SW Ohio | N Kentucky | SE Indiana

CHNA

Community Health Needs Assessment

THE HEALTH COLLABORATIVE

GDAHA Greater Dayton Area Hospital Association

2019 Report

The Collaborative Report serves:

- ✓ 35 Hospitals
- ✓ 25 Counties
- ✓ 28 Local Health Departments
- ✓ 3 States

Hospitals

The Christ Hospital Health Network
Cincinnati Children's Hospital Medical Center
Clinton Memorial Hospital
Highpoint Health
Kettering Health Network
- Fort Hamilton Hospital
- Grandview Medical Center
- Greene Memorial Hospital
- Kettering Behavioral Medic Center
- Kettering Medical Center
- Soin Medical Center
- Southview Medical Center
- Sycamore Medical Center

Lindner Center of HOPE
Mercy Health | Cincinnati Region
- Mercy Health - Anderson Hospital
- Mercy Health - Clermont Hospital
- Mercy Health - Fairfield Hospital
- Mercy Health - West Hospital
- The Jewish Hospital – Mercy Health

Mercy Health | Springfield Region
- Mercy Health - Urbana Hospital
- Springfield Regional Medical Center

Premier Health
- Atrium Medical Center
- Miami Valley Hospital
- Miami Valley Hospital North
- Miami Valley Hospital South
- Upper Valley Medical Center

TriHealth
- Bethesda Butler Hospital
- Bethesda North Hospital
- Good Samaritan Hospital
- McCullough Hyde Memorial Hospital
- TriHealth Evendale Hospital

UC Health
- Daniel Drake Center for Post-Acute Care
- University of Cincinnati Medical Center
- West Chester Hospital

Wayne HealthCare
Wilson Health

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COMMUNITY HEALTH NEEDS ASSESSMENT

Executive Summary

For the third iteration of a regional Community Health Needs Assessment (CHNA), The Health Collaborative has again convened member hospitals to collaborate and engage in its development. Several additions, to the process and partners, increased the level of community input in comparison to the 2016 CHNA.

Member hospitals of the Greater Dayton Area Hospital Association (GDAHA) joined the collaboration, and the result is a robust portrait of the larger Southwest Ohio region. The report covers Greater Dayton and Greater Cincinnati, which includes Northern Kentucky and Southeastern Indiana. The Interstate 75 highway that connects Cincinnati and Dayton is becoming a largely urbanized corridor, with a population of about three million. People in both metropolitan areas believe that a Cincinnati-Dayton Metropolitan Statistical Area is just a matter of time and that it would be good for both cities.[1]

This collaborative CHNA for 2019 shares data for the whole region as well as detailed county-level data. Service areas of hospitals vary, and this approach provides the most thorough picture of health needs locally and regionally. An added bonus this cycle is the active participation of the Southwest Ohio members of the Association of Ohio Health Commissioners. The CHNA team reached out to them in spring 2017 to take the first steps towards the State of Ohio's requirement that health departments and hospitals align their assessments starting in 2020. As a result, the CHNA team has researched more secondary data measures, included hospital utilization data, oversampled vulnerable populations, and engaged more participants. A total of 1,416 people or organizations completed a survey or attended a meeting. A significant part of the increase was due to local health departments helping to promote and conduct meetings.

An impressive level of agreement emerged among meeting attendees, consumers, nonprofit agencies, and health departments. Five health issues achieved consensus as high priorities by these participants and were supported by the secondary data.

1. Substance abuse
2. Mental health
3. Access to care/services
4. Chronic disease
5. Healthy behaviors

[1] Hinson, J. (2017). It's time to take the Cincinnati-Dayton MSA idea seriously. *Cincinnati Business Courier*. February 9. Gnau, T. (2018). Dayton, Cincinnati could combine into one metro area. *Dayton Daily News*. July 30.

Priorities were determined by the number of votes in community meetings; the number and percentage of mentions on surveys; and, for secondary data, data worse than state or national data, trending in the wrong direction, and impacting at least 16 counties. The five priorities ranked in the top 8 for all primary data sources (meetings and surveys from consumers, health departments, and agencies). See Table 27. Here is additional information for each priority area:

Substance abuse

Although Substance Abuse Disorder is a mental health diagnosis, the volume of responses indicated that substance abuse remain a separate category related to the use and abuse of illegal drugs, prescription drugs, alcohol, and addiction in general. Comments about the impact of alcohol on society and families recurred in meetings and on surveys. Multiple people asked for less concentration on drug-specific responses and more approaches that deal with the underlying problems leading to addiction of any kind.

The vast majority of responses from surveys or in meetings were the general terms, 'substance abuse,' or 'drug abuse.' Heroin continues to be a source of grave concern throughout the region. In some areas, however, the number of heroin overdoses have declined while the use of other drugs is increasing. Part of the decline is the expanded availability of naloxone throughout the region. Use of methamphetamines (meth) and other illegal drugs is growing. In some cases, the dealers are mixing one or more drugs with heroin, and the customers are unaware. In one county, 'meth' was given for free with each purchase of heroin. The growth in meth use was also cited as an alternative to the risk of using fentanyl, which has received a lot of public attention when there have been dramatic spikes in overdose deaths due to the presence of fentanyl.

Many respondents were familiar with, and appreciative of, community-wide coalitions fighting the opioid crisis. As a result of increased public awareness, they were also more cognizant of the need for continued funding; prevention efforts; harm reduction such as syringe exchange; more opportunities for treatment on demand; more recovery options; more housing options for people in recovery; affordable treatment; and removing the stigma that makes people hesitate to seek help.

Secondary data supported Substance abuse as a priority. Twenty-three counties out of 25 had high rates of drug poisoning deaths; only Ohio County in Indiana had a rate below the national rate of 14.6 deaths per 100,000. The highest rates were found in Northern Kentucky: Campbell County at 58 and Kenton County at 56 deaths per 100,000. Montgomery County's rate was 48.1. Eighteen counties had high rates of binge alcohol consumption, exceeding the national rate of 16.6%. The measure is based on the percentage of the population drinking 5 or more drinks in one sitting (4+ for women). Clermont (22%), Greene (22%), and Preble (23%) had the highest rates. Sixteen counties had high percentages of motor vehicle deaths involving alcohol, above the nation's rate of 30%. Clark (42%) and Highland (40%) had the highest percentages, but 8 counties had percentages between 37% and 39%.

Mental health

The general term, 'Mental health,' was the most common response in this category. For the first time 'child mental health' was frequently mentioned. There were also myriad comments about many different types of mental health issues. Depression was cited most often, followed closely by anxiety. Suicide was openly discussed in several meetings, and it was a priority in both LGBTQ+ meetings. In Dayton 22 attendees gave 5 votes for suicide as a priority, and in Cincinnati 6 people gave 2 votes. Next most commonly mentioned were mood disorders and ADD/ADHD. Self-harming came up several times, as did stigma. Many people mentioned trauma in general, and specifically Adverse Childhood Experiences – both the impact of past experiences on adults and the impact on children living through them now. A disturbing trend was the increase in comments about the need for psychiatric hospital beds for children younger than 12.

Related issues included access to mental health providers in the community, insurance for behavioral health treatment, and providers who would accept Medicaid. Secondary data corroborates the lack of providers, and 24 of 25 counties do not have enough mental health providers. Only Hamilton County meets (and exceeds) the national ratio of 1 provider for every 470 people. In Ohio, the ratio is 1 per 561; in Kentucky 1 per 525; and in Indiana 1 per 701. Some of the Indiana counties are especially underserved with a ratio 1 provider per 2,630 in Switzerland; 3,250 in Franklin; 5,930 in Ohio; and 7,250 in Union.

Other related metrics include depression percentage, suicide rate, and average number of poor mental health days. Eighteen counties have people reporting more than 3.7 days, the national average. Preble (7.3), Champaign (7.0) and Clermont (5.5) are the counties with the highest number of poor mental health days reported. Sixteen counties have high suicide rates. The national rate in 2016 was 13.4 deaths per 100,000, and it has increased 28% from 1999 to 2016.[2] Ohio's rate was 13.1; Indiana's rate 14.25; and Kentucky's 19.3. Depression rates in Ohio (18.5%), Kentucky (22%), and Indiana (24%) exceed the national rate of 17.1% of the population. The table on page 92 shows that major depressive disorders were among the top 20 most common diagnoses of hospitalized patients in the region.

Access to care/services

This category received many general 'Access' comments, but also a wealth of specific concerns. The lack of providers was mentioned the most often, 16% of all Access issues. The issues included providers who didn't take Medicaid or other insurance; providers located outside the geographic area; and too few specialists. Other barriers and gaps identified were: no insurance; inadequate insurance coverage; high deductible plans; affordability of care (co-pay and/or out-of-pocket); cost of medication; can't take time off during working hours; no one to watch children; language barrier; and/or lack of local services (e.g., cancer treatment).

Transportation was named by consumers in meetings and on surveys, for a total of 7% of all mentions within the Access category. Transportation was a big issue in both urban and rural settings, whether the

[2] https://www.nimh.nih.gov/health/statistics/suicide.shtml, accessed 12-17-18.

problem was no public transportation; inadequate transportation; or cost of transportation (bus fare, bus transfers, car ownership and/or gas purchase).

These issues often intersected. For example, there was a man in Preble County who had a care plan for his cancer, but months later had not yet started treatment. He could not find anyone willing to give him a ride back and forth to appointments in another county. On a positive note, many people expressed satisfaction with school-based health centers and would like to see more of them.

The secondary data reflects that many counties have provider shortages. Twenty counties have fewer dentists than their state ratios of one dentist per 1,660 (Ohio), 1,561 (Kentucky), or 1,852 (Indiana). Eighteen counties have fewer primary care physicians (PCP) than their state ratios of one PCP per 1,310 (Ohio), 1,507 (Kentucky), or 1,505 (Indiana).

Chronic disease

The most common chronic diseases cited were: heart disease, cancer, and diabetes. Hypertension was commonly cited, and stroke, allergies, and arthritis were mentioned several times. Many responses used the more generic term, ‘Chronic disease.’

Lung cancer and Type 2 Diabetes significantly impact the region, according to the secondary data. Greene County is the only county with lung cancer mortality rates lower than the national rate of 39.4 lung cancer deaths per 100,000. The counties with the highest rates represent all three states: Ohio (82.9) and Switzerland (80) in Indiana; Adams (70.7) and Brown (81.2) in Ohio; and Campbell (81.2) in Kentucky. Eighteen counties have high percentages of residents with diabetes, above the national percentage of 10.7%. Three counties in Ohio had much higher percentages: Adams (17.5%), Clinton (17%), and Shelby (19.2%).

Sixteen counties had high rates of chronic lower respiratory disease deaths for people aged 65 and older. The table on page 92 shows that arthritis, cardiovascular, heart, and respiratory issues were among the top 20 most common diagnoses of hospitalized patients in the region.

Healthy behaviors

This category is the flip side of chronic disease. This is where people described all the habits that they would like to change to avoid illness or increased risk of death. Some people did just answer ‘healthy behaviors,’ but the most common specific recommendations were: eat healthier; exercise more; quit smoking; and lose weight. This category also captured comments to: quit taking drugs or stop drinking alcohol.

Secondary data supports the public perception of needing to address alcohol intake, physical inactivity, smoking, and/or weight. Twenty-two counties have higher percentages of adults who smoke, compared to the national percentage of 16.5%. Nineteen counties have more residents who are physically inactive, compared to the national percentage of 25.2%. Seventeen counties exceed the national percentage of adults who are obese (29.2%). Eleven counties have high percentages for all three

indicators (adult smoking, obesity, and physical inactivity). They are the five Indiana counties and 6 counties in Ohio: Butler, Clark, Clinton, Darke, Fayette, and Montgomery.

In answer to the question, “What is your perception of the overall health status of your community,” 114 respondents (11.1% of the 1,026 who answered) thought it was very good (7.4%) or excellent (3.7%). Thirty-four percent, or 349, believed it was good. Fifty-five percent, or 563, thought it was poor or fair. The ‘Fair’ answer attracted the most responses: 413, or 40.3% of the total.

The top five priorities described above reflect the top average rankings, based on frequency of votes or mentions, from meeting participants, consumer surveys, agency surveys, and health department surveys in 2018. Most of the quantitative data are for the year 2016, the most recent year available for the majority of measures. These statistical data support the qualitative data. Fourteen, or about 10%, of the 140+ data measures exceeded state averages and had a negative impact on 16 to 25 counties (64%-100%). They are listed in descending order of how many counties in the region were affected by high rates or percentages:

- Rate of injury deaths (e.g., suicide, homicide, drug poisoning, traffic accident, fall) – 25 counties
- Ratio of mental health providers - 24
- Rate of lung cancer mortality - 24
- Rate of drug poisoning deaths - 23
- Percentage of adult smoking - 22
- Overall cancer mortality rate - 22
- Ratio of dentists - 20
- Percentage of residents with physical inactivity - 19
- Average number of poor mental health days (in past 30 days) - 18
- Percentage engaging in binge/excessive drinking - 18
- Percentage of people with diabetes - 18
- Ratio of Primary Care Physicians - 18
- Percentage of adult obesity - 17
- Percentage of driving deaths with alcohol-impairment - 16
- Rate of chronic lower respiratory disease deaths for age 65+ - 16
- Rate of stroke deaths - 16
- Rate of suicide - 16

Primary data from meetings and surveys was collected from April through July of 2018. The technique of discourse analysis was used to categorize comments, sort and count them, and calculate how often ideas were repeated. Secondary data started with the resources of County Health Rankings, but added more data from national and state sources in Indiana, Kentucky, and Ohio. Priorities were determined by consensus between the primary data responses and the supporting statistics. The priorities were also demonstrated by the average rank order according to each source of data (e.g., meeting, surveys, health department, statistics). The vulnerable populations who were oversampled in this CHNA were: African-Americans; Elderly residents; Latino residents; LBGTQ+ residents; refugees from Rwanda; and urban residents. Community Need Index scores were utilized to identify the likelihood of healthcare disparities at the ZIP Code level for all ZIP Codes in 25 counties.

Social Determinants of Health

This report features a new chapter on Urban Health. Three years ago, Social Determinants of Health (SDHs) were mentioned many times in the cities, but the results were diluted when combined with all regional responses. This time SDHs became top priorities for people who live in urban areas but also for people considering the child health issues. Healthy People 2020 (HP2020) defines SDHs as the "conditions in the environments in which people live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks."[3]

CHNA participants cited Poverty most often overall as an SDH. The SDH category also included mentions related to education, employment, environment (living conditions at home and/or hazards in the immediate community such as pollution or crime), violence, race, ethnicity, housing, homelessness, culture, and language. All four primary sources agreed on SDHs as a barrier to child wellness. In this context, 80% of the SDH comments specified education. Among urban participants, 11% cited SDHs as a top priority; housing and safety were mentioned most often. Although SDHs did not emerge as a top regional priority overall, the issue was identified among the top non-financial barriers and the top unmet needs at the regional level.

Emerging Issues

Several emerging areas of interest from the qualitative data are worth noting, although they are not yet high priorities. During the last cycle, the emerging ideas were the burden of high-deductible insurance plans and the heroin epidemic. This time around, those are identified as priority areas within Access to care and Substance abuse. For this cycle, many comments cited the following needs:

- Support for parents and families – especially young parents who may lack the information and/or skills to be proactive in areas of child development, immunization, school attendance, and school readiness;
- Care for children – especially the growing number of children whose parents are heroin addicts or have died from a drug overdose;
- Initiatives to combat addiction – They should address all types of addiction, not just heroin; quite a few people mentioned the devastating impact of alcoholism on families, for example; and
- Social/emotional health – including dealing with bullying, coping skills, positive outlook, self-control, stress management, and community activities that bring people together.

Community coalitions to address infant mortality and substance abuse were frequently mentioned as being 'handled well,' but always with the caveat that more remained to be done. Fourteen counties had infant mortality rates greater than the national rate of 5.9 per 1,000 live births. Nine counties had rates exceeding their state's rates. The highest mortality rates were found in Adams (10.1) and Highland (10), two of the poorest counties in Ohio. The well-publicized efforts around infant mortality may have influenced its having a lower profile among the top priorities this time.

Not surprisingly, some of the topics already discussed surfaced in the questions about unmet needs and barriers. All meeting attendees and survey respondents agreed that these issues were not being

[3] https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health, accessed 12/19/2018.

handled well or addressed enough: Access to care/services; Mental health; Social Determinants of Health; and Substance abuse. Transportation made it to both the financial and non-financial list of barriers. The difference might be no public transportation in the county vs. not having enough money to put gas in the car.

The primary and secondary data agree to a remarkable degree at all levels: regional, county, and urban. They reflect similar concerns across a large and diverse region, and they reinforce the value of a comprehensive and collaborative approach to the Community Health Needs Assessment. There are few surprises; the region is aware of its challenges. Their daunting nature underscores the importance of working together to address complex and often systemic issues that can impact an individual and a community's health both directly and indirectly.

