

2023

# KENTUCKY MINORITY HEALTH STATUS REPORT



Cabinet for Health and Family Services

Department for Public Health  
Office of Health Equity

~ in collaboration with ~

Office of Data Analytics  
Division of Analytics

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## Executive Summary

The Minority Health Status Report (MHSR) is produced biennially in odd-numbered years in compliance with KRS 216.2929, Section 4. The MHSR aims to provide a quantifiable overview of the current health outcomes for minority groups in Kentucky as compared to the population at large and offer recommendations to meet the identified health needs of minority populations. The 2023 MHSR begins with an overview of the root causes of inequity, then outlines disparities related to maternal and child health, cancer, substance use disorders, diabetes and obesity, and concludes with recommendations to help improve the health and wellness of *all* Kentuckians.

### Maternal and Child Health

- Adverse Childhood Experiences (ACEs) are negative, sometimes traumatic, experiences that occur during childhood. ACEs can lead to long-term negative health impacts. Multiple ACEs are most prevalent among Black and Hispanic populations in Kentucky.
- Kentucky has a higher preterm birth rate than the national average. The highest rate of preterm births in Kentucky is among Black infants.
- Kentucky has a greater infant mortality rate than the national average. The infant mortality rate among Black infants in Kentucky was over twice the rate of White infants.
- The highest rate of maternal mortality in Kentucky occurs among Non-Hispanic Black populations.

### Cancer

- Kentucky consistently ranks among the top in the country for highest cancer rates.
- Kentucky has a greater incidence rate of HPV-related cancers than the national average. In Kentucky White populations who live in rural Appalachia are most likely to get HPV-related cancer.
- In Jefferson County from 2015-2019 it was found that Black women had a higher cancer mortality rate than White women.

### Substance Use Disorder

- For 2022 Kentucky reported a 5% decrease in overdose deaths from 2021. However, while the state death rates are trending down, the death rates among Black Kentuckians are rising. Since 2020 there has been a 46.5% increase of drug overdose deaths among Black Kentuckians.

### Diabetes and Obesity

- Kentucky has a higher prevalence rate of diabetes than the national average. Kentuckians who have an income of \$25,000 or less a year are most likely to have diabetes and/or obesity.
- In Kentucky, 16% of those who live in Appalachia have diabetes compared to a rate of 13% for those who do not live in Appalachia.

### Key Recommendations

- Provide transportation vouchers for those who lack transportation to and from health care related services.
- Regularly offer health care and preventive health care services after traditional work hours.
- Hire and promote individuals with diverse lived experiences.
- Partner with community organizations that provide childcare so that caregivers can access services.
- Assess for language and cultural needs.

## Root Causes of Inequity

Health inequities are “systematic differences in the opportunities groups have to achieve optimal health, leading to unfair and avoidable differences in health outcomes.<sup>1</sup>” Inequities are often an underlying basis for differences in health and social outcomes, and among reasons for which many of the conditions in a community exists. Often, one’s quality and length of life can be determined by the zip code in which they live, which is in direct contrast to equity. The root cause of unequal allocation of power and resources, largely determined by race, ethnicity, and wealth, creates unequal social, economic, and environmental conditions that then lead to poorer health outcomes and unequal opportunities.<sup>2</sup>

Many disparities that persist today are rooted in historical discriminatory practices. For example, the 1934 Federal Housing Administration (FHA) *Underwriting Handbook* outlined lending practices, regulations, and policies related to finances, standards, and employment within the housing industry to address the housing crisis. However, the FHA’s policies separated neighborhoods by occupation, income, race, and ethnicity, leading to inequitable outcomes. The historical practice of redlining, where mortgage lenders drew red lines around portions of a map to show neighborhoods where they would deny loans for housing and businesses,<sup>3</sup> led to harmful impacts for people of color and exacerbated segregation and disparity of opportunity. See **Appendix A** for an image of redlining in Jefferson County, Kentucky. Many Black families were forced to move to inner city neighborhoods that often-lacked health care, healthy food markets, and educational opportunities, and increased their likelihood of exposure to highways, landfills, waste sites, and chemical plants —lead being a prevalent chemical found in blood levels of Black children.<sup>4</sup> The lack of quality resources in minority-dominated communities has led to adverse social determinants of health – the conditions in which people are born, grow, work, live, and age – among many minority populations.

Achieving health equity requires addressing social determinants of health (see **Appendix B**) through population-based interventions and targeted methods focused on areas with the greatest unmet needs. Health equity promotes the belief that every Kentuckian deserves the opportunity to be healthy and to reach their full human potential, regardless of their zip code.

## Background

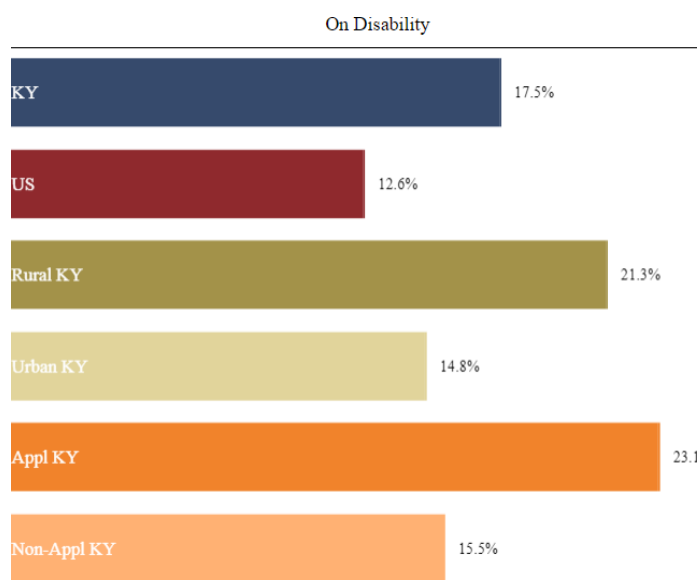
To better understand the health disparities among populations it is important to consider the social, environmental, and historical contexts in which the issues exist. The 2021 MHSR reported that 28% of Kentucky’s minority populations live below the poverty line compared to 9.5% of Kentucky’s White population.<sup>5</sup> Residents of impoverished communities are more likely to have limited access to health care, education, healthy food, and employment opportunities, and are more likely to live in environments with greater environmental toxins and health risks.<sup>6</sup> According to Healthy People 2030, “Across the lifespan, residents of impoverished communities are at increased risk for mental illness, chronic disease, higher mortality, and lower life expectancy.”<sup>7</sup>

In addition to the increased health risks that impact impoverished populations, 7.7% of Black residents and 22.3% percent of Hispanic residents in Kentucky lack health insurance, compared to 4.8% of White residents.<sup>8</sup> According to Milbank Quarterly, “Uninsured adults have less access to recommended care, receive poorer quality of care, and experience worse health outcomes than insured adults do.” Issues are further exacerbated by language barriers.<sup>9</sup> The historical unethical treatment of minorities and

discriminatory practices, such as redlining, continue to have harmful impacts felt throughout communities today.

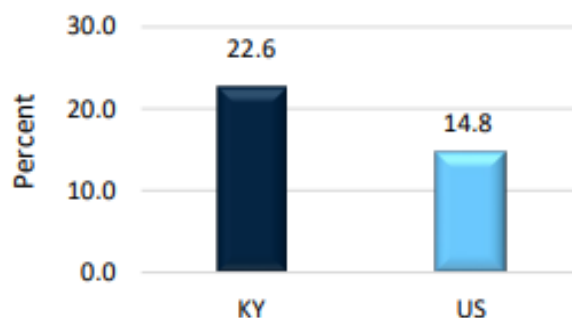
## Demographics

Kentucky has a population of 4,512,310.<sup>10</sup> The median household income for Kentuckians (\$55,454) is \$13,567 less than the U.S. median (\$69,021). Kentucky has a lower rate of persons age 25+ years who are high school graduates or who have a bachelor’s degree than the national average (see **Appendix C**). Kentucky consistently ranks as one of the least healthy states in the country. Compared with national rates, Kentucky has a higher burden of respiratory issues, cancer, obesity, and heart disease.<sup>11</sup>



"Appl": Appalachia  
Source: 2021 Kentucky Cancer Needs Assessment

**Percent of Adults with Fair or Poor Health: Kentucky vs. Nationwide (State and DC), 2021**

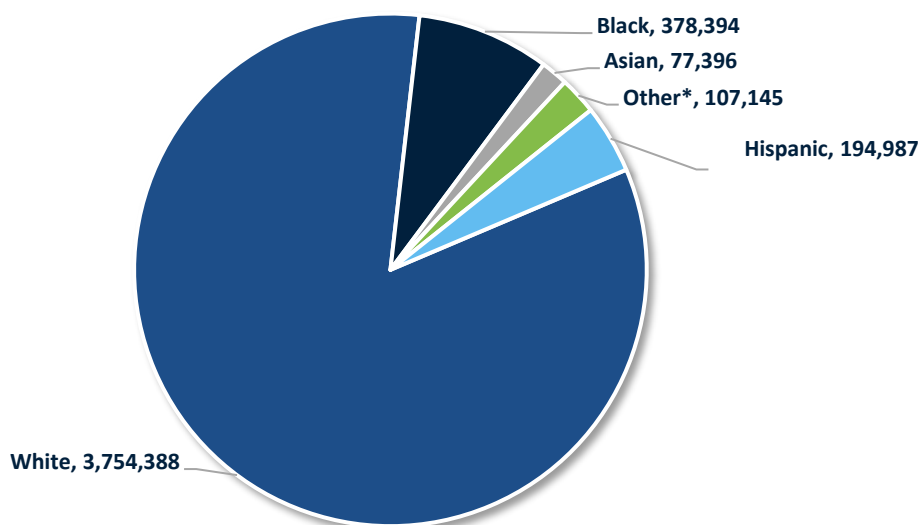


Source: Kentucky Department for Public Health State Health Assessment 2023

## Race and Ethnicity

Overall, most of Kentucky’s population is White (83.2%). Black Kentuckians account for 8.4% of the population, followed by Hispanic 4.3%, Other 2.4% and Asian 1.7%.<sup>12</sup> Kentucky has less diversity by race/ethnicity than the U.S. national average.<sup>13</sup>

**Kentucky Population by Race/Ethnicity, 2021**



\*Other category includes American Indian/Alaska Native, Hawaiian/Other Pacific Islander, Two or more races.

