DECADE REVIEW OF HEALTH STATUS

for St. Louis City and County 2000-2010

an update to *Building a Healthier St. Louis*

Released: December 2012

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A large debt of gra tude is owed to the members of the RHC's Health Status Repor ng Task Force, who took considerable me and e ort to guide the crea on of this document. Special thanks to Dr. Dolores Gunn, Director of the St. Louis County Department of Health, and Pamela Walker, Interim Director of the City of St. Louis Department of Health, for collabora ve leadership as Co-Chairs.

We would also like to acknowledge the many non-pro t organizations, government agencies, and community members who assisted with research ac vi es or reviewed dra versions of the report.

The creation of this report has been a community-wide effort lled with spirited dialogue and collabora on. Together, we are building a healthier St. Louis.

Thank You,

St. Louis Regional Health Commission
December 2012

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EXECUTIVE SUMMARY

INTRODUCTION

The St. Louis Regional Health Commission (RHC), formed in 2001 upon the consensus recommenda on of Civic Progress, governmental leaders, and community members, works in partnership with regional health sector advocates and stakeholders to improve health care access, reduce health dispari es, and improve health outcomes for the uninsured and underinsured in St. Louis City and County.

In 2003 the RHC released a comprehensive report on the state of health status, health disparity, and performance of the health care safety net in the St. Louis region. The crea on of the report, *Building a Healthier Saint Louis: A Report on the Integrity of Saint Louis' Health Care Safety Net*, was a collabora ve e ort between the RHC, its Advisory Boards, and the community at large. *Building a Healthier Saint Louis* played a key role in the RHC's initi l strategic planning process for the delivery of primary and specialty health care services to the uninsured and underinsured in St. Louis City and County.

After the 2003 release, the RHC commi ed to providing an updated report to review community-wide progress in improving health status. Timed with the availability of Census 2010 data, the RHC's *Decade Review of Health Status* fulfills that commitment. This new report focuses on *change* over the past decade in leading health indicators and disparity metrics across St. Louis City and County.

This report focuses on change over the past decade in leading health indicators and disparity metrics in St. Louis City and County.

Provided in the pages to follow are detailed sta s cs, illustra ons, and narra ve regarding change observed in 14 key health condi ons and other factors that impact health. In addi on to a survey of data, this report also acknowledges and celebrates the regional progress already made to improve health outcomes and reduce disparity over the past decade.

Decade Review of Health Status is another step in the RHC's collabora ve work to improve access and reduce health disparities i St. Louis City and County. Looking forward, the RHC will conti ue to work across the region to develop innova ve and e ecti e solutions o improve health status.

Three Objectives Fulfilled

(1) Present an objective analysis of change in leading health indicators and disparity metrics in St. Louis City and County over the past decade (2000 to 2010).

(2) Highlight noteworthy and relevant "success stories" about change in health status or factors that impact health in St. Louis City and County over the past decade (2000 to 2010).

(3) Provide a data-driven platform to guide fu-ture RHC and community-based funding initiatives geared towards improving health care access, reducing health disparities, nd improving health outcomes for the uninsured and underinsured in St. Louis City and County in the decade to come.

SUMMARY OF KEY FINDINGS

Summarized below are important changes in the status of 14 key health condi ons, or factors that impact health, in the St. Louis region over the past ten years. A high-level overview of ndings is provided, followed by a review of individual condi ons and indicators. Each of these topic areas are explored in greater depth later in the report.

Developed by Task Force

This report was a collaborativ and consensus-based e ort led by the RHC's Health Status Repor ng Task Force, co-chaired by Dr. Dolores Gunn, Director of the St. Louis County Department of Health, and Pamela Walker, Interim Director of the City of St. Louis Department of Health. A complete roster of Task Force members can be found in the Acknowledgement sec on of this report.

Overview of Health Outcomes

1. *Gains in health status achieved, notably in the City.*
Over the past ten years, the City and County have seen substan al drops in mortality att ibutable to leading chronic health condi ons, including heart disease, stroke, diabetes, and cancer. Declines in regional mortality are similar to trends seen na onwide for many chronic condi ons during this ti e. Although nega ve health outcomes generally remain more prevalent in the City as compared to the County, the gap between these two areas considerably narrowed over the past ten years in many leading health condi ons and social determinants of health.

2. *Population of the region changed considerably.*
The St. Louis region looks much different today than it did a decade ago. Statistics about age, poverty and racial/ethnic composition indicate the City and County changed considerably. This report did not explorerto what degree sociodemographic changes were associated with health status during this time.

3. *Poor health outcomes continue to be geographically concentrated.*
Many of the 29 zip codes iden ed as high risk in the RHC's *Building a Healthier St. Louis* Report (2003) have shown improvement in health status over the past ten years. However, current data suggest that the geographic distribution of unfavorable health outcomes in the St. Louis region remains largely the same as a decade ago. Despite progress, poorer health outcomes are par cularly concentrated in the City and adjacent areas of North and South County.

4. *Health disparities persist.*
Despite overall improvement in health status throughout the St. Louis region over the past ten years, race- and gender-based dispari es persist. Three-fold diffe ences or greater are observed between African-Americans and Caucasians in diabetes and AIDS mortality, low birth weight, and emergency room visits a ributable to childhood asthma. Two-fold or greater diff rences are observed between males and females in heart disease, stroke, and diabetes mortality.

5. *Risk factors still matter.*
Although the region has seen substan al overall improvement in health status over the past decade, nega ve trends in obesity, tobacco use, and inactivit were also observed. These risk factors are associated with many social determinants of health.

SUMMARY OF KEY FINDINGS (cont)

Overview of Health Outcomes by Condition or Category

Demographics and Social Determinants:

- The total combined popula on of the City and County shrank 3.4% between 2000 and 2010. In comparison, the total popula on of Missouri and the United States grew 7.0% and 9.7%, respectiv ly, during the same period.
- Areas with greatest overall popula on decline are located in the City and North County.
    - Popula on decline among children (under ve years old) is most acute in West County, North County, and the City.
- Between 2000 and 2010, the size of the African-American popula on in the City decreased by 12% in contrast to an increase of 20% in the County.
- Although the total popula on in the region decreased, the number of people living in poverty increased by 26% from 2000 to 2010.
- While the rate of unemployment remained consistently higher in the City between 2000 and 2010, the number of unemployed persons rose in the County and fell in the City during this ti e.

Heart Disease:

- Between 2000 and 2010, the rate of **heart disease mortality fell 29% in the region**.
- The gap in heart disease mortality between the City and County narrowed slightly from 2000 and 2010.
- While mortality rates fell for all gender-race groups in the region, substan al diff rences persist. For example, current data reveal that men are 60% more likely to die of heart disease as compared to women.

Diabetes:

- **Diabetes mortality rates declined 24%** in the City and County from 2000 to 2010.
- While mortality rates for diabetes decreased, annual hospitaliza ons increased substan ally over levels from 2000.
- While mortality rates fell for all gender-race groups in the region, substan al diff rences persist. For example, current data reveal that African-Americans are 260% more likely to die of diabetes as compared to Caucasians.

Stroke:

- Between 2000 and 2010, **mortality rates for stroke fell 30%** in the region.
- The gap in stroke mortality between the City and County narrowed from 2000 and 2010.
- While mortality rates for stroke fell for all gender-race groups, substan al diff rences persist. For example, current data reveal that African-Americans are 60% more likely to die of stroke as compared to Caucasians.

SUMMARY OF KEY FINDINGS (cont)

Chronic Obstructive Pulmonary Disease (COPD):

- Between 2000 and 2010, mortality rates for COPD were consistently lower in the City and County, while an increase was observed statewide.
- While mortality rates fell for all gender-race groups in the region, the most substanti l drops were observed among African American men and women. Mortality rates decreased by 28% and 16% for African-American men and women, respectiv ly, between 2000-01 and 2009-10.

Cancer:

- **Mortality rates for breast, lung, colorectal, and prostate cancer fell (11-24%)** in the region between 2000 and 2010. Cancer incidence in the City and County declined in similar fashion.
- Current data reveal that, unlike many other health condi ons, zip codes with the highest rates of breast and prostate cancer mortality do not appear concentrated in the urban center.
- The racial health disparity related to prostate is much greater than breast and colorectal cancer. Current data reveal that African-American men are 2.3 mes more likely to die from prostate cancer than Caucasian men, in comparison to breast and colorectal cancer where the rela ve risk is 1.2 and 1.8, respecti ely.

Health Disparities:

- Health dispari es sti l exist in the City and County, notably by racial group. African Americans in the region conti ue to have poorer health status, in comparison to Caucasians.
- Rates of avoidable hospitaliza on among African American men and women rose between 2000 and 2009 while rates for Caucasians remained rela vely at at less than half the level of African Americans.
- In the City and County, African American adults are more than twice as likely to be uninsured as compared to Caucasian adults.

Maternal and Child Health:

- Between 2000 and 2009, **the number of births by teenage mothers (ages 15 to 17 years) fell by 30%**.
- Current data trends show that African-American infants are at greater risk for poor health outcomes as compared to Caucasian infants. While African-American infants made up 40% of all live births in the City and County from 2008-09, this group accounted for 70% of the 145 average annual infant deaths reported during this ti e period.
    - In addi on, African-American infants are nearly three tim s more likely than Caucasians to be born at a low birth weight (<2,500 grams). This health disparity has persisted from 2000 to 2009.

SUMMARY OF KEY FINDINGS (cont)

Childhood Asthma:

- Current data reveal a concentra on of uncontrolled asthma among children (under ve years) across North City and North County.
- African-American children in the region are 7.5 mes more likely to visit the emergency room for asthma than Caucasian children. This health disparity has persisted between 2000 and 2009.

Early Childhood Health:

- Lead poison prevalence plummeted in the City between 2000 and 2010, **dropping from 31% to 3%**.
- The rate of leading injuries among children (under ve years) decreased among nearly all categories across the region.

Behavioral Health:

- From 2000 to 2009, ER visits in the region with alcohol-related mental disorder and a ec ve disorder diagnosis increased 21% and 81%, respecti ely.
- High rates of acute mental health disorders are highly concentrated in areas of the City and parts of North County.
- There is a lack of robust and reliable behavioral health data available in the St. Louis region.

Sexually Transmitted Infections (STIs):

- Rates of STIs increased approximately 26% throughout the region from 2000 to 2010. Notably, chlamydia infec on rose steadily in the City and County during this period. Zip codes with greatest increase are located primarily in the City and North County.
- Approximately 180 new HIV infecti ns were diagnosed per year in the region over the past decade. In 2010, nearly 5,000 persons were living with HIV or AIDS in the region.
- Although HIV/AIDS mortality rates fell for all gender-race groups in the region, substan al diff r-ences persist. For example, current data reveal that African-Americans are 6.5 mes more likely to die of HIV/AIDS as compared to Caucasians.

Violence and Injury:

- Homicides increased 18% in the region between 2000 and 2009.
- Motor vehicle injury rates fell for Whites and Blacks between 2000 and 2009.
- The majority of zip codes with high rates of vic ms of violence were located in the City and North County.

Medical Risk Factors:

- Approximately 31% and 29% of the City and County popula on, respec vely, is obese.
- The prevalence of both high cholesterol and high blood pressure among adults is estimated to be greater than one in three in the region.
- Approximately 27% and 15% of adults in the City and County, respectively, are current smokers.

BACKGROUND

ABOUT THE RHC

The RHC is a network of individuals with responsibility and commitment to improving health in St. Louis City and County. The Commission itself is a 19-member body. Most Commissioners are appointed by a government o cial, heath care provider organiza on, or area medical school. Refer to the table at right for an accounti g of Commissioners.

The RHC also has two Advisory Boards, each composed of 25 individuals. The Community Advisory Board represents community organiza ons, ci zens, and users of the safety net system. The Provider Services Board represents health service providers in the region.

A variety of community, hospital, government, university-based groups, and organizations ar represented on the RHC's Commission and Advisory Boards.

Table 1.

Number of RHC Commissions by Source of Appointment

RHC Commissioner Appointed By	Number of Commissioners
St. Louis County Executi e	3
Mayor of St. Louis City	3
Governor of Missouri	2
Hospitals / Health Systems	2
Primary Care Health Centers	2
St. Louis ConnectCare	1
Area Medical Schools	1
Community Representatio	3
Advisory Board Chairs	2
Total	19

www.STLRHC.org
Up-to-date rosters of Commissioners and Advisory Board Members are online.

Mission of the RHC

To improve health care access, reduce health disparities, and improve health outcomes for the uninsured and underinsured in St. Louis City and County.

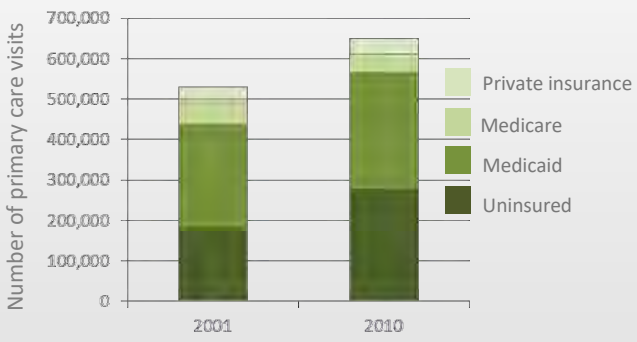
IMPROVING ACCESS

Access to quality regular medical care is strongly associated with improved health outcomes. Individuals without medical insurance and without a regular and easily-accessible source of care are found more likely to postpone medical care and experience di - culty obtaining care in comparison to those with insurance and regular access to care. St. Louis' healthcare safety net — a system of community-based providers who off r health services to low-income people, including the uninsured — plays an essenti l role in maintaining and expanding access to care for vulnerable popula ons. In 2011, the regional safety net served a popula on of 336,000 individuals, or 26% of all City and County residents.

As part of its mission, the RHC is commi ed to improving access to care for primary and specialty services. Changes in access to care, speci cally via

Figure 1.

Primary care visits among regional safety net providers by payor category, 2001 and 2010



www.STLRHC.org
Download *Access to Care Data Book* for more informa on on many of the health care organiza ons that serve the under- and uninsured in the St. Louis region.

safety net care providers, are reported in the RHC's annual *Access to Care Data Book*. Selected elements of that report from prior years are presented here and past reports are available to the public in their en rety on the RHC website. For Figures 1, 2 and 3 in this sec on, primary care is comprised of adult medical primary, pediatric, obstetrical and dental services; specialty care includes specialized medical services provided by a physician specialist outside of a primary care or emergency department setti .

Figure 2.

Select services provided by the primary care safety net, 2006-10

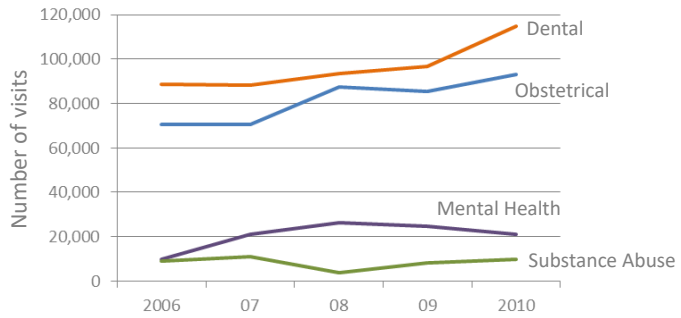
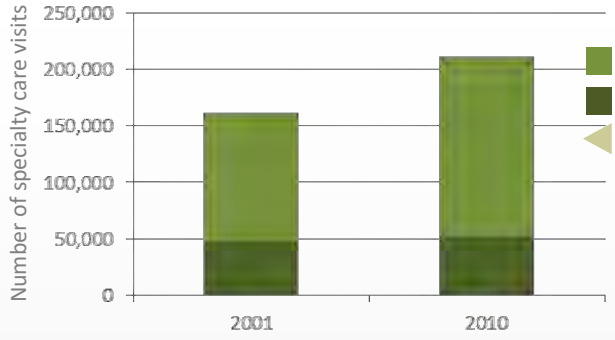


Figure 3.

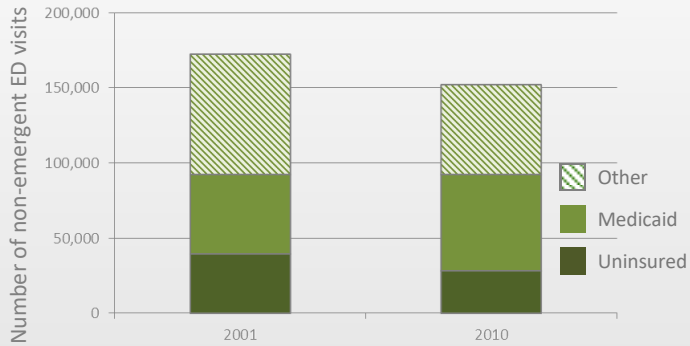
Specialty care visits among regional safety net providers by payor category, 2001 and 2011



Data is limited to specialty care ins tu ons in St. Louis City and County that are classi ed as healthcare safety net sites in the annual RHC survey.

Figure 4.

Non-emergent ED visits by payor category



Non-emergent ED visits are low-acuity encounters that could be more appropriately treated in a diff rent provider se ng, as reported by area hospitals.

Safety Net Providers

The RHC surveys the following safety net ins tu ons offe - ing primary and specialty care to track changes in access over time.

- Barnes Jewish Hospital Clinics*†
- Be y Jean Kerr People's Health Centers*
- Cardinal Glennon*†
- GlennonCare at DePaul*
- Family Care Health Centers*
- Grace Hill Neighborhood Health Centers*
- Health and Dental Care for Kids*
- Myrtle Hilliard Davis Comprehensive HealthCCenters*
- St. Louis ConnectCare†
- St. Louis County Department of Health and Department of Correc ons*
- St. John's JKF Clinic*†
- St. Luke's Ped. Clinic*
- St. Mary's Ped. Clinic and Health Center*
- SLUCare*†
- The SPOT*
- Washington University School of Medicine†

*Primary care provider
†Specialty care provider

KEY IMPROVEMENTS

- Primary and specialty care encounters among the safety net popula on (Medicaid payors and the uninsured) increased 20% and 30%, respecti ely, between 2001 and 2010.
- From 2006 to 2010, dental care visits increased 32% (an increase of approximately 28,000 visits).
- While non-emergent ED visits decreased 12% overall, primary care encounters grew 20% during this ti e.

LOOKING BACK A DECADE

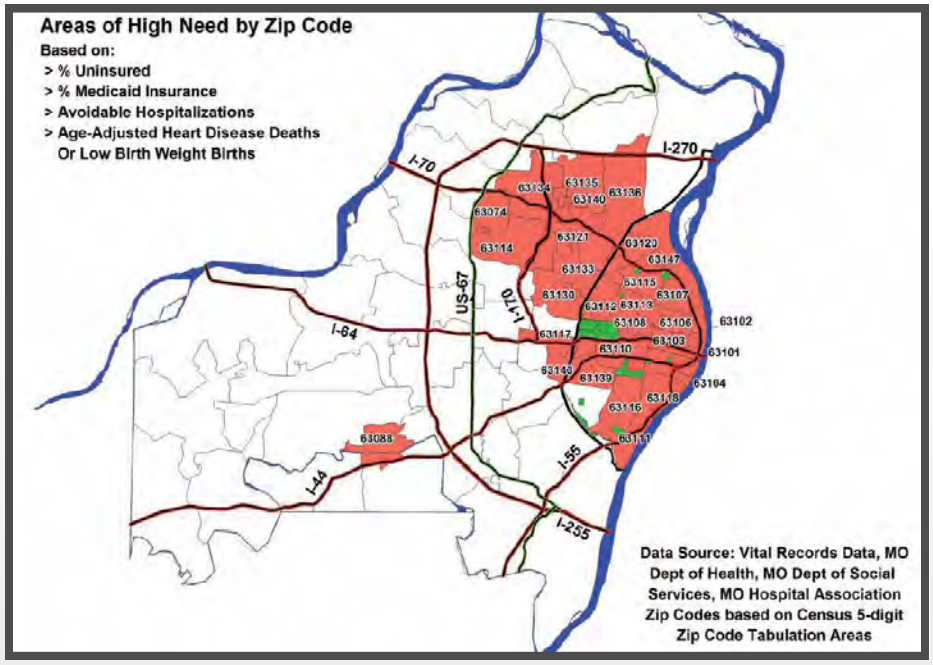
In 2003 the RHC released the *Building a Healthier St. Louis* report. This document provided a "snap shot" analysis of health outcomes and health disparities in t. Louis City and County based on 2000-01 vital statistics data. Over 60 key health indicators were included in this analysis. Where possible, analysis was performed at the neighborhood and zip code level.

With the guidance of the RHC Access to Care/Care Coordina on and Measurement Workgroups, 29 zip codes were iden ed in the 2003 report as areas that su er dispropor onately from poor health outcomes and limited access to medical care. City and County zip codes were categorized as high need if they fell above the regional mean based on a composite of ve indicators related to inadequate access to care and poor health outcomes: (1) percent of uninsured households, (2) percentage of Medicaid recipients, (3) rate of unavoidable hospitaliza on, (4) rate of heart disease mortality and (5) rate of low birth weight infants (<2,500 grams).

Figure 5, extracted from the 2003 publicati n, shows the loca on of 29 high need zip codes. The majority of these zip codes are located throughout St. Louis City and North County. *Decade Review of Health Status* provides localized analysis of trends in health status with a focus on change in health status for the same 29 high needs zip codes in comparison to regional norms.

Figure 5.

Areas of High Need by Zip Code
(iden fi d in 2003 RHC report *Building a Healthier St. Louis*)



Twenty-nine Areas of High Need*

63106: N City (Je -Vander-Lou)
63107: N City (Hyde Park)
63113: N City (The Ville)
63115: N City (Penrose)
63120: N City (Walnut Park East)
63147: N City (Baden)
63101: City (Downtown)
63102: City (Downtown)
63103: City (Midtown)
63104: City (Soulard)
63108: City (Central West End)
63112: City (Skinker-DeBaliviere)
63110: S City (Shaw)
63116: S City (Holly Hills)
63118: S City (Benton Park)
63111: S City (Carondelet)
63139: S City (Clift n Hgts)

63074: N County (St. Ann)
63114: N County (Overland)
63121: N County (Normandy)
63130: N County (U City)
63133: N County (Wellston)
63134: N County (Berkley)
63135: N County (Ferguson)
63136: N County (Jennings)
63137: N County (Riverview)
63117: Mid-County (Richmond Hgts)
63143: Mid-County (Maplewood)
63088: S County (Valley Park)

* as iden ed in 2003 RHC report, *Building a Healthier St. Louis*

PURPOSE AND PROCESS

SCOPE OF THE REPORT

Goals and Objectives

The goal of this report is to provide a user-friendly, highly visual, and data-driven review of ***change*** in leading health indicators and disparity metrics in St. Louis City and County over the past decade.

The report objectiv s are:

(1) Present an objec ve analysis of change in health indicators and disparity metrics in St. Louis City and County over the past decade (2000 to 2010).

(2) Highlight noteworthy and relevant "success stories" about change in health status or factors that impact health in St. Louis City and County over the past decade (2000 to 2010).

(3) Provide a data-driven pla orm to guide future RHC funding initi - tiv s geared towards improving health care access, reducing health disparities, an improving health outcomes for the St. Louis City and County residents in the decade to come.

Featured Topics

Behavioral Health
Cancer
Childhood Asthma
Chronic Obstruc ve Pulmonary Disease
Demographics & Social Determinants of Health
Diabetes
Early Childhood Health
Health Dispari es
Heart Disease
Maternal and Child Health
Medical Risk Factors
Sexually Transmi ed Infection
Stroke
Violence & Injury

Selection of Health Status Indicators

The report features region-specifi analysis of trends over me for 14 topics, including behavioral health, cancer, childhood asthma, chronic obstruc ve pulmonary disease, demographics/social determinants of health, diabetes, early childhood health, health disparities, hea t disease, maternal and child health, medical risk factors, sexually transmi ed infecti ns, stroke and violence/injury.

Health indicators and disparity metrics included in the report are limited to those recognized na onally as leading causes of death and/or poor health outcomes and chief contributors to health care system costs. Indicators included were discussed and approved by RHC Commissioners, Advisory Boards, and Health Status Repor ng Task Force members at the beginning of the report's development.

Sources of Data

The primary sources of data were both valid and available within the ten year me frame of interest (2000 to 2010) for both St. Louis City and County, preferably by zip code. Examples of valid and available data include vital records and hospital discharges collected by the Missouri Department of Health and Senior Services. The most recent data included in this report was available as of November 2012.

Data sources providing valid, objective measurements of health status over a decade were preferred.

To the greatest extent possible, project staff limited inclusion of survey-based data as, in the St. Louis region, this information is based on small sample sizes and is gathered by self-report generally via telephone survey.

AUDIENCE

The primary audience for this report includes community health organiza on and social service agency leadership; public health professionals; clinicians who intersect with public health; health system managers and execu ves; elected o cials; and university professors and researchers. Although a professional-level audience is the primary target, it is the hope of RHC staff that the report's user-friendly and highly visual layout will encourage use by a broader set of community members interested in the health status of the St. Louis region.

LIMITATIONS

Great care has been taken to ensure the accuracy of the data presented in this report. However, given the complexity in de ni on of some measures, cauti n should be taken in drawing conclusions from the data. In some instances, par cularly as a result of small "event" counts within a given geographic area, a speci c rate for a par cular indicator may require further investi a on before meaningful conclusions can be made.

All data contained in the report are collected from secondary sources such as vital records data from the Missouri Department of Health and Senior Services and the US Census Bureau. However, there could be errors due to incorrect coding or improper categoriza on of the data when originally collected.

The RHC is not attes g to the complete accuracy of all data included in this report due to potenti l margins of error, as indicated above. However, the extensive e ort to validate the data has significantl minimized poten al inaccuracies. Readers are encouraged to read the appendices to the report or contact the RHC with questi ns concerning methodology or data valida on.

Information on health status for many minority populations was limited due to the data sources available for this report.

In addi on, the RHC is cognizant of the presence of diverse racial/ethnic groups in the St. Louis region beyond those most frequently presented throughout the report. The local area is enriched by its ethnic and racial diversity, including but not limited to large communities f Hispanics, Bosnians and Asians. However, measuring regional health outcomes at the county and zip code level among these popula ons is not possible today given the limitations f available public health surveillance data. Future local and state e orts are needed to remedy this de ciency in community health status informa on.

DEVELOPMENT PROCESS

The core RHC values of inclusiveness, transparency, and consensus-based decision making guided the creati n, review, and valida on of report components.

RHC Core Values
inclusiveness, transparency and consensus-based decision making

Four core decision-making bodies guided the review and validation process of all report components. See below for a description of the roles of responsibilities of each of these groups as related to the review and validation of this report:

(1) Health Status Repor ng Task Force:
- Provide technical exper se around content, format, and general orienta on of report content.
- Filter data, facts, and various points of view so as to best meet project objec ves and goals.
- Assure objecti ity of analysis methods, presentati ns of data, and key conclusions.

Mechanisms for review: task force members met eight ti es between August 2011 and October 2012 to review project materials.

(2) RHC Commissioners:
- Finalize and approve all health status repor ng public deliverables.
- Serve as addi onal vehicle of review and vetti around report content.

Mechanisms for review: Commissioners reviewed ongoing project progress and materials during monthly meeti gs.

(3) RHC Advisory Boards:
- Provide construc ve input and feedback regarding health status repor ng activ ties
- Serve as addi onal vehicle of review and vetti around report content.

Mechanisms for review: Advisory Board members reviewed ongoing project progress and materials during monthly meeti gs.

(4) Community-based Partners:
- Provide construc ve feedback regarding health status repor ng ac vi es.
- Serve as addi onal vehicle of review and vetti around report content.

Mechanisms for review: In October 2012 the RHC hosted three open house style community forums to engage as many community health experts as possible in the review and valida on of the data and key ndings presented in the report prior to nal release. In total, approximately 200 community members from non-pro t, university, hospital, community health center, and grassroots organiza ons provided over 400 unique feedback comments during the forum events which were used to improve report layout and content.

In addi on, project sta made extensive e orts leading up to nal publicati n to review data and additional re ort elements to be included individually with local content-specific health experts.

Although it is possible that some voices were missed along the way, the RHC designed a community engagement strategy to allow a large number of health experts and invested ci zens to contributed to the development of this report's quality and accuracy.

FEATURED TOPICS

The following pages include profiles covering these topics
(listed in order presented):

Demographics & Social Determinants of Health

Heart Disease

Diabetes

Stroke

Chronic Obstruc ve Pulmonary Disease

Cancer

Health Dispari es

Maternal and Child Health

Early Childhood Health

Childhood Asthma

Behavioral Health

Sexually Transmi ed Infection

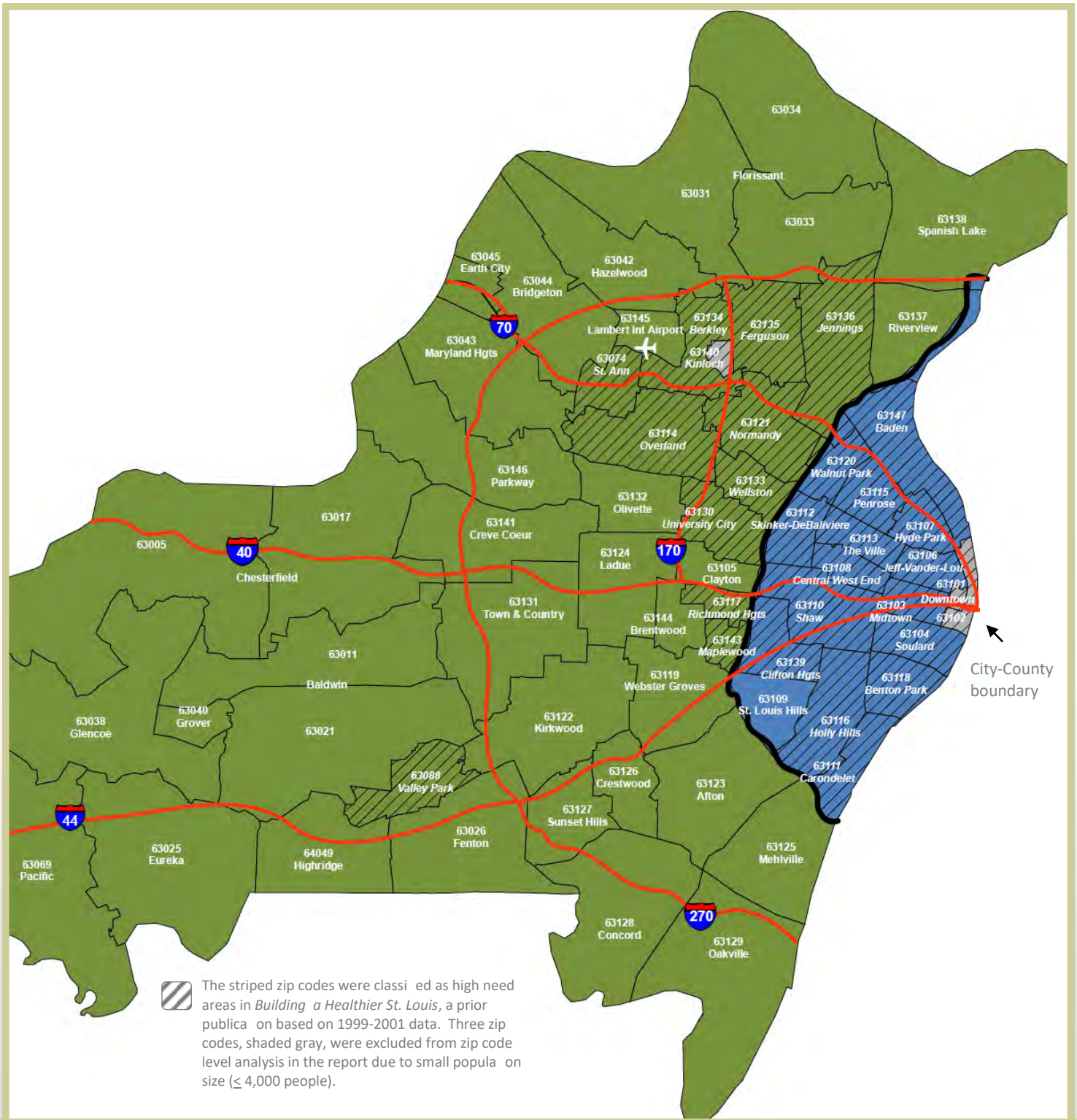
Violence & Injury

Medical Risk Factors

REFERENCE MAP

Please refer to the labeled zip code and community map below as you review the pro les included in this report. Zip code level maps are used throughout to visualize the current geographic spread, or localiza on, of hospitaliza on and mortality for many leading health indicators as well as to show demographic shifts in popula on.