COMMUNITY HEALTH NEEDS ASSESSMENT

Chapter 1. Collaborative Partners

Nonprofit hospitals in the Greater Cincinnati and Greater Dayton regions combined their efforts and resources to produce a comprehensive and collaborative Community Health Needs Assessment (CHNA). Each participating healthcare system designated a representative to join the CHNA Committee. They signed an agreement with their respective member organizations, The Health Collaborative in Cincinnati or the Greater Dayton Area Hospital Association (GDAHA), to create the process and produce a report. The Southwest District of the Association of Ohio Health Commissioners partnered in the effort. They also provided representatives who could speak on the behalf of the 17 Ohio counties served by the hospitals. The hospitals will use the report as a basis for determining their top health priorities. They are listed on the cover of the report and below:

- The Christ Hospital Health Network
- Cincinnati Children's Hospital Medical Center
- Clinton Memorial Hospital
- Highpoint Health
- Kettering Health Network
  - Fort Hamilton Hospital
  - Grandview Medical Center
  - Greene Memorial Hospital
  - Kettering Behavioral Medicine Center
  - Kettering Medical Center
  - Soin Medical Center
  - Southview Medical Center
  - Sycamore Medical Center
- Lindner Center of Hope
- Mercy Health | Cincinnati region
  - Mercy Health - Anderson Hospital
  - Mercy Health - Clermont Hospital
  - Mercy Health - Fairfield Hospital
  - Mercy Health - West Hospital
  - The Jewish Hospital - Mercy Health
- Mercy Health | Springfield Urbana region
  - Mercy Health - Urbana Hospital

    - Springfield Regional Medical Center
- Premier Health
    - Atrium Medical Center
    - Miami Valley Hospital
    - Miami Valley Hospital North
    - Miami Valley Hospital South
    - Upper Valley Medical Center
- TriHealth
    - Bethesda Butler Hospital
    - Bethesda North Hospital
    - Good Samaritan Hospital
    - McCullough-Hyde Memorial Hospital
    - TriHealth Evendale Hospital
- UC Health
    - Daniel Drake Center for Post-Acute Care
    - University of Cincinnati Medical Center
    - West Chester Hospital
- Wilson Health
- Wayne HealthCare

All county-level public health departments completed surveys, plus 5 city health departments.[4] The health departments in Southwest Ohio and Northern Kentucky provided additional support, such as secondary data collection. The partnership with the Southwest District of the Association of Ohio Health Commissioners included:

- Adams County Health Department
- Brown County Health Department
- Butler County Health Department
- Champaign-Urbana County Department
- Cincinnati Health Department
- City of Hamilton Health Department
- Clark County Combined Health District
- Clermont County Public Health
- Clinton County Health Department
- Darke County General Health District
- Fayette County Public Health
- Greene County Public Health
- Hamilton County Public Health
- Highland County Health Department

[4] In this report, all local health jurisdictions are referred to as 'health departments,' which means the operational entity of a county or city health district. The Northern Kentucky Health Department serves 4 counties.

- Miami County Public Health
- Middletown City Health District
- Norwood Health Department
- Piqua City Health Department
- Preble County Public Health
- Public Health - Dayton & Montgomery County
- Sidney Shelby County Health Department
- Springdale Health Department
- Warren County Combined Health District

The CHNA Team involved four entities working closely together: The Health Collaborative (lead agency); the Greater Dayton Area Hospital Association; Gwen Finegan (lead consultant and project manager); and Public Health - Dayton & Montgomery County (secondary data collection for Ohio counties). The Health Collaborative (THC) contracted with Ms. Finegan to conduct a comprehensive and collaborative assessment for the healthcare systems and hospitals. The lead consultant assembled a team of four sub-contractors to assist her. Both THC and the Greater Dayton Area Hospital Association (GDAHA) managed the relationships and signed agreements with their respective member hospitals. The lead consultant initiated the connection with the Southwest District of the Association of Ohio Health Commissioners (AOHC), and both she and THC representatives attended six AOHC meetings. The lead consultant worked closely with Erik Balster, Director for the SW District of AOHC and Health Commissioner of Preble County to incorporate AOHC's requests and ensure smooth communication.

The lead consultant also worked closely with Dawn Ebron, Community Health Improvement Planning and Epidemiology Supervisor, and epidemiologists Kyle Wallace, Ashley Seybold, and Susan Herzfeld at Public Health - Dayton & Montgomery County to coordinate meetings and for secondary data collection. Interact for Health provided data from their Greater Cincinnati Health Status Survey as did PreventionFirst! from its PRIDE survey. Louise Kent, Planning Administrator for the Northern Kentucky Health Department, identified additional data sources for the Commonwealth of Kentucky and the three northern counties. The Cincinnati Health Department gathered data for the City of Cincinnati. Many others contributed to a successful process, and they are listed in Appendix A. Acknowledgments.

ROLES AND RESPONSIBILITIES

Hospitals

The hospitals agreed to the following:

- Identify a single point-of-contact as a representative on the CHNA Committee;
- Attend quarterly CHNA meetings or send a delegate;
- Participate in planning and design;
- Distribute invitations (by mail, email, in person, social media, and/or on bulletin boards) two weeks in advance of a scheduled meeting; and
- Provide feedback on the draft report.

Public Health Departments

AOHC represented its members by:

- Identifying the Southwest District Director as the single point-of-contact for communication and coordinator;
- Attending the quarterly CHNA Committee meetings;
- Forming an ad hoc working group and convening the region's public health epidemiologists; and
- Sharing minutes and sign-in sheets from meetings.

CHNA Team

The Health Collaborative

Angelica Hardee, PhD, CHES

Senior Manager, Gen-H

The Health Collaborative is a nonprofit organization serving the Greater Cincinnati area. It works with its member hospitals on healthcare improvement projects, shares best practices, and gains exclusive access to comprehensive data. The CHNA project was assigned to the Gen-H team. Gen-H is a community-wide commitment to making health and healthcare a shared value in Greater Cincinnati and Northern Kentucky. Dr. Hardee served as THC's staff lead on the CHNA project, staring in mid-September 2017. Her responsibilities were to:

- Convene member hospitals;
- Manage the contractual agreements with hospitals;
- Liaison with GDAHA;
- Liaison with hospitals;
- Liaison with community partners;
- Recruit and direct the student interns;
- Coordinate design of the report cover;
- Manage the contractual agreement with the lead consultant;
- Arrange for administrative support for consulting team;
- Provide day-to-day oversight; and
- Report results to the board and other community stakeholders.

Colleen O'Toole, PhD

Chief Administrative Officer

Dr. Colleen O'Toole served as THC's staff lead on the CHNA project from May 2017 until mid-October 2017. As THC's executive sponsor, Dr. O'Toole initially contacted its member hospitals to determine their interest in sharing the cost and services of a consultant. They agreed to pursue a collaborative regional approach, and, for the third time, The Health Collaborative served as the convener and conduit for conducting a regional CHNA. She also reached out to Bryan Bucklew at GDAHA, and they agreed to combine efforts for one report to cover the service areas for both greater Cincinnati and greater

Dayton hospitals. Dr. O'Toole contracted with the lead consultant Gwen Finegan, who had crafted the 2016 Collaborative CHNA and been responsible for the 2013 CHNAs for six Mercy Health hospitals. Dr. O'Toole notified hospital members when it was time to budget for the CNHA project, and she initiated the process of obtaining signed agreements with each hospital or health system. She continued to provide executive oversight and guidance for the duration of the project.

Jason Bubenhofer
Manager, Business Intelligence

Mr. Bubenhofer collaborated with consultant Gwen Finegan to identify more than a dozen key health factors in which the Greater Cincinnati and Dayton regions have below average outcomes vs. United States national rates. He led the design and production efforts to create regional maps for each of these health factors at the county level.

Emily Kimball
Coordinator, Gen-H

Ms. Kimball scheduled team meeting times, disseminated meeting invitations, set up quarterly CHNA meetings, helped arrange webinar training for CHNA meetings, managed the student interns, procured all supplies, and provided handouts and refreshments for the county-level meetings.

Lisa Sladeck
Events Administrator

Ms. Sladeck researched hosts and sites for community meetings to ensure convenient and accessible locations, preferably in ZIP Codes at high risk for healthcare disparities. She scheduled more than 20 meetings across the tristate region. She coordinated all details with facilities, such as YMCAs, libraries, public health departments, and other community-based sites.

GDAHA

Shawn Imel
Director, Health Information Technology

Mr. Imel served in a capacity similar to Dr. Hardee's, providing liaison with GDAHA's member hospitals. GDAHA is a nonprofit organization serving the Greater Dayton area. It works with its member hospitals on healthcare improvement projects, shares best practices, and gains exclusive access to comprehensive data. Shawn continued his role from the 2016 CHNA to serve as GDAHA's lead on the project. He worked closely with the CHNA Team and helped identify meeting sites and participants in Greater Dayton. When he left GDAHA in July 2018, his supervisor Marty Larson took over his duties and oversight responsibility.

Marty Larson
Executive Vice President

Mr. Larson replaced Mr. Imel in July 2018 as GDAHA's representative. He too had involvement in the 2016 CHNA process and was able to assume responsibility seamlessly.

Bryan Bucklew
President and CEO

Mr. Bucklew led the strategic direction and operations of GDAHA from 2005 to 2018. He was the executive sponsor of the CHNA at GDAHA. Mr. Bucklew reached out to the member hospitals and recruited them to participate in this collaborative effort. Mr. Bucklew notified hospital members when it was time to budget for the CNHA project, and he initiated the process of obtaining signed agreements with each hospital or health system. He provided executive oversight and guidance for the duration of the project.

Consultants

The scope of work for the consultants included these deliverables:

- Primary data gathered via community meetings in 25 counties and via hard-copy and electronic surveys, with emphasis on identifying the needs of vulnerable and underserved populations.
- Collection of more than 140 secondary data measures for 25 counties.
- Conduct quarterly meetings with representatives of 35 hospitals.
- Attend meetings and coordinate efforts with the Director for the SW District of AOHC.
- Analysis and interpretation for each county as well as for the region.
- Write a comprehensive Community Health Needs Assessment report that consolidates all data and reflects the region's most pressing issues.
- Perform project management and supervision of subcontractors.

Gwen Finegan
Lead Consultant

Gwen Finegan is a senior consultant with extensive experience in the areas of planning, community development, community engagement, program development and evaluation, board retreats, training, and meeting facilitation. She has expertise in initiating and completing large-scale projects and engaging community participation at neighborhood and regional levels. She is the owner of Gwen Finegan Consulting Services and a partner in StoryCoaches, for digital storytelling. She has a BA degree from Wilmington College in Strategic Organizational Leadership.

Past CHNA experience includes her role as the Regional Director, Community Outreach for Mercy Health, where she developed the process, researched, and wrote the Community Health Needs Assessment reports for six hospitals serving urban, suburban, and rural areas. She shared best practices with other hospital members of the Greater Cincinnati Health Council (now known as The

Health Collaborative), and she served on a statewide committee of Catholic Health Partners to understand and implement the new IRS regulations for Community Health Needs Assessments. Ms. Finegan worked with THC and GDAHA and their member hospitals to produce the 2016 Collaborative CHNAs (one for Cincinnati hospitals and one for Dayton hospitals). She co-presented on collaborating with the Cincinnati Health Department at the 2016 annual meeting of the American Public Health Association. Three health systems hired her to assist them in developing their Implementation Strategies in response to the 2016 CHNA.

She teaches the Health Data Management course for the Department of Health Services Administration at Xavier University and currently serves on the Global Paramedic Higher Education Council (GPHEC)™.and the National Center for Accountable Care Communities, Inc.

Her role involved responsibility for the following activities:

- Day-to-day management of operations
- Identifying and vetting data resources
- Liaison with THC and GDAHA
- Regular reporting to THC
- Liaison with community organizations
- Liaison with Southwest Association of Ohio Health Commissioners
- Process design and implementation (including but not limited to timeline creation; creation of materials; creation of survey questions; meeting design; and overall approach and methodology)
- Quality control and oversight
- Supervision of subcontractors
- Support for hospital and public health representatives (including presentation at meetings, webinar training, communication by phone and email, facilitation of specific requests, and sharing best practice resources)
- Selection of data and creation of tables for mapping
- Creation of regional data tables
- Research for causes of death
- Designing and formatting final report
- Writing final report

She assembled the following team of qualified subcontractors with varied and complementary knowledge and experience:

Sadie Healy, Masters of Public Health

Sadie has an MPH from George Washington University and a Social Work degree from Calvin College. This educational combination is unique and enables her to carefully listen and quickly assess needs, problem areas, and opportunities for success. She worked on the family planning team to organize programs, campaigns and research projects at Jhpiego, an affiliate of Johns Hopkins University. Sadie managed customer relationships with over 200 hospitals in 22 low-resource countries for an NGO that sold surgical equipment. In addition to those relationships she worked with bio-medical engineers who maintained the surgical equipment and the doctors who trained the new staff on how to use the

equipment. She also managed the Homeless Prevention and Rapid Re-Housing program for the city of Santa Monica. She worked to ensure clients, many of whom struggled with addiction, were able to remain housed following the financial crisis.

Her role involved responsibility for the following activities:

- Assisting with communications and operational strategies
- Managing the process of scheduling and marketing meetings
- Liaison with community organizations
- Meeting facilitation
- Primary data collection and analysis
- Creation of community profiles
- Creation of the regional resource list

Tomika Hedrington, Masters in Human Resource Development

With more than 13 years of experience in the housing field, Tomika Hedrington is skilled at HUD program development, compliance, and audit process. She is a specialist in Assessment of Fair Housing, CDBG, and HOME programs. Tomika manages the Fair Housing and Section 3 programs for the City of Hamilton in Butler County. She also has work experience in mental health advocacy, case management, and housing placement. During her personal time, she is a board member on the Butler County Housing and Homeless Coalition and City of Hamilton Diversity and Inclusion Committee.

Her role involved responsibility for the following activities:

- Meeting facilitation
- Secondary data collection
- Analysis of secondary data and creation of tables
- Primary data collection
- Creation of community snapshots and CNI maps
- Creation of community profiles
- Analysis of primary data and creation of tables
- Compilation of data resource list
- Contributing to the section on child health in Greater Dayton

Robyn Reepmeyer, Masters of Public Health

Robyn Reepmeyer holds a Bachelors of Arts in Communication and a Masters of Public Health. She is an experienced program manager with a 12-year history of public health advocacy and assisting hospitals with quality improvement, physician engagement, community engagement, and partnerships.

Past experience includes six years as a Program Manager with MindPeace, working to increase access to mental healthcare for children in Greater Cincinnati. She managed relationships with 65+ school teams, including creating detailed needs assessments and establishing the first quantitative data collection tool to be used by school mental health teams. For three years, Ms. Reepmeyer was the Provider Network Development Specialist at Cincinnati Children's Hospital with the Health Network by

Cincinnati Children's, which served high risk children on Medicaid in the region. She managed relationships with independent pediatric practices and was an active leader in numerous community events organized to serve vulnerable children and families in the community. Ms. Reepmeyer also worked for the TriHealth Physician Hospital Organization, where she cultivated and managed relationships with 60+ independent physician practices. She provided training for practice teams on value-based reimbursement.

In her personal time, Robyn volunteers with Junior League of Cincinnati and has served as Chair of Refugee Connect and Chair of the Community and Outreach committee. For the last four years, she has served on the LSDMC for the Academy of World Languages, a Cincinnati Public School.

Her role involved responsibility for the following activities:

- Meeting facilitation
- Identifying and vetting data resources
- Secondary data collection
- Analysis of secondary data and creation of tables
- Primary data collection
- Creation of community snapshots and CNI maps
- Creation, formatting, proofreading, and editing of community profiles
- Analysis of primary data and creation of tables
- Creation of population graphs
- Research on resources

Amelia Bedri

A 2018 graduate of Xavier University's Health Services Administration program, Amelia Bedri works at Paradise Home Care, LLC. She previously worked for three years as a Validation Specialist with Anthem Blue Cross Blue Shield and earned her Accident/Health and Life Insurance License in 11 states. Ms. Bedri also did Market Research for Anthem and has a solid background on the Affordable Care Act.

Her role involved responsibility for the following activities:

- Meeting facilitation
- Secondary data collection
- Analysis of secondary data and creation of tables
- Primary data collection
- Creation of community snapshots and CNI maps
- Creation of community profiles
- Analysis of primary data and creation of tables
- Research and description of vulnerable populations

See the Acknowledgments in Appendix A for a full list of everyone who contributed to a successful effort.

Chapter 2. Communities Served

DESCRIPTION

Hospitals reviewed their standard method of evaluating a geographic service area, for example where 75% or more of their patients live. They also considered geographic areas where vulnerable and under-served populations live – both within the service area (in a 'doughnut hole') or in areas immediately adjacent to the service area traditionally considered for marketing or statistical purposes. This approach recognizes that people may live in or next to a service area but encounter financial or other barriers that keep them from seeking hospital care. Figure 1, below, shows the 25 counties of the Tristate region included in the CHNA: three in Northern Kentucky, five in Indiana, and 17 in Ohio.

Regional Map

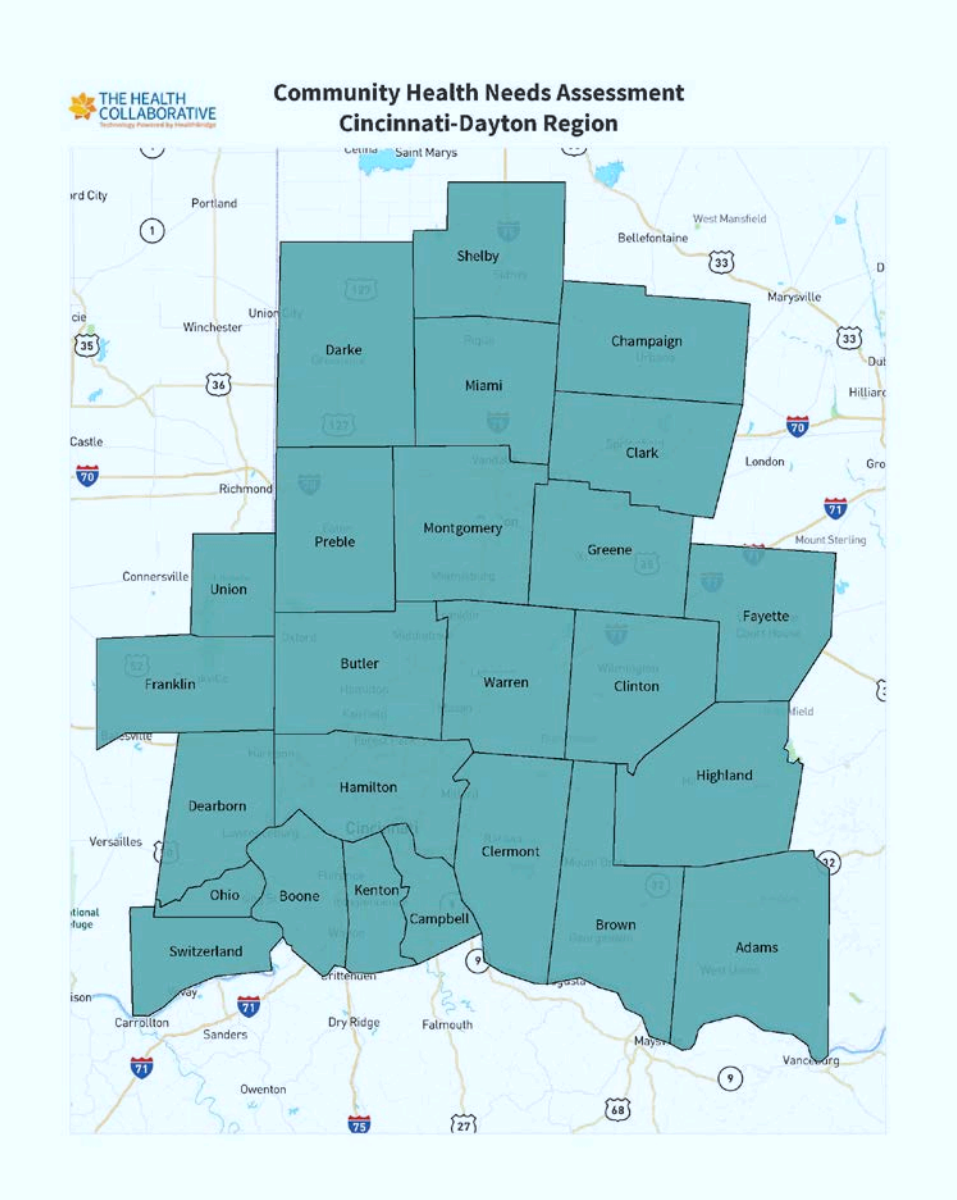

FIGURE 1. 25-COUNTY REGION

DEFINITION

The healthcare systems identified which counties included the geographic areas served by their hospitals. See Table 1 below.

