PLANNING WITH PARTNERS TO IMPROVE KENTUCKY'S HEALTH

March 22, 2017 Kentucky History Center Frankfort, Kentucky



WELCOME

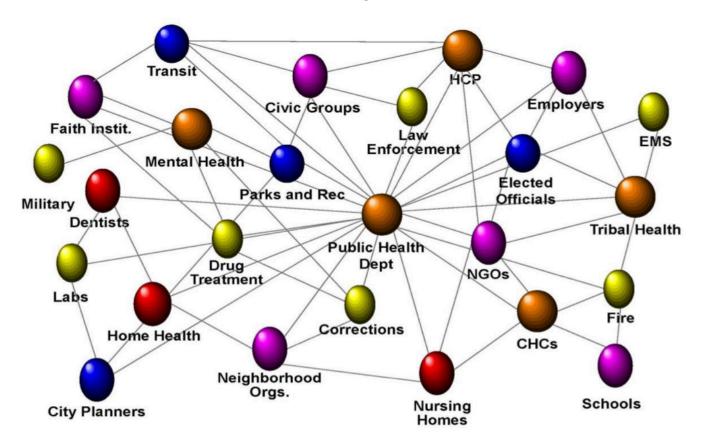
Dr. Hiram C. Polk Jr., MD Commissioner Department for Public Health

ACROSS THE CABINET, ACROSS THE COMMONWEALTH

Judge Timothy Feeley Deputy Secretary Cabinet for Health and Family Services

INTRODUCTIONS

Public Health System Partners



Public Health 3.0

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PUBLIC HEALTH 3.0

TIMELINE

Public Health 1.0

Tremendous growth of knowledge and tools for both medicine and public health Uneven access to care and public health	Public Health 2.0				
	Systematic development of PH (public health) governmental agency capacity across the U.S. Focus limited to traditional PH agency programs	Public Health 3.0			
		& commu generate Improve s	nultiple sectors inity partners t collective impa social ants of health	0	
ate 1800s	1988 IOM Future of Public Health Report	Recession	Affordable Care Act	2012 IOM For the Public's Health Reports	

7

What is **PUBLIC HEALTH 3.0**



A significant upgrade in public health practice to a modern version that emphasizes cross-sectorial environmental, policy- and systemslevel actions that directly affect the social determinants of health.

Local Public Health Leaders as the Chief Health Strategist

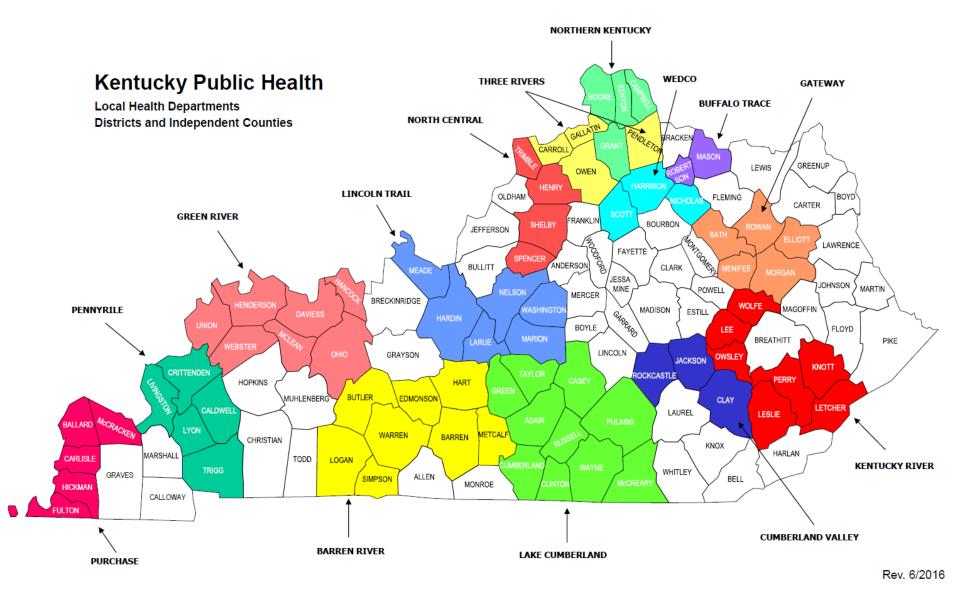
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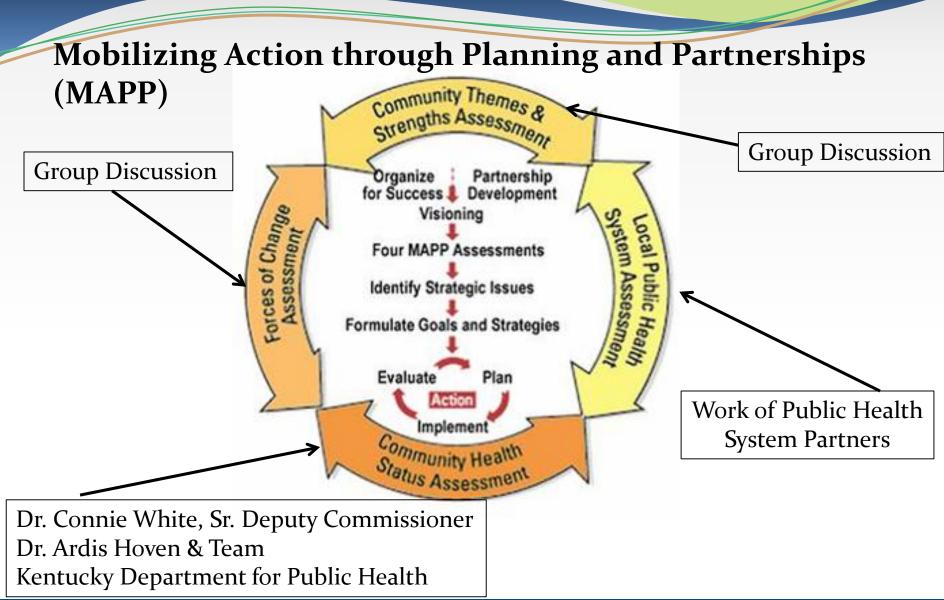
PUBLIC HEALTH 3.0



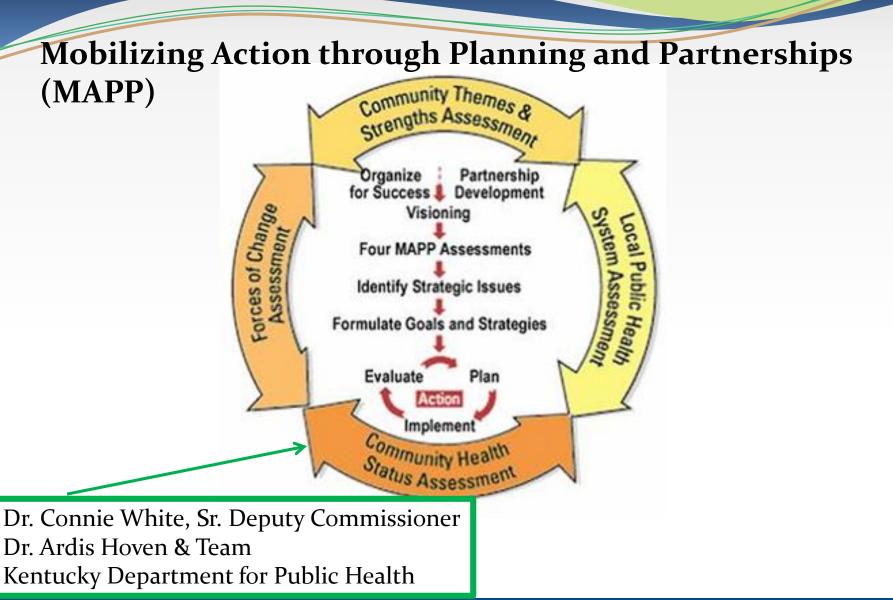














KENTUCKY HEALTH STATUS

Individual Perspective

2013 Kentuckians Perspective Survey distributed by KDPH in **2013**: 1,324 Kentuckians ranked TOP 10 Health Priorities

- 1. Access to Health Care 6. Healthy Eating
- 2. Obesity 7. Diabetes
- 3. Drug & Alcohol Abuse 8. Mental Health
- 4. Cancers
- 5. Tobacco Use

- 9. Heart Disease
- **10**. Physical Activity

2016 Kentuckians Perspective

 KY Health Issue Poll – 1580 Random sample Telephone Interviews (funded by Foundation for a Healthy KY)

> Top four health care issues identified as the most important for men, women and children in Kentucky*

	CHILDREN		WOMEN		MEN	
1	Obesity	25%	Cancer	39%	Cancer	21%
2	Problems with health insurano or health care	10% Ə	Heart disease	11%	Heart disease	20%
3	Cancer	8%	Problems with health insuranc or health care	10% e	Problems with health insuranc or health care	12% e
4	Hunger/ malnutrition	6%	Obesity	9%	Obesity	10%

* KHIP asked three open-ended questions: "What is the most important health care issue facing men in Kentucky?"; "What is the most important health care issue facing women in Kentucky?"; and "What is the most important health care issue facing children in Kentucky?"