A zip code level analysis is also used to highlight change between 2000 and 2010 in health status among the 29 "high need" areas iden ed earlier in the report. The striped zip codes on the map below, as well as throughout the report, show the loca on of these areas.



DEMOGRAPHICS & SOCIAL

Life Expectancy

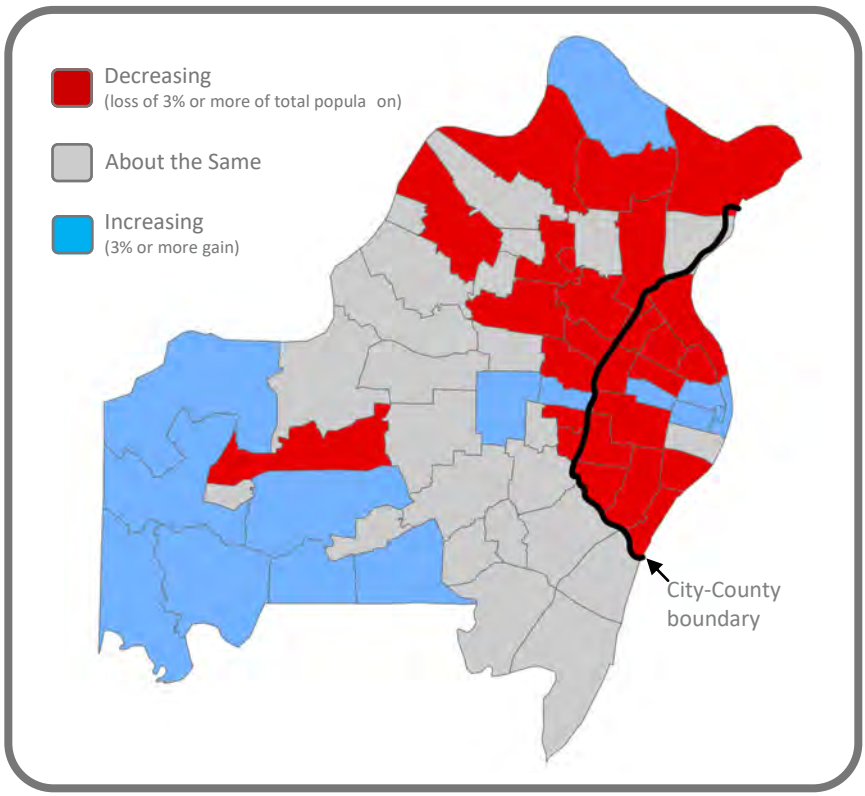
73.6 City, 76.6 County

Public Health Impact

Demographics help to describe the general characteris cs of a popula on, such as age, race, gender and employment status. Examining the demographic trends of a region help to guide communi es as they work to better meet the changing social, educati nal and healthcare needs of partic lar popula ons. Many associations ar found between certain demographic characteris cs and poor health. For example, as individuals age, their health needs are shown to become more complex and numerous. In addi on, individuals who are unemployed are also likely to be uninsured or underinsured and lack a regular source of healthcare; in turn, this demographic group is placed at greater risk for poor health. The demographic composi on of a community is one factor among many that impact popula on health. Social determinants of health, condi ons discussed in greater detail in the sec on to follow, are another group of factors that greatly impact popula- ti n health.

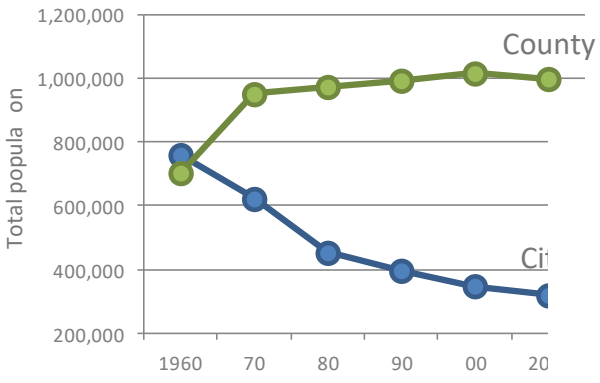
Age-adjusted Mortality Rates (per 100,000)

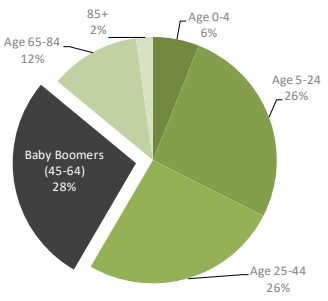
Population Ch nge by Zip Code, 2000 to 2010



Refer to the Appendix A.1 for population distribution for all zip codes.

Population Ch nge, 1960 to 2010





y Boomers in 2010

ly 28% (or 364,000) of the regional popu- is aged 45 to 64, the Baby Boom Genera- here will be a sharp increase in the reti e- age populati n over the next two decades group conti ues to age. Ten years ago, ns in that age group accounted for 17.5% region's total populati n.

DETERMINANTS OF HEALTH

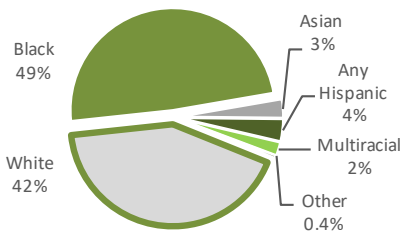
Population Ch nge By Racial/Ethnic Group from 2000 to 2010

The graphic above illustrates the rela ve and absolute changes in popula on by racial/ethnic group for the City and County.

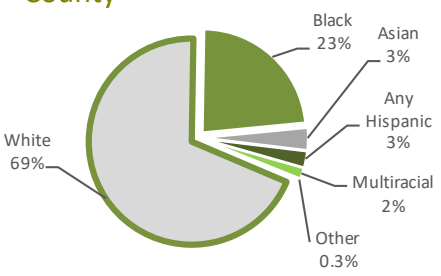
	City				County			
	2000	2010		%Δ	2000	2010		%Δ
White	149,329	134,702	↘	-10%	772,041	687,984	↘	-11%
Black	177,446	156,389	↘	-12%	192,544	231,801	↗	+20%
Asian	6,820	9,233	↗	+35%	22,492	34,466	↗	+53%
Any Hispanic	7,022	11,130	↗	+59%	14,577	25,024	↗	+72%
Mul racial	5,980	6,616	↗	+11%	11,566	16,587	↗	+43%
Other	1,592	1,224	↘	-23%	3,095	3,092	▫▫	< 0 >
Total	348,189	319,294	↘	-8%	1,016,315	998,954	↘	-2%

Current Racial/Ethnic Diversity, 2010

City



County



Key Observations

- Age-adjusted mortality in the City has decreased substanti l-ly during the past decade, narrowing the gap between the County and State of Missouri. In 2009, the City mortality rate was just 10% higher than that observed in the state.
- The total combined popula on of the City and County shrank 3.4% (or 46,256 fewer people) between 2000 and 2010. In comparison, the total population f Missouri and the United States grew 7.0% and 9.7%, respec vely, during the same period.
- The majority of zip codes with popula on decline were located in the City and North County.
- Between 2000 and 2010, the size of the Black popula on in the City decreased by 12% in contrast to an increase of 20% in the County.
- The region became more diverse over the past decade, principally though a decrease in popula on of Whites which fell by approximately 11% (or 98,684).

References: See Appendix K for descriptions of source data.

DEMOGRAPHICS & SOCIAL

Public Health Impact

Social determinants of health are the conditi ns in which people are born, grow, live, work and age that e ect a wide range of health and quality of life outcomes. These circumstances are in turn shaped by a wider set of forces, such as economics and social policies, that impact the distributi n of resources at both nati nal and local levels. Income and educati n are common but not comprehensive measures of the social determinants of health.

Individuals in Poverty, 2000 and 2010

	City		County		Missouri	
% Below Federal Poverty Level (FPL)	**2000**	**2010**	**2000**	**2010**	**2000**	**2010**
Individuals 50% <FPL	42,346	41,442	31,760	44,728	276,248	385,117
Individuals 100% <FPL	83,388	86,635	68,552	103,831	637,891	888,570
Individuals 133% <FPL	113,970	113,895	104,939	158,833	1,189,086	1,314,451
Individuals 150% <FPL	123,932	123,057	118,402	178,656	1,114,719	1,464,213
Individuals 200% <FPL	161,471	153,346	179,726	259,646	1,627,593	2,062,074
Insurance status (%)	**2003**	**2010**	**2003**	**2010**	**2003**	**2010**
Uninsured	18.3	19.0	8.0	9.6	11.9	13.2
Medicaid/MC+	32.8	29.6	10.7	11.4	17.4	16.1

NOTE: valid and reliable insurance status data by county not available prior to 2003.

Families in Poverty, 2000 and 2010

The gures at right illustrate the change in number of families in poverty between 2000 and 2010 for the City and County. The striped area represents the number of female head of households with young children living in poverty.

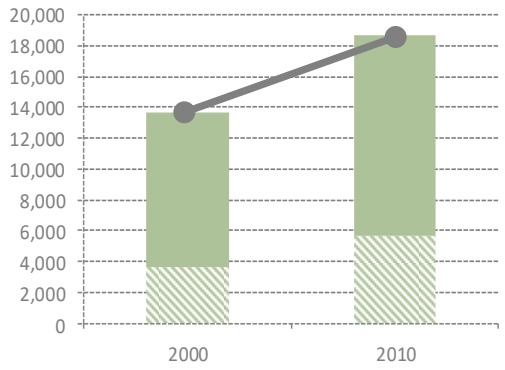
Female Head of Household families with young children (< 5 years old) living in poverty

All other types of families living in poverty

City

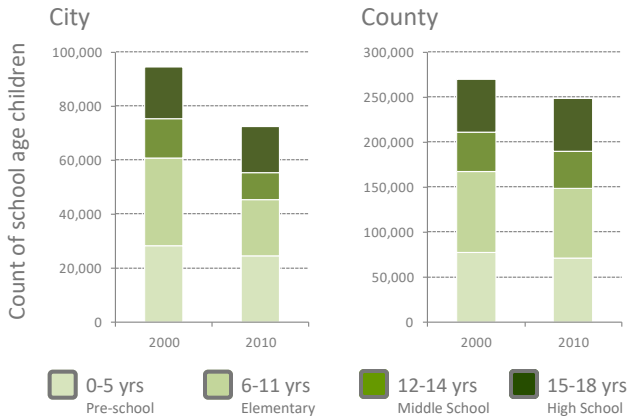
Note: The total number of families in the City fell from 77,784 to 65,060 from 2000 to 2010.

County



Note: The total number of families in the County fell from 272,519 to 256,877 from 2000 to 2010.

School Age Children, 2000 and 2010

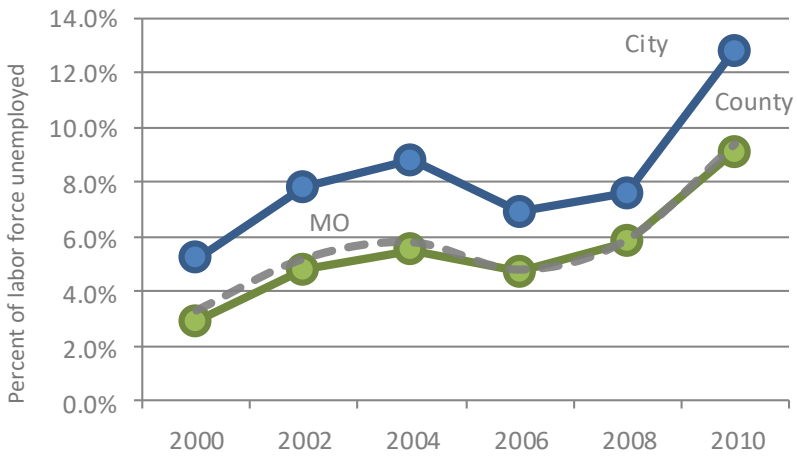


Educationa A ainment of Young Adults (Ages 18-24), 2000 and 2010

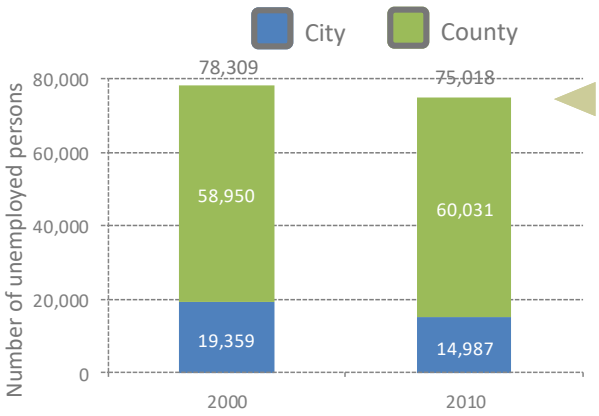
	City		County	
	2000	**2010**	**2000**	**2010**
	%	**%**	**%**	**%**
No High School Diploma	27.8	13.0	21.5	15.1
High School Diploma Only	28.6	23.3	23.8	26.5
Some College or Degree	43.6	63.7	54.7	58.4

DETERMINANTS OF HEALTH

Unemployment Rate, 2000 to 2010



Number of Unemployed Persons, 2000 and 2010



While unemployment rates were consistently higher in the City, the County accounted for 75% and 80% of all of the region's unemployed persons in 2000 and 2010, respecti ely.

Key Observations

- While the total popula on shrank 3.4%, the number of people living in poverty increased by 25.5% (or 38,526 more individuals).
- The percentage of uninsured in the City has remained about double the County between 2003 and 2010.
- While the number of female head of household families living in poverty decreased in the City from 2000 to 2010, this number trended up in the County, increasing by 56% (or 2,089 families).
- From 2000 to 2010, there was a shi in educati nal a ainment of young adults (age 18 to 24 years) in the region.
- While unemployment rates have been consistently higher in the City, the number of unemployed persons rose in the County and fell in the City between 2000 and 2010.

References: See Appendix K for descriptions of source data.

Composi on of Employment by Industry Sector, 2000 and 2010

Based on home locatio of employee, not locatio of worksite.	City				County			
	2000	2010		%Δ	2000	2010		%Δ
Civilian employed populatio	143,850	143,572	▫▫	-0.2%	505,250	480,733	↘	-4.9%
Manufacturing	12.0%	7.7%	↘		12.7%	10.3%	↘	
Retail trade	9.7%	9.1%	▫▫		11.3%	11.3%	▫▫	
Finance; insurance	6.6%	6.2%	▫▫		9.0%	9.2%	▫▫	
Professional; scienti ; mgt	9.7%	11.0%	↗		11.1%	11.9%	▫▫	
Educatio ; health care	23.5%	27.7%	↗		21.7%	25.9%	↗	
Arts; entertainment; recreati n	10.5%	14.0%	↗		7.6%	9.1%	↗	
Public administratio	6.1%	6.1%	▫▫		3.3%	3.0%	▫▫	
Other	21.9%	18.1%	↘		19.1%	23.3%	↗	
Total	100%	100%			100%	100%		

HEART DISEASE

Prevalence (of adults ever screened)

hypertension

32% City, 31% County

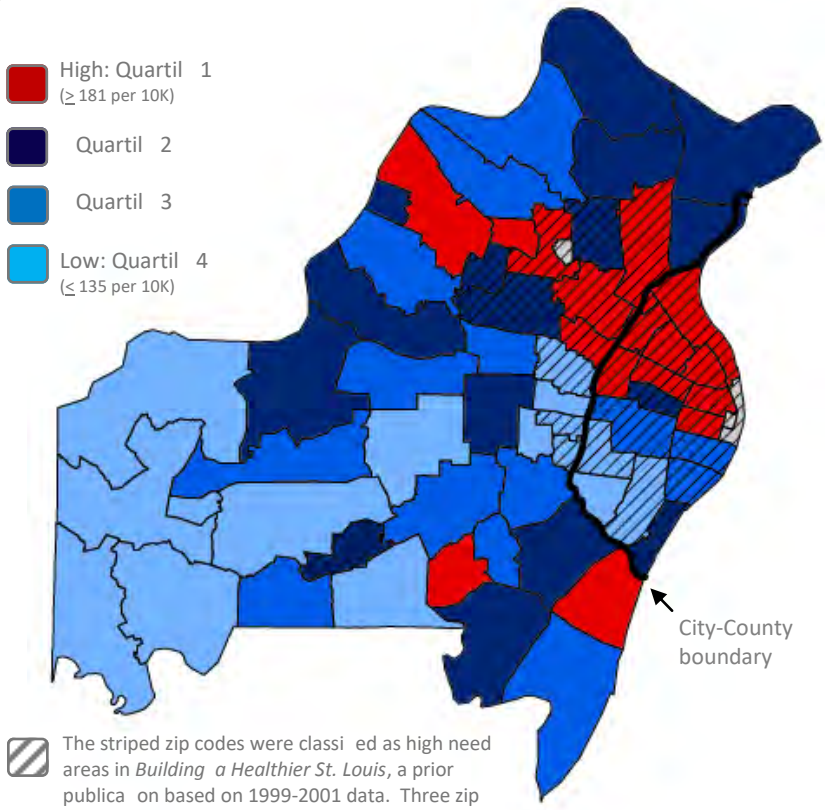
high cholesterol

35% City, 37% County

Public Health Impact

Heart disease is a leading contributor to poor health and is ranked as the number one cause of death nationwide as well as in the St. Louis region. Each year in the United States, 25% of all reported deaths are attributable to heart disease. Similarly, in St. Louis City and County in 2010, the most recent year for which data is available, 3,321 deaths (27% of all deaths) were attributable to heart disease. Approximately 26.8 million adults in the United States are currently living with heart disease. In addition to the health burden of disease, heart disease and its associated expenses is estimated to have cost the United States $314.6 billion in 2010.

Hospitalization Rate by Zip Code, 2009-10



The striped zip codes were classified as high need areas in *Building a Healthier St. Louis*, a prior publication based on 1999-2001 data. Three zip codes, shaded gray, were excluded from analysis due to small population size (≤ 4,000 people).

Refer to the Appendix B for hospitalization rates for all zip codes.

Change in Heart Disease *Hospitalization Rate* for Selected High Need Zip Codes, 2000 to 2010

Building a Healthier St. Louis, a 2003 community health assessment published by the St. Louis Regional Health Commission, identified 29 "high need" zip codes based on a composite of indicators. The striped areas on the map above show their location. Change in health status, measured by rate of heart disease hospitalization, within these selected zip codes was assessed and compared to overall trends in the region. Zip codes with substantial change from 2000-01 to 2009-10 are shown below.

Substantial Improvement
(Health status improvement better than regional norm)

- 63106: N City (Jeff-Vander-Lou)
- 63108: City (Central West End)
- 63103: City (Midtown)
- 63139: S City (Clifton Hgts)
- 63116: S City (Holly Hills)
- 63111: S City (Carondelet)
- 63143: Mid-County (Maplewood)

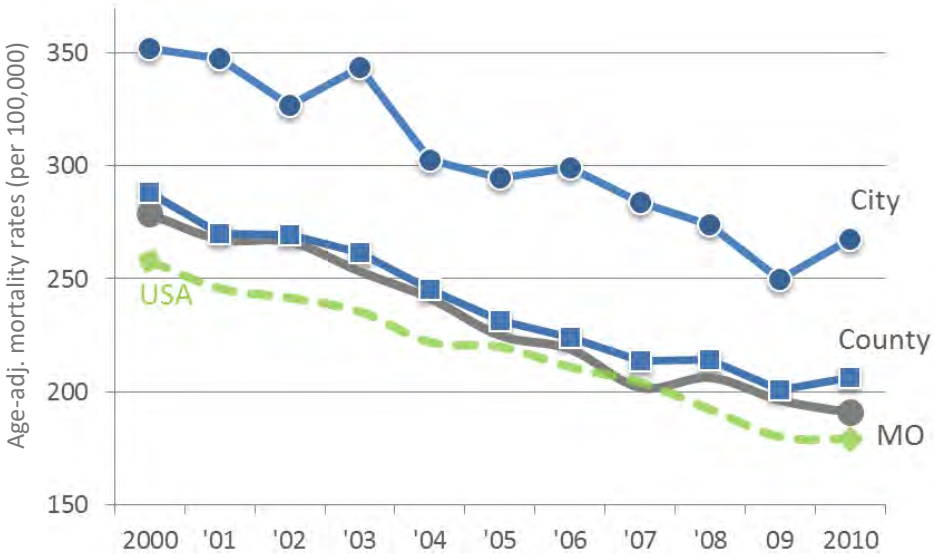
Health status gap widened
in comparison to the regional norm

- 63113: N City (The Ville)
- 63115: N City (Penrose)
- 63107: N City (Hyde Park)
- 63120: N City (Walnut Park East)
- 63147: N City (Baden)
- 63133: N County (Wellston)
- 63134: N County (Berkley)
- 63136: N County (Jennings)
- 63088: S County (Valley Park)

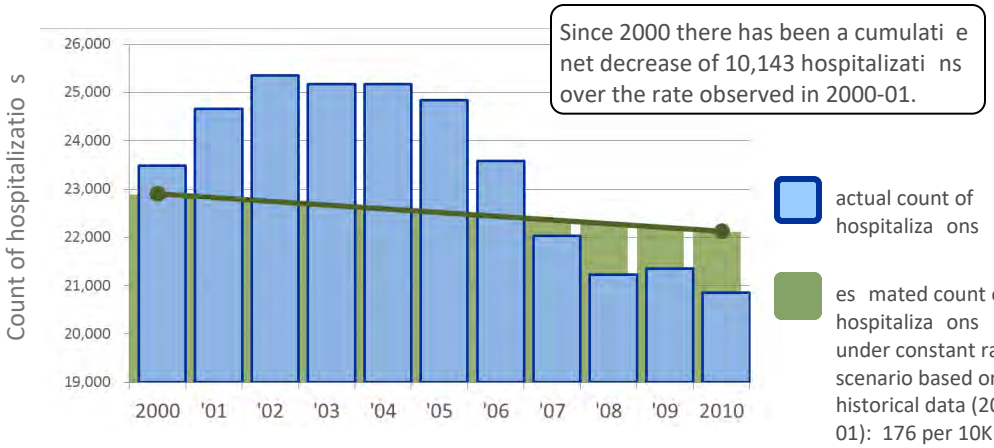
* NOTE: For the purposes of this report, the broad category of cardiovascular disease includes: heart valve disorders; peri-endo-and myocarditi s cardiomyopathy; acute myocardial infarction; coronary artherosclerosis and other heart disease; nonspecific chest pain; pulmonary heart disease; other and ill-defined heart disease; conductive disorders; cardiac dysrhythmias; cardiac arrest and ventricular fibrillation; and congestive heart failure-nonhypertension.

DEFINED: Heart disease refers to several medical condi ons* that disrupt the heart's ability to pump, such as a myocardial infarc on (or heart a ack) or heart failure.

Age-adjusted ***Mortality*** Rates (per 100,000)



Count of Inpa ent ***Hospitalizations*** Over Time

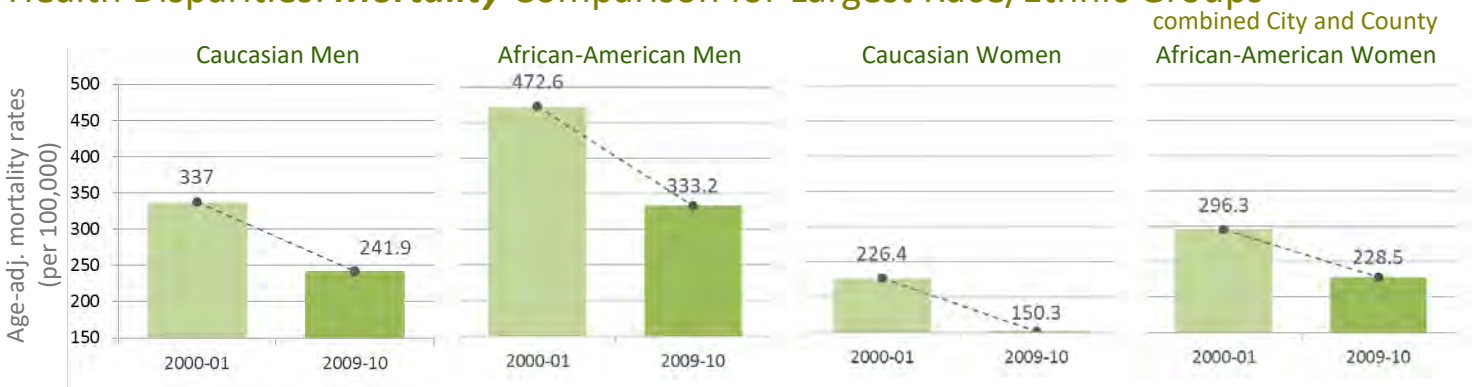


Key Observations

- Between 2000 and 2010, mortality rates for heart disease fell 29% in the region.
- The gap in heart disease mortality rates between the City and County narrowed slightly between 2000 and 2010.
- While mortality rates have fallen for all gender-race groups in the region, substan al diff r-ences persist. There was a 2.2-fold diffe ence in mortality rates between African American men (333 per 100K) and Caucasian women (150 per 100K) in 2009-10.
- The number and rate of hospitaliza ons for heart disease rose in the early years of the decade, but fell between 2006 and 2010 to levels below 2000.
- During the ten years, substanti l reducti ns in heart disease hospitaliza ons were observed in many "high need" zip codes.

References: See Appendix K for descriptions of source data.

Health Disparities: ***Mortality*** Comparison for Largest Race/Ethnic Groups



Although the region includes diverse racial and ethnic groups, valid public health surveillance data is limited to the comparison shown above.

DIABETES

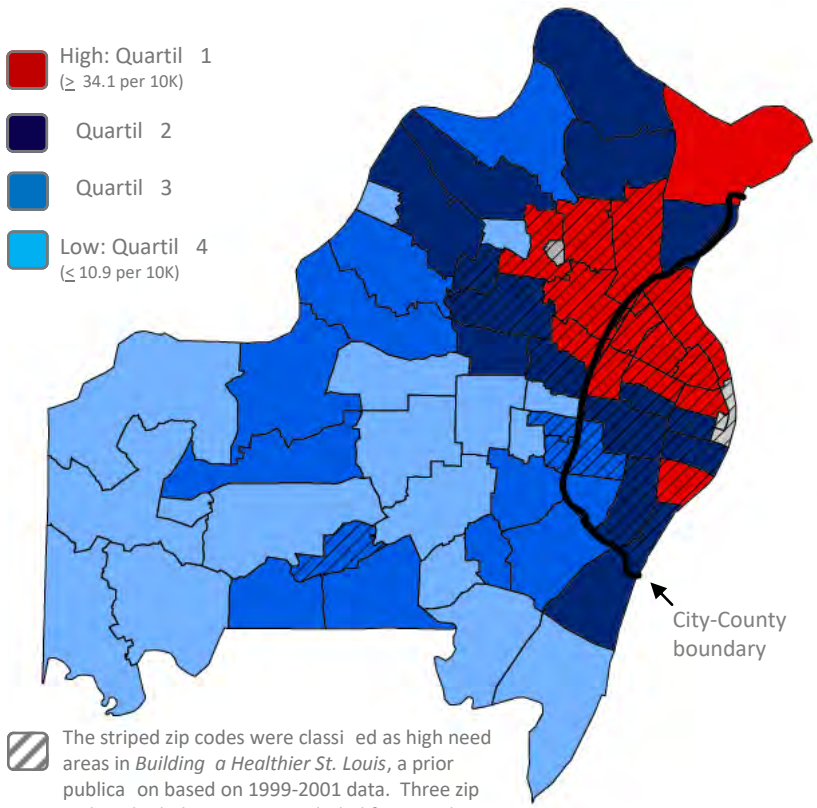
Prevalence

12% City, 9% County

Public Health Impact

In 2010, diabetes was reported as the seventh leading cause of death in the United States. It is also iden ed as a chief cause of death in St. Louis City and County. If le uncontrolled, diabetes can lead to severe health complica ons, including heart disease, stroke, blindness, kidney failure, and lower-limb amputa on. Overall, the risk of death among those with diabetes is twice that for those of similar age without diabetes. Approximately 27% of U.S resident 65 years and older are currently living with diabetes. In addi on to the health burden of disease, diabetes and its associated condi ons is estima ed to cost the United States health care system $174 billion dollars each year.

Hospitalization Rate by Zip Code, 2009-10



Refer to the Appendix C for hospitalization rates for all zip codes.

Change in Diabetes *Hospitalization Rate* by Selected High Need Zip Codes, 2000 to 2010

Building a Healthier St. Louis, a 2003 community health assessment published by the St. Louis Regional Health Commission, identi d 29 "high need" zip codes based on a composite of indicators. The striped areas on the map above show their locatio . Change in health status, measured by rate of diabetes hospitalizatio , within these selected zip codes was assessed and compared to overall trends in the region. Zip codes with substantial c ange from 2000-01 to 2009-10 are shown below.

