KENTUCKY

State Health Improvement Plan 2017 - 2022

Kentucky Public Health

Prevent. Promote. Protect.

Acknowledgements

The Kentucky Department for Public Health is grateful to those from the statewide stakeholders group who aided in the development of this State Health Improvement Plan. This document is a statewide effort of ideas and aspirations. Many have generously donated their time and provided invaluable insight and direction to the development of this plan's goals and strategies.

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Executive Summary

In an effort to overcome the health problems that ail the commonwealth, the Kentucky Department for Public Health performed a State Health Assessment. This report evaluated available data on target areas of concern in our state, and was presented at "Planning with Partners to Improve Kentucky's Health," a symposium of numerous stakeholders across multiple disciplines, on March 22, 2017. During this symposium, the stakeholders identified focus areas that need attention to improve health outcomes in Kentuckians. Using the State Health Assessment data, the group chose the following focus areas for Kentucky to target over the next five years:

- Substance Use Disorder
- Tobacco
- Obesity
- Adverse Childhood Experiences
- Integration to Health Access

Also of primary concern were the *fabric issues*, or topics that are deeply intertwined with each of the focus areas. The fabric issues include:

- Data Collection and Analysis
- Health in All Policies
- Economic and Community Engagement/Development
- Environmental Health
- Mental Health

Workgroups composed of health leaders from across the state and multiple areas of healthcare have met to evaluate the five focus areas in greater depth and contributed to the production of this document. Workplans with goals, strategies, and activities were developed. Indicators to measure success for improving health outcomes were selected. Information presented in this revised document reflects successes, revisions due to barriers, emerging issues or change in community focus, and future plans to continue the work toward a healthier Commonwealth.

This document was revised in October 2021 to include new information related to several measures as well as the achievement of milestones which can be seen in the "Areas of Focus to Improve Health Outcomes" section of this document. Progress from each group is reflected in this revised SHIP. These were the only changes to the document currently.

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Mission, Vision, and Values

Kentucky Public Health
Prevent. Promote. Protect.

Mission Statement
To improve the health and safety of people in Kentucky through Prevention, Promotion and Protection.

Vision Statement
Healthier People, Healthier Communities

Values
- **R**esponsiveness
- **E**quity
- **A**ccountability
- **C**ollaboration
- **H**onesty

KENTUCKY
CABINET FOR HEALTH
AND FAMILY SERVICES

Mission Statement
To be a diverse and inclusive organization providing programs, services and supports that protect and promote the health and well-being of all Kentuckians and their communities.

Vision Statement
A commonwealth where every Kentuckian reaches their full human potential and all communities thrive.

Values
- Equity
- Health and well-being
- Structural economic support
- Resilient individuals and communities
- Operational excellence

Kentucky at a Glance

Kentucky, known as the "Bluegrass State" for the deep hue of its pasturelands, is most notable for its rich coalfields, fast racehorses, fine bourbon, and superior collegiate sports. Kentucky is home to the nation's greatest length of contiguous navigable waterways, the nation's largest cave system, and two of the largest man-made lakes east of the Mississippi. Kentucky is the nation's leader in bourbon production and the state is also a leading producer of cattle, burley tobacco, coal, automobile parts, and satellites.

The state of Kentucky is in the south-central United States along the west side of the Appalachian Mountains. Its area of 39,436 square miles includes some of the most diverse topography in the eastern half of the nation. The eastern part of the state, the Eastern Coal Field, is a rugged and mountainous area covered with forests and dissected by streams. In the gently rolling central part of the state, the Bluegrass region to the north and the Mississippi Plateau to the south are separated by a chain of low, steep hills, the Knobs. The western part of the state, the Western Coal Field, is comprised of less rugged mountains enclosed by the Mississippi Plateau. The southwest corner of the state, the Jackson Purchase, is a low flat plain. There are 54 Appalachia counties in Kentucky. Kentucky is bordered by seven states. The potential for interstate transmission of disease is high.

Kentucky is proud of its heritage as a pioneer in health care. In 1925, Frontier Nursing Service (now University) was established in Hyden, Kentucky as the national birthplace of midwifery and family nursing training. In 1974, the first Women, Infants and Children (WIC) clinic in the country was opened in Pineville. Moreover, Kentucky is home to Dr. Joseph N. McCormack, Kentucky Public Health Commissioner from 1878 to 1919 and one of the founding fathers and early presidents of the Association of State and Territorial Health Officers (ASTHO).

Demographics

- Population: 4,467,673[1] (Density rank is 25th among all states)[2]
- Less diversity by race/ethnicity than other states:[1]
  - White – 87.5%
  - Black – 8.5%
  - Hispanic or Latino – 3.9%
  - Asian, Hawaiian, Pacific Islander – 1.9%
- Kentucky has a higher population of veterans (7.2%) than the U.S. (6.9%).[2]
- Six percent of Kentuckians speak a language other than English at home, compared to 22.0% in the U.S.[3]
- The current population in Kentucky has grown 3.0% in the last 10 years.[4]

[1] U.S. Census Bureau QuickFacts, Kentucky, Unites States, population estimates, July 1 2019.
[2] U.S. Census Bureau. Chart Survey/Program: 2019 ACS 1-Year Estimates Subject Tables, Table S2101.
[3] U.S. Census Bureau. Chart Survey/Program: 2019 ACS 1-Year Estimates Subject Tables, Table S1601.
[4] U.S. Census Bureau. Percent Change in Resident Population for the 50 States, the District of Columbia, and Puerto Rico: 2010 to 2020.

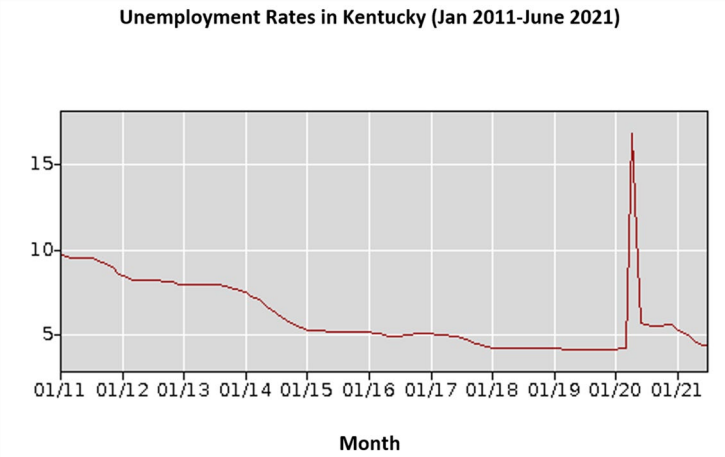
Housing

- 9.0 per 10,000 households (4,011 people) in Kentucky are homeless family households – either sleeping outside, sleeping in emergency shelters or staying in transitional housing programs.[1]
- Nationally, there were 580,466 people experiencing homelessness in America (January 2020). Most were individuals (70%) and the rest were people living in families with children.[1]

[1] National Alliance to End Homelessness. The State of Homelessness in America 2021.

Economics

- Fifth poorest state in the nation (median household income):[1]
    - Kentucky percentage living below the poverty level – 16.3%
    - US percentage living below the poverty level – 10.5%
- 22% of children in Kentucky live in poverty.[2]
- The average household income in Kentucky is $50,589 (2015-2019).[1]
- Kentucky's unemployment rate is 4.4%, compared to the national average of 5.9%.[3]
- The lack of job security, stable work environment, and ability to provide basic needs can be detrimental to one's physical, mental, and emotional health. The unemployment rate in Kentucky jumped dramatically in 2020 due to the pandemic.[4]



[5]

[1] U.S. Census Bureau, "QuickFacts". *Census.gov/quickfacts*. Retrieved 5 August 2021.
[2] Annie E. Casey Foundation. KIDS COUNT data center. Children in Poverty, 2019.
[3] US Bureau of Labor Statistics. Local Area Unemployment Statistics.
[4] Healthy People 2030, Employment. Employment - Healthy People 2030 | health.gov.
[5] U.S. Bureau of Labor Statistics. Unemployment Rate. Bureau of Labor Statistics Data (bls.gov). Retrieved 13 September 2021.

Aging

- In 2019 there were 1,041,850 persons aged 60 and older in the Commonwealth, the largest age group in Kentucky, comprising 23% of the total population. This is projected to increase to 26.8% by 2040. [1]
- Kentucky ranks 45th in health outcomes for seniors.[2]

[1] Kentucky State Data Center. University of Louisville. Data provided by Kentucky Department for Aging and Independent Living.
[2] United Health Foundation. *America's Health Rankings Senior Report 2021.*

Disability

- As of 2018, 17.3% of Kentuckians living at home qualify as disabled.[1]
- Among the types of disabilities, the highest employment rate was for people with a "Hearing Disability". The highest percentage of not working but actively looking for work was for people with a "Cognitive Disability".[1]
- Kentucky ranks fourth in the nation for persons ages 65 and over with a disability.[2]

[1] Cornell University. Disability Statistics – 2018 Disability Status Report Kentucky.
[2] Kentucky Institute for Aging. The State of Aging 2015 Report of the Institute of Aging.

Educational Achievement

- In 2019, 10.3% of Kentuckians had achieved an advanced college degree.[1]
- Only 14.9% of Kentuckians have a bachelor's degree.[1]
- At least 20% of Kentuckians have had some college credits.[1]
- 12.8% of all Kentuckians have not graduated from high school.[1]
- In 2013, the Kentucky legislature amended KRS 159.010, to raise the compulsory school attendance age to 18. Implementation has been in effect in all districts since 2017. Kentucky's graduation rate is 90.3%, which is third in the nation. High school graduation racial gap decreased 30% between 2017 and 2018 from 14.2 to 9.9 percentage points.[2]

[1] US Census Bureau. *data.census.gov.* 2019 American Community Survey 1-Year Estimates.
[2] United Health Foundation. *2020 America's Health Rankings Report.*

Access to Healthcare

- Kentucky's uninsured rate is 5.7%, while the national average of uninsured persons per state is 8.8%.[1]
- 27% of Kentuckians are covered by Medicaid.[2]
- There are an estimated 270.1 primary care physicians for every 100,000 Kentuckians.[3]

[1] US Census Bureau. *data.census.gov. 2019 American Community Survey 5-Year Estimates.*
[2] Kaiser Family Foundation. *kff.org. Medicaid State Fact Sheets October 2019.*
[3] United Health Foundation. *2020 America's Health Rankings Report.*

Maternal and Child Health

- From 2016 to 2019, the infant mortality rate in Kentucky declined from 6.3 to 5.0 per 1,000 live births.[1,] The national rate was 5.7 in 2018.[2]
- The infant mortality rate among black infants (10.8 per 1,000 livebirths) was nearly twice the infant mortality rate of white infants (6.1 per1,000 live births).[3]
- The rate of Neonatal Abstinence Syndrome (NAS) is 23.9 per 1,000 newborn hospitalizations, more than three times higher the national rate (7.3).[4]
- The percent of Kentucky women who smoked during pregnancy has declined from 19.5% to 15.0% (2015 to 2019).[5] However, this is more than double the 2019 US rate of 6%.
- Kentucky ranks 6th worst in the nation for obesity among high school students in 2019.[6]

[1] Centers for Disease Control and Prevention. National Center for Health Statistics. Kentucky Infant Mortality Rate.

[2] Centers for Disease Control and Prevention. Maternal and Infant Health. Infant Mortality Rates.

[3] March of Dimes. Infant mortality rates by race/ethnicity: Kentucky 2016-2018 average.

[4] HCUP Fast Stats. Healthcare Cost and Utilization Project (HCUP). August 2020.

[5] Annie E. Casey Foundation. KIDS COUNT data center. Births to mothers who smoked during pregnancy in the United States.

[6] Robert Wood Johnson Foundation. *State of Childhood Obesity.* 2019.

Access to Food and Food Insecurity

- 13.7% of Kentucky households report food insecurity – defined by the US Department of Agriculture as a measure of lack of access, at times, to enough food for an active, healthy life for all household members.[1,2]
- 17.9% of Kentucky children are food insecure (179,030 children).[2]
- 11 Kentucky counties have childhood food insecurity rates of 30% or higher.[2]

[1] Economic Research Service/USDA. *Household Food Security in the United States in 2019, ERR-275.*

[2] Feeding America. 2019 Map the Meal Gap. Child Food Insecurity in Kentucky: Before COVID-19.

Successes with Improving Health

This plan focuses on improving the health of Kentucky and thus areas for improvement, but we would be remiss if the report did not mention a few of our many successes. More details are provided in the section, "Focus Areas for Improving Health of Kentuckians." For example:

- The legislature authorized harm reduction syringe exchange programs with local approval by boards of health and local government to curb the spread of associated infectious diseases. As of July 2021, there were 74 Syringe Services Program sites operating in 64 Kentucky counties.
- As of May 2021, over 95% of Kentucky students attend tobacco-free school districts.
- Kentucky has 64 communities with adopted pedestrian and bicycle plans, 57 separate Safe Routes to School projects, and 24 communities designated as Trail Towns.
- In Kentucky, by law, all schools are required to provide drug abuse prevention education.
- Kentucky had increased or maintained the number of preventive screenings (e.g., dental visits, cervical cancer, breast cancer, colorectal cancer) performed among Medicaid enrollees the past several years. This number decreased in 2020 due to the pandemic.

Challenges with Health Behaviors and Health Outcomes

Despite ongoing efforts, Kentucky's health rankings have changed little over the last 30 years according to America's Health Rankings (Figure 1). The state has ranked 40th or below in America's Health Rankings for 29 of the last 30 years; in 2020, Kentucky ranks 46th for health outcomes. In the area of health outcomes, Kentucky ranks high in multiple chronic conditions, high for preventable hospitalizations, and high in smoking (Table 1). Changing the deeply ingrained health culture to one that emphasizes preventive care has been a challenge; however, progress has been steadily achieved.

The 2019 Kentucky Behavioral Risk Factor Surveillance System (KyBRFS) demonstrates the following:

- 23.6% of adults are current smokers, which ranks 49th overall. The national average is 16.0%.
- 32.8% of adults report physical inactivity, which is 6.5% greater than the national average.
- 17.2% of Kentuckians report having experienced more than 14 days of poor mental health in the last 30 days, as compared to 13.8% of adults reporting poor mental health nationally.

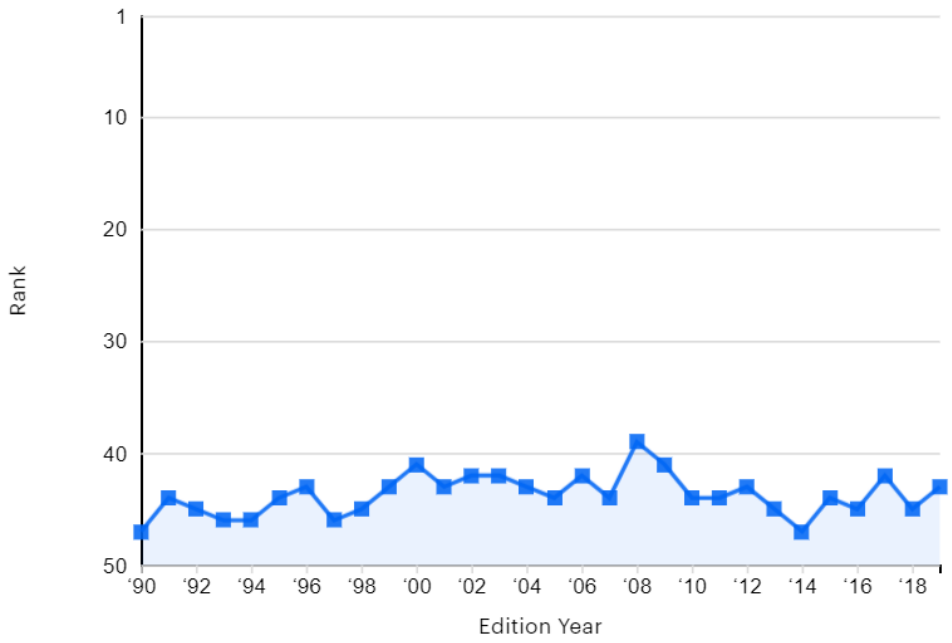


Figure 1. Kentucky's Overall National Health Ranking reported from America's Health Rankings (1990-2019).

While most of Kentucky's average health outcome rates are far below the national average, data from the 2019 KyBRFS shows that Kentuckians with lower educational achievement (less than high school completion vs. college graduate) and with lower annual income (less than $25,000 annual household income vs. $50,000 or more) suffer from:

- More than two times higher rates of diabetes;
- Three times the rate of coronary artery disease;
- Over four times higher rates of poor health habits (e.g., smoking);
- One and a half times higher rates of depression; and
- Double the rate of adults who report more than 14 days of poor mental health days in the past 30 days.

These numbers are troubling considering that Kentucky is home to seven of the 30 counties in the nation with the lowest median annual household incomes.[1] Approximately 24% of Kentucky children live in households with income below the national poverty level and 11% live in extreme poverty meaning that they live in a household with income 50% of the poverty level.[2]

As is true in many states, Kentucky has been affected by the substance use disorder epidemic. The Kentucky Office of Drug Control Policy states more than 1,964 Kentuckians died from drug overdoses in 2020. That's a 49% increase from 2019. Nationally, more than 93,000 people died from drug overdoses in 2020, which represents the highest number of overdose deaths ever recorded in a 12-month period.[3] In a 2016 report, the CDC named 220 counties in the United States that are at-risk for a rapid HIV outbreak related to injection drug use. Kentucky, primarily in the eastern portions, is home to 54 of those 220 counties.