KENTUCKY HEALTH STATUS

DATA PERSPECTIVE

Data Sources

- U.S. Census Data 2010
- KY Behavioral Risk Factor Surveillance (Ky BRFS) 2011-2015
- Kentucky Cancer Registry: 2010-2014
- KY Vital Statistics Files
- KY Department for Public Health: HIV/HCV
- KY Injury Prevention and Research Center
- Youth Risk Behavior Survey

Health Disparities

- Health disparities are differences in health status between populations that are caused by social or economic disadvantage
- A number of disparities in health outcomes exist in Kentucky based on race/ethnicity and geography.
- The data illustrate the need for comprehensive approaches that include addressing the social determinants of health through an equity lens.



Adverse Childhood **Experiences** (ACE) **Kentucky Behavioral Risk Factor Survey** 2015

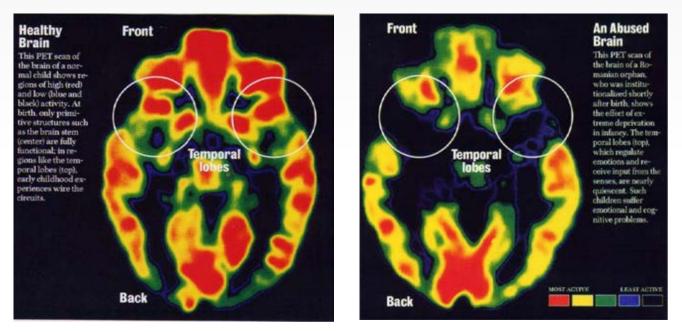
Critical Periods

 Birth – 2 years; critical window for hardwiring the brain for social-emotional development.



- Social-Emotional development is based on secure <u>attachment</u> and becomes the foundation for cognitive development and sense of self-identity.
- Attachment comes from a <u>nurturing relationship</u> with a caregiver that is consistent and caring.

Critical Periods



The Two Year window - results of extreme deprivation of stimulation

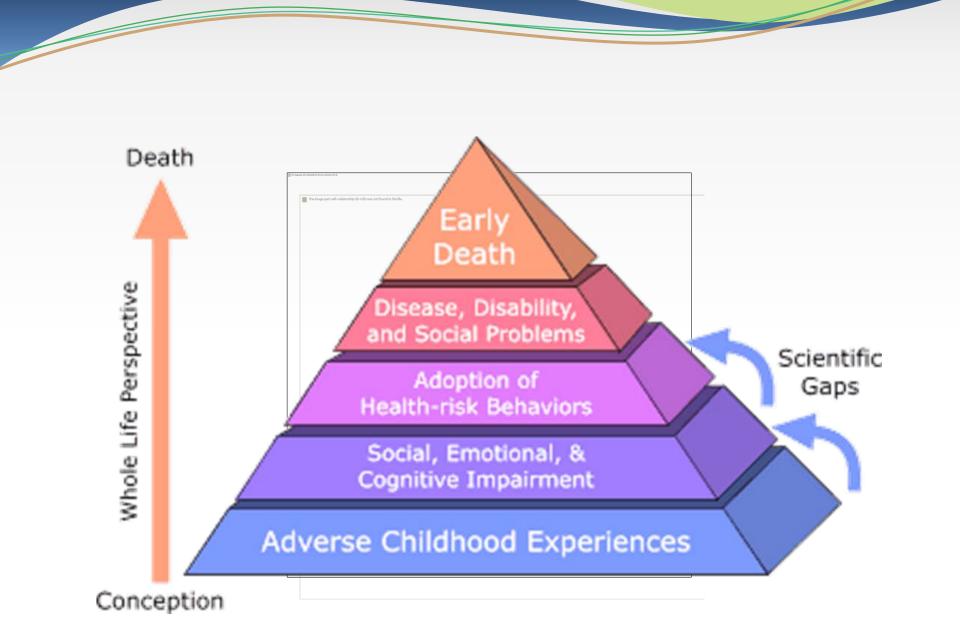
ACE Module

Comprised of 11 questions that assess the following eight categories of ACE:

- Childhood Abuse
 - 1. Physical abuse
 - 2. Sexual Abuse
 - 3. Emotional Abuse
- Household Dysfunction
 - 4. Presence of a mentally ill household member
 - 5. Alcohol or drug abuse in the household
 - 6. Incarcerated household member
 - 7. Violence between adults in the household
 - 8. Parental divorce or separation

Toxic Stress





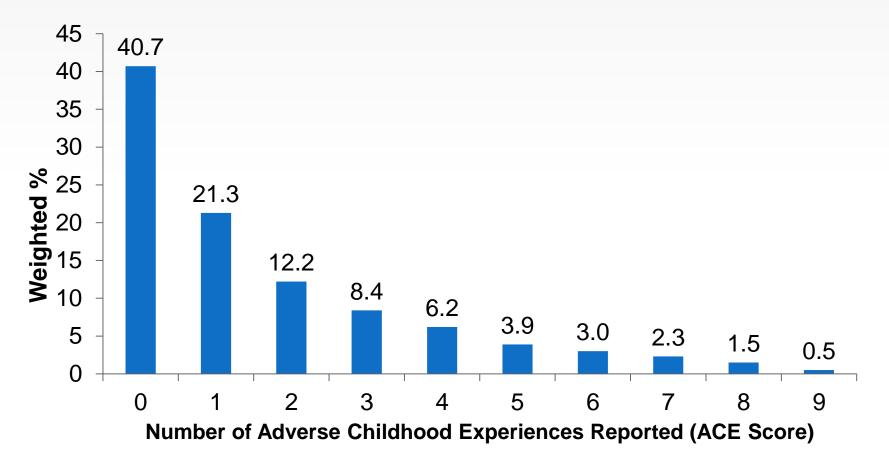
Kentucky Behavioral Risk Factor Survey (KyBRFS)

Eleven questions about adverse childhood experiences (ACE) were added in the 2015 Kentucky Behavioral Risk Factor Survey (KyBRFS).

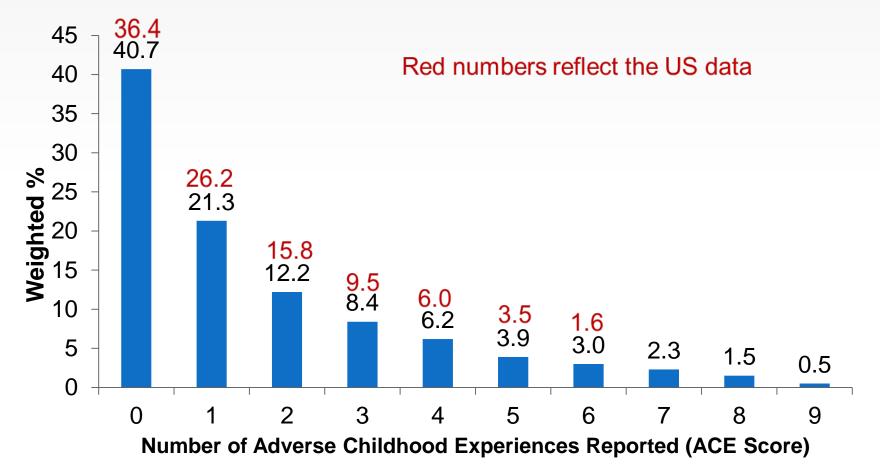
Prevalence of ACE Among Some States in the US

STATE	% of Adults with at least 1 ACE	% of adults with 4 or more ACEs
California	61%	16.7%
Iowa	55%	14%
Kentucky	59%	17.5%
Minnesota	55%	13%
Montana	61%	17%
Vermont	57%	13%
Washington	62%	17%
Wisconsin	56%	14%

