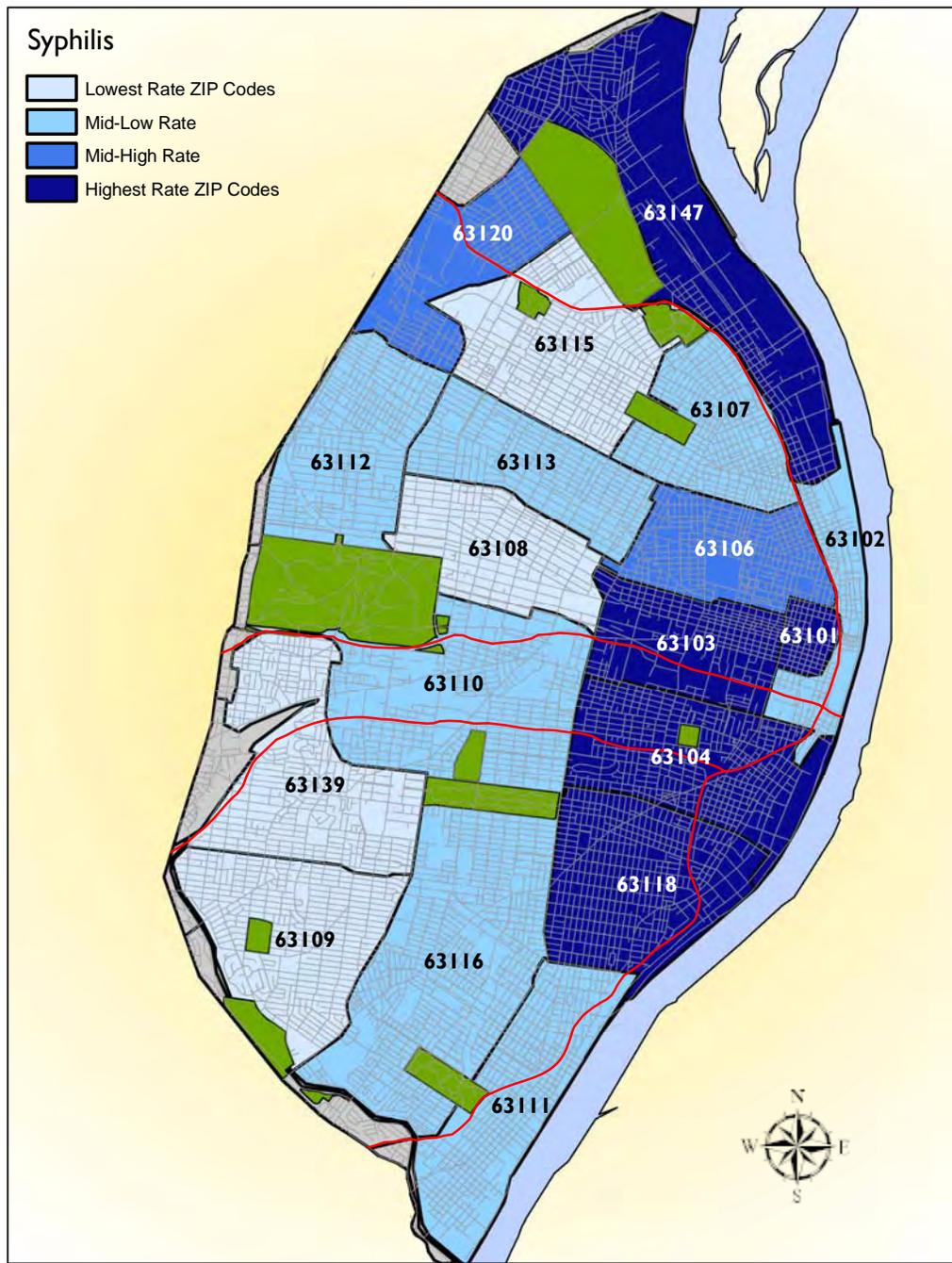
Cases /100,000 Population

ZIP Code	Syphilis	Map Quartile
63101**	57.1	4*
63103	30.7	4*
63118	26.5	4*
63104	26.4	4*
63147	24.2	4*
63106	20.3	3*
63120	17.5	3*
63111	16.1	2*
63107	13.4	2*
63102**	12.8	2*
63116	12.6	2*
63110	11.8	2*
63113	11.4	2*
63112	10.8	2*
63115	9.0	1*
63108	6.9	1*
63139	6.4	1*
63109	1.9	1*

STL City	14.0
STL Black	19.5
STL White	8.4
MO	3.2
MO Black	13.5
MO White	1.9
US	3.8
US Black	14.2
US White	2.0

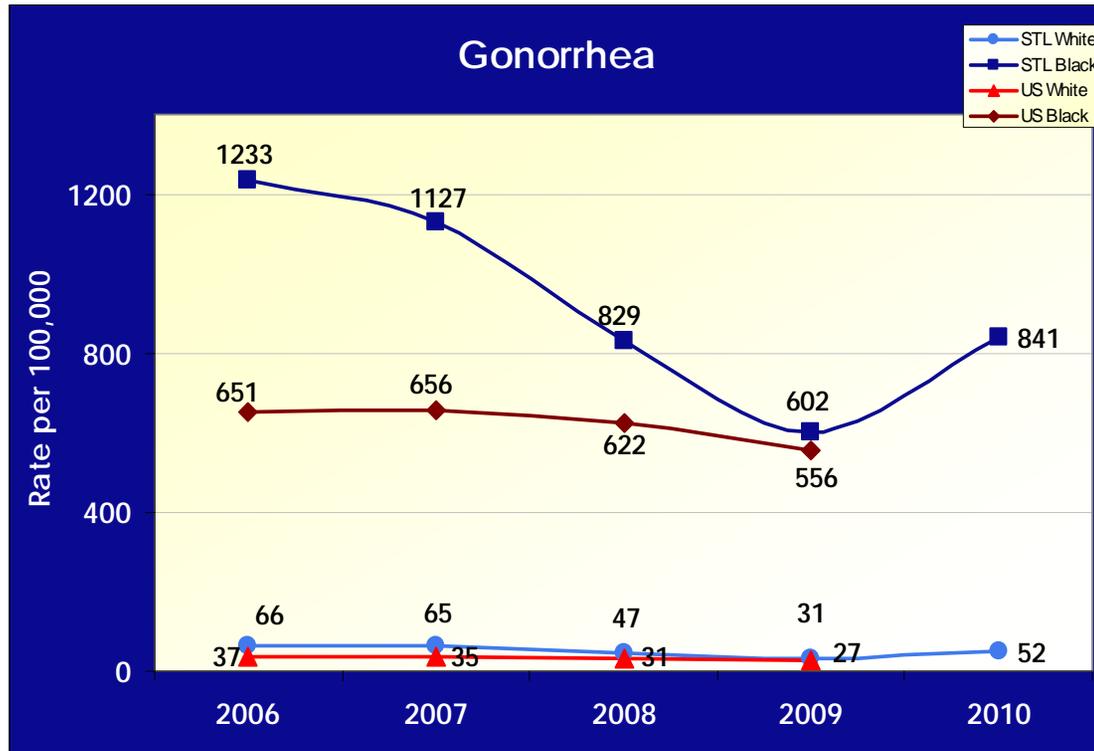
**small population-interpret with caution

* < 20 health events-interpret with caution



Syphilis

Gonorrhea



"Prevention of HIV also includes prevention of curable STD's like gonorrhea. Unprotected sex is unprotected sex. Exposure to STD's that are curable is also possible exposure to those that are not, like HIV. Prevention, education, testing and use of protection are key. STD's are preventable."

-Rochelle Turner, Program Manager

Data Source: City of St. Louis Department of Health, Bureau of Communicable Disease

Definition

Neisseria gonorrhoeae is a sexually transmitted bacterial disease that differs in males and females in course, severity and ease of recognition. It is second only to chlamydia infection in the number reported to the Centers for Disease Control. The rates are presented as the number of cases per 100,000 population and are averaged over the 2006-2010 time period.

Public Health Implications

In women, gonorrhea is a common cause of pelvic inflammatory disease (PID), about 10-20% of women with untreated chlamydia or gonorrhea develop PID. In men, gonorrhea can cause epididymitis, a painful condition of the testicles that can lead to infertility if left untreated. Individuals infected with gonorrhea may be at an increased risk for contracting HIV.

St. Louis Rates and Comparative Info

Rates of gonorrhea in St. Louis City declined significantly since the early 1990s from rates of over 1,200 per 100,000 to 588 per 100,000 in the 2006-2010 time period. The average rate of gonorrhea in St. Louis City during the time period was 4.1 times the Missouri rate and 5.2 times the U.S. rate. In 2010, 1,677 cases of Gonorrhea were reported in St. Louis City.

Black/White Disparity

Specific rates by race for St. Louis City are presented in this report but caution must be used when looking at the data, annually, between 14 and 22 percent of the cases do not specify race. There may also be underreporting in the white community. When looking at the average rates by ZIP Code, the highest rates were reported in ZIP Codes that are predominately black. The rate among blacks is 17.7 times higher than whites in the city.

Disparity Ratio: 17.7

Potential Public Health Interventions

Most infections among men produce symptoms that cause them to seek curative treatment. Gonococcal infections among women are often asymptomatic, an important component of gonorrhea control in the United States continues to be the screening of women at high risk for STDs. The highest rates of gonorrhea and chlamydia in women are in 15-19-year-olds.

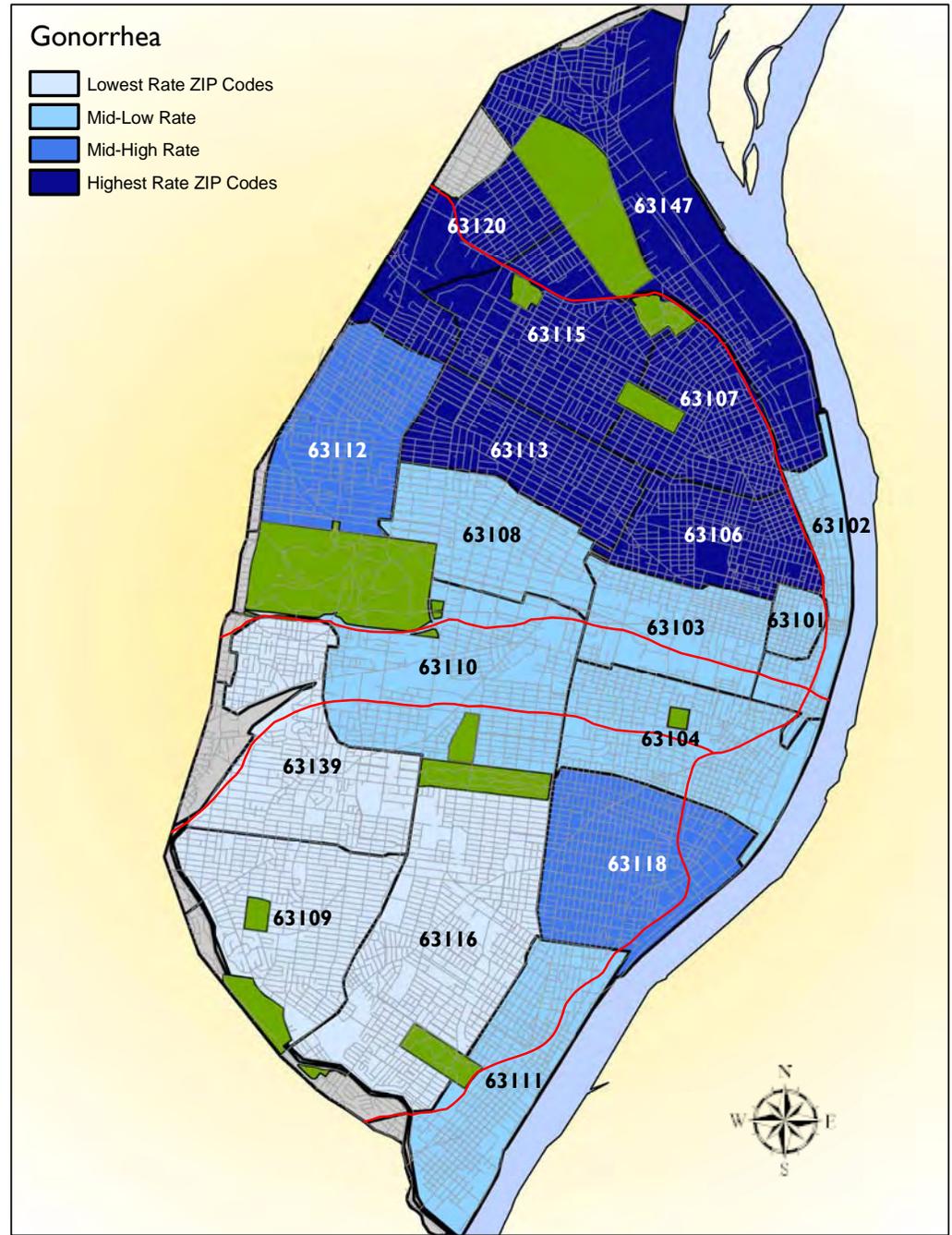
Cases /100,000 Population

ZIP Code	Gonorrhea	Map Quartile
63120	1094.3	4
63113	1043.9	4
63115	1043.1	4
63107	1035.9	4
63106	1002.4	4
63147	844.4	4
63112	814.0	3
63118	727.5	3
63101**	571.1	2*
63102**	523.0	2*
63103	483.0	2
63104	433.3	2
63111	415.8	2
63110	414.4	2
63108	325.6	2
63116	236.9	1
63139	75.1	1*
63109	64.6	1

STL City	588.4
STL Black	904.3
STL White	51.2
MO	141.9
MO Black	756.4
MO White	28.4
US	112.4
US Black	621.1
US White	32.9

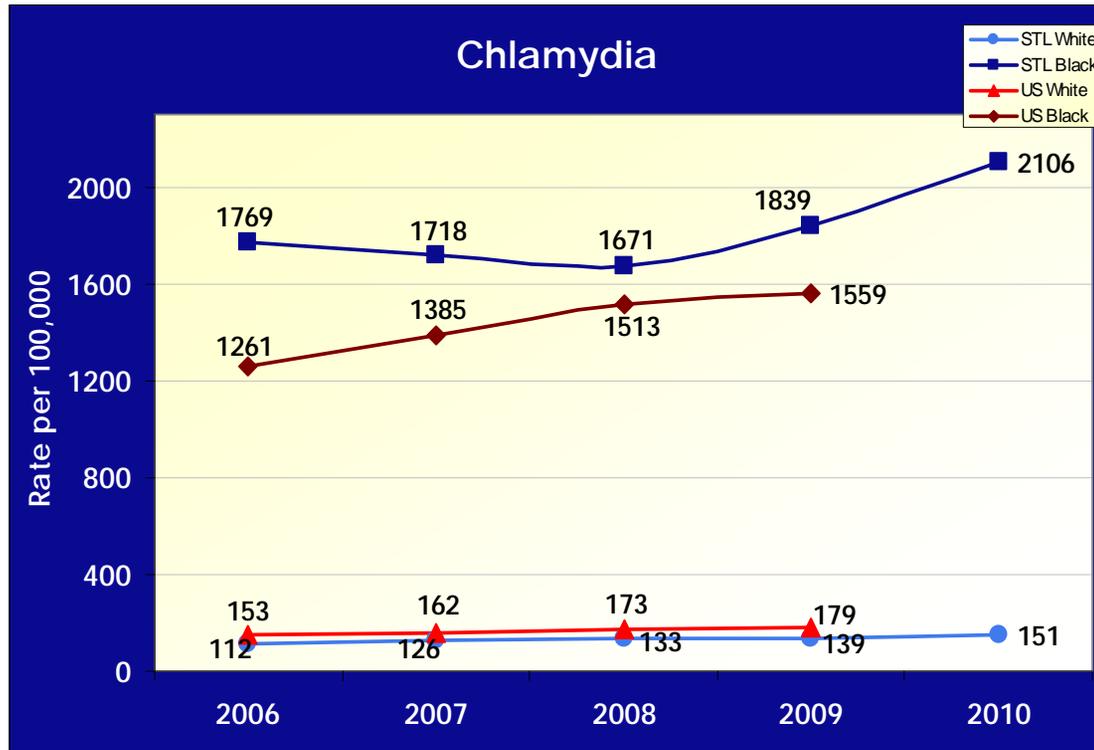
**small population-interpret with caution

* < 20 health events-interpret with caution



Gonorrhea

Chlamydia



Definition

Chlamydia trachomatis is a bacteria that causes the sexually transmitted disease. Clinical manifestations of this genital infection are similar to gonorrhea, however, the majority of cases are asymptomatic in both men and women. The rates described here are cases per 100,000 population and are averaged over the 2006-2010 time period.

Public Health Implications

Infections are frequently asymptomatic in both females and males; chlamydia infections have been found in 1-25% of sexually active men. In recent years, testing of males has become more prevalent, leading to an increase in rates of infection. Since clinical manifestations are similar to gonorrhea, it is recommended that both organisms be treated if one is suspected.

St. Louis Rates and Comparative Info

Comparing the average rate from 2006-2010, the St. Louis City chlamydia infection rate is 3.0 times that seen in Missouri, and 3.4 times that seen in the U.S. In 2010, 4,564 cases of chlamydia were reported in St. Louis City.

Black/White Disparity

Specific rates by race for St. Louis City are presented in this report but caution must be used when looking at the data, annually, about 23 percent of the cases do not specify race. There may also be underreporting in the white community. When looking at the averaged rates by ZIP Code, the highest rates were reported in ZIP Codes that are predominately black.

Disparity Ratio: 13.6

Potential Public Health Interventions

As with other sexually transmitted diseases, health and sex education are important strategies for prevention and control. Due to the asymptomatic nature of the disease, increased screening is recommended.

“To break the cycle of chlamydia transmission in the United States, health care providers should encourage annual chlamydia screening for all sexually active females aged <25 years, maximize use of effective partner treatment services, and rescreen infected females and males 3 months after treatment.”

-Morbidity and Mortality Weekly Report; CDC Grand Rounds: Chlamydia Prevention: Challenges and Strategies for Reducing Disease Burden and Sequelae, April 2011

Data Source: City of St. Louis Department of Health, Bureau of Communicable Disease

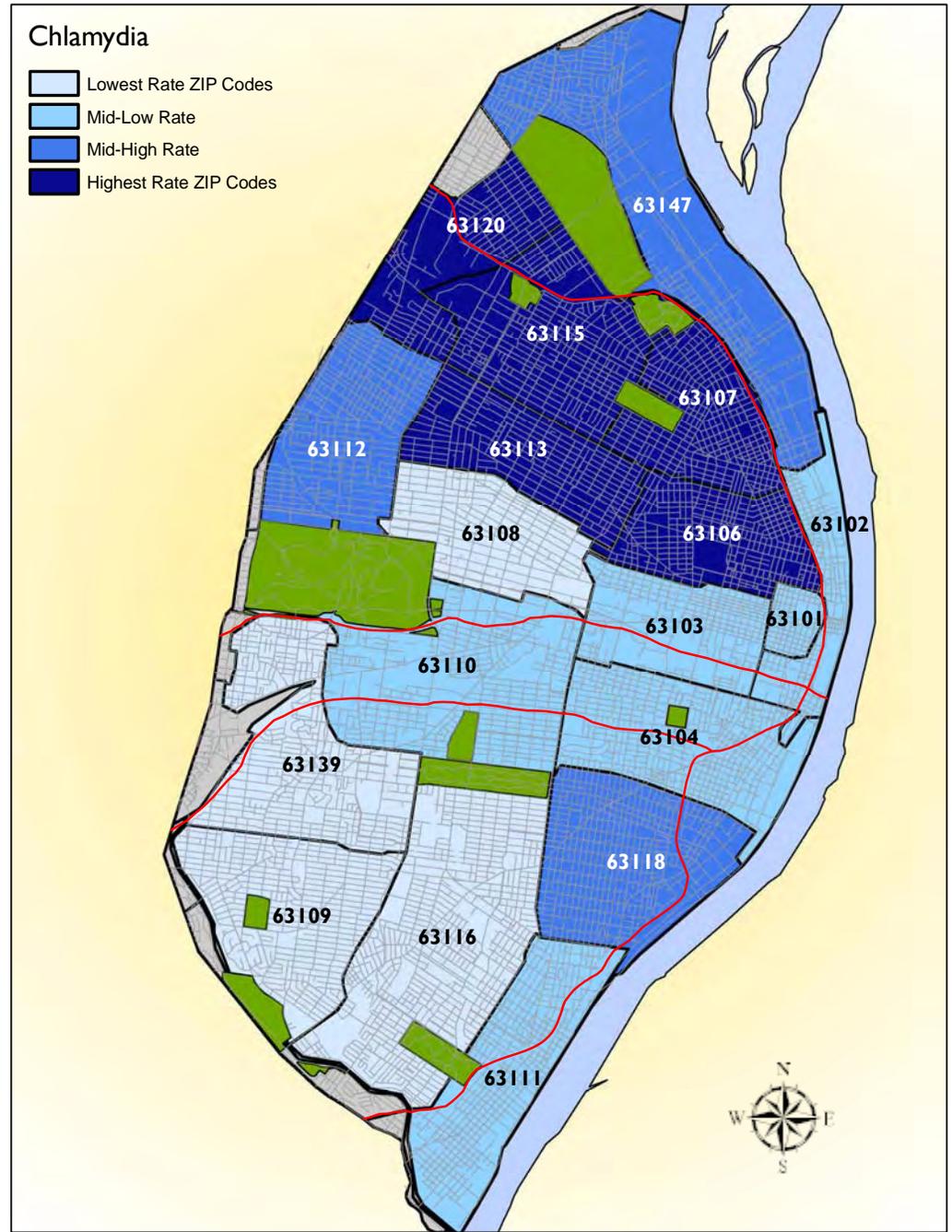
Cases /100,000 Population

ZIP Code	Chlamydia	Map
	a	Quartile
63106	2580.7	4
63120	2308.3	4
63113	2054.8	4
63115	2045.3	4
63107	2042.4	4
63147	1700.8	3
63112	1670.5	3
63118	1481.5	3
63101**	1370.6	2
63111	1056.5	2
63103	1050.3	2
63104	1043.2	2
63102**	931.1	2*
63110	909.6	2
63108	700.7	1
63116	567.3	1
63139	225.2	1
63109	216.1	1

STL City	1272.5
STL Black	1765.5
STL White	129.9
MO	417.4
MO Black	1648.4
MO White	146.7
US	369.7
US Black	1390.5
US White	163.7

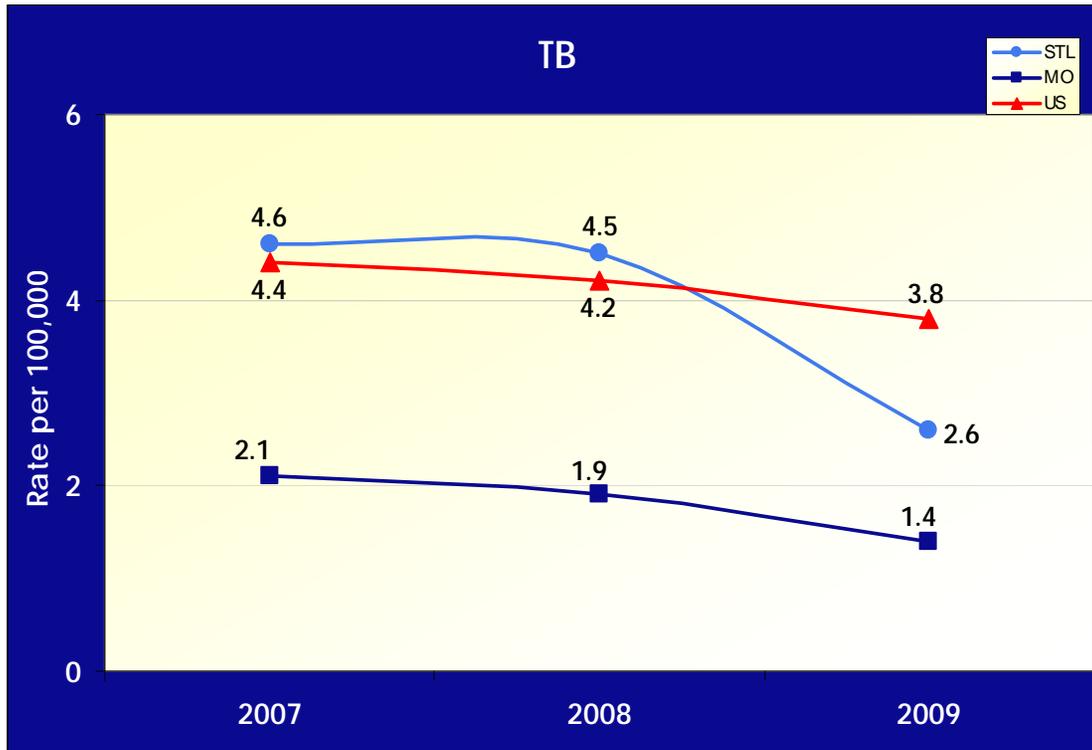
**small population-interpret with caution

* < 20 health events-interpret with caution



Chlamydia

T B C a s e s



“An increased focus should be placed on those with latent TB to catch them when they are in the latent stage and prevent the progression into full blown TB. There is also a stigma, especially among foreign born populations, that is similar to that of the stigma of HIV/AIDS testing and diagnosis, that prevents those with TB from being tested and undergoing routine treatment.”

-Dale Wrigley Bureau Chief of Communicable Diseases at the Center for HIV/STD/Hepatitis A Services, City of St. Louis Department of Health

Definition

TB, or tuberculosis, is a disease caused by bacteria called *Mycobacterium tuberculosis*. The bacteria can attack any part of the body, but usually attacks the lungs. The rates are presented as the number of cases per 100,000 and are also averaged over the 2005-2009 time period.

Public Health Implications

As a result of drug therapy developed in the 1940's, TB slowly began to disappear in the United States. However, there was a resurgence of TB in the early 1990s. There has been a steady decline in the number of persons with TB since 1992. But TB is still a problem: 11,537 cases were reported in 2009 in the United States. In 2009, the U.S. rate at 3.8 per 100,000 was the lowest rate in over 55 years.

St. Louis Rates and Comparative Info

The average rate of TB in St. Louis City was 2.3 times the Missouri rate, and almost identical to the U.S. rate. In 2009 in St. Louis City, there were less than 10 cases of TB. The ZIP Codes with the highest rates are 63102, 63106 and 63108. The ZIP Codes with the lowest rates are 63139, 63110 and 63101.

Black/White Disparity

N/A

Disparity Ratio: Data not available.

Potential Public Health Interventions

A TB skin test is the most effective way to diagnose a TB infection. People who are infected with TB but do not have any symptoms cannot spread TB, however, they may develop TB disease at some time in the future. Individuals with compromised immune systems are at an increased risk for an active infection. This population includes: infants, young children and people living with HIV.