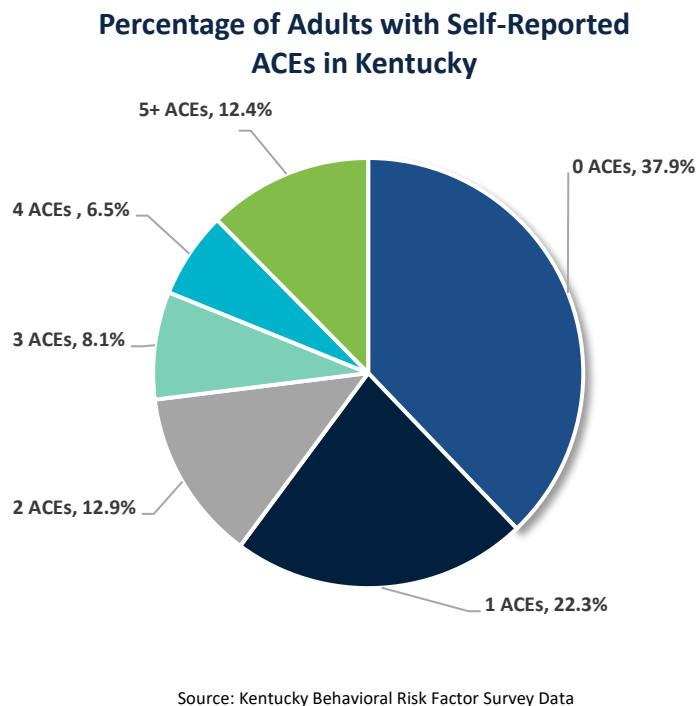
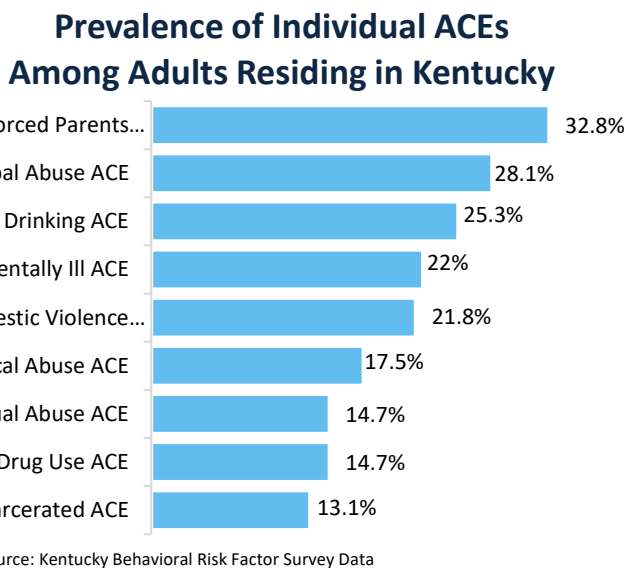
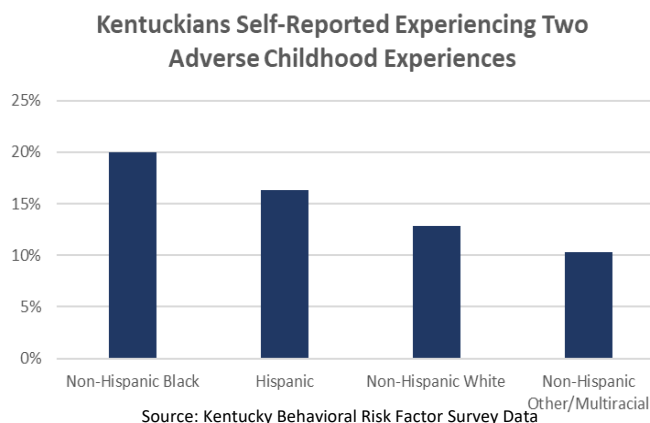


# Maternal and Child Health

## Adverse Childhood Experiences (ACEs)

Adverse Childhood Experiences (ACEs) are negative, sometimes traumatic, experiences that occur during childhood (ages 0-17). ACEs may include experiencing violence, abuse/neglect, living in a household with substance use problems, instability in the home, and more. ACEs are often preventable and can lead to long-term negative effects on one’s health and well-being. Black and Hispanic populations in Kentucky are more likely to experience multiple ACEs. In 2018, the Kentucky Behavioral Risk Survey (KyBRFS) showed that 62.7% of adult Kentuckians self-reported experiencing at least one ACE, versus the national rate of 64%. In 2020, the rate increased slightly to 65%. **Appendix D** outlines the series of ACEs questions that are asked in the KyBRFS. The question abbreviations will be used for descriptive analysis in this report. See **Appendix E** for additional ACE data by region.

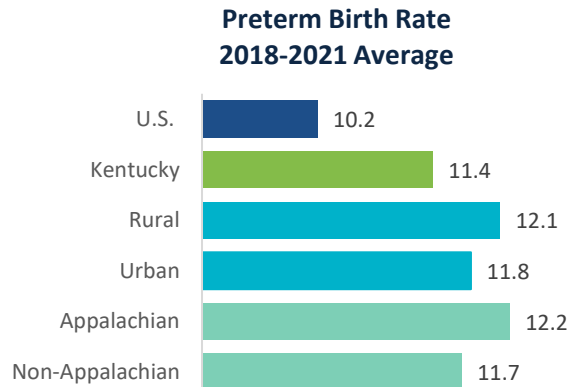
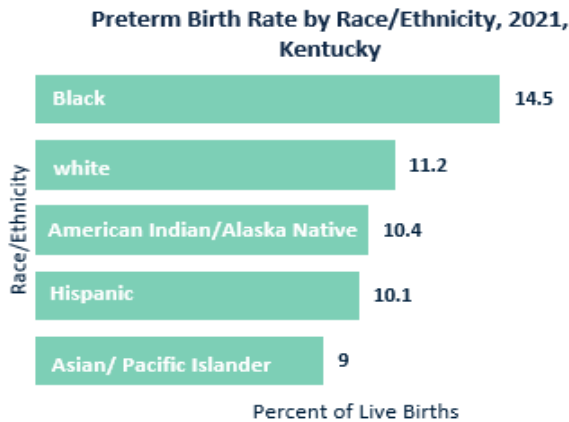
Kentucky is in line with national trends in that ACEs are more prevalent for Black and Hispanic populations than for White populations.<sup>14</sup> Studies have linked a greater number of ACEs with a greater risk of health problems such as heart disease, cancer, diabetes, and stroke.<sup>15</sup>



## Preterm Births

Preterm birth is defined as a live birth before 37 completed weeks gestation. Preterm births can lead to higher rates of death and/or disability.<sup>16</sup> In 2021, the preterm birth rate increased by 0.4% in the U.S.,

from 10.1% to 10.5%.<sup>17</sup> The U.S. scored a D+ for preterm birth rates per the March of Dimes Annual Report Card on Maternal and Infant Health. Unfortunately, Kentucky has an even higher preterm birth rate than the national average at a rate of 12% (6,247 babies). Kentucky is among nine states that scored an F for preterm birth rates in the U.S.<sup>18</sup> The preterm birth rate in the U.S. among Black women was about 50% higher than that of White or Hispanic women.<sup>19</sup> Kentucky falls in line with national trends in that the highest rate of preterm births is among Black infants.

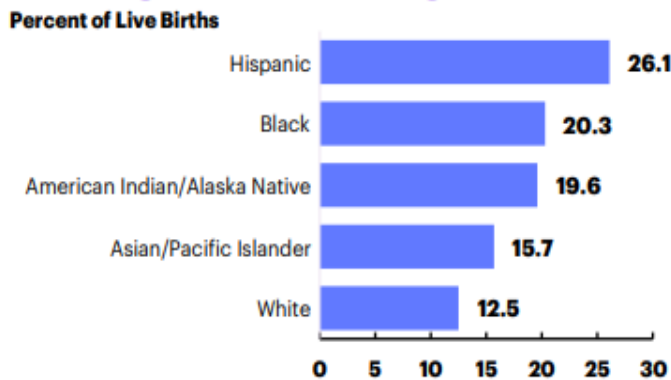


Source: March of Dimes PERISTATS (RE/ Preterm Birth Overview | PeriStats | March of Dimes)

## Infant Mortality

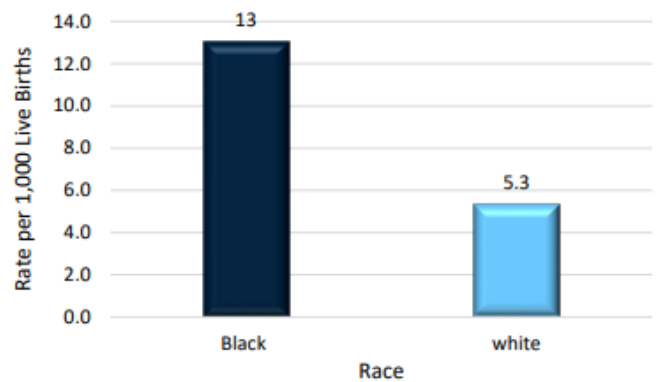
Infant mortality is defined as death occurring during the first year of life. Infant mortality rates are often used as a metric to gauge the social, political, health care delivery, and medical outcomes in a geographic area.<sup>20</sup> The U.S. ranks poorly compared to other industrialized nations with an infant mortality rate of 5.4 per 1,000 births. Unfortunately, Kentucky has an even greater infant mortality rate than the U.S. average at 6.2. mortalities per 1,000 births. In 2021 the infant mortality rate among Black infants in Kentucky was over twice the rate of White infants.<sup>21</sup> Hispanic and Black populations are among the most likely to have inadequate prenatal care in Kentucky.<sup>22</sup>