TABLE 1. HOSPITAL SERVICE AREAS

Participating Hospitals and Counties Served

Hospital / System Name	Hospital Facilities Included in CHNA	Service Areas Defined by County
The Christ Hospital Network	The Christ Hospital	Butler, Clermont, Hamilton and Warren Counties in Ohio; Boone, Campbell, and Kenton Counties in Kentucky
Cincinnati Children's Hospital Medical Center	**Limited Scope:** Requested results from three questions about Child Health and provided Cincinnati Children's summary.	Butler, Clermont, Hamilton, and Warren Counties in Ohio; Boone, Campbell, and Kenton Counties in Kentucky; and Dearborn County in Indiana
Clinton Memorial Hospital	Clinton Memorial Hospital	Clinton and Fayette Counties in Ohio
Highpoint Health	Highpoint Health	Dearborn, Ohio, and Switzerland Counties in Indiana
Kettering Health Network	Fort Hamilton Hospital	Butler County in Ohio
Kettering Health Network	Grandview Medical Center	Montgomery and Preble Counties in Ohio
Kettering Health Network	Greene Memorial Hospital	Greene County in Ohio
Kettering Health Network	Kettering Behavioral Medicine Center	Montgomery County in Ohio
Kettering Health Network	Kettering Medical Center	Miami, Montgomery, and Warren Counties in Ohio
Kettering Health Network	Soin Medical Center	Clark and Greene Counties in Ohio
Kettering Health Network	Southview Medical Center	Montgomery County in Ohio
Kettering Health Network	Sycamore Medical Center	Montgomery County in Ohio
Lindner Center of Hope	Lindner Center of Hope	Butler, Clermont, Clinton, Hamilton, Montgomery, and Warren Counties in Ohio
Mercy Health | Cincinnati Region	Mercy Health - Anderson Hospital	Clermont and Hamilton Counties in Ohio
Mercy Health | Cincinnati Region	Mercy Health - Clermont Hospital	Brown, Clermont, Clinton, and Hamilton Counties in Ohio
Mercy Health | Cincinnati Region	Mercy Health - Fairfield Hospital	Butler, Hamilton, and Warren Counties in Ohio
Mercy Health | Cincinnati Region	The Jewish Hospital - Mercy Health	Butler, Clermont, Hamilton, and Warren Counties in Ohio
Mercy Health | Cincinnati Region	Mercy Health - West Hospital	Hamilton County in Ohio
Mercy Health | Springfield Region	Mercy Health - Urbana Hospital	Champaign County in Ohio

Participating Hospitals and Counties Served, continued

Hospital / System Name	Hospital Facilities Included in CHNA	Service Areas Defined by County
Mercy Health | Springfield Region	Springfield Regional Medical Center	Clark County in Ohio
Premier Health	Atrium Medical Center	Butler and Warren Counties in Ohio
Premier Health	Miami Valley Hospital	Greene, Miami, Montgomery, and Shelby Counties in Ohio
Premier Health	Miami Valley Hospital North	Miami and Montgomery Counties in Ohio
Premier Health	Miami Valley Hospital South	Greene and Montgomery Counties in Ohio
Premier Health	Upper Valley Medical Center	Darke, Miami, and Shelby Counties in Ohio
TriHealth	Bethesda Butler Hospital	Butler County in Ohio
TriHealth	Bethesda North Hospital	Butler, Clermont, Hamilton, Warren Counties in Ohio
TriHealth	Good Samaritan Hospital	Butler, Clermont, Hamilton, Warren Counties in Ohio
TriHealth	McCullough-Hyde Memorial Hospital	Butler and Preble Counties in Ohio; Franklin and Union Counties in Indiana
TriHealth	TriHealth Evendale Hospital	Butler, Clermont, Hamilton, Warren Counties in Ohio
UC Health	Daniel Drake Center for Post-Acute Care	Butler, Clermont, Hamilton, Warren Counties in Ohio
UC Health	University of Cincinnati Medical Center	Butler, Clermont, Hamilton, Warren Counties in Ohio
UC Health	West Chester Hospital	Butler and Warren Counties in Ohio
Wilson Health	Wilson Health	Shelby County in Ohio
Wayne HealthCare	Wayne HealthCare	Darke County in Ohio

Chapter 3. Process and Methods

For the third time, The Health Collaborative (THC) convened nonprofit hospitals to participate in a collaborative CHNA. THC retained the elements that worked well three years ago, incorporated feedback for improvement, and reached out to local health departments for more active partnership. What worked well was the willingness of hospitals in Greater Cincinnati and Greater Dayton to work together on a combined regional plan. Another asset was the active participation of hospital and health department representatives in the design process and at quarterly meetings. These features were contributing factors to the significant increase in participation for primary data collection. The CHNA Team applied the same guiding principles as in the prior cycle.

PRINCIPLES

The approach to designing a regional and community-oriented CHNA started with five key attributes:

Collaborative – The hospitals were active participants in contributing to the design and execution of the CHNA. Their member organizations, THC and the Greater Dayton Area Hospital Association (GDAHA), were key to the collaboration and had representatives at the table. Other organizations joined the effort, especially members of the Southwest Association of Ohio Health Commissioners, the Northern Kentucky Health District, and Interact for Health, a grantmaking nonprofit which serves 20 counties in the Greater Cincinnati, Northern Kentucky, and Southeast Indiana region.

Inclusive – THC, hospitals, and health departments cast the net widely to include vulnerable populations and the agencies serving them. Choices of meeting spaces took into consideration access, transportation, welcoming environment, and locations easily accessible to underserved populations.

Participatory – About one hour of each 90-minute community meeting was devoted to hearing from the people who arrived to share their ideas and experiences. In addition to community meetings, surveys contained mostly open-ended questions. Every effort was made to ensure that opinions were captured verbatim.

Reproducible – Facilitators asked the same questions at meetings, interviews, and in surveys. If people could not attend a meeting, they had the opportunity to respond to the same questions via survey. Facilitators asked consistent questions in urban areas, rural areas, large counties, and small counties.

Transparent – The consultants created ‘County Snapshots’ from secondary data to share at community meetings. Each County Snapshot was one page. Attached to the Snapshot was a Community Need Index (CNI) map for all the ZIP Codes per county, which was one or two pages depending on the number of ZIP Codes. (The City of Cincinnati shared city-level data with participants in the meetings they hosted and facilitated.) Meeting attendees first answered the question about the ‘most serious health issues’ in their county or city before receiving the Snapshot and CNI map to avoid influencing their first top-of-mind answer. Attendees had the same information that the meeting facilitators had. At each meeting, facilitators shared when and where the final report would be available to the public – on THC, GDAHA, and hospitals’ websites.

INVOLVEMENT OF LOCAL HEALTH DEPARTMENTS

THC had previously included the Cincinnati Health Department, Hamilton County Public Health, and the Northern Kentucky Health Department as partners in the 2016 CHNA. Effective January 1, 2020 the Ohio Department of Health (ODH) requires that local health departments and tax-exempt hospitals align to a three-year timeline for assessments and plans. ODH recommends one of two models for partnering on implementation: 1) one joint plan that serves all participating health departments and nonprofit hospitals engaged in its development, or 2) individual assessment plans that are aligned and informed by collaborative assessment and planning efforts of a collaborative group. Either option satisfies the State's requirement to link priorities and implementation plans to its own State Health Improvement Plan. As a result, THC and its lead consultant reached out to the Southwest Association of Ohio Health Commissioners (AOHC) in the spring of 2017. Rather than wait until 2020, the consultant believed that it was important to identify ways to collaborate and to align population health planning in advance of the mandatory timeframe, for the benefit of the communities served as well as to ease the future transition.

Starting in June 2017, the Southwest AOHC graciously invited the THC representatives to two of its regular member meetings and formed an ongoing working group that represented 14 Health Departments. See Appendix B for list of members who volunteered on 9/13/17 to serve on the ad hoc CHNA Public Health Work Group and others who subsequently attended a meeting. Below is a summary of the meetings for discussing the CHNA process and how best to align efforts. See Appendix C for a crosswalk of the IRS requirements for nonprofit hospital CHNAs and Public Health requirements for Community Health Assessments (CHAs).

TABLE 2. MEETINGS BETWEEN CHNA TEAM AND AOHC - SW DISTRICT

Date	Location	Type of Meeting
6/23/17	Greene County Public Health in Xenia	AOHC SW district meeting
8/25/17	Springdale Health Department	AOHC SW district meeting
10/26/17	Warren County Combined Health District in Lebanon	CHNA Public Health Work Group (Work Group) ad hoc meeting
11/16/17	Warren County Combined Health District in Lebanon	Work Group meeting
11/28/17	Wright State University in Dayton	Work Group meeting with focus on epidemiologists and those responsible for data collection
3/30/18	Greene County Public Health in Xenia	AOHC SW district meeting

The Health Departments shared the additional requirements for their PHAB accreditations, made requests for additional data, and helped in several key ways. The Health Departments requested more demographic data; additional data points for mental health, substance abuse, and chronic disease; and hospital utilization data. Epidemiologists from Public Health -- Dayton and Montgomery volunteered to use their resources to extract 141 data points for the past two years for Ohio counties. These data included what the prior CHNA collected as well as SW AOHC's additional data requests. The Cincinnati Health Department collected and analyzed their own data in alignment with county data. The Director of

the Southwest AOHC agreed to be the point person and coordinate communications with THC and the consultant. The Health Departments offered to publicize meetings within their jurisdictions, and asked if they could conduct supplemental meetings.

OVERVIEW OF METHODS

For the collaborative design, the process for gathering primary data, and the process for identifying, collecting, interpreting, and analyzing secondary data, the consultants referenced numerous methods for both qualitative and quantitative data. The consultants sought data that reflected recent as well as emerging issues by people who lived in the hospitals' service areas, with attention to vulnerable populations and social determinants of health. Secondary data provided information about demographics, health conditions, and health-related issues as of 2016. Primary data reflected the opinions and attitudes of individuals and agencies motivated to attend a meeting or complete a survey. Their passion and level of interest is helpful to hospitals who are contemplating future programs that depend on community support. While not designed to be statistically representative of all 3.3 million residents of the region, there was often remarkable alignment among the top 5-10 priorities from meetings, individual surveys, agency surveys, and health departments. Here is a brief description of the activities and tools utilized most often.

- Analysis of priorities to identify areas of consensus from all data sources
- Communication by email and letter to past and prospective meeting attendees
- Community meetings that included a visual, interactive, and collective multi-voting exercise (3 dots) to identify the top three priorities of residents
- Community Need Index (See Appendix D for more information.)
- Comparison of most frequent topics by geographic area and across data source (i.e., community meeting participant or survey response from individual, agency, or health department)
- Consultation with topic experts (i.e., epidemiology, air quality, public health)
- Design and feedback meetings with hospital and health department representatives
- Discourse analysis to categorize and analyze key concepts and topics in all collected responses
- Geographic Information System (GIS) mapping program to identify compelling data and represent data visually
- Marketing materials for hospitals, health departments, and meeting hosts to use or adapt to their needs
- Meeting sites, with refreshments, in convenient locations that were welcoming, accessible, and perceived as community asset or resource
- Online databases for researching accurate and reliable data
- Oversampling with vulnerable populations and the general public, including focus groups, use of interpreters and translators, and surveys administered one-to-one in person and via tablet at events
- Proofreading at least twice of secondary data entry for accuracy and consistency
- Regular communication with hospital and health department representatives
- Review of reports and publications on health, and health-related, topics
- Scripts, handouts, and supplemental resource materials provided to trained facilitators and scribes
- Shared data at meetings in form of County Snapshots and Community Need Index maps
- Standard set of stakeholder questions (for individual, agency, meeting, health department)

- SurveyMonkey (Gold) for tracking responses at meetings, from interviews, or on surveys, and use of feature to create custom tags for each response
- Tabulation of responses by geographic area, region-wide and for immigrants, children, and urban residents
- Team approach with diverse consultants
- Training, in person and via webinar, for CHNA Team, health departments, hospitals, and nonprofits interested in facilitating and scribing for supplemental meetings to target sub-populations or sub-county geographic areas. This ensured consistent facilitation, process, and recording of meeting comment and priorities.
- Trend analysis that considered local data measures worse that state and/or U.S. measures and/or trending worse than prior years
- Word count to determine frequent categories and to identify dominant topic within a category (e.g., how many times 'heroin' was mentioned within 'Substance abuse' category)

VULNERABLE POPULATIONS

The IRS requires that hospitals gather input from medically underserved, minority, and low-income populations and encourages a broad range of input from people who live or organizations who serve vulnerable residents of the community. There can be dynamic tension between asking for open sharing of opinions while also requesting potentially sensitive demographic information. Participants were not asked to disclose demographic information at meetings. Individual survey respondents were given the option to disclose race, ethnicity, or address.

To ensure broad representation but also inclusion of vulnerable populations, the CHNA Team and its partners did the following:

- Marketing the community meetings through hospitals, health departments, and community-based nonprofit organizations with follow-up email and phone calls to nonprofit agencies that had not been engaged in past CHNA meetings.
- Addressed two meetings of grantees for Interact for Health's Thriving Community initiative to publicize the meetings and share the link to the online survey.
- Solicited input in smaller focus group settings for people who were African-American; Latino; elderly; identifying as belonging within the LBGTQ+ community; or members of Cincinnati's Creating Healthy Communities initiative – and asked them to share the survey link with friends, family, and colleagues.
- Engaged native speakers who were health and outreach workers to conduct one-on-one surveys with Latinos and refugees from the conflict in Rwanda.
- Sent college student interns to community events and festivals, which attracted the general public as well as those which targeted specific populations, such as Cincy Cinco, Asian Food Fest, and Juneteenth (among others) – they conducted the surveys on mobile tablets with drop-down menus.
- People Working Cooperatively also administered mobile surveys in low-income homes, for elderly and disabled residents, where their nonprofit was making repairs and/or accessibility modifications.
- Medical offices shared surveys with patients who were minorities or receiving substance abuse treatment.

Survey Responses from Agencies

Responding agencies served all counties, with at least 3 agencies in each county and as high as 34 agencies serving Hamilton County, the most populous county. Of those agencies which identified the populations most impacted by priority health issues, here are the populations mentioned. (They do not include specific neighborhoods or towns that were mentioned by name.) The survey question was: "What populations within your community are most impacted by these health issues?"

TABLE 3. AGENCIES: POPULATIONS MOST IMPACTED

Populations Most Impacted Identified by Agencies

Populations Most Impacted	# Mentions	% of Mentions
Low-income	30	49.0%
Children	20	19.6%
African Americans & people of color	14	13.7%
Children and the elderly (not including children mention separately)	12	11.8%
People who live in a city	5	4.9%
Young adults	5	4.9%
Elderly (not including elderly mentioned with children)	4	3.9%
People with disabilities	3	2.9%
People with low level of education	3	2.9%
People who live in rural areas	2	2.0%
People with mental health and substance abuse	2	2.0%

Survey Responses from Health Departments

The CHNA Team received responses from all County Health Departments plus local Health Departments in City of Cincinnati, City of Hamilton, City of Middletown, City of Norwood, and City of Springdale. Of those Health Departments which identified the populations most impacted by priority health issues, below are the populations mentioned. (The table does not include specific neighborhoods or towns that were mentioned by name.) The survey question was: "What populations within your community are most impacted by these health issues?"

TABLE 4. HEALTH DEPARTMENTS: POPULATIONS MOST IMPACTED

Populations Most Impacted Identified by Health Departments

Populations Most Impacted	# Mentions	% of Mentions
Low-income	14	32.6%
Children	8	18.6%
African Americans & minorities	5	11.6%
People with mental health issues, including addiction	4	9.3%
Elderly	3	7.0%
Families	2	4.7%
Young adults	2	4.7%

Supplemental Surveys

A total of 223 mobile surveys were collected by People Working Cooperatively, a nonprofit organization, and by college student interns between 4/12/18 and 7/26/18. The interns were undergraduate and graduate students from the University of Cincinnati Health Promotion and Education Department. THC utilized a mobile version of the survey to collect additional responses from people who might not attend meetings. The CHNA Team modified the consumer survey with more drop-down menus (vs. open-ended questions) to enable quicker completion. Events were found via Facebook, community event postings, non-profit websites, and social media. They included events designed to attract Latinos, African-Americans, LGBTQ+ community, Asians, families with children, and/or the general public. All surveys at events were collected at either public places (e.g. parks, community centers) or with permission of private sponsors. Two to four students attended each event. Respondents lived in 13 counties, with the most participants living in Hamilton County (142, or 63.7%), Butler County (23, or 10.3%), and Montgomery County (22, or 9.9%). PWC surveyed seniors at whose homes they were making home repairs and/or accessibility modifications. Their representatives used tablets to collect answers at the resident's home. The interns collected responses on tablets at the following community events:

- Asian Food Fest
- Center for Closing the Health Gap Expo
- Child Health Expo
- Cincy Cinco
- City Flea Market
- Family Day at the YMCA
- Food Truck Rally
- FreeStore FoodBank's Hunger 5K
- Juneteenth
- Over-the-Rhine 5K
- Salsa on the Square
- YMCA Healthy Kids Day

Supplemental Meetings

Public Health - Dayton & Montgomery County conducted additional meetings to obtain input from vulnerable populations: 2 meetings with African-Americans, Latinos, seniors, and 3 meetings with members of the LGBTQ+ community. THC also conducted an extra meeting in Hamilton County for members of the LGBTQ+ community in Greater Cincinnati.