The pandemic has affected Kentucky, and its impact on associated health behaviors and outcomes will be monitored for years to come.

[1] U.S. Census Bureau. Small Area Income and Poverty Estimates (SAIPE) Program, SAIPE State and County Estimates for 2019.
[2] 2021 KIDS COUNT Data Book, The Annie E. Casey Foundation.
[3] Kentucky Office of Drug Control Policy (KY-ODCP) and KY-ASAP 2020 Combined Annual Report, 2020 Final Annual Report.pdf (ky.gov).

Ranking	Measure	Values from 2020 Report
Substance Use Disorder		
15th	Illicit Drug Use – Youth	7.3% of children aged 12-17
41st	Drug Deaths	29.8 deaths per 100,000
Tobacco		
49th	Smoking – Adults	23.6%
50th	Tobacco Use – Youth	10.2% of children aged 12-17
49th	Tobacco Use – Pregnant Women	17.1% of live births
50th	Cancer Deaths	233.4 per 100,000*
Obesity		
45th	Obesity – Adults	36.5%
48th	Overweight or Obese – Youth	36.9% of children aged 10-17
44th	Persons Diagnosed with Diabetes	13.3%
48th	Physical Inactivity – Adults	32.8%
43rd	Breastfed	21.1% of infants
Adverse Childhood Experiences		
39th	Adverse Childhood Experiences	17.8% of children aged 0-17
44th	Children in Poverty	23.0%
37th	Infant Mortality	6.7 deaths per 1,000 live births
37th	Low Birthweight	8.9% of live births
47th	Teen Births	27.3 per 1,000 females aged 15-19
8th	Homeless Family Households	3.0 per 10,000 households~
^	Unintended Pregnancies	30.9% of pregnancies
43rd	Food Insecurity	14.7% of households
39th	Have Protective Family Routines and Habits	11.3% of children aged 0-17*
Integration of Health Access		
17th	Primary Care Physicians	270.1 per 100,000
46th	Preventable Hospitalizations	5,509 discharges per 100,000 Medicare enrollees
47th	Premature Deaths	10,082 years lost per 100,000
14th	Lack of Health Insurance	6.4% of total population
29th	Dentists	56.9 per 100,000

Table 1. Examples of Kentucky Rankings from America's Health Rankings Report (2020)

* = United Health Foundation. *2019 America's Health Rankings Report.*

~ = United Health Foundation. *2018 America's Health Rankings Report.*

^ = Data unavailable

Connecting to the Community

On March 22, 2017, the Kentucky Department for Public Health (KDPH) convened a meeting of stakeholders inclusive of public health advocates and a varied group of citizens. The attendees included representatives from local health departments, colleges and universities, professional organizations, faith-based organizations, mental health community, legislators, civic groups, managed care organizations, non-profit organizations, and hospital organizations. The goal of this meeting was to present the 2017 State Health Assessment Update (SHA) and to develop goals for this State Health Improvement Plan (SHIP).

This meeting was facilitated by Angela Carman, DrPH, Associate Dean for Practice and Workforce Development with the University of Kentucky College of Public Health, and included an overview of Public Health 3.0, which sought to engage multiple sectors and community partners to generate collective impact and improve social determinants of health. Dr. Carmen presented a review of the Community Health Improvement Plans (CHIPs) that Kentucky local health departments have adopted to help assure alignment between state and local goals. The most recognized strategic initiative in the CHIPs was substance use disorder followed closely by obesity. KDPH then provided a presentation on Adverse Childhood Experiences and the data supporting the SHA.

All stakeholders divided into smaller workgroups to review the data and collectively determine what critical areas Kentucky should focus our resources on to improve health outcomes. Each workgroup presented to the assembly. After a dynamic discussion, the larger assembly identified five priorities through collective impact:

- Substance Use Disorder
- Tobacco
- Obesity
- Adverse Childhood Experiences
- Integration to Health Access

Additionally, the group identified five underlying topics that were interwoven throughout each of the five priority focus areas. Although these *fabric issues* emerged as secondary priorities, each could stand alone as a priority because of their inter-connectedness with each of the broader focus areas. Workgroups related their own goals and strategies back to these fabric issues:

- Data Collection and Analysis
- Health in All Policies
- Economic and Community Engagement/Development
- Environmental Health
- Mental Health

Before dismissing, workgroups outlined their strategy for developing these focus areas to provide goals and measurable strategies that Kentucky can achieve in the next five years. For the next three months, these stakeholders participated in routine in-person and telephone conferences and prepared goals, strategies, and measurements that support the five focus areas. The Kentucky SHIP Committee used the information from these sessions to produce this document.

The workgroups presented a thorough understanding of each of their focus areas and developed significantly more content than could be presented in the SHIP. The information on these individual focus topics were of such importance, the SHIP Committee recommended that each workgroup produce a supporting document for each of their focus areas that will separately support the work being done in the commonwealth currently, analyze more data to support that work, and discuss initiatives needed to improve our health outcomes.

Over the past several years workgroups met, selected indicators, developed work plans and activities, and updated one another on the status of goals, strategies, and measures. There were successes and challenges in both the process and the goals/strategies. It was not always easy for workgroups to meet due to competing priorities. New information and opportunities have led to the revision of several measures as well as the achievement of milestones which can be seen in the "Areas of Focus to Improve Health Outcomes" section of this document; progress from each group is reflected in this revised SHIP.

A summary of the "Planning with Partners to Improve Kentucky's Health" meeting can be found by visiting: https://chfs.ky.gov/agencies/KDPH/Documents/KDPHPlanningwithPartners.pdf.

State Health Assessment

In 2013, KDPH completed a comprehensive state health assessment (SHA). More than 1,300 Kentuckians responded to an electronic survey, which served to identify Kentucky's priority health issues. The top ten health issues perceived were access to care, obesity, drugs and alcohol, cancer (all kinds), tobacco use, mental health, diabetes, maternal and child health, heart disease and stroke, and physical activity.

In 2017, KDPH released a SHA Update. This data stands in support of the 2013 assessment in many areas. However, several emerging health issues have been identified and require further analysis. One such example is rising rates of hepatitis C infection. The 2017 State Health Assessment Update may be found at: https://chfs.ky.gov/agencies/KDPH/Documents/The2017KentuckyStateHealthAssessmentUpdate31517.pdf.

Over the next couple of years, a new state health assessment process is expected to begin. However, data has been gathered regularly by the workgroups to inform progress on strategies in between cycles. The new data relevant to initiatives is highlighted within this document.

Health Equity as a Framework

Social determinants of health (SDOH) are defined in Healthy People 2030 (HP2030) as "the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks."[1]

SDOH include economic stability, education access and quality, health care access and quality, neighborhood and built environment, social and community context, and other factors as shown in Figure 2. Health literature has effectively demonstrated the association between SDOH and adverse health outcomes. Achieving health equity will require addressing these SDOH through population-based and targeted methods focused on the areas with the greatest need. Targeting disparities and inequities among the SDOH provides an opportunity to greatly improve the commonwealth's overall health.

Health equity is defined as "…the attainment of the highest level of health for all people."[2] To accomplish this, we must strive to eliminate the inequities, which are unfair, or unjust differences in health outcomes between populations based on race, ethnicity, gender, income, locality, or other social conditions. These inequities are often rooted in social injustices, both conscious and unintentional, which render individuals and populations vulnerable to adverse health outcomes.

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social Integration	Health Coverage
Income	Transportation	Language	Access to Healthy Options	Support Systems	Provider Availability
Expenses	Safety	Early Childhood Education		Community Engagement	Provider Linguistic and Cultural Competency
Debt	Parks	Vocational Training		Discrimination	
Medical Bills	Playgrounds				Quality of Care
Support	Walkability	Higher Education			

Health Outcomes

Mortality • Morbidity • Life Expectancy • Health Care Expenditures • Health Status • Functional Limitations

Figure 2. Social determinants of health. Adapted from the Kaiser Family Publication regarding the SDOH, found by visiting: Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity | KFF

Introduction

Traditional approaches to improving health outcomes have focused on providing everyone with the same resources and healthcare services. Emerging evidence and trends have shown that not all populations benefit from this "one size fits all" approach. Social shifts promoting increased interest and emphasis on health equity have occurred. Population-based strategies that account for the unique differences within populations and communities are more effective for improving public health.[2] Using an equity framework to address the SHIP focus areas is a tool that will help ensure that all Kentuckians have an opportunity to live long, healthy, and productive lives regardless of income, education, gender, or race/ethnicity. The Kentucky Department for Public Health and stakeholders have recognized the relationship between equity and health outcomes and are committed to reducing social inequities in each of the five focus areas.

Many opportunities exist in Kentucky to promote health equity. Socioeconomic factors, such as extensive poverty and poor educational achievement, along with other social indicators such as access to care and food insecurity, provide opportunities to create a culture of health in all communities across the commonwealth.

Achieving health equity for the diverse communities across the state is possible. KyBRFS and other data sources have identified existing disparities among diverse populations defined by race and ethnicity, gender, and geography. Policy and practices at the institutional and organizational levels also impact inequities and must be included in efforts to improve health and health outcomes.

Public health has historically addressed health disparities by focusing on the risk factors for disease and conditions using the medical model as the context. Using a **Framework of Health Equity** (Figure 3) shifts the focus to social factors such as schools, neighborhoods, workplaces, gender, and class. The **Framework of Health Equity** provides a structure to focus on social and ecological factors as major contributors that impact our health and health outcomes. This **Framework of Health Equity** will serve as the lens through which each priority focus area is examined.

Substance Use Disorder

Like much of the nation, Kentucky is affected by the substance use disorder epidemic. In 2020, over 1,900 Kentucky deaths were reported due to overdose (a 49% increase)[3] and more than 12,800 survived an overdose event.[4] Despite education and awareness efforts, increase in harm reduction strategies, and many other efforts these numbers continue to increase.

SDOH such as low socioeconomic status, unemployment, no social cohesion, and hopelessness have been linked to the development and propagation of substance abuse. In addition, research also observes that geographic location, poverty, and educational attainment are associated with this pervasive disorder. These inequities must be addressed if we are to truly impact the opioid and substance use disorder epidemic in the state.

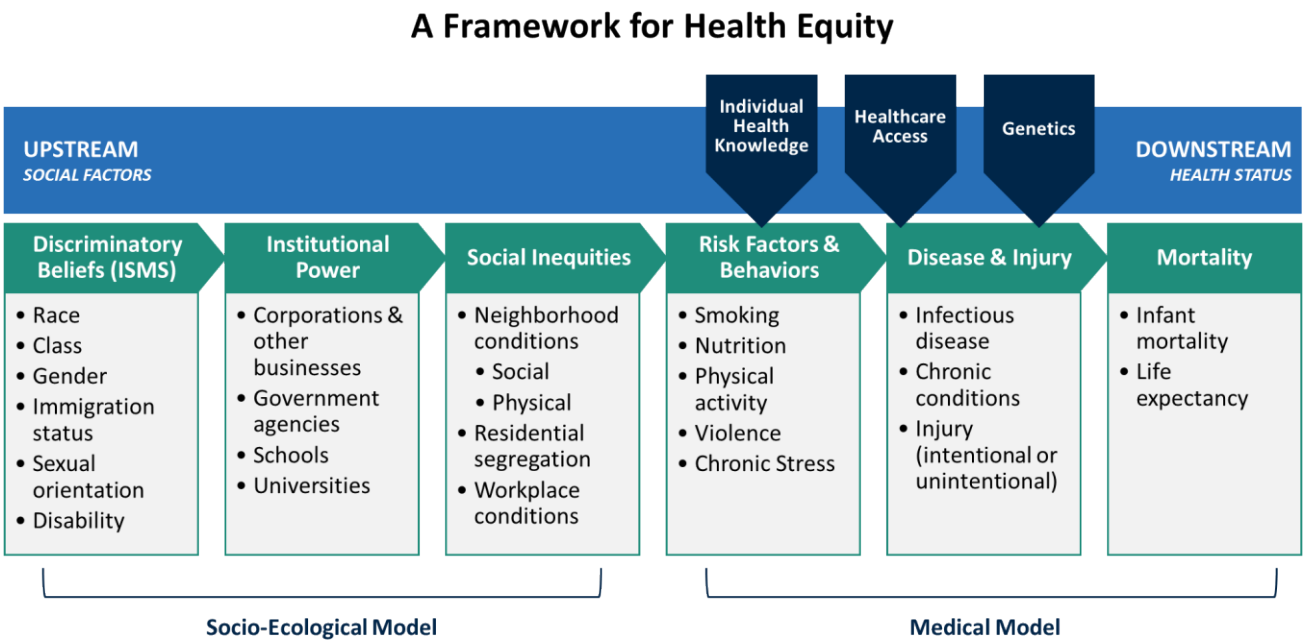


Figure 3. Framework for Health Equity adapted by ACPHD from the Bay Area Regional Health Inequities Initiative (Summer 2008).

Tobacco

Disparities also exist in tobacco use among racial ethnic groups in Kentucky. Black residents initiate smoking sooner, and although the prevalence of cigarette smoking did not significantly differ by race from their white counterparts, they are more likely to die from smoking related diseases.[5,6,7] Persons in Appalachia when compared to non-Appalachian residents are also disproportionately impacted having higher mortality rates from lung cancer and other smoking related diseases.[7,8] Addressing these inequities through evidence-based interventions will help reduce the morbidity and mortality from tobacco use and exposure in these disparate populations. Children in Kentucky who experience adverse childhood experiences (ACEs) are more likely to use tobacco as adults.[6] Prevention and cessation strategies must account for the unique challenges, assets, and intersections of identities within Kentucky populations disproportionately impacted by tobacco.

Socioeconomic status is highly associated with smoking prevalence. Low-income adults and adults with low educational attainment are more likely to be current smokers and less likely to have successful quit attempts.[6,9] In Kentucky, the prevalence of cigarette smoking among adults with an annual household income below $25,000 is 38.4%, compared to 15.2% for those with an income of $50,000 or more. The smoking rate among adults with less than a high school education is 38.9%, compared to 8.9% among college graduates.[6]

Significant disparities in smoking prevalence also exist between lesbian, gay, bisexual and transgender (LGBT) individuals and their heterosexual counterparts. In Kentucky, the smoking prevalence among the LGBT population in 2014 was 43.7%, compared to 25.8% among heterosexual individuals.[10]

Obesity

Although obesity impacts the entire commonwealth, it disproportionately affects some populations more than others. Residents in eastern Kentucky, persons with intellectual and developmental disabilities (IDD), and racial and ethnic minorities experience an increased burden. Inequities related to food insecurity, food deserts, lack of walkable communities, mobility status, and safety are all social indicators widening the disparity gap among certain geographical areas and populations within the state. Many of our communities in eastern Kentucky as well as Black and Hispanic populations throughout the state have limited access to care, limited income, and other barriers that place them at greatest risk for poor health outcomes related to obesity. Policies, institutional and structural barriers, and social norms that impact these communities need to be addressed if a cultural shift is to occur providing a more equitable and healthier place for disadvantaged individuals to live. Obesity prevention efforts in Kentucky's communities include various multi-sector approaches, such as CDC evidence-based strategies.

Adverse Childhood Experiences

Adverse childhood experiences (ACEs) are stressful or traumatic experiences occurring before age 18 that disrupt the safe and nurturing environments that children need to thrive. Social, economic, and cultural factors can widen the disparity gap in populations affected by ACEs. Research has shown an association between ACEs and health-related risk behaviors such as substance use disorder, tobacco and alcohol use, pregnancy and paternity before age 20, and eating disorders. Additionally, health outcomes such as cardiovascular disease, obesity, diabetes, cancer, and even premature death have been tied to ACEs.[11] Current research is examining the impact of ACEs in youth that are in the juvenile justice, education, and foster care systems. Current findings suggest a disproportionate impact based on race, gender, and socioeconomic status. Though ACEs are a relatively new focus in the public health field, there are many opportunities to prevent and mitigate ACEs to reduce morbidity and mortality within the Commonwealth and build resiliency. New research is exploring the effects of Positive Childhood Experiences that encourage the Science to Thrive, countering ACEs and their effects.

Integration to Health Access

SDOH and equity are pressing issues related to health access. Our Kentucky team's working definition of integration to health access is "to ensure all Kentuckians have access to integrated medical, dental, behavioral, and social services to improve and maintain their health through the development of coordinated, multi-disciplinary systems of care." Resources such as transportation, the ratio of health care professionals, and the number of health care facilities must be considered on both micro and macro levels. To accomplish the goal of access to integrated healthcare, a multidisciplinary approach is required. The population must know how to obtain the

care they need—where to go, the type of insurance plan and benefits available to them, and how to use their insurance. Additionally, we cannot dismiss the importance of building community trust with healthcare providers as well as health systems. Establishing those relationships among the people who live and work in a community is critical to improving access and enabling everyone to be a key agent of change, improving not only their health, but the health of their community. The identification of community leaders to work with both traditional and non-traditional health care delivery systems can help to create innovative and targeted solutions.

