CENTER FOR HEALTH EQUITY
A Division of Public Health and Wellness

LOUISVILLE METRO HEALTH EQUITY REPORT 2017

ACKNOWLEDGEMENTS

Report authored and created by Center for Health Equity staff:
Brandy N. Kelly Pryor, PhD
Rebecca Hollenbach, MPH, CHES
Aja Barber, MS
T Gonzales, MSW

Data analysis:
Yu-Ting Chen, MPH, MS
Rebecca Hollenbach, MPH, CHES
Kentucky State Data Center

Design:
Danielle Waninger

We would like to acknowledge the following for their help in creating the report:
Office of Mayor Greg Fischer
Louisville Metro Department of Public Health and Wellness staff and Metro Government employees
University of Louisville Libraries
Dr. Cate Fosl, Anne Braden Institute for Social Justice Research
University of Louisville School of Public Health and Information Sciences faculty and students
Chris Owens, Office for Women
Louisville Metro Board of Health
Lilah Gael, MPA
Ava Corwin

Comments, questions, and requests for additional information can be directed to:
healthequity@louisvilleky.gov
400 East Gray St.
Louisville, KY 40202
(502) 574-6616

Suggested Citation:
Center for Health Equity. 2017 Health Equity Report: Uncovering the Root Causes of Health. Louisville Metro Department of Public Health and Wellness. 2017; Louisville, KY. Available from: https://louisvilleky.gov/government/center-health-equity/health-equity-report

Dear Community Member,

It is a great pleasure to share the 2017 Health Equity Report: Uncovering the Root Causes of Our Health, the third such report since our inaugural report in 2011. This Health Equity Report is a tool for policy makers, residents and Louisville Metro Government employees to better understand how we can intervene at various levels of root causes and create health equity in all policies for all of Louisville. It is our goal that every resident, no matter where they were born, live, learn, work, play, or worship can thrive and enjoy hope, happiness, and wellness.

Greg Fischer
Mayor

We recognize that health equity is everybody's work, so as we began planning for this seminal report last year, we had the wonderful opportunity to have listening sessions with community members, policy makers, foundation and nonprofit leaders, and academic colleagues on what we needed to start, stop, and continue. We learned valuable nuggets from those conversations and were encouraged that previous reports were being used by individuals and organizations across many sectors. We also know we have the resources we need to work together to create a Louisville Metro where we all thrive. Thus, it is our goal that this report tells a powerful story that is useful across those broad audiences we have touched in the past as well as newer audiences. We desire for this report to be a picture of our health data, but also a blueprint to create and maintain both policies and practices that will make Louisville equitable for all.

Dr. Sarah Moyer
Director, *Louisville Metro Department of Public Health and Wellness*

As the first Center for Health Equity in a municipal government, our eleven year history has been rich because of the community voices that have partnered and pushed us. We have been in a constant state of evolution as a Center and believe the work of equity should continue to grow and evolve until we reach liberation and wellness for all communities. We are ready and eager to partner with communities, organizations, and other Metro agencies to do the urgent and necessary work of addressing root causes and turning over new soil. As you make your way through this report we hope you will be in touch with us to share how you are putting it to work in our community! We believe that, together, we can make Louisville the healthiest and most equitable city in the country where everyone can reach their full potential!

Sincerely,

Dr. Brandy N. Kelly Pryor

Director, Center for Health Equity
Louisville Metro Department of Public Health and Wellness

Assistant Professor
University of Louisville

EXECUTIVE SUMMARY

In Louisville, health equity means that everyone has a fair and just opportunity to be healthy and reach their full human potential. A person's identities, whatever they may be, should not predict how long or how well one will live.

This requires creating systems and policies where environments, economics, and government work for everyone.

For more than 10 years, the Center for Health Equity and our partners have worked to understand how these systems impact health, and how we can improve them to create a Louisville Metro where all can thrive.

Our goals are to provide evidence-based connections between health outcomes, root causes of health, and the historical context that creates inequity. In addition, we provide clear, evidence-based best practices to move our community forward. We have been intentional about identifying areas of both advantage and disadvantage across our city so that readers better understand health inequities and their relationship to policies and practices.

The Health Equity Report is a tool for policy makers, residents and Louisville Metro Government employees to better understand how they can intervene and create equitable policies and practices for Louisville, so that all our residents can thrive and enjoy hope, happiness and wellness.

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Beneath the Surface - Mary Carothers

The Health Equity Report

An Introduction

KEY INSIGHTS

- **Louisville Metro is changing**- our population is growing and becoming more diverse.
- **Our history shapes the landscape we see today**. From health outcomes to root causes our history includes systems of power which have shaped program and policy decisions.
- **Health outcomes stem from root causes, which are shaped by systems of power**. These root causes often interact to create powerful effects on the quality of life for residents and visitors.
- **Public health policy that uses a holistic approach is an effective tool to enact changes that will improve health comprehensively**. For example, comprehensive tobacco and alcohol policies can have a major impact on many health outcomes.
- **Health outcomes at younger ages impact health outcomes later in life.** For example, oral health is correlated with several outcomes later in life, such as Alzheimer's disease and heart disease.
- **Different groups face different challenges.** For example, White men are dying in greater numbers and at greater rates from suicide, while Black men are dying in greater numbers and at greater rates from homicide.
- **Premature death rates (such as suicide or homicide) are relatively small compared to death rates from cancer and heart disease.** However, these premature death rates can have a big impact on life expectancy for a community.
- **Improving the health of Louisville Metro will require us to change chronic disease outcomes.**
- **Where you live matters to how long you can expect to live.** Louisville Metro's life expectancy is 76.8, but some areas have a 12.6 year difference in life expectancy.
- **When we all come together and combine our resources, we can create effective, long-term change.**

RECOMMENDATIONS

1. Interventions must happen at multiple levels - individual, interpersonal, organizational, community and policy- to have the biggest impact on health.

2. Increase and improve systems for data collection, data sharing and data analysis across all outcomes. As Louisville Metro we need to examine where data is missing, and for what groups the data does not exist. When possible, break data down by various groups to get a better picture of who is most impacted.

3. Ensure more opportunities for wealth-building, education, and employment in our community for those that need it most.

4. Promote policies and development that protect and improve our environmental quality.

5. Build our health infrastructure to ensure that all persons are able to easily receive preventative medical services as well as treatment for mental health, trauma and substance use disorder.

6. Expand access to healthy foods by examining our policies and practices for areas of innovation.

7. Continue to examine our criminal justice system for opportunities for improvement and changes that will support the creation of a thriving community.

8. Support our youngest community members by preventing or mitigating the effects of trauma and adverse childhood experiences.

9. Create opportunities for all communities to thrive with access to parks, businesses, and community organizations.

THE CONSTRUCTION OF THE HEALTH EQUITY REPORT

Feedback and Report Construction

With reports previously released in 2011 and 2014, the goal of this Health Equity Report was to reconsider what information was included and how it was displayed while continuing to provide the quality data on our community for users of the report. We received feedback from residents, community partners and colleagues on the ways they had used the report, which information was most useful to them, and what information they would like to see added. We also looked to the literature and public health evidence-based practices to understand better ways to convey information about health equity, and added some of our own, unique ideas. The result is the 2017 Health Equity Report.

Structure

The report has four main sections:

Introduction

This introduces key concepts and terms that laid the groundwork for the report.

Who is Louisville Metro?

This section examines the history of Louisville Metro, and how our past has influenced our present through a visual timeline. It shows the demographics and rich diversity of those who are currently living in our county.

Root Causes

This last section defines the 11 root causes that are used throughout the report, although these are not an exhaustive list. It describes the theory behind how systems of power influence root causes, and subsequently health outcomes. It also offers a glimpse other areas that we need to continue to explore, collect and analyze data on to fully understand the health of our community.

Health Outcomes

These 21 health outcomes are arranged in the order of the life course, from infancy to death. They include information on the definition of the health outcome and how the health outcome is subsequently linked to health and quality of life. Data are shown that describes health outcomes for different populations by race, gender, and geography, and includes trends over time. These data are linked to a select few root causes, and research is explained to draw the link between the root cause and the health outcome. Evidence-based best practices suggest what action we can take as a community to improve health at all levels: individual, interpersonal, organizational, community, and policy. Finally, resources and references guide readers to further information.

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LOUISVILLE METRO HEALTH EQUITY REPORT 2017

LOUISVILLE METRO HEALTH EQUITY REPORT

The Social Determinants of Health in Louisville Metro Neighborhoods







2011

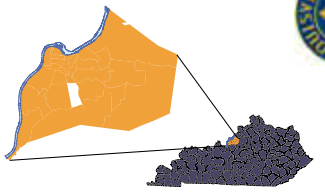
LOUISVILLE METRO PUBLIC HEALTH & WELLNESS
The Center for Health Equity

LOUISVILLE METRO HEALTH EQUITY REPORT

The Social Determinants of Health in Louisville Metro Neighborhoods





2014

*Updated July 2014

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KEY CONCEPTS AND THEMES

1. ***Pieces of cultural production***

   Each section opens with pieces of art created by the Louisville Metro community. These seek to represent the lived experiences and the stories which go beyond the numbers presented in the report. There is value in artistic expression, which can tell valuable stories through a different medium.

2. ***Intersectionality***

   This concept embodies the fact that people have many different identities, which will shape how they experience the world. For example, as you look at data and break it down into more complex subgroups (e.g., Black Female, or Hispanic/Latino male), you start to see different patterns emerge for men vs. women, and black men vs. white women. Having more complex and nuanced data allows for a better understanding of specific health outcomes for different groups.

3. ***Life course***

   This concept demonstrates that people will experience different root causes and health outcomes at different points in their life. For example, asthma is a more common problem among children while stroke is more common among the elderly. Health outcomes experienced at different life stages can have a cumulative effect, ultimately impacting quality and length of life.

4. ***Tree metapho***r

   Throughout, we use the tree metaphor to understand why we see the population health outcomes that we do, also called our theory of causation. We start in the soil, with the systems of power which shape the way the roots, the root causes, are experienced by different communities, ultimately determining the quality and length of life for the leaves, the health outcomes.

5. ***Interconnectedness***

   Many of these health outcomes are linked to each other; many of these root causes are linked to each other. Often these health outcomes and root causes have synergy with each other, making it either easier or more difficult to maintain health.

6. ***Thematically ordered health outcomes***

   Health outcomes are grouped by the age at which they have a large population impact. Additionally, they are ordered so that they build upon concepts discussed in previous outcomes.

HEALTH OUTCOMES

Health outcomes can range from well-being to sickness to death. They include things like asthma, heart disease, and cancer. Differences in root causes lead to differences in health outcomes and can even influence life expectancy. You will see 21 health outcomes in our full report.

ROOT CAUSES

Root causes can range from food systems to neighborhood development. Differences in root causes include whether or not we have grocery stores in our neighborhoods or the ability to get a housing loan. Root causes lead to health outcomes and have to be addressed to make a difference in individual health. You will see 11 examples of root causes in our full report.

SYSTEMS OF POWER

Deep in the soil, you will find systems of power—like racism and sexism — which shape how people experience root causes of health equity like housing or employment. These systems of power are embedded in history and our present day policies and practices.

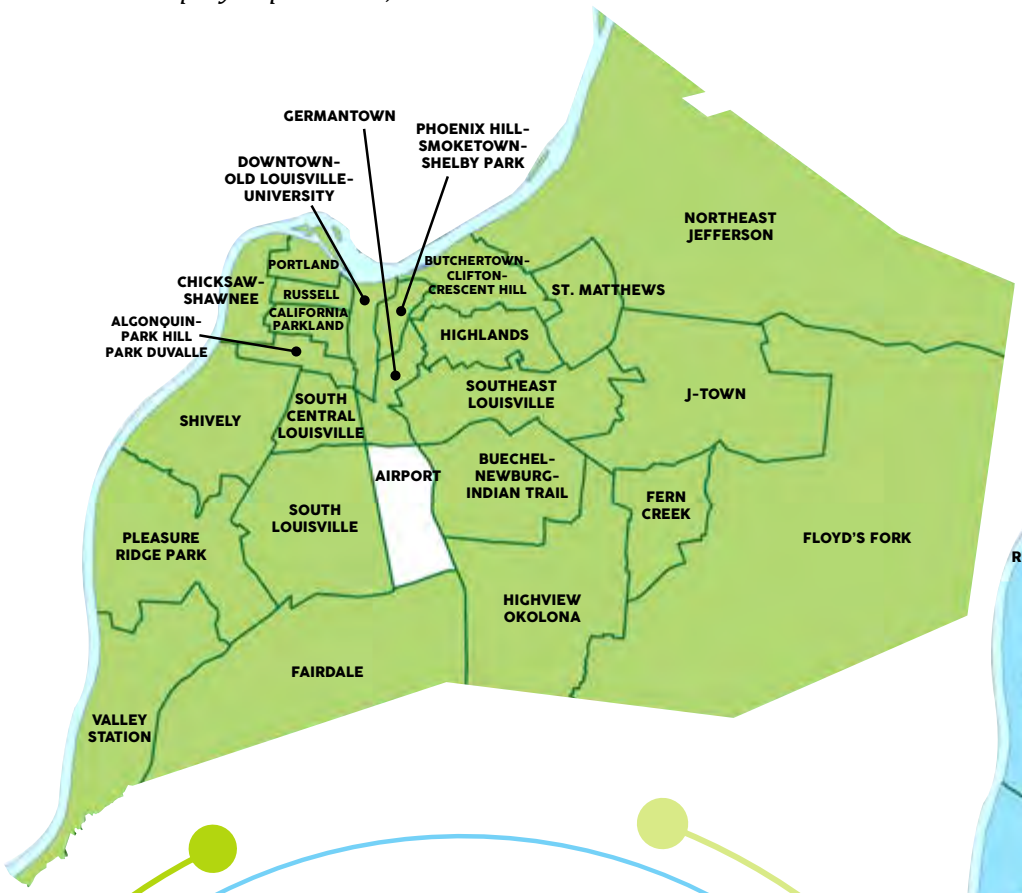
METHODOLOGY

Many people will note that our 2017 maps look different than the maps in the 2011 and 2014 reports. The previous boundaries were neighborhood area clusters, or groupings of neighborhoods based on 2000 census tracts. These new boundaries are referred to as "community areas" or "market areas" and are different groupings of neighborhoods which align with 2010 census tracts. While changing the boundaries might be an adjustment, we believe it will ultimately allow us to share better, more reliable data and to synergize our efforts with the city's long-term plans.

Please contact us with questions and specific data requests for other geographical boundaries.

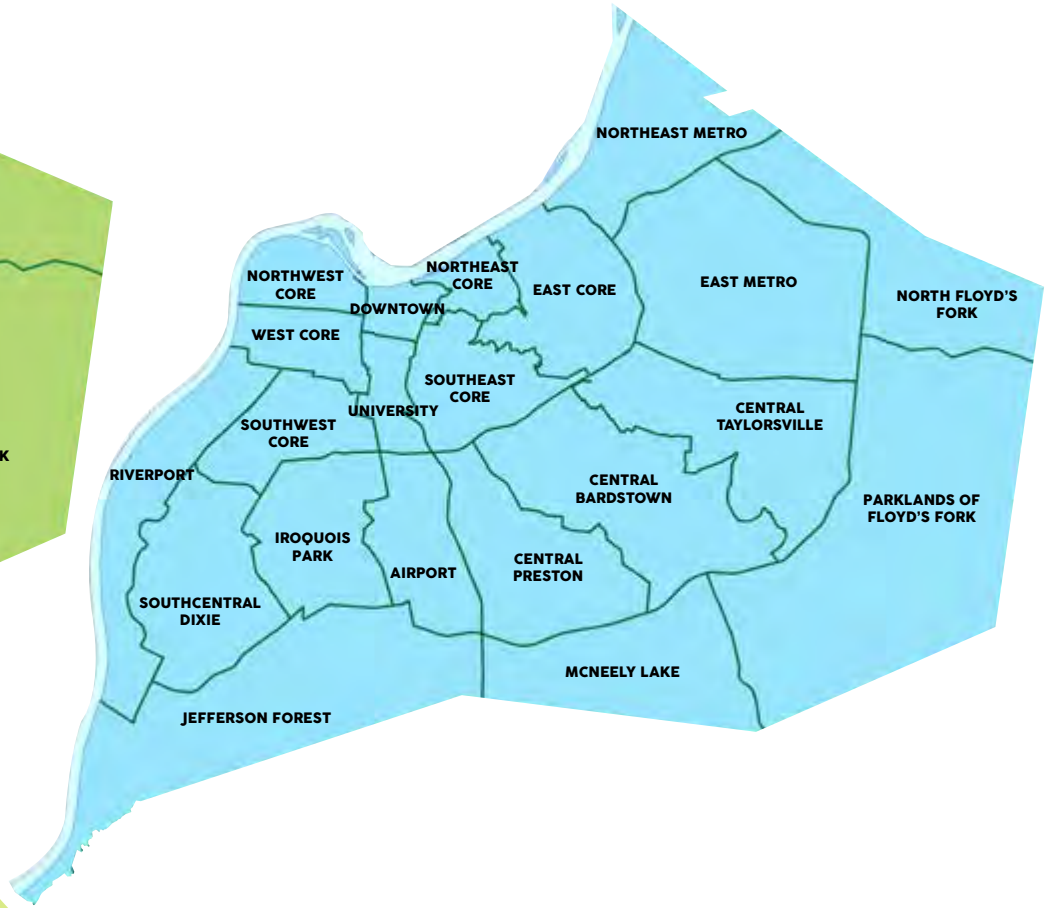
NEIGHBORHOODS

Health Equity Report 2011, 2014



COMMUNITY AREAS

Health Equity Report 2017



GLOSSARY OF DATA TERMS

Age-adjusted: Age-adjusted (as opposed to crude rates are those that have taken into account the population's age distribution and corrected the data accordingly. This allows data to be comparable from place to place.

Census tract: A census tract is a small unit of geography which often has data tied to it from the United States Census Bureau. Tracts can be grouped together to form larger geographical units such as market areas.

Median: The median is a way of measuring the middle of the data. It means that half of all cases are above that number and half of all cases are below that number. It is often used instead of the mean because outliers can skew the mean.

Rate: The rate is the number of persons affected by the health outcome divided by the total number of people who could potentially be affected. Often death rates are per 100,000 and other rates are per 1,000.

Unstable/unreliable: For numerators under 20, the CDC defines these rates as statistically unreliable. It means that the data may be subject to large fluctuations from year to year. As such, it is less reliable to use.

Incidence: Incidence is the number of new cases that occur.

Prevalence: Prevalence is the total number of cases that exist—or the number of new cases plus the number of already existing cases.

Mortality: Mortality is another word for deaths that occur.

Life expectancy: The average number of years a newborn is expected to live, if the current rates at which people die stay the same.

METHODOLOGY

HEALTH OUTCOMES

DEMOGRAPHICS

Demographic data comes predominantly from the 2011-2015 American Community Survey estimates, which is a product of the Census Bureau. Some data, such as sexual orientation and gender identities outside the male/female binary, are not collected by the census. Supplemental data is included to try to fill these gaps, with sources listed directly below the statistics.

HEALTH OUTCOMES

Literature review

Root causes for each health outcome were chosen by talking to subject matter experts and doing scans of the literature to understand important factors. Once a select few root causes were chosen, literature reviews of academic articles and public health websites were done to determine the connection between the health outcome and the root causes.

Data

Most of the data comes from 2011-2015 Kentucky Vital Statistics which are the birth and death records. The locations of these records are based on residence at time of birth or death. These outcomes have been age-adjusted to the 2000 US Standard Population in order to be comparable to national statistics.

County-level rates have been calculated using 2010 Census bridged population estimates. Map rates have been calculated using 2011-2015 American Community Survey estimates.

Additional data sources were used for other health outcomes. Sources for these data are listed directly below the statistics.

All data provided is for Louisville Metro as a whole. Where possible, data is broken down by race/ethnicity, gender, year, or some combination of all three. Given small numbers for certain populations reliable data is not always available and is not always shown.

BEST PRACTICES

Best Practices have been assembled from comprehensive research programs which have assessed and evaluated many policies and programs. The goal was to recommend evidence-based actions which have proven to make a difference for health. In many cases, these interventions have also been found to be cost-effective for communities.

Best practices are arranged along the socio-ecological model which recommends that interventions happen at ALL levels in order to reinforce interventions, create synergy, and make sustainable, long-term change.

Several of the main guides used to compile these recommendations include:

RWJF County Health Rankings and Roadmaps: What Works for Health
http://www.countyhealthrankings.org/roadmaps/what-works-for-health

Centers for Disease Control's HI-5 (Health Impact in 5 years)
https://www.cdc.gov/policy/hst/hi5/interventions/index.html

Centers for Disease Control's 6|18 Initiative: Accelerating Evidence into Action
https://www.cdc.gov/sixeighteen/

City Health Guide
http://www.cityhealth.org/

The Community Guide
https://www.thecommunityguide.org/

Additional resources were used to compile additional recommendations relevant to specific health outcomes.

GLOSSARY

Behavioral health infrastructure:
Refers to the physical and organizational structures in place in communities that deliver mental health services.

Best practice: (also evidence-based practice)
Strategy that utilizes data and practices based on clinical experience and expertise.

Chronic disease:
Illnesses or conditions that last over a long period of time, such as cancer, heart disease, chronic respiratory diseases, stroke, and diabetes.

Community engagement:
Proactive, authentic, and continuous collaboration with residents, community groups, and organizations to address issues for the benefit of the community.

Compassion fatigue: (Also known as secondary traumatic stress or STS)
A condition among those who serve or work with trauma victims and gradually lose their sense of compassion, often as a response to increased stress, anxiety, hopelessness, and other negative outcomes.

Cultural competency:
The ability to interact effectively with people of cultures different from your own.

Disability:
The interaction between individuals with a health condition and their environments. Environments may include inaccessible transportation options, social stigma, or lack of available services. Disabilities can be seen (e.g. cerebral palsy, spinal cord injury, etc.) or unseen (depression, dyslexia, etc.).

Ethnicity:
A sociological construct that places people into social groups based on characteristics such as a shared sense of group membership, language, history and ancestral geographical connection.

Foreign-born:
Refers to someone who lives in a country other than the one in which they were born.

Gender identity:
A person's internal sense of being male, female, both, neither of these, or another gender(s). Currently, social norms often refer to gender as being either male or female, also known as the gender binary.

Health:
A state of being represented by the quality of one's physical, mental, and emotional health. This can range on a scale from illness to wellness to thriving.

Health Equity:
In Louisville, health equity means that everyone has a fair and just opportunity to be healthy and reach their full human potential.

Intersex:
A general term used to describe a variety of conditions where a person has sex or reproductive characteristics that are not typically male or female.

Legislation:

A law or body of laws enacted by a governing body, or the process of creating those laws.

LGBTQ:

This stands for lesbian, gay, bisexual, transgender, and queer.

Life expectancy:

The average number of years a newborn is expected to live, if the current rates at which people die stay the same.

People of color:

An overarching term used to include all people who are not White or of European descent.

Policy:

Rules or laws adopted by a government, business, organization, or institution.

Premature death:

Death that occurs before reaching an expected age, usually for a reason considered preventable such as accident, injury, or illness. For example, these outcomes often include homicide, accidents, suicide.

Program:

Activities or events to help carry out a plan or reach a specific goal. Programs are often the result of policy or in response to legislation decisions.

Protective factors:

Conditions and behaviors which help to reduce a person's exposure to hazardous or harmful events or environments.

Race:

A socially constructed category that uses characteristics such as skin color, facial features, and body structure as a basis for classifying people. These categories can include people of different ethnicities and nationalities.

Risk factors:

Exposure and behaviors that can significantly impact a person's health. This can include genetics or individual behaviors like diet, alcohol consumption, sexual practices, and sanitation. It can also include characteristics of a person's social, political, economic and physical environment.

Sexual orientation:

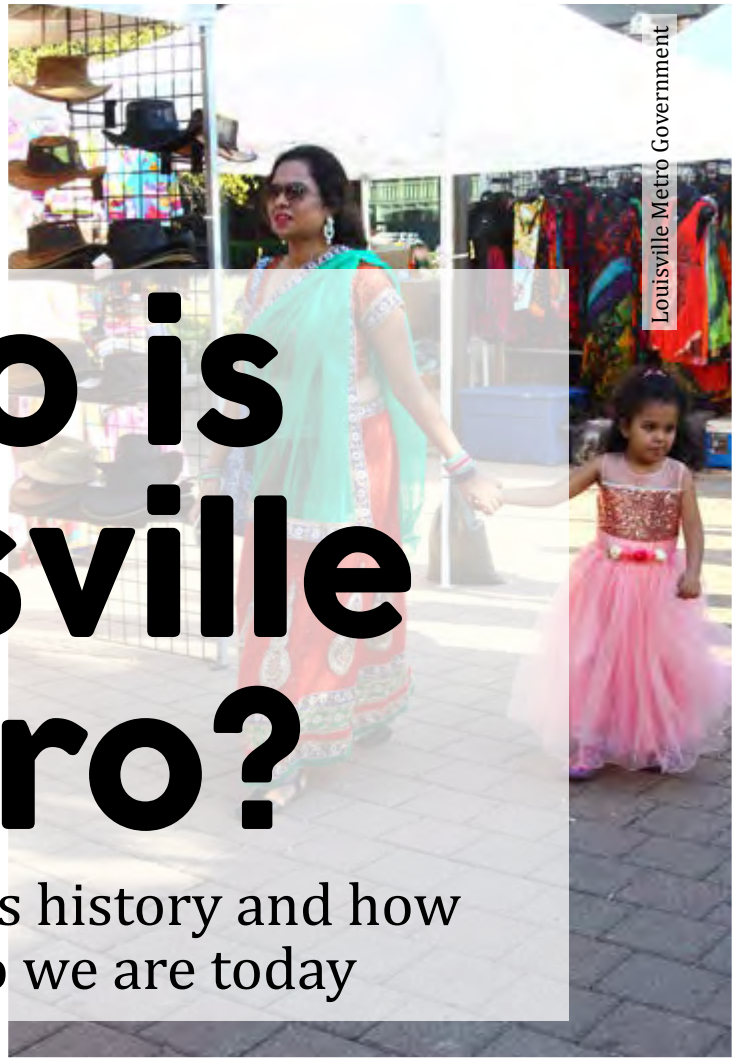
Inherent and enduring emotional, romantic or sexual attraction to other people. Descriptors such as 'heterosexual' and 'homosexual' are used in data collection, but people can identify in many ways, including: gay, straight, bisexual, lesbian, and any other numerous sexual orientations.

Trauma-informed:

An approach recognizing the impact of trauma on survivors so that subsequent care given emphasizes patients' emotional, psychological, and physical safety.


Louisville Metro Government


Louisville Metro Parks and Recreation


Louisville Metro Government

Who is Louisville Metro?

A look at Louisville's history and how we became who we are today


Louisville Metro Parks and Recreation


Louisville Metro Government


Louisville Metro Government


Louisville Metro Parks and Recreation

Louisville Metro Parks and Recreation

Sarah Katherine Davis

Louisville Metro Government

Louisville Metro Government

T. Gonzales

Damiya Johnson

LOUISVILLE METRO'S HISTORY

This historical timeline provides brief information on events that shaped Louisville Metro and created the social, political and economic landscape that we see today.

Colonization: Indigenous peoples lived, hunted, and developed complex societies for thousands of years in what would later become Louisville. After European colonizers who came to North America in search of economic opportunity began to settle here in the early 1770s, they laid claim to all lands that belonged to native peoples.

Slavery and Statehood: Enslaved Africans trafficked by the earliest colonists were forced into unpaid labor on a large scale to clear and settle central Kentucky. When Kentucky attained statehood in 1792, it did so as the first state to sanction slavery in its Constitution.

Steamboats and the Slave Trade: The invention of the steamboat in 1811 helped Louisville rise to regional prominence as a shipping hub along the Ohio River and as a regional center for the slave trade, with many Africans sent "down the river" from here to points farther south.

19th-Century Immigration: After its canal was completed in 1830, Louisville attracted a huge influx of German and Irish immigrants, triggering an ugly wave of anti-immigrant, anti-Catholic protest that culminated on August 6, 1855—a day known as "Bloody Monday," with rioting, arson, and murder that left at least 22 dead.

Struggles over Slavery: As conflicts over slavery led to Civil War in 1861, Kentucky remained officially neutral. In reality, White people fought bitterly for both sides while some Blacks fled bondage to serve as Union troops. Kentucky Whites were so divided, and the state was of such strategic importance in the war that President Abraham Lincoln's 1863 Emancipation Proclamation exempted Kentucky. Slavery ended here only in 1865 with the postwar passage of the Thirteenth Amendment —an amendment that Kentucky refused to approve.

The Coming of "Jim Crow" Segregation: By 1900, Louisville had the sixth largest concentration of free Black people of any U.S. city, largely due to being an important junction on the Underground Railroad. But the 20th century also brought new forms of racial discrimination all across the South, including in Kentucky, in the form of "Jim Crow" segregation laws, which confined Black people to separate and unequal schools, workplaces, and neighborhoods.

Buchanan v. Warley, 1917: When Louisville passed a housing segregation ordinance in 1914 that restricted residents to moving only onto blocks containing a majority of their own race, a new local NAACP branch challenged the ordinance all the way to the U.S. Supreme Court with the help of local Black journalist William Warley and a White realtor named Charles Buchanan. In 1917, the Supreme Court upheld property rights for both races and outlawed residential segregation ordinances, a major first step to stopping the advance of racial segregation laws.

Voting Rights: In Louisville, home to Kentucky's largest concentration of African Americans, the Black community effectively used the power of the ballot to swing elections and leverage political gains. By the early 1900s, Louisville women, both Black and White, worked to win voting rights for women, which became law across the United States with the passage of the Nineteenth Amendment to the U.S. Constitution, ratified in 1920.

Credit: Compiled by Dr. Cate Fosl of the Anne Braden Institute for Social Justice Research at University of Louisville.

Redlining: Amid the Great Depression, the federal government created a Home Owners Loan Corporation in 1933 to make home ownership more widely available, but its efforts excluded Black home seekers through a new practice known as "redlining." The resulting maps of American cities color-coded neighborhoods, leaving Black-majority neighborhoods "redlined" as high-risk, low return—which steered lenders away from loans there. Public and private credit institutions in Louisville used those maps for decades, making Black home ownership mostly unattainable for generations.

The Civil Rights Movement: In the years following World War II, the struggle for civil rights gained steam, leading to a massive nonviolent movement by the 1950s and 1960s that brought about dramatic changes for African Americans. Massive sit-ins, along with voter turnout campaigns to elect more supportive officials, achieved many new equality laws that eliminated race-based restrictions and inspired further social movements.

Open Housing and "White Flight": A second wave of civil rights activity swept the community later in the 1960s to demand open housing. In 1967, after repeated public protests and Black voter drives to oust electoral opponents, the city passed an Open Housing ordinance that ended racial restrictions in housing—becoming the first major Southern city to enact such a law. One year later, Kentucky also passed a fair housing bill, and the national Fair Housing Act became law. But along with these new opportunities, more than 15,000 Whites fled Louisville's west side between 1964-68 to escape integration while urban renewal projects were simultaneously demolishing many longstanding Black neighborhoods downtown, effectively pushing Black residents west.

Refugee Resettlement: Refugees, people who fled their home countries and cannot return because of a well-founded fear of persecution, have historically come into the United States in large numbers, starting with post-WWII displaced Europeans. The influx of Asian refugees grew larger after the U.S. pulled out of Vietnam in 1975, prompting the passage of national refugee resettlement policy in 1980. The metro area is home to two refugee resettlement agencies governed by this law—Kentucky Refugee Ministries and Catholic Charities of Louisville—which work with local religious institutions and government agencies to provide much-needed support services such as housing, employment assistance, and language instruction.

Privatization: In response to the social and economic changes of preceding decades, a new conservative agenda gained power with the election of Pres. Ronald Reagan in 1980. This renewed emphasis on free-market individualism—which relied on private solutions to economic and social problems, ushered in tax cuts for businesses, and severely cut back government regulations and services—became the norm in federal and state policies by the end of the 20th century.

Americans with Disabilities: Using many strategies borrowed from the Black freedom movement, Louisvillians with disabilities organized locally and nationally to end discriminatory treatment and gain better access to both basic services and opportunities provided by simple modifications, such as wheelchair ramps and sound-equipped stoplights. An early victory was a countywide needs assessment in 1980—one of the first of its kind in the nation. In 1990, the Americans with Disability Act (ADA) became federal law, vastly improving the lives of disabled as well as aging populations.

Lesbian-*Gay-Bisexual-Transgender (LGBT) Protections:* Inspired by the civil rights movement, lesbians and gay men in Louisville began organizing collectively as early as the 1970s to fight the stigma that had kept them in fear for much of the century. In 1991, the Fairness Campaign was established and proposed a "Fairness ordinance" that would expand local civil rights protections to include sexual orientation. In 1999, Louisville passed a Fairness ordinance that was among the first in the nation to offer equal protections against discrimination on the basis of both sexual orientation and gender identity. An expanded version of that ordinance—which applied to housing, employment, and public accommodations—was adopted by the Louisville Metro Council in 2004.

Merger: In 2003, Louisville combined its city and county governments into one, making it among the nation's 20 largest metropolitan areas. The hotly contested merger campaign had bipartisan and multiracial support at the time it passed by referendum in 2000, but many equality-minded organizations such as the NAACP and the Fairness Campaign opposed the merger on the grounds that it would weaken unions and various kinds of equal protections. The biggest concern was that it would dilute what was then substantial Black political and electoral power given the differences in demographics between the city and the merged city-county.

Louisville Metro's Changing Population

Louisville Metro is now home to over 760,000 people within its consolidated city/county boundaries. Louisville Metro's neighborhoods are diverse with strong histories and character.

About 19.4% of the population lives in 84 small cities, such as Shively and Jeffersontown, some of which have separate tax systems, governance, and services.

Louisville Metro itself is slowly changing; the White population continues to decline while people of color, immigrants, refugees, and others contribute to the growing diversity of our community. People with a disability make up 14.5% of the population of Louisville Metro.

Our ability to discuss the identity of Louisville Metro and the people who live here hinges on the information that we have. For some groups, such as the LGBTQ community, there is no viable information that is annually collected in Louisville Metro. Other challenges that exist include that of language; in order to capture changes over time, survey language does not always capture the complex, evolving ways in which people choose to identify. Finally, numbers are helpful to see population trends, but they do not capture the intangible reality of what it means to live, work, play or pray in Louisville Metro.

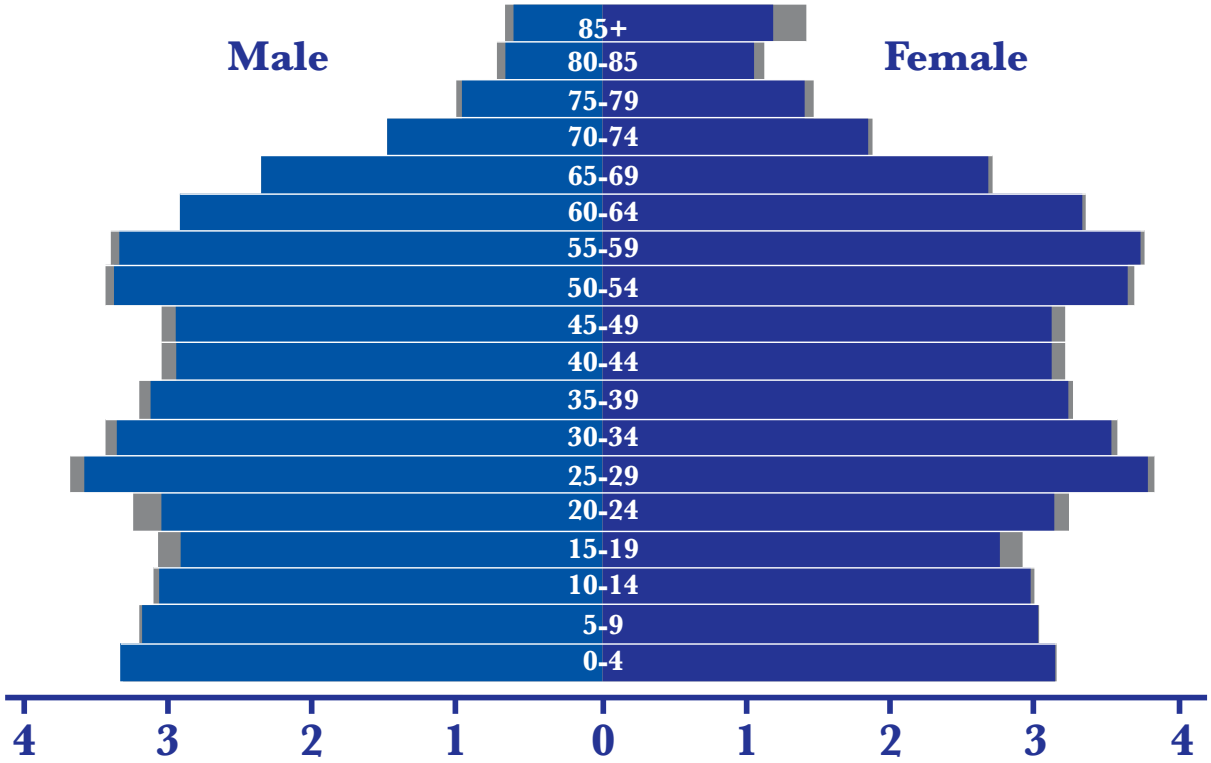
	2000		2010		2015	
TOTAL POPULATION	693,604		741,096		763,623	
RACE/ETHNICITY						
Other*	**1,658**	0.2%	**1,921**	0.3%	**1,648**	0.2%
Multiple Races**	**7,120**	1.0%	**13,547**	1.8%	**16,226**	2.1%
Asian	**9,748**	1.4%	**16,393**	2.2%	**20,201**	2.6%
Hispanic or Latino	**12,370**	1.8%	**32,542**	4.4%	**37,359**	4.9%
Black or African American	**130,743**	18.8%	**153,036**	20.6%	**161,960**	21.2%
White	**531,965**	76.7%	**523,657**	70.7%	**526,229**	68.9%
GENDER						
Female	**362,005**	52.2%	**383,397**	51.7%	**394,885**	51.7%
Male	**331,599**	47.8%	**357,699**	48.3%	**368,738**	48.3%
TOTAL POPULATION	693,604		741,096		763,623	
AGE						
Under 5 years	**46,600**	6.7%	**48,634**	6.6%	**49,441**	6.5%
5-9 years	**47,900**	6.9%	**47,238**	6.4%	**47,488**	6.2%
10-19 years	**91,560**	13.2%	**94,871**	12.8%	**92,074**	12.1%
20-29 years	**93,297**	13.5%	**102,735**	13.9%	**106,768**	14.0%
30-64 years	**320,265**	46.2%	**348,523**	47.0%	**354,408**	46.4%
65 years and over	**93,982**	13.5%	**99,095**	13.4%	**113,444**	14.9%

Source: Annual County Resident Population Estimates, Population Division, U.S. Census Bureau.
Racial categories are non-Hispanic.
**Other includes groups whose total population was less than 1% (American Indian or Alaskan Native, Native Hawaiian or Other Pacific Islander, and Some Other Race)*
*** Multiple races refers to those who identify as two or more races/ethnicities*

Snapshot of Louisville Metro's Demographics

POPULATION PYRAMID for Louisville Metro

Source: U.S. Census Bureau, 2011-2015 American Community Survey
Group quarters facilities include college dormitories, nursing facilities, correctional facilities, military barracks and homeless shelters.



Note: Gray bars represent group quarters (GQ) population

SEXUAL ORIENTATION

95.9%
HETEROSEXUAL OR STRAIGHT

2.2%
HOMOSEXUAL OR GAY/LESBIAN

1.9%
BISEXUAL

Source: 2014 Louisville Metro Department of Public Health and Wellness BRFSS
Respondents were asked if they identified as labeled above. These are the same questions/ language used by the CDC. Percents reflect weighted samples, not a census. The census does not collect data on sexual orientation.

GENDER IDENTITY

An estimated

17,700

adults identify as transgender in Kentucky.

Source: The Williams Institute, June 2016
There is no Louisville data available for gender identity and most national surveys do not capture this information.

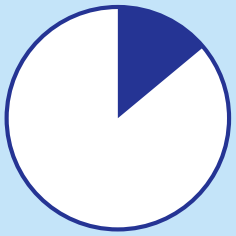
FOREIGN BORN

6.7%

of Louisville Metro residents were born outside the United States.

Source: U.S. Census Bureau, 2011-2015 American Community Survey

DISABILITY



14.5% of Louisville Metro residents have a disability.

Disability includes hearing, vision, cognitive, ambulatory, self-care and independent living difficulty.

Source: U.S. Census Bureau, 2011-2015 American Community Survey

RELIGION

Over 74 different religions are practiced in Louisville Metro. In 2010, **54.8%** of the population was a follower of some kind of religion. The five most popular denominations are:

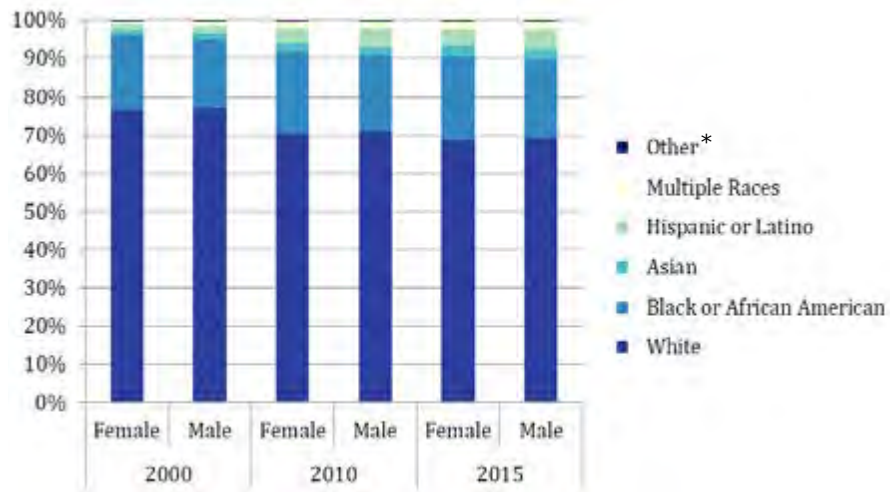
1. Catholic Church
2. Southern Baptist Convention
3. Christian Churches and Churches of Christ
4. United Methodist Church
5. Progressive National Baptist Convention, Inc.

