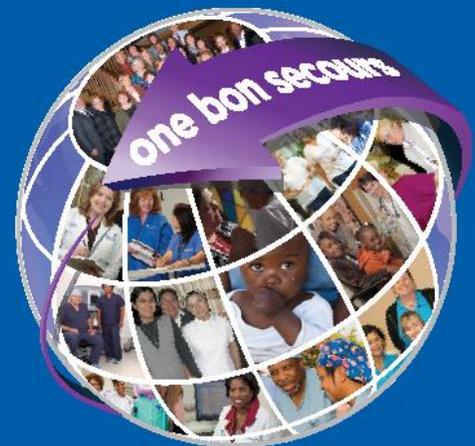




Community Health Needs Assessment

Our Lady of Bellefonte Hospital
Bon Secours Kentucky Health System



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:** is 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 serves approximately 400,000 residents of five counties in northeastern Kentucky - Greenup, Boyd, Lawrence, Carter, and Elliott (which comprise the FIVCO Area Development District), two counties in southern Ohio - Lawrence and Scioto, and two counties in western West Virginia - Wayne and Cabell. The Community Health Needs Assessment (CHNA) was conducted for the OLBH primary service area of 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 June 2019 and included both primary and secondary data analyses. The 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 vulnerable populations and people with chronic diseases.

The following health priorities were identified through the assessment process and will be the focus of the Implementation Plan:

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

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 and Bon Secours Mercy Health Mid-American Group. The system also includes Bellefonte Physician Services, a medical group which provides a variety of services, including primary care, pediatrics, specialty care, and urgent care, from nearly 40 locations throughout the Tri-State of Ohio, Kentucky, and West Virginia. OLBH serves approximately 400,000 residents of five counties in northeastern Kentucky - Greenup, Boyd, Lawrence, Carter, and Elliott (which comprise the FIVCO Area Development District), two counties in southern Ohio - Lawrence and Scioto, and two counties in western West Virginia - Wayne and Cabell. The OLBH primary service area encompasses Greenup, Boyd, and Carter counties in Kentucky and Lawrence County in Ohio.

Description of Community Served

The assessed counties, Boyd, Carter, and Greenup in Kentucky and Lawrence in Ohio, lay in the foothills of the Appalachian Mountains, situated at the border between Ohio, Kentucky, and West Virginia. This area is known for unhealthy behaviors and poor health outcomes.

According to the United States Census Bureau, American Community Survey, a total of 173,766 people live in the assessed counties, which cover 1,367 square miles. Of these, 95.6% are white, 1.84% is black, and 2.56% make up all other races. The Hispanic/Latino population is approximately 1.17%. Approximately 20% of the population is disabled. There are more females (50.8%) than males (49.2%) in the four-county service area. The population is made up of 22.1% children/youth (age 0-17), 60.2% adults (age 18-64), and 17.7% seniors (age 65 and older).

All four counties have a total poverty level higher than Ohio, Kentucky, and the United States. The percentage of students on the free and reduced lunch program in all four counties is higher than the national average. The median and per capita income levels for the region are well below Kentucky, Ohio, and the United States. Medicaid enrollment in the four counties is well above both states and the nation. With the exception of Carter County, the area fares better with health care insurance enrollments than both states and the nation. When considering educational attainment, only Boyd County has a lower rate of adults that do not have a high school diploma than the national average. Teen birth rates for all four counties exceed those of comparative state and national rates. Unemployment in the area is also worse than both states and the nation. The following chart outlines in detail these comparisons:

Indicator/Area	Boyd Co.	Carter Co.	Greenup Co.	Lawrence Co.	Kentucky	Ohio	United States
Poverty-total	18.98%	18.65%	17.56%	18.44%	18.81%	15.38%	15.11%
Poverty-child	26.4%	24.6%	26.3%	25.5%	25.7%	22.1%	21.2%
Free/Reduced Lunch	61.5%	66.2%	53.7%	63.4%	59.5%	44.9%	52.6%
Median Income	\$55,634	\$43,827	\$55,212	\$57,990	\$56,522	\$64,433	\$67,871
Per Capita Income	\$25,438	\$19,170	\$24,446	\$22,567	\$24,801	\$27,799	\$29,829
Medicaid Population	26.8%	30.3%	25.8%	27.8%	24.9%	20.8%	21.6%
Uninsured Adults	9.93%	12.64%	9.59%	9.23%	9.61%	8.5%	11.7%
No High School Diploma	10.81%	20.54%	13.2%	14.4%	14.4%	10.5%	13.0%
Teen Births	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

Sources: US Census Bureau American Community Survey 2012-16; US Census Decennial Census 2010; *National Center for Education Statistics, NCES - Common Core of Data. 2015-16*; US Census Bureau, *Small Area Health Insurance Estimates. 2016*; US Department of Health & Human Services, *Health Indicators Warehouse. Centers for Disease Control and Prevention, National Vital Statistics System 2006-12*; US Department of Labor, *Bureau of Labor Statistics. 2018 - August*.

Persons Representing the Broad Interests of the Community

In order to assure that there was a broad involvement from all four counties in the assessment process, a questionnaire and focus groups were selected to gain input. Each county focus group consisted of individuals from public health, businesses, non-profits, health care, and others interested in the health of their community. There were individuals from each county public health department, which represented the medically underserved, low-income, and minority populations. Multiple other non-profits also represented those that are underserved, low-income, or part of the minority community. These covered programs ranged from those for the aged to those for young children/infants.

Organizations Providing Input

Organization providing input	Nature and extent of input	Medically underserved, low-income, or minority populations represented by organization
Ohio Univ. Southern, retired prof.	Lawrence Co. focus group	Community member/activist
Ohio Univ. Cooperative Extension	Lawrence Co. focus group	Provides services and educational opportunities for the broad community
Community at Large	Lawrence Co. focus group	Community at large/resident perspective
Care Source	Lawrence Co. focus group	Medicaid insurance provider, low

		income perspective
Ironton in Bloom/Ironton Alive	Lawrence Co. focus group	Community activist
Lawrence Co. Early Childhood/Lawrence Co. Community Action	Lawrence Co. focus group	Provides Headstart early education services; low income/minority perspective
Christ Episcopal Church – Reverend	Lawrence Co. focus group	Faith community/community at large perspective
Ironton Alive/Farmer’s Market	Lawrence Co. focus group	Community activist/community at large perspective
AETNA Better Health Agency	Boyd & Greenup Cos. 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, minority populations,
Ashland Schools YSC	Boyd Co focus group	Provides non-educational assistance for students in high school - low-income/parent/education perspectives
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
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 perspectives
City of Wurtland	Greenup Co. focus group	Government perspective
Commercial Bank/President	Carter Co. focus Group	Business – employer 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
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 – 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	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
Healthcare 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 focuses 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
Interagency Council	Boyd Co focus group	Interagency Council brings helping agencies together to provide for the underprivileged, focus group moderator – low income/medically underserved perspective
KDMC	Boyd, Greenup & Lawrence Co. focus groups	Healthcare - medically underserved, low-income, minority. populations with chronic

		disease needs perspective
Kentucky Home place	Carter Co. focus Group	Prescription assistance programs. - low income/medically underserved perspective
KY Cancer Program	Boyd Co focus group	Cancer care program - healthcare/low income/medically underserved perspective
Lawrence Co. Early Childhood Academy	Lawrence Co. focus group	Early childhood education perspective
Lawrence Co., OH 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/1 st Steps	Boyd Co focus group	Adult aging and developmental delays in children - - low income perspective
OLBH	Greenup Co. focus group	Medical community - healthcare, medically underserved, low-income, minority populations, and populations with chronic disease needs perspective
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
Raceland Schools FRYSC	Greenup Co. focus group	Provides non-educational assistance for students in elementary & high school - low-income/minority perspective
Ramey-Estep Home	Boyd Co focus group	Residential and foster care treatment facility - foster care perspective
AME Church, Ironton	Lawrence Co. focus group	Faith community perspective
Safe Harbor	Boyd & Greenup Cos. 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 & Greenup Cos. 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 from the community through the use of a questionnaire and through focus groups. The questionnaire was distributed both online using Survey Monkey and in-person using a paper version.

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. The 21-question survey was administered throughout the four-county service area, with 1,511 respondents. There were 1,396 individuals who provided their county of residence. Of these, 45.8% were from Boyd County; 20.5% from Carter County; 20% Greenup County; 11.2% Lawrence County (Ohio); and 3% were from counties outside of the service area, including Floyd, Rowan, Lewis, Menifee, Franklin, and Elliott counties in Kentucky; Wayne, Lincoln, and Cabell counties in West Virginia; and Scioto County in Ohio.

Of the respondents, there were more females (77.5%) than males (21.5%). There was good diversity in the age of respondents, with 7.2% age 18-24; 26.9% age 25-39; 32.7% age 40-54; 18.1% age 55-64; and 15.2% over age 65. Income distribution was also diverse, with 25% reporting income at or below \$24,999; 20.5% in the \$25,000-\$49,999 income range; 20.31% in the \$50,000-\$74,999 income range; and 34.2% with income above \$75,000.

The race and ethnicity distribution of respondents closely followed area census data, with 97.3% white; 1.5% black; and 1.2% representing all other races. Hispanics made up 1.23% of respondents and non-Hispanics made up the other 98.77%. Educational attainment varied, with 4.1% of respondents having no high school diploma; 15.6% with a high school diploma or GED equivalent degree; 19.3% with some college; 14.6% with an associate, trade school, or technology school certificate; 17.9% with a bachelor’s degree; and 28.5% with a graduate or higher degree.

Under community support and services, respondents were asked if they got enough social and emotional support from friends, family, their church, and the community; if they had

enough financial and physical support; and if there was safe housing, play spaces, and transportation to get where they needed to go.