As a result of Affordable Care Act, Medicaid was expanded in many states including Kentucky. There were many positive impacts. An expansion of covered individuals occurred but where to seek care, the benefits they receive, and use of their coverage presented some challenges. There are still some that have not sought coverage even with the expansion. Some Kentuckians find themselves making too much income to qualify for expanded Medicaid, but not enough income to adequately afford insurance premiums in addition to regular living costs.

Summary

For each focus area above, we examined the underlying SDOH, which may be found in the preceding subsections and are summarized in Figure 4 below.

Substance Abuse	Smoking	Obesity	Adverse Childhood Experiences	Integration to Health Access
Income	Education	Income	Social Support	Transportation
Education	Access to Care	Education	Income	Income
Access to Care	Income	Cultural Factors	Housing	Access to Care
	Race/Ethnicity	Access to Healthy Food	Race/Ethnicity	Education
	Healthy Food	Gender		
	Built Environment	Race/Ethnicity		
		Built Environment		

Figure 4. Social determinants of health as defined in the five focus areas of the SHIP.

[1] Healthy People 2030, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved September 8, 2021, from https://health.gov/healthypeople/objectives-and-data/social-determinants-health.
[2] U.S. Department of Health and Human Services. "The Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020. Phase I report: Recommendations for the framework and format of Healthy People 2020. Section IV. Advisory Committee findings and recommendations." (2008). https://www.healthypeople.gov/sites/default/files/PhaseI_0.pdf Accessed August 17, 2017.

[3] Kentucky Office of Drug Control Policy (KY-ODCP) and KY-ASAP 2020 Combined Annual Report, 2020 Final Annual Report.pdf (ky.gov).
[4] Steel, M., Merzke, M., Farrey, A., Liford, M. (2021). Kentucky Resident Emergency Department Admissions for Nonfatal Drug Overdoses, 2016–2020. Kentucky Injury Prevention and Research Center.
[5] Kentucky Youth Risk Behavioral Survey (YRBS). Kentucky High School Survey, 2019.
[6] Kentucky Behavioral Risk Factor Surveillance System (KyBRFS), 2018.
[7] Kentucky Cabinet for Health and Family Services and Kentucky Personnel Cabinet. The 2019 Diabetes Report. Frankfort, KY: KY Cabinet for Health and Family Services, Department for Medicaid Services, Department for Public Health, Office of Health Data and Analytics, and KY Personnel Cabinet, Department of Employee Insurance, 2019.
[8] Age-Adjusted Cancer Mortality Rates by County in Kentucky, 2014 - 2018. Based on data released July 2021. Kentucky Cancer Registry: Cancer Rates Info. Retrieved Aug 18, 2021, from http://cancer-rates.info/ky/.
[9] Gilman, S. E., Abrams, D. B., & Buka, S. L. (2003). Socioeconomic status over the life course and stages of cigarette use: initiation, regular use, and cessation. Journal of Epidemiology & Community Health, 57(10), 802-808.
[10] Kentucky Behavioral Risk Factor Surveillance System (KyBRFS), 2014.
[11] The Adverse Childhood Experiences (ACE) Study; Centers for Disease Control and Prevention. Retrieved Nov. 4, 2016.

Fabric Issues

During the March 2017 "Planning with Partners to Improve Kentucky's Health" symposium, stakeholders identified five focus areas for improving the health of Kentuckians. These five domains were included in the State Health Improvement Plan (SHIP). In addition, five *fabric issues* were also identified for attention. These issues consistently recurred during the conversation and were woven directly into each of the focus areas such that, to accomplish the five focus area goals, investigation of the fabric issues must also be undertaken.

Access to Data Collection and Analysis

Rapid advances in technology and the increasing need to validate programs has led to exponential growth in data collection, storage, and interpretation in relation to healthcare applications. The value of representative and accurate data and the ability to perform meaningful analysis is vital to inform policy and regulation. Realizing the importance of this issue, the Cabinet for Health and Family Services (CHFS) is undertaking the merger of numerous databases to improve policy and program planning and to determine outcomes accurately.

Using technology to post dashboards of data, such as the dashboards planned for this SHIP, will allow governmental staff, policy partners, and the public to access the data with greater ease. Annual data review and analysis related to the five focus areas of the SHIP will help identify trends and gaps in data and achievement and will help inform partners through multiple communication methods. Many of the desired measures in each focus area currently do not have an established baseline, which emphasizes the need for focused data gathering, sharing, and monitoring.

The CDC has amassed a comprehensive database of adult obesity rates, physical activity, and nutritional habits of adults using the information from the annual KyBRFS telephone survey. The Youth Risk Behavior Survey (YRBS) collected by the Kentucky Department of Education (KDE) samples middle and high school students on similar data points. These data sources are critical to decision making in the state, but do not provide the level of granularity that is necessary to fuel change.

Data sources related to the substance use disorder (SUD) crisis in Kentucky have advanced rapidly, which reflects the severity of Kentucky's crisis. The Kentucky Injury Prevention and Research Center (KIPRC) has worked with the Justice Cabinet Office of Drug Policy to analyze data surrounding the state's SUD crisis. The Kentucky All Schedule Prescription Electronic Reporting (KASPER) tracks all controlled substances prescribed in Kentucky and can analyze morphine milligram equivalent dose (MME), prescribing by medical specialty and geographic area. The Kentucky Neonatal Abstinence Syndrome Registry can be cross-referenced with the Childhood Fatality Review to determine locations in need of more resources to prevent infant death. The Kentucky Maternal Mortality Review Committee has determined that the leading cause of death

of pregnant or women who had delivered within one year was an SUD factor. Yet, more information is needed to develop predictive modeling of at-risk areas to shape policy and target interventions. The CDC also has a robust database for tobacco use in Kentucky gathered via KyBRFS and YRBS.The Kentucky Tobacco Quitline has a data collection component to evaluate use and successful quit attempts, but more information from the public is not tracked.

Health in All Policies

In order to change our culture to one focused on health, it is critical that we emphasize that health is the foundation of all activities, policies, and regulations. Health is interwoven in all activities of a person's life—work, play, eating, and sleeping. Some examples of health-focused policy include smoke-free workplaces, opportunities for physical activity and the environment to safely move, childcare with comprehensive staff training, healthy nutritional options, and the knowledge to appropriately access quality health care.

Economic Development and Community Engagement

Kentucky's SHA demonstrated a correlation between lower income levels and increased prevalence of chronic disease and poor health habits. Communities with a lower economic status are unable to focus resources on programs aimed to improve health outcomes; rather these communities apply their limited resources to more immediate obstacles. This creates a vicious cycle in which preventable problems multiply.

Environmental Health

Science continues to link our health and wellbeing to the surroundings where we live, work, and play. A healthy society cannot be expected to prevail if it does not have clean air, good water quality, lack of environmental contaminants, or if its surroundings are unsafe or improper for physical activity. It is necessary that we evaluate our state's environment and ensure that it is conducive to developing and maintaining a healthy population.

Mental Health

Mental health is a foundational area for all five of the focus areas. Tobacco use and substance abuse disorder incidence is greater in those with mental health disorders. Obesity is often a symptom of underlying depression and results in poor self-esteem. Moreover, obesity may be the side effect of mental health treatment medication. As noted in the Adverse Childhood Experiences focus area discussion, stresses occurring during childhood have profound and lasting negative mental health effects. Sadly, many with health coverage do not know how to use such benefits to seek mental health care. Mental health and its associated sequelae must be at the forefront of our approaches to remodeling healthcare and healthcare access in the commonwealth.

Areas of Focus
to Improve Health Outcomes

Substance Use Disorder

Kentucky has been heavily afflicted by the substance use disorder (SUD) crisis, which is affecting much of our country. Along with Pennsylvania, Ohio, Tennessee, and West Virginia, Kentucky was one of the first states in which this indiscriminate disease reached epidemic proportions. No part of the commonwealth is unaffected, but northern and eastern Kentucky, especially rural communities, have been most plagued.

The pandemic was likely a contributing factor in the rise in overdose deaths across the United States and in Kentucky. The interruption of routine for those in recovery, the sense of isolation, economic concerns, and anxiety all contributed to the dramatic increase use. The drug supply in Kentucky morphed during this pandemic time to include fentanyl at levels never seen before. An opioid was involved in 90% of all deaths, and fentanyl was detected in more than 70% of all cases in Kentucky and nationwide. The overdose increase was also exacerbated by the widespread availability of potent inexpensive methamphetamine.[1]

In 2020, Kentucky had over 1,900-overdose deaths, a 49% increase from 2019.[1] One of the goals of HP2030 is reduction of drug-induced deaths. Addressing this epidemic is a top priority across all levels of Kentucky's infrastructure. While great strides have been made, the drug overdose epidemic is worsening. Close coordination between Public Health, Behavioral Health, Medicaid, Community Based Services (all Departments in CHFS) and the Justice Cabinet through KORE (Kentucky Opioid Response Effort) has leveraged federal funding to "seek to expand and sustain a comprehensive, equitable recovery-oriented system of care to end the opioid epidemic that has reached into every community in Kentucky" (https://chfs.ky.gov/agencies/dbhdid/Pages/kore.aspx).

The Substance Use Disorder (SUD) Workgroup developed a three-pronged approach to assess goals and strategies necessary to ending this crisis. Three subgroups of team members from across the state were developed to focus attention on this three-pronged approach. These include:

Prevention
Harm Reduction
Treatment

Many of our measures do not have a baseline as these areas have not been addressed in the past. There is an emphasis in monitoring these areas as an opportunity for data collection and establishing baselines for future goals.

Data

The Kentucky SUD data are staggering and the cost to human life and wellbeing is severe.

- Tenth highest number of deaths due to drug injury in 2018.[2]
- In 2019, there were 1,102 cases of babies with signs and symptoms of Neonatal Abstinence Syndrome (NAS); this was an increase from 2018. Rates are highest in Appalachian areas of the state. Mothers of infants with NAS tend to have less education, be unmarried, and have more children, which may suggest lower socioeconomic status, a lack of social support, or reduced access to services. Infants with NAS are twice as likely to have a low birth weight and three times as likely to be admitted to a neonatal intensive care unit.[3]
- Of the nonfatal drug overdose ED visits for 2020, the top payer type was Medicaid, followed by Commercial, Medicare, and self-pay or charity.[4]

Successes

The SUD crisis has infiltrated our population indiscriminately. All economic and social strata are afflicted. The magnitude of this crisis has led to new alliances and partnerships. Our legislature has passed innovative and strong legislation to help reverse this problem.[5]

- Kentucky now has laws to eliminate the proliferation of "pill-mills" that allowed excessive prescribing of opioids in non-quality medical settings.
- The legislature authorized harm reduction syringe service programs (SSPs) with local approval by boards of health and government to curb the spread of associated infectious diseases and offer those with SUD to be closer to the network of care and treatment options.
- New statutes were written that increased funding for the availability of intense outpatient and inpatient treatment for SUD.
- The number of SUD inpatient facilities for pregnant and parenting women with children has increased fourfold.
- Commonly known as a "Good Samaritan Law," the legislature enacted a statute that protects people from prosecution when they report a drug overdose. Calling 911 during an overdose can mean the difference between life and death, but some witnesses had

avoided calling due to fear of arrest.

- Kentucky Medicaid approved payment for peer support specialists to work with patients to give assistance to those with SUD.
- Increasing numbers of physicians have obtained a license to prescribe buprenorphine to offer Medication for Opioid Use Disorder (MOUD).
- The number of Kentucky methadone clinics has doubled and is covered by Kentucky Medicaid.
- The Justice Cabinet is offering extended-release naloxone to inmates prior to release and planning case management to get them MOUD and into mental healthcare after release.
- Data collection techniques are continuing to strive for real-time information to guide future initiatives.

Challenges

Harm reduction strategies are becoming more accepted and employed throughout the commonwealth. As a result, we are experiencing improvement in some outcomes associated with intravenous drug abuse. However, these programs are not universally accepted. Gaining buy-in remains a challenge.

Funding, from both public and private entities, has increased to help fight this epidemic. Kentucky Medicaid has increased funding for addiction treatment, but more is needed. Naloxone distribution has been very successful in Kentucky. However, the program needs more funds to meet the state's needs.

The progression from prescribed opioids to illegal street drugs is a growing problem now that physicians have begun diminishing the prescribing of opioids over the last five years. A growing partnership with law enforcement agents is necessary to both raise awareness and end the sale of these deadly drugs in Kentucky.

Opportunities

The Commonwealth of Kentucky will continue to work toward enhancing the availability of prevention, harm reduction, and treatment for all citizens.

- Operation UNITE was launched in April 2003 to combat SUD.
- The "Don't Let Them Die" campaign was launched which allowed multiple organizations to receive high visibility as they developed new and innovative means to reach the SUD population as well as their families/friends. Now discontinued, the campaign ran 2017-2018. Hope and Help KY followed that with radio, TV, print, and digital adds and ended in 2020 (http://hopeandhelpky.com/).
- There was $32 million dedicated to address the opioid epidemic in the biennium budget.
- FindHelpNowKY.org, a patient treatment locator website, was launched in January 2018 to work in conjunction with the Naloxone Locator website. This allows the person with SUD,

the public (family/friend), and healthcare providers to search for availability of SUD care in real time for someone who has reached a moment of clarity and wants treatment now.

- KASPER (Kentucky All Schedule Prescription Electronic Reporting) has linked non-fatal overdose hospital data to a patient's record of controlled substance prescriptions.
- Kentucky received funding from the 21st Century Cures Act to fund the Kentucky Opioid Response Effort (KORE), a multi-cabinet effort to focus on the SUD population of:
    - Pregnant and parenting women
    - Recently incarcerated individuals re-entering society
    - Adolescents
    - Those in a non-fatal overdose setting

[1] Kentucky Office of Drug Control Policy Overdose Fatality Report. 2020 KY ODCP Fatality Report (final).pdf.
[2] United Health Foundation. *2020 America's Health Rankings Report.*
[3] Kentucky Cabinet for Health and Family Services (CHFS). (2020). Neonatal Abstinence Syndrome in Kentucky: Annual Report on 2019 Public Health Neonatal Abstinence Syndrome (NAS) Reporting Registry. NASReport.pdf (ky.gov).
[4] Steel, M., Merzke, M., Farrey, A., Liford, M. (2021). Kentucky Resident Emergency Department Admissions for Nonfatal Drug Overdoses, 2016–2020. Kentucky Injury Prevention and Research Center.
[5] https://odcp.ky.gov/Pages/default.aspx.

Goals, Strategies, and Measures

[PREVENTION] GOAL 1: Promote early childhood education in kindergarten through fourth grade on personal development.

Strategy 1.1: Pilot programs in multiple counties to institute personal development in young children that stress the importance of physical activity, diet, and responsible decisions on avoidance of tobacco and drugs.

Justification: *Prevention begins with strong personal development in children. Many children do not receive such guidance in their home setting (see Adverse Childhood Experiences section). These programs will work to increase resilience in our children.*

Measure 1.1.1: Reduce percentage of total students reporting ever having tried select substances
Baseline: See table below (2015)
Target: Establish target for each substance and decrease (2022)
Data Source: KDPH; YRBS

2021 Status/Comments:
Updated measure, target, and timeline. New baseline established.

Percentage of students reporting ever having tried the following substances:

	2015	2019
Cigarette smoking	44.1%	30.6%
Electronic vapor products	41.7%	53.7%
Marijuana	33.1%	31.9%
Synthetic marijuana	10.3%	6.2%
Cocaine	4.6%	3.5%
Inhalants	7.4%	5.6%
Heroin	3.7%	1.8%
Methamphetamines	3.9%	2.2%
Ecstasy	5.0%	3.6%

Data source for table: YRBS. The only substance which students reported ever having tried that increased was electronic vapor products.

Vaping use has increased dramatically since 2015. Measure in progress.

Other successes: KDPH works with resource prevention centers in Community Mental Health Centers (CMHCs) to train teachers and staff on evidence-based curriculums. Out of the 120 counties in Kentucky, 119 have local Kentucky Agency for Substance Abuse Policy Boards. These boards help fund curriculum and resources.

[PREVENTION] GOAL 2: Decrease non-medical use of pain relievers in Kentucky.	
Strategy 2.1: Promote techniques for private citizens to eliminate unused drugs from their medicine cabinets through in-home destruction programs and expanded take-back programs in police, fire departments, and pharmacies. ***Justification:*** *Easy availability of medications in the home is known to present opportunities that some use to initiate their SUD journey. Removing this easy access can curb the initiation of drug use.*	**Measure 2.1.1:** Increase number of community sponsored drug take-back and in-home medication destruction programs **Baseline:** 198 permanent prescription drug disposal locations in 116 counties (2016) **Target:** Establish baseline and double the number of programs (2022) **Data Source:** Local Kentucky Agency for Substance Abuse Policy (KY-ASAP), Justice Cabinet, Office of Drug Control Policy

2021 Status/Comments:
Baseline established.

As of August 2020, there were 193 locations in 116 counties that were permanent prescription drug disposal locations. The number of locations decreased from the baseline, although the number of counties with locations remained the same. Data source: Kentucky Office of Drug Control Policy (KY-ODCP) and KY-ASAP 2020 Combined Annual Report. Measure in progress.

Other successes: Since October 2011, Drug Take Back events have collected more than 163,000 pounds of unused and unwanted prescription medications.