Source: U.S. Religion Census: Religious Congregations and Membership Study, 2010 (County File). Retrieved from the Association of Religion Data Archives, http://www.thearda.com/Archive/Files/Descriptions/RCMSCY10.asp

136 languages spoken

Source: Spring 2017 Jefferson County Public Schools

RACE AND ETHNICITY OVER TIME

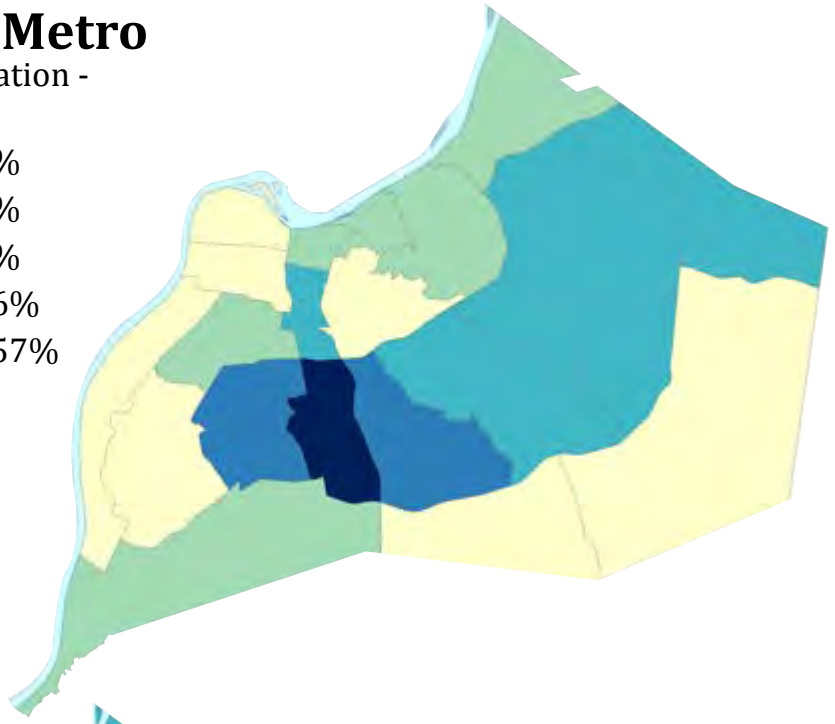


Source: Annual County Resident Population Estimates, Population Division, U.S. Census Bureau.
Racial categories are non-Hispanic.
**Other includes American Indian or Alaskan Native, Native Hawaiian or Other Pacific Islander, and Some Other Race*

Immigrants in Louisville Metro

Percent of Population - Foreign Born

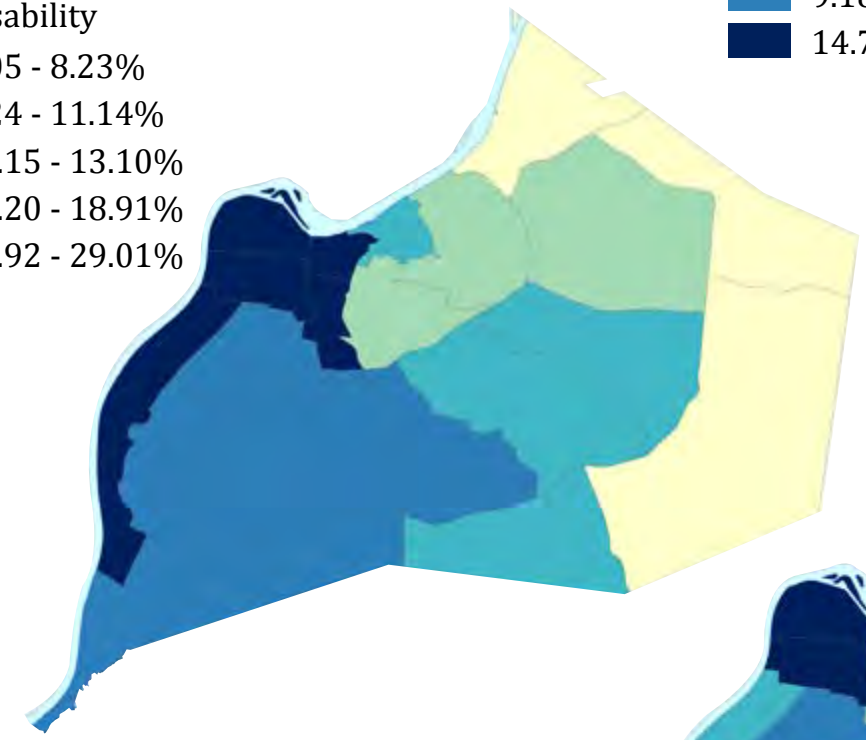
- 1.00 - 2.87%
- 2.88 - 6.64%
- 6.65 - 9.17%
- 9.18 - 14.76%
- 14.77 - 35.57%



Disability in Louisville Metro

Percent of Population - With Disability

- 7.05 - 8.23%
- 8.24 - 11.14%
- 11.15 - 13.10%
- 13.20 - 18.91%
- 18.92 - 29.01%



Women in Louisville Metro

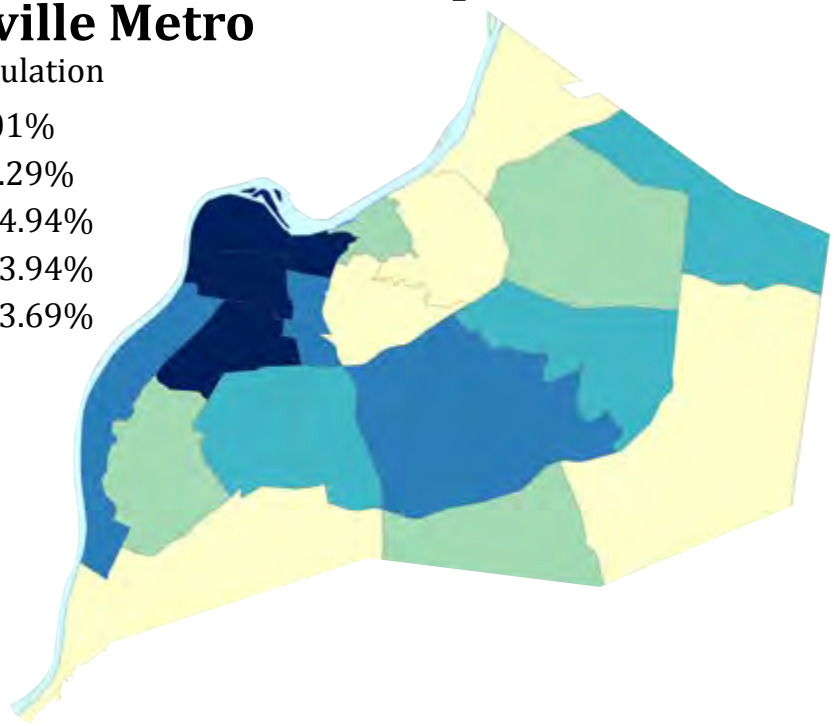
Percent of Population - Female

- 42.88%
- 42.89 - 50.23%
- 50.24 - 51.91%
- 51.92 - 53.02%
- 53.03 - 54.07%

Black/African American Population in Louisville Metro

Percent of Population

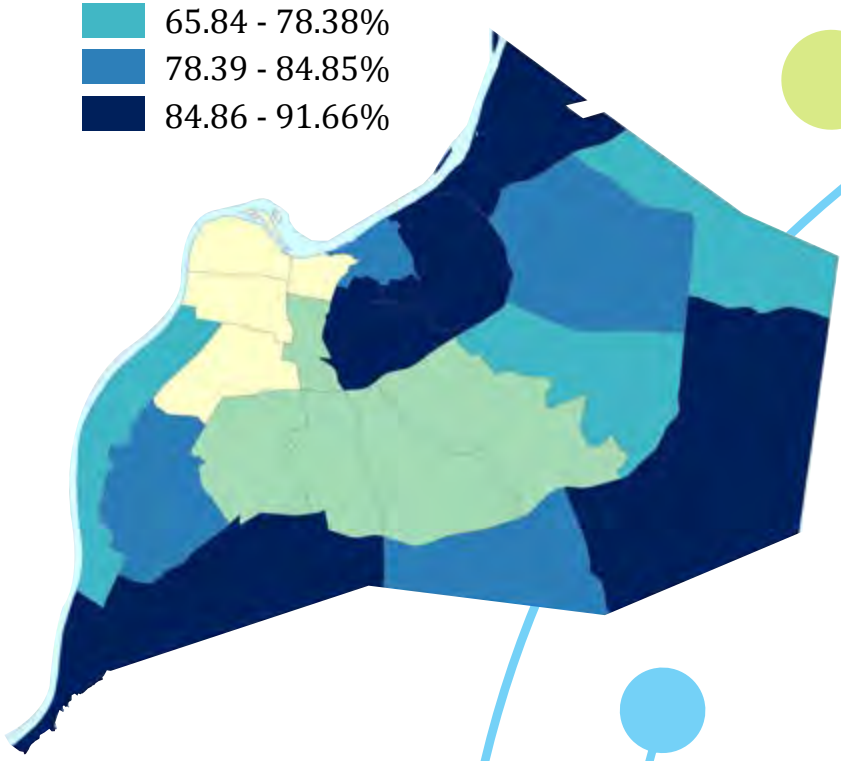
- 2.86 - 4.01%
- 4.02 - 10.29%
- 10.30 - 14.94%
- 14.95 - 23.94%
- 23.95 - 83.69%



White Population in Louisville Metro

Percent of Population

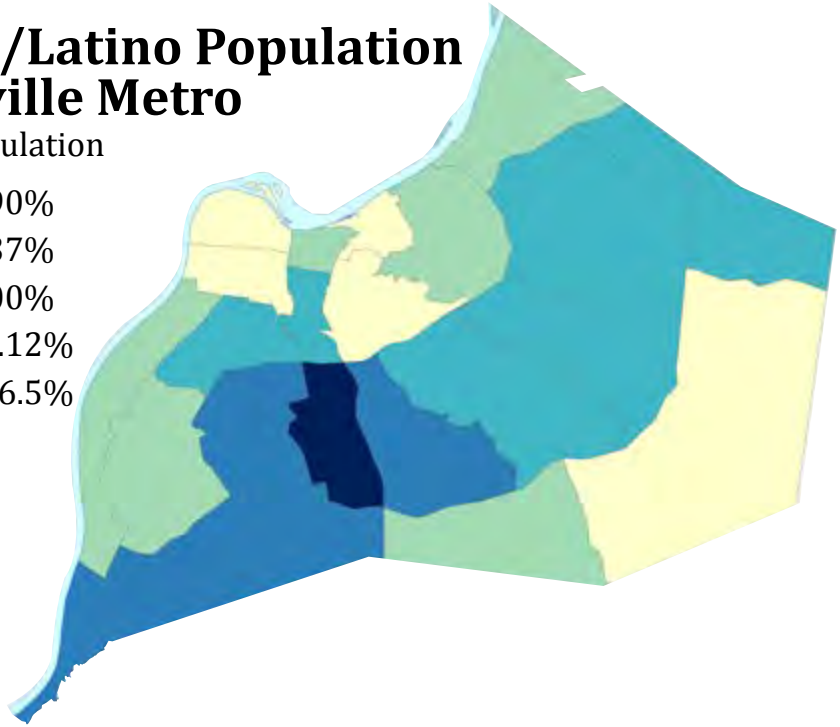
- 12.60 - 41.28%
- 41.29 - 65.83%
- 65.84 - 78.38%
- 78.39 - 84.85%
- 84.86 - 91.66%



Hispanic/Latino Population in Louisville Metro

Percent of Population

- 0.55 - 1.90%
- 1.91 - 3.37%
- 3.38 - 6.00%
- 6.01 - 12.12%
- 12.13 - 26.5%



EMPLOYMENT AND INCOME

BUILT ENVIRONMENT

TRANSPORTATION

FOOD SYSTEMS

EARLY CHILDHOOD DEVELOPMENT

HEALTH AND HUMAN SERVICES

NEIGHBORHOOD DEVELOPMENT

HOUSING

CRIMINAL JUSTICE

ROOT CAUSES

EDUCATION

ENVIRONMENTAL QUALITY

ROOT CAUSES

**Check out our website for upcoming reports on root causes.*

In our report, we have examined 11 root causes that lead to health outcomes. In order to address population health outcomes, we must address root causes. Root causes impact health outcomes because the way an individual experiences a root cause often provides either an advantage (such as higher income or more access to fresh, healthy food) or a disadvantage (such as lower income and more access to high sugar, processed foods). These root causes create environments with specific choices; the choices that residents make are shaped by the choices they have.

These are not the only root causes that exist. Nevertheless, the root causes chosen as a focus in this report are key factors in the health outcomes featured in this report. Most root causes are interconnected and linked to many, if not all health outcomes. In this report we have selected two to four root causes per health outcome to provide examples of how these connections work. Please keep in mind that these two to four outcomes are examples and not the entire list of what is at the root of these health outcomes. On these pages we provide the names of the root causes and the general meaning behind these outcomes. Reference each individual health outcome to see a deeper focus on how they impact those health outcomes specifically.

NEIGHBORHOOD DEVELOPMENT

This examines the economic and social characteristics of a neighborhood. What kinds of businesses and capital are available in the neighborhood? What kinds of development are happening? Is there intergenerational wealth or intergenerational poverty, and how is it linked to historical segregation? What kind of community capacity is there to organize and demand change or influence decisions? It also examines the types of zoning laws and development decisions that shape the resources of the community.

Health outcomes: Asthma, Homicide, Lead poisoning, Mental health, Sexual assault and Intimate partner violence, STDs, Teen pregnancy, Tobacco use

HOUSING

Housing includes an array of factors that look at affordability and quality of housing. It examines who is able to attain and maintain home ownership, who rents, and who is experiencing unstable housing or homelessness.

Health outcomes: Asthma, Heart disease, Lead poisoning

TRANSPORTATION

Transportation looks at the ways that people are able to move through a community, whether it be by walking, biking, driving, taking public transportation, etc. It examines what infrastructure exists and what kinds of transportation modes it supports. It also examines what kinds of laws or policies make the environment easier or more difficult to navigate.

Health outcomes: Accidents

CRIMINAL JUSTICE

This refers to the system that involves police, courts, and incarceration and how they are linked together. It examines how people move through and are impacted by these systems. It can include laws that determine how these systems function, the assumptions and social norms governing actions and decisions, as well as the types of activities that are (or are not) criminalized.

Health outcomes: Infant mortality, Sexual assault and Intimate partner violence, Suicide

BUILT ENVIRONMENT

Built environment refers to the physical environment in which one lives. What buildings are present? What transportation pathways are available? What parks, green spaces, or natural resources are present in your community? Are there community centers and libraries? While this can be intimately linked to neighborhood development, it refers more to the physical resources that exist within a community. Often the built environment can help facilitate aspects of neighborhood development. For example, parks can improve social cohesion, or the relationships that people have to each other.

Health outcomes: Accidents, Arthritis, Diabetes, Homicide, Stroke

FOOD SYSTEMS

Food systems are made of many different elements, from food supply chains, to where food is sold or given out, to programs that examine the affordability and accessibility of food. This includes everything from farms and community gardens, corner stores, grocery stores, co-ops, farmer's markets, community supported agriculture (CSAs), food pantries, soup kitchens, restaurants and programs such as WIC (Women, Infants and Children) and SNAP (Supplemental Nutrition Assistance Program). Food systems examine the quality and type of foods that are ultimately available to a community.

Health outcomes: Arthritis, Cancer, Diabetes, Heart disease, Infant mortality, Oral health, Stroke

EARLY CHILDHOOD DEVELOPMENT

Early childhood development refers to the environment in which children grow up and develop cognitive, social, and linguistic skills. It can include relationships to caregivers, quality and affordability of childcare, opportunities for learning, and kindergarten readiness. Often, it is impacted by other root causes, such as neighborhood development, which may expose or protect children from certain experiences. Additionally, it may be impacted by how children's parents or caregivers experience other root causes, such as employment and income or education.

Health outcomes: Drug and alcohol use, Heart disease, Sexual assault and Intimate partner violence, Teen pregnancy

ENVIRONMENTAL QUALITY

Environmental quality reflects the quality of the air, water and soil in a community. The level of pollution that exists from traffic, industry, brownfields and toxic release sites can impact environmental quality, as does the quality and maintenance of infrastructure for water and sewage. Another factor important to Louisville is the urban heat island effect, which artificially raises the temperature of the city compared to its surroundings.

Health outcomes: Asthma, Cancer, Lead poisoning, Oral health

EDUCATION

Education encompasses everything from elementary school to high school and postsecondary education, which is everything after high school and its equivalent such as vocational training programs, apprenticeships, internships, college, masters and doctorate degrees. Education looks at the resources and opportunities available at each stage of a person's training, the level of learning that occurs, and what kinds of supports are available to help people eventually achieve their career goals.

Health outcomes: Alzheimer's disease, Drug and alcohol use

HEALTH AND HUMAN SERVICES

Health and human services encompasses the fields of health care and public health. On the health care side, it includes insurance coverage, provider availability and proximity, patient-provider communication, the cost of health care, and the ease or difficulty with which someone navigates health services. On the public health side, it also looks at what kinds of community resources, programming, education, and policies are available to improve the overall population's health.

Health outcomes: Cancer, Mental health, Oral health, STDs, Stroke, Suicide, Teen pregnancy, Tobacco use

EMPLOYMENT AND INCOME

Employment and income examines the types of jobs people have, whether they work part or full-time, what kinds of benefits they do or do not receive, and what kinds of wealth and assets they are or are not able to build up over time as a result of their employment status.

Health outcomes: Alzheimer's disease, Arthritis, Cancer, Diabetes, Drug and alcohol use, Homicide, Infant mortality, Mental health, STDs, Suicide, Tobacco use

SYSTEMS OF POWER

Root causes shape the choices that are available to residents and communities. We know that root causes look different for different communities—the question is why? Why are these choices the choices that are available?

Deep in the soil, you will find systems of power—like racism and sexism—that shape how people experience root causes of health equity like housing or employment. These systems of power are embedded in history and our present-day practices and policies. To improve health, we must reexamine how our policies and systems work, to make environments that are healthy for all of our residents.

Individual behavior and choices alone are not enough to account for the differences we see in the distribution of population health outcomes. We must dig deeper to understand how some "behaviors" might arise from the opportunity—or lack of opportunity—in residents' social, political, physical, and economic environments. Health equity acknowledges that these environments look different for different people, and that if inequities in policy and practice were addressed, these health disparities could be preventable.[1]

Thousands of research studies have validated that social, political, physical and economic environments impact residents' health, leading to health disparities.[2] These disparities have been well documented in this report, including differences in rates of teen pregnancy, diabetes, stroke, and most importantly, death rates. Several scholars and researchers have proposed that racism is an underlying cause that shapes the landscapes that residents experience. These landscapes ultimately determine population health outcomes.[3,4]

Consider the tree metaphor that we have used throughout the report. When the soil is rich and full of nutrients (the systems of power provide beneficial policies and practices), the roots (causes) will thrive and produce good health outcomes (leaves and flowers).[5] When the soil is lower quality, you will see a negative impact on the roots and subsequently, the health outcomes.

How do we know that changing policies and practices to be more racially equitable will work? We see that communities within Louisville Metro that are thriving and have better health outcomes often have benefited from having strong, healthy root causes: an educational pipeline leading to higher educational attainment, neighborhoods with resources ranging from health services to healthy foods to thriving businesses, strong employment prospects, and quality housing options.

Evidence from public health success stories tells us that when we come together to align resources and improve policies and practices, we can see improvements in residents' health outcomes and quality of life. Together, we can make Louisville Metro a place where all can thrive and experience health, happiness, and wellness.

1. Braveman P. Health Disparities and Health Equity: Concepts and Measurement. *Ann Rev Public Health*. 2006; 27:167-194.
2. Link BG, Phelan J. Social Conditions as Fundamental Causes of Disease. *Journal of Health and Social Behavior*. 1995; 80-94.
3. Krieger N. Methods for the Scientific Study of Discrimination and Health: An Ecosocial Approach. *American Journal of Public Health*. 2012; 102(5): 936-945.
4. Jones CP, Jones CY, Perry GS, Barclay G, Jones CA. Addressing the Social Determinants of Children's Health: A Cliff Analogy. *Journal of Health Care for the Poor and Underserved*. 2009; 20: 1-12.
5. Jones CP. Levels of Racism: A Theoretic Framework and a Gardener's Tale. *American Journal of Public Health*. 2000; 90(8): 1212-1215.

DEATHS

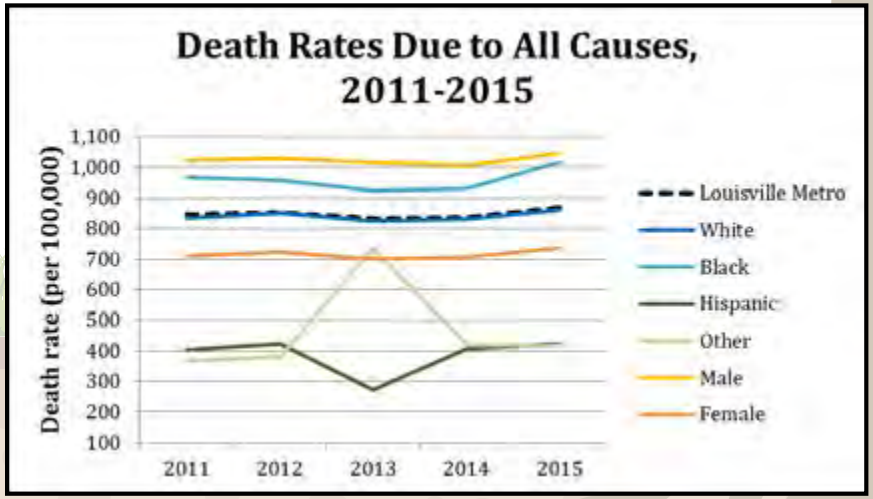
"At some point, everyone will die. But at what age and with what degree of suffering?"

– Nancy Krieger

Deaths Due to All Causes Total 2011 - 2015

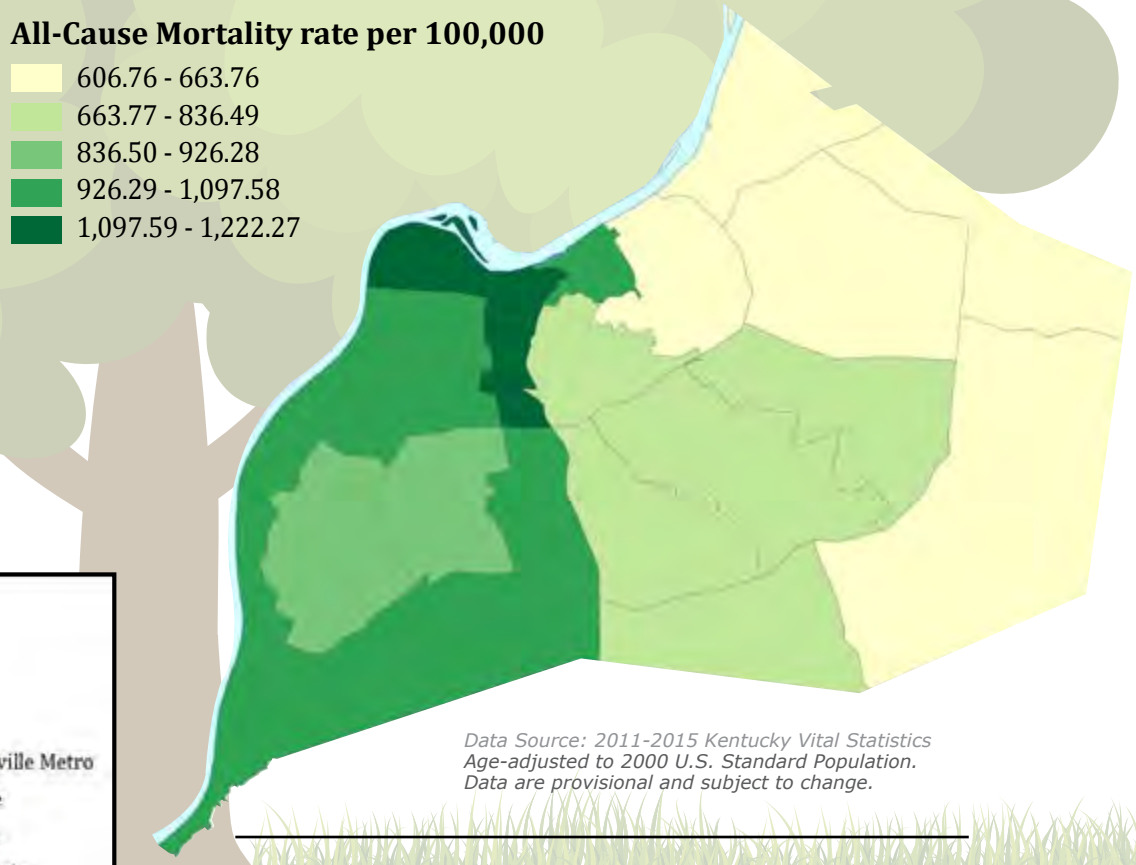
	Count	Age-adjusted rate (per 100,000)
Black Male	3,220	1,199.38
White Male	14,592	1,012.02
Louisville Metro	**36,970**	**848.96**
Black Female	3,151	795.59
White Female	15,422	708.52
Other Male	149	516.01
Hispanic Male	182	436.08
Other Female	128	419.58
Hispanic Female	126	339.75

Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to the 2000 U.S. Standard Population.
Racial categories are non-Hispanic.



Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to the 2000 U.S. Standard Population.

Death Due to All Causes

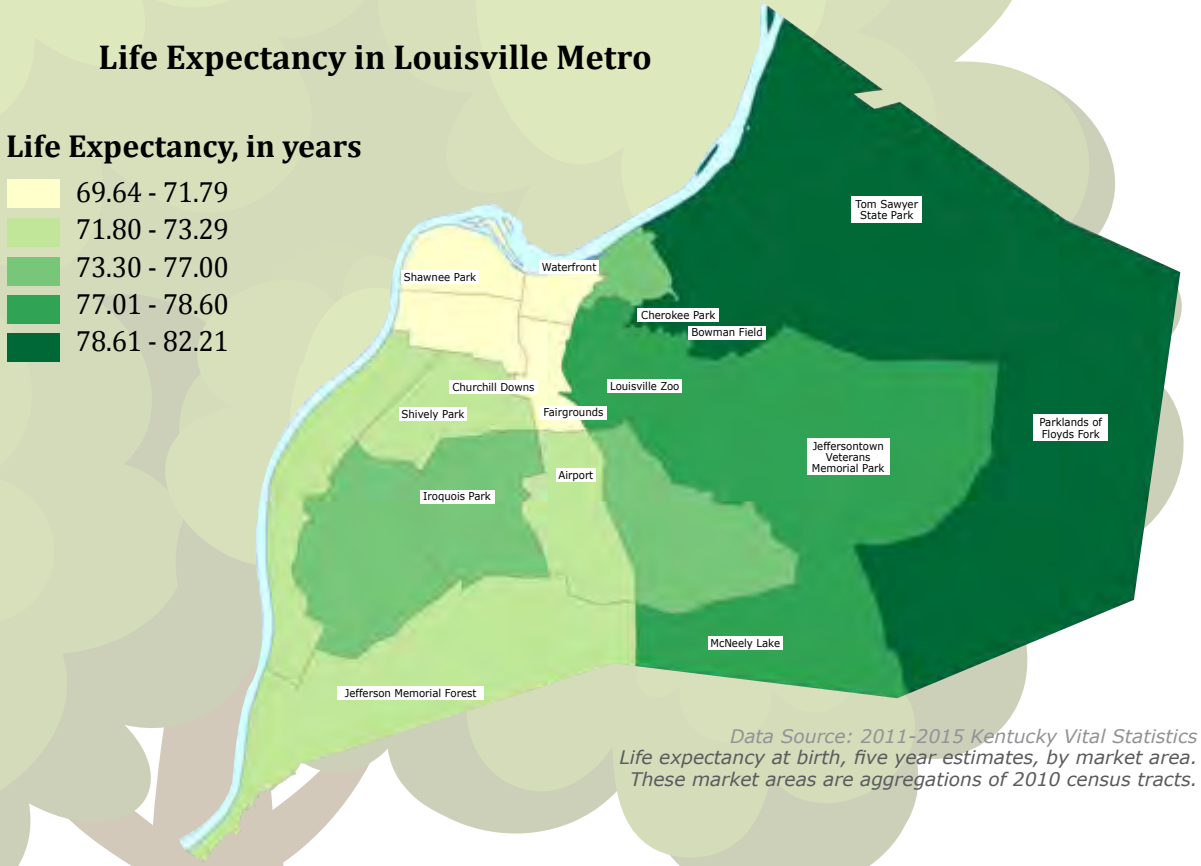


Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to 2000 U.S. Standard Population.
Data are provisional and subject to change.

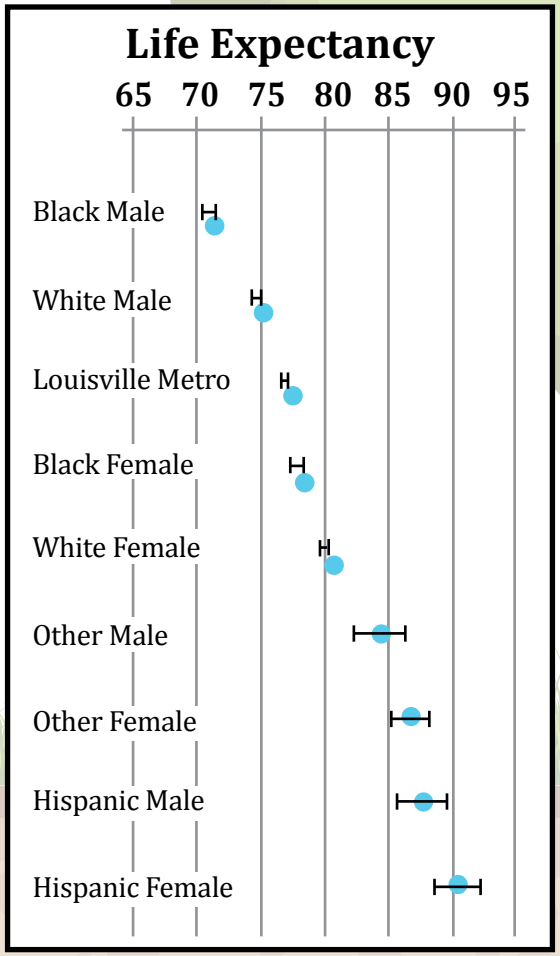
The median age of those who died in Louisville Metro from 2011-2015 was 76. However, different populations are dying at different rates. Men have higher death rates than women because they are more likely to die prematurely from things like overdose, transit accidents, homicide and suicide. We also find that Black populations are dying at greater rates than their same gender counterparts, in part due to systemic oppression which differently patterns the way people experience root causes such as housing, employment, and education.

Our death rates and life expectancy are determined by root causes and the systems of power that shape them. Here we explore the cumulative effect that root causes and systems of power have on health through all-cause death rates and life expectancy.

Life Expectancy in Louisville Metro



Data Source: 2011-2015 Kentucky Vital Statistics
Life expectancy at birth, five year estimates, by market area.
These market areas are aggregations of 2010 census tracts.



Data Source: 2011-2015 Kentucky Vital Statistics
Life expectancy at birth, five year estimates.
Lines represent 95% confidence intervals.

Life expectancy is the average number of years a newborn is expected to live, if the current rates at which people die stay the same. The life expectancy for Louisville Metro is 76.8, but some areas have a 12.6 year difference in life expectancy. Comparing the life expectancy for Louisville Metro from 2006-2010 and 2011-2015, there has been no significant change. Additionally, the differences in life expectancy between neighborhoods cannot be compared from the 2011 and 2014 reports to the 2017 report given the differences in geographic boundaries.

Top 3 Outcomes That Lead To Death

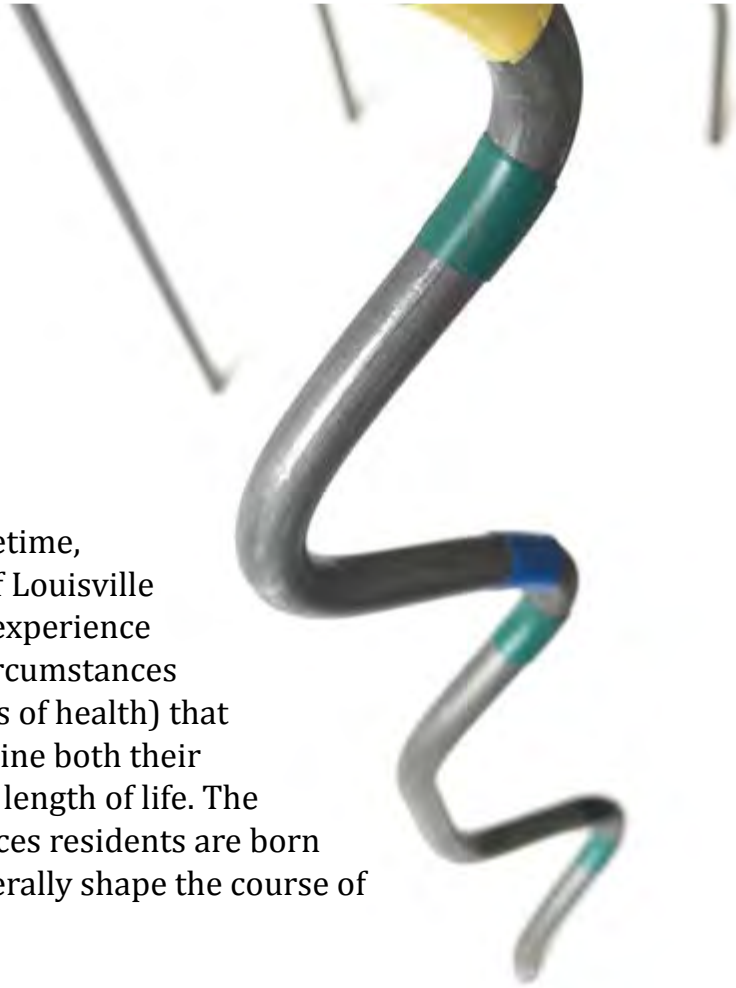
	1.	2.	3.
USA	**Heart disease 169.9**	**Cancer 163.6**	**COPD* 41.6**
Louisville Metro	**Cancer 189.9**	**Heart disease 169.6**	**COPD* 51.9**

Data Source: 2011-2015 National Vital Statistics System, National Center for Health Statistics, CDC
Age-adjusted to 2000 U.S. Standard Population, rates per 100,000.
**COPD or Chronic Obstructive Pulmonary Disease is now known as Chronic Lower Respiratory Disease.*

Both Louisville Metro and the USA have the same rate of heart disease deaths, but Louisville Metro has a much higher rate of cancer, making it our leading cause of death.

Health Outcomes

Our experience and environment shape the course of our life.



Across a lifetime, residents of Louisville Metro will experience different circumstances (root causes of health) that will determine both their quality and length of life. The circumstances residents are born into will literally shape the course of their lives.

The Health Equity Report documents how these root causes produce population differences in health outcomes, and highlights best practices to improve every community's health.

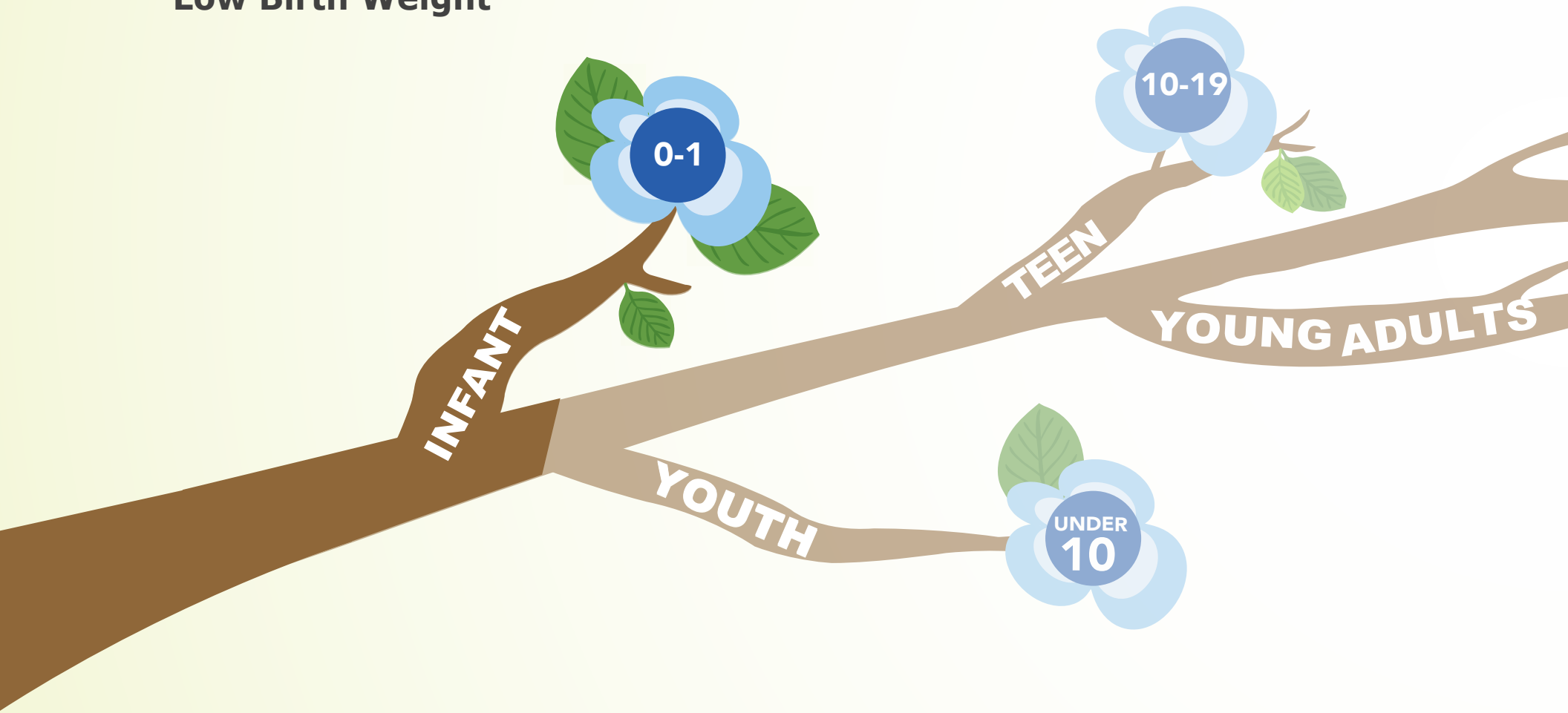
Andrew Cozzens, Smoketown Life|Line Project

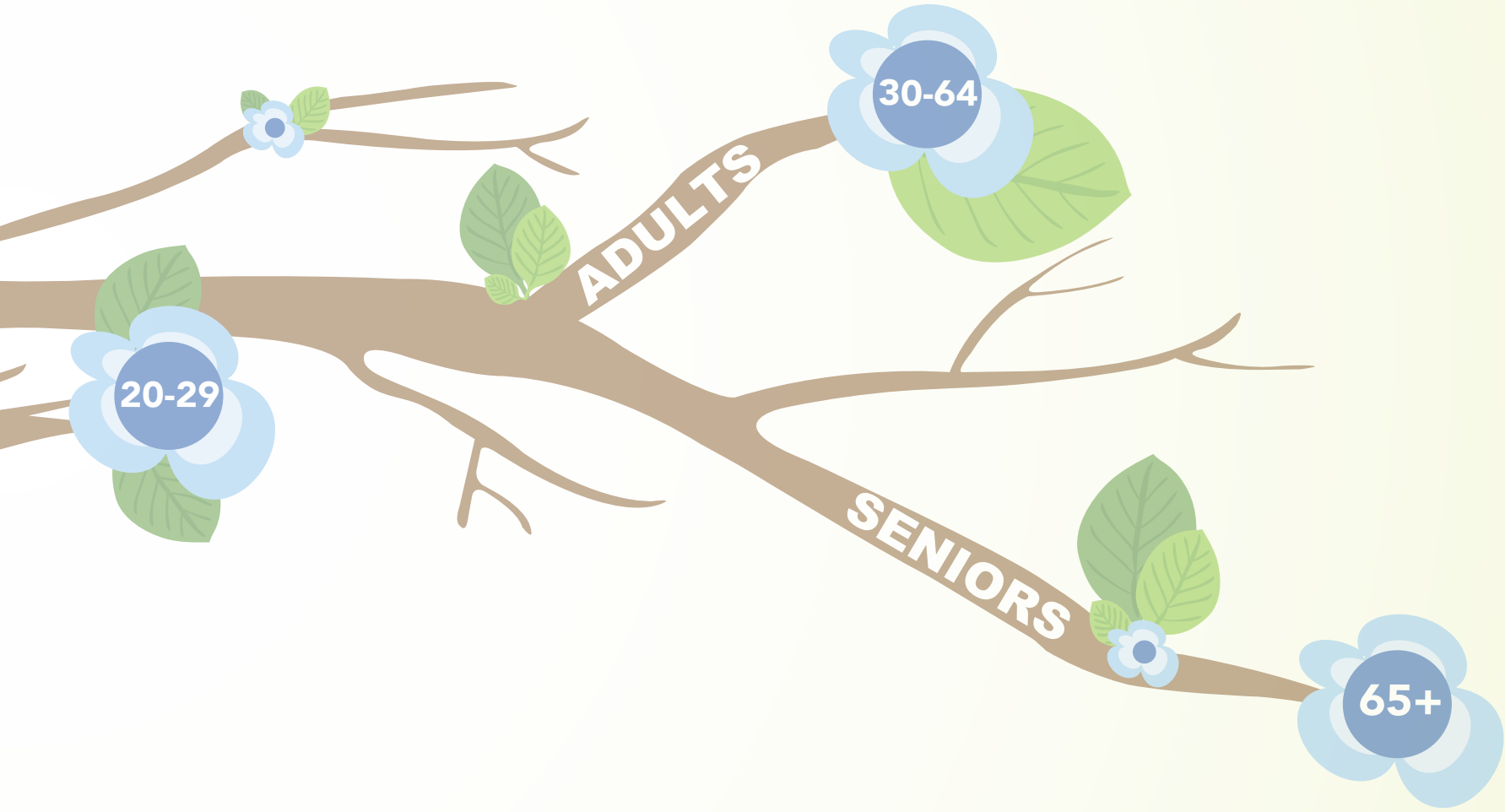
- Incarceration
- Violence
- Family Issues
- Addiction
- Trauma
- Mental Illness

Project HEAL artist Andrew Cozzens - a sculptor – created the Smoketown Life|Line Project to create dialogue with community around trauma, while visualizing its multi-dimensional impact. The intention of the sculpture is to use art as a language that lifts up the voices of those often left out of equitable policy making. It documents not only individual paths of people and the circumstances that shape them, but the health equity story of the neighborhood itself.

INFANTS

Infant Mortality
Preterm Birth
Low Birth Weight




30-64
ADULTS
20-29
SENIORS
65+

INFANT HEALTH

We strive for a Louisville where all babies live to see their first birthday and beyond.

What is infant mortality?

The Center for Disease Control and Prevention (CDC) defines 'infant mortality' as the death of an infant before their first birthday.[1]

What are preterm births and low birth weight? How do these outcomes affect health and quality of life?

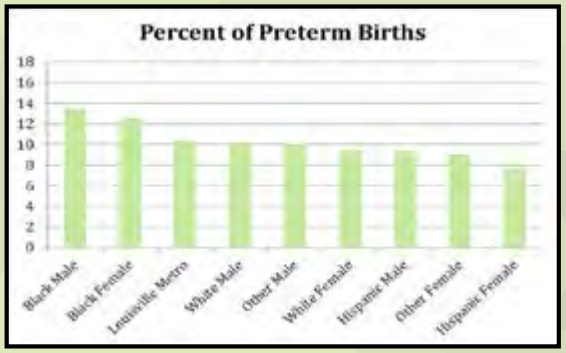
The CDC definition for 'preterm birth' is "when a baby is born too early, before 37 weeks of pregnancy has been completed."[2] Preterm birth can present a serious risk of disability and/or shortened life expectancy for the baby because there is so much development that occurs in the third trimester of pregnancy, including the brain, lungs, and liver.[2]

A baby's weight is measured immediately after they are born. Babies with low birth weight are those who weigh less than 5.5 pounds; a baby can be considered low birth weight regardless of whether the baby was born preterm or carried for the full 37 weeks.[3] Low weight at birth has the potential for lifelong impact on motor skills, social development and learning dis/abilities, as well as the financial stability of the parent/guardian due to the significant associated medical costs.[3]

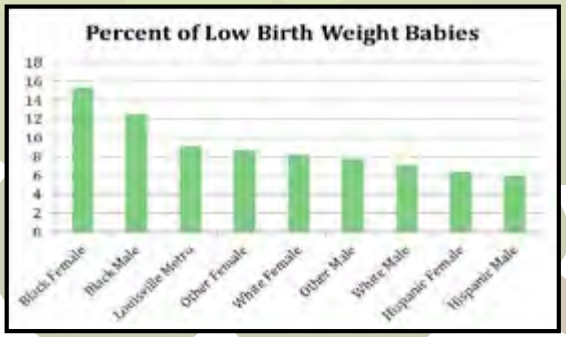
What is the connection between infant mortality, preterm birth, and low birth weight?