## INADEQUATE PRENATAL CARE BY RACE AND ETHNICITY



Source: 2022 March of Dimes Report Card: Kentucky

## Infant Mortality Rate by Race, Kentucky, 2021



Source: Kentucky Department for Public Health State Health Assessment 2023

## Postpartum Mental Health

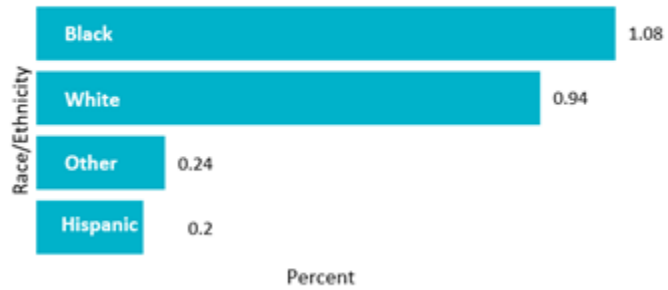
### Postpartum Depression

Postpartum depression (PPD) is a medical condition that affects one in eight women in the U.S.<sup>23</sup> Symptoms of PPD are similar to symptoms of depression, but may include:

withdrawing from loved ones, doubting one’s ability to care for a newborn, feeling distant from the newborn, anger, thoughts of self-harm or harming the newborn, and more. There are several risk factors for PPD, which can include depression

during pregnancy, being physically or sexually abused, stress, diabetes, and complications during pregnancy.<sup>24</sup> The Kentucky Pregnancy Risk Assessment Monitoring System found that 13.9% of women in Kentucky self-reported postpartum depressive symptoms.<sup>25</sup> Studies have found that maternal depression rates are higher among those who have a lower income versus those with a higher income.<sup>26</sup>

New Mothers with ED Visit for Mental Health <90 Days After Birth (%), 2022, Kentucky

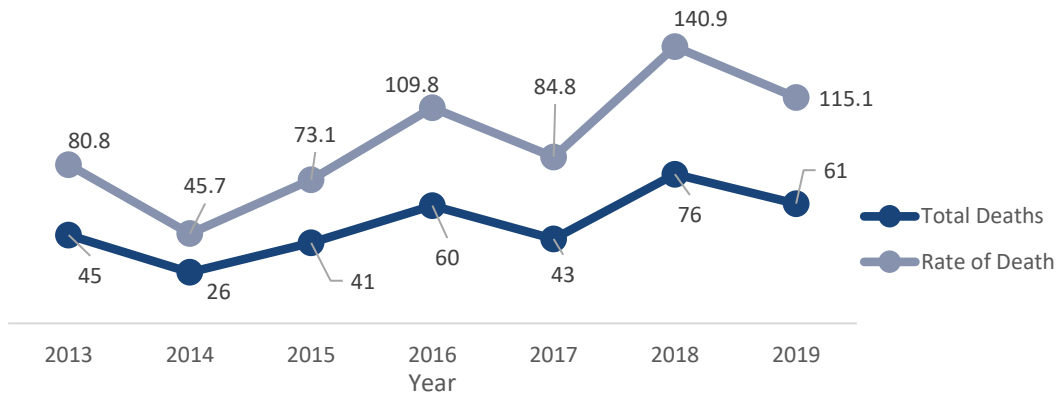


Source: Health Facilities Service Data (HFSD) (KHA)

## Maternal Mortality

In 2021, 1,205 women died of maternal causes in the U.S., an increase from 861 deaths in 2020.<sup>27</sup> The American College of Obstetricians and Gynecologists reported that more women die from pregnancy-related complications in the U.S. than in any other developed country.<sup>28</sup> Nationally, and in Kentucky, the greatest number of maternal mortality cases occur among Non-Hispanic Black populations.

Total Number of Maternal\* Deaths and Rate of Death, Kentucky, 2013-2019



\*Maternal death is defined as any female between the ages of 15-55 that was pregnant within one year prior to death or pregnant at death and died from any cause. \*\*2016-2019 data is preliminary, and numbers may change Data Sources: KY Vital Statistics files, linked live birth, and death certificate files years 2013-2019

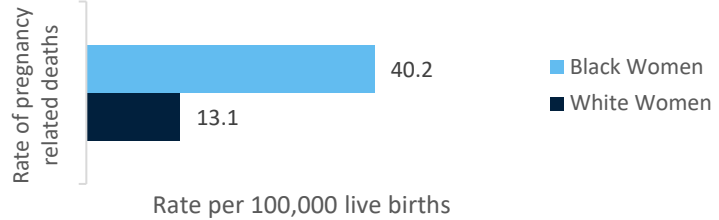


All maternal deaths in Kentucky are reviewed by the Maternal Mortality Review Committee (MMRC) to identify causes of maternal death, risk factors, system deficits or preventable causes, and to prevent pregnancy complications related to or associated with maternal deaths.

After the MMRC review of the 2018 cohort, it was determined that more than half of the 2018 maternal deaths in Kentucky were pregnancy-associated (death of a woman while pregnant or within one year of the termination of pregnancy regardless of the cause), and 16% were

pregnancy-related (death of a woman during pregnancy or within one year of the end of the pregnancy related to a pregnancy complication). The MMRC also found that substance abuse contributed to more than half (53%) of the accidental maternal deaths reviewed.<sup>29</sup>

**Kentucky Pregnancy Related Death Rate by Race 2018\***



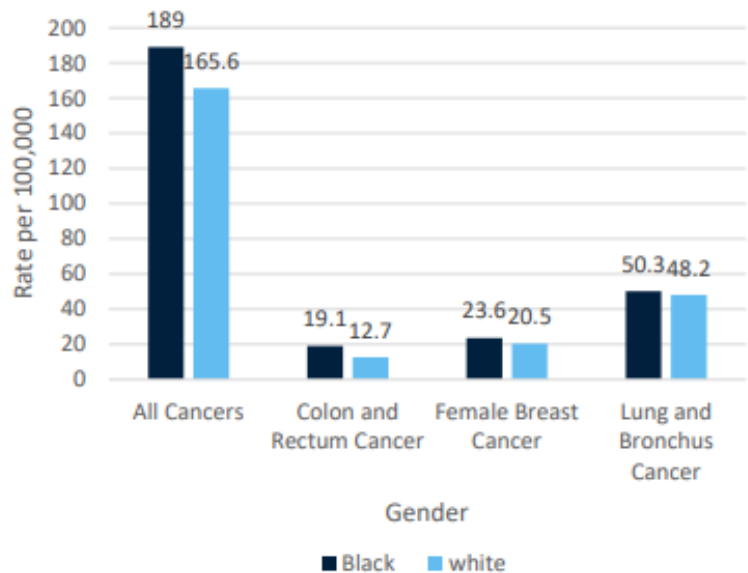
\*In the case of Black pregnancy related deaths N=2, and for White pregnancy related deaths N=6  
Source: Kentucky Public Health Maternal Mortality Review Annual Report

## Cancer

Kentucky has consistently ranked among the top states for highest cancer rates.<sup>30</sup> It is estimated that 41 out of 100 men and 39 out of 100 women will develop cancer during their lifetime.<sup>31</sup>

While cancer affects all populations, certain groups bear a disproportionate burden of cancer compared with other groups. Groups that may experience cancer disparities include those defined by race/ethnicity, income, education, and other characteristics.<sup>32</sup> As evidenced in Kentucky's data, cancer disparities exist across the commonwealth. For example, Kentucky has a greater incidence rate of HPV-related cancers than the national average. The populations in Kentucky most impacted are those who live in Appalachia, rural areas, and are White (see **Appendix F**). Other disparities, such as by race, have been evidenced by data in Jefferson County. The graphic to the right illustrates that Black populations have a higher mortality rate from cancer than White populations in Jefferson County. See **Appendices G and H** for additional Kentucky cancer data.

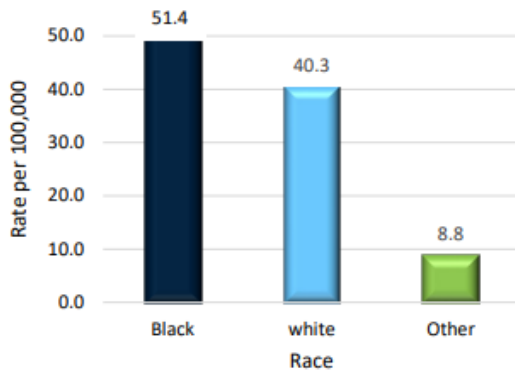
**Cancer Types Mortality Age-Adjusted Rate per 100,000 by Race in Jefferson County, Kentucky, 2015-2019**



Source: 2023 Kentucky State Health Assessment

## Substance Use Disorders

Opioid Induced Deaths by Race, Kentucky, 2021



Source: 2023 Kentucky State Health Assessment

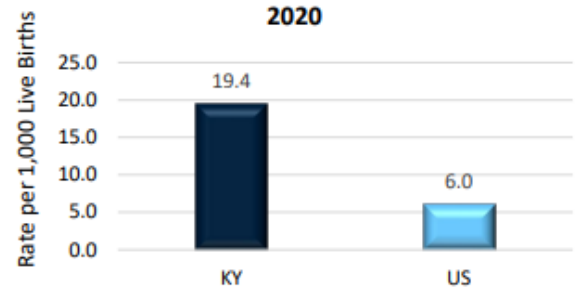
According to the 2022 Overdose Fatality Report, “For the first time in four years, Kentucky has seen a decrease in drug overdose deaths, representing a 5% reduction since 2018... Kentucky was one of only eight states that reported decreases of 100 or more deaths compared to 2021.” However, according to the Kentucky Injury Prevention and Research Center, since 2020 there has been a 46.5% increase of drug overdose deaths among Black Kentuckians.