Strategy 2.2: Enhance education of healthcare professionals on appropriate opioid prescribing. Engage professional boards (medicine, dentistry, nursing) to collaborate in development of in-person and on-line educational opportunities consistent with their specialty organizations. Include techniques to educate the public on realistic expectations of adequate pain control vs pain-free. ***Justification:*** *Thoughtful opioid dispensation has been a focus of national professional organizations as well as the CDC. A statewide effort would strengthen our collective knowledge in those that serve our citizens.*	**Measure 2.2.1:** Increase number of professional organizations that hold conferences (individual and collaborative) with focus on substance use disorder **Baseline:** 0 (2021) **Target:** Establish baseline and initiate at least one statewide conference on opioid prescribing with collaboration among health professional boards (2022) **Data Source:** KDPH; Department for Behavioral Health,Developmental and Intellectual Disabilities (BHDID)
2021 Status/Comments: Baseline established. As of September 2021, Kentucky has hosted a Harm Reduction Summit four times. These summits meet the target. Data source: KDPH. **Other successes**: Centers for Disease Control funding was established to support efforts. A Pharmacist position was hired to provide pharmacy detailings for safe opioid prescribing. Stakeholders and professional organizations interested in participating in conferences focused on substance use disorder have and will continue to be identified.	

[PREVENTION] GOAL 3: Enhance the use of non-opioid pain reduction therapies before prescribing opioids.	
Strategy 3.1: Eliminate barriers to the use of non-opioid therapies for pain management. ***Justification:*** *Research supports the use of alternative therapies (e.g., acupuncture, massage therapy, physical therapy, and meditation) as useful treatment for chronic pain. However, cumbersome authorization of these treatments hinders their use.*	**Measure 3.1.1:** Decrease annual opioid prescriptions for pain per person via KASPER data **Baseline:** 1.10 (2016) **Target:** Decrease by 5% (2022) **Data Source:** Kentucky Office of Drug Control Policy (KY-ODCP) and KY-ASAP 2020 Combined Annual Report

2021 Status/Comments:
Updated measure, target, and timeline. New baseline established. New data source.

The total number of opioid prescriptions dispensed in Kentucky as reported to KASPER continues to decline, with a 2020 per capita rate of 1.01 opioid prescriptions per person. The target has been met.

Other successes: The total number of opioid prescriptions for pain continues to decline as well. Have had conversations with private and employee insurance companies and Kentucky Medicaid MCOs, about the effort to encourage the use of non-opioid therapies for chronic pain management.

[HARM REDUCTION] GOAL 4: Improve experience of patients reporting to Emergency Departments with non-fatal overdose.	
Strategy 4.1: Revise statute that requires physicians that order Human Immunodeficiency Virus (HIV) testing to be responsible for test result notification (KRS 214.181). ***Justification:*** *The culture of Emergency Department (ED) management has changed since this law was written. The intent to assure patient protection with notification for the ordering physician is not practical as ED professionals work in many settings, making this notification impractical. Granting hospitals the authority to notify patients of HIV test results will avail the patient more opportunity to receive needed testing when presenting to the ED with a non-fatal overdose.*	**Measure 4.1.1:** Increase number of HIV and hepatitis C tests ordered on patients with the diagnosis of non-fatal overdose **Baseline:** Unknown (2016) **Target:** Establish baseline and increase by 5% (2022) **Data Source:** Kentucky Health Information Exchange, KDPH

2021 Status/Comments:
Additional data source.

The Statute has been revised and became effective July 1, 2019. The strategy has been met, and the measure is in progress. Data source: KDPH.

Other successes: Developed a Hepatitis A Toolkit for Environmental Health and Best Practices document when Kentucky experienced a Hepatitis epidemic among illicit drug users and the homeless. Hiring Risk Reduction Specialists across the Commonwealth. Whole-genome sequencing (WGS) on Hepatitis C through KDPH's Division of Laboratory Services (DLS) is an ongoing project. DLS has planned

initiatives for both HIV viral load testing and WGS for HIV. Kentucky is included in the CDC "Ending the HIV Epidemic" effort to end the epidemic by 2030. Kentucky received CDC Grant funding for strategic planning for this initiative to enhance rural health proposals. Through the Opioid Crisis Cooperative Agreement, the Viral Hepatitis Program (VHP) was able to hire an epidemiologist to conduct a jurisdiction-level vulnerability assessment to identify Kentucky counties at risk of opioid overdose and outbreaks of HIV/HCV.

[HARM REDUCTION] GOAL 5: Increase the distribution and use of naloxone across Kentucky.	
Strategy 5.1: Coordinate the distribution and data collection of naloxone through one central position in KDPH using funding sources from all levels of state government. Develop technology to promote voluntary reporting of naloxone distribution to patients with SUD, their families and friends, first responders, pharmacists, emergency management, local health departments, hospitals, and EDs. Collect outcome data whenever naloxone is used in the field. ***Justification:*** *The rapid use of naloxone can reduce overdose deaths. Expanding the availability of naloxone to the non-using and using populations promotes reversal of overdose and potential opportunities for receiving SUD treatment.*	**Measure 5.1.1:** Increase naloxone distribution to patients **Baseline:** 67 via mobile events (2016) **Target:** Increase by 5% (2022) **Measure 5.1.2:** Reduce number of overdose deaths **Baseline:** 1,354 (2016) **Target:** 1,284 (2022) – 5% reduction **Measure 5.1.3:** Reduce number of ED visits for non-fatal overdose **Baseline:** 13,190 (2016) **Target:** 12,530 (2022) – 5% reduction ~~**Measure 5.1.4:** Increase number of Mobile Harm Reduction Unit deployments per 6 months~~ ~~**Baseline:** 17 (2017)~~ ~~**Target:** 30 (2022)~~ **Data Source:** KDPH, Mobile Harm Reduction Program and Kentucky Injury Prevention and Research Center (KIPRC); Kentucky Harm Reduction Coalition; KDPH, Office of Vital Statistics; Kentucky Pharmacy Association; Kentucky Office of Drug Control Policy (KY-ODCP) and KY-ASAP 2020 Combined Annual Report
2021 Status/Comments: 5.1.1: Updated measure, target, and timeline. New baseline established. New data source. 5.1.2: Additional data source. 5.1.4: Measure removed due to feasibility.	

5.1.1: In 2016, the number of Narcan units distributed was 67, and in 2020, 408, well above the goal to increase by 5%. Target met. Data source: Kentucky Pharmacy Association.
5.1.2: Overdose deaths of Kentucky residents, regardless of where the death occurred totaled 1,316 for 2019, compared to 1,247 in 2018, an approximate five percent increase, but a decrease from the baseline in 2016. Measure in progress. Data source: Kentucky Office of Drug Control Policy (KY-ODCP) and KY-ASAP 2020 Combined Annual Report.
5.1.3: KDPH has seen a reduction according to data received from KIPRC but will continue to monitor and officially update progress toward target when the SHIP is next updated.
5.1.4: KDPH successfully purchased five additional Mobile Harm Reduction Units. There has been an increase in deployments with the purchase of these, but this measure will now cease. Measure is best captured in the naloxone mobile events and number given in 5.1.1.

Other successes:
5.1.1: KDPH's Division of Public Health Protection and Safety (PHPS) was awarded a $3.2 million dollar award from SAMHSA: Kentucky's Application for the First Responders-Comprehensive Addiction and Recovery Act Grant. Since January 1, 2019 KDPH, in conjunction with Kentucky Pharmacists Association, has conducted more than 40 Harm Reduction Events where more than 2,000 naloxone kits were dispensed, and naloxone/overdose-related training was provided to recipients.

[TREATMENT] GOAL 6: Increase the availability of evidence-based treatment for SUD for all Kentuckians.	
~~**Strategy 6.1:** Encourage the expansion of Medicaid coverage to include methadone therapy as a covered service.~~ ~~***Justification:** Methadone is an evidence-supported therapy for treatment of substance use disorder. Increasing access to methadone therapy may decrease the number of overdose deaths, decrease intravenous drug use and its sequelae, and allow persons with SUD to become functioning members of society.*~~	~~**Measure 6.1.1:** Increase number of patients served in methadone clinics~~ ~~**Baseline:** Unknown (2016)~~ ~~**Target:** Establish baseline and increase by 5% (2022)~~ ~~**Measure 6.1.2:** Increase number of treatment visits in methadone clinics~~ ~~**Baseline:** Unknown (2016)~~ ~~**Target:** Establish baseline and increase by 5% (2022)~~ ~~**Measure 6.1.3:** Increase number of methadone clinics~~ ~~**Baseline:** Unknown (2016)~~ ~~**Target:** Establish baseline and increase by 5% (2022)~~

2021 Status/Comments: 6.1.1: Strategy and measure removed due to feasibility. 6.1.2: Strategy and measure removed due to feasibility. 6.1.3: Strategy and measure removed due to feasibility. This strategy and its measures have been removed as we were unable to determine a baseline and measure these. **Other successes**: The waiver that would allow KDPH to pay for methadone passed in July 2019.	
Strategy 6.2: Encourage the use of paraprofessional providers in the treatment of substance use disorders (i.e., paramedicine technicians, peer support specialists, and community health workers). ***Justification:*** *Utilization of peer networks has been shown to increase entry into treatment.*	**Measure 6.2.1:** Increase number of insurance carriers that cover paraprofessional services **Baseline:** Unknown (2016) **Target:** Establish baseline and increase by 5% (2022) **Measure 6.2.2:** Increase number of paraprofessional services provided **Baseline:** Unknown (2016) **Target** Establish baseline and increase by 5% (2022) **Data Source:** DMS; BHDID
2021 Status/Comments: 6.2.1: A baseline has not been established. Measure in progress. 6.2.2: A baseline has not been established. Measure in progress. **Other successes**: 6.2.1: The number of organizations (and county coverage) that utilize Community Health Workers (CHWs) within and outside of clinical settings are 27 organizations covering 77 counties. As of October 2021, there are 80 certified CHWs. Data source: KDPH, 2021.	
~~**Strategy 6.3:** Improve quality and access to evidence-based medication assisted therapy (MAT).~~ ~~***Justification:*** *Targeting resources to evidence-based MAT will enable patients with SUD the greatest hope for long-term recovery.*~~	~~**Measure 6.3.1:** Reduce number of "cash only" MAT clinics~~ ~~**Baseline:** Unknown (2016)~~ ~~**Target:** Eliminate "cash only" MAT clinics (2022)~~ ~~**Measure 6.3.2:** Increase percentage of MAT clinics that are physician-owned~~ ~~**Baseline:** Unknown (2016)~~ ~~**Target**: 100% (2022)~~ ~~**Data Source:** BHDID~~

2021 Status/Comments: 6.3.1: Strategy and measure removed due to feasibility. 6.3.2: Strategy and measure removed due to feasibility. The strategy and its measures have been removed as we were unable to measure these. Moving forward, this measure will be removed or replaced.

Tobacco

According to the CDC, tobacco use is the number one cause of preventable disease, disability, and death in the United States.[1] Tobacco use is associated with several adverse health outcomes including various cancers, diabetes, cardiovascular disease, chronic obstructive pulmonary disease, and other health conditions.[2]

Despite reductions in tobacco use nationwide and within the commonwealth, Kentucky continues to have high usage rates. Moreover, Kentucky leads the country in lung cancer related deaths, which are directly related to smoking prevalence. Reduction of tobacco use is an important strategy for improving the health of Kentuckians.

Data

In 2019, about 23.6% of Kentucky adults reported that they were current smokers – higher than the US median of 16.0% (KyBRFS). According to the 2019 YRBS, the smoking rate among high school students was 8.9% compared to 6.0% nationally. Among middle school students in Kentucky, 4.3% reported they were currently smoking.

Successes

Although tobacco use has been a longstanding health issue in Kentucky, efforts to decrease this have not been static. As of July 2021, 39 Kentucky communities, cities, and towns have implemented comprehensive smoke-free ordinances, and 36.6% of Kentucky workers are protected by 100% smoke-free workplace ordinances.[3] KDPH, local health departments (LHDs), and the American Lung Association partnered to assist public housing authorities with implementing smoke-free policies; Housing and Urban Development mandated all public housing authorities go smoke-free in 2018. Kentucky has maintained low rates of tobacco retailers selling tobacco products to minors through vigorous training of retailers.

Other accomplishments in Kentucky's tobacco prevention and control efforts include:

- A significant decrease in the youth smoking rate since 2009 due to a cigarette tax increase to $0.60 per pack, and changes in federal policy related to cigarette flavorings and marketing.

- Passage of Kentucky legislation in April 2018 increasing the state cigarette tax by $0.50, for a total of $1.60 per pack of cigarettes.
- The passage of Kentucky legislation in March 2017 requiring barrier-free coverage of FDA-approved tobacco cessation products and services by all insurance carriers.
- As of August 2021, over 95% of Kentucky students are in 100% tobacco free school districts.[4]

Challenges

Kentucky has long been among the top five states in the prevalence of current cigarette smoking among adults.[5] As a result, Kentucky ranks very high in the prevalence of smoking-related diseases such as cancer and cardiovascular/lung disease. Recent momentum in Kentucky communities passing smoke-free policies has slowed due to a 2014 Kentucky Supreme Court decision overruling the authority of LHD Boards of Health to enact smoke-free regulations, though fiscal courts and city councils may still pass smoke-free ordinances.

Recently, the increased use of electronic cigarettes has presented unique challenges regarding smoke-free policies, cessation efforts, and youth smoking rates. Electronic cigarettes have been associated with several burn injuries in the commonwealth related to explosions of their battery systems. The health impact of electronic cigarettes is not fully known at this time; aerosol analyses have found variable levels of hazardous components such as formaldehyde, heavy metals, and ultrafine particles. The nation was shaken in 2019 when EVALI (e-cigarette or vaping use-associated lung injury) was identified as a growing number of young people developed severe lung illness secondary to e-cigarette and vaping use. Kentucky did have deaths related to this episode.

Opportunities

Discussions during the "Planning with Partners to Improve Kentucky's Health" symposium and the subsequent Tobacco Workgroup meetings exposed many resources and opportunities to improve the status of tobacco use in the Commonwealth. The many stakeholders included state and local affiliates of national organizations, statewide cancer control organizations, local health coalitions, academic institutions, LHDs, non-profits, and individual champions. These partners continue to prioritize tobacco as a focus of their work, and leverage resources across sectors to reduce the burden of tobacco use. Their efforts include educational webinars, conferences, trainings, legislative advocacy, providing technical assistance to businesses and communities desiring to go smoke-free, and educating students about tobacco among other activities.

Kentucky also provides tobacco cessation services through the Kentucky Quitline. Stakeholders continue to seek external funding to supplement existing efforts to address tobacco prevention and cessation at multiple levels. Local health coalitions across the state coordinate grassroots activities to educate communities about the toll of tobacco and lead efforts to implement

municipal smoke-free ordinances. LHDs provide tobacco education within schools, lead cessation classes for adults, and serve as leaders within their communities to maintain progress and push for further advancements in tobacco prevention and cessation.

Opportunities to decrease the prevalence and impact of tobacco use in Kentucky include leveraging the components of KRS 304.17A-168, legislation passed in March 2017 by the Kentucky General Assembly requiring barrier-free coverage of FDA-approved tobacco cessation products and services by educating health systems, managed care organizations, health professionals, and other stakeholders on the implications of this legislation.

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[1] Office on Smoking and Health at a Glance, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention. December 2020. NCCKDPHP Office on Smoking and Health (OSH) At A Glance (cdc.gov).
[2] Tobacco Use. Chronic Disease Risk Factors Fact Sheet. Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion. Accessed Sep 2021. NCCKDPHP Tobacco Use Fact Sheet (cdc.gov).
[3] Kentucky Smoke-free Ordinance Database. Kentucky Center for Smoke-free Policy,University of Kentucky College of Nursing. Jul 2021. Kentucky Smoke-free Ordinance Database | Breathe (uky.edu).
[4] Kentucky Department for Public Health Tobacco Prevention and Cessation Program data, 2021.
[5] American Lung Association, 2011. Trends in tobacco use. Washington, DC: American Lung Association. http://www.lung.org/assets/documents/research/tobacco-trend-report.pdf.

Goals, Strategies, and Measures

GOAL 1: Reduce youth smoking.	
Strategy 1.1: Limit access to tobacco products and reduce perceived social acceptability of tobacco use by youth. ***Justification:*** *Limiting youth access to tobacco products and reducing the perceived social acceptability of tobacco use are evidence-based strategies for preventing initiation of tobacco use among youth and increasing cessation rates among adults.*	**Measure 1.1.1:** Increase cigarette excise tax amount **Baseline:** $0.60 per pack (2017) **Target:** $1.60 per pack (2020) **Data Source:** KRS 438.311; KDPH, Tobacco Prevention and Cessation Program **Measure 1.1.2:** Increase percentage of Kentucky school districts with a 100% Tobacco Free School policy prohibiting tobacco use, including e-cigarettes, on all school district property and during student-related school trips **Baseline:** 39% (2017) **Target:** 100% -- Pass statewide law with exemptions (2019) **Data Source:** KDPH, Tobacco Prevention and Cessation Program **Measure 1.1.3:** Increase legal minimum age to purchase tobacco products **Baseline:** 18 years old (2017) **Target:** 21 years old – Pass statewide law (2020) **Data Source:** KRS 438.311; KDPH, Tobacco Prevention and Cessation Program **Measure 1.1.4:** Increase percentage of schools in which teachers tried to increase student knowledge on tobacco-use prevention in a required course in any of grades 6 through 12 during the current school year **Baseline:** 92.2% (2016) **Target:** 95% (2020) **Data Source:** KDE School Health Profiles **Measure 1.1.5:** Maintain number of annual national tobacco prevention and cessation mass media campaigns targeting youth in Kentucky

	Baseline: 2 (2017) **Target:** 2 (2020) **Data Source:** KDPH, Tobacco Prevention and Cessation Program **Measure 1.1.6:** Maintain number of statewide youth surveys on tobacco use – YRBS and Kentucky Incentive for Prevention (KIP) surveys of middle and high school tobacco use, including information on gender, ethnicity/race, and sexual orientation **Baseline:** 2 (2017) **Target:** 2 (2020) **Data Source:** KDE, YRBS; Resources for Education, Adaptation, Change & Health (REACH), KIP

2021 Status/Comments:

1.1.1: Updated data source.
1.1.2: Updated target.
1.1.3: Updated data source.
1.1.4: Updated measure, target, and timeline. New baseline established.