Race & Ethnicity Information

Below are the results, from the surveys, of how many people voluntarily identified their race and/or ethnicity. For comparison, below is the breakdown by state and for the two most populous counties (with the largest cities) as of 2016:

TABLE 5. COMPARATIVE DEMOGRAPHICS – RACE & ETHNICITY

Region's Race and Ethnicity Data

Race/Ethnicity	Hamilton County	Montgomery County	OH	KY	IN
American Indian	0.1%	0.2%	0.9%	0.2%	0.2%
Asian	2.4%	2.0%	2.4%	1.3%	2.0%
Hispanic	2.9%	2.6%	3.5%	3.3%	6.5%
Black	25.7%	20.5%	12.1%	7.9%	9.2%
White	66.4%	71.7%	80.0%	87.5%	84.0%
Two or more races	2.5%	3.0%	2.2%	2.1%	2.2%

For the THC-administered surveys, there were optional questions for personal information, including race. These questions were not asked at the county meetings. Race and ethnicity results were available for the WeTHRIVE! survey administered separately by Hamilton County Public Health and shared with the CHNA Team for inclusion in the Community Profile for Hamilton County. The combined survey response from individuals yielded a total of 1,286 responses. Of which 62%, or 799, provided information about race and/or ethnicity. Of those who replied, 77.7% percent identified as white; 15.6% black; and 8.8% Latino. Below are the results by survey for participants who did provide this information.

Online Consumer Survey

- Total responses: 492
- 245, or 49.8%, answered the question, "What is your race?" Of those who disclosed race, they were:
    - White: 210, or 85.71% of those who answered the question about race
    - Black: 33, or 13.47%
    - American Indian or Alaska Native: 1, or 0.41%
    - Asian: 1, or 0.41%

Latino Consumer Survey

- Total responses: 74
- TriHealth Outreach Ministries and Santa Maria Community Services surveyed their patients/clients who identified as Latino.
- 70, or 94.6%, answered the question regarding race.
  - 2 people, or 2.9% identified as White.
  - 68 people, or 97.1% answered 'Other'
    - 53 identified as Hispanic or Latino
    - 15 identified as White and Hispanic
- Some of these respondents shared their country of origin.
  - 7 identified as Guatemalan
  - 4 identified as Puerto Rican
  - 1 identified as Honduran

Rwanda Refugee Survey

- Total responses: 39
- Race: Only 4 people, or 10.26%, answered the question regarding race, and all identified as Black.
- Ethnicity: TriHealth Outreach Ministries surveyed patients who were African refugees fleeing the conflict in Rwanda. Refugees from Rwanda belong to one of these ethnic groups: Hutus, Tutsis, and the Twa. A community health worker asked the questions in the Kirundi language.

WeTHRIVE! Survey

Hamilton County Public Health surveyed county residents (not living in the City of Cincinnati) on the health, safety, and well-being of the population, as part of its WeTHRIVE! initiative. Out of 666 responses that Hamilton County Public Health shared with the consultants, 558 expressed a health or health-related concern. (Not included were concerns about code enforcement, general civic matters, private property complaints, general public services, or staffing.) Below is the breakdown by race and ethnicity.

TABLE 6. RACE & ETHNICITY OF WETHRIVE! RESPONDENTS

WeTHRIVE! Health Responses

Race/Ethnicity	# of Respondents With Health Concerns	% of Respondents with Health Concerns
White Non-Hispanic	409	73.30%
Black Non-Hispanic	88	15.80%
Biracial	4	0.72%
Mixed race	2	0.36%
Hispanic	2	0.36%
Native American	2	0.36%
Asian	1	0.18%
Israelite	1	0.18%
White Middle-Eastern	1	0.18%
Did Not Disclose	48	8.60%

Healthcare Equity and Disparity

The Community Need Index (CNI) identifies the severity of health disparity based on certain barriers known to limit healthcare access. Catholic Healthcare West and Solucient developed the original CNI maps more than 10 years ago. They conducted validation testing on this standardized approach to create a high-level assessment of relative need. Appendix D contains a more detailed description from Dignity Health.[5]

For ambulatory sensitive conditions, the highest need ZIP Codes had hospital admission rates 97% higher than the lowest need ZIP Codes – almost twice as high. These are conditions that can be successfully treated in an outpatient setting and would not usually require hospital admission.

The validation testing affirmed the link between community need, access to care, and preventable hospitalizations. A comparison of CNI scores to hospital utilization showed a strong correlation between high need and high use. Admission rates were more than 60% higher for communities with the highest need (CNI score = 5) compared to communities with the lowest need (CNI score = 1).[6]

CNI scores were calculated based on specific barriers to access, shown in Table 7 on the next page.

[5] Dignity Health. (nd). Improving public health & preventing chronic disease: CHW's Community Need Index. https://www.dignityhealth.org/-/media/Service%20Areas/arizona/PDFs/dignity-health-community-need-index-brochure3213448.ashx?la=en

[6] Roth, R., Presken, P., and Pickens G. (2004). "A Standardized National Community Needs Index for the Objective High-Level Assessment of Community Health Care." San Francisco: Catholic Healthcare West. www.dignityhealth.org/stellent/groups/public/@xinternet_con_sys/documents/webcontent/084757.pdf.

TABLE 7. COMMUNITY NEED INDEX – BARRIERS

Barriers Contributing to Health Disparities

Barrier	Description	Reason for Inclusion in CNI Score
Income	Percentage of elderly, children, and single parents living in poverty	Patients may be less able to pay for insurance and/or health expenses.
Cultural/ Language	Percentage Caucasian/ non-Caucasian and percentage of adults over the age of 25 with limited English proficiency	Barrier can contribute to increased prevalence of disease and lower recruitment into government health programs. Patients may not understand medical instructions or be able to read prescription labels.
Education	Percentage without high school diploma	It is an indicator of poor health and increased likelihood of poverty and lack of insurance. Patients may not recognize early disease symptoms or understand medical information.
Insurance	Percentage uninsured and percentage unemployed	Patients may delay or forego treatment, resulting in hospitalization for chronic conditions.
Housing	Percentage renting houses	Rental housing is more likely to be sub-standard and be located in areas with higher crime rates, lower quality schools, limited healthy food choices, and fewer recreational opportunities. It is associated with transitory lifestyles that may deter health prevention.

The CNI is an objective and unbiased assessment of community need and socioeconomic barriers to health care. A high CNI score is a warning sign. It announces: 'Look here! People living in this ZIP Code are more likely to have a disadvantage in accessing care, affording care, preventing and managing disease, obtaining an early diagnosis, having access to health information, and understanding medication and doctors' instructions.'

The CNI is a starting point for looking at geographic areas with a fresh perspective. Hospitals cannot always know about the barriers experienced by people who don't come into the hospital. This is a foundation on which to layer specialized knowledge, local context, and information about emerging trends. Addressing the underlying causes of health inequity and disparity of care can also achieve the Triple Aim of improved care for individuals, improved health of the community, and reduced costs associated with unnecessary hospitalizations and diseases discovered only at a late stage.

PRIMARY DATA

Almost 1,300 people had an opportunity to identify and prioritize health and health-related issues at a meeting or by survey. Twenty-three county- or district-level public health departments responded by survey, and the CHNA Team also received survey responses from 5 city-level health departments. Ninety-six nonprofit organizations completed surveys, and they served residents in every county. Total response far exceeded the level of response experienced three years earlier for the 2016 CHNAs in Cincinnati and Dayton.

Primary data was obtained, with a uniform set of questions, via the following:

- There were 42 meetings, held in 23 counties, which attracted 463 representatives of community organizations, the general public, and/or members of medically underserved and vulnerable populations—to identify barriers to care (financial and non-financial), give input for current needs assessment, prioritize issues, and identify resources to address health and health-related issues.
- Online surveys of individuals (828), agencies (96), and public health departments (28) throughout the region.
- The CHNA Team asked each health system if any hospital had received comments from the public for the CHNA. In July 2018, Good Samaritan Hospital closed in Dayton. Premier Health has held public meetings with community stakeholders. Residents have had the opportunity, and continue to have the opportunity, to express their opinions and wishes as part of the CHNA process. Comments were tabulated and are a part of the CHNA report. As part of the CHNA process, Premier is committed to investing in both healthcare and other economic development activity in the community most affected. This process, related to the reuse of the Good Samaritan site and other community benefit activities, will continue into the future.

None of the other health systems or hospitals reported receiving written comments from the public regarding the 2016 CHNA or its subsequent implementation strategies. THC will accept comments for future CHNAs by emails (chna@healthcollab.org).

Community Meetings

See Appendix E for a list of all meetings and the number of attendees and Appendix E for a list of all attendees, per the sign-in sheets collected at each meeting.

Invitations and Marketing

Any individual or agency representative who gave their address during the 2013 or 2016 CHNA process was added to an invite list, and THC mailed them an invitation to the meeting scheduled in their county. The consultants created an invitation tracking document that included previous attendees and added nonprofit organizations in each county that had either a phone number, street address, or email discoverable through a Google search. A total of 696 individuals or nonprofit agencies were invited. They received a colorful 8-1/2” by 11” flyer with the meeting details and information outlining the purpose and goals for the meeting and CHNA process. THC ensured all invitees were contacted. In total they sent 544 emails and 376 letters by first-class mail. The CHNA Team also added a field for providing an optional email address to the meeting sign-in sheet for future CHNA meetings. (Note: only agencies are required to provide contact information on the sign-in sheet.)

The consultants made phone calls to agencies that had not previously attended a CHNA meeting as well as to strategic organizations that serve vulnerable populations and/or have a broad reach, e.g., United Way. Following the phone conversations, they would send to interested persons an email with the necessary information for them to distribute. THC sent flyers to hospitals and to meeting host sites for posting and distribution. The consultants also posted upcoming meetings every two weeks in the Interact for Health e-newsletter: Health Watch, which is emailed across 20 counties.

The consultants sent flyers to public health departments to post and distribute. Some health departments publicized meetings on their social media pages. Several health departments held additional meetings and publicized the THC/GDAHA meetings simultaneously and/or in a new joint flyer. These included: Cincinnati Health Department, Clark County Combined Health District, Clermont County Public Health, and Public Health - Dayton & Montgomery County. Examples of flyers are provided in Appendix F. THC provided a template, which was easily adapted. The examples show how some health departments and hospitals hosted, promoted, offered incentives, or customized the invite to encourage attendance.

The stretch goal for meetings was to attract 678 people, representing 0.02% of the region's population. The CHNA Team did not meet this target, but did engage 463 people who attended the meetings. This was a 229% increase over the 202 people who attended a meeting in the previous cycle. The largest turnout was in Dayton, where a hospital was closing and where Public Health - Dayton & Montgomery County provided a free meal for dinner. Public Health - Dayton & Montgomery County also provided $10 Subway gift cards at their supplemental meetings and promoted meetings on their Facebook page. Part of the increase in attendance is due to the supplemental meetings held by health departments. More than one-third of participants attended a meeting held by the health departments in Clark, Clermont, and Montgomery Counties and the City of Cincinnati.

The CHNA Team collected and reported RSVPs by email. A direct phone number was provided for RSVPs but was seldom utilized.

Types of Stakeholders Invited:

Advocacy groups
American Cancer Society
American Red Cross
Behavioral Health providers
Boards of Mental Health and Addiction Services
Boards of Recovery and Mental Health Services
Cancer centers
Chambers of Commerce
Charitable pharmacies
Child care providers
Child development centers
Children's advocacy organizations
Children's Services
Churches
Civic groups
Coalitions - Substance abuse
Community Action Agencies
Community coalitions
Community colleges
Community development organizations
Community members
Community outreach workers
Council on Aging
Council on Rural Services
Courts
Crisis centers
Daycare providers
Dental care
Drug prevention & education programs
Drug recovery and treatment centers
Drug-free alliances and coalitions

Early childhood intervention
Educational Service Centers
Elected officials
Emergency food distributors
Emergency Management Agencies
Environmental Services
Fair Housing
Faith-based organizations
Family and Children First Councils
Family Resource Centers
Fire & EMS
Food pantries and/or soup kitchens
Foundations
Free clinic
Habitat for Humanity
Homeless shelters and advocates
Housing providers
Human service nonprofits
Infant mortality coalitions
Insurance
Job & Family Services
Job Corps Center
K-12 schools
Latino outreach groups
Law enforcement
Legal Aid
LGBTQ+ organizations
Libraries
Local government
Local or regional committee focused on health issue(s)
March of Dimes
Medical schools
Mentoring
Minority business organizations
Minority health nonprofits
National Alliance on Mental Illness (NAMI)
Neighborhood organizations
Nutrition services
One Stop Jobs Centers
Parenting support groups
Parks
Patient advocates and navigators
Patient support groups
People Working Cooperatively
Pharmacies
Physician offices
Planned Parenthood
Policy makers
Pregnancy Resource Centers
Preschool providers
Prevent Blindness
Programs supporting mothers and babies
Public housing
Rape survivor support services
Recreation centers
Refugee resettlement
Regional planning
Rehabilitation & nursing facilities
Religious orders
Rotary Clubs
Salvation Army
School districts
School-based School Centers
Senior Centers
Senior Services agencies
Services for blind and visually impaired
Services for developmentally disabled
Shelters / services for victims of abuse
Soil and water conservation district
St. Vincent DePaul Society
Substance abuse prevention organizations
Support groups
Training programs
Transitional and supportive housing
Transportation agencies
United Way
Universities
University Extension Services (OSU & Purdue)
Urban League
Veterans
Violence prevention initiatives
Volunteer groups
Wellness Centers
WIC programs
Women's Centers
Workforce development
YMCA
Youth groups
YWCA

Webinar Training

With the active participation of Ohio health departments, several of them expressed interest in holding additional meetings within their jurisdictions in order to sample more sub-county geographic areas or to reach vulnerable sub-populations. There were two opportunities, on 4/5/18 at 2:30 pm and 4/13/18 at

10:30 am, to join a one-hour training via live webinar. A taped recording was made available and shared on 5/2/18. The lead consultant organized the content around an annotated agenda for a typical community meeting and offered tips and suggestions at key points in a meeting. After the webinar, the following materials were shared with attendees:

- Recommended supply list
- Meeting flyer template
- Sign-in sheet to use “as-is”
- Script
- List of hospitals, counties, and health departments for customizing script
- Forms for Question 8 (resource list) and Question 11 (overall health)
- Webinar’s PowerPoint slides
- Instructions for submitting community meeting results
- Calendar of community meetings scheduled

A total of 47 people registered for one of the two webinars, and 27 people attended. There were 2 people representing community groups; 19 people attended on behalf of 9 health departments; and representatives of 6 hospitals. Once additional meeting dates were scheduled, the CHNA Team provided each county’s snapshot and CNI map for use in the meeting. The webinar training enabled 4 health departments who followed up and conducted an additional 13 meetings.

Purpose of Meetings

The purpose of the meetings was to solicit public input. The desire was to attract individuals or nonprofit organizations with experience or knowledge to share, especially on emerging issues not captured by the secondary data and from the perspectives of medically underserved, minority, and/or low-income populations. The objectives were to:

- Share county-level highlights from the secondary data (and city-level for Cincinnati Health Department meetings)
- Gather diverse people to share their ideas -- general public and community leaders
- Receive input from agencies that represent vulnerable populations
- Hear concerns and questions about existing health/health-related issues
- Obtain information about financial and non-financial barriers to health care
- Identify resources available locally to address issues
- Obtain insight into local conditions from local people
- Discover health and health-related priorities of attendees

Meeting Facilitation

In advance of each meeting, the lead consultant developed a standard script and trained her sub-contractors in active listening as scribes, and each person had the opportunity to rehearse the facilitation of a meeting. The training’s content was identical to the webinar for health department representatives. Each consultant was capable of performing, and did perform, both roles – facilitator and scribe. A group of 2-3 consultants went to each meeting, depending on the number of RSVPs.

Each meeting followed the same format and agenda. (A sample agenda is in Appendix G.) Refreshments were served, and nametags were used to generate a welcoming atmosphere. Locations

were selected for convenience, access, and trusted reputation in the community. The facilitator first shared general Tristate and state-specific health and health-related data to provide context. The survey questions were used, but the first question – about most serious health issues – was asked separately. This technique was intended to capture first thoughts without an opportunity to be influenced by the more specific county-level data or by other attendees. It also served to generate a wide range of ideas for prioritizing later in the meeting. All responses were captured verbatim or shortened with the approval of the speaker.

After the first question, the consultants (a meeting facilitator and at least one scribe) shared the County Snapshot and the CNI Map for the county or counties invited to the meeting. Then the remaining questions were asked and transcribed. The length of the meetings was 90 minutes. The brainstorming with focused questions lasted typically 60 minutes, and discussion involved the whole group. At the end, each person was given 3 colored dots. They walked around the room and placed the dots next to issues they prioritized as most important. People regularly voted for other people's ideas. Each meeting concluded by answering any questions, giving information about next steps, thanking them for their time and ideas, and providing survey links to take home or to work for family, friends, and colleagues to participate.

A total of 440 people (unduplicated) attended 42 meetings.[7] Of these, 283 were speaking on behalf of an organization; 127 were individuals representing their own point of views; 17 represented themselves and an organization; and 13 did not check either box to identify if they were attending as an individual or representing an agency. In Appendix E is the full list of meeting attendees with their organizational affiliations. There is also a separate list in Appendix H that shows all organizations who participated, either by sending someone to a meeting or completing a survey.

Surveys

The consultants developed three types of surveys: Individual Consumer; Agency; and Health Department. The questions remained the same for each survey. The main differences were 1) the use of 'you' to refer to the consumer vs. 'the people you serve' for the agencies and health departments; and 2) asking for the title and organization for agencies and health departments. The Health Department version also requested the qualifications of the respondents, as required by the IRS. The Individual Consumer survey was also translated into Spanish and adapted for mobile application at community events. The consultants used SurveyMonkey to collect responses, tabulate data, interpret and analyze results, and create categories to track key words and phrases.