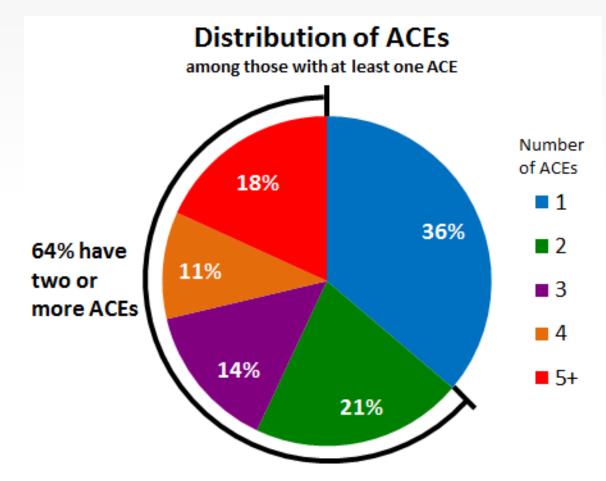
Prevalence of Adverse Childhood Experiences (ACE) among Kentucky adults ages 18 and older by ACE Score, KyBRFS 2015



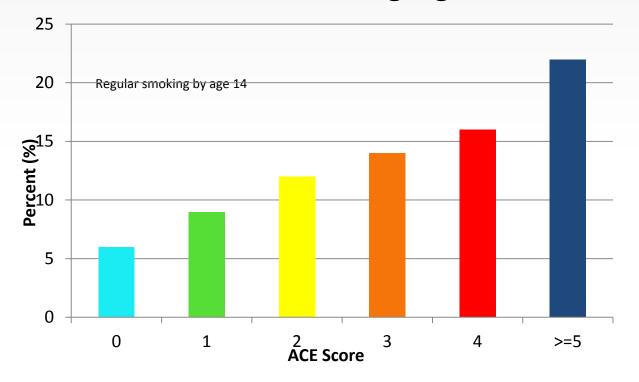
Prevalence of Adverse Childhood Experiences (ACE) among Kentucky adults ages 18 and older by ACE Score, KyBRFS 2015



Results from KyBRFS 2015

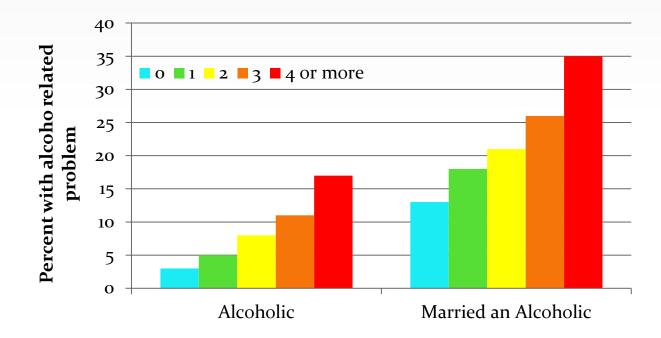


Relationship Between ACE Score and Early Initiation of Smoking Cigarettes



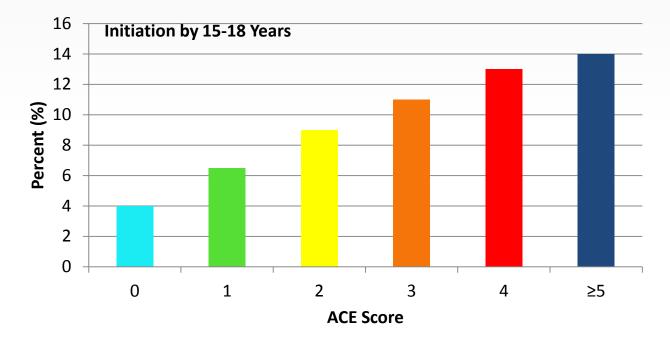
Anda et al., 1999, JAMA

The ACE Score Alcohol Use and Abuse



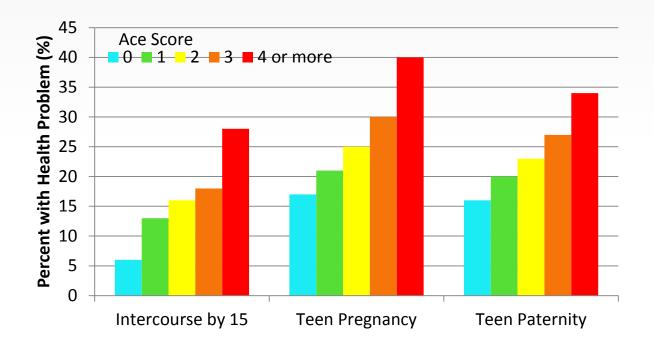
Dube SR et al, Adictive Behavior, 2002

ACEs and the Age at Initiation of Illicit Drugs



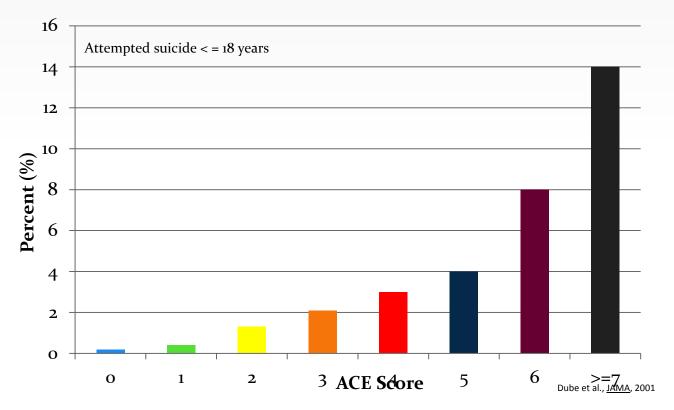
Dube et al., 2003, Pediatrics

ACE Score and Teen Sexual Behaviors

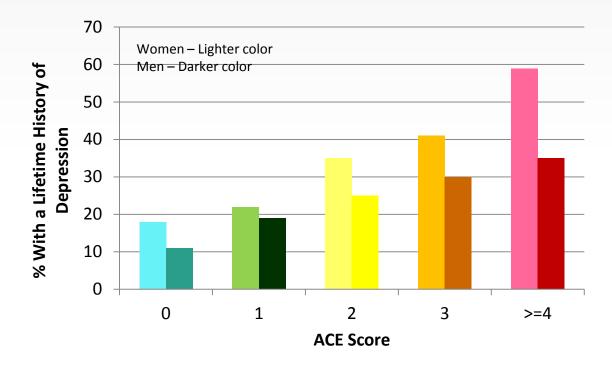


Hillis S et al, 2001

ACE Score and Attempting Suicide During Adolescence



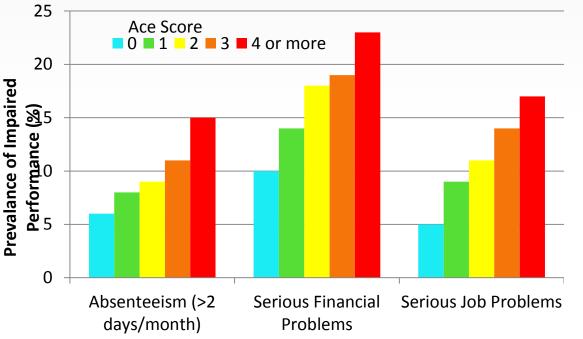
ACEs Chronic Depression as an Adult



Chapman D et al, Journal of Affective Disorders, 2004



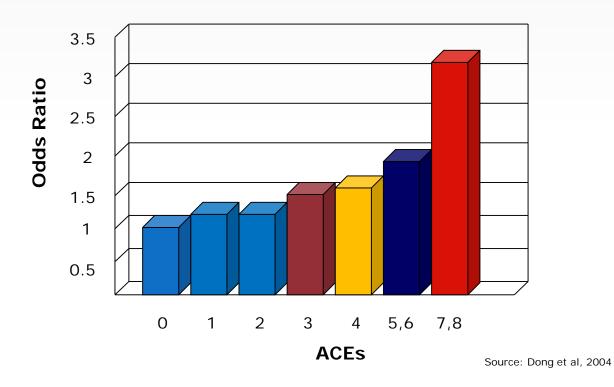
ACE Score and Impaired Worker Performance



Anda RF et. al., The Permanente Journal, 2004



Risk Factors for Adult Heart Disease are Embedded in Adverse Childhood Experiences