Data Source: City of St. Louis Department of Health, Bureau of Communicable Disease

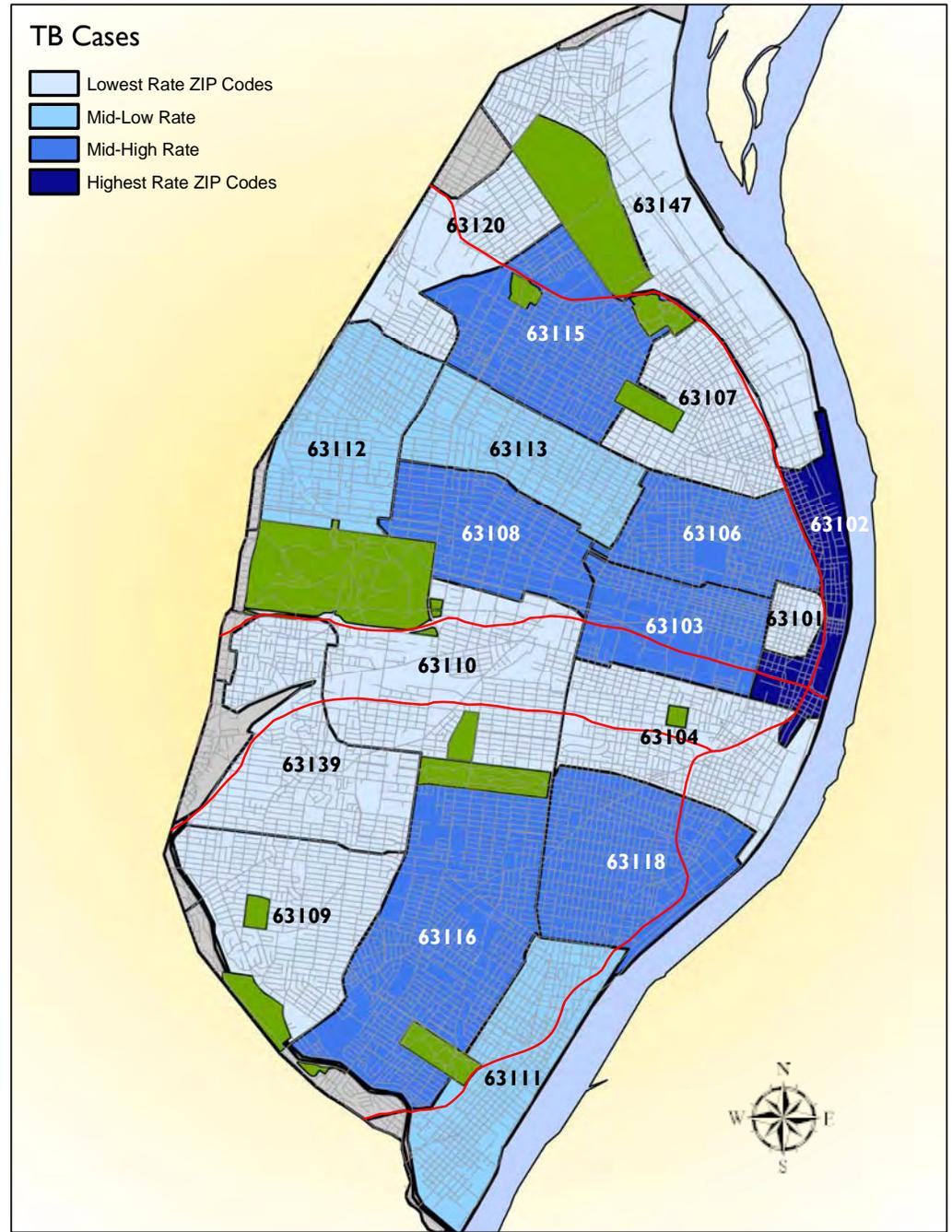
Cases /100,000 Population

ZIP Code	TB Cases	Map Quartile
63102**	13.2	4*
63106	9.2	3*
63108	9.0	3*
63116	8.3	3*
63115	8.2	3*
63103	8.1	3*
63118	7.4	3*
63113	5.1	2*
63112	4.5	2*
63111	3.8	2*
63120	1.6	1*
63147	1.5	1*
63107	1.3	1*
63104	1.0	1*
63109	0.6	1*
63101**	0.0	1*
63110	0.0	1*
63139	0.0	1*

STL City	4.2
STL Black	NAV
STL White	NAV
MO	1.8
MO Black	NAV
MO White	NAV
US	4.1
US Black	NAV
US White	NAV

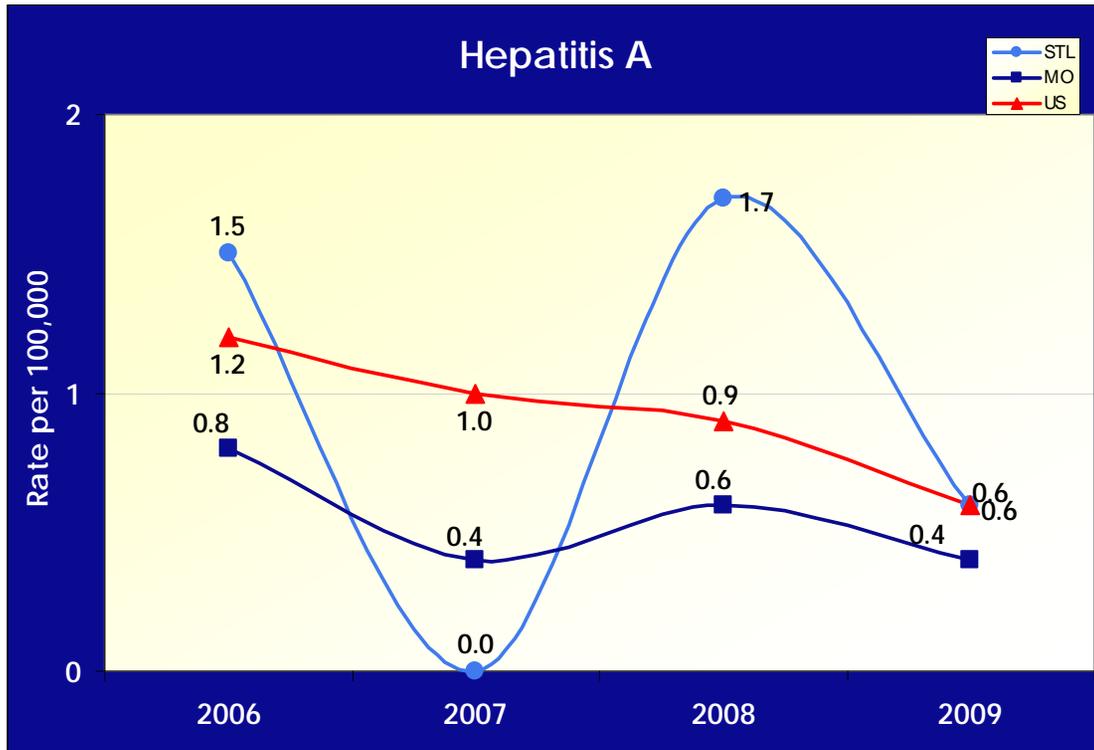
**small population-interpret with caution

* < 20 health events-interpret with caution



TB Cases

Hepatitis A



Definition

Hepatitis A is a liver disease caused by Hepatitis A virus (HAV). HAV is transmitted via the fecal/oral route, either person to person contact or from ingesting contaminated food or water. Severity of illness may be mild, lasting 1 to 2 weeks; or severe, lasting several months. Prolapsing hepatitis can occur in 10-15% of cases during the 6 months after acute illness. The rates are presented as the number of cases per 100,000 population and are averaged over 2006-2010 time period.

Public Health Implications

Since 1995, there has been an effective vaccine available to prevent HAV. The vaccine is recommended to high-risk populations: international travelers, MSM, injection drug users and children. In the City of St. Louis, food-service workers are also required to be HAV vaccinated.

St. Louis Rates and Comparative Info

In St. Louis City, rates of hepatitis A decreased dramatically in the period from 1994 to 2005. In 2009, there were only 3 cases of hepatitis A reported in St. Louis City. The average rate of hepatitis A between 2006-2010 was 1.6 times the average rate in Missouri, and slightly lower compared to the U.S. overall.

Black/White Disparity

The black population had a rate almost twice that seen in the white population, 0.7 versus 0.39 respectively.

Disparity Ratio: 1.8

Potential Public Health Interventions

Good personal hygiene and proper sanitation can help prevent hepatitis A. Vaccines are also available for long-term prevention of HAV infection in persons 2 years of age and older. Immune globulin is available for short-term prevention in all ages. HAV vaccination is the best protection.

“Since the city ordinance requiring all restaurant establishment employees to be vaccinated against Hepatitis A has been in effect, we have seen less outbreaks and infection among employees. Inspections and ordinances have decreased the infection rate.”

-Dale Wrigley Bureau Chief of Communicable Diseases at the Center for HIV/STD/Hepatitis A Service, City of St. Louis Department of Health

Data Source: City of St. Louis Department of Health, Bureau of Communicable Disease

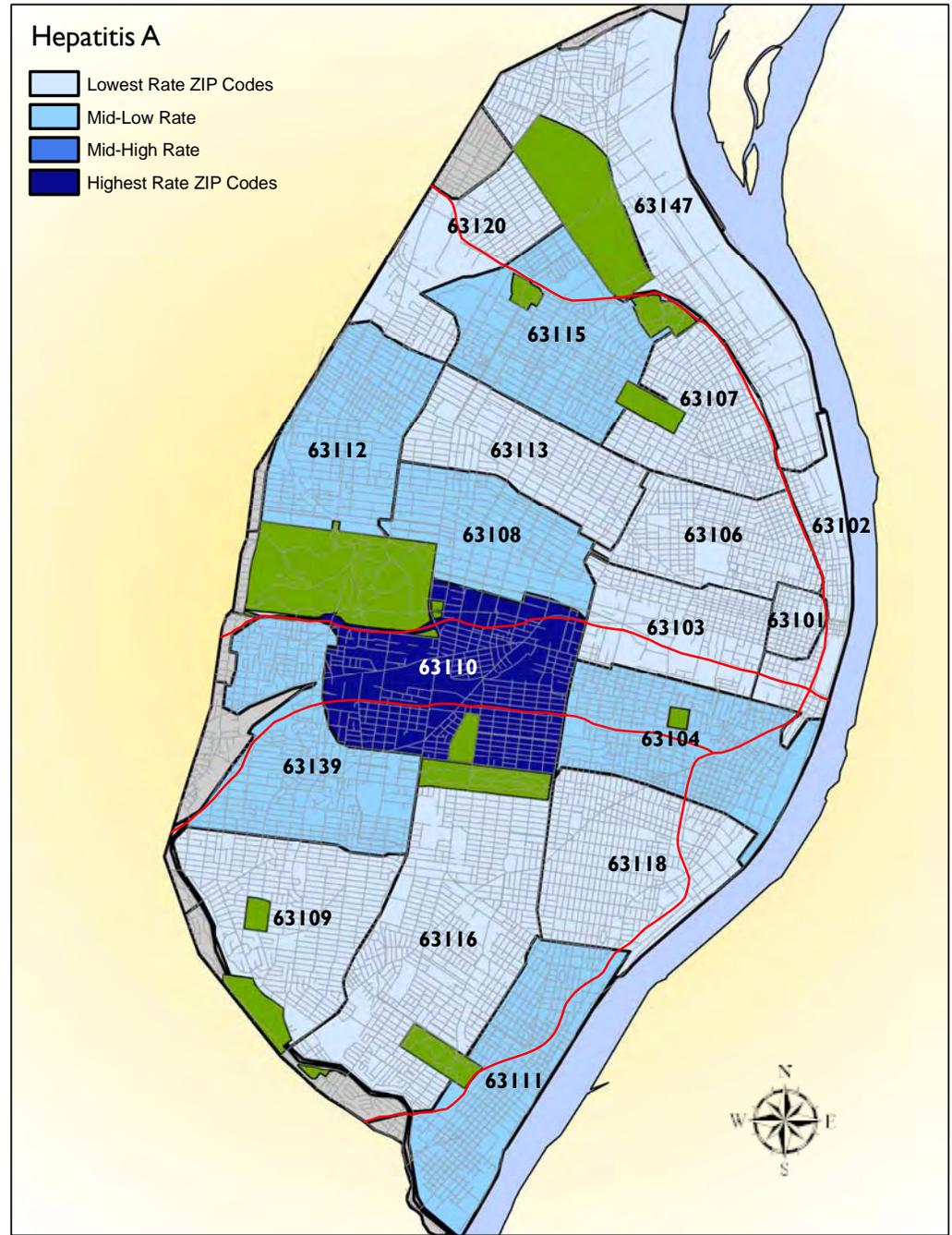
Cases /100,000 Population

ZIP Code	Hep A	Map Quartile
63110	3.94	4*
63111	1.89	2*
63112	1.80	2*
63115	1.64	2*
63139	1.60	2*
63104	1.01	2*
63108	0.99	2*
63116	0.81	1*
63101**	0.00	1*
63102**	0.00	1*
63103	0.00	1*
63106	0.00	1*
63107	0.00	1*
63109	0.00	1*
63113	0.00	1*
63118	0.00	1*
63120	0.00	1*
63147	0.00	1*

STL City	0.92
STL Black	0.70
STL White	0.39
MO	0.58
MO Black	0.38
MO White	0.43
US	1.04
US Black	NAV
US White	NAV

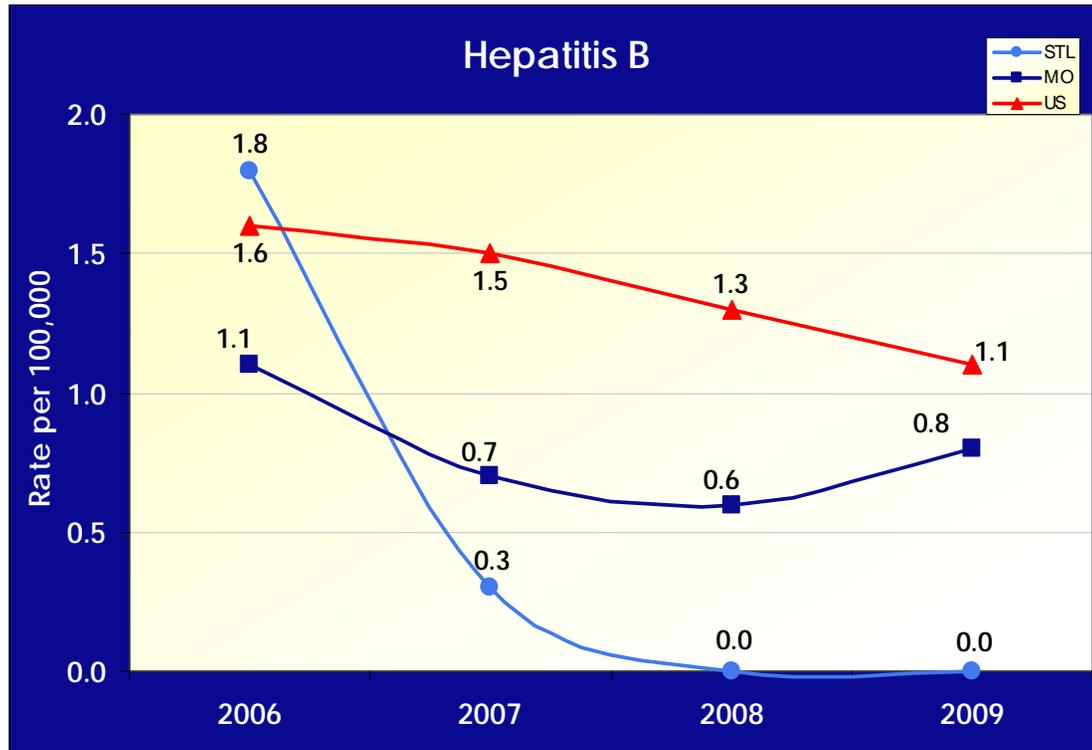
**small population-interpret with caution

* < 20 health events-interpret with caution



Hepatitis A

Hepatitis B



Definition

Hepatitis B is a serious disease caused by a virus that attacks the liver. The virus, which is called hepatitis B virus (HBV), can cause lifelong infection, cirrhosis (scarring) of the liver, liver cancer, liver failure and death. HBV is transmitted by percutaneous or mucosal exposure to infectious blood or body fluids from persons who have either acute or chronic HBV infection. The rates are presented as the number of cases per 100,000 population and are averaged over the 2006-2010 time period.

Public Health Implications

In the United States, hepatitis B is largely a disease of young adults; the rate of reported cases is highest for persons 20 - 49 years of age. The number of new infections per year has declined from an average of 260,000 in the 1980s to about 3,371 in 2009. The greatest decline has happened among children and adolescents due to routine hepatitis B vaccination.

St. Louis Rates and Comparative Info

Averaged rates in the time period 2006-2010, indicate that the rate in St. Louis City is significantly lower than both the Missouri rate and the U.S. rate. The number of cases of acute HBV in the city is very low, between 2006-2010, there were less than 10 cases.

Black/White Disparity

The black population in the city had a rate 1.5 times that seen in the white population, 0.58 versus 0.39 respectively.

Disparity Ratio: 1.5

Potential Public Health Interventions

The current hepatitis B vaccination strategy in the United States has an overall goal of eliminating HBV transmission. Because most of the serious consequences related to HBV occur among persons with chronic HBV infection, the primary objectives of this strategy are to prevent chronic HBV infection. Chronic infection can lead to cirrhosis and liver cancer.

“Because our children are now immunized against Hepatitis B along with other childhood immunizations, the number of Hepatitis B cases should be decreasing as a trend as we go forward into the future.”

-Dale Wrigley Bureau Chief of Communicable Diseases at the Center for HIV/STD/Hepatitis A Services, City of St. Louis Department of Health

Data Source: City of St. Louis Department of Health, Bureau of Communicable Disease

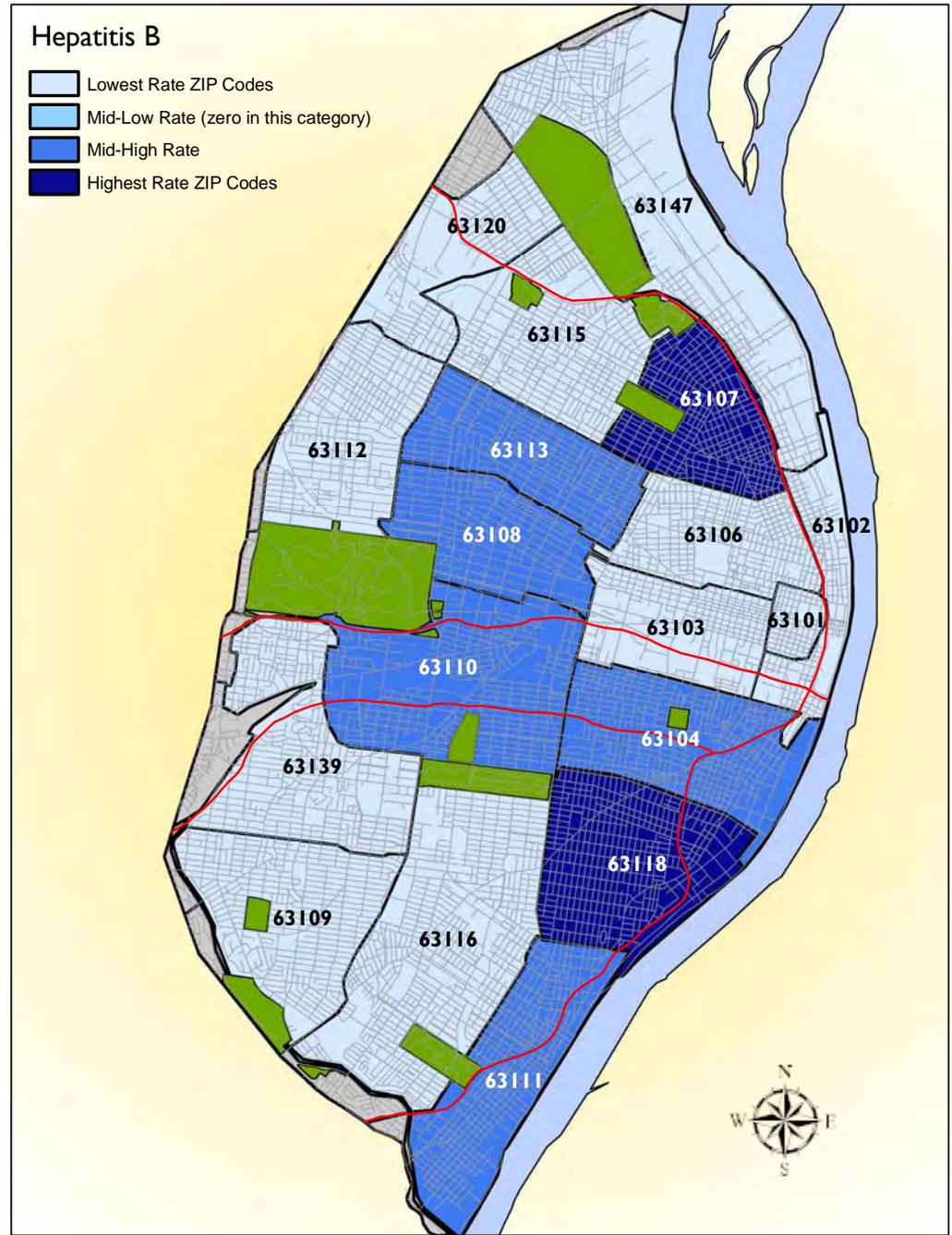
Cases /100,000 Population

ZIP Code	Hep B	Map Quartile
63118	1.36	4*
63107	1.34	4*
63113	1.27	4*
63104	1.01	3*
63108	0.99	3*
63110	0.98	3*
63111	0.95	3*
63101**	0.00	1*
63102**	0.00	1*
63103	0.00	1*
63106	0.00	1*
63109	0.00	1*
63112	0.00	1*
63115	0.00	1*
63116	0.00	1*
63120	0.00	1*
63139	0.00	1*
63147	0.00	1*

STL City	0.47
STL Black	0.58
STL White	0.39
MO	0.86
MO Black	1.00
MO White	0.65
US	1.50
US Black	NAV
US White	NAV

**small population-interpret with caution

* < 20 health events-interpret with caution



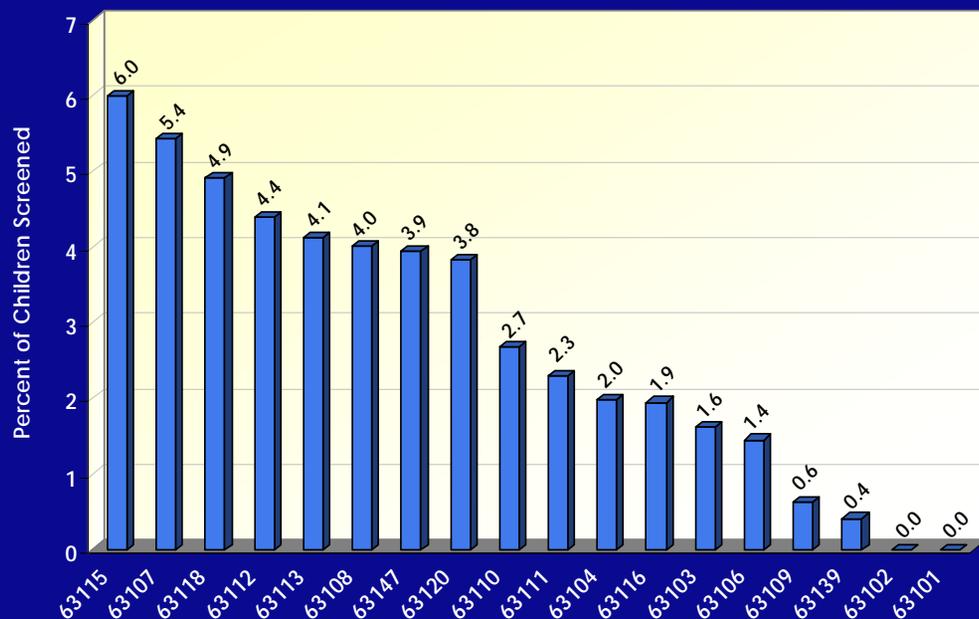
Hepatitis B

ENVIRONMENTAL



Lead Poisoning

Childhood Lead Poisoning Prevalence



“Since 2003, the City of St. Louis has seen a 65% reduction in childhood lead poisoning prevalence, an increase in the number of children engaging in blood lead level screening, and an increase in the availability of lead-free housing.”

-University of Washington Health Disparities Toolkit; National Association of County and City Health Officials, Mar, 2010

Data Source: City of St. Louis Department of Health, Children’s Environmental Health Bureau

Definition

Lead poisoning results from the ingestion of lead. It primarily affects children between the ages of 6 months and 5 years. The major source of lead is from chipping lead-based paint and paint dust in housing. Lead poisoning, in this document, is defined as those children less than six years of age that have a blood lead level of 10 µg/dl (micrograms per deciliter) or higher. The rates presented are the percent of lead poisoned children that have been screened and are referred to as “screening prevalence rates” (SPR). The rates do not represent all children under six years of age.

Public Health Implications

Childhood lead poisoning is considered to be entirely preventable but remains a major environmental health problem in the United States. Lead poisoning can adversely affect intelligence, behavior and development. Minority and poor children are disproportionately affected.

St. Louis Rates and Comparative Info

The rate for both Missouri and the U.S. in 2009 was around 1%. In 2009, in St. Louis City there were 438 children under the age of 6 reported as having elevated blood lead levels. The number of children lead poisoned has steadily decreased in St. Louis City since 2000.

Black/White Disparity

In St. Louis City in 2009 the screening prevalence rate for black children was 3.9 whereas the rate in white children was 1.5. The ZIP Codes with the highest screening prevalence rates are in the predominately black areas of the city. They are ZIP Codes 63115, 63107, 63118, 63112, 63113 and 63108.

Disparity ratio: 2.6

Potential Public Health Interventions

Screening programs, education programs, epidemiological assessments to determine high risk areas, prevention programs, remediation efforts and policy development.

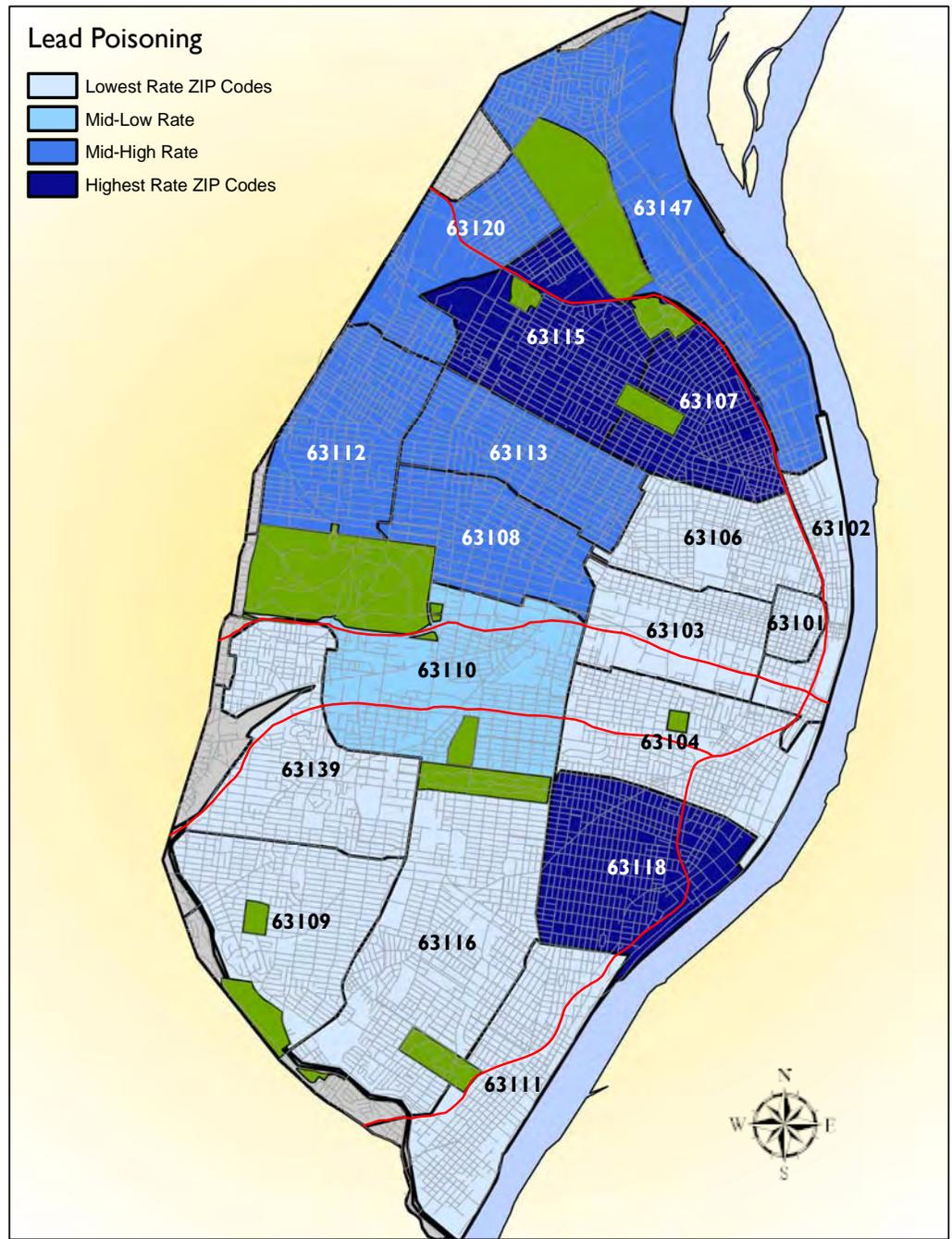
% Poisoned /100 Tested

ZIP Code	Lead Poison	Map Quartile
63115	6.0%	4
63107	5.4%	4
63118	4.9%	4
63112	4.4%	3
63113	4.1%	3
63108	4.0%	3*
63147	3.9%	3
63120	3.8%	3
63110	2.7%	2*
63111	2.3%	1
63104	2.0%	1*
63116	1.9%	1
63103	1.6%	1*
63106	1.4%	1*
63109	0.6%	1*
63139	0.4%	1*
63101**	0.0%	1*
63102**	0.0%	1*

STL City	3.2%
STL Black	3.9%
STL White	1.5%
MO	1.0%
MO Black	NAV
MO White	NAV
US	0.8%
US Black	NAV
US White	NAV

**small population-interpret with caution

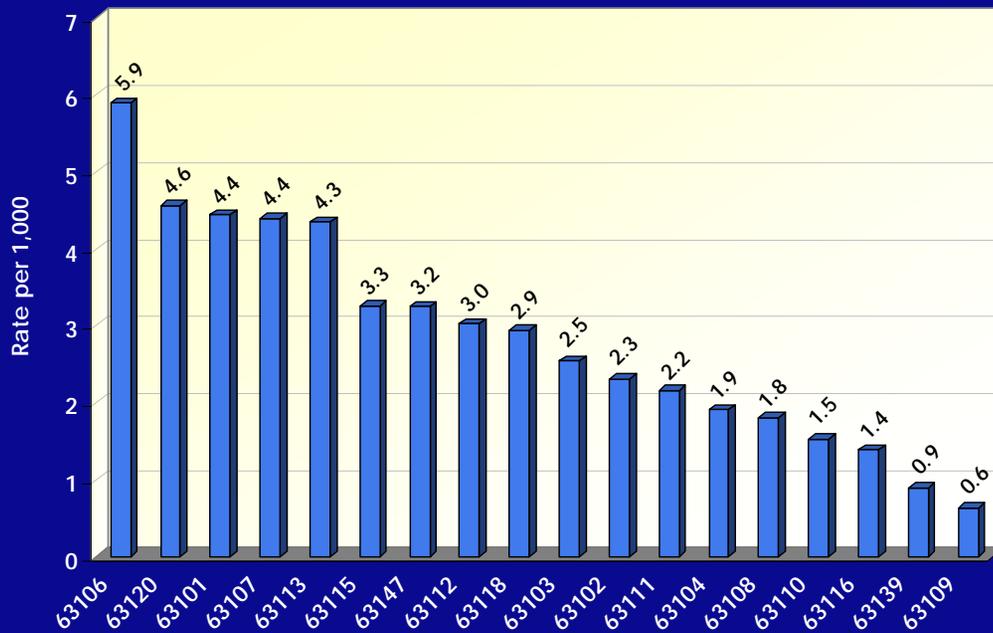
* < 20 health events-interpret with caution



Lead Poisoning

Asthma

Asthma Hospitalizations



“St. Louis is between two rivers, so the mold and pollen numbers are always going to be high . . . While one in 11 children have asthma in St. Louis, in some neighborhoods in North St. Louis the number is one in five.”