1.1.1: The cigarette excise tax is $1.10, which is more than the baseline but less than the target ($1.60). Measure in progress. Data Source: KDPH, Tobacco Prevention and Cessation Program, 2021.
1.1.2: Ninety-seven percent (97%) of school districts have passed 100% Tobacco-Free School policies. This is an increase from the baseline but has not reached the target. Measure in progress.
1.1.3: The minimum age to purchase tobacco products was increased to 21 (target met). Federal legislation raised the age of sale to 21 in 2019; state law followed in 2020. Data source: KDPH, Tobacco Prevention and Cessation Program, 2021.
1.1.4: The total percentage of schools is 89.9%, which includes both middle and high schools. This is a decrease from the baseline and is below the target. Measure in progress.
1.1.5: Two media campaigns were maintained: one reaching youth about smokeless tobacco, and a second educating youth about e-cigarettes and vaping. Increasing media for youth e-cigarette cessation resources is an ongoing initiative. Target is being met.
1.1.6: The number of statewide youth surveys is one. The Youth Risk Behavior Survey was completed in 2019. The KIP survey was delayed until fall 2021 due to the pandemic. Measure in progress.

Other successes:

1.1.1: During the first 12 months that the increased tax was in effect, 39 fewer packs of cigarettes were purchased in Kentucky than in the prior 12 months. This was an annual decrease of 10.1 percent, compared to an average annual decrease of 3.1 percent in the immediately preceding years. This was one of many initiatives the Foundation for a Healthy Kentucky accomplished with tobacco initiatives.
1.1.2: In 2019, the Kentucky legislature passed House Bill (HB) 11, a statewide 100% Tobacco-Free School bill that gives school districts

the opportunity to pass tobacco-free school policies. The Kentucky Tobacco Prevention and Cessation Program mailed a new Tobacco-Free Schools toolkit to every public and private school serving sixth grade or older. The toolkit contains information on the youth vaping epidemic, tips for enforcing a tobacco-free school policy, and resources to promote My Life, My Quit and other evidence-based resources. Every health department received a courtesy copy.

GOAL 2: Reduce adult smoking.	
Strategy 2.1: Limit access to tobacco products and decrease perceived social acceptability of smoking while increasing access to smoking cessation options. ***Justification:*** *Reducing access and perceived acceptability of smoking encourages adults to quit smoking and increasing evidence-based cessation options increases the likelihood adult smokers will successfully remain smoke-free.*	**Measure 2.1.1:** Maintain number of annual tobacco prevention and cessation mass media campaigns targeting adults in Kentucky **Baseline:** 1 (2017) **Target:** 1 (2020) **Data Source:** KDPH, Tobacco Prevention and Cessation Program media materials purchase records **Measure 2.1.2:** Increase cigarette excise tax amount **Baseline:** $0.60 per pack (2017) **Target:** $1.60 per pack (2020) **Data Source:** KRS 138.140; KDPH, Tobacco Prevention and Cessation Program **Measure 2.1.3:** Maintain number of statewide adult surveys on tobacco use – KyBRFS survey of adult tobacco use, including information on gender, ethnicity/race, and sexual orientation **Baseline:** 1 (2017) **Target:** 1 (2020) **Data Source:** KyBRFS; KDPH, Tobacco Prevention and Cessation Program **Measure 2.1.4:** Increase number of mental health hospitals and substance use recovery centers offering tobacco cessation **Baseline:** Unknown (2017) **Target:** Establish baseline and increase by 5% (2020) **Data Source:** KDPH; BHDID

2021Status/Comments:
2.1.2: Updated data source.
2.1.3: Updated data source.

2.1.1: A campaign promoting Kentucky Quitline services was conducted. Maintaining www.quitnowkentucky.org, 1-800-QUITNOW, and the Spanish language quitline 1-855-DELO YA, which reach thousands of Kentuckians each year with free tobacco cessation assistance, is an ongoing initiative. Measure in progress.
2.1.2: The cigarette excise tax amount was increased to $1.10 per pack. This is an increase from the baseline but has not met the target ($1.60). Measure in progress. Data Source: KDPH, Tobacco Prevention and Cessation Program, 2021.
2.1.3: The number of statewide adult surveys on tobacco use is one, meeting the baseline and target. It includes modules on electronic cigarettes, secondhand smoke exposure, and cessation. Data Source: KDPH, Tobacco Prevention and Cessation Program, 2021.
2.1.4: Baseline established in 2020. Forty percent (40%) of cigarettes smoked are smoked by people with mental illness; providing tobacco-free grounds and access to cessation services are important to protecting vulnerable populations. Eighty-two percent of CMHCs have a written policy restricting tobacco use. Data Source: KDPH, Tobacco Prevention and Cessation Program, 2020.

GOAL 3: Reduce exposure to secondhand smoke.	
Strategy 3.1: Increase the number of communities and cities with comprehensive smoke-free policies that include new and emerging products such as e-cigarettes and heat-not-burn products. Collaborate with the Kentucky Housing and Urban Development Office, providing information on smoke-free best practices, and facilitating cessation among public housing residents. Promote media messages of the health consequences of secondhand smoke exposure via news interviews, newspaper op-eds, and mass media messaging to include social media. ***Justification:*** *Secondhand smoke causes a variety of severe health consequences among those exposed, including increased risk of lung cancer.*	**Measure 3.1.1:** Increase the percentage of communities covered by comprehensive smoke-free policies **Baseline:** 32.7% (2017) **Target:** 50% (2020) **Data Source:** KDPH and Kentucky Center for Smoke-Free Policy **Measure 3.1.2:** Increase the percentage of public housing authorities with smoke-free policies **Baseline:** 4% (2017) **Target:** 100% – Meet federal requirements (2018) **Data Source:** Kentucky Housing and Urban Development Office **Measure 3.1.3:** Increase the percentage of homes that voluntarily do not allow smoking **Baseline:** 73.4% (2017) **Target:** 80.74% (2020) **Data Source:** KyBRFS; KDPH, Tobacco Prevention and Cessation

	Program
2021Status/Comments: 3.1.3: Updated data source. 3.1.1: Thirty-six percent of Kentuckians are protected by comprehensive indoor smoke-free policies. While this is an increase from the baseline, we have not met our target. Measure in progress. 3.1.2: Housing and Urban Development mandated all public housing authorities go smoke-free in 2018, meeting our target. 3.1.3: The percent of homes that do not allow smoking in their home at any time is 75%. This is an increase from the baseline, but we have not reached our target yet. Measure in progress. Data Source: KDPH, Tobacco Prevention and Cessation Program, 2018. **Other successes**: 3.1.1: Providing technical assistance to local communities on reducing tobacco use is an ongoing initiative for KDPH.	

GOAL 4: Increase the number of Kentucky adults who successfully quit smoking.	
Strategy 4.1: Maintain access to Quit Now Kentucky Quitline service to provide counseling and nicotine replacement therapy (NRT) to smokers who want to quit smoking. ***Justification:*** *Quitting smoking reduces risk from the health consequences of tobacco use, reduces secondhand smoke exposure, and increases worker productivity. Quitlines are an evidence-based strategy.*	**Measure 4.1.1:** Increase the number of public-private partnerships to fund Quit Now Kentucky and NRT for uninsured Kentuckians who access the Quitline **Baseline:** 1 (2017) **Target:** 3 (2020) **Data Source:** KDPH **Measure 4.1.2:** Increase the number of healthcare professionals who receive education on the increased health insurance coverage of tobacco cessation benefits through webinars, handouts, and media campaigns **Baseline:** 22,000 (2017) **Target:** 37,000 (2018) **Data source:** KDPH Quitline vendor records of referring physicians
2021Status/Comments: 4.1.1: The number of public-private partnerships is seven. We have exceeded our target goal. 4.1.2: Information on Quit Now Kentucky provided in MD Update in six issues during 2020. The number of healthcare professionals receiving education is 52,500, which exceeds our target.	

GOAL 5: Reduce lung cancer mortality among Kentucky residents.

Strategy 5.1: Increase the number and quality of lung cancer screenings of at-risk Kentucky adults. Promote the National Cancer Institute's Population-Based Research Optimizing Screening through Personalized Regiments (PROSPR) and other evidence-based screening protocols. ***Justification:*** *Increasing the number and quality of lung cancer screenings will enable those diagnosed to receive care earlier and reduce lung cancer mortality.*	**Measure 5.1.1:** Increase the number of lung cancer screenings for individuals with a history of tobacco use **Baseline:** 7,866 (2017). **Target:** 10,000 (2019) **Data Source:** Cabinet for Health and Family Services, Office of Health and Data Analytics **Measure 5.1.2:** Reduce new cases of lung cancer **Baseline:** See table below (2020) **Target:** Establish baseline and decrease (2022) **Data Source:** American Lung Association State of Lung Cancer 2020

2021Status/Comments:

5.1.1: Updated measure, target, and timeline. New baseline established. New data source.

5.1.2: Updated measure, target, and timeline. New baseline established. New data source.

5.1.1: The number of lung cancer screenings for individuals with a history of tobacco use for 2020 was 12,440, an increase from the baseline and exceeding the target.

5.1.2: Baseline established with 2020 American Lung Association data (below). Measure in progress.

2020 Rate of New Cases by Racial and Ethnic Group, Age-Adjusted Lung Cancer Incidence Rate per 100,000

Category	Nation	KY
White American	63.1	93.3
Black American	61.1	85.4
Latino	29.9	28
Asian American or Pacific Islander	34.6	30.6
Indigenous Peoples	42	0

Other successes: 5.1.1: In the American Lung Association 2020 report for Kentucky, 11.7% of those at high risk for lung cancer were screened, which was significantly higher than the national rate of 5.7%. Kentucky ranks 4th among all states for lung cancer screening, placing it in the above average tier. Every large hospital system and their multiple locations in Kentucky offers lung cancer screening promoting access across Kentucky.

GOAL 6: Increase the quality of care received by Kentucky residents diagnosed with Chronic Obstructive Pulmonary Disease (COPD).	
Strategy 6.1: Adapt and adopt a Kentucky version of the COPD National Action Plan to improve prevention, early diagnosis, and intervention strategies. ***Justification:*** *Increasing the quality of care of COPD will increase quality of life and life expectancy for those with COPD.*	**Measure 6.1.1:** Reduce emergency department visits for COPD **Baseline:** 54,318 (2016) **Target:** 53,000 (2022) **Data Source:** EnviroHealthLink **Measure 6.1.2:** Reduce hospital admissions for COPD **Baseline:** 16,642 (2016) **Target:** 16,000 (2022) **Data Source:** EnviroHealthLink **Measure 6.1.3:** Adapt and adopt the COPD National Action Plan for Kentucky **Baseline:** No plan (2021) **Target:** 1 plan (2022) **Data Source:** KDPH
2021Status/Comments: 6.1: Updated strategy. 6.1.1: Updated measure, target, and timeline. New baseline established. New data source. 6.1.2: Updated measure, target, and timeline. New baseline established. New data source. 6.1.3: New measure. 6.1.1: Emergency department visits for COPD are 56,172, which is higher than the baseline and target. Measure in progress. 6.1.2: Hospital admissions for COPD are 19,512, which is higher than the baseline and target. Measure in progress. 6.1.3: Measure in progress.	

Obesity

Kentucky continues to rank among the most overweight states in the nation. In 2019, 36.5% of adults in Kentucky were obese.[1] The percentage of high school students who qualify as overweight or obese increased from 35.5% in 2015 to an alarming 36.2% in 2019.[2] Although all regions of Kentucky fare more poorly than the nation, rates of chronic disease remain highest across eastern Kentucky where obesity rates are also highest.[3]

Obesity greatly increases the risk of developing life-threatening chronic diseases and expensive health conditions such as diabetes, stroke, arthritis, sleep apnea, asthma, heart attack, and certain cancers. Kentucky's health care costs attributable to obesity will be $6 billion in 2018, or $1,836 a year per adult according to United Health Foundation, American Public Health Association, and Partnership for Prevention.[4]

The factors contributing to obesity are complex; however, unhealthy diet behavior and physical inactivity are among the leading causes. Most recent data reflect that 45.8% of adults in Kentucky eat fruits less than one time per day, and 32.8% reported they did not participate in some form of physical activity in the past month.[1] Among high school students, only 47.5% report eating fruit or drinking 100% fruit juice one or more times per day.[2] Additionally, 19.1% of students report they did not participate in at least 60 minutes of physical activity on at least one day during the past seven days before the survey.[2]

Successes

Healthy habits established in early childhood build the foundation for lifelong health. In Kentucky, obesity prevention starts at birth as Kentucky birthing facilities are encouraged to achieve the Baby-Friendly Hospital designation. The Baby-Friendly Hospital Initiative recognizes hospitals that provide mothers with the information, confidence, and skills necessary to successfully breastfeed their babies. Literature shows a connection between breastfeeding and lower rates of childhood obesity.[5] Hospitals with this designation have demonstrated that they provide education and counseling on breastfeeding techniques per the United Nations International Children's Emergency Fund and the World Health Organization guidelines. Kentucky currently has four Baby-Friendly Hospitals recognized for their optimal level of support for breastfeeding initiation.

In 2014, the prevalence of obesity in children ages 2 to 4 years old participating in the Kentucky WIC program decreased 5%, which is a larger decrease than in any other state.[6] Success in early care and education can partially be attributed to training childcare centers and implementing classroom changes that promote healthy behaviors for all children.

In the fall 2016, the Kentucky Board of Education adopted the Alliance for a Healthier Generation's Healthy Schools Program assessment tool for school districts to utilize in evaluation of their practices and policy implementation around physical activity, nutrition, and worksite wellness. From this information, KDE can report state aggregate data on the initiatives schools are implementing to prevent obesity in the school setting.

Kentucky addresses issues of community access to healthy foods by working with farmers' markets and Fresh Stop Markets ("pop-up" fresh food markets set up in fresh food insecure neighborhoods) to accept federal nutrition assistance benefits. Of Kentucky's 170 farmers' markets, 49 accept SNAP (Supplemental Nutrition Assistance Program – formerly known as Food Stamps), 92 accept WIC, and 99 accept Senior Farmers' Market Nutrition Program (SFMNP) benefits.[7] In addition to nutrition initiatives, local communities have established coalitions that address walkability by supporting policies and programs to increase physical activity and inclusion of active transportation. Kentucky has multiple communities with "Complete Streets" policies, 77 have adopted bicycle and pedestrian plans, many communities are working on funded Safe Routes, and 24 have developed Trail Towns.[8] Additionally, there are 11 local and district health departments that have received funding to develop walkable communities.

Challenges

In Kentucky, most communities lack access to safe and adequate spaces for physical activity and affordable nutritious foods. According to Feeding America, Kentucky has 644,540 people facing hunger – and of them 179,030 are children. These challenges directly affect the health behaviors that lead to a higher prevalence of obesity and associated chronic diseases. Initiatives that address access to healthy foods and opportunities for physical activity on a policy and environmental level are most effective in promoting positive health behavior change.[9]

Opportunities

There are established statewide networks consisting of leaders from various government agencies, public health organizations, non-profits, businesses, advocacy groups, and community groups addressing Kentucky's obesity concerns. These groups actively work to share information, network opportunities, and connect with experts who support policy, systems, and environmental changes that promote healthy eating and active lifestyles. Areas of focus include birthing facilities, early care and education centers, schools, worksites, and community access (farmers' markets and pedestrian planning).

The below groups are actively working together on these initiatives:

- Partnership for a Fit Kentucky (chaired by KDPH)
- Kentucky School Health and Physical Education Association
- Local Food Advisory Network
- Foundation for a Healthy Kentucky
- Early Care and Education Advisory Council
- Kentucky Breastfeeding Coordinators

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[1] Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Nutrition, Physical Activity, and Obesity Data Portal. 2019. [accessed Sep 13, 2021] Search & Browse Nutrition, Physical Activity, and Obesity | Page 1 of 1 | Chronic Disease and Health Promotion Data & Indicators (cdc.gov).

[2] Centers Disease Control and Prevention, 2019 YRBS Youth Online: High School YRBS - T-Test Kentucky 2019 and United States 2019 Results | DASH | CDC.

[3] Unbridled Health A Plan for Coordinated Chronic Disease Prevention and Health Promotion http://chfs.ky.gov/NR/rdonlyres/EDC31B0E-D81E-4BB0-87CD-C3CCCC837F9/0/UnbridledHealthPlanNovember2013.pdf.