ACE Study---Early Death

- Compared childhood trauma and mortality
- Identified 1, 539 deaths within the cohort between 1995 and 2006
- People with 6 or more ACEs died nearly 20 years earlier than those without ACEs
 - 60.6 years versus 79.1 years

Resilience

- Resilience is the ability to overcome serious hardship
- The foundation of resilience is the combination of
 - Supportive relationships
 - Adaptive skill building
 - Positive experiences that re-inforce selfefficacy, perceived control, and belonging
- Resilience requires relationships
- The capabilities that underlie resilience can be strengthened at any age

Harvard Center for the Developing Child. Key Concepts

Every child is one caring adult away from a success story



Every child is one caring adult away from a success story



Every child is one caring adult away from a success story



Demographics

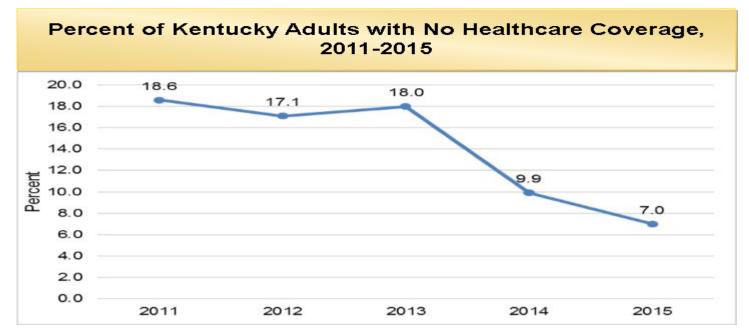
- Kentucky's population of 4,339,367 ranks 26th among the states.
- Kentucky has less diversity by Race/Ethnicity than other U.S. states.

Population Segmented by Race/Ethnicity			
Race or Ethnicity	Kentucky	U.S. Population	
White	87.8%	72.4%	
Black	7.8%	12.6%	
Asia, Hawaii, Pacific	1.2%	5.0%	
2 or more races	1.7%	2.9%	
Hispanic/Latino origin	3.1%	16.3%	
White not Hispanic	86.3%	63.7%	

Source: U.S. Census Data for 2010.

Healthcare Access/Coverage

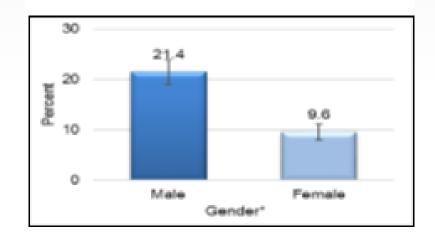
- From 2011 2015, the prevalence of Kentucky adults who reported having no healthcare coverage declined from 18.6% to only 7%.
- The prevalence of no healthcare coverage was significantly higher among adults with an annual household income between \$25,000—\$49,999 than among those with household income of \$50,000 or more (11.4% vs 4.1%).



Alcohol Consumption

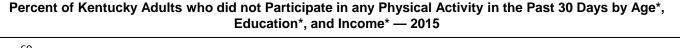
- In 2015, the prevalence of binge drinking among Kentucky adults (15.3%) was lower than the U.S. median prevalence (16.3%).
- Binge drinking was highest among adults with a college degree (18.8%), and lowest among those with less than high school (9.4%).
- Binge drinking was significantly more common among those with an annual incomes of \$50,000 or more than among those who earn less than \$25,000 a year (19.6% vs 12.3%).

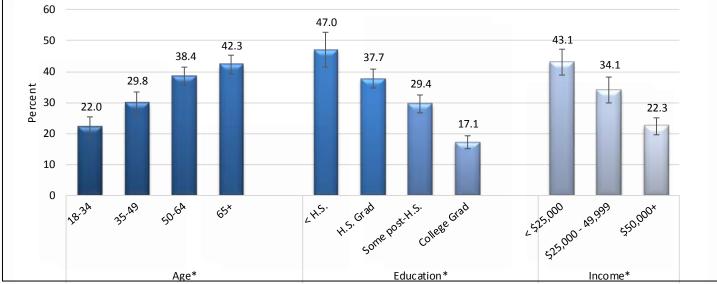




Physical Activity

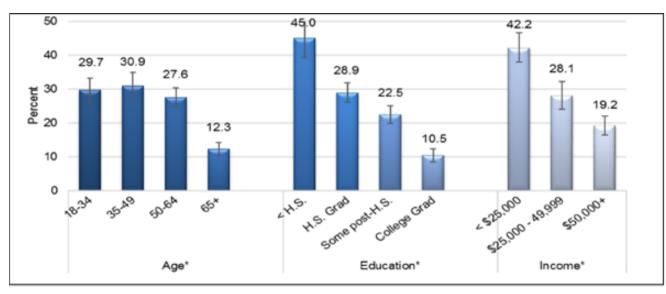
- In 2015, an estimated 32.5% of Kentucky adults reported no leisure time activity. This estimate was higher than the U.S. median (26.2%).
- Rates differed by age, education, and income.





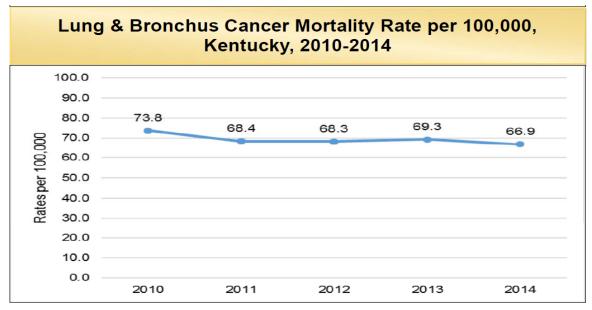
Tobacco Use

- About 26.0% of Kentucky adults reported that they were current smokers in 2015. This estimate was higher than the U.S. median (17.5%).
- From 2011 to 2015 the prevalence of smoking seems to be slowly but steadily decreasing.
- Rates differed significantly by education and income.



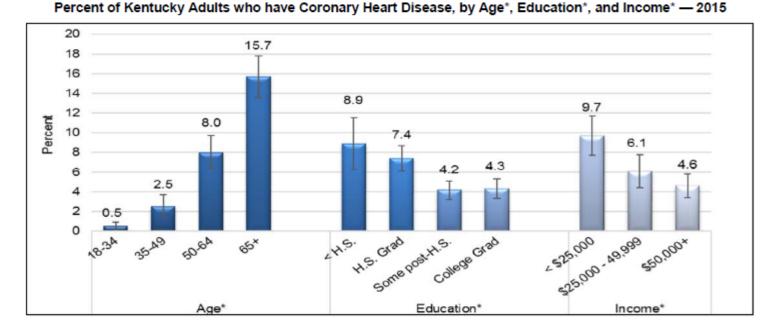
Cancers

- Overall cancer mortality rates declined between 2010-2014, from 207/100,000 - 198/100,000,
- Breast, Colon & Rectum, and Lung & Bronchus cancer mortality rates all declined, 2010-2014
- Lung/bronchus showed greatest decline: $\approx 7/100,000$



Coronary Heart Disease

- 6.0% KY adults reported ever being told they have coronary heart disease vs. 3.9% in U.S.
- Prevalence nearly double for males (8.0% vs 4.2%)
- Rates did not differ significantly by race
- Rates differed significantly by age, education & income



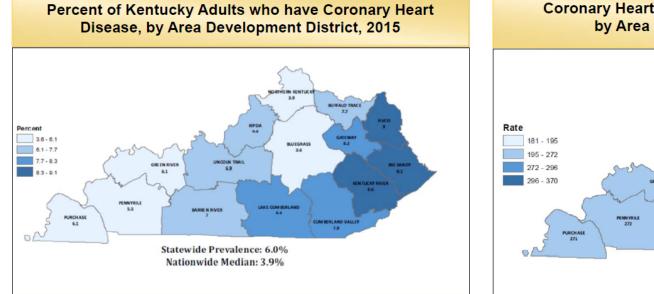
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Coronary Heart Disease Geography

- Prevalence tended to be higher in eastern Kentucky/ Appalachia
- But mortality higher in rural parts of Kentucky