Substantial Improvement
(Health status improvement be er than regional norm)

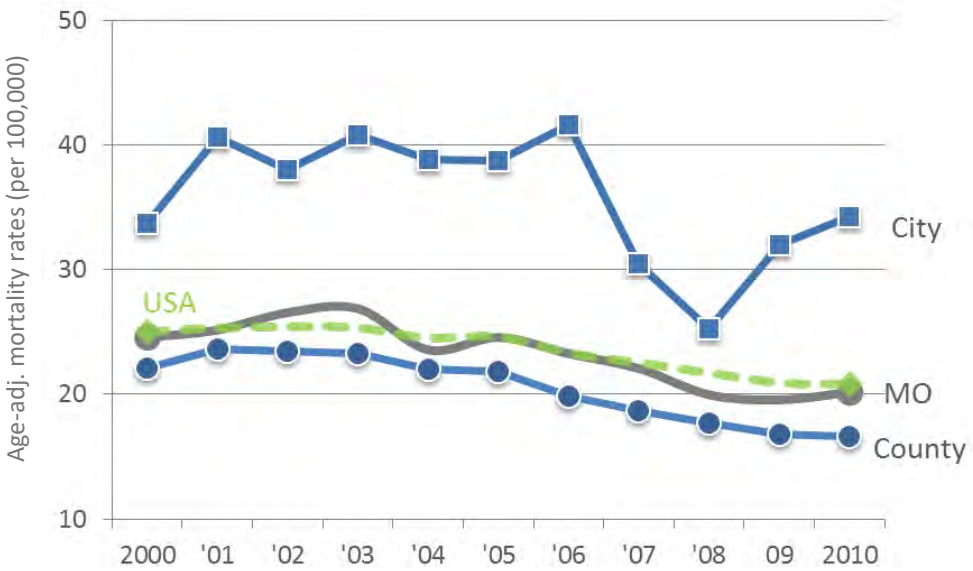
- 63106: N City (Je -Vander-Lou)
- 63147: N City (Baden)
- 63103: City (Midtown)
- 63104: City (Soulard)
- 63108: City (Central West End)
- 63112: City (Skinker-DeBaliviere)
- 63139: S City (Cli on Hgts)
- 63133: N County (Wellston)
- 63117: Mid-County (Richmond Hgts)
- 63143: Mid-County (Maplewood)
- 63088: S County (Valley Park)

Health status gap widened
in comparison to the regional norm

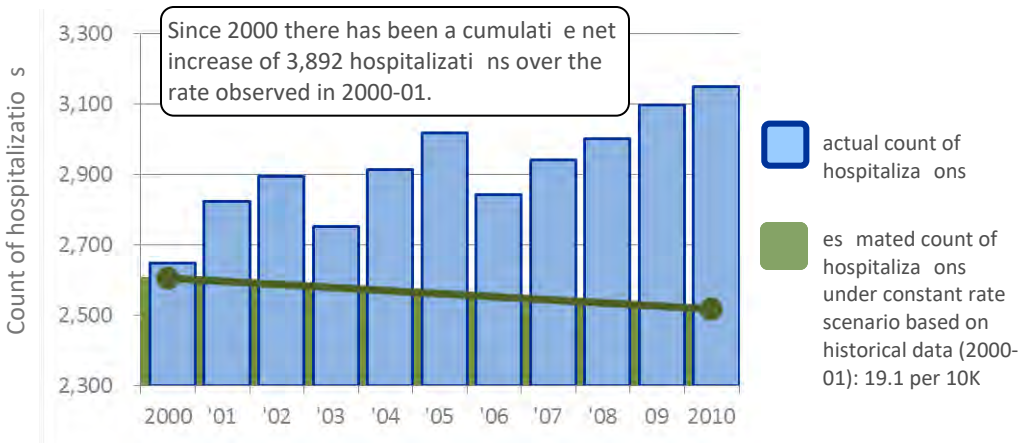
- 63115: N City (Penrose)
- 63120: N City (Walnut Park East)
- 63107: N City (Hyde Park)
- 63110: S City (Shaw)
- 63074: N County (St. Ann)
- 63114: N County (Overland)
- 63121: N County (Normandy)
- 63130: N County (U City)
- 63136: N County (Jennings)
- 63135: N County (Ferguson)
- 63134: N County (Berkley)

DEFINED: Diabetes is a health condi on, characterized by elevated blood glucose levels, in which the body does not properly produce or use insulin and categorized as Type 1, Type 2, and gestati nal diabetes. Type 2 is the most common form and has been associated with lifestyle-related risk factors, such as obesity. The data presented here includes both Type 1 (insulin-dependent) and Type 2 (non-insulin dependent) diabetes.

Age-adjusted ***Mortality*** Rates (per 100,000)



Count of Inpa ent ***Hospitalizations*** Over Time



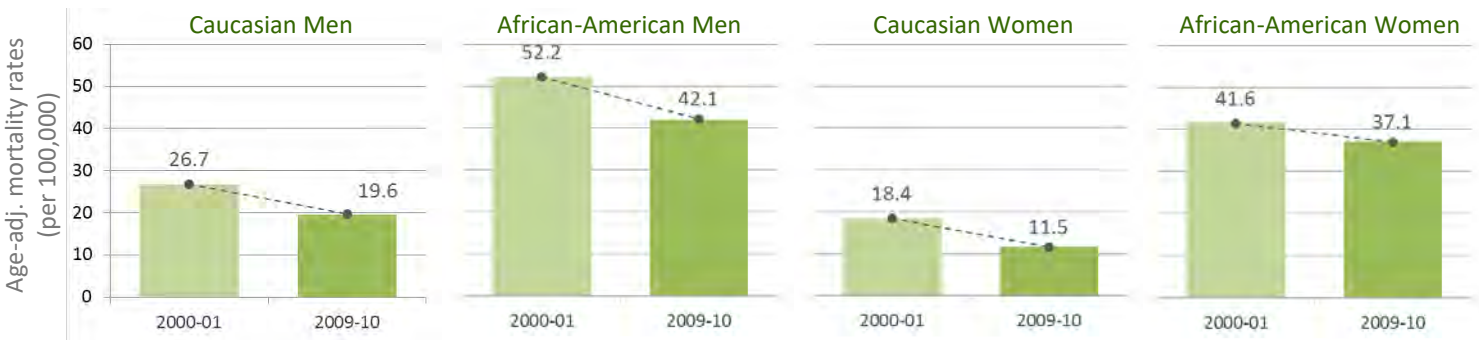
Key Observations

- In the State of Missouri and USA, diabetes mortality rates declined modestly and steadily between 2000 and 2009. A similar trend was observed for St. Louis County. Rates for St. Louis City declined sharply but are on the rise again.
- While mortality rates fell for all gender-race groups, substanti l diff rences persist. There was a 3.7-fold diffe ence in mortality rates between African American men (42 per 100K) and Caucasian women (11 per 100K) in 2009-10.
- While mortality rates for diabetes decreased, annual hospitaliza ons increased since 2000.
- There is a three-fold diffe ence in hospitaliza on rates between high and low quar le zip codes. High hospitaliza on zip codes in 2009-10 are highly concentrated in areas of North City and North County.

References: See Appendix K for descriptions of source data.

Health Disparities: ***Mortality*** Comparison for Largest Racial Groups

combined City and County



Although the region includes diverse racial and ethnic groups, valid public health surveillance data is limited to the comparison shown above.

STROKE

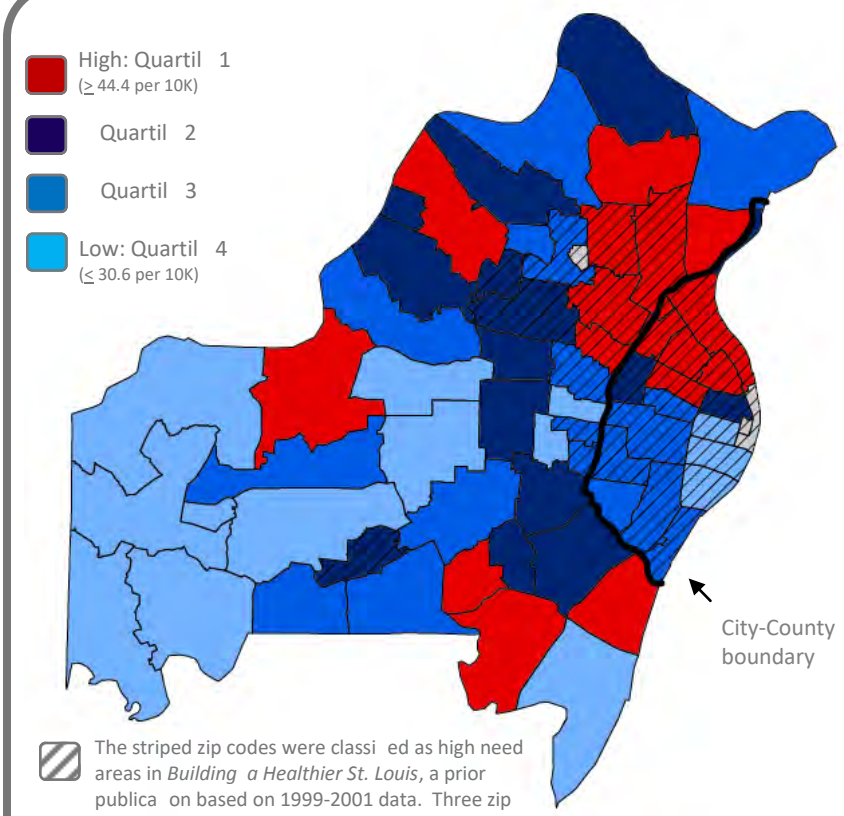
Prevalence

2.5% City, 2.9% County

Public Health Impact

Stroke is the third leading cause of death in the United States. Nati nwide, nearly 140,000 deaths are a ributable to stroke each year. In 2010 (the most recent year for which data is available), approximately 689 deaths were caused by stroke in St. Louis City and County. Stroke can also cause severe disability, including speech di cul es and paralysis. According to the most recent data, an esti ated 1.1 million individuals who survive a stroke report they struggle performing basic everyday tasks. Although many contributi g risk factors cannot be controlled, factors commonly associated with an increased risk for stroke include high blood pressure, high cholesterol, heart disease, diabetes, obesity, and previous strokes. In additi n to the health burden, stroke was esti ated to have cost the United States health care system approximately $74 million in 2010.

Hospitalization Rate by Zip Code, 2009-10



The striped zip codes were classi ed as high need areas in *Building a Healthier St. Louis*, a prior publica on based on 1999-2001 data. Three zip codes, shaded gray, were excluded from analysis due to small popula on size (≤ 4,000 people).

Refer to the Appendix D for hospitalization rates for all zip codes.

Change in Stroke ***Hospitalization Rate*** by Selected High Need Zip Codes, 2000 to 2010

Building a Healthier St. Louis, a 2003 community health assessment published by the St. Louis Regional Health Commission, identi d 29 "high need" zip codes based on a composite of indicators. The striped areas on the map above show their locatio . Change in health status, measured by rate of stroke hospitalizatio , within these selected zip codes was assessed and compared to overall trends in the region. Zip codes with substantial c ange from 2000-01 to 2009-10 are shown below.

Substantial Improvement
(Health status improvement be er than regional norm)

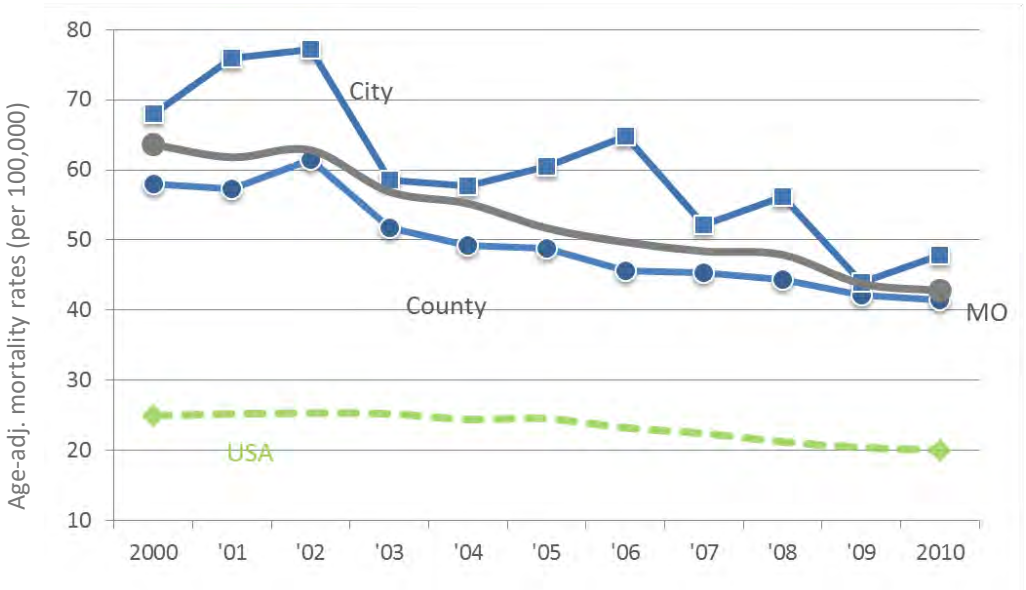
- 63103: City (Mid-town)
- 63104: City (Soulard)
- 63139: S City (Cli on Hgts)
- 63118: S City (Benton Park)
- 63116: S City (Holly Hills)
- 63111: S City (Carondelet)
- 63117: Mid-County (Richmond Hgts)

Health status gap widened
in comparison to the regional norm

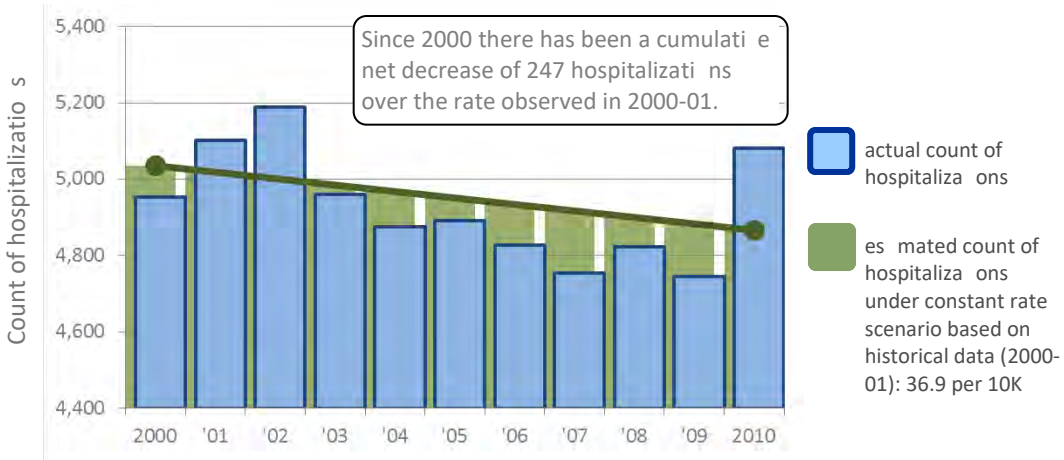
- 63107: N County (Hyde Park)
- 63120: N City (Walnut Park East)
- 63115: N City (Penrose)
- 63136: N County (Jennings)
- 63135: N County (Ferguson)
- 63134: N County (Berkley)
- 63133: N County (Wellston)
- 63143: Mid-County (Maplewood)
- 63088: S County (Valley Park)

DEFINED: A stroke, or "brain a ack," occurs when a clot blocks the blood supply to the brain or when a blood vessel in the brain bursts.

Age-adjusted ***Mortality*** Rates (per 100,000)



Count of Inpa ent ***Hospitalizations*** Over Time

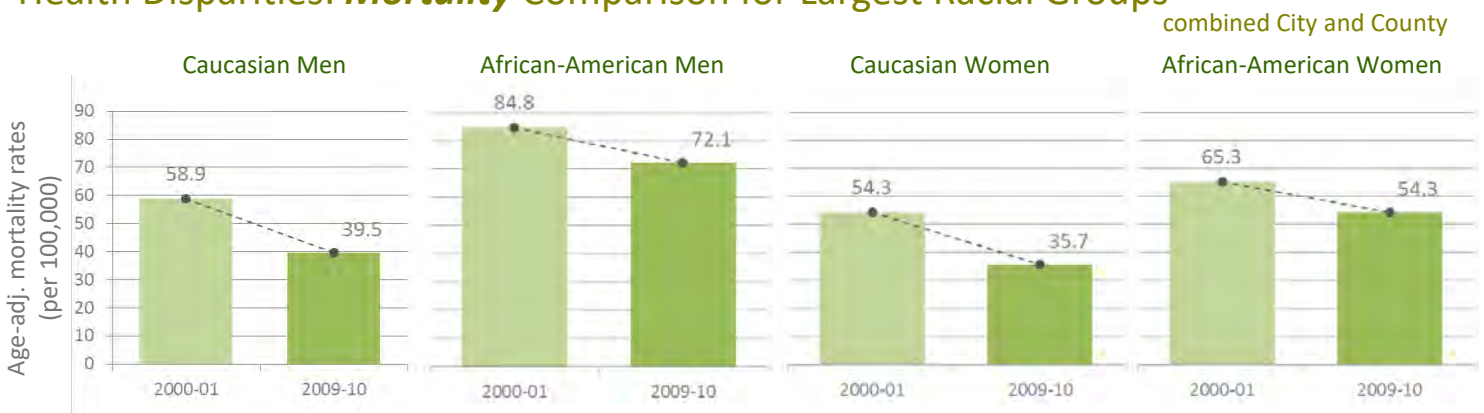


Key Observations

- Between 2000 and 2010, mortality rates for stroke fell 30% in the region.
- The gap in stroke mortality rates between the City and County narrowed between 2000 and 2010.
- While mortality rates have fallen for all gender-race groups in the region, substan al diff r-ences persist. There was a 2-fold diffe ence in mortality rates between African American men (72 per 100K) and Caucasian women (36 per 100K) in 2009-10.
- The number and rate of hospitaliza on for stroke rose in the early years of the decade, fell between 2003 and 2009, and then rose again in 2010.
- From 2000 to 2010, substanti l reductions in stroke hospitalization rates were observed in seven "high need" zip codes.

References: See Appendix K for descriptions of source data.

Health Disparities: ***Mortality*** Comparison for Largest Racial Groups



Although the region includes diverse racial and ethnic groups, valid public health surveillance data is limited to the comparison shown above.

COPD CHRONIC OBSTRUCTIVE PULMONARY DISEASE

National Prevalence

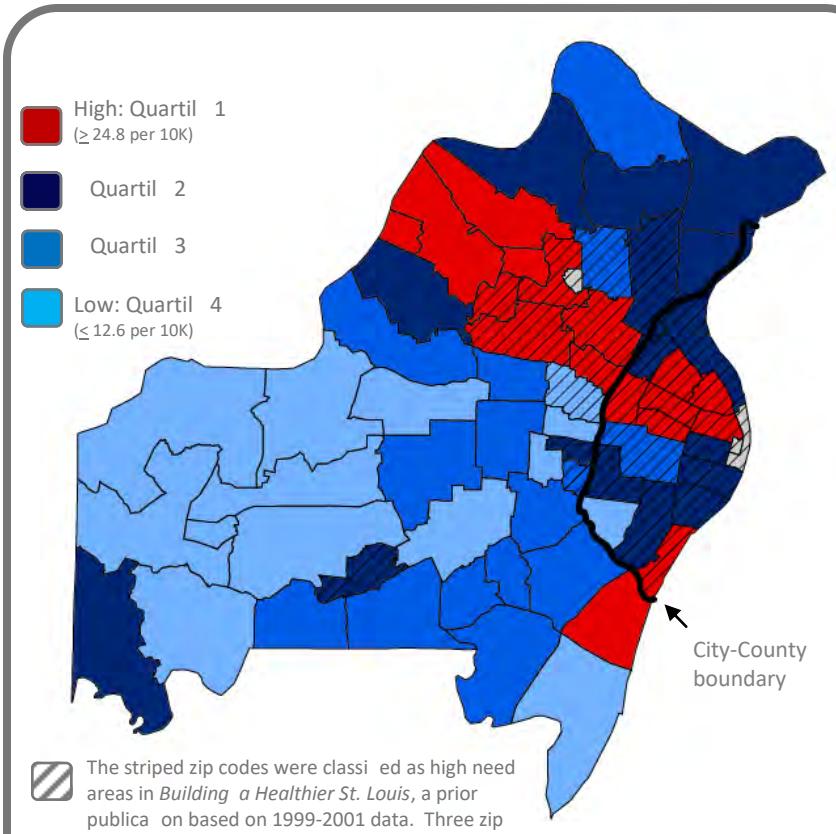
emphysema
22 cases per 1,000

chronic bronchitis
44 cases per 1,000

Public Health Impact

With 120,000 deaths each year and approximately 12 million people currently diagnosed na onwide, COPD is a leading cause of death and disability in the United States. In 2010 (the most recent year for which data is available), approximately 528 deaths were a ributable to COPD and related condi ons in St. Louis City and County. Smoking (either current or in the past) is the most commonly associated risk factor for COPD. This disease progresses slowly over me. As it worsens, individuals become limited in their ability to complete even basic every day acti i-ties. I addi on to the health burden of COPD mortality and morbidity, the disease is es mated to cost the United States health care system $32 billion each year.

Hospitalization Rate by Zip Code, 2009-10



Refer to the Appendix E for hospitalization rates for all zip codes.

Change in COPD *Hospitalization Rate* by Selected High Need Zip Codes, 2000 to 2010

Building a Healthier St. Louis, a 2003 community health assessment published by the St. Louis Regional Health Commission, identi d 29 "high need" zip codes based on a composite of indicators. The striped areas on the map above show their locatio . Change in health status, measured by rate of COPD hospitalizatio , within these selected zip codes was assessed and compared to overall trends in the region. Zip codes with substantial c ange from 2000-01 to 2009-10 are shown below.

Substantial Improvement
(Health status improvement be er than regional norm)

- 63120: N City (Walnut Park East)
- 63108: City (Central West End)
- 63103: City (Midtown)
- 63104: City (Soulard)
- 63139: S City (Cli on Hgts)
- 63110: S City (Shaw)
- 63118: S City (Benton Park)
- 63137: N County (Riverview)
- 63143: Mid-County (Maplewood)

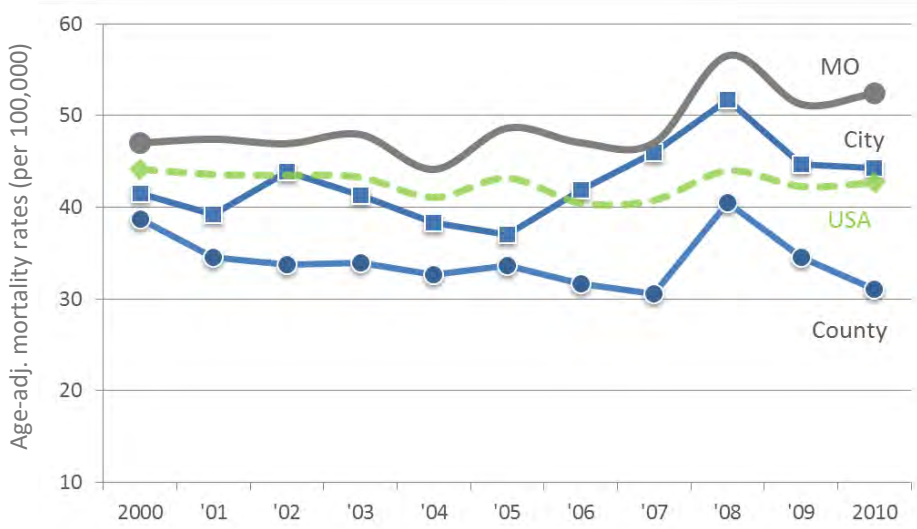
Health status gap widened
in comparison to the regional norm

- 63106: N City (Je -Vander-Lou)
- 63107: N City (Hyde Park)
- 63115: N City (Penrose)
- 63147: N City (Baden)
- 63112: City (Skinker-DeBaliviere)
- 63116: S City (Holly Hills)
- 63074: N County (St. Ann)
- 63130: N County (U City)
- 63133: N County (Wellston)
- 63136: N County (Jennings)
- 63134: N County (Berkley)
- 63114: N County (Overland)
- 63121: N County (Normandy)
- 63088: S County (Valley Park)

NOTE: for the purposes of this report, the broad category of COPD includes: bronchi s (chronic and unspeci ed); emphysema; and other chronic lower respiratory diseases.

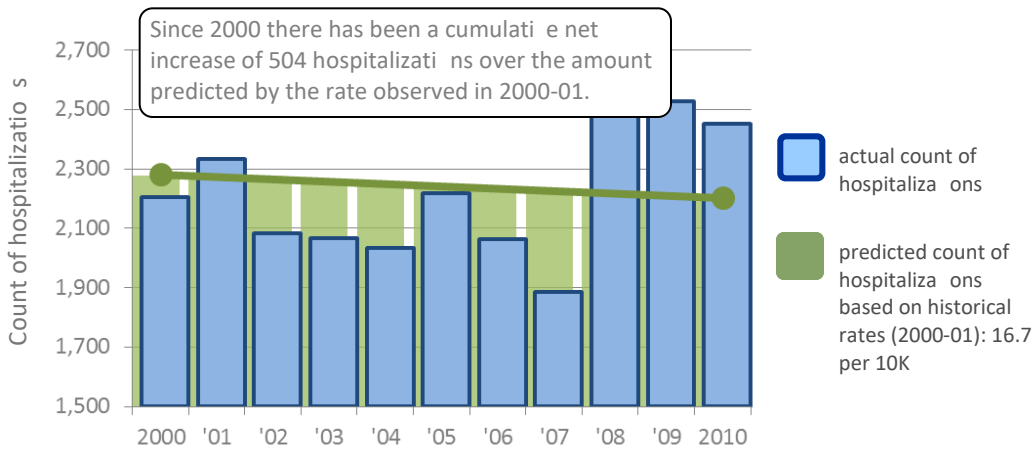
DEFINED: Chronic obstruc ve pulmonary disease (COPD) refers to a group of diseases that cause air ow blockage and breathing-related issues. The most common COPD condi- ons are emphysema and chronic bronchi s.

Age-adjusted ***Mortality**** Rates (per 100,000)



*Includes mortality a ributable to chronic bronchi s, emphysema, asthma, and other chronic lower respiratory diseases.

Count of Inpa ent ***Hospitalizations*** Over Time



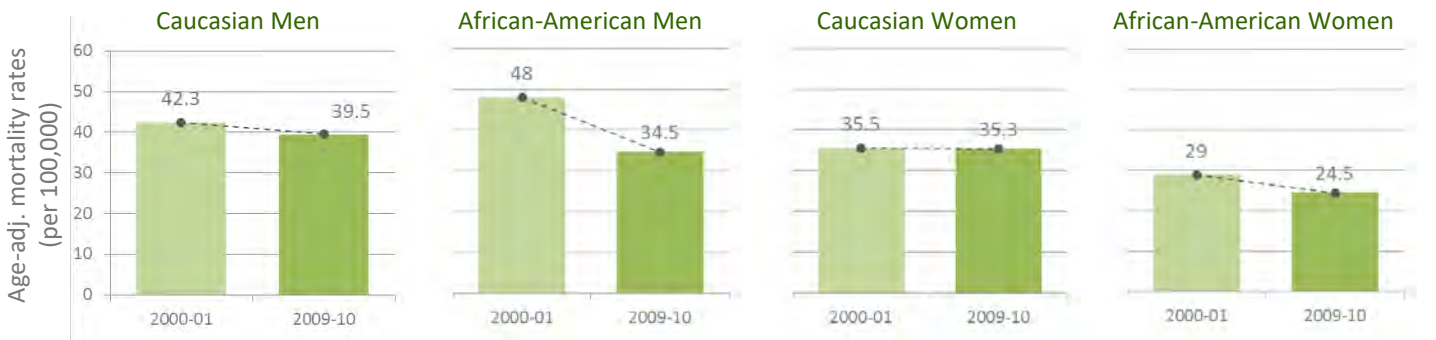
Key Observations

- Between 2000 and 2010, mortality rates for COPD were consistently lower the St. Louis region, as an increase was observed statewide.
- The gap in COPD mortality* rates between the City and County expanded between 2000 and 2010.
- While mortality rates* fell for all gender-race groups in the region, the most substantia drops were seen among African American men and women. Mortality rates decreased 28% and 16% among African American men and women, respec vely, from 2000-01 to 2009-10.
- The number and rate of hospitalizati n for COPD fell through 2007, but rose in 2008 holding to levels above 2000.
- From 2000 to 2010, a reducti n in COPD hospitalizati n rates was observed in seven City zip codes.
- In 2009-10, the highest rates of hospitalizati ns were located along a strip of adjacent zip codes, stretching northwest away from downtown St. Louis City.

References: See Appendix K for descriptions of source data.

Health Disparities: ***Mortality**** Comparison for Largest Racial Groups

combined City and County



Although the region includes diverse racial and ethnic groups, valid public health surveillance data is limited to the comparison shown above.

CANCER

Incidence (All Cancer Types)

City

440 cases per 100,000 individuals

County

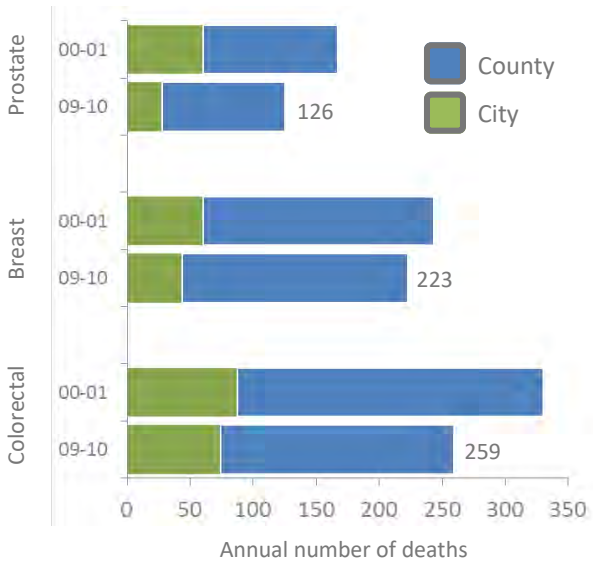
513 cases per 100,000 individuals

Public Health Impact

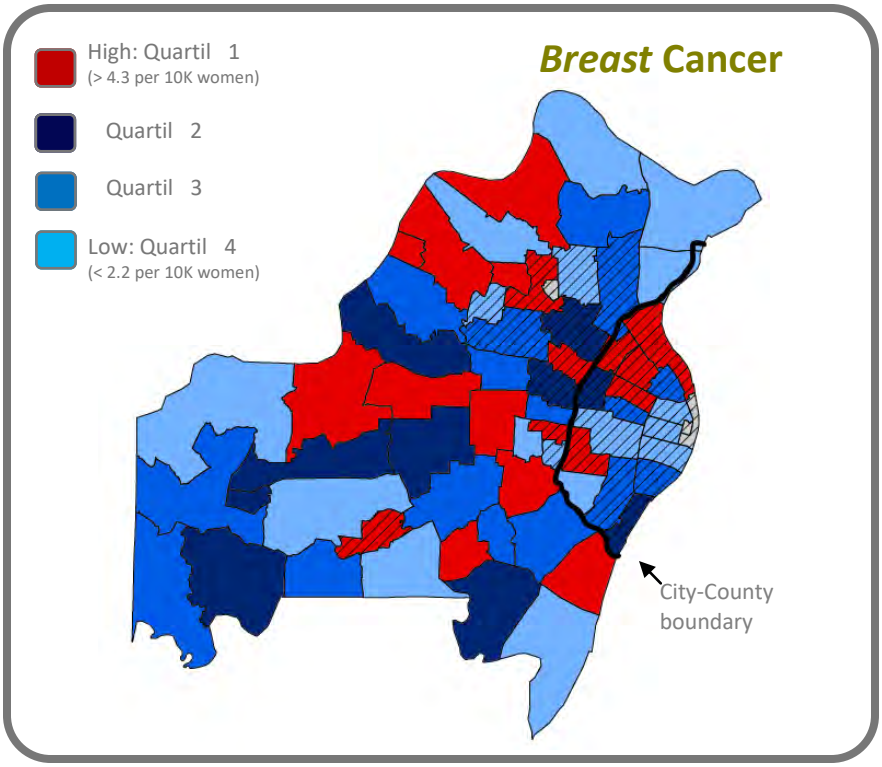
In the United States, half of all men and one-third of all women are esti ated to develop a form of cancer during their lifetim . Na onwide from 2003 to 2007 (the most recent years for which data is available), an average of nearly 600,000 people died each year of cancer. In 2010, approximately 2,700 individuals died of cancer in St. Louis City and County. Although breast, prostate and colorectal are among the most commonly diagnosed cancers both national y and regionally, and are a substan al cost to society in terms of quality of life and economics, their associated morality rates are lower than many other forms. The na onal nancial burden of cancer care was es mated at $125 billion in 2010.