Although not all preterm births or low birth weights result in death, the CDC identifies both of these outcomes as significant risk factors for infant mortality.[1] Because preterm births and low birth weights make it difficult to fight off infections, develop important bodily functions, and grow into a healthy adult, death is a much higher risk.[2]

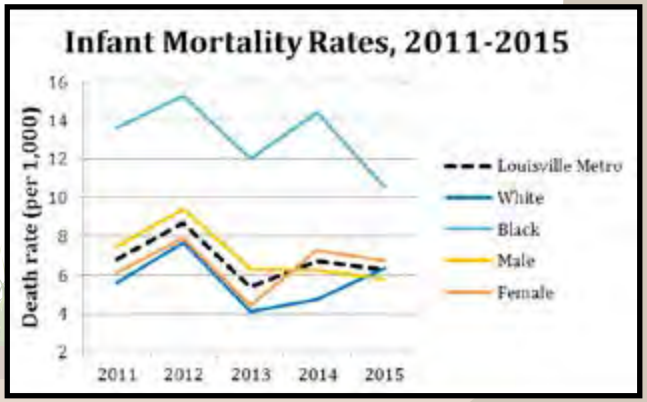
INFANT HEALTH



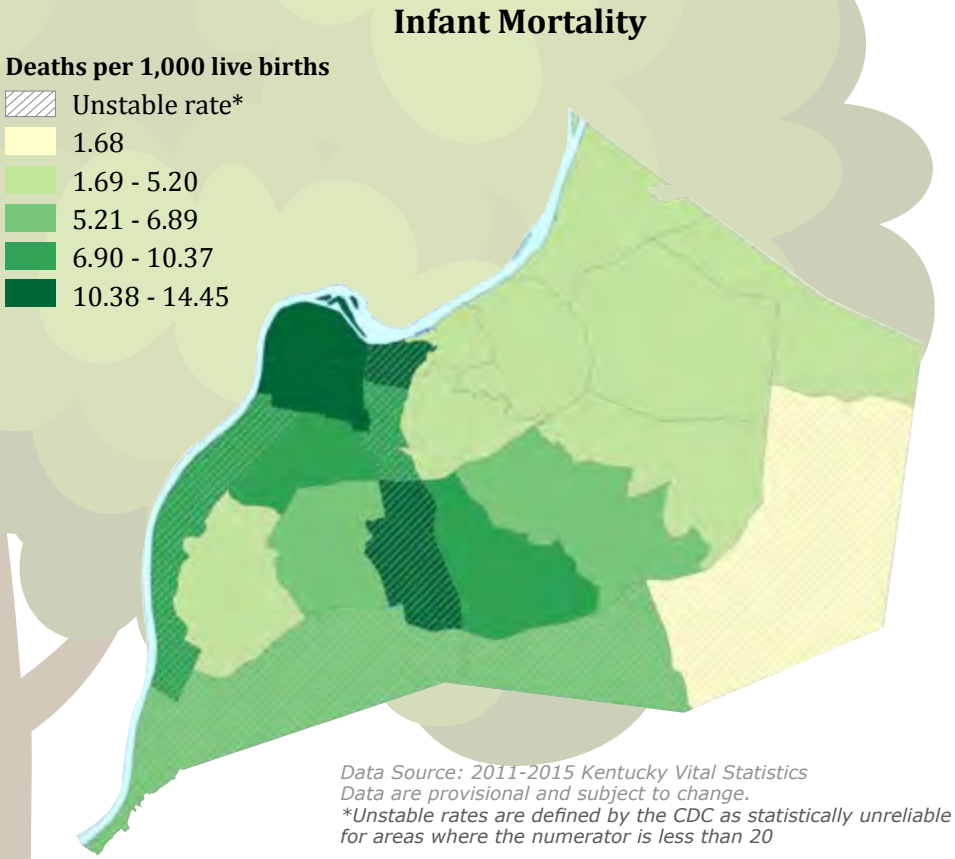
Data Source: 2011-2015 Kentucky Vital Statistics



Data Source: 2011-2015 Kentucky Vital Statistics



Data Source: 2011-2015 Kentucky Vital Statistics
Annual rates are unreliable for Hispanic and Other.



Data Source: 2011-2015 Kentucky Vital Statistics
Data are provisional and subject to change.
**Unstable rates are defined by the CDC as statistically unreliable for areas where the numerator is less than 20*

From 2011-2015, there were 335 infant deaths in Louisville Metro, out of 49,577 total births. Far and away, preterm births, low birth weights and infant mortality disproportionately affect Black babies. This is important because infant outcomes can impact health throughout the rest of one's life. While infant mortality has slowly been falling, the death rate for Black babies from 2011-2015 was 1.95 times higher than for Louisville Metro; 2.31 times higher than for White babies; and 2.88 times higher than for Hispanic babies.

Root Causes | Health Outcomes

CRIMINAL JUSTICE

FOOD SYSTEMS

EMPLOYMENT AND INCOME

EMPLOYMENT AND INCOME

The relationship between (un)employment, income and birth outcomes is important to understand because mothers make up a large percentage of employees. Having steady income, regardless of who is employed, helps the mother be able to fulfill the needs for a healthy pregnancy. This includes being able to afford prenatal care and healthy foods, as well as avoid the stress that financial uncertainty can have on the baby's growth and health.[4] The amount of income also matters to infant health. **For example, a 2014 study found a connection between wage increases and birth weight; results projected that if all states in 2014 had increased their minimum wages by one dollar, there would likely have been 2,790 fewer low birth weight births and 518 fewer infant deaths for the year.**[4]

Employment can also impact pregnancy in other ways, such as type of employment or characteristics of the job.[5,6] Research shows a connection between birth outcomes – especially birth weight – and job characteristics, such as whether or not the mother's job has recognized status (ex. "doctors, dentists, and engineers"), the job requires physical labors (ex. "cleaners, farm laborers, and nurses"), or the job involves regular exposure to conflict (ex. "social workers, policemen, and lawyers").[7]

FOOD SYSTEMS

Eating healthy foods, staying active and gaining the right amount of weight during pregnancy helps keep both the mother and baby healthy. However, individual behavior when pregnant often is dictated by the choices available. In particular, the availability of fresh food from grocery and/or convenience stores located near people's homes play an important role in dietary choices.

Regardless of income, it is incredibly difficult for mothers living in areas with limited or no access to grocery stores to achieve the healthy diet needed for a healthy delivery. For example, residents in urban areas have described their access to food largely through corner markets that mostly sell alcohol and other non-food items, rather than stores that carry vegetables and fruit needed for a healthy delivery.[8] Researchers also found a connection between healthier infant birth weights and "living further away from" and/or living around "a smaller number of convenience stores."[9]

The 2010 State of Food Report compiled by the Mayor's Healthy Hometown Movement, documented the inequities in food access across Jefferson County.[10] The report showed that residents living in west and south Louisville uniquely navigate food insecurity by having both limited access to full-service grocery stores and few options of transportation to travel to stores outside of their neighborhoods. Communities that are food insecure are also more likely to be saturated with tobacco and alcohol advertising through convenience stores. This often leaves residents with more access to tobacco products, and the resulting negative health consequences, than fresh food.[11] When convenience stores are more prevalent, researchers see a negative impact on maternal and child health.[9]

CRIMINAL JUSTICE

Research shows that having at least one parent jailed during pregnancy (regardless of if it is the mother or father), plays an important role in the health outcomes for their newborn.[12]

There are several reasons there is an impact on birth outcomes when a father is jailed during the mother's pregnancy. The best understood is the loss of income when one parent is in jail. Not only do families lose one person's income, they often have additional expenses, including legal fees and associated costs of keeping in contact with someone in jail or prison (collect phone calls, sending packages, travel).[13] Additionally, having a partner in jail can also negatively impact the mother during pregnancy because of high levels of stress.

According to The Sentencing Project, women in the United States are the fastest growing population of prisoners.[14] As the number of women in prison rises, so does the number of women who are pregnant or give birth in prison. Although there is limited research about the impact of jail time on birth outcomes, this issue is gaining attention. What research does show is that there is a significant, increased likelihood of both negative psychosocial effects on the mother and less access to quality, timely prenatal care.[15] This combination can make it much more difficult to maintain a healthy pregnancy, impacting the child's birth outcomes.

Research also shows that, depending on how far along the pregnancy is, incarceration can also have an impact on infant health. **For example, jail time during second and third trimesters appears to have a negative impact on the baby's birth weight.**[13]

BEST PRACTICES

To improve infant health in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Employment and Income

Food Systems

Criminal Justice

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY

national, state, local law

Connect with your elected officials!

- Implement a state-level Earned Income Tax Credit (EITC) to aid wealth building and alleviate poverty.[16,17]
- Implement child care subsidies to help parents with low-income work more hours, stay in jobs longer, and increase overall earnings.[18]
- Implement paid parental leave policies for working parents.[19]
- Provide co-parenting resources automatically through family court.[20]
- Implement alternative sentencing programs allowing parents to stay connected with their children by being diverted from jails and prisons.[21]

COMMUNITY

relationships among organizations

How can we link resources together?

- Establish funding to subsidize healthy foods; in some communities, this includes competitive prices to improve sales of healthy foods; in others, it looks like Vegetable Prescription plans.[22,23]
- Ensure that parents and children eligible for Medicaid are automatically enrolled.
- Provide counseling on safe sleep practices and standardized life-planning resources.
- **Expand access to early childhood home-visiting and developmental screening programs, like Healthy Start.[24,25]**

ORGANIZATIONAL

organizations, social institutions

Change where you work, learn, pray, and play.

- ***Expand utilization of nutritional guidelines for food procurement contracts (including vending machines, breakfast and lunch options, etc.) in governments, workplaces, schools, and public facilities.**
- Implement multi-component worksite programs that address nutrition and physical activity.[26]
- Standardize screening and referral for post-birth depression, intimate partner violence, and substance use disorders.
- Ensure access to contraception education and access in the hospital after the birth

INTERPERSONAL

family, friends, social networks

Support each other!

- Create opportunities for parents to be engaged and involved with family.
- Participate in birthing networks and play groups.
- Quit smoking or support pregnant women who are trying to quit smoking.

INDIVIDUAL

knowledge, attitudes, skills

What you can do!

- Attend regular appointments before and after the birth; make sure you schedule visits for both your child and yourself.
- Take folic acid regularly.
- Use safe sleep practices every time your baby is sleeping.
- Consult with your healthcare professionals to learn more about breastfeeding best practices.

RESOURCES

Healthy Babies Louisville

If your organization would like to join the Healthy Babies Louisville Coalition to improve perinatal health outcomes for women and infants, visit: http://healthybabieslouisville.org/ Email PIHN@louisvilleky.gov or call **502-574-5883**

Healthy Start and HANDS

Healthy Start and HANDS are home-visiting programs focused on improving health outcomes for mothers, infants, and families. HANDS serves all families in Louisville Metro while Healthy Start is targeted to 40202, 40203, 40208, 40210, 40211, and 40212. For more information on HANDS visit: http://www.familyandchildrensplace.org/our-services/hands/ For more information on Healthy Start call **502-574-MOM1 (6661)**

Local Food Resource Guide

For more information on the Louisville Farmers Market Association and Local Food Resources, visit: https://louisvilleky.gov/government/mayors-healthy-home-town-movement/services/healthy-eating

Breastfeeding

For more resources, such as support groups, free lactation consultation, and WIC classes, visit: https://louisvilleky.gov/government/health-wellness/breastfeeding-support

WIC

WIC (Women, Infants and Children) is a health and nutrition program. For more information about the program, to check eligibility, or to sign-up, visit: http://www.louisvillewic.org

Baby and Me Are Smoke Free

For support with quitting smoking when you are pregnant or planning to become pregnant, call **502-574-6541** to learn more about the Giving Infants and Families Tobacco-Free Starts (GIFTS) program.

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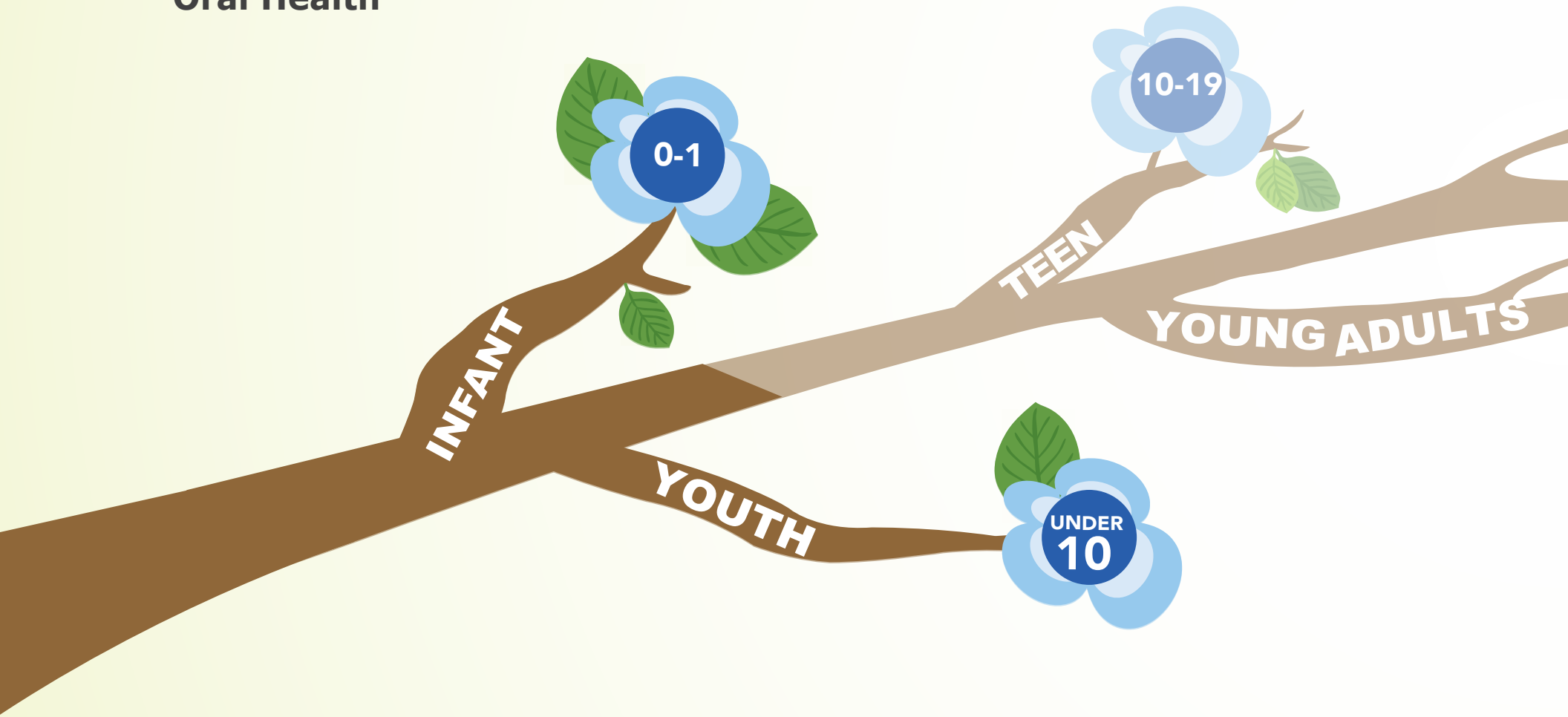
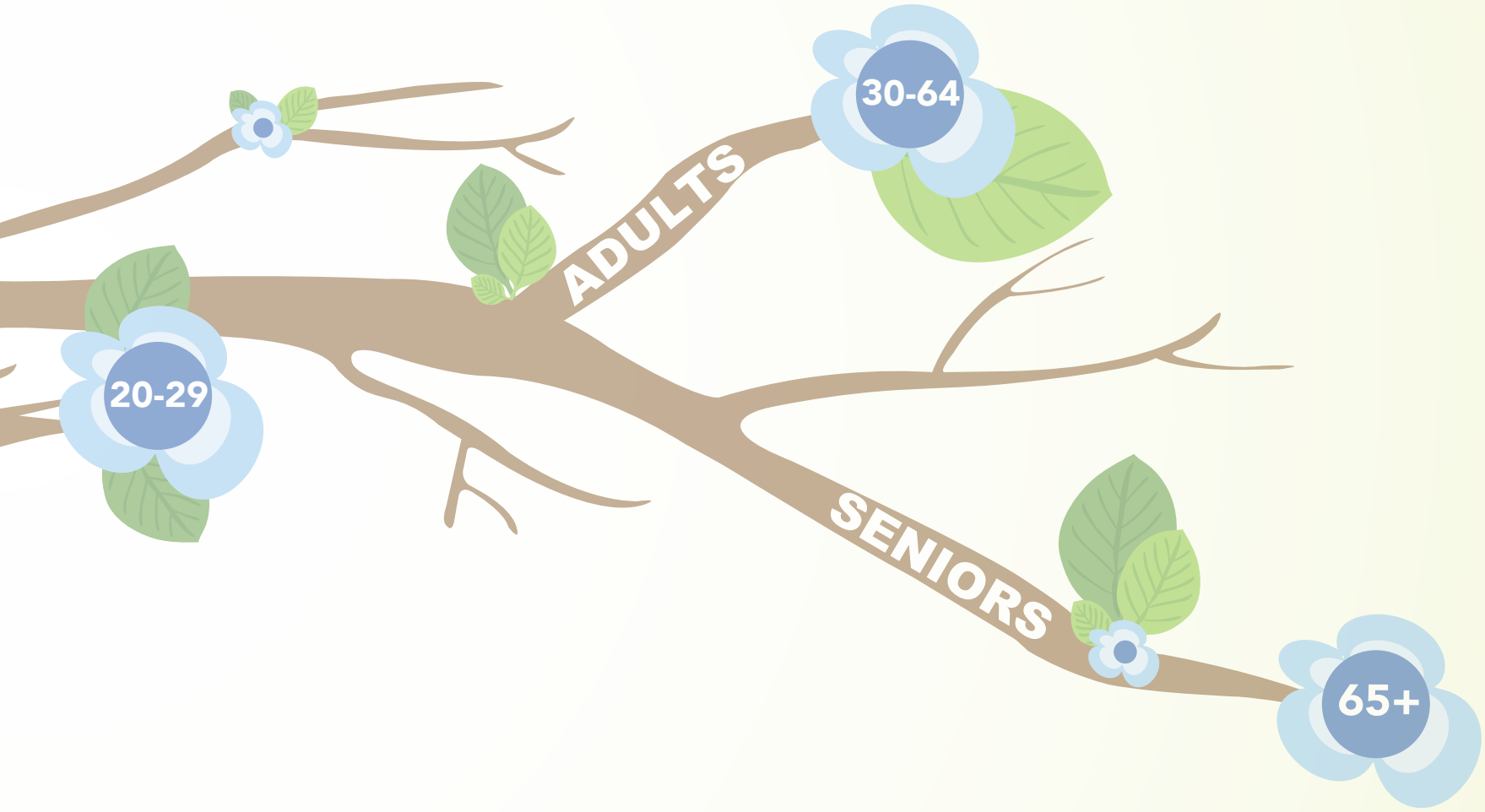
YOUTH

Asthma
Lead Poisoning
Oral Health




30-64
ADULTS
20-29
SENIORS
65+

ASTHMA

We want a city where every person can breathe easy.

What is asthma?

"Asthma is a chronic (or lifelong) lung disease that makes it harder to move air in and out of your lungs."[1] People with asthma have it all of the time, but only experience symptoms or attacks when they come into contact with things that bother their lungs.[2] Common asthma symptoms include:

- "wheezing (a whistling sound when you breathe),
- chest tightness,
- shortness of breath, and
- coughing."[3]

How does asthma affect health and quality of life?

There is no cure for asthma but individuals with asthma can manage the disease by limiting exposure to things that bother the lungs, also known as asthma triggers. The things that trigger asthma are different for everyone, but some common triggers include:

- dust,
- air pollution, and
- secondhand smoke.[2]

When someone with asthma comes into contact with one of these triggers, it can make it hard to breathe or cause other symptoms.[2,4] Asthma can be controlled by taking medicine exactly as prescribed by a physician.

Asthma affects the well-being of families and communities. Having symptoms all of the time can affect a person's ability to concentrate, as well as their ability to sleep. The combination of fear from not being able to breathe and feeling like you cannot control your asthma can lead to higher levels of stress and anxiety. When asthma and its symptoms are not managed it may limit everyday activities like going to school, work, social events, or playing sports.[5]

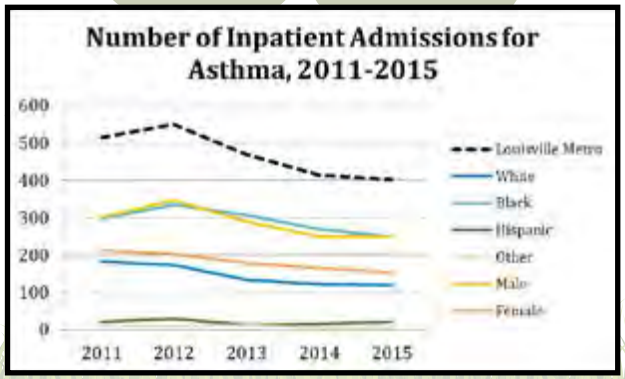
As a leading cause of childhood hospitalization and school absences, asthma can affect academic performance.[4] When children have to miss school, this may also mean that their parents have to miss work to stay at home and take care of them.[4] Frequent missed work days among parents who are paid hourly or have used all of their sick leave can "also widen the opportunity/financial gap."[6]

ASTHMA

Inpatient Admissions for Asthma, 2011-2015

	Count	Percent of Admissions
Louisville Metro	**2350**	**100.00%**
Black Male	881	37.49%
Black Female	578	24.60%
White Male	452	19.23%
White Female	283	12.04%
Hispanic Male	72	3.06%
Hispanic Female	35	1.49%
Other Male	32	1.36%
Other Female	17	0.72%

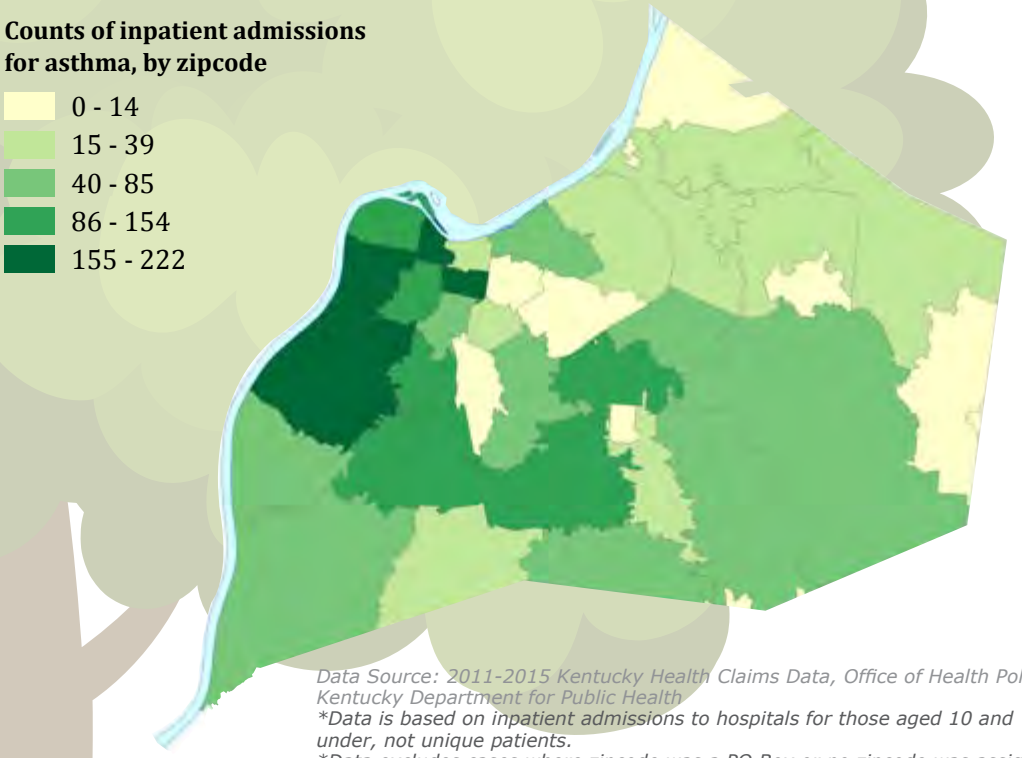
Data Source: 2011-2015 Kentucky Health Claims Data, Office of Health Policy, Kentucky Department for Public Health
Data is based on inpatient admissions to hospitals for those aged 10 and under, not unique patients.



Data Source: 2011-2015 Kentucky Health Claims Data, Office of Health Policy, Kentucky Department for Public Health
Data is based on inpatient admissions to hospitals for those aged 10 and under, not unique patients.

Asthma

Total inpatient admissions to hospitals for asthma from 2011-2015 by zipcode for those aged 10 and under



Data Source: 2011-2015 Kentucky Health Claims Data, Office of Health Policy, Kentucky Department for Public Health
**Data is based on inpatient admissions to hospitals for those aged 10 and under, not unique patients.*
**Data excludes cases where zipcode was a PO Box or no zipcode was assigned.*

Currently, there is not a county-wide system that tracks how many children have asthma. The best comparison we have is inpatient hospital admissions, which track the number of times someone is admitted to the hospital for an asthma-related problem.

These visits tend to be predominantly from Black children, although it is hard to know if there are more Black children with severe asthma problems or if a few children are repeatedly going to hospitals for acute care (or a mix of both).

Overall, inpatient visits have been decreasing with time, potentially as a result of more residents obtaining insurance and primary care through the Affordable Care Act.

Health Outcomes | **Root Causes**

ENVIRONMENTAL QUALITY

NEIGHBORHOOD DEVELOPMENT

HOUSING

The exact causes of asthma are not known. However, research shows that exposure to certain triggers that can be found in under-resourced housing and unhealthy neighborhood conditions, among other places, increases a child's risk of developing asthma as well as worsens symptoms for those who already have asthma.[7,8]

HOUSING

Housing quality is one of the most important factors affecting a child's asthma. Older, overcrowded, and/or poorly maintained housing units can expose children to many different indoor asthma triggers.[9,10,11] For example, housing with poor ventilation, water damage, old carpeting, and cracked walls that create an environment for mold, dust mites, cockroaches, and rodents, all of which are common asthma triggers.[9,10,11] While some asthma triggers can be addressed by those who rent their homes, many require home modifications that need their property manager's permission (who may not have the resources that are required to make those changes). **Addressing some asthma triggers in rental housing therefore requires the involvement of the property manager for major home modifications, and in some cases, the enforcement of housing code violations by city or county officials.**[12]

Tobacco smoke is another common asthma trigger. For example, children with asthma who have people who smoke around them have more frequent attacks and emergency room visits, compared to those who do not.[13] Because cigarette smoking is higher among adults coping with the consequences of poverty, children in public housing have higher exposure to tobacco smoke.[13,14,15] Even if parents or guardians do not smoke, children living in multi-housing buildings can still be exposed to tobacco smoke as it travels from one unit to another, through walls, air ducts, and cracks in the floor.[15] However, on November 30, 2016, a federal rule was announced to prohibit smoking in public housing units nationwide. Starting February 3, 2017, all public housing agencies in the country were required to implement this smoke-free policy inside units and for outdoor areas within 25 feet from public housing units and administrative offices.[16,17]

NEIGHBORHOOD DEVELOPMENT

Physical and social conditions of neighborhoods can both increase the risk of developing asthma and worsen symptoms for those already diagnosed.[11] Children with asthma need a safe environment and good nutrition to stay healthy. However, because continued housing segregation concentrates poverty and deprives neighborhoods of quality development, accessing the needed resources to manage childhood asthma can be extremely difficult for some residents.[11,18,19] For example, in Louisville, residents hospitalized for asthma primarily live in communities where there are 1) a majority of people of color, 2) high poverty rates and 3) poor air quality due to air pollutants from industrial activities and motor vehicles.[20]

Research shows the consequences of historical disinvestment, such as concentrated poverty or limited opportunity for wealth-building, result in other negative outcomes, such as violent crime.[21] Violent crime also can deter economic investment, which further limits neighborhood development.[22] For children, this can negatively impact asthma outcomes through increased stress levels and limited outdoor activities, due to a lack of safe recreational spaces.[11,23] Limiting outdoor physical activity may also lead to childhood obesity, which increases a child's risk of developing asthma.[23] Added stress also impacts parents' psychological well-being and their ability to control their child's asthma.[13] Research shows that parents with high stress levels are more likely to smoke tobacco, a known asthma trigger.[11]

ENVIRONMENTAL QUALITY

Asthma affects people of all ages but it is one of the most common chronic illnesses for children. Because they are still growing and developing, children are more susceptible to outdoor environmental contaminants than adults; at this stage in their life, children breathe more air, drink more water, and eat more food per pound of weight than adults. This means that children with asthma are even more sensitive to environmental contaminants, whether they be in the air they breathe or the soil they play in.[24,25] **In particular, children who live in poverty are more likely to live near industries that emit toxins into the environment.**[26] Because of increased exposure to asthma triggers, managing asthma can create additional financial burdens and time commitments due to needed hospital visits. For families who already have limited income, the ability to manage asthma for their children can become extremely difficult.[26]

Also having an impact on environmental triggers, Louisville has been identified as an urban heat island.[27] **With significantly higher temperatures, the urban heat island effect can lead to higher levels of air pollution and air quality problems that are known to trigger asthma attacks.**[13,28] This has a critical impact on the conditions that trigger asthma symptoms, especially for families who cannot afford higher utility costs to keep their homes cool.[29]

Finally, motor vehicles are also a large source of air pollution, causing more than 50% of pollution in urban areas.[30] Because of this, children who live in cities with limited public transportation are more likely to be exposed to air pollution by way of private vehicles than children who live in rural areas.

BEST PRACTICES

To reduce asthma in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Environmental Quality

Neighborhood Development

Housing

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY

national, state, local law

Connect with your elected officials!

- ***Institute and enforce comprehensive smoke-free policies to reduce second-hand smoke exposure by limiting tobacco usage in public places.**[31]
- Shift from complaint-based rental code enforcement to a proactive rental inspection ordinance requiring mandatory and periodic inspections of rental properties.
- ***Promote zoning policies that encourage mixed use development.**
- Increase the age of sale for tobacco products from 18 to 21 in Kentucky.[32]
- Increase price or tax on tobacco products to reduce demand and consumption and prevent youth from starting.[33]

COMMUNITY

relationships among organizations

How can we link resources together?

- ***Increase funding for the Louisville Affordable Housing Trust Fund and home improvement loans and grants to help generate a greater inventory of healthy, affordable housing for low-income residents.**[34]
- ***Increase use of alternative modes of transportation, such as bicycling or clean diesel or electronic bus fleets that reduce emissions.**[35]

ORGANIZATIONAL

organizations, social institutions

Change where you work, learn, pray, and play.

- Utilize health impact assessments for neighborhood development projects.
- Continue to support 'Asthma Friendly' schools and child care settings.[36]
- Expand medical-legal partnerships, like Doctors and Lawyers for Kids.

INTERPERSONAL

family, friends, social networks

Support each other!

- Train health workers to implement home-based interventions focused on reducing exposures to asthma triggers through environmental changes, self-management training, and care coordination.
- Quit smoking to protect your kids.

INDIVIDUAL

knowledge, attitudes, skills

What you can do!

- Take your medications as prescribed by your healthcare provider, even when you feel well.
- Get a flu shot every year.

RESOURCES

Air Now Air Quality Index

To see daily air quality conditions in Louisville Metro visit: www.airnow.gov

Kentuckiana Air Education (KAIRE)

A branch of the Air Pollution Control district, KAIRE provides education and helps share tips on what residents can do to improve air quality. For more information visit: www.helptheair.org

Local Tenant Rights, Laws, and Protections

To learn more about your rights to housing as a renter, visit: https://portal.hud.gov/hudportal/HUD?src=/states/kentucky/renting/tenantrights

Air Pollution Control District

For more information on local, state and federal regulations around air quality and emissions visit: www.louisvilleky.gov/government/air-pollution-control-district

Urban Heat Island Project and Cool 502

To learn more about the Urban Heat Island Effect, visit the Office of Sustainability's website: https://louisvilleky.gov/government/sustainability/urban-heat-island-project

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LEAD POISONING

In Louisville, we are taking action so every child can grow up in a safe and healthy place to live.

What is lead poisoning?

Lead is a toxic metal found in nature due to pollution and, over time, can build up in your body and travel to organs like the brain, liver, kidney, and bones.[1] Lead is toxic to everyone but can be particularly harmful to fetuses, infants, and young children because it affects several body systems and processes that are important to how children's brains and bodies develop.[1] Lead poisoning happens when children eat, swallow, or breathe in lead they are exposed to in their environments.[2] Dust from old lead paint is still the leading cause of childhood lead poisoning.[2]

There is no known level of lead exposure that is considered safe. The Centers for Disease Control and Prevention suggests that a level of 5 micrograms per deciliter (µg/dL) is a "level of concern" in children.[3] The amount of lead in your body can be measured through blood tests. Lead poisoning is preventable by taking steps to reduce exposure.[4]

How does lead poisoning affect children?

Lead can be especially harmful to children because their bodies are still developing; they are particularly susceptible to damage to the nervous system.[1] Often there are no immediately noticeable symptoms of lead poisoning, but negative effects may still be at play. Some of these effects can include problems with hearing, high blood pressure, and kidney function.[5] Exposure to lead can happen from many different parts of a child's environment, including dust from old paint or soil.[1] Lead can also be stored in bones and later released into the bloodstream during pregnancy and become a source of exposure to a fetus.[1]

Other effects of lead poisoning can result in a lower IQ level, an increase in the likelihood of attention deficit hyperactivity disorder (ADHD), and slow the growth and development of the brain and nervous system.[5] Even at low levels, lead can create significant challenges for learning and educational achievement for children.[6]

LEAD POISONING

Lead Poisoning in kids under 6, 2011-2016

	Number of tests	Number of children
Blood lead level ≥ 5 µg/dL	2319	1413
Blood lead level ≥ 15 µg/dL	332	139

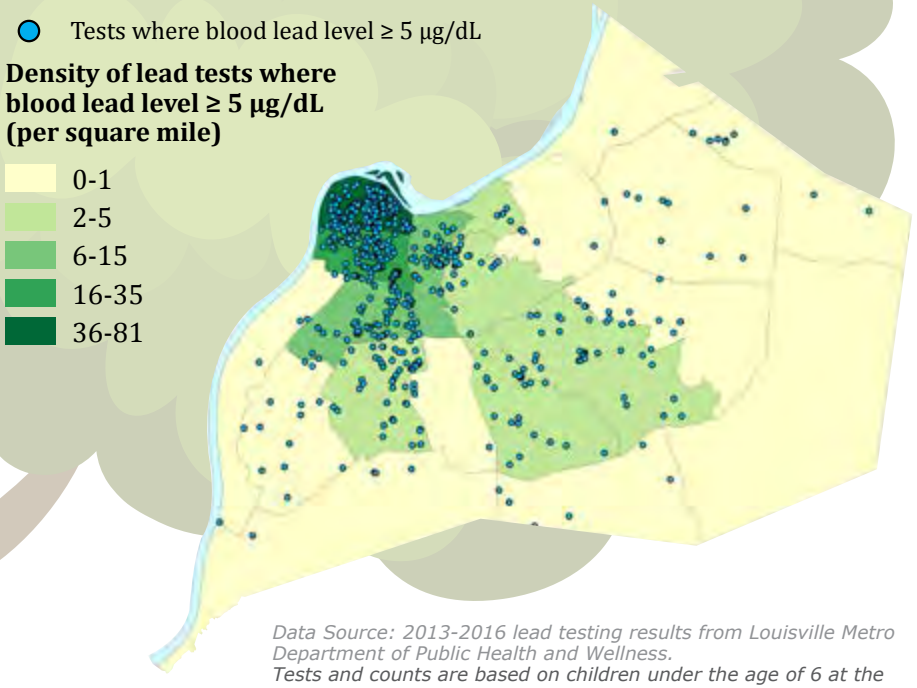
Data Source: 2011-2016 lead testing results from Louisville Metro Department of Public Health and Wellness.
Tests and counts are based on children under the age of 6 at the time of the test.

There are no safe levels of lead, however, the Centers for Disease Control suggests that a level of 5 micrograms per deciliter (µg/dL) or higher is a "level of concern" in children. Data is reviewed for those under the age of 6, because this is the age cut off for federal lead programs.

In Louisville Metro, the most reliable lead data comes from the Louisville Metro Department of Public Health and Wellness, although it is not comprehensive of all lead tests that occur in the county. As such, the actual numbers are probably higher.

An estimated 1,413 children have blood lead levels that are 5 µg/dL or higher. These positive tests are clustered in downtown, west, and south Louisville.

Lead Poisoning



Data Source: 2013-2016 lead testing results from Louisville Metro Department of Public Health and Wellness.
Tests and counts are based on children under the age of 6 at the time of the test.Tests where blood lead level was greater that or equal to 5 µg/dL. Points based on residence at time of test.
**This does not include all tests from Jefferson County, but accounts for at least 75% of all tests.*

Root Causes | Health Outcomes

ENVIRONMENTAL QUALITY

NEIGHBORHOOD DEVELOPMENT

HOUSING

HOUSING

In the Unites States, lead-based paint has been a major source of lead exposure. In 1978, the Unites States banned the use of lead-based paint, although some states stopped using it earlier.[7] **Because lead-based paint was used in homes for decades, many homes built before 1978 likely have old lead paint. The risk of lead poisoning increases as the paint peels, cracks, or is worn down.** This is because the chips and dust can spread around a home, onto hands, toys and into the mouths of the occupants.[2]

The type of housing you live in can also have an impact on a child's health. For example, rental units have been linked to poor health outcomes, like lead poisoning, and are often occupied by residents with almost one-third of the median incomes of those who own their homes.[8] This has a particular impact on families who live in poverty because they are more likely to both rent and occupy homes with severe physical problems.[9] Because it is often outside of their control, families who don't own homes must rely on the landlord or homeowner to commit the needed financial resources to eliminate the exposure to lead-based paint.

NEIGHBORHOOD DEVELOPMENT

Since the 1930's, housing and lending practices, such as redlining, have negatively impacted Louisville Metro by preventing equitable neighborhood development.[10] Outlawed by the Fair Housing Act in 1968, redlining was the federal policy of denying home loans to people based on their race.[10] Today, communities are still navigating the consequences, as well as the ways in which redlining has evolved in practice.[11,12]

The help given to White communities in the first half of the 1900s, including subsidized development and homeownership assistance, was critical to developing thriving neighborhoods.[13] The stark contrast for communities of color, especially Black communities, led to a significant difference in wealth accumulation between neighborhoods.[14] Over time, houses in communities of color often fell into disrepair and lead paint began to break down. Because of the expensive costs, lead paint is often not removed or properly maintained and has become a hazard to children living in these homes.[15] Policies and practices from over 100 years ago have had very real impacts on families, impacting their ability to build the financial resources needed for the costly repairs necessary to prevent lead paint from becoming a risk to children in their homes.

ENVIRONMENTAL QUALITY

From the 1970s to the late 1990s, federal regulations began to phase out lead usage in a variety of products.[16] **Before the 1970s, lead was commonly used to create products we still use every day, such as water pipes, gasoline, and paint.**[16] Even though lead is now banned for use in many products, we still find it in our current environment, either from products that haven't been replaced or lingering residue.[16] Lead particles from past gasoline exhaust can still be found surrounding major roadways, which often includes private residences and public green space.[5] Lead was added to these products to improve their performance but was easily accumulated in the many parts of our environment – air, water, and soil.

Another significant risk of lead exposure is from lead-producing industries, some of which are still in operation today.[17] For example, there are thousands of contaminated sites left behind after polluting industries stopped operations, also known as brownfields.[18] In addition to leaving behind abandoned buildings or vacant lots, brownfields also have the potential to contaminate beyond property lines through the air, water or soil.[18] This uniquely exposes children to the risk of lead exposure when they play outside.[18] Research also shows residents, especially children, living near lead-producing industries still in operation are more likely to have elevated lead levels in their blood.[18]

BEST PRACTICES

To reduce lead poisoning in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Environmental Quality

Neighborhood Development

Housing

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY

national, state, local law

Connect with your elected officials!

- Strengthen local enforcement capabilities for homes determined to have lead hazards, making homeowners, including landlords, accountable for abating home lead hazards.
- ***Continue to enforce the Environmental Protection Agency's (EPA) Lead Based Paint Renovation, Repair and Painting (RRP) Law for contractors who work in pre-1978 buildings.[19]**
- Ensure that Medicaid, Medicare and private health insurance cover lead screenings, environmental testing and treatment.

COMMUNITY

relationships among organizations

How can we link resources together?

- ***Increase funding for the Louisville Affordable Housing Trust Fund and home improvement loans and grants to help generate a greater inventory of healthy, affordable housing for low-income residents.[20]**
- Ensure that home-buyers and renters know their legal rights when it comes to lead inspections.[21]
- ***Target education and prevention efforts in the highest risk areas of Louisville Metro and encourage blood lead screening for children at community gatherings and health fairs.**
- Create a strong network of referral agencies that have resources for families experiencing difficulties with lead such as Lead Safe Louisville, Metropolitan Housing Coalition, Louisville Water Company, and the Louisville Metro Department of Public Health and Wellness' Childhood Lead Poisoning Prevention Program (CLPPP).
- Increase funding for environmental screening and lead abatement programs.[22]
- ***Continue to support incentives for brownfield assessment and remediation.[23]**

ORGANIZATIONAL

organizations, social institutions

Change where you work, learn, pray, and play.

- ***Expand the LMPHW CLPPP's healthy home environment assessments and case management for children with elevated blood lead levels.[24]**
- Create a compliance check model to ensure contractors stay up to date with their certifications and are following the Renovation, Repair and Painting (RRP) Law while on all work sites for the duration of the project.[19]
- ***Educate primary care providers on required and recommended blood lead testing and screening schedules (especially for Medicaid required intervals) as well as follow-up procedures for children who have elevated blood lead levels.**

INTERPERSONAL

family, friends, social networks

Support each other!

- Ensure that parents understand risks for lead exposure, how to prevent it, and how to treat if lead levels are elevated.

INDIVIDUAL

knowledge, attitudes, skills

What you can do!

- Get your children screened for lead, especially if you live in a home built before 1978.

RESOURCES

Childhood Lead Poisoning Prevention Program

If you're interested in learning more about Childhood Lead Poisoning and how to prevent it, contact Louisville Metro Department of Public Health and Wellness' Childhood Lead Poisoning Prevention Program

Call **502-574-6650** or visit our website: https://louisvilleky.gov/government/health-wellness/childhood-lead-poisoning-prevention

Provider Toolkit

Resources are available from Louisville Metro Government for providers. For more information, visit: https://louisvilleky.gov/government/health-wellness/lead-information-providers

A toolkit is also available for download from the following link: https://louisvilleky.gov/file/2017leadpoisoningpreventionprovidertoolkitandguidepdf

Lead-Safe Louisville

Louisville Metro Government's Lead-Safe Louisville program helps eliminate lead in owned and rental units. For more information visit: https://louisvilleky.gov/government/housing-community-development/lead-safe-louisville

Environmental Protection Agency (EPA)

The EPA's website has information about lead prevention for homeowners and renters, testing programs, and laws that regulate lead exposure in the United States. For more information visit: https://www.epa.gov/lead

Louisville Water Company

The Louisville Water Company has a comprehensive lead management program offering testing and information. For more information about lead and water quality visit: http://www.louisvillewater.com/leadservices

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ORAL HEALTH

What is oral health?