Overall personal health was rated as excellent/very good by 59.95%; fair by 34.69%; and poor/very poor by 5.36%. The following chart shows responses for getting the social and emotional support:

Social and Emotional support received from:	Strongly agree/agree	Neutral	Disagree/strongly disagree
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%

When asked about getting financial and physical support, the respondents reported:

Financial and physical support received from:	Strongly agree/agree	Neutral	Disagree/strongly disagree
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 respondents (64.8%) received care through their doctor’s office, 13% sought care at an urgent care center, and 9.2% visited the emergency department. Additional care was attained through a federally qualified health center (3.2%), local health department (1.9%), or free clinic (0.4%). Nearly 5% of respondents did not seek care in the past year.

Having health insurance is critical to people’s ability to access health care services. Those without health insurance often seek care late and are more likely to die prematurely. Most questionnaire respondents had some form of health care insurance coverage, with 59.1% insured through their employer or labor union. Nearly 17% were insured through Medicare and 14% through Medicaid. 6% were covered through individual policies, Tricare, Veterans Administration/military, or had some other type of coverage. Slightly over 3% had no health care coverage.

The air we breathe and the water we drink are important to our well-being, economic prosperity, and the environment. Access to healthy foods and safe places to be physically active can have huge impacts on a person’s health. Those completing the questionnaire were asked about the health of the community in which they lived. This section included the overall health of the community, if there were safe places to play and walk, whether fresh food was accessible, and if the air was clean. When asked about the overall health of their community, only 17.4% felt that it was very good or good, with 56.6% deeming their community’s health as fair, and 26% rating the community’s health as poor or very poor.

The following chart demonstrates the reasons respondents identified as to why they felt their community was healthy or not:

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 for a healthy community. The chronic stress associated with living in unsafe neighborhoods can accelerate aging and harm health. Unsafe neighborhoods can cause anxiety, depression, and stress, and are linked to higher rates of pre-term births and low-birthweight babies, even when income is accounted for. Fear of violence can keep people indoors, away from neighbors, exercise, and healthy foods, which can contribute to obesity. When respondents were asked about safety in their neighborhoods, most felt there was safe housing (62.8% agreed/strongly agreed), while 21.3% remained neutral and 15.9% disagreed or strongly disagreed. Nearly half (48.9%) agreed or strongly agreed that there were safe places to play, with 25.3% remaining neutral and 25.8% disagreeing or strongly disagreeing. Safe transportation to get where needed also garnered more than half (51.9%) of respondents strongly agreeing or agreeing, with nearly 25% remaining neutral and 23.1% strongly disagreeing or disagreeing.

Respondents were asked if they could help make their community a better place to live. Nearly two-thirds (73.6%) strongly agreed or agreed that they could make a difference, with 23.9% remaining neutral and only 2.6% feeling they could not.

Included in the survey, respondents were asked to choose what they believed were the top five community health needs. The list included alcohol and drug abuse; health screenings and programs; vaccines; cancer; dental health; heart disease, high blood pressure and stroke; mental health; overweight and obesity; and violence and abuse. In addition, questions were asked that focused on where respondents sought care (i.e., physician office, emergency department, health department, etc.) and what type of health care coverage they had, if any. The following is the list in rank order:

1. **Alcohol/Drug/Tobacco Use (86.7%)**
2. **Cancer (51.3%)**
3. **Obesity (47.2%)**
4. **Mental Health Issues/Suicide (45.8%)**
5. **Child Abuse/Neglect (42.7%)**
6. **Diabetes (39.9%)**

- 7. Heart Disease (31.2%)
- 8. High Blood Pressure (21.9%)
- 9. COPD (Lung/Breathing Issues) (21.3%)
- 10. Dental Health (20.0%)
- 11. Domestic Abuse (17.7%)
- 12. Senior Health (17.5%)
- 13. Persons with Disabilities (13.2%)
- 14. Teen Pregnancy (10.5%)
- 15. Infant Health (8.34%)
- 16. Sexually Transmitted Disease including HIV/AIDS (8.28%)
- 17. Asthma (7.9%)
- 18. 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 not only impact the health of the community, but also can have an economic impact. Respondents were asked which programs were meeting these community needs. The following chart shows the 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 counties of the primary service area. The groups were made up of persons representing public health, non-profits, businesses, hospitals, schools, city and county government, faith communities, news media, universities/colleges, and community members at large. Attendance was good but varied - Boyd County, 34 attendees; Carter County, 20 attendees; Greenup County, 28 attendees; and Lawrence County, 17 attendees. Facilitation was provided to the groups by area health departments, hospitals, and non-profits. Sessions focused on learning the attendees’ opinions about the strengths, weaknesses, opportunities, and threats (SWOT) to the communities’ health.

The health of a community is dependent not only upon the genetics of its residents, but also upon the environment in which the residents live, work, play, and worship. Essentially, a person's health depends upon their environment. As such, a healthy community is one in which all residents have access to a quality education, safe and healthy homes, adequate employment, transportation, physical activity, and healthy food, in addition to quality health care. Unhealthy communities have increased incidence and prevalence of chronic diseases, such as cancer, diabetes, and heart disease. The health of these communities is critical to the growth and development of the Tri-State area.

The focus groups looked at the **strengths** of the communities through the health lens and found many things that worked well in promoting health. Across the counties, participants identified schools (both secondary and higher education) as a strength. They included many non-profits and collaboration between agencies, counties, and the states of Kentucky and Ohio as having a positive impact. There are also economic development efforts and programs focused on workforce development and leadership. Health care is high quality and available in most areas. Churches and the faith community are supportive and there is a strong sense of community. They also cited that there is a building awareness for people to live healthier lifestyles.

Weaknesses were also identified that may have a negative impact on the communities' health. Drug and substance abuse issues were discussed in all sessions, with concerns that the problem was getting worse with a shift from opioids to heroine and fentanyl. This issue also contributes to crime and may cause children to be put into foster care or live with relatives. Another issue that was a common theme was the lack of public or affordable transportation in many areas. Access to affordable and senior housing was cited as inadequate in some areas. Obesity and lifestyle choices rounded out their concerns.

There were many **opportunities** identified that may move the communities toward better health. Most of these were social/economic opportunities, including education and workforce development, creating a drop-in center to help educate and assist the homeless, and learning from other communities about successful efforts that may be able to be replicated by local campaigns. The participants also believe that technology, including telemedicine and electronic medical records, has a role and should be embraced and used to improve health care access. Hospitals should use current health care providers to further expand access and recruit more specialists. Acquiring grants to improve pedestrian safety and fund children's activities were also listed as opportunities.

One of the biggest **threats** to the health of the communities was seen to be the illicit drug/substance abuse issue, which contributes to crime and mental health problems (two other highly-ranked issues). Participants also cited concerns for family structure, with many children being raised by grandparents or other relatives, and for young people and families leaving the area for better opportunities. With industrial plant closings, the loss of

jobs was considered a threat. Government health care cuts can also have a negative impact and be a threat to the overall health of the communities.

The following chart shows each group’s responses to the SWOT analysis (rank order unless bulleted):

County	Strengths	Weaknesses	Opportunities	Threats
Boyd, KY	<ol style="list-style-type: none"> 1. Collaborations 2. Faith community 3. School resource centers 3. Non-profit community services 4. Community events 	<ol style="list-style-type: none"> 1. Lack of affordable housing 2. Transportation 3. Good paying jobs 4. Youth activity 5. Obesity 5. Lifestyle 	<ol style="list-style-type: none"> 1. Trades/skills/job ready 2. Funding for kid’s activities 3. Mentorship 4. Engage faith community 5. Clean environment 5. Embrace technology 	<ol style="list-style-type: none"> 1. Drugs 2. Mental health 3. Family structure along with grandparents raising kids 3. Loss of jobs
Carter, KY	<ul style="list-style-type: none"> • Strong sense of community • Number of health care clinics • Good access to specialists • Improved communication with physicians with technology • Greater awareness of need for healthier lifestyle • Parks & recreation opportunities • Galaxy project to engage youth • Leadership programs • Increase in home health programs • Higher education helping to develop workforce • Great collaboration between agencies, businesses, etc. 	<ul style="list-style-type: none"> • Obesity is a challenge and seems to be increasing • Feeling of pessimism • Closest hospital 30 minutes away • Addiction and opioids worse or has shifted to heroine and fentanyl • Not enough transitional housing support for those coming out of recovery or prison. General weakness in how people are integrated back into society • Not enough ambulance coverage • Clinic hours are limited • No homeless shelter • Limited engagement of community in health classes and resources • Low access to low income housing 	<ul style="list-style-type: none"> • Integrating veterans into community • Use technology to improve access; telemedicine, EMRs • Educate about resources available and leverage those resources • Communicate good things happening in community to increase synergy and positivity • Improve pedestrian safety through grants • Build upon existing workforce development programs • Involve young people in community improvement • Expand and strengthen existing collaborations and coalitions to improve health 	<ul style="list-style-type: none"> • General sense of negativity about change and the ability to improve the county • Accessing resources to support growth is challenging, hard, and lacking • General movement to limit the ability to age in place and move them (elderly) from the area • Companies do not always utilize local labor and resources thus undermine possible benefits to the community • Young families & people moving elsewhere for better opportunities • Drug crisis makes it challenging for employers to find workers that can pass a drug test, which undermines economic growth