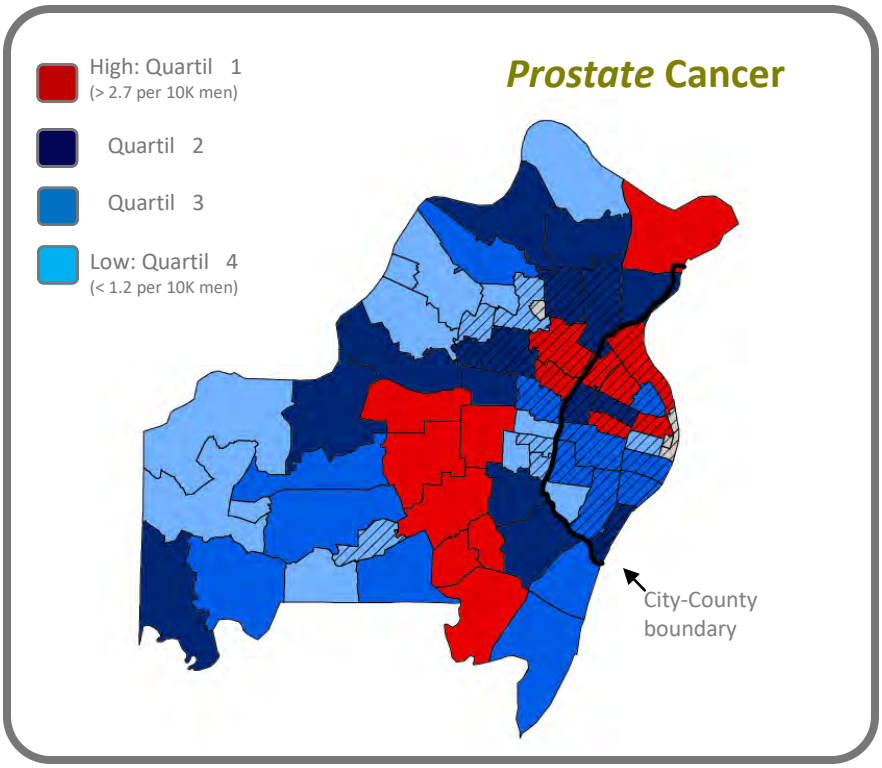
Count of Deaths: Prostate, Breast and Colorectal Cancer

Average number of annual deaths, 2000-01 and 2009-10



Cancer Mortality Rate by Zip Code, 2008-09





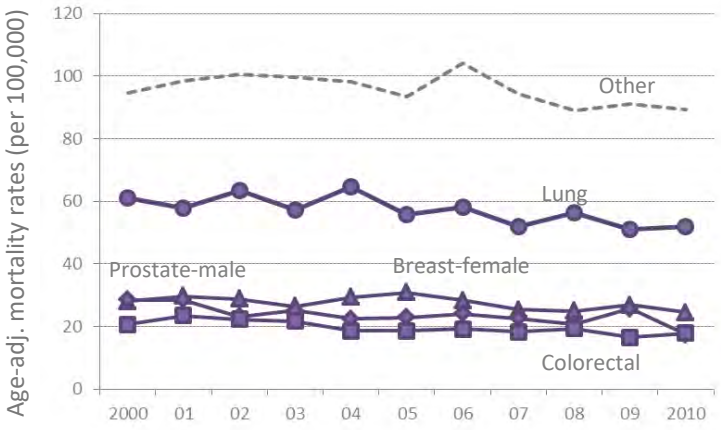
The striped zip codes were classi ed as high need areas in *Building a Healthier St. Louis*, a prior publica on based on 1999-2001 data. Three zip codes, shaded gray, were excluded from analysis due to small popula on size (≤ 4,000 people).

Refer to the Appendix F.1 and F.2 for mortality rates for all zip codes.

DEFINED: Cancer is a term used to encompass a large group of diseases in which abnormal cells grow out of control in a certain area of the body. Untreated cancers can cause serious illness and some mes death. Not all cancers can be treated. Very common forms of this disease include breast, prostate and colorectal cancer.

Age-adjusted ***Cancer Mortality*** Rates (per 100,000)

combined City and County



"Other" cancer types include: lip, esophagus, stomach, liver, pancreas, larynx, non-melanoma skin, cervix, uterus, ovary, kidney, bladder, brain, Hodgkin's Disease, non-Hodgkin's lymphoma, Leukemia, and other unspeci ed malignant neoplasms.

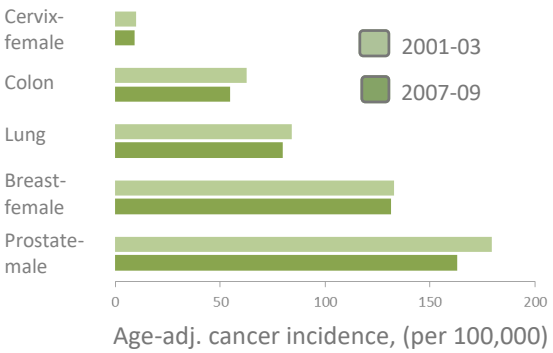
Age-adjusted Cancer Mortality: US Comparison, 2009 (per 100,000)

Cancer Type	Mortality (per 100,000)	
	Region	USA
Lung	51.1	48.5
Breast-female	26.8	22.3
Prostate-male	25.7	22.0
Colorectal	16.5	15.9

In 2009, cancer mortality rates in the City and County trended above the US average for many commonly diagnosed types.

Age-adjusted ***Cancer Incidence,*** Invasive Stage (per 100,000), 2001-03 and 2007-09

combined City and County



	Cervix	Colon	Lung	Breast	Prostate
	2001-03				
City	13.2	67.4	94.9	126	166
County	7.0	58.0	73.6	140	193
MO	8.6	56.7	80.4	126	141
	2007-09				
City	11.8	54.6	85.9	118	160
County	6.5	55.0	73.6	145	166
MO	8.0	47.2	77.0	123	130

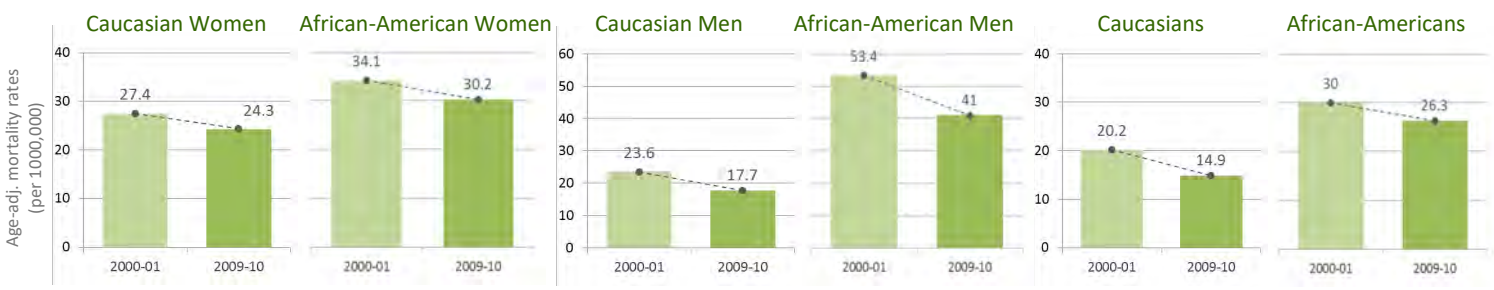
Key Observations

- Mortality rates for breast, lung colorectal, and prostate cancer fell 11%, 13%, 22%, and 24% and in the region, respec vely. Incidence decreased in similar fashion.
- There is a 2-fold di erence in mortality rates between the high and low quartile zip codes, for breast and prostate cancer alike. High mortality rate zip codes do not appear concentrated in the urban center.
- The most recent surveillance data (2009-10) indicates the total number of annual deaths att ibutable to prostate, breast, and colorectal cancer were 126, 223, and 259, respecti ely. This is a reducti n (8-25%) from the deaths recorded in 2000-01.
- The racial health disparity related to prostate is much greater than breast and colorectal cancer in the region. African American men are 2.3 ti es more likely to die from prostate cancer than Caucasian men.

References: See Appendix K for descriptions of source data.

Health Disparities: ***Mortality*** Comparison for Largest Racial Groups

combined City and County



Although the region includes diverse racial and ethnic groups, valid public health surveillance data is limited to the comparison shown above.

HEALTH DISPARITIES

DEFINED: Health disparities are preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by disadvantaged populations, groups, and communities defined by race/ethnicity, gender, education, income, disability, geographic location, or sexual orientation.

PART OF THE RHC MISSION
The St. Louis Regional Health Commission is dedicated to reducing health disparities among populations in the St. Louis City and County region.

BACKGROUND

Despite some improvements in the overall health of the St. Louis region, health disparities remain widespread among members of racial/ethnic and other minority populations. The region's health status will never reach optimal levels when large segments of the population continue to suffer from poor health status. Specifically, African Americans continue to have poorer health status, in comparison to Caucasians.

The St. Louis Regional Health Commission acknowledges that health disparities still exist in our community, notably by racial group. African Americans in the region continue to have poorer health status, in comparison to Caucasians.

Figure 1.

Trends in Preventable Hospitalizations Among Adults (Age 45-64) by Race and Gender, 2000 to 2009

combined City and County

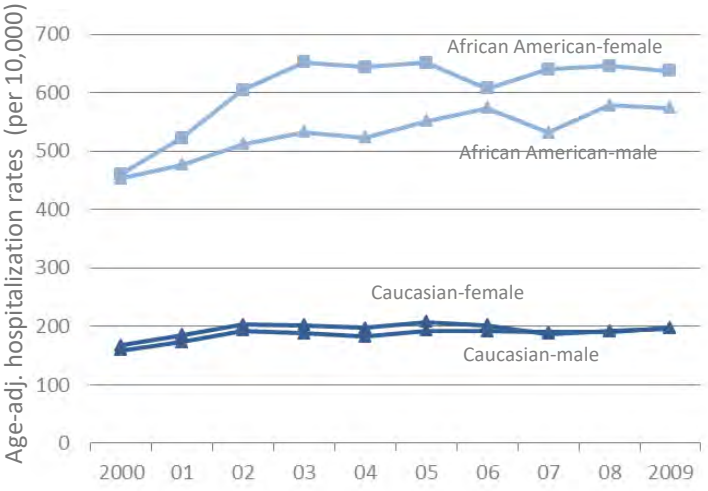


Table 1.

Comparison of Mortality Rates by Race for Selected Chronic Conditions, 2008-2009

combined City and County

Age-adj. rates per 100,000

	White	Black	Higher Risk
Heart disease	194	294	↑ 52%
Chronic ischemic	81.6	97.5	↑ 20%
Acute myocardial infarction	58.2	79.9	↑ 37%
Hypertensive	7.2	32	↑ 344%
Heart failure	12.3	16.1	↑ 31%
Cancer (all types)	173	240	↑ 39%
Cerebrovascular (stroke)	38.1	64	↑ 68%
Diabetes	14.5	40.7	↑ 180%
Kidney Disease	12.3	31.4	↑ 155%
Asthma	19	34	↑ 80%
Chronic liver disease/cirrhosis	6.6	7.4	↑ 12%

Indicates chronic conditions in which age-adjusted risk for death among African Americans is over 100% greater than the risk among Caucasians.

Table 1 (at left) presents information that for many chronic conditions African Americans have at least a 30% higher mortality rate than Caucasians. The relative risk for three conditions — hypertensive heart disease, diabetes and kidney disease — is substantially greater or double.

Figure 1 (above) shows that the rates of preventable hospitalizations for African American men and women have steadily risen between 2000 and 2009 while rates for Caucasians have remained relatively flat and are less than half the level of African Americans.

The St. Louis region is enriched by its ethnic and racial diversity. Measuring health disparities associated with race, ethnicity, or country of origin, beyond broad comparisons of African Americans and Caucasians, is not possible today given the limitations of available public health surveillance data. Future local and state efforts are needed to remedy this deficiency in community health status information.

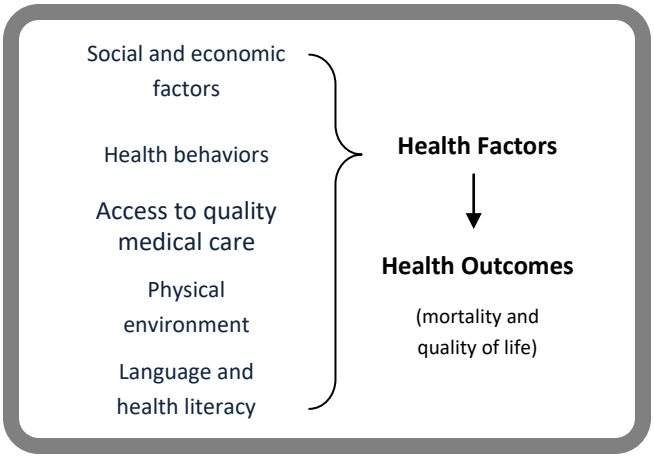
The analysis and explanation of health disparities is much more complex than race and ethnicity.

Different factors related to health status work in tandem with one another to either minimize or exacerbate disparities. The conceptual model in Figure 2 presents five key factors that contribute to mortality and quality of life.

Setting priorities and measuring progress in relation to minimizing disparities requires a better understanding of the interaction between these factors and health status.

Figure 2

Conceptual Model: Contributors to Health Outcomes

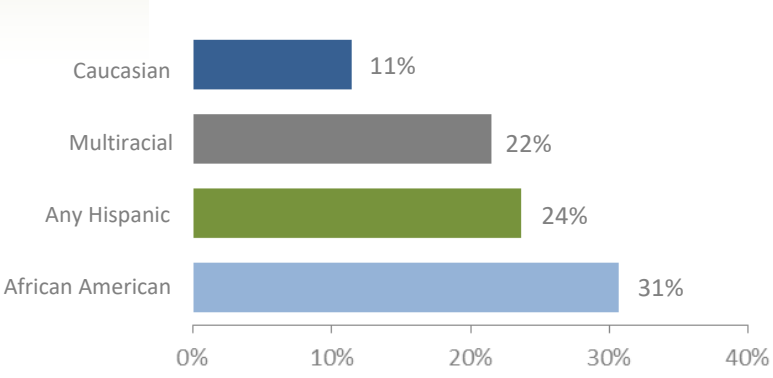


SOCIAL & ECONOMIC FACTORS

Figure 3.

Individuals in Poverty by Racial/Ethnic Group (all ages), 2010

combined City and County



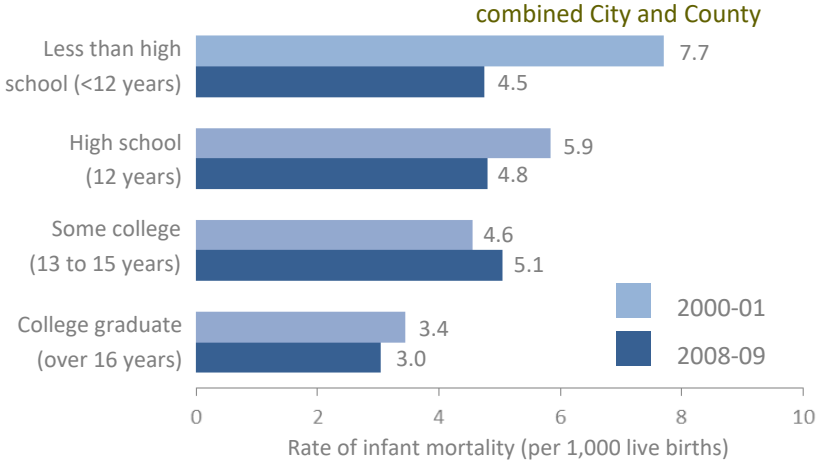
Health varies by income and education as well as by racial or ethnic group. The overlap between race and poverty across the St. Louis region can make it difficult to identify the contributing social and economic factors on health status.

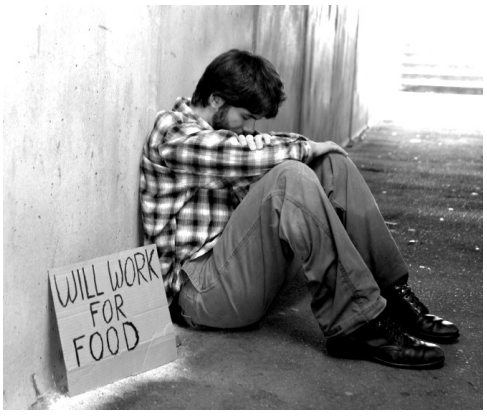
It is known, however, that individuals who are poor and those who have not graduated from high school experience worse health on average than higher income or more educated individuals. Figure 4 (at left) examines the association between education, as an indicator of socioeconomic status, on infant mortality.

Figure 4.

Rate of Infant Mortality by Mother's Level of Education, 2000-01 and 2008-09

combined City and County





HEALTH BEHAVIORS

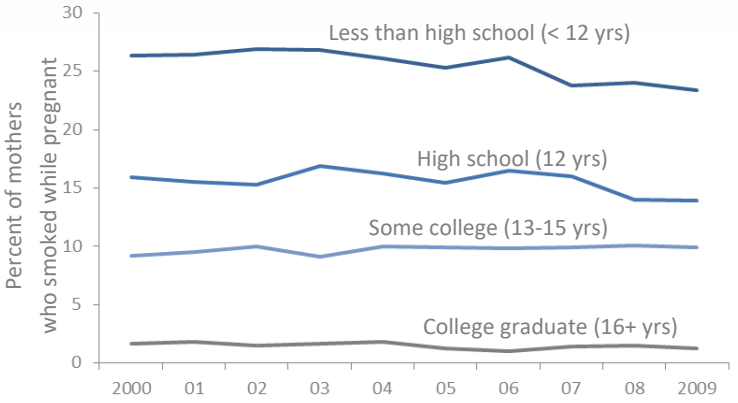
Health-related behaviors are a major cause of preventable disease and premature death across the United States. Behaviors related to tobacco, alcohol, diet, and physical inactivity account for nearly 40% of total deaths nationwide. Recent attention by researchers, medical providers, and the general public to the strong influence on health exerted by individual behaviors has resulted in improved health outcomes overall. However, little progress has been made in reducing important differences in health resulting from health behaviors among many disadvantaged groups. Over the past decade, disparities in some key health-related behaviors have persisted between populations and in some cases widened.

Evidence of such persistent differences are shown for tobacco use during pregnancy in Figure 5 (at right). Approximately 24% of women with less than a high school education smoked during pregnancy versus just 10% with some college education.

Figure 5.

Percent of Mothers who Smoked While Pregnant by Level of Education, 2000 to 2009

combined City and County



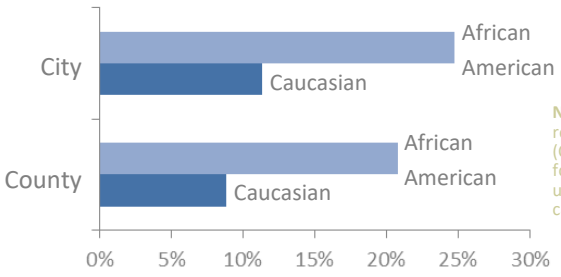
ACCESS TO QUALITY MEDICAL CARE

Access to quality health care is strongly associated with better health outcomes. Individuals without medical insurance or a regular and easily-accessible source of care are found more likely to postpone medical care, experience difficulty obtaining care, and visit a doctor less often.

In the City and County, African American adults are more than twice as likely to be uninsured as compared to Caucasian adults, as shown in Figure 6. This lack of coverage translates into not receiving medical services when needed, as has been reported by approximately 12% of African Americans and 5% Caucasians in the St. Louis region in 2007.

Figure 6.

Adults without Health Care Coverage, 2007



NOTE: The number of respondents was 832 (City) and 965 (County) for the telephone survey used to measure health care coverage.

PHYSICAL ENVIRONMENT

Research has shown how the environments in which people live and work — homes, neighborhoods, and schools — shape behaviors and impact health. Physical environments can be dangerous due to pollution or violence or can limit ability to engage in health promoting behaviors (e.g., physical activity). For example, an individual's ability to go outside and exercise, avoid cigarette smoke, and buy healthy foods are diminished by living in certain neighborhoods and under certain policies.

Table 2 (at right) shows data from a statewide ranking of counties regarding the status of the *built environment*, the infrastructure designed to support human activities, and *environmental quality*, such as air and water quality. Out of 115 total Missouri counties ranked in 2009, the City and County were #96 and #105, respectively, based on indicators measuring the quality of the physical environment.

Table 2.

Physical Environment Contributors to Health, 2009

	City	County	MO
Annual number of unhealthy air quality days due to ozone	5	17	7
Rate of recreational facilities (per 100,000)	8	15	10
Low-income individuals who do not live near grocery store	5%	4%	8%
Percent of restaurants that are fast food establishments	46%	53%	47%
Overall ranking (out of 115 counties in MO)	**#96**	**#105**	--

LANGUAGE & HEALTH LITERACY

People who cannot understand instructions from health care providers or basic health education information (e.g., nutrition labels, vaccination recommendations) are at a considerable disadvantage when it comes to achieving optimal health.

LANGUAGE

Research shows that non-English speakers have more difficulty accessing medical care services and are more likely to make mistakes in following physician orders (e.g., taking medications, obtaining diagnostic tests).

HEALTH LITERACY

Among native English-speakers, health literacy affects heath status considerably, as many patients struggle with understanding confusing information or communicating effectively with health care providers.

Conclusion

Health disparities in the St. Louis region are influenced by social and economic factors, health behaviors, access to quality health care, physical environment and language/health literacy. Factors of race and ethnicity particularly influence our understanding of health disparities in the St. Louis community.

The interrelated contributors to health status, which may be working in combination to widen disparities, also represent key areas for interventions to minimize the effect of health disparities on community health status.

References: See Appendix K for descriptions of reference sources.

MATERNAL & CHILD HEALTH

In 2009, there were 16,909 live births in St. Louis City and County, a 7.7% decline from 2000.

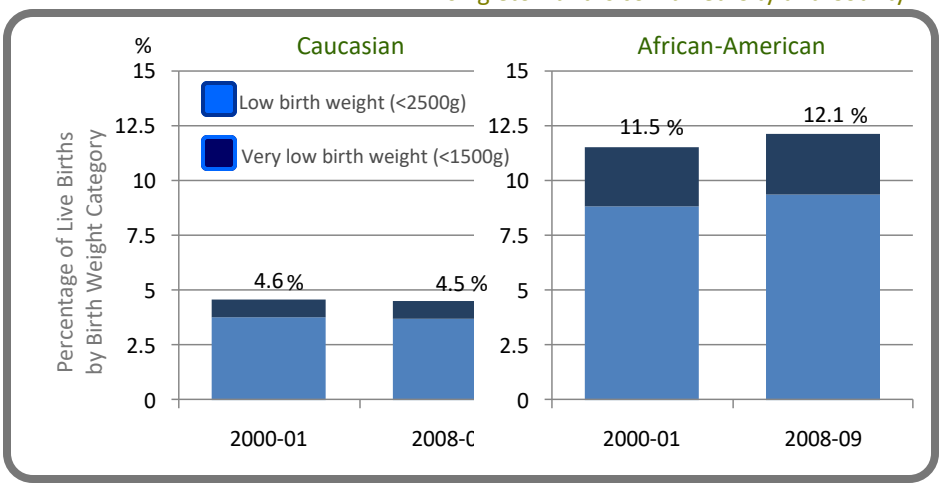
Public Health Impact

Receiving early and conti uous prenatal care helps to monitor pregnancy progress and iden fy health problems before they result in serious health complications or mother and child, such as low birth weight (LBW) and neonatal mortality. Research shows that babies born to mothers who receive no prenatal care are three tim s more likely to be born at LBW, and ve mes more likely to die, than are those whose mothers receive prenatal care. In addition, BW infants are more likely to develop long-term disability or die within the rst year of life than are normal weight infants; very low birth weight (VLBW) infants are at even greater risk.

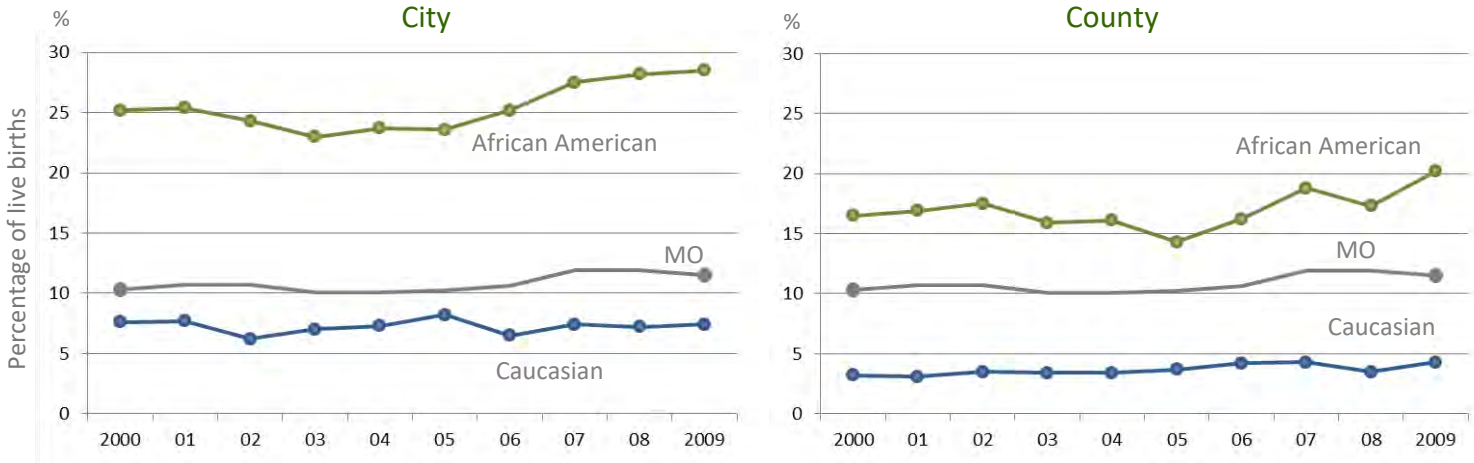
Count of Live Births, 2000 and 2009

Low and Very Low Birth Weight Infants*

singleton births combined City and County



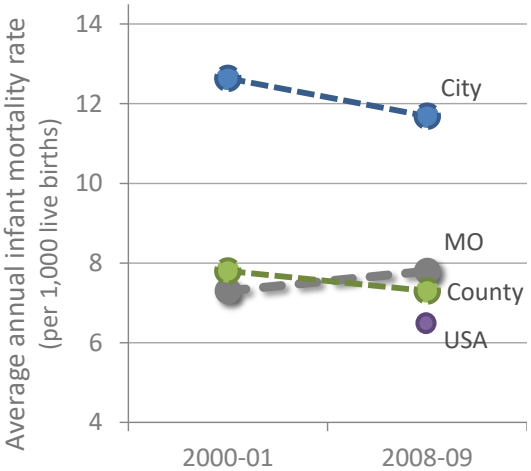
Births with Inadequate Prenatal Care*, 2000 to 2009



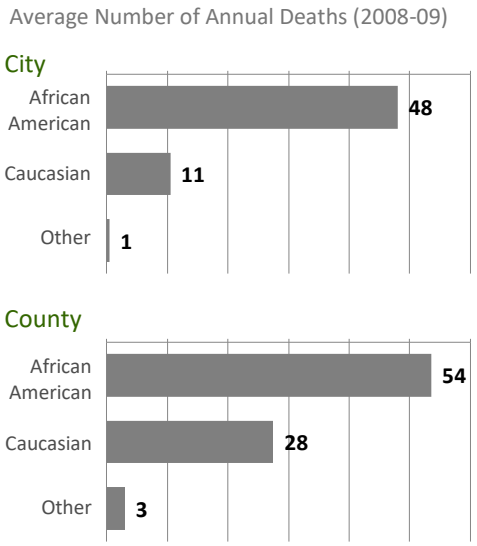
Although the region includes diverse racial and ethnic groups, valid public health surveillance data is limited to the comparison shown above.

DEFINED: Prenatal care and birth weight are key factors that contribute to overall pregnancy health and infant mortality and morbidity.

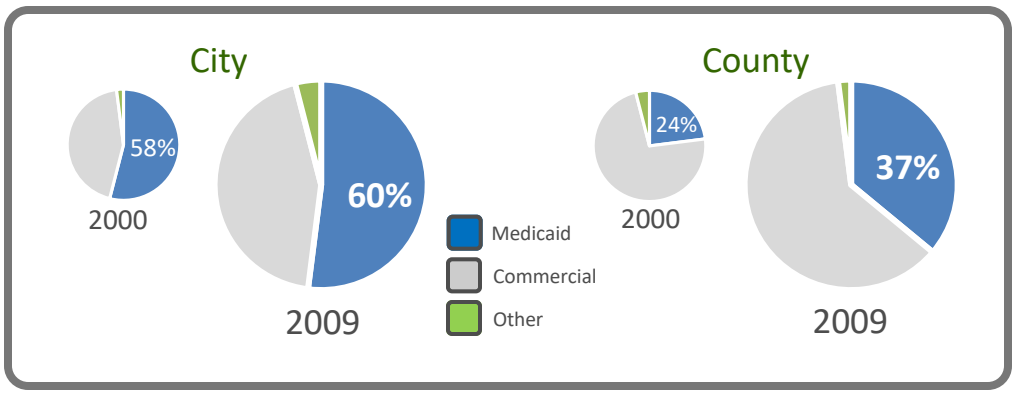
Infant *Mortality*
(Rate per 1,000 live births)



Infant *Mortality*
(Count of Deaths)



Live Births Under Medicaid Program, 2000 and 2009

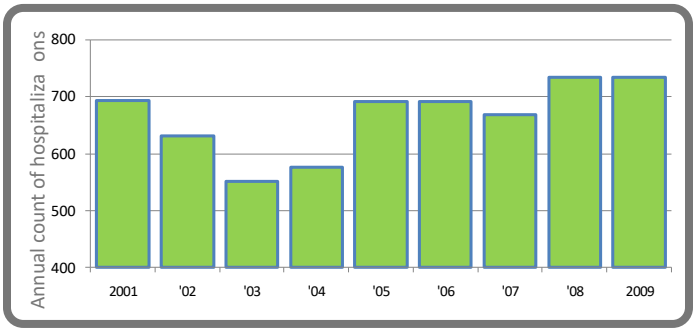


Live Births by Teenage Mothers, 2000 and 2009

	2000		2009	
	10-14 yo	15-17 yo	10-14 yo	15-17 yo
City	29	402	17	266
County	17	349	4	258
Total	46	751	21	524
% of All Births	0.3%	4.1%	0.1%	3.1%

* NOTE: For the purposes of this report, receiving prenatal care is de ned as a mother having received prenatal care within the rst trimester (or rst three months) of pregnancy. Low birth weight (LBW) infants are those born weighing 2,500 grams or less; very low birth weight (VLBW) infants are those born weighing 1,500 grams or less. "Perinatal" refers to diseases and illnesses closely surrounding birth for infants (<1 yo). Approximately 35% of hospitaliza ons for perinatal condi ons were speci cally coded as low birth weight or short gesta on.