-Jordan Wildermuth, project director for the St. Louis office of the Asthma and Allergy Foundation

Data Source: Missouri Department of Health and Senior Services, Bureau of Health Care Analysis and Data Dissemination

Definition

Asthma is a long-term, often progressive disease in which the airways in the lungs become temporarily blocked through inflammation causing episodes of breathing difficulty. Asthma triggers include dust, tobacco smoke, cockroaches and some chemicals. A long-term multifaceted approach is required to prevent and manage asthma. Asthma currently cannot be cured, only controlled. The rates are presented as the number of asthma hospitalizations averaged for the time period 2006-2008 per 1,000 population.

Public Health Implications

Asthma is one of the most common and costly diseases in the United States. Over 8 percent of the adult population has asthma, as almost 19 million adults reported the condition in 2010. Furthermore, over 9 percent of children suffer from the respiratory disease. Asthma is disproportionately affecting poor, inner-city dwellers.

St. Louis Rates and Comparative Info

St. Louis City rates are more than twice the rate in Missouri and the US. The ZIP Codes with the highest rates are 63106 and 63120. The ZIP Codes with the lowest rates are 63109 and 63139.

Black/White Disparity

Blacks are hospitalized for asthma in St. Louis City at a rate 6.6 times that of whites. While this may partly reflect an issue with access to primary care and its subsequent effects on asthma exacerbations, the disparity is nonetheless alarming.

Disparity Ratio: 6.6

Potential Public Health Interventions

Public health programming includes assisting in access to primary care, health education and environmental sanitation interventions.

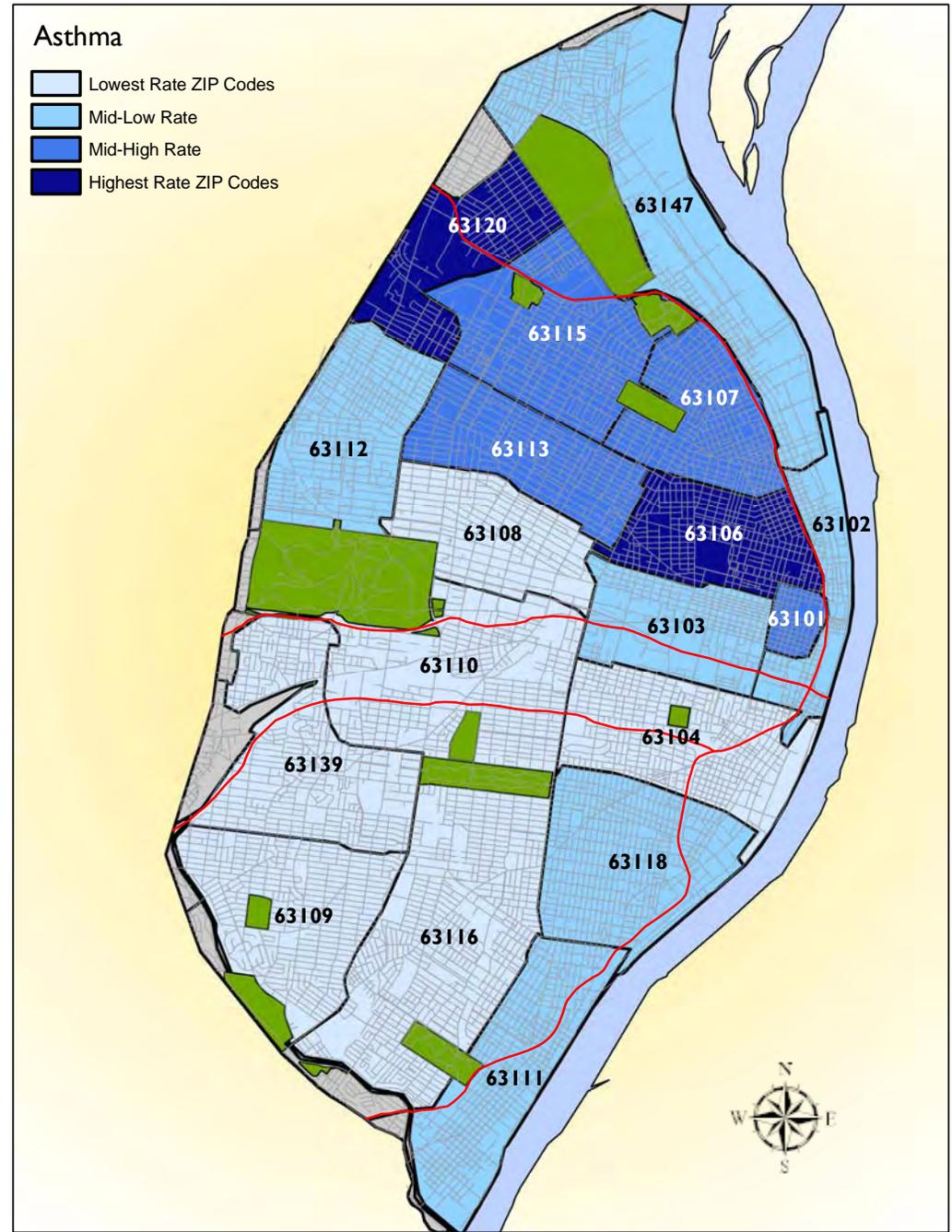
Admissions /1000 Population

ZIP Code	Asthma	Map Quartile
63106	5.9	4
63120	4.6	4
63101**	4.4	3
63107	4.4	3
63113	4.3	3
63115	3.3	3
63147	3.2	2
63112	3.0	2
63118	2.9	2
63103	2.5	2
63102**	2.3	2*
63111	2.2	2
63104	1.9	1
63108	1.8	1
63110	1.5	1
63116	1.4	1
63139	0.9	1
63109	0.6	1

STL City	3.1
STL Black	5.3
STL White	0.8
MO	1.3
MO Black	4.0
MO White	0.9
US	1.5
US Black	NAV
US White	NAV

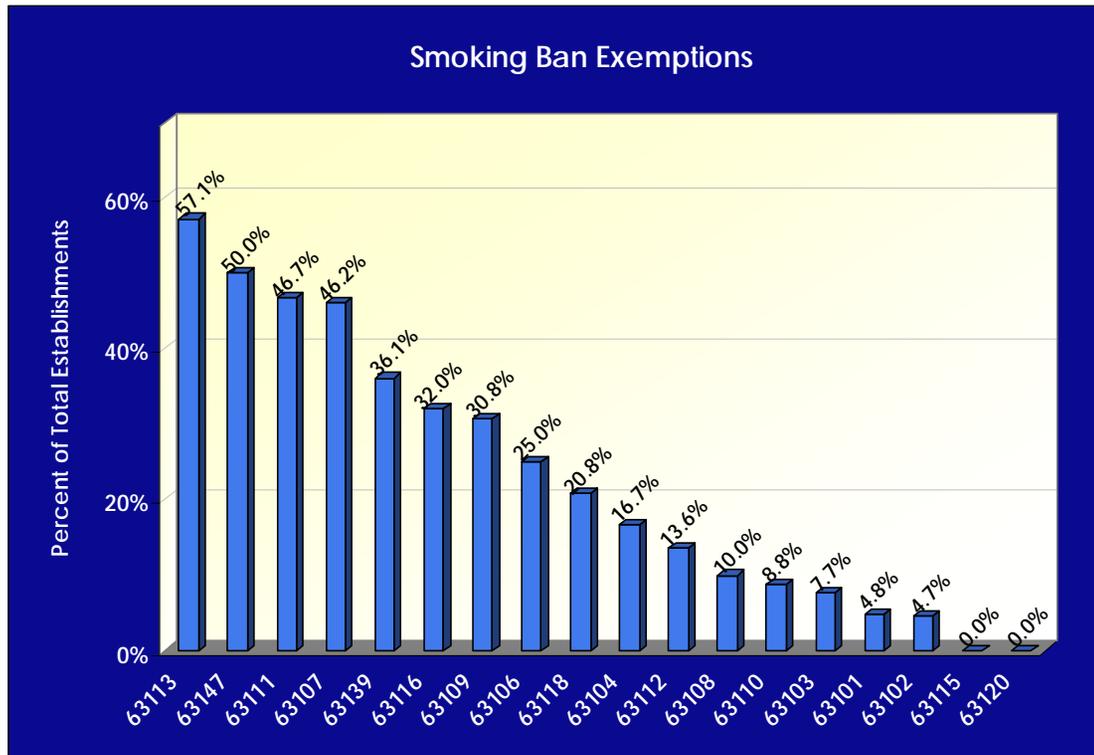
**small population-interpret with caution

* < 20 health events-interpret with caution



Asthma

Smoking Ban Exemptions



“With the abundant science and knowledge about the dangers of secondhand smoke, exemptions for certain workplaces are no longer acceptable.”

-Smoke Free St. Louis, www.smokefreestl.org

Definition

The City's smoking ordinance prohibits smoking in all enclosed public places and enclosed places of employment. The ordinance includes, but is not limited to, the entrance or exit lobbies, elevators, restrooms, common areas of multi-unit dwellings, aquariums, bingo facilities, polling places, convention facilities, shopping malls, sports arenas and restaurants. Vehicles that constitute places of employment are also subject to the St. Louis Smoke Free Air Act. Smoking will still be allowed in private residences, except when used as a licensed day care, licensed adult day care, or licensed health care facility. Local hotels and motels can allow smoking in 20 percent of their rooms. Other exempt areas include private clubs, outdoor areas of places of employment, tobacco retail stores and casino gaming areas. Bars of 2,000 square feet or less, which have food sales of 25 percent or less of sales and which do not admit persons under 21 to enter are also allowed to apply for exemption.

Public Health Implications

Studies have shown that smoke-free laws that ban smoking in public places like bars and restaurants improve air quality and decrease air pollution, which has been linked to lung and heart disease.

St. Louis Rates and Comparative Info

Comparative information not available.

Black/White Disparity

N/A

Disparity Ratio: N/A

Potential Public Health Interventions

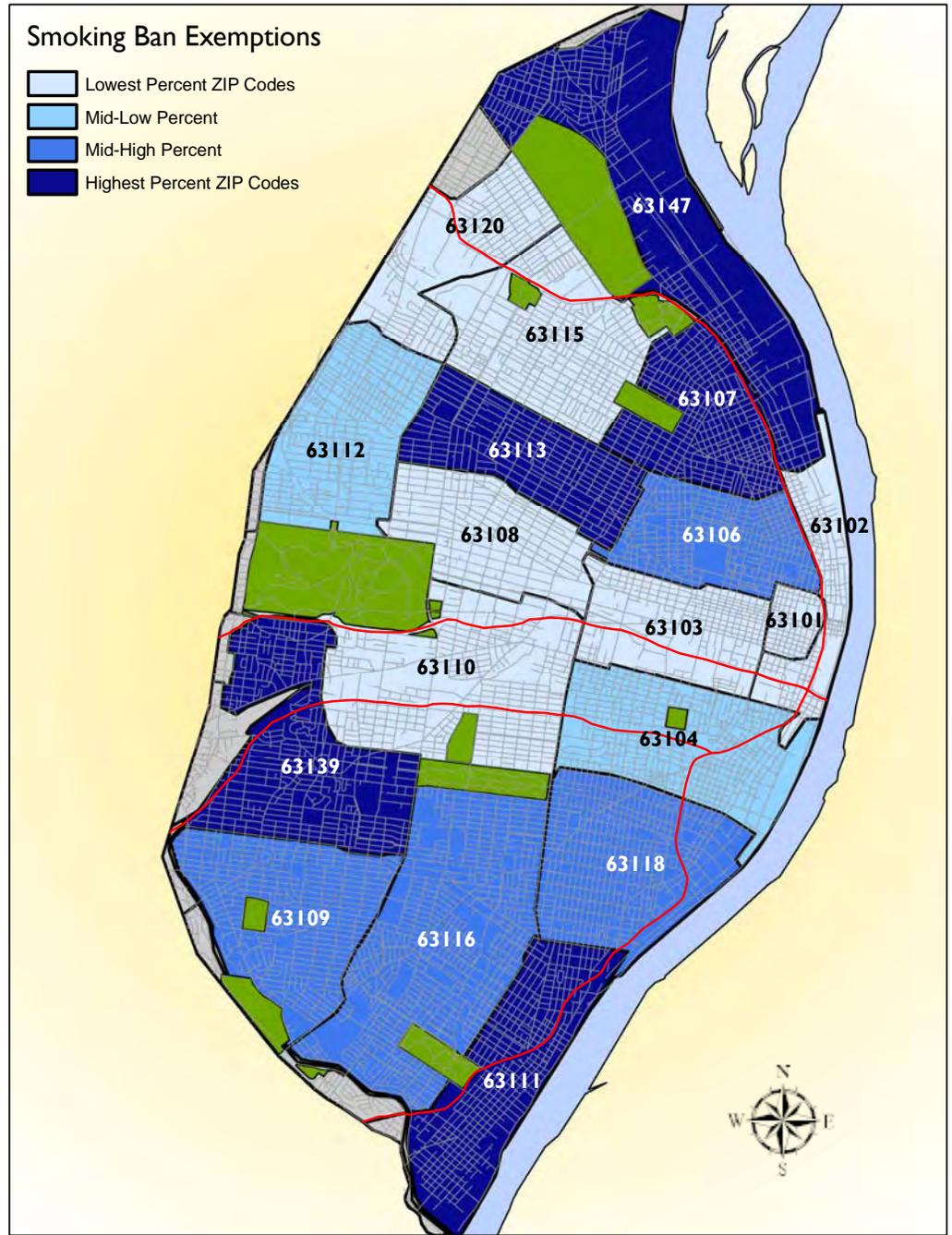
The expansion of the ordinance to include all bars, restaurants, and public areas would provide a healthier environment for all patrons and employees.

Data Source: City of St. Louis Department of Health, Environmental Health Bureau

% of Total Establishments Exempt

ZIP Code	Smoking Exempt	Map Quartile
63113	57.1%	4
63147	50.0%	4
63111	46.7%	4
63107	46.2%	4
63139	36.1%	4
63116	32.0%	3
63109	30.8%	3
63106	25.0%	3
63118	20.8%	3
63104	16.7%	2
63112	13.6%	2
63108	10.0%	1
63110	8.8%	1
63103	7.7%	1
63101	4.8%	1
63102	4.7%	1
63115	0.0%	1
63120	0.0%	1

STL City	19.2%
STL Black	N/A
STL White	N/A
MO	N/A
MO Black	N/A
MO White	N/A
US	N/A
US Black	N/A
US White	N/A

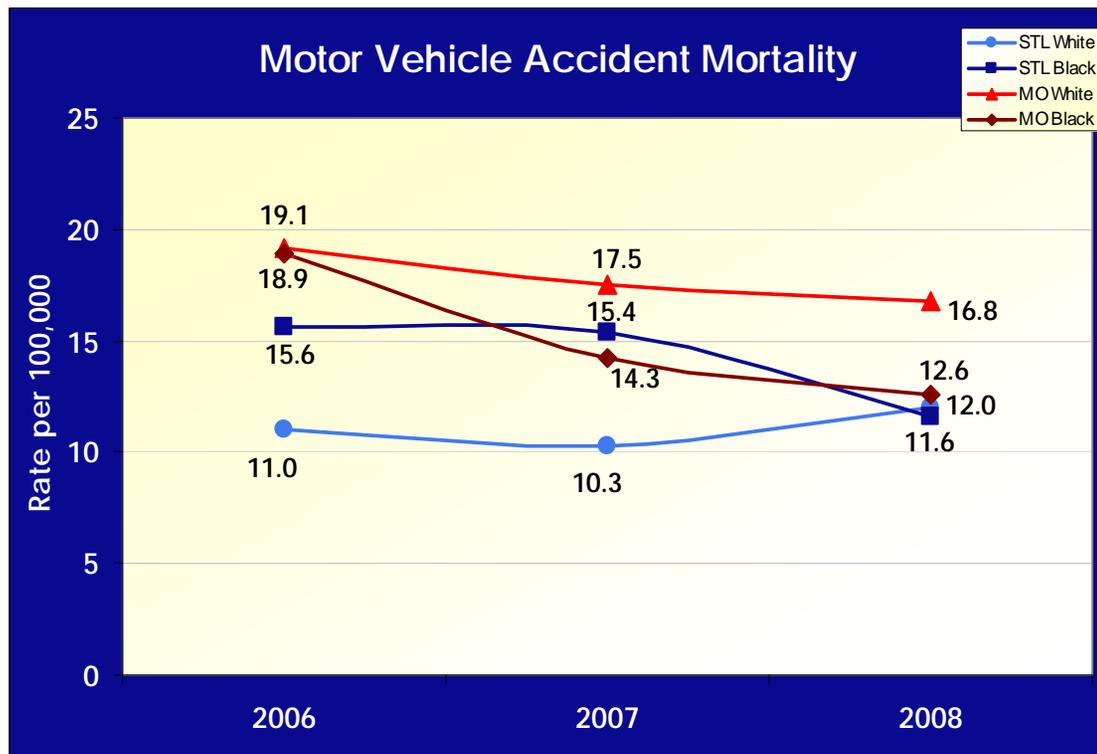


Smoking Ban Exemptions

INJURY



Motor Vehicle Accident Mortality



“Too many people are texting, talking and driving at the same time.”

-Deborah Hersman, Safety Board Chairman (National Transportation Safety Board)

Data Source: Missouri Department of Health and Senior Services; Vital Records Data

Definition

Deaths from motor vehicle accidents are described as a transport accident involving a motor vehicle, and includes both motor vehicle traffic and non-traffic accidents. The death is recorded in the ZIP Code of the accident victim’s residence, not where the accident occurred. Age-adjusted rates are presented per 100,000 population and are averaged over the 2006-2008 time period.

Public Health Implications

In the U.S., traffic injuries are the leading cause of injury deaths. According to the CDC, More than 2.3 million adult drivers and passengers were treated in emergency departments as the result of being injured in motor vehicle crashes in 2009. Additionally, US adults drank too much and got behind the wheel about 112 million times in 2010. Alcohol-impaired drivers are involved in about 1 in 3 crash deaths, resulting in nearly 11,000 deaths in 2009.

St. Louis Rates and Comparative Info

In St. Louis City, the average rate is 0.7 that seen in U.S., and 0.8 times the average rate in Missouri. In 2008, there were 39 St. Louis City residents that died from motor-vehicle accidents. The ZIP Codes with the highest rates are 63106 and 63113. The ZIP Codes with the lowest rates are 63102 and 63101.

Black/White Disparity

The St. Louis City average rate for the black population for the years 2006 through 2008 is 1.3 times the St. Louis City average white rate in the same time period.

Disparity Ratio: 1.3

Potential Public Health Interventions

Research has found that lap/shoulder belts, when used properly, reduce the risk of fatal injury to front seat passenger car occupants by 45 percent and the risk of moderate-to-critical injury by 50 percent. For light truck occupants, seat belts reduce the risk of fatal injury by 60 percent and moderate-to-critical injury by 65 percent.

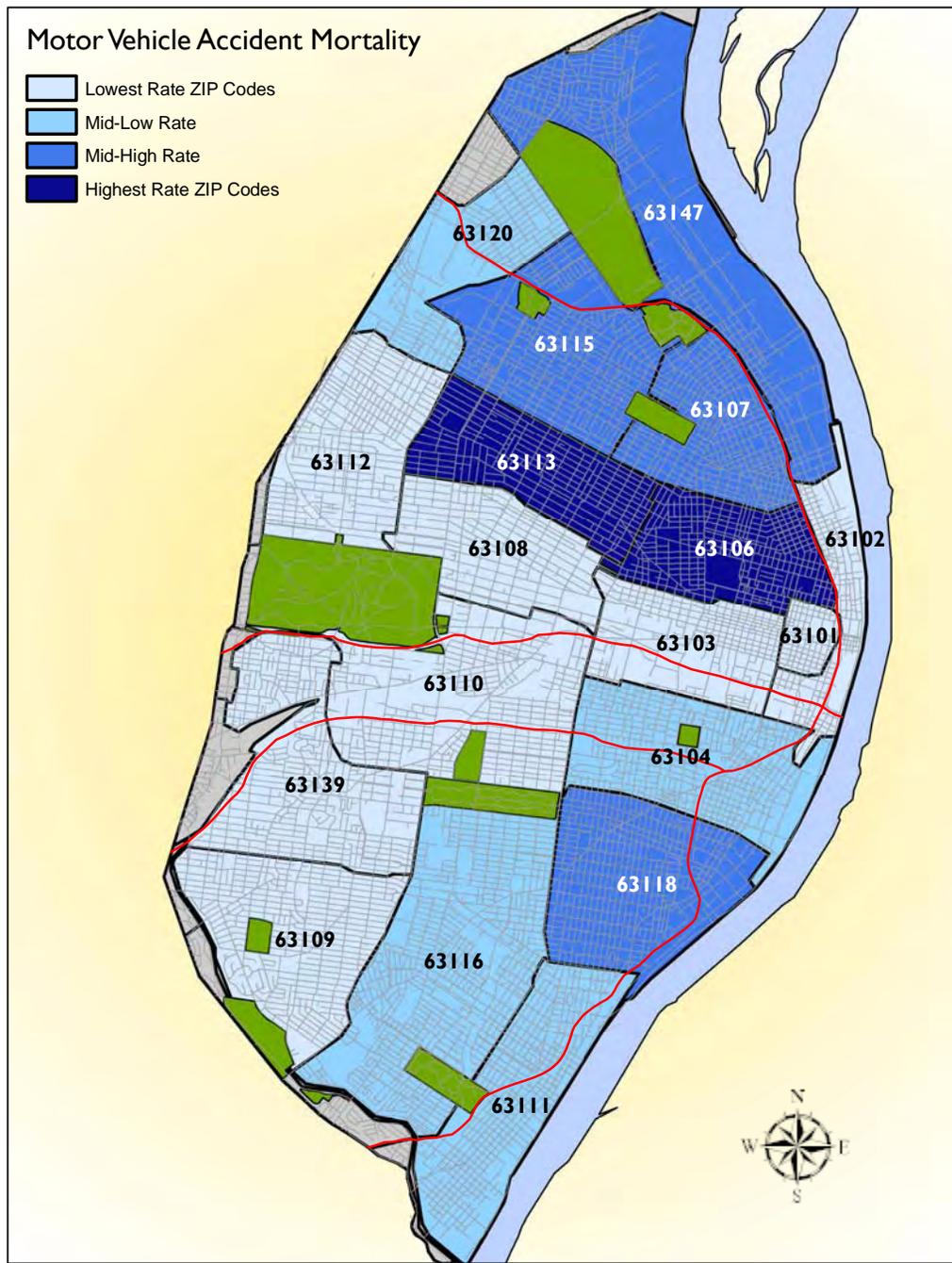
Deaths /100,000 Population

ZIP Code	MVA Mortality	Map Quartile
63106	27.9	4*
63113	22.0	4*
63107	19.4	3*
63118	17.1	3*
63147	16.5	3*
63115	16.1	3*
63111	11.6	2*
63116	11.5	2*
63120	10.6	2*
63104	9.4	2*
63139	8.8	1*
63108	7.3	1*
63103	6.7	1*
63112	6.0	1*
63110	4.0	1*
63109	3.2	1*
63101**	0.0	1*
63102**	0.0	1*

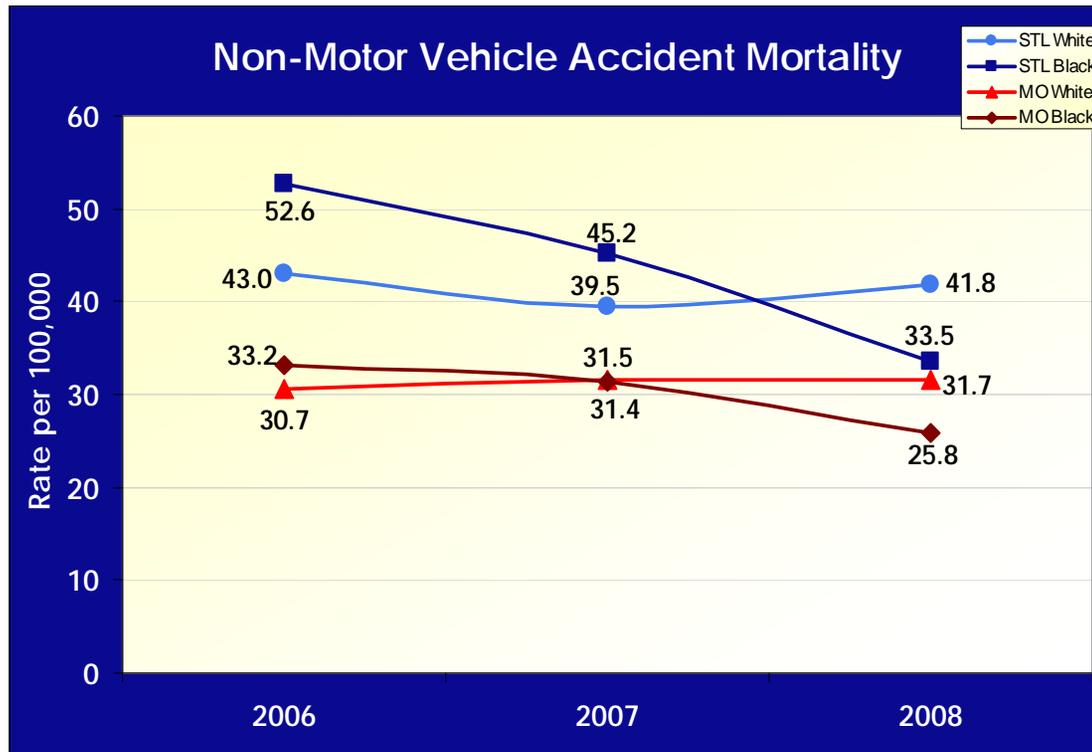
STL City	12.1
STL Black	14.2
STL White	11.0
MO	17.4
MO Black	15.2
MO White	17.8
US	14.7
US Black	14.4
US White	15.1

**small population-interpret with caution

* < 20 health events-interpret with caution



Non-Motor Vehicle Accident Mortality



Definition

Unintentional deaths from “non-motor vehicle accidents” and adverse events include accidental poisonings (including drug overdoses), falls, suffocation and drowning. Age-adjusted rates are presented per 100,000 population and are averaged over the 2006-2008 time period.