		<p>in Olive Hill area</p> <ul style="list-style-type: none"> • Slow internet • Lack of adequate childcare; children being raised by others. 	<ul style="list-style-type: none"> • Use current base of health care providers to help further expand access 	
Greenup, KY	<ol style="list-style-type: none"> 1. Strong hospitals 2. Schools 3. Welcoming community 4. State park 5. 211 resources 	<ol style="list-style-type: none"> 1. Jobs 2. Transportation 2. Substance abuse 3. Obesity 4. Kid's living with family other than parents 	<ol style="list-style-type: none"> 1. Industrial growth 1. Education 2. Support for families raising kids 3. Adding programs like START 3. Communications 3. Transportation Expansion 4 Grants 5. Walkable neighborhoods 	<ol style="list-style-type: none"> 1. Jobs 2. Substance abuse 3. Drug trafficking 4. State budget funding
Lawrence, OH	<ol style="list-style-type: none"> 1. Faith based community 2. Relationships and collaboration between people and organizations 3. Judicial System (drug court) 3. Health care quality/availability 4. People 5. Strong economic development groups 	<ol style="list-style-type: none"> 1. Drug issues 1. Tax base 2. Family issues such as grandparents raising kids 3. Jail 3. Public transportation 3. Aging population 3. Senior housing 3. Affordable housing 3. Government strategic plan 	<ol style="list-style-type: none"> 1. Drop in center for homeless education and assistance 1. Learn from other communities like Huntington and Ashland 2. Buy local 3. Recruit medical specialists (such as oral surgeons, services for kids) 3. Riverfront development 3. States work together 	<ol style="list-style-type: none"> 1. Drugs 1. Crime 2. Family Unit 2. Mental Health 3. Tax base 3. Poverty 4. Health care cuts from the government

Secondary Data

Secondary data from national, state, regional, county, and local levels were considered in preparation of the CHNA. The information was divided into five categories that impact health. These categories included:

- **Socioeconomic:** persons with disabilities; median and per capita income; Medicaid population; uninsured population; adult and child poverty; unemployment; and teen births.
- **Clinical care:** access to dentists and primary care providers; low screening rates for mammography, pap tests, and colonoscopy/sigmoidoscopy; poor disease management for diabetes and high blood pressure; lack of consistent primary care; and preventable hospital events.
- **Health behaviors:** low fruit/vegetable consumption; no leisure time physical

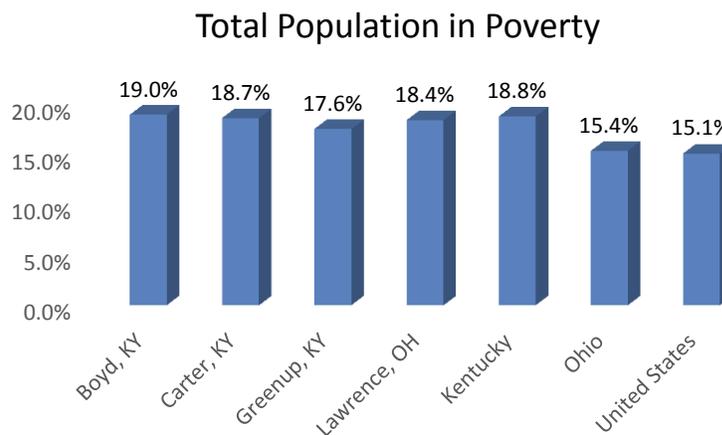
- activity; high number of former or current smokers; and low tobacco use quit rates.
- **Health outcomes:** high incidence of asthma, colon/rectal, and lung cancers, heart disease, high blood pressure, high cholesterol, infant mortality and low birth weight babies.
- **Mortality:** high mortality rates for cancer, coronary heart disease, drug poisoning, heart disease, lung disease, motor vehicle crashes, stroke, suicide and unintentional injury, high level of premature death, obesity and general poor health.

Social and Economic Indicators

Social insecurity and economic indicators often are associated with poor health. Poverty, unemployment, and lack of educational achievement affect access to care and a community’s ability to engage in healthy behaviors. Without a network of support and a safe community, families cannot thrive. Ensuring access to social and economic resources provides a foundation for a healthy community.

Poverty, unemployment, and educational achievement, the three most critical social and economic indicators, are all worse in the service area than in the United States as a whole.

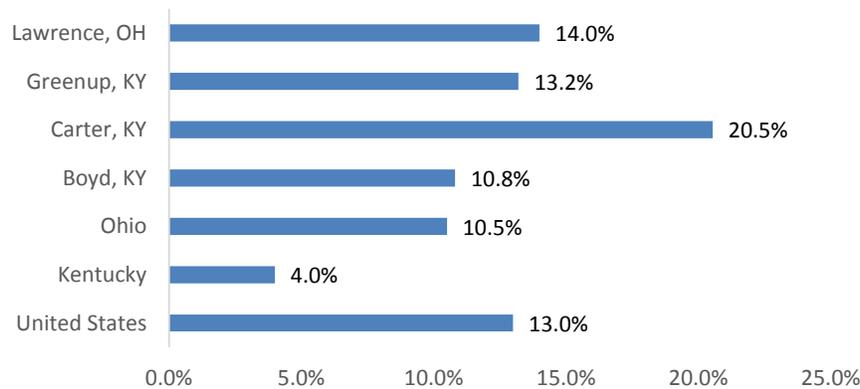
Poverty can be both a cause and consequence of poor health. The chance of poor health is increased by poverty, as these individuals are often deprived of information, money, and access to health services to prevent or treat disease due to poverty. Difficult choices may have to be made that impact health, like whether to purchase needed medications or food. The lack of resources often creates a situation where health care is put off due to the cost of doctor’s fees, medication, and transportation. This, in turn, often creates a situation for those in poverty where disease is diagnosed later, when it is more difficult and costlier to treat.



Source: US Census Bureau, American Community Survey 2012-16

Educational attainment (number of years of education completed) is an upstream contributing factor which may affect health outcomes. According to the January 2018 edition of the *Annual Review of Public Health*, adults with higher educational attainment live healthier and longer lives compared to their less educated peers. These disparities are large and widening. During the past several generations, education has become the principal pathway to financial security, stable employment, and social success. Education improves an individual’s knowledge, skills, reasoning, effectiveness, and a broad range of other abilities, which have been linked to better health and longer life. Education impacts economics, health behaviors, psychological and social wellbeing, and access to health care. Those with less education tend to smoke more and eat less healthy. These individuals also have fewer resources to access health care services.

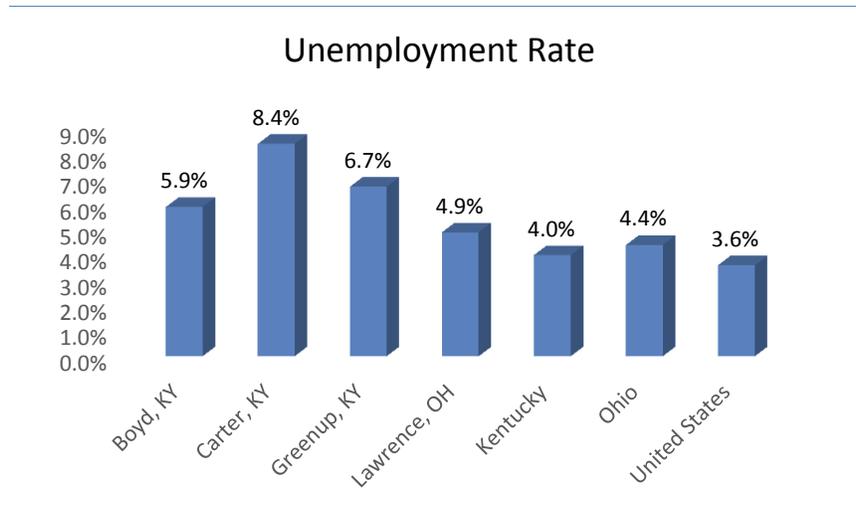
Adults with No High School Diploma



Source: National Center for Education Statistics, Common Core Data 2015-16

Unemployment negatively affects health outcomes. Employment in a good paying job makes it much easier for workers to live in healthier neighborhoods, provide a quality education for their children, and buy more nutritious foods, all of which affect health outcomes. People with good jobs are more likely to have good benefits, including health insurance. According to the Robert Wood Johnson Foundation, higher earnings also translate to longer lifespan. Since 1977, the life expectancy of male workers retiring at age 65 has risen 5.8 years in the top half of the income distribution, compared to only 1.3 years in the bottom half. By contrast, the unemployed face numerous challenges beyond loss of income. Laid-off workers are more likely to have fair to poor health, compared to their continuously employed counterparts. Those that have lost jobs are more likely to develop stress-related conditions, such as stroke, heart attack, or arthritis. A 2010 Gallup Poll found that unemployed individuals were far more likely than the employed individuals to be diagnosed with depression and report feelings of sadness and worry. There are also those employed but classified as the “working poor,” a status associated with health challenges. Research shows that insurance coverage is less likely among this group of workers and

those with lower wages are less likely to access preventive care services that insurance may cover, such as screenings and immunizations.



Source: US Department of Labor, Bureau of Statistics, March 2019.