Prevalence

Mortality



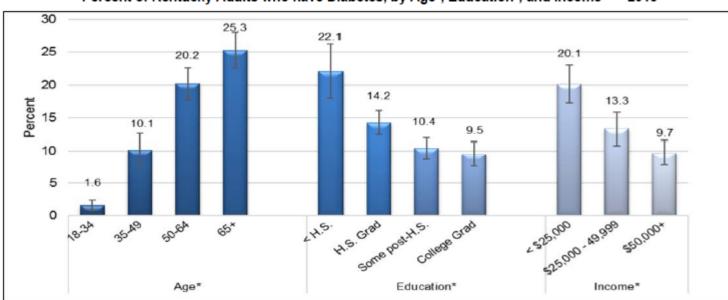
Coronary Heart Disease Death Rates per 100,000, by Area Development District, 2015

Statewide Rate: 227



Diabetes

- 13.4% KY adults reported ever being told they have diabetes vs. a 9.9% median in U.S. in 2015
 - Prevalence increased from 10.8% in 2011
- Prevalence not significantly different by gender or race
- Rates differed significantly by age, education & income

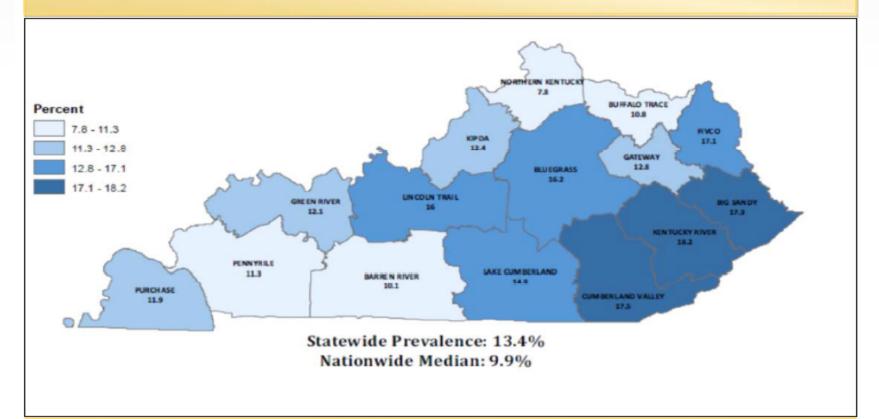


Percent of Kentucky Adults who have Diabetes, by Age*, Education*, and Income* - 2015

Diabetes by Geography

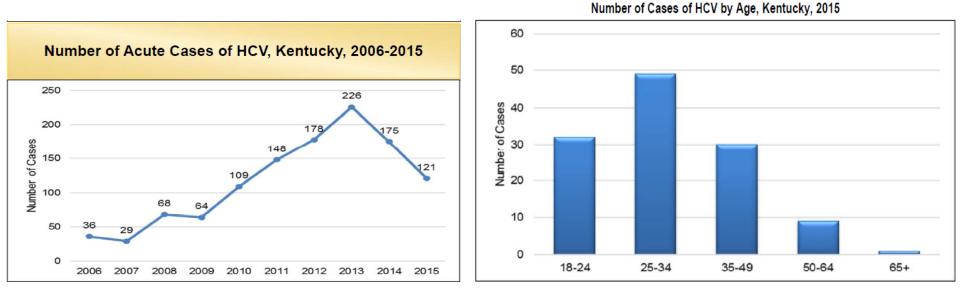
• We see higher rates in eastern Kentucky/Appalachia

Percent of Kentucky Adults who have Diabetes, by Area Development District, 2015



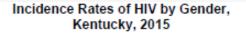
Hepatitis C (HCV)

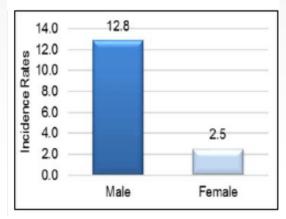
- Highest rate of new HCV cases in U.S. 2008-2015
- Highest burden of acute HCV is among 25-34 year-olds
- Majority of new HCV cases are White, non-Hispanic
- Estimated that over 38,000 Kentuckians are chronically infected with HCV



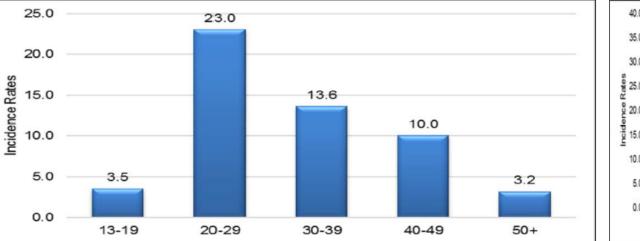
Human Immunodeficiency Virus (HIV)

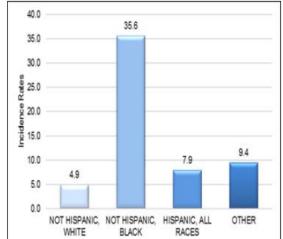
- HIV infections occur in males over females at 6:1 ratio
- Non-Hispanic Whites experience the highest <u>number</u> of HIV cases (183) but highest <u>rate</u> is in non-Hispanic Blacks (127 cases)
- Highest rate of new cases is among 20-29 year age group
- Transmission of HIV in Kentucky is primarily through men who have sex with men





Incidence Rates of HIV by Race, Kentucky, 2015

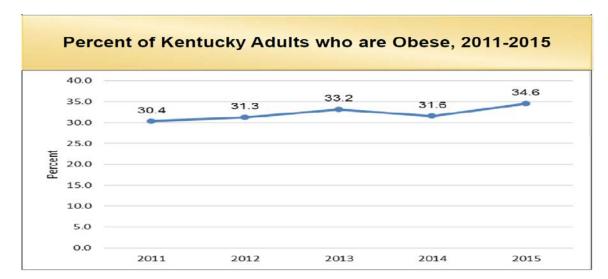




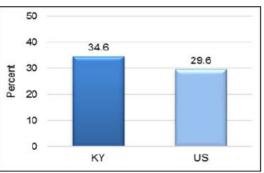
Incidence Rates of HIV by Age, Kentucky, 2015

Obesity

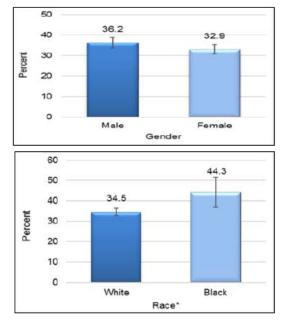
- In 2015, 34.6% of Kentuckians classified as "Obese" vs. 29.6% median U.S. prevalence
- Prevalence increased from 2011 2015
- Obesity slightly higher in men but significantly higher in Blacks
- Obesity peaked in 50-64 year age group but did not differ significantly by education or income



Percent of Adults who are Obese: Kentucky vs. Nationwide (States and DC) — 2015

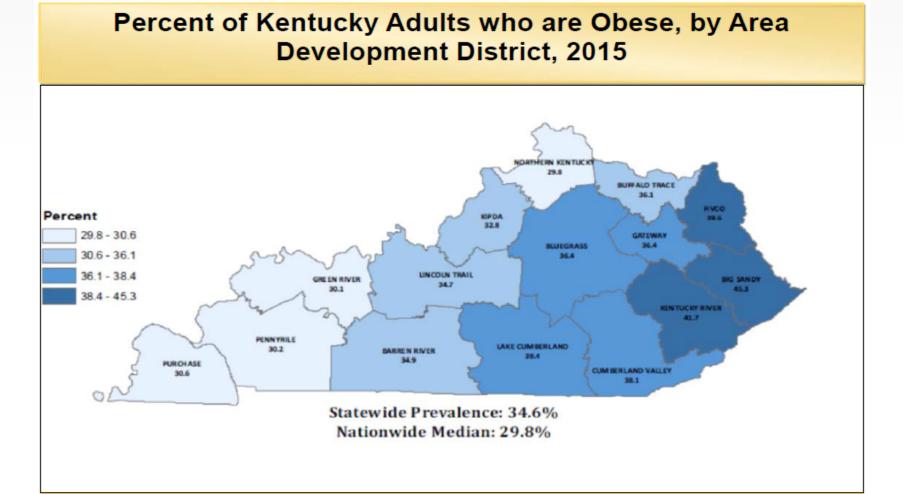


Percent of Kentucky Adults who are Obese, by Gender, and by Race* — 2015



Obesity by Geography

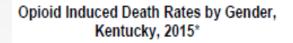
Obesity reported in Kentucky highest from east to west