Public Health Implications

Unintentional injuries are the leading cause of death in the United States for people aged 1-44. Poisoning is the leading cause of unintentional injury death among those age 35-54, and the 2nd cause among those age 25-34 and 55-64. Falls are the #1 cause of unintentional injury death for those age 65+, and is the 3rd most common type of unintentional injury death for all ages. For children age 1-4, drowning is the most common type of unintentional injury, the 2nd most common for those age 5-9.

St. Louis Rates and Comparative Info

In St. Louis City, the rate of non-motor vehicle accidents is 1.7 times that seen in the U.S., and 1.3 times the rate in Missouri. In 2008 there were 133 deaths to St. Louis City residents due to non motor-vehicle accidents. The ZIP Codes with the highest rates are 63111 and 63101. The ZIP Codes with the lowest rates are 63102 and 63104.

Black/White Disparity

In St. Louis City, the average rate of death from 2006 to 2008 from non-motor vehicle accidents is slightly higher in the black community than in the white community.

Disparity Ratio: 1.1

Potential Public Health Interventions

The Division of Unintentional Injury Prevention (at CDC) monitors trends in unintentional injuries in the U.S., and conducts research to better understand risk factors, and evaluates interventions to prevent these injuries. Current activities include studies on: risk factors for falls in older adults, prevention strategies to avoid over-medication, education pieces to address water safety awareness.

“Since 2003, more overdose deaths have involved opioid analgesics than heroin and cocaine combined”

-CDC

Data Source: Missouri Department of Health and Senior Services; Vital Records Data

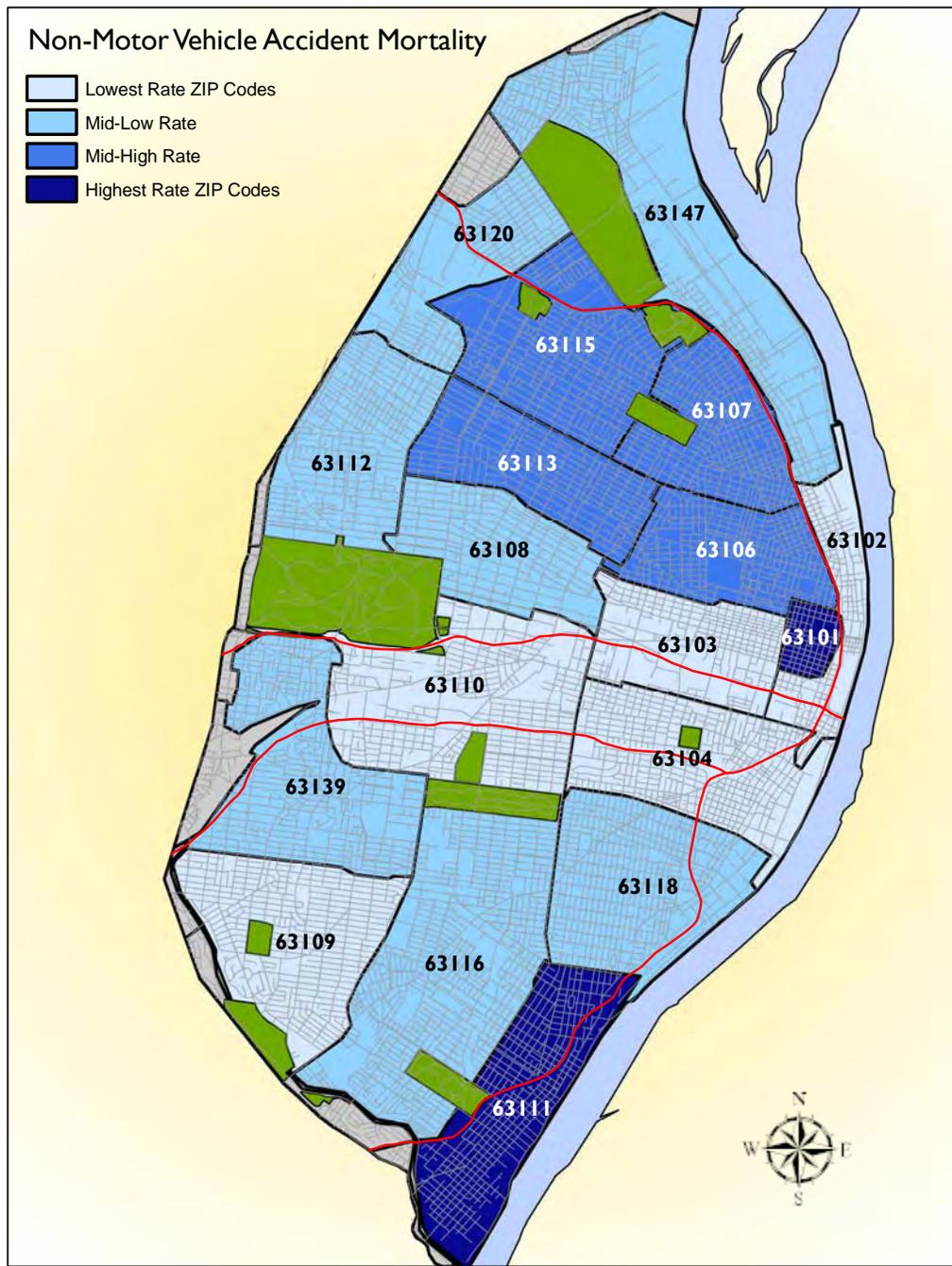
Deaths /100,000 Population

ZIP Code	NMVA Mortality	Map Quartile
63111	70.0	4
63101**	69.4	4*
63113	55.2	3
63115	48.6	3
63107	46.8	3
63106	46.0	3*
63118	43.1	2
63112	40.5	2
63116	40.2	2
63108	39.4	2
63120	38.2	2*
63139	37.8	2
63147	37.8	2*
63109	31.8	1
63110	29.0	1*
63103	27.6	1*
63104	20.7	1*
63102**	15.0	1*

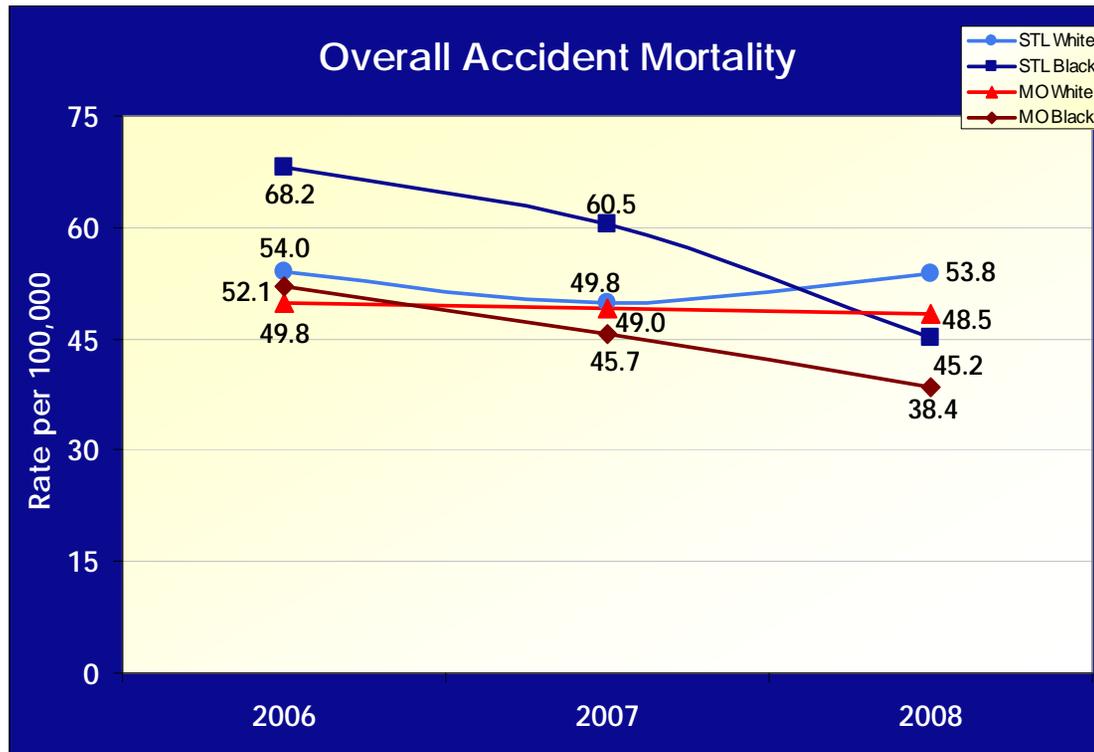
STL City	41.8
STL Black	43.8
STL White	41.5
MO	31.0
MO Black	30.1
MO White	31.3
US	25.2
US Black	23.1
US White	26.2

**small population-interpret with caution

* < 20 health events-interpret with caution



Overall Accident Mortality



“Last year was the sixth consecutive year Missouri’s crash fatality rate fell.”

-Leanna Depue, MoDOT Highway Safety director

Data Source: Missouri Department of Health and Senior Services; Vital Records Data

Definition

Deaths from accidents and adverse events includes non-motor vehicle and motor vehicle accidents. Non-motor vehicle accidents include falls, fires, poisonings, railway, water and air transport accidents. Age-adjusted rates are presented per 100,000 population and are averaged over the 2006-2008 time period.

Public Health Implications

Injuries are a major issue in public health. In 2010, unintentional injury was the leading cause of death for Americans 1-44 years old. The two leading injuries that resulted in mortality; motor-vehicle traffic accidents for 1-24 year olds, and unintentional poisoning for 25-44 year olds; are both preventable. In that same year, 54,251 years of potential life were lost due to unintentional injury deaths in Missouri alone. In addition to fatalities, people that are injured may face life-long mental, emotional and physical challenges. Injury patterns vary by age group, gender and cultural group.

St. Louis Rates and Comparative Info

The average overall death rate due to all accidents in St. Louis City is 1.3 times that in the U.S. The average St. Louis City rate is 1.1 times that in Missouri. In 2008 there were 172 deaths to St. Louis residents due to all accidents.

Black/White Disparity

In St. Louis City, the average rate in the black community is slightly higher than the rate in the white community.

Disparity Ratio: 1.1

Potential Public Health Interventions

The most common causes of injuries seen in emergency departments are from traffic crashes, falls and violence. Studies of conventional trauma care show that as many as 35% of trauma patient deaths could have been prevented if optimal urgent care had been available. Epidemiological studies and health education are potential public health activities.

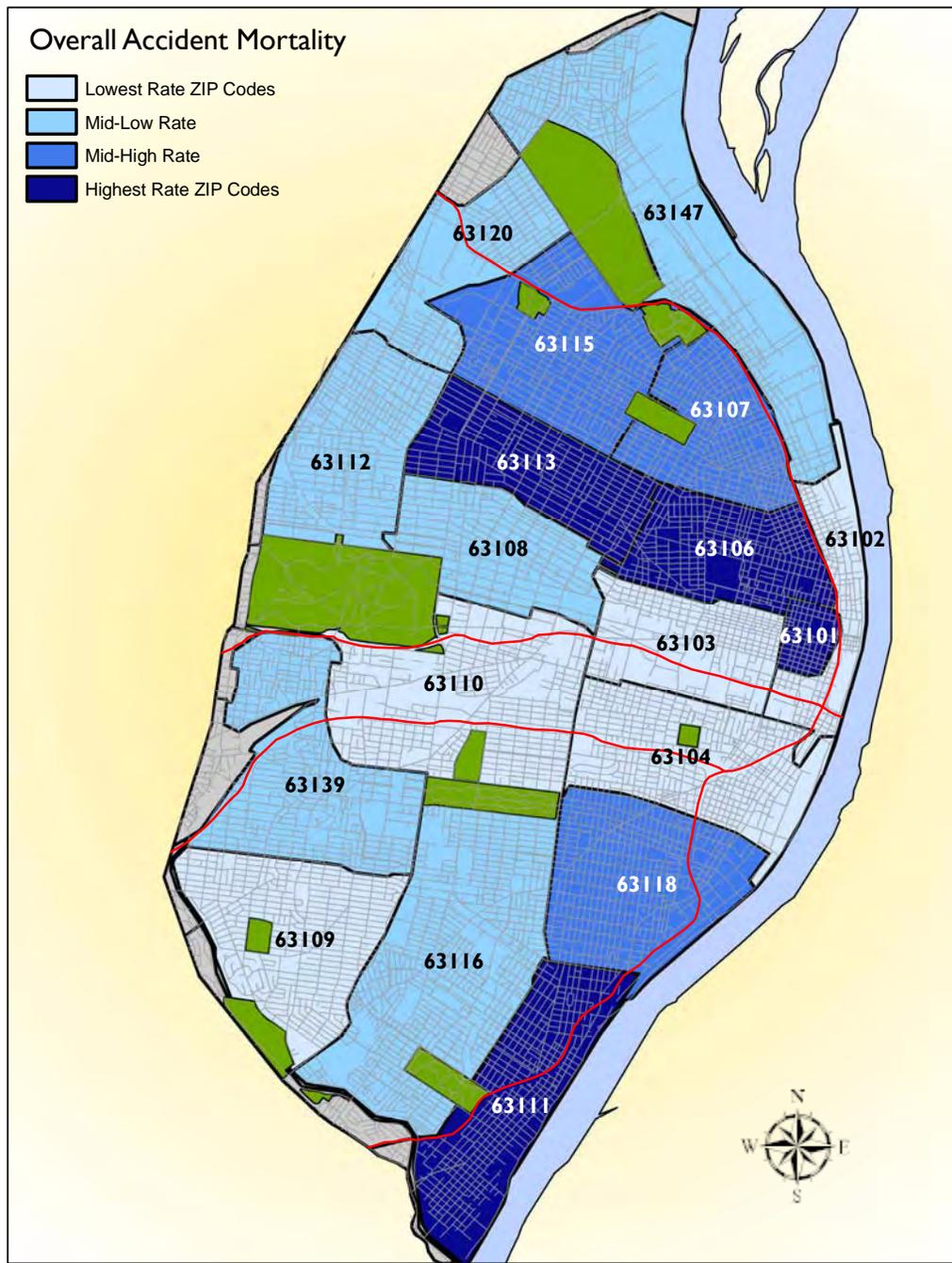
Deaths /100,000 Population

ZIP Code	Accident Mortality	Map Quartile
63111	81.6	4
63113	77.2	4
63106	73.9	4
63101**	69.4	4*
63107	66.2	3
63115	64.7	3
63118	60.2	3
63147	54.3	2
63116	51.7	2
63120	48.8	2*
63108	46.7	2
63139	46.6	2
63112	46.5	2
63109	34.9	1
63103	34.4	1*
63110	32.9	1*
63104	30.1	1*
63102**	15.0	1*

STL City	53.8
STL Black	58.0
STL White	52.5
MO	48.4
MO Black	45.3
MO White	49.1
US	39.9
US Black	37.5
US White	41.3

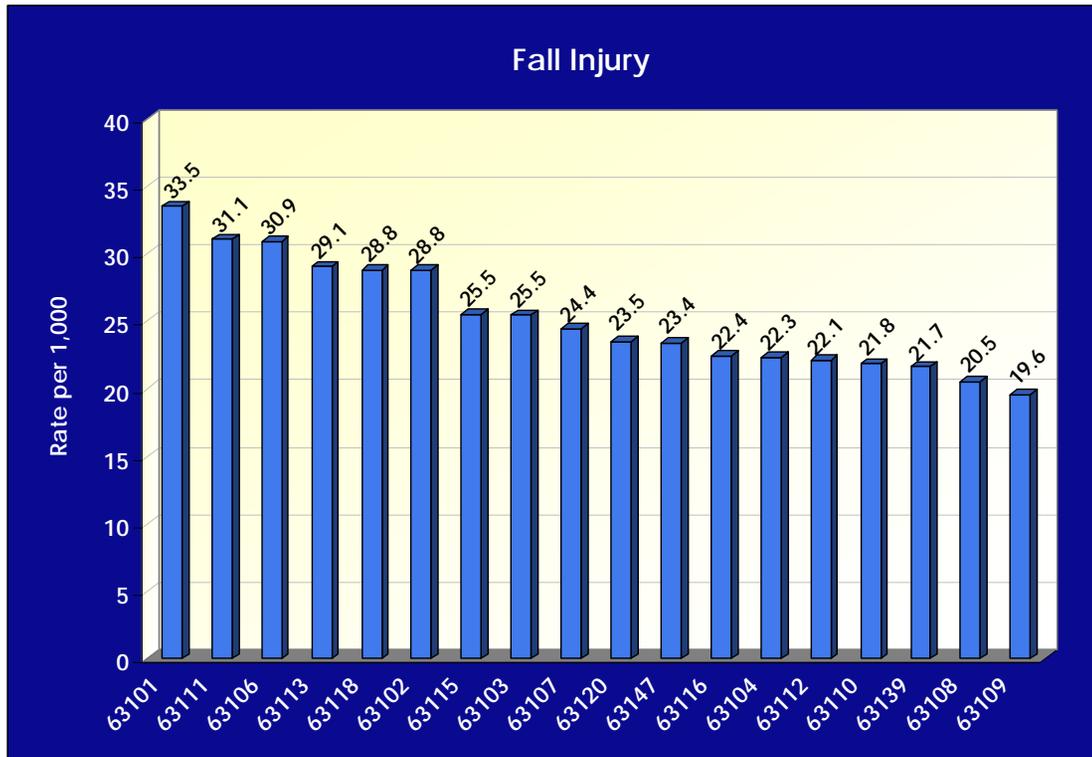
**small population-interpret with caution

* < 20 health events-interpret with caution



Overall Accident Mortality ¹³¹

Fall Injury



“Falls are very complicated. We need to look at the whole person—not just the activity of falling—to get to the root cause of falls.”

-Nina Tumosa, SLU geriatric program

Definition

Injuries from falls are the leading cause of unintentional death among individuals 65 years of age or older. Falls are also a significant cause of injury and disability among children. Common injuries resulting from falls include hip, spine and forearm fractures, open wounds and brain injury.

Public Health Implications

The frequency of falls increases with age and frailty level. Older people who are living in nursing homes fall more often than those who are living in community. Approximately 30-50% of people living in long-term care institutions fall each year, and 40% of them experienced recurrent falls

St. Louis Rates and Comparative Info

The rate in St. Louis City of 22.8 fall injuries per 1,000 population is lower than both the state rate (29.1) and the U.S rate of 27.5. In Missouri as a whole, the rate for whites is higher than that for blacks, but in St. Louis City, African Americans have a higher rate than whites.

Black/White Disparity

The 2006 through 2009 average fall injury rate is slightly higher in the black population in St. Louis City than in the white population, 22.8 vs. 19.9.

Disparity Ratio: 1.1

Potential Public Health Interventions

This rate is an indication of both age and the safety of one’s living environment. Efforts should be taken to ensure safe and hazard-free living and working environments for children and the elderly.

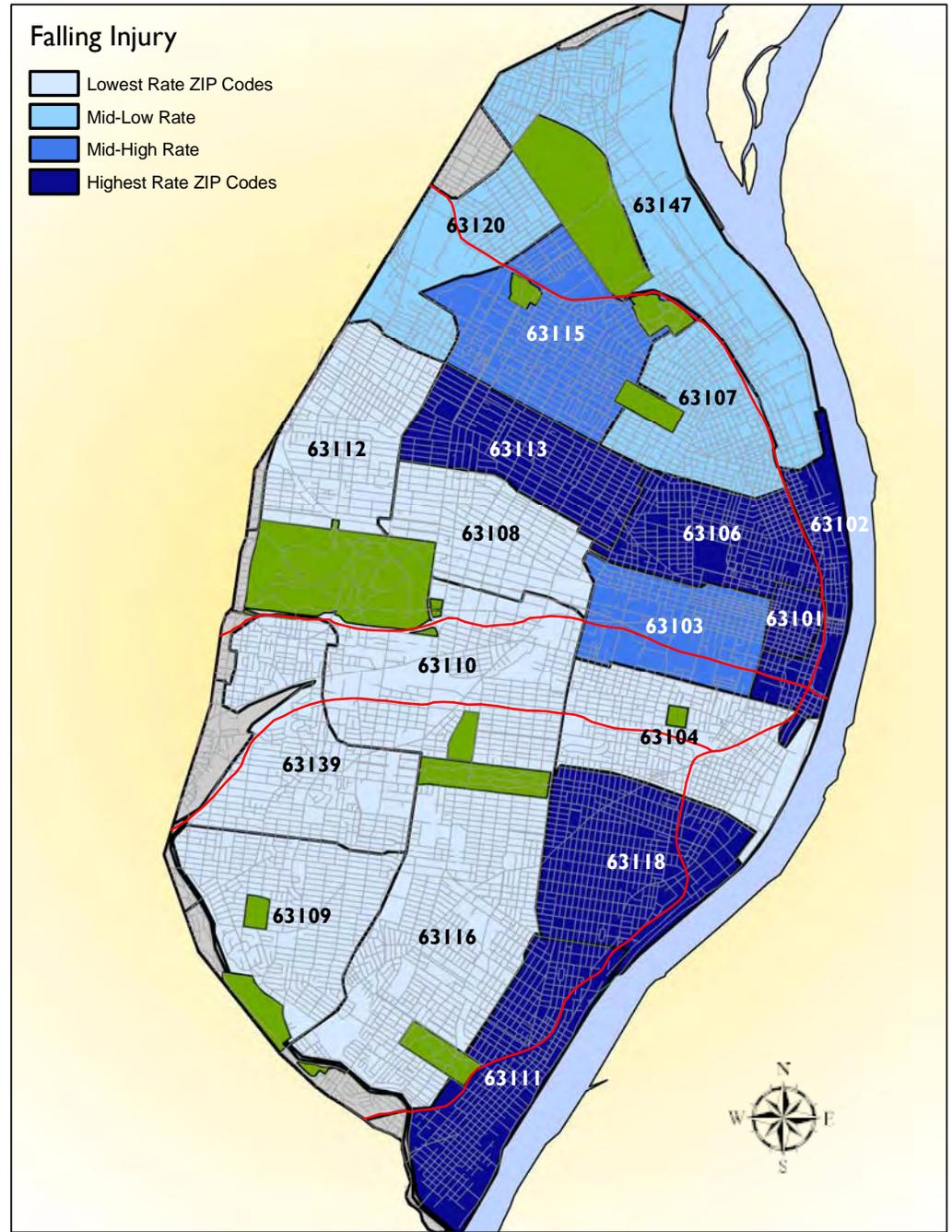
Data Source: Missouri Department of Health and Senior Services, Bureau of Health Care Analysis and Data Dissemination

Injury-Rate per 1,000

ZIP Code	Fall Injury	Map Quartile
63101**	33.5	4
63111	31.1	4
63106	30.9	4
63113	29.1	4
63118	28.8	4
63102**	28.8	4
63115	25.5	3
63103	25.5	3
63107	24.4	2
63120	23.5	2
63147	23.4	2
63116	22.4	1
63104	22.3	1
63112	22.1	1
63110	21.8	1
63139	21.7	1
63108	20.5	1
63109	19.6	1

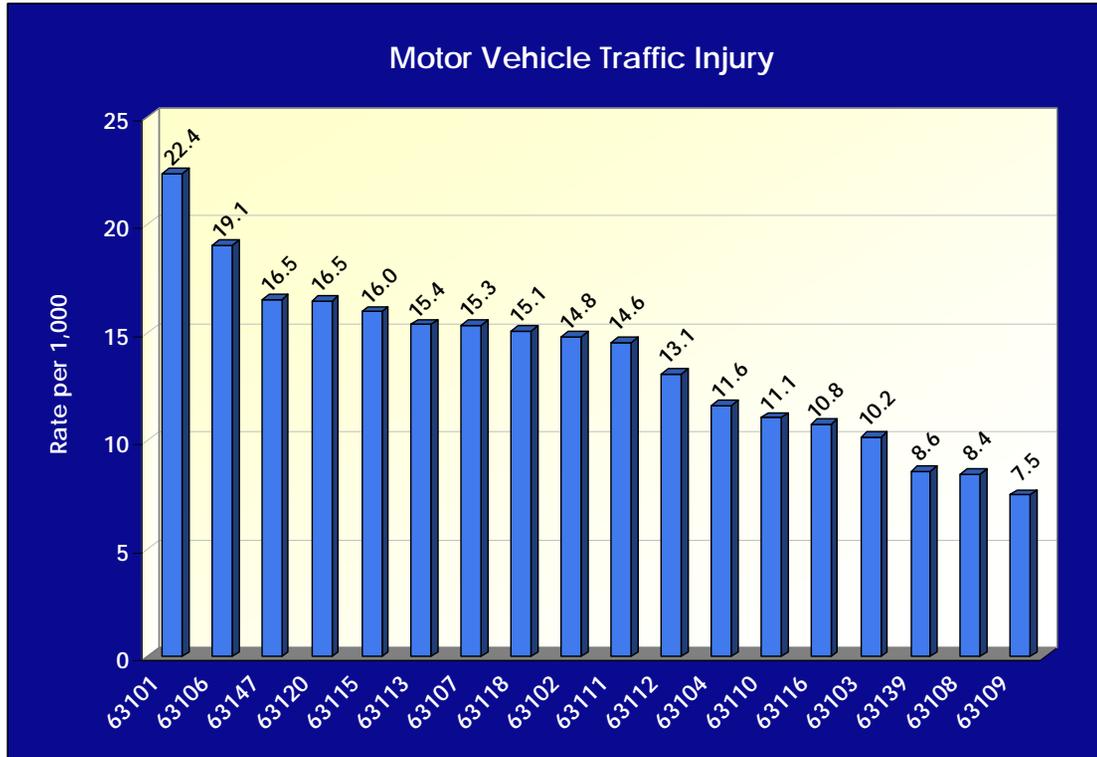
STL City	22.8
STL Black	22.8
STL White	19.9
MO	29.1
MO Black	25.0
MO White	29.3
US	27.5
US Black	21.8
US White	24.3

**small population-interpret with caution



Fall Injury

Motor Vehicle Traffic Injury



Definition

The unintended collision of one motor vehicle with another, bicyclist, motorcyclist, or pedestrian, resulting in injuries. Age-adjusted rates are presented per 1,000 population and are averaged over the 2006-2009 time period.

Public Health Implications

In the U.S., traffic injuries are the leading cause of injury deaths. According to the CDC, more than 2.3 million adult drivers and passengers were treated in emergency departments as the result of being injured in motor vehicle crashes in 2009. According to the CDC, each day, more than 15 people are killed and more than 1,200 people are injured in crashes that were reported to involve a distracted driver. Distracted driving is driving while doing another activity that takes your attention away from driving; these activities can increase the chance of a motor vehicle crash.

St. Louis Rates and Comparative Info

In St. Louis City, the ratio for motor vehicle traffic injury is 1.1 times that seen in the U.S., and slightly lower than the average rate in Missouri. In 2009, 3,901 St. Louis City residents had a motor vehicle traffic injury. The highest rates occurred in the ZIP Codes 63106, 63147 and 63120. The ZIP Codes with the lowest rates are 63103, 63139, 63108 and 63109.

Black/White Disparity

In St. Louis City, the average rate of motor vehicle traffic injury for the black community is 2.3 times that seen in the white community.

Disparity Ratio: 2.3

Potential Public Health Interventions

Distracted driving is one of the leading causes of motor vehicle traffic injury. It is important not to take hands off the wheel or eyes off the road while driving. Campaigns should be created to educate drivers about the dangers of texting, emailing, using the telephone, or eating while driving.

“In one year alone, motor vehicle crashes cost Americans \$99 billion in medical care, rehabilitation, and lost wages.”