[4] United Health Foundation, American Public Health Association and Partnership for Prevention. (2008). The Future Costs of Obesity: National and State Estimates of the Impact of Obesity on Direct Health Care Expenses. Based on Research by Kenneth E. Thorpe.

[5] Breastfeeding and childhood obesity--a systematic review. (Institute for Social Pediatrics and Adolescent Medicine, 2004, 1247-1256). Full Article: http://www.nature.com/articles/0802758.

[6] Pan L, Freedman DS, Sharma AJ, et al. Trends in Obesity Among Participants Aged 2–4 Years in the Special Supplemental Nutrition Program for Women, Infants, and Children — United States, 2000–2014. MMWR Morb Mortal Wkly Rep 2016;65:1256–1260. DOI: http://dx.doi.org/10.15585/mmwr.mm6545a2.

[7] Kentucky Department of Agriculture records as of July 2021.

[8] Kentucky Transportation Cabinet Walk/Bike Program records as of July 2021.

[9] Robert Wood John Foundation Commission to Building A Healthier America. (2014). Time to act: Investing in the health of our children and communities: Recommendations from the Robert Wood John Foundation Commission to Building A Healthier America. Retrieved from http://www.rwjf.org/content/dam/farm/reports/reports/2014/rwjf409002.

Goals Strategies, and Measures

GOAL 1: Increase access to breastfeeding in birthing facilities and increase breastfeeding rates among Kentucky women.	
Strategy 1.1: Develop a comprehensive plan to increase a culture of breastfeeding among new mothers in Kentucky to reach toward the Healthy People (HP) goal of babies that are breastfed. ***Justification:*** *Evidence-based hospital practices play a critical role in assisting mothers to initiate and establish breastfeeding. Studies have demonstrated a strong association between hospital staff training and increased breastfeeding initiation as well as significant increases when hospitals adopt the 10 standards specified by Baby-Friendly USA.*	**Measure 1.1.1:** Increase number of Baby-Friendly Hospitals **Baseline:** 4 (2017) **Target:** 8 (2022) **Data Source:** Baby-Friendly USA **Measure 1.1.2:** Improve CDC Maternity Practices in Infant Nutrition and Care (mPINC) score **Baseline:** 73 (2015) **Target:** 80 (2022) **Data Source:** CDC mPINC Report **Measure 1.1.3:** Increase rate of infants "ever breastfed" **Baseline:** 66.9% (2016) **Target:** 81.1% – consistent with HP goal (2022) **Data Source:** CDC Breastfeeding Report Card **Measure 1.1.4:** Increase rate of infants breastfeeding at 6 months of age **Baseline:** 35.3% (2016) **Target:** 51.8% – consistent with HP goal (2022) **Data Source:** CDC Breastfeeding Report Card **Measure 1.1.5:** Increase rate of infants exclusively breastfeeding at 6 months of age **Baseline:** 19% (2016) **Target:** 22.3% – consistent with HP goal (2022) **Data Source:** CDC Breastfeeding Report Card **Measure 1.1.6:** Increase number of Breastfeeding Peer Support programs **Baseline:** 28 (2017)

	Target: 34 (2022) **Data Source:** KDPH, Division of Maternal Child Health, WIC Breastfeeding Program
2021Status/Comments: 1.1.1: As of May 2021, the number of Baby-Friendly Hospitals is three. This initiative is very expensive and hospitals that were either certified or on the pathway to receive this certification have decided to not continue this certification. Measure in progress. 1.1.2: CDC mPINC Score for 2018 was 68. In 2018, they changed the mPINC report which collects different data. Kentucky's score dropped because of this change. Measure in progress. 1.1.3: Percent of infants ever breastfed was 72.6% in 2020. This is higher than the baseline, but we have not met the target yet. Measure in progress. 1.1.4: The percent of infants breastfeeding at 6 months of age was 44.5% in 2020. This is higher than the baseline, but we have not met the target yet. Measure in progress. 1.1.5: The percent of infants exclusively breastfeeding at 6 months of age was 23.0% in 2020. This has exceeded the target. 1.1.6: The number of Breastfeeding Peer Support programs as of 2021 is 28. There has been no change from the baseline. Measure in progress.	

GOAL 2: Increase the availability of healthier food and beverage choices in communities.	
Strategy 2.1: Promote development of stronger farmers' markets that accept federally sponsored food benefits for those in need. ***Justification:*** *The CDC's recommended evidence-based strategies for obesity prevention create greater access to quality and affordable fruits and vegetables, an important step to increase consumption of healthier foods.*	**Measure 2.1.1:** Increase number of farmers' markets that accept SNAP benefits **Baseline:** 55 (2017) **Target:** 80 (2022) **Data Source:** Kentucky Department of Agriculture (KDA), Community Farm Alliance **Measure 2.1.2:** Increase number of farmers' markets that accept WIC benefits **Baseline:** 90 (2017) **Target:** 100 (2022) **Data Source:** KDPH, WIC Farmers' Market Nutrition Program **Measure 2.1.3:** Increase number of farmers' markets that

	accept SFMNP benefits **Baseline:** 88 (2017) **Target:** 100 (2022) **Data Source:** KDA **Measure 2.1.4:** Increase number of Fresh Stop Markets in fresh food insecure neighborhoods **Baseline:** 14 (2017) **Target:** 20 (2022) **Data Source:** New Roots non-profit program records, Community Farm Alliance **Measure 2.1.5:** Increase number of participating farmers' markets, Fresh Stop Markets, and retailers in Kentucky Double Dollars Program **Baseline:** 21 (2016) **Target:** 30 (2022) **Data Source:** Community Farm Alliance, Kentucky Double Dollars Report **Measure 2.1.6:** Reduce percentage of food insecure individuals **Baseline:** 15.8% (2017) **Target:** 14% (2022) **Data Source:** Map the Meal Gap Report, Feeding America

2021Status/Comments:
2.1.1: Additional data source.
2.1.4: Additional data source.

2.1.1: There are 49 farmers' markets that are eligible to accept SNAP benefits. This is less than the baseline and target. Measure in progress.
2.1.2: The number of farmers' markets that accept WIC benefits is 92 and will be in 82 counties. This is more than the baseline but less than the target. Measure in progress.
2.1.3: There are 86 counties with 99 markets that accept SFMNP benefits. The number of markets has increased from the baseline and has almost met the target. Measure in progress.
2.1.4: There are 8 Fresh Stop Markets in KY, which is a decrease from the original baseline.
2.1.5: The number of participating farmers' markets (49), Fresh Stop Markets (8), and retailers (5) in the Kentucky Double Dollars

Program is a total of 62. This has exceeded the target.
2.1.6: The percentage of food insecure individuals has dropped to 14.8%. We have not met the target yet (14%). Measure in progress.

Other successes:
2.1.1: There are currently 160 successful farmers' markets across the Commonwealth, spanning more than 110 counties and 2,700 vendors (KDA). Beginning of the 2020 program year Kentucky Double Dollars launched at 43 farmers' markets, 12 Fresh Stops, and 3 retail stores across Kentucky. Since 1992, the WIC Farmers Market Nutrition Program (WIC FMNP) has helped promote local farmers' markets and bring locally grown fresh fruits and vegetables into the homes of WIC participants. Local WIC agencies issue FMNP vouchers and provide nutrition education. WIC FMNP participants can receive up to $8 per day in Kentucky Double Dollars incentive vouchers**.**
2.1.4: For Fresh Stop Markets, there are seven sites that are part of New Roots (Louisville-area) and the NorthFork Fresh Stop Market in Perry County. There are currently two community markets in Lexington and a food share in Frankfort that operate with a similar model but aren't affiliated with New Roots, and all participate in Kentucky Double Dollars.
2.1.5: Of the 49 farmers' markets offering matching incentives through Kentucky Double Dollars there are also five retail sites offering SNAP matching incentives. There is a multi-farmer community-supported agriculture (CSA) in Lexington, KY.

GOAL 3: Implement policies to address access to and consumption of healthier foods.	
Strategy 3.1: Work to develop more robust policies for supervision of local decision-making as it relates to food consumption. ***Justification:*** *Promoting healthy lifestyle behaviors including increased fruit and vegetable consumption and wellness increases a healthy culture.*	**Measure 3.1.1:** Increase number of local food policy councils **Baseline:** 2 (2016) **Target:** 6 (2022) **Data Source:** CDC State Indicator Report of Fruits and Vegetables **Measure 3.1.2:** Increase number of school food authorities (SFAs) procuring local food for their menus for students and staff **Baseline:** 77 (2017) **Target:** 85 (2022) **Data Source:** KDA **Measure 3.1.3:** Increase percentage of schools implementing all the components of the state's required local school wellness policy **Baseline:** 45.9% (2017)

	Target: 50% (2022) **Data Source:** KDE, Healthy Schools Program State Aggregate Data
2021Status/Comments: 3.1.2: Updated measure. 3.1.1: The number of specific local food policy councils is two. Measure in progress. 3.1.2: The number of SFAs serving local food for their menus is 80. An improvement from the baseline, the target has not yet been met. Measure in progress. 3.1.3: The percentage of schools implementing all the components of the state's required local school wellness policy is 47%. An improvement from the baseline, the target has not yet been met. Measure in progress. **Other successes**: 3.1.1: The Foundation for a Healthy Kentucky Investing in Kentucky's Future initiative yielded the adoption of 38 local policies at the county, city, and organizational levels. 3.1.2: Of the 80 SFAs participating, 38 serve local fruit, 30 serve local vegetables, and 22 serve local milk at least weekly. There are 967 schools and 541,992 students in participating SFAs in KY. Seventy SFAs provide food, nutrition, or agricultural education. Education may include taste tests and cooking demos, USDA Team Nutrition materials, and field trips to farms. Forty-two SFAs have edible gardens.	

GOAL 4: Increase opportunities for physical activity at all ages.	
Strategy 4.1: Work with Kentucky's multiple statewide coalitions to increase the number of policies that make physical activity an easier choice and assure physical environments to support those policies. For example, the Alliance for a Healthier Generation's Healthy Schools Program uses evidence-based programs to create and sustain healthy environments where students, especially those in greatest need, can learn more and flourish. ***Justification:*** *Local policies and the physical environment influence daily choices that affect health and weight status. The CDC's recommended Strategies for Obesity Prevention include increasing opportunities for physical activity. Furthermore, evidence shows that*	**Measure 4.1.1:** Decrease percentage of adults who engage in no leisure-time physical activity **Baseline:** 32.5% (2015) **Target:** 30 (2022) **Data Source:** KyBRFS **Measure 4.1.2:** Increase percentage of adults who achieve at least 150 minutes a week of moderate-intensity aerobic physical activity or 75 minutes a week of vigorous-intensity aerobic activity (or an equivalent combination) **Baseline:** 45.2% (2015) **Target:** 47% (2022)

physical activity improves both health outcomes and educational achievement.	**Data Source:** KyBRFS **Measure 4.1.3:** Increase percentage of students in grades 9-12 who achieve one hour or more of moderate- and/or vigorous-intensity physical activity daily **Baseline:** 20.2% (2015) **Target:** 25% (2022) **Data Source:** YRBS **Measure 4.1.4:** Increase percentage of middle school students who are physically active for at least 60 minutes each day of the week **Baseline:** 28.7% (2015) **Target:** 35% (2022) **Data Source:** YRBS **Measure 4.1.5:** Increase percentage of elementary schools reporting students are provided at least 20 minutes of recess during each school day **Baseline:** 71.1% (2015) **Target:** 75% (2022) **Data Source:** Healthy Schools Program State Aggregate Data **Measure 4.1.6:** Increase percentage of schools completing the Healthy Schools Program assessment **Baseline:** 60% (2020) **Target:** 70% (2022) **Data Source:** Alliance for a Healthier Generation
2021 Status/Comments: 4.1.6: Updated measure, target, and timeline. New baseline established. New data source. 4.1.1: The percentage of adults who engage in no leisure-time physical activity is 29.8%, which has met the target. 4.1.2: The percentage of adults participating in 150 minutes or more of aerobic activity per week is 35.3%. This is less than the baseline and the target. Measure in progress. 4.1.3: Percentage of students in grades 9-12 who achieve one hour or more of moderate- and/or vigorous-intensity physical activity daily	

is 37.4%, which has surpassed the target.
4.1.4: The percentage of middle school students who are physically active for at least 60 minutes each day of the week is 43.8%, which has surpassed the target.
4.1.5: The percentage of elementary schools reporting students are provided at least 20 minutes of recess during each school day is 86%, which has surpassed the target (75%).
4.1.6: Sixty percent of schools complete the HSP assessment. We are maintaining the baseline and are working towards the target. Measure in progress.

Other successes:
4.1.5: Kentucky was one of 16 states to receive a competitive 5-year CDC grant to address physical activity and nutrition. Eleven local and district health departments have received funding to focus on physical activity and nutrition programming in early childhood education.

GOAL 5: Implement policies to increase opportunities for physical activity.	
Strategy 5.1: Work with local school councils to implement shared-use agreements of some of their facilities (e.g., playgrounds and school tracks). ***Justification:*** *A "shared use" policy can be a formal agreement between two entities, typically a school and another agency such as a city government or a YMCA, to share school facilities during non-school hours or they can be informal, in that a school allows community members to use facilities for exercise without a formal contract with another agency.*	**Measure 5.1.1:** Increase percentage of schools reporting shared-use agreements **Baseline:** 74% (2017) **Target:** 80% (2022) **Data Source:** School Health Profiles Principal
2021 Status/Comments: 5.1.1: New data source. 5.1.1: The percentage of schools reporting shared-use agreements is 56%, which is a decrease from the baseline). However, a different data source was used. Measure in progress.	

Strategy 5.2: Work with local coalitions and city or county governments to develop and adopt local bicycle/pedestrian master plans. ***Justification:*** *Bicycle/pedestrian plans are the first step to changing community design and building walkable communities (e.g., sidewalks, crosswalks, lighting, bike lanes). Pedestrian plans are an evidence-based strategy to improving the safety and attractiveness of places, promoting active transportation, and recreation.*	**Measure 5.2.1:** Increase number of adopted bicycle/pedestrian plans **Baseline:** 52 (2016) **Target:** 65 (2022) **Data Source:** Kentucky Transportation Cabinet Walk Bike Program records
2021 Status/Comments: 5.2.1: There are 77 different plans, and 64 different communities with some type of walk/bike master plan, surpassing the target. **Other successes**: Eleven local and district health departments have received funding to focus on the creation of walkable communities. Kentucky received a competitive 5-year CDC grant to address physical activity and nutrition. Kentucky hosted a Bike Walk Summit in 2018. Created the Bike Walk Kentucky State Strategic Plan. The Active Living Program is in an active partnership with the KYTC Walk/Bike program; KDPH shares community plans, engineering/scoping studies, and more when available.	

Adverse Childhood Experiences

Adverse childhood experiences (ACEs) are stressful or traumatic events occurring before the age of 18 that disrupt the safe and nurturing environments that children need to thrive. These experiences can have negative and lasting effects on health and wellbeing. Adult outcomes associated with ACEs include, but are not limited to, heart disease, diabetes, obesity, cancer, intimate partner violence, depression, poor anger control, smoking, substance abuse, multiple sex partners, unintended pregnancy, and early death.[1] For the first time, Healthy People 2030 guidelines have added four objectives on ACEs, a step to recognize the systemic impact of childhood trauma on health. None of the past Healthy People editions – 1990, 2000, 2010, 2020 – had an objective to address ACEs as part of its national guidance to promote health and prevent disease.[2]

Child Maltreatment:
Physical abuse
Verbal abuse
Sexual abuse
Neglect

Household Dysfunction:
Drinking in the household
Substance use in the household
Domestic violence
Mental illness in the household
Incarceration of family member

A person's ACE score is a measure of cumulative exposure to particular adverse childhood experiences. Exposure to any single ACE condition counts as one point. If a person experienced none of these conditions in childhood, their ACE score is zero.[3] It is important to note that the ACE score does not capture the frequency or severity of any given ACE in a person's life, only the number of categories of ACEs experienced by the individual.

Successes

Research has shown that children thrive best in families who are equipped to handle inevitable turmoil, which is universal. Supportive relationships with caring adults are necessary for appropriate childhood development.[4] In Kentucky, several programs [e.g., Kentucky Strengthening Families, Health Access Nurturing Development Services (HANDS) home visitation program, Kentucky Youth Thrive, the University of Kentucky Young Parents Program (YPP) and

Building Resilient Children and Families (BOUNCE) in Louisville] are ongoing in both urban and rural settings, and support families to develop skills to enhance protective factors and build resilience. These skills reduce the impact of adversity, build resiliency, and therefore improve the wellbeing of children and families. These skills include:

- Self-respect and other personal values and attitudes
- Social skills
- Helpful and optimistic thinking
- Skills for getting things accomplished

Kentucky school districts are also pursuing resilience-building strategies, which will provide students with improved mental and physical health outcomes as they grow into adults. These programs include ACEs training for teachers and staff, trauma informed care as well as the Teen Outreach Program, the Sources of Strength Program, and The Leader in Me Program, which are all designed to facilitate and encourage student success. In Kentucky, by law, all schools are required to provide drug abuse prevention education.