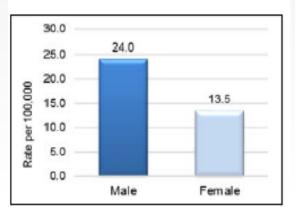


Opioid Deaths

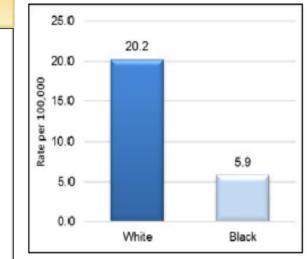
Opioid induced death rates in Kentucky:

- Have risen dramatically since 2006
- Were almost 2X higher in males than females in 2015
- Were 3X higher in Whites than Blacks in 2015
- 25-49 year-olds are most affected

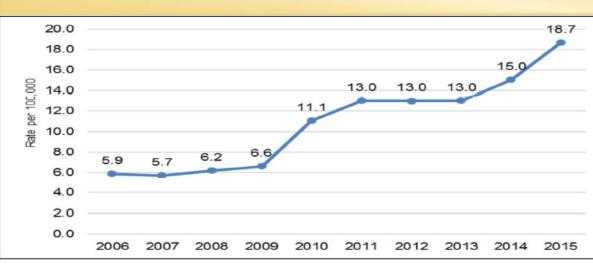




Opioid Induced Death Rates by Race, Kentucky, 2015*



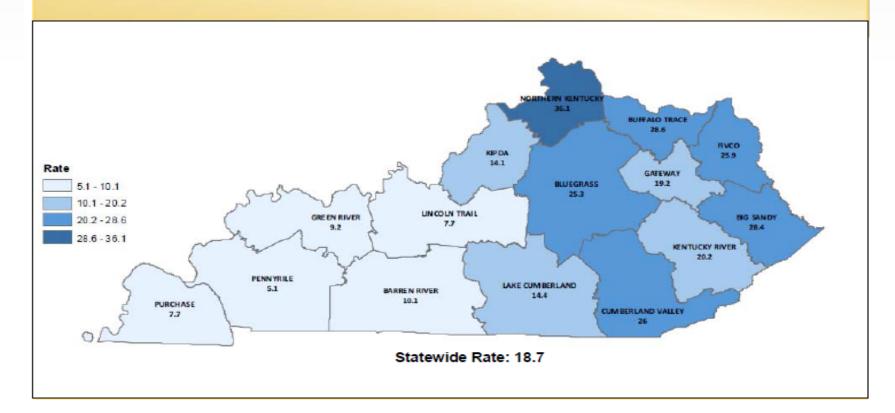
Opioid Induced Death Rates per 100,000, Kentucky, 2006-2015



Opioid Deaths by Geography

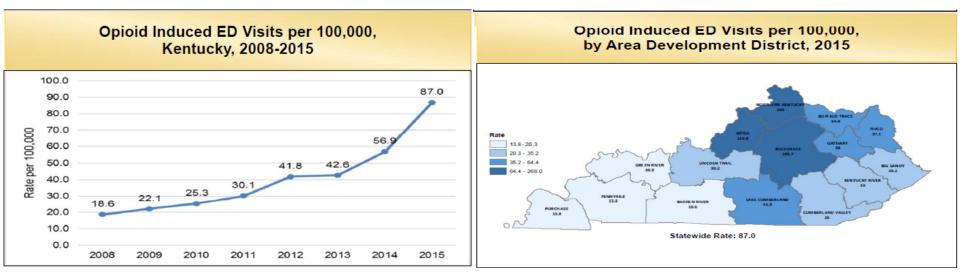
• Highest rates are in eastern and northern KY

Opioid Induced Death Rates per 100,000, by Area Development District, 2015



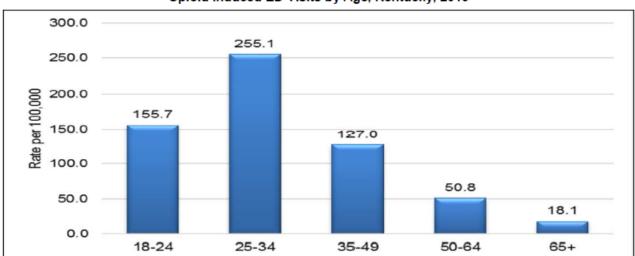
Opioid Induced Emergency Department (ED) Visits

- Opioid induced ED visits rose nearly 5X higher from 2006 and 2015 – 18.6 to 87.0 visits per 100,000
- Northern KY experienced the highest rates in 2015 with eastern KY following



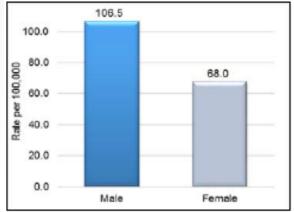
Opioid Induced Emergency Department (ED) Visits Kentucky, 2015*

- Nearly 4,000 ED visits of KY residents involving an opioid in 2015 – 87.0/100,000
- Again, males and Whites overrepresented
- 25-34 year age group most affected

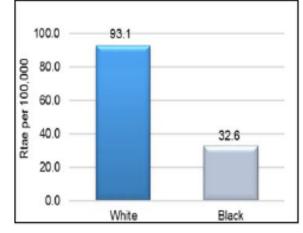




Opioid Induced ED Visits by Gender,

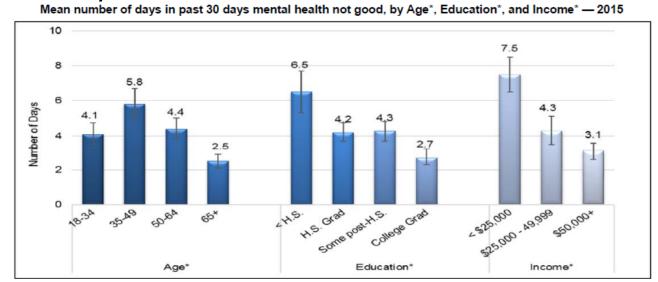


Opioid Induced ED Visits by Race, Kentucky, 2015*

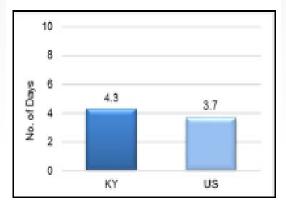


Poor Mental Health Days

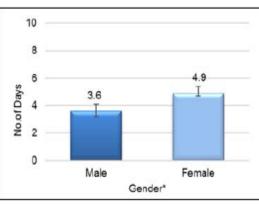
- Average number of poor mental health days decreased from 4.8 in 2011 to 4.3 in 2015
- Higher than national average of 3.7 days
- Women more likely to have a higher number
- Age, education & income all related to number of reported poor mental health days



Mean number of days in past 30 days mental health not good: Kentucky vs. Nationwide



Mean number of days in past 30 days mental health not good, by Gender -- 2015



60

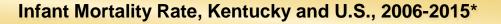
Maternal & Child Health

For the update the areas included were:

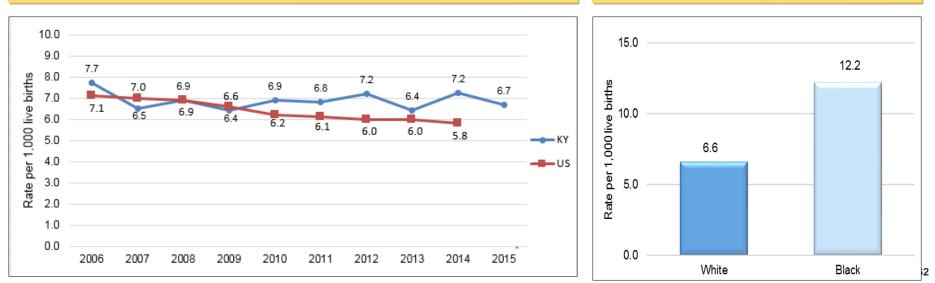
- Infant Mortality
- Neonatal Abstinence Syndrome (NAS)
- Smoking During Pregnancy
- Obesity in Youth

Infant Mortality

- From 2006 to 2015, the infant mortality rate has declined but not at the same rate as what is seen nationally.
- In 2014, for every 1,000 babies born in KY, 7.2 died. That is 417 infants that died before their first birthday.
- In 2015, the infant mortality rate among Black infants (12.2 per 1,000 live births) was nearly twice that of White infants. (6.6 per 1,000 live births).



Infant Mortality Rate by Race Kentucky; 2015*



What Does "417 Babies" Look Like?