Hospitaliza ons for Perinatal* Condi ons
combined City and County



Key Observations

- The total number of annual live births in St. Louis City and County fell 7.7% over the past nine years.
- In 2008-09, African American infants were 2.7 mes more likely than Caucasians to be born at a low birth weight (< 2500 g). This health disparity has persisted for the past nine years.
- A modest rise in inadequate prenatal care was noted among City and County African Americans between 2005 and 2009 while the trend was rela vely at for Caucasians.
- Infant mortality rates decreased in the region between 2000 and 2009, but the rate for the City remains much higher than the state and na on.
- While African-American infants made up 40% of all live births in the region during 2008-09, they accounted for 70% of the infant mortality rate during this period.
- Between 2000 and 2009, the births by teenage mothers 15-17 yo fell 30%.

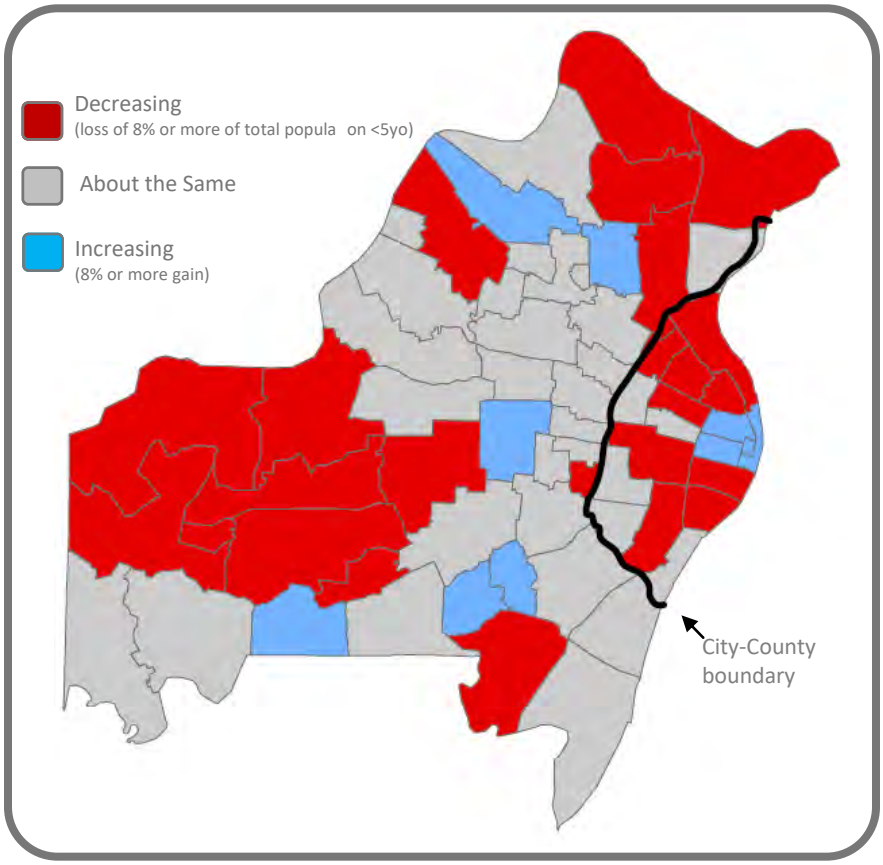
References: See Appendix K for descriptions of source data.

EARLY CHILDHOOD HEALTH

Public Health Impact

The period of early childhood represents a tim of brain development that has a significant impact on children's later emotional, i tellectual, and physical growth. What children know and can do leading up to the me they start school helps determine their educa onal and lifelong success. Health also plays an important role in early childhood development. The health status and behaviors related to health developed at an early age have been shown to substanti lly influe ce the health and well-being of an individual throughout the life course. Recent data report that, na onwide, one in seven preschoolers are obese and one in six children each year will suff r from an unintentional i jury. Similar trends are seen in Missouri as well as in the St. Louis region. Like many chronic health condi ons suffered l ter in adulthood, the majority of the indicators and conditions hat negativ ly impact children early in life are preventable.

Population Change Among Children <5 Years of Age by Zip Code, 2000 to 2010



Refer to the Appendix A.2 for population distribution for all zip codes.

Population Ch nge By Racial/Ethnic Group among Children <5 Years of Age, from 2000 to 2010

The graphic above illustrates the rela ve and absolute changes in populatio (<5yo) by racial/ethnic group for the City and County. Between 2000 and 2010, the total number of children <5yo in the region has decreased by 6,730 individuals (-9%).

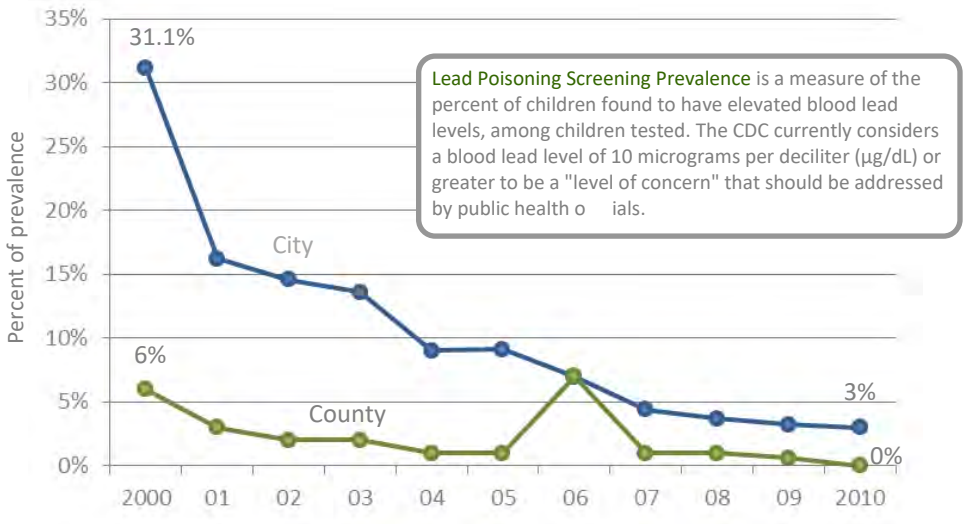
Unavailable Data:
Childhood Immunizations

Most immuniza ons which prevent the spread of life-threatening diseases are administered in the early childhood years. While children in Missouri must present documentati n of up-to-date immuniza on status to enroll in school, the centralized system in place to monitor adherence to immuniza on schedules before this transi on is not popula on-based. Future local and state eff rts are needed to remedy this de - ciency in data availability.

*Religious and medical exemp- ons are allowed.

DEFINED: Early childhood health is defi ed as the health and well-being of children under fi e years of age. Although not all inclusive, lead poisoning, injury, and nutritio are leading indicators of early childhood health.

Lead Poisoning Screening Prevalence Among Children <5 Years of Age, 2000 to 2010 (blood lead levels ≥10 µg/dL)



Leading Injuries Among Children 1 to 4 Years of Age, 2000-01 to 2008-09 (Age-adjusted Rate per 100,000)

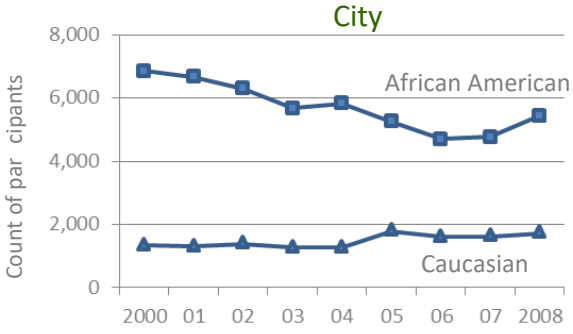
	City			County		
	2000-01	2008-09	% △	2000-01	2008-09	% △
Abuse/Neglect/Rape	265	137	**-48.2**	68.8	86.5	**+25.7**
Cut/Pierce	1,332	574	**-56.9**	991	568	**-42.6**
Jump/Fall	5,609	5,090	**-9.3**	5,398	5,304	- -
Fire/Burn	752	490	**-34.8**	429	365	**-14.9**
Motor Vehicle Tra	563	305	**-46**	288	239	**-17.1**
Poison/Overdose	851	550	**-35.4**	455	562	**+12.2**
Struck By/Against	3,512	1,523	**-56.6**	3,222	1,757	**-45.5**
Su ocate/Hung	126	13.5	**-89.3**	46.2	22.6	**-51.1**
Total	18,319.1	13,721	**-25.1**	14,835.7	12,998.4	**-12.4**

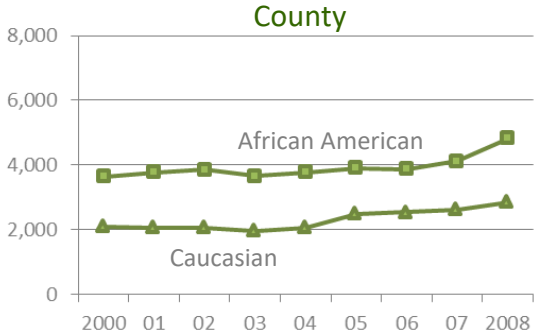
Key Observations

- The total combined popula on of children (<5yo) shrank 9% (7,633 fewer children) in the region between 2000 and 2010. This popula on decreased 10% and 8% in the City and County, respec vely, during this me.
- The popula on shi from 2000 to 2010 among children is dis-ti ct from the change reported for people of all ages.
- Lead poison screening preva-lence plummeted in the City between 2000 and 2010, drop-ping from 31.1% to 3%.
- The rate of leading injuries among children (<5 yo) de-creased for nearly all categories across the region.
- In 2008, nearly 15,000 children (<5 yo) par cipated in the WIC program. Between 2000 and 2008 the gap between WIC par-tic pa on among African Ameri-can and Caucasian children has narrowed in the City and re-mained stable in the County.

References: See Appendix ZZ for descriptions of source data.

Parti ipation i WIC Among Children 1 to 4 Years of Age, 2000 to 2008





WIC (Women, Infant and Children) provides federal grants to states for supplemental foods, health care referrals, and nutri on educa on for pregnant women and their children.

CHILDHOOD ASTHMA

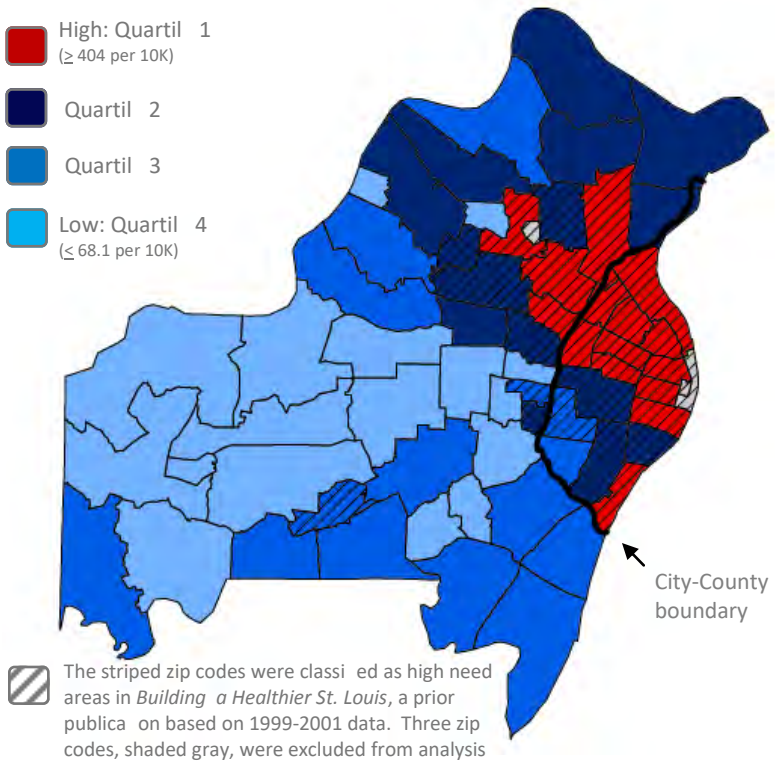
Prevalence

25.9% City, 9.5% County

Public Health Impact

Asthma, the leading chronic condi on among children, is a lung disease characterized by periods of wheezing, chest ti htness, shortness of breath and coughing. Between 2009 and 2010, there were 43 deaths due to asthma in St. Louis City and County, of which four were children under age 15. In Missouri, over 400,000 adults (8.8%) and 155,000 children 17 years and younger (10.9%) were living with asthma in 2010, the most recent published surveillance data. In the St. Louis metropolitan area, the prevalence of children living with asthma in 2010 was 11.4%. Among children in Missouri, asthma is more common among African-Americans (21.8%) than other minori es (10.6%) and Caucasians (8.5%). Uncontrolled asthma is o en assessed by rates of emergency room visits and hospitalizations in ublic health studies.

Rate of *Acute Asthma Management Services* for Children* by Zip Code, 2008-09 (<15yo)



Refer to Appendix G for rates of hospitalization and ED visits for all zip codes.

Change in *Acute Asthma Management Services* for Children* by Selected High Need Zip Codes, 2000 to 2009 (<15yo)

Building a Healthier St. Louis, a 2003 community health assessment published by the St. Louis Regional Health Commission, identi d 29 "high need" zip codes based on a composite of indicators. The striped areas on the map above show their locatio . Change in health status, measured by rate of acute asthma management, within these selected zip codes was assessed and compared to overall trends in the region. Zip codes with substantial c ange from 2000-01 to 2008-09 are shown below.

Substantial Improvement
(Health status improvement be er than regional norm)

- 63110: S City (Shaw)
- 63112: N City (Skinker-DeBaliviere)

Health status gap widened
in comparison to the regional norm

- 63107: N City (Hyde Park)
- 63113: N City (The Ville)
- 63108: City (Central West End)
- 63111: S City (Carondelet)
- 63133: N County (Wellston)
- 63134: N County (Berkley)
- 63135: N County (Ferguson)
- 63074: N County (St. Ann)
- 63143: Mid-County (Maplewood)

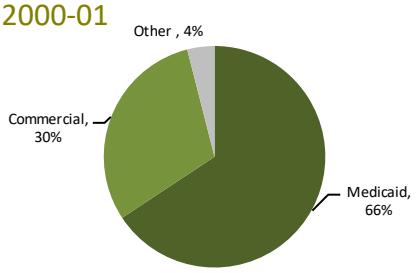
*Combined rate of hospitaliza on and emergency department visits used to quan fy acute care for asthma management in St. Louis City and County.

DEFINED: Asthma is a chronic disease that a ects the lungs. It is one of the most common long-term diseases of children, but adults have asthma, too. Asthma causes repeated episodes of wheezing, breathlessness, chest tig tness and coughing.

Emergency Room Visits for Asthma Among Children by Health Insurance Type, 2000-01 vs. 2008-09 (<15 yo)

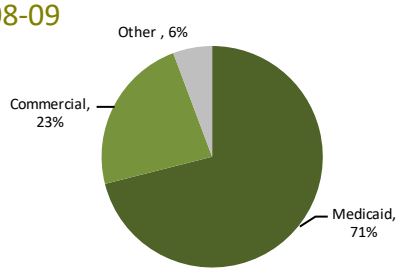
City and County combined

2000-01



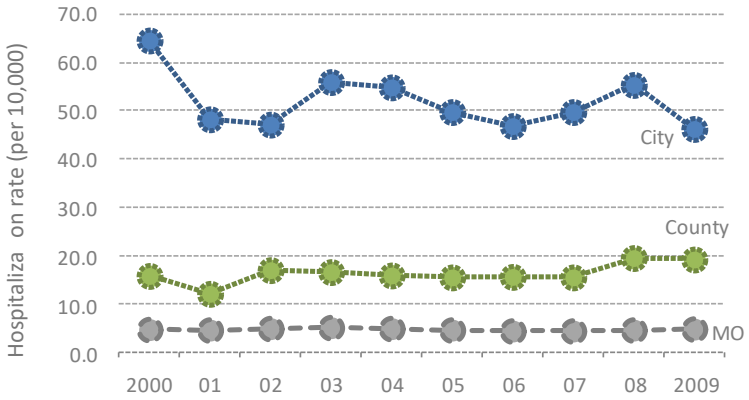
n = 5,524 / year

2008-09



n = 4,873 / year

Asthma Hospitalization R tes for Children in Medicaid Program, 2000 to 2009 (<15 yo)



Population Trends: 2000 to 2010

Between 2000 and 2010, the number of children (<15 yo) decreased 22% in the City and 12% in the County.

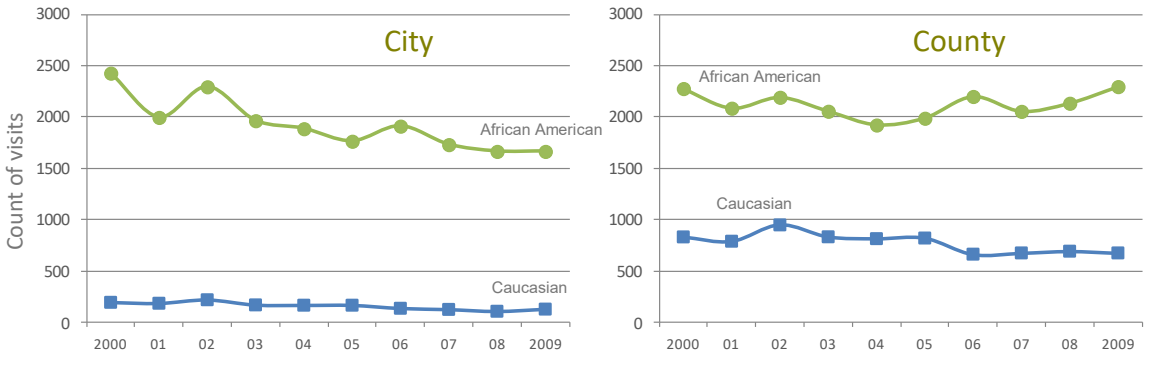
Emergency room and hospitaliza on rates are indicators of poor asthma control. Changes in these rates are presented for children enrolled in Medicaid because this payor category is the best available proxy measure for family income, a known factor associated with preventati e medica on adherence and exposure to environmental triggers.

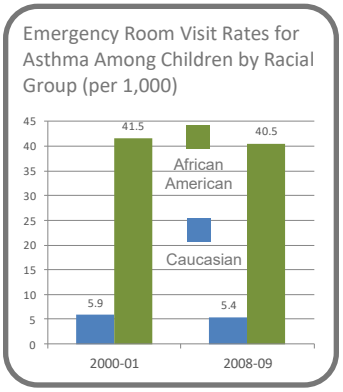
Key Observations

- While prevalence of asthma by zip code is unknown, mapping services for acute management (hospitaliza on and/or emergency room visit) reveals a concentratio of uncontrolled asthma across North City and North County.
- As the rate of hospitaliza ons for asthma among children in the Medicaid program (City and County combined) fell between 2000-01 and 2008-09, the number of emergency visits among this popula on has dropped by approximately 5%.
- In 2008-09, 71% of all emergency room visits for asthma in the region (City and County combined) were paid for by Medicaid.
- In 2008-09, African American children in the region were 7.5 tim s more likely to visit the emergency room for asthma than Caucasians (40.5 vs. 5.4 per 1,000). This health disparity has persisted since 2000-01.
- There has been steady decline in emergency room visit volume among African American children in the City.

References: See Appendix K for descriptions of source data.

Annual Number of Emergency Room Visits for Asthma by Racial Group (<15 yo)





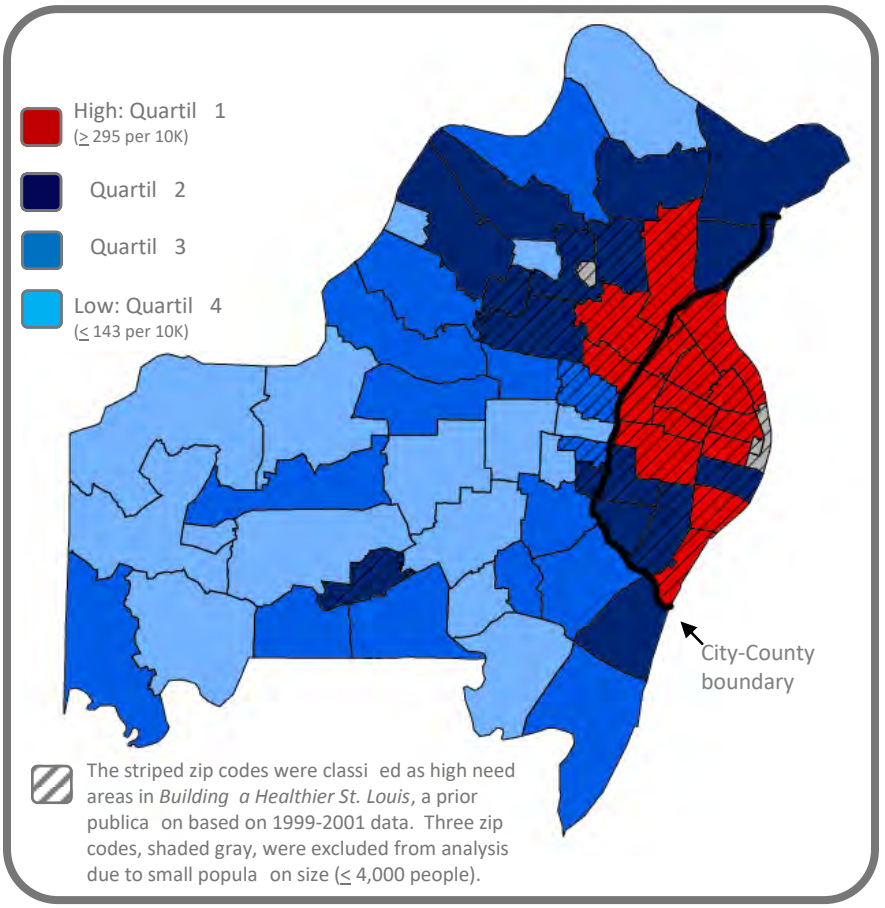
BEHAVIORAL HEALTH

Public Health Impact

Behavioral health is integral to overall health. As a general concept, behavioral health is the reciprocal relations ip between human behavior and the well-being of the body and mind. Behavioral health is broadly de ned to include mental health condi ons, including substance use and health behaviors. Behavioral health issues touch the lives of millions of Americans each day. Recent data report that na onally it is esti ated that 1 in 20 individuals (age 12 and over) are currently depressed and 18% are binge drinkers. Similarly, current data suggest that 1 in 18 individuals in Missouri are currently depressed (age 12 and over) and 19% are binge drinkers. Missouri emergency departments saw nearly 65,000 mental health and substance abuse-related visits in 2009. In addi on to its health burden of disease, behavioral health issues and their associated expenses are es mated to cost the US health care system $135 billion each year.

Acute Mental Disorder Event Rate by Zip Code, 2008-2009

(Hospitalizations and Emergency Room Visits)

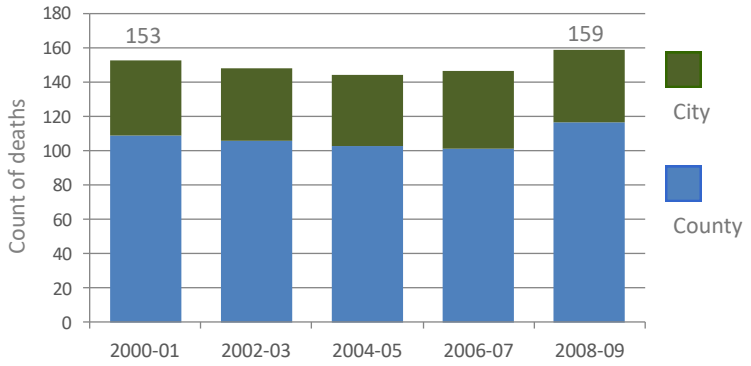


Refer to the Appendix H for hospitalization and emergency visit rates for all zip codes .

Unavailable Data

In comparison to many physical diseases, health behaviors and medical risk factors, publically available data systems for tracking behavioral health and substance abuse are not as robust and reliable. Therefore, it is di ult to assess change in health status a ributable to mental health or the known linkages between mental and physical health. This is especially true for elderly and adolescent populatio s. Future local and state e orts are needed to remedy this defi ciency in data availability.

Count of Annual Suicides, 2000-01 to 2008-09



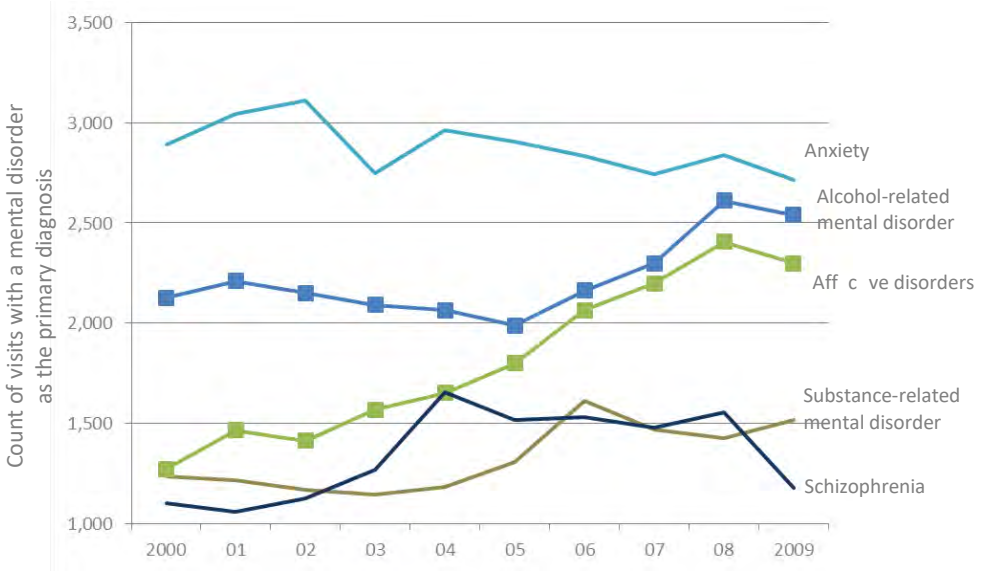
Age Group Distribu on of Suicide, 2008-2009

Age Group	Avg. Annual Deaths	
Under 24	21	(13%)
25 to 44	57	(36%)
45 to 64	56	(35%)
65 and over	26	(16%)
Total	159	

DEFINED: Behavioral health is a broad category inclusive of both mental health disorders and substance abuse-related issues. Although not all inclusive, emergency department visits with mental health and/or substance abuse diagnosis, suicides, and drug arrests are common metrics that help to measure the burden on society.

Emergency Room Visits for Selected Mental Disorders, 2000 to 2009

City and County combined



Key Observations

- There is a two-fold difference in the rate of acute mental health disorders between high and low quarti e zip codes. High rates of acute mental health disorders in 2008-09 appear highly concentrated in areas of the City and parts of North County.
- After a decline from 2000 to 2006, the number of annual suicides increased in the region. This increase was driven largely by the number of suicides in the County.
- From 2000 to 2009, ER visits in the region with alcohol-related mental disorder and a ecti e disorder diagnosis increased 21% and 81%, respec vely.
- In 2008-09, ER visits for a primary diagnosis of a mental disorder accounted for 3% of total ER visits, and 17% for mental disorders as primary or secondary to another medical condi on.
- As drug arrests in the City dropped 19% from 2008 to 2010, arrests in the County increased 37% during this ti e.

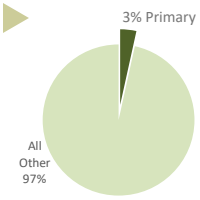
Current Binge Drinking Among Adults, 2006 to 2010

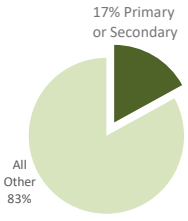
It is es mated that 18% of St. Louis City and County adults are binge drinkers (males having ve or more drinks on one occasion, females having four or more drinks on one occasion). There has been no significa t change in this statis c over the past 5 years.

Source: 2006 and 2010 Behavioral Risk Factor Surveillance System survey.

Mental Disorders in the Emergency Room

3% of all emergency room visits among City and County residents were for the primary diagnosis of a mental disorder (2008-09)





17% of all emergency room visits among City and County hospitals include a mental disorder as a primary or secondary diagnosis (2009)

References: See Appendix K for descriptions of source data.

Key Indicators of Alcohol and Drug Abuse, 2008 to 2010

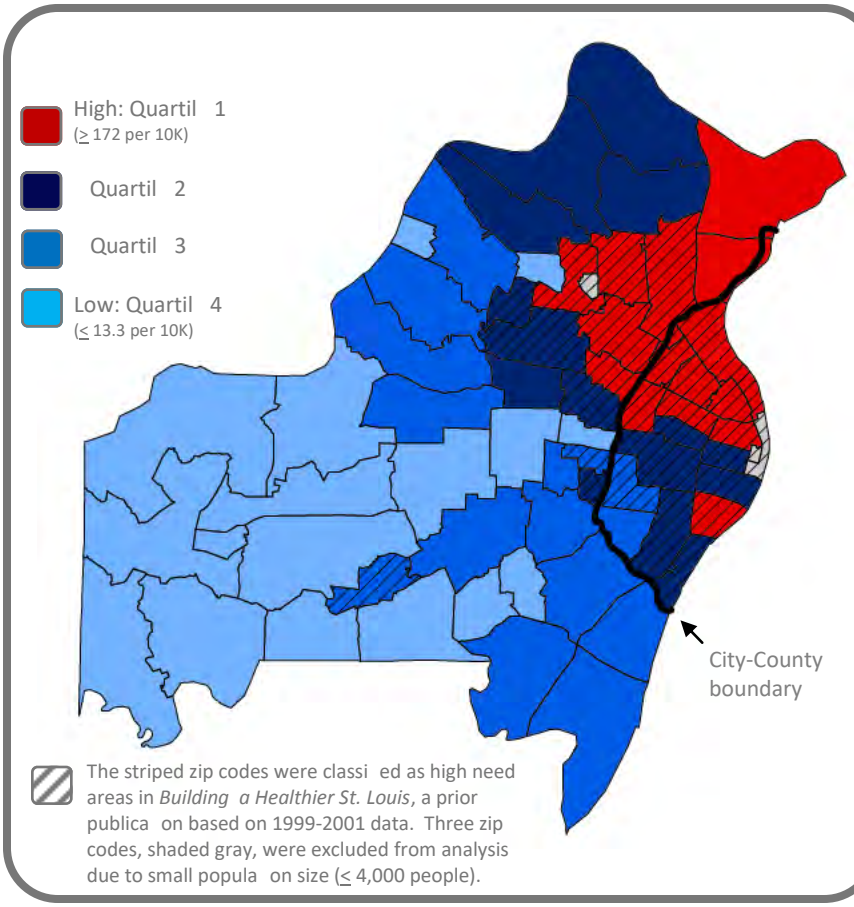
	City				County			
	2008	2009	2010	% △	2008	2009	2010	% △
Drug Incident School Suspensions	114	145	152	+ 33	426	392	485	+ 14
Juvenile Court Drug O enses	154	121	134	- -	473	503	468	- -
Drug Court Parti ipants	749	701	640	- 14	217	239	222	- -
Drug Arrests, Police Report	3,778	2,907	3,046	- 19	5,465	6,314	7,489	+ 37
Admissions to Substance Abuse Treatment Programs	4,000	4,037	3,648	- 8.8	3,124	3,339	2,933	- 6.1

SEXUALLY TRANSMITTED INFECTIONS

Public Health Impact

Sexually transmi ed infec ons (STIs) are a cri cal health challenge facing the na on today. The Centers for Disease Control and Preven on (CDC) es mates that there are 19 million new infec ons every year in the United States and more than half of Americans will get one at some me. The St. Louis metropolitan area conti ues to rank among the highest in the na on in rates of STIs. There are many kinds of STIs; some of the most common include Chlamydia, Gonorrhea, Syphilis, and HIV/AIDS. If diagnosed in their early stages and treated consistently, many of these condi ons can be managed and even cured. However, if le untreated they can cause serious health complica ons and in some cases death. In addi on to their health burden, STIs are es mated to cost the U.S. health care system $17 billion every year.