The World Health Organization (WHO) defines oral health as the following:

> Oral health is essential to general health and quality of life. It is a state of being free from mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal (gum) disease, tooth decay, tooth loss, and other diseases and disorders that limit an individual's capacity in biting, chewing, smiling, speaking, and psychosocial wellbeing.[1]

We want a Louisville where all people have access to services and care that keep them healthy.

How does oral health affect health and quality of life?

According to the 2010 US Surgeon General Report, tooth decay is the most common chronic disease for children; it is five times as common as asthma.[2]

Poor oral health can have many adverse effects, including pain, impaired ability to talk and eat, and potentially having to go to the emergency room for complications. Children with poor oral health miss more school and have worse academic performance than those who get routine preventative care.[3] Absence from school impacts parents and caregivers, who have to take time off of work (sometimes unpaid) to care for their children.[4]

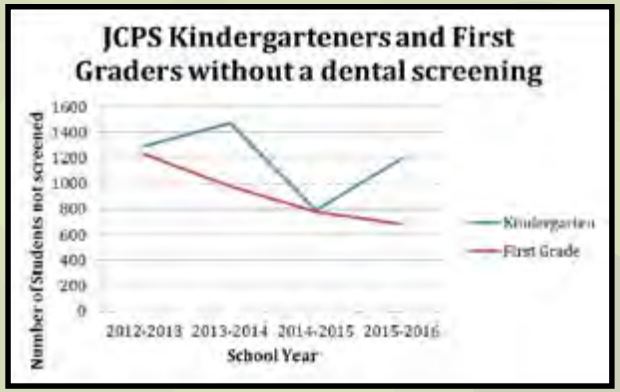
As you age, your oral health status can affect other things, like pregnancy outcomes. When pregnant, people with gum disease are at higher risk for **preeclampsia** and pre-term birth.[5] A pregnant person can also pass the bacteria from gum disease to their child, increasing the child's risk of developing cavities.[6]

Later in life, poor oral health (including tooth decay and gum disease) has been associated with heart disease and respiratory diseases, such as pneumonia.[7,8] Although research is preliminary, chronically poor oral health has been linked to cognitive decline.[9] Poor oral health may also be the first indicator that another disease is present, such as lupus, Crohn disease, diabetes, and human immunodeficiency virus (HIV).[10]

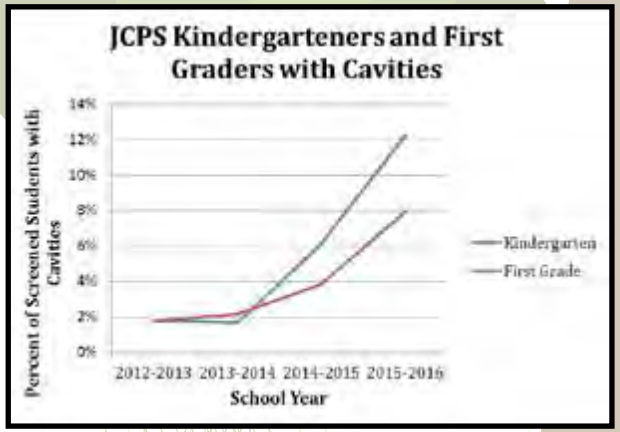
KEY TERM

Preeclampsia: "also known as toxemia and occurring in a pregnant woman after her 20th week of pregnancy, this syndrome causes high blood pressure and problems with the kidneys and other organs. Symptoms include sudden increase in blood pressure, too much protein in the urine, swelling in a woman's face and hands, and headache."[5]

ORAL HEALTH



Data Source: Kentucky Dental Screening Records, Jefferson County Public Schools



Data Source: Kentucky Dental Screening Records, Jefferson County Public Schools

Number of JCPS students screened with cavities

	School Year			
	2012-2013	**2013-2014**	**2014-2015**	**2015-2016**
Kindergarten	121	108	430	779
First Grade	115	151	273	563

Data Source: Kentucky Dental Screening Records, Jefferson County Public Schools

The best data on children's oral health status comes from mandatory school screening records. Not all children are screened, although over the past few years, the number of students no screened has decreased.

The number of children with cavities, however, has increased. This could either mean that cavities are on the rise, or that the increases in screening numbers have led to an increase in cavity identification.

While JCPS represents a majority of school children in Louisville Metro, there are still other private and parochial schools that are not represented in this data.

Health Outcomes | **Root Causes**

HEALTH AND HUMAN SERVICES

FOOD SYSTEMS

ENVIRONMENTAL QUALITY

ENVIRONMENTAL QUALITY

The environment where a person lives can have a significant impact on their oral health. **For example, the CDC has found that community water fluoridation is a cost-effective, high-impact intervention that helps to prevent dental cavities in both children and adults.**[11] In Kentucky, there is a law requiring water to be fluoridated in water systems serving populations greater than 3,500 people.[12]

It is critical for communities to have access to safe drinking water, as it also helps discourage high levels of consumption of other beverages such as soda or sugar-sweetened drinks.[13]

However, communities that are water insecure, or do not have reliable access to clean, safe water, are at a much higher risk for many negative health outcomes, particularly oral health issues. This often has the greatest impact on communities living in poverty or in rural areas.[14]

FOOD SYSTEMS

Diets high in added sugar (such as soda and nutrient-poor snacks) are known to be correlated with increased levels of tooth decay and worse overall oral health.[15,16] Those who are able to eat more fruits and vegetables have less tooth decay.[17] However, recent studies show a major food companies significantly contribute to unhealthy diets when marketing exposure toward Black and Latino communities emphasizes candy, sugary drinks, and salty foods.[18] For healthier foods, food companies target that advertising toward White communities.

While choice of food plays a role, we also know that the choices people make are limited by the choices they have. For communities where many residents are living in or near poverty, these choices are often dictated by the limited availability of fresh food from supermarkets, farmers markets or convenience stores located near people's homes.[17]

For communities, food access encompasses both physical access to full-service grocers in their neighborhood, as well as an individual's ability to afford foods necessary for a healthy diet.[17] Research shows that when communities have ample access to fresh fruits, vegetables, and foods that aren't processed, they are more likely to maintain a healthy diet.[19]

HEALTH AND HUMAN SERVICES

In order to maintain good health, it is important that a person also have good oral health. That requires preventative steps, including personal oral care routines and access to oral healthcare.[19] **In particular, having access to preventative oral health screenings early in life can improve health, as oral health may be an indicator for additional health concerns.**[20]

According to a 2007 nationwide study of oral health by the CDC, 50% of all children have never visited a dentist. Children ages 2-5 who do visit a dentist are less likely to have cavities and tooth decay.[21] This means programs like Kentucky's Medicaid expansion, which includes automatic enrollment in dental benefits for kids and adults, can help ensure that children have good oral health.[22]

In 2011, Kentucky enacted a state law, requiring that all children entering public school have their oral health screened, and those with oral health issues be referred to care.[23]

BEST PRACTICES

To improve oral health in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Food Systems

Health and Human Services

Environmental Quality

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY

national, state, local law

Connect with your elected officials!

- ***Continue community water fluoridation to prevent tooth decay.[24]**
- Maintain and enforce mandatory oral health screenings and referrals for children entering school, with follow-up treatment when necessary.[22]
- Continue to ensure that Medicaid, Medicare and private health insurance cover screenings and preventive oral healthcare services.

COMMUNITY

relationships among organizations

How can we link resources together?

- Support and join the Kentucky Oral Health Coalition in its initiatives to advance oral health including oral health literacy, school-based services, and increasing the number of dental Medicaid providers.
- Establish funding to subsidize healthy foods; in some communities, this includes competitive prices to improve sales of healthy foods; in others, it looks like Vegetable Prescription plans.[25,26]
- Continue to provide opportunities for free screening and treatment (for example, the Louisville Dental Society's free mobile screening program supported by the Louisville Metro Department of Public Health and Wellness).[27]

ORGANIZATIONAL

organizations, social institutions

Change where you work, learn, pray, and play.

- ***Expand utilization of nutritional guidelines for food procurement contracts (including vending machines, breakfast and lunch options, etc.) in governments, workplaces, schools, and public facilities.**
- Strengthen the provision of school-based oral health services to include dental services and sealant programs.[28]
- Educate primary care providers to encourage oral health examination of kids before age one and to improve linkage to dental care.
- Continue providing educational programs for kids on how and why to take care of their teeth.

INTERPERSONAL

family, friends, social networks

Support each other!

- Encourage your child to brush their teeth daily.
- Take your child to dental visits twice a year, starting when your child is 12 months old.

INDIVIDUAL

knowledge, attitudes, skills

What you can do!

- Brush and floss your teeth daily and apply topical fluoride as directed by your dentist.
- Visit your dentist at least twice a year.

RESOURCES

Kentucky Oral Health Coalition

If you are interested in joining the Kentucky Oral Health Coalition to improve oral health outcomes, you can visit its website to learn more: http://kyoralhealthcoalition.org To join, contact Mahak Kalra, Policy Director, at: mkalra@kyyouth.org

Louisville Dental Society

For more information on the Louisville Dental Society's free mobile screenings visit: http://louisvilledentalsociety.org/

WIC

For more information about the program, to check eligibility, or to sign-up, visit: http://www.louisvillewic.org

SNAP

If you're interested in the Supplemental Nutrition Assistance Program (SNAP), visit: http://chfs.ky.gov/dcbs/dfs/foodstampsebt.htm

Local Food Resource Guide

For more information on the Louisville Farmers Market Association and Local Food Resources, visit: https://louisvilleky.gov/government/mayors-healthy-hometown-movement/services/healthy-eating

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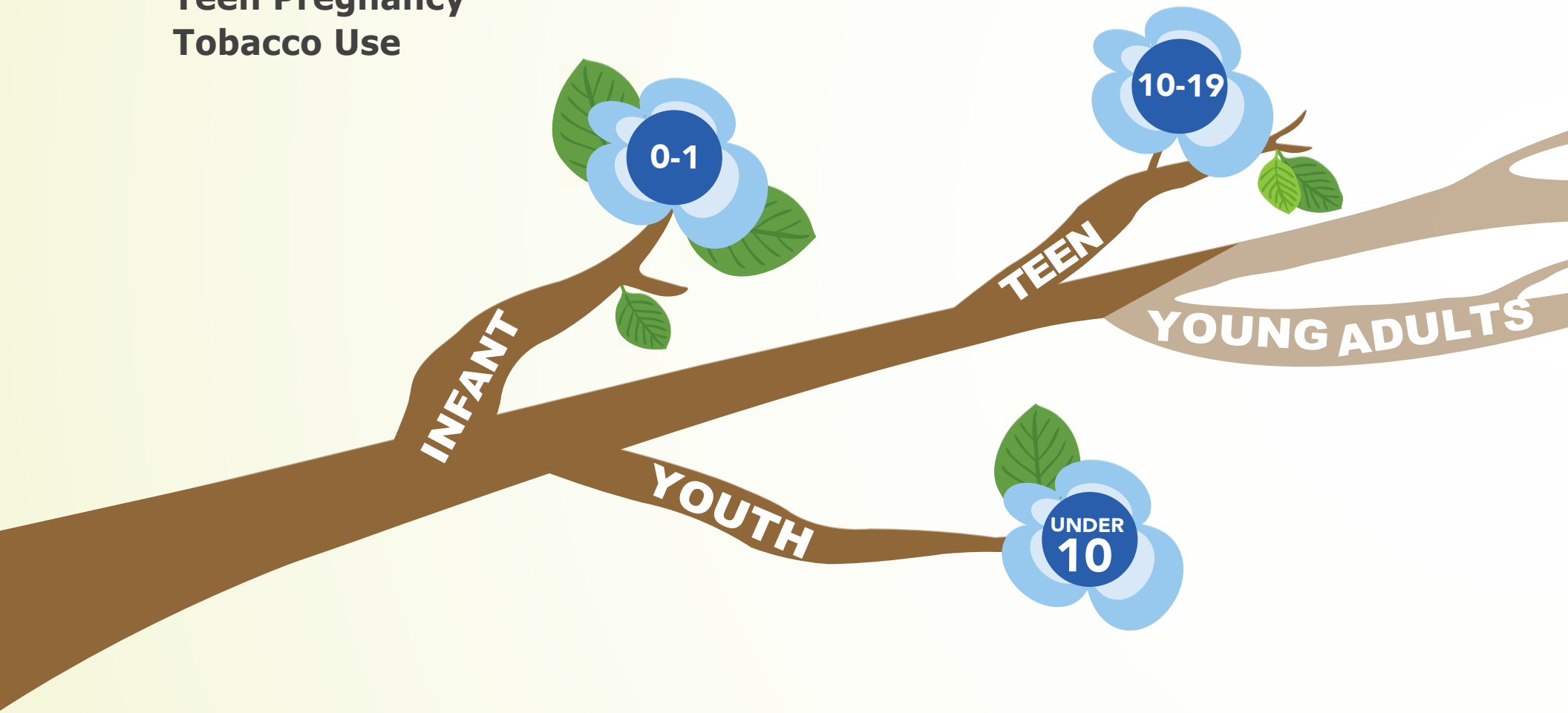
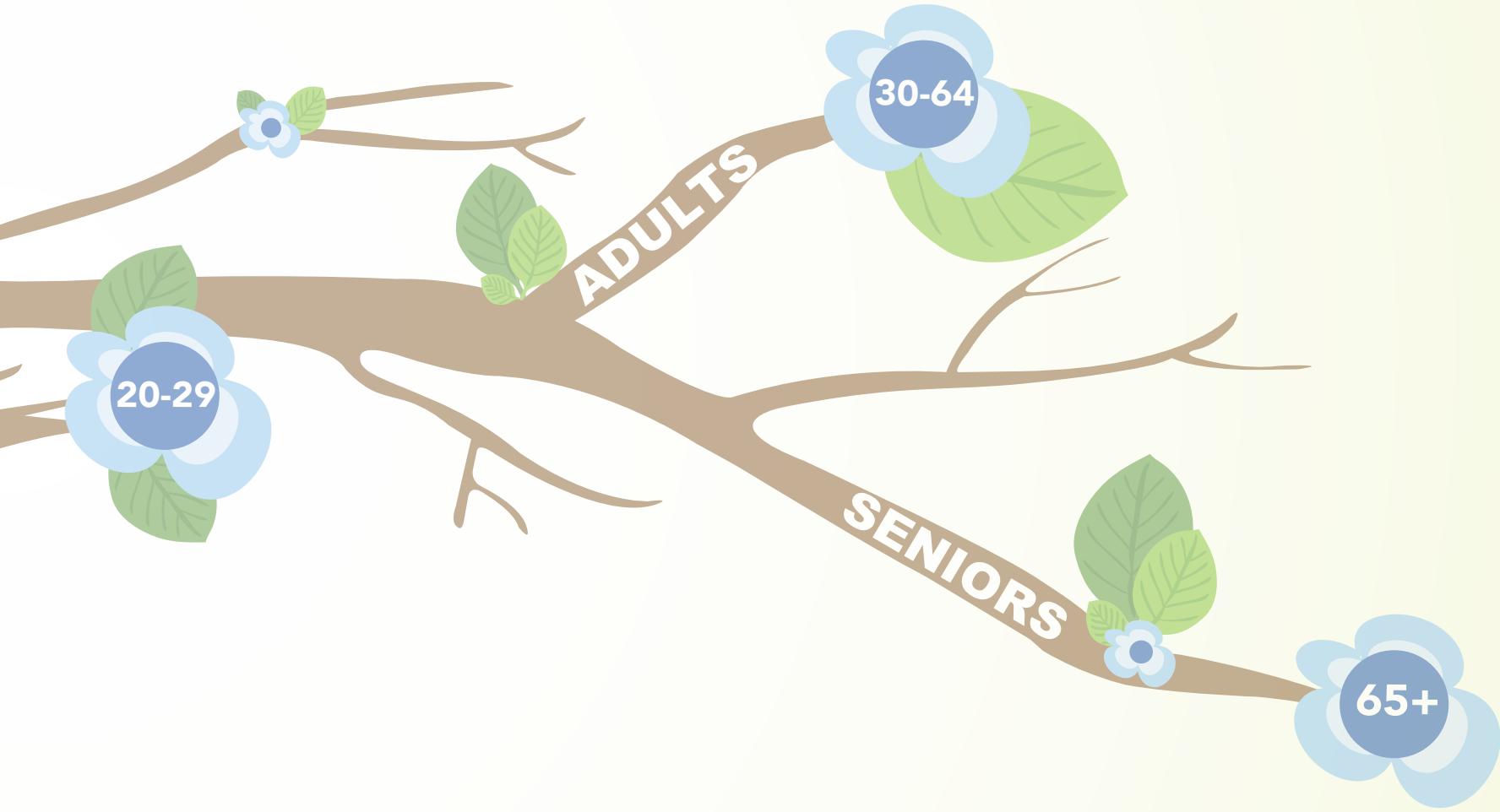
TEENS

Sexual Assault/Intimate Partner Violence
STDs
Teen Pregnancy
Tobacco Use




30-64
ADULTS
20-29
SENIORS
65+

SEXUAL ASSAULT/IPV

In Louisville, we are working toward communities that thrive in the broadest and most meaningful ways. Thriving means that everyone can feel safe — in our communities, in their homes, and in their closest relationships.

What are sexual assault and intimate partner violence (IPV)?

The Department of Justice defines sexual assault as "any type of sexual contact or behavior that occurs without the explicit consent of the recipient."[1] Sexual assault can occur both within and outside of an intimate partner relationship. In 7 out of 10 sexual assaults, the person assaulted knew the perpetrator.[2]

Most people have heard "domestic violence" used to describe abuse from one spouse to another. Over time, the term intimate partner violence (IPV) has been adopted to reflect that there are many different kinds of relationships outside of marriage that can also be abusive. IPV is the "physical, sexual or psychological harm by a current or former partner or spouse."[3]

Sexual assault and intimate partner violence are preventable, not natural, and not the fault of the victim or survivor.

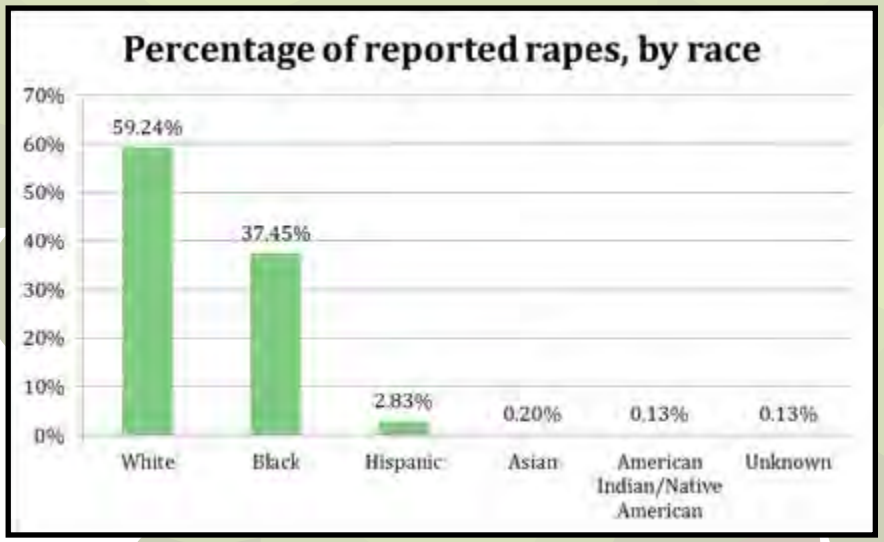
How does sexual assault and intimate partner violence (IPV) affect health and quality of life?

Intimate partner violence and sexual assault can affect survivors' mental, social, financial and physical health and quality of life.[4] The most serious outcome of sexual assault and IPV is death – either from suicide, as a result of their trauma, or homicide, at the hands of a current or previous partner.

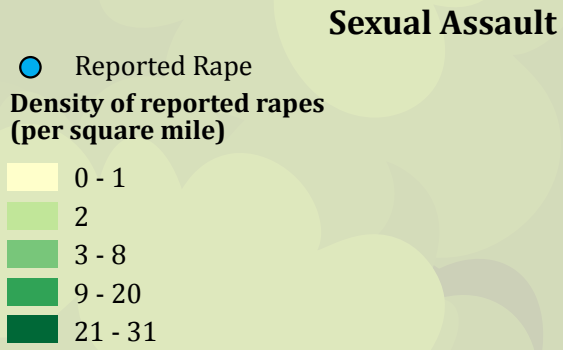
Most survivors of IPV and sexual assault will experience some form of depression, anxiety, or post-traumatic stress disorder.[5] Poor mental health and abuse can result in missed days of school or work and subsequent financial difficulties. IPV and sexual assault can negatively impact existing or future relationships with family, friends and romantic partners. In some cases, the perpetrator of IPV can force social isolation from friends and family. In other cases, the psychological effects may cause survivors to withdraw and experience difficulty with trust and intimacy.[4]

Those who experience IPV or sexual assault are more likely to develop substance use or eating disorder problems, engage in risky sexual behaviors, and be at risk for future victimization, which in turn negatively impact health.[4] Abuse can also cause chronic stress that can create additional health problems like chronic pain, infections, cardiovascular disease, and gastrointestinal disorders. Survivors may also experience direct physical injuries from their abuse, in addition to contracting sexually transmitted diseases or having an unwanted pregnancy.[4,5]

SEXUAL ASSAULT/IPV



Data Source: 2011-2015 LMPD Records Management System (I/LEADS)



Data Source: 2011-2015 LMPD Records Management System (I/LEADS)
2011-2015 Kentucky State Police, Criminal ID and Records Branch (KYOPS)
Dots represent incidents of rape, as defined by FBI's most current UCR code.
Points based on location of incident.

This sexual assault data comes from incidents that were reported to the Louisville Metro Police Department. This data reflects incidents that occurred from 2011-2015 using the FBI's most updated definition for rape: "Penetration, no matter how slight, of the vagina or anus with any body part or object, or oral penetration by a sex organ of another person, without the consent of the victim."

Those who report rapes are predominantly younger, female, and White, although there are a disproportionate number of Black persons who have reported a rape. These numbers do not reflect the entirety of the problem; more often than not, rape and sexual assault goes unreported.

85.2% of rape survivors were female with a median age of 18 years.

Data Source: 2011-2015 LMPD Records Management System (I/LEADS)

Root Causes | Health Outcomes

CRIMINAL JUSTICE

EARLY CHILDHOOD DEVELOPMENT

NEIGHBORHOOD DEVELOPMENT

NEIGHBORHOOD DEVELOPMENT

Sexual assault and IPV can happen to anyone regardless of your race, how much money you make, or where you live. However, the characteristics of your neighborhood can impact many factors that protect against becoming an abuser or a survivor (i.e. community recreation, early childhood development programs, and high rates of employment). According to the World Health Organization (WHO), neighborhood characteristics like high levels of poverty, unemployment, illiteracy, and violence increase the likelihood of IPV being reported.[6]

It is critical to understand the impact on communities when there is little economic investment in their neighborhood, especially the extremely significant levels of stress residents navigate. This is often compounded by limited opportunities for employment, neighborhood violence, and feelings of isolation from thriving areas of town. Research also shows adolescents who live in poverty are more likely to witness or experience IPV.[7] This coupled with the consequences of living in poverty can increase the risk of perpetrating or experiencing IPV or sexual assault.[8]

Sexual assault and IPV are not only experienced in neighborhoods with lower incomes. Instead, it is more likely to be reported, a phenomenon often attributed to the increased exposure to other social services that encourage reporting abuse.[9]

Neighborhood conditions are also connected to the psychological wellbeing of IPV survivors. One research study found that living in an underserved neighborhood influences both wellbeing and quality of life for IPV survivors.[10] **Dealing with IPV and poverty at the same time brings about feelings of stress, powerlessness, and social isolation in the lives of those who have or are experiencing IPV**.[11]

EARLY CHILDHOOD DEVELOPMENT

Adverse childhood experiences (ACEs) are stressful or traumatic events, such as neglect or abuse, that can occur in anyone's life, regardless of income, race or neighborhood. However, the stressors of living in poverty, unstable housing, or having limited access to fresh foods increases the likelihood of experiencing ACEs. ACEs include physical, sexual, and emotional abuse.[12] These adverse events, especially when experienced as a child, are strongly related to the development of various health problems throughout a person's life.[13]

While health outcomes related to IPV and sexual assault are complicated, research shows that the trauma children experience while witnessing IPV among their primary caregivers affects their emotional and physical development into adulthood.[14,15] For any child who is exposed to IPV, mental healthcare is critical to reducing long-term, negative impacts. However, children who live in poverty are much less likely to receive that care, due to limited financial and physical access. This is important because children who witness IPV and aren't connected to quality mental healthcare are more likely to have trouble forming peer relationships, developing social skills, and feel a lost sense of security, which increases their risk for IPV later in life.[16]

The effects of IPV exposure as a child are known to have impacts in adulthood. **Research links witnessing IPV to a higher risk of men committing violence toward women, as well as women having a higher risk of experiencing violence at the hands of their partners**.[17,18]

CRIMINAL JUSTICE

Historically in the United States, violence against women has been excluded from the traditional justice system. It was not until the late 1800s that the court system began to show signs that it would hold men accountable for violent acts against women, such as sexual assault and IPV.[19] But, because sexual assault and IPV were long considered it to be a normal part of marriage or intimate relationships, **it was not until the 1970s that domestic violence was defined as a crime under the law**.[20]

Expected social behaviors, also known as social norms, play an important role in understanding the connection between sexual assault, IPV and criminal justice. In the context of IPV and sexual assault, social norms are considered determinants that may make it more likely that certain groups will be exposed to or experience these forms of violence more than others.[21,22,23]

An example of a harmful social norm is the belief that only women can become victims of sexual assault of IPV because men are "stronger and more dominating."[24] This can create stigma that prevents men from reporting their experiences or seeking help.[24] Another social norm considered sexual and intimate partner violence to be family disputes, not social problems.[24] This norm has made it extremely difficult for survivors to report their experiences or be believed when they do so.[25] Before the 1960s it was also a norm among police to not intervene, or to advise the victim to change their behavior to avoid abuse when they received domestic violence calls.[20,26] **Although laws have changed and police are now required to respond to domestic violence calls, the history of not intervening and the persisting social norms surrounding IPV continue to affect the health outcomes of communities.**

BEST PRACTICES

To reduce sexual assault/IPV in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Criminal Justice

Early Childhood Development

Neighborhood Development

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY

national, state, local law

Connect with your elected officials!

- Support and enforce housing protections that prevent renters from becoming homeless as a result of incidents of Intimate Partner Violence (IPV).
- Limit the density of liquor stores to prevent over-concentration in certain neighorbhoods.[27]
- Work with proponents of tax reform to review and consider increasing alcohol taxes.[28]
- Continue to restrict the sale of alcohol to minors and look for innovative enforcement strategies.[29]

COMMUNITY

relationships among organizations

How can we link resources together?

- Create community partnerships that provide legal assistance and training for survivors of violence to understand their rights and effectively seek justice.
- Share data among all sources, such as the criminal justice system, social services, education and health, to better understand patterns and effectively prevent violence.[30]
- Launch community education campaigns, such as Break the Silence, enabling bystanders to know how they can help prevent or stop abuse and what resources are available.
- ***Provide extracurricular activities that allow opportunities for self-expression and leadership development.[31]**
- ***Continue to convene the Domestic Violence Prevention and Coordinating Council's Fatality Review committee assessing and reviewing domestic violence cases and opportunities for systemic improvement.**

ORGANIZATIONAL

organizations, social institutions

Change where you work, learn, pray, and play.

- ***Implement school-based violence prevention programs that enhance communication, problem-solving and conflict resolution skills and explore issues of consent and gender norms.[32]**
- Continue to support the Green Dot program, which teaches people in schools and neighborhoods how to prevent violence and change social norms.[33]
- ***Standardize and continue to integrate screening, risk assessment and referral tools for ACEs, IPV, sexual assault, stalking and human trafficking in case management, patient care, and law enforcement.**
- Expand training of dentists, early childhood educators, and other professionals in settings who work privately with clients on how to ask and talk about abuse: Ask, Validate, Document, Refer.

INTERPERSONAL

family, friends, social networks

Support each other!

- Learn how to best support someone who is experiencing violence in a trauma-informed way.

INDIVIDUAL

knowledge, attitudes, skills

What you can do!

- Find resources that help you understand what you have experienced and how to cope; this could include therapy.

RESOURCES

Center for Women and Families

If you need immediate assistance call the Center for Women and Families (Kentuckiana) 24/7 Crisis Line **502-581-7222**

National Network to End Domestic Violence

If you need immediate assistance call the National Network to End Domestic Violence 24/7 Helpline **1-800-799-7233** and TTY **1-800-787-3224**

RAINN

If you need immediate assistance, call the RAINN 24/7 National Sexual Assault Hotline **1-800-656-HOPE (4673)**

Louisville Metro Office for Women

Learn more about the Louisville Metro Government Office for Women at: https://louisvilleky.gov/government/office-women

Bounce Coalition

If you or your organization are interested in addressing Adverse Childhood Experiences, visit the website for the Bounce Coalition: www.BounceLouisville.org

PACT in Action

For more information about PACT in Action, visit: http://www.pactinaction.org/

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STDs

We can promote healthy sexual behaviors and increased reproductive health services across our community.

What are sexually transmitted diseases (STDs) and human immunodeficiency virus (HIV)?

Sexually transmitted diseases (STDs) are a group of diseases that can be passed through contact with infected bodily fluids (i.e., blood, semen, vaginal fluids, or infected skin) or sexual contact (i.e., vaginal, anal, or oral).[1,2] Some of these diseases include gonorrhea, chlamydia, hepatitis, syphilis, genital herpes, human papillomavirus (HPV) and human immunodeficiency virus (HIV).[2]

HIV is the virus that causes AIDS (acquired immunodeficiency syndrome). STDs are also called sexually transmitted infections (STIs); health workers use this language because someone may carry one of these bacteria or virus but have no symptoms.[3]

How do STDs affect health and quality of life?

Anyone who has sex or sexual contact can get an STD. Often, people will experience no symptoms or symptoms that are easy to ignore. STDs fall into two categories: 1) those that can be cured with medicine like antibiotics, and 2) those that cannot be cured but can be managed with treatment.[4] Some STDs can cause infections or warts (small bumps or groups of bumps) in the mouth, throat, or the genital areas.[2] Human papillomavirus (HPV) can cause cancers like cervical cancer, penile cancer, and anal cancer.[5] Some STDs like chlamydia can impact reproductive health through damage to the uterus and fallopian tubes and make future pregnancy difficult.[2,6,7] In some cases, STDs and HIV may be spread from a pregnant person to an infant or fetus.[2,8]

HIV breaks down the body's immune system, which makes it hard to avoid and recover from infections.[2] When STDs are not treated, they can make it easier to contract HIV.[2] STDs and HIV are common among teens and young adults; more than half of the 20 million new cases of STDs reported yearly in the United States occur among youth.[9] Young people face significant challenges to treatment, including stigma and lack of accurate information.[10]

STDs

Chlamydia, Gonorrhea and Syphilis Rates (per 1,000) for Youth Ages 10-19

	2011	2012	2013	2014	2015
Black Female	86.01	71.84	61.82	61.17	51.32
Black Male	29.24	24.86	20.24	18.60	18.56
White Female	12.03	12.65	11.98	9.97	10.14
Hispanic Female	10.58	11.46	9.58	6.93*	7.62*
Other Female	6.43	5.67*	7.89	8.56	5.71*
White Male	2.30	1.94	1.79	2.03	1.93
Other Male	2.36*	0.64*	1.84*	0.88*	2.24*
Hispanic Male	2.69*	2.23*	1.40*	4.08*	1.94*

Data Source: 2011-2015 Kentucky Sexually Transmitted Disease Program, Kentucky Department of Public Health
**The CDC defines rates as statistically unreliable when the numerator is less than 20. Racial categories are non-Hispanic.*

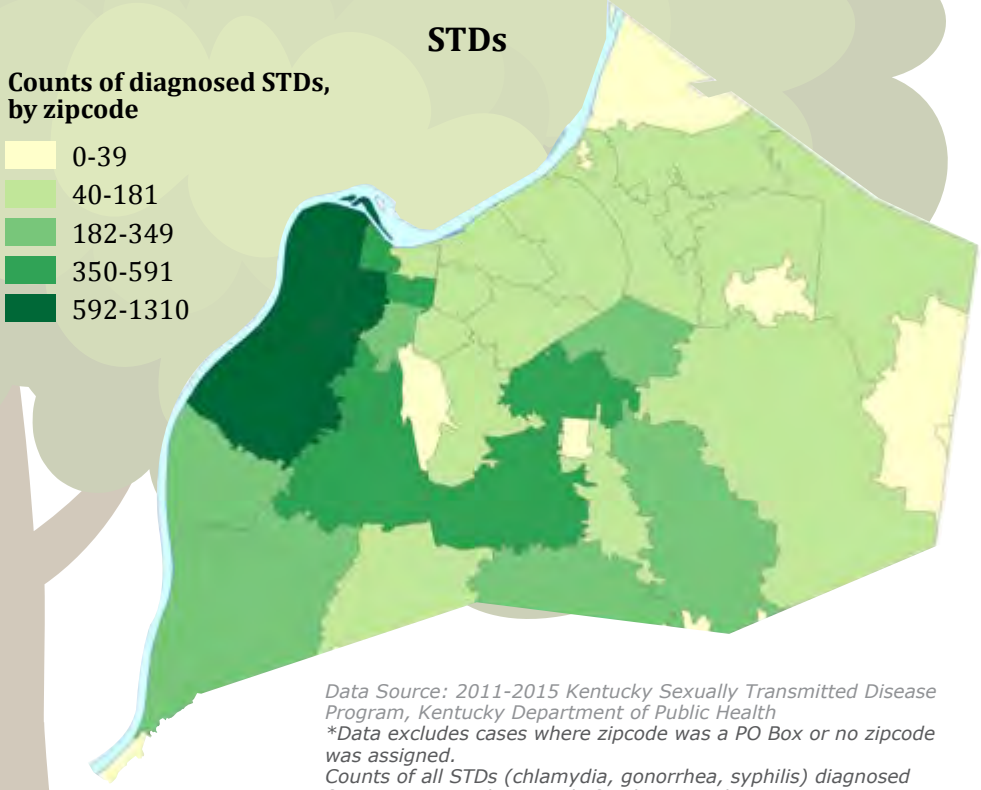
New HIV cases for Youth Ages 13-24

Those aged 13-24 accounted for 25.73% of new HIV cases in Jefferson County from 2011-2015.

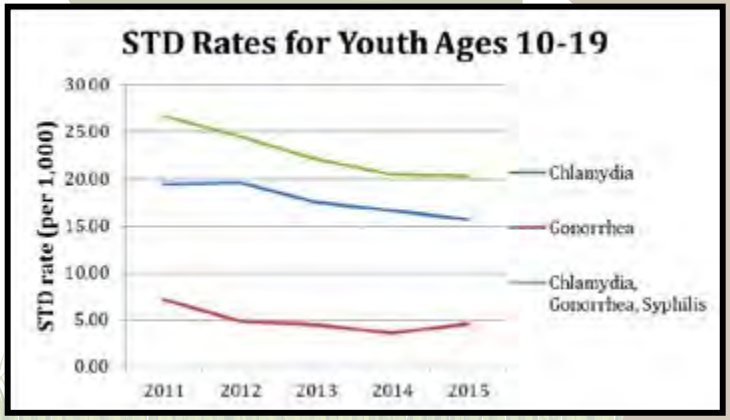
	2011	2012	2013	2014	2015	Total
New Cases Ages 13-24	31	50	29	24	42	176
Total New Cases	117	157	133	137	140	684

Data Source: 2011-2015 HIV/AIDS Branch, Kentucky Department of Public Health

STDs



Data Source: 2011-2015 Kentucky Sexually Transmitted Disease Program, Kentucky Department of Public Health
**Data excludes cases where zipcode was a PO Box or no zipcode was assigned.*
Counts of all STDs (chlamydia, gonorrhea, syphilis) diagnosed from 2011-2015 by zipcode for those aged 10-19.



Data Source: 2011-2015 Kentucky Sexually Transmitted Disease Program, Kentucky Department of Public Health

These rates are for youth aged 10-19 in Louisville Metro. Chlamydia is the most common STD. Although rates of STDs have steadily been falling across all categories, rates remain massively elevated for Black girls.

Black girls are more likely than any other teen to be tested and diagnosed with chlamydia, gonorrhea or syphilis. In 2015, their rates were 2.76 times higher than Black boys, 5.06 times higher than White girls, and 26.7 times higher than White boys.

Health Outcomes | **Root Causes**

- HEALTH AND HUMAN SERVICES
- NEIGHBORHOOD DEVELOPMENT
- EMPLOYMENT AND INCOME

EMPLOYMENT AND INCOME

Anyone, regardless of employment status or income level, can become infected with an STD, particularly if they are not using protection during sexual intercourse. **However, people who make higher wages encounter fewer barriers to taking preventative, protective measures.**[11] **This includes relative ease of access to preventative information and healthcare, as well as a decreased need to use sex for economic reasons.**[11]

Research shows a relationship between limited income and higher rates of STDs. For example, national STD and HIV rates are highest in communities of color living in concentrated poverty, particularly in southern U.S. states (Alabama, Georgia, Florida, Mississippi, North Carolina, South Carolina, Tennessee, and Texas).[12] There are numerous factors that contribute to high rates of STD transmission, many of which are attributed to consequences of poverty. These include limited access to quality sexual education, contraception, and healthcare. Research also shows that when unemployment rates decrease, individuals have a much lower risk of contracting STDs.[13]

Those navigating both an STD diagnosis and unemployment also may experience difficulty in accessing treatment, resulting in underutilization of medical care and decreased likelihood of understanding effective protective methods for future sexual encounters.[14]

NEIGHBORHOOD DEVELOPMENT

Although anyone engaging in sexual intercourse can contract an STD, those who live in neighborhoods with strong social supports, low mental distress and less violence have a much lower risk.[10] **More specifically, feeling connected to neighbors, living in safe and stable neighborhood environments, and parental involvement unhindered by structural barriers contribute to decreasing the number of young people with an STD.**[14]

Well-developed neighborhoods have a combination of characteristics that work well for its residents. For young people, these characteristics can specifically include recreation spaces such as "bowling alleys, movie theaters, skating rinks, and museums."[15] While youth identify these spaces as key resources for their neighborhoods, research also shows that safe recreational spaces in communities can lead to a lower risk of young people being diagnosed with an STD.[15]

Well-developed neighborhoods encouraging relationship-building between residents, with actual resources to meet residential needs, and neighbors who trust one another are also more likely to have both a higher rate of early HIV diagnosis and consistent treatment utilization by patients.[16]

HEALTH AND HUMAN SERVICES

Healthcare providers can offer information related to safe sexual practices to prevent transmission, preventative STD screenings, and treatment options for those navigating a diagnosis.[17] Although utilizing healthcare services is critical for everyone, access varies across populations and may require innovative practices to reach communities, particularly where there are a high number of residents living in poverty.

For example, neighborhoods with medical centers in community schools offer valuable opportunities for preventative care, as well as treatment for students, particularly for those who may not be able to afford services and have limited physical access to healthcare facililties.[18] **Additionally, when youth are exposed to school-based health programs, they are less likely to engage in risky sexual behaviors and to be diagnosed with an STD.**[17]

For individuals with an STD diagnosis, getting tested early ensures that they are able to begin treatment, reducing the chance of transmitting the infection to others.[18]

BEST PRACTICES

To reduce STDs in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Employment and Income

Health and Human Services

Neighborhood Development

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY

national, state, local law

Connect with your elected officials!

- Implement a state-level Earned Income Tax Credit (EITC) to aid wealth building and alleviate poverty.[19,20]
- Implement child care subsidies to help parents with limited incomes work more hours, stay in jobs longer, and increase overall earnings.[21]
- Continue to ensure that Medicaid, Medicare and private health insurance cover screenings and preventive healthcare services.
- Allow for expedited partner therapy, so that partners of those diagnosed with chlamydia or gonorrhea are able to receive prescriptions and medication without having to see a healthcare provider.
- Mandate vaccinations for STDs such as HPV and hepatitis B.

COMMUNITY

relationships among organizations

How can we link resources together?

- Expand access to STD/HIV testing and free condoms in non-traditional locations such as community centers and neighborhood associations to reach underserved areas.[22]
- Create a youth-led social norming campaign to normalize sexual health issues, increase public awareness, and decrease stigma toward HIV/STD prevention.[23]
- Form an intergenerational, multi-sectoral coalition to prevent STDs/HIV among youth.

ORGANIZATIONAL

organizations, social institutions

Change where you work, learn, pray, and play.

- Utilize evidence-based, medically accurate programs for comprehensive risk reduction sexual education to promote sexual health and awareness for youth in school or afterschool settings.[24]
- Create school-based health centers to provide a youth-friendly clinical setting, routine testing for STDs/HIV, and free condoms.[25]
- Mandate integration of routine opt-out HIV testing in clinics and hospitals.[26]
- Expand partner notification services so that patients who test positive for an STD are able to have their provider contact past and current sexual partners about potential risk and connect them to resources.[27]

INTERPERSONAL

family, friends, social networks

Support each other!

- Discuss sex and healthy relationships with your teen or use resources that can help you answer questions and provide guidance.[28]

INDIVIDUAL

knowledge, attitudes, skills

What you can do!

- Use safer sex practices (like using condoms and other barriers consistently during sex).[26]
- If you are sexually active, get tested for STDs and HIV.

RESOURCES

Specialty Clinic

Visit the **Specialty Clinic**, a division of Louisville Metro Department of Public Health, for testing and treatment of STDs like syphilis, gonorrhea, chlamydia, genital warts, bacterial vaginosis, yeast, herpes and trichomoniasis. Free HIV testing is also available. Patients are seen on a WALK-IN basis at 914 E Broadway. If you have questions, please call **502-574-6699**

Planned Parenthood

Testing and treatment is also available at Planned Parenthood **1-800-230-PLAN (7526)**

Office of Resilience and Community Services

Louisville Metro provides many services related to education, finances, and financial empowerment. To learn more visit: https://louisvilleky.gov/government/resilience-and-community-services/seeking-services

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TEEN PREGNANCY

Our goal is a community where everyone can make proactive decisions about their health and future.

What is teen pregnancy?

According the Centers for Disease Control and Prevention, teenage pregnancy refers to:

> *A teenage girl, usually between the ages of 15 – 19, becoming pregnant.*[1,2]

How does teen pregnancy affect health and quality of life?