-Center for Disease Control and Prevention

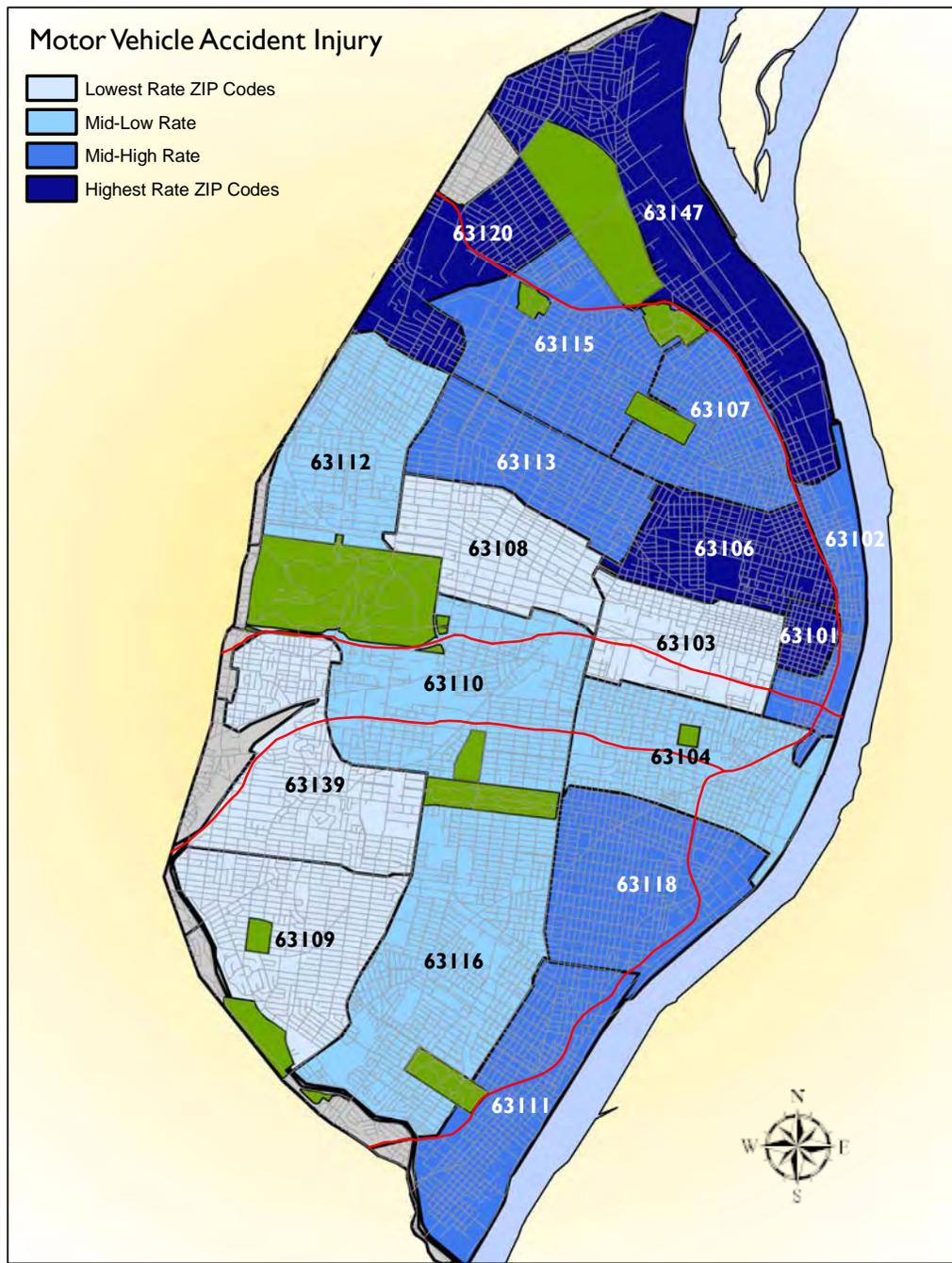
Data Source: Missouri Department of Health and Senior Services, Bureau of Health Care Analysis and Data Dissemination

Injury-Rate per 1,000

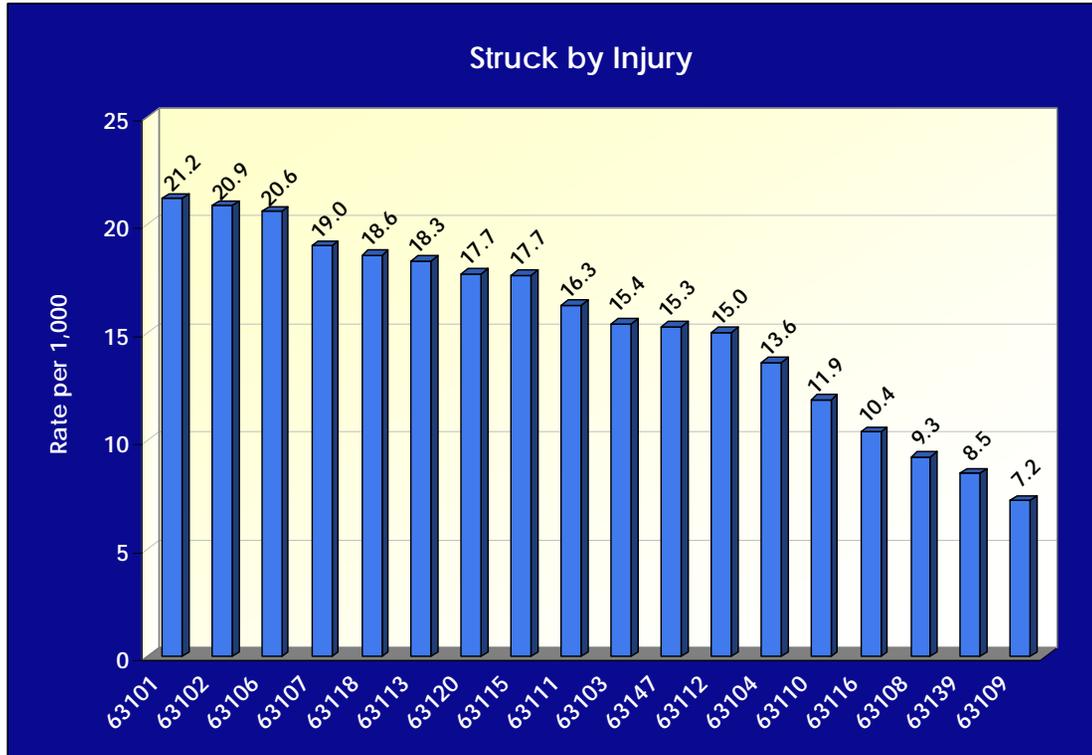
ZIP Code	Traffic Injury	Map Quartile
63101**	22.4	4
63106	19.1	4
63147	16.5	4
63120	16.5	4
63115	16.0	3
63113	15.4	3
63107	15.3	3
63118	15.1	3
63102**	14.8	3
63111	14.6	3
63112	13.1	2
63104	11.6	2
63110	11.1	2
63116	10.8	2
63103	10.2	1
63139	8.6	1
63108	8.4	1
63109	7.5	1

STL City	11.8
STL Black	16.0
STL White	7.0
MO	13.0
MO Black	18.7
MO White	11.9
US	10.6
US Black	16.0
US White	7.7

**small population-interpret with caution



Struck - By Injury



Data Source: Missouri Department of Health and Senior Services, Bureau of Health Care Analysis and Data Dissemination

Definition

Struck-by injury occurs when a part of the human body is hit by a moving or flying object, or human being. Age-adjusted rates are presented per 1,000 population and are averaged over the 2006-2009 time period.

Public Health Implications

In the United States, violence is a significant problem. From infants to the elderly, it affects people in all stages of life. According to the CDC, the use of a fist against the head or the use of a weapon in the dispute increases the risk of serious injury or death, though neither outcome may be intended. Also, there is a danger from flying objects when power tools, or activities like pushing, pulling, or prying, may cause objects to become airborne. According to OSHA, approximately 75% of struck-by fatalities involve heavy equipment such as trucks or cranes.

St. Louis Rates and Comparative Info

In St. Louis City, the rate of struck by injury is 1.5 times lower than the rates seen in the U.S.. In 2009, 4,491 St. Louis City residents were injured by a blunt object or fight. The ZIP Codes with the highest rates are 63106, 63107, 63118, 63113, 63120 and 63115. The ZIP Codes with the lowest rates are 63116, 63108, 63139 and 63109.

Black/White Disparity

The St. Louis City average struck by injury rate for the black population for the years 2006 to 2009 is 2.4 times that seen in the white population.

Disparity Ratio: 2.4

Potential Public Health Interventions

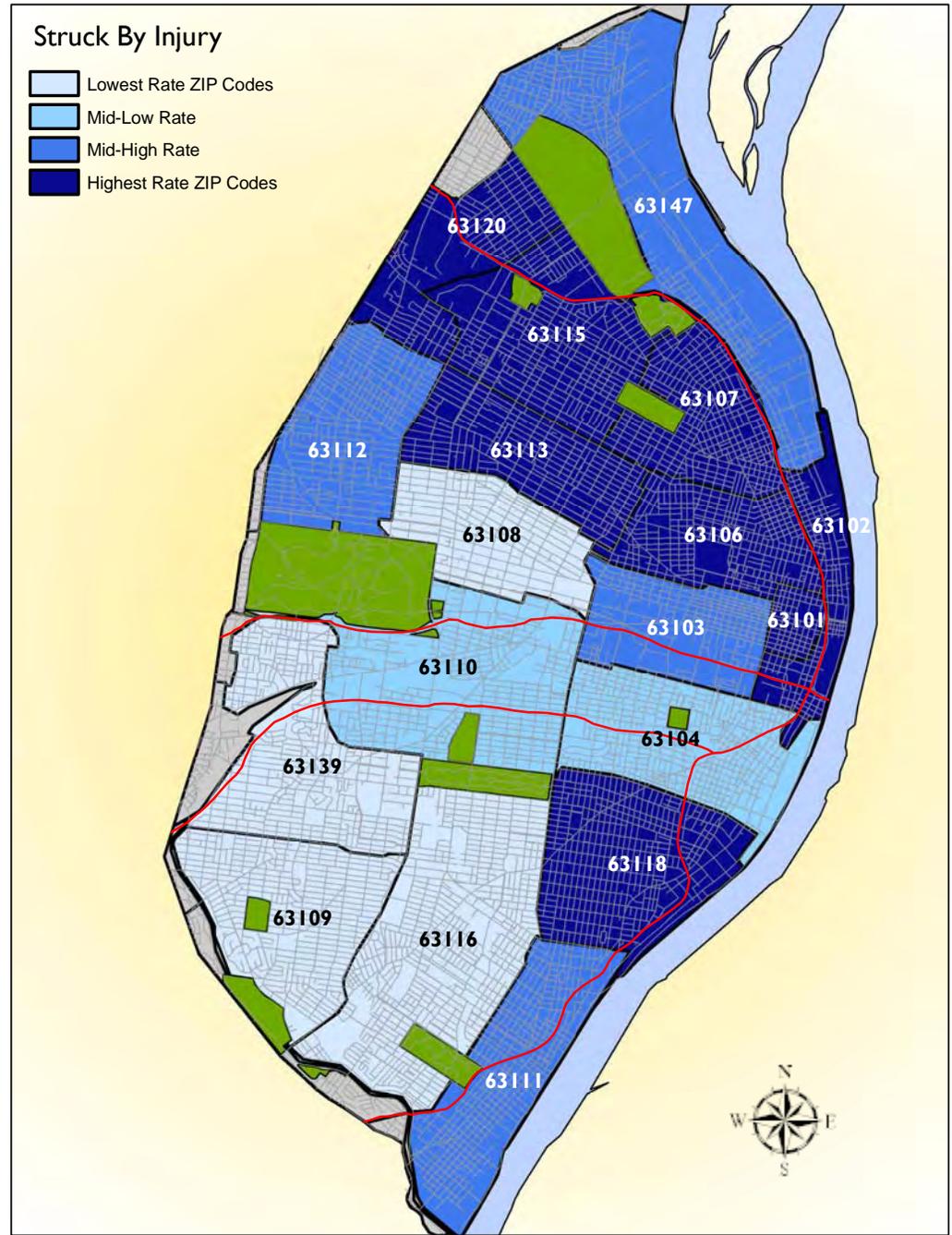
The best way to prevent struck by injuries is to educate the community on the factors that put people at risk and create programs that will protect them from struck by injuries. In the work force, educate workers on the proper use of safety glasses, goggles, face shields, hardhats, etc., where machines or tools may cause flying particles.

Injury-Rate per 1,000

ZIP Code	Struck Injury	Map Quartile
63101**	21.2	4
63102**	20.9	4
63106	20.6	4
63107	19.0	4
63118	18.6	4
63113	18.3	4
63120	17.7	4
63115	17.7	4
63111	16.3	3
63103	15.4	3
63147	15.3	3
63112	15.0	3
63104	13.6	2
63110	11.9	2
63116	10.4	1
63108	9.3	1
63139	8.5	1
63109	7.2	1

STL City	13.0
STL Black	17.9
STL White	7.6
MO	14.9
MO Black	19.9
MO White	13.9
US	19.6
US Black	22.1
US White	15.4

**small population-interpret with caution

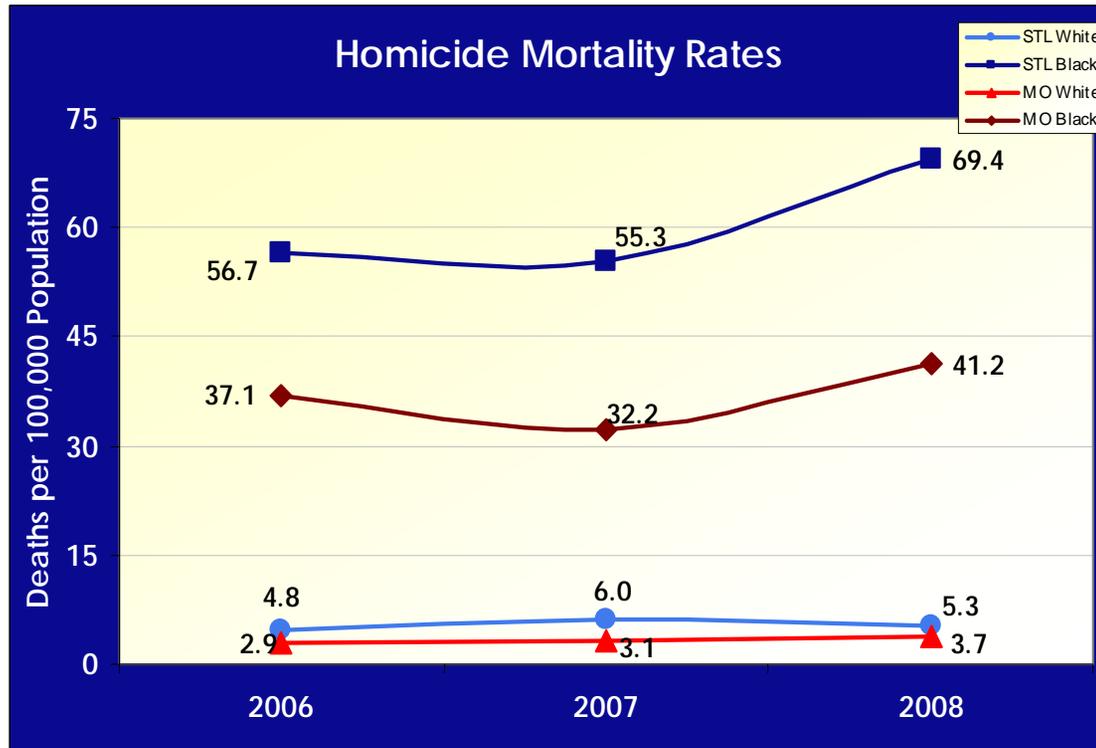


Struck - By Injury

BEHAVIOR



Homicide



“Aside from a spike in murders in 2008, violent crime has been falling across the St. Louis region in recent years.”

-St. Louis Post Dispatch; St. Louis youth gunshot death rate second highest in U.S., May, 2011

Data Source: Missouri Department of Health and Senior Services; Vital Records Data

Definition

Deaths from homicides and legal intervention include injuries inflicted by another person with the intent to injure or kill, by any means, and injuries inflicted by police or other law-enforcing agents in the course of legal action. The homicides are based on the residence of the victim, not where it took place. Age-adjusted rates are presented per 100,000 population and are averaged over the 2006-2008 time period.

Public Health Implications

Nationally, more than two thirds of homicides are committed with a firearm. In 2007, there were 12,632 gun related homicides committed in the United States. Nationally, in 2007, homicide was the sixth leading cause of death for African Americans.

St. Louis Rates and Comparative Info

The homicide rate in the U.S. increased sharply between 1985 and 1991, reaching 9.8 per 100,000 and then began to decline in 1992 falling to 5.9 by 2007. In St. Louis City, the 2006-2008 average age-adjusted homicide rate is 5.3 times that seen in the U.S., and 4.3 times that in Missouri. In 2008 there were 125 deaths due to homicide and legal intervention to residents in St. Louis City. This is up from 91 in 2005.

Black/White Disparity

In the St. Louis City black population, the death rate due to homicide is 11.2 times that seen in the white population in the 2006-2008 time period. The average age-adjusted homicide rate among St. Louis City blacks is 2.8 times that seen in the U.S. black population; for the St. Louis City white population, the average homicide rate is 1.5 times that seen in U.S. whites in the 2006 through 2008 time period.

Disparity Ratio: 11.2

Potential Public Health Interventions

Violence is a multifaceted and complex problem of enormous social consequence. Evaluation of specific interventions that may reduce injuries and deaths related to interpersonal violence, particularly among adolescents and young adults.

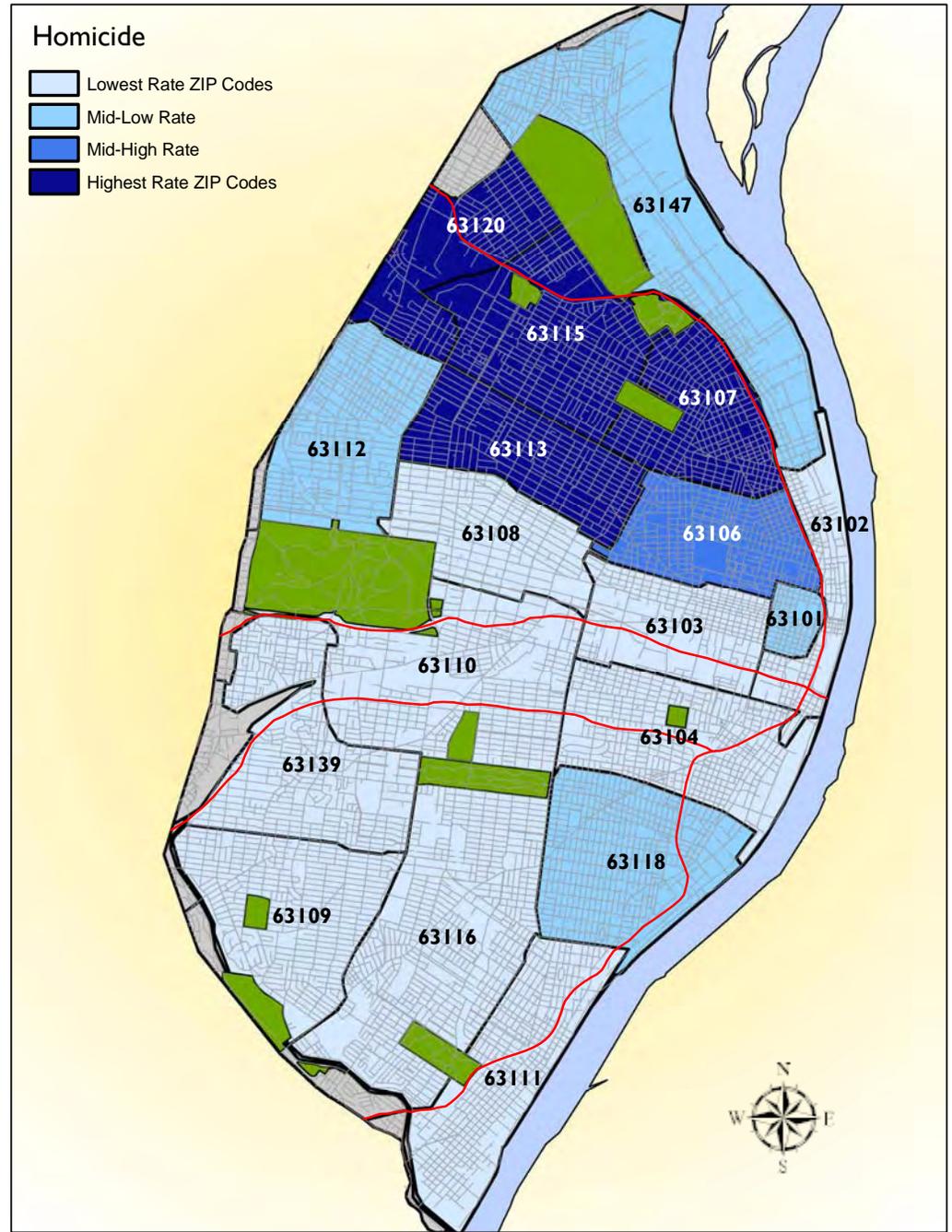
Deaths /100,000 Population

ZIP Code	Homicide	Map Quartile
63115	93.8	4
63107	77.8	4
63120	77.1	4
63113	75.4	4
63106	61.0	3*
63147	46.9	2*
63112	33.1	2
63101**	26.7	2*
63118	26.6	2
63111	23.1	1*
63104	20.0	1*
63116	14.2	1
63103	13.7	1*
63110	13.4	1*
63108	11.5	1*
63139	1.4	1*
63109	0.9	1*
63102**	0.0	1*

STL City	32.2
STL Black	60.5
STL White	5.4
MO	7.5
MO Black	36.9
MO White	3.3
US	6.1
US Black	21.4
US White	3.7

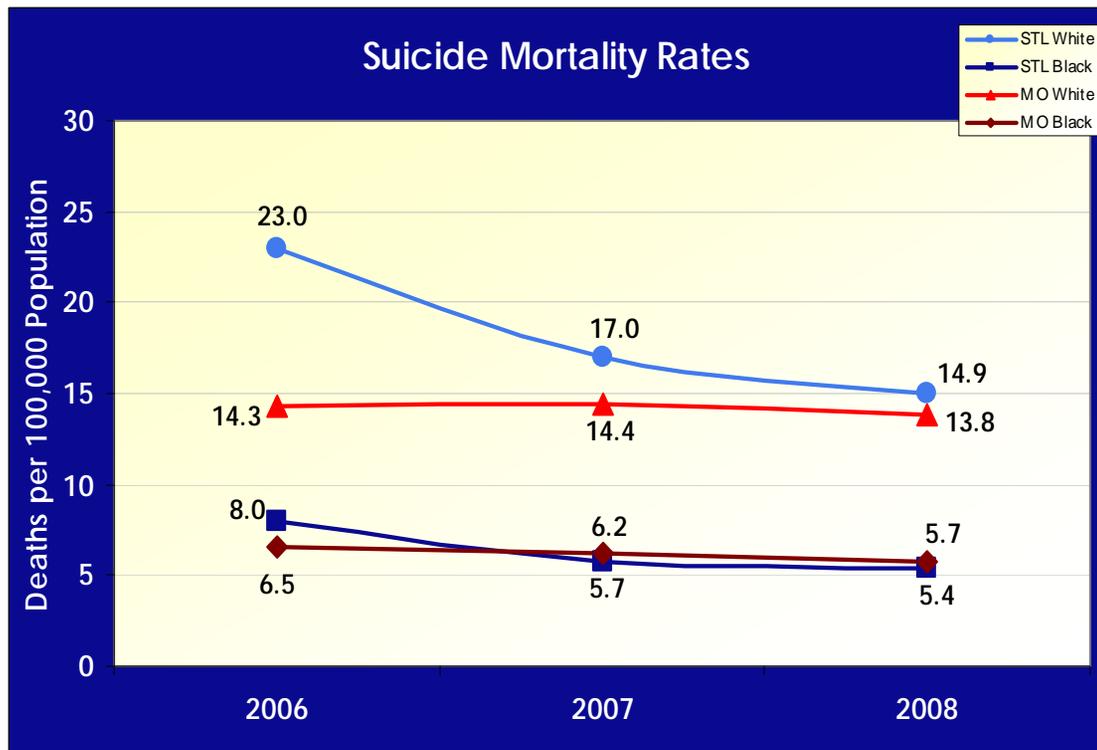
**small population-interpret with caution

* < 20 health events-interpret with caution



Homicide

Suicide



Data Source: Missouri Department of Health and Senior Services; Vital Records Data

Definition

Suicide and attempted suicide are described as self-inflicted injuries specified as intentional. The determination of suicide on a death certificate requires that the death be established as both self-inflicted and intentional. Because suicide is particularly subject to inaccurate determination, the incidence of suicide may be underestimated by anywhere from 10%-50%. Age-adjusted rates are presented per 100,000 population and are averaged over the 2006-2008 time period.

Public Health Implications

Persons suffering from mental disorders, particularly affective illnesses, are at markedly increased risk of committing suicide. Other predictors of suicide include: substance abuse, stressful life events, loss or disruption of normal social support networks, absent or inadequate social support networks, and ready accessibility of firearms - firearms are the most frequently used method of suicide. Suicide rates tend to be higher for men than women.

St. Louis Rates and Comparative Info

In St. Louis City, the average suicide rate is slightly higher than that in the U.S., but slightly lower than the rate seen in Missouri. In 2008 there were 35 suicides by City residents, down slightly from 37 in 2005.

Black/White Disparity

In St. Louis City, the average rate for the white population is 2.9 times the rate of suicide seen in the black population.

Disparity Ratio: 0.35

Potential Public Health Interventions

Identifying and treating persons with mental disorders remains an important mainstay of suicide prevention. Screening programs conducted in schools to identify high-risk youths are useful in identifying young persons who should receive in-person counseling and, if warranted, referral and treatment.

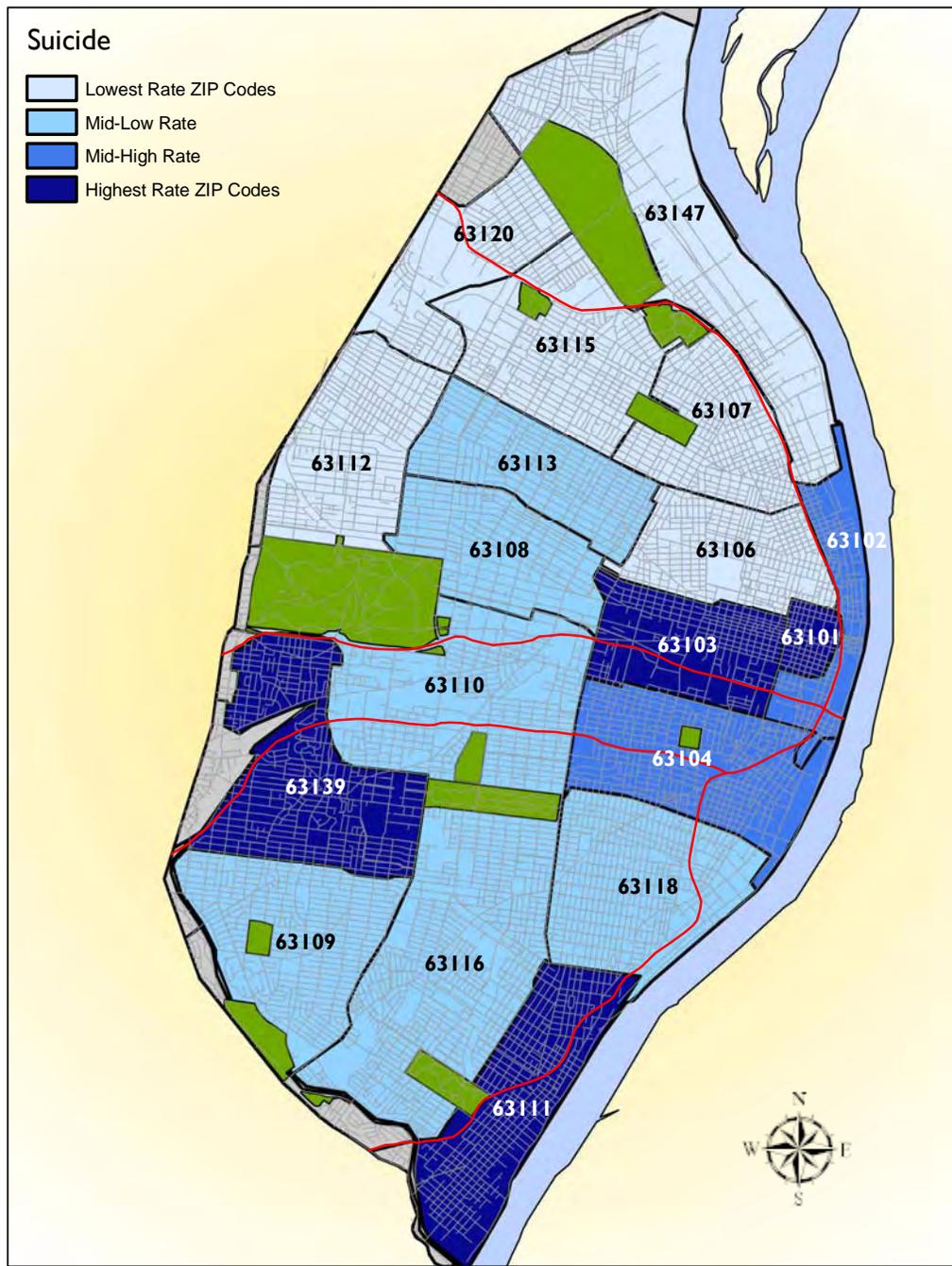
Deaths /100,000 Population

ZIP Code	Suicide	Map Quartile
63103	27.2	4*
63101**	26.7	4*
63111	25.4	4*
63139	19.9	4*
63102**	18.6	3*
63104	15.8	3*
63118	13.2	2*
63109	13.0	2*
63116	12.4	2*
63110	9.5	2*
63108	8.6	2*
63113	8.2	2*
63106	7.1	1*
63120	4.9	1*
63115	4.2	1*
63147	2.5	1*
63107	2.4	1*
63112	1.5	1*

STL City	11.9
STL Black	6.4
STL White	18.3
MO	13.1
MO Black	6.1
MO White	14.2
US	11.1
US Black	5.1
US White	12.3

**small population-interpret with caution

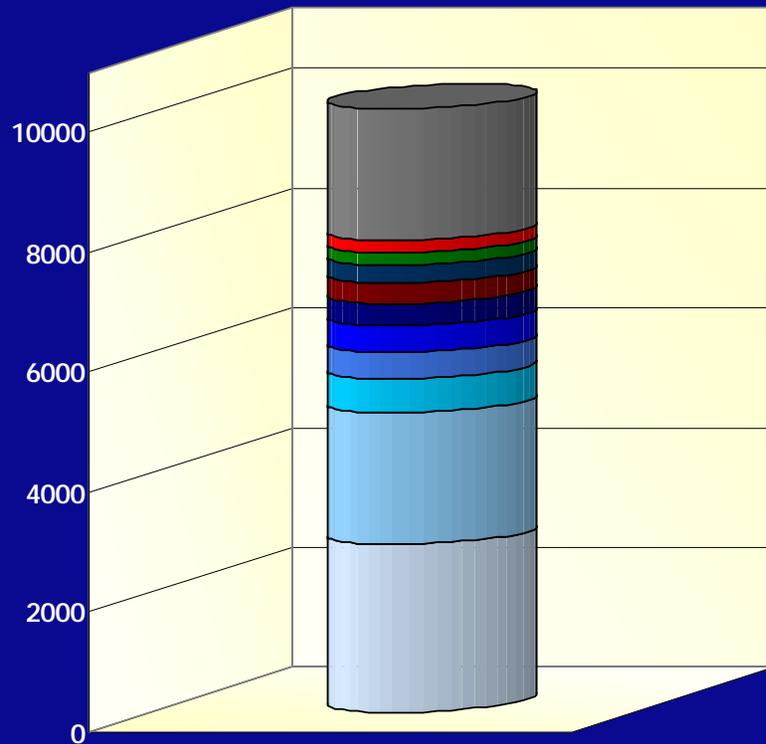
* < 20 health events-interpret with caution



Suicide

Leading Causes of Death

Leading Causes of Death-Total



- All Other
- Kidney disease (Top-10 for Black Only)
- Influenza and pneumonia (Top-10 for White Only)
- Diabetes mellitus
- Homicide (Top-10 for Black Only)
- Mental and behavioral disorders
- COPD
- Non-motor vehicle accident
- CVA
- Cancer
- Heart Disease

Definition

Data on the cause of death is information reported on all death certificates. The “underlying cause of death” is defined as “the disease or injury which initiated the chain of events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury” (World Health Organization). Underlying causes of death are determined using procedures in coding the cause of death, and are then coded using the Tenth Revision, International Classification of Diseases, 1999 (ICD-10 codes).