Kentucky is ranked fourth highest for opioid overdose deaths in the U.S.<sup>33</sup> In 2022, a total of 2,135 Kentucky residents died from a drug overdose.<sup>34</sup> Opioids were involved in 90% of drug overdose deaths in Kentucky in 2022.<sup>35</sup>

## Neonatal Abstinence Syndrome (NAS)

In 2020 Kentucky had a rate three times higher than the U.S. average for neonatal abstinence syndrome (NAS). NAS is the collection of symptoms babies experience when they have withdrawal from drugs that they were exposed to in utero. In Kentucky the highest rate of NAS was among White populations (21.2), followed by “Other” race(s) (17), then Black populations (7).<sup>36</sup>

NAS Rate per 1,000 Births, KY vs. US, 2020

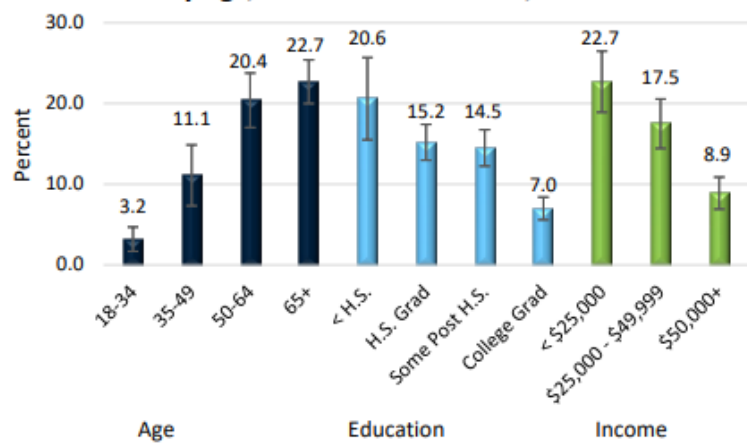


Source: 2023 Kentucky State Health Assessment

## Diabetes/Overweight

Approximately 13.8% of Kentucky adults reported being told by a doctor that they have diabetes, compared to the national average of 10.9%. Kentuckians with an annual household income of less than \$25,000 reported a higher prevalence of diabetes (22.7%) than those with a household income of \$50,000 or more (8.9%). Further, the prevalence of diabetes decreased as education level increased. Adults with less than a high school education reported a higher prevalence of diabetes (20.6%) compared to those with a college degree (7.0%).<sup>37</sup> Black Kentuckians have the highest rate of diabetes in the state (18.5%) compared to White populations (13.5%).

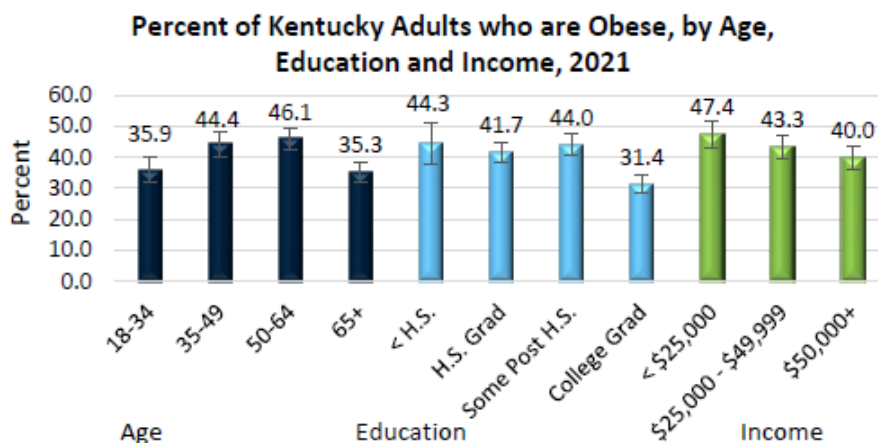
Percent of Adults who have Diabetes, by Age, Education and Income, 2021



Source: 2023 Kentucky State Health Assessment

See **Appendices I and J** for additional diabetes data. Between 2011 and 2019, the prevalence of adult diabetes in Kentucky exhibited a concerning rise from 10.8% to 13.3%,

securing the state’s position as the fifth highest in the nation for diabetes prevalence.<sup>38</sup> People who have overweight or obesity are at an increased risk of type 2 diabetes.<sup>39</sup> In 2021, an estimated 40.3% of Kentucky adults were classified as being obese, higher than the U.S. median of 33.9%. Black adults in Kentucky have a prevalence of 46.8% as compared to 40% of White adults. Further, Kentuckians who have a lower income have a higher incidence of obesity. Kentucky is ranked number two in the nation for obesity prevalence.<sup>40</sup>



Source: 2023 Kentucky State Health Assessment

## Opportunities for Health Equity Moving Forward

Many of the health disparities evidenced among Kentucky’s minority populations are comparable to health disparities that exist among those who live in Appalachian or rural regions of the state compared to those who live in urban areas. The health equity framework used by the Kentucky Department for Public Health Office of Health Equity posits that by reducing, and ultimately eliminating, health disparities for minority groups and acknowledging the relationship between health-related factors and disparities, that health outcomes for all groups can be improved. Eliminating disparities would help improve life expectancy, reduce unnecessary expenditures, make resources more accessible, and help to ensure that all Kentuckians have what they need to thrive. Gratefully, some recommendations from the 2021 MHSR have been acted upon to help to improve the health of Kentuckians (see **Appendix K**). Still, as evidenced in this report, much work remains to be done.

## Collective Equity in the Commonwealth

In 2021, the Kentucky Department for Public Health (KDPH) received a grant for \$43 million from the Centers for Disease Control and Prevention (CDC), the *National Initiative to Address COVID-19 Health Disparities Among Populations at High-Risk and Underserved, Including Racial and Ethnic Minority Populations and Rural Communities*, that began June 1, 2021, and ends May 31, 2024. With this funding, the KDPH is able to support state and local initiatives aimed at improving health outcomes for marginalized and vulnerable populations throughout Kentucky. Through this grant, 76 community organizations and 48 community health workers across Kentucky, spanning rural and urban areas, now partner with the KDPH to collaboratively remove barriers to health, educate communities about health and wellness, lessen the burden on health care infrastructure, and improve health outcomes for some of Kentucky’s most vulnerable populations.

## 2023 Recommendations

- Provide transportation vouchers for those who lack transportation to and from health care related services.
- Regularly offer health care and preventive health care services after traditional work hours.
- Hire and promote individuals with diverse lived experiences.
- Partner with community organizations that provide childcare so that caregivers can access services.
- Assess for language and cultural needs in advance so that those needs can be met.
- Ensure that interpreter services are made available.
- Explicitly display anti-discrimination policies and include them in materials given to individuals.

## Limitations and Strengths

Understanding the limitations and strengths of the Minority Health Status Report for Kentucky is crucial to interpreting its data and recommendations. Below is an outline of both limitations and strengths.

### Limitations:

- *Data Collection:* There are inconsistencies in data collection methods or sources, which can impact the accuracy and comprehensiveness of the report.
- *Underreporting:* Minority communities may underreport specific health issues due to stigma, lack of access to care, or distrust of medical professionals.
- *Generalization:* The report may generalize data across large groups, potentially overlooking unique challenges faced by specific subgroups within more significant minority categories.
- *Temporal Limitations:* Health disparities and their root causes can evolve. The data in the report may not reflect real-time changes or recent interventions.
- *External Factors:* There could be external factors not considered in the report that might play a role in health disparities, such as recent economic shifts or newly introduced state policies.

### Strengths:

- *Highlighting Disparities:* By collecting and presenting data on health disparities, the report raises awareness about the health challenges faced by minority populations in Kentucky.
- *Comprehensive Overview:* The report provides a broad view of health outcomes and challenges across various health dimensions, making it a valuable resource for policymakers and health care providers.
- *Basis for Action:* The report's findings can inform health interventions, policies, and programs to address the identified disparities.
- *Community Engagement:* In many cases, such reports are created in consultation with community leaders and members, ensuring the inclusion of their perspectives and insights.
- *Continual Monitoring:* Regular updates and editions of the report can track progress over time, ensuring that interventions have the desired impact and address the most pressing issues.

## Conclusion

Kentucky stands at a pivotal juncture in addressing the health disparities plaguing its minority communities. The statistical evidence presented illustrates the disproportionate health challenges faced by minority populations within the state. These disparities, from maternal and infant health to chronic diseases, underline the pressing need for systemic change.

*Key Findings:*

### Maternal and Child Health

- Adverse Childhood Experiences (ACEs) are negative, sometimes traumatic, experiences that occur during childhood. ACEs can lead to long-term negative health impacts. Multiple ACEs are most prevalent among Black and Hispanic populations in Kentucky.
- Kentucky has a higher preterm birth rate than the national average. The highest rate of preterm births in Kentucky is among Black infants.
- Kentucky has a greater infant mortality rate than the national average. The infant mortality rate among Black infants in Kentucky was over twice the rate of White infants.
- The highest rate of maternal mortality in Kentucky occurs among Non-Hispanic Black populations.

### Cancer

- Kentucky consistently ranks among the top in the country for highest cancer rates.
- Kentucky has a greater incidence rate of HPV-related cancers than the national average. In Kentucky White populations who live in rural Appalachia are most likely to get HPV-related cancer.
- In Jefferson County from 2015-2019 it was found that Black women had a higher cancer mortality rate than White women.

### Substance Use Disorder

- For 2022 Kentucky reported a 5% decrease in overdose deaths from 2021. However, while the state death rates are trending down, the death rates among Black Kentuckians are rising. Since 2020 there has been a 46.5% increase of drug overdose deaths among Black Kentuckians.

### Diabetes and Obesity

- Kentucky has a higher prevalence rate of diabetes than the national average. Kentuckians who have an income of \$25,000 or less a year are most likely to have diabetes and/or obesity.
- In Kentucky, 16% of those who live in Appalachia have diabetes compared to a rate of 13% for those who do not live in Appalachia.