The benefits and challenges of any pregnancy are different for each person who becomes pregnant; these are shaped by a person's health, relationships, and other social and economic factors. There is not conclusive information about the shorter or longer-term links to health behaviors of people who become pregnant as a teenager.[3] Most research topics on teenagers and pregnancy concentrate on the health of the fetus or child—including the impact of preterm birth and low-birth weight—but less so on the health of the person who is pregnant.[4]

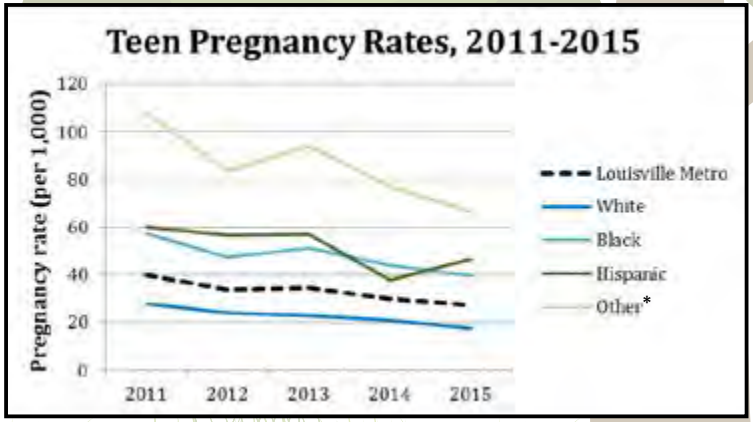
Due to instuitutional barriers for teenagers who are parents (i.e. childcare or financial resources), pregnancy can have an impact on educational attainment and income for pregnant teens, which can have a health impact over the course of their lifespan.[3] Some of this impact can be attributed to unintended pregnancies. **Approximately 45% of all pregnancies in the United States are unintended—meaning they are unwanted or mistimed; for teenagers, the number is closer to 77%.**[5] Pregnancy for teenagers often results in not obtaining a high school diploma and leads to higher rates of unemployment.[2] Additionally, women who experience unintended pregnancies are less likely to get prenatal care, which is important for the health of both infant and parent.[6]

TEEN PREGNANCY

Teen Pregnancy
Total 2011 - 2015

	Count	Rate (per 1,000)
Other	273	84.99
Hispanic	288	51.27
Black	1525	47.95
Louisville Metro	**3685**	**33.18**
White	1599	22.70

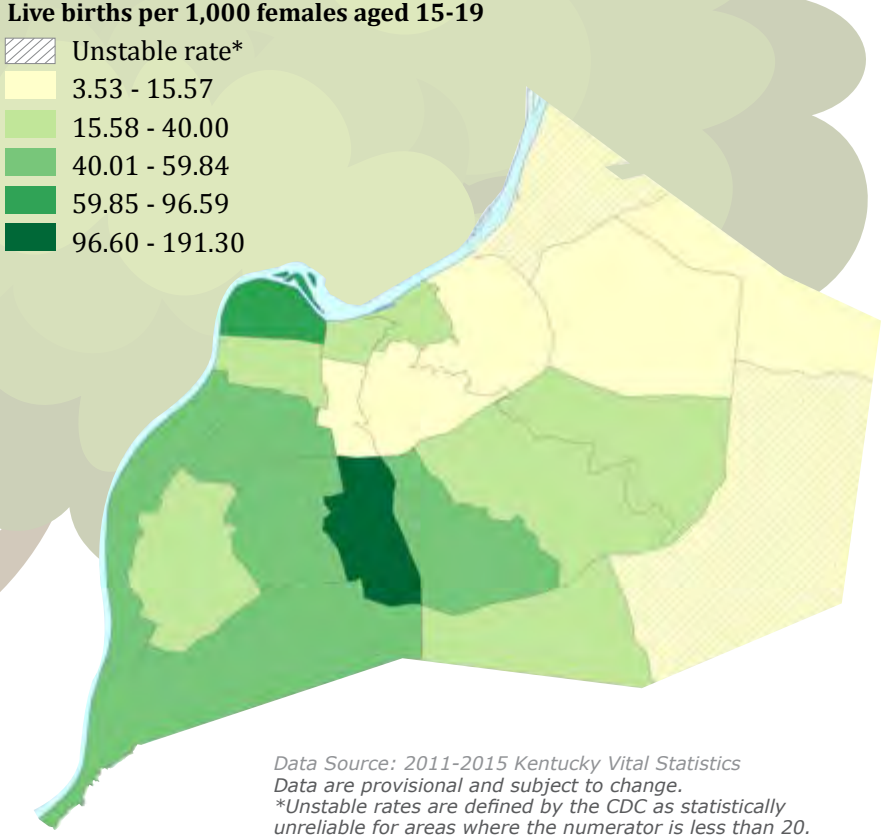
Data Source: 2011-2015 Kentucky Vital Statistics
**Other includes all racial/ethnic groups that are not White, Black or Hispanic.*
The rate equals live births divided by female aged 15-19 years old per 1,000.
Racial categories are non-Hispanic.



Data Source: 2011-2015 Kentucky Vital Statistics
**Other includes all racial/ethnic groups that are not White, Black or Hispanic.*

Teen Pregnancy

Live births per 1,000 females aged 15-19



Data Source: 2011-2015 Kentucky Vital Statistics
Data are provisional and subject to change.
**Unstable rates are defined by the CDC as statistically unreliable for areas where the numerator is less than 20.*

Teen pregnancy is having the largest impact on young girls of color, especially those who are not Hispanic or Black. These girls are almost 4 times more likely than White girls to have a child during the ages 15-19.

Root Causes | Health Outcomes

EARLY CHILDHOOD DEVELOPMENT

NEIGHBORHOOD DEVELOPMENT

HEALTH AND HUMAN SERVICES

HEALTH AND HUMAN SERVICES

Family planning services are important for anyone of reproductive age. These services include health exams, birth control, and other screenings. In 2014, approximately 38.3 million women in the United States, or half of all women of reproductive age (13-44), were in need of contraceptive services and supplies. Of these women, over half (20.2 million) required publicly funded contraceptives, either because of their income or their age.[7,8]

For marginalized communities, access to family planning services can be limited due to an inability to afford services or few, nearby physical locations. This leads to inequities across racial, ethnic, and income-level groups, as well as, for immigrants.[7]

With a lack of access to care (prenatal included), it is also difficult for marginalized youth to access proper contraception.[7] In addition to not being able to access contraceptive methods, youth may not understand how they can be used because health and human service providers, even those outside of clinical settings, may provide little to no discussions on sexual health. For example, contraception methods, such as long-acting reversible contraceptives (LARC), continue to be misunderstood and underutilized by teenagers.[9] The lack of discussion related to sexual health is often attributed to persistent stigmatizing feelings about teenagers who are sexually active or become parents.[7]

NEIGHBORHOOD DEVELOPMENT

Regardless of race, income, or neighborhood, teenage parents are a reality in every community. Not every pregnancy is unplanned or unwanted, but neighborhood characteristics play an important role in teens being more likely to have an unplanned pregnancy. Neighborhoods that are impacted by greater income inequality and have a high percentage of the population living below the federal poverty level have higher birth rates for teenagers.[10,11,12,13]

Research has found that physical disorder in neighborhoods (i.e. vacant properties, abandoned vehicles, beer or alcohol containers, cigarette butts, or litter) can be associated with higher rates of teenagers with children.[14] When this kind of physical disorder is present, there often is accompanying and significant structural disinvestment in the community. Neighborhoods that are physically neglected also see economic disinvestment, food deserts, and limited access to health and family planning services.

Although these neighborhood conditions can dramatically impact the life and health of teenagers, there is often extremely limited youth engagement in policy and decision-making, making these conditions are far outside a young person's control. **This is important because the experiences of young people and their needs are rarely considered in neighborhood planning.** In a neighborhood with limited investment, adult residents may also feel no control over conditions, which means a young person's access to family planning services is less likely to increase.

EARLY CHILDHOOD DEVELOPMENT

Early childhood development is influenced by many factors, with societal environments that shape family dynamics and community opportunities as the most influential.[15] When a community has comprehensive early childhood development programs (i.e. preschools), the cognitive, social and emotional functions of preschool-aged children are positively impacted. These programs help children to learn and feel comfortable with reading, as well as develop critical thinking skills.[15] Most importantly, these programs also improve the overall quality of life for children.[16]

Research shows that teenagers who were involved in early childhood development programs are less likely to have unplanned pregnancies, be arrested, or require social services.[16] However, early childhood development programs, especially programs that are high quality, are not accessible to everyone. Families who live in poverty are less likely to be able to cover the high cost of childhood development programs and have less fully-funded programs in their community.[17]

BEST PRACTICES

To improve the quality of life for families in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Neighborhood Development

Early Childhood Development

Health and Human Services

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY
national, state, local law
Connect with your elected officials!

COMMUNITY
relationships among organizations
How can we link resources together?

ORGANIZATIONAL
organizations, social institutions
Change where you work, learn, pray, and play.

INTERPERSONAL
family, friends, social networks
Support each other!

INDIVIDUAL
knowledge, attitudes, skills
What you can do!

- Maintain access to free and reduced cost birth control such as long acting reversible contraceptives (LARCs), as is currently mandated under the Affordable Care Act.[18]
- Implement universal comprehensive early childhood development programs.[19]
- ***Expand access to early childhood home-visiting and developmental screening programs, like Healthy Start.[20]**
- ***Coordinate community resources to provide support and programs to help teen parents stay in school and succeed.[21]**
- ***Support youth voice in equitable decision-making through initiatives such as the Racial Equity Youth Council.**
- Utilize evidence-based, medically accurate programs for comprehensive risk reduction sexual education to promote sexual health and awareness for youth in school or afterschool settings.[22]
- Create school-based health centers to provide a youth-friendly clinical setting, access to birth control, free condoms, and care for teen mothers.[23,24,25]
- Discuss sexual health with your teen or use resources that can help you answer questions and provide guidance.
- Find a medical professional you trust to ask for information on sexual health and pregnancy.
- If you are sexually active and want to prevent pregnancy, use a form of birth control such as an IUD or condoms.

RESOURCES

Planned Parenthood

Planned Parenthood offers pregnancy-related services **1-800-230-PLAN (7526)**

Healthy Start and HANDS

Healthy Start and HANDS are home-visiting programs focused on improving health outcomes for mothers, infants, and families. HANDS serves all families in Louisville Metro while Healthy Start is targeted to 40202, 40203, 40208, 40210, 40211, and 40212. For more information on HANDS visit: http://www.familyandchildrensplace.org/our-services/hands/ For more information on Healthy Start call **502-574-MOM1 (6661)**

Baby and Me Are Smoke Free

For support with quitting smoking when you are pregnant or planning to become pregnant, call **502-574-6541** to learn more about the Giving Infants and Families Tobacco-Free Starts (GIFTS) program.

Breastfeeding

For more resources such as support groups, free lactation consultation, and WIC classes, visit: https://louisvilleky.gov/government/health-wellness/breastfeeding-support

WIC

WIC (Women, Infants, and Children) is a health and nutrition program. For more information about the program, to check eligibility, or to sign-up, visit: http://www.louisvillewic.org

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TOBACCO USE

We are working to create a Louisville where everyone is free of preventable disease and illness.

What is tobacco?

"Tobacco is an agricultural crop, most commonly used to make cigarettes. Tobacco can be processed, dried, rolled, and smoked as: cigarettes, cigars, bidis (thin, hand-rolled cigarettes imported from Southeast Asia), clove cigarettes, kreteks (cigarettes imported from Indonesia that contain cloves and other additives). Loose-leaf tobacco can be smoked in pipes and hookahs The two most common forms of smokeless tobacco are chewing tobacco and snuff (finely ground tobacco placed between the gum and lip)."[1]

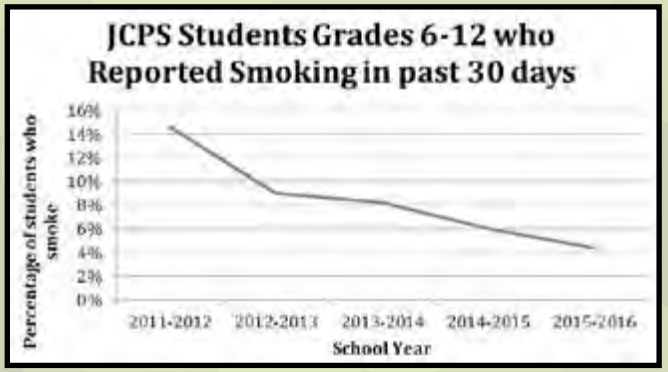
These products contain nicotine, which occurs naturally in tobacco and is addictive.[2]

How does smoking affect health and quality of life?

According to the Centers for Disease Control (CDC), smoking tobacco remains the leading cause of preventable death and disease in the United States.[3] Smoking and using tobacco can be harmful in numerous ways, including leading to heart disease, lung disease, poor oral health, and cancer in many parts of the body.[3] Many chemicals found in cigarettes—the most popular tobacco product—are toxic and are known by researchers to cause cancer.[4]

Additionally, the smoke and toxins from tobacco products have negative health effects on non-smokers who are exposed to secondhand smoke (also called environmental tobacco smoke or involuntary smoking).[5] Secondhand smoke can lead to heart attacks, stroke, and increased respiratory issues for non-smokers, especially for those who have asthma.[5] The risks of secondhand smoke for children are particularly harmful, including: increased risk of respiratory infections, sudden infant death syndrome (SIDS), and ear infections.[6]

TOBACCO USE



Data Source: 2011-2016, Safe and Drug Free Schools Survey, Jefferson County Public Schools
**Note: Survey question language was changed in 2013.*
Data based on the following questions:
*2011-2012: How many occasions (if any) have you smoked **cigarettes** or used other **tobacco products** during the past 30 days?*
2013-2016: During the past 30 days did you smoke part or all of a cigarette?

In Louisville Metro, 25.5% of those over 18 years old are current smokers.

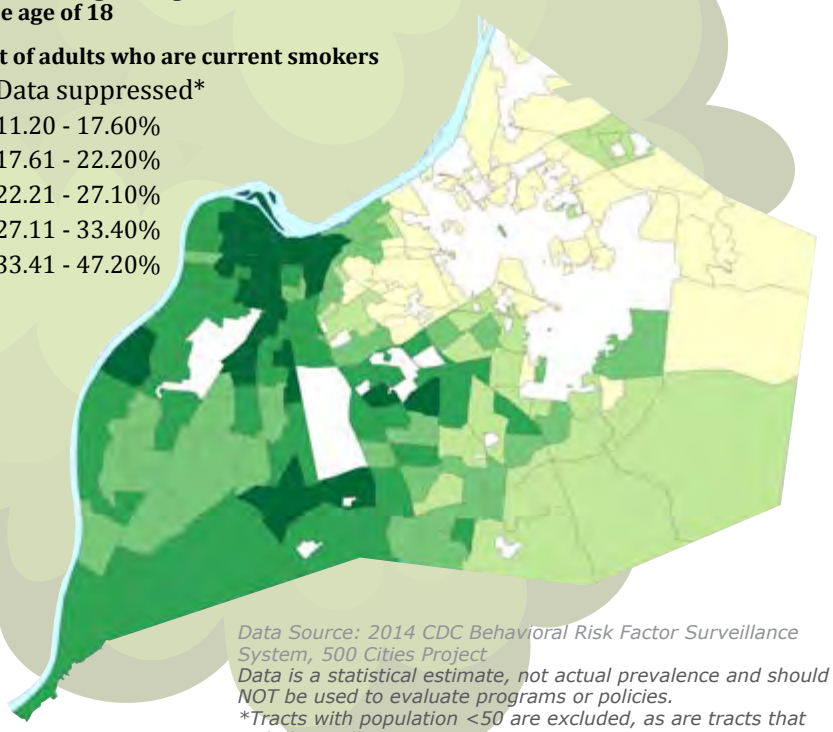
Data Source: 2014 Centers for Disease Control Behavioral Risk Factor Surveillance System, 500 Cities Project

Tobacco Use

Current smoking among adults over the age of 18

Percent of adults who are current smokers

- Data suppressed*
- 11.20 - 17.60%
- 17.61 - 22.20%
- 22.21 - 27.10%
- 27.11 - 33.40%
- 33.41 - 47.20%



Data Source: 2014 CDC Behavioral Risk Factor Surveillance System, 500 Cities Project
Data is a statistical estimate, not actual prevalence and should NOT be used to evaluate programs or policies.
**Tracts with population <50 are excluded, as are tracts that include small cities.*

Tobacco use is important because it can cause so many other health problems. There are a few sources of information on tobacco use in Louisville Metro. For teens, the information comes from Jefferson County Public Schools' (JCPS) annual Safe and Drug Free Schools Survey. It appears that smoking has been on the decline, however the questions on the survey changed in 2013, so it is hard to draw conclusions about tobacco use among teens. While JCPS represents a majority of school children in Louisville Metro, there are still other private and parochial schools that are not represented in this data.

Statewide, other counties participate in the Kentucky Incentives for Prevention Survey (KIP) which asks about student substance use and mental health. From these surveys, we know that statewide, e-cigarette usage is on the rise while usage of traditional tobacco products has declined, however this data is not available for JCPS.

Another source of information for adults comes from calculations created by the Centers for Disease Control. They use county-level data from the Behavioral Risk Factor Surveillance System (BRFSS) and put it in mathematical formulas to try to determine which census tracts have higher percentages of adults who are current smokers.

NEIGHBORHOOD DEVELOPMENT

Although tobacco existed in the United States before European colonization, the crop initially became Kentucky's largest cash product because of unpaid, enslaved labor.[7] Both this foundation and the national growth of tobacco industries as powerful entities established tobacco as one of the most profitable cash products in Kentucky for generations. Only recently has it become the state's sixth largest cash crop, in large part because of the Fair and Equitable Tobacco Reform Act of 2005, that ended the depression-era planting restrictions and compensated farmers who previously owned tobacco quotes from 2005-2014.[8] **Many connect this history to the ongoing high rates of smoking in Kentucky, with research showing smoking and tobacco use in Kentucky consistently among the highest in the nation.[9,10,11]**

In addition to a long history of tobacco in Kentucky, **decades of research also show patterns of strategic marketing to lower income communities and communities of color, particularly Black communities, through point-of-sale (POS) marketing.**[12] Used by tobacco industries, this marketing strategy began as wealthier consumers found the support to stop smoking following the release of the U.S. Surgeon General's 1964 report highlighting tobacco's dangerous consequences.[13] POS advertising and promotions refer to a variety of marketing practices, including signs on the interior and exterior of retail stores, shelving displays, and coupons to maintain a low price for the consumer.[12] POS advertising also includes promotional payments to retailers by tobacco companies to have their products placed in specific store locations.

Individuals with lower incomes may find it extremely difficult to quit smoking while simultaneously navigating and trying to cope with stressful consequences of poverty. To make things more difficult, research also shows there is a significant impact on smoking behaviors when tobacco companies target advertising toward their neighborhoods.[14] For example, because lower income communities have a higher density of convenience stores primarily marketing and selling alcohol and tobacco products, some residents have more access to tobacco products than to fresh foods or full service grocers.[15] For those who do not smoke, neighborhoods with high rates of smoking can also impact their health through increased secondhand smoke exposure.[14]

EMPLOYMENT AND INCOME

Over the past 50 years, tobacco use in the United States, particularly smoking, has generally declined for everyone but there are still dramatic differences along income levels in both tobacco use and death rates.[13,16] When smoking became popular, people with higher incomes could afford the habit and often used tobacco more frequently.[13] That trend reversed after the release of the first U.S. Surgeon General's report in 1964 describing the deadly dangers of smoking. Today, those with lower incomes are more likely to smoke, face more barriers to smoking cessation programs or services, and despite attempting "at the same rate as those who earn more," are less successful with quitting.[14,17,18]

Employment status and the type of employment plays a role in tobacco use, particularly on smoking intensity and ability to successfully quit.[19,20] For example, research shows a relationship between involuntary unemployment and an increase in smoking.[19] Additionally, while there is not a significant difference in the desire to quit smoking, service-industry workers and others considered part of the working-class are more likely to smoke more than those who earn more.[20] This is especially true when there is limited workplace support for quitting.

HEALTH AND HUMAN SERVICES

There are many factors impacting a person's access to health and human services. This can include their insurance status, ability to afford care, proximity to services, and culturally-competent providers.[21] Because these factors are so critical, there is a significant, beneficial impact when someone has access to each of them. In particular, when communities face barriers to healthcare, people are less likely to trust their provider or have continuity in both preventative and targeted care.

Research shows health and human services providers can have a significant impact on prevention of initial tobacco use, as well as successfully quitting.[22,23] One literature review found that individuals who were unsuccessful in quitting were discouraged about their attempts when they saw health professionals and other service providers were also tobacco users.[23] Additionally, a lack of structured support from authority figures such as teachers or prison staff also reduced a person's ability to successfully quit.[23]

Research results reveal a positive impact on uninsured individuals when they access affordable coverage; after gaining health insurance, these individuals are more likely to successfully quit.[24] Because those with lower incomes are more likely to both be uninsured and use tobacco, these results critically identify a long-term impact of access to healthcare services for those who have the greatest need but least structural support.

BEST PRACTICES

To reduce tobacco use in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Employment and Income
Health and Human Services
Neighborhood Development
Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY
national, state, local law
Connect with your elected officials!

- ***Institute and enforce comprehensive smoke-free policies to reduce second-hand smoke exposure by limiting tobacco usage in public places.[25]**
- Ensure insurance coverage for all over-the-counter tobacco cessation products among all health insurance providers, including private companies, Medicare, and Medicaid.[26]
- Increase the age of sale for tobacco products from 18 to 21 in Kentucky.[27]
- Increase price or tax on tobacco products to reduce demand and consumption and prevent youth from starting.[28]
- Restrict tobacco marketing, especially at the point of sale.[29,30]
- Limit the number of locations able to advertise and sell tobacco products within 1000 yards of a school.

COMMUNITY
relationships among organizations
How can we link resources together?

- Create mass media campaigns focused on changing social norms and giving information for how to quit.[28]
- Increase the number of free, community-wide tobacco cessation classes that give all participants free Nicotine Replacement Therapy (NRT) for a minimum of 10 weeks.

ORGANIZATIONAL
organizations, social institutions
Change where you work, learn, pray, and play.

- Ensure that doctors, dentists and dental hygienists ask about tobacco use at every visit, and know what resources are available if patients show interest in quitting.
- ***Provide educational programs for youth and adults that explain how and why tobacco damages every system in the body.**

INTERPERSONAL
family, friends, social networks
Support each other!

- Let people know you are trying to quit smoking, so they can learn how to best support you.
- Look for strong support groups of people who don't smoke or who have successfully quit.

INDIVIDUAL
knowledge, attitudes, skills
What you can do!

- Join smoking cessation classes or call the Kentucky quit-line: 1-800-QUIT-NOW (784-8669).
- Utilize nicotine replacement therapy and behavior modification therapy to increase the odds of quitting for good.
- Take the money you would use to purchase tobacco products and save it to reward yourself for a job well done.

RESOURCES

Smoking Cessation Classes

Louisville Metro provides resources including classes to help people quit smoking: https://louisvilleky.gov/government/stop-smoking-class-schedule

Quit Line

If you're interested in quitting, call the Kentucky quit-line **1-800-QUIT-NOW (784-8669)**

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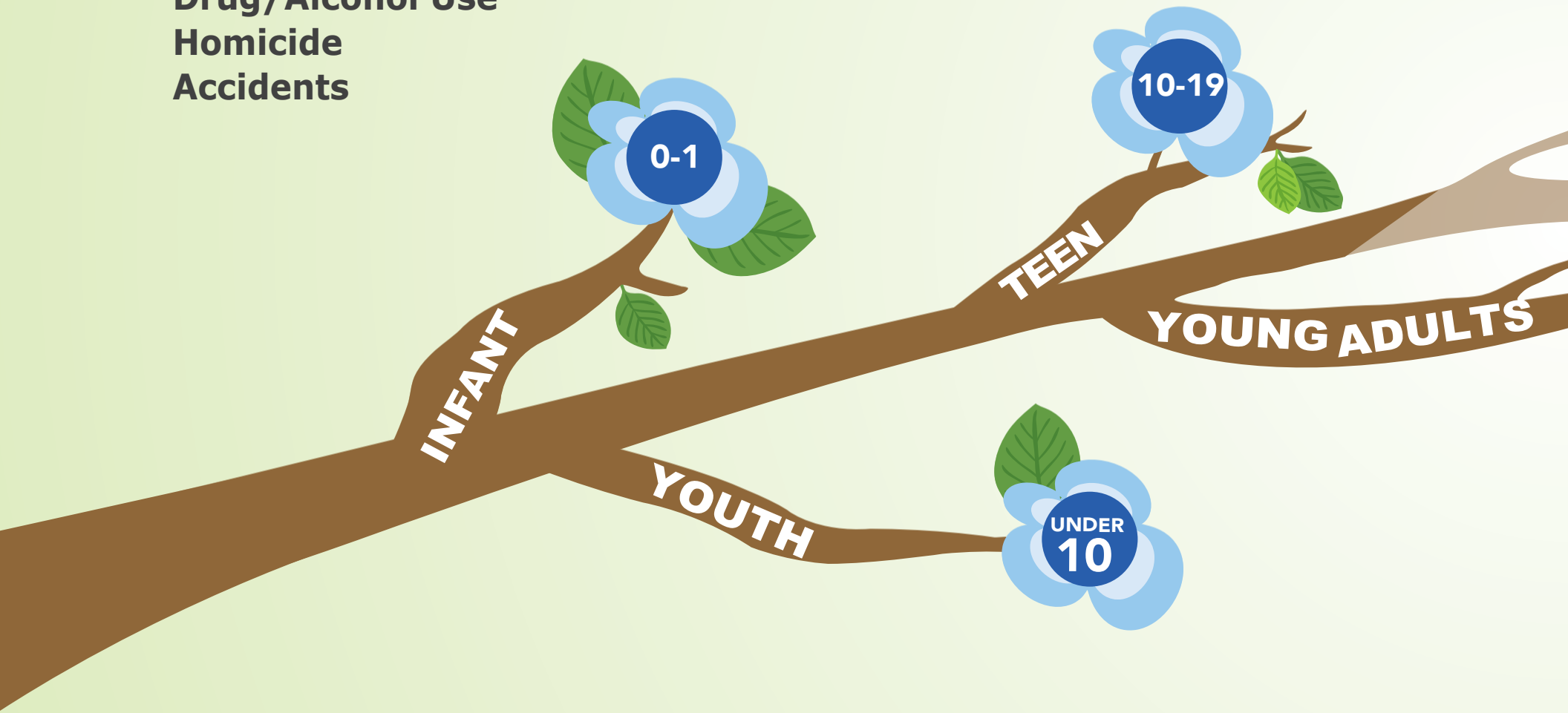
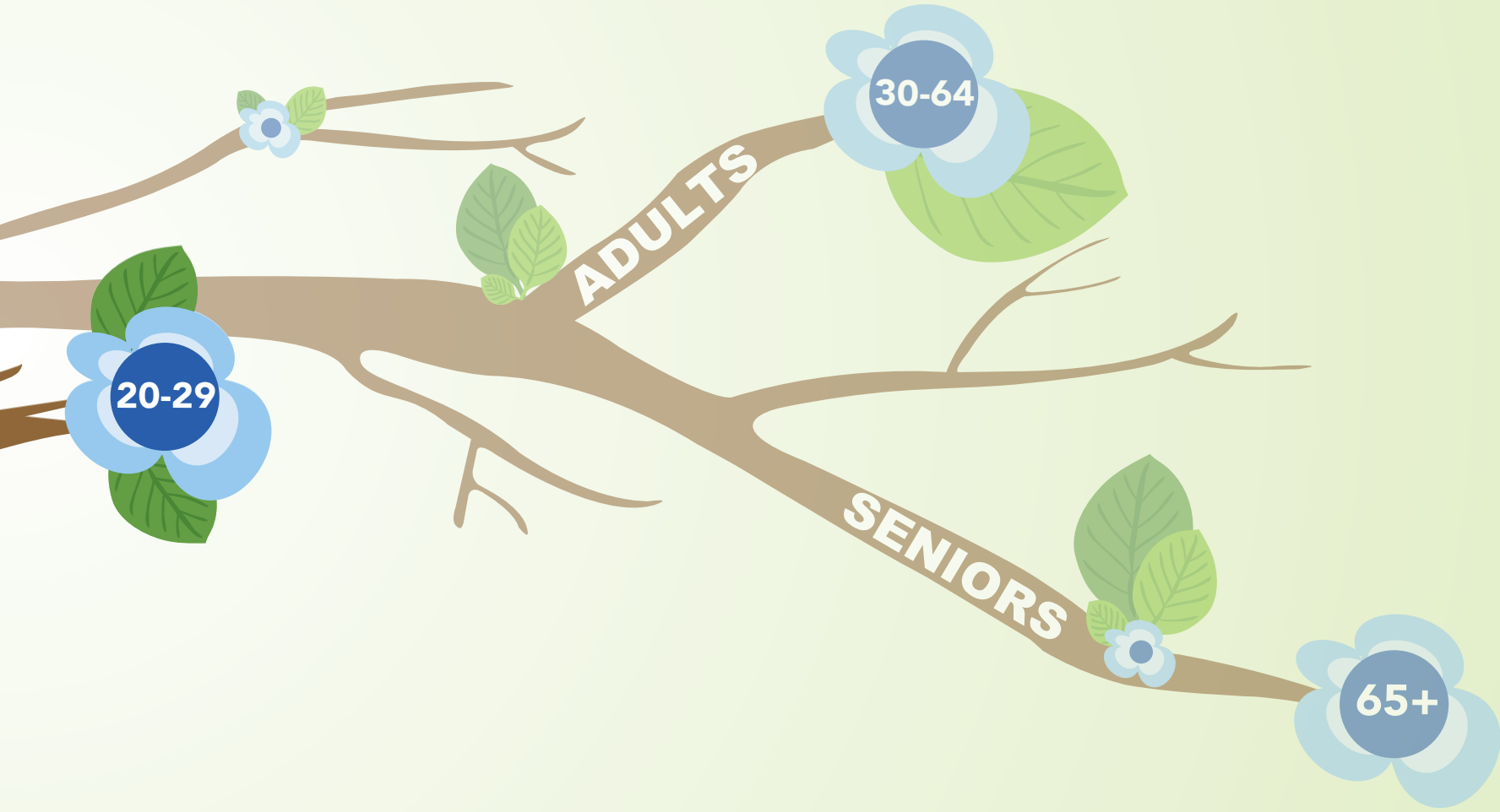
YOUNG ADULTS

Mental Health
Suicide
Drug/Alcohol Use
Homicide
Accidents




30-64
ADULTS
20-29
SENIORS
65+

MENTAL HEALTH

We are working toward a Louisville where our communities are healthy in the broadest and most meaningful terms: where joy and connections and wellbeing are as prevalent as lower rates of heart disease and diabetes.

What is mental health?

The World Health Organization (WHO) defines mental health as:

> *A state of well-being in which every individual realizes her or his own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.*[1]

Mental health is often discussed as being on a scale, ranging from wellness to illness.[2] There are many factors that contribute to mental health, including: life-satisfaction, hopefulness, personal self-worth, and a sense of community.[3] These factors help to determine a person's quality of life, but they are often overlooked in healthcare settings where there is more focus on mental illness rather than mental health.[3,4] A person who is not experiencing mental well-being does not necessarily have a diagnosable mental disorder.[5]

How does mental health affect overall health and quality of life?

According to the Centers for Disease Control and Prevention (CDC), mental wellness is associated with improved health outcomes.[3] Mental wellness may include having lower levels of a sense of helplessness, higher levels of intimacy (e.g., feeling very close with family and friends), and lower reports of chronic diseases.[2]

Evidence shows that mental illness is closely connected to the chance of being diagnosed with chronic diseases like diabetes, asthma, and cardiovascular disease.[6] For example, studies have reported that mental disorders like depression and anxiety are risk factors for stroke and high blood pressure.[7,8] Overall, health and mental illness are known to have a dependent relationship where chronic diseases can intensify mental illness symptoms, and mental illness can make it difficult to manage chronic diseases.[6]

MENTAL HEALTH

Mental health data is not easy to obtain at a population health level. Our best estimates come from calculations created by the Centers for Disease Control. They use county-level data from the Behavioral Risk Factor Surveillance System (BRFSS) and use mathematical formulas to determine which census tracts have higher percentages of adults with poor mental health. This map shows estimates of where a large percent of the population of those over 18 experience poor mental health for more than half of the month.

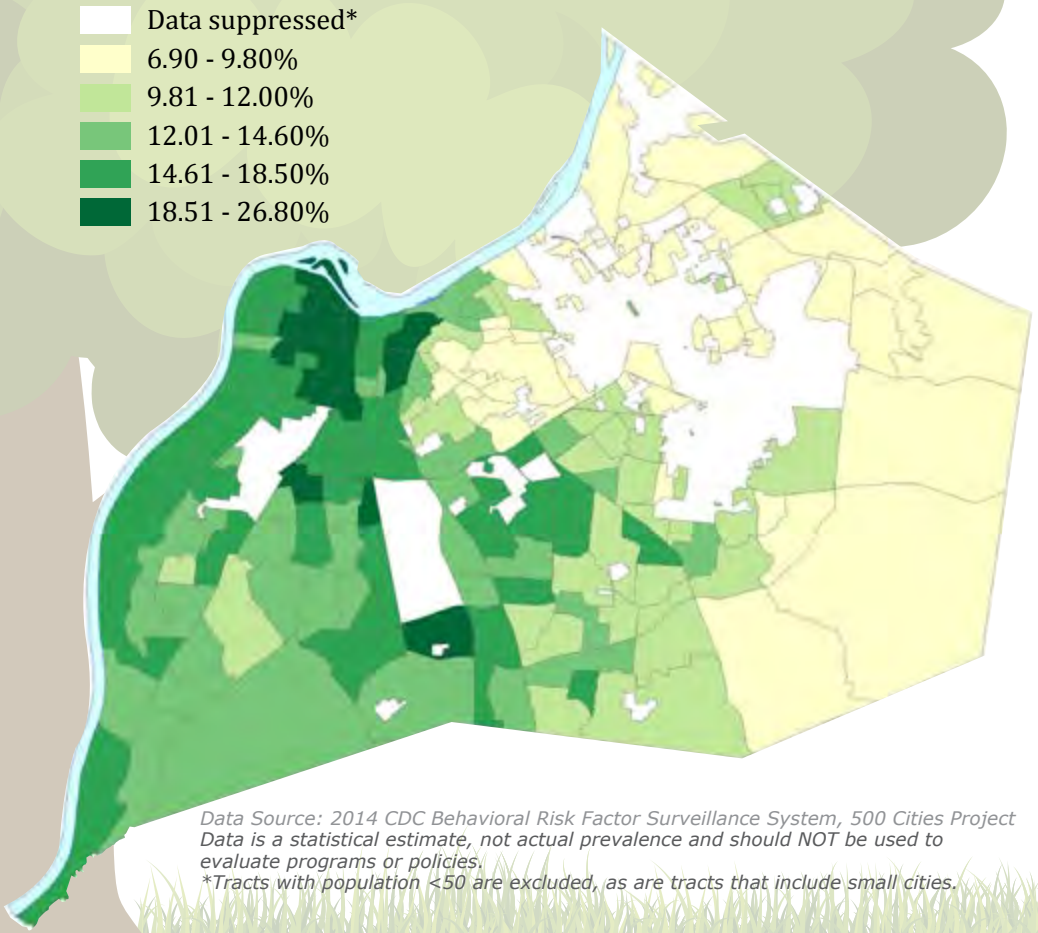
Mental health data can be difficult to collect because not everyone who is experiencing poor mental health will go to the doctor. There is still a lot of stigma that keeps people from seeking the help they need.

In Louisville Metro, 13.3% of those over 18 years old have had 14 or more unhealthy days in one month.

Data Source: 2014 Centers for Disease Control Behavioral Risk Factor Surveillance System, 500 Cities Project

Mental Health

Percent of adults aged 18 years and older who responded that their mental health was "not good" for 14 or more days in the past month



Data Source: 2014 CDC Behavioral Risk Factor Surveillance System, 500 Cities Project
Data is a statistical estimate, not actual prevalence and should NOT be used to evaluate programs or policies.
**Tracts with population <50 are excluded, as are tracts that include small cities.*

Health Outcomes | **Root Causes**

- HEALTH AND HUMAN SERVICES
- EMPLOYMENT AND INCOME
- NEIGHBORHOOD DEVELOPMENT

NEIGHBORHOOD DEVELOPMENT

Where you live influences mental well-being. **Factors like housing quality, indoor and outdoor air quality, recreational spaces and noise have an impact.**[9] For example, research links both poor quality housing and lack of recreation spaces to a negative impact on mental well-being because it causes social isolation.[10] Additional research shows that exposure to parks and other green spaces reduce the risk of developing mental health disorders like attention-deficit disorder (ADHD).[11]

Neighborhood deterioration is connected to stress and depressive symptoms.[12] **Residents living in a neighborhood with a lack of resources, including limited economic investment or few spaces for residents to safely come together, are more likely to experience stressors associated with a sense of hopelessness, leading to poor mental health outcomes**.[13]

On the other hand, research shows that **when residents feel both a sense of community with their neighbors and control over the quality of their neighborhood, there is a positive impact on mental health**.[14] In particular, feeling that neighbors will intervene if a resident needs help or knowing that they can be successful in advocating to the city for the neighborhood's needs are shown to prevent depression and anxiety disorders.[14]

EMPLOYMENT AND INCOME

Research shows that unstable forms of employment like temporary or part-time work can lead to poor mental health.[15] **Temporary employment, job loss and periods of unemployment are closely linked to lower levels of mental wellness, especially during early adulthood.**[15,16] Among other reasons, this can be attributed to an extremely limited amount of social support and financial resources. Individuals with stronger social networks experiencing job loss report higher levels of mental wellness than those less connected to resources.[16,17] **When neighborhoods or communities are collectively experiencing job loss, the mental wellbeing of residents is at an even greater risk because there is an increase in communal, chronic stress due to potential consequences of unemployment.** These consequences include food insecurity, unstable housing, inability to pay bills and trauma, particularly if there are high rates of violence.[18,19]

Living in poverty increases the likelihood of being diagnosed with a mental illness.[20] This is attributed to the stress that owing debt can have when money is limited and basic needs may or may not be able to be met.

Because of the environments that shape a person's or community's experiences, certain populations may be more susceptible to experiencing job loss or unemployment. For example, children who experience a high number of adverse childhood experiences (ACEs) are more likely to struggle with poor work performance and loss of employment.[21] Other populations at a higher risk of unemployment include Black communities (born inside and outside the United States) and transgender workers.[22,23,24]

HEALTH AND HUMAN SERVICES

According to the WHO, between 35%-50% of people with severe mental health disorders receive no treatment.[25] Stigma around mental illness is one known factor that prevents individuals from accessing mental health services.[4] **Research shows that individuals diagnosed with a mental illness are less likely to receive the same amount of health insurance benefits as those without this diagnosis.**[26]

Black and Latino populations living in poverty in the U.S. are more likely to have reduced access to mental health services. [27] Research shows that this is largely due to lack of insurance coverage, stigma associated with accessing mental health services, and mental healthcare that fails to take into consideration all identities that one person may hold (such as religion, race, beliefs about health, or language).[28]

According to the Community Preventative Services Task Force, an independent and unpaid panel of public health and prevention experts, expanding mental health benefits legislation will reduce financial burdens as a barrier while increasing both access to and use of mental health services.[29] For communities that have limited providers available, creative strategies can be used to diversify the options. For example, telehealth is an opportunity to provide health services virtually for residents who would be unable to seek healthcare in person.[30] While this is not the only answer to increasing access, it provides an alternative that can serve diverse needs.[31]

BEST PRACTICES

To improve mental health in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Health and Human Services

Employment and Income

Neighborhood Development

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY

national, state, local law

Connect with your elected officials!

- Continue to require health insurance plans to include mental health benefits and coverage in all policies.[32]
- Implement a state-level Earned Income Tax Credit (EITC) to aid wealth building and alleviate poverty.[33,34]
- Implement child care subsidies to help parents with limited incomes work more hours, stay in jobs longer, and increase overall earnings.[35]

COMMUNITY

relationships among organizations

How can we link resources together?

- Reduce mental health provider shortages in underserved neighborhoods; examples could include telehealth initiatives or incentivizing mental health nurse practitioner students to serve by funding student loan relief.
- ***Provide extracurricular activities that allow opportunities for self-expression and leadership development.[36]**
- ***Create more opportunities for job placement by continuing to fund summer jobs programs.**
- ***Increase funding to create parks and maintain green space in innovative ways.**
- ***Continue to convene the Dual Diagnosis Cross-Functional Team to implement evidence-based practices such as Law Enforcement Assisted Diversion.**

ORGANIZATIONAL

organizations, social institutions

Change where you work, learn, pray, and play.

- ***Promote and continue to integrate social and emotional learning programs in school settings to teach problem solving and coping skills.[37]**
- Encourage employers to institute flexible scheduling allowing employees to create work-life balance.[38]
- Improve cultural competency skills and mental health awareness in primary care providers.[39]
- ***Strengthen and expand training in trauma-informed approaches for school employees who work directly with students (bus drivers, teachers, etc.).**

INTERPERSONAL

family, friends, social networks

Support each other!

- Cultivate strong relationships so that you are able to support each other.

INDIVIDUAL

knowledge, attitudes, skills

What you can do!

- Learn which coping and stress management skills work for you; this may include therapy.

RESOURCES

Crisis Line at Centerstone

If you need immediate assistance, call the 24/7 Crisis line at **502-589-4313**

National Suicide Prevention Lifeline

Call the toll-free National Suicide Prevention Lifeline (NSPL) at **1-800-273-TALK (8255)**, 24 hours a day, 7 days a week. The service is available to everyone. The deaf and hard of hearing can contact the Lifeline via TTY at **1-800-799-4889**. All calls are confidential.

Mental Health Services

Talk to your doctor about a referral to a mental healthcare provider. If you don't have insurance, you may also use the free Cardinal Success Program. To learn more call **502-852-3888**

Parks & Recreation

To learn more about Louisville Metro's opportunities for parks and recreation visit: https://louisvilleky.gov/government/parks

KentuckianaWorks

To learn more about employment programs from KentuckianaWorks visit: http://www.kentuckianaworks.org/

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SUICIDE

We are working toward a Louisville where everyone thrives across the span of a full life.

What is suicide?

Suicide is when a person dies as a result of self-harm because of the desire to end their life.[1] Sometimes people attempt a suicide that does not result in a death; these attempts may or may not result in serious physical injuries.[1] Suicidal ideation is "thinking about, considering, or planning suicide," and is a significant indicator for health and well-being.[1]

How does suicide affect health and quality of life?

There are many reasons people think about, attempt or complete suicide; these reasons can be complex and can have more than one cause. Living with thoughts of suicide, often coupled with depression, can impact a person's health. There is a strong link between experiencing stressors such as violence, disaster, loss, or sense of isolation with suicidal behavior; a suicide attempt or ideation may happen when these and other stressors exceed a person's current coping abilities.[2]

Suicide affects people across the lifespan, including recent increases in suicides among middle-aged people.[3] Young adults between the ages of 18 and 24 have some of the highest rates of suicidal ideation and attempts.[4] Recent research has shown that certain young adult populations who experience discrimination, such as American Indian, refugee, and LGBTI (lesbian, gay, bisexual, transgender, and intersex) youth hold some of the highest suicide rates among young adults in the United States.[2,5] As a result, addressing social determinants like neighborhood environment, access to mental health services, and reducing access to the means of suicide (poisons, firearms, etc.) are critical to the prevention of suicide.

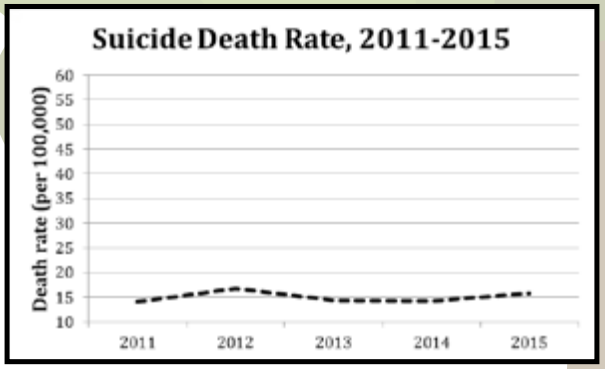
SUICIDE

Root Causes | Health Outcomes

Suicide Deaths Total 2011 - 2015

	Count	Age-adjusted rate (per 100,000)
White Male	396	29.14
Other Male	9	19.28*
Louisville Metro	**584**	**15.05**
Black Male	45	12.32
White Female	113	7.62
Hispanic Male	6	6.66*
Black Female	13	3.21*
Hispanic Female	**	2.30*
Other Female	0	0.00*

Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to 2000 U.S. Standard Population
Cause of death determined by Coroner's Office on death certificate.
**The CDC defines rates as statistically unreliable when the numerator is less than 20.*
***Data suppressed (counts less than 5).*
Racial categories are non-Hispanic.