Physical Environment

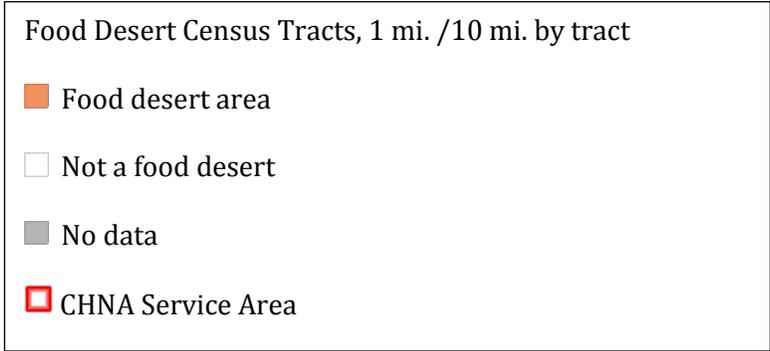
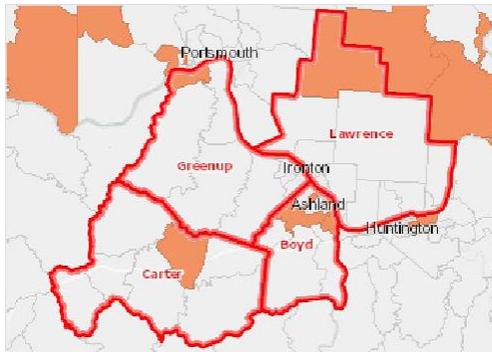
A community’s health is affected by its physical environment. A safe, clean environment that provides access to healthy food and recreational opportunities is important to maintaining and improving community health.

Area/Indicator	Boyd Co.	Carter Co.	Greenup Co.	Lawrence Co.	Kentucky	Ohio	United States
Food Access Rate Fast Food Restaurants (per 100,000 pop.)	131.2	64.94	62.31	60.85	73.26	80.6	77.06
Food deserts (% of population impacted)	51.8%	15.6%	40.3%	33.7%	33.6%	46.7%	42.1%
Recreation facilities rate (Per 100,000 pop.)	6.06	10.82	2.71	4.80	7.95	9.75	11.01

Data Sources: US Census Bureau, County Business Patterns, 2016; US Department of Agriculture, Economic Research Service, USDA - Food Access Research Atlas. 2015

Food access is a challenge in some areas of the four-county service area. In Boyd County, for example, food access challenges primarily occur in low-income areas within the city of Ashland. Healthy food retailers, such as grocery stores, farmers markets, and other vendors of fresh, affordable, and nutritious food, are critical to creating and sustaining healthy, thriving communities. Without access to healthy foods, maintaining a nutritious diet and good health are more challenging. An unhealthy diet is a known contributor to obesity and

being overweight, which affects two out of three adults and over one-third of children age 6-19 in the United States. Healthy food access has been recognized as an important factor in reducing obesity and improving health by national agencies and associations, including the Centers for Disease Control and Prevention (CDC) and the Institute of Medicine.



Data Source: US Department of Agriculture, Economic Research Service, USDA – Food Access Research Atlas, 2015.

Recreation facilities also contribute to health by providing a safe place to be physically active. Individuals who live within one-half mile of a park, or in urban areas; within one mile of a recreational facility; or within 3 miles of a recreational facility, for those living in rural areas, are considered to have adequate access for opportunities to be physically active. In the service area, only Carter County has a rate better than both states and the nation. Increased physical activity is associated with reduced risk for type 2 diabetes, cancer, stroke, high blood pressure, heart disease, and premature death independent of obesity. The built environment, such as parks, sidewalks, and gyms, are important to encourage physical activity and people living close to them are more likely to exercise.

Clinical Care

The lack of access to health care professionals presents a barrier to achieving good health. People’s access to facilities and physicians, the uninsured rate, financial hardship, transportation barriers, cultural competency, and coverage limitations all affect access. Rates of morbidity, mortality, and emergency hospitalizations can be reduced if community residents access services, such as health screenings, routine tests, vaccinations, and primary care, in a timely manner. Prevention indicators can call attention to a lack of access or knowledge regarding one or more health issues and can inform program interventions.

Access to health care providers for the region is mixed. Boyd County does not have access issues, primarily because of its hospital and physician office concentrations. However, the other three counties have limited access to dentists, mental health professionals, and primary care providers. The rate of these providers per 100,000 population in Carter, Greenup, and Lawrence counties is well below both states and the nation. Access to health services and the timely use of personal health services are critical

to good health outcomes. Individual having access to comprehensive, high quality health care services is important to promote and maintain health, prevent and manage disease, reduce unnecessary disability and premature death, and achieve health equity.

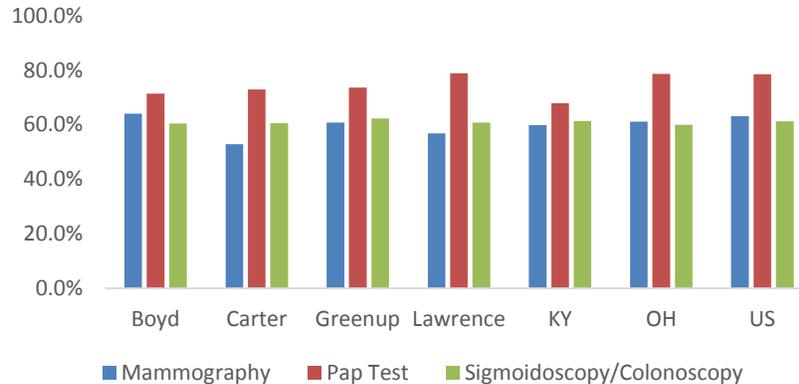
Having a consistent primary care provider is important for higher quality of care. Primary care offers the patient a single place where a broad array of health problems can get the appropriate attention. A primary care provider guides the patient through the health system; provides referrals for services from other health professionals; facilitates an ongoing relationship between patients and clinicians; provides opportunities for disease prevention and health promotion; and helps build bridges between personal health care services and patients’ families.

Area/Indicator	Boyd Co.	Carter Co.	Greenup Co.	Lawrence Co.	Kentucky	Ohio	United States
Access to Dentists (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
No consistent Primary Care Provider	18.9%	23.4%	18.4%	34.1%	19.2%	18.7%	22.1%

Data Source: US Department of Health & Human Services, Health Resources and Services Administration, Area Health Resource File, 2014.

Cancer screenings help save lives. The earlier cancer is detected, the easier and less costly it is to treat. Timely screening has proven to be an effective tool in curtailing cancer mortality rates. With early screening and engagement, health professionals are able to better tailor treatment plans to individual tumor characteristics. In the service area, Carter, Greenup and Lawrence counties have mammography rates among Medicare patients below both states and the nation. Boyd, Carter, and Greenup counties have Pap test rates higher than Kentucky but lower than the United States average. Colon screenings through sigmoidoscopy or colonoscopy are below Kentucky and the nation in Boyd and Carter counties. Lawrence County also has a rate lower of colon screenings than the nation.

Cancer Screening

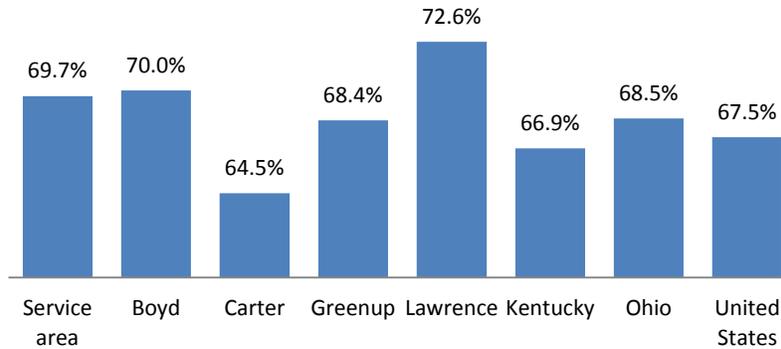


Data Sources: Dartmouth College Institute for Health Policy & Clinical Practice, Dartmouth Atlas of Health Care, 2014; Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2006-12.

Disease management for people with chronic conditions helps to reduce costs and improve the quality of life. In the United States, 44% of noninstitutionalized Americans with chronic disease account for a disproportionate share (78%) of health care expenses. According to the Dartmouth College Institute for Health Policy 2006-12, diabetes mellitus management among the Medicare population is better in the service area than Kentucky (85.9%), Ohio (85.1%), and the United States (85.2%), except for in Lawrence County (83%) where it is a few points worse. High blood pressure management, defined as those taking blood pressure medicines when needed, is better in two of the four counties in the service area, according to CDC Behavioral Risk Survey Surveillance System data, 2006-10. Boyd (5.7%) and Carter (15%) counties are much better than Greenup (17.8%) and Lawrence (28.9%) counties, when compared to Kentucky (17.6%), Ohio (19.8%), and the United States (21.7%).

Pneumococcal vaccines can help prevent the spread of pneumonia. According to vaccines.gov, pneumococcal disease causes thousands of infections every year in the United States. It is more common in children, but it is most likely to cause serious complications in adults. Pneumococcal disease is contagious, meaning that it spreads from person to person. It can lead to different kinds of health problems, including serious infections in the lungs, lining of the brain and spinal cord, and blood. Pneumococcal disease is especially dangerous for babies, older adults, and people with certain health conditions. Getting vaccinated is the best way to prevent pneumococcal disease.

Pneumonia Vaccinations Age 65+



Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, Department of Health & Human Services, 2006-12.

The **preventable hospital events** indicator reports the discharge rate (per 1,000 Medicare enrollees) for conditions that are ambulatory care sensitive (ACS). ACS conditions include pneumonia, dehydration, asthma, diabetes, and other conditions which could have been prevented if adequate primary care resources were available and accessed by those patients. According to the data, all of the service area fares worse than the comparable state and national data.