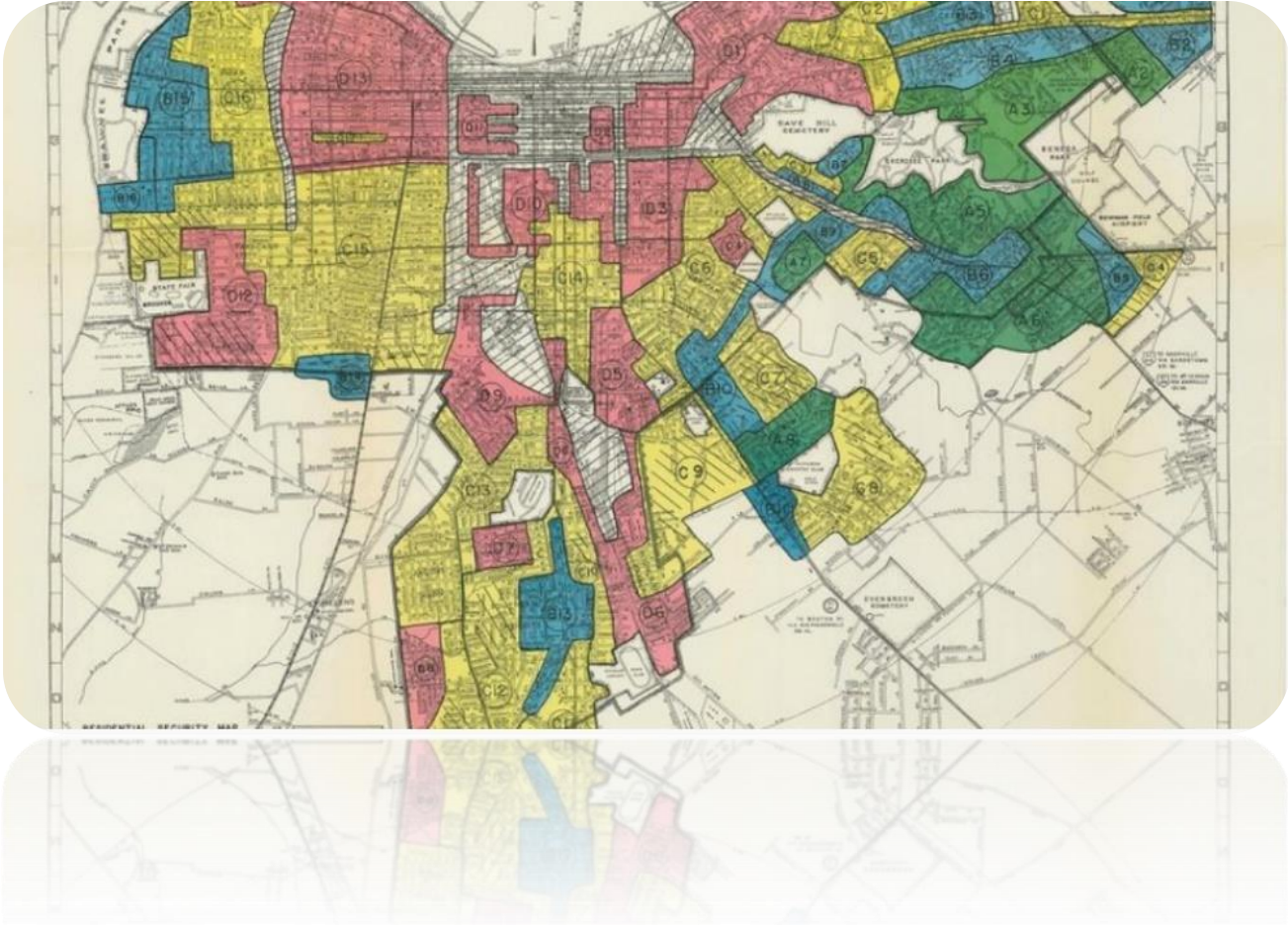
Addressing these disparities necessitates a multipronged approach. First, there is an urgent need to enhance access to quality health care within minority communities, which would involve enhancements to physical infrastructure, transportation, communication, and training care providers in linguistic and cultural competence. Second, targeted linguistic and culturally tailored health education campaigns can bridge the knowledge gap confronting disadvantaged populations. Third, to ensure long-term positive change, it is imperative to address the broader social determinants of health. This would involve initiatives that lift minority communities from poverty, provide access to quality education, and ensure safe and clean living environments.

The MHSR unveils both challenges and opportunities. While the disparities are concerning, understanding them can offer a roadmap for change. By committing to systemic interventions and prioritizing the health of its minority residents, Kentucky has the potential to set a positive precedent for other states grappling with similar challenges. Achieving a more equitable and healthier future for all Kentuckians requires collective will, effort, and unwavering commitment.



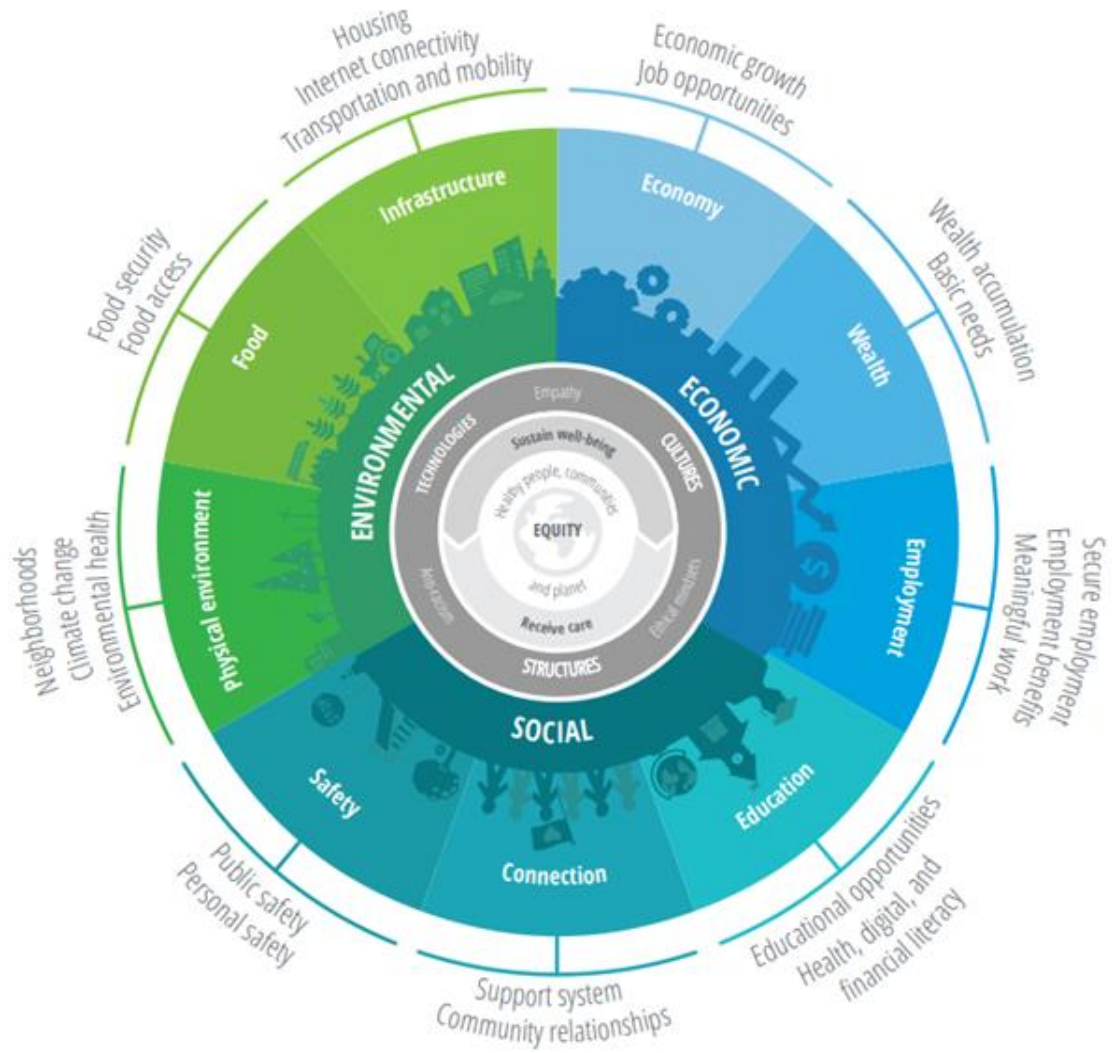
# Appendix

Appendix A: Map of redlining in Jefferson County, KY





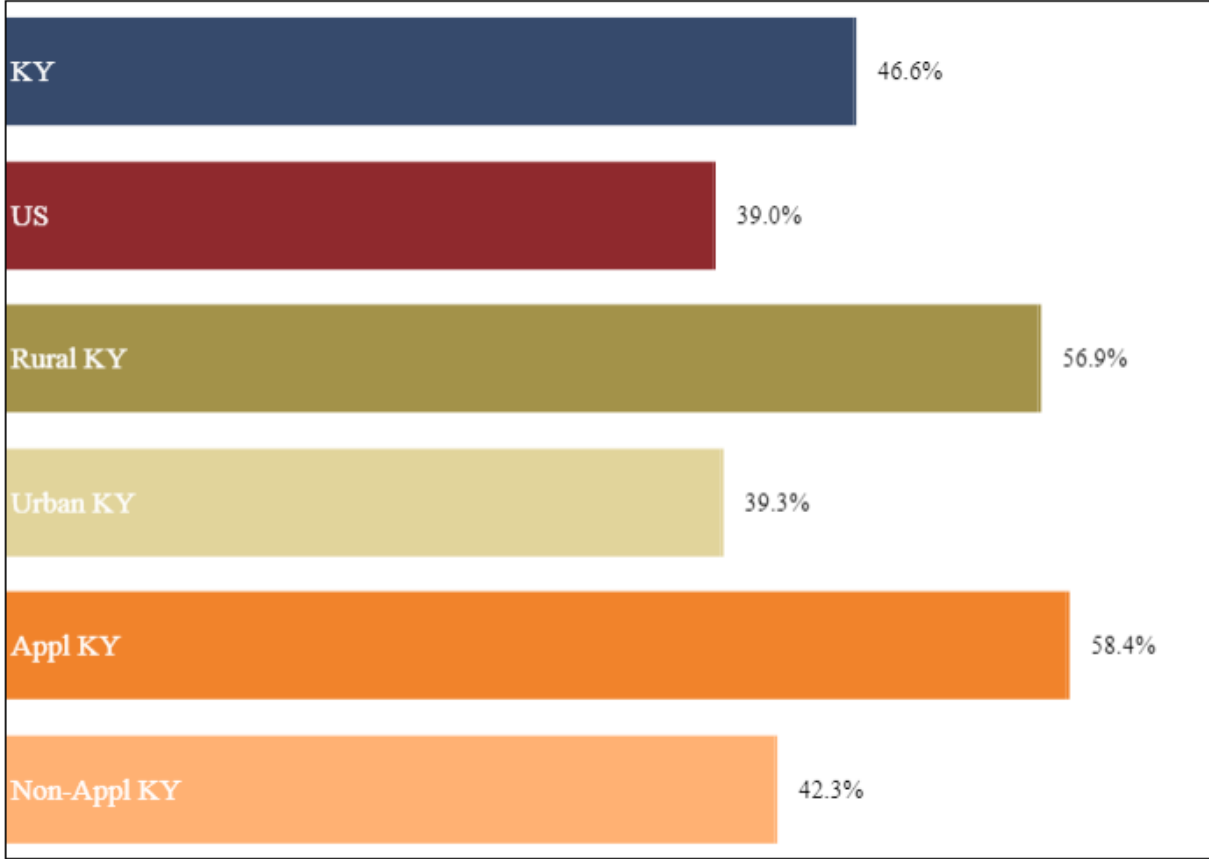
## Appendix B: Social Determinants of Health Drivers



Source: Deloitte analysis.