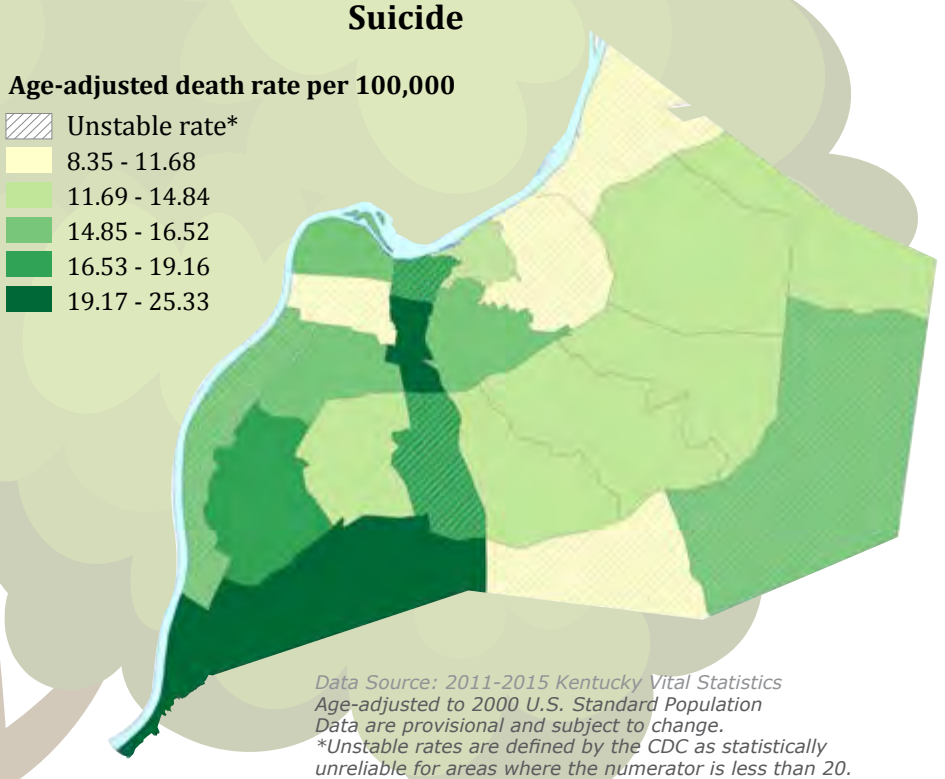


Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to 2000 U.S. Standard Population

Most commonly used methods:

Guns (57.37%)
Hanging (22.77%)
Drugs/poison (12.67%)

Data Source: 2011-2015 Kentucky Vital Statistics



Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to 2000 U.S. Standard Population
Data are provisional and subject to change.
**Unstable rates are defined by the CDC as statistically unreliable for areas where the numerator is less than 20.*

White men are almost twice as likely to die from suicide as an average resident of Louisville Metro. This is due in part to the fact that men are more likely to use more lethal means to attempt suicide, and therefore are more likely to die. Those who commit suicide are most likely to use some sort of firearm; in Louisville Metro, 57.37% of suicides involved a firearm. It is possible that there may be more suicides occurring from drug use that are simply not counted for many reasons, one being that no suicide note is left.

The median age of those who died from suicide in Louisville Metro from 2011-2015 was 45.5.

CRIMINAL JUSTICE | **HEALTH AND HUMAN SERVICES** | **EMPLOYMENT AND INCOME**

EMPLOYMENT AND INCOME

Research shows that neighborhoods with low employment rates and exposure to violence and drugs are more likely to have residents who report hopelessness, a risk factor for suicide.[6] Additionally, living in a neighborhood where poverty is concentrated is also connected to higher levels of suicidal ideation and attempts among young people.[7] However, **a neighborhood with a strong sense of collective support among neighbors and opportunities for quality employment is known to promote feelings of belonging,** a known protective factor against suicidal ideation and attempts.[8]

While neighborhood income levels can have an impact on wellbeing, an individual's ability to find quality employment has a significant impact as well. **Many researchers have identified strong links between unemployment and suicide rates,** but recent research shows a deeper connection with the duration of unemployment.[9] **While recent job loss can trigger suicidal ideation or an attempt, research shows that mass layoffs or unemployment lasting longer than 15 weeks have a stronger link to suicide.**[10] This can be attributed to the instability and mental stress that long-term unemployment can bring.

HEALTH AND HUMAN SERVICES

When talking about suicide, it is important to differentiate it from mental illness; not everyone who is navigating a mental illness will attempt or even consider suicide. However, quality healthcare, including but not limited to mental healthcare, is important for those considering suicide. In 2013, 70% of individuals who died by suicide were not receiving mental health services at the time of their death.[11] One study showed that 60% of hospital patients who died from suicide within 72 hours of being discharged had been admitted to a hospital based on complaints related to chronic conditions like insomnia, shortness of breath, or chest pain.[12] **Preparing all service providers, especially non-mental health service providers, to understand the many ways that suicidal thoughts can manifest in a person's body helps increase early detection and linkage to appropriate mental healthcare.**[13]

While health service providers are critical to early detection of suicidal ideation or attempts, everyone does not have the same ability to access these services. So, it is important that other human service providers (i.e., child welfare workers, adult day care workers, etc.) who may be more likely to be in contact with residents are trained and prepared to assist with detection of symptoms and linkage to care.[13] This is especially important for providers that serve populations like foster care youth, who have higher risk of suicidal ideation and attempts.[14]

CRIMINAL JUSTICE

While suicide is a leading cause of death for young adults in the United States, **youth in the juvenile justice system are at a much higher risk for suicide attempts.**[15] This is partly due to a young person's environment and context before they are incarcerated. However, research also shows that suicide attempt rates increase as youth in the juvenile justice system move from intake to detention and release.[15]

While a great deal of research focuses on the individual behaviors of those involved in the criminal justice system, institutional conditions are also considered a risk factor.[16] **Prison conditions are an important predictor of suicidal ideation, suicide attempts and completion.** One research study found that the combination of punitively being cut off from society, feelings of insecurity, and having limited access to quality mental health services increases the number of suicide deaths in adult prisons, especially maximum security prisons.[16,17] Reform of the criminal justice system that improves policies and practices could lower the number of suicides among individuals who come into contact with the system.

Research shows that reducing access to guns has a significant impact on the number of deaths by suicide.[18] Because guns are highly lethal and readily available, many people choose them when attempting suicide. While this still needs further exploration, researchers found a "powerful link" between household gun ownership and rates of suicide.[18]

BEST PRACTICES

To reduce suicide in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Employment and Income

Health and Human Services

Criminal Justice

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY

national, state, local law

Connect with your elected officials!

- Continue to require health insurance plans to include mental health benefits and coverage in all policies.[19]
- Institute permit-to-purchase laws that require individuals purchasing a firearm to first apply for a permit, decreasing immediate access to lethal means of suicide.[20]

COMMUNITY

relationships among organizations

How can we link resources together?

- Institute a Suicide/Overdose Fatality Review system to share best practices among providers, discover potential gaps in care, and learn more ways to prevent suicides.
- Reduce mental health provider shortages in underserved neighborhoods; examples could include telehealth initiatives or incentivizing mental health nurse practitioner students to serve by funding student loan relief.
- ***Join the Zero Suicide Initiative, that empowers organizations and employers to move toward Zero Suicides by participating in community action planning forums to report progress and share resources and policies.**

ORGANIZATIONAL

organizations, social institutions

Change where you work, learn, pray, and play.

- ***Promote and continue to integrate social and emotional learning programs in school settings to teach problem solving and coping skills.**[21]

INTERPERSONAL

family, friends, social networks

Support each other!

- Learn how to talk and ask about someone's mental health. Talking about suicide often reduces, rather than increases, risk.[22,23]
- Learn how to best support someone who is struggling. Do your research and help connect them to resources.

INDIVIDUAL

knowledge, attitudes, skills

What you can do!

- Learn which strategies to cope with depression work for you; this may include therapy.

RESOURCES

Crisis Line at Centerstone

If you need immediate assistance, call the 24/7 Crisis line at Centerstone **502-589-4313**

National Suicide Prevention Lifeline

Call the toll-free National Suicide Prevention Lifeline (NSPL) at **1-800-273-TALK (8255)**, 24 hours a day, 7 days a week. The service is available to everyone. The deaf and hard of hearing can contact the Lifeline via TTY at **1-800-799-4889**. All calls are confidential.

National Suicide Prevention Website

Visit NSPL (https://suicidepreventionlifeline.org/help-someone-else/) to learn how you can support someone and resources available on social media to reach out.

Zero Suicide

If you are an organization or employer interested in implementing Zero Suicide, an initiative of the Louisville Health Advisory Board, please contact: louisvillezerosuicide@gmail.com

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DRUG/ALCOHOL USE

We are cultivating a community where everyone can lead a healthy, fulfilled life, and reach their full human potential.

What is drug and alcohol use?

Substance use disorders occur when the repeated use of alcohol and/or drugs causes significant problems in a person's life. These problems can occur with individual health, at school, work, or at home, using alcohol or drugs even when you would rather not, and taking risks that can lead to injury, traumatic events, or even death.[1] Not everyone who uses substances, such as alcohol or drugs, will develop a substance use disorder, but for those who do, the American Psychiatric Association recognizes that "changes in the brain's wiring" occur, along with the development of "intense cravings," making it incredibly difficult to stop using the substance.[2]

Why do people start using alcohol and/or drugs?

People begin using alcohol and/or drugs for many reasons; untreated mental health issues and untreated trauma are some of the most common reasons. Often, people are simply trying to feel better—to get relief from anxiety, depression, or other mental health issues. Unfortunately, many people are ashamed to ask for help or to tell others they are struggling to cope; instead, they seek relief through alcohol or drugs, which are usually readily available.[3,4,5]

Some people may develop a substance use disorder after a surgery or accident as a result of prescription pill dependency. For example, excessive prescription of pain medication is credited for the current heroin epidemic. When pain medication is over prescribed, because of changes in the brain made by these medications, some people may not be able to function without taking some kind of pain pill. If pain pills are not available, they may use heroin.[6,7] As a result of increased awareness, new guidelines have been established to help doctors prescribe pain medication in a safer way.[8]

Some people are curious about what it is like to get high, so they experiment with whatever is available to them. For young people, this is often marijuana and alcohol. However, many people report their first exposure to prescription medication came from taking something in the family medicine cabinet.[9,10,11]

How does substance use affect health and quality of life?

The specific health impact of substance use depends on which and how often substances are used. According to the National Institute on Drug Abuse there are general impacts on health outcomes, which can include heart disease, stroke, cancer or lung disease.[12] Substance use can also worsen a person's mental health, isolate them from their support system, or impact their ability to maintain housing or employment.

Substance use disorders may require treatment from a wide-range of types of therapies, including medications and counseling. Different drugs affect the brain in different ways, so treatments vary. For example, treatment for alcohol issues is not the same as treatment for marijuana issues.[13] Someone with a substance use disorder may have other needs, like help securing basics such as food, clothing, and shelter. They may also need coping skills and healing from traumatic life events, like neighborhood violence, sexual abuse, physical abuse or neglect.[14]

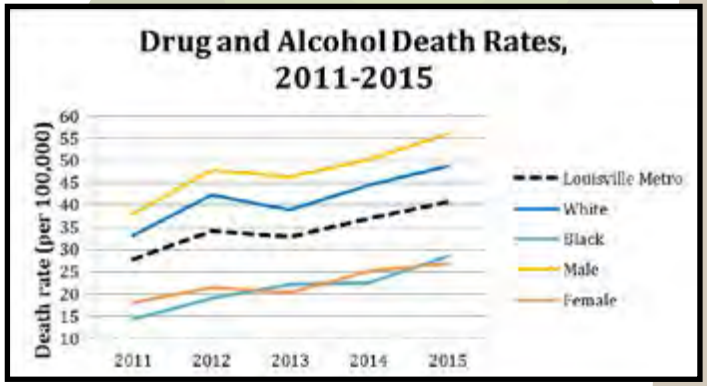
DRUG/ALCOHOL USE

Health Outcomes | Root Causes

Drug and Alcohol Deaths Total 2011 - 2015

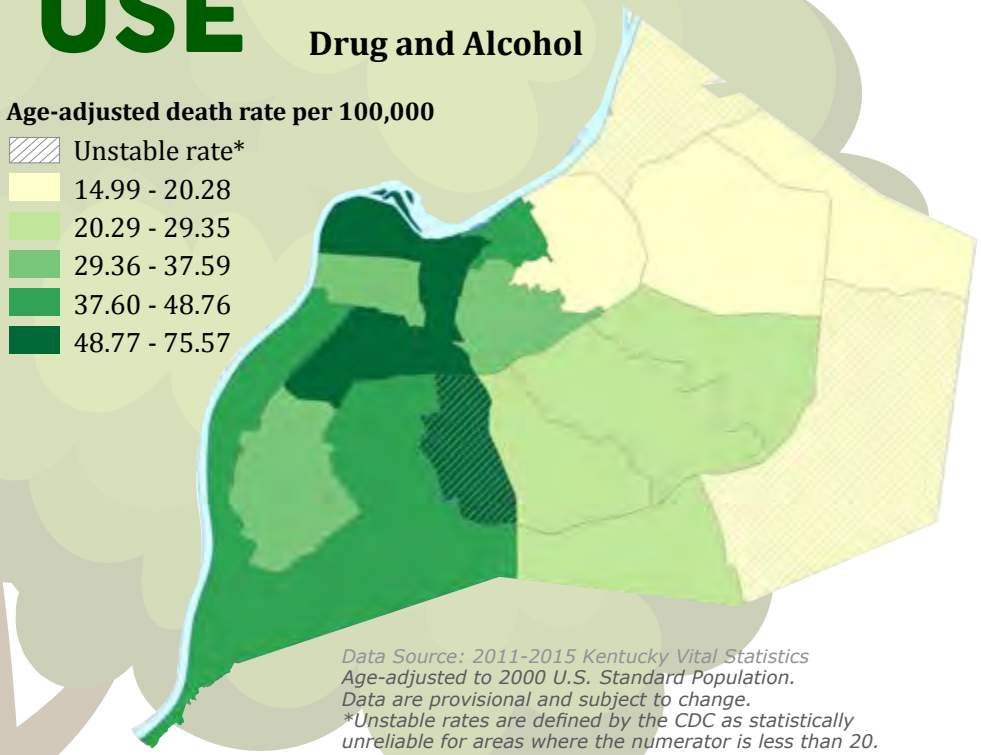
	Count	Age-adjusted rate (per 100,000)
White Male	778	56.28
Louisville Metro	**1356**	**34.56**
Black Male	116	33.25
White Female	386	27.51
Black Female	57	12.78
Hispanic Male	8	9.27*
Other Male	**	7.11*
Other Female	**	5.09*
Hispanic Female	**	4.04*

Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to 2000 U.S. Standard Population.
Cause of death determined by Coroner's Office on death certificate.
**The CDC defines rates as statistically unreliable when the numerator is less than 20.*
***Data suppressed (counts less than 5).*
Racial categories are non-Hispanic.



Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to 2000 U.S. Standard Population

Drug and Alcohol



Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to 2000 U.S. Standard Population.
Data are provisional and subject to change.
**Unstable rates are defined by the CDC as statistically unreliable for areas where the numerator is less than 20.*

Unlike many other health outcomes, that have either declined or remained stable, the recent opioid epidemic has caused drug- and alcohol- related deaths to rise across all demographic groups. White men are most affected, with death rates almost twice that of the next most affected group, Black men. As a whole, the White population is dying at rates nearly twice that of Black populations from drug and alcohol-related causes. In Louisville Metro, these deaths are also occurring in geographic clusters: the northwestern-most part of the county, downtown, Old Louisville, and south, near Churchill Downs.

Those who die from drug or alcohol use are younger than those who die from other outcomes. In Louisville Metro from 2011-2015, the median age of those who died from drugs was 40, while the median age for alcohol-related deaths was 55. A majority of those were drug related (67.92%).

EDUCATION

EARLY CHILDHOOD DEVELOPMENT

EMPLOYMENT AND INCOME

EMPLOYMENT AND INCOME

Regardless of income or employment status, anyone has the potential to develop a substance use disorder. However, the amount of money coming into your home can impact the amount of stress you're trying to manage, your access to alcohol and various drugs, and your access to quality healthcare.[15]

Although research shows that anyone can develop a substance use disorder, stereotypes exist that connect drug and alcohol misuse to people who have lower incomes. The implication is that people who have lower incomes make poor decisions that lead to substance misuse. **However, research paints a clearer picture, and shows that risk factors for substance misuse, such as limited education, trauma, or mental health issues, can and do occur for people across income levels.** The difference is that a higher income acts as protection against many of these risk factors.[16]

EARLY CHILDHOOD DEVELOPMENT

Research shows that many adults begin using substances in their teenage years.[17] However, the *roots* of substance use can also be traced back to childhood. **Although not everyone who uses drugs or alcohol does so to cope with something that is unresolved, many people do - and knowing that substance use begins early means it is critical for supportive structures to be in place early in a child's life to prevent adverse childhood events (ACEs) or to help children develop healthy coping strategies.**[18]

Many people will at some point experience trauma.[19] For children, their ability to find and use resources to cope is often outside their control. With more common traumatic events, such as changing schools or divorce, there often are structured supports to help children cope. This is not necessarily the case for traumatic events such as neighborhood violence, unstable housing, unreliable food sources, abuse or neglect. **Families and children experiencing these kinds of traumas often have less access to supportive services.** They are frequently financially unable to leave, and may not be able to effectively eliminate the source of the trauma.

EDUCATION

Substance use disorders can impact anyone, regardless of their level of formal education. However, research shows a connection between limited levels of education, such as not receiving a high school diploma, and high rates of substance use.[20] This doesn't mean you're more susceptible to developing a substance use disorder if you don't finish high school, or don't go to college. Instead, this reveals that **formal education has a greater potential to provide protection against risk factors that can lead to substance use, through things like steady employment, which may then lead to steady income, housing, healthcare, transportation, and access to healthy food.**

For students living in or around poverty, educational attainment in under-resourced schools becomes even more difficult.[21] Along with the many consequences of not being able to afford basic needs, children living in poverty can potentially be at a greater risk of substance use disorders because of school conditions far outside of their control, such as unqualified teachers, few exploratory courses, or limited technology. Additionally, seeing the stark differences between their quality of life and that of students with a stable income can negatively impact how they envision their future.

The interrelationship between education and substance use means that education level can impact substance use, which in turn can impact future educational attainment. People struggling with a substance use disorder are hindered in their ability to succeed in formal education. And lack of formal education can impact a person's income and ability to access quality healthcare, including mental healthcare.[22] Once this cycle begins, it can be very difficult to break.

BEST PRACTICES

To reduce drug/alcohol use in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Employment and Income

Early Childhood Development

Education

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY

national, state, local law

Connect with your elected officials!

- Limit the density of liquor stores to prevent over-concentration in certain neighborhoods.[23]
- Work with proponents of tax reform to review and consider increasing alcohol taxes.[24]
- Continue to restrict the sale of alcohol to minors and look for innovative enforcement strategies.[25]
- Continue to require health insurance plans to include mental health benefits and coverage of all varieties of substance use disorder treatment in all policies; work with payers to improve reimbursement models and access to care.[26]

COMMUNITY

relationships among organizations

How can we link resources together?

- ***Support syringe exchange programs, that allow access to clean syringes, HIV and Hepatitis C testing, and referrals to treatment resources and STD testing.[27]**
- Improve data collection and sharing to better track and respond to trends in substance use disorders.
- ***Provide extracurricular activities that allow opportunities for self-expression and leadership development.[28]**
- ***Maintain and expand child-parent centers that provide education, food, referrals and support to families with limited incomes.[29]**
- ***Create public education campaigns to raise awareness, reduce stigma and provide resources.**

ORGANIZATIONAL

organizations, social institutions

Change where you work, learn, pray, and play.

- ***Promote and continue to integrate social and emotional learning programs in school settings to teach problem solving and coping skills.[30]**
- Destigmatize Employee Assistance Programs so employees can seek help to resolve trauma and other factors contributing to development of substance use disorders.
- ***Standardize and continue to integrate screening, risk assessment and referral tools for ACES and substance use in case management, patient care, and school settings.**
- ***Support and expand education for healthcare students and providers on addiction, culturally competent care, and compassion fatigue.**

INTERPERSONAL

family, friends, social networks

Support each other!

- Tell those you know, love, and care about that they can come to you for support and help if they are struggling.

INDIVIDUAL

knowledge, attitudes, skills

What you can do!

- Learn and practice stress management skills that work for you: exercise, dance, music, art, spiritual connection, talking things out with a friend, writing in a journal.
- Seek therapy for mental health issues and for unresolved traumatic events in your life.
- Keep prescription medications out of reach of others, and don't keep them in your medicine cabinet when no longer needed.

RESOURCES

Office of Addiction Services

Louisville Metro Public Health and Wellness' Office of Addiction Services shares information on recovery options and other available resources. For information visit: https://louisvilleky.gov/government/health-wellness/office-addiction-services

Syringe Exchange Program

Call or visit the Syringe Exchange Program (a program of Louisville Metro Public Health and Wellness) **502-574-6520**

For more information visit: https://louisvilleky.gov/government/health-wellness/syringe-exchange-program

Bounce Coalition

If you or your organization are interested in addressing Adverse Childhood Experiences, visit the website for the Bounce Coalition: www.BounceLouisville.org

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HOMICIDE

In Louisville, we are striving to create a community where every person can expect to live a long and healthy life free of violence.

What is homicide?

Homicide is the act of killing another person, usually referred to as murder.

How does homicide affect health and quality of life?

Homicide occupies a great deal of space in our collective consciousness because of the way it disrupts our personal and community life. Homicide is traumatic, bringing life to an end prematurely and violently. Many studies have shown that high homicide or violent crime rates have a negative impact on the neighborhood where it occurs, causing psychological trauma such as post-traumatic stress disorder, grief, a sense of loss and reduced perceptions of safety.[1] Witnessing or being a victim of gun violence is linked to increases in gun carrying and psychological distress.[2] Additionally, experiencing previous violent trauma, including being the victim of a shooting, increases the likelihood of becoming a future homicide victim.[3]

Homicide occurs in and impacts every part of our community, however it is more densely concentrated in certain areas of the city. It is a significant public health issue with root causes that are often misunderstood, leading to misaligned intervention and prevention strategies. A closer examination reveals a unique mixture of historic and present day social and economic stressors contributing to which communities are most impacted by homicide. For example, a 2010 study found that in some Los Angeles neighborhoods lacking quality economic development, homicides decrease the average life expectancy of Black men by 5 years.[4] Similarly, in Louisville, where communities of color are disproportionately living in neighborhoods lacking quality economic development, data shows over half of the homicide victims between 2011 to 2015 were Black men.

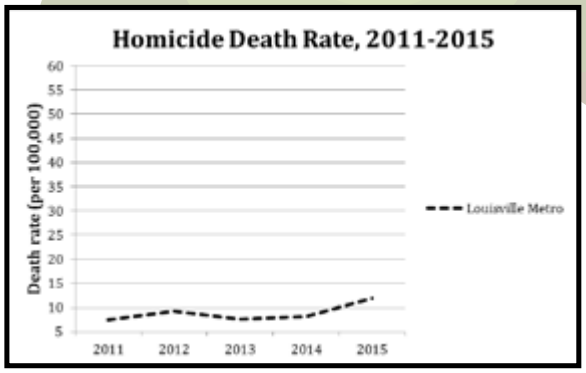
HOMICIDE

Root Causes | Health Outcomes

Homicide Deaths Total 2011 - 2015

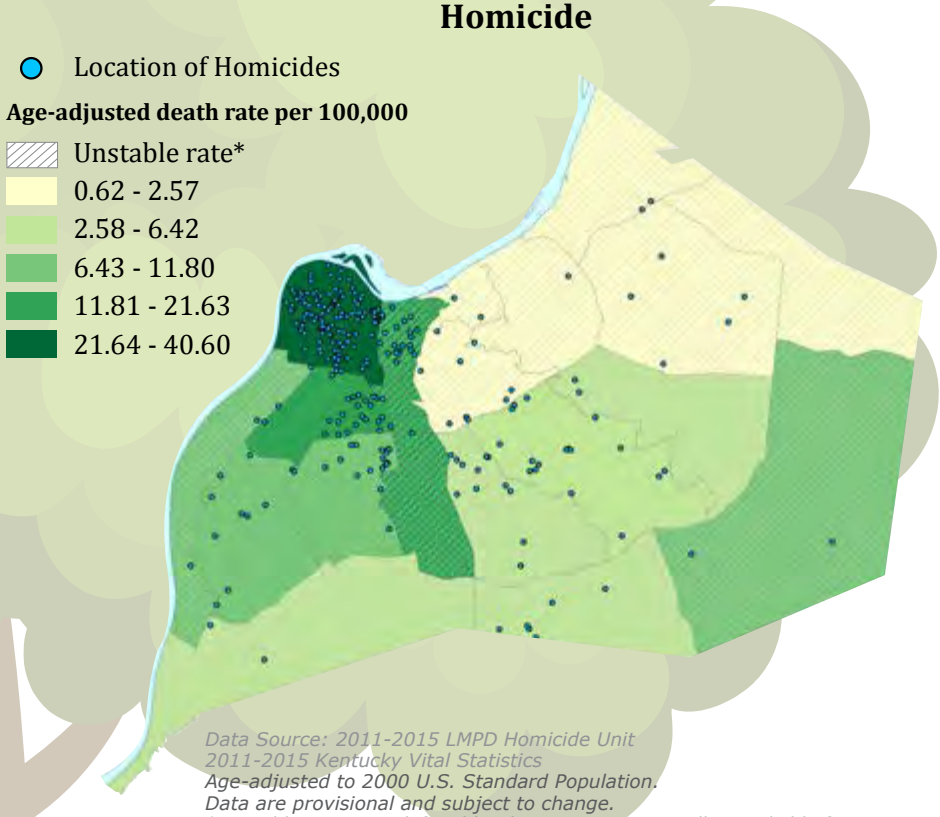
	Count	Age-adjusted rate (per 100,000)
Black Male	187	49.12
Other Male	6	9.71*
Hispanic Male	9	9.10*
Louisville Metro	**333**	**8.90**
Black Female	29	6.43
White Male	73	4.72
Other Female	**	3.33*
White Female	27	0.06
Hispanic Female	0	0*

Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to 2000 U.S. Standard Population.
Note: Vital Stats gathers data differently than the LMPD homicide unit and numbers may not be comparable.
**The CDC defines rates as statistically unreliable when the numerator is less than 20.*
***Data suppressed (counts less than 5).*
Racial categories are non-Hispanic.



Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to 2000 U.S. Standard Population

Top 3 methods:
1. Guns 78.68%
2. Assault, unspecified means 9.01%
3. Sharp object 6.01%



Data Source: 2011-2015 LMPD Homicide Unit
2011-2015 Kentucky Vital Statistics
Age-adjusted to 2000 U.S. Standard Population.
Data are provisional and subject to change.
**Unstable rates are defined by the CDC as statistically unreliable for areas. where the numerator is less than 20.*
Rates based on residence at time of murder; Points based on location of death.

While homicide has generally been declining for decades, in recent years, rates have increased. Far and away, the group that is most affected is Black men, whose death rates are 5.5 times that of the Louisville Metro rate for homicide. Additionally, this violence is geographically concentrated in the northwestern areas of the county, meaning that certain communities are disproportionately experiencing the chronic stress of community violence. However, the downtown and south areas also have clusters of homicides. Homicides are also disproportionately the result of gun violence. What is not well documented is the proportion of these homicides that are linked in some way to intimate partner violence.

The median age of those who died from homicide in Louisville Metro from 2011-2015 was 30. This means that homicide is a large contributor to premature death, especially for Black men.

EMPLOYMENT AND INCOME

BUILT ENVIRONMENT

NEIGHBORHOOD DEVELOPMENT

NEIGHBORHOOD DEVELOPMENT

Neighborhood development is complex and is made up of both tangible and intangible factors. This includes physical spaces, economic investment and various other neighborhood characteristics. Together, these factors can have a significant impact on homicide rates, especially when there is little investment in, and maintenance of, a neighborhood. For example, the presence of vacant properties has been strongly connected with homicides. **Research shows that when residents live in areas with high numbers of vacant and abandoned properties, there is a negative impact on community well-being because the positive aspects of the community are overshadowed.**[5]

Because neighborhoods with capital, high demand, and wealth are less likely to have vacant and abandoned properties, vacant properties become a symbol of economic disinvestment.[6,7] A study found that simply fixing doors and windows on vacant properties was effective at reducing violent crime in neighborhoods without displacing crime to other neighborhoods.[8] When people have the resources to do so, they are more likely to buy and maintain a space that they perceive as valuable. However, in neighborhoods where wealth-building for residents has historically been prohibited by government policies, such as redlining or job discrimination, people are less able to spend time and money improving the buildings in their neighborhoods.[5,7] **In many instances, individuals with low income are not always owners of their homes and landlords are not willing to commit additional resources, resulting in dilapidated or vacant properties. These properties ultimately can end up becoming physical spaces for crime to occur.**[7]

BUILT ENVIRONMENT

The built environment is one of many factors included in the larger concept of neighborhood development. Specifically, this determinant focuses on the physical parts of our environment, such as buildings and green space.[9] Several studies have examined how environmental features such as vacant and abandoned properties, lighting, sidewalk quality, and green space impact homicide and gun violence.[8,10,11] Specifically, they have found that **neighborhoods with better sidewalks and lighting, as well as more community centers, parks and greenspace, have a decreased likelihood of homicides.**[10,11]

Additionally, well-maintained parks and green space are thought to have a therapeutic effect on the mind and body, as well as provide a gathering space to build community.[12] When quality recreation spaces (including parks, community centers, or other places to gather socially) are available, research also shows that there are less opportunities for crime to occur.[7] **This reveals that when cities invest in quality green space, engaging in safe recreation becomes the easy choice for residents and reduces the likelihood that crime will occur.**

EMPLOYMENT AND INCOME

Although it has been rejected and invalidated by scholars again and again, there continues to be connections made between high rates of homicide and a "culture of poverty."[13, 14, 15] This social theory argues that the reason people have such difficulty getting out of poverty is because of values that keep them from trying hard enough to earn more money. This theory completely ignores the institutional and structural realities of poverty, that are far outside of the control of people who must navigate them, and the physical, social, and mental consequences of what it means to not have enough money to fulfill basic needs.[16]

Instead, **unbiased research shows that, while poverty and homicide are connected, there is a significant impact in reducing homicide when government provides social protections against poverty.**[17] Social protections are policy and practice decisions that act as a buffer against the consequences of poverty by raising the standard of living to meet the basic necessities of life. When those basic needs can't be met because of limited income, there is a clear connection to an increase in homicides. Because poverty isolates communities, socially and/or geographically from the protections that come with thriving communities, individuals create their own mechanisms for navigating economics and safety outside of the law.[18]

BEST PRACTICES

To reduce homicides in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Employment and Income

Built Environment

Neighborhood Development

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY
national, state, local law
Connect with your elected officials!

COMMUNITY
relationships among organizations
How can we link resources together?

ORGANIZATIONAL
organizations, social institutions
Change where you work, learn, pray, and play.

INTERPERSONAL
family, friends, social networks
Support each other!

INDIVIDUAL
knowledge, attitudes, skills
What you can do!

Implement a state-level Earned Income Tax Credit (EITC) to aid wealth building and alleviate poverty.[19,20]

Implement child care subsidies to help parents with limited income work more hours, stay in jobs longer, and increase overall earnings.[21]

***Implement programs to revitalize vacant and abandoned property with the support of newly revised state laws.**

***Support opportunities for second chance employment.**

***Increase funding to create parks and maintain green space in innovative ways.**

***Create more opportunities for job placement by funding summer jobs programs.**

***Provide extracurricular activities that allow opportunities for self-expression and leadership development.**[22]

***Continue to utilize hospital-based programs to divert and prevent violence.**

***Implement school-based violence prevention programs, which enhance communication, problem-solving and conflict resolution skills and explore issues of consent and gender norms.**[23]

Ensure availability of cognitive-behavioral therapy for those who have experienced trauma, especially in school settings.

***Implement violence interrupter models where trained people identify and mediate conflicts.**[24]

***Continue mentoring and case management programs that connect youth to resources.**

Get involved in local community organizations- this could include mentoring programs, those that maintain parks, or even neighborhood associations.

RESOURCES

Vacant Public Property Administration

To learn more about the Louisville Metro's efforts to reduce vacant and abandoned properties visit: https://louisvilleky.gov/government/vacant-public-property-administration

KentuckianaWorks

To learn more about employment programs from KentuckianaWorks visit: http://www.kentuckianaworks.org/

#Bethe1

This campaign from Louisville Metro Government encourages citizens, faith groups, and businesses to learn what role they can play in addressing violence in Louisville. Learn more and sign-up at: https://louisvilleky.gov/node/233236/

Parks and Recreation

To learn more about Louisville Metro's opportunities for parks and recreation visit: https://louisvilleky.gov/government/parks

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ACCIDENTS

We want a Louisville where everyone can move and travel safely to where they live, work and play.

What are accidents?

Accidents are unintentional and unexpected incidents that often result in damage or injury. For this report, we will examine motor vehicle, bicycle, and pedestrian accidents and their impact on young adults.

· Motor vehicle accidents occur when cars, trucks, or motorcycles collide with other automobiles, people, animals, or stationary objects.

· Bicycle accidents are primarily the result of falls, or collisions with cars.[1]

· Pedestrians are defined as individuals who are walking, jogging, running, sitting or lying down, according to the National Highway Traffic Safety Administration.[2]

How do accidents affect health and quality of life?

In the United States, young adults between the ages of 20 and 29 are more likely to be impacted by accidents than by disease.[3] Motor vehicle, bicycle, and pedestrian accidents are often preventable. These collisions can inflict serious injuries, lead to death, and can profoundly impact a young person's quality of life.[3] People can suffer from many different types of injuries after an accident, including: cuts or tears on the skin, broken bones, internal injuries, sprains, and brain injury.[4] Further, pain resulting from injuries sustained during accidents can impact mental health and contribute to the onset of post-traumatic stress disorder (PTSD), depression, and anxiety disorders.[5]

As a consequence of these injuries and impacts, survivors of motor vehicle, bicycle, and pedestrian accidents must deal with considerable financial costs. These costs may include temporary or permanent loss of income due to an inability to work, as well as expensive and/or ongoing medical treatment.[6,7] Younger adults in their 20s are the age group that is least likely to have health insurance coverage, and more likely to engage in risky behavior that can result in injury or death.[3]

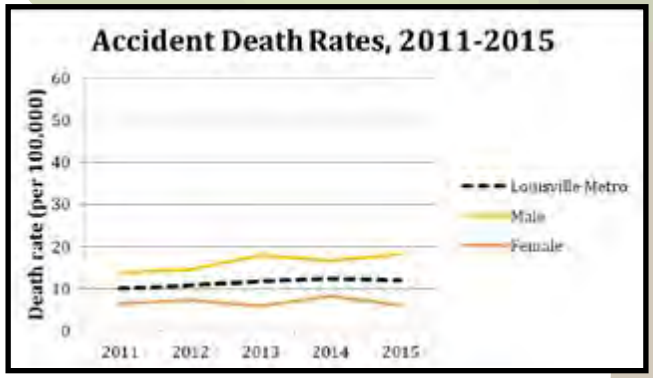
ACCIDENTS

Root Causes | Health Outcomes

Accident Deaths Total 2011 - 2015

	Count	Age-adjusted rate (per 100,000)
Black Male	58	16.55
Hispanic Male	19	16.46*
White Male	216	15.91
Other Male	8	15.33*
Louisville Metro	**439**	**11.38**
Other Female	**	9.93*
Hispanic Female	7	8.04*
White Female	98	6.66
Black Female	29	6.49

Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to the 2000 U.S. Standard Population.
**The CDC defines rates as statistically unreliable when the numerator is less than 20.*
***Data suppressed (counts less than 5).*
Racial categories are non-Hispanic.

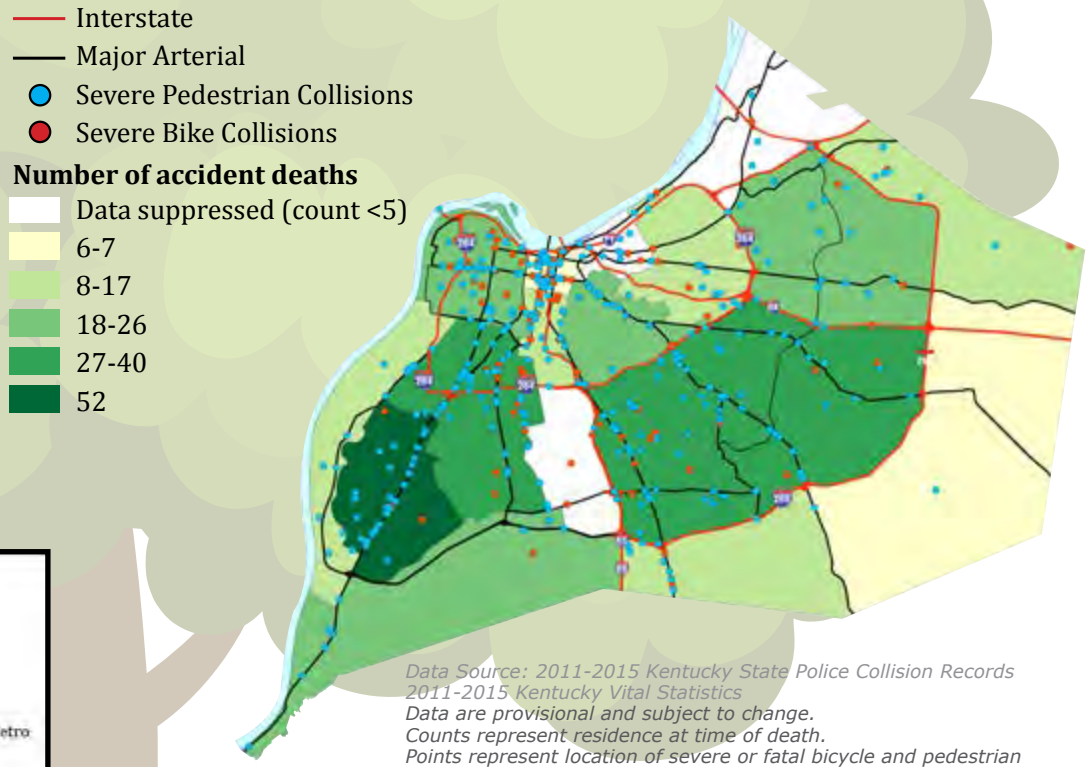


Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to the 2000 U.S. Standard Population

Most common causes of death:
1. Multi-vehicle (35.54%)
2. Car occupant (28.93%)
3. Pedestrian (19.36%)
4. Motorcycle (10.48%)

Data Source: 2011-2015 Kentucky Vital Statistics

Accidents



Data Source: 2011-2015 Kentucky State Police Collision Records
2011-2015 Kentucky Vital Statistics
Data are provisional and subject to change.
Counts represent residence at time of death.
Points represent location of severe or fatal bicycle and pedestrian accidents.

Transportation-related accidents mostly affect men. In fact, regardless of race or ethnicity, men are almost 3 times more likely to die from a transit-related accident than women. The median age of those who died from transportation-related accidents in Louisville Metro from 2011-2015 was 42, making it among the leading causes of premature death.

On the maps, the colors represent where people lived at the time of their death, and the dots represent the location of severe (fatal or severe-injury) bike or pedestrian accidents. They demonstrate that accidents are clustered along major arterial transportation pathways, as well as in the downtown area.

TRANSPORTATION

BUILT ENVIRONMENT

BUILT ENVIRONMENT

The built environment, when discussing transportation in communities, often refers to both road and pedestrian infrastructure that includes lighting, street signals, crosswalks, medians, etc.

One of the many functions of urban planning and design is to help ensure there is infrastructure that can support road safety, especially related to high traffic volume.[8] Research indicates that narrower lane designs may help to reduce the frequency of accidents, as motorists reduce speeds on these types of streets.[9] Narrower lanes for cars also are believed to help to create space for pedestrians and cyclists, increasing safety for everyone using the roads.[8] Research shows the severity of pedestrian injuries in accidents increases on roads where there is a higher volume of traffic, and on streets with more lanes and higher posted speed limits.[10]

However, residents living in communities with limited transportation, particularly low-income communities, are more likely to be injured by a vehicle. Low-income residents are more likely to walk as a primary method of transportation, and pedestrian safety issues in low-income areas are often overshadowed by other issues, such as gun violence.[11] Additionally, transportation infrastructure often looks different in low-income communities due to differences in investment.[12] **Without intentional focus and investment on making safer roadways, problems will persist.**[11]

Complete Streets is a movement that aims to prioritize bikers and pedestrians in transportation design through policy.[13] A Complete Streets policy sets a vision for how to proceed, sets target outcomes, explicitly prioritizes all users, and encourages use of design features to reduce accidents such as speed reduction, increased lighting, and improved connectivity of streets.[14]

TRANSPORTATION

The transportation system is a combination of all of the roads, paths, highways, buses, and trains in our city; this system connects people and products across the community to one another.[15] When there are a high number of accidents between motor vehicles, bicycles, or pedestrians, it is an indicator that there are issues related to how people get around their communities. For example, research shows when cities have roads or intersections with a high number of vehicles and few options for pedestrians to safely cross, there is an increased risk of accidents, especially involving pedestrians.[16]

When cities invest in creating more walkable communities, they see a decrease in accidents involving pedestrians and vehicles.[11] As cities across the nation try to create solutions to high rates of accidents, the focus is often on downtown and suburban areas. Unfortunately, this focus usually does not include neighborhoods, that are also experiencing other forms of economic and social disinvestment.[11] Research shows that, while accidents involving pedestrians is a national issue, people with limited incomes suffer the most injuries and fatalities.[11]

Vision Zero, which originated in Sweden, is a policy approach to reducing transportation fatalities.[17] It focuses on designing transportation systems to be "fail-proof," knowing that humans can and will make mistakes when using roadways.[17] Policies address the design of transportation systems and infrastructure to make sure that all modes of transportation- vehicle, bike and pedestrian—can safely co-exist. Several other cities like Los Angeles and New York City have implemented policies that increase data sharing, improve law enforcement strategies for reducing speed, improve road infrastructure, and implement education and safety campaigns.[18]

BEST PRACTICES

To reduce accidents in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Built Environment

Transportation

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY

national, state, local law

Connect with your elected officials!

- Implement a Vision Zero policy statement.[17,18]
- ***Create a Complete Streets policy, that encourages the use of design to calm traffic and create more safe spaces for bikers and pedestrians.**[19,20,21,22]
- ***Promote zoning policies that encourage mixed development, and create places that encourage physical activity.**[23,24]
- Require and enforce universal motorcycle and bicycle helmet laws.[25,26]

COMMUNITY

relationships among organizations

How can we link resources together?

- ***Expand the public transportation system to reduce dependence on motor vehicles.**[27]
- ***Fund and implement bike and pedestrian friendly infrastructure, education, and incentives for biking and walking.**[28,29]
- Increase the availability, affordability and correct use of car seats through distribution, education, and incentive programs.[30,31]
- ***Support educational and mass media campaigns on bike and pedestrian safety.**

ORGANIZATIONAL

organizations, social institutions

Change where you work, learn, pray, and play.

- Strengthen training of healthcare providers, social workers, and counselors to administer alcohol screening and brief interventions to reduce alcohol use and the potential for impaired driving.[32]
- Mandate the use of ignition interlock devices for those who may be convicted of alcohol-impaired driving.[33]
- ***Use speed enforcement detection devices, such as speed cameras and radar, to reduce driving speeds in targeted areas.**[34]

INTERPERSONAL

family, friends, social networks

Support each other!

- Travel with care! Look out for your fellow travelers; look for bikers and pedestrians before turning or changing lanes.

