



# Community Health Needs Assessment

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Our Lady of Bellefonte Hospital  
Bon Secours Kentucky Health System  
September – December 2019



Good Help to Those In Need®

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### *Mission*

To bring compassion to health care and to be Good Help to Those in Need®, especially those who are poor and dying. As a system of caregivers, we commit ourselves to help bring people and communities to health and wholeness as part of the healing ministry of Jesus Christ and the Catholic Church.

### *Vision*

As a prophetic Catholic health ministry, we will partner with our communities to create a more humane world, build health and social justice for all, and provide exceptional value for those we serve.

### *Values*

1. **Respect**: Our commitment to treat all people well. Each person has equal dignity because each individual “is made in the likeness of God.” We promote self-respect and mutual respect and trust among all the members of the Bon Secours team.
2. **Compassion**: Experiencing empathy with another’s life situation. Compassion is being with another as well as doing for them in such a way that the person experiences acceptance, concern, hopefulness, and sensitivity.
3. **Justice**: The value that supports and protects the rights of all people. It promotes the right to have needs met and in a manner consistent with human dignity; and it supports and protects the right of the individual to participate in decision-making regarding their care.
4. **Integrity**: A highly-developed sense of ethical behavior, consistent with that expected of an individual or organization with great moral character. Integrity is having our actions in harmony with our thoughts, feelings, and values.
5. **Quality**: The excellence we strive to reach in the delivery of our health services. It is done in a fashion to meet or exceed clearly established internal and external standards.
6. **Innovation**: The process of creating or managing new ideas, methods, and technologies to vitalize existing services and to develop new ones. Innovation is stimulated by a strong awareness of the needs of those we serve and thrives in an organization that promotes new approaches to health care delivery. The innovative organization commits resources necessary for research and development and for change, while recognizing that not all new efforts will succeed.
7. **Stewardship**: The responsible use of all our resources for which they are intended to support, promote, and preserve our mission and ministry. It is the use of good business principles. It is the balanced and right relationship of quality and value with cost and financial return.
8. **Growth**: Developing and improving our services and promoting self-renewal and progressive developmental programs for those with whom we work, our organization, and our community. It implies expansion, embracing change, and seeking opportunities as an organizational way of life.

### *Executive Summary*

Our Lady of Bellefonte Hospital (OLBH) is a 214-bed, non-profit, acute care facility located in Greenup County and licensed in the state of Kentucky. OLBH is part of the Bon Secours Kentucky Health System (BSKHS) and the Bon Secours Mercy Health Mid-American Group. The BSKHS also includes Bellefonte Physician Services, a medical group which provides a variety of health care services, including primary care, pediatrics, specialty care, and urgent care, from 30 locations in northeastern Kentucky and southeastern Ohio. OLBH serves approximately 300,000 residents of five counties in northeastern Kentucky (Boyd, Carter, Greenup, Elliott, and Lawrence), two counties in southeastern Ohio (Lawrence and Scioto), and two counties in western West Virginia (Cabell and Wayne). The Community Health Needs Assessment (CHNA) was conducted for OLBH's primary service area, which encompasses Greenup, Boyd, and Carter counties in Kentucky and Lawrence County in Ohio.

The CHNA was a collaborative effort between OLBH, King's Daughters Medical Center (KDMC), the Healthy Choices, Healthy Communities Coalition, the CHNA Advisory Group, and local health departments. The CHNA was conducted between November 2018 and July 2019 and included both primary and secondary data analyses. Primary data included a questionnaire and focus groups with key individuals in the community, including residents, public health representatives, and those with special knowledge of medically underserved, low-income, and minority populations as well as populations with chronic disease needs. Secondary data included research from local, state, and national sources.

The following significant health needs (hereinafter referred to as health priorities) were identified through the CHNA process and will be the focus of the Community Health Implementation Plan (CHIP):

1. Substance Use Disorder
2. Cancer
3. Obesity
4. Poverty
5. Mental Health

*Note.* The CHNA for the tax year ending August 31, 2019, was approved by the BSKHS Board of Directors on August 14, 2019. Its corresponding CHIP was approved by the Board on October 9, 2019. In order to align the CHNA posting deadline for legacy Bon Secours hospitals with the deadline for legacy Mercy Health hospitals, a separate CHNA for the stub period of September 1 to December 31, 2019, has been prepared. The health priorities remain consistent with those identified in the prior CHNA. OLBH has not taken action on the CHNA for the tax year ending August 31, 2019. Therefore, the CHNA for the stub period includes the actions taken on the previously filed CHNA for the tax year ending August 31, 2016.

### *Facility Description*

Our Lady of Bellefonte Hospital (OLBH) is a 214-bed, non-profit, acute care facility located in Greenup County and licensed in the state of Kentucky. OLBH is part of the Bon Secours Kentucky Health System (BSKHS) and the Bon Secours Mercy Health Mid-American Group. The BSKHS also includes Bellefonte Physician Services, a medical group which provides a variety of health care services, including primary care, pediatrics, specialty care, and urgent care, from 30 locations in northeastern Kentucky and southeastern Ohio. OLBH serves approximately 300,000 residents of five counties in northeastern Kentucky (Boyd, Carter, Greenup, Elliott, and Lawrence), two counties in southeastern Ohio (Lawrence and Scioto), and two counties in western West Virginia (Cabell and Wayne). The Community Health Needs Assessment (CHNA) was conducted between November 2018 and July 2019 and was a collaborative effort between OLBH, King's Daughters Medical Center (KDMC), the Healthy Choices, Healthy Communities Coalition, the CHNA Advisory Group, and local health departments. The CHNA focused on OLBH's primary service area, which includes Greenup, Boyd, and Carter counties in Kentucky and Lawrence County in Ohio.

### *Description of Community Served*

The assessed counties, Greenup, Boyd, and Carter in Kentucky and Lawrence in Ohio, lay in the foothills of the Appalachian Mountains on the Tri-State border between Kentucky, Ohio, and West Virginia. The Tri-State area is known for its unhealthy behaviors and poor health outcomes. According to the United States Census Bureau, a total of 169,378 people reside in the four counties, which cover a total of 1,367 square miles. 96.3% of service area residents are white, 1.6% are black or African American, 1.3% are Hispanic or Latino, and 0.8% make up all other races. There are more females (50.9%) than males (49.1%) in the four-county service area. In the service area, 27.4% of residents are under 18 years of age, 53.1% are between 18 and 64 years of age, and 19.5% are 65 years of age or older.

In the service area, 21.0% of residents under 65 years of age have a disability, compared to 13.0% of Kentucky residents, 10.0% of Ohio residents, and 8.7% of Americans under 65 years of age. Moreover, 6.0% of service area residents under 65 years of age do not have health insurance, compared to 6.7% in Kentucky, 7.7% in Ohio, and 10.0% nationally in this age group. 21.0% of service area residents live in poverty, compared to 16.9% of Kentucky residents, 13.9% of Ohio residents, and 11.8% of Americans. In the service area, 25.7% of children live in poverty, compared to 25.7% in Kentucky, 22.1% in Ohio, and 21.2% in the United States. 61.2% of students in the service area are eligible to receive reduced-price or free meals at school via the National School Lunch Program (NSLP), compared to 59.5% in Kentucky, 44.9% in Ohio, and 52.6% nationally. The service area has a teen birth rate of 50.6%, compared to 48.4% in Kentucky, 36.0% in Ohio, and 36.6% nationally.

Across the four-county service area, 6.5% of residents are unemployed, compared to 4.1% in Kentucky, 4.5% in Ohio, and 4.0% nationally. The median household income in the service area is \$43,405, compared to \$46,535 in Kentucky, \$52,407 in Ohio, and \$57,652



nationally. In Carter County, the median household income (\$35,095) is more than one-third lower than the national median. The service area has a per capita income of \$23,280, compared to \$25,888 in Kentucky, \$29,011 in Ohio, and \$31,177 nationally. Across all four counties, Medicaid enrollment is 27.7%, compared to 24.9% in Kentucky, 20.8% in Ohio, and 21.6% nationally. When considering educational attainment, 85.1% of service area residents 25 years of age or older are high school graduates or higher, compared to 85.2% in Kentucky, 89.8% in Ohio, and 87.3% nationally. Of this same age group, 16.3% of service area residents have a bachelor's degree or higher, compared to 23.2% in Kentucky, 27.2% in Ohio, and 30.9% nationally.

Characteristic	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Poverty - Total	20.1%	28.2%	16.0%	19.5%	16.9%	13.9%	11.8%
Poverty - Child	26.4%	24.6%	26.3%	25.5%	25.7%	22.1%	21.2%
NSLP Eligible	61.5%	66.2%	53.7%	63.4%	59.5%	44.9%	52.6%
Median Household Income	\$45,543	\$35,095	\$47,517	\$45,466	\$46,535	\$52,407	\$57,652
Per Capita Income	\$26,420	\$18,477	\$25,378	\$22,844	\$25,888	\$29,011	\$31,177
Medicaid Enrollment	26.8%	30.3%	25.8%	27.8%	24.9%	20.8%	21.6%
With Disability (under 65 years of age)	16.5%	14.2%	14.9%	16.8%	13.0%	10.0%	8.7%
No Health Insurance	5.4%	6.3%	5.3%	7.0%	6.7%	7.7%	10.0%
High School Graduate or Higher (25 years of age or older)	88.8%	78.9%	86.9%	85.9%	85.2%	89.8%	87.3%
Bachelor's Degree or Higher (25 years of age or older)	19.4%	14.0%	17.2%	14.5%	23.2%	27.2%	30.9%
Teen Birth Rate	58.3%	51.4%	43.8%	48.8%	48.4%	36.0%	36.6%
Unemployment Rate	5.4%	8.9%	5.9%	5.6%	4.1%	4.5%	4.0%

*Note.* Retrieved from National Center for Education Statistics, Common Core of Data, 2015-2016; US Census Bureau, US Census Decennial Census, 2010; US Census Bureau, Small Area Health Insurance Estimates, 2016; US Department of Health and Human Services, Health Indicators Warehouse, 2016; Centers for Disease Control and Prevention, National Vital Statistics System, 2006-2012; US Bureau of Labor Statistics, 2019

### ***Persons Representing the Broad Interests of the Community***

In order to ensure a broad involvement in the CHNA process from all four of the assessed counties, a questionnaire and focus groups were conducted to gain input. In each county, a focus group was held that included residents, public health representatives, and those with special knowledge of medically underserved, low-income, and minority populations as well as populations with chronic disease needs. Individuals from each county health department (Ashland-Boyd, Carter, Greenup, and Lawrence) attended their respective focus group. The non-profits in attendance covered programs that ranged from assistance for aged residents to those for young children and infants.