Public Health Implications

The underlying cause of death is a well-accepted measure of mortality, and is useful as a means of standardizing classification of deaths. Mortality rates may be used to determine high-risk populations in a community.

St. Louis Rates and Comparative Info

In the U.S., the leading causes of death in 2009 were: 1) Heart disease, 2) Cancer, 3) Chronic obstructive pulmonary disease (COPD), now referred to as chronic lower respiratory disease, 4) Cerebrovascular disease (CVA - stroke), 5) Unintentional injuries, 6) Alzheimer’s, 7) Diabetes, 8) Flu and Pneumonia, 9) Nephritis, and 10) Suicide. The three leading causes of death in St. Louis City in the 2006-2008 time period were heart disease, cancer and cerebrovascular disease. In 2008 there were 3,271 deaths to residents of St. Louis City. In St. Louis City the top ten causes of death account for almost 80% of all deaths.

Black/White Disparity

In the 2006-2008 time period, the top two leading causes of death for both the black and white populations in St. Louis City were heart disease and cancer. However, where homicide was the 3rd leading cause of death in the St. Louis City for the black population, it did not appear in the top ten causes of death in the St. Louis white population.

Disparity Ratio: N/A

Potential Public Health Interventions

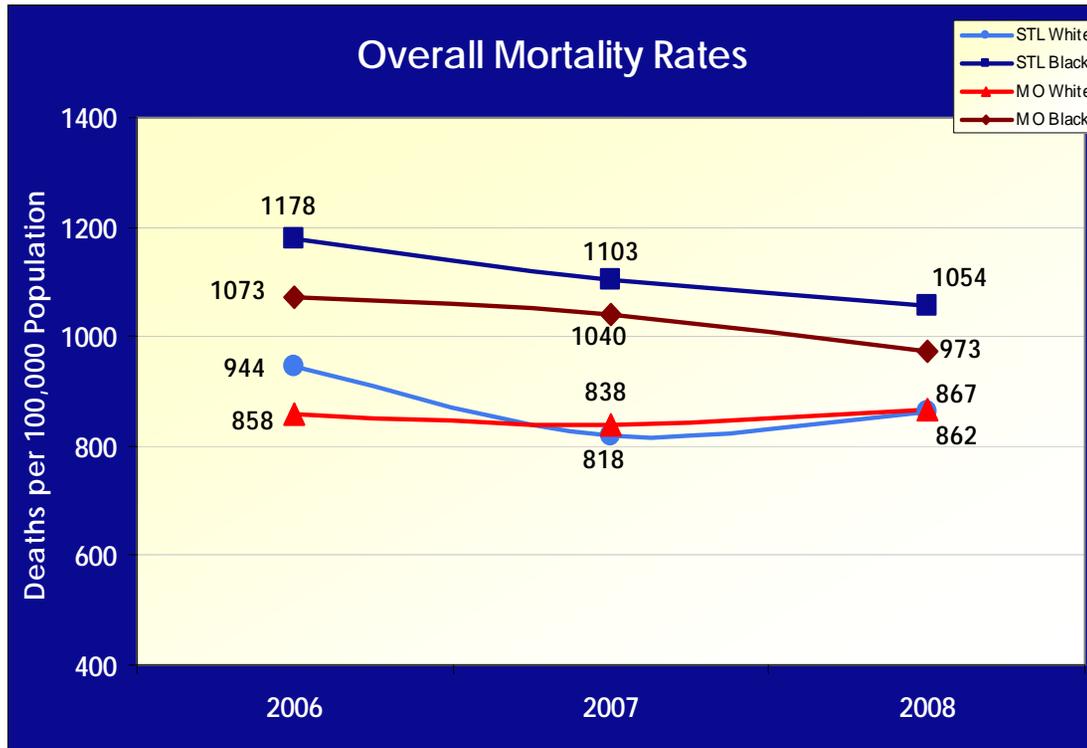
It has been estimated that in the U.S., 40% to 50% of premature mortality occurs in tobacco users. Tobacco has been attributed to heart disease, cancer, CVA, COPD, pneumonia and influenza. Epidemiological studies, surveillance and health education activities are potential public health interventions.

Data Source: Missouri Department of Health and Senior Services; Vital Records Data

Leading Causes of Death by Race and Age Groups – 2006-2008

Age Group	Total Deaths	City Total		STL White		STL Black	
		Top Causes	% of Total	Top Causes	% of Total	Top Causes	% of Total
<1	173	Conditions originating in perinatal period	57%	Conditions originating in perinatal period	46%	Conditions originating in perinatal period	59%
		Non-motor vehicle accident	15%	Congenital anomalies	29%	Non-motor vehicle accident	16%
		Congenital anomalies	12%	Non-motor vehicle accident	11%	Congenital anomalies	8%
		Sudden infant death syndrome	3%	Cerebrovascular disease (CVA)	4%	Sudden infant death syndrome	4%
		Other/Various	13%	Other/Various	11%	Other/Various	13%
1 to 14	48	Homicide	21%	Cerebrovascular disease (CVA)	25%	Homicide	23%
		Non-motor vehicle accident	17%	Chronic lower respiratory disease (COPD)	25%	Non-motor vehicle accident	18%
		Motor vehicle accident	10%	Congenital anomalies	25%	Motor vehicle accident	11%
		Cancer	10%	Heart Disease	25%	Cancer	11%
		Other/Various	42%	Other/Various	0%	Other/Various	36%
15 to 24	236	Homicide	55%	Non-motor vehicle accident	40%	Homicide	65%
		Motor vehicle accident	13%	Motor vehicle accident	21%	Motor vehicle accident	11%
		Non-motor vehicle accident	13%	Homicide	12%	Non-motor vehicle accident	6%
		Suicide	5%	Suicide	12%	Suicide	4%
		Other/Various	15%	Other/Various	16%	Other/Various	15%
25 to 34	294	Homicide	29%	Non-motor vehicle accident	22%	Homicide	38%
		Non-motor vehicle accident	14%	Motor vehicle accident	19%	Non-motor vehicle accident	10%
		Motor vehicle accident	9%	Suicide	18%	Cancer	7%
		Suicide	9%	Cancer	12%	Heart Disease	7%
		Other/Various	40%	Other/Various	29%	Other/Various	37%
35 to 44	440	Non-motor vehicle accident	17%	Non-motor vehicle accident	26%	Homicide	16%
		Cancer	13%	Heart Disease	14%	Cancer	14%
		Heart Disease	12%	Cancer	12%	Heart Disease	12%
		Homicide	12%	Suicide	12%	Non-motor vehicle accident	12%
		Other/Various	45%	Other/Various	35%	Other/Various	46%
45 to 54	1,049	Heart Disease	24%	Heart Disease	22%	Heart Disease	26%
		Cancer	22%	Cancer	20%	Cancer	24%
		Non-motor vehicle accident	10%	Non-motor vehicle accident	11%	Non-motor vehicle accident	9%
		Cerebrovascular disease (CVA)	5%	Suicide	5%	Cerebrovascular disease (CVA)	5%
		Other/Various	39%	Other/Various	41%	Other/Various	37%
55 to 64	1,376	Cancer	31%	Cancer	33%	Cancer	29%
		Heart Disease	27%	Heart Disease	26%	Heart Disease	28%
		Chronic lower respiratory disease (COPD)	4%	Chronic lower respiratory disease (COPD)	6%	Cerebrovascular disease (CVA)	5%
		Cerebrovascular disease (CVA)	4%	Cerebrovascular disease (CVA)	3%	Non-motor vehicle accident	4%
		Other/Various	34%	Other/Various	31%	Other/Various	34%
65+	6,448	Heart Disease	32%	Heart Disease	33%	Heart Disease	32%
		Cancer	23%	Cancer	21%	Cancer	25%
		Cerebrovascular disease (CVA)	7%	Cerebrovascular disease (CVA)	7%	Cerebrovascular disease (CVA)	6%
		Chronic lower respiratory disease (COPD)	5%	Chronic lower respiratory disease (COPD)	6%	Mental and behavioral disorders	5%
		Other/Various	33%	Other/Various	33%	Other/Various	32%

Overall Mortality



“Chronic diseases--such as heart disease, stroke, cancer, and diabetes--are among the most prevalent, costly, and preventable of all health problems, Leading a healthy lifestyle (avoiding tobacco use, being physically active, and eating well) greatly reduces a person’s risk for developing chronic disease.”

-CDC; Missouri: Burden of Chronic Disease, 2008

Data Source: Missouri Department of Health and Senior Services; Vital Records Data

Definition

Mortality statistics are an important public health surveillance tool that fulfills both legal and social functions. U.S. mortality statistics are based on information coded by the states and provided to the National Center for Health Statistics. The age-adjusted mortality rates are presented per 100,000 population, and are averaged over the 2006-2008 time period. Rates are age-adjusted to account for differences in the age distribution of the population in each ZIP Code and thereby allowing comparisons among different areas.

Public Health Implications

Mortality statistics are essential data in epidemiological studies for research in areas such as heart disease, cancer and injury control, for identifying high-risk populations and geographic differences in rates of selected causes of death.

St. Louis Rates and Comparative Info

The average age-adjusted overall death rate in St. Louis City is 1.3 times that seen in the U.S. in the same time period. The St. Louis City averaged rate is also 1.1 times that experienced in Missouri. In 2008 there were 3,271 deaths to residents of St. Louis City.

Black/White Disparity

Both the black and white populations in St. Louis City show higher mortality rates than seen in the U.S. population for the respective races. The average rate in the St. Louis City black population is 1.3 times that seen in the St. Louis City white population. The average rate in the St. Louis City black population and the St. Louis City white population are 1.1 and 1.2 times that in the respective U.S. populations.

Disparity Ratio: 1.3

Potential Public Health Interventions

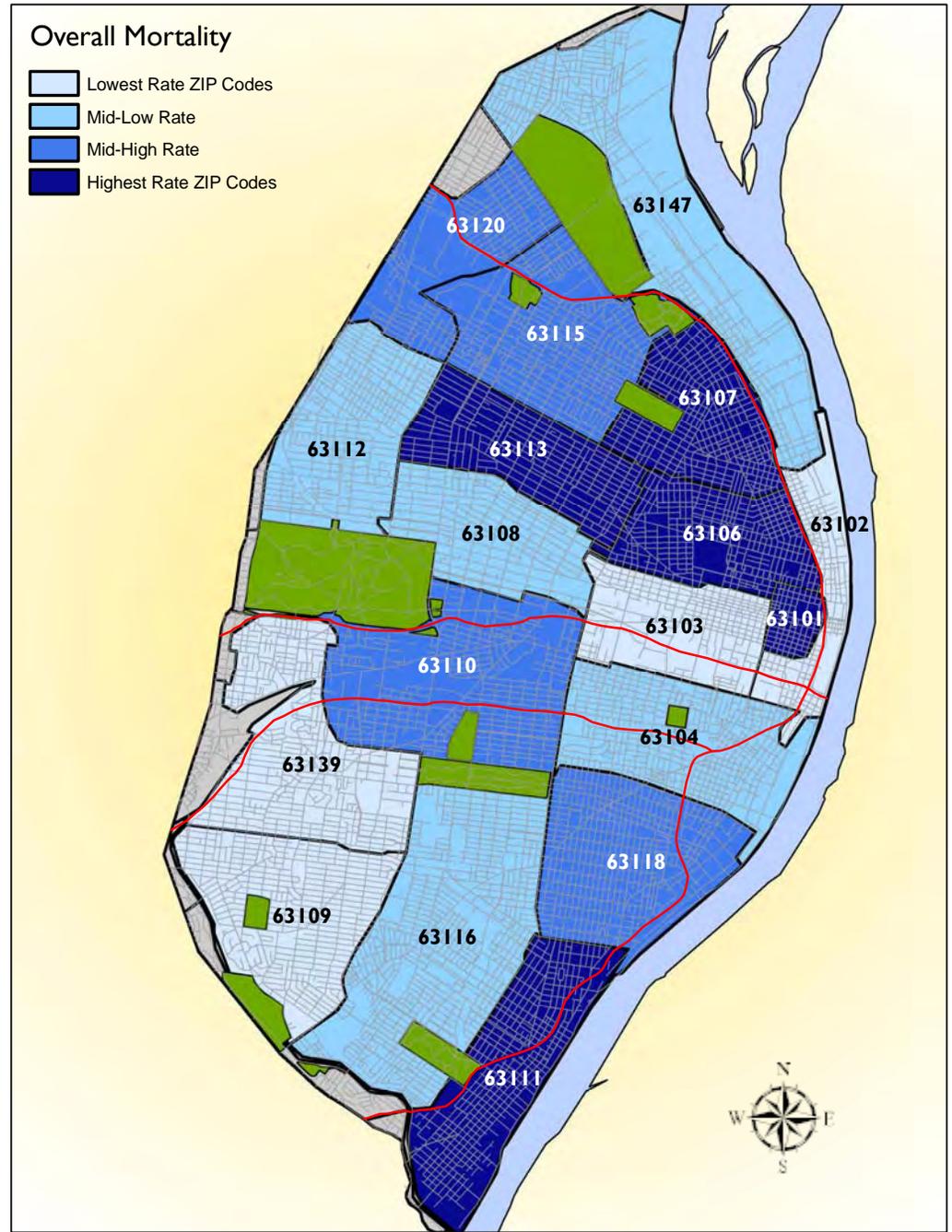
A long-term downward trend in mortality reflected in the U.S. age-adjusted death rates, has continued since 1940. Public health interventions include surveillance and epidemiological studies to determine high-risk behaviors and populations.

Deaths /100,000 Population

ZIP Code	Overall Mortality	Map Quartile
63106	1266.4	4
63113	1265.3	4
63111	1193.6	4
63107	1133.1	4
63101**	1122.9	4
63120	1047.5	3
63115	1038.4	3
63118	992.6	3
63110	983.5	3
63112	965.8	2
63147	919.1	2
63116	913.0	2
63108	888.3	2
63104	877.3	2
63139	792.2	1
63109	686.9	1
63102**	672.0	1
63103	665.1	1

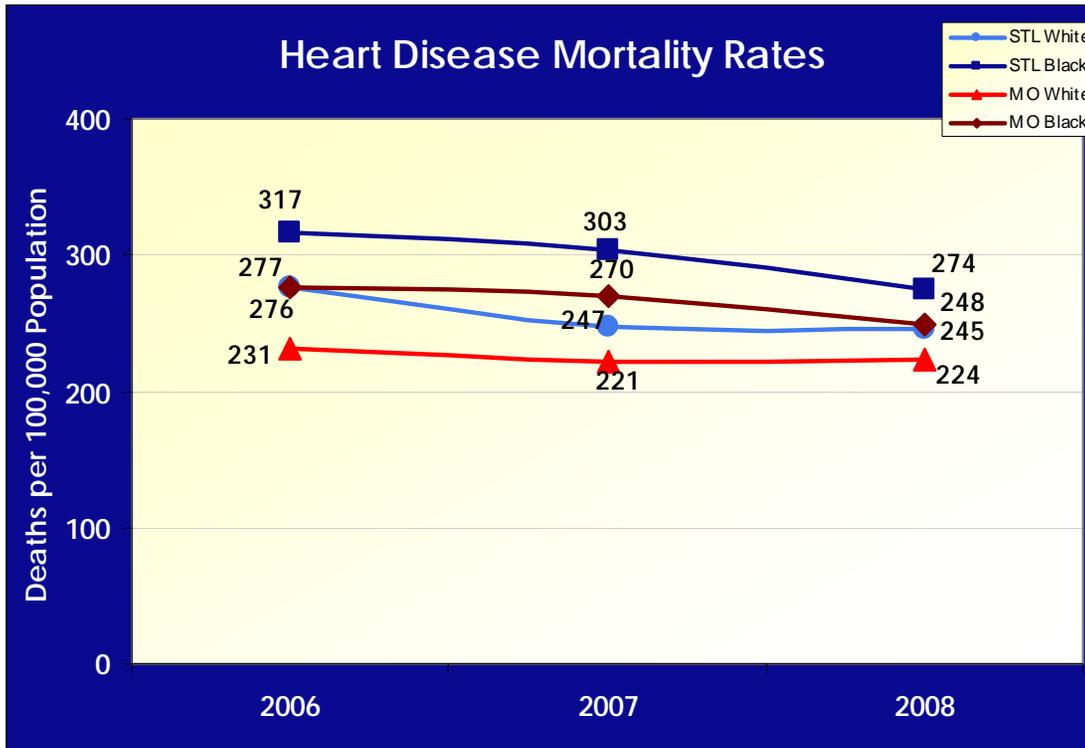
STL City	966.6
STL Black	1111.5
STL White	873.5
MO	866.6
MO Black	1028.2
MO White	854.3
US	768.4
US Black	970.0
US White	756.9

**small population-interpret with caution



Overall Mortality

Heart Disease Mortality



“A lot of effort is spent trying to treat coronary and heart disease after it’s already taking place; the ideal system prevents the heart attack from ever happening.”

-Dr. Michael Lim, interim director of the Division of Cardiology at St. Louis University

Data Source: Missouri Department of Health and Senior Services; Vital Records Data

Definition

Diseases of the heart are a common cause of ill health and the number one cause of death. Types of heart disease are many including rheumatic heart disease, hypertensive disease, ischemic heart disease and diseases of pulmonary circulation. Age-adjusted rates are the number of deaths per 100,000 population and are averaged over the 2006-2008 time period.

Public Health Implications

The American Heart Association has identified several risk factors for coronary heart disease, which can lead to a heart attack and death. Some of them can be changed, treated or modified and some cannot. The more risk factors a person has, the greater the chance that he or she will develop heart disease. Risk factors include: increasing age, male sex, heredity, cigarette and tobacco smoke, high blood pressure, high blood cholesterol levels, physical inactivity, obesity and overweight and diabetes mellitus.

St. Louis Rates and Comparative Info

The death rate due to heart disease in St. Louis City is 1.4 times the rate seen in the U.S and 1.2 times that seen in Missouri. In 2008, 884 deaths were due to heart disease in St. Louis City.

Black/White Disparity

In the St. Louis City black population, the average death rate due to heart disease is 1.16 times that in the St. Louis City white population. When compared to the U.S. population, the white population in St. Louis City has death rates due to heart disease at 1.3 times the U.S. white population. The St. Louis City average black population rate is almost 1.2 times the U.S. black population.

Disparity Ratio: 1.16

Potential Public Health Interventions

The most effective public health activities would include targeting areas with high death rates due to heart disease, and developing educational programs to encourage smoking cessation, healthier eating habits, and increased physical activity.

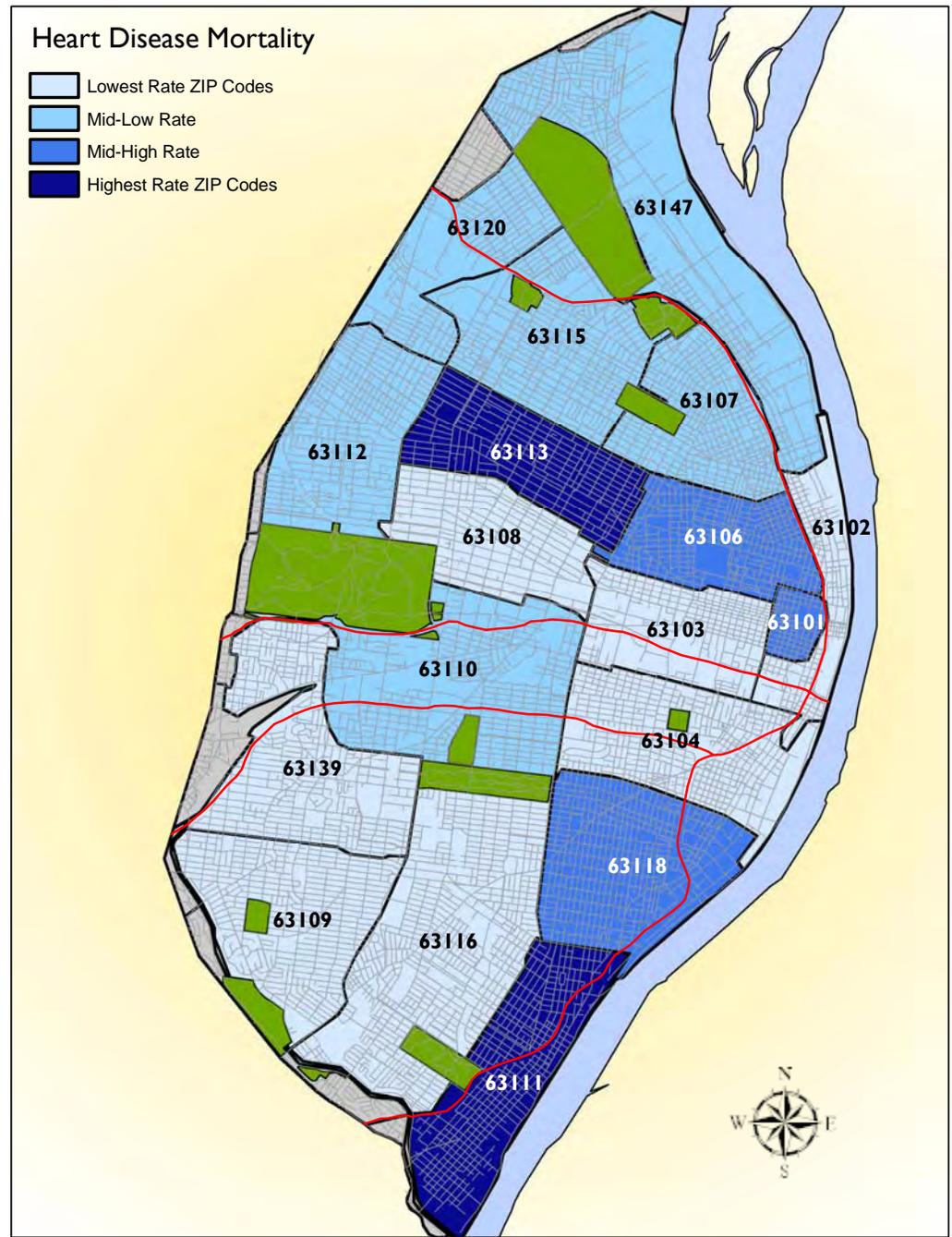
Deaths /100,000 Population

ZIP Code	Heart Dis Mortality	Map Quartile
63113	354.9	4
63111	350.3	4
63118	315.2	3
63106	308.8	3
63101**	289.9	3*
63110	278.3	2
63115	274.0	2
63147	267.8	2
63107	267.1	2
63120	266.8	2
63112	262.3	2
63116	250.5	1
63104	242.6	1
63139	239.6	1
63108	229.4	1
63109	222.2	1
63103	215.8	1
63102**	190.7	1*

STL City	269.3
STL Black	297.9
STL White	255.9
MO	227.2
MO Black	264.8
MO White	225.2
US	195.6
US Black	252.5
US White	192.4

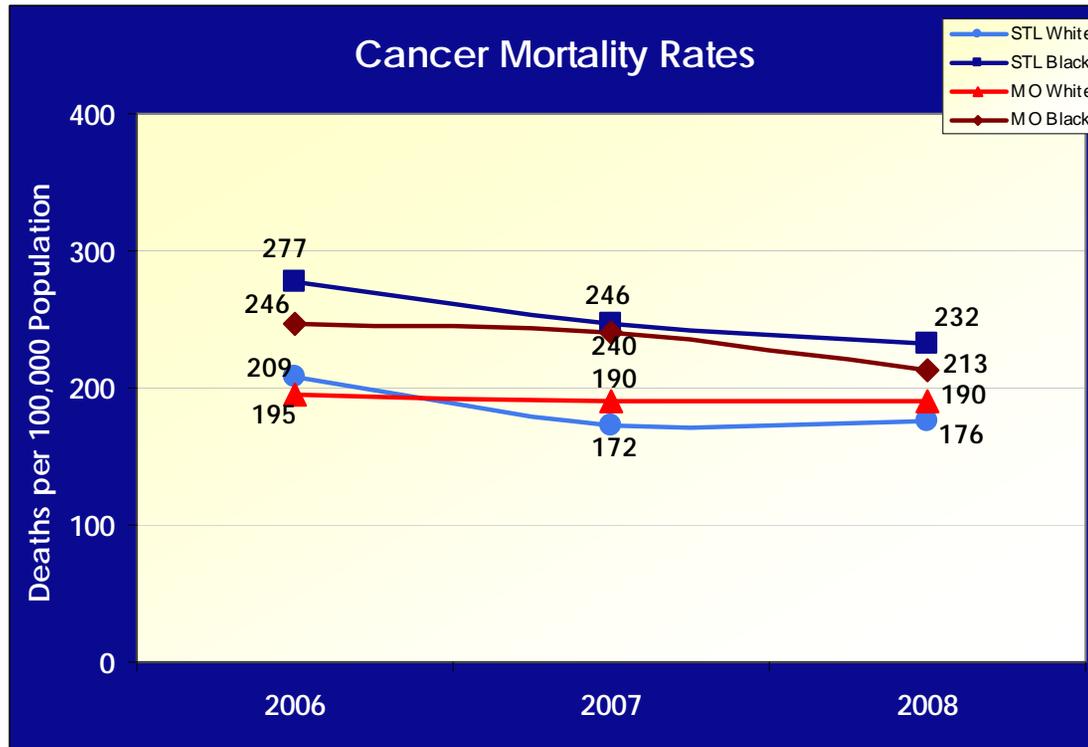
**small population-interpret with caution

* < 20 health events-interpret with caution



Heart Disease Mortality

Cancer Mortality



“Even though nationwide white women are more likely to get breast cancer, black women are about 35 percent more likely to die of the disease . . . in St. Louis that number is closer to 60 percent.”