Challenges

In 2015, Kentucky introduced an ACEs module for the telephone survey, KyBRFS, collecting state data regarding health-related risk behaviors, chronic health conditions, and use of preventive services. This allowed the department to establish a baseline measurement for comparisons of ACEs and their impact on health and health outcomes. The 2015 KyBRFS results are consistent with the findings from the original ACEs Study conducted by Kaiser Permanente and the CDC and other ACEs studies. Survey results show 59% of Kentucky residents have experienced at least one ACE. In Kentucky, 64% of the individuals who experienced at least one ACE have experienced two or more ACEs. Data from the 2015 KyBRFS also indicates that many people experienced more than one type of ACE event. Of those who experience at least one ACE, 36% experienced divorce in the household, 27% experienced a drinking problem in the household, and 26% experienced verbal abuse.[5]

Kentuckians who have experienced a high number of ACEs report much higher numbers of chronic disease and risk factors than those who experienced no ACEs. Compared to adults who experienced no ACEs, adults who experienced a high number of ACEs are[6]

- 3.5 times as likely to be a current smoker.
- 2.5 times as likely to be a binge drinker.
- 1.8 times as likely to report poor health status.
- 1.6 times as likely to have had a stroke.
- 4.9 times as likely to experience depression.

Questions about ACEs were included in the 2015 and 2018 KyBRFS. Increases in households with drug problems increased from 11.6% in 2015 to 13.8% in 2018. Prevalence of adults reporting at least one ACE has increased from 59% in 2015 to 63% in 2018.[7] The data gleaned from the 2015 and 2018 KyBRFS and other sources, including the YRBS and the KIP survey, support addressing ACEs in the health care setting as well as in communities. A better understanding of the adverse events experienced by an individual during childhood could provide insight into their physical and mental health status as an adult.

Opportunities

ACEs can be severe, frequent, and unrelenting. They can severely impact the body's stress response systems and may result in the disruption of typical brain development and chemistry. This type of stress is called *toxic stress*. Fortunately, research suggests that there are things we can do to buffer toxic stress, preventing or reversing its effects. Healthy environments need to be created in which children subjected to toxic stress can find relief, feel safe, experience adult support, and learn resiliency skills.[8] Programs and school curricula need to include resilience-building techniques to help children respond to ACE stressors. Resilience provides children and youth the ability to recover and rebuild from difficult situations.[9]

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[1] Child Trends; Research Brief; Adverse Childhood Experiences; Year 2014.

[2] Merck, A. (2021, June 28). *Healthy people 2030 adds 4 objectives on childhood TRAUMA, up from 0*. Salud America. Retrieved from Healthy People 2030 Adds 4 Objectives on Childhood Trauma, Up From 0 - Salud America (salud-america.org).

[3] The Adverse Childhood Experiences (ACE) Study; Centers for Disease Control and Prevention. Retrieved Nov. 4, 2016.

[4] Adverse Childhood Experiences; Substance Abuse and Mental Health Services Administration, Rockville, MD; Retrieved Nov. 4, 2016.

[5] Data Brief: Common ACEs in Kentucky Department for Public Health Division of Maternal & Child Health December 2016.

[6] Kentucky Behavioral Risk Factor Surveillance System (KyBRFS), 2018.

[7] Kentucky Department for Public Health, Division of Maternal and Child Health. Adverse Childhood Experiences, 2018. ACES fact sheet Feb 2020.pdf

[8] Franke HA. Toxic Stress: Effects, Prevention and Treatment. Acra S, ed. Children. 2014;1(3):390-402. doi:10.3390/children1030390.

[9] Christina D. Bethell, Paul Newacheck, Eva Hawes, and Neal Halfon. Adverse Childhood Experiences: Assessing TheImpact On Health and School Engagement and The Mitigating Role of Resilience Health Affairs, 33, no.12 (2014):2106-2115.

Goals, Strategies, and Measures

GOAL 1: Improve Kentucky's awareness of ACEs.	
Strategy 1.1: Provide ACEs awareness activities across the state including the impact of ACEs on an individual's health, the importance of strengthening families, and building resiliency in children and teens. Develop and implement a collaborative promotional plan that includes messaging through multiple platforms (social media, earned media, paid media, out of home media, presentations, lobby days, storytelling, and other outlets). ***Justification:*** *Kentuckians need to understand ACEs and their impact on individuals and communities to improve resiliency.*	**Measure 1.1.1:** Increase number of ACEs trainings per year **Baseline:** Unknown (2017) **Target:** Establish baseline and increase (2022) **Data Source:** KDPH media tracking **Measure 1.1.2:** Increase number of legislators reached through promotional materials and ACEs awareness messaging **Baseline:** Unknown (2017) **Target:** Establish baseline and reach 50% (2022) **Data Source:** KDPH media tracking
2021Status/Comments: 1.1.1: Updated measure, target, and timeline. 1.1.1: A baseline has not yet been established. Initiative in progress. 1.1.2: A baseline has not yet been established. Initiative in progress. **Other successes**: 1.1.1: HANDS program currently implements ACEs education in their program. Kentucky Strengthening Families represents organizations dedicated to embedding six research-based protective factors into services and supports for children and their families. University of Kentucky Young Parents Program addresses ACEs needs of teen parents and their children through comprehensive services. Kentucky elementary and middle schools implement "The Leader in Me Program", an empowerment transformation process. Middle and high schools implement the Wyman Teen Outreach Program (TOP), an evidence-based youth development program that helps teens develop healthy behaviors, life skills, and a sense of purpose. Prevent Child Abuse Kentucky showed a "Resilience" video in eight places. KDE, in partnership with Kentucky Education Television (KET) aired a six-part series that included trauma and youth mental health. KDPH has completed several ACEs trainings spanning across the Commonwealth. Since 2017, at least 20 trainings/presentations have been conducted. 1.1.2: A panel discussion was held with KY BOUNCE Coalition, legislators, and KDPH. Presentations have been given to the Interim Joint Committee on Health and Welfare and Family Services regarding ACEs.	

GOAL 2: Increase availability of resiliency training strategies to develop knowledge and skills to address ACEs.	
Strategy 2.1: Identify existing evidence-based and evidence-informed curriculum that support family; build resiliency skills in children, teens, and adults; and potentially reduce ACEs. Develop a repository of curriculums and programs supporting protective factors and building resiliency skills. ***Justification:*** *Although there are ongoing efforts to address ACEs and increase resilience, there is a lack of uniformity, evidence-based programming, and standardization in Kentucky's approaches.*	**Measure 2.1.1:** Creation of repository **Baseline:** 0 (2017) **Target:** 1 (2022) **Data Source:** Repository posted to KDPH website
2021 Status/Comments: 2.1.1: Initiative in progress. We believe training and/or technical assistance successes are best captured in 2.2.1. **Other successes**: Evidence-based curriculums and programs that support family and building resiliency skills include HANDS, BOUNCE Coalition, and Kentucky Youth Advocates.	
Strategy 2.2: Facilitate training and technical assistance to communities, agencies, and other partners desiring to address ACEs, family support, and resiliency education in their community. ***Justification:*** *Trainings and technical assistance will ensure that communities are adequately prepared to support families by sharing evidence-based strategies, building resiliency skills for children, teens, and adults, and potentially reducing the impact of ACEs.*	**Measure 2.2.1:** Increase percentage of counties that have participated in at least one resiliency training and/or technical assistance **Baseline:** Unknown (2017) **Target:** Establish baseline and increase to 85% (2022) **Data Source:** KDPH **Measure 2.2.2:** Increase percentage of counties that have at least one resiliency program in place **Baseline:** Unknown (2017) **Target:** Establish baseline and increase to 85% (2022) **Data Source:** KDPH

2021Status/Comments:

2.2.1: A baseline has not been established. Initiative in progress.
2.2.2: A baseline has not been established. Initiative in progress.

Other successes:
2.2.1: Sullivan University/Academic utilization of ACES resources. Conference for guidance counselors. Lexington and Louisville ACEs talks by Dr. Connie White of KDPH. There are 24 health departments in the next year that are planning to address Bullying and Suicide prevention. KDPH can track the Sources of Strength program through the partnership with Behavioral Health. Working with Family Thrive and Youth Thrive in our Early Childhood area has been a success. HANDS uses the evidence-based Growing Great Kids curriculum for home visitors. HEART (addressing SUD mothers) uses a separate module from Growing Great Kids more related to socialization. Early Child Mental Health uses the Strengthening Families framework. KDPH recently established a position to focus on trauma-informed care and resiliency. Kentucky Department for Behavioral Health, Developmental & Intellectual Disabilities, in conjunction with the Society for the Prevention of Teen Suicide and Maureen Underwood, national youth suicide prevention subject matter expert, has developed a new 45-minute curriculum for implementation in Kentucky schools in the fall of 2021. The curriculum meets the state legislative mandate to deliver suicide prevention information to all middle and high school students by September 15th of each school year. The Louisville BOUNCE Coalition provided training to the Kentucky Association of Community Health Workers (KYACHW) conference in 2020 on ACEs and self-care. BOUNCE has initiated a program in Russell County – a rural Appalachian county – to assess response in that environment.
2.2.2: Resiliency is a topic covered in several of the programs/trainings listed in 2.2.1 such as HANDS. KDPH recently established a position to focus on trauma-informed care and resiliency.

GOAL 3: Increase capacity and collaboration with state and local partners to address ACEs in Kentucky.	
Strategy 3.1: Identify partners in divisions or agencies within CHFS, Administrative Office of the Courts, KDE, and other agencies or institutions that integrate principles of ACEs reduction, strengthening families, and building resilience in their programs. Establish the "Partnership for a Resilient Kentucky" (PaRK) taskforce, dedicated to addressing ACEs and promoting healthy families with strong resilience skills. ***Justification:*** *A collaborative effort between state and local agencies and local communities to address the origins of ACEs and to promote*	~~**Measure 3.1.1:** Increase number of partners involved in PaRK~~ ~~**Baseline:** 0 (2017)~~ ~~**Target:** 10 (2019)~~ ~~**Data Source:** KDPH program records~~ ~~**Measure 3.1.2:** Increase number of annual meetings for collaboration among PaRK partners~~ ~~**Baseline:** 0 (2017)~~ ~~**Target:** 2 per year (2019)~~ ~~**Data Source:** KDPH records~~

programs that build families and resilience will be effective to reduce ACEs in Kentucky and improve health outcomes for Kentucky citizens.	**Measure 3.1.3:** Increase number of identified funding opportunities (e.g., federal and state funding streams, private funds, foundations) **Baseline:** Unknown (2017) **Target:** Establish baseline and increase by 5% (2022) **Data Source:** KDPH records
2021Status/Comments: 3.1.1: Measure removed due to feasibility. 3.1.2: Measure removed due to feasibility. 3.1.1: This measure has been removed as PaRK did not come to fruition. 3.1.2: This measure has been removed as PaRK did not come to fruition. 3.1.3: A baseline has not been established. Initiative in progress. **Other successes**: The Preventive Health and Health Services Block Grant (PHHSBG) provides funding for several KDPH programs that contribute to ACEs work including the KY Prescription Assistance Program (KPAP), asthma, health equity, and sexual violence. Health access and environment indicators are woven within these. The Environmental Tracking Network has incorporated ACEs three times in their annual Children's Environmental Health Summit.	

Integration to Health Access

The definition of integration to health access determined by the statewide collaborative workgroup for the purpose of this SHIP is "to ensure all Kentuckians have access to integrated medical, dental, behavioral, mental, and social services to improve and maintain their health through the development of coordinated, multi-disciplinary systems of care." The Integration to Health Access Workgroup was formed to define what health access means for Kentucky and establish a vision and plan for the transformation and improvement of population health outcomes in communities across the commonwealth.

This preventative strategy enables integration of innovative clinical care services and community-based health services via the "three buckets of prevention" as framed in Public Health 3.0:

1. *Improve the use of clinical preventive services.*
2. *Provide innovative clinical prevention outside of clinical settings.*
3. *Implement community-wide preventive interventions*.

An overarching vision is to have multi-sector collaboration among community partners to maximize impact and leverage all community resources to improve access to preventive services, meet essential human needs, reduce health disparities, and improve local social determinants of health. Focus on policy and system changes by using regulatory and statutory updates is essential for maximizing impact and for sustainability.

Data

Kentucky demonstrates strengths and weaknesses regarding health access:

- The prevalence of Kentuckians without healthcare coverage is below the national median (5.7% vs. 8.8%).[1]
- Lack of health care coverage significantly decreased with increasing annual household income level. The highest percentage was among adults with an annual household income between $25,000-$49,999 at 11.4%.[2]
- Adults with less than high school education reported a significantly higher prevalence of no healthcare coverage than those with a college degree (11% vs 3.1%).[2]
- Kentucky has 270.1 active primary care physicians per 100,000 vs the US average of 241.9 per 100,000.

- The ratio of mental health providers in Kentucky is 249.1 per 100,000 vs the US average of 268.6 per 100,000.[3]
- Kentucky has 56.9 dentists per 100,000 vs the US average of 61.2 per 100,000.[3]
- Kentucky spends $83.00 per person on public health funding vs the US average of $86.00 per person.[4]

Successes

Beginning in 2014, Kentucky has prioritized increased access to health care. The Medicaid expansion allowed Kentucky citizens who earned up to 138% of the poverty level to become eligible for coverage. As a result, the percentage of uninsured in the commonwealth has dropped dramatically. Data collected by CHFS shows that the new Medicaid beneficiaries are taking advantage of preventive screenings, with the following increases from 2013 to 2014 as follows:[5]

- 30% increase in breast cancer screenings
- 3% increase in cervical cancer screenings
- 16% increase in colorectal cancer screening
- 37% increase in adult dental visits

Challenges

Given the volatility of healthcare policy at the national level, future insurance coverage remains uncertain. We will continue to monitor the national situation and seek to increase access for Kentuckians.

Cost is always a factor in health care and health care access. Tremendous resources are required to provide programs that improve the health of those who may not have health care coverage. Kentucky attempted to initiate a premium assistance program to help pay for job-based coverage but determined not to implement this initiative. Recently, there has been a national shift from acute care to highlighting preventive medicine. This is a paradigm shift for both the nation and Kentucky. This change can create confusion for the consumer about health literacy. There are knowledge gaps in what is covered with insurance, how to find a medical home, and how to navigate within the health care system. Such concerns are outlined with known barriers to accessing health services listed in HP2030 (unmet health needs, inability to get preventive services, financial burdens, and preventable hospitalizations).[6] These all are symptoms of a deeper issue: *Can Kentuckians be healthy with the resources presently available?* A multi-disciplinary approach is required if success is to be found.

Opportunities

In June 2017, stakeholders developed a comprehensive plan to address the oral health of Kentuckians, including access to oral care. Programs and partners from across the state are participating in this process. Again, this provides an opportunity to examine what is occurring in Kentucky and develop strategies to combat the issues.

KDPH continues to examine innovative ways to address health and health delivery. Local health departments are using Public Health 3.0 as a holistic guide to lead Kentucky communities on a path to better health. The Kentucky Community Health Worker Advisory Workgroup and the Kentucky Association of Community Health Workers (KYACHW) are working to promote access to Community Health Workers (CHWs) within health systems and outside the clinical setting. Statewide alliances and coalitions such as the Kentucky Diabetes Network, Alliance for a Better Community, and Kentuckiana Health Collaborative are all working to promote public awareness, education, and the use of evidence-based practices.

[1] US Census Bureau. *data.census.gov. 2019 American Community Survey 5-Year Estimates.*
[2] Kentucky Department for Public Health (KDPH). *State Health Assessment Report, 2017 Update*. Frankfort, Kentucky: Cabinet for Health and Family Services, Kentucky.
[3] United Health Foundation*. 2020 America's Health Rankings Report.*
[4] United Health Foundation. *2018 America's Health Rankings Report.*
[5] https://www.healthinsurance.org/kentucky-medicaid/ Retrieved August 3, 2017.
[6] Healthy People 2030, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved September 14, 2021, from Health Care Access and Quality - Healthy People 2030 | health.gov.

Goals, Strategies, and Measures

~~**GOAL 1: Improve health literacy by simplifying and standardizing health insurance.**~~	
~~**Strategy 1.1A:** Coordinate with state agencies (including Kentucky Department for Insurance, KDPH, DMS, etc.) to reduce health insurance complexity by making health plans simpler and more understandable for consumers to make informed decisions.~~ ~~**Strategy 1.1B:** Promote continued development of clearer language used to explain health plans for Medicaid enrollees, where possible, by the end of fiscal year 2018.~~ ~~**Strategy 1.1C:** Encourage assessment and coordination among state agencies, private insurance companies, providers, and health coalitions, to provide outreach and enrollment assistance. By 2018, LHDs will provide input to assist Medicaid enrollees with a plan to identify where assistance is needed.~~ ~~**Strategy 1.1D:** Support education of Medicaid enrollees about how commercial health coverage works so they can maximize the benefits of their plans. KDPH and LHDs will participate in the development of information to educate consumers on health coverage.~~ ~~***Justification (Strategies 1.1A-1.1D):** Kentucky's Medicaid 1115 Waiver includes a goal to increase insurance literacy and improve health literacy in terms of medical consumer knowledge. By becoming better informed, the enrollee can make better personal and plan choices.*~~	~~**Measure 1.1.1:** Increase number of Medicaid enrollees who understand their health plan~~ ~~**Baseline:** Unknown (2017)~~ ~~**Target:** Establish baseline and increase by 5% (2022)~~ ~~**Data Source:** Medicaid enrollment~~
2021 Status/Comments: Goal, strategies, and measure removed.	