### *Organizations Providing Input*

Organization Providing Input	Nature and Extent of Input	Medically Underserved, Low-Income, or Minority Populations Represented by Organization
Aetna Better Health	Boyd and Greenup Co. focus groups	Insurance provider perspective, medically underserved, low-income, minority populations, and populations with chronic disease needs
Ashland Schools FRC	Boyd Co. focus group	Provides non-educational assistance for students in elementary school, low-income and minority populations
Ashland Schools YSC	Boyd Co. focus group	Provides non-educational assistance for students in high school, low-income/parent/education perspective
Ashland-Boyd Co. Heath Dept.	Boyd Co. focus group	Public health, medically underserved, low-income, minority populations, and populations with chronic disease needs
Boyd Co. Public Library	Boyd Co. focus group	Public library, community at large perspective
CARes	Boyd Co. focus group	Resource agency that connects those in need with agencies to help, low-income/medically underserved perspective
CareSource	Lawrence Co. focus group	Medicaid insurance provider, low-income perspective
Carter Co. Health Dept.	Carter Co. focus group	Public health perspective, medically underserved, low-income, minority populations, and populations with chronic disease needs
Carter County Schools/FRYSC Coordinator	Carter Co. focus group	Provides non-educational assistance for students in high school, low-income/minority/parent/education perspective
Christ Episcopal Church, reverend	Lawrence Co. focus group	Faith community/community at large perspective
City of Wurtland	Greenup Co. focus group	Government perspective
Commercial Bank, president	Carter Co. focus group	Business – employer perspective
Community at Large	Lawrence Co. focus group	Community at large/resident perspective
Daily Independent Newspaper	Greenup Co. focus group	Media perspective
Dept. of Corrections Reentry	Greenup Co. focus group	Parolee re-entry program, justice system perspective

Organization Providing Input	Nature and Extent of Input	Medically Underserved, Low-Income, or Minority Populations Represented by Organization
FIVCO ADD	Boyd Co. focus group	Area development district, government/economic development perspective
FIVCO, Carter County	Carter Co. focus group	Aging program, aging population perspective
For Jamie's Sake	Boyd Co. focus group	Resource center for the foster and adoption community, foster child perspective
Frontier Housing	Boyd Co. focus group	Public housing, low-income perspective
Grahn Community Center	Carter Co. focus group	Community activist, aging/low-income perspective
Grayson Council on Aging/ First Light Home Care	Carter Co. focus group	Adult aging and developmental delays in children perspectives
Grayson Emergency Mgt.	Carter Co. focus group	Emergency services – medically underserved perspective
Grayson Gallery, CCCP	Carter Co. focus group	Local business/activist, business/employer perspective
Greenup Co. Health Dept.	Greenup Co. focus group	Public health, medically underserved, low-income, minority populations, and populations with chronic disease needs
Greenup Co. Schools FRC	Greenup Co. focus group	Provide non-education assistance for students in need, low-income/minority/parent/education perspectives
Greenup Co. Schools YSC	Greenup Co. focus group	Provides non-educational assistance for students in high school, low-income/parent/minority/education perspectives
Health Care Access Branch, KY Public Health	Carter Co. focus group	Public health, medically underserved, low-income, minority populations, and populations with chronic disease needs
Hillcrest-Bruce Mission	Boyd Co. focus group	Mission services, low-income/medically underserved/minority perspective
Hope Central	Boyd Co. focus group	Resource center focusing on education, job searching and training, and resource finding, low-income perspective
Housing Authority of Catlettsburg	Boyd Co. focus group	Public housing agency, low-income perspective



Organization Providing Input	Nature and Extent of Input	Medically Underserved, Low-Income, or Minority Populations Represented by Organization
Interagency Council	Boyd Co. focus group	Brings helping agencies together to provide for the underprivileged, focus group moderator, low-income/medically underserved perspective
Ironton Alive/Farmer's Market	Lawrence Co. focus group	Community activist/community at large perspective
Ironton in Bloom/Ironton Alive	Lawrence Co. focus group	Community activist
KDMC	Boyd, Greenup, and Lawrence Co. focus groups	Health care organization, medically underserved, low-income, minority populations, and populations with chronic disease needs perspective
Kentucky Homeplace	Carter Co. focus group	Assistance in finding and applying for pharmaceutical company prescription assistance programs, low-income/medically underserved perspective
KY Cancer Program	Boyd Co focus group	Cancer care program, health care/low-income/medically underserved perspective
Lawrence Co. Early Childhood Academy	Lawrence Co. focus group	Early childhood education perspective
Lawrence Co. Early Childhood/Lawrence Co. Community Action	Lawrence Co. focus group	Provides Head Start early education services, low-income/minority perspective
Lawrence Co. Health Dept.	Lawrence Co. focus group	Public health, medically underserved, low-income, minority populations, and populations with chronic disease needs
Legal Aid of the Bluegrass	Greenup Co. focus group	Legal aid for those that need help, low-income perspective
Mahajan Therapeutics	Lawrence Co. focus group	Mental health and addiction services perspective
NEKY Community Action Coalition/ First Steps	Boyd Co. focus group	Adult aging and developmental delays in children, low-income perspective
Ohio Univ. Cooperative Extension	Lawrence Co. focus group	Provides services and educational opportunities for the broad community
Ohio Univ. Southern, retired prof.	Lawrence Co. focus group	Community member/activist
OLBH	Greenup Co. focus group	Health care organization, health care, medically underserved, low-income, minority populations, and populations with chronic disease needs perspective

Organization Providing Input	Nature and Extent of Input	Medically Underserved, Low-Income, or Minority Populations Represented by Organization
Olive Hill Council for Planning and Restoration	Carter Co. focus group	Local government perspective
Olive Hill Historical Society	Carter Co. focus group	Community activist
Pathways, Inc.	Carter Co. focus group	Mental health perspective
Quinn Chapel AME Church	Lawrence Co. focus group	Faith community perspective
Raceland Schools FRYSC	Greenup Co. focus group	Provides non-educational assistance for students in elementary and high school, low-income/minority perspective
Ramey Estep Home	Boyd Co. focus group	Residential and foster care treatment facility, foster care perspective
Safe Harbor of NEKY	Boyd and Greenup Co. focus groups	Shelter for victims of domestic violence, low-income perspective
Shelter of Hope	Greenup Co. focus group	Shelter for victims of domestic violence, low-income perspective
Smithfield Packing	Carter Co. focus group	Local industry perspective
St. Clair Family Medicine	Carter Co. focus group	Local health clinic, medically underserved, low-income, minority populations, and populations with chronic disease needs perspective
United Way of NEKY	Greenup Co. focus group	Non-profit funding agency supporting community agencies, low-income perspective
US Bancorp	Greenup Co. focus group	Business/employer perspective
US Census Bureau	Boyd Co. focus group	US government perspective
Vocational Rehab	Boyd Co. focus group	Vocational rehabilitation service perspective
WellCare	Boyd and Greenup Co. focus groups	Health insurance/Medicaid provider, medically underserved, low-income, minority populations, and populations with chronic disease needs perspective

### *Primary Data*

Primary data was collected between February and July 2019 from the four assessed counties through a questionnaire and focus groups. The questionnaire was distributed both online using SurveyMonkey and in print.

### *Questionnaire*

The questionnaire focused on multiple areas, including personal health, the health of the community, community support and services, health programs, health care services, and access to health care services. The 21-question questionnaire was administered throughout the four-county service area and garnered a total of 1,511 responses, 1,396 of which

included the respondent's county of residence. Of these respondents, 45.8% were from Boyd County, 20.5% were from Carter County, 20.0% were from Greenup County, 11.2% were from Lawrence County, and 3.0% resided in counties outside of the service area, including Floyd, Rowan, Lewis, Menifee, Franklin, and Elliott counties in Kentucky, Scioto County in Ohio, and Wayne, Lincoln, and Cabell counties in West Virginia. There were more female (77.5%) than male (21.5%) respondents. 7.2% of respondents were 18 to 24 years of age, 26.9% were 25 to 39 years of age, 32.7% were 40 to 54 years of age, 18.1% were 55 to 64 years of age, and 15.2% were 65 years of age or older. 25.0% of respondents had an annual income at or below \$24,999, 20.5% of respondents' annual income ranged from \$25,000 to \$49,999, 20.3% of respondents' annual income ranged from \$50,000 to \$74,999, and 34.2% of respondents' annual income was above \$75,000.

The race and ethnicity distribution of respondents closely followed the Census data of the service area, with 97.3% being white, 1.5% being black or African American, 1.23% being Hispanic or Latino, and 1.2% representing all other races. Educational attainment varied, with 4.1% of respondents having a high school diploma or equivalent, 19.3% with some college, 14.6% with an associate's degree, trade school certificate, or technology school certificate, 17.9% with a bachelor's degree, and 28.5% with a graduate degree or higher.

Overall personal health was rated excellent or very good by 60.0% of respondents, fair by 34.7%, and poor or very poor by 5.4%. The following tables show questionnaire responses related to social, emotional, financial, and physical support:

<b>Social and Emotional Support Received from:</b>	<b>Strongly Agree/Agree</b>	<b>Neutral</b>	<b>Disagree/Strongly Disagree</b>
Family	80.8%	8.6%	10.6%
Friends	80.0%	12.9%	7.1%
Church	66.3%	23.5%	10.2%
Community	40.8%	38.3%	20.9%

<b>Financial and Physical Support Received from:</b>	<b>Strongly Agree/Agree</b>	<b>Neutral</b>	<b>Disagree/Strongly Disagree</b>
Family	72.5%	13.7%	13.8%
Friends	55.2%	28.3%	16.5%
Church	46.4%	35.9%	17.7%
Community	33.1%	40.4%	26.5%

During the past year, most (64.8%) respondents sought care through their doctor's office, 13% received care at an urgent care center, 9.2% visited an emergency department, 3.2% sought care through a Federally Qualified Health Center, 1.9% sought care through a local health department, and 0.4% visited a free clinic. Nearly 5% of respondents reported that they did not seek care during the past year.

Health insurance coverage is critical to one's ability to access health care services. Those without health insurance often seek care late and are more likely to die prematurely. Most respondents had some form of health insurance, with 59.1% insured through an employer or labor union, 17.0% enrolled in Medicare, 14.0% enrolled in Medicaid, and 6.0% covered through individual policies, Veterans Affairs (VA), Tricare, or another type of health coverage. Over 3% of respondents reported that they had no health insurance coverage.

Air and drinking water quality is important to one's well-being and economic prosperity as well as to the broader environment. Access to healthy foods and safe places to be physically active can also have substantial impacts on one's health. The respondents were asked various questions about the health of their community, including those pertaining to the overall health of the community, whether there are safe places to play and walk, whether fresh food is accessible, and whether the air is clean. The overall health of the community was rated as good or very good by 17.4% of respondents, fair by 56.6% of respondents, and poor or very poor by 26.0% of respondents. The reasons identified by respondents as to why they felt their community was healthy or not are outlined in the table below:

Area	Strongly Agree/Agree	Neutral	Disagree/Strongly Disagree
Clean environment	26.4%	33.4%	40.2%
Little Air Pollution	29.1%	24.1%	46.8%
Access to Clean Water	67.9%	17.8%	14.3%
Access to Healthy Foods	69.0%	15.9%	15.1%
Good Places to Play	42.0%	26.6%	31.4%
Good Place to Walk/Bike	41.5%	24.0%	34.5%
Access to Dental Care	60.1%	21.4%	18.5%

Safety is essential to the health of a community. Chronic stress associated with living in unsafe neighborhoods can accelerate aging and have deleterious effects on health, even when income is accounted for, including higher rates of anxiety, depression, pre-term births, and low birthweight babies. Fear of violence can keep neighborhood residents indoors, away from interactions with neighbors, exercise, and healthy foods, which can contribute to obesity. When asked about neighborhood safety, 62.8% of respondents agreed or strongly agreed that there was safe housing in their neighborhood, 25.3% remained neutral, and 15.9% disagreed or strongly disagreed. Nearly half (48.9%) of respondents agreed or strongly agreed that there were safe places to play, 25.3% remained neutral, and 25.8% disagreed or strongly disagreed. More than half (51.9%) of respondents agreed or strongly agreed that they had safe transportation, 25.0% remained neutral, and 23.1% disagreed or strongly disagreed. When respondents were asked if they thought they could help make their community a better place to live, nearly three-quarters (73.6%) agreed or strongly agreed that they could make a difference, 23.9% remained neutral, and 2.6% disagreed or strongly disagreed.

As part of the questionnaire, respondents were asked to choose what they believed to be the top five community health needs. The list of community health needs included alcohol and drug abuse, health screenings and programs, vaccinations, cancer, dental health, heart disease, high blood pressure and stroke, mental health, overweight and obesity, and violence and abuse. The list in rank order is below:

1. Alcohol/Drug/Tobacco Use (86.7%)
1. Cancer (51.3%)
2. Obesity (47.2%)
3. Mental Health Issues/Suicide (45.8%)
4. Child Abuse/Neglect (42.7%)
5. Diabetes (39.9%)
6. Heart Disease (31.2%)
7. High Blood Pressure (21.9%)
8. Chronic Obstructive Pulmonary Disease (Lung/Breathing Issues) (21.3%)
9. Dental Health (20.0%)
10. Domestic Abuse (17.7%)
11. Senior Health (17.5%)
12. Persons with Disabilities (13.2%)
13. Teen Pregnancy (10.5%)
14. Infant Health (8.34%)
15. Sexually Transmitted Disease, including HIV/AIDS (8.28%)
16. Asthma (7.9%)
17. Stroke (5.3%)

Health care and community resources are important to help meet the needs of residents and promote a healthy community. A lack of resources to meet a health need creates issues that impact the economic vitality and health of the community. Respondents were asked if current programs were meeting various community health needs. The following table shows their responses:

Program Area	Strongly Agree/Agree	Neutral	Disagree/ Strongly Disagree
Alcohol/Drug Abuse	22.7%	26.0%	51.3%
Access to Health Programs/Screenings	54.8%	24.4%	20.8%
Access to Vaccinations	71.7%	16.3%	12.0%
Cancer	40.9%	33.5%	25.6%
Dental Health	52.0%	23.6%	24.4%
Diabetes	46.1%	32.9%	21.1%
Heart Disease/High Blood Pressure/Stroke	52.1%	28.3%	19.6%
Mental Health	30.5%	28.9%	40.6%
Overweight/Obesity	27.0%	29.3%	43.8%
Violence/Abuse	29.4%	36.2%	34.4%



### *Focus Groups*

Focus groups were held in all four service area counties from May to July 2019. Each focus group included residents, public health representatives, and those with special knowledge of medically underserved, low-income, and minority populations as well as populations with chronic disease needs. Attendance across the focus groups varied, with 34 attending the Boyd County focus group, 20 attending the Carter County focus group, 28 attending the Greenup County focus group, and 17 attending the Lawrence County focus group. Local health departments, health care organizations, and non-profits jointly facilitated the focus groups. The aim of the focus groups was to learn attendees' opinions about the strengths, weaknesses, opportunities, and threats (SWOT) to the health of the community.