–St. Louis Public Radio; New project aims to decrease breast cancer deaths in north St. Louis, July 2011

Data Source: Missouri Department of Health and Senior Services; Vital Records Data

Definition

Cancer is a general term frequently used to indicate any of various types of malignant neoplasms, most of which invade surrounding tissues. Deaths from cancer include solid malignant neoplasms and neoplasms of the lymphatic and hematopoietic tissues. Age-adjusted rates are presented per 100,000 population and are averaged over the 2006-2008 time period.

Public Health Implications

Different risk factors are attributed to different cancer types. Tobacco use is the single best recognized cause of cancer, and is now responsible for 30% of all cancer deaths in the U.S. Other causes of cancer include high-fat and low-fiber diets, physical inactivity and genetics.

St. Louis Rates and Comparative Info

The St. Louis City average rate for cancer is 1.17 times that seen in the United States and 1.09 times the Missouri rate. In 2008, there were 698 deaths due to cancer in St. Louis City.

Black/White Disparity

The average rate in the St. Louis City black population is 1.4 times that in the St. Louis City white population. The St. Louis City average black population rate is 1.16 times the U.S. black population in the same time period.

Disparity Ratio: 1.4

Potential Public Health Interventions

Smoking cessation is a critical component in the reduction of cancer mortality. Diet is another important area in cancer prevention; some estimate that healthier eating habits will reduce cancer rates and decrease cancer deaths by 9%. Early detection of cancer and cancer screening programs, particularly in high-risk populations, such as in individuals with strong family history of cancer, can also decrease mortality rates.

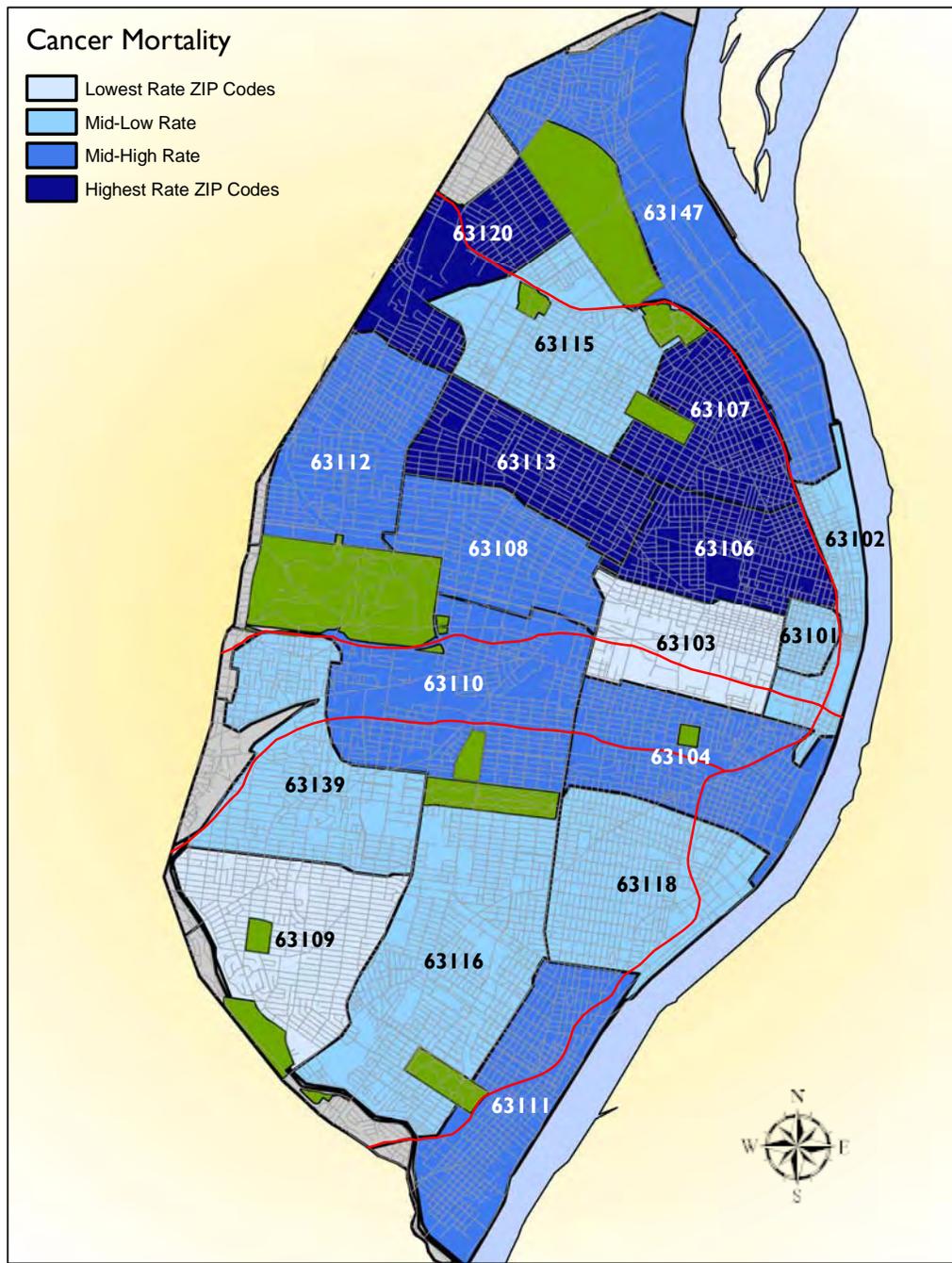
Deaths /100,000 Population

ZIP Code	Cancer Mortality	Map Quartile
63106	284.6	4
63107	280.7	4
63113	278.1	4
63120	265.7	4
63108	233.7	3
63147	232.9	3
63111	232.5	3
63112	224.2	3
63104	212.0	3
63110	209.6	3
63115	203.4	2
63102**	195.2	2*
63116	193.9	2
63118	190.2	2
63139	178.8	2
63101**	177.0	2*
63103	130.6	1
63109	122.7	1

STL City	210.6
STL Black	252.0
STL White	185.2
MO	193.8
MO Black	232.7
MO White	191.7
US	179.6
US Black	216.5
US White	178.7

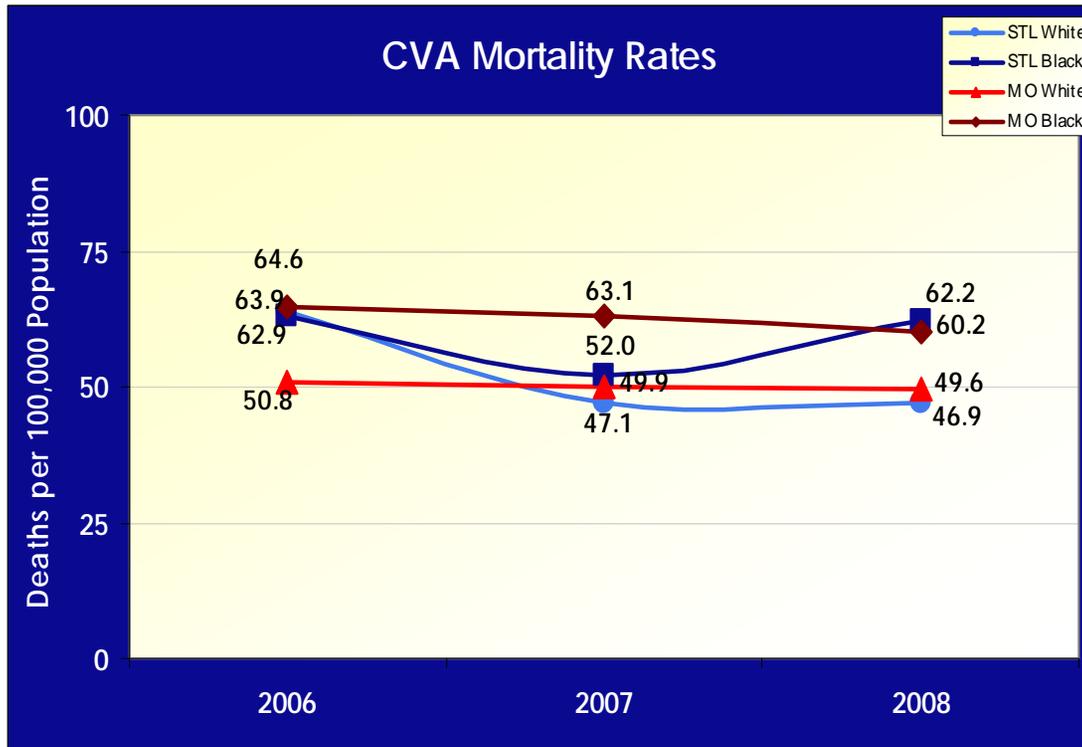
**small population-interpret with caution

* < 20 health events-interpret with caution



Cancer Mortality

CVA Mortality



Data Source: Missouri Department of Health and Senior Services; Vital Records Data

Definition

Cerebrovascular disease (CVA) is a general term for brain dysfunction caused by an abnormality of the cerebral blood supply. Deaths from cerebrovascular diseases, commonly called “stroke”, usually result from a cerebral hemorrhage, thrombosis causing infarction, or an embolism which generally originates from the heart. Age-adjusted rates are presented per 100,000 population and averaged over 2006-2008.

Public Health Implications

Some stroke risk factors are based on heredity or natural processes that can't be changed: strokes more than double for each decade of life after age 55. Men have about a 19% greater chance of stroke than women. African Americans have a much higher risk of death due to CVA, in part due to a greater incidence of high blood pressure. Factors that can be changed include controlling high blood pressure and not smoking cigarettes.

St. Louis Rates and Comparative Info

The average rate for death due to stroke in St. Louis City is somewhat higher than that seen in the U.S. and Missouri, 1.3 and 1.1 times, respectively. In 2008, there were 184 deaths due to CVA.

Black/White Disparity

In St. Louis City the average death rate for the black population is just 1.13 times that in the white population. Compared to the black population in the U.S., the average death rate for stroke in the St. Louis City black population is slightly lower. For the St. Louis City white population, the average rate for strokes is 1.27 times that seen in the U.S. white population.

Disparity Ratio: 1.1

Potential Public Health Interventions

Education on lowering high blood cholesterol and lipids, controlling high blood pressure, increasing physical activity, controlling obesity and quitting smoking are factors that can be intervened upon to reduce the mortality rate due to stroke.

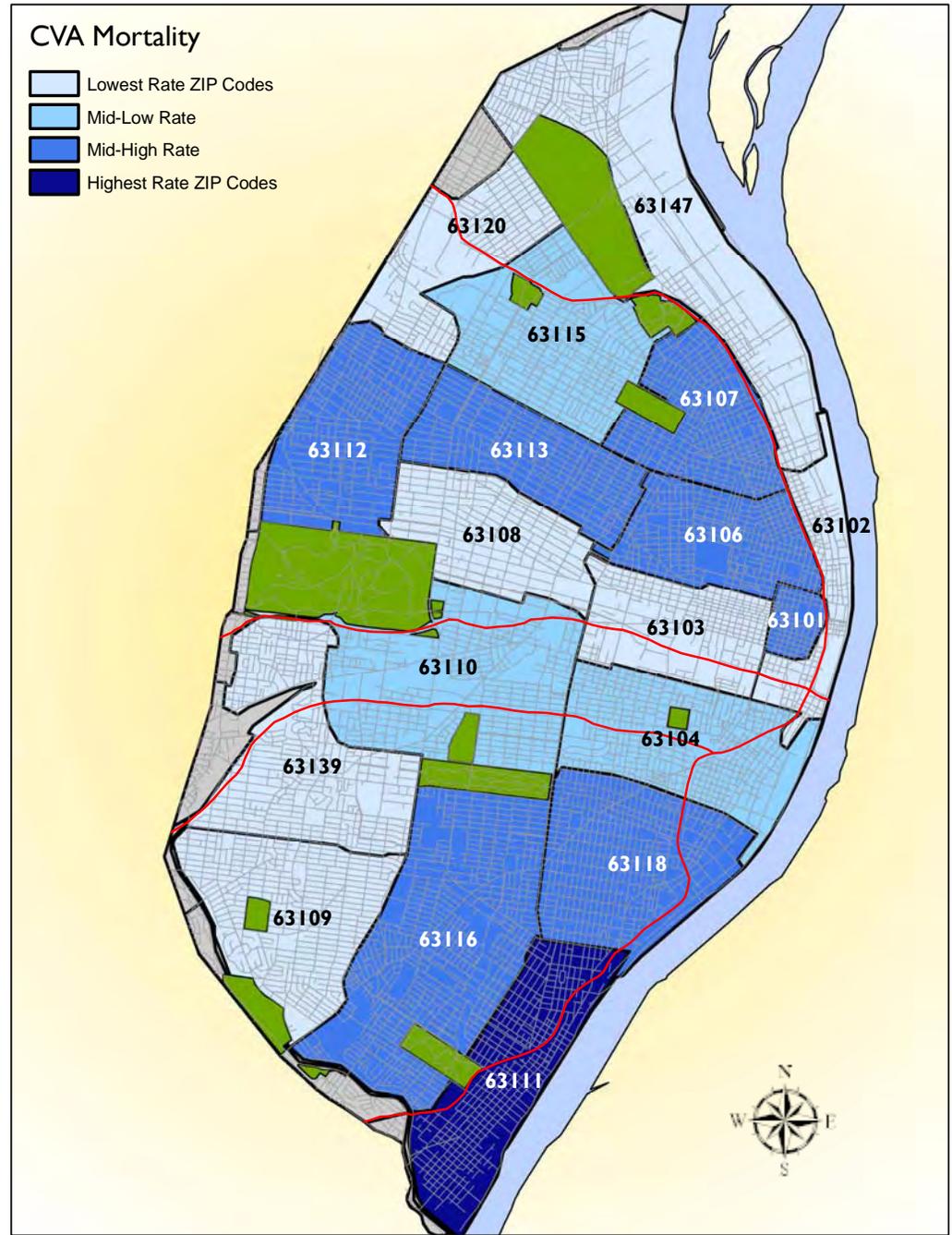
Deaths /100,000 Population

ZIP Code	CVA Mortality	Map Quartile
63111	84.0	4
63118	65.8	3
63106	64.3	3*
63107	64.1	3
63113	62.9	3
63116	62.4	3
63112	61.9	3
63101**	61.1	3*
63104	58.1	2
63115	56.7	2
63110	51.4	2
63120	47.0	1*
63139	43.6	1
63147	38.3	1*
63109	37.9	1
63108	37.7	1
63102**	15.0	1*
63103	10.3	1*

STL City	54.9
STL Black	59.0
STL White	52.4
MO	51.1
MO Black	62.6
MO White	50.1
US	42.9
US Black	61.0
US White	41.1

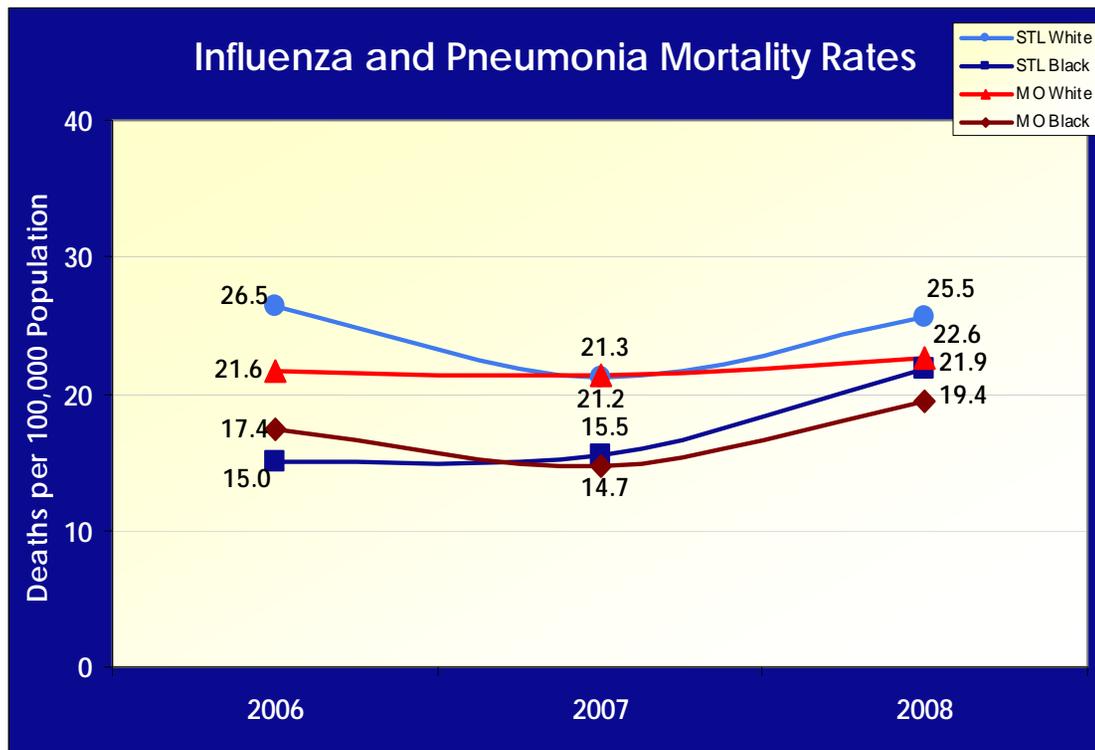
**small population-interpret with caution

* < 20 health events-interpret with caution



CVA Mortality

Influenza and Pneumonia Mortality



“Flu is unpredictable and how severe it is can vary widely from one season to the next... Certain people are at greater risk for serious complications if they get the flu. This includes older people, young children, pregnant women and people with certain health conditions (such as asthma, diabetes, or heart disease), and persons who live in facilities like nursing homes.”

-CDC, Key Facts About Seasonal Flu

Data Source: Missouri Department of Health and Senior Services; Vital Records Data

Definition

Influenza, commonly called "the flu," is an infection of the respiratory tract caused by the influenza virus. Compared with most other viral respiratory infections, such as the common cold, influenza infection often causes a more severe illness. Most people who get the flu recover completely in 1 to 2 weeks, but some people develop serious and potentially life-threatening medical complications, such as pneumonia. Age-adjusted rates are presented per 100,000 population and are averaged over the 2006-2006 time period.

Public Health Implications

In an average year, influenza is associated with more than 25,000 deaths nationwide and more than 200,000 hospitalizations. Flu-related complications can occur at any age. However, the elderly and people with chronic health problems are much more likely to develop serious complications after influenza infection than younger, healthier people. In the U.S., the deaths due to influenza and pneumonia are consistently in the top 10 leading causes of death within every age group.

St. Louis Rates and Comparative Info

In St. Louis City, the average rate for death due to influenza and pneumonia is 1.24 times the rate in the U.S. In 2008 there were 82 deaths due to pneumonia and influenza to residents of St. Louis City.

Black/White Disparity

In St. Louis City the average death rate in the black population is 0.72 that in the white population. Compared to the U.S. average death rate for pneumonia and influenza, the St. Louis City black population fares better than the U.S. black population but St. Louis City whites fare worse than the U.S. white population.

Disparity Ratio: 0.72

Potential Public Health Interventions

Much of the illness and death caused by influenza can be prevented by annual influenza vaccination. Influenza vaccine is specifically recommended for people who are at high risk for developing serious complications as a result of influenza infection. These high-risk groups include all people aged 6 months to 4 years, aged 50 years or older, and people of any age with chronic diseases of the heart, lung or kidneys, diabetes, immunosuppression, or severe forms of anemia.

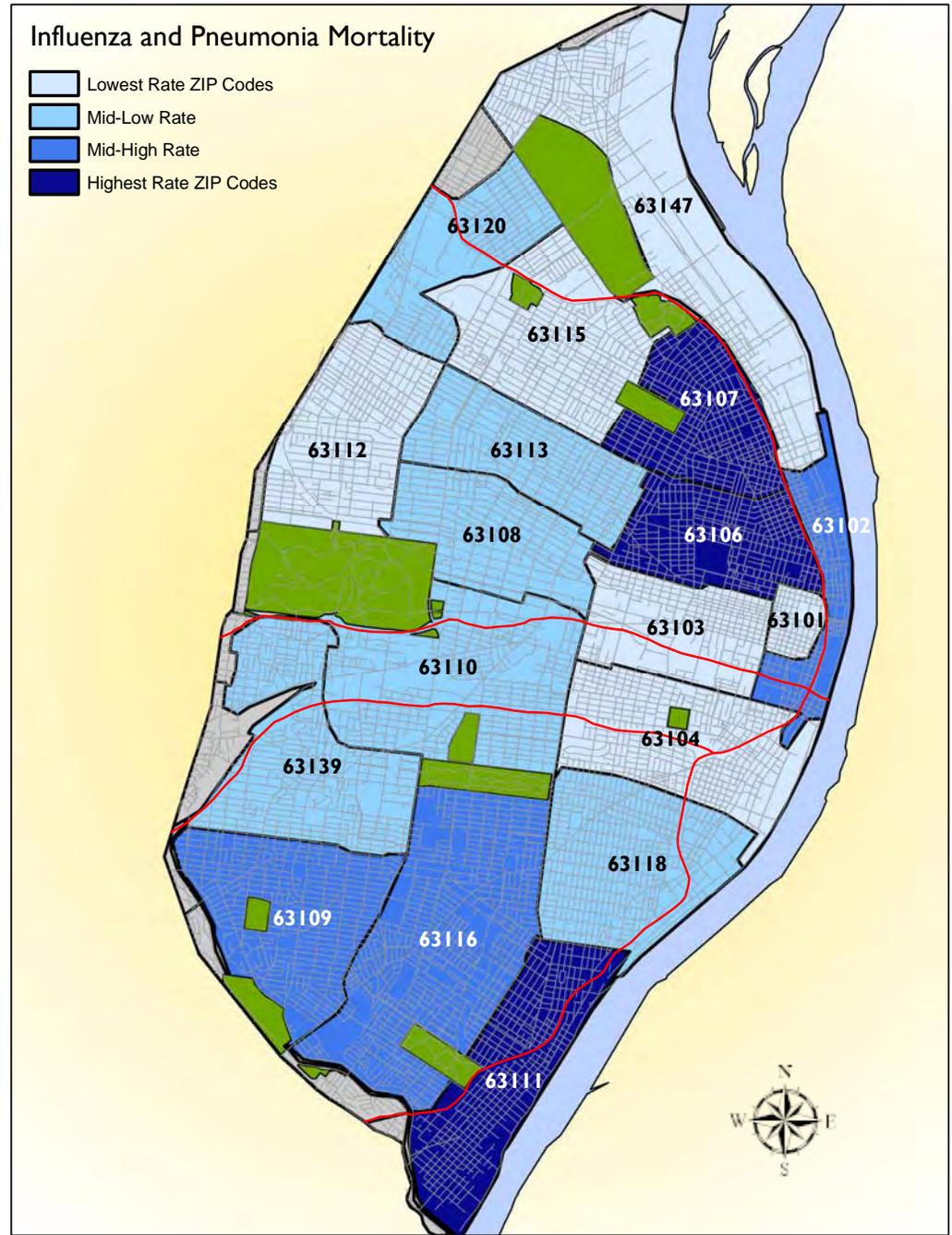
Deaths /100,000 Population

ZIP Code	Flu Mortality	Map Quartile
63106	36.3	4*
63107	33.5	4*
63111	31.2	4
63102**	29.1	3*
63109	25.8	3
63116	25.3	3
63108	21.7	2*
63139	20.9	2*
63110	18.2	2*
63120	17.7	2*
63113	17.4	2*
63118	17.2	2*
63115	15.9	1*
63147	15.3	1*
63112	13.6	1*
63104	9.7	1*
63101**	0.0	1*
63103	0.0	1*

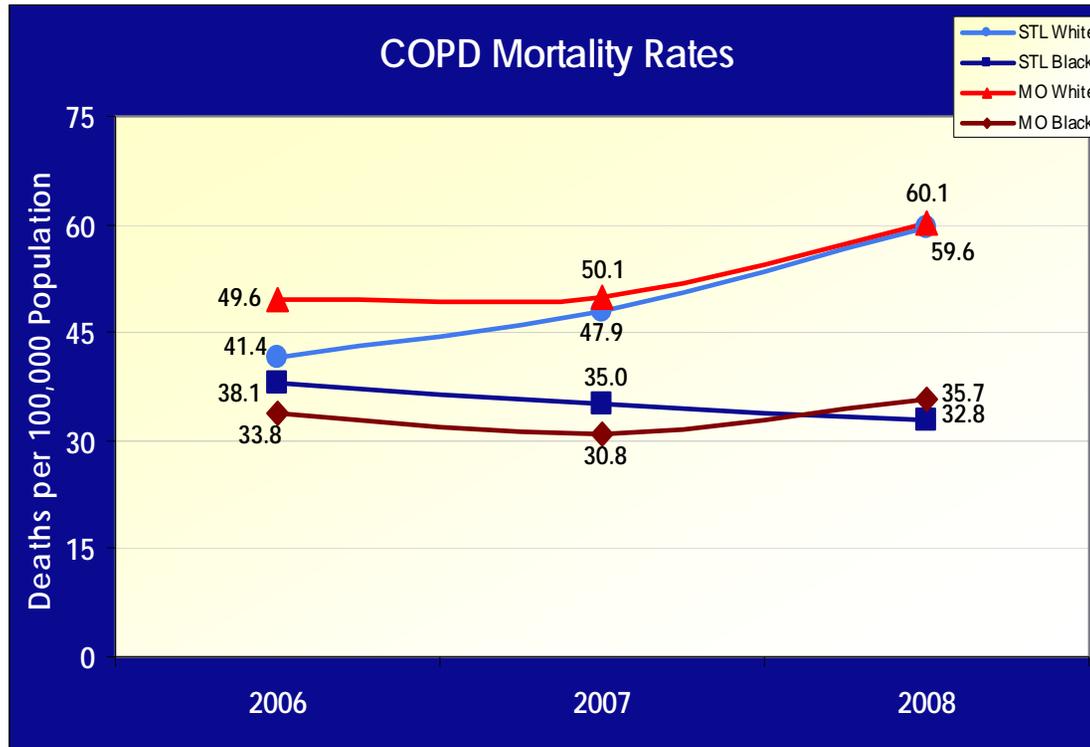
STL City	21.1
STL Black	17.5
STL White	24.4
MO	21.4
MO Black	17.2
MO White	21.9
US	17.0
US Black	19.0
US White	16.9

**small population-interpret with caution

* < 20 health events-interpret with caution



COPD Mortality



“In the United States, tobacco use is a key factor in the development and progression of COPD, but asthma, exposure to air pollutants in the home and workplace, genetic factors, and respiratory infections also play a role.”

-Centers for Disease Control

Data Source: Missouri Department of Health and Senior Services; Vital Records Data

Definition

Chronic obstructive pulmonary disease (COPD) is now referred to as “chronic lower respiratory diseases” and is a general term that comprises those conditions that are accompanied by chronic or recurrent reduction in expiratory airflow within the lung, due to the narrowing of the small bronchi. Deaths from chronic obstructive pulmonary diseases and allied conditions include deaths due to bronchitis, emphysema, asthma and chronic airway obstruction. Age-adjusted rates are presented per 100,000 population and are averaged over the 2006-2008 time period.

Public Health Implications

Both emphysema and chronic bronchitis are diseases of longtime smokers: 82 percent of those who die of COPD are smokers, and smokers are ten times more likely than non-smokers to die of COPD. Higher rates of chronic bronchitis are also found among coal miners, grain handlers, metal molders and other workers exposed to dust and irritating fumes. Chronic bronchitis symptoms worsen when atmospheric concentrations of sulfur dioxide and other air pollutants increase.

St. Louis Rates and Comparative Info

Overall in St. Louis City, the average death rate for COPD or “chronic lower respiratory disease” is slightly higher than that in the U.S., but considerably lower than the average rate in Missouri. In 2008, there were 161 deaths to residents of St. Louis City due to COPD. The ZIP Codes with the highest rates are 63101, 63118, 63111 and 63116. The ZIP Codes with the lowest rates are 63102 and 63103.

Black/White Disparity

The average rate in St. Louis City due to COPD in the white population is 1.41 times that in the black population. Comparing rates to the U.S. population, the averaged death rate in St. Louis City for both whites and blacks is higher than their national counterpart groups.