Rate of ***New Infection**** by Zip Code, 2009-10



Refer to the Appendix I for infection rates for all zip codes .

Change in the Rate of ***Newly Diagnosed Cases of STIs*** by Selected High Need Zip Codes, 2000-01 to 2009-10

Building a Healthier St. Louis, a 2003 community health assessment published by the St. Louis Regional Health Commission, identi d 29 "high need" zip codes based on a composite of indicators. The striped areas on the map above show their locatio . Change in health status, measured by rate of newly diagnosed cases of STIs, within these selected zip codes was assessed and compared to overall trends in the region. Zip codes with substantial c ange from 2000-01 to 2009-10 are shown below. Three zip codes in St. Louis County where STI rates doubled during this ti e are future identi d.

Substantial Improvement
(Health status improvement be er than regional norm)

- 63104: City (Soulard)
- 63110: S City (Shaw)
- 63106: N City (Je -Vander-Lou)
- 63107: N City (Hyde Park)
- 63113: N City (The Ville)
- 63115: N City (Penrose)
- 63120: N City (Walnut Park East)
- 63147: N City (Baden)
- 63112: City (Skinker-DeBaliviere)

Health status gap widened in comparison to the regional norm

- 63108: City (Central West End)
- 63103: City (Midtown)
- 63139: S City (Cli on Hgts)
- 63116: S City (Holly Hills)
- 63118: S City (Benton Park)
- 63111: S City (Carondelet)

Potential Outliers
(Incidence rates doubled)

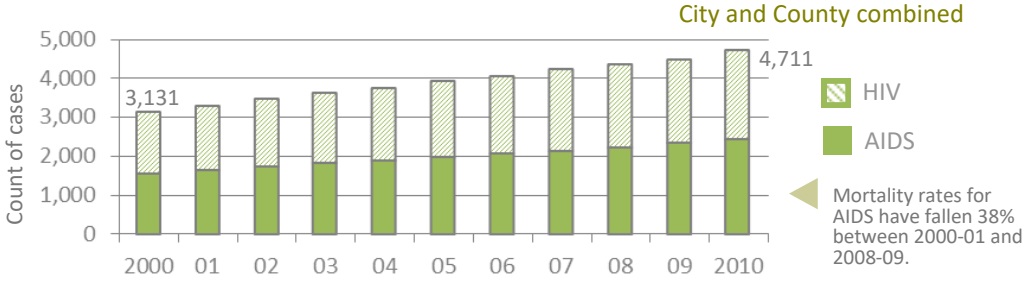
- 63143: Mid-County (Maplewood)
- 63137: Mid-County (Riverview)
- 63088: S County (Valley Park)

*STI incidence, or rate of new infec on, is calculated as a composite measure of combined counts of newly diagnosed cases of Chlamydia, Gonorrhea, and early stage Syphilis.

DEFINED: STIs are infections transmitted from one person to the next. In addition to sexual activity, other potential avenues of STI transmission include pregnancy, needle-sharing, skin-on-skin contact, and breastfeeding. Although not an all-inclusive list, Chlamydia, Gonorrhea, Syphilis, and HIV/AIDS are commonly diagnosed STIs.

Persons Living with HIV/AIDS, 2000 to 2010

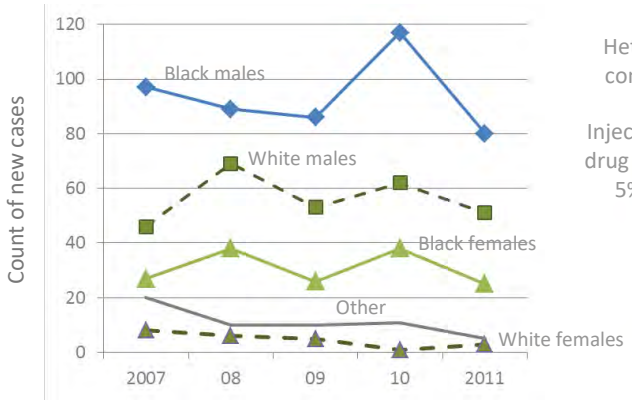
City and County combined

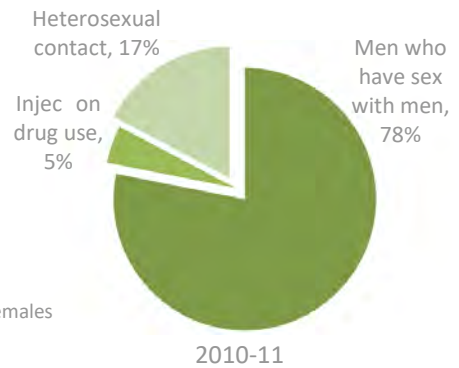


Mortality rates for AIDS have fallen 38% between 2000-01 and 2008-09.

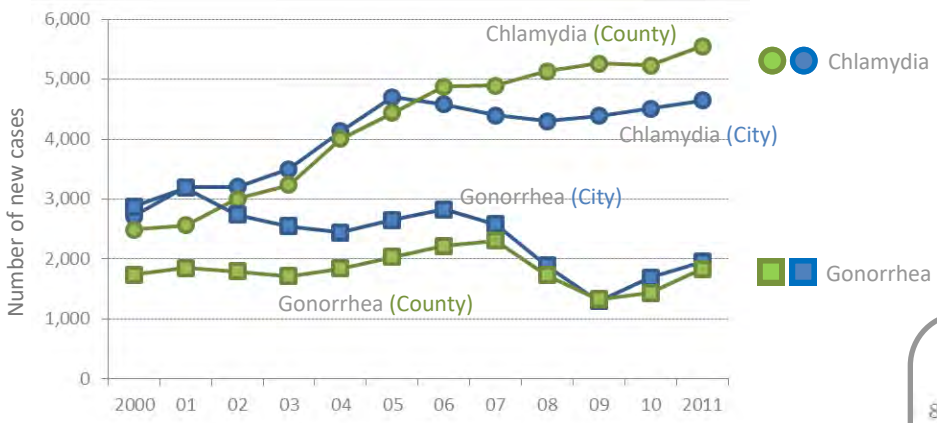
New Cases of HIV by Racial and Risk Group, 2007 to 2011

City and County combined





New Cases of Gonorrhea and Chlamydia, 2000 to 2011



NOTE: there are diffe - ences in case iden ca- on strategies for Syphilis, Gonorrhea, and Chlamydia in the St. Louis STI reporti g region. While disease inves ga on occurs for Syphilis, this is not so for cases of Gonorrhea and Chlamydia.

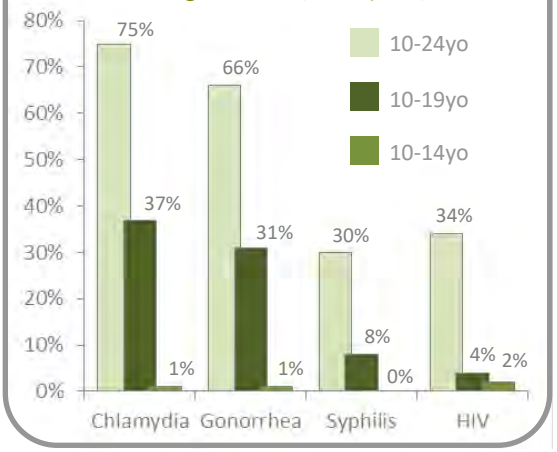
New Early Syphilis Cases, 2000 to 2011

Key Observations

- Rates of newly diagnosed STIs rose between 2000 to 2010 throughout the region. Zip codes with greatest increase were located throughout much of the City and North County.
- In 2010, there were 4,711 people living with HIV or AIDS in the region.
- In 2011, approximately three-fourths of all new cases of HIV occurred among men who have sex with men.
- New cases of HIV spiked in 2010, driven mostly by an increase among Black males.
- Diff rent trends in case counts were observed in the City and County for Gonorrhea, Chlamydia and Syphilis. Notably, Chlamydia cases steadily rose in the City and County.
- In 2011, 37% and 31% of new Chlamydia and Gonorrhea cases, respecti ely, were diagnosed in youth ages 10 to 19 years.

References: See Appendix K for descriptions of source data.

Annual Percentage of New STI Cases Occurring in Youth (10-24 years), 2011



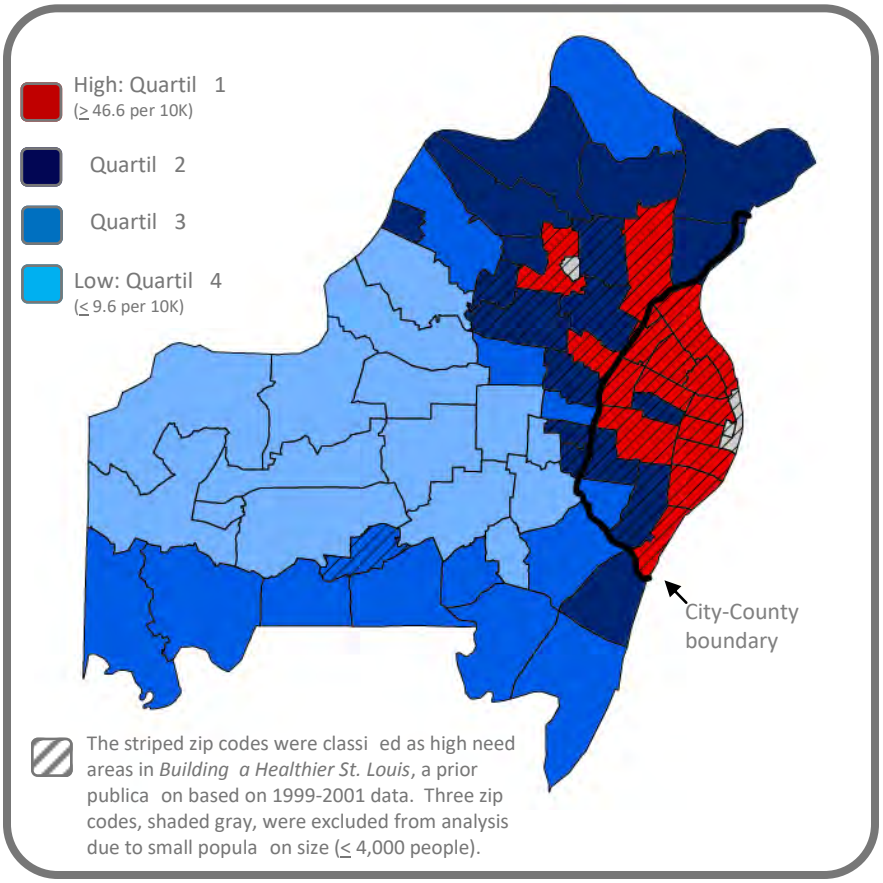
VIOLENCE & INJURY

In 2009, there were 206 homicides in the City and County, a 29% increase from 2000.

Public Health Impact

In the United States, over half of all deaths each year among individuals under 45 years of ages are a ributable to injury (including unintentional a d violence-related mortality). Violence and injury is also iden ed, both locally and na onally, as a leading cause of hospitaliza on and visits to the emergency room. Although violence and injury impact individuals of all ages, approximately 75% of all deaths among young people na onally are due to incidences of violence and injury. In the St. Louis region in 2009, 40% of all homicide deaths occurred among individuals under 25 years of age. In addi on to the public health burden, violence and injury are es mated to account for $406 billion in medical and work lost costs in the United States each year.

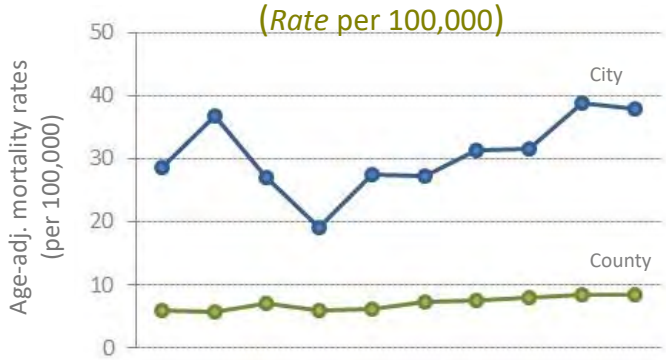
Rate of Victims of Violence* by Zip Code, 2000-09



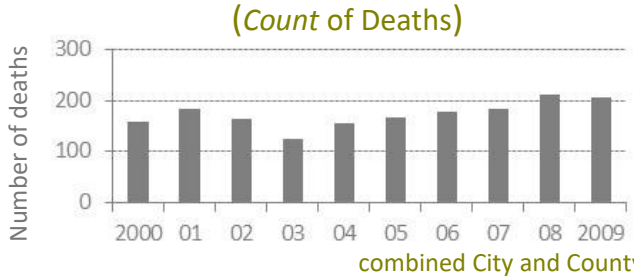
Refer to the Appendix J for hospitalization rates for all zip codes.

Homicide Deaths, 2000 to 2009

(*Rate* per 100,000)



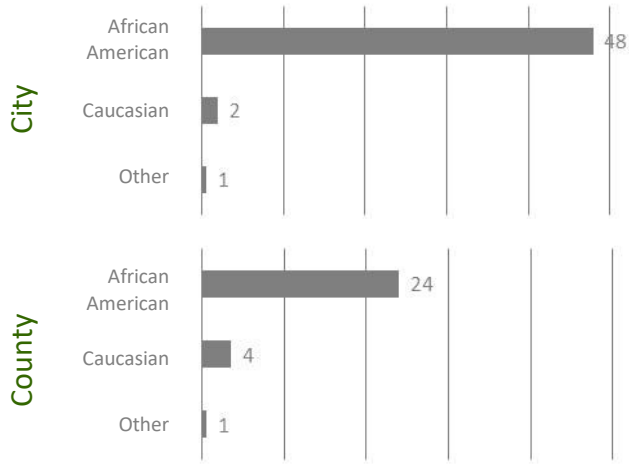
(*Count* of Deaths)



combined City and County

Count of Homicide Deaths Among Youths and Young Adults, 2008-09 (<25yo)

Average Number of Annual Homicide Deaths



*Vic ms of violence rate is a composite measure including rates of assault-related injury resul ng in death, hospitaliza on, or emergency room visit from 2000 to 2009.

DEFINED: Injury and violence encompass a broad array of topics, including uninten onal injuries such as falls and motor vehicle accidents, as well as inten onal injuries, or violent acts, such as assault and homicide.

Key Observations

- Between 2000 and 2009, homicides increased in the region. Among individuals under 25 years old, homicide deaths increased 7% during this me.
- The majority of zip codes with high rates of vic ms of violence were located in the City and North County.
- At an increase of 47%, rearm was the only injury category that increased substan ally between 2000-01 and 2008-09.
- In 2009, 26% and 36% of all ER visits were a ributable to injury and poisoning in the City and County, respecti ely.
- Racial di erences in ER visits and hospitaliza ons increased between 2000 and 2009 for rearm and abuse/neglect/rape.
- Motor vehicle injury rates fell for Whites and African Americans.

Change in Rate of Common Injuries, 2000-01 to 2008-09

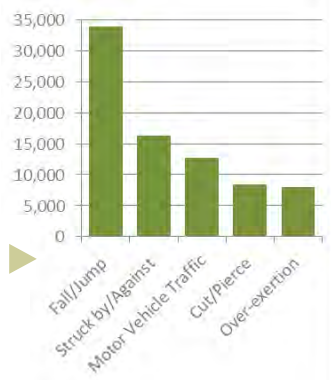
combined City and County

Increased (≥ 10%)	Firearm (+47%)
About the same	Poison/Overdose (+6.1%), Abuse/Neglect/Rape (+4.8%), Fall/Jump (-7.8%)
Decreased (≤ 10%)	Machinery (-51%), Cut/Pierce (-42%), Drowning (-35%), Over-exerti n (-32%), Struck By/Against (-32%), Motor Vehicle Tra c (-28%), Fire/Burn (-27%) Suff cate/Hanging (-27%), Motor Vehicle Tra c (-26%), Weather/Wildlife (-11%)

Distribu on of Common Injuries (Non-Fatal), 2008-09

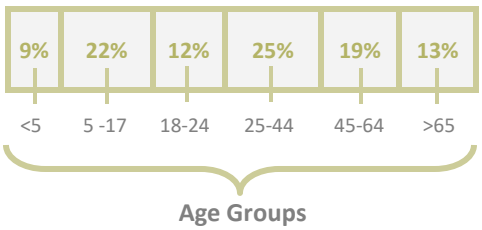
n = 93,202/year

These 5 categories comprise 85% of all non–fatal injuries, as measured by average annual emergency room visit or hospitalization.



Distribution of Injuries by Age (Non-Fatal), 2008-09

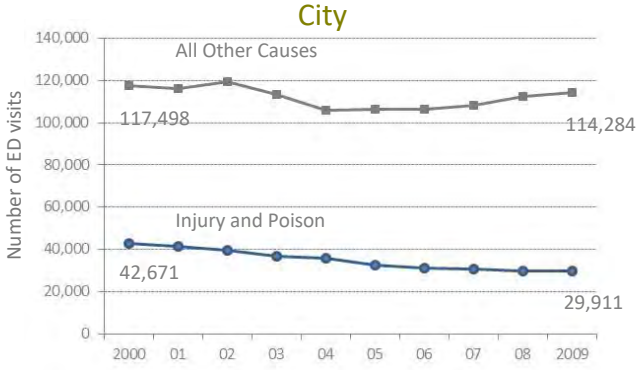
n = 93,202/year



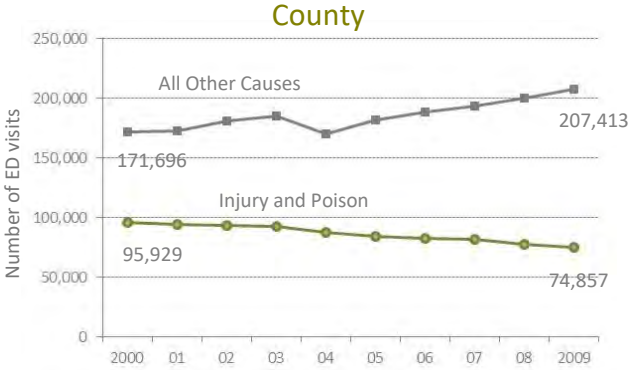
References: See Appendix K for descriptions of source data.

ER Visits for Injury and Poisoning, 2000 to 2009

City



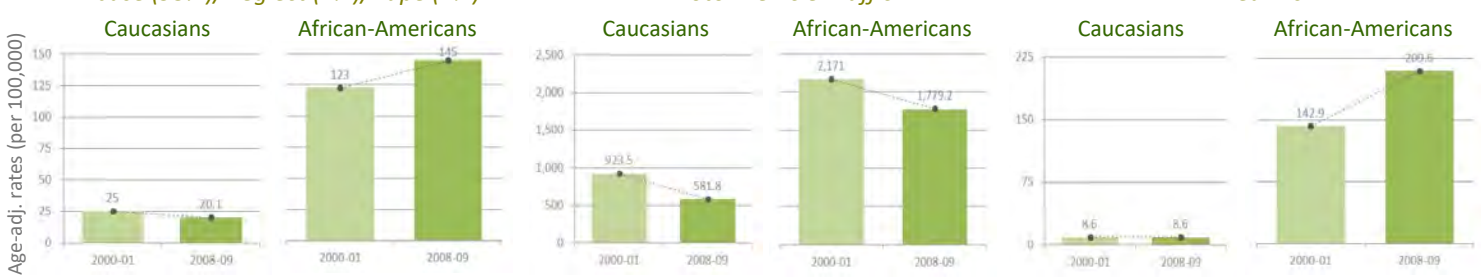
County



Health Disparities: R te of ER Visits and Hospitalizatio s for Common Injuries

combined City and County

Abuse (95%)/Neglect (1%)/Rape (4%) — *Motor Vehicle Traffic* — *Firearms*



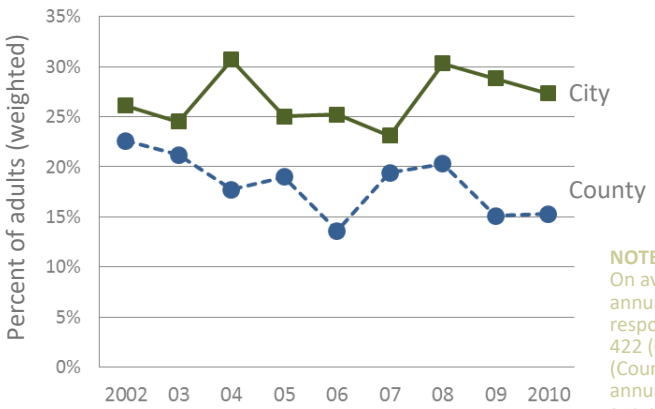
Although the region includes diverse racial and ethnic groups, valid public health surveillance data is limited to the comparison shown above.

MEDICAL RISK FACTORS

Public Health Impact

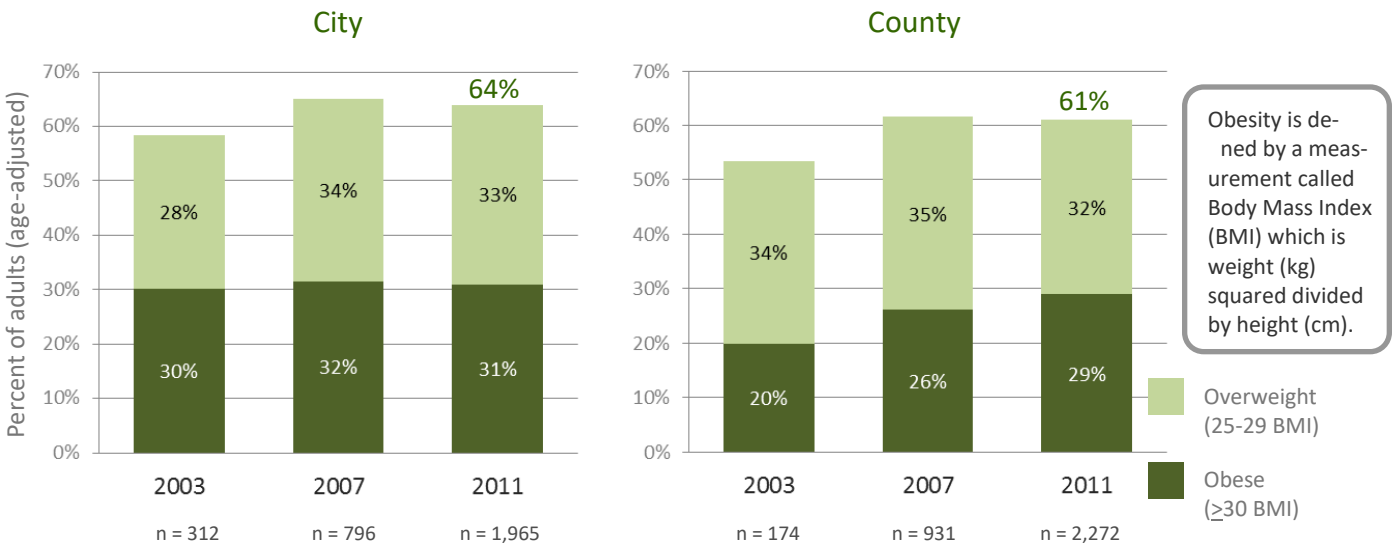
Factors such as tobacco use, obesity, and inac- ti ity are associated with increased risk of poor health and chronic diseases such as diabetes and heart disease. These factors are a major cause of preventable disease and premature death across the U.S as well as in the St. Louis area. In addi on to the health burden, it is es mated that medical issues a ributable to smoking and obesity combined are responsible for approximately $340 billion in annual health -related economic losses na onwide.

Tobacco Use: Current Smokers - Adults



NOTE: On average, the annual number of respondents was 422 (City) and 395. (County) for the annual telephone survey used to measure tobacco use.

Obese and Overweight Adults



Key Risk Factors and Health Behaviors of Adults

	City			County		
	2003	2007	2011	2003	2007	2011
High blood pressure (current)	22%	25%	35%	17%	18%	34%
Has diabetes	8.7%	8.9%	12%	7.6%	9.8%	11%
Had a heart a ack	- -	4.6%	5.0%	- -	3.7%	4.6%
High cholesterol	34%	34%	42%	35%	38%	42%
Ac vity limitatio	22%	24%	23%	16%	20%	22%
Less than 5 fruits veggies/day	- -	78%	88%	- -	74%	86%
No leisure me physical ac vity*	- -	31%	27%	- -	22%	20%
Lives with a smoker	31%	33%	24%	31%	23%	19%

* within the past 30 days

NOTE: Methodological improvements to the 2011 data collec on survey, which now includes mobile phones, does not permit direct comparison of 2011 results to prior years.

Key Observations

1. Approximately 31% and 29% of the City and County population respec vely, is obese.
2. In 2010, the percentage of the adult popula on that currently smokes was higher in the City (27%) versus County (15%).
3. The prevalence of both high cholesterol and high blood pres- sure among adults is esti ated to be greater than one in three in the region.

References: See Appendix K for descriptions of source data.

COMMONLY ASKED
QUESTIONS & ANSWERS

This section addresses common questions that were heard at the three community forums hosted by the RHC in October 2012 to solicit feedback on a preliminary dra of the report.

○ ○ ○

Q: *Why doesn't the report talk about the causes of or make interpretations about the observed trends?*

A: The purpose of *Decade Review of Health Status* is to provide an objecti e presenta on of data. In turn, the report does not investi ate or a empt to explain potenti l causes of the observed data. The RHC hopes the report s mulates community dialogue about the causes which aff ct both posi ve and nega ve trends observed in the data.

Q: *The report is missing recommendations to address poor health outcomes observed. Why?*

A: The purpose of *Decade Review of Health Status* is to provide an objecti e presenta on of data. In turn, the report does not include recommenda ons or statements of priority.

Q: *How were community members involved in the creation of the report?*

A: The RHC created a vigorous community engagement strategy for the development and review of *Decade Review of Health Status*. RHC Advisory Board members reviewed ongoing project progress and materials during monthly meeti gs. In addi on, the RHC hosted three open house style community forums to engage as many community members as possible in the review and validation of the data and key findings presented in the report prior to final release. More information about this community engagement process can be found in the "Purpose & Process" section of the report.

Q: *Are your rates in the report adjusted to account for population change? To account for differences in age? To account for changes in income?*

A: All county level rates in the report are adjusted for both popula on change and age. While all zip code rates are adjusted for popula on change, adjustment for age was not performed due to small counts and limited availability of age-standardiza on data. None of the rates presented in the report are adjusted for income.

Q: *Why are data trends for certain minority populations in the St. Louis region excluded?*

A: The St. Louis region is enriched by its ethnic and racial diversity. However, beyond broad comparisons of African Americans and Caucasians, measuring health status indicators by race, ethnicity, or county of origin is not possible today given the limita ons of available and valid public health surveillance data. Future local and state e orts are needed to remedy this de - ciency in community health status informa on.

Q: *Why is more behavioral health and substance abuse data not included?*

A: In comparison to many physical diseases, health behaviors, and medical risk factors, publi-cally-available data systems for tracking behavioral health and substance abuse are not as ro-bust and reliable. Future local and state efforts are needed to remedy this deficiency in data availability.

Q: *Why is information from other surrounding counties not included in the report?*

A: Beyond inclusion of state and na onal trends for comparison purposes, the geographic scope of this report is limited to St. Louis City and County, the service area of the RHC.

Q: *How were health indicators and disparity metrics selected for inclusion in the report?*

A: Health indicators and disparity metrics included in the report are limited to those recognized national y as leading causes of death and/or poor health outcomes and chief contributors to health care system costs. Indicators included were discussed and approved by RHC Commissioners, Advisory Boards, and Health Status Repor ng Task Force members at the beginning of the report's development.

Q: *The report lacks important information about the health status and health behaviors of adolescents. Why?*

A: Surveillance data on school age children, including adolescents, is very limited due to numerous challenges related to surveying or collectin data on youth. Future local and state e orts are needed to remedy this de ciency in data availability.

Q: *Why does the report use different terminology around race/ethnicity throughout the report?*

A: To the greatest extent possible, project sta remained true to the terminology used by each data reference source or sought to maintain consistency within sec ons of the report.

Q: *What is the RHC going to do with this information next?*

A: The RHC will disseminate this informa on, via community engagement and direct mailing, to a diverse stakeholder group throughout the St. Louis region inclusive of: community health organiza on and social service agency leadership; public health professionals; clinicians; health system managers and executiv s, government leaders, and university professors and researchers. In addi on, all informa on will be available electronically for download at www.stlrhc.org.

○ ○ ○

Findings from *Decade Review of Health Status* will serve as a data-driven pla orm to guide future RHC funding initi tiv s geared towards improving health care access, reducing health disparities, an im-proving health outcomes for the St. Louis City and County in the decade to come. Please contact the RHC to learn about opportuni es to engage in conversa on and ac on around the informa on presented in the report.