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

Data Source: Dartmouth College Institute for Health Policy & Clinical Practice, Dartmouth Atlas of Health Care, 2014

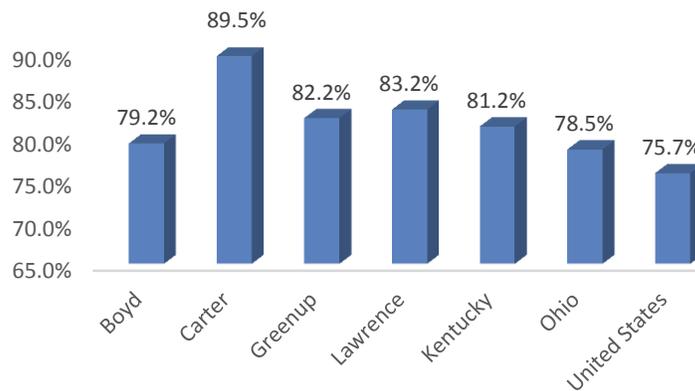
Health Behaviors

Health behaviors such as poor diet, a lack of exercise, and substance abuse contribute to poor health status. Unhealthy eating and lack of physical activity can lead to significant health issues, including obesity and diabetes. Tobacco use contributes to a multitude of health issues including cancer, heart disease, and COPD.

Fruit and vegetable intake is an important component of a healthy diet. Reduced fruit and vegetable consumption is linked to poor health and an increased risk of noncommunicable diseases. According to the World Health Organization, an estimated 3.9 million deaths worldwide were attributable to inadequate fruit and vegetable consumption in 2017. Including fruits and vegetables as part of the daily diet may reduce the risk of some diseases, including cardiovascular diseases and certain types of cancer. More limited evidence suggests that, when consumed as part of a healthy diet low in fat, sugars, and salt/sodium, fruits and vegetables may also help to prevent weight gain and reduce the risk of obesity, an independent risk factor for many diseases. In addition, fruits and vegetables

are rich sources of vitamins and minerals, dietary fiber, and a host of beneficial non-nutrient substances, including plant sterols, flavonoids, and other antioxidants. Consuming a variety of fruits and vegetables helps to ensure an adequate intake of many of these essential nutrients. There is an inadequate consumption of fruits and vegetables among adults in the service area compared to Kentucky, Ohio, and the United States.

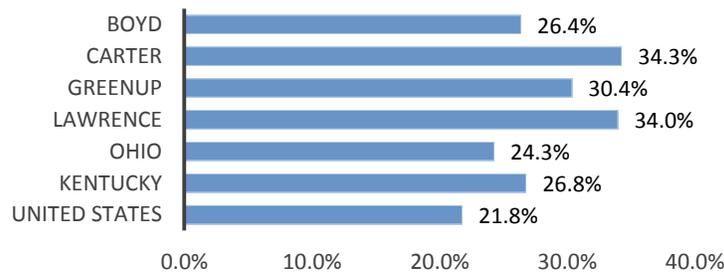
Fruit and Vegetable Consumption: Fewer than 5 Servings per daily



Source: Centers for Disease Control, Behavioral Risk Factor Surveillance System, 2006-12.

Physical inactivity is a major public health problem. The CDC, Behavioral Risk Surveillance System questionnaire, asks “during the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?” In the service area, 31.1% of adults age 20 and older reported that they did not. Physical activity is important because current behaviors are determinants of future health and may indicate a cause of future significant health issues, such as obesity and poor cardiovascular health.

Physical Inactivity



Source: Centers for Disease Control, Behavioral Risk Factor Surveillance System, 2006-12.

Tobacco use is a major public health issue. According to the report, *Tobacco, Nicotine and E-Cigarettes*, from the National Institute on Drug Abuse, updated January 2018, cigarette smoking harms nearly every organ in the body and smoking is the leading preventable cause of premature death in the United States. Although rates of smoking have declined, it is estimated that it leads to about 480,000 deaths annually. Smokers age 60 and older have a twofold increase in mortality compared to those who have never smoked, dying an estimated six (6) years earlier. Quitting smoking results in immediate health benefits, and some or all of the reduced life expectancy can be recovered, depending on the age at which a person quits. Though nicotine itself does not cause cancer, at least 69 chemicals in tobacco smoke are carcinogenic and cigarette smoking accounts for at least 30% of all cancer deaths. The overall rates of death from cancer are twice as high among smokers as nonsmokers, with heavy smokers having a four times greater risk of death from cancer than nonsmokers.

In the service area, an estimated 36,057, or 26.4% of adults age 18 or older, self-report currently smoking cigarettes some days or every day. This is relevant because tobacco use is linked to leading causes of death, including cancer and cardiovascular disease. Current tobacco use is worse in all four counties than Kentucky, Ohio, and the United States and quit attempts are much lower. Tobacco use among former and current smokers is near or greater than 50% in three of the four counties, as indicated in the following chart:

Area/Indicator	Boyd Co.	Carter Co.	Greenup Co.	Lawrence Co.	Kentucky	Ohio	United States
Tobacco Use – Current Smokers	28%	33.6%	23.9%	26.2%	26.1%	21.7%	18.1%
Tobacco Use – Former and Current Smokers	49.8%	61.6%	57.5%	44.5%	53.5%	49.1%	44.2%
Tobacco – Quit Attempts	51.4%	46.8%	52.1%	42.8%	54.3%	55.5%	60.0%

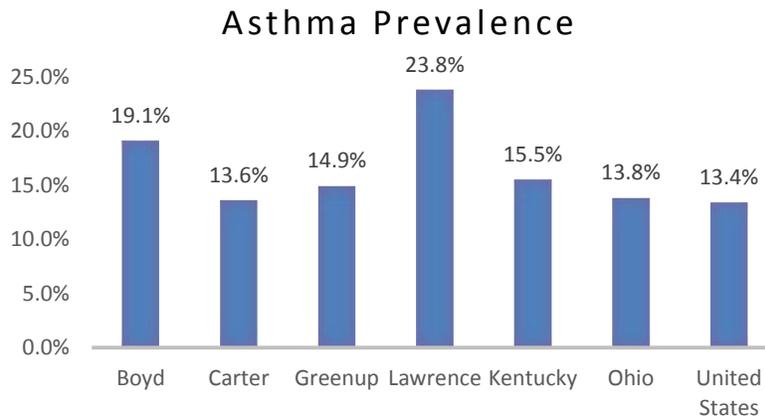
Sources: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, Department of Health & Human Services, Health Indicators Warehouse. 2006-12. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 2013.

Health Outcomes

Looking at morbidity and mortality rates allows assessment of linkages between social and behavioral determinants of health and outcomes. By comparing, for example, the prevalence of certain chronic diseases to indicators in other categories (e.g., poor diet and exercise) with outcomes (e.g., high rates of obesity and diabetes), various causal relationships may emerge, allowing a better understanding of how certain community health needs may be addressed.

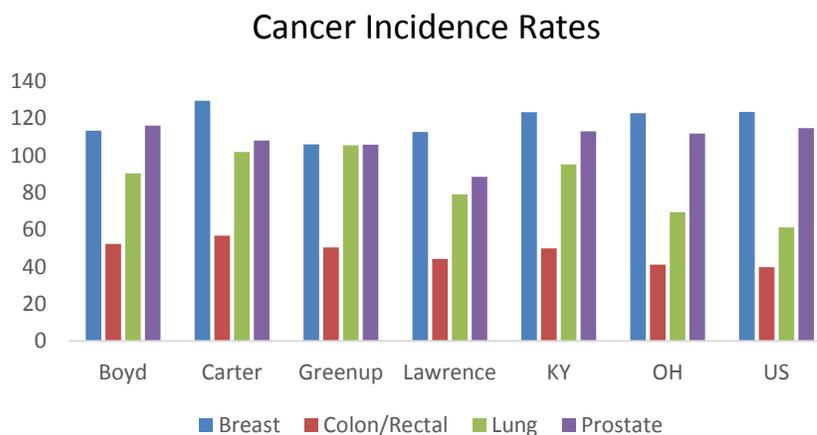
Asthma prevalence is not only a serious public health issue that has far-reaching medical, economic, and psychosocial impact, but is also a personal health issue. The following chart reports the percentage of adults age 18 and older who self-report that they have ever

been told by a doctor, nurse, or other health professional that they had asthma. Three of the four counties have higher asthma prevalence rates than Kentucky, Ohio, and the United States.



Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2011-13

Cancer incidence rates provide a picture of the estimated new cancer cases diagnosed each year, based on 100,000 population. Cancer puts a huge burden on the individual and the health care system. In the service area, all counties except Carter fare much better than both states and the nation when it comes to breast cancer incidence. All of the service area counties are worse than Kentucky, Ohio, and the United States when it comes to incidence of colon/rectal and lung cancers. With prostate cancer, only Boyd County has an incidence rate worse than both states and the nation. The cancer incidence rate details are highlighted in the following chart:

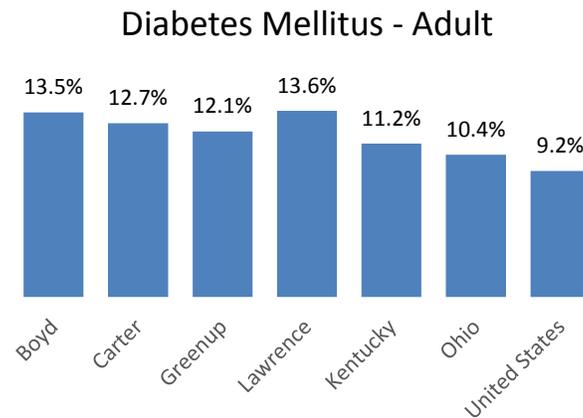


Source: State Cancer Profiles. 2011-15.

While **depression** is not a normal part of the aging process, there is a strong likelihood of it occurring when other physical health conditions are present. Symptoms of clinical

depression can be triggered by other chronic illnesses common in later life, such as Alzheimer’s disease, Parkinson’s disease, heart disease, cancer, and arthritis. According to the Centers for Medicare and Medicaid Services, depression among Medicare recipients in the service area is higher than Kentucky, Ohio, and the United States. 22.7% of Medicare patients in Boyd and Greenup counties, 19.3% in Carter County, and 23.0% in Lawrence County report having depression. This is compared to Kentucky at 20.2%, Ohio at 18.5%, and the United States at 16.7%.