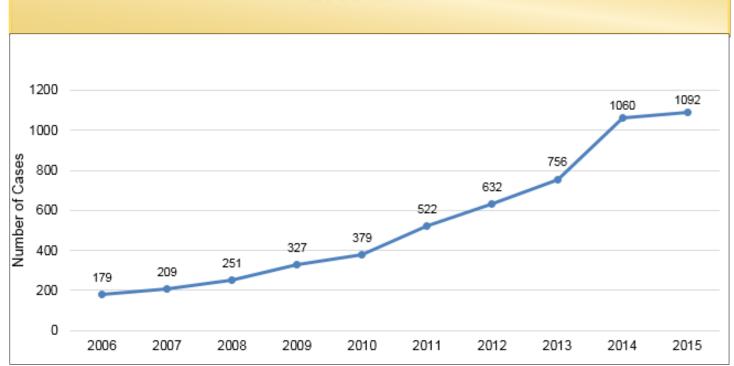
The equivalent of about 20-21 kindergarten classrooms of children that will never be filled.

Source Template: National Infant Mortality CollN Initiative. Why prioritize infant health efforts?

Neonatal Abstinence Syndrome (NAS)

- From 2006 to 2015, the number of Kentucky residents newborns with NAS has increased from 179 to 1,092.
- This is a six-fold increase.

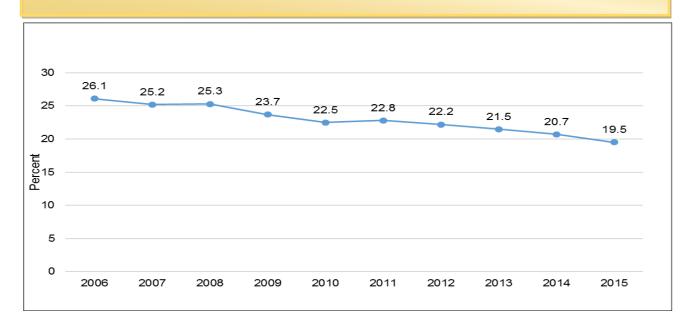
NAS Hospitalizations of Kentucky Resident Newborns, 2006-2015*



Smoking During Pregnancy

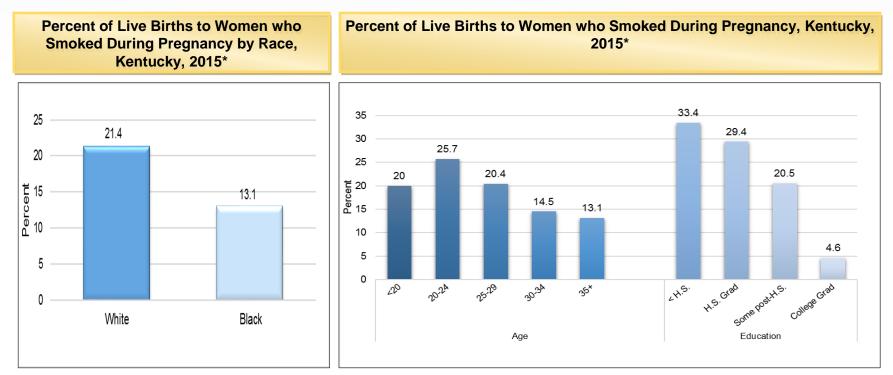
- From 2006 to 2015, the percent of Kentucky residents births with mothers who smoked during pregnancy has declined from 26.1% to 19.5%.
 - This is significantly higher than the 2014 national data in which 8.4% of mothers reported smoking during pregnancy.

Percent of Live Births to Women who Smoked During Pregnancy, Kentucky, 2006-2015*



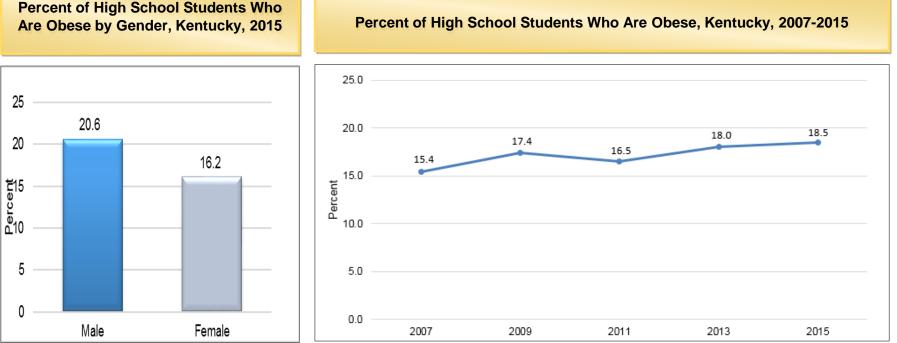
Smoking During Pregnancy

- In 2015, there was an increase of White infants (21.4%) who had mothers who smoked during pregnancy as compared to Black infants (13.1%).
- In 2015, mothers with less than a high school diploma were more likely to smoke during pregnancy.



Obesity in Youth

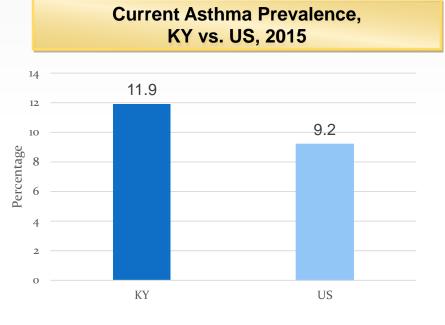
- In 2015, male high school students were more likely to be obese than female students.
- From 2007 to 2015, the percentage of high school students who were obese increased from 15.4% to 18.5%.



Current Asthma Prevalence

<u>Asthma</u>

- In 2015, 11.9% of Kentucky adults reported current asthma compared to 9.2% in the U.S. (CDC BRFSS)
- The asthma rate is significantly higher in women at 14.1% than in men at 9.5%. (KyBRFS 2015)
- Asthma is the primary diagnosis of almost 20,000 emergency department visits and 6,000 hospitalizations. (Kentucky Office of Health Policy outpatient data, 2014)
- In 2014 (most recent child data available) about one out of every 10 Kentucky children had current asthma. (KyBRFS, 2014)

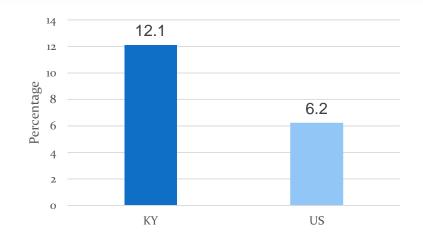


Chronic Obstructive Pulmonary Disease (COPD)

<u>COPD</u>

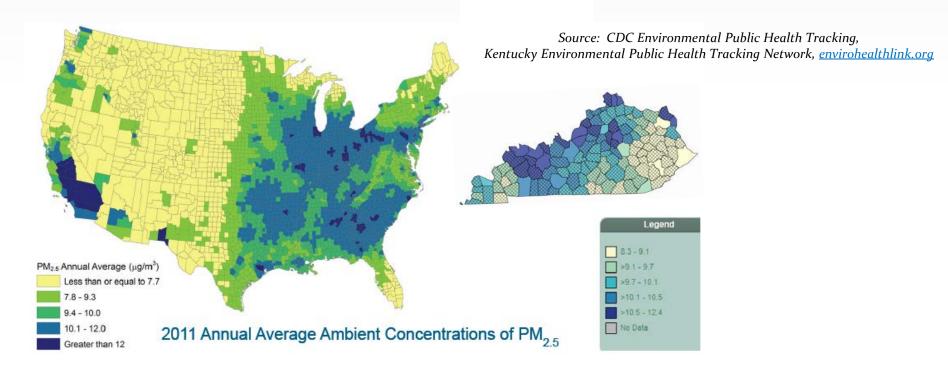
- In 2015, COPD prevalence for KY was 12.1% compared to the U.S. at 6.2%, nearly double the U.S. rate. (CDC BRFSS)
- The prevalence of COPD is about the same for men (11.8%) and women (12.3%). (KyBRFS 2015)
- Persons with less than a high school education reported significantly higher rates of COPD at 26.4% compared to college graduates at 4.5%. (KyBRFS 2015)
- COPD is listed in the diagnosis codes for one of every five hospitalizations in Kentucky. (Office of Health Policy hospital discharge data 2014)

COPD Prevalence, KY vs. US, 2015



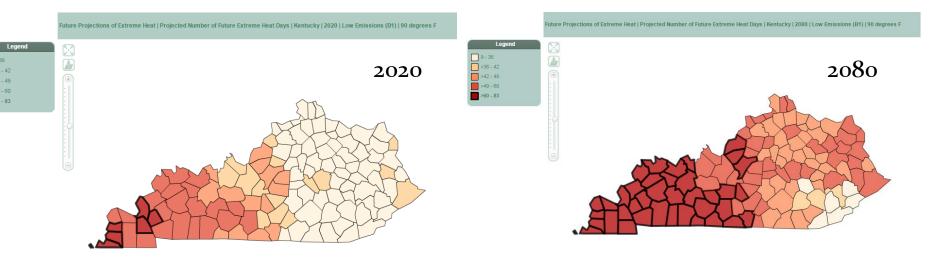
Particulate Matter

- Air pollution is a leading environmental threat to human health.
- Particulate matter (PM2.5) or very small particles, can be inhaled deeply into the lungs and can affect the heart, blood vessels, and lungs.
- In Kentucky, higher concentrations of particulate matter tend to be in western and northern Kentucky. Kentucky has areas that are in higher concentrations than the U.S. median.