Appendix A.1

Population for St. Louis City and County by Zip Code
All Ages

Zip Code	Census 2000	Annual Estimates 01	02	03	04	05	06	07	08	09	Census 2010	Change Count	Change Percent
63005	16,674	16,782	16,890	16,998	17,106	17,214	17,321	17,429	17,537	17,645	17,753	1,079	6%
63011	38,100	37,925	37,749	37,574	37,399	37,224	37,048	36,873	36,698	36,522	36,347	-1,753	-5%
63017	42,716	42,591	42,467	42,342	42,218	42,093	41,968	41,844	41,719	41,595	41,470	-1,246	-3%
63021	54,560	54,730	54,900	55,070	55,240	55,411	55,581	55,751	55,921	56,091	56,261	1,701	3%
63025	11,046	11,327	11,608	11,888	12,169	12,450	12,731	13,012	13,292	13,573	13,854	2,808	25%
63026	41,383	41,657	41,931	42,205	42,479	42,754	43,028	43,302	43,576	43,850	44,124	2,741	7%
63031	50,013	49,833	49,653	49,473	49,293	49,113	48,932	48,752	48,572	48,392	48,212	-1,801	-4%
63033	45,574	45,317	45,059	44,802	44,544	44,287	44,030	43,772	43,515	43,257	43,000	-2,574	-6%
63034	16,803	16,899	16,995	17,090	17,186	17,282	17,378	17,474	17,569	17,665	17,761	958	6%
63038	5,066	5,251	5,436	5,620	5,805	5,990	6,175	6,360	6,544	6,729	6,914	1,848	36%
63040	8,300	8,321	8,342	8,364	8,385	8,406	8,427	8,448	8,470	8,491	8,512	212	3%
63042	19,162	19,206	19,250	19,294	19,338	19,382	19,426	19,470	19,514	19,558	19,602	440	2%
63043	22,401	22,398	22,394	22,391	22,387	22,384	22,381	22,377	22,374	22,370	22,367	-34	0%
63044	14,623	14,218	13,812	13,407	13,001	12,596	12,190	11,785	11,379	10,974	10,568	-4,055	-28%
63049	13,931	14,128	14,324	14,521	14,717	14,914	15,110	15,307	15,503	15,700	15,896	1,965	14%
63069	15,145	15,195	15,245	15,296	15,346	15,396	15,446	15,496	15,547	15,597	15,647	502	3%
63074	15,399	15,376	15,352	15,329	15,305	15,282	15,258	15,235	15,211	15,188	15,164	-235	-2%
63088	8,366	8,356	8,347	8,337	8,327	8,318	8,308	8,298	8,288	8,279	8,269	-97	-1%
63101	1,327	1,456	1,586	1,715	1,844	1,974	2,103	2,232	2,361	2,491	2,620	1,293	97%
63102	1,311	1,412	1,512	1,613	1,713	1,814	1,914	2,015	2,115	2,216	2,316	1,005	77%
63103	4,603	4,833	5,062	5,292	5,522	5,752	5,981	6,211	6,441	6,670	6,900	2,297	50%
63104	19,088	19,045	19,002	18,958	18,915	18,872	18,829	18,786	18,742	18,699	18,656	-432	-2%
63105	14,490	14,808	15,125	15,443	15,761	16,079	16,396	16,714	17,032	17,349	17,667	3,177	22%
63106	10,553	10,686	10,819	10,952	11,085	11,218	11,351	11,484	11,617	11,750	11,883	1,330	13%
63107	16,313	15,873	15,433	14,993	14,553	14,113	13,672	13,232	12,792	12,352	11,912	-4,401	-27%
63108	20,890	20,958	21,026	21,093	21,161	21,229	21,297	21,365	21,432	21,500	21,568	678	3%
63109	29,264	29,032	28,800	28,569	28,337	28,105	27,873	27,641	27,410	27,178	26,946	-2,318	-8%
63110	20,163	19,857	19,552	19,246	18,941	18,635	18,329	18,024	17,718	17,413	17,107	-3,056	-15%
63111	21,583	21,456	21,329	21,202	21,075	20,948	20,821	20,694	20,567	20,440	20,313	-1,270	-6%
63112	22,678	22,447	22,216	21,985	21,754	21,523	21,292	21,061	20,830	20,599	20,368	-2,310	-10%
63113	16,101	15,808	15,514	15,221	14,927	14,634	14,341	14,047	13,754	13,460	13,167	-2,934	-18%
63114	38,479	38,251	38,023	37,796	37,568	37,340	37,112	36,884	36,657	36,429	36,201	-2,278	-6%
63115	25,238	24,792	24,345	23,899	23,453	23,007	22,560	22,114	21,668	21,221	20,775	-4,463	-18%
63116	47,017	46,669	46,322	45,974	45,626	45,279	44,931	44,583	44,235	43,888	43,540	-3,477	-7%
63117	9,771	9,710	9,649	9,589	9,528	9,467	9,406	9,345	9,285	9,224	9,163	-608	-6%
63118	30,222	29,870	29,518	29,167	28,815	28,463	28,111	27,759	27,408	27,056	26,704	-3,518	-12%
63119	34,416	34,371	34,327	34,282	34,237	34,193	34,148	34,103	34,058	34,014	33,969	-447	-1%
63120	13,268	12,971	12,674	12,376	12,079	11,782	11,485	11,188	10,890	10,593	10,296	-2,972	-22%
63121	29,172	28,915	28,658	28,401	28,144	27,887	27,630	27,373	27,116	26,859	26,602	-2,570	-9%
63122	38,653	38,637	38,621	38,606	38,590	38,574	38,558	38,542	38,527	38,511	38,495	-158	0%
63123	49,680	49,643	49,606	49,568	49,531	49,494	49,457	49,420	49,382	49,345	49,308	-372	-1%
63124	9,819	9,879	9,939	9,998	10,058	10,118	10,178	10,238	10,297	10,357	10,417	598	6%
63125	33,150	33,055	32,960	32,865	32,770	32,676	32,581	32,486	32,391	32,296	32,201	-949	-3%
63126	15,386	15,359	15,331	15,304	15,276	15,249	15,222	15,194	15,167	15,139	15,112	-274	-2%
63127	4,852	4,861	4,869	4,878	4,887	4,896	4,904	4,913	4,922	4,930	4,939	87	2%
63128	29,122	29,145	29,169	29,192	29,216	29,239	29,262	29,286	29,309	29,333	29,356	234	1%
63129	51,191	51,344	51,496	51,649	51,802	51,955	52,107	52,260	52,413	52,565	52,718	1,527	3%
63130	34,424	33,990	33,556	33,122	32,688	32,254	31,820	31,386	30,952	30,518	30,084	-4,340	-13%
63131	16,396	16,433	16,471	16,508	16,545	16,583	16,620	16,657	16,694	16,732	16,769	373	2%
63132	13,731	13,757	13,782	13,808	13,834	13,860	13,885	13,911	13,937	13,962	13,988	257	2%
63133	8,693	8,640	8,587	8,533	8,480	8,427	8,374	8,321	8,267	8,214	8,161	-532	-6%
63134	14,982	14,848	14,713	14,579	14,444	14,310	14,176	14,041	13,907	13,772	13,638	-1,344	-9%
63135	21,532	21,512	21,492	21,473	21,453	21,433	21,413	21,393	21,374	21,354	21,334	-198	-1%
63136	53,604	53,100	52,595	52,091	51,586	51,082	50,578	50,073	49,569	49,064	48,560	-5,044	-9%
63137	21,217	21,161	21,104	21,048	20,992	20,936	20,879	20,823	20,767	20,710	20,654	-563	-3%
63138	21,879	21,709	21,538	21,368	21,197	21,027	20,857	20,686	20,516	20,345	20,175	-1,704	-8%
63139	24,364	24,207	24,049	23,892	23,734	23,577	23,419	23,262	23,104	22,947	22,789	-1,575	-6%
63140	789	740	690	641	591	542	492	443	393	344	294	-495	-63%
63141	20,025	20,082	20,139	20,195	20,252	20,309	20,366	20,423	20,479	20,536	20,593	568	3%
63143	10,978	10,848	10,718	10,588	10,458	10,328	10,198	10,068	9,938	9,808	9,678	-1,300	-12%
63144	9,072	9,047	9,023	8,998	8,973	8,949	8,924	8,899	8,874	8,850	8,825	-247	-3%
63146	29,760	29,710	29,660	29,611	29,561	29,511	29,461	29,411	29,362	29,312	29,262	-498	-2%
63147	13,190	13,008	12,827	12,645	12,463	12,282	12,100	11,918	11,736	11,555	11,373	-1,817	-14%

Area	Census 2000	Annual Estimates 01	02	03	04	05	06	07	08	09	Census 2010	Change Count	Change Percent
City	348,189	345,300	342,410	339,521	336,631	333,742	330,852	327,963	325,073	322,184	319,294	-28,895	-8%
County	1,016,315	1,014,579	1,012,843	1,011,107	1,009,371	1,007,635	1,005,898	1,004,162	1,002,426	1,000,690	998,954	-17,361	-2%
Region	1,364,504	1,359,878	1,355,253	1,350,627	1,346,002	1,341,376	1,336,750	1,332,125	1,327,499	1,322,874	1,318,248	-46,256	-3%
State of MO	5,595,211	5,634,583	5,673,954	5,713,326	5,752,697	5,792,069	5,831,441	5,870,812	5,910,184	5,949,555	5,988,927	393,716	7%

Notes:

The annual estimates are based on a average annual change anchored by actual results from the US Census 2000 and 2010
Since some zip codes overlap county-level boundaries, including adjacent Jefferson County, the sum of population counts by zip code does not equal regional totals.
The hatched square indicates a 'high need zip code' as identified in *Building a Healthier St. Louis.*

Appendix A.2

Population for St. Louis City and County by Zip Code
Under 5 Years Old

Zip Code	Census 2000	Annual Estimates 01	02	03	04	05	06	07	08	09	Census 2010	Change Count	Percent
63005	1,248	1,194	1,141	1,087	1,033	980	926	872	818	765	711	-537	-43%
63011	2,653	2,575	2,497	2,418	2,340	2,262	2,184	2,106	2,027	1,949	1,871	-782	-29%
63017	2,101	2,061	2,020	1,980	1,939	1,899	1,859	1,818	1,778	1,737	1,697	-404	-19%
63021	4,320	4,229	4,138	4,048	3,957	3,866	3,775	3,684	3,594	3,503	3,412	-908	-21%
63025	925	918	912	905	899	892	885	879	872	866	859	-66	-7%
63026	3,170	3,156	3,141	3,127	3,112	3,098	3,083	3,069	3,054	3,040	3,025	-145	-5%
63031	3,304	3,280	3,256	3,232	3,208	3,184	3,160	3,136	3,112	3,088	3,064	-240	-7%
63033	2,804	2,762	2,719	2,677	2,634	2,592	2,550	2,507	2,465	2,422	2,380	-424	-15%
63034	886	871	856	841	826	812	797	782	767	752	737	-149	-17%
63038	330	325	320	314	309	304	299	294	288	283	278	-52	-16%
63040	828	799	770	741	712	684	655	626	597	568	539	-289	-35%
63042	1,169	1,183	1,196	1,210	1,224	1,238	1,251	1,265	1,279	1,292	1,306	137	12%
63043	1,355	1,353	1,351	1,349	1,347	1,345	1,343	1,341	1,339	1,337	1,335	-20	-1%
63044	713	694	675	656	637	618	599	580	561	542	523	-190	-27%
63049	966	987	1,008	1,028	1,049	1,070	1,091	1,112	1,132	1,153	1,174	208	22%
63069	964	957	950	943	936	929	922	915	908	901	894	-70	-7%
▨ 63074	1,017	1,015	1,013	1,011	1,009	1,008	1,006	1,004	1,002	1,000	998	-19	-2%
▨ 63088	803	780	756	733	709	686	662	639	615	592	568	-235	-29%
▨ 63101	69	73	76	80	84	88	91	95	99	102	106	37	54%
▨ 63102	19	20	20	21	22	23	23	24	25	25	26	7	37%
▨ 63103	129	134	140	145	150	156	161	166	171	177	182	53	41%
▨ 63104	1,565	1,542	1,519	1,496	1,473	1,450	1,426	1,403	1,380	1,357	1,334	-231	-15%
63105	542	540	539	537	536	534	532	531	529	528	526	-16	-3%
▨ 63106	1,129	1,152	1,175	1,197	1,220	1,243	1,266	1,289	1,311	1,334	1,357	228	20%
▨ 63107	1,272	1,227	1,183	1,138	1,094	1,049	1,004	960	915	871	826	-446	-35%
▨ 63108	614	613	612	611	610	610	609	608	607	606	605	-9	-1%
63109	1,750	1,746	1,741	1,737	1,732	1,728	1,724	1,719	1,715	1,710	1,706	-44	-3%
▨ 63110	1,485	1,444	1,402	1,361	1,320	1,279	1,237	1,196	1,155	1,113	1,072	-413	-28%
▨ 63111	1,612	1,617	1,623	1,628	1,633	1,639	1,644	1,649	1,654	1,660	1,665	53	3%
▨ 63112	1,447	1,440	1,433	1,426	1,419	1,412	1,404	1,397	1,390	1,383	1,376	-71	-5%
▨ 63113	995	975	955	936	916	896	876	856	837	817	797	-198	-20%
▨ 63114	2,621	2,624	2,627	2,630	2,633	2,636	2,638	2,641	2,644	2,647	2,650	29	1%
▨ 63115	1,671	1,645	1,618	1,592	1,565	1,539	1,513	1,486	1,460	1,433	1,407	-264	-16%
▨ 63116	3,418	3,385	3,352	3,320	3,287	3,254	3,221	3,188	3,156	3,123	3,090	-328	-10%
▨ 63117	497	499	500	502	503	505	506	508	509	511	512	15	3%
▨ 63118	2,641	2,601	2,561	2,521	2,481	2,442	2,402	2,362	2,322	2,282	2,242	-399	-15%
63119	1,991	1,986	1,982	1,977	1,972	1,968	1,963	1,958	1,953	1,949	1,944	-47	-2%
▨ 63120	1,001	982	964	945	927	908	889	871	852	834	815	-186	-19%
▨ 63121	1,864	1,858	1,851	1,845	1,838	1,832	1,825	1,819	1,812	1,806	1,799	-65	-3%
63122	2,491	2,483	2,476	2,468	2,461	2,453	2,445	2,438	2,430	2,423	2,415	-76	-3%
63123	2,609	2,625	2,642	2,658	2,675	2,691	2,707	2,724	2,740	2,757	2,773	164	6%
63124	427	435	443	452	460	468	476	484	493	501	509	82	19%
63125	1,837	1,844	1,851	1,858	1,865	1,873	1,880	1,887	1,894	1,901	1,908	71	4%
63126	722	732	741	751	760	770	779	789	798	808	817	95	13%
63127	199	201	202	204	205	207	209	210	212	213	215	16	8%
63128	1,308	1,294	1,280	1,265	1,251	1,237	1,223	1,209	1,194	1,180	1,166	-142	-11%
63129	2,976	2,952	2,928	2,905	2,881	2,857	2,833	2,809	2,786	2,762	2,738	-238	-8%
▨ 63130	1,997	1,986	1,974	1,963	1,952	1,941	1,929	1,918	1,907	1,895	1,884	-113	-6%
63131	901	888	874	861	847	834	821	807	794	780	767	-134	-15%
63132	819	824	829	835	840	845	850	855	861	866	871	52	6%
▨ 63133	684	685	687	688	689	691	692	693	694	696	697	13	2%
▨ 63134	1,096	1,094	1,091	1,089	1,087	1,085	1,082	1,080	1,078	1,075	1,073	-23	-2%
▨ 63135	1,453	1,465	1,478	1,490	1,502	1,515	1,527	1,539	1,551	1,564	1,576	123	8%
▨ 63136	4,396	4,338	4,281	4,223	4,165	4,108	4,050	3,992	3,934	3,877	3,819	-577	-13%
▨ 63137	1,398	1,407	1,415	1,424	1,433	1,442	1,450	1,459	1,468	1,476	1,485	87	6%
63138	1,922	1,891	1,859	1,828	1,796	1,765	1,734	1,702	1,671	1,639	1,608	-314	-16%
▨ 63139	1,331	1,327	1,322	1,318	1,313	1,309	1,305	1,300	1,296	1,291	1,287	-44	-3%
63140	990	984	978	973	967	961	955	949	944	938	932	-58	-6%
63141	673	667	661	654	648	642	636	630	623	617	611	-62	-9%
▨ 63143	525	525	525	525	525	525	524	524	524	524	524	-1	0%
63144	1,530	1,529	1,528	1,528	1,527	1,526	1,525	1,524	1,524	1,523	1,522	-8	-1%
63146	753	746	739	732	725	718	711	704	697	690	683	-70	-9%
▨ 63147	6,694	6,623	6,551	6,480	6,408	6,337	6,265	6,194	6,122	6,051	5,980	-714	-11%

Area	Census 2000	Annual Estimates 01	02	03	04	05	06	07	08	09	Census 2010	Change Count	Percent
City	23,477	23,238	22,999	22,761	22,522	22,283	22,044	21,805	21,567	21,328	21,089	-2,388	-10%
County	63,851	63,327	62,802	62,278	61,753	61,229	60,704	60,180	59,655	59,131	58,606	-5,245	-8%
Region	87,328	86,565	85,801	85,038	84,275	83,512	82,748	81,985	81,222	80,458	79,695	-7,633	-9%
State of MO	369,898	371,932	373,966	376,000	378,034	380,068	382,101	384,135	386,169	388,203	390,237	20,339	5%

Notes:

The annual estimates are based on a average annual change anchored by actual results from the US Census 2000 and 2010
Since some zip codes overlap county-level boundaries, including adjacent Jefferson County, the sum of population counts by zip code does not equal regional totals.
▨ The hatched square indicates a 'high need zip code' as identified in *Building a Healthier St. Louis.*

Appendix B

Heart Disease
Hospitalization Rates for St. Louis City and County by Zip Code
All Ages

Zip Code	Count of Hospitalizations 2000-01	Count of Hospitalizations 2009-10	Annual Hospitalization Rate (per 10,000) 2000-01	Annual Hospitalization Rate (per 10,000) 2009-10	Change Difference	Change Percent
63005	224	283	67.2	79.7	12.5	19%
63011	1,218	1,117	159.8	153.7	(6.2)	-4%
63017	1,502	1,347	175.8	162.4	(13.4)	-8%
63021	1,023	1,150	93.8	102.2	8.5	9%
63025	281	354	127.2	127.8	0.6	0%
63026	1,126	1,158	136.0	131.2	(4.8)	-4%
63031	1,545	1,406	154.5	145.8	(8.6)	-6%
63033	1,679	1,559	184.2	181.3	(2.9)	-2%
63034	403	567	119.9	159.6	39.7	33%
63038	110	127	108.6	91.8	(16.7)	-15%
63040	130	129	78.3	75.8	(2.5)	-3%
63042	673	553	175.6	141.1	(34.6)	-20%
63043	655	671	146.2	150.0	3.8	3%
63044	631	476	215.8	225.2	9.5	4%
63049	424	473	152.2	148.8	(3.4)	-2%
63069	403	424	133.0	135.5	2.4	2%
63074	616	543	200.0	179.0	(21.0)	-10%
63088	227	260	135.7	157.2	21.5	16%
63101	126	66	-	-	-	-
63102	42	49	-	-	-	-
63103	366	262	397.6	189.9	(207.7)	-52%
63104	632	520	165.5	139.4	(26.2)	-16%
63105	362	329	124.9	93.1	(31.8)	-25%
63106	597	437	282.9	183.9	(99.0)	-35%
63107	696	587	213.3	246.4	33.1	15%
63108	920	664	220.2	153.9	(66.3)	-30%
63109	1,023	702	174.8	130.3	(44.5)	-25%
63110	628	502	155.7	146.7	(9.0)	-6%
63111	963	699	223.1	172.1	(51.0)	-23%
63112	942	844	207.7	207.2	(0.5)	0%
63113	759	719	235.7	273.0	37.3	16%
63114	1,368	1,255	177.8	173.3	(4.4)	-2%
63115	1,202	1,042	238.1	250.8	12.6	5%
63116	1,626	1,175	172.9	134.9	(38.0)	-22%
63117	302	247	154.5	134.8	(19.8)	-13%
63118	1,071	820	177.2	153.5	(23.7)	-13%
63119	1,168	1,002	169.7	147.5	(22.2)	-13%
63120	499	482	188.0	234.1	46.0	24%
63121	1,161	1,053	199.0	197.9	(1.1)	-1%
63122	1,304	1,073	168.7	139.4	(29.3)	-17%
63123	1,947	1,553	196.0	157.5	(38.5)	-20%
63124	463	344	235.8	165.1	(70.7)	-30%
63125	1,540	1,259	232.3	195.5	(36.8)	-16%
63126	660	464	214.5	153.5	(61.0)	-28%
63127	288	219	296.8	221.7	(75.1)	-25%
63128	1,169	1,030	200.7	175.4	(25.3)	-13%
63129	1,415	1,436	138.2	136.2	(2.0)	-1%
63130	988	815	143.5	135.5	(8.1)	-6%
63131	549	412	167.4	122.8	(44.6)	-27%
63132	463	411	168.6	146.9	(21.7)	-13%
63133	386	437	222.0	267.7	45.7	21%
63134	568	594	189.6	217.8	28.2	15%
63135	764	726	177.4	170.2	(7.3)	-4%
63136	1,944	1,897	181.3	195.3	14.0	8%
63137	823	676	193.9	163.6	(30.3)	-16%
63138	689	653	157.5	161.8	4.4	3%
63139	866	578	177.7	126.8	(50.9)	-29%
63140	24	15	-	-	-	-
63141	738	589	184.3	143.0	(41.3)	-22%
63143	316	224	143.9	115.7	(28.2)	-20%
63144	269	180	148.3	102.0	(46.3)	-31%
63146	1,070	910	179.8	155.5	(24.3)	-14%
63147	485	537	183.9	236.1	52.2	28%
Median			176.5	153.8		
Mean			179.1	161.9		

Notes:

Count of hospitalization includes a two-year period of time.
Hospitalization rates are based on zip code of residence, not location of the medical service.
Hospitalization rates are presented as an annualized estimate for each two-year period.
Three zip codes are too small (≤ 4,000 residents) to report hospitalization rates.
The hatched square indicates a 'high need zip code' as identified in *Building a Healthier St. Louis.*

Appendix C

Diabetes
Hospitalization Rates for St. Louis City and County by Zip Code
All Ages

Zip Code	Count of Hospitalizations 2000-01	Count of Hospitalizations 2009-10	Annual Hospitalization Rate (per 10,000) 2000-01	Annual Hospitalization Rate (per 10,000) 2009-10	Change Difference	Change Percent
63005	12	15	3.6	4.2	0.6	17%
63011	87	83	11.4	11.4	0.0	0%
63017	64	98	7.5	11.8	4.3	58%
63021	70	104	6.4	9.2	2.8	44%
63025	15	26	6.8	9.4	2.6	38%
63026	90	104	10.9	11.8	0.9	8%
63031	137	177	13.7	18.4	4.7	34%
63033	189	292	20.7	34.0	13.2	64%
63034	38	74	11.3	20.8	9.5	84%
63038	11	14	10.9	10.1	(0.7)	-7%
63040	6	13	3.6	7.6	4.0	111%
63042	57	106	14.9	27.0	12.2	82%
63043	60	75	13.4	16.8	3.4	25%
63044	51	47	17.4	22.2	4.8	28%
63049	50	53	17.9	16.7	(1.3)	-7%
63069	31	31	10.2	9.9	(0.3)	-3%
63074	53	87	17.2	28.7	11.5	67%
63088	31	27	18.5	16.3	(2.2)	-12%
63101	20	11	-	-	-	-
63102	2	16	-	-	-	-
63103	64	47	69.5	34.1	(35.5)	-51%
63104	115	74	30.1	19.8	(10.3)	-34%
63105	28	17	9.7	4.8	(4.9)	-50%
63106	126	116	59.7	48.8	(10.9)	-18%
63107	149	193	45.7	81.0	35.3	77%
63108	132	123	31.6	28.5	(3.1)	-10%
63109	102	74	17.4	13.7	(3.7)	-21%
63110	102	106	25.3	31.0	5.7	22%
63111	122	134	28.3	33.0	4.7	17%
63112	201	163	44.3	40.0	(4.3)	-10%
63113	198	174	61.5	66.1	4.6	7%
63114	109	216	14.2	29.8	15.7	111%
63115	205	250	40.6	60.2	19.6	48%
63116	172	186	18.3	21.4	3.1	17%
63117	36	21	18.4	11.5	(7.0)	-38%
63118	203	196	33.6	36.7	3.1	9%
63119	97	81	14.1	11.9	(2.2)	-15%
63120	102	115	38.4	55.8	17.4	45%
63121	196	270	33.6	50.7	17.2	51%
63122	61	78	7.9	10.1	2.2	28%
63123	153	122	15.4	12.4	(3.0)	-20%
63124	23	19	11.7	9.1	(2.6)	-22%
63125	91	139	13.7	21.6	7.9	57%
63126	31	35	10.1	11.6	1.5	15%
63127	14	7	14.4	7.1	(7.3)	-51%
63128	82	64	14.1	10.9	(3.2)	-23%
63129	115	103	11.2	9.8	(1.5)	-13%
63130	109	170	15.8	28.3	12.4	78%
63131	43	24	13.1	7.2	(6.0)	-45%
63132	46	58	16.8	20.7	4.0	24%
63133	88	80	50.6	49.0	(1.6)	-3%
63134	74	149	24.7	54.6	29.9	121%
63135	112	172	26.0	40.3	14.3	55%
63136	339	470	31.6	48.4	16.8	53%
63137	122	141	28.8	34.1	5.4	19%
63138	83	149	19.0	36.9	18.0	95%
63139	111	70	22.8	15.4	(7.4)	-33%
63140	-	3	-	-	-	-
63141	32	34	8.0	8.3	0.3	3%
63143	46	35	21.0	18.1	(2.9)	-14%
63144	20	16	11.0	9.1	(2.0)	-18%
63146	70	74	11.8	12.6	0.9	8%
63147	142	97	53.8	42.6	(11.2)	-21%
Median			17.0	19.1		
Mean			21.7	24.7		

Notes:

Count of hospitalization includes a two-year period of time.
Hospitalization rates are based on zip code of residence, not location of the medical service.
Hospitalization rates are presented as an annualized estimate for each two-year period.
Three zip codes are too small (≤ 4,000 residents) to report hospitalization rates.
The hatched square indicates a 'high need zip code' as identified in *Building a Healthier St. Louis.*

Appendix D

Stroke
Hospitalization Rates for St. Louis City and County by Zip Code
All Ages

Zip Code	Count of Hospitalizations 2000-01	Count of Hospitalizations 2009-10	Annual Hospitalization Rate (per 10,000) 2000-01	Annual Hospitalization Rate (per 10,000) 2009-10	Change Difference	Change Percent
63005	40	56	12.0	15.8	3.8	31%
63011	224	242	29.4	33.3	3.9	13%
63017	334	334	39.1	40.3	1.2	3%
63021	185	260	17.0	23.1	6.2	36%
63025	57	60	25.8	21.7	(4.1)	-16%
63026	199	270	24.0	30.6	6.6	27%
63031	351	321	35.1	33.3	(1.8)	-5%
63033	331	393	36.3	45.7	9.4	26%
63034	90	126	26.8	35.5	8.7	32%
63038	21	24	20.7	17.4	(3.4)	-16%
63040	21	29	12.7	17.0	4.4	35%
63042	120	141	31.3	36.0	4.7	15%
63043	118	175	26.3	39.1	12.8	49%
63044	144	110	49.2	52.0	2.8	6%
63049	61	111	21.9	34.9	13.0	59%
63069	75	81	24.8	25.9	1.1	5%
63074	123	114	39.9	37.6	(2.3)	-6%
63088	52	59	31.1	35.7	4.6	15%
63101	27	21	-	-	-	-
63102	7	9	-	-	-	-
63103	54	35	58.7	25.4	(33.3)	-57%
63104	146	92	38.2	24.7	(13.6)	-36%
63105	86	73	29.7	20.7	(9.0)	-30%
63106	91	96	43.1	40.4	(2.7)	-6%
63107	161	148	49.3	62.1	12.8	26%
63108	154	151	36.9	35.0	(1.9)	-5%
63109	201	174	34.3	32.3	(2.1)	-6%
63110	136	110	33.7	32.2	(1.6)	-5%
63111	176	143	40.8	35.2	(5.6)	-14%
63112	195	161	43.0	39.5	(3.5)	-8%
63113	194	172	60.2	65.3	5.1	8%
63114	285	284	37.0	39.2	2.2	6%
63115	228	255	45.2	61.4	16.2	36%
63116	368	299	39.1	34.3	(4.8)	-12%
63117	78	56	39.9	30.6	(9.4)	-23%
63118	226	141	37.4	26.4	(11.0)	-29%
63119	317	261	46.1	38.4	(7.6)	-17%
63120	109	136	41.1	66.0	25.0	61%
63121	245	242	42.0	45.5	3.5	8%
63122	282	272	36.5	35.3	(1.1)	-3%
63123	465	379	46.8	38.4	(8.4)	-18%
63124	109	77	55.5	37.0	(18.5)	-33%
63125	301	273	45.4	42.4	(3.0)	-7%
63126	136	115	44.2	38.0	(6.1)	-14%
63127	61	63	62.9	63.8	0.9	1%
63128	271	251	46.5	42.8	(3.8)	-8%
63129	280	316	27.3	30.0	2.6	10%
63130	210	191	30.5	31.7	1.2	4%
63131	112	100	34.2	29.8	(4.3)	-13%
63132	98	104	35.7	37.2	1.5	4%
63133	70	107	40.3	65.6	25.3	63%
63134	119	134	39.7	49.1	9.4	24%
63135	136	179	31.6	42.0	10.4	33%
63136	398	467	37.1	48.1	11.0	30%
63137	170	167	40.1	40.4	0.4	1%
63138	151	140	34.5	34.7	0.2	1%
63139	192	156	39.4	34.2	(5.2)	-13%
63140	1	1	-	-	-	-
63141	124	117	31.0	28.4	(2.6)	-8%
63143	53	68	24.1	35.1	11.0	46%
63144	60	35	33.1	19.8	(13.2)	-40%
63146	213	194	35.8	33.1	(2.6)	-7%
63147	159	133	60.3	58.5	(1.8)	-3%
Median			36.9	35.4		
Mean			36.9	37.4		

Notes:

Count of hospitalization includes a two-year period of time.
Hospitalization rates are based on zip code of residence, not location of the medical service.
Hospitalization rates are presented as an annualized estimate for each two-year period.
Three zip codes are too small (≤ 4,000 residents) to report hospitalization rates.
The hatched square indicates a 'high need zip code' as identified in *Building a Healthier St. Louis.*

Appendix E

Chronic Pulmonary Obstructive Disorder (COPD)
Hospitalization Rates for St. Louis City and County by Zip Code
All Ages