Diabetes mellitus (DM) is a major public health problem worldwide. Persistently high blood glucose levels can lead to serious life-changing and life-threatening complications. Diabetes can be effectively managed when caught early. However, when left untreated, it can lead to potential complications that include heart disease, stroke, kidney damage, eye damage, and nerve damage. The following chart reports the percentage of adults age 20 and older who have ever been told by a doctor that they have diabetes. The high prevalence of diabetes may indicate an unhealthy lifestyle and puts individuals at risk for further health issues. DM is higher across all four service area counties than Kentucky, Ohio, and the United States.



Source: Center for Disease Control and Prevention, National Center for Disease Prevention and Health Promotion, 2013

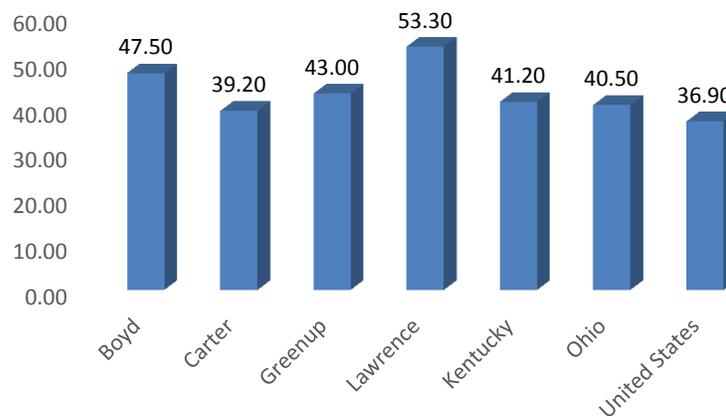
Heart disease is often used interchangeably with “cardiovascular disease.” It can be fatal and can also lead to serious illness, disability, and lower quality of life. Heart disease is the leading cause of death in the United States. Heart disease describes a range of conditions that affect the heart, including narrowed or blocked vessels that can lead to heart attack, angina, or stroke. Diseases under the heart disease umbrella include blood vessel diseases, such as coronary artery disease, heart rhythm problems (arrhythmias), and heart defects present at birth (congenital heart defects). Other heart conditions, including those that affect the heart muscle, valves, or rhythm, are also considered heart disease. The following chart shows the morbidity and mortality (age-adjusted per 100,000 population) of heart disease and associated conditions, such as high blood pressure and high cholesterol.

Area/Indicator	Boyd Co.	Carter Co.	Greenup Co.	Lawrence Co.	Kentucky	Ohio	United States
Heart Disease (adult)	6.6%	5.4%	8.9%	4.8%	5.9%	5.1%	4.4%
Heart Disease (Medicare pop.)	33.4%	32.1%	34.3%	30.3%	29.1%	27.2%	26.5%
High Blood Pressure (adult)	33.4%	40.3%	32.7%	26.5%	32.5%	28.8%	28.2%
High Cholesterol (adult)	45.1%	46.6%	44.2%	32.7%	41.4%	38.7%	38.5%
Coronary Heart Disease Mortality	158.0	145.0	133.6	129.9	111.3	110.6	99.6
Heart Disease Mortality	241.6	221.8	213.9	213.3	202.5	187.8	168.2

Sources: Centers for Disease Control and Prevention, National Vital Statistics System, 2006-12. Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2011-13. Centers for Medicare and Medicaid Services, 2015.

Stroke is the fifth leading cause of death in the United States. A stroke may lead to significant disability, such as paralysis, speech difficulties, and emotional problems. A stroke can cause permanent loss of function. The long-term effects of a stroke depend on which part of the brain was damaged and to what degree. Three of the four counties are worse than both states and all are worse than the nation in stroke mortality.

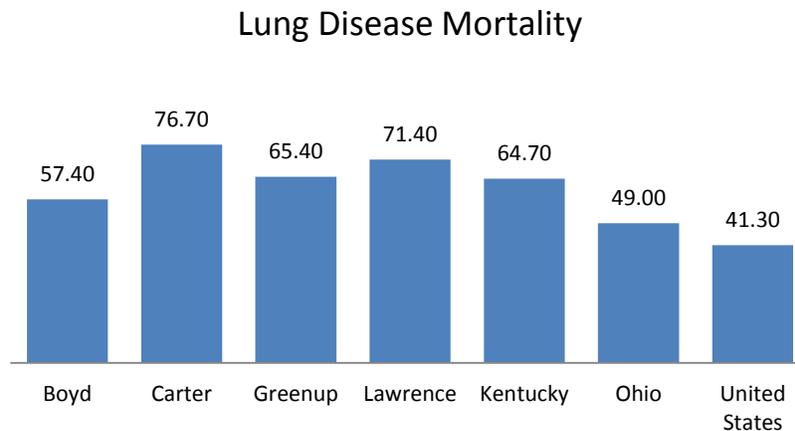
Stroke Mortality



Source: Centers for Disease Control and Prevention, National Vital Statistics System, 2006-12.

Lung disease, other than cancer, refers to many disorders affecting the lungs, such as asthma, COPD, infections like influenza, pneumonia and tuberculosis, lung cancer, and many other breathing problems. Some lung diseases can lead to respiratory failure. Lung disease refers to any disease or disorder in which the lungs do not function properly. According to the National Institute of Environmental Health Sciences, lung disease is the

third leading killer in the United States, responsible for one in seven deaths, and is the leading cause of death among infants under the age of one. Lung disease mortality (age-adjusted rate per 100,000 population) is higher than both states and the nation across all four counties, as shown in the following chart:



Source: Centers for Disease Control and Prevention, National Vital Statistics System. 2006-12.

Infant mortality and low-birthweight may be indicators of inadequate prenatal care. In 2015, preterm birth and low-birthweight accounted for about 17% of all infant deaths. According to the National Institute of Health, studies have demonstrated that low birthweight, defined as a birthweight of less than 5.5 pounds (2500 grams), is associated with a higher risk of neonatal and infant mortality and morbidity and a greater risk for adverse health outcomes, cognitive development, and school performance problems than those born a normal weight. In the service area, infant mortality is better than both states and the nation in all but Lawrence County, where it is considerably worse. However, low birthweight is worse across all four counties than the states and the nation. The following chart shows these comparisons:

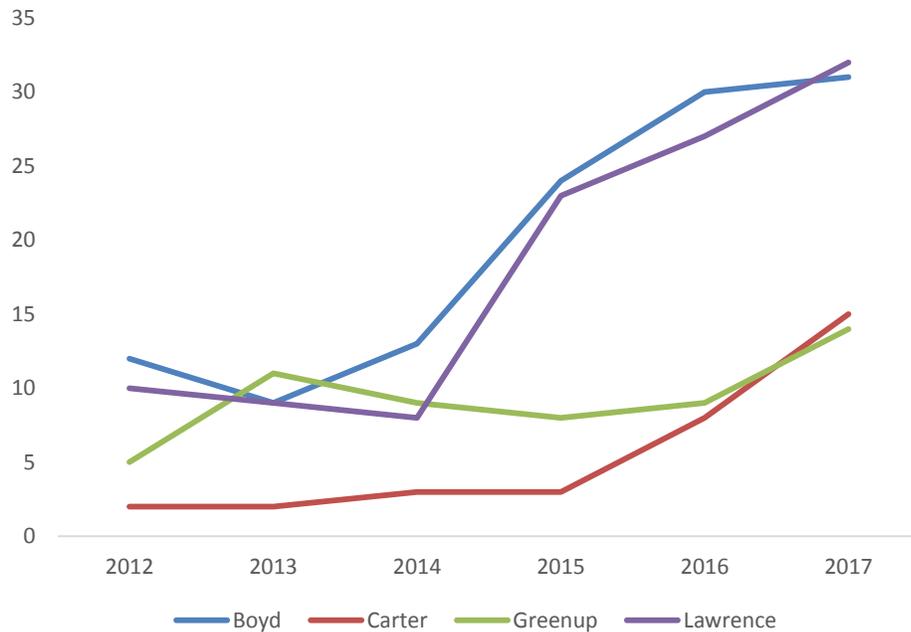
Area/Indicator	Boyd Co.	Carter Co.	Greenup Co.	Lawrence Co.	Kentucky	Ohio	United States
Infant Mortality Rate (per 1,000 births)	6.6	5.0	5.8	9.1	7.0	7.7	6.5
Low birth weight (under 2500 g)	10.3%	10.1%	8.7%	10.9%	9.1%	8.6%	8.2%

Source: US Department of Health & Human Services Health Indicators Warehouse. Centers for Disease Control and Prevention, National Vital Statistics System. 2006-12.

Drug poisoning/overdose deaths continue to rise in the area. In 2017, the number of drug overdose deaths was nearly three times higher than in 2012. Heroin and prescription opioids account for the greatest number of fatal overdoses. Hydrocodone and naloxone account for the highest number of deaths from controlled substances. Drug overdose is a growing problem in the area. The death rate from drug overdose is higher in Boyd County

(32.6), Greenup County (27.4), and Lawrence County (28.1) than Kentucky (27.4), Ohio (2.7), and the United States (15.6). While Carter County’s rate (24.9) is better than both states, it is much higher than the nation.

Drug Overdose Fatalities



Sources: Kentucky Office of Drug Control and Policy, 2017 Overdose Fatality Report; Ohio Department of Public Health, 2017.