Survey Development

The health departments requested questions about perception of overall health and demographics; the latter was optional. Cincinnati Children's added a third question about child health. In 2016, some issues were mentioned more often in urban meetings but lost in a regional roll-up. So, this time she added a question for people to identify which term or terms best identified where they lived (or served): urban, suburban, small town, or rural. She also added a question to identify if someone lived in one of

[7] There were 463 meeting attendees, but 23 people attended more than one meeting – often because they worked in one county but lived in another county.

the cities where urban health departments had expressed interest in filtering responses by city. The Spanish-language version was reviewed and edited by Ms. Elsa Boyer, who volunteered her time. She is a semi-retired Certified Healthcare Interpreter and native speaker with 16 years of hospital experience. A mobile version of the consumer survey was created using drop-down menus of the most frequent responses for use by student interns with tablets at community events. See Appendix I for examples of the surveys.

Survey Administration

The CHNA Team and partners helped to distribute online versions of the surveys. For example, Public Health - Dayton & Montgomery County promoted the survey at its booth at the 2018 Dayton Pride Festival. Hard copies were used with Spanish-speaking families, refugees from Rwanda, and at treatment facilities and physician offices connected to Mercy Health. TriHealth Outreach Ministries gave 40 $10 Kroger gift cards as incentives to the Spanish-speaking community health workers and the community health worker working with the French-speaking refugees from Rwanda (who asked the questions in French but recorded the answers in English). The Program Director of Immigrant and Wellness Services at Santa Maria Community Services initially gave the surveys to Latino families who came for services, but quickly realized that she obtained fewer skipped questions when the survey was administered by a bilingual intern one-on-one. Both TriHealth Outreach Ministries and Santa Maria Community Services provided the answers already translated into English for the consultants. A total of 113 immigrant surveys were completed and returned.

At community meetings, the agenda handout had links to the individual consumer and agency surveys printed at the bottom, and the facilitator would call attendees' attention to the link at the end of the meeting.

Completed Surveys

If a person answered the 'most serious' question, then the response was recorded for that question although it was an incomplete survey. This happened occasionally. Surveys where the person only identified the county of residence were not counted, because no real information was shared. This was more likely to happen if a hard copy of a survey was dropped off without the context of a meeting or another person to explain its purpose. The process produced 954 survey responses:

- 715 Individual Consumer Surveys (includes 223 Mobile Surveys)
- 96 Agency Surveys
- 74 Latino Consumer Surveys
- 39 Surveys from refugees from Rwanda
- 29 Health Department Surveys (two from one department)

Appendix J contains the list of the participating health departments in the region and who responded from each department. All County Health Departments responded. Several Health Commissioners completed the survey in collaboration with, or after obtaining input from, senior staff members.

Analysis of Primary Data

The primary data collection and analysis used the narrative method and specifically the technique of discourse analysis. The focus was on collecting data from individuals based on their experience. There were several important steps to ensure a consistent process:

- Verbatim entry of comments – this happens automatically with the online survey process and scribes were trained to do this at the community meetings
- Creating custom tags to summarize each response, e.g., cancer, diabetes, heart disease
- Creating themes that connect some of the tags, e.g., Chronic disease
- Proofreading each other's tags and analysis, with review by at least 3 different people to ensure overall consistency
- Use of SurveyMonkey's 'Gold' level enabled the creation of custom tags and initial sorting. It also provided a consistent way to compare survey results with meeting responses. It worked for face-to-face verbal encounters, such as in meetings, as well as written responses. Comments made in person were entered into SurveyMonkey, tagged, and themes identified. The lead consultant customized the tagging in SurveyMonkey because she found that its automatic grouping of ideas was not precise enough and could not account for context or adapt when responses used different words for similar concepts.
- Reviewing tags at the county-level, urban level, and regional level was done to ensure that the tags and themes made sense and were applicable at all levels. For example, the consultants created tags for 'addiction,' 'heroin,' 'meth' as subsets of the 'Substance abuse' theme, because of their apparent frequency at the beginning of the tagging process. They counted each tag and saved the count, but none of these tags reached high enough numbers (more than 5% of mentions) to warrant its own category in the final analysis. See Appendix K for guidelines used to assign categories and for sorting and tabulating responses.
- SurveyMonkey's filter options facilitated the process of sorting and analyzing by county, by groups of counties, by type of survey, and/or by sub-population. This is a useful option to consider context or culture, such as urban respondents or Latino respondents.

Hamilton County's WeTHRIVE! data were not entered into SurveyMonkey, but the same tags were applied in an Excel spreadsheet. The lead consultant consulted with Hamilton County Public Health's Director of Epidemiology and Assessments and the Director of Health Promotion and Education to confirm which types of responses fit with a health or health-related tag.

Many responses addressed multiple topics; each new idea was tagged. The review process included verifying that each distinct comment, or 'mention,' was tagged once. For example, if smoking was clustered under the 'Healthy behaviors' theme, then it did not appear as its own category. If transportation was mentioned in more than 5% of all mentions, then it might become its own category, especially if this pattern were evident in a majority of counties. Otherwise it was counted under 'Access to care/services.'

The earliest reference to this tool was in the field of linguistics at the University of Pennsylvania in 1952.[8] Only more recently has it been applied in the field of healthcare. Here are some descriptions in

[8] Harris, Z.S. (1952). Discourse analysis: A sample text. *Language.* 28(5), 474-494.

the literature of discourse analysis as used in a qualitative approach with narrative, whether verbal or written:

> "Discourse analysis is the study of social life, understood through analysis of language in its widest sense (including face-to-face talk, non-verbal interaction, images, symbols and documents). It offers ways of investigating meaning, whether in conversation or in culture." [9]

> "Discourse analysis is a qualitative research approach that offers the potential to challenge our thinking about aspects of the reality of health and health care practice."[10]

> "Discourse has been defined as 'a group of ideas or patterned way of thinking which can be identified in textual and verbal communications, and can also be located in wider social structures.'… DA [Discourse Analysis] has the potential to reveal valuable insights into the social and political contexts in which varied discourses about health take place. Areas of research which are relevant to healthcare concerns include … conversations between lay people about health risks and issues…."[11]

> "This article explores how discourse analysis is useful for a wide range of research questions in health care and the health professions.... Discourse analysis is about studying and analysing the uses of language. Because the term is used in many different ways, we have simplified approaches to discourse analysis into three clusters.… Regardless of approach, a vast array of data sources is available to the discourse analyst, including transcripts from interviews, focus groups, samples of conversations, published literature, media, and web based materials."[12]

The consultants identified top priorities by method of collection (meeting or survey), by type of respondent, and by county. They counted and identified most frequent key words and phrases recurring at both the county level and at the regional level. Common themes emerged across counties and respondents. Whenever possible, the consultants respected the word choices of each respondent, and so there is some variation in terms. For example, access to care could include barriers such as lack of transportation or affordability as well as lack of providers or specialists in a rural area. When a specific type of access problem or challenge was repeated by many people, then the subordinate idea was also captured. Each County Profile contains a "Consensus on Priorities" described by the different types of stakeholders. In the prioritization and implementation phases, hospitals can consider the Profiles for the counties they serve and/or the priorities identified in Chapter 4's Regional Summary.

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[9] Shaw, S., & Bailey, J. (2009). Discourse analysis: What is it and why is it relevant to family practice? *Family Practice*, *26*(5), 413–419. http://doi.org/10.1093/fampra/cmp038

[10] Cheek, J. (2004). At the margins? Discourse analysis and qualitative research. *Qualitative Health Research*. Sage Publications. doi: 10.1177/1049732304266820.

[11] Yazdannik, A., Yousefy, A., & Mohammadi, S. (2017). Discourse analysis: A useful methodology for health-care system researches. *Journal of Education and Health Promotion*, *6*, 111. doi.org/10.4103/jehp.jehp_124_15.

[12] Hodges, B.D., Kuper, A., and Reeves, S. (2008). Discourse analysis. *British Medical Journal*. 337:a879. doi.org/ 10.1136/bmj.a879.

For the eight counties served by Cincinnati Children's Hospital Medical Center (Cincinnati Children's), the consultants shared, via Excel spreadsheets, all the Child Health data collected through meetings, interviews, or surveys for further analysis. Cincinnati Children's conducted its own CHNA and identified the overarching themes of Consumer Education and Prevention. For the Greater Dayton area, the consultants compiled and analyzed the responses to the three Child Health questions for its eight counties. See Chapter 5 for details on the findings.

Prioritization of Primary Data

For the community meetings, the top votes (measured by number of dots) determined the priorities at the county and regional level. For the survey results, the regional priorities were the issues receiving the most overall mentions. At the county level, the priorities were sorted by county of residence/service. The threshold for including a priority was 5% or more of all mentions, or at least two mentions. For comparison purposes, priorities were rank ordered with the top priority listed first in the column. For the urban section, topics were sorted by the people who identified they lived in a city, or served the population living there. The Urban Health section is new with the 2019 CHNA. Its results were not used to determine priorities but are provided in the report for the benefit of several city health departments in the region and hospitals serving urban areas.

SECONDARY DATA

Data Collection

The lead consultant designed the initial data collection worksheet, and the interns from the 2016 CHNA cycle created a Data Instruction Manual. Initially, the County Health Rankings (CHR) formed the foundation for data collection with its county-level focus on health outcomes, health factors, health behaviors, quality of life, clinical care, physical environment, and socioeconomic factors. Additional sources supplemented the CHR data.

Publicly available health statistics and demographic were obtained at the state and county level. The methodology varied slightly by state. The epidemiologists for Public Health - Dayton & Montgomery County (PHDMC) volunteered to collect data for the State of Ohio and all the Ohio counties included in the CHNA. They included data through 2016. Unfortunately, Ohio's 2017 data was not finalized in time for this report. Using the same sources as the epidemiologists as much as possible, the sub-contractors performed the research for Indiana and Kentucky counties. They researched more than 140 data measures, although the total could vary county by county. For example, PreventionFIRST!'s Student Drug Use Survey only surveyed these Ohio counties in 2017: Butler, Clermont, Clinton, Hamilton, Highland, and Warren. In some counties, data was suppressed due to small numbers. Kentucky did not have readily available county-level data for measures found in Ohio, such as the number of overdose deaths per 100,000 due to fentanyl, heroin, or prescription opioids.

The Cincinnati Health Department modeled their data collection to match this process for county and state data. Their work was conducted by epidemiologists, graduate student interns, and volunteers. They supplemented with city-specific sources for the period 2012-2016 when data were available.

The sub-contractors worked effectively as a team to verify and proofread data and to ensure consistent formatting. They identified data sources unique to Indiana and Kentucky. They also accessed the interactive CNI tool on the Dignity Health website to create county-level maps and ZIP Code tables.[13] They monitored periodic data updates on the CHR and CNI websites and revised the data worksheets until September 2018.

Data Sources

The standards for researching and including data were:

- Comparable (measures that could be compared, in all three states, to benchmarks such as Healthy People 2020 or state/national rates)
- County-level data (ZIP Code level preferred but rare)
- Focus on health outcome data (preferred over subjective survey data when both were available)
- Reproducible (new update available within three years or at 3-year intervals vs. one-time statistic)
- Reputable source
- Trend data available (more than one data point; 3-5 years preferred)

These standards are consistent with and extend the measurement principles of the Institute for Healthcare Improvement's Triple Aim.[14] The CHR was an excellent starting point, but the consultants discovered additional sources with more recent data as well as indicators for measures not collected by CHR. The prevalence of certain cancers, the rapid increase of heroin overdose deaths in the region, and additional mortality data are examples of supplemental data. Many excellent sources of information did not have a breakdown below the state level or did not include the entire region. The consultants contacted state health departments, local health departments, and local experts when there was confusion about wording or collection of data that varied by state.

The CHR measures and the supplemental measures are listed below. The biggest change from the prior cycle is that the Department of Health and Human Services no longer maintains the Health Indicators Warehouse as an online source, and it had provided data for 8 key measures. In one case, 'total preterm live births %,' no alternate source was found for the Kentucky counties, and yet it's an important factor in infant mortality. The Ohio health departments also requested the inclusion of more demographic detail. (The number of data measures increased by 33%, from 106 in 2016 to 142 in 2019.) In Appendix L, the List of Data Sources gives more information about each measure and the years covered.

For Ohio counties, PHDMC epidemiologists consulted the following sources for data or data ranges ending with 2016 and one period prior. For Indiana and Kentucky sources, the sub-contractors modeled their data collection on the Ohio process and supplemented with state-specific sources. When possible, they collected four years of data. Here is a list of all data sources:

- AIDSvu - http://map.aidsvu.org/map?state=ky
- American Community Survey (5-year estimate 2012-2016)

[13] https://www.dignityhealth.org/cm/content/pages/community-health.asp. Detailed description is available in Appendix D.
[14] Stiefel M. and Nolan K. (2012). A Guide to Measuring the Triple Aim: Population Health, Experience of Care, and Per Capita Cost. IHI Innovation Series white paper, p. 3. Cambridge MA.

- Business Analyst, Delorme map data, ESRI, U.S. Census provided by RWJF 2018 County Health Rankings
- Cancer Incidence: Ohio Department of Health, Ohio Cancer Incidence Surveillance System, 2014-2015
- Centers for Disease Control and Prevention (CDC), Behavioral Risk Factor Surveillance System
- Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. 500 Cities Project Data 2016
- Centers for Disease Control and Prevention, National Center for Health Statistics. CDC WONDER Online Database, Underlying Causes of Death and Multiple Causes of Death
- Centers for Disease Control and Prevention's Division of HIV/AIDS Prevention
- Centers for Disease Control and Prevention's national HIV surveillance program
- Comprehensive Housing Affordability Strategy (CHAS) data
- County Health Rankings 2018 - American Community Survey, 5-year estimates
- County Health Rankings 2018 - Area Health Resource File/American Medical Association
- County Health Rankings 2018 - Area Health Resource File/National Provider Identification File
- County Health Rankings 2018 - Behavioral Risk Factor Surveillance System
- County Health Rankings 2018 - Bureau of Labor Statistics
- County Health Rankings 2018 - Centers for Disease Control and Prevention Diabetes Interactive Atlas
- County Health Rankings 2018 - National Highway Traffic Safety Administration, Fatality Analysis Reporting System
- County Health Rankings 2018 - National Center for Education Statistics
- County Health Rankings 2018 - National Center for Health Statistics
- County Health Rankings 2018 - National Center for HIV/AIDS, Viral Hepatitis, STD, and TB prevention
- County Health Rankings 2018 - Small Area Income and Poverty Estimates
- County Health Rankings 2018 - U.S. Census Bureau's Small Area Health Insurance
- Dartmouth Atlas of Healthcare. Accessed at http://www.countyhealthrankings.org/explore-health-rankings/rankings-data on 2/6/18
- Data USA (Cincinnati) – Access to Care
- ED Facts provided by RWJF 2018 County Health Rankings
- Environmental Protection Agency. Air Quality System Monitoring Data. State Air Monitoring Data. Annual PM 2.5 Level (Monitor only). Accessed from Environmental Public Health Tracking Network: www.cdc.gov/ephtracking. Accessed on 03/01/2018
- Environmental Public Health Tracking Network
- Federal Bureau of Investigation (FBI), Uniform Crime Reporting (UCR), Crime in the United States. Available at: https://ucr.fbi.gov/crime-in-the-u.s/2016/crime-in-the-u.s.-2016/topic-pages/violent-crime
- Feeding America, Map the Meal Gap, Accessed March 9, 2018
- Greater Cincinnati Community Health Status Survey
- http://www.governing.com/gov-data/health/county-suicide-death-rates-map.html
- Indiana State Health Department
- Kentucky Cancer Registry
- Kentucky State Health Department

- kentuckyhealthfacts.org
- Measure of America
- National Center for Health Statistics - Data.CDC.gov
- National Center for Health Statistics - Mortality Files
- National Center for Health Statistics - Natality files
- National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
- Northern Kentucky Health District
- Ohio Department of Health, Death Certificates
- Ohio Department of Health, HIV/AIDS Surveillance Program. Data reported through 6/30/17
- Ohio Department of Health, STD Surveillance Program. Data reported through 5/7/2017
- Ohio Department of Health: Center for Public Health Statistics and Informantics. Ohio Public Health Information Warehouse
- Ohio Emergency Medical Services; Naloxone Administration by Ohio EMS Providers, accessed at http://www.ems.ohio.gov/links/emsNaloxoneAdminByCounty2017.pdf on 2/13/18
- Population: Bridged-Race County Population data from National Center for Health Statistics (NCHS), Ohio Department of Health, 2014-2015
- PreventionFIRST! Student Drug Use Survey, through 2017
- Safe Drinking Water Information System
- U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates
- U.S. Census Bureau, County Business Patterns
- U.S. Census Population Estimates
- Uniform Crime Reporting - FBI
- USDA Food Environment Atlas

Analysis of Secondary Data

After assembling data worksheets for about 140 measures per county, the consultants applied the following criteria to determine the most significant health needs for a one-page summary, titled a County Snapshot. The criteria for inclusion on a County Snapshot and potential use as a ‘call-out’ were:

- Top causes of death
- Worsening trend
- Lagging national and state measures, and
- To a lesser extent, falling behind a Healthy People 2020 target

The analysis included identifying key data points to use as ‘call-outs’ to make it easy for people at community meetings to see, at a glance, some of the large problems facing their community. For this reason, the consultants collected and analyzed the secondary data in advance of the meetings in order to share county-level data with people and agencies in the community.

Some measures were retained for a County Snapshot, even if not critically important, when the measure was relevant to an adjacent county or for the whole region. Other considerations for inclusion were if a measure represented a risk factor for serious disease (e.g., smoking) or conditions easily treated or prevented (e.g., sexually transmitted disease).

The consultants also kept track of measures mentioned in the previous CHNA and priorities identified at the state level. After reviewing the data at the county level, the County Snapshots and CNI maps helped the consultants to identify regional issues that affected multiple counties. THC created 15 maps from the secondary data that reflect significant issues for the region. The maps and accompanying description are part of Chapter 4. Regional Summary.