		Count of Hospitalizations		Annual Hospitalization Rate (per 10,000)		Change	
	Zip Code	2000-01	2009-10	2000-01	2009-10	Difference	Percent
	63005	13	17	3.9	4.8	0.9	23%
	63011	55	82	7.2	11.3	4.1	56%
	63017	79	100	9.2	12.1	2.8	30%
	63021	74	93	6.8	8.3	1.5	22%
	63025	27	23	12.2	8.3	(3.9)	-32%
	63026	89	150	10.8	17.0	6.2	58%
	63031	155	192	15.5	19.9	4.4	28%
	63033	179	159	19.6	18.5	(1.2)	-6%
	63034	36	54	10.7	15.2	4.5	42%
	63038	10	11	9.9	8.0	(1.9)	-19%
	63040	3	9	1.8	5.3	3.5	193%
	63042	80	98	20.9	25.0	4.1	20%
	63043	64	86	14.3	19.2	4.9	35%
	63044	58	68	19.8	32.2	12.3	62%
	63049	41	54	14.7	17.0	2.3	15%
	63069	50	64	16.5	20.5	3.9	24%
▨	63074	85	113	27.6	37.3	9.7	35%
▨	63088	23	35	13.7	21.2	7.4	54%
▨	63101	15	9	-	-	-	-
▨	63102	4	3	-	-	-	-
▨	63103	42	28	45.6	20.3	(25.3)	-56%
▨	63104	98	68	25.7	18.2	(7.4)	-29%
	63105	37	25	12.8	7.1	(5.7)	-45%
▨	63106	70	109	33.2	45.9	12.7	38%
▨	63107	85	86	26.1	36.1	10.0	39%
▨	63108	105	114	25.1	26.4	1.3	5%
	63109	110	67	18.8	12.4	(6.4)	-34%
▨	63110	59	53	14.6	15.5	0.9	6%
▨	63111	122	128	28.3	31.5	3.2	11%
▨	63112	80	128	17.6	31.4	13.8	78%
▨	63113	105	105	32.6	39.9	7.3	22%
▨	63114	179	222	23.3	30.7	7.4	32%
▨	63115	102	139	20.2	33.5	13.2	66%
▨	63116	133	178	14.1	20.4	6.3	45%
▨	63117	22	25	11.3	13.6	2.4	21%
▨	63118	156	130	25.8	24.3	(1.5)	-6%
	63119	77	91	11.2	13.4	2.2	20%
▨	63120	69	47	26.0	22.8	(3.2)	-12%
▨	63121	96	148	16.5	27.8	11.4	69%
	63122	87	87	11.3	11.3	0.0	0%
	63123	183	152	18.4	15.4	(3.0)	-16%
	63124	35	37	17.8	17.8	(0.1)	0%
	63125	175	165	26.4	25.6	(0.8)	-3%
	63126	43	38	14.0	12.6	(1.4)	-10%
	63127	24	14	24.7	14.2	(10.6)	-43%
	63128	91	99	15.6	16.9	1.2	8%
	63129	131	116	12.8	11.0	(1.8)	-14%
▨	63130	51	61	7.4	10.1	2.7	37%
	63131	24	43	7.3	12.8	5.5	75%
	63132	36	44	13.1	15.7	2.6	20%
▨	63133	45	59	25.9	36.1	10.3	40%
▨	63134	66	80	22.0	29.3	7.3	33%
▨	63135	63	74	14.6	17.3	2.7	19%
▨	63136	172	241	16.0	24.8	8.8	55%
▨	63137	102	79	24.0	19.1	(4.9)	-20%
	63138	74	81	16.9	20.1	3.2	19%
▨	63139	109	90	22.4	19.7	(2.6)	-12%
	63140	1	2	-	-	-	-
	63141	41	36	10.2	8.7	(1.5)	-15%
▨	63143	34	26	15.5	13.4	(2.1)	-13%
	63144	21	14	11.6	7.9	(3.6)	-31%
	63146	101	97	17.0	16.6	(0.4)	-2%
▨	63147	44	54	16.7	23.7	7.1	42%
	Median			16.2	18.0		
	Mean			17.4	19.5		

Notes:

Count of hospitalization includes a two-year period of time.
Hospitalization rates are based on zip code of residence, not location of the medical service.
Hospitalization rates are presented as an annualized estimate for each two-year period.
Three zip codes are too small (≤ 4,000 residents) to report hospitalization rates.
▨ The hatched square indicates a 'high need zip code' as identified in *Building a Healthier St. Louis.*

Appendix F.1

Breast Cancer
Mortality Rates for St. Louis City and County by Zip Code
Females Only

Zip Code	Count of Deaths 2000-01	2002-03	2004-05	2006-07	2008-09	Female Population 2008	Annual Mortality Rate (per 10K Females) 2008-09
63005	5	4	2	4	3	8,766	1.7
63011	14	7	10	14	14	19,093	3.7
63017	22	18	17	16	21	21,992	4.8
63021	7	8	20	20	12	28,908	2.1
63025	2	4	8	7	5	6,680	3.7
63026	17	7	12	3	9	22,095	2.0
63031	12	15	23	17	23	25,662	4.5
63033	22	22	23	9	11	23,515	2.3
63034	7	10	3	8	2	9,176	1.1
63038	1	1	-	1	2	3,216	3.1
63040	3	-	1	1	3	4,334	3.5
63042	7	6	7	4	1	10,312	0.5
63043	5	12	7	6	7	11,437	3.1
63044	2	8	4	5	11	6,016	9.1
63049	3	2	4	3	4	7,747	2.6
63069	6	5	6	7	4	7,293	2.7
63074	7	12	4	5	3	7,949	1.9
63088	3	4	6	2	4	4,392	4.6
63101	-	1	-	-	1	1,072	-
63102	1	-	-	1	1	509	-
63103	2	-	-	2	1	2,998	1.7
63104	5	5	5	2	2	9,551	1.0
63105	7	4	1	3	5	8,424	3.0
63106	3	4	8	3	3	6,809	2.2
63107	7	9	6	2	4	6,900	2.9
63108	6	7	5	10	6	11,024	2.7
63109	13	14	8	9	4	14,566	1.4
63110	6	2	6	6	1	9,288	0.5
63111	4	5	10	5	7	10,605	3.3
63112	12	11	8	8	8	11,182	3.6
63113	10	9	7	7	9	7,256	6.2
63114	16	9	10	13	9	18,827	2.4
63115	15	10	14	10	10	11,953	4.2
63116	11	7	11	17	14	22,515	3.1
63117	1	-	3	4	6	4,936	6.1
63118	6	6	9	5	7	13,979	2.5
63119	17	19	12	18	18	18,216	4.9
63120	3	4	8	6	7	5,875	6.0
63121	5	18	14	16	11	14,972	3.7
63122	9	16	20	20	13	20,685	3.1
63123	31	16	23	14	15	25,907	2.9
63124	4	6	4	4	5	5,497	4.5
63125	7	13	11	14	18	16,851	5.3
63126	8	4	3	7	5	7,994	3.1
63127	5	4	1	2	3	2,609	5.7
63128	17	18	18	15	11	15,407	3.6
63129	20	14	16	15	6	26,974	1.1
63130	13	17	16	14	12	16,360	3.7
63131	6	5	5	11	7	8,600	4.1
63132	8	4	8	6	4	7,422	2.7
63133	5	2	2	2	4	4,540	4.4
63134	4	8	5	6	7	7,517	4.7
63135	9	7	6	7	5	11,542	2.2
63136	15	12	21	20	16	27,728	2.9
63137	10	6	10	8	3	11,233	1.3
63138	4	6	11	5	5	11,232	2.2
63139	7	10	9	4	10	11,641	4.3
63140	-	1	2	-	-	210	-
63141	10	6	13	6	11	10,695	5.1
63143	3	3	8	1	2	4,931	2.0
63144	-	3	4	1	1	4,759	1.1
63146	9	7	8	11	10	15,613	3.2
63147	4	7	-	1	6	5,980	5.0
Median							3.1
Mean							3.3

Notes:

Count of deaths includes a two-year period of time.
Mortality rates are based on zip code of residence, not location of the medical service.
Mortality rates are presented as an annualized estimate for each two-year period. They are not age-adjusted.
Three zip codes are too small (≤ 4,000 residents) to report mortality rates.
The hatched square indicates a 'high need zip code' as identified in *Building a Healthier St. Louis.*

Appendix F.2

Prostate Cancer
Mortality Rates for St. Louis City and County by Zip Code
Males Only

Zip Code	Count of Deaths 2000-01	2002-03	2004-05	2006-07	2008-09	Male Population 2008	Annual Mortality Rate (per 10K Males) 2008-09
63005	1	1	4	2	2	8,771	1.1
63011	2	2	6	1	6	18,852	1.6
63017	5	12	5	13	11	21,510	2.6
63021	6	6	3	4	11	27,013	2.0
63025	1	3	1	2	2	6,612	1.5
63026	7	2	4	3	8	21,480	1.9
63031	13	22	7	9	10	22,911	2.2
63033	15	7	13	8	9	20,000	2.3
63034	3	3	2	-	-	8,394	0.0
63038	1	-	-	2	-	3,328	0.0
63040	-	-	1	-	-	4,135	0.0
63042	2	3	1	2	3	9,202	1.6
63043	3	5	1	1	2	10,937	0.9
63044	6	-	2	4	-	5,363	0.0
63049	4	2	1	2	-	7,756	0.0
63069	2	1	-	3	4	8,254	2.4
63074	2	2	2	2	1	7,262	0.7
63088	-	-	1	-	-	3,896	0.0
63101	-	-	1	-	-	1,289	-
63102	-	-	-	-	-	1,606	-
63103	1	2	3	1	-	3,442	0.0
63104	3	4	4	4	3	9,192	1.6
63105	6	1	1	2	2	8,608	1.2
63106	3	-	4	2	5	4,808	5.2
63107	6	7	5	3	2	5,892	1.7
63108	5	3	6	3	7	10,408	3.4
63109	7	4	5	2	3	12,844	1.2
63110	4	3	3	-	3	8,430	1.8
63111	5	2	2	7	5	9,962	2.5
63112	4	7	9	12	4	9,648	2.1
63113	11	10	9	10	3	6,497	2.3
63114	6	1	2	5	8	17,829	2.2
63115	9	12	8	10	11	9,715	5.7
63116	13	2	7	4	6	21,720	1.4
63117	4	2	4	1	-	4,349	0.0
63118	2	5	3	5	4	13,428	1.5
63119	14	9	15	6	8	15,842	2.5
63120	5	3	5	4	3	5,015	3.0
63121	9	6	4	16	10	12,144	4.1
63122	11	9	4	4	14	17,842	3.9
63123	14	5	8	13	10	23,475	2.1
63124	7	3	7	3	3	4,800	3.1
63125	6	9	5	5	6	15,540	1.9
63126	5	4	5	8	6	7,173	4.2
63127	-	2	3	1	2	2,312	4.3
63128	11	6	5	4	8	13,902	2.9
63129	6	7	5	6	9	25,439	1.8
63130	4	6	4	7	5	14,592	1.7
63131	3	4	2	9	6	8,094	3.7
63132	5	2	1	2	3	6,515	2.3
63133	2	3	4	1	4	3,727	5.4
63134	2	6	2	1	1	6,390	0.8
63135	7	1	3	4	5	9,832	2.5
63136	11	9	12	11	11	21,841	2.5
63137	2	2	6	3	4	9,534	2.1
63138	2	4	3	7	5	9,283	2.7
63139	7	2	5	3	4	11,463	1.7
63140	-	1	-	-	-	183	-
63141	9	10	2	4	6	9,785	3.1
63143	2	2	1	-	-	5,007	0.0
63144	2	3	-	-	-	4,115	0.0
63146	3	4	5	9	7	13,749	2.5
63147	6	3	4	5	4	5,757	3.5
Median							2.1
Mean							2.0

Notes:

Count of deaths includes a two-year period of time.
Mortality rates are based on zip code of residence, not location of the medical service.
Mortality rates are presented as an annualized estimate for each two-year period. They are not age-adjusted.
Three zip codes are too small (≤ 4,000 residents) to report mortality rates.
The hatched square indicates a 'high need zip code' as identified in *Building a Healthier St. Louis.*

Appendix G

Childhood Asthma
Acute Care Rates for St. Louis City and County by Zip Code
Under 15 Years Old

Zip Code	Count of Visits 2000-01 ED	Hospital	Total	Count of Visits 2008-09 ED	Hospital	Total	Acute Care Rate (per 1,000 Children <15 yo) 2000-01	2008-09	% Change Rate
63005	36	9	45	26	4	30	4.9	3.5	-28%
63011	55	10	65	49	13	62	3.8	4.2	10%
63017	51	12	63	44	20	64	4.0	4.6	14%
63021	114	19	133	86	29	115	5.0	4.8	-4%
63025	29	11	40	22	4	26	7.0	4.1	-40%
63026	129	21	150	128	30	158	7.5	8.2	9%
63031	205	34	239	280	46	326	11.1	16.7	50%
63033	359	53	412	429	72	501	21.5	29.6	37%
63034	81	12	93	112	23	135	13.0	21.4	65%
63038	6	1	7	7	2	9	2.7	3.1	15%
63040	11	1	12	10	2	12	2.5	2.6	6%
63042	104	23	127	162	31	193	17.2	26.4	54%
63043	43	14	57	47	11	58	6.8	7.5	9%
63044	39	11	50	44	12	56	13.6	17.0	25%
63049	39	7	46	64	15	79	7.2	12.3	71%
63069	31	6	37	34	9	43	5.8	7.4	26%
63074	75	14	89	130	42	172	15.5	30.0	94%
63088	24	6	30	23	4	27	8.2	8.4	3%
63101	22	6	28	9	1	10	-	-	-
63102	2	-	2	3	1	4	-	-	-
63103	37	2	39	33	6	39	60.6	57.2	-6%
63104	371	65	436	295	46	341	48.1	47.8	-1%
63105	18	4	22	17	4	21	5.0	5.0	-1%
63106	385	93	478	353	75	428	68.6	58.4	-15%
63107	348	89	437	295	68	363	47.0	61.5	31%
63108	127	31	158	112	28	140	39.2	43.1	10%
63109	73	12	85	56	17	73	8.9	8.8	-1%
63110	406	60	466	180	30	210	47.0	33.5	-29%
63111	253	40	293	300	54	354	30.7	45.7	49%
63112	449	102	551	283	83	366	55.7	46.0	-17%
63113	351	74	425	271	62	333	54.7	58.5	7%
63114	342	56	398	299	76	375	24.1	25.5	6%
63115	508	115	623	384	104	488	52.8	54.3	3%
63116	389	74	463	331	57	388	23.5	23.9	2%
63117	37	10	47	29	8	37	15.2	13.1	-13%
63118	651	130	781	451	67	518	45.4	39.6	-13%
63119	92	14	106	64	20	84	8.2	6.8	-17%
63120	298	58	356	181	42	223	47.1	42.0	-11%
63121	518	103	621	407	89	496	48.4	46.5	-4%
63122	86	9	95	107	28	135	6.2	8.7	40%
63123	109	20	129	161	25	186	7.6	11.7	54%
63124	16	5	21	18	2	20	6.1	5.2	-15%
63125	153	18	171	105	18	123	14.4	11.2	-22%
63126	28	-	28	28	4	32	5.5	6.2	14%
63127	14	2	16	4	2	6	9.9	3.8	-61%
63128	47	8	55	68	9	77	5.7	8.5	50%
63129	120	27	147	139	21	160	6.9	8.4	21%
63130	310	59	369	204	41	245	30.2	23.4	-23%
63131	32	1	33	22	5	27	4.8	4.0	-16%
63132	88	18	106	105	33	138	20.0	25.1	25%
63133	191	43	234	209	46	255	50.7	60.0	18%
63134	286	35	321	285	43	328	41.8	48.6	16%
63135	266	46	312	337	47	384	28.2	38.9	38%
63136	1,117	176	1,293	924	179	1,103	44.5	46.1	4%
63137	325	78	403	329	60	389	40.3	40.0	-1%
63138	366	56	422	342	59	401	39.6	40.4	2%
63139	63	13	76	46	16	62	10.3	10.2	-1%
63140	13	4	17	16	3	19	-	-	-
63141	32	7	39	23	8	31	4.9	4.4	-10%
63143	54	10	64	55	7	62	19.2	21.3	11%
63144	9	2	11	13	4	17	4.3	6.3	48%
63146	56	16	72	78	19	97	7.9	10.9	39%
63147	229	60	289	168	38	206	51.3	46.6	-9%
Median							14.0	16.8	
Mean							22.5	23.6	

Notes:

ED (Emergency Department)
ED visits that result in an admission to the hospital are coded as a hospitalization.
Count of cases includes a two-year period of time.
Rates are based on zip code of residence, not location of the medical service.
Rates are presented as an annualized estimate for each two-year period. They are not age-adjusted.
Three zip codes are too small (≤ 4,000 residents) to report acute care rates.
The hatched square indicates a 'high need zip code' as identified in *Building a Healthier St. Louis.*

Appendix H

Behavioral Health
Acute Care Rates for St. Louis City and County by Zip Code
All Ages

Zip Code	Count of Visits 2000-01 ED	Hospital	Total	Count of Visits 2008-09 ED	Hospital	Total	Acute Care Rate (per 10K pop) 2000-01	2008-09	% Change Rate
63005	73	147	220	130	163	293	66.0	83.5	27%
63011	294	608	902	453	644	1,097	118.4	149.5	26%
63017	345	716	1,061	462	583	1,045	124.2	125.2	1%
63021	426	754	1,180	702	832	1,534	108.1	137.2	27%
63025	134	279	413	140	193	333	186.9	125.3	-33%
63026	432	854	1,286	724	1,021	1,745	155.4	200.2	29%
63031	688	1,138	1,826	796	1,230	2,026	182.6	208.6	14%
63033	635	932	1,567	820	1,217	2,037	171.9	234.1	36%
63034	158	224	382	203	279	482	113.7	137.2	21%
63038	37	83	120	65	79	144	118.4	110.0	-7%
63040	39	61	100	61	63	124	60.2	73.2	22%
63042	284	445	729	405	574	979	190.2	250.8	32%
63043	246	449	695	342	533	875	155.1	195.5	26%
63044	233	674	907	189	325	514	310.1	225.9	-27%
63049	176	252	428	258	342	600	153.6	193.5	26%
63069	177	341	518	267	260	527	171.0	169.5	-1%
63074	316	587	903	342	520	862	293.2	283.3	-3%
63088	96	162	258	150	223	373	154.2	225.0	46%
63101	86	181	267	162	142	304	-	-	-
63102	36	70	106	133	92	225	-	-	-
63103	633	646	1,279	522	395	917	1,389.3	711.9	-49%
63104	755	898	1,653	570	488	1,058	433.0	282.2	-35%
63105	160	244	404	241	239	480	139.4	140.9	1%
63106	550	557	1,107	509	467	976	524.5	420.1	-20%
63107	605	766	1,371	623	688	1,311	420.2	512.4	22%
63108	735	1,173	1,908	723	1,075	1,798	456.7	419.5	-8%
63109	399	869	1,268	564	781	1,345	216.6	245.4	13%
63110	782	906	1,688	567	609	1,176	418.6	331.9	-21%
63111	827	1,291	2,118	926	1,033	1,959	490.7	476.2	-3%
63112	873	957	1,830	731	633	1,364	403.5	327.4	-19%
63113	775	927	1,702	869	809	1,678	528.5	610.0	15%
63114	674	1,245	1,919	872	1,167	2,039	249.4	278.1	12%
63115	757	858	1,615	940	785	1,725	320.0	398.1	24%
63116	923	1,287	2,210	1,099	1,190	2,289	235.0	258.7	10%
63117	148	196	344	175	223	398	176.0	214.3	22%
63118	1,576	2,031	3,607	1,625	1,480	3,105	596.8	566.4	-5%
63119	294	582	876	396	594	990	127.3	145.3	14%
63120	375	373	748	394	345	739	281.9	339.3	20%
63121	604	865	1,469	761	862	1,623	251.8	299.3	19%
63122	350	654	1,004	454	601	1,055	129.9	136.9	5%
63123	583	930	1,513	644	957	1,601	152.3	162.1	6%
63124	71	140	211	96	126	222	107.4	107.8	0%
63125	472	994	1,466	669	991	1,660	221.1	256.2	16%
63126	122	231	353	201	262	463	114.7	152.6	33%
63127	45	80	125	48	65	113	128.8	114.8	-11%
63128	240	527	767	280	477	757	131.7	129.1	-2%
63129	390	711	1,101	598	898	1,496	107.5	142.7	33%
63130	527	705	1,232	551	670	1,221	178.9	197.2	10%
63131	97	252	349	165	221	386	106.4	115.6	9%
63132	198	288	486	231	274	505	177.0	181.2	2%
63133	271	420	691	348	486	834	397.4	504.4	27%
63134	286	433	719	356	429	785	240.0	282.2	18%
63135	528	606	1,134	532	706	1,238	263.3	289.6	10%
63136	1,249	1,431	2,680	1,515	1,815	3,330	250.0	335.9	34%
63137	351	515	866	448	625	1,073	204.1	258.3	27%
63138	393	606	999	494	649	1,143	228.3	278.6	22%
63139	492	769	1,261	540	634	1,174	258.8	254.1	-2%
63140	16	21	37	11	9	20	-	-	-
63141	202	335	537	306	338	644	134.1	157.2	17%
63143	282	451	733	265	322	587	333.8	295.3	-12%
63144	71	104	175	111	122	233	96.5	131.3	36%
63146	295	536	831	391	634	1,025	139.6	174.5	25%
63147	326	386	712	377	438	815	269.9	347.2	29%
Median							184.7	225.4	
Mean							247.7	251.8	

Notes:

ED (Emergency Department)
ED visits that result in an admission to the hospital are coded as a hospitalization.
Count of cases includes a two-year period of time.
Rates are based on zip code of residence, not location of the medical service.
Rates are presented as an annualized estimate for each two-year period. They are not age-adjusted.
Three zip codes are too small (≤ 4,000 residents) to report acute care rates.
The hatched square indicates a 'high need zip code' as identified in *Building a Healthier St. Louis.*

Appendix I

Sexually Transmitted Infections
Rates for St. Louis City and County by Zip Code
All Ages, Males and Females

Zip Code	Count of Cases 2000-01 Clamy	Gonor	Sypl	Total	Count of Cases 2009-10 Clamy	Gonor	Sypl	Total	Total Infection Rate (per 10K) 2000-01	2009-10	% Change Infection Rate
63005	8	-	-	8	20	5	-	25	2.4	7.0	194%
63011	27	10	-	37	69	9	3	81	4.9	11.1	129%
63017	25	5	-	30	57	9	3	69	3.5	8.3	137%
63021	39	18	-	57	125	15	-	140	5.2	12.4	138%
63025	6	3	-	9	23	-	-	23	4.1	8.3	104%
63026	23	3	-	26	57	11	-	68	3.1	7.7	145%
63031	142	79	3	224	391	87	5	483	22.4	50.1	124%
63033	281	206	3	490	745	188	3	936	53.8	108.8	102%
63034	38	29	3	70	198	47	3	248	20.8	69.8	235%
63038	3	3	-	6	13	3	-	16	5.9	11.6	95%
63040	7	3	-	10	9	3	-	12	6.0	7.0	17%
63042	90	53	3	146	299	73	5	377	38.1	96.2	152%
63043	34	13	-	47	112	13	-	125	10.5	27.9	166%
63044	42	22	3	67	82	14	3	99	22.9	46.8	104%
63049	-	-	-	-	-	-	-	-	-	-	-
63069	3	-	-	3	3	-	-	3	1.0	1.0	-3%
63074	89	46	3	138	176	44	3	223	44.8	73.5	64%
63088	17	-	-	17	30	7	3	40	10.2	24.2	138%
63101	38	48	-	86	48	16	5	69	-	-	-
63102	21	16	-	37	43	18	3	64	-	-	-
63103	60	83	-	143	134	46	11	191	155.3	138.4	-11%
63104	386	382	5	773	408	146	16	570	202.5	152.8	-25%
63105	14	7	3	24	34	12	-	46	8.3	13.0	57%
63106	361	343	-	704	681	190	8	879	333.6	369.9	11%
63107	471	554	6	1,031	583	198	10	791	316.0	332.0	5%
63108	199	198	3	400	282	104	3	389	95.7	90.2	-6%
63109	55	29	3	87	150	40	3	193	14.9	35.8	141%
63110	403	423	6	832	371	119	10	500	206.3	146.1	-29%
63111	222	203	3	428	533	148	17	698	99.2	171.8	73%
63112	488	590	5	1,083	726	269	7	1,002	238.8	246.0	3%
63113	465	520	3	988	692	253	12	957	306.8	363.4	18%
63114	259	179	3	441	469	107	3	579	57.3	80.0	40%
63115	624	737	6	1,367	1,042	366	8	1,416	270.8	340.8	26%
63116	381	301	3	685	596	194	32	822	72.8	94.4	30%
63117	28	20	-	48	57	15	-	72	24.6	39.3	60%
63118	712	720	9	1,441	909	329	29	1,267	238.4	237.2	0%
63119	59	37	-	96	157	26	3	186	13.9	27.4	96%
63120	384	423	6	813	652	216	12	880	306.4	427.4	39%
63121	529	438	3	970	941	327	15	1,283	166.3	241.1	45%
63122	78	30	-	108	112	20	3	135	14.0	17.5	26%
63123	68	13	-	81	159	26	5	190	8.2	19.3	136%
63124	8	3	-	11	11	3	3	17	5.6	8.2	46%
63125	68	25	-	93	137	29	3	169	14.0	26.2	87%
63126	18	6	-	24	31	3	-	34	7.8	11.2	44%
63127	3	-	-	3	8	3	-	11	3.1	11.1	260%
63128	32	7	-	39	77	7	-	84	6.7	14.3	114%
63129	51	6	-	57	147	24	3	174	5.6	16.5	196%
63130	316	277	-	593	414	113	6	533	86.1	88.6	3%
63131	8	6	-	14	19	3	-	22	4.3	6.6	54%
63132	105	59	3	167	147	40	3	190	60.8	67.9	12%
63133	228	250	3	481	398	127	3	528	276.7	323.5	17%
63134	250	219	3	472	488	138	3	629	157.5	230.6	46%
63135	292	188	3	483	573	171	5	749	112.2	175.5	57%
63136	1,109	931	7	2,047	2,004	616	17	2,637	190.9	271.5	42%
63137	196	151	-	347	679	219	5	903	81.8	218.6	167%
63138	220	175	3	398	602	157	5	764	91.0	189.3	108%
63139	63	48	3	114	112	28	10	150	23.4	32.9	41%
63140	15	19	-	34	17	7	-	24	-	-	-
63141	19	7	-	26	49	3	3	55	6.5	13.4	106%
63143	56	55	-	111	122	34	3	159	50.6	82.1	62%
63144	9	11	-	20	23	3	-	26	11.0	14.7	34%
63146	47	21	-	68	133	32	3	168	11.4	28.7	151%
63147	301	278	3	582	465	157	6	628	220.6	276.1	25%
Median									23.2	48.5	
Mean									80.6	104.4	

Notes:

Clamy (Clamydia), Gono (Gonorrhea), Sypl (Early Syphilis), Total (sum of all three types of included infections)
Count of cases includes a two-year period of time.
Infection rates are based on zip code of residence, not location of the medical service.
Infection rates are presented as an annualized estimate for each two-year period. They are not age-adjusted.
Three zip codes are too small (≤ 4,000 residents) to report infection rates.
The hatched square indicates a 'high need zip code' as identified in *Building a Healthier St. Louis.*

Appendix J

Injury: Victims of Violence (Assaults)
Rates for St. Louis City and County by Zip Code
All Ages

Zip Code	Count										Total	Annual Rate (per 10K)
	00	01	02	03	04	05	06	07	08	09		2000-09
63005	12	11	11	12	8	8	8	8	11	8	97	5.7
63011	35	27	27	22	20	25	17	21	27	34	255	6.8
63017	25	26	25	24	35	20	17	18	23	25	238	5.6
63021	44	47	55	42	41	40	33	38	25	37	402	7.3
63025	7	13	12	12	10	8	16	17	17	15	127	10.3
63026	63	67	77	77	46	56	55	56	47	55	599	14.1
63031	79	87	86	91	114	109	125	113	90	96	990	20.1
63033	89	88	113	84	134	110	110	100	138	106	1,072	24.1
63034	22	19	21	21	28	32	27	29	34	28	261	15.1
63038	4	7	1	5	4	4	2	7	5	4	43	7.3
63040	3	8	4	6	6	6	6	5	6	3	53	6.3
63042	37	46	44	55	35	45	51	45	52	47	457	23.6
63043	19	24	20	21	18	23	22	25	16	18	206	9.2
63044	16	24	20	18	16	23	17	21	19	12	186	14.5
63049	21	23	25	30	20	24	19	24	16	19	221	14.9
63069	30	25	27	25	22	36	20	28	38	22	273	17.8
63074	19	30	20	28	43	43	37	38	42	34	334	21.8
63088	13	10	15	8	12	11	10	8	9	10	106	12.7
63101	6	15	22	24	30	26	9	19	14	18	183	-
63102	10	4	14	30	19	15	12	16	16	16	152	-
63103	168	116	79	28	40	33	32	37	39	29	601	106.6
63104	121	113	148	102	107	85	94	78	71	98	1,017	53.8
63105	18	26	27	32	21	21	25	18	19	35	242	15.2
63106	93	95	95	100	107	87	74	64	64	64	843	75.6
63107	147	150	166	120	134	118	90	103	105	103	1,236	86.2
63108	95	99	80	72	100	70	61	33	48	51	709	33.5
63109	48	48	62	63	50	52	41	37	41	40	482	17.1
63110	145	138	172	164	168	118	90	60	64	61	1,180	62.8
63111	122	107	123	119	153	116	121	107	149	124	1,241	59.1
63112	182	162	189	153	147	130	119	126	80	88	1,376	63.6
63113	156	171	169	165	160	128	113	95	91	87	1,335	90.3
63114	90	87	91	101	115	109	102	92	115	80	982	26.2
63115	200	177	191	183	193	170	144	138	145	157	1,698	73.1
63116	162	166	176	181	197	154	146	112	103	141	1,538	33.8
63117	20	6	23	30	22	15	20	8	12	7	163	17.2
63118	256	240	300	273	294	238	248	166	225	233	2,473	86.4
63119	35	33	35	29	41	28	35	30	37	24	327	9.6
63120	103	122	109	101	105	112	87	84	66	63	952	79.8
63121	142	119	118	110	136	134	130	136	135	139	1,299	46.4
63122	34	40	34	25	28	26	34	26	20	16	283	7.3
63123	67	69	65	59	61	51	45	67	62	55	601	12.1
63124	6	8	5	2	4	3	4	3	3	4	42	4.2
63125	62	74	77	72	71	50	64	72	65	78	685	20.9
63126	17	16	19	10	21	6	11	16	15	7	138	9.0
63127	3	3	5	4	6	3	3	9	9	5	50	10.2
63128	32	34	30	35	31	25	20	38	23	30	298	10.2
63129	59	48	53	61	56	49	67	65	56	54	568	10.9
63130	85	93	100	75	84	50	68	36	40	59	690	21.2
63131	7	12	12	5	12	15	15	7	8	11	104	6.3
63132	29	25	23	30	21	32	19	13	27	16	235	17.0
63133	79	50	65	55	63	55	64	43	55	37	566	67.0
63134	79	74	70	57	65	70	80	69	76	77	717	49.9
63135	83	90	95	86	85	103	84	84	112	97	919	42.9
63136	317	290	328	294	332	358	294	301	307	299	3,120	60.8
63137	61	57	98	81	95	118	98	88	117	124	937	44.7
63138	73	65	72	101	110	101	104	110	131	104	971	46.0
63139	58	50	50	50	66	35	39	40	42	45	475	20.1
63140	4	6	4	8	5	5	3	3	1	3	42	-
63141	18	20	22	11	15	11	10	18	21	10	156	7.7
63143	23	23	33	26	30	27	15	15	21	22	235	22.6
63144	8	7	10	10	11	4	4	8	1	7	70	7.8
63146	17	21	32	25	39	30	19	29	28	20	260	8.8
63147	89	71	91	88	79	71	54	72	57	69	741	59.9

Median	18.9
Mean	30.7

Notes:

Counts reflect the zip code of residence of the victim, not location of the assault.
Three zip codes are too small (≤ 4,000 residents) to report rates.
The hatched square indicates a 'high need zip code' as identified in *Building a Healthier St. Louis.*

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