Associated Drug Poisoning Data

Description	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH
All Drugs	378	145	102	-
Heroin	153	52	24	-
Pharmaceutical Opioids	58	24	12	-
Benzodiazepine	23	10	12	-
Hydrocodone	51	75	116	-
Oxycodone	31	44	67	-
Naloxone	57	104	87	-
Total	139	223	270	-
Total Number of Drug Overdose Deaths	31	15	14	-

Source: Kentucky Outpatient Services Database and Kentucky Inpatient Hospitalization Files, 2017.

Motor vehicle crashes, according to the CDC, are a leading cause of death in the United States, with over 100 people dying in motor vehicle crashes daily. More than 2.5 million drivers and passengers were treated in emergency departments as the result of being injured in motor vehicle crashes in 2015. The economic impact is also notable: in a one-year period, the cost of medical care and productivity losses associated with occupant injuries and deaths from motor vehicle crashes exceeded \$63 billion. In the service area, the age-adjusted rate of mortality in motor vehicle crashes is worse than Ohio (10.2) and the nation (11.3). The highest rate is in Carter County (25.1), which is higher than Kentucky’s rate of 17.5. The other county rates are: Boyd – 11.2, Greenup – 15.9, and Lawrence - 11.5 (Source: *US Department of Health & Human Services, Health Indicators Warehouse. Centers for Disease Control and Prevention, National Vital Statistics System, 2006-12*). The following chart shows the number of crashes involving drunk or impaired driving:

Vehicle Crash Associated Data

Description	Boyd, KY	Carter, KY	Greenup, KY	Lawrence, OH
Fatal Collison	0	0	0	-
Collison Involving Injury	8	17	6	-
Collison Involving Property Damage	18	3	11	-
Total	26	20	17	-
Fatal Collison	1	0	0	-
Collison Involving Injury	9	6	2	-
Collison Involving Property Damage	9	4	4	-
Total	19	10	6	-

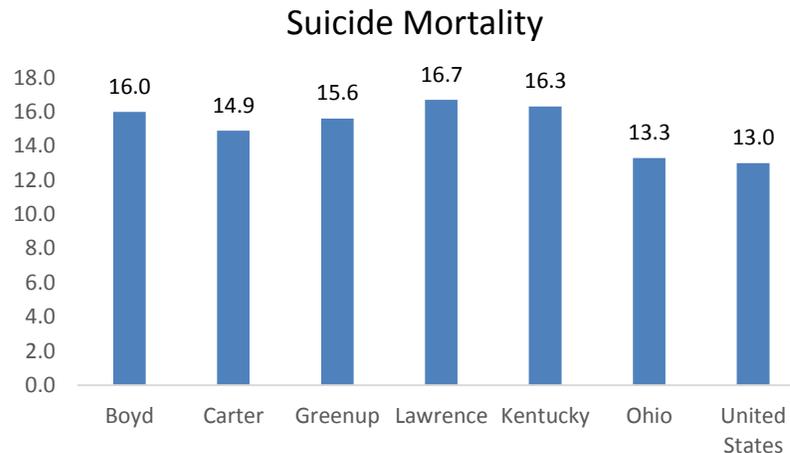
Source: Kentucky State Police, 2016

Premature death is measured through deaths that are unnecessary and preventable. This measurement focuses on deaths that occur before age 75 because these deaths are largely preventable, compared to deaths at older ages. Communities where many people die at younger ages often face social and economic disadvantages that largely impact community well-being. Premature death can be used to compare populations or geographic areas and better understand the risk factors for early deaths. Over the past few decades, the rates of premature death from all causes in the United States have declined as preventive services and government health policies improve. However, significant variation in premature death rates remains a serious health equity concern. In the service area, the premature death rate is much higher than Ohio and the national rate. However, the three Kentucky counties fare better than Kentucky as a whole, as reflected in the following chart:

Area/Indicator	Boyd Co.	Carter Co.	Greenup Co.	Lawrence Co.	Kentucky	Ohio	United States
Premature Death (Years of Potential Life Lost Rate per 100,000)	9,912	10,245	9,401	10,363	10,610	7,908	7,222

Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2013.

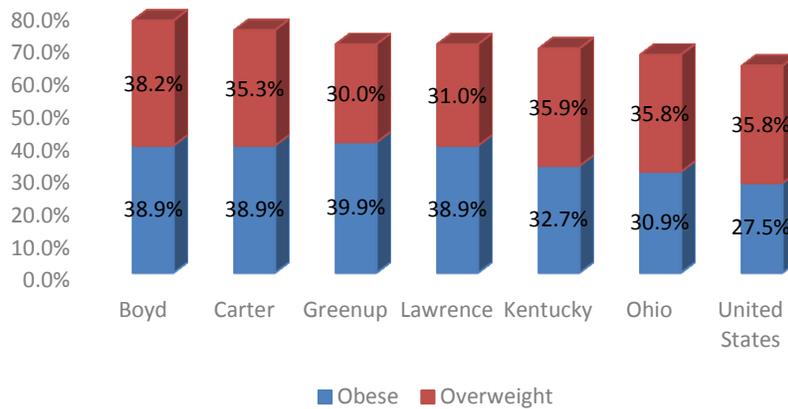
Suicide is a large and growing public health problem. Suicide is the 10th leading cause of death in the United States. Suicide is a problem throughout the life span, effecting all ages. According to the CDC, it is the second leading cause of death for people 10 to 34 years of age, the fourth leading cause among people 35 to 54 years of age, and the eighth leading cause among people 55 to 64 years of age. Suicide mortality in the service area is higher than both Ohio and the United States (age-adjusted rate per 100,000 population).



Source: Centers for Disease Control and Prevention, National Vital Statistics System, 2012-16.

Obesity (BMI >30) and **overweight** (BMI 25-29.9) pose a high public health risk. People who are obese, compared to those with a normal or healthy weight, are at an increased risk for many serious diseases and health conditions, including high blood pressure, high LDL cholesterol, type 2 diabetes, coronary artery disease, stroke, osteoarthritis, and sleep apnea. In addition, obese individuals are at a higher risk for some cancers, including breast, colon, endometrial, kidney, gallbladder, and liver. The percent of obese persons in all four counties is higher than both states and the nation. Only Boyd County has an overweight percentage that exceeds both the state and the national percentage. The following chart provides detail about the obesity and overweight problem of the service area:

Obese and Overweight



Sources: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2013. Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2011-13.

Poor general health, as an indicator, is an important measure of general poor health status. Within the service area, 27.9% of adults age 18 and older self-report having poor or fair health in response to the question: "would you say that in general your health is excellent, very good, good, fair, or poor?" This is well below Kentucky, Ohio, and the United States.

Area/Indicator	Boyd Co.	Carter Co.	Greenup Co.	Lawrence Co.	Kentucky	Ohio	United States
Poor General Health (age adjusted percent)	25.6%	31.2%	23.6%	27.9%	21.1%	15.3%	15.7%

Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2011-13.

Information Gaps

There were information gaps identified for Lawrence County, where we were unable to attain data for drug poisoning and motor vehicle crash data associated with driving under the influence. In addition, the BRFSS data is older than desired. This is because county level data is limited. Administrative district or regional information is more current, but the inclusion of non-target county data may skew results for target counties. While the BRFSS data is six years old, this data does not seem to change significantly over time, so the 2011-13 data was considered usable.

Existing Resources

Resources and programs currently in place to address the health needs identified in the CHNA are provided by multiple community organizations in the area, as follows:

Local Health Departments:

- Ashland-Boyd County
- Carter County
- Greenup County
- Lawrence County (Ohio)

Local Hospitals:

- King's Daughters Medical Center
- Our Lady of Bellefonte Hospital, Bon Secours Kentucky Health System
- Southern Ohio Medical Center
- Cabell Huntington Hospital
- Saint Mary's Medical Center
- Veteran's Administration-Huntington

Mental Health/Substance Abuse:

- King's Daughters Medical Center
- Our Lady of Bellefonte Hospital, Bon Secours Kentucky Health System
- ILCAO- Family Guidance Center
- Mended Reeds
- Pathways, Inc.
- Prestera Mental Health
- Shawnee Mental Health
- Southern Ohio Behavioral Health
- River Park Hospital

Transportation to Aid in Access to Care:

- City of Ashland Bus System
- Ironton Port Authority
- Van Ministry, Bon Secours Kentucky Health System
- Tri-State Transit Authority Bus System-Ashland/Ironton/Huntington
- King's Daughters Medical Center
- North East Community Action
- Medicab

Low-Income Assistance:

- The Neighborhood
- Safe Harbor
- Shelter of Hope
- Hope's Place
- United Way
- Salvation Army
- Kentucky Home place
- Area Churches
- Interagency/Community Action Councils

Community Assets

Data was collected from the questionnaire and focus groups about what assets or strategies exist in the communities that contribute to health. The following were identified:

- Local health departments
- Strong hospitals
- Number of health care clinics
- Good access to specialists
- Health care technology
- Greater awareness of the need for healthier lifestyle
- Health screening and education programs
- Good schools and colleges
- Strong faith community
- Judicial system-drug program
- Strong economic development groups
- 211 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 get a comprehensive view of the health needs of the service area, data was collected from primary (a questionnaire and focus groups) and secondary data sources. This will provide the framework for discussion and the selection of the top health priorities that can be addressed by OLBH over the next three years through implementation planning and the implementation process. The following chart provides the top health concerns from each data source:

Focus Groups: based on responses from the “Threats” discussion	Questionnaire: based on top 10 answers question	Secondary Data: three out of four counties worse than nation
<ul style="list-style-type: none"> • Substance abuse • Family unit/children living with grandparents • Jobs • Mental Health • Crime 	<ul style="list-style-type: none"> • Alcohol/drug/tobacco use • Cancer • Obesity • Mental health/suicide • Child abuse/neglect • Diabetes • Heart disease • High blood pressure • COPD (lung/breathing issues) • Dental Health 	<ul style="list-style-type: none"> • Poverty • Preventable hospital events (ambulatory care sensitive conditions that could have been prevented with adequate primary care) • Physical inactivity • Fruit and vegetable consumption • Tobacco use • Diabetes • Heart disease • Asthma • Colorectal cancer • Lung cancer • Stroke • Lung disease other than cancer • Low birth weight • Suicide • Obesity • Poor general health