The health of the community is dependent upon the genetics of its residents as well as the environment in which they live, work, play, and worship. Essentially, one's health largely depends on one's environment. A healthy community has access to quality educational resources, safe and healthy neighborhoods, adequate employment, reliable transportation, healthy foods, safe places to be physically active, and high quality health care services. Unhealthy communities have a heightened incidence and prevalence of chronic diseases such as cancer, diabetes, and heart disease. Healthy communities are integral to the growth and development of the Tri-State area.

The **strengths** of the community, as identified by the focus groups, included schools (both secondary and higher education), the presence of many non-profits, collaboration between agencies, counties, and the states of Kentucky and Ohio, economic development efforts and programs focused on workforce development and leadership, the availability and quality of health care in most areas, supportive churches and faith communities, and a strong sense of community. Focus group participants also mentioned that there is a building awareness for people to live healthier lifestyles in the Tri-State area.

The **weaknesses** of the community, as identified by the focus groups, included drug and substance abuse, which focus group participants believed to be worsening due to the shift from opioids to heroine and fentanyl, the prevalence of crime and children in foster care or living with relatives, the lack of public or affordable transportation as well as to affordable housing and senior housing in many areas, and the prevalence of obesity and unhealthy lifestyle choices.

The **opportunities** of the community, as identified by the focus groups, included education and workforce development, the creation of a drop-in center to help educate and assist homeless residents, and the potential to learn from other communities about successful efforts that can be replicated locally. Focus group participants also noted that technology, including telemedicine and electronic medical records, has an important role and should be embraced and utilized to improve access to health care services in the community. Focus group participants believed that hospitals should recruit more specialists and use current

health care providers to further expand access to health care services. The opportunity to acquire grants to improve pedestrian safety and fund children's activities was also noted.

The **threats** to the community, as identified by the focus groups, included illicit drug and substance abuse, the prevalence of crime and mental health problems, concerns for family structure, the prevalence of children being raised by their grandparents or other relatives, and young residents and families leaving the community to pursue better opportunities elsewhere. Job loss was also noted as a threat to the community, mainly due to the recent industrial plant closures in the service area. Moreover, focus group participants identified government health care cuts as a potential threat to the community. The SWOT analysis is outlined in the table below:

County	Strengths	Weaknesses	Opportunities	Threats
Boyd, KY	<ul style="list-style-type: none"> <li>• Collaborations</li> <li>• Faith community</li> <li>• School resource centers</li> <li>• Non-profit community services</li> <li>• Community events</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of affordable housing</li> <li>• Transportation</li> <li>• Good paying jobs</li> <li>• Youth activity</li> <li>• Obesity</li> <li>• Poor lifestyle choices</li> </ul>	<ul style="list-style-type: none"> <li>• Trades/skills/job ready</li> <li>• Funding for kids activities</li> <li>• Mentorship</li> <li>• Engage faith community</li> <li>• Clean environment</li> <li>• Embrace technology</li> </ul>	<ul style="list-style-type: none"> <li>• Drugs</li> <li>• Mental health</li> <li>• Family structure with grandparents raising kids</li> <li>• Loss of jobs</li> </ul>
Carter, KY	<ul style="list-style-type: none"> <li>• Strong sense of community</li> <li>• Number of health care clinics</li> <li>• Good access to specialists</li> <li>• Improved communication with physicians with technology</li> <li>• Greater awareness of need for healthier lifestyle</li> <li>• Parks and recreation opportunities</li> <li>• Galaxy project to engage youth</li> <li>• Leadership programs</li> <li>• Increase in home health programs</li> <li>• Higher education helping to develop workforce</li> <li>• Great collaboration between agencies, businesses, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Obesity is a challenge and seems to be increasing</li> <li>• Feeling of pessimism</li> <li>• Closest hospital is 30 minutes away</li> <li>• Addiction and opioids worse or has shifted to heroine and fentanyl</li> <li>• Not enough transitional housing support for those coming out of recovery or prison. General weakness in how people are integrated back into society</li> <li>• Not enough ambulance coverage</li> <li>• Clinic hours are limited</li> <li>• No homeless shelter</li> <li>• Limited engagement of community in health classes and resources</li> <li>• Low access to low-income housing in Olive Hill area</li> <li>• Slow internet</li> <li>• Lack of adequate childcare; children being raised by other than parents</li> </ul>	<ul style="list-style-type: none"> <li>• Integrating veterans into community</li> <li>• Use technology to improve access; telemedicine, electronic medical records</li> <li>• Educate about resources available and leverage those resources</li> <li>• Communicate good things happening in community to increase synergy and positivity</li> <li>• Improve pedestrian safety through grants</li> <li>• Build upon existing workforce development programs</li> <li>• Involve young people in community improvement</li> <li>• Expand and strengthen existing collaborations and coalitions to improve health</li> <li>• Use current base of health care providers to help further expand access</li> </ul>	<ul style="list-style-type: none"> <li>• General sense of negativity about change and the ability to improve the county</li> <li>• Accessing resources to support growth is challenging, hard, and lacking</li> <li>• General movement to limit the ability to age in place and move elderly from the area</li> <li>• Companies do not always utilize local labor and resources</li> <li>• Young families and people moving elsewhere for better opportunities</li> <li>• Drug crisis makes it challenging for employers to find workers that can pass a drug test, which undermines economic growth</li> </ul>

County	Strengths	Weaknesses	Opportunities	Threats
<b>Greenup, KY</b>	<ul style="list-style-type: none"> <li>• Strong hospitals</li> <li>• Schools</li> <li>• Welcoming community</li> <li>• State park</li> <li>• 2-1-1 resources</li> </ul>	<ul style="list-style-type: none"> <li>• Jobs</li> <li>• Transportation</li> <li>• Substance abuse</li> <li>• Obesity</li> <li>• Kids living with family other than parents</li> </ul>	<ul style="list-style-type: none"> <li>• Industrial growth</li> <li>• Education</li> <li>• Support for families raising kids</li> <li>• Adding programs like START</li> <li>• Communications</li> <li>• Transportation</li> <li>• Expansion</li> <li>• Grants</li> <li>• Walkable neighborhoods</li> </ul>	<ul style="list-style-type: none"> <li>• Jobs</li> <li>• Substance abuse</li> <li>• Drug trafficking</li> <li>• State budget funding</li> </ul>
<b>Lawrence, OH</b>	<ul style="list-style-type: none"> <li>• Faith-based community</li> <li>• Relationships and collaboration between people and organizations</li> <li>• Judicial system (drug court)</li> <li>• Health care quality/availability</li> <li>• People</li> <li>• Strong economic development groups</li> </ul>	<ul style="list-style-type: none"> <li>• Drug issues</li> <li>• Tax base</li> <li>• Family issues such as grandparents raising kids</li> <li>• Jail</li> <li>• Public transportation</li> <li>• Aging population</li> <li>• Senior housing</li> <li>• Affordable housing</li> <li>• Government strategic plan</li> </ul>	<ul style="list-style-type: none"> <li>• Drop-in center for homeless education and assistance</li> <li>• Learn from other communities like Huntington and Ashland</li> <li>• Buy local</li> <li>• Recruit medical specialists (such as oral surgeons, services for kids, etc.)</li> <li>• Riverfront development</li> <li>• States work together</li> </ul>	<ul style="list-style-type: none"> <li>• Drugs</li> <li>• Crime</li> <li>• Family unit</li> <li>• Mental health</li> <li>• Tax base</li> <li>• Poverty</li> <li>• Health care cuts from the government</li> </ul>

### *Secondary Data*

Secondary data for the CHNA was collected from local, state, and national sources between February and July 2019. The data was divided into four categories impacting health. These categories are outlined below:

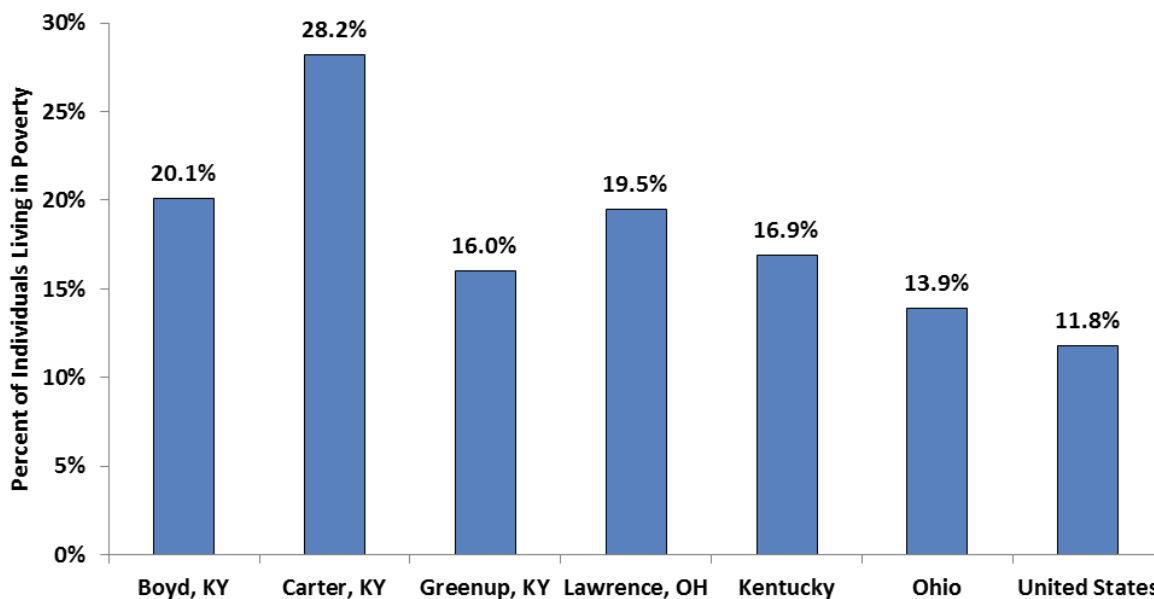
1. **Socioeconomic**: Poverty, educational attainment, unemployment, and homelessness.
2. **Clinical Care**: Access to health care providers, cancer incidence and screening, disease management, vaccinations, and preventable hospital events.
3. **Health Behaviors**: Food and recreation facility access, fruit and vegetable consumption, physical inactivity, and tobacco use.
4. **Health Outcomes**: Asthma, depression, diabetes, heart disease, cancer mortality, stroke, infant mortality and low birthweight, mental and substance use disorders mortality, premature death, suicide, overweight and obesity, and poor general health.

### Socioeconomic

Socioeconomic factors, such as poverty, poor educational attainment, and unemployment, are often associated with poor health status. A healthy community is built on accessible social and economic resources that allow residents and families to thrive. The three most critical socioeconomic factors are poverty, unemployment, and educational attainment.

#### Poverty

Poverty is associated with poor health status, as individuals living in poverty are often deprived of information, money, and access to health care services needed to prevent and treat disease. Due to the costs of care, impoverished individuals must also decide whether or not to obtain needed health care services, medications, and food. As a result, individuals in poverty often have diseases diagnosed later, when they are more difficult and costlier to treat. Across the four-county service area, 21.0% of residents live in poverty, compared to 16.9% in Kentucky, 13.9% in Ohio, and 11.8% nationally. The percentage of individuals in Boyd (20.1%), Carter (28.2%), and Lawrence (19.5%) counties living in poverty is higher than Kentucky, Ohio, and the United States. Greenup (16.0%) is the only county with a lower percentage of individuals living in poverty than Kentucky.