Disparity Ratio: 0.71

Potential Public Health Interventions

Prevention of COPD involves reducing controllable risks. Health education activities related to smoking and avoidance of exposure to secondhand smoke whenever possible. Policy development related to clean air quality both in the workplace and in the community.

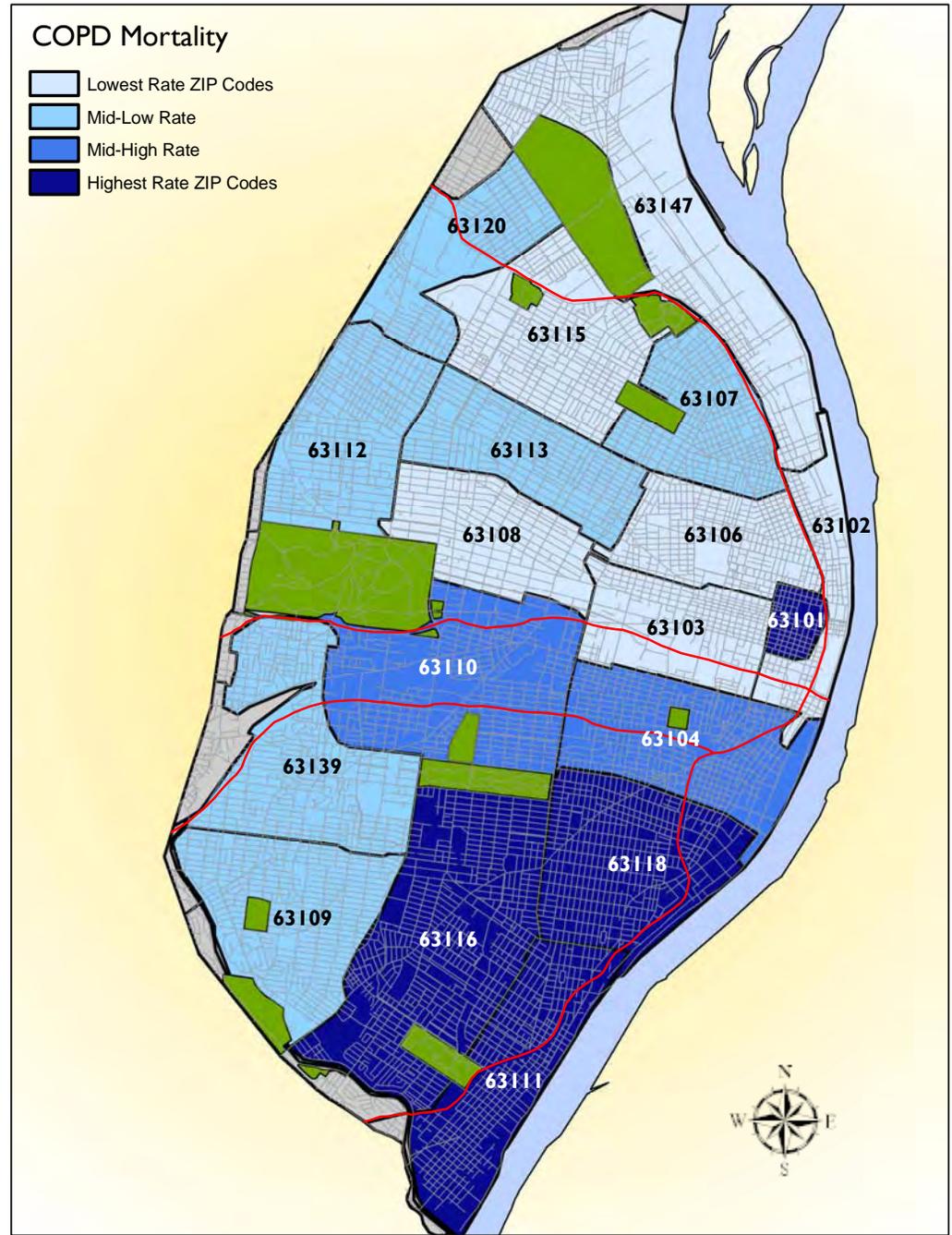
Deaths /100,000 Population

ZIP Code	COPD Mortality	Map Quartile
63101**	91.6	4*
63118	66.3	4
63111	61.8	4
63116	57.8	4
63104	49.9	3
63110	45.8	3
63120	43.4	2*
63109	40.4	2
63107	40.3	2*
63139	40.2	2
63112	37.7	2
63113	35.9	2
63106	34.0	1*
63115	29.4	1
63147	26.9	1*
63108	24.5	1*
63103	6.8	1*
63102**	0.0	1*

STL City	42.4
STL Black	35.3
STL White	49.7
MO	51.4
MO Black	33.5
MO White	53.3
US	40.7
US Black	28.1
US White	42.8

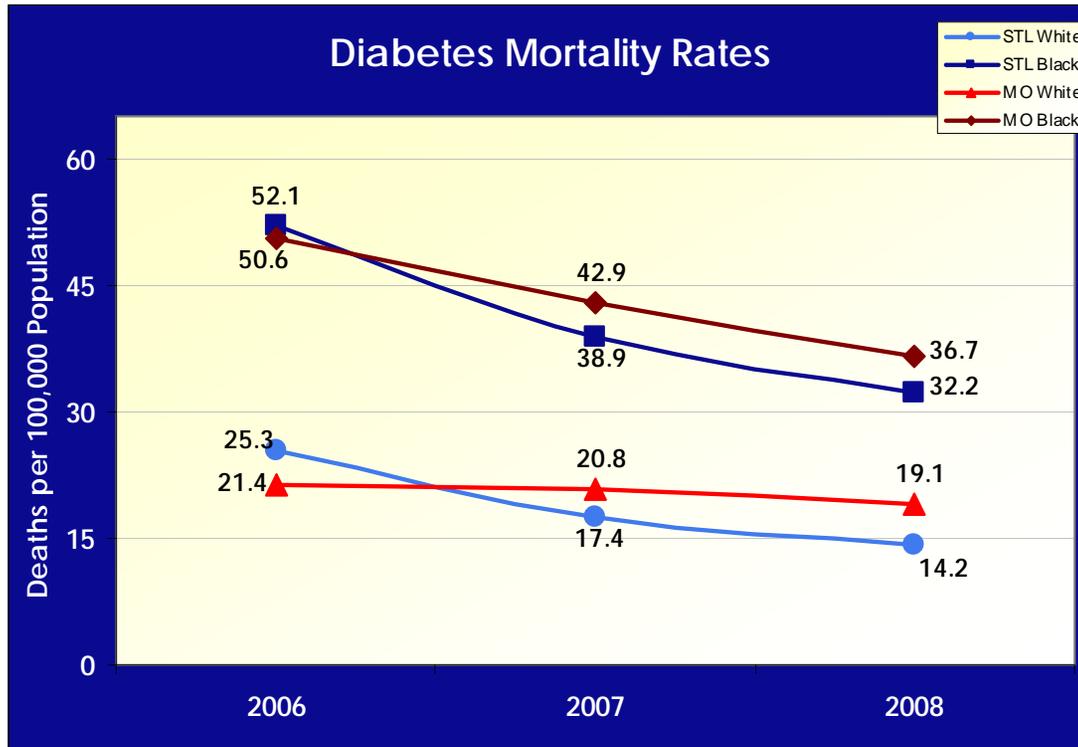
**small population-interpret with caution

* < 20 health events-interpret with caution



COPD Mortality

Diabetes Mortality



“There has been an explosion of diabetes. Even children are getting Type 2 diabetes at age 10 to 14. It used to be that people would get (type 2) diabetes when they were in their 40s.”

-Joan McGinnis St. Louis Diabetes Coalition

Data Source: Missouri Department of Health and Senior Services; Vital Records Data

Definition

Diabetes mellitus is a metabolic disease, caused by an absolute or relative deficiency of insulin. Death from diabetes mellitus is usually due to long-term complications. Age-adjusted rates are presented per 100,000 population and are averaged over the 2006-2008 time period.

Public Health Implications

Heart disease is the leading cause of diabetes-related deaths, with a heart disease death rate about 2 to 4 times as high as that of adults without diabetes. People with diabetes are also at a higher risk of stroke and are more likely to die of pneumonia or influenza than people who do not have diabetes. A genetic susceptibility to this disease, coupled with diet, physical inactivity and increasing age increases the risk of diabetes.

St. Louis Rates and Comparative Info

In the U.S., diabetes prevalence has been gradually increasing since 1958. The average death rate due to diabetes in St. Louis City is 1.25 times that seen in the U.S., and 1.29 times that seen in Missouri. In 2008, there were 79 deaths to residents of St. Louis City as a result of diabetes.

Black/White Disparity

The average death rate in the St. Louis City black population is over twice that seen in the white population. Comparing the black population, the average death rate in St. Louis City is slightly lower than the rates in the U.S. and Missouri; for the white population, the rate in St. Louis City is also slightly lower than the U.S. and state populations.

Disparity Ratio: 2.2

Potential Public Health Interventions

Diabetes detection and diabetes-related preventive-care practices are important for reducing the development and progression of diabetes complications and disability. Effective strategies should focus among groups at highest risk in St. Louis City such as blacks and pregnant women.

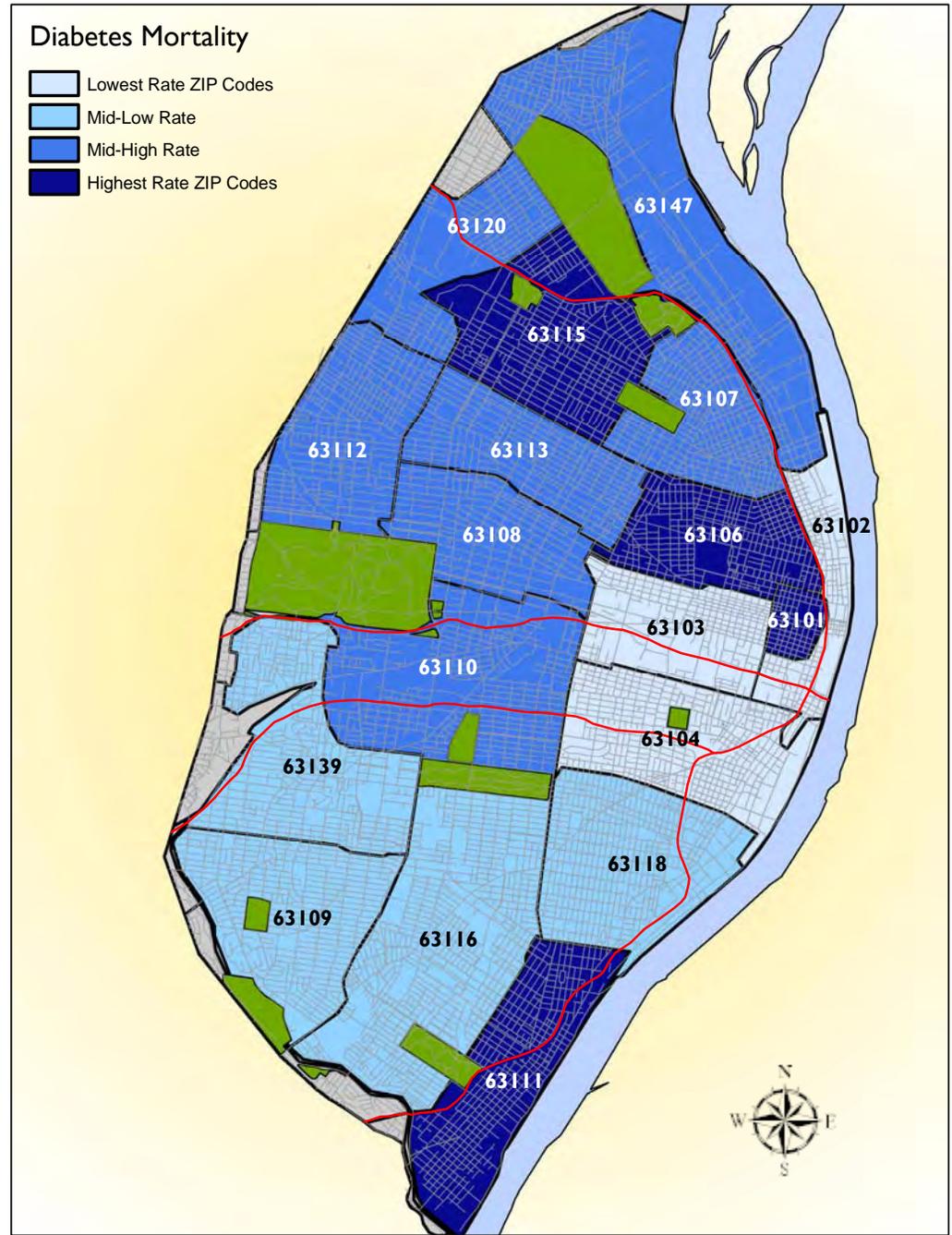
Deaths /100,000 Population

ZIP Code	Diabetes Mortality	Map Quartile
63101**	103.8	4*
63115	45.9	4
63106	41.1	4*
63111	38.5	4
63113	35.3	3
63120	35.0	3*
63110	34.0	3*
63108	33.4	3
63112	31.7	3
63147	30.5	3*
63107	28.0	3*
63139	22.9	2*
63116	22.1	2
63118	21.6	2*
63109	19.5	2
63102**	15.0	1*
63103	10.1	1*
63104	7.0	1*

STL City	28.6
STL Black	41.0
STL White	18.9
MO	22.2
MO Black	43.3
MO White	20.4
US	22.9
US Black	44.0
US White	20.9

**small population-interpret with caution

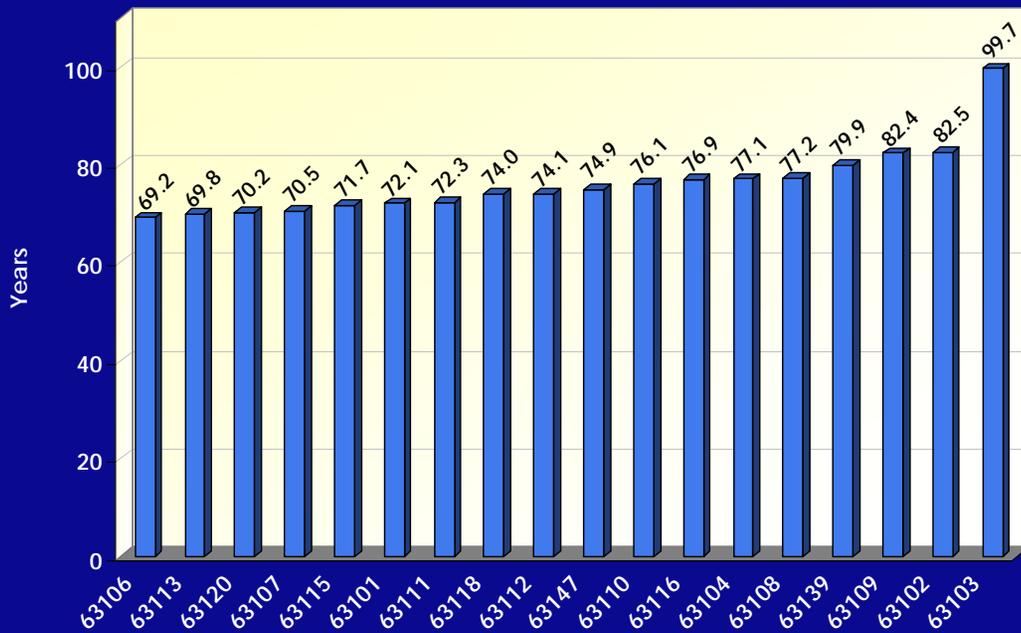
* < 20 health events-interpret with caution



Diabetes Mortality

Years Life Expectancy

Life Expectancy at Birth



*The high life expectancy in 63103 is a result of a statistical anomaly due to a small number of deaths.

“ZIP Code 63108 has one of the highest life expectancy rates in the city, 77 years. That means statistically, if you live in the Central West End, you live eight years longer than someone in 63106...The highest life expectancy in the City of St. Louis is ZIP Code 63109 in South St. Louis. That includes the St. Louis Hills neighborhood. There, life expectancy is 82 years, 13 years more than 63106.”

-KSDK; Life expectancy in 63106 is lower than Iran, Iraq, & Egypt, May 2012

Definition

Years life expectancy at birth is defined as the number of years a baby born in an area or a specific subpopulation could be expected to live if it experienced the current age-specific mortality rates of that area or specific subpopulation. The years life expectancy is based on 2006-2008 averaged mortality rates.

Public Health Implications

Studies show that the two factors that have the most significant impact on life expectancy are infant mortality (death under one year of age) and income distribution (gap between high and low incomes) in an area.

St. Louis Rates and Comparative Info

Life expectancy in years based on the mortality rates in the time period 2006 through 2008 in St. Louis City is 0.96 that seen in the U.S., and 0.97 that seen in Missouri. The ZIP Codes with the shortest life expectancies are 63106 and 63113. The ZIP Codes with the longest life expectancy are 63103, 63102 and 63109. It should be noted that high life expectancy in 63103 is a result of a statistical anomaly due to a small number of deaths.

Black/White Disparity

Life expectancy in years based on the mortality rates in the time period 2006 through 2008 in St. Louis City for blacks is 0.91 the life expectancy of whites in St. Louis City. Life expectancy in the St. Louis City black population is 0.97 the life expectancy of the U.S. black population.

Disparity Ratio: 0.91

Potential Public Health Interventions

Public health interventions include surveillance and epidemiological studies to determine high-risk behaviors and populations.

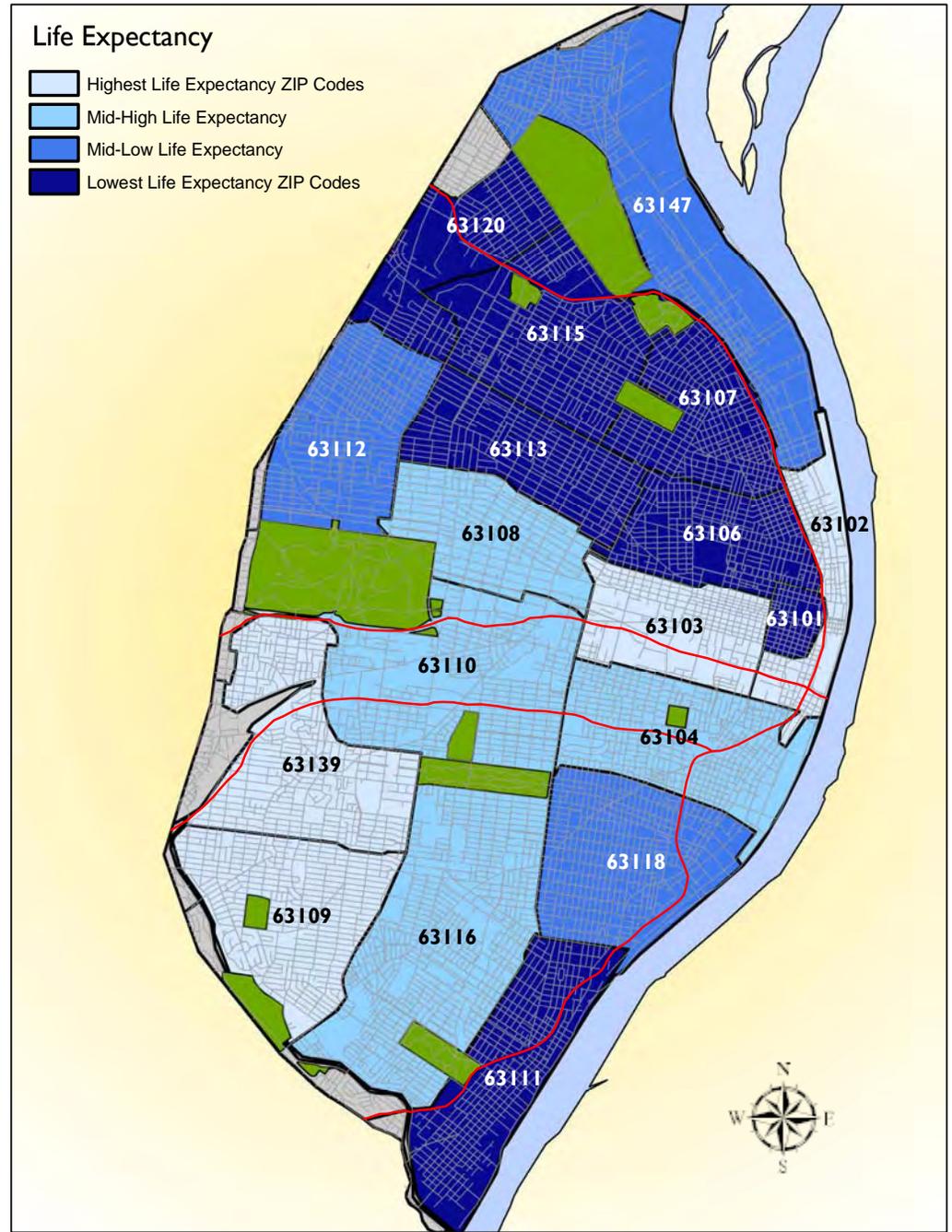
Data Source: Missouri Department of Health and Senior Services; Vital Records Data

Life Expectancy in Years

ZIP Code	Life Expect	Map Quartile
63106	69.2	4
63113	69.8	4
63120	70.2	4
63107	70.5	4
63115	71.7	4
63101**	72.1	4
63111	72.3	4
63118	74.0	3
63112	74.1	3
63147	74.9	3
63110	76.1	2
63116	76.9	2
63104	77.1	2
63108	77.2	2
63139	79.9	1
63109	82.4	1
63102**	82.5	1
63103**	99.7	1

STL City	74.9
STL Black	71.1
STL White	78.2
MO	77.4
MO Black	72.6
MO White	77.9
US	77.9
US Black	73.6
US White	78.4

**small population-interpret with caution



Years Life Expectancy

Glossary / Acronyms

Age-adjusted Rates

Since the difference in the age composition of the population will influence mortality rates, it is preferable to use age specific mortality rates when comparing the mortality experiences in geographic areas or population groups. For this report, a direct method of calculating age-adjusted mortality rates is used to calculate a summary statistic. For this report the 2000 U.S. population is used as the “standard population”. The age stratum may differ from other published age-adjusted rates and therefore any comparisons to other reports must be done with caution.

AIDS

ICD-10 codes: B20-B24

Cancer

ICD-10 codes: C00-C97

Case

In epidemiology, a person in the population or study group identified as having the particular disease, health disorder or condition under investigation. A variety of criteria may be used to identify cases. The epidemiologic definition of a case is not necessarily the same as the ordinary clinical definition.

CDC Centers for Disease Control and Prevention

The CDC is one of the major operating components of the Department of Health and Human Services. It “is recognized as the lead federal agency for protecting the health and safety of people at home and abroad, providing credible information to enhance health decisions, and promoting health through strong partnerships. The CDC serves as the national focus for developing and applying disease prevention and control, environmental health, and health promotion and education activities designed to improve the health of the people of the United States”. CDC, located in Atlanta, Georgia, is an agency of the Department of Health and Human Services.

Cerebrovascular Accident

ICD-10 codes: I60-I69, “stroke”.

Chronic Obstructive Pulmonary Disease (COPD), now Chronic Lower Respiratory Disease

ICD-10 codes: J40-J47

Descriptive Statistics

The branch of statistics used to simply describe the data and to provide simple summaries. Descriptive statistics help to simplify large amounts of data in a manageable and sensible way. Descriptive statistics are distinguished from inferential statistics where inferences are drawn from the data such as making judgments of probability.

Diabetes Mellitus

ICD-10 codes: E10-E14

Diagnosis-Related Group (DRG) System

DRG's are a system of categorizing hospitalized patients based on the primary and secondary diagnosis, primary and secondary procedures, age and length of hospital stay. The patient's actual diagnosis is converted into a DRG that is used to calculate a hospital's reimbursement.

Epidemic

From the Greek epi (upon) and demos (people); the occurrence in a community or region of cases of an illness, specific health-related behavior, or other health-related events clearly in excess of normal expectancy. The community or region and the period of time in which the cases occur are precisely specified.

Epidemiology

The study of the distribution and determinants of health-related states or events in defined populations.

Healthy People 2020

Healthy People 2020, is a national health promotion and disease prevention initiative. Its goals are to increase the quality and years of healthy life and eliminate health disparities. It is a statement of national opportunities-a tool that identifies the most significant preventable threats to health and focuses public and private sector efforts to address those threats. The first set of national health targets, published in 1997 was supported by objectives with 2000 targets. Healthy People 2020 builds on initiatives pursued over the last three decades to achieve over the second decade of the 21st Century.

Heart Disease

ICD-10 codes: I00-I09, I11, I13, I20-I51

Homicide

ICD-10 codes: X85-Y09, Y87.1

ICD-10 Codes

The Tenth Revision, International Classification of Diseases, 1992, World Health Organization, is the classification structure used to code and classify mortality data from death certificates. It is designed to promote international comparability in the collection, processing, classification and presentation of mortality statistics. The ICD has been revised periodically to incorporate changes in the medical field. To date, there have been 10 revisions of the ICD. The 10th revision has been used since 1999.

Incidence

A measurement of only the new cases of a disease or other event occurring during a given period of time. Incidence rates have new cases as the numerator and the population at risk for being a case as the denominator.

Glossary / Acronyms

Mean

The average, the sum of all the values divided by the number of values.

Morbidity

Refers to illness or some other (morbid) condition, it does not refer to death.

Mortality

Refers to death, usually measured through death certificates. In the United States, State laws require death certificates for all deaths, and Federal Law mandates national collection and publication of deaths and other vital statistics data. Underlying causes of death are determined using procedures in coding the cause of death and are then coded using the Tenth Revision, International Classification of Diseases, 1992 (ICD-10).

Motor Vehicle Accidents

ICD-10 codes: 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

MSM

Men having sex with men.

Non Motor Vehicle Accidents (Unintentional Injuries)

ICD-10 codes: 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-X59, Y85-Y86

Pneumonia and Influenza

ICD-10 codes: J10-J18

Population at Risk

The population consisting of those to whom an event could happen to, whether it did or not.

Prevalence

A measurement of all cases of disease or other events prevailing at a given time. It includes new cases and old cases that are still around. Prevalence rates have new and past existing cases as the numerator and the population at risk for being a case as the denominator.

Primary Source Data

An original source of data such as that information obtained from interviews, focus groups and surveys.

Quartile

A division of the total cases, observations or rates into four groups of equal size.

Rate

A measure of the frequency of occurrence of a phenomenon. In epidemiology, demography and vital statistics, a rate is an expression of the frequency with which an event occurs in a defined population. The use of rates rather than raw numbers is essential for comparison of experience between populations at different times, different places or among different classifications of persons. The components of a rate are the numerator (all the events that happened), the denominator (all of the population that the event could have happened to), the specified time in which events occurred and usually a multiplier, a power of 10 frequently 1,000 or 100,000, which converts the rate from an awkward fraction or decimal to a whole number.

Ratio

The value obtained by dividing one quantity by another. A ratio is an expression of the relationship between a numerator and a denominator where the two are usually separate and distinct quantities, neither being included in the other.

Risk Factor

A factor that increases the risk of some event happening.

Secondary Source Data

A source that provides non-original data or information such as vital records data.

SNAP

Supplemental Nutrition Assistance Program also known as food stamps.

Standard Deviation (SD)

A measure of dispersion or variance. It is equal to the positive square root of the variance. The mean tells where the values for a group are centered. The standard deviation is a summary of how widely dispersed the values are around this center

Standard Population

A population in which the age composition is known precisely, for all practical purposes as a result of a census. A standard population is used as a comparison group in age adjustment such as in the calculation of mortality rates. All mortality data in this report are age-adjusted to the 2000 U.S. population.

Suicide

ICD-10 codes: X60-X84, Y87.0

Surveillance

The ongoing systematic collection, analysis and interpretation of health data that are essential to the planning, implementation and evaluation of public health practice.

Weighted Data

Any information given different weights or importance in calculations; one criterion counts more than another criterion.

WIC

Federally-funded health and nutrition program for women, infants, and children.



Appendix a

ZIP Codes – City of St. Louis

These ZIP Codes are entirely contained within St. Louis City limits:

63101
63102
63103
63104
63106
63107
63108
63109
63110
63111
63112
63113
63115
63116
63118
63120 (very small portion is in St. Louis County)
63139
63147

These ZIP Codes are shared with St. Louis County. Only a very small portion of each ZIP Code is contained within St. Louis City limits. Since the population and events are so small, these were not included in the assessment.

63105	Central fringe
63117	South fringe
63119	South fringe
63123	South fringe
63125	South fringe
63143	South fringe
63130	North fringe
63133	North fringe
63136	North fringe
63137	North fringe
63138	North fringe