An interventional approach may need to be targeted to a single area, instead of to broadly improve health. While there are numerous issues across all four service area counties, not all counties have the same needs. Therefore, it was important to analyze the secondary data broken down by county (items included are statistically below both the state and nation):

Boyd County	Carter County	Greenup County	Lawrence County (Ohio)
<ul style="list-style-type: none"> • Poverty • Food desert • Recreation facilities • Preventable hospital events • Physical inactivity • Tobacco use • Asthma • Colorectal cancer 	<ul style="list-style-type: none"> • Poverty • Educational attainment • Primary care access • No consistent primary care provider • Mammography screening • Pneumonia vaccine 	<ul style="list-style-type: none"> • Poverty • Educational attainment • Recreation facilities • Recreation facilities • Preventable hospital events • Fruit and vegetable consumption 	<ul style="list-style-type: none"> • Poverty • Educational attainment • Primary care access • No consistent primary care provider • Mammography screening • Preventable hospital events

<ul style="list-style-type: none"> • Lung cancer • Diabetes • Heart disease • High blood pressure • High cholesterol • Stroke • Lung disease • Low birth weight • Premature death • Obesity • Overweight • Poor general health 	<ul style="list-style-type: none"> • Preventable hospital events • Fruit and vegetable consumption • Physical inactivity • Tobacco use • Breast cancer • Colorectal cancer • Lung cancer • Diabetes • Heart disease • High blood pressure • High cholesterol • Lung disease • Low birth weight • Premature death • Suicide • Obesity • Poor general health 	<ul style="list-style-type: none"> • Physical inactivity • Colorectal cancer • Lung cancer • Diabetes • Heart disease • High blood pressure • High cholesterol • Stroke • Lung disease • Low birth weight • Premature death • Obesity • Overweight • Poor general health 	<ul style="list-style-type: none"> • Fruit and vegetable consumption • Physical inactivity • Tobacco use • Asthma • Colorectal cancer • Lung cancer • Diabetes • Heart disease • Stroke • Lung disease • Infant mortality • Low birth weight • Premature death • Suicide • Obesity • Poor general health
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Significant Health Needs and Priorities

The priorities developed are based on questionnaire and focus group findings as well as the analysis of quantitative health and social indicators, as presented in this CHNA. In addition, the resources presently available within the counties served were considered. The CHNA is aligned with the efforts of other local agencies and considers the proposed objectives for Healthy People 2030. The priorities identified by the CHNA are:

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

Substance Use Disorder

Capacity and Adequacy of Service Levels:

- In all of our counties except Boyd access to mental health providers are below the KY, OH and national average. This is a huge gap for these communities as individuals battling issues they cannot receive professional support and treatment.
- Tobacco use is above the national, and state average for current and former smokers and our attempts to quit smoking is also above average across all categories.
- The drug overdose rates continue to rise in 2017, Boyd saw 378 overdoses with 31 resulting in death, Carter County saw 145 overdoses with 15 deaths and Greenup County had 102 overdoses with 14 deaths.

- In Boyd, Greenup, Carter and Lawrence counties there are various service providers to address substance use disorder in both the inpatient and outpatient setting. The services include detoxification, intensive outpatient and inpatient and chemical dependency services.
- Community organizations that provide services are not capable of meeting the vast need. The biggest need is for long term treatment, many have to go to other parts of the states or country to find a facility. Another issue is the cost of treatment; many individuals are uninsured or underinsured and cannot afford the treatment they need.

Current Service Providers:

Bon Secours Our Lady of Bellefonte Hospital Behavioral Health offers inpatient and outpatient counseling and an inpatient unit for addiction treatment. Other service providers include KDMC, SOMC, Mended Reeds, NECCO, Shawnee mental health, Pathways, Mahajan Therapeutics, Ramey Estep,

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

- All of the service area counties are worse than Kentucky, Ohio, and the United States when it comes to incidence of colon/rectal and lung cancers. With prostate cancer, only Boyd County has an incidence rate worse than both states and the nation.

Current Service Providers:

Bon Secours Our Lady of Bellefonte Hospital provides screenings and education for many types of cancer, OLBH has smoking cessation programs offered on campus and in the community. Radiation Therapy, Chemo and several support groups are offered. Other service providers include KDMC, local health departments, home health agencies, Community Hospice, KY Home place, Ashland Bellefonte Cancer Center.

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

- The percent of obese persons in all four counties is higher than both states and the nation.
- Boyd County has an overweight percentage that exceeds both the state and the national percentage.
- People who are obese, compared to those with a normal or healthy weight, are at an increased risk for many serious diseases and health conditions, including high blood pressure, high LDL cholesterol; type 2 diabetes, coronary artery disease, stroke, osteoarthritis, and sleep apnea.
- Obese individuals are at a higher risk for some cancers, including breast, colon, endometrial, kidney, gallbladder, and liver

Current Service Providers:

Bon Secours Our Lady of Bellefonte Hospital offers fitness programs and nutritional counseling, Fit Families program and Bless your Heart program in local churches. Other service providers include KDMC surgical and nonsurgical weight loss options, YMCA and local health departments.

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

- The chance of poor health is increased by poverty, as these individuals are often deprived of information, money, and access to health services to prevent or treat disease due to poverty.
- Lack of resources often creates a situation where health care is put off due to the cost of doctor's fees, medication, and transportation.
- Poverty increases the chance that diseases are diagnosed later, when it is more difficult and costlier to treat.
- According to the US Census Bureau, American Community Survey, 19% of Boyd County, 18.7% of Greenup County, 18.7 % of Carter County and 18.8% of Lawrence Co residents live in poverty.

Current Service Providers:

Bon Secours Our Lady of Bellefonte Hospital offers insurance counseling and offers a sliding scale payment plan for uninsured and underinsured individuals, we provide free transportation to doctor appointments, PT, OT, Pulmonary and Cardiac rehab and other services, we provide free mammograms to uninsured and underinsured individuals along with free health screenings including skin and prostate cancer. Other providers include Primary Plus a Federal Qualified Health Center (FQHC), Local Health Departments and Hill Crest Mission offers a free dental clinic.

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

- Suicide mortality in the service area is higher than both Ohio and the United States (age-adjusted rate per 100,000 population).
- The mental health provider ratio
- Suicide is the 10th leading cause of death in the United States. Suicide is a problem throughout the life span, effecting all ages.
- According to the CDC, it is the second leading cause of death for people 10 to 34 years of age, the fourth leading cause among people 35 to 54 years of age, and the eighth leading cause among people 55 to 64 years of age.

Current Service Providers:

Bon Secours Our Lady of Bellefonte Hospital offers inpatient and outpatient mental health services including a geriatric psych inpatient program. Other providers include KDMC, Shawnee Mental health, Pathways, NECCO, and River Park Hospital.

Progress on Health Priorities Identified in the 2016 CHNA

Coalition Infrastructure Development

Initiative	Impact
Healthy Choices Healthy Communities (HC/HC)	Coalition working with community members, businesses, schools and service agencies to address social determinants of health. Regular scheduled meetings. Basecamp a project management program or tool is used to upload calendar of activities, meeting minutes and important information. Instrumental in the Implementation of a 211 call center for KY counties.
HC/HC Workgroups formed (meet monthly)	<ul style="list-style-type: none"> • Substance Abuse • Poverty • Access to care • Obesity

Substance Abuse

Initiative	Impact
Bridges out of Addiction	Conference offered to the community, over 300 attended the one day event.
School Partnerships	<ul style="list-style-type: none"> • Prevention education on e-cigarette and vaping risks to 8,000 students in 17 schools in Boyd, Greenup and Carter County in KY and Lawrence Co. Ohio. • Prevention education on opioid and prescription drug use to 836 students in Lawrence co. Ohio middle and high school students. • Prevention education awareness campaign on substance abuse 11 schools participated 2000 students in grades K-6.

Obesity

Initiative	Impact
Festival of Fitness	Festival of Fitness event to raise awareness of the

	opportunities in the community.
Bless Your Heart	OLBH exercise physiologists provided a program in 8 local churches; health screenings and weekly fitness classes.
Fit Families	Exercise physiologist worked with families and children on life style changes to improve health and nutrition status.

Poverty

Initiative	Impact
Bridges out of Poverty	Community training for nonprofit agencies and service providers on the impact of poverty on the family structure and the role of organizations in the community working with individuals living in poverty.
Bank On	Free Financial Literacy classes for individuals living in poverty.
Dental assistance	Dental care assistance for uninsured and underinsured individuals with extractions, dentures and cleanings.
Med assist	Enrollment assistance individuals that are uninsured.
Food Pantry/MOW	Assistance for patients and community members living with food insecurity.

Access to Care

Initiative	Impact
Transportation	<ul style="list-style-type: none"> • Provide transportation to low income individuals to medical appointments. Over 12,207 patient transports since 2016. • Transportation grant to study transportation gaps and issues completed in 2019.
211 Call center	Provided funding and support to initiate 211 Community resource connecting people with resources available in the community for access to health and other services provided.
Community outreach and education	<ul style="list-style-type: none"> • Outreach and community events related to heart disease and high blood pressure. • Men’s health • Support groups <ul style="list-style-type: none"> ○ Breast Cancer ○ Prostate Cancer

Note. No written comments were received on the previously completed CHNA.