Extreme Heat

- By the year 2080, it is projected that many of Kentucky counties will have at least 60 days per year that are at a minimum of 90 degrees or higher.
- Useful for Community Health Assessment and Planning, as higher temperatures can lead to increased risk of heat stress and other health complications.
- Especially important for vulnerable populations (children, elderly, immunocompromised) and/or those with heart or respiratory conditions, such as asthma.



Source: CDC, Kentucky Environmental Public Health Tracking Network, envirohealthlink.org

Environmental Exposure

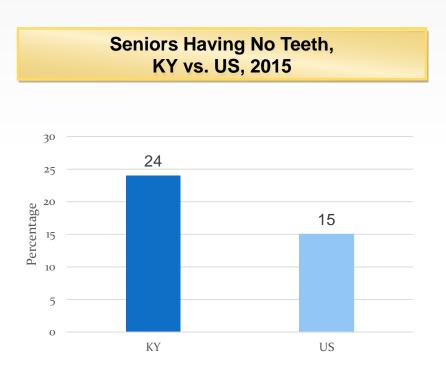
- Some Kentuckians may be exposed to environmental hazards including pesticides and hazardous waste sites.
- Reported pesticide exposures are higher in Kentucky than in the rest of the United States.
- Kentucky has 13 Superfund sites that may pose threats to human health and/or the environment. A Superfund site is any land in the United States that has been contaminated by hazardous waste and identified by the Environmental Protection Agency (EPA) for cleanup.

KENTUCKY		UNITED STATES
45.5	Rate of exposure to pesticides per 100,000 people (2014)	32.8
13	Number of Superfund sites Source: U.S. EPA	27 (average number of sites per state)

Source: CDC, Kentucky Environmental Public Health Tracking Network, envirohealthlink.org

Oral Health

- Kentucky has the highest percentage of households with fluoridated municipal water than any state in the nation at 99.9%. (cdc.gov, My Water's Fluoride)
- According to BRFSS 2014 (the most current year for oral health data)
 - 61% of Kentucky adults visited the dentist in the past year compared to 65% nationally.
 - 51% of Kentucky adults have lost a tooth to disease compared to 43% nationally.
 - 24% of Kentucky seniors have no teeth at all compared to 15% nationally.



BREAK OUT SESSION

REACTIONS TO THE DATA





BREAK OUT SESSION

State Themes & Strengths Assessment

Networking Lunch





BREAK OUT SESSION

FORCES OF CHANGE ASSESSMENT





Health Initiatives by Major Organizations

Health Initiatives by Major Organizations Foundation for a Healthy Kentucky

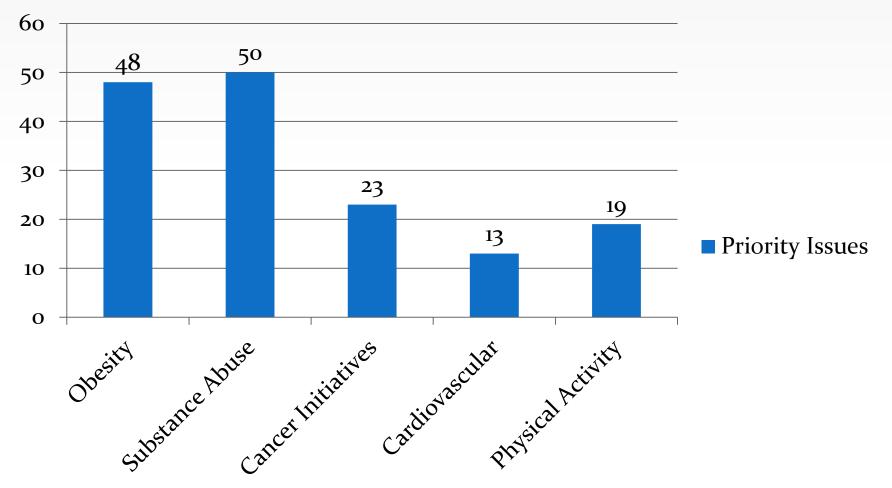
Health Initiatives by Major Organizations Kentucky Chamber of Commerce

Health Initiatives by Major Organizations Kentucky Department of Education

Health Initiatives by Major Organizations Kentucky Health Departments Association

Local Community Health Efforts

Top 5 Priority Health Issues



Health Initiatives by Major Organizations Kentucky Hospital Association

Health Initiatives by Major Organizations Kentucky Primary Care Association

SUMMARY

DATA

•Access •Education •Policy (Tobacco) •Early Childhood/ACE •Obesity/Healthy Food

STRENGTHS

Community Partnerships
Analytical Capacity
Technical Capacity
LHD – Conveners
Focus on Population Health
Culture of Compassion
KHIE
Unique Local Issues

RISKS

Funding
Data Issues
Silos
Prevention Takes Time
Social issues around need
Unique Local Issues

+ CHANGE

•HC in National Conversation•Programming/Coverage/Focus

- CHANGE

- •Uncertainty HC
- •Funding
- •Health Status



FOCUS AREA IDENTIFICATION

Top Focus Areas for the SHIP

- Substance Use++++
- Obesity+++
- Tobacco+++
- Environmental Health
- Integration to Access+
- ACE+++
- Economic & Community
- Access to Data/Analysis
- Health in All Policies
- Mental Health

Focus Areas in GREEN indicate top 5 health issues for SHIP. Other Focus Areas are "fabric" topics that contribute to the top 5 causes.

Focus Area Identification



Collective Impact:

The commitment of a group of important actors from different sectors to a common agenda for solving a specific social problem

Focus Area Identification

Isolated Impact vs. Collective Impact

Isolated Impact	Collective Impact
 Funders select individual grantees that offer the most promising solutions. Nonprofits work separately and compete to produce the greatest independent impact. 	 Funders and implementers understand that social problems, and their solutions, arise from the interaction of many orga- nizations within a larger system. Progress depends on working toward the same goal and measuring the same things. Large scale impact depends on increas- ing cross-sector alignment and learning among many organizations.
 Evaluation attempts to isolate a particular organization's impact. Large scale change is assumed to depend on scaling a single organization. Corporate and government sectors are often disconnected from the efforts of foundations and nonprofits. 	
	 Corporate and government sectors are essential partners. Organizations actively coordinate their action and share lessons learned.

Channeling Change: Making Collective Impact Work By Fay Hanleybrown, John Kania & Mark Kramer; 2012

Focus Area Identification

The Five Conditions of Collective Impact

Common Agenda	All participants have a shared vision for change including a common understanding of the problem and a joint approach to solving it through agreed upon actions.
Shared Measurement	Collecting data and measuring results consistently across all participants ensures efforts remain aligned and participants hold each other accountable.
Mutually Reinforcing Activities	Participant activities must be differentiated while still being coordinated through a mutually reinforcing plan of action.
Continuous Communi- cation	Consistent and open communication is needed across the many players to build trust, assure mutual objectives, and create common motivation.
Backbone Support	Creating and managing collective impact requires a separate organization(s) with staff and a specific set of skills to serve as the backbone for the entire initiative and coordinate participat- ing organizations and agencies.

Channeling Change: Making Collective Impact Work By Fay Hanleybrown, John Kania & Mark Kramer; 2012



Focus Areas & Next Steps

Wrap Up/Action Steps



THANK YOU!