INDIVIDUAL

knowledge, attitudes, skills

What you can do!

- Use caution and reduced speeds while driving.
- Always wear a helmet when riding a bike or a motorcycle.
- Use your seatbelt whenever you get into a car.

RESOURCES

Bike Louisville

For more information about the city's initiatives to improve bicycle and pedestrian safety, visit: https://louisvilleky.gov/government/bike-louisville

Kentucky Department of Transportation

For more information on state-level programs and policies, visit their website: http://transportation.ky.gov/pages/programs-and-services.aspx

Travel with Care

Louisville Metro's Bike Louisville program has a Travel with Care campaign to humanize people on bikes and encourage better behavior among drivers and bike riders. To learn more visit: https://louisvilleky.gov/government/bike-louisville/travel-care

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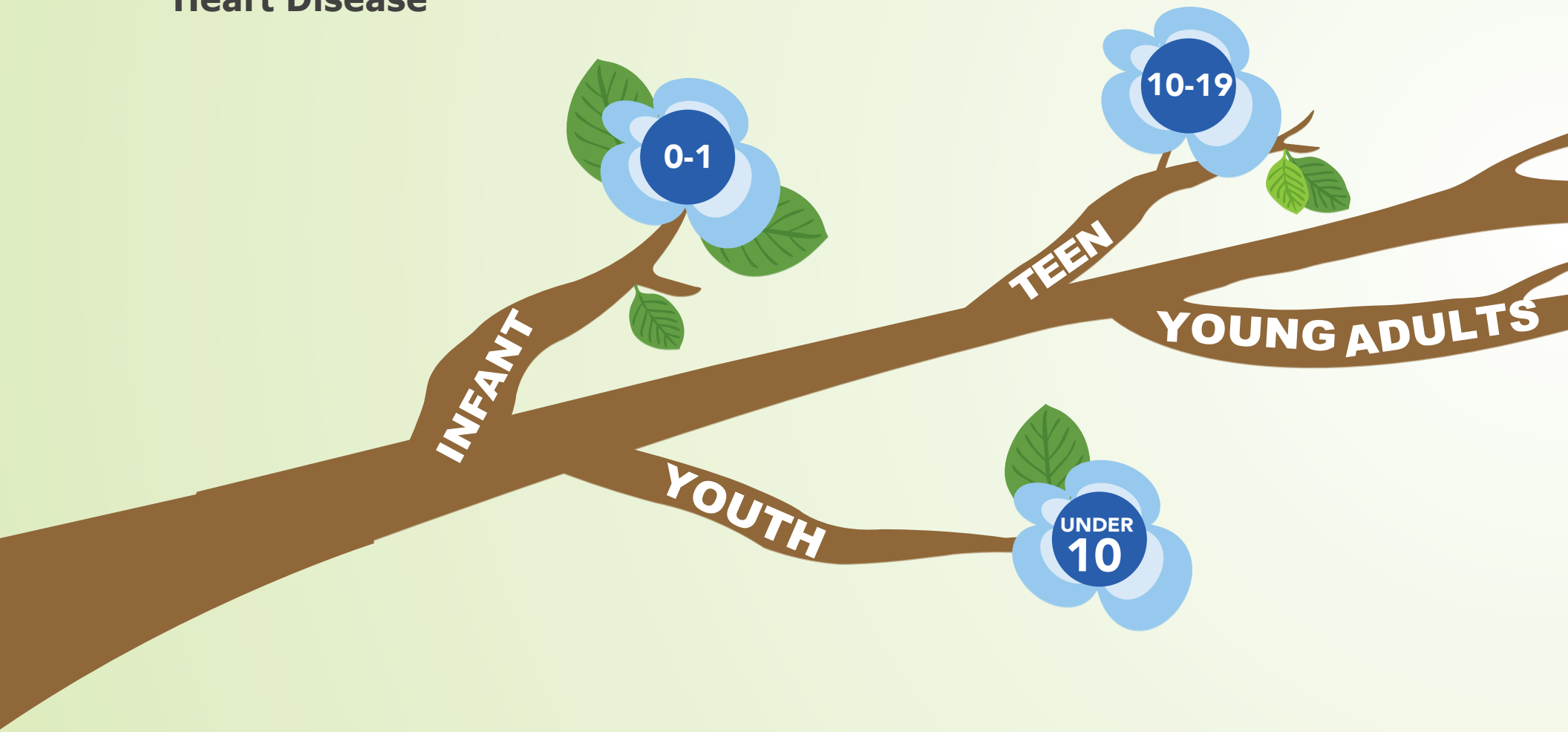
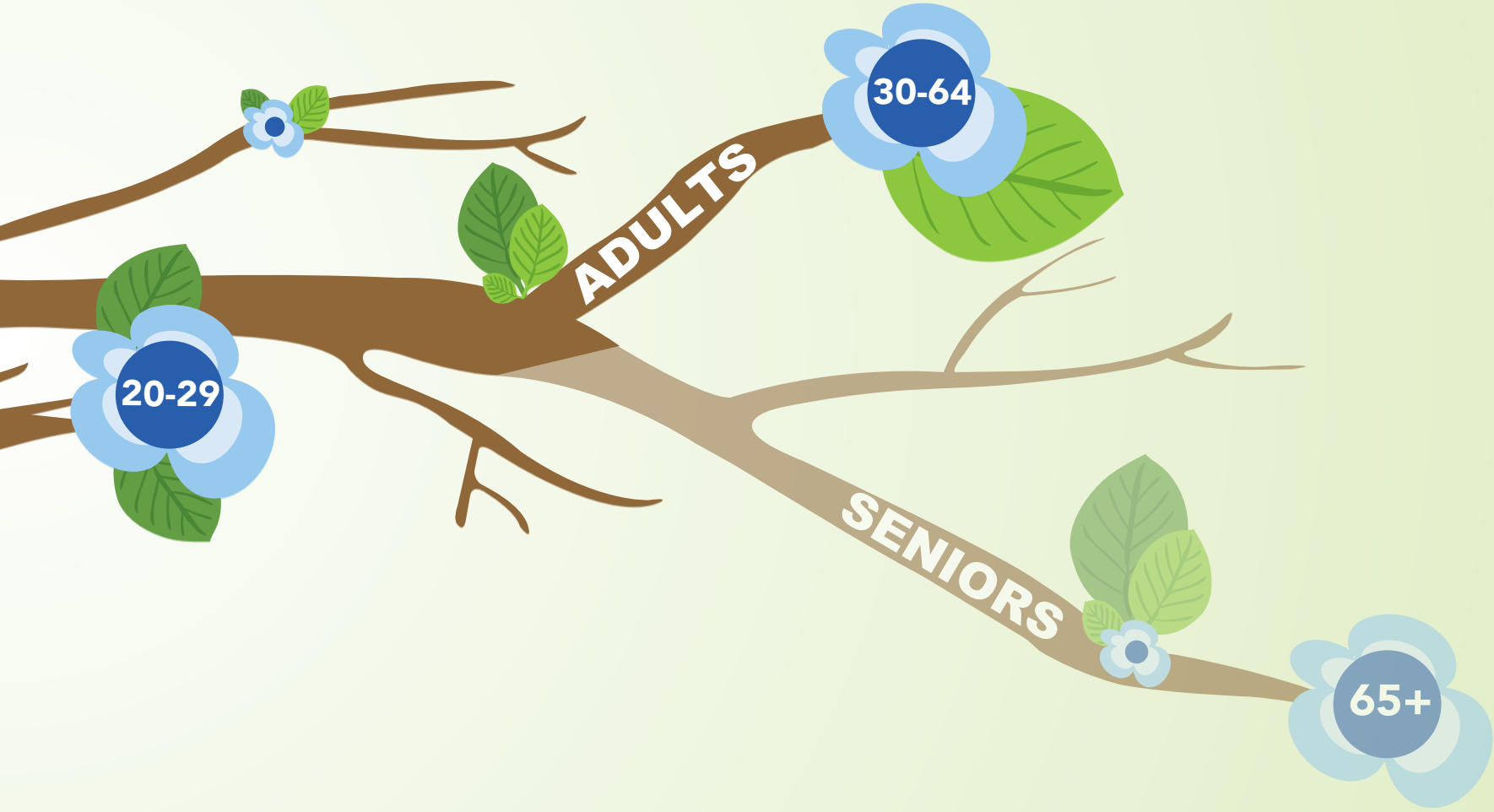
ADULTS

Cancer
Diabetes
Heart Disease




30-64
ADULTS
20-29
SENIORS
65+

CANCER

In Louisville, we want a city where each person enjoys health and wellness.

What is cancer?

The Center for Disease Control and Prevention (CDC) defines cancer as follows:

> *Cancer is a term used for diseases in which abnormal cells divide without control and can invade other tissues. Cancer cells can spread to other parts of the body through the blood and lymph systems. Cancer is not just one disease, but many diseases. There are more than 100 kinds of cancer.*[1]

Other common terms used for cancer are malignant tumors and neoplasms.[2] Lung, prostate, colorectal, stomach and liver cancer are the most common cancer types in men.[2] In women, the most common types of cancer are breast, colorectal, lung, cervical and stomach.[2]

How does cancer affect health and quality of life?

In Louisville, cancer is the leading cause of death; about 6.7% of adults have been told by a healthcare provider that they have cancer (excluding skin cancer).[3] Cancer touches all populations in the United States, but certain groups are more impacted than others.[4] For example, some people may be more likely to develop cancer because of where they live or the type of job they have. Others might lack access to healthcare, so that when they finally receive a diagnosis (identifying a disease from its signs and symptoms), their cancer is further along, and they are more likely to experience more adverse effects from treatment or have their cancer result in death.

Cancer can result in significant suffering, disability and death.[2] Early diagnosis, screening, treatment and **palliative care** can reduce the level of disability and death.[2,5] Cancer-related and cancer treatment (such as chemotherapy) side effects can affect quality of life. Such side effects include changes in appearance, changes in appetite and digestion, sleep disturbances, problems with sexuality/intimacy, fatigue, pain and a weakened immune system. Additionally, cancer can be emotionally and financially stressful for those affected, including people who are supporting those with cancer.

KEY TERM

Palliative care: prevents or treats both the symptoms and side effects of serious and life-threatening diseases, in addition to addressing related psychological, social, and spiritual problems.[5]

CANCER

Root Causes | Health Outcomes

Cancer Deaths Total 2011 - 2015

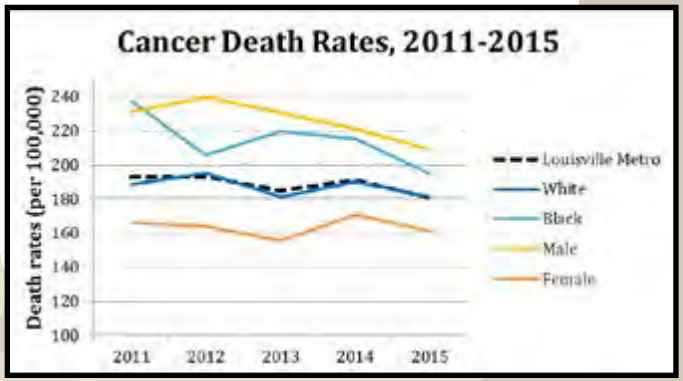
	Count	Age-adjusted rate (per 100,000)
Black Male	701	263.08
White Male	3,366	225.01
Louisville Metro	**8,240**	**188.47**
Black Female	733	184.89
White Female	3,308	162.04
Hispanic Male	38	113.89
Other Female	36	106.82
Hispanic Female	33	93.60
Other Male	25	85.08

Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to the 2000 U.S. Standard Population.
Racial categories are non-Hispanic.

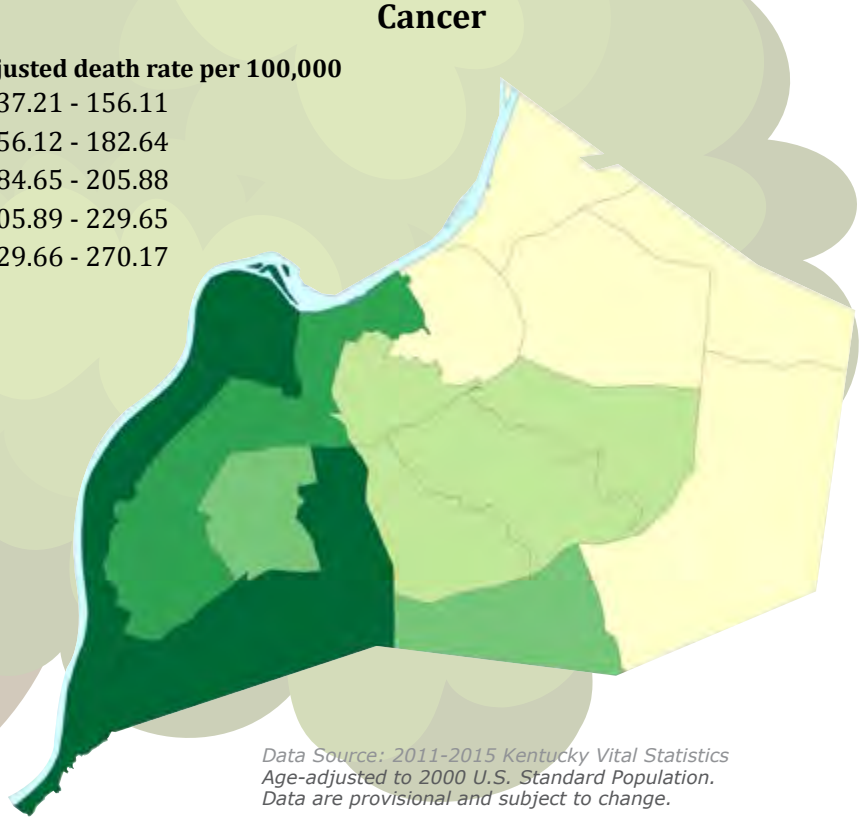
Cancer Incidence & Death Rates 2011 - 2014

Cancer Type	Louisville Metro Age-adjusted Incidence Rate	Louisville Metro Age-adjusted Death Rate
All Cancers	593.3	191.0
Lung and bronchus	89.0	59.5
Breast (female only)	172.2	23.3
Prostate	135.8	20.1
Colorectal	54.6	15.5
Pancreas	14.3	11.8
Leukemia	17.8	8.0
Liver and intrahepatic bile duct	10.6	7.9
Non-Hodgkin lymphoma	21.7	6.7
Urinary bladder	22.8	4.3
Cervical	8.6	3.2
Melanoma of the skin	38.7	3.1
Oral cavity and pharynx	14.7	2.7

Data source: Kentucky Cancer Registry http://www.cancer-rates.info/ky
Rates are age-adjusted to the 2000 U.S. Standard Population per 100,000 for the years 2011-2014.
Incidence describes the number of newly diagnosed cases.



Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to the 2000 U.S. Standard Population.



Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to 2000 U.S. Standard Population.
Data are provisional and subject to change.

Cancer is the leading cause of death for Louisville Metro. Breast and prostate cancers are those that predominantly affect residents. Not all those who get cancer die from it, as the incidence rate (how many new people are diagnosed each year) is almost 3 times higher than the death rate for Louisville Metro, and has slowly been declining. Cancer deaths generally are clustered in the entire western half of the county. Overall, White and Black men are more likely to die from any kind of cancer than women.

The median age of those who died from cancer in Louisville Metro from 2011-2015 was 72.

FOOD SYSTEMS | **ENVIRONMENTAL QUALITY** | **EMPLOYMENT AND INCOME** | **HEALTH AND HUMAN SERVICES**

HEALTH AND HUMAN SERVICES

A study by the American Cancer Society showed that **people who are uninsured or underinsured are more likely to be diagnosed with cancer at its more advanced stages.**[6] By then, cancer treatment is more expensive and patients are more likely to die from the disease.[6]

The number of new cancer cases as well as many deaths can be reduced or prevented with early screenings.[7] Screening for cervical (pap tests), colorectal and breast cancers (mammograms) helps find these diseases at an early stage, when treatment is most effective.[8] Where one lives should not determine if one lives. Making sure that families who live in poverty have access to affordable health insurance is an important first step in saving lives from cancer.[8]

Vaccines can also reduce cancer risk.[7] The human papillomavirus (HPV) vaccine helps prevent most cervical cancers and several other kinds of cancer.[7] The hepatitis B vaccine can also help lower the risk of liver cancer.[7]

EMPLOYMENT AND INCOME

For a family that has the available income and structural support, preventing cancer is much more cost-effective than treating it.[8] However, many families either cannot afford the preventative measures (such as eating healthy foods or seeking medical care) or must navigate structural barriers (such as limited green space for exercise or polluted air).

In addition to whether someone has enough income to prevent cancer, the type of job one works also matters. **Certain jobs put one at higher risk for cancer.**[9] These include:

Agriculture, forestry and fishing – too much sun or exposure to agricultural chemicals.[9]

Construction and painting – exposure to asbestos, too much sun, silica, diesel engine exhaust, coal products, paints and solvents, wood dust.[9]

Manufacturing and mining industries – exposure to fossil fuels, asbestos, silica, solvents or too much sun.[9]

Service industries (such as truck driving, inspectors, etc) – too much sun, second-hand smoke, diesel engine exhaust.[9]

ENVIRONMENTAL QUALITY

Pollution of air, water, and soil with cancer-causing (carcinogenic) chemicals contributes to the incidence of cancer.[10] Worldwide, it is estimated that outdoor air pollution contributed to 3.2 million premature cancer deaths in 2012.[10]

Research shows that residents who live in communities with concentrated poverty are more likely to live near polluting industries and polluted land and water.[11] These communities, which are also navigating high rates of violence, inequities in both food and employment access, as well as other diagnoses (such as risk of infant mortality, diabetes, obesity, etc.) are more susceptible to the consequences of pollutants because their bodies are navigating high stress and other diagnoses.[12,13]

Lung cancer also is the leading cause of cancer death.[14] Cigarette smoking is responsible for almost all cases of lung cancer.[14] Adults exposed to secondhand smoke at home or at work have a 20 to 30% increased risk of developing lung cancer.[14] Many cancer-causing and toxic chemicals are found in higher concentrations in secondhand smoke than in smoke inhaled by smokers.[14]

FOOD SYSTEMS

People with less healthy diets are more likely to develop cancer. **From many studies done on the association between diet and cancer, experts concluded that the food we eat can affect our risk of cancer.**[15,16,17]

Because there are a variety of types, there are different ways diet can impact the risk of cancer. For example, diets high in processed and red meat can increase the risk of colorectal cancer while research suggests that eating fruit and vegetables reduces the risk of mouth, upper throat, larynx and lung cancers.[18,19,20,21,22,23,24] There is strong evidence linking high fiber foods, which are typically also fresh fruits and vegetables, to a reduction in colorectal cancer risk.[25,26]

Research also shows that diet-related obesity significantly raises the risk of endometrial (uterine), breast, prostate, colorectal cancers.[10] An active lifestyle and healthy diet both help to maintain a healthy weight.

However, it is incredibly difficult to maintain a healthy diet when households are food insecure, meaning there is limited access to fresh food. This can occur either because households do not have enough money to afford all of their competing financial responsibilities or there are few or no physical locations in their neighborhood to purchase fresh foods. According to the US Department of Agriculture, around 12.3% of all US households were food insecure in 2016.[27] When looking at Black or Hispanic households, the percentage increases significantly to 22.5% and 18.5% respectively.[27]

BEST PRACTICES

To reduce cancer in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Health and Human Services

Environmental Quality

Employment and Income

Food Systems

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY

national, state, local law

Connect with your elected officials!

- Continue to ensure that Medicaid, Medicare and private health insurance cover screenings and preventive healthcare services.
- ***Institute and enforce comprehensive smoke-free policies to reduce second-hand smoke exposure by limiting tobacco usage in public places.**[28]
- ***Continue to enforce regulations requiring prevention of hazardous exposures in work setting.**

COMMUNITY

relationships among organizations

How can we link resources together?

- Establish funding to subsidize healthy foods; in some communities, this includes competitive prices to improve sales of healthy foods; in others, it looks like Vegetable Prescription plans.[29,30]
- Build capacity to ensure that professionally trained medical interpreters are available for everyone who needs medical services; language access services are legally required if providers receive federal funds like Medicaid and Medicare.[31]

ORGANIZATIONAL

organizations, social institutions

Change where you work, learn, pray, and play.

- Support patient navigator programs to ensure that everyone is able to understand how to move through the health system and receive preventative services.[32]
- Ensure employees, students, and those who receive services are up-to-date on cancer-preventing vaccinations, such as HPV.
- ***Provide worker education and safety training to reduce and address potential exposures to cancer-causing substances.**[33]
- ***Expand utilization of nutritional guidelines for food procurement contracts (including vending machines, breakfast and lunch options, etc.) in governments, workplaces, schools, and public facilities.**

INTERPERSONAL

family, friends, social networks

Support each other!

- Support friends and family who have been diagnosed or are being treated for cancer.

INDIVIDUAL

knowledge, attitudes, skills

What you can do!

- Join smoking cessation classes or call the Kentucky quit-line: 1-800-QUIT-NOW (784-8669).
- Reduce excessive alcohol use (which increases risk of several cancers).

RESOURCES

Kentucky Cancer Program

For information about treatment and support for cancer, visit Kentucky Cancer Program: http://www.kcp.uky.edu/

Office of Resilience and Community Services

Louisville Metro provides many services related to education, finances, and financial empowerment. To learn more visit: https://louisvilleky.gov/government/resilience-and-community-services/seeking-services

Smoking Cessation Classes

Louisville Metro provides resources including classes to help people quit smoking: https://louisvilleky.gov/government/stop-smoking-class-schedule

Local Food Resource Guide

For more information on the Louisville Farmers Market Association and Local Food Resources, visit: https://louisvilleky.gov/government/mayors-healthy-hometown-movement/services/healthy-eating

SNAP

If you're interested in the Supplemental Nutrition Assistance Program (SNAP), visit: http://chfs.ky.gov/dcbs/dfs/foodstampsebt.htm

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DIABETES

We can develop local healthcare and food systems that provide everyone the greatest opportunity to be healthy.

What is diabetes?

Diabetes is not a single disease, but a group of disorders that affect how the body makes and stores blood glucose (a type of sugar).[1] Insulin is the hormone that helps us use and store food and sugar. Insulin is an important signal within the body that lets our cells know that we have eaten food and whether the energy from that food needs to be used or stored.[2] Diabetes happens when the body cannot produce enough insulin or cannot correctly use the insulin it produces.[3]

There are different types of diabetes; the most common types are Type 1 and Type 2. In Type 1 diabetes, the body can no longer produce the insulin needed to use and store blood glucose.[3] Type 2 diabetes is a problem of insulin resistance—the body either does not make enough insulin or is unable to use it efficiently.[3]

How does diabetes affect health and quality of life?

A chronic level of high blood glucose can cause a variety of symptoms, such as blurred vision, sores that do not heal, and frequent urination.[1] Many people will not experience any symptoms from diabetes at first.[1] Diabetes leads to an increased risk of developing long-term organ damage and failure, including injury to the eyes, nerves, heart and blood vessels. Other chronic illnesses like heart disease, high blood pressure, and kidney disease are closely related to diabetes.[1]

The combination of these coexisting chronic diseases can make it difficult for people to self-manage their diabetes. It can be stressful to deal with a long-term condition like diabetes, which may explain why there are higher rates of anxiety and depression in those with diabetes.[4] Diabetes is expensive to manage effectively, which adds more stress and burden to patients. The healthcare costs for people with diabetes is more than twice that of people without diabetes.[3]

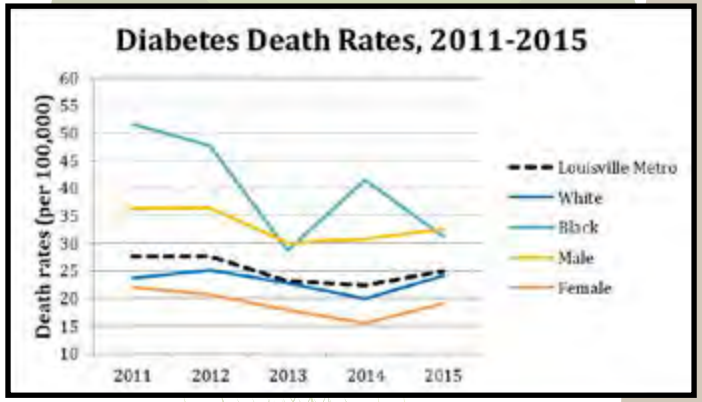
DIABETES

Root Causes | Health Outcomes

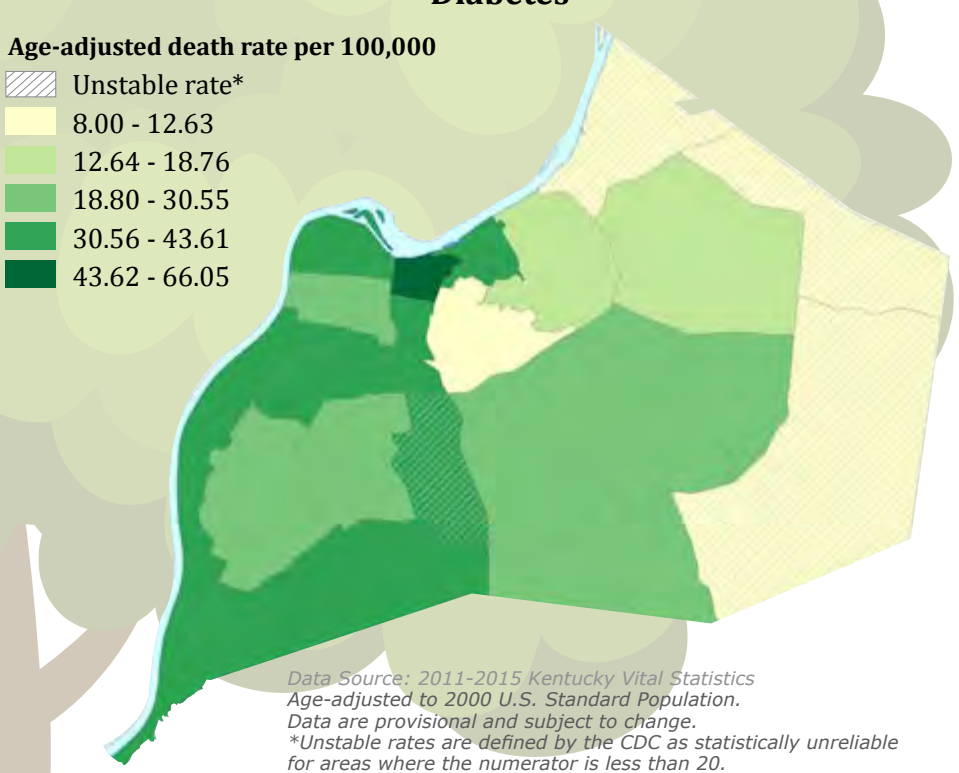
Diabetes Deaths Total 2011 - 2015

	Count	Age-adjusted rate (per 100,000)
Black Male	131	48.21
Black Female	137	34.75
White Male	478	32.04
Louisville Metro	**1096**	**25.16**
White Female	338	16.33
Hispanic Female	**	15.00*
Other Male	**	10.82*
Hispanic Male	**	8.19*
Other Female	**	5.22*

Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to the 2000 U.S. Standard Population.
**The CDC defines rates as statistically unreliable when the numerator is less than 20.*
***Data suppressed (counts less than 5).*
Racial categories are non-Hispanic.



Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to the 2000 U.S. Standard Population.



Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to 2000 U.S. Standard Population.
Data are provisional and subject to change.
**Unstable rates are defined by the CDC as statistically unreliable for areas where the numerator is less than 20.*

This data shows deaths that are directly attributable to diabetes. These represent the most severe cases, those who die from complications or who do not have the resources to properly manage their disease. It does not reflect people who die from other causes but also have diabetes. Geographically, the downtown area has the highest rates of death due to diabetes. Black men are dying at rates almost two times higher than the rate for Louisville Metro. Men generally had rates that were 1.75 times higher than women.

The median age of those who died from diabetes in Louisville Metro from 2011-2015 was 70.

BUILT ENVIRONMENT

EMPLOYMENT AND INCOME

FOOD SYSTEMS

FOOD SYSTEMS

All communities, regardless of race or income, are impacted by diabetes. However, communities where residents have lower incomes are more likely to experience risk factors that contribute to diabetes, particularly access to healthy food. An important part of preventing diabetes is maintaining a healthy diet that is low in added sugar, salt and fat, but high in foods such as fruits, whole grains, and vegetables.[5]

Access to healthy food in communities is layered, depending on both the physical proximity to fresh food grocers and a person's ability to afford the purchases.[5] While some people may easily be able to maintain a healthy diet because they live in communities with several options for grocery shopping and have the needed income, millions of people are unsure of whether there will even be enough food to satisfy the hunger of everyone in the household.[6]

Without access to healthy and fresh foods, individuals are more likely to become diabetic. Because people who have limited access to healthy food are also likely to live in or near poverty, managing the complicated treatment for diabetes becomes even more difficult, increasing their risk of dying from diabetes-related symptoms or other co-morbid conditions.[7,8]

EMPLOYMENT AND INCOME

A person's access to a healthy diet is one of the most important predictors of diabetes, especially Type 2 diabetes.[7] Because access to healthy food often requires an ability to afford the purchase, employment and income also play an important role in maintaining a healthy diet. For individuals who cannot find employment or do not make enough money to cover all of their basic needs, it can be extremely difficult to maintain a diet that prioritizes fresh foods over cheaper, processed foods.[9]

Research shows that stress associated with employment can also increase a person's risk of becoming diabetic.[9] While workplace stress is an understood dynamic of any employment, researchers found a significantly increased risk of diabetes when employees are navigating both extremely high demands and limited power in decision making.[10]

Additionally, recent research has found a connection between job insecurity and a moderate increased risk for diabetes.[11] Researchers attribute the increased risk to the consequences of the stress that results from fear of not having reliable income, which can also worsen symptoms for those already diagnosed.

BUILT ENVIRONMENT

In addition to maintaining a healthy diet, staying physically active also plays an important role in preventing diabetes.[12] In communities with quality investment, the built environment can promote physical activity with its design, through recreational facilities, parks, or pedestrian pathways.[13] This provides residents with various outside options for physical activity. This can include walking in their neighborhoods, to work, or at local parks.[14]

However, the ability to be physically active can be complicated, as access to recreational spaces are more often found in areas where a higher percentage of residents have a college education and make higher wages.[14] Spaces for physical activity are important for everyone, but residents with limited income often have fewer choices for leisure, particularly outdoor physical activity.[14]

Another critical component for community health is the walkability of a neighborhood, largely determined by a design encouraging pedestrian safety.[15] When residents feel safe in their neighborhoods, they are much more likely to engage in physical activity. For example, pathways connecting various parts of the community and well-lit streets are shown to positively influence residential walking.[15]

BEST PRACTICES

To reduce diabetes in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Built Environment

Employment and Income

Food Systems

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY

national, state, local law

Connect with your elected officials!

- Continue to ensure that Medicaid, Medicare and private health insurance cover screenings and preventive healthcare services, especially those that support diabetes education and disease management.[16]
- ***Promote zoning policies that encourage mixed use development and create places that encourage physical activity.[17,18,19]**

COMMUNITY

relationships among organizations

How can we link resources together?

- Establish funding to subsidize healthy foods; in some communities, this includes competitive prices to improve sales of healthy foods; in others, it looks like Vegetable Prescription plans.[20,21]
- Develop innovative ways to access parks and public spaces.
- ***Maintain sidewalks and improve accessibility of parks and public spaces to increase physical activity; add point of decision prompts to indoor and outdoor spaces to encourage walking and use of stairs.[22]**
- Build capacity to ensure that professionally trained medical interpreters are available for everyone who needs medical services; language access services are legally required if providers receive federal funds like Medicaid and Medicare.[23]
- ***Build a pipeline for referral of those with diabetes and pre-diabetes to evidence-based education and support programs within the community.**
- ***Train physicians to increase diagnosis of pre-diabetes and referral to evidence based prevention programs.**

ORGANIZATIONAL

organizations, social institutions

Change where you work, learn, pray, and play.

- Support patient navigator programs to ensure that everyone is able to understand how to move through the health system and receive preventative services.[24]
- ***Expand utilization of nutritional guidelines for food procurement contracts (including vending machines, breakfast and lunch options, etc.) in governments, workplaces, schools, and public facilities.**
- Continue to support worksite wellness and school-based programs that address nutrition and physical activity.[25]
- Use exercise prescriptions, which tailor programs to patients' needs and health status, as a way to discuss fitness goals and progress with patients.[26]
- ***Encourage worksites, faith-based, and community groups organize and support diabetes education and support programs for their members.**

INTERPERSONAL

family, friends, social networks

Support each other!

- Support and promote shared decision making between the physician and patient.
- Promote support and education for family members and caregivers of those with diabetes.

INDIVIDUAL

knowledge, attitudes, skills

What you can do!

- Attend a diabetes self-management course to learn more about nutrition and diabetes management.
- Engage in daily physical activity.

RESOURCES

Diabetes Classes

If you're interested in learning more about Diabetes Self-Management Education Programs, or Diabetes Prevention Programs, call **502-574-6663**

Office of Resilience and Community Services

Louisville Metro provides many services related to education, finances, and financial empowerment. To learn more visit: https://louisvilleky.gov/government/resilience-and-community-services/seeking-services

SNAP

If you're interested in the Supplemental Nutrition Assistance Program (SNAP), visit: http://chfs.ky.gov/dcbs/dfs/foodstampsebt.htm

Local Food Resource Guide

For more information on the Louisville Farmers Market Association and Local Food Resources, visit: https://louisvilleky.gov/government/mayors-healthy-hometown-movement/services/healthy-eating

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HEART DISEASE

We are working for a city where everyone has healthy places to live, work, and play.

What is heart disease?

According to the Centers for Disease Control and Prevention, the term "heart disease" refers to several types of heart conditions.[1] Coronary artery disease is the most common type of heart disease; this diseases affects blood flow to the heart.[1] Decreased blood flow can cause a heart attack.[1]

Coronary heart disease is characterized by a narrowing of the arteries (atherosclerosis).[2] Fatty deposits, or plaques, cling to the artery walls and can clog the arteries, making it more likely that a blood clot will form.[2] A heart attack occurs when a blood clot blocks one of the arteries of the heart.[2] This prevents the flow of blood, cuts off the oxygen supply to the heart and damages or kills the heart cells.[2]

How does heart disease affect health and quality of life?

Heart disease is the leading cause of death in the United States.[2] Even when it does not result in death, significant complications can arise from heart disease.[3] These complications may include not being able to exercise or do other physical activities, experiencing an abnormal heart rate, chest pain, an impaired ability to talk or eat, fatigue, and sleep issues.[4,5] After a first heart attack, most people go on to live a long, productive life.[6] However, around 20 percent of patients age 45 and older will have another heart attack within five years of their first.[6]

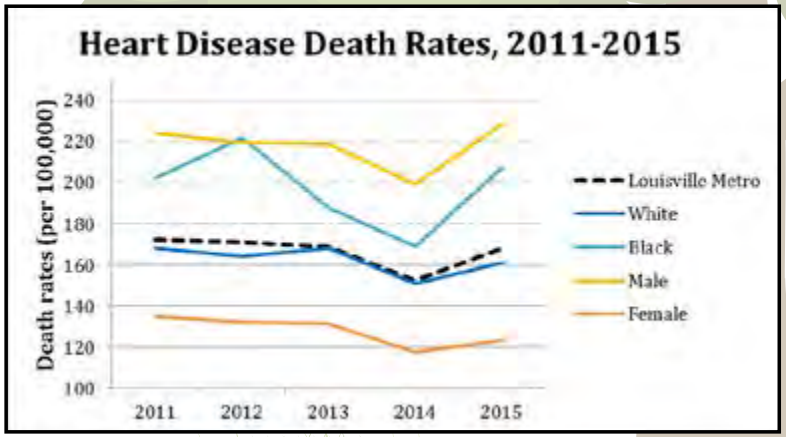
Heart disease costs the United States about $207 billion each year.[3] This total includes the cost of healthcare services, medications, and lost productivity.[2] Developing heart disease or having a heart attack is a significant life event. People are more likely to experience depression after a heart attack because of uncertainty about the future, inability or delay in returning to regular activities, and the stress of making changes in health behaviors.[7] All of this may hinder their ability to follow up on their recovery and rehabilitation efforts.[8]

HEART DISEASE

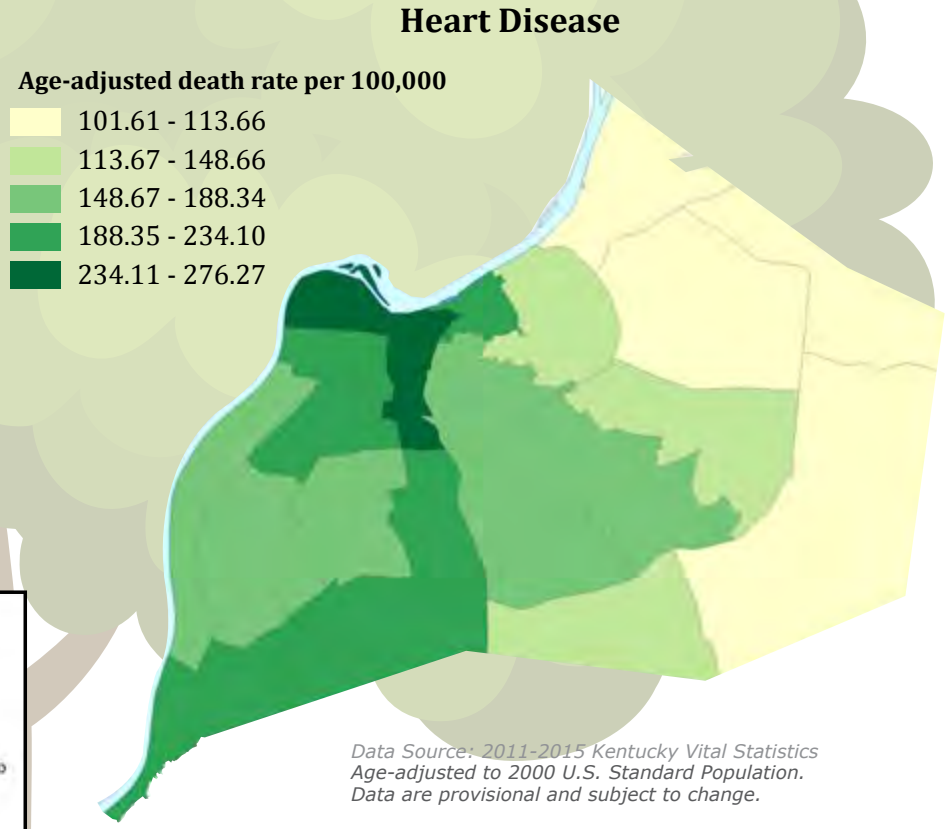
Heart Disease Deaths
Total 2011 - 2015

	Count	Age-adjusted rate (per 100,000)
Black Male	699	257.84
White Male	3,129	214.16
Louisville Metro	**7,400**	**166.43**
Black Female	605	154.98
White Female	2,874	123.61
Other Male	31	122.25
Hispanic Male	27	80.43
Other Female	18	69.92*
Hispanic Female	17	53.99*

Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to the 2000 U.S. Standard Population.
**The CDC defines rates as statistically unreliable when the numerator is less than 20.*
Racial categories are non-Hispanic.



Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to the 2000 U.S. Standard Population.



Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to 2000 U.S. Standard Population.
Data are provisional and subject to change.

Heart disease is the second leading cause of death in Louisville Metro. Men die from heart disease at higher rates than women, and Black people die at higher rates than their White counterparts. Heart disease death rates are higher in the downtown core, Old Louisville and the Northwest core.

The median age of those who died from heart disease in Louisville Metro from 2011-2015 was 79.

Health Outcomes | Root Causes

- HOUSING
- EARLY CHILDHOOD DEVELOPMENT
- FOOD SYSTEMS

FOOD SYSTEMS

Healthy, fresh foods are critical to overall good health. High-salt diets increase blood pressure and the risk of heart attack and stroke.[2] Most people consume more than ten times the amount of salt needed to meet daily sodium requirements. However, there is evidence that plant foods – especially wholegrain cereals, legumes, nuts, fruits and vegetables – may decrease the risk of heart disease.[2]

While a healthy diet is important for preventing heart disease, it is even more critical that eating healthy foods is the easy choice. **This means residents must have the physical access to grocers or markets in their communities that provide fresh fruits, vegetables and other dietary needs, as well as be able to afford the purchase.** For residents who have limited access to healthy food, also known as being food-insecure, there is an increased risk of developing heart disease.[9] People who are food-insecure are also more likely to live in neighborhoods saturated with tobacco and alcohol advertising through convenience stores. This often leaves residents with more access to these products, and their negative health consequences, than fresh food.[10] When these patterns emerge, researchers also see an increase in heart disease.[11]

EARLY CHILDHOOD DEVELOPMENT

Although heart disease is a major cause of death for adults and not children, a child's experiences can have an important impact on their health in adulthood.[12] For example, evidence suggests that adverse childhood experiences (ACEs), which include abuse, neglect, and household dysfunction, are tied to health problems in adulthood, including heart disease.[6] In particular, ACEs contribute to the development of heart disease risk factors including obesity, high blood pressure, and cholesterol in infants and children.[6] There is also evidence linking early life markers, such as birth weight and childhood socioeconomic status to the risk of developing heart disease.[6]

Although a child's experiences, especially with adverse events, can have a significant impact on their risk for developing heart disease, research shows that early intervention can reverse those negative effects.[13] In particular, having stable, supportive environments for children to process emotions in a safe space can reduce the risk of developing heart disease. For example, these spaces can include quality childhood development programs, especially in communities where children are at a higher risk of both experiencing adverse effects and having limited access to quality mental healthcare.[13]

HOUSING

There are many health benefits to having safe, stable and affordable housing. For those who are navigating a chronic disease, especially heart disease, stable housing helps with maintaining treatment regimens and knowing when to seek additional treatment.[14]

On the other hand, there is a strong connection between poor-quality housing and worse health outcomes.[15] Residents who live in poverty and are unable to meet their basic needs are more likely to navigate chronic stress, inequitable access to food and live in poor-quality housing.[15] This significantly increases the likelihood of being diagnosed with heart disease. Additionally, those living in poverty face many barriers to the medical treatment needed.

Unfortunately, because housing is so critical for maintaining good health, research also shows that individuals who are homeless die from heart disease at a much higher rate than adults in the general population.[16] For example, men who were homeless, aged 45 to 64, were 40% to 50% more likely to die from heart disease than their counterparts.[16] Additionally, physicians serving homeless adults report that treating heart disease in these patients often requires earlier hospitalization than for patients with homes.[16] This is due to the extreme difficulty in both maintaining a healthy diet low in sodium and fat and finding opportunities to rest their bodies.[16]

BEST PRACTICES

To reduce heart disease in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Housing

Early Childhood Development

Food Systems

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY

national, state, local law

Connect with your elected officials!

- ***Promote zoning policies that encourage mixed use development and create places that encourage physical activity.[17,18,19]**
- ***Institute and enforce comprehensive smoke-free policies to reduce second-hand smoke exposure by limiting tobacco usage in public places.[20]**
- Ensure insurance coverage for all over-the-counter tobacco cessation products among all health insurance providers, including private companies, Medicare, and Medicaid.[21]
- Increase the age of sale for tobacco products from 18 to 21 in Kentucky.[22]
- Increase price or tax on tobacco products to reduce demand and consumption, and prevent youth from starting.[23]
- Restrict tobacco marketing, especially at the point of sale.[24]
- Limit the number of locations able to advertise and sell tobacco products within 1000 yards of a school.

COMMUNITY

relationships among organizations

How can we link resources together?