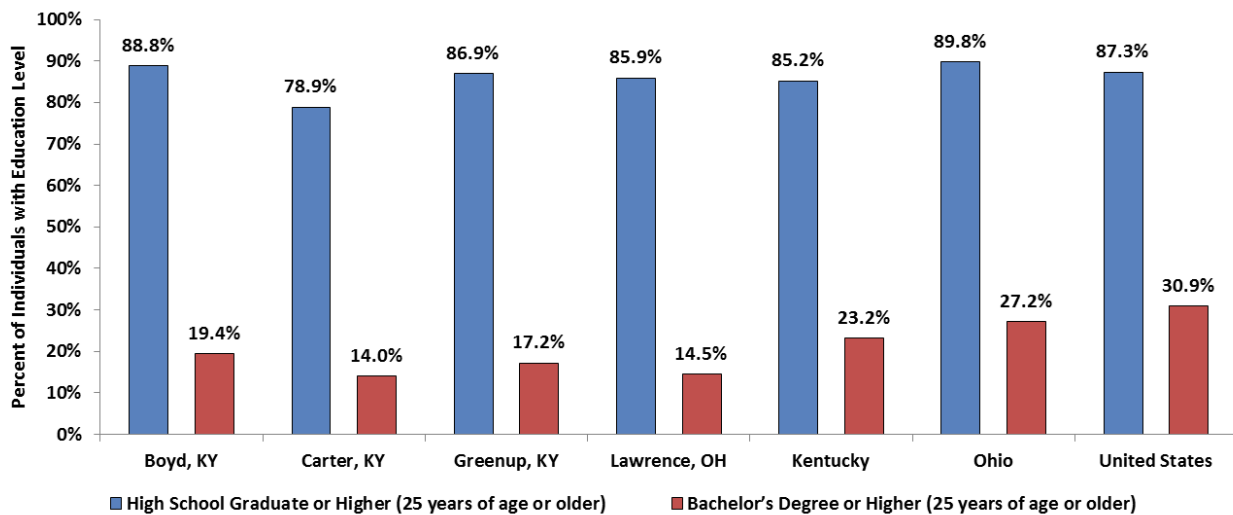


Note. Retrieved from US Census Bureau, 2018

#### Educational Attainment

Some evidence has demonstrated that educational attainment, defined as the number of years of education completed, is an upstream contributing factor to health outcomes. The January 2018 edition of the *Annual Review of Public Health* reported that adults with higher educational attainment tend to live longer and be healthier than their less educated peers. For several generations, education has been considered the principle pathway to financial security, stable employment, and social success. Education also improves one's knowledge,

skills, reasoning, and effectiveness, all of which are skills that have been linked to increased quality of life and life span. Education impacts one's health behaviors, access to health care services, and socioeconomic and psychological well-being. In the service area, 85.1% of residents 25 years of age or older are high school graduates or higher, compared to 85.2% in Kentucky, 89.8% in Ohio, and 87.3% nationally. Of this same age group, 16.3% of service area residents have a bachelor's degree or higher, compared to 23.2% in Kentucky, 27.2% in Ohio, and 30.9% nationally. Boyd (88.8%), Greenup (86.9%), and Lawrence (85.9%) counties have a higher percentage of residents 25 years of age or older that are high school graduates or higher than Kentucky. Boyd is also the only county with a higher percentage of high school graduates in this age group than the United States, but it is still lower than Ohio. None of the assessed counties has a higher percentage of residents 25 years of age or older with a bachelor's degree or higher than Kentucky, Ohio, and the nation.



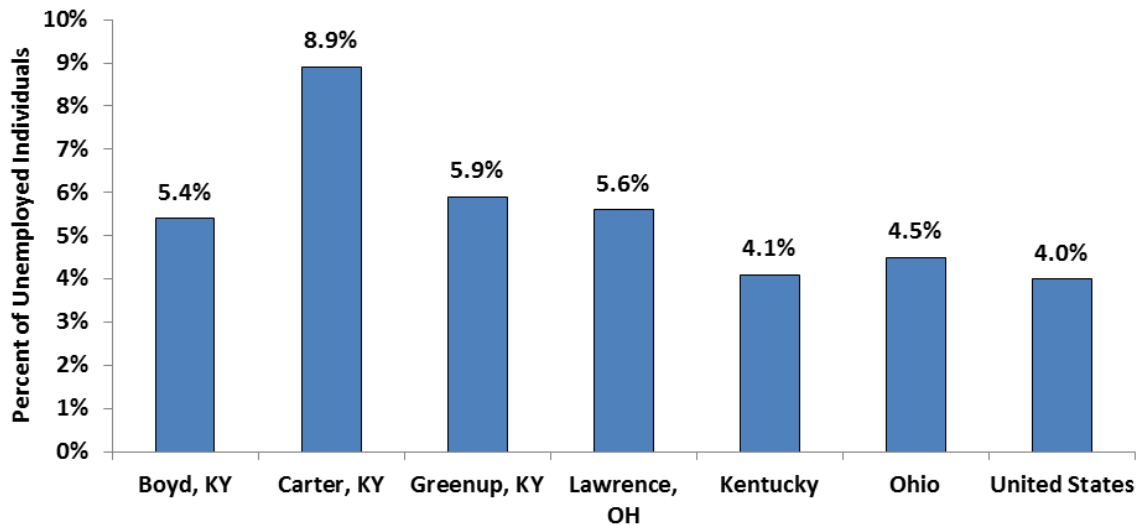
*Note.* Retrieved from National Center for Education Statistics, Common Core Data, 2015-2016

### Unemployment

Unemployment is associated with poor health status because it hinders one's ability to live in a safe neighborhood, access quality educational resources, and purchase healthy foods. Employment has many benefits, including the increased likelihood of having some form of health insurance, which allows individuals to bear a lower cost burden from needed health care services. According to the Robert Wood Johnson Foundation, earning a higher income translates to longer life span. Since 1977, the average life expectancy of male workers retiring at 65 years of age has risen 5.8 years in the top half of the income distribution, compared to 1.3 years in the bottom half. By contrast, unemployed individuals, including those who are laid off, are more likely to have fair or poor health status and develop various stress-related conditions, including stroke, heart attack, arthritis, depression, and anxiety, than employed individuals. The "working poor" also have health challenges despite being employed. This class of workers is less likely to access preventive care services, including immunizations and screenings, or have health insurance than their employed



counterparts. In the service area, 6.5% of residents are unemployed, compared to 4.1% in Kentucky, 4.5% in Ohio, and 4.0% nationally. The percentage of unemployed individuals in Carter (8.9%) County is substantially higher than Kentucky, Ohio, and the United States.



*Note.* Retrieved from US Bureau of Labor Statistics, 2019

### Homelessness

Individuals who experience homelessness are more likely to engage in illicit drug and substance abuse and have physical and mental health issues. All four service area counties have a lower percentage of total homelessness than Kentucky (0.7%) and Ohio (1.9%). Only Boyd (0.3%) County has a higher percentage of total homelessness than the United States (0.2%).

Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Homeless Population (number of persons)	147	1	0	35	3,688	10,249	554,808
Total Homelessness	0.3%	<0.1%	0.0%	<0.1%	0.7%	1.9%	0.2%

*Note.* Retrieved from Kentucky Housing Corporation, 2019; US Census Bureau, 2019; US Interagency Council on Homelessness, 2018

### Clinical Care

The lack of access to health care providers and facilities presents a barrier to achieving good health. Several factors, such as insured status, financial hardship, transportation barriers, cultural competency, and health insurance coverage limitations, affect one's access to health care services. Moreover, rates of morbidity, mortality, and emergency hospitalization can all be reduced if residents are ensured timely access to health care services, such as screenings, routine tests, vaccinations, and primary care services.

### *Access to Health Care Providers*

Across the four-county service area, residents' access to health care providers varies. While Boyd County has no apparent access issues for dental care, mental health, or primary care, the number of dentists, mental health providers, and primary care providers in Carter, Greenup, and Lawrence counties per 100,000 population is lower than Kentucky, Ohio, and the United States. Access to health care providers is critical to good health outcomes, healthy behavior promotion and maintenance, disease management and prevention, and health equity. Consistency in one's primary care provider is also important for patient-provider relationship building, disease prevention, and health promotion. The number of health care providers and percentage of residents with a consistent primary care provider is shown in the table below:

Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Access to Dental Care (per 100,000 pop.)	66.22	29.46	41.59	32.73	61.8	59.1	65.6
Access to Mental Health (per 100,000 pop.)	471.0	143.2	115.6	58.4	179.8	154.8	202.8
Access to Primary Care (per 100,000 pop.)	106.9	22.04	77.12	51.93	74.0	93.1	87.8
Consistent Primary Care Provider	88.1%	76.6%	81.6%	65.9%	80.8%	81.3%	77.9%

*Note.* Retrieved from US Department of Health and Human Services, Health Resources and Services Administration, Area Health Resource File, 2014

### *Cancer Incidence and Screening*

The breast cancer incidence rate per 100,000 population in Boyd (116.7), Greenup (110.1), and Lawrence (123.3) counties is lower than Kentucky (126.3), Ohio (127.4), and the United States (125.2). While Carter (125.5) County's breast cancer incidence rate per 100,000 population is lower than both states, it is higher than the nation. The colon and rectal cancer incidence rate per 100,000 population in Greenup (97.3) and Lawrence (93.5) counties is lower than Kentucky (100.0), but higher than Ohio (84.1) and the United States (38.7). The colon and rectal cancer incidence rate per 100,000 population in Boyd (108.1) and Carter (116.3) counties is higher than both states and the nation. In the service area, the lung cancer incidence rate per 100,000 population in Boyd (188.4), Carter (188.6), and Lawrence (157.3) counties is lower than Kentucky (189.1), but higher than Ohio (140.2) and the United States (59.2). Greenup (207.8) has a much higher lung cancer incidence rate per 100,000 population than both states and the nation.

With regards to cancer screening and prevention, the mammography screening rate among Medicare patients in Boyd (64.1%) County is higher than Kentucky (59.9%), Ohio (61.2%), and the United States (63.1%). The mammography screening rate among Medicare patients

in Carter (52.9%) and Lawrence (56.8%) counties is less than both states and the nation. Greenup (60.8%) County has a mammography screening rate among Medicare patients lower than Ohio and the United States, but higher than Kentucky. Greenup (62.3%) County has a higher colonoscopy and sigmoidoscopy rate than both states and the nation. While the colonoscopy and sigmoidoscopy rate in Boyd (60.5%), Carter (60.6%), and Lawrence (60.8%) counties is lower than Kentucky (61.4%) and the United States (61.3%), it is higher than Ohio (60.0%). The cancer incidence and screening rates for the assessed counties can be found in the table below:

Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Breast Cancer Incidence (per 100,000 pop.)	116.7	125.5	110.1	123.3	126.3	127.4	125.2
Colon and Rectal Cancer Incidence (per 100,000 pop.)	108.1	116.3	97.3	93.5	100.0	84.1	38.7
Lung Cancer Incidence (per 100,000 pop.)	188.4	188.6	207.8	157.3	189.1	140.2	59.2
Mammography Screening Rate among Medicare pts.	64.1%	52.9%	60.8%	56.8%	59.9%	61.2%	63.1%
Colonoscopy/Sigmoidoscopy Rate	60.5%	60.6%	62.3%	60.8%	61.4%	60.0%	61.3%

*Note.* Retrieved from Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2012-2016; Dartmouth College Institute for Health Policy and Clinical Practice, 2014

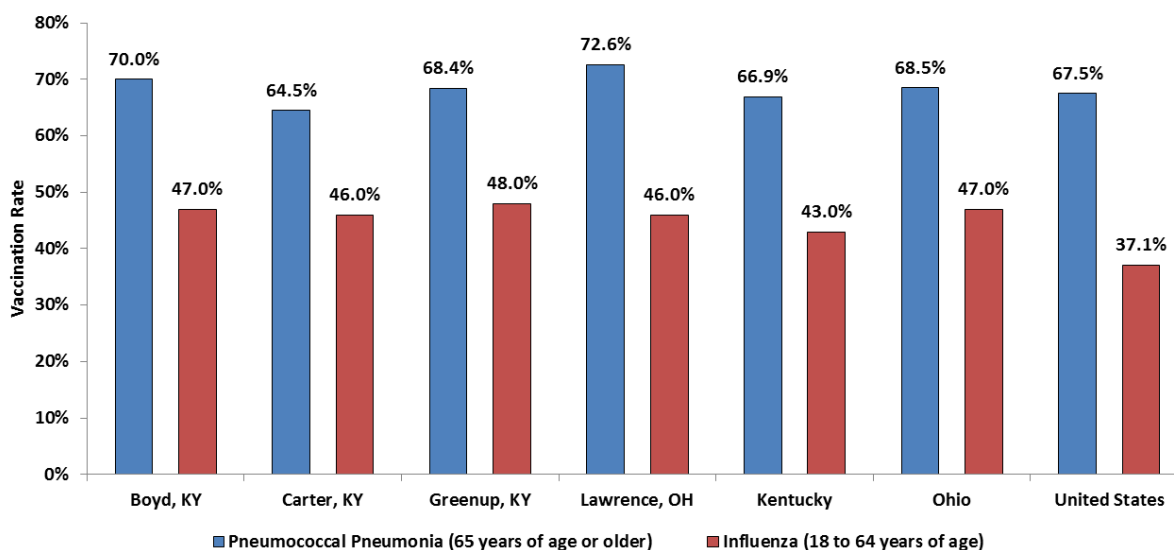
### *Disease Management*

Disease management for individuals with chronic diseases helps to reduce health care costs and improve quality of life. In the United States, 44% of non-institutionalized persons with chronic diseases account for 78% of health care costs. According to the Dartmouth College Institute for Health Policy and Clinical Practice, diabetes management of Medicare patients in the service area, with the exception of Lawrence (83.0%) County, is better than Kentucky (85.9%), Ohio (85.1%), and the United States (85.2%). High blood pressure management in Greenup (17.8%) County is higher than Kentucky (17.6%), but lower than Ohio (19.8%) and the United States (21.7%). High blood pressure management Boyd (5.7%) and Carter (15.0%) counties is much lower than both states and the nation. High blood pressure management in Lawrence (28.9%) County is higher than both states and the nation.