**Appendix C: Kentucky High School Diploma or Less Comparisons**

High School Diploma or Less

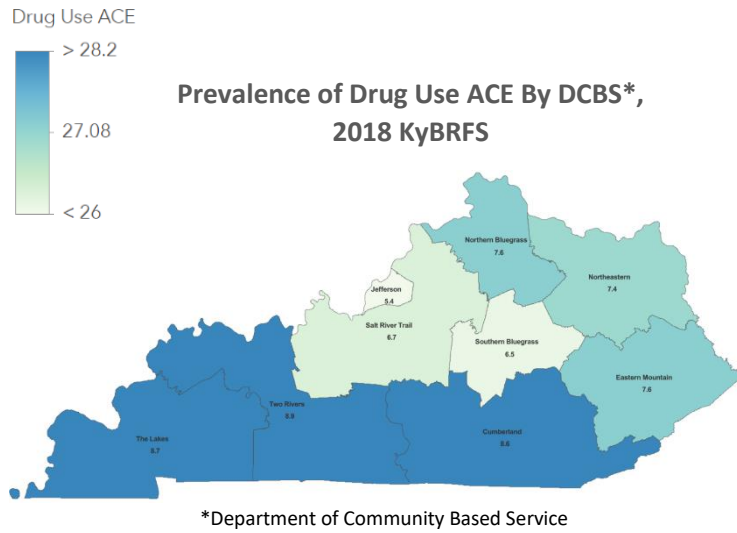
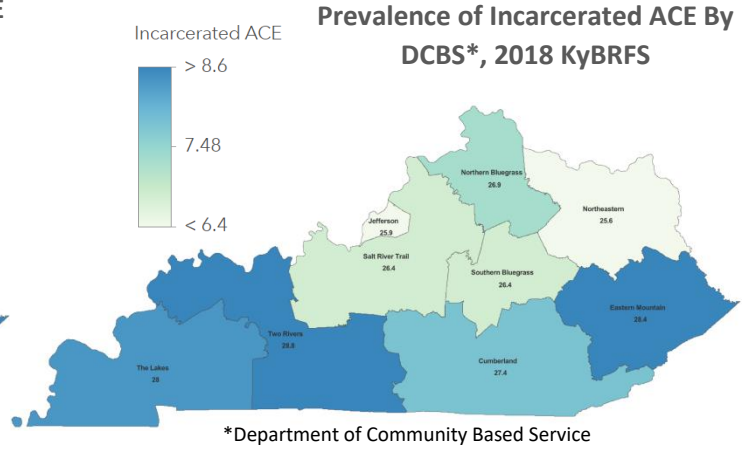
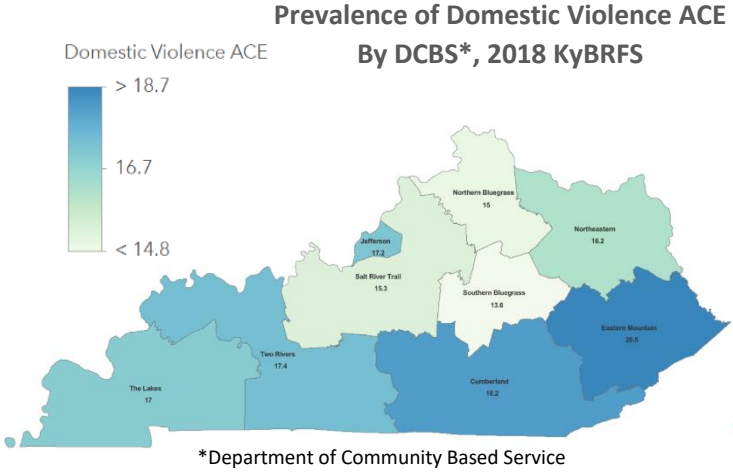


Source: 2021 Kentucky Cancer Needs Assessment; University of Kentucky Markey Cancer Center Community Impact Office

**Appendix D: Kentucky Behavioral Risk Factor Survey Adverse Childhood Experiences Questions**

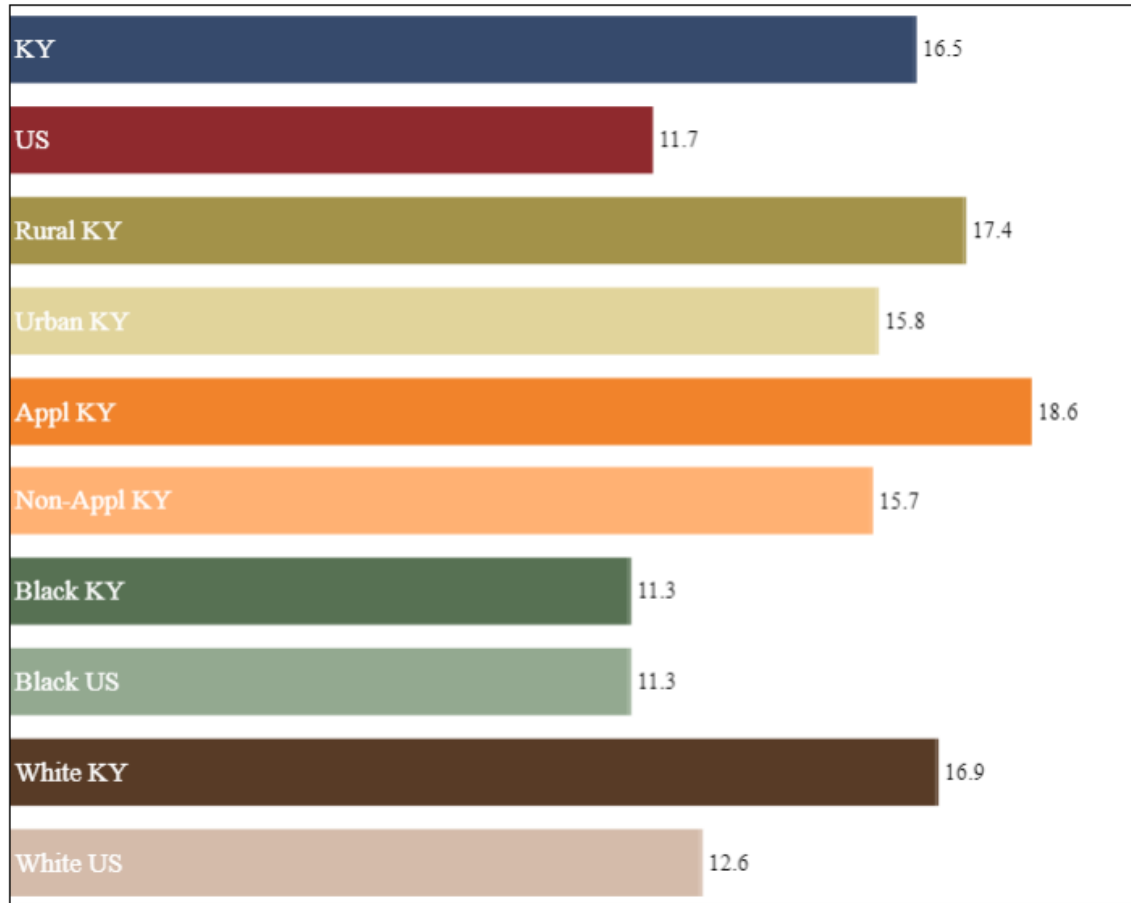
<b>KyBRFS Adverse Childhood Experiences Questions</b>	<b>Question Abbreviation</b>	<b>Response</b>
Did You Live with Anyone Who Was Depressed, Mentally Ill, Or Suicidal?	Mentally Ill ACE	Y/N
Did You Live with Anyone Who Was a Problem Drinker or Alcoholic?	Drinking ACE	Y/N
Did You Live with Anyone Who Used Illegal Street Drugs or Who Abused Prescription Medications?	Drug Use ACE	Y/N
Did You Live with Anyone Who Served Time or Was Sentenced to Serve Time in A Prison, Jail, Or Other Correctional Facility?	Incarcerated ACE	Y/N
Were Your Parents Separated or Divorced?	Divorced Parents ACE	Y/N/Parents not married
How Often Did Your Parents or Adults in Your Home Ever Slap, Hit, Kick, Punch or Beat Each Other Up?	Domestic Violence ACE	Never/Once/More than once
Not Including Spanking, (Before Age 18), How Often Did a Parent or Adult in Your Home Ever Hit, Beat, Kick, Or Physically Hurt You in Any Way?	Physical Abuse ACE	Never/Once/More than once
How Often Did a Parent or Adult in Your Home Ever Swear at You, Insult You, Or Put You Down?	Verbal Abuse ACE	Never/Once/More than once
How Often Did Anyone At Least 5 Years Older Than You or An Adult, Ever Touch You Sexually?	Sexual Abuse ACE	Never/Once/More than once
How Often Did Anyone At Least 5 Years Older Than You or An Adult, Try to Make You Touch Them Sexually?	Sexual Abuse ACE	Never/Once/More than once
How Often Did Anyone At Least 5 Years Older Than You or An Adult, Force You to Have Sex?	Sexual Abuse ACE	Never/Once/More than once