- Allocate full funding for the Louisville Affordable Housing Trust Fund and home improvement loans and grants to help generate a greater inventory of healthy, affordable housing for residents with low-income.[25]
- Establish funding to subsidize healthy foods; in some communities, this includes competitive prices to improve sales of healthy foods; in others, it looks like Vegetable Prescription plans.[26,27]
- Develop innovative ways to access parks and public spaces.
- ***Maintain sidewalks and improve accessibility of parks and public spaces to increase physical activity; add point of decision prompts to indoor and outdoor spaces to encourage walking and use of stairs.[28]**

ORGANIZATIONAL

organizations, social institutions

Change where you work, learn, pray, and play.

- ***Expand utilization of nutritional guidelines for food procurement contracts (including vending machines, breakfast and lunch options, etc.) in governments, workplaces, schools, and public facilities.**
- ***Promote and continue to integrate social and emotional learning programs in school settings to teach problem solving and coping skills.[29]**
- ***Standardize and continue to integrate screening, risk assessment and referral tools for ACES and substance use in case management, patient care, and school settings.**
- Implement patient navigator programs to ensure that everyone is able to understand how to move through the health system and receive preventative services.[30]

INTERPERSONAL

family, friends, social networks

Support each other!

- Support family and friends who are trying to change their diet, lifestyle.

INDIVIDUAL

knowledge, attitudes, skills

What you can do!

- Join smoking cessation classes or call the Kentucky quit-line: 1-800-QUIT-NOW (784-8669).
- Engage in daily physical activity.
- Talk with your primary care provider to see what diet changes may make sense for you and learn how you can monitor your blood pressure and cholesterol.

RESOURCES

Family Health Centers

The Family Health Centers offer a variety of free and low-cost classes including the Living Well Workshops and the Healthy Living Club that address chronic disease management (including high blood pressure), healthy eating, being active, and losing weight: http://www.fhclouisville.org/medicalhome/health-classes/

Freedom from Smoking

Louisville Metro provides resources including classes to help people quit smoking: https://louisvilleky.gov/government/stop-smoking-class-schedule

If you're interested in quitting, call the Kentucky quit-line **1-800-QUIT-NOW (784-8669)**

Kentucky Nutrition Education Program (NEP):

UK's Cooperative Extension Service administers both the Expanded Food and Nutrition Education Program (EFNEP), and the Supplemental Nutrition Assistance Program (SNAP-Ed). These programs help individuals to plan nutritious meals on a limited budget, acquire safe food handling practices and improve food preparation skills. For more information visit: https://fcs-hes.ca.uky.edu/content/nutrition-education-programs, follow on Facebook: https://www.facebook.com/KYNEP or contact the Louisville Metro Area Nutrition Agent at **502-569-2344**

Local Food Resource Guide

For more information on the Louisville Farmers Market Association and Local Food Resources, visit: https://louisvilleky.gov/government/mayors-healthy-hometown-movement/services/healthy-eating

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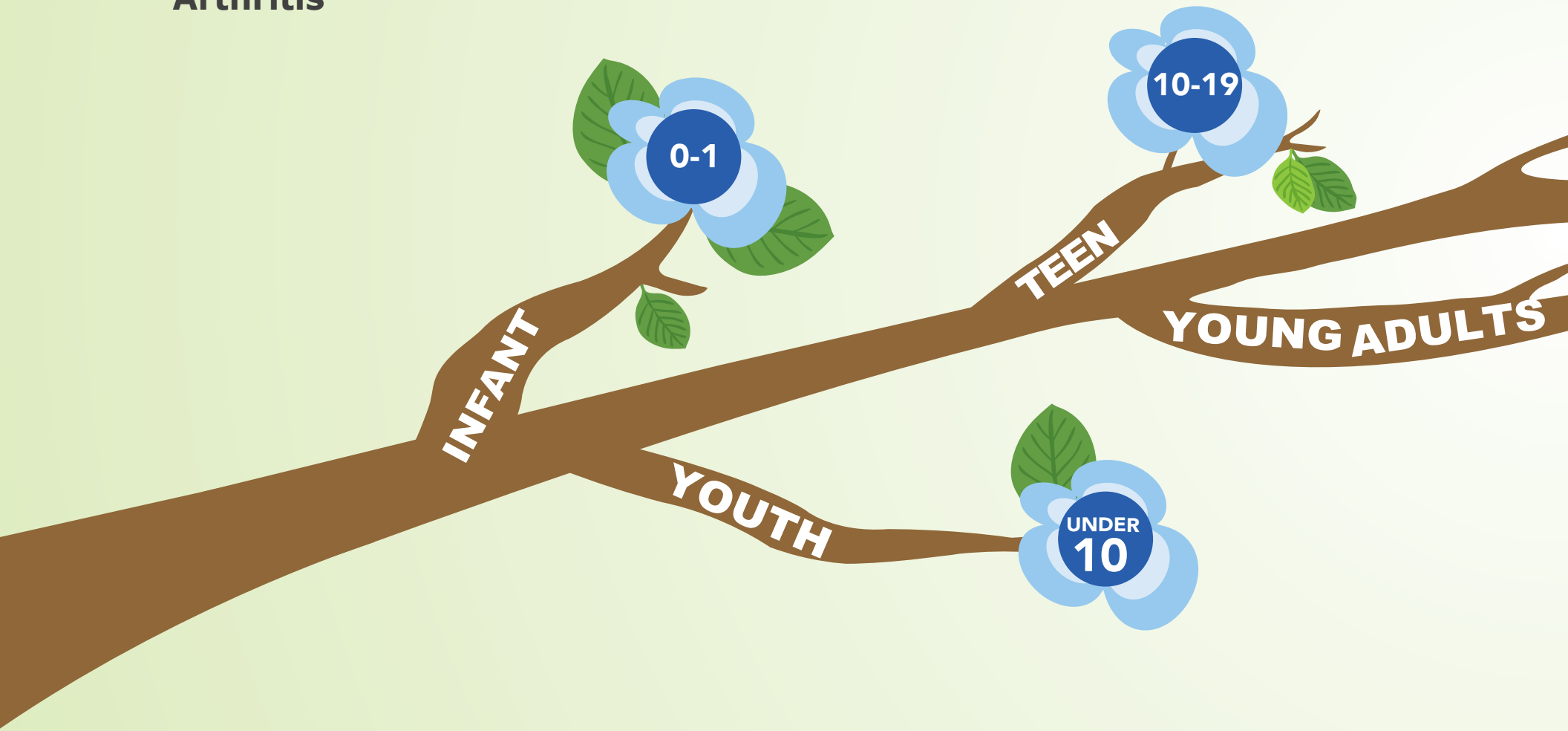
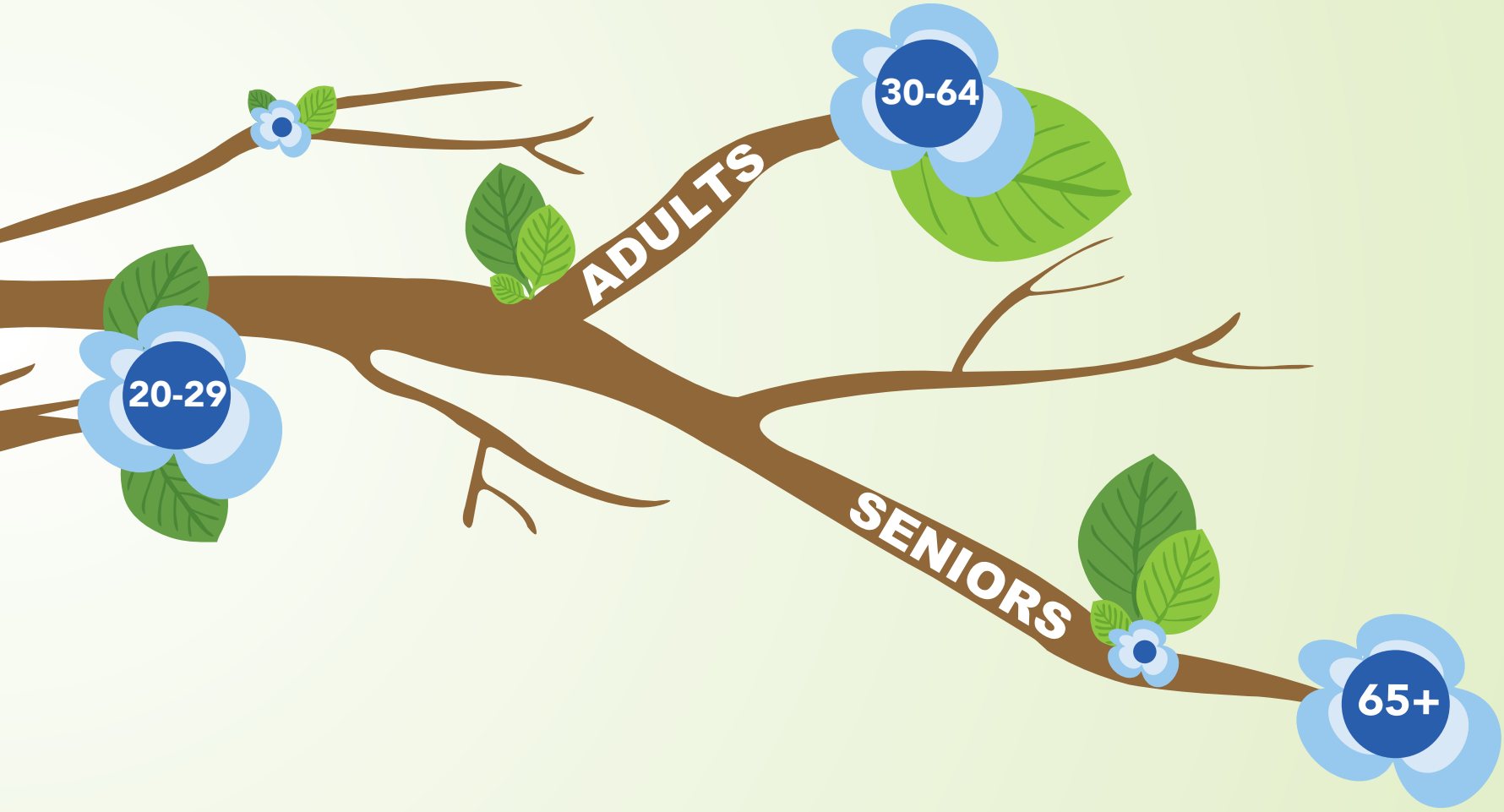
SENIORS

Stroke
Alzheimer's
Arthritis




30-64
ADULTS
20-29
SENIORS
65+

STROKE

Our community works to ensure all people have an active and healthy lifestyle.

What is a stroke?

The American Stroke Association, which is part of the American Heart Association, defines stroke this way:

> A stroke occurs when a blood vessel that carries oxygen and nutrients to the brain is either blocked by a clot or bursts (or ruptures). When that happens, part of the brain cannot get the blood (and oxygen) it needs, so it and brain cells die.[1]

How do strokes affect health and quality of life?

When isolated from other cardiovascular diseases, stroke is the fifth-highest cause of death in the United States, and is a significant cause of long-term disability.[2,3]

The kind of disability a stroke can cause depends on two things: 1) where in the brain the blood flow was blocked, and 2) how much brain tissue was affected by this blockage.[4] Some of the problems a stroke can cause include paralysis (not being able to move part of the body), memory loss, and trouble seeing or speaking.[3] These complications can also cause issues controlling bladder muscles, difficulties in eating and drinking, and lack of movement after a stroke may lead to the development of blood clots.[5]

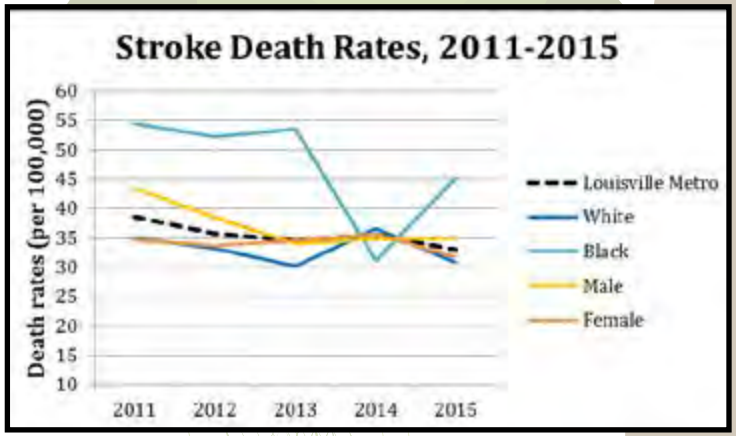
Recovery from a stroke can cost a lot of money. A person who survives a stroke might need a lot of help from other people. According to the Centers for Disease Control and Prevention, stroke costs people in the U.S. about $33 billion every year. The financial costs associated with a stroke include healthcare services and hospitalization, medicines used for treatment, and lost income due to missed work.[6]

STROKE

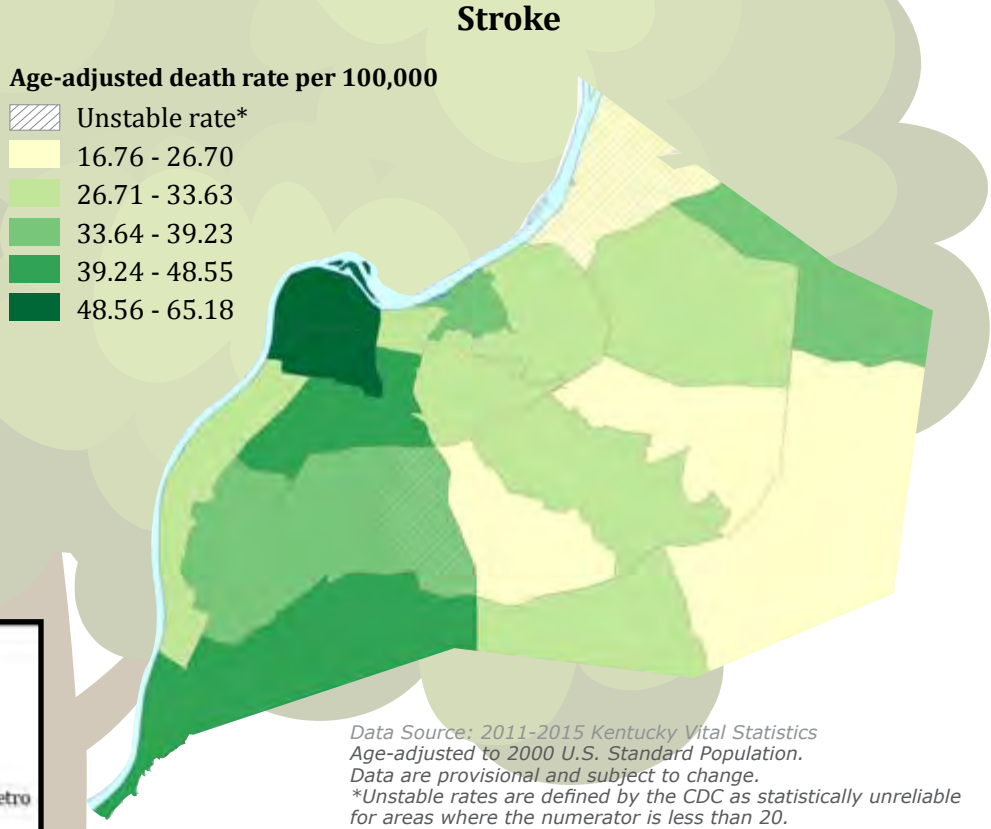
Stroke Deaths
Total 2011 - 2015

	Count	Age-adjusted rate (per 100,000)
Black Male	130	52.19
Black Female	171	43.67
Other Female	12	42.46*
Louisville Metro	**1560**	**35.56**
White Male	488	34.53
Other Male	9	32.61*
White Female	740	31.96
Hispanic Male	5	22.95*
Hispanic Female	5	16.74*

Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to the 2000 U.S. Standard Population.
**The CDC defines rates as statistically unreliable when the numerator is less than 20.*
Racial categories are non-Hispanic.



Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to the 2000 U.S. Standard Population.



Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to 2000 U.S. Standard Population.
Data are provisional and subject to change.
**Unstable rates are defined by the CDC as statistically unreliable for areas where the numerator is less than 20.*

The highest rates of stroke death are in the northwest corner of Louisville. Both Black men and women are dying at higher rates from stroke than the rate for Louisville Metro. Although stroke death rates have generally remained consistent across time, there have been some changes in the Black population.

The median age of those who died from stroke in Louisville Metro from 2011-2015 was 82.

Health Outcomes | Root Causes

- HOUSING
- EARLY CHILDHOOD DEVELOPMENT
- FOOD SYSTEMS

FOOD SYSTEMS

A healthy diet is critical for good health and has a significant impact on many health outcomes. Research shows that a diet with more red and processed meats, refined grains, and sweetened foods significantly increases a person's risk of having a stroke. Diets higher in fruits and vegetables, fish, and whole grains were related to a lower risk.[7]

Access to healthy foods is crucial to minimizing risk factors for stroke. Many of the factors that put a person at risk of a stroke are the same as those that put somebody at risk of other kinds of heart problems.[8] The American Heart Association and American Stroke Association recommend a healthy diet as one of the most effective actions a person can take to prevent heart problems.[9] However, to be able to follow the lifestyle advice suggested by the American Heart Association and American Stroke Association a person must have access to healthy, affordable food through resources such as supermarkets or farmers markets near the home.

Research shows that residents of neighborhoods with a heavy presence of sources of unhealthy food, such as fast food restaurants, are at a higher risk of stroke.[10,11] **Communities with limited access to fresh food are also more likely to live in neighborhoods saturated with tobacco and alcohol advertising through convenience stores.** This often leaves residents with more access to these products, and their negative health consequences, than fresh food.[12] When these patterns emerge, researchers also see an increase in heart disease, a risk factor for stroke.[13]

BUILT ENVIRONMENT

Maintaining a physically active lifestyle is extremely important to prevent strokes.[9] **Many aspects of a neighborhood, including the availability of safe, open spaces, such as well-maintained parks and community centers, are important to helping make sure that people can exercise safely.**

In addition to making it easier to take part in activities that help prevent strokes, a well-designed environment is important to keeping a stroke from doing as much damage to the brain as it might otherwise do. For example, when a neighborhood is developed to facilitate a sense of community among its residents, there are more opportunities to engage in physical activity with or near other people. This improves the chances that someone else will be nearby to perform CPR or contact emergency services if a stroke occurs.[9] Being around somebody who acts quickly by contacting emergency medical services can improve the chances of recovery and reduce the likelihood of a long-term disability.[9] Research shows that the likelihood of surviving a stroke improves significantly when a bystander performs CPR or if emergency medical services arrive within four minutes.[10]

When characteristics of a neighborhood's built environment work well together and benefit residents, those who live in the community are more likely to feel connected with each other.[14] This feeling, known as social cohesion, is also a significant protective factor against suffering from a stroke.[14]

HEALTH AND HUMAN SERVICES

Researchers have recently discovered a significant link between chronic stress and stroke risk factors, including high blood pressure and heart disease.[15,16] Those experiencing chronic stress, such as "heavy workloads, job insecurity, or living in poverty," may have an overproduction of brain activity and bodily response that negatively impacts on their physical and mental health. For this reason, quality, consistent health services, particularly mental healthcare with a focus on stress reduction, can be critical to reducing the likelihood of experiencing a stroke.[16]

Because millions of brain cells die each minute a stroke goes untreated, it is also important that somebody who has a stroke can access immediate care. A quick response to a stroke makes a person more likely to recover and less likely to have a long-term disability.[9] A well-functioning emergency medical services system and the availability of nearby hospitals are important to making sure an immediate response to a stroke is possible.

Access to health and human services, such as healthcare and adequate insurance coverage, is also important for managing the long-term effects of a stroke. When someone has had a stroke, common treatment methods include medications, rehabilitation programs, and medical procedures.[17] For many patients, ongoing care can be necessary in order to improve their health, such as managing high cholesterol or diabetes. For this reason, it becomes even more critical to have physical and financial access to healthcare services to reduce the risk of additional strokes.[17]

BEST PRACTICES

To reduce stroke in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Housing

Early Childhood Development

Food Systems

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY
national, state, local law
Connect with your elected officials!

COMMUNITY
relationships among organizations
How can we link resources together?

ORGANIZATIONAL
organizations, social institutions
Change where you work, learn, pray, and play.

INTERPERSONAL
family, friends, social networks
Support each other!

INDIVIDUAL
knowledge, attitudes, skills
What you can do!

- ***Promote zoning policies that encourage mixed use development and create places that encourage physical activity.**[18,19,20]
- ***Institute and enforce comprehensive smoke-free policies to reduce second-hand smoke exposure by limiting tobacco usage in public places.**[21]
- Ensure insurance coverage for all over-the-counter tobacco cessation products among all health insurance providers, including private companies, Medicare, and Medicaid.[22]
- Increase the age of sale for tobacco products from 18 to 21 in Kentucky.[23]
- Increase price or tax on tobacco products to reduce demand and consumption and prevent youth from starting.[24]
- Restrict tobacco marketing, especially at the point of sale.[25]
- Limit the number of locations able to advertise and sell tobacco products within 1000 yards of a school.

- Establish funding to subsidize healthy foods; in some communities, this includes competitive prices to improve sales of healthy foods; in others, it looks like Vegetable Prescription plans.[26,27]
- ***Maintain sidewalks and improve accessibility of parks and public spaces to increase physical activity; add point of decision prompts to indoor and outdoor spaces to encourage walking and use of stairs.**[28]
- Develop innovative ways to access parks and public spaces.
- Build capacity to ensure that professionally trained medical interpreters are available for everyone who needs medical services; language access services are legally required if providers receive federal funds like Medicaid and Medicare.[29]

- ***Expand utilization of nutritional guidelines for food procurement contracts (including vending machines, breakfast and lunch options, etc.) in governments, workplaces, schools, and public facilities.**
- Implement patient navigator programs to ensure that everyone is able to understand how to move through the health system and receive preventative services.[30]

- Support family and friends who are trying to change their diet, lifestyle.

- Join smoking cessation classes or call the Kentucky quit-line: 1-800-QUIT-NOW (784-8669).
- Engage in daily physical activity.
- Talk with your primary care provider to see what diet changes may make sense for you and learn how you can monitor your blood pressure and cholesterol.

RESOURCES

Family Health Centers

The Family Health Centers offer a variety of free and low-cost classes, including the Living Well Workshops and the Healthy Living Club that address chronic disease management (including high blood pressure), healthy eating, being active, and losing weight: http://www.fhclouisville.org/medicalhome/health-classes/

Freedom from Smoking

Louisville Metro provides resources including classes to help people quit smoking: https://louisvilleky.gov/government/stop-smoking-class-schedule

If you're interested in quitting, call the Kentucky quit-line **1-800-QUIT-NOW (784-8669)**

Kentucky Nutrition Education Program (NEP):

UK's Cooperative Extension Service administers both the Expanded Food and Nutrition Education Program (EFNEP), and the Supplemental Nutrition Assistance Program (SNAP-Ed). These programs help individuals to plan nutritious meals on a limited budget, acquire safe food handling practices and improve food preparation skills. For more information visit: https://fcs-hes.ca.uky.edu/content/nutrition-education-programs, follow on Facebook: https://www.facebook.com/KYNEP or contact the Louisville Metro Area Nutrition Agent at **502-569-2344**

Local Food Resource Guide

For more information on the Louisville Farmers Market Association and Local Food Resources, visit: https://louisvilleky.gov/government/mayors-healthy-hometown-movement/services/healthy-eating

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ALZHEIMER'S DISEASE

Our community can provide quality care and support for individuals and families so everyone can live with dignity at each stage of life.

What is Alzheimer's disease?

Alzheimer's disease is a form of **dementia** that affects your brain and changes the way you think, act, and remember. It is not a normal part of aging.[1]

According to the National Institute on Aging:

> *Alzheimer's disease is an irreversible, progressive brain disorder that slowly destroys memory and thinking skills and, eventually, the ability to carry out the simplest tasks. In most people with Alzheimer's, symptoms first appear in their mid-60s.*[2]

How does Alzheimer's disease affect health and quality of life?

Alzheimer's disease is the most common cause of **dementia** among older adults, affecting over 5 million people in the United States.[1,2] While researchers have learned more and more about how the brain is affected over the lifespan of Alzheimer's disease, they are not certain what causes this condition.[2] For at least a small portion of people with Alzheimer's disease, the cause is a genetic mutation that can be passed down in their family.[3]

The progression and symptoms of the disease are different for everyone, but there are some common changes and challenges. Over the course of Alzheimer's disease, symptoms may begin with having difficulty finding the correct words to use, wandering and getting lost, until eventually the person requires continuous monitoring and care.[2]

Alzheimer's disease takes an immense toll both on the lives of those diagnosed with the disease and the family members, friends, and community members who provide care for them.[4] Caregivers experience chronic stress due to the responsibilities of meeting the needs of their loved one and meeting their own needs.

KEY TERM

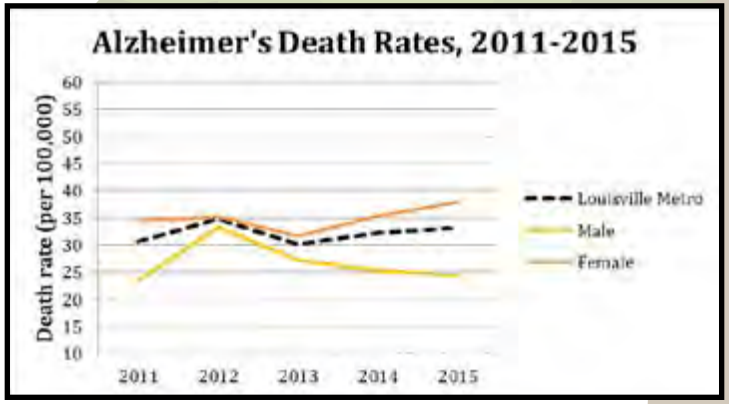
Dementia: A general term describing the severe decline in mental abilities caused by physical changes in the brain.[1]

ALZHEIMER'S DISEASE

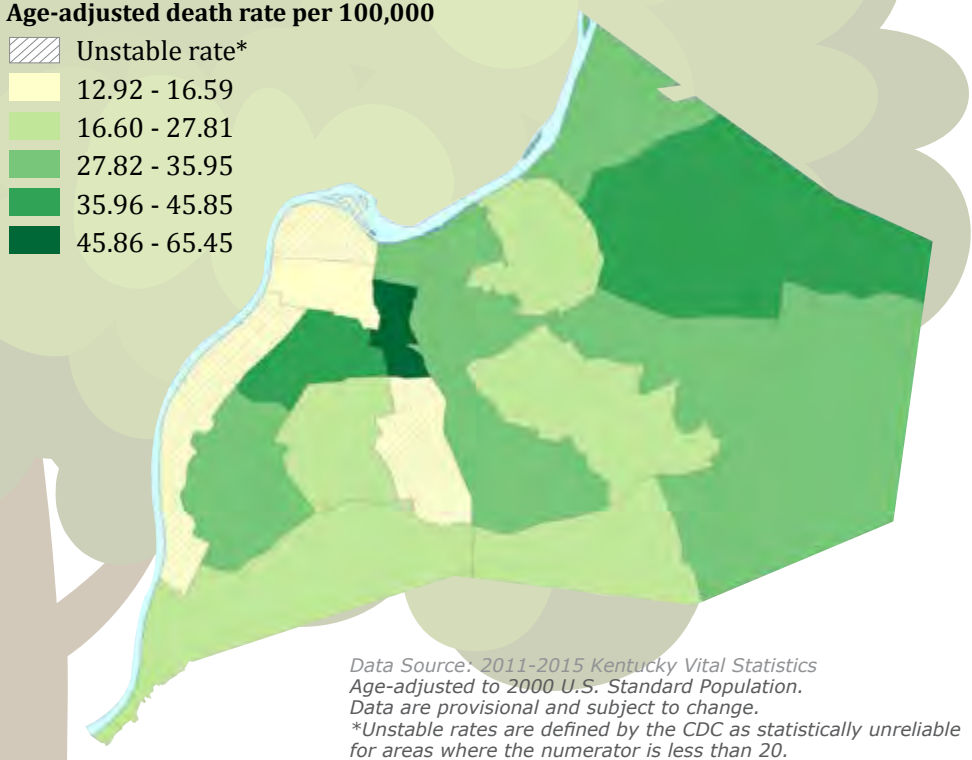
Alzheimer's Disease Deaths
Total 2011 - 2015

	Count	Age-adjusted rate (per 100,000)
White Female	960	37.40
Louisville Metro	**1460**	**32.22**
Other Male	**	29.11*
White Male	367	27.25
Black Male	40	24.32
Hispanic Female	6	23.37*
Black Female	81	21.31
Other Female	**	8.97*
Hispanic Male	0	0*

Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to the 2000 U.S. Standard Population.
**The CDC defines rates as statistically unreliable when the numerator is less than 20.*
***Data suppressed (counts less than 5).*
Racial categories are non-Hispanic.



Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to the 2000 U.S. Standard Population.



Data Source: 2011-2015 Kentucky Vital Statistics
Age-adjusted to 2000 U.S. Standard Population.
Data are provisional and subject to change.
**Unstable rates are defined by the CDC as statistically unreliable for areas where the numerator is less than 20.*

Most people who die from Alzheimer's disease are white women; this is most likely a reflection of the fact that women have a longer life expectancy and are less likely to die from other health outcomes earlier in life. However, national trends suggest that people of color experience Alzheimer's at higher rates. Geographically, Alzheimer's disease affects the Old Louisville area the most.

The median age of those who died from Alzheimer's disease in Louisville Metro from 2011-2015 was 88.

Root Causes | Health Outcomes

EMPLOYMENT AND INCOME

EDUCATION

The exact cause of Alzheimer's disease remains unknown to researchers; however, evidence indicates patterns that show higher levels of the disease for Black and Latino communities.[11] Those who end up dying from Alzheimer's are usually those who do not die of another co-morbidity first. Here we explore what is known about root causes and their correlation to Alzheimer's. It is important to remember that because two things occur at the same time does not mean one causes the other. As with any health outcome, the reason why any one individual acquires a disease is complex and is likely the result of many factors, such as social, biological, environmental and genetic, rather than one. There remains much to be learned about Alzheimer's disease at every level.

EDUCATION

Educational attainment can have a major impact on a person's ability to earn income and access meaningful employment opportunities.[5] The resulting higher income can provide greater access to needed care for someone who has Alzheimer's. However, studies show there is a higher occurrence of dementia in populations with lower education levels.[6,7] **This suggests that education can enhance neurological functions that can then act as a coping mechanism if and when degenerative changes begin to occur, which would delay symptoms.[6,7]**

Education levels are also related to other important factors impacting brain health throughout life and into older adulthood. Education levels can impact exposure to toxic environmental factors, chronic disease, nutrition, and facilitate mentally stimulating activities.[8]

In communities with low-income wage earners, educational achievement is much more difficult when considering the context of the consequences of poverty. This means that those who live in communities with lower income levels and lower levels of formal education may not have the protective factors that education provides against Alzheimer's, and could increase their susceptibility to the disease.

EMPLOYMENT AND INCOME

Socioeconomic status impacts health at every stage of life, and in 2014, 10% of adults 65 years old and older were living in poverty.[9,10]

Research shows various factors have a significant impact on cognitive functions and disorders, even when these factors are present early in a person's life. These include socioeconomic status, educational achievement, and job environment.[11] Although research does not identify which of these has the greatest impact, it is clear the compounded effects are critical to the racial and ethnic differences in who is most impacted by an Alzheimer's diagnosis.

While income is definitely not the only factor that impacts whether a person will be diagnosed with Alzheimer's, it does play an important role in the stress that a person is trying to manage, what healthy choices are available to a person, and whether they will have access to the long-term care needed after diagnosis.

Individuals and communities with more financial resources throughout their life are better situated to have good physical and neurological health. This is largely attributed to having less chronic stress, being more likely to maintain healthier diets, having regular access to healthcare, and participating in activities that promote health and wellness.[12]

BEST PRACTICES

To reduce Alzheimer's disease in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Employment and Income

Education

Health and Human Services

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY

national, state, local law

Connect with your elected officials!

- Implement a state-level Earned Income Tax Credit (EITC) to aid wealth building and alleviate poverty.[13,14]
- Implement child care subsidies to help parents with limited incomes work more hours, stay in jobs longer, and increase overall earnings.[15]

COMMUNITY

relationships among organizations

How can we link resources together?

- ***Expand opportunities for youth and families to pay for further education such as college savings accounts and financial aid and scholarship programs.[16,17]**
- Provide culturally proficient Alzheimer's disease public awareness and education campaigns from health and community serving organizations.
- Build equitable partnerships between institutions and community-based service organizations to expand diagnostic services and case-managed care across the community, especially in communities where these services are minimal or absent.

ORGANIZATIONAL

organizations, social institutions

Change where you work, learn, pray, and play.

- Increase the appropriate recruitment and acceptance of people of color in FDA and federal clinical trials for Alzheimer's treatments.
- Establish and maintain Alzheimer's education and service delivery options in multiple languages to meet the needs of community members.

INTERPERSONAL

family, friends, social networks

Support each other!

- Build and sustain socially supportive connections and relationships into older adulthood.
- Provide support groups and respite care opportunities for caregivers.

INDIVIDUAL

knowledge, attitudes, skills

What you can do!

- Exercise regularly and keep a balanced, healthy diet to maintain good heart health.[1]
- Engage in mentally stimulating activities.[1]

RESOURCES

Alzheimer's Association Helpline

If you're looking for more information or support call the Alzheimer's Association Greater Kentucky and Southern Indiana 24/7 Helpline **1-800-272-3900**

Office of Resilience and Community Services

Louisville Metro provides many services related to education, finances, and financial empowerment. To learn more visit: https://louisvilleky.gov/government/resilience-and-community-services/seeking-services

Louisville Promise

Louisville Promise is a community effort to remove persistent barriers to college attainment by increasing available scholarships and creating innovative community partnerships to provide educational support. To learn more, visit: http://louisvillepromise.org/

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ARTHRITIS

We can grow our community supports so everyone has a high quality of life—with the help they need for work and daily living activities.

What is arthritis?

Arthritis is a general term that represents over 100 diseases causing joint pain, stiffness, and limited range of movement.[1] Arthritis can also sometimes be referred to as "rheumatoid conditions."

The most common type of arthritis is osteoarthritis [2]; this occurs when the protective cushioning between joints—known as cartilage—wears away, causing the bones to rub against each other.[2] Other types of arthritis include gout, fibromyalgia and rheumatoid arthritis.[3]

How does arthritis affect health and quality of life?

A study of 2010-2012 National Health Interview Survey data revealed that 52.5 million adults in the U.S. had been told by a doctor that they had some form of arthritis.[4] The same study showed that 22.7 million of those with arthritis also had activity limitations due to their arthritis.[4]

Arthritis has been the leading cause of disability in the U.S. for adults for the past 15 years.[3] These conditions can cause chronic pain, reduce movement resulting in losing the ability to work, and increase the risk of falls and injuries.[3]

Arthritis is common among people who suffer from other chronic conditions, such as heart disease and diabetes.[4] Given that arthritis can limit a person's ability to engage in physical activity, it can lead to greater complications from these and other chronic diseases; opportunities for exercise can lead to improved mood, lower blood sugar levels, and lower cholesterol.[5]

ARTHRITIS

In Louisville Metro, 30.8% of those over 18 years old reported having arthritis.

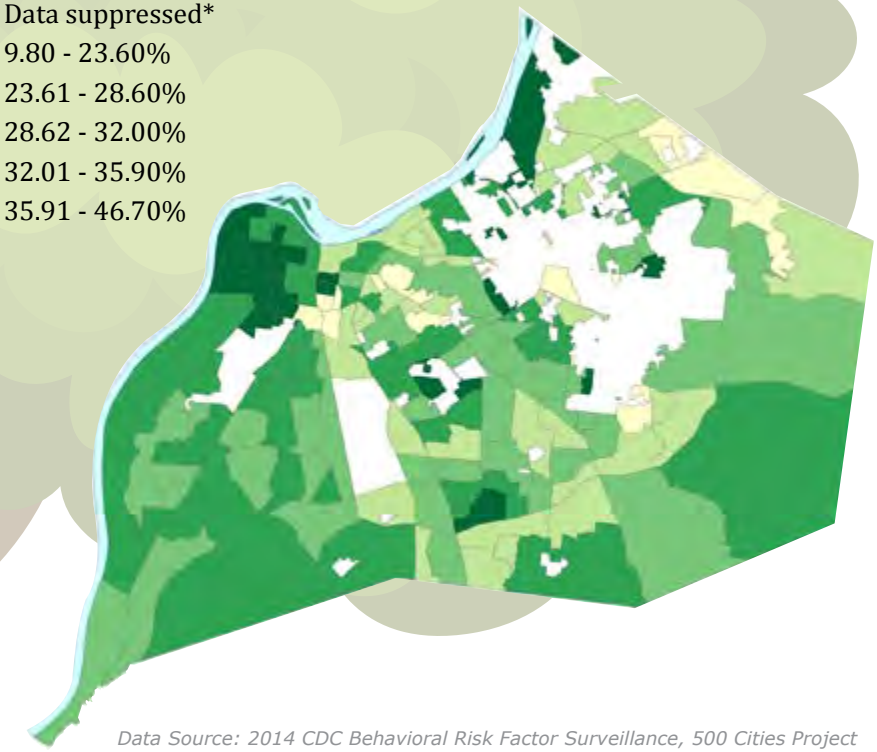
Data Source: 2014 Centers for Disease Control Behavioral Risk Factor Surveillance System, 500 Cities Project

Our best estimates on arthritis come from calculations created by the Centers for Disease Control. They use county-level data from the Behavioral Risk Factor Surveillance System (BRFSS) and use formulas to try to determine which census tracts have higher percentages of adults with arthritis. This map shows estimates of where a large percent of the population of those over 18 experience arthritis.

Arthritis

Percent of adults with arthritis aged 18-64 years

- Data suppressed*
- 9.80 - 23.60%
- 23.61 - 28.60%
- 28.62 - 32.00%
- 32.01 - 35.90%
- 35.91 - 46.70%



Data Source: 2014 CDC Behavioral Risk Factor Surveillance, 500 Cities Project
Data is a statistical estimate, not actual prevalence and should NOT be used to evaluate programs or policies.
**Tracts with population <50 are excluded as are tracts that include small cities.*

Health Outcomes

Root Causes

BUILT ENVIRONMENT

FOOD SYSTEMS

EMPLOYMENT AND INCOME

EMPLOYMENT AND INCOME

More likely to affect women,[6] arthritis has been associated with physically demanding occupations where certain kinds of job functions, such as repetitive motions or consistent heavy lifting, have been associated with greater risk.[7,8,9]

Some research shows that "white-collar" workers are less likely to be afflicted by arthritis symptoms, while "blue-collar" and low-wage workers are more likely to have to exit employment due to the pain.[10] This is attributed to the other illnesses that "blue-collar" and low-wage workers are also more likely to suffer from, as well as the difficulty of managing arthritis as a chronic illness.[10]

Research also found **that employees with arthritis whose workplaces had policies such as paid sick leave and long-term disability payments experienced less pain and fewer symptoms.**[11]

Additionally, having limited income and living in neighborhoods with high poverty levels are associated with increased prevalence and symptoms of arthritis because residents are navigating a complex set of risk factors, such as disadvantages in occupation and income, food access, and recreation opportunities.[7]

FOOD SYSTEMS

Obesity is considered one of the most significant risk factors for arthritis.[8,9,12] While this is most attributed to the stress that additional weight puts on joints,[13] the environmental factors that shape obesity as a community-wide outcome also play an important role. This includes a community's access to fresh fruits and vegetables and ability to maintain a healthy diet.

Because obesity has been linked to diet, food additives (such as high fructose corn syrup), and food environment (such as number of grocery stores), it is critical that communities have physical access to full-service grocers in their neighborhood, as well as the income to afford to purchase foods necessary for a healthy diet.[14,15] **Research shows that when communities have ample access to fresh fruits, vegetables, and foods that aren't processed they are more likely to maintain a healthy diet**.[16]

Additionally, for those who are already living with arthritis, there is evidence that maintaining a healthy diet can improve symptoms.[17] This means ensuring access to healthy food is an easy choice for every community can impact preventing arthritis, as well as managing painful symptoms.

BUILT ENVIRONMENT

Because obesity is considered one of the most important risk factors for arthritis,[8,9,12] it is important to explore built environment as another determinant related to the health outcome, especially as it relates to physical activity.[14,15] Physical activity (such as Tai Chi, swimming, or walking) is important for reducing risk for arthritis because it helps to keep a person's joints active and functioning.[18]

The built environment can promote or prevent physical activity through its design. For example, people who are closer to recreational facilities or live in places where they can walk to work, restaurants, or recreational spaces are more likely to engage in physical activity.[15]

Another study demonstrated that the built environment has a significant effect on quality of life once a person with arthritis has functional limitations. **For example, people with arthritis who had access to parks, handicapped parking, and transportation, reported less disability with social, leisure, and work activities**.[19]

BEST PRACTICES

To reduce arthritis in our community, ***we must work together at multiple levels to create long-term solutions.*** *This means investing in both programs for individuals and policies that will change the landscape. Here are* ***evidence-based*** *actions* ***we*** *can take at every level in our communities to improve health outcomes.*

Built Environment

Employment and Income

Food Systems

Individual Actions You Can Take

***Louisville Metro Government is working on or has accomplished these initiatives.**

PUBLIC POLICY
national, state, local law

Connect with your elected officials!

- ***Comply with federal OSHA workplace safety and worker's compensation standards to prevent and treat work-related injuries.**
- Implement worksite wellness policies, such as paid sick leave and long-term disability.

COMMUNITY
relationships among organizations

How can we link resources together?

- Establish funding to subsidize healthy foods; in some communities, this includes competitive prices to improve sales of healthy foods; in others, it looks like Vegetable Prescription plans.[20,21]
- Develop innovative ways to access parks and public spaces.
- ***Maintain sidewalks and improve accessibility of parks and public spaces to increase physical activity; add point of decision prompts to indoor and outdoor spaces to encourage walking and use of stairs.[22]**
- Utilize community partnerships to fund and train community members to become group leaders of arthritis-friendly exercise programs such as the Walk with Ease program, Active Living Everyday, EnhanceFitness, or Fit and Strong![23,24]

ORGANIZATIONAL
organizations, social institutions

Change where you work, learn, pray, and play.

- ***Expand utilization of nutritional guidelines for food procurement contracts (including vending machines, breakfast and lunch options, etc.) in governments, workplaces, schools, and public facilities.**
- Continue and support school-based programs to increase physical activity.[25]
- Support multi-component worksite programs that address nutrition and physical activity.[26]

INTERPERSONAL
family, friends, social networks

Support each other!

- Build and sustain socially supportive connections and relationships.
- Provide support groups for individuals with arthritis.

INDIVIDUAL
knowledge, attitudes, skills

What you can do!

- Engage in daily physical activity.
- Participate in an arthritis self-management program.[27]

RESOURCES

Kentucky Department for Public Health

Learn more about local resources and programs for arthritis from the Kentucky Department for Public Health: http://chfs.ky.gov/dph/info/dpqi/cd/arthritis.htm

Office of Resilience and Community Services

Louisville Metro provides many services related to education, finances, and financial empowerment. To learn more visit: https://louisvilleky.gov/government/resilience-and-community-services/seeking-services

The Arthritis Foundation Kentucky

Call **502-585-1866** or visit: http://www.arthritis.org/kentucky/ for more information.

SNAP

If you're interested in the Supplemental Nutrition Assistance Program (SNAP), visit: http://chfs.ky.gov/dcbs/dfs/foodstampsebt.htm

Local Food Resource Guide

For more information on the Louisville Farmers Market Association and Local Food Resources, visit: https://louisvilleky.gov/government/mayors-healthy-hometown-movement/services/healthy-eating

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