### *Vaccinations*

Vaccinations, such as those for pneumococcal pneumonia and influenza, help prevent the spread of disease. The pneumococcal pneumonia vaccination rate among residents 65 years of age or older in Boyd (70.0%) and Lawrence (72.6%) counties is higher than Kentucky (66.9%), Ohio (68.5%), and the United States (67.5%). In Carter (64.5%) County, the pneumococcal pneumonia vaccination rate among residents in this age group is lower

than both states and the nation. Greenup (68.4%) County has a pneumococcal pneumonia vaccination rate among residents in this age group higher than Kentucky and the nation, but lower than Ohio. In the service area, the influenza vaccination rate among residents 18 to 64 years of age in Boyd (47.0%) and Greenup (48.0%) counties is equal to or greater than Kentucky (43.0%), Ohio (47.0%), and the United States (37.1%). In Carter (46.0%) and Lawrence (46.0%) counties, the influenza vaccination rate among adult residents is higher than Kentucky and the nation, but lower than Ohio. These comparisons can be found in the figure below:



*Note.* Retrieved from Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2012-2016; countyhealthrankings.org

### *Preventable Hospital Events*

Preventable hospital events are ambulatory care sensitive (ACS) conditions that could be prevented if adequate ambulatory care resources are available and accessible to patients. ACS conditions include pneumonia, dehydration, asthma, and diabetes. According to the Dartmouth College Institute for Health Policy and Clinical Practice, all four service area counties experience more preventable hospital events per 1,000 Medicare enrollees than Kentucky (77.0), Ohio (59.8), and the United States (49.9).

Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Preventable Hospital Events (per 1,000 Medicare enrollees)	104.8	90.1	88.7	81.1	77.0	59.8	49.9

*Note.* Retrieved from Dartmouth College Institute for Health Policy and Clinical Practice, 2014

### Health Behaviors

Unhealthy behaviors, such as poor diet, lack of exercise, and substance abuse, contribute to poor health status. Unhealthy eating and a lack of physical activity can lead to serious health issues, including obesity and diabetes. Tobacco use also contributes to numerous health issues, such as cancer, heart disease, and chronic obstructive pulmonary disease (COPD). The physical environment of a community helps foster good health behaviors by providing residents access to healthy foods and recreation facilities.

### Food and Recreation Facility Access

Food and recreation facility access is a challenge in many parts of the service area. Food vendors, such as grocery stores and farmers markets, are critical to maintaining a healthy community. Individuals can become overweight and obese by eating an unhealthy diet. Recreation facilities also contribute to health by providing a safe place to be physically active. To have adequate access to opportunities to be physically active, one must live within half a mile of a park, one mile of a recreation facility in an urban area, or three miles of a recreation facility in a rural area. Increased physical activity is associated with reduced risk of diabetes, cancer, stroke, high blood pressure, heart disease, and premature death, independent of obesity. Individuals who live closer to a recreation facility are also more likely to be physically active.

Although the number of fast food restaurants per 100,000 population is greater in Boyd (131.2) County than Kentucky (73.3), Ohio (80.6), and the United States (77.1), a greater percentage of its population is impacted by deserts (51.8%) than Kentucky (33.6%), Ohio (46.7%) and the nation (42.1%). Moreover, the number of recreation facilities per 100,000 population is lower in Boyd (6.06) County than Kentucky (8.0), Ohio (9.8), and the United States (11.0). Carter (64.9), Greenup (62.3), and Lawrence (60.9) counties have less fast food restaurants per 100,000 population than both states and the nation. The percentage of the population in Greenup (40.3%) and Lawrence (33.7%) counties impacted by food deserts is higher than Kentucky, but lower than Ohio and the United States. Carter (15.6%) County has a lower percentage of the population impacted by food deserts than both states and the nation. Carter (10.8) County also has a higher number of recreation facilities per 100,000 population than both states, whereas Greenup (2.7) and Lawrence (4.8) counties have less recreation facilities than both states and the nation.

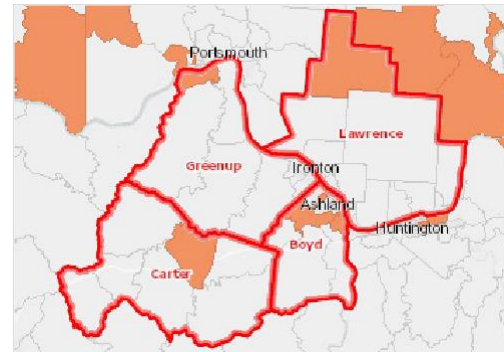
Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Fast Food Restaurants (per 100,000 pop.)	131.2	64.9	62.3	60.9	73.3	80.6	77.1
Food Deserts (% of pop. impacted)	51.8%	15.6%	40.3%	33.7%	33.6%	46.7%	42.1%
Recreation Facilities (per 100,000 pop.)	6.06	10.8	2.7	4.8	8.0	9.8	11.0

*Note.* Retrieved from US Census Bureau, County Business Patterns, 2016; US Department of Agriculture, Economic Research Service, USDA Food Access Research Atlas, 2015



#### Food Desert Census Tracts (1 mile/10 mile by tract)

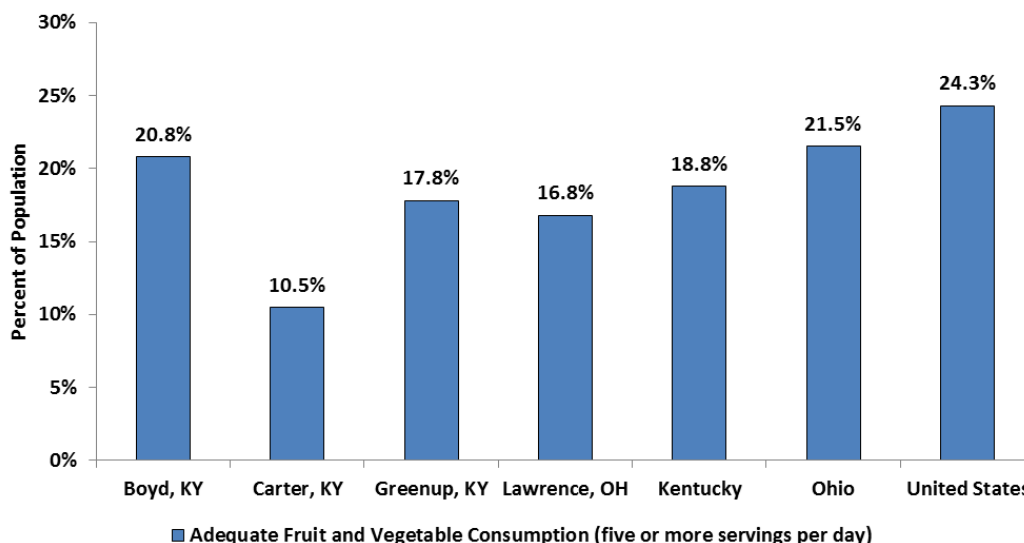
- Food desert area
- Not a food desert
- No data
- OLBH Primary Service Area



*Note.* Retrieved from US Department of Agriculture, Economic Research Service, USDA Food Access Research Atlas, 2015

#### *Fruit and Vegetable Consumption*

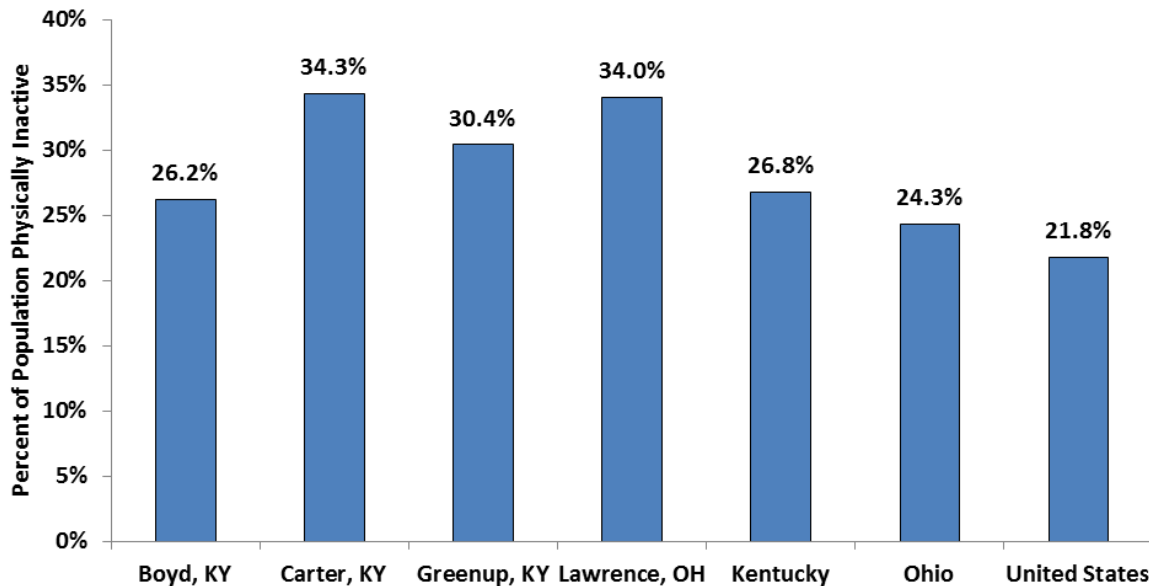
Reduced fruit and vegetable consumption is linked to overall poor health and an increased risk of heart disease and cancer. Some evidence has also suggested that, when consumed as part of a diet low in fat, sugar, and sodium, fruits and vegetables can help prevent weight gain and reduce the risk of obesity. According to the World Health Organization, 3.9 million deaths worldwide in 2017 were attributed to inadequate fruit and vegetable consumption. Fruit and vegetable consumption helps to ensure an adequate intake of essential vitamins, minerals, and dietary fiber. In the service area, the percentage of the population that has adequate fruit and vegetable consumption, defined as consuming five or more servings of fruits and vegetables per day, in all four counties is lower than Ohio (21.5%) and the United States (24.3%). Boyd (20.8%) is the only county with a higher percentage of the population with adequate fruit and vegetable consumption than Kentucky (18.8%).



*Note.* Retrieved from Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2006-2012

### Physical Inactivity

Physical inactivity is a major public health problem nationwide. In the service area, Carter (34.3%), Greenup (30.4%), and Lawrence (34.0%) have a higher percentage of physically inactive residents than Kentucky (26.8%), Ohio (24.3%), and the United States (21.8%). Only Boyd (26.2%) County has a lower percentage of physically inactive residents than Kentucky, but it is still higher than Ohio and the nation.