## Appendix E: Kentucky Adverse Childhood Experience by Region



## Appendix F: Kentucky HPV-related Cancer Incidence Rates

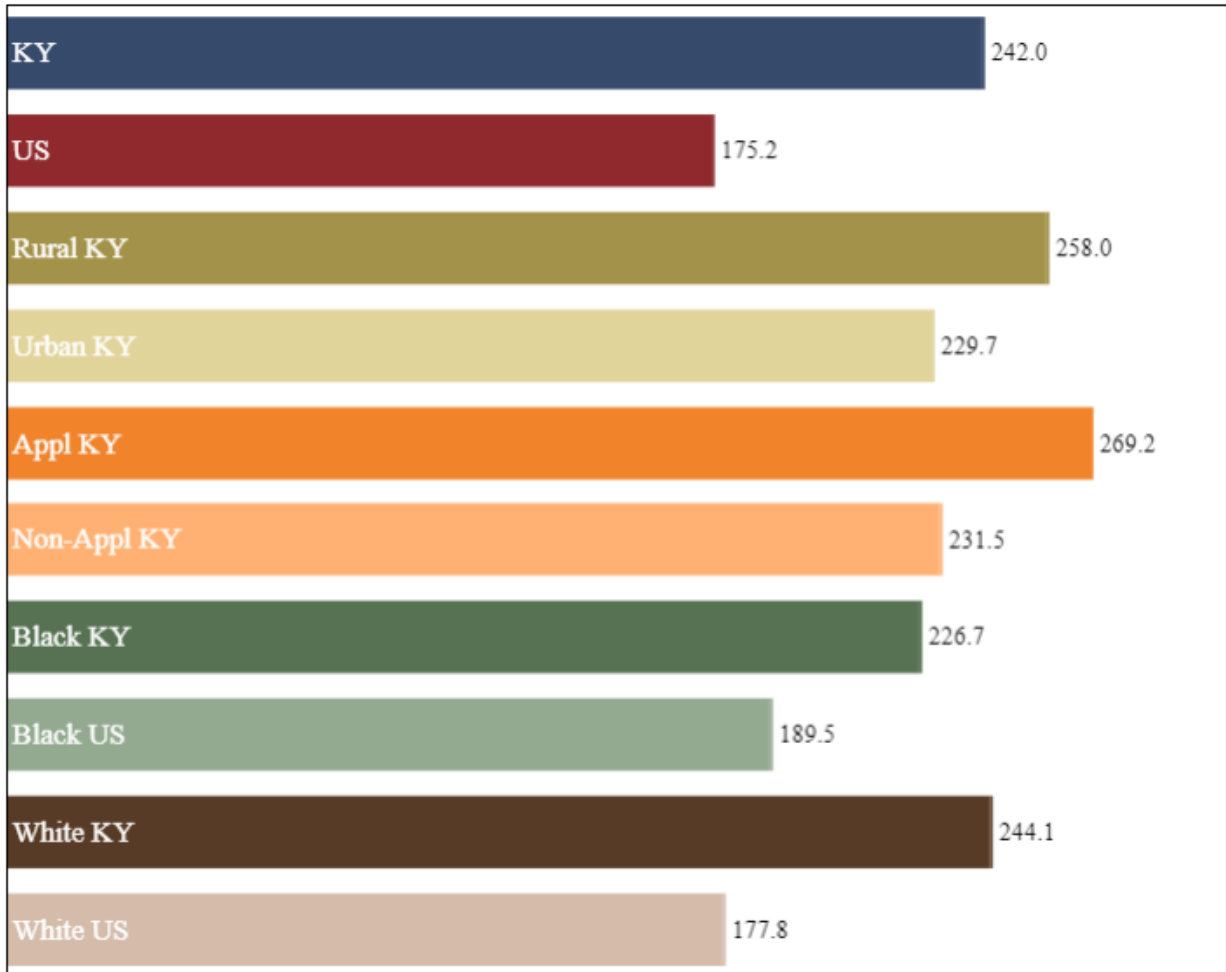
HPV-related Cancers Incidence Rates (age-adjusted)



Source: 2021 Kentucky Cancer Needs Assessment; University of Kentucky Markey Cancer Center Community Impact Office

## Appendix G: Kentucky Tobacco-related Cancer Incidence Rates

Tobacco-related Cancers Incidence Rates (age-adjusted)

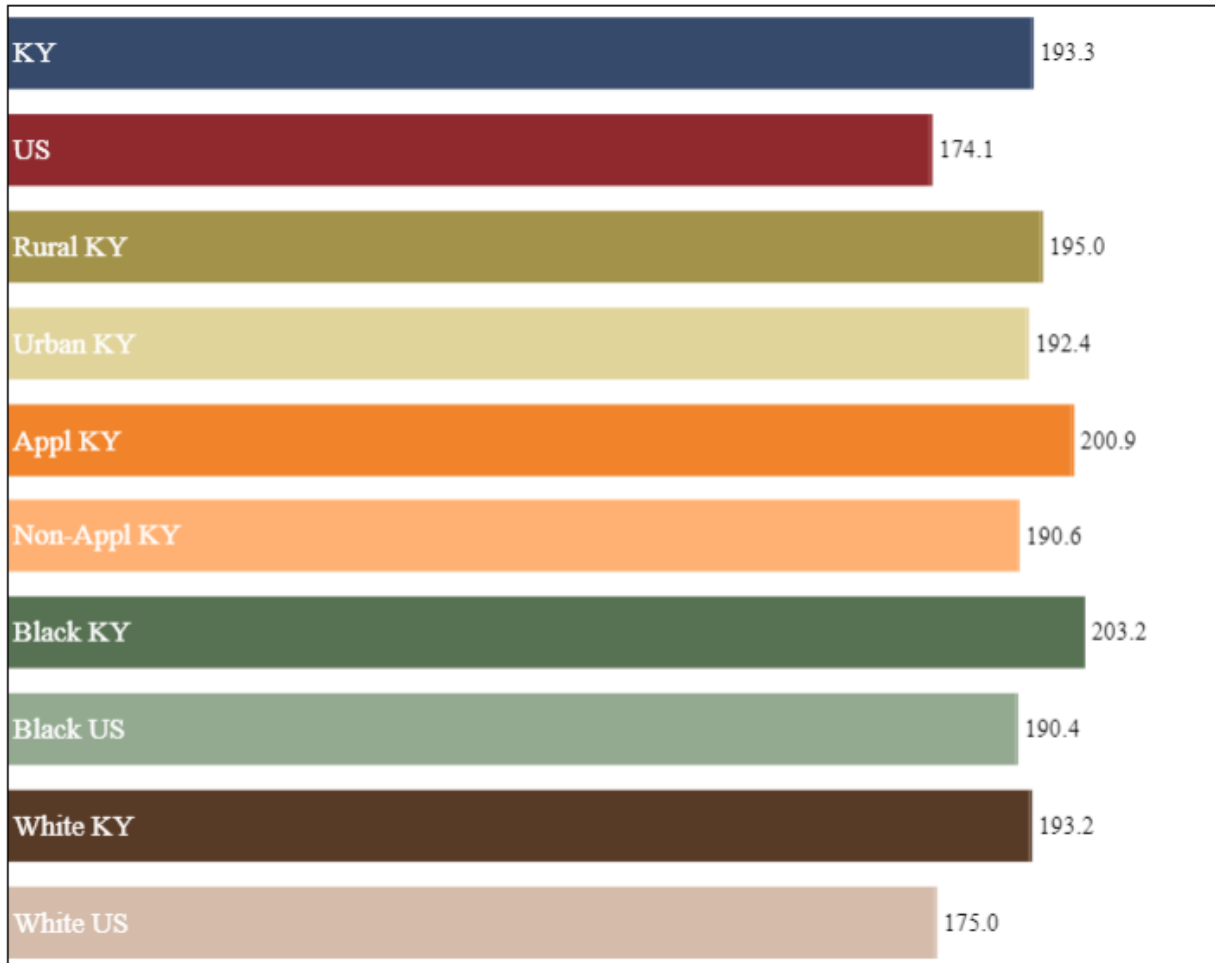


Source: 2021 Kentucky Cancer Needs Assessment; University of Kentucky Markey Cancer Center  
Community Impact Office



## Appendix H: Kentucky Obesity-related Cancer Incidence Rates

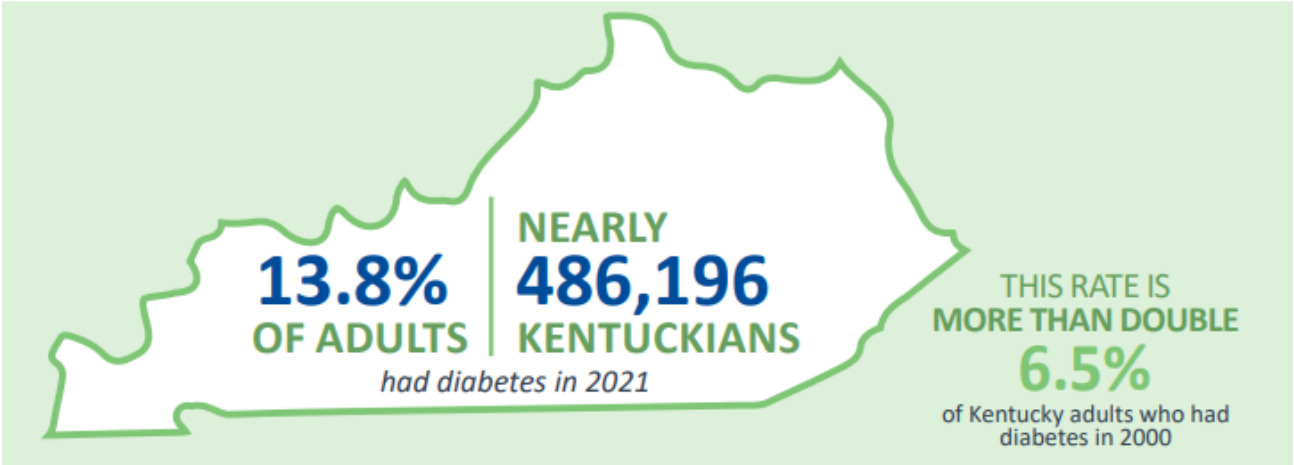
Obesity-related Cancers Incidence Rates (age-adjusted)



Source: 2021 Kentucky Cancer Needs Assessment; University of Kentucky Markey Cancer Center Community Impact Office

Appendix I: Diabetes in Kentucky

DIABETES IS COMMON IN KENTUCKY.