Prioritization of Secondary Data

Secondary data was prioritized at the county and regional level. The county-level priorities were the data points that met the criteria of being worse than the state and/or national measures and also trending in the wrong direction. The priorities were sorted for analysis by county of residence/service. At the regional level, the measures that met the criteria, and for which we had complete data, were analyzed for the issues impacting the most counties in the region. For comparison purposes, priorities were rank ordered with the top priority listed first in the Secondary Data column. New for this cycle was compilation of hospital utilization data, which was requested by the health departments in Ohio. These data were not analyzed or included in the prioritization; they reflect residents who received hospital services but do not necessarily represent the whole population.

PRIMARY AND SECONDARY PRIORITIES

This CHNA report describes the five priorities that emerged at the regional level. At the county level, the report describes areas of agreement among data sources for each county, or groups of counties (e.g., Northern Kentucky and Dearborn/Ohio/Switzerland counties in Indiana). Some hospitals operate in a single county while some have a regional presence. To support the prioritization process for all the hospitals, the report provides the following breakdown of regional and county priorities. Table 27 shows the regional priorities most frequently cited in meetings and surveys as well as top issues from the secondary data. For each county profile, there is a paragraph that summarizes “Consensus on Priorities.” Hospitals can use either or both summaries as a basis for a joint or individual hospital prioritization process that can also consider any emerging or pressing issues identified by hospital staff, leaders, and/or community advisors.

DATA CHALLENGES AND GAPS

Gaps occur in three ways: 1) Data measures are not collected and/or published publicly; 2) Data collection is not uniform from state to state; and 3) Data suppression makes it difficult to drill down below the state level. For counties with small populations, mortality and disease statistics are sometimes suppressed. The reasons include: preservation of confidentiality and privacy; numbers too small to be reliable; or the reported data is not actual but based on a state average (which can be misleading for a small rural county).

Below are some examples encountered in researching this CHNA report.

- Emerging interest – in Adverse Childhood Experiences (ACEs), Trauma, and the impact on children of losing parents to heroin overdose – are not supported by uniformly collected data in every locality. There is no single agreed-upon list of experiences for ACEs. There is state-level data for

ACEs, however, and Ohio is one of five states where 1 in 7 children had 3 or more ACEs. The national rate is 1 in 10 children.[15]

- Fentanyl & related drugs overdose deaths, Heroin poisoning overdose deaths, and Prescription Opioid overdose deaths: State of Indiana and Commonwealth of Kentucky – Data were not available for every year.
- Preterm live births percentage: Commonwealth of Kentucky – Data were not available.
- Child mortality: State of Ohio – Rates based on fewer than 10 child deaths are unstable and not reported.
- HIV prevalence: State of Ohio – Rates are not calculated for a case count of fewer than 5.
- Infant mortality: State of Ohio – Rates based on fewer than 10 infant deaths are unstable and not reported.
- Motor vehicle crash deaths: State of Ohio – Rates are suppressed and considered unreliable when counts are fewer than 20.
- Cancer mortality: CDC – Rates are suppressed and considered unreliable when counts are fewer than 20.
- Homicide rate: CDC – Rates are suppressed and considered unreliable when counts are fewer than 20.
- Mammography screening: CDC – Estimates should be interpreted with caution when based on fewer than 50 responses.

The challenge persists in how best to capture sub-county data, such as ZIP Code or census tract. In 2015, the County Health Rankings & Roadmaps (CHRR) funded pilot projects in California, Missouri, and New York each with a different methodology. CHRR reported on their progress at the 2016 American Public Health Association annual meeting.[16] One suggestion was tapping into commercial data sources, but those too can vary by location. This could work for a deep-dive into one particular community, but there is not yet any known replicable and comparable data for the 3-state Cincinnati-Dayton region that includes part of Appalachia. Here is the current status of funded pilots in Missouri and New York and their different approaches:

- In April 2018, the Missouri Hospital Association launched its new platform, exploreMOhealth.org to assist hospitals with CHNA secondary data analysis using county- and ZIP Code-level data on health and social factors. It provides a rich set of information to explore sub-county variation in health.[17]
- The Washington University School of Medicine used hospital and census-derived data to provide sub-county data. One limitation they identified is that “The population pool for hospital data sets may not be as representative of the general population as population-based surveys.” Hospital utilization data is more likely to represent an existing patient population and less likely to include

[15] Sacks, V. and Murphey, D. (2018). The prevalence of adverse childhood experiences, nationally, by state, and by race or ethnicity. February 20. Accessed 10/23/18 at https://www.childtrends.org/publications/prevalence-adverse-childhood-experiences-nationally-state-race-ethnicity

[16] Givens, M. (2016). Refining the health snapshot in local communities: Approaches to enhancing data availability and unmasking health gaps. Presentation at APHA Annual Meeting in Denver by County Health Rankings & Roadmaps, with partners from the Missouri Hospital Association, Washington University School of Medicine, and New York State Department of Health. October 31.

[17] Missouri Hospital Association (2018). New Missouri Health Data Resource Unveiled. *Quality News*. April. Accessed 10/23/18 at https://www.mhanet.com/mhaimages/SQI/Newsletter/2018/QualityNews_April2018.pdf

under-served or unserved people. In the future they plan to create an interactive platform for Missouri stakeholders and to evaluate performance of this method on successive years of data, in other states, and with the inclusion of additional data sources for domains not readily captured in hospital and census-derived data sets.[18] For example, they found that restricting measures to hospital and census-derived data limited the data available in the environmental health factors subdomain, which CHRR had previously identified as a challenge.[19]

- The New York Department of Health identified sub-county data, based on three different geographic levels, for 11 measures.[20] They are:

  - ZIP Code level:
    - Age-adjusted preventable hospitalization rate per 10,000 - Aged 18+ years
    - Asthma emergency department visit rate per 10,000 population
    - Asthma emergency department visit rate per 10,000 - Aged 0-4 years
    - Age-adjusted heart attack hospitalization rate per 10,000
    - Adolescent pregnancy rate per 1,000 females - Aged 15-17 years

  - School District level: (outside New York City only)
    - Percentage of children and adolescents who are obese

  - Minor Civil Division (Outside New York City) or Community District (for City boroughs):
    - Percentage of premature deaths (before age 65 years)
    - Percentage of preterm birth
    - Percentage of infants exclusively breastfed in the hospital
    - Percentage of unintended pregnancy among live births
    - Percentage of live births that occur within 24 months of a previous pregnancy

These examples illustrate the need for a consistent nationwide approach. Not all states have the resources to invest in this complicated arena. There are many metropolitan areas, and hospitals that serve them, which extend across state boundaries. At this time, none of these pilots is being scaled for use nationally or in other regions.

[18] Nagasako, E., Waterman, B., Reidhead, M., Lian, M., and Gehlert, S. (2018). Measuring subcounty differences in population health using hospital and census-derived data sets: The Missouri ZIP Health Rankings Project. *Journal of Public Health Management and Practice : JPHMP*, *24*(4), 340-349.
[19] Hendryx M, Ahern MM, and Zulig KJ. (2013). Improving the environmental quality component of the County Health Rankings model. *Am J Public Health*. 103:727–732.
[20] New York State Prevention Agenda Dashboard - Methodology and Limitations. Accessed 10/23/18 at https://webbi1.health.ny.gov/SASStoredProcess/guest?_program=/EBI/PHIG/apps/dashboard/pa_dashboard&p=abt2

Chapter 4. Regional Summary

There are five different types of source materials: Meeting responses; Consumer survey responses; Agency survey responses; Health Department survey responses; and secondary data for more than 140 publicly available measures.

This chapter summarizes the common themes expressed across 25 counties, and it identifies areas of consensus among 1,416 participant responses: 463 people who came to meetings and 828 who completed surveys online. The meeting responses were transcribed from comments recorded at the 42 community meetings. Online surveys provided responses from consumers, nonprofit agencies, and local health departments. The chapter will also compare the priorities from primary data sources with 15 issues affecting most of the region as indicated by the secondary data.

While collecting primary and secondary data, the consultants noticed that many of the priorities identified three and six years ago still concerned Tristate residents and organizations. The most striking difference from 2013 to 2016 was the increased attention to, and severity of, the heroin and prescription drug abuse problem in the region. For this 2019 report, public awareness has become even more sophisticated and focused on the myriad and complex array of connected issues. There were more comments about addiction of all types; underlying mental health issues; the impact of trauma; lack of mental health providers; need for more access to treatment; and the toll of addiction on communities and families, especially children whose parents had a fatal overdose. These themes echoed throughout the comments from all primary data sources. Substance abuse and Infant mortality were the two topics most cited as areas where there was meaningful and visible community collaboration. At the same time, respondents explained that while the progress was good, much more needed to be done.

OVERVIEW OF SIGNIFICANT NEEDS

Two questions focus attention on what's missing and where there is room for improvement. They include the questions about barriers: financial and non-financial. The question about which issues are not being addressed enough identifies where there are unmet needs. Social Determinants of Health (SDHs) are addressed as one of the top 7 unmet needs. The answers to these questions are consistent with the findings shown in Table 27, which shows top priorities by source. The secondary data and primary data agreed on five issues: Substance abuse; Mental health; Access to care/services; Chronic disease; and Healthy behaviors.

PRIMARY DATA

Unmet Needs

One of the CHNA questions, "What important health issues are not being addressed enough," revealed perceived gaps related to important health and health-related issues. Four issues emerged as prioritized needs for all respondents: Access to care/services; Mental health; Social determinants of health; and Substance abuse. Within the category of 'Access to care/services,' lack of providers was mentioned the most often, for 16% of all access issues. The issues included providers who didn't take Medicaid or other insurance; providers located outside the geographic area; and too few specialists.

Transportation was named by consumers in meetings and on surveys, for a total of 7% of all mentions within the Access category.

TABLE 8. REGION: PRIORITIZED UNMET NEEDS IN THE REGION

Most Frequent Answers to 'Not Being Addressed Enough' Question
(in descending order of number of mentions)

Meetings	Consumers	Agencies	Health Depts.
Access to care/services	Substance abuse	Access to care/services	Access to care/services
Social determinants of health	Access to care/services	Substance abuse	Mental health
Mental health	Social determinants of health	Mental health	Substance abuse
Substance abuse	Mental health	Social determinants of health	Social determinants of health

All sources agreed on three additional areas of unmet needs, but these issues did not receive as many mentions: Chronic disease, Health education/Promotion, and Healthy behaviors. Two more areas of unmet needs received mentions by some sources but not all: Healthy food/Nutrition (not mentioned by health departments) and Obesity (not mentioned at the community meetings).

Barriers

On the next three pages are comparisons of the financial and non-financial barriers to health care identified by the various groups who provided their feedback. Some respondents provided non-financial answers for the 'Financial Barrier' question. In some cases, the barrier was the absence of an assigned Medicaid provider near where they lived. In rural counties, the assigned primary care provider might be located out of the county, and there were few specialists. Even with Medicaid, this scenario felt like no coverage. People with commercial insurance also reported the challenge of finding a local provider in their network. The people in these situations felt that they would still have to pay out-of-pocket for care from a provider of their choice, when insurance didn't cover the services. The lack of providers and/or inadequate insurance coverage became a financial barrier. This is also why 'cost of care' is considered a significant barrier, even for those with coverage.

During the 2016 CHNA, participants began bringing up the barrier of co-pays and high-deductible plans. These comments were more frequent and widespread during the 2019 CHNA. Not being able to afford lost wages and (unpaid) time off work seemed less of a barrier this time than the 'income' barrier of having a low-paying job and/or needing to work two minimum-wage jobs in order to survive. The cost of prescription medicine remains an ongoing concern.

Transportation was mentioned more often this cycle, both as a financial and non-financial barrier. As a financial barrier, it included the rising cost of bus fare and transfers; cost of gas; and not being able to afford the purchase of a car. Many parts of the region have no public transportation, which is reflected in the non-financial barriers. More prominent this cycle were Social Determinants of Health, with sub-categories of race, culture, language, and discrimination receiving many mentions. Figure 4 shows Access and SDHs were the two largest categories for non-financial barriers, when their sub-categories were combined. Access for people with Mental disability is a new concern voiced by consumers.

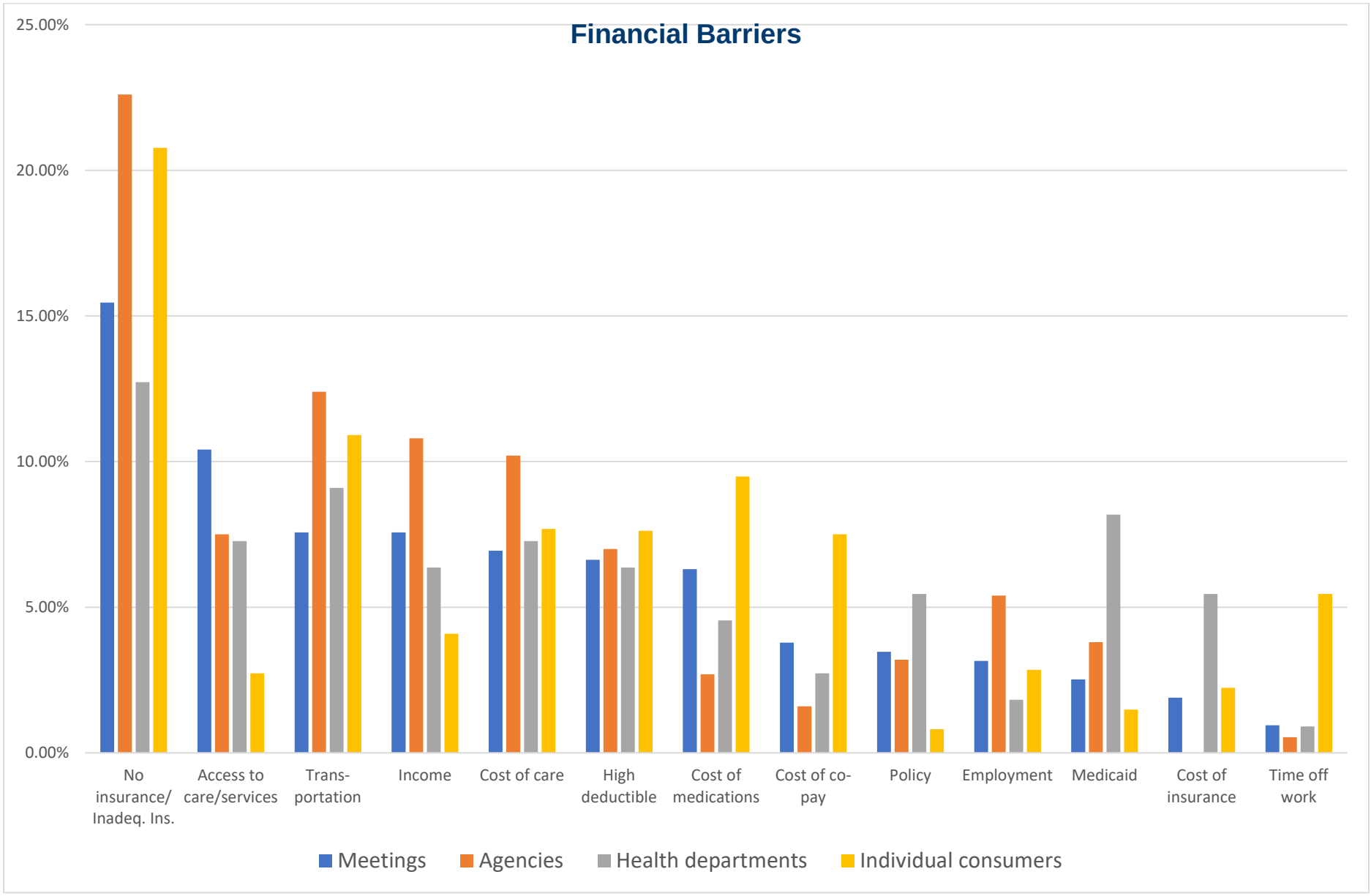


FIGURE 2. REGION: FINANCIAL BARRIERS

Non-Financial Barriers Identified

(through meetings and surveys)