GOAL 2: Expand access to health care services within and outside clinical settings using innovative delivery models.	
Strategy 2.1: Encourage higher educational institutions to create health care workforce development strategies that respond to emerging needs in the field (e.g., dental hygienists, community health workers). KDPH and other stakeholders will collaborate in the development of strategies and implementation of strategies in each of the eight Medicaid regions. ***Justification:*** *There is a national shortage of health care professionals. Without an adequate workforce (e.g., physicians, nurses, dentists, physician assistants), health access will remain difficult. Additionally, as society becomes more technologically advanced, new ways of providing care should be considered to increase health access.*	**Measure 2.1.1:** Increase number of higher education institutions that have a health care workforce development strategy **Baseline:** Unknown (2017) **Target:** 8 – one in each Medicaid region (2019) **Data Source:** KDPH ~~**Measure 2.1.2:** Increase number of higher education institutions that have implemented a health care workforce development strategy~~ ~~**Baseline:** Unknown (2017)~~ ~~**Target:** 8 – one in each Medicaid region (2019)~~ ~~**Data Source:** Kentucky Center for Education and Workforce Statistics~~ **Measure 2.1.3:** Increase number of students enrolled in a health care professional careers **Baseline:** 4,673 Certificate, 24,361 Associate's, 10,758 Bachelor's, 2,480 Master's (2011-12) **Target:** Increase by 10% (2022) **Data Source:** Kentucky Council on Postsecondary Education's Data and Advanced Analytics Team, http://cpe.ky.gov/data/ **Measure 2.1.4:** Increase number of organizations (and county coverage) that utilize Community Health Workers within and outside of clinical settings **Baseline:** 14 organizations covering 36 counties (2017) **Target:** 30 organizations covering 60 counties (2022) **Data Source:** KDPH, Kentucky Community Health Worker Advisory Group

2021Status/Comments:
2.1.1: Updated data source.
2.1.2: Measure removed due to feasibility.
2.1.3: New baseline established.

2.1.1: A baseline has not been established. Initiative in progress.
2.1.2: This measure has been removed as we were unable to determine a baseline and measure this.
2.1.3: In 2020-21, combined degree counts were 1,508 for Certificate (a 67.7% decrease), 8,627 for Associate's (a 64.6% decrease), 12,094 for Bachelor's (a 12.4% increase), and 4,768 for Master's (a 92.3% increase). As of 2014-15, Certificates are only offered through KCTCS. Associate degrees have dropped quite a bit, while numbers enrolled in bachelor's and particularly master's programs have increased. The target has partially been met, measure in progress.
2.1.4: The number of organizations (and county coverage) that utilize Community Health Workers (CHWs) within and outside of clinical settings are 27 organizations covering 77 counties. This is an increase from the baseline. The number of organizations has not met the target, but county coverage has surpassed it. Measure in progress.

Other successes:
2.1.1: CHFS leadership met with all university deans to discuss workforce development strategies. Kentucky Public Health Association's 2016-2021 Strategic Plan lists under its "Education" focal area that an objective is to collaborate with universities, KDPH, and other states/national partners.
2.1.4: KDPH added dedicated staffing to the CHW Program in 2017. KDPH successfully deployed a CHW Certification Process in 2019 resulting in 69 CHWs certified in less than 2 years demonstrating the level of competency of CHWs in Kentucky. KDPH CHW Program developed an annual data collection for success stories of CHW programs in Kentucky, initial publication 2021. New CHW programs are being deployed across Kentucky regularly at Federally Qualified Health Centers (FQHCs), large health systems, insurers, and civic and faith-based organizations. KDPH Chronic Disease Programs provided federal funding to FQHCs to startup CHW programs and for CHW training through the Appalachian Kentucky Health Care Access Network. KDPH has provided funding to Kentucky Homeplace for 27 years for CHWs.

Strategy 2.2: Develop and establish training on virtual health services for health service providers (e.g., hospitals, federally qualified health centers, community health centers, and private physician offices) and consumers. A team from DMS, KDPH, the University of Kentucky (UK), and the University of Louisville (UofL) developed the telehealth strategic plan. Significant legislation was passed to enhance telehealth services. ***Justification:*** *Implementation of telehealth mechanisms will improve health care access.*	**Measure 2.2.1:** Increase number of health agencies that receive training on virtual health services **Baseline:** Unknown (2017) **Target:** Establish baseline and increase by 10% (2022) **Data Source:** Kentucky Health Information Exchange
2021 Status/Comments: 2.2.1: Updated target. Updated data source. 2.2.1: A baseline has not been established. Initiative in progress. Consider changing metric. **Other successes**: Kentucky was one of four states selected to participate in the telehealth technical assistance (TA) initiative offered by the Association of State and Territorial Health Officials (ASTHO). Working on developing training, providing resources, and identifying needed training by discipline. Resulting strategic plan was used to build the new Kentucky telehealth legislation.	
Strategy 2.3: Expand the adoption of telemedicine technologies (e.g., remote patient monitoring) to increase access to health care services for people living in rural and other underserved communities. ***Justification:*** *Implementation of telehealth mechanisms will improve health care access.*	**Measure 2.3.1:** Increase number of adopted telemedicine technologies (e.g., remote patient monitoring) **Baseline:** Unknown (2017) **Target:** Establish baseline and increase by 5% (2022) **Data Source:** Kentucky Information Exchange
2021 Status/Comments: 2.3.1: Updated data source. 2.3.1: A baseline has not been established. Initiative in progress. Consider a metric change. **Other successes**: Regulations that support telemedicine (waivers and flexibility) are a success story. Identified every action that allowed telehealth to be used. House Bill 140 approved. Working on regulation for use and security on telehealth. CHFS developed a Division of Telehealth Services and KDPH sits on the Telehealth Service Steering Committee.	

Strategy 2.4: Maximize Kentucky Health Information Exchange (KHIE) participation among health care delivery systems. Continue to ensure privacy and security of electronic health information. Support the use of electronic data, measurement, and clinical decision support tools, and promote providers using electronic data sources to accurately report health care quality for local and regional use. ***Justification:*** *Implementation of telehealth mechanisms will improve health care access.*	**Measure 2.4.1:** Increase number of health care delivery agencies participating in KHIE **Baseline:** See table below (2017) **Target:** Increase percentage growth of health care delivery agencies by 40% (2021) **Data Source:** KHIE

2021 Status/Comments:

2.4.1: Updated target and timeline. New baseline established.

2.4.1:

Functions KHIE facilitates for KDPH	2017	2021	% Growth
Immunizations	1432	2605	82%
Syndromic Surveillance	153	220	44%
Electronic Lab Reporting	26	227	773%
Electronic Case Reporting	0	12	N/A
Direct Lab Entry	0	525	N/A

Other successes: KHIE is the public health reporting authority for electronic data (this is unique to Kentucky – centralized location; supports data analytics). Provider assistance program – incentivizes connections (do not charge for services). Building XDRO (extreme drug-resistant organisms) bi-directional data registry. Have built an event notification and alert. Looking into ICD-10 codes that can be created for social determinants of health (SDOH). Have connected numerous commercial labs that are submitting real-time viral tests into NEDSS.

GOAL 3: Strengthen community cross-sector health coalitions.	
Strategy 3.1: Train LHD directors on Public Health 3.0 to serve as the lead health strategist in their communities and encourage cross-sector health coalitions. ***Justification:*** *LHD directors are the most appropriate convener of cross-sector health coalitions because of their unique knowledge and influence within their local community.*	**Measure 3.1.1:** Increase percentage of LHD directors who have received training on Public Health 3.0 **Baseline:** Unknown (2017) **Target:** Establish baseline and increase to 75% (2022) **Data Source:** KDPH
2021 Status/Comments: 3.1.1: Updated data source. 3.1.1**:** A baseline has not been established. Initiative in progress. **Other successes**: Health in All Policies (HiAP) Training, 2017; Public Health Transformation Presentations (2018-present).	
Strategy 3.2: Identify communities that have established cross-sector health coalitions and promote them as "best practices" among other LHDs. Convene LHD directors and community leaders at a "Health Access Workgroup" to present the work of these coalitions, promote collaboration, and facilitate additional support. ***Justification:*** *Communities could discover innovative practices through sharing, networking, and collaborating with other LHDs who have successfully facilitated multi-sector coalitions.*	**Measure 3.2.1:** Increase percentage of LHDs who establish cross-sector health coalitions that include social support services and oral health **Baseline:** Unknown (2017) **Target:** Establish baseline and increase (2020) **Data Source:** KDPH
2021 Status/Comments: 3.2.1: Updated target and timeline. Updated data source. 3.2.1: A baseline has not been established. Initiative in progress. **Other successes**: Oral Care**:** 41 out of 57 health departments offer some type of oral health service. Of the 16 LHDs that are not providing oral care, zero are considering providing oral care. Currently, oral health data is updated monthly by the LHD staff into DATAMART, which is an Access Database. Once updated, this information can be pulled by both local and KDPH members. LHDs that provide social	

support services: As of June 2021, other than a couple of ongoing federal programs such as WIC, most LHDs have stopped all community social support services due to the pandemic. When asked, they all agreed that they would begin to restart social support services when guidance was provided by the state.	
Strategy 3.3: Educate and promote a "Health in All Policies" (HiAP) approach across Kentucky. KDPH will conduct seminars and conferences to educate local and state leaders across all sectors and policy areas on HiAP approach and its implications on health. ***Justification:*** *HiAP will assist with showing how non-traditional partners can improve health using their sphere of influence.*	**Measure 3.3.1:** Increase percentage of LHDs and multisector coalitions who are trained on HiAP **Baseline:** Unknown (2017) **Target:** Establish baseline and increase (2020) **Data Source:** KDPH
2021Status/Comments: 3.3.1: Updated target and timeline. Updated data source. 3.3.1: A baseline has not been established. Initiative in progress. **Other successes**: Training occurred in August 2017, Kentucky Health Department Association Retreat. It was a collaboration with Kentucky Population Health Leadership Institute and Health Impact Partners. There were 44 participants in attendance. CE credit was given.	

Call to Action

Nearly every Kentuckian has a family member, friend, or co-worker who has been affected by poor health outcomes. Kentucky's SHIP can assist in improving these outcomes through a united effort and shared vision to create healthier people and healthier communities. Together we can make healthy living easier and more affordable by looking at creative solutions that address the places where people live, learn, work, play, and receive care. Collaboration ensures that the whole is greater than the sum of its parts.

How do you and your organization fit into this projected picture of health in Kentucky?

You are a key part of the team, and here are some examples of ways you can begin to make a difference.

Schools

- Support all Kentucky school districts to pass and implement a 100% Tobacco Free School policy
- Implement a comprehensive school physical activity program
- Adopt and implement comprehensive wellness policies outlining opportunities for student and staff wellness
- Promote health professional careers
- Implement the CDC Whole School, Whole Community, Whole Child Framework to improve student health and academic success
- Engage local community partners to meet the needs of students and their families

Universities

- Develop programs to educate on public health issues: substance use disorder, healthy lifestyle
- Make the entire campus 100% tobacco free
- Increase the number of students in health professional careers
- Fund and support research and interventions addressing behaviors and environmental factors that lead to or worsen chronic diseases such as cancer, heart disease, diabetes, and mental health

Legislators

- Sponsor or support legislation that ensures smoke free initiatives in all Kentucky public spaces
- Assure funding for state and local population health foundational efforts
- Raise awareness of Kentucky's health focus areas by participating in existing programs, or sponsor new programs as needed in each district
- Hold government organizations accountable for cultural competency training and diversifying the workforce

Employers

- Implement comprehensive tobacco free policies
- Implement HiAP mindset
- Adopt comprehensive worksite wellness programs
- Provide healthy food options in vending machines and cafeterias
- Provide health promotion material to staff
- Provide health insurance coverage or give information on how to obtain health insurance
- Educate staff on benefits offered

State Government

- Encourage physical activity and a state of wellness
- Promote Health in All Policies in the organization culture
- Develop a culturally diverse workforce
- Continue to promote and support statewide programs, policies, and best practices addressing chronic and emerging public health issues

Hospitals

- Collaborate to sponsor community educational programs
- Seek or maintain accreditation/certification to ensure quality (e.g., Heart, Stroke, Baby Friendly, Cancer, etc.)
- Utilize and encourage best practices for breastfeeding infants and lactation support

Community Organizations

- Collaborate with local government to fill gaps in services to the local community
- Provide health promotional information to the members and participate in spreading this information in your community
- Work with local health departments for strategic planning in the community
- Attend public hearings and meetings on health-related ordinances and activities

Faith-based Organizations

- Encourage parishioners to be informed and participate in their own health care decisions
- Provide health promotional information to parishioners and offer health promotion screenings
- Offer space, if available, for physical activity programs
- Encourage parishioners to be involved in community events

Health Care Professionals

- Provide culturally relevant counseling, information, and referrals for preventive screenings
- Refer patients to smoking cessation, physical activity, nutrition, breastfeeding, disease self-management, and behavioral health programs
- Prescribe pain mediation with caution as recommended by the CDC chronic pain management guidelines

Local Health Departments

- Continue to support Local Health Department Accreditation through the Public Health Accreditation Board (PHAB)
- Provide leadership as the public health strategist in your communities
- Promote community health worker and navigation services to clients
- Actively seek community coalitions and individual stakeholders when developing policies
- Implement Health in All Policies mindset
- Utilize evidence-based programming to address community needs

Kentuckians

- Stop using tobacco products or never start
- Support comprehensive tobacco free environmental policies
- Increase daily physical activities
- Understand the science of substance use disorder
- Decrease intake of sugar sweetened beverages
- Access and support local food economy
- Advocate for community health needs including access to safe and clean spaces to be physically active, access to healthier foods, access to health services, and healthier school environments for children and adolescents
- Get involved in local community health actions through coalitions and other organizations

State Health Improvement Plan Contributors

The focus area workgroups, composed of representatives from LHDs, colleges and universities, professional organizations, faith-based organizations, mental health community, legislators, civic groups, managed care organizations, non-profit organizations, and hospital organizations, completed their assigned task to make recommendations to the SHIP Committee toward the goals and strategies in June 2017. After completion of the SHIP document, the workgroups met to discuss their progress; this revision provides an update on each workplan's progress. The workgroups all agreed to contribute their expertise to development of an in-depth supporting document of their focus area to support the recommendations of the SHIP.

KDPH has agreed to take the lead on coordinating the completion of the goals/strategies of the SHIP but have support from the vast array of agencies that contributed to this document. There have been coordination challenges, such as changes in staff and other pressing issues such as a Hepatitis A outbreak and the pandemic. Listed below are the individuals and their agencies that helped to develop our plan. We thank them for their time and energy to improve the health of all Kentuckians.

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Acronyms

ACEs	Adverse Childhood Experiences
AHR	America's Health Rankings
ASTHO	Association of State and Territorial Health Officers
BHDID	Kentucky Department for Behavioral Health, Developmental and Intellectual Disabilities
BOUNCE	Building Resilient Children and Families
CDC	Centers for Disease Control and Prevention
CHFS	Cabinet for Health and Family Services
CHIPs	Community Health Improvement Plans
CHWs	Community Health Workers
CMHCs	Community Mental Health Centers
COPD	Chronic Obstructive Pulmonary Disease
CSA	Community-Supported Agriculture
DMS	Department for Medicaid Services
ED	Emergency Department
FDA	Food and Drug Administration
HANDS	Health Access Nurturing Development Services
HI-5	Health Impact in Five Years
HiAP	Health in All Policies
HIV	Human Immunodeficiency Virus
HP2030	Healthy People 2030
IDD	Intellectual and Developmental Disabilities
KASPER	Kentucky All Schedule Prescription Electronic Reporting
KDE	Kentucky Department of Education
KDPH	Kentucky Department for Public Health
KHIE	Kentucky Health Information Exchange
KIP	Kentucky Incentive for Prevention
KIPRC	Kentucky Injury Prevention and Research Center
KORE	Kentucky Opioid Response Effort
KPAP	Kentucky Prescription Assistance Program
KYACHW	Kentucky Association of Community Health Workers
KY-ASAP	Kentucky Agency for Substance Abuse Policy
KyBRFS	Kentucky Behavioral Risk Factor Surveillance System
LGBT	Lesbian, Gay, Bisexual and Transgender
LHDs	Local Health Departments
MME	Morphine Milligram Equivalent

mPINC	CDC Maternity Practices in Infant Nutrition and Care
MOUD	Medication for Opioid Use Disorder
NAS	Neonatal Abstinence Syndrome
NRT	Nicotine Replacement Therapy
PaRK	Partnership for a Resilient Kentucky
PROSPR	Population-Based Research Optimizing Screening through Personalized Regiments
REACH	Resources for Education, Adaptation, Change & Health
SDOH	Social Determinants of Health
SFMNP	Senior Farmers' Market Nutrition Program
SHA	State Health Assessment
SHIP	State Health Improvement Plan
SNAP	Supplemental Nutrition Assistance Program
SUD	Substance Use Disorder
UK	University of Kentucky
UNICEF	United Nations International Children's Emergency Fund
UofL	University of Louisville
WHO	World Health Organization
WIC	Women, Infants and Children
YPP	University of Kentucky Young Parents Program
YRBS	Youth Risk Behavior Survey

Kentucky Public Health
Prevent. Promote. Protect.

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