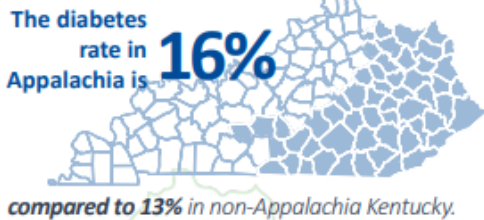


ANOTHER **12%** HAVE PREDIABETES AND ARE AT RISK FOR DEVELOPING DIABETES.

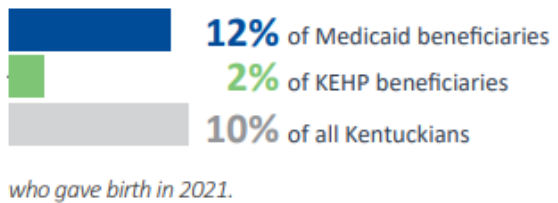


\* Adults are defined as individuals over the age of 19 for Medicaid and individuals 18 years and older for Kentucky Employees' Health Plan (KEHP)

WHERE YOU LIVE MATTERS.



DIABETES IS COMMON DURING PREGNANCY.



Appendix J: Diabetes in Kentucky

DIABETES IS SERIOUS.



THE 5 AREA DEVELOPMENT DISTRICTS WITH THE HIGHEST MORTALITY RATES ARE IN EASTERN KENTUCKY.



DEATH RATES ARE SUBSTANTIALLY HIGHER FOR AFRICAN AMERICANS.



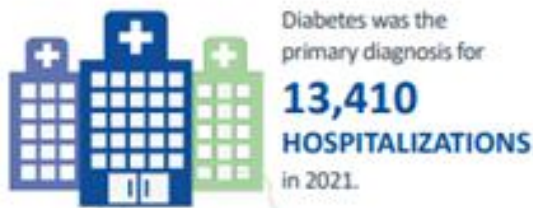
SINCE 2001, DIABETES MORTALITY RATES HAVE



**11,925 Kentuckians**

visited the emergency department a total of **15,208 times** for diabetes in 2021.

**10,588** KENTUCKIANS HAD AT LEAST ONE HOSPITAL STAY FOR DIABETES IN 2021.



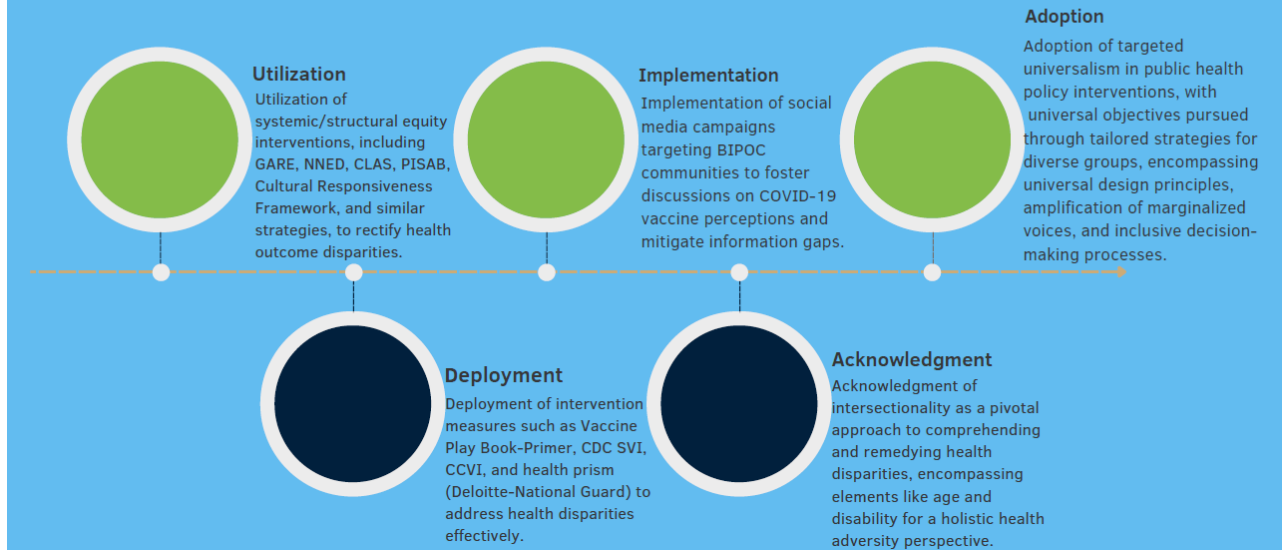
AVERAGE LENGTH OF STAY

**5 DAYS**



## Appendix K: 2021 MHSR Recommendations Acted Upon

# 2021 Recommendations Acted Upon



## Notes

- <sup>1</sup> <https://www.ncbi.nlm.nih.gov/books/NBK425845/>
- <sup>2</sup> <https://www.ncbi.nlm.nih.gov/books/NBK425845/>
- <sup>3</sup> <https://www.countyhealthrankings.org/>
- <sup>4</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5623116/>
- <sup>5</sup> [https://www.chfs.ky.gov/agencies/dph/oc/heb1/MHSR%2012.22.2022%20\(1\).pdf](https://www.chfs.ky.gov/agencies/dph/oc/heb1/MHSR%2012.22.2022%20(1).pdf)
- <sup>6</sup> <https://health.gov/healthypeople>
- <sup>7</sup> <https://health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/poverty#:~:text=Across%20the%20lifespan%2C%20residents%20of,mortality%2C%20and%20ower%20life%20expectancy.&text=Children%20make%20up%20the%20largest%20age%20group%20of%20those%20experiencing%20poverty.>
- <sup>8</sup> Explore Uninsured in Kentucky | AHR (americashealthrankings.org)
- <sup>9</sup> *AMA J Ethics*. 2021;23(2):E109-116. doi: 10.1001/amajethics.2021.109.
- <sup>10</sup> <https://www.census.gov/quickfacts/fact/table/KY/PST045222>
- <sup>11</sup> [https://www.cdc.gov/nceh/tracking/profiles/Kentucky\\_Profile.htm](https://www.cdc.gov/nceh/tracking/profiles/Kentucky_Profile.htm)
- <sup>12</sup> <http://ksdc.louisville.edu/data-downloads/estimates/>
- <sup>13</sup> Kentucky Department for Public Health State Health Assessment 2023
- <sup>14</sup> Institute for Child and Family Well-Being, Helen Bader School of Social Welfare, University of Wisconsin-Milwaukee <https://doi.org/10.1016/j.chiabu.2021.105066>
- <sup>15</sup> Childhood adversity and minority groups | News | Harvard T.H. Chan School of Public Health
- <sup>16</sup> <https://www.cdc.gov/reproductivehealth/>
- <sup>17</sup> <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pretermbirth.htm#:~:text=Preterm%20birth%20is%20when%20a,born%20in%20the%20United%20States.>
- <sup>18</sup> <https://www.marchofdimes.org/peristats/reports/united-states/maternity-care-deserts>
- <sup>19</sup> <https://www.cdc.gov/reproductivehealth/maternalinfanthealth>
- <sup>20</sup> <https://www.marchofdimes.org/peristats/data?reg=99&top=6&stop=92&lev=1&slev=1&obj=1>
- <sup>21</sup> Kentucky Department for Public Health State Health Assessment 2023
- <sup>22</sup> <https://www.marchofdimes.org/peristats/reports/kentucky/report-card>
- <sup>23</sup> <https://www.cdc.gov/reproductivehealth/features/maternal-depression/index.html>
- <sup>24</sup> <https://www.marchofdimes.org/find-support/topics/postpartum/postpartum-depression>
- <sup>25</sup> <https://www.cdc.gov/prams/>
- <sup>26</sup> <https://doi.org/10.1016/j.socscimed.2022.115017>
- <sup>27</sup> <https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2021/maternal-mortality-rates-2021.htm>
- <sup>28</sup> Kentucky Cabinet for Health and Family Services (CHFS). (2021). Maternal Mortality Review in Kentucky: Annual Report on 2018 Public Health Maternal Mortality Review (MMR). <https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2021/maternal-mortality-rates-2021.pdf>
- <sup>29</sup> <https://www.chfs.ky.gov/agencies/dph/dmch/Documents/MMRAnnualReport.pdf>
- <sup>30</sup> [https://www.cdc.gov/nchs/pressroom/sosmap/cancer\\_mortality/cancer.htm](https://www.cdc.gov/nchs/pressroom/sosmap/cancer_mortality/cancer.htm)
- <sup>31</sup> <https://www.cancer.org/content/>
- <sup>32</sup> <https://www.cancer.gov/about-cancer/understanding/disparities>
- <sup>33</sup> [https://www.cdc.gov/nchs/pressroom/sosmap/drug\\_poisoning\\_mortality/drug\\_poisoning.htm](https://www.cdc.gov/nchs/pressroom/sosmap/drug_poisoning_mortality/drug_poisoning.htm)
- <sup>34</sup> <https://odcp.ky.gov/Reports/2022%20Overdose%20Fatality%20Report.pdf>
- <sup>35</sup> <https://odcp.ky.gov/Reports/2022%20Overdose%20Fatality%20Report.pdf>
- <sup>36</sup> Kentucky Department for Public Health 2023 State Health Assessment
- <sup>37</sup> Kentucky Department for Public Health 2023 State Health Assessment
- <sup>38</sup> [https://www.cdc.gov/nchs/pressroom/sosmap/diabetes\\_mortality/diabetes.htm](https://www.cdc.gov/nchs/pressroom/sosmap/diabetes_mortality/diabetes.htm)
- <sup>39</sup> <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/>
- <sup>40</sup> <https://cancerstatisticscenter.cancer.org/#!/state/Kentucky>