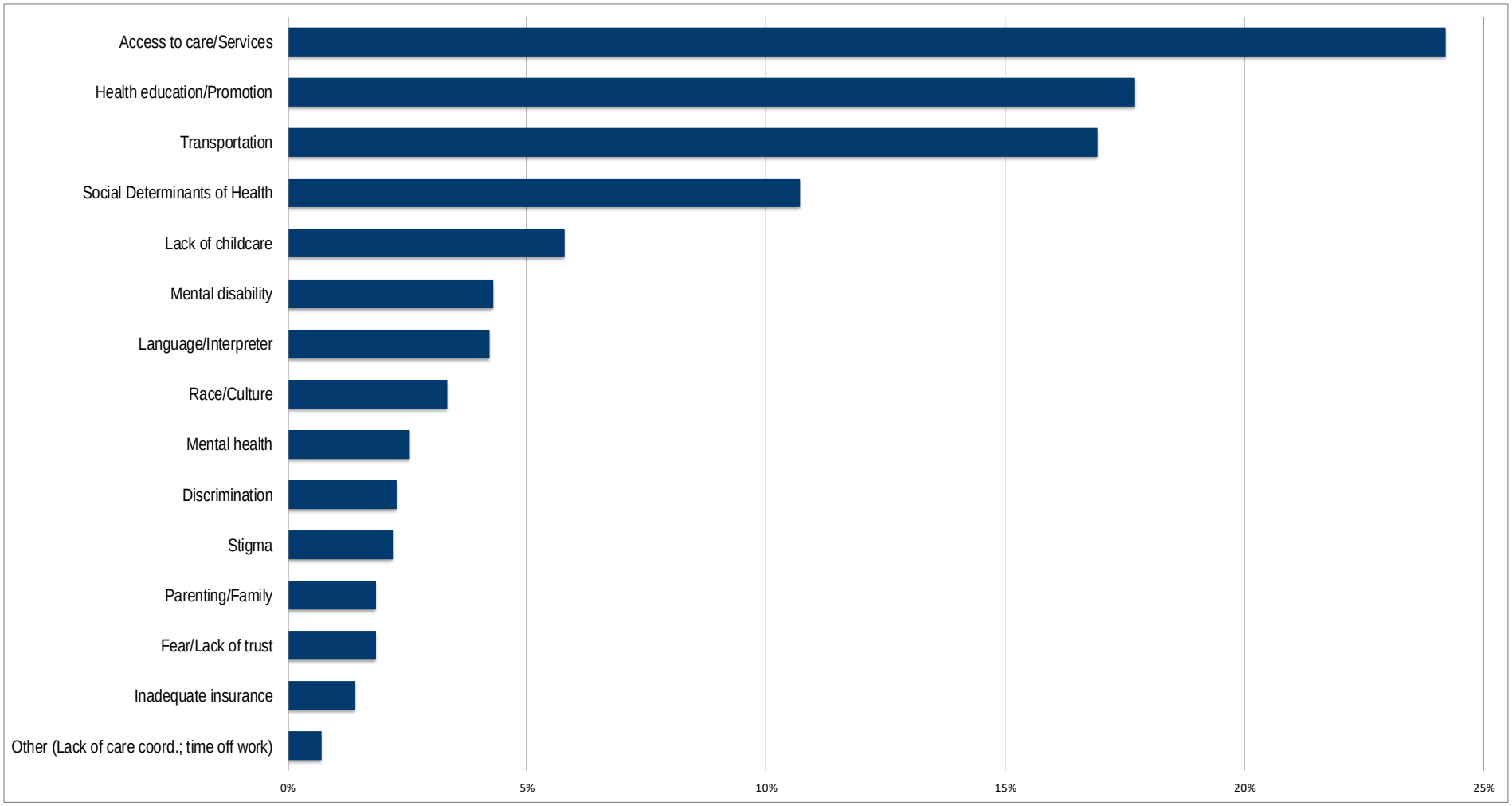


FIGURE 3. REGION: NON-FINANCIAL BARRIERS

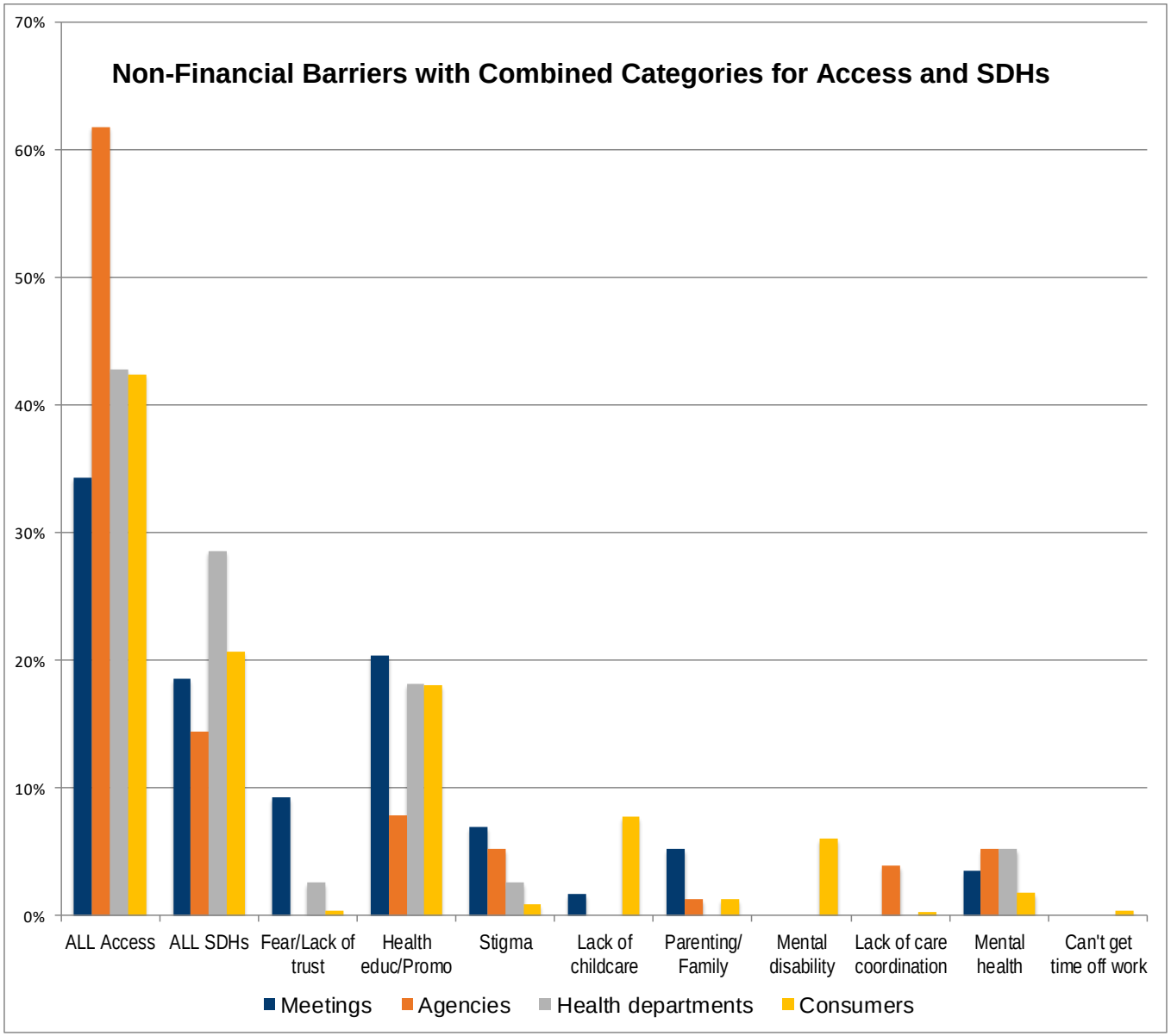


FIGURE 4. REGION: NON-FINANCIAL BARRIERS COMBINED

Issues Handled Well

There is more variation among groups of respondents for this question, "Which important health issues are being handled well in your community?" Only two issues had consensus in the top five: Substance abuse and Wellness/Prevention. This is the same result as three years ago.

As noted earlier, for Substance abuse, respondents noted that progress was good but more needed to be done. Other issues where groups agreed were: Access to care (in top 4 for Meetings, Consumers, and Agencies); Community collaboration (in 2nd place for Meetings, Agencies, and Health Departments); and Chronic disease (in top 5 for Meetings, Consumers, and Health Departments). Mental health and Healthy food/Nutrition were mentioned by 3 groups but not all 4, and these issues were in 5th to 8th place.

TABLE 9. REGION: ISSUES HANDLED WELL

Most Frequent Answers to 'Important Issues Handled Well' Question
(in descending order of number of mentions)

Meeting	Consumer	Agency	Health Department
Wellness/Prevention	Substance abuse	Substance abuse	Substance abuse
Community collaboration	Chronic disease	Community collaboration	Community collaboration
Access to care	Access to care	Wellness/Prevention	Chronic disease
Substance abuse	Wellness/Prevention	Access to care	Wellness/Prevention
Chronic disease	Health education/Promotion	Mental health	Health education/Promotion
Healthy food/Nutrition	Healthy behaviors	Infant mortality	Access to care
Infant mortality	Healthy food/Nutrition	Healthy food/Nutrition	Infant mortality
Mental health	Environmental health	Chronic disease	Mental health

Ways to Improve Health

During the 2016 CHNA process, 'eat healthier' and 'exercise more' comprised 70% of responses. During this cycle, they are still frequent replies but now there are even more answers to the questions, "What can you do to improve your health?" and "What can people, whom your organization serves, do to improve their health?" In the last cycle, 'Get more information' received merely 0.9% of mentions. In the top 5 responses for all groups, there was consensus on (in descending order of total mentions):

- Eat healthier foods (172)
- Access health education (157)
- Exercise more (126)
- Receive preventive care (84)

All 4 groups agreed on Get enough sleep but in 9th or 10th place. Other specific ways to improve health that were mentioned by 3 groups, although not all in the top 5, were: Get involved in the community; Drink more water; and Manage stress.

TABLE 10. REGION: WAYS TO IMPROVE HEALTH

Most Frequent Answers to 'Ways to Improve Personal Health' Question
(in descending order of number of mentions)

Meeting	Consumer	Agency	Health Department
Exercise more	Make better lifestyle choices	Exercise more	Access health education
Access health education	Access health education	Access health education	Exercise more
Eat healthier foods	Receive preventive care	Eat healthier foods	Receive preventative care
Receive preventive care	Exercise more	Receive preventive care	Eat healthier
Make better lifestyle choices	Eat healthier	Make better lifestyle choices	Manage stress

Another new question this cycle was, "What is your perception of the overall health status of your community?"

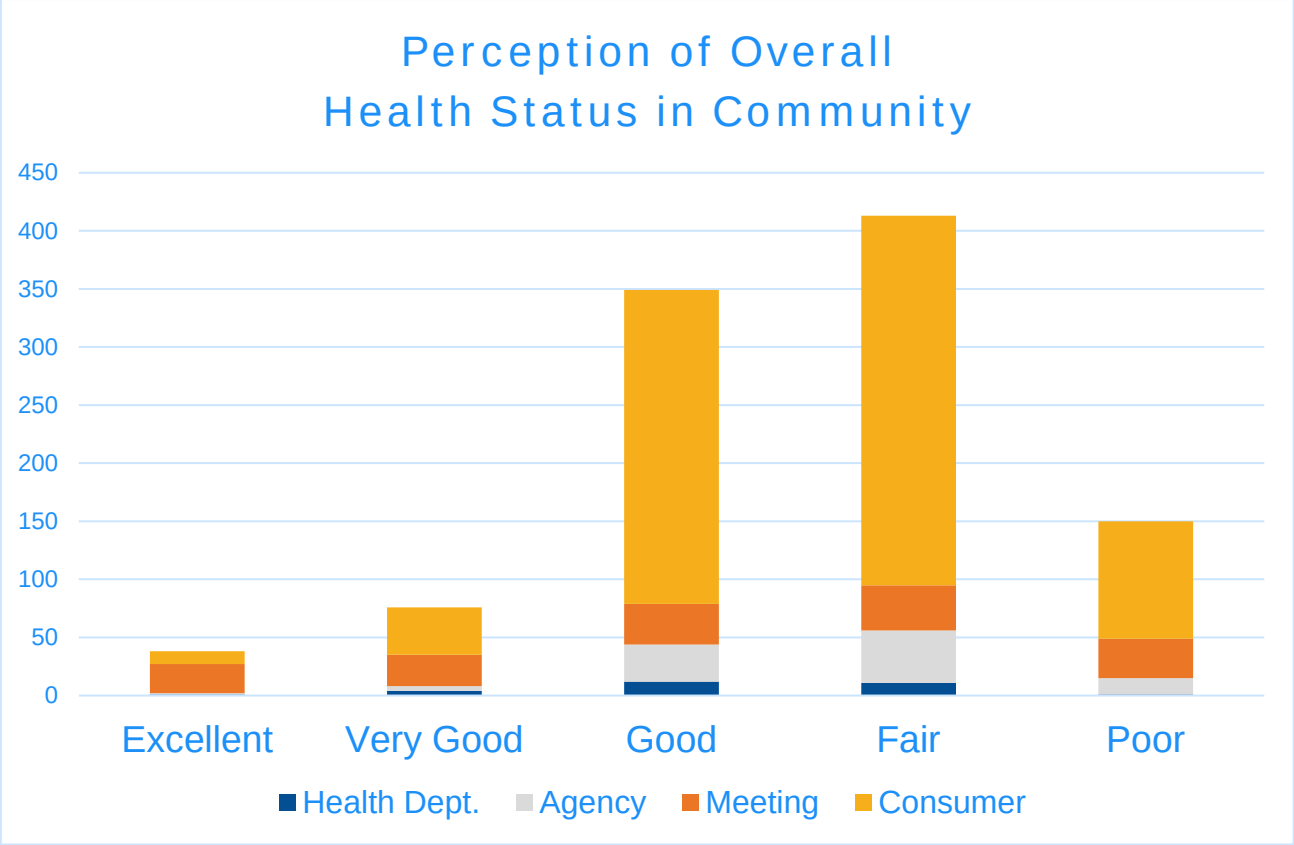


FIGURE 5. REGION: PERCEPTION OF HEALTH STATUS

Priorities from Community Meetings

At the meetings, each attendee received three colored dots to apply next to the issues they deemed most serious or important, based on their knowledge and experience and the interactive discussion during the meeting. All the comments, from all questions, were posted on the walls. The consultants observed some attendees conversing with each other and often voting for another's idea, instead of their own. Percentages represent how many dots an issue received divided by the number of total votes. There were 1,131 total votes. Figure 6 shows all topics receiving more than 20 votes, or at least 2%.

Meeting Priorities

Percentage of all votes

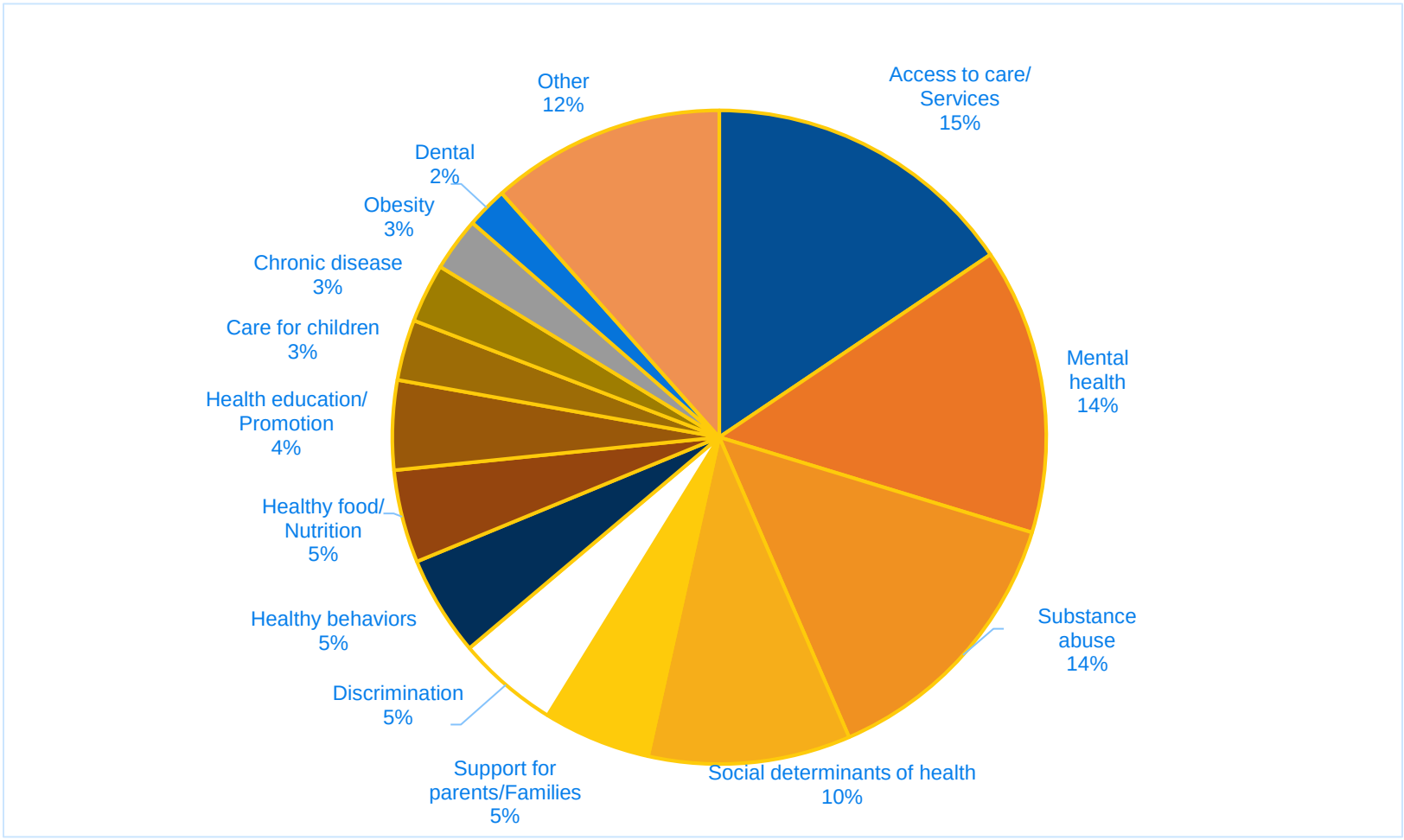


FIGURE 6. REGION: PRIORITY VOTING AT COMMUNITY MEETINGS

Discrimination was called out as its own category because of the number of votes it received from Butler (1), Greene (3), Hamilton (14), and Montgomery (39) Counties combined. Social Determinants of Health would have been an even larger slice of the pie, if discrimination had been counted there.

The top votes from Figure 6 reflect concerns shared across the region. Concern about parents and families is an emerging topic. It encompasses kinship care due to the opioid crisis and the needs of children born to parents who don't understand the importance of kindergarten readiness, school attendance, immunizations, or developmental milestones. The priorities reported by the most counties are shown below in Table 11. Many counties share other concerns as well, but meeting attendees did not assign them the highest priority. See Appendix E for the full list of meeting participants.

TABLE 11. REGION: MEETING PRIORITIES SHARED ACROSS COUNTIES

Categories of 'Serious Issues' Receiving Most Votes as 'Top Priorities'

	Access to care/ Services	SDH + Discrimi-nation	Mental health	Sub-stance abuse	Parents/ Families	Healthy behavior	Healthy food/ Nutrition	Health education /Promo.	Care for children	Chronic disease	Obesity	Dental
Boone			4	1				1	4	2		
Campbell	2		1			2		3				
Kenton		1	3	4	2	1		1				
Dearborn/Ohio/ Switzerland	14	5	17	19	12	22	1	3		3	2	3
Franklin	3		2	3								
Union				3				4				
Adams	6	10	11	16	2	1	2				4	
Brown	7	3		3					1	1		
Butler	5	1	7	11	1	2				1	2	
Champaign	10	8	3	11	2			1		2		2
Clark	34	22	25	14	8	10	8		8	8	3	8
Clermont	7	3	5	10	1	3	6	1			2	1
Clinton	2							1				
Darke	17		4	6	4			5	5	3	2	
Fayette	1	2			4	5						
Greene	7	3	1	2		1		3			4	
Hamilton	25	62	26	8	3	4	16	12	7	2	3	
Highland	4		2	2					2			
Miami					7		2					
Montgomery	19	47	33	27	11	5	12	8	8	8	6	4
Preble	5	1	6	1					3	3		2
Shelby	8		6	7	1		2	7			1	3
Warren		2	4	8	2		3				1	
Total Votes	176	170	160	156	60	56	52	50	38	33	30	23

Priorities from Consumer Surveys

New sub-categories emerged from the 1,131 comments of 715 consumer survey respondents. Within the category of Substance abuse, there were more mentions, compared to three years ago, about addiction in general, and not only in relation to opioids. Within the area of Mental health, Adverse Childhood Experiences (ACEs), suicide, and trauma were mentioned specifically. Under Access to care/services, transportation was listed as a priority in both urban and rural parts of the region. Table 12, below, shows the top priorities from the consumer surveys.