*Note.* Retrieved from Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2006-2012

### Tobacco Use

According to the January 2018 edition of *Tobacco, Nicotine, and E-Cigarettes*, tobacco use harms nearly every vital organ in the human body and is the leading preventable cause of premature death in the United States. Though tobacco smoking rates have declined, it still leads to an estimated 480,000 deaths annually. Smokers 60 years of age or older have a twofold increase in mortality compared to never smokers and die an estimated six years earlier. The overall cancer mortality rate of smokers is twice as high as nonsmokers and four times as high for heavy smokers. 28.0% of service area residents 18 years of age or older self-report currently smoking tobacco. Tobacco use among current smokers 18 years of age or older is higher in all four counties than Ohio (21.7%) and the United States (18.1%). Tobacco use among current and former smokers 18 years of age or older is near or greater than 50% in Boyd (49.8%), Carter (61.6%), and Greenup (57.5%) counties, which is higher than Ohio (49.1%) and the nation (44.2%). Quit attempts among current and former smokers in this age group in all four service area counties is lower than Kentucky (54.3%), Ohio (55.5%), and the nation (60.0%). The table found on page 25 outlines these comparisons.

Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Tobacco Use Among Current Smokers (18 years of age or older)	28.0%	33.6%	23.9%	26.2%	26.1%	21.7%	18.1%
Tobacco Use Among Current and Former Smokers (18 years of age or older)	49.8%	61.6%	57.5%	44.5%	53.5%	49.1%	44.2%
Quit Attempts Among Current and Former Smokers (18 years of age or older)	51.4%	46.8%	52.1%	42.8%	54.3%	55.5%	60.0%

*Note.* Retrieved from Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2006-2012; Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2013

### Health Outcomes

Morbidity and mortality rates can bring to light the linkages between social determinants of health and health outcomes. For example, the comparison of chronic disease indicators, such as poor diet and lack of exercise, with health outcomes, such as obesity and diabetes prevalence, may uncover various causal relationships and allow for a better understanding of how certain community health needs can be addressed.

### Asthma

Asthma is a serious public and personal health issue with widespread biological, economic, and psychosocial impacts. The asthma prevalence of all four service area counties is higher than Kentucky (10.7%), Ohio (9.9%), and the United States (7.9%). The table below reports the percentage of those 18 years of age or older who self-report ever being told by a doctor, nurse, or other health care professional that they have asthma:

Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Asthma Prevalence (18 years of age or older)	19.1%	13.6%	14.9%	23.8%	10.7%	9.9%	7.9%

*Note.* Retrieved from Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2017

### Depression

Depression is not a normal part of the aging process. However, there is a strong likelihood that depression will occur when other health conditions common with aging are present. Symptoms of clinical depression can be triggered by other common elderly health issues, such as Alzheimer's disease, Parkinson's disease, heart disease, cancer, and arthritis. The Centers for Medicare and Medicaid Services report that the depression rate among Medicare recipients in the service area is higher in Boyd (22.7%), Greenup (22.7%), and Lawrence (23.0%) counties than Kentucky (20.2%), Ohio (18.5%), and the nation (16.7%).

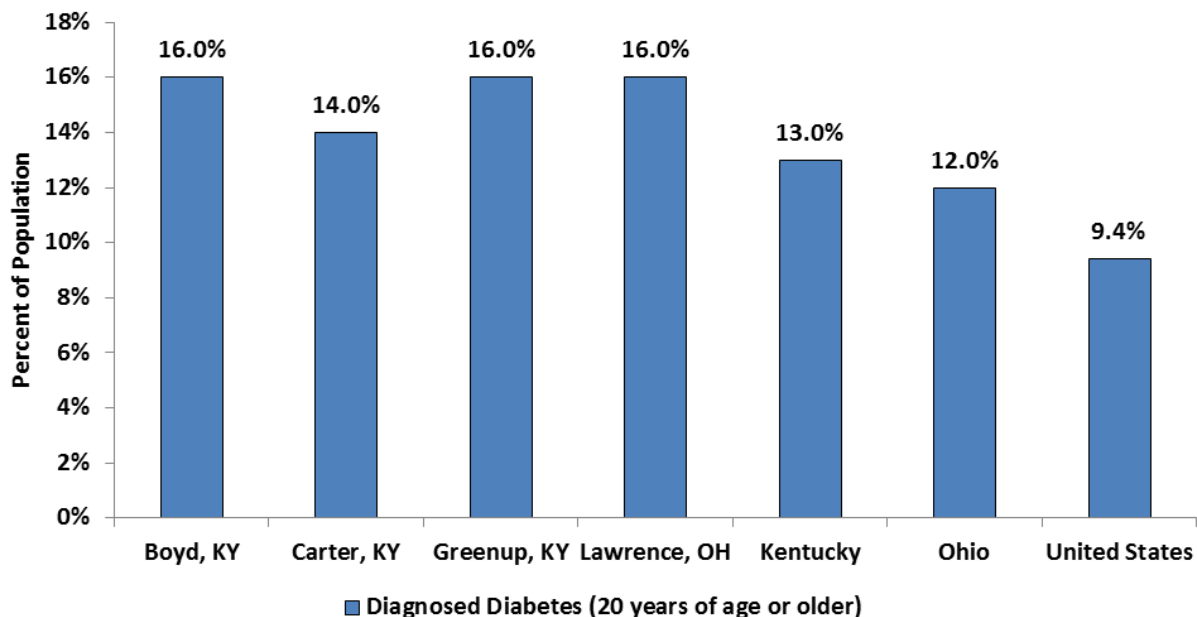
Carter (19.3%) County's depression rate among Medicare recipients is higher than Ohio and the United States, but lower than Kentucky.

Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Depression Rate among Medicare pts.	22.7%	19.3%	22.7%	23.0%	20.2%	18.5%	16.7%

*Note.* Retrieved from Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2017

### Diabetes

Diabetes is a major public health problem worldwide. Persistently high blood glucose levels can lead to serious health complications, including heart disease, kidney damage or failure, nerve damage, eye damage, bone and joint problems, and teeth and gum infections. In the service area, all four counties have a higher percentage of residents 20 years of age or older with diagnosed diabetes than Kentucky (13.0%), Ohio (12.0%), and the nation (9.4%).



*Note.* Retrieved from American Diabetes Association, 2015; Robert Wood Johnson Foundation, 2018

### Heart Disease

Heart disease, also referred to as cardiovascular disease, can lead to disability and serious health complications and reduce one's quality of life. Heart disease is the leading cause of death in the United States. Heart disease is an umbrella term that describes a range of cardiovascular conditions, including vascular disease, coronary artery disease, arrhythmias, and congenital heart defects. The service area, deemed "coronary valley," has a 56.0% higher mortality rate from heart disease than any other territory in the United States. Boyd (6.6%) and Greenup (8.9%) counties have a higher percentage of residents 18

to 64 years of age diagnosed with heart disease than Kentucky (5.9%), Ohio (5.1%), and the United States (4.4%). Carter (5.4%) County's percentage of residents diagnosed with heart disease in this age group is higher than Ohio and the nation, but lower than Kentucky. In Lawrence (4.8%) County, the percentage of residents diagnosed with heart disease in this age group is lower than both Kentucky and Ohio, but higher than the United States. Heart disease among Medicare patients in all four service area counties is higher than Kentucky (29.1%), Ohio (27.2%), and the nation (26.5%). The table below shows the prevalence and mortality rates of heart disease and its associated conditions, such as high blood pressure, high cholesterol, and coronary artery disease:

Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Heart Disease (18 to 64 years of age)	6.6%	5.4%	8.9%	4.8%	5.9%	5.1%	4.4%
Heart Disease among Medicare pts.	33.4%	32.1%	34.3%	30.3%	29.1%	27.2%	26.5%
High Blood Pressure (18 to 64 years of age)	33.4%	40.3%	32.7%	26.5%	32.5%	28.8%	28.2%
High Cholesterol (18 to 64 years of age)	45.1%	46.6%	44.2%	32.7%	41.4%	38.7%	38.5%
Coronary Artery Disease Mortality (age-adjusted per 100,000 pop.)	158.0	145.0	133.6	129.9	111.3	110.6	99.6
Heart Disease Mortality (age-adjusted per 100,000 pop.)	241.6	221.8	213.9	213.3	202.5	187.8	168.2

*Note.* Retrieved from Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2011-2013; Centers for Disease Control and Prevention, National Vital Statistics System, 2006-2012; Centers for Medicare and Medicaid Services, 2015

### *Cancer Mortality*

Cancer is the second leading cause of death in the United States. In the service area, cancer mortality is a public health crisis. In Boyd (25.0), Carter (29.0), and Lawrence (28.8) counties, the breast cancer mortality rate per 100,000 population is higher than Kentucky (21.0), Ohio (22.4), and the United States (20.6). Greenup (17.0) is the only county with a breast cancer mortality rate per 100,000 population below both states and the nation. With regards to colon and rectal cancer, Greenup (18.0) and Lawrence (19.8) counties have a higher mortality rate per 100,000 population than Kentucky (17.0), Ohio (15.7), and the United States (14.2). Although Boyd (16.0) and Carter (16.0) counties have a higher colon and rectal cancer mortality rate per 100,000 population than Ohio and the nation, it is lower than Kentucky. The lung cancer mortality rate per 100,000 population in Boyd (64.0), Carter (61.0), and Lawrence (65.7) counties is lower than Kentucky (66.0), but higher than Ohio (50.3) and the United States (41.9). Greenup (69.0) is the only county with a higher lung cancer mortality rate per 100,000 population than Kentucky. The table on page 28 shows the mortality rates for breast, colon and rectal, and lung cancer.



Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Breast Cancer Mortality (per 100,000 pop.)	25.0	29.0	17.0	28.8	21.0	22.4	20.6
Colon and Rectal Cancer Mortality (per 100,000 pop.)	16.0	16.0	18.0	19.8	17.0	15.7	14.2
Lung Cancer Mortality (per 100,000 pop.)	64.0	61.0	69.0	65.7	66.0	50.3	41.9

*Note.* Retrieved from kentuckyhealthfacts.org; Ohio Department of Health, Lawrence County Cancer Profile, 2019

### Stroke

A stroke may cause significant disability, including paralysis, speech difficulties, and emotional problems. Controllable risk factors for stroke include high blood pressure, diabetes, heart disease, and tobacco use. Stroke is the fifth leading cause of death in the United States. Boyd (72.0), Greenup (62.2), and Lawrence (58.4) counties have a higher stroke occurrence per 100,000 population than Kentucky (55.4), Ohio (52.3), and the United States (48.1). Carter (50.0) is the only county with a lower stroke occurrence per 100,000 population than Kentucky.

Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Stroke Occurrence (per 100,000 pop.)	72.0	55.0	62.2	58.4	55.4	52.3	48.1

*Note.* Retrieved from healthdata.org

### Infant Mortality and Low Birthweight

Infant mortality and low birthweight may be indicators of inadequate prenatal care. The Centers for Disease Control and Prevention consider babies born less than 2,500 grams, or 5.5 pounds, to be low birthweight. Low birthweight babies are at a heightened risk of neonatal and infant mortality and adverse health complications, including lowered cognitive development and poor scholastic performance. In the four-county service area, the infant mortality rate per 1,000 live births in Boyd (6.0) and Greenup (6.0) counties is lower than Kentucky (7.0) and Ohio (8.0), but higher than the United States (5.8). Carter (3.0) is the only county with a lower infant mortality rate per 1,000 live births than Kentucky, Ohio, and the nation. Lawrence (9.0) County's infant mortality rate per 1,000 live births is higher than both states and the United States. Moreover, Boyd (10.3%), Carter (10.1%), and Lawrence (10.9%) counties have a higher percentage of live births that are low birthweight than Kentucky (9.1%), Ohio (8.6%), and the nation (8.3%). Greenup (8.7%) County's percentage of live births that are low birthweight is lower than Kentucky, but higher than Ohio and the United States. Lawrence County has the highest percentage of live births that are low birthweight in the state of Ohio. The table found on page 29 shows the differences in infant mortality rates and low birthweight percentages across the four service area counties, two states, and the nation.

Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Infant Mortality (per 1,000 live births)	6.0	3.0	6.0	9.0	7.0	8.0	5.8
Low Birthweight (percentage of live births)	10.3%	10.1%	8.7%	10.9%	9.1%	8.6%	8.3%

Note. Retrieved from Centers for Disease Control and Prevention, 2019; countyhealthrankings.org; kentuckyhealthfacts.org

### *Mental and Substance Use Disorders Mortality*

Mental and substance use disorders are common, recurrent, and often serious. Mental disorders involve changes in thinking, mood, and/or behavior, resulting in a diminished ability to function. Substance use disorders occur when the recurrent use of alcohol and/or drugs cause clinically significant impairment, including health complications, disability, and failure to meet major life responsibilities. In the service area, the number of deaths attributed to mental and substance use disorders continues to rise, increasing fourteenfold between 1980 and 2014. Boyd (25.4), Carter (26.3), and Greenup (23.6) counties have a higher mental and substance use disorders mortality rate per 100,000 population than Kentucky (22.1), Ohio (18.3), and the United States (13.5). Only Lawrence (18.8) County has a lower mortality rate per 100,000 population attributed to mental and substance use disorders than Kentucky.

Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Mental and Substance Use Disorders Mortality (per 100,000 pop.)	25.4	26.3	23.6	18.8	22.1	18.3	13.5

Note. Retrieved from healthdata.org

### *Premature Death*

Premature death is defined as death that occurs before 75 years of age. These deaths are typically preventable. A community in which premature death is commonplace often faces socioeconomic disadvantages that adversely impact residents' health status and well-being. In the service area, the years of potential life lost prior to 75 years of age are greater in Boyd (9,430), Carter (9,688), and Lawrence (11,900) counties than Kentucky (8,867), Ohio (8,500), and the nation (7,432). Greenup (8,821) County's years of potential life lost prior to 75 years of age are slightly less than Kentucky, but more than Ohio and the United States. With regards to life expectancy, the residents of all four service area counties live shorter lives than the average Kentuckian (76.3 years), Ohioan (78.4 years), and American (79.1 years).

Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Premature Death (years of potential life lost per 100,000 pop.)	9,430	9,688	8,821	11,900	8,867	8,500	7,432
Life Expectancy (years)	76.0	75.1	76.0	75.3	76.3	78.4	79.1

Note. Retrieved from countyhealthrankings.org; healthdata.org; kentuckyhealthfacts.org

### *Suicide*

Suicide is the tenth leading cause of death in the United States. In 2017, suicide was the second leading cause of death among Americans 10 and 34 years of age and the fourth leading cause of death among those 35 to 54 years of age. The suicide mortality rate of Lawrence (16.7) County per 100,000 population is greater than Kentucky (16.3), Ohio (13.3), and the United States (13.0). In Boyd (16.0), Carter (14.9), and Greenup (15.6) counties, the suicide mortality rate is lower than Kentucky, but higher than Ohio and the nation.

Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Suicide Mortality (per 100,000 pop.)	16.0	14.9	15.6	16.7	16.3	13.3	13.0

*Note.* Retrieved from Centers for Disease Control and Prevention, National Vital Statistics System, 2012-2016

### *Overweight and Obesity*

Overweight, defined as having a body mass index (BMI) of 25.0 or higher, and obese, defined as having a BMI of 30.0 or higher, individuals are at an increased risk of many serious health complications, including high blood pressure, high cholesterol, diabetes, coronary artery disease, stroke, osteoarthritis, and sleep apnea. Obese individuals are also at a higher risk of various types of cancer, including breast, colon and rectal, endometrial, kidney, gallbladder, and liver. In the service area, Boyd (75.0%), Carter (73.0%), and Greenup (74.0%) counties have a higher percentage of overweight individuals 18 years of age or older than Kentucky (68.0%), Ohio (66.7%), and the United States (71.6%). Boyd (41.0%), Carter (42.0%), and Greenup (40.0%) also have a higher percentage of obese individuals 18 years of age or older than Kentucky (34.0%), Ohio (30.9%), and the nation (39.8%). Lawrence is the only county with a lower percentage of overweight (69.9%) and obese (38.9%) individuals in this age group than the United States.

Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Overweight (18 years of age or older)	75.0%	73.0%	74.0%	69.9%	68.0%	66.7%	71.6%
Obesity (18 years of age or older)	41.0%	42.0%	40.0%	38.9%	34.0%	30.9%	39.8%

*Note.* Retrieved from Centers for Disease Control and Prevention, 2018; countyhealthrankings.org; kentuckyhealthfacts.org

### *Poor General Health*

Poor general health is an important indicator of health status. Across all four service area counties, a higher percentage of residents self-report having poor or fair health compared to Kentucky (21.1%), Ohio (15.3%), and the United States (15.7%). The percentages of those who self-report having poor or fair health in each service area county can be found in the table on page 31.

Area/Indicator	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH	Kentucky	Ohio	United States
Poor or Fair Health (18 years of age or older)	25.6%	31.2%	23.6%	27.9%	21.1%	15.3%	15.7%

*Note.* Retrieved from Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2011-2013

### *Information Gaps*

While no information gaps were identified during primary and secondary data collection and analysis, the Behavioral Risk Factor Surveillances System (BRFSS) data is older than desired, with some data being eight years old at the time of writing. However, BRFSS data is not known to vary significantly over time. Therefore, this data was considered to be usable for the CHNA process and sufficiently representative of the population being analyzed.

### *Existing Resources*

Resources and programs currently in place to address the health needs identified through the CHNA process are provided by the following organizations:

#### **Local Health Departments:**

- Ashland-Boyd County
- Carter County
- Greenup County
- Lawrence County

#### **Local Hospitals:**

- OLBH
- KDMC
- Southern Ohio Medical Center
- Cabell Huntington Hospital
- Saint Mary's Medical Center
- Hershel "Woody" Williams VA Medical Center

#### **Mental Health/Substance Use Disorder:**

- OLBH
- KDMC
- Family Guidance Center - ILCAO
- Mended Reeds
- Pathways, Inc.
- Prestera Mental Health
- Shawnee Mental Health
- Southern Ohio Behavioral Health
- River Park Hospital

**Transportation/Access to Care:**

- City of Ashland Bus System
- Ironton Port Authority
- OLBH - Van Ministry
- Tri-State Transit Authority Bus System
- KDMC
- Northeast Kentucky Community Action Agency
- Medicab

**Low-Income Assistance:**

- Neighbors Helping Neighbors (The Neighborhood)
- Safe Harbor of Northeast Kentucky
- Shelter of Hope
- Hope's Place
- United Way
- Salvation Army
- Kentucky Homeplace
- Local Faith Communities (Churches)
- Interagency/Community Action Councils

***Community Assets***

Data was collected from the questionnaire and focus groups about existing community assets and strategies that contribute to health. The following were identified:

- Local health departments
- Strong local hospitals
- Number of health care clinics
- Good access to medical specialists
- Health care technology
- Greater awareness for people to live healthier lifestyles
- Health screening and education programs
- Good local schools and colleges
- Strong faith communities
- Judicial system - drug program
- Strong economic development groups
- 2-1-1 resources
- School-based family and youth resource centers
- Parks and recreation opportunities
- Leadership programs
- Home health programs
- Higher education/workforce development



- Greater agency collaboration
- Health coalitions
- Non-profit community services
- Strong community pride

### *Health Needs Identified*

To gain a comprehensive view of community health needs, the CHNA process included both primary and secondary data collection and analysis. Primary data included a questionnaire and focus groups with key individuals in the community, including residents, public health representatives, and those with special knowledge of medically underserved, low-income, and minority populations as well as populations with chronic disease needs. Secondary data included research from local, state, and national sources. The following table outlines the health needs identified from each data source and provides a framework to select the most significant health needs (hereinafter referred to as health priorities):

Focus Groups	Questionnaire	Secondary Data
<ul style="list-style-type: none"> <li>• Illicit drug and substance abuse</li> <li>• Prevalence of crime and mental health problems</li> <li>• Concerns for family structure</li> <li>• Prevalence of children being raised by their grandparents and other relatives</li> <li>• Outmigration of young residents and families to pursue better opportunities elsewhere</li> <li>• Job loss</li> <li>• Government health care cuts</li> </ul>	<ul style="list-style-type: none"> <li>• Alcohol/drug/tobacco use</li> <li>• Cancer</li> <li>• Obesity</li> <li>• Mental health issues/suicide</li> <li>• Child abuse/neglect</li> <li>• Diabetes</li> <li>• Heart disease</li> <li>• High blood pressure</li> <li>• COPD (lung/breathing issues)</li> <li>• Dental health</li> <li>• Domestic abuse</li> <li>• Senior health</li> <li>• Persons with disabilities</li> <li>• Teen pregnancy</li> <li>• Infant health</li> <li>• Sexually transmitted disease, including HIV/AIDS</li> <li>• Asthma</li> <li>• Stroke</li> </ul>	<ul style="list-style-type: none"> <li>• Poverty</li> <li>• Preventable hospital events</li> <li>• Physical inactivity</li> <li>• Fruit and vegetable consumption</li> <li>• Tobacco use</li> <li>• Diabetes</li> <li>• Heart disease</li> <li>• Asthma</li> <li>• Cancer (breast, colon and rectal, and lung)</li> <li>• Stroke</li> <li>• Low birthweight</li> <li>• Suicide</li> <li>• Overweight and obesity</li> <li>• Poor general health</li> </ul>

While there are numerous community health needs present across the four-county service area, an intervention may need to be targeted to a single area or county, as opposed to being implemented broadly across the service area, to be most effective. The table on page 34 separates the community health needs identified through the CHNA process by service area county.

Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH
<ul style="list-style-type: none"> <li>Poverty</li> <li>Homelessness</li> <li>Food and recreation facility access</li> <li>Preventable hospital events</li> <li>Physical inactivity</li> <li>Tobacco use</li> <li>Asthma</li> <li>Cancer</li> <li>Diabetes</li> <li>Heart disease</li> <li>Cancer mortality</li> <li>High blood pressure</li> <li>High cholesterol</li> <li>Stroke</li> <li>Low birthweight</li> <li>Premature death</li> <li>Overweight and obesity</li> <li>Poor general health</li> </ul>	<ul style="list-style-type: none"> <li>Poverty</li> <li>Educational attainment</li> <li>Access to primary care providers</li> <li>Consistent primary care provider</li> <li>Mammography screening rate</li> <li>Pneumococcal pneumonia vaccination rate</li> <li>Preventable hospital events</li> <li>Fruit and vegetable consumption</li> <li>Physical inactivity</li> <li>Tobacco use</li> <li>Cancer</li> <li>Diabetes</li> <li>Heart disease</li> <li>High blood pressure</li> <li>High cholesterol</li> <li>Cancer mortality</li> <li>Low birthweight</li> <li>Premature death</li> <li>Suicide</li> <li>Obesity</li> <li>Poor general health</li> </ul>	<ul style="list-style-type: none"> <li>Poverty</li> <li>Educational attainment</li> <li>Recreation facility access</li> <li>Preventable hospital events</li> <li>Fruit and vegetable consumption</li> <li>Physical inactivity</li> <li>Cancer</li> <li>Diabetes</li> <li>Heart disease</li> <li>High blood pressure</li> <li>High cholesterol</li> <li>Stroke</li> <li>Cancer mortality</li> <li>Low birthweight</li> <li>Premature death</li> <li>Obesity</li> <li>Overweight and obesity</li> <li>Poor general health</li> </ul>	<ul style="list-style-type: none"> <li>Poverty</li> <li>Educational attainment</li> <li>Access to primary care providers</li> <li>Consistent primary care provider</li> <li>Mammography screening rate</li> <li>Preventable hospital events</li> <li>Fruit and vegetable consumption</li> <li>Physical inactivity</li> <li>Tobacco use</li> <li>Asthma</li> <li>Cancer</li> <li>Diabetes</li> <li>Heart disease</li> <li>Stroke</li> <li>Cancer mortality</li> <li>Infant mortality</li> <li>Low birthweight</li> <li>Premature death</li> <li>Suicide</li> <li>Obesity</li> <li>Poor general health</li> </ul>

### *Health Priorities*

The following health priorities represent the most frequently identified community health needs across the questionnaire, focus groups, and secondary data sources. Substance use disorder (alcohol/drug/tobacco use), cancer, obesity, and mental health issues/suicide were identified as the four top community health needs by questionnaire respondents. Focus group participants identified substance use disorder, obesity, cancer, poverty, and their related issues as weaknesses and/or areas of opportunity across all four service area counties. Secondary data further supported the need for community-based interventions to address the issues of substance use disorder, cancer, obesity, poverty, and mental health. Resources and programs currently in place to address community health needs and the objectives of Healthy People 2020 were also considered during the selection process. The health priorities identified through the CHNA process can be found on page 35.

1. Substance Use Disorder
2. Cancer
3. Obesity
4. Poverty
5. Mental Health

### *Substance Use Disorder*

#### **Capacity and Adequacy of Service Levels:**

- In the four-county service area, 28.0% of residents 18 years of age or older self-report currently smoking tobacco.
- Tobacco use among current smokers 18 years of age or older is higher in all four service area counties than Ohio (21.7%) and the United States (18.1%).
- Tobacco use among current and former smokers 18 years of age or older is near or greater than 50% in Boyd (49.8%), Carter (61.6%), and Greenup (57.5%) counties, which is higher than Ohio (49.1%) and the nation (44.2%).
- Quit attempts among current and former smokers 18 years of age or older in all four service area counties is lower than Kentucky (54.3%), Ohio (55.5%), and the nation (60.0%).
- In the service area, the number of deaths attributed to mental and substance use disorders continues to rise, increasing fourteenfold between 1980 and 2014.
- Boyd (25.4), Carter (26.3), and Greenup (23.6) counties have a higher mental and substance use disorders mortality rate per 100,000 population than Kentucky (22.1), Ohio (18.3), and the United States (13.5). Only Lawrence (18.8) County has a lower mortality rate per 100,000 population attributed to mental and substance use disorders than Kentucky.

#### **Current Service Providers:**

- OLBH
- KDMC
- Southern Ohio Medical Center
- Pathways, Inc.
- Ramey Estep Homes
- NECCO Center
- Mahajan Therapeutics
- Impact Prevention
- River Hills Prevention Connection
- Local County Health Departments (Ashland-Boyd, Carter, Greenup, and Lawrence)
- Young People in Recovery
- Tri-State Family Connections
- Faith Health Appalachia
- ILCAO Family Guidance Center
- Mended Reeds

- Prestera Mental Health
- Shawnee Mental Health
- River Park Hospital

### *Cancer*

#### **Capacity and Adequacy of Service Levels:**

- The breast cancer incidence rate per 100,000 population in Boyd (116.7), Greenup (110.1), and Lawrence (123.3) counties is lower than Kentucky (126.3), Ohio (127.4), and the United States (125.2). While Carter (125.5) County's breast cancer incidence rate per 100,000 population is lower than both states, it is higher than the nation.
- The colon and rectal cancer incidence rate per 100,000 population in Greenup (97.3) and Lawrence (93.5) counties is lower than Kentucky (100.0), but higher than Ohio (84.1) and the United States (38.7). The colon and rectal cancer incidence rate per 100,000 population in Boyd (108.1) and Carter (116.3) counties is higher than both states and the nation.
- In the service area, the lung cancer incidence rate per 100,000 population in Boyd (188.4), Carter (188.6), and Lawrence (157.3) counties is lower than Kentucky (189.1), but higher than Ohio (140.2) and the United States (59.2). Greenup (207.8) has a much higher lung cancer incidence rate per 100,000 population than both states and the nation.
- In Boyd (25.0), Carter (29.0), and Lawrence (28.8) counties, the breast cancer mortality rate per 100,000 population is higher than Kentucky (21.0), Ohio (22.4), and the United States (20.6). Greenup (17.0) is the only county with a breast cancer mortality rate per 100,000 population below both states and the nation.
- With regards to colon and rectal cancer, Greenup (18.0) and Lawrence (19.8) counties have a higher mortality rate per 100,000 population than Kentucky (17.0), Ohio (15.7), and the United States (14.2). Although Boyd (16.0) and Carter (16.0) counties have a higher colon and rectal cancer mortality rate per 100,000 population than Ohio and the nation, it is lower than Kentucky.
- The lung cancer mortality rate per 100,000 population in Boyd (64.0), Carter (61.0), and Lawrence (65.7) counties is lower than Kentucky (66.0), but higher than Ohio (50.3) and the United States (41.9). Greenup (69.0) is the only county with a higher lung cancer mortality rate per 100,000 population than Kentucky.

#### **Current Service Providers:**

- OLBH
- KDMC
- Southern Ohio Medical Center
- Ashland-Bellefonte Cancer Center
- Kentucky Homeplace
- American Cancer Society

- Local County Health Departments (Ashland-Boyd, Carter, Greenup, and Lawrence)
- Community Hospice
- Carter County Cancer Coalition

### *Obesity*

#### **Capacity and Adequacy of Service Levels:**

- In the service area, the percentage of the population that has adequate fruit and vegetable consumption in all four counties is lower than Ohio (21.5%) and the United States (24.3%). Boyd (20.8%) is the only county with a higher percentage of the population with adequate fruit and vegetable consumption than Kentucky (18.8%).
- In the four-county service area, Boyd (75.0%), Carter (73.0%), and Greenup (74.0%) counties have a higher percentage of overweight individuals 18 years of age or older than Kentucky (68.0%), Ohio (66.7%), and the United States (71.6%). Boyd (41.0%), Carter (42.0%), and Greenup (40.0%) also have a higher percentage of obese individuals 18 years of age or older than Kentucky (34.0%), Ohio (30.9%), and the nation (39.8%). Lawrence is the only county with a lower percentage of overweight (69.9%) and obese (38.9%) individuals in this age group than the United States.

#### **Current Service Providers:**

- OLBH (Bless Your Heart Program and Firm Fitness)
- KDMC (surgical and nonsurgical weight loss)
- Local County Extension Offices
- YMCA
- Local County Health Departments (Ashland-Boyd, Carter, Greenup, and Lawrence)

### *Poverty*

#### **Capacity and Adequacy of Service Levels:**

- Across the four-county service area, 21.0% of residents live in poverty, compared to 16.9% in Kentucky, 13.9% in Ohio, and 11.8% nationally. The percentage of individuals in Boyd (20.1%), Carter (28.2%), and Lawrence (19.5%) counties living in poverty is higher than Kentucky, Ohio, and the United States. Greenup (16.0%) is the only county with a lower percentage of individuals living in poverty than Kentucky.
- In the service area, 6.5% of residents are unemployed, compared to 4.1% in Kentucky, 4.5% in Ohio, and 4.0% nationally. The percentage of unemployed individuals in Carter (8.9%) County is substantially higher than Kentucky, Ohio, and the United States.
- All four service area counties have a lower percentage of total homelessness than Kentucky (0.7%) and Ohio (1.9%). Only Boyd (0.3%) County has a higher percentage of total homelessness than the United States (0.2%).



**Current Service Providers:**

- OLBH (insurance counseling, sliding scale payment plan for uninsured and underinsured individuals, Van Ministry, Meals on Wheels, and free cancer screenings for uninsured and underinsured individuals)
- Local County Health Departments (Ashland-Boyd, Carter, Greenup, and Lawrence)
- BankOn
- United Way of Northeast Kentucky
- Hillcrest-Bruce Mission
- Neighbors Helping Neighbors (The Neighborhood)
- Primary Plus
- Safe Harbor of Northeast Kentucky
- Shelter of Hope
- Hope's Place
- The Salvation Army
- Kentucky Homeplace
- Local Faith Communities (Churches)
- Interagency/Community Action Councils

***Mental Health*****Capacity and Adequacy of Service Levels:**

- The number of mental health providers in Carter (143.2), Greenup (115.6), and Lawrence (58.4) counties per 100,000 population is less than Kentucky (179.8), Ohio (154.8), and the United States (202.8). Boyd (471.0) County's number of mental health providers per 100,000 population is much higher than both states and the nation.
- The depression rate among Medicare recipients in the service area is higher in Boyd (22.7%), Greenup (22.7%), and Lawrence (23.0%) counties than Kentucky (20.2%), Ohio (18.5%), and the nation (16.7%). Carter (19.3%) County's depression rate among Medicare recipients is higher than Ohio and the United States, but lower than Kentucky.
- In the service area, the number of deaths attributed to mental and substance use disorders continues to rise, increasing fourteenfold between 1980 and 2014.
- Boyd (25.4), Carter (26.3), and Greenup (23.6) counties have a higher mental and substance use disorders mortality rate per 100,000 population than Kentucky (22.1), Ohio (18.3), and the United States (13.5). Only Lawrence (18.8) County has a lower mortality rate per 100,000 population attributed to mental and substance use disorders than Kentucky.
- The suicide mortality rate of Lawrence (16.7) County per 100,000 population is greater than Kentucky (16.3), Ohio (13.3), and the United States (13.0). In Boyd (16.0), Carter (14.9), and Greenup (15.6) counties, the suicide mortality rate is lower than Kentucky, but higher than Ohio and the nation.

**Current Service Providers:**

- OLBH (Bellefonte Behavioral Health)
- KDMC
- Southern Ohio Medical Center
- Pathways, Inc.
- Mended Reeds
- NECCO Center
- Prestera Mental Health
- Shawnee Mental Health
- River Park Hospital
- Family Resource Centers
- Ramey Estep Homes

### *Progress on Health Priorities Identified in the 2016 CHNA*

#### *Coalition Infrastructure Development*

Initiative	Impact
Healthy Choices, Healthy Communities Coalition	Healthy Choices, Healthy Communities Coalition participants include community members and local schools, businesses, and social services agencies. The Coalition consists of four workgroups focused on addressing community health priorities: Socioeconomic Challenges (Poverty), Wellness Together (Obesity), Substance Use Disorder, and Access to Care (Transportation). Basecamp, a project management app, is utilized to create and upload the Coalition's calendar, activities, meeting minutes, and other important information. The Coalition was instrumental in the implementation of a 2-1-1 Help Center in Northeastern Kentucky.

#### *Substance Use Disorder*

Initiative	Impact
Bridges Out of Addiction	On March 14, 2019, the Bridges Out of Addiction conference was held at Ashland Community and Technical College. The free conference was open to the public and sponsored by the Healthy Choices, Healthy Communities Coalition and Kentucky Agency for Substance Abuse Board. Over 300 community members attended.
Local School Partnerships	Prevention education on e-cigarette and vaping risks was provided to 8,000 students at elementary and high schools in all four service area counties. Prevention education on opioid and prescription drug use was provided to 863 elementary and high school students in Lawrence County. A substance use disorder prevention education and awareness campaign was also launched, in which 11 local schools and 2,000 elementary school students participated.

### Obesity

Initiative	Impact
Festival of Fitness	The Festival of Fitness is an event held in Ashland, Kentucky, to promote healthy behaviors and raise awareness of fitness and recreation opportunities.
Bless Your Heart Program	The Bless Your Heart program, which consists of health screenings and weekly fitness classes, was provided by OLBH exercise physiologists to members of eight local faith communities (churches).
Fit Families Program	The Fit Families program consists of OLBH exercise physiologists coaching local children and families to make positive lifestyle changes with the aim of improving the nutrition and health status of these individuals.

### Poverty

Initiative	Impact
Bridges Out of Poverty Program	The Bridges Out of Poverty program educates local non-profits and social services agencies about the impact of poverty on family structure and how these organizations can assist those living in poverty.
Bank On	Bank On provides free financial literacy classes to those living in poverty.
Dental Care Assistance	Dental care assistance for tooth extractions, dentures, and routine cleanings is provided to uninsured and underinsured individuals.
Medical Care Assistance	Health insurance enrollment assistance is provided to uninsured individuals.
Food Pantry and Meals on Wheels Program	The Food Pantry and Meals on Wheels program provide healthy food options to individuals living with food insecurity.

### Access to Care

Initiative	Impact
Van Ministry	The Van Ministry provides transportation to medical appointments for low-income individuals. The Van Ministry has facilitated over 12,200 patient transports since 2016. In 2019, OLBH completed a transportation gap study as part of a transportation grant.
2-1-1 Help Center	Through the Healthy Choices, Healthy Communities Coalition, OLBH provided funding and support to start a 2-1-1 Help Center to connect residents in Northeastern Kentucky with local access to care resources.
Community Outreach and Education	OLBH regularly facilitates community outreach and education efforts, including heart disease and high blood pressure education and awareness and breast and prostate cancer support groups.

*Note.* The CHNA for the tax year ending August 31, 2019, was approved by the BSKHS Board of Directors on August 14, 2019. Its corresponding Community Health Implementation Plan was approved by the Board on October 9, 2019. In order to align the CHNA posting deadline for legacy Bon Secours hospitals with the deadline for legacy Mercy Health hospitals, a separate CHNA for the stub period of September 1 to December 31, 2019, has been prepared. The health priorities remain consistent with those identified in the prior CHNA. OLBH has not taken action on the CHNA for the tax year ending August 31, 2019. Therefore, the CHNA for the stub period includes the actions taken on the previously filed CHNA for the tax year ending August 31, 2016. No written comments were received on the previously filed CHNA.