TABLE 12. REGION: PRIORITIES FROM CONSUMER SURVEYS

Most Frequent Answers to 'Priorities' Question on Consumer Surveys
(in descending order of number of mentions)

Priority	# Mentions	% Mentions
Substance abuse *(addiction=61; opioids=38; heroin=7; alcohol=7)*	238	23.3%
Chronic disease *(diabetes=43; cancer=36; heart=30; hypertension=15; respiratory=9)*	135	13.2%
Mental health *(trauma=4; child mental health=3; ACEs=3, suicide=2)*	100	9.8%
Obesity	100	9.8%
Access to care/services *(affordability=23; more drug treatment=11; insurance=11; transportation=7; dental=4)*	77	7.5%
Healthy food/Nutrition *(healthy food=42; nutrition=12; food insecurity=7)*	75	7.4%
Healthy behaviors *(quit smoking=27; exercise=18; lose weight=11; eat healthier=9; make healthier lifestyle choices=4)*	70	6.9%

Priorities from Agency Surveys

A total of 96 organizations completed the survey online and contributed 204 priorities. The nonprofits served one or more counties. A few organizations had more than one person from the agency respond. Fifty-eight agency respondents provided their contact information. They represent a good cross-section of sectors and geographic areas. Although the category, Care for children, received just under 5% of mentions. The report includes 'Care for children' here because it was also a new emerging category at meetings and with health departments. Most mentions concerned the general well-being and value of children in the community, but the category also included care for the children of addicts, childhood mental health, child hunger, school readiness, childcare, after-school programs, and safe places to play.

Appendix H lists the agencies that responded to the survey and provided their organization's name.

TABLE 13. REGION: AGENCY PRIORITIES

Most Frequent Answers to 'Priorities' Question on Agency Surveys
(in descending order of number of mentions)

Priority	# Mentions	% Mentions
Substance abuse	44	21.57%
Mental health	24	11.76%
Access to care/services (e.g, cost, specialty care/services, transportation)	15	7.35%
Chronic disease (diabetes=5, cancer=4, heart=3)	13	6.37%
Infant mortality	13	6.37%
Obesity	13	6.37%
Healthy food/Nutrition (nutrition=8)	11	5.39%
Healthy behaviors (smoking/tobacco=6)	11	5.39%
Care for children	10	4.90%

Priorities of Health Departments

Each of the county-level health departments responded, as well as the Cities of Cincinnati, Norwood and Springdale within Hamilton County and the Cities of Hamilton and Middletown in Butler County. They provided 87 responses to answer the question, "What are your top priorities?" Substance abuse was the top priority for 19 health departments in 16 counties. Mental health was a priority for health departments in 14 counties, and Chronic disease was a priority for 10 health departments in 8 counties. Table 14 below shows all priorities receiving more than 5% of mentions.

Appendix J provides a list of participating public health departments, the officials who completed the survey, and their qualifications.

TABLE 14. REGION: HEALTH DEPARTMENT PRIORITIES

Most Frequent Answers to 'Priorities' Question from Health Departments
(in descending order of number of mentions)

Priority	# Mentions	% Mentions
Substance abuse	19	21.8%
Mental health	14	16.1%
Chronic disease	10	11.5%
Obesity	7	8.0%
Care for children	6	6.9%
Healthy behaviors	6	6.9%
Maternal & child health / Infant mortality	6	6.9%
Access to care/services	5	5.7%

> *"We don't know if we have an infant mortality problem, because there's no birth center, prenatal care, or OB/Gyn doctor in Fayette County."*
>
> - Public health official

SECONDARY DATA

This section focuses on measures that transcend county boundaries. The Community Need Index provides an opportunity to look at ZIP Codes where health disparities may exist. Fourteen measures indicate negative outcomes, poor access, and/or risk factors that affect multiple counties. The CHNA team created maps to illustrate where there are areas of concern.

Health Disparities

A regional map, based on CNI scores for each ZIP Code, is shown below. As discussed on pages 34-35, the CNI is a validated high-level assessment of the risk of health disparities. CNI – Sixty-eight ZIP Codes, or 26% of the region's 262 ZIP Codes, had high scores (3.4 to 5.0) indicating a likelihood of disparities in their experience, or lack, of health care. Hamilton County contained 27 of these ZIP Codes, and Montgomery County had 12 of them. Four of the 6 ZIP Codes in Adams County reflect high likelihood of health disparities. About one-third of counties in the region do not show high CNI scores. That does not mean that no disparity exists. There can be pockets of need in every county.

Regional CNI Map

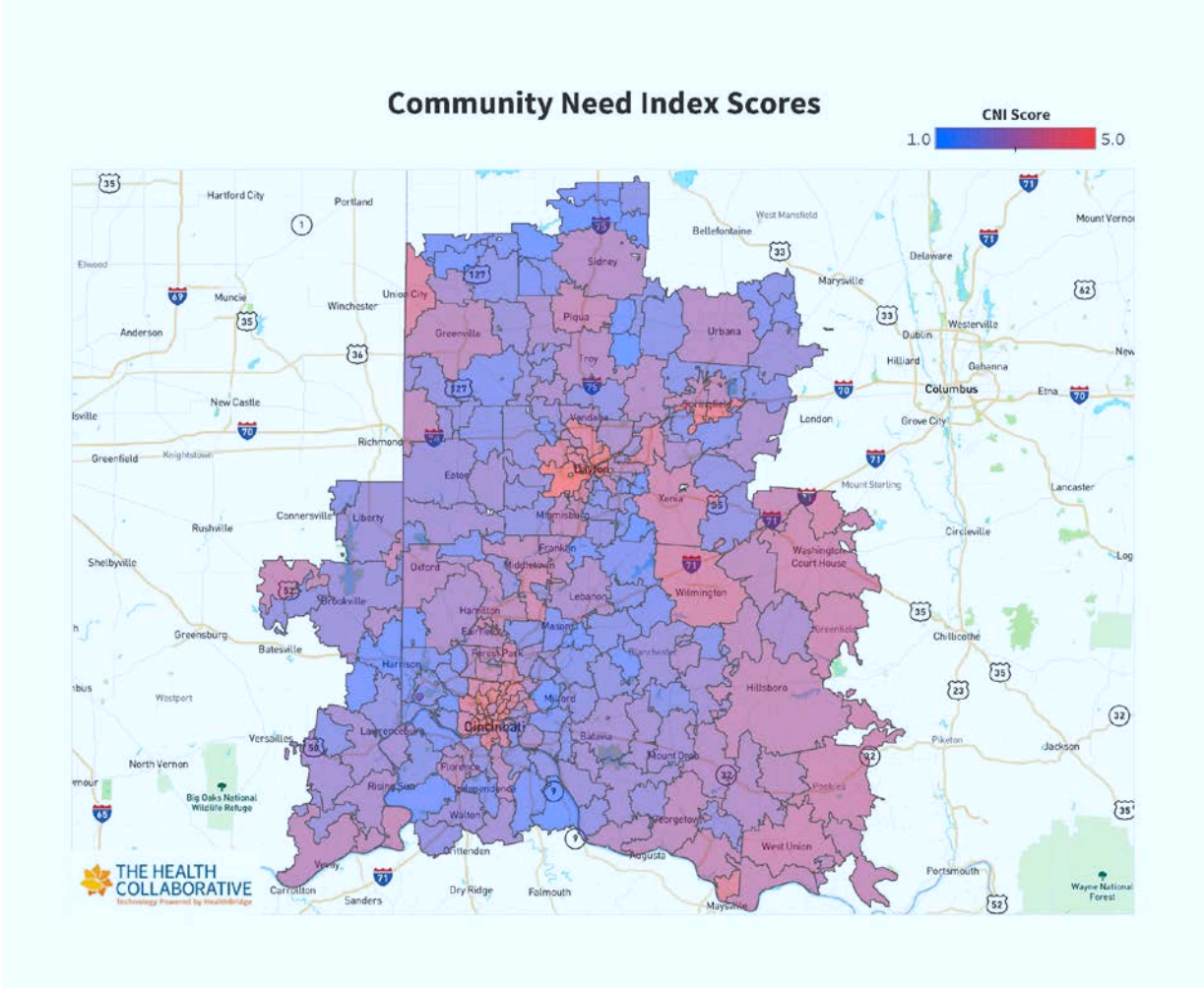


FIGURE 7. REGION: CNI SCORES

Shared Health Concerns

There are 14 measures where 2016 data is available for all counties, and where outcomes are worse than U.S. rates or percentages. At the end of this section are maps for each measure. Each of these maps represents either poor health outcomes or indicators of serious health factors which contribute to disease. Not mapped, but contained in the table below are an additional 10 measures where local rates or percentages lag the U.S. But for this group, either Kentucky and/or Indiana data is missing or the problems don't affect quite as many counties. This second group is included because some of these issues were cited in meetings and/or surveys.

TABLE 15. REGION: POOR HEALTH OUTCOMES OR FACTORS SHARED BY MULTIPLE COUNTIES

Health Issues from Secondary Data – Affecting 64% to 100% of Counties

Health or Health-related Measure	# of counties	% of counties
Injury deaths (per 100,000)	25	100%
Mental health providers (ratio of 1 provider per)	24	96%
Lung cancer mortality (rate per 100,000)	23	92%
Drug poisoning deaths (per 100,000)	23	92%
Adult smoking (%)	22	88%
Overall cancer mortality (rate per 100,000)	22	88%
Dentists (ratio of 1 dentist per)	20	80%
Physical inactivity (%)	19	76%
Average # of poor mental health days (in past 30 days)	18	72%
Binge/excessive drinking (%)	18	72%
Diabetes (%)	18	72%
Primary care physicians (ratio of 1 PCP per)	18	72%
Adult obesity (%)	17	68%
Alcohol-impaired driving deaths (%)	16	64%
Unmapped: Incomplete data or not as widespread:		
Chronic lower respiratory disease deaths age 65+ (rate per 100,000)	16	64%
Stroke deaths (rate per 100,000)	16	64%
Suicide (rate per 100,000)	16	64%
Heart disease deaths (rate per 100,000)	15	60%
Heroin poisoning overdose deaths (per 100,000)	14	56%
Infant mortality (rate per 1,000 births)	13	52%
Food insecurity (%)	10	40%
Motor vehicle crash deaths (per 100,000)	10	40%
Children in poverty (%) (<18yrs.)	8	32%
Depression (%)	8	32%

Butler, Clinton, and Dearborn Counties had high numbers for most measures. Some counties had mixed results. For example, Shelby County had the highest numbers for Adult obesity, Physical inactivity, and Diabetes, but its Adult smoking and Binge drinking percentages were on the low end. Preble County had

the highest numbers for Poor mental health days, Adult smoking, and Binge drinking, but it was on the low end for Adult obesity and Diabetes. Brown County had the highest numbers for Binge drinking and Injury deaths, and the 2nd highest rate for Lung cancer. Brown County, however, had low percentages of Adult obesity and Diabetes.

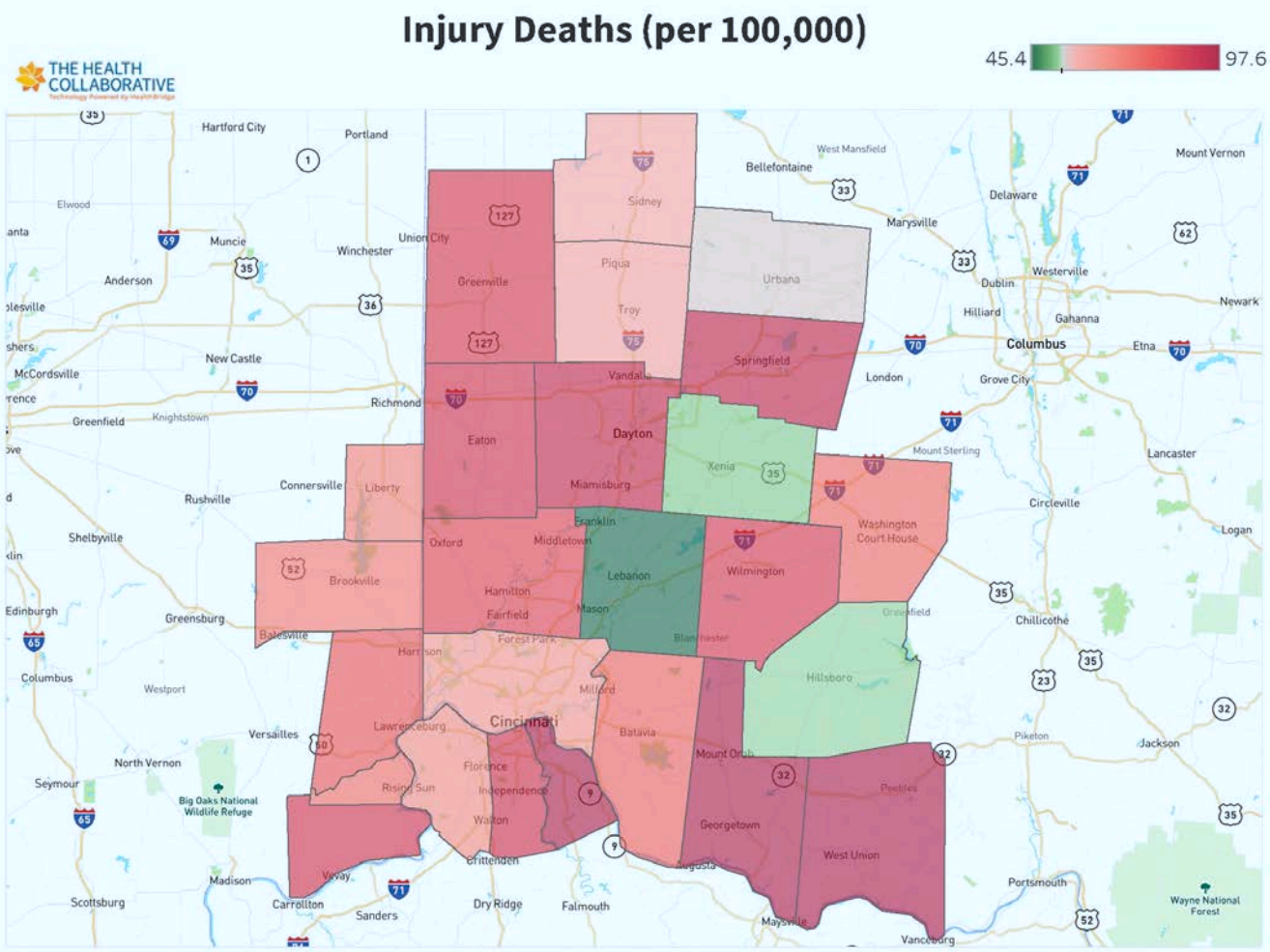
Here is a description of the significance of each metric.

- Injury deaths (per 100,000) – Injury deaths include intentional (e.g. suicide by firearm, suicide by suffocation, homicide by firearm) and unintentional (e.g., poisoning, motor vehicle traffic, fall) injury deaths. All 25 counties in the region had high rates of injury deaths. The rates ranged from 97.6 in Adams County to 45.5 in Warren County. The national rate was 45.3. The state averages were all high: Indiana at 70; Kentucky at 88; and Ohio at 61.2. The Healthy People 2020 goal is 53.7.
- Mental health providers (ratio of 1 provider per): – 24 counties in the region had low numbers of mental health providers for their residents. The rate of people served by one provider ranged from 415 in Hamilton County to 7,250 in Union County, IN. The national rate was 1 provider per 470 residents. The state ratios were all high: Indiana at 1 per 701 people; Kentucky at 1 per 525 people; and Ohio.at 1 per 636 people. The average of all three states is 1 mental health provider per 613 people. There is no Healthy People 2020 goal.
- Lung cancer mortality (rate per 100,000): – 23 counties in the region had high rates of lung cancer deaths. The rates ranged from 38.2 in Greene County to 82.9 and 80.in the Indiana counties of Ohio and Switzerland Counties respectively. The national rate was 39.4. The state rates were all high: Indiana at 55.1; Kentucky at 67.3; and Ohio.at 48.2. The Healthy People 2020 goal is 45.5.
- Drug poisoning deaths (per 100,000): – 23 counties had high rates of drug poisoning deaths. A fact sheet published in August 2017 provides a sobering context.[21] Poisoning is the leading cause of injury death, and drugs (legal or illegal) are responsible for most of the poisoning deaths. From 1999 to 2015, the age-adjusted rate tripled nationally from 6.1 to 16.3 drug poisoning deaths per 100,000. There were increases in deaths caused by heroin, synthetic opioids (excluding methadone), cocaine, and psychostimulants, such as methamphetamine and ritalin. In 2015 Ohio, Kentucky, and Indiana all had statistically higher rates than the national rate. Kentucky and Ohio were among the 4 states with the highest age-adjusted drug poisoning deaths in the U.S. Regionally, the rate ranged from 12.4 in Ohio County, IN to 56 and 58 in adjacent Kentucky counties of Kenton and Campbell, respectively. The Healthy People 2020 goal is 11.3.
- Adult smoking (%): – 22 counties have high percentages of adults who smoke. The range is 10% in Warren County and 43% in Preble County. Brown County was the next highest at 37%. The state percentages are all higher than the national percentage of 16.5%: 21% in Indiana; 24% in Kentucky; and 22% in Ohio. The Healthy People 2020 goal is 12.
- Overall cancer mortality (rate per 100,000): – 22 counties had high rates of overall cancer deaths. The death rate ranged from 153.8 in Warren County to 232.1 in Ohio County, IN. The state percentages are all higher than the national rate of 157.1: 182.2 in Indiana; 197.8 in Kentucky; and 174.3 in Ohio. The Healthy People 2020 goal is 161.4.
- Dentists (ratio of 1 dentist per): – 20 counties in the region had low numbers of dentists for their residents. The rate of people served by one provider ranged from 1,210 in Greene County to 6,250 in Brown County. The average of all three states was 1 dentist per 1,691 people. The state ratios

[21] National Center for Health Statistics (2017). NCHS data on drug-poisoning deaths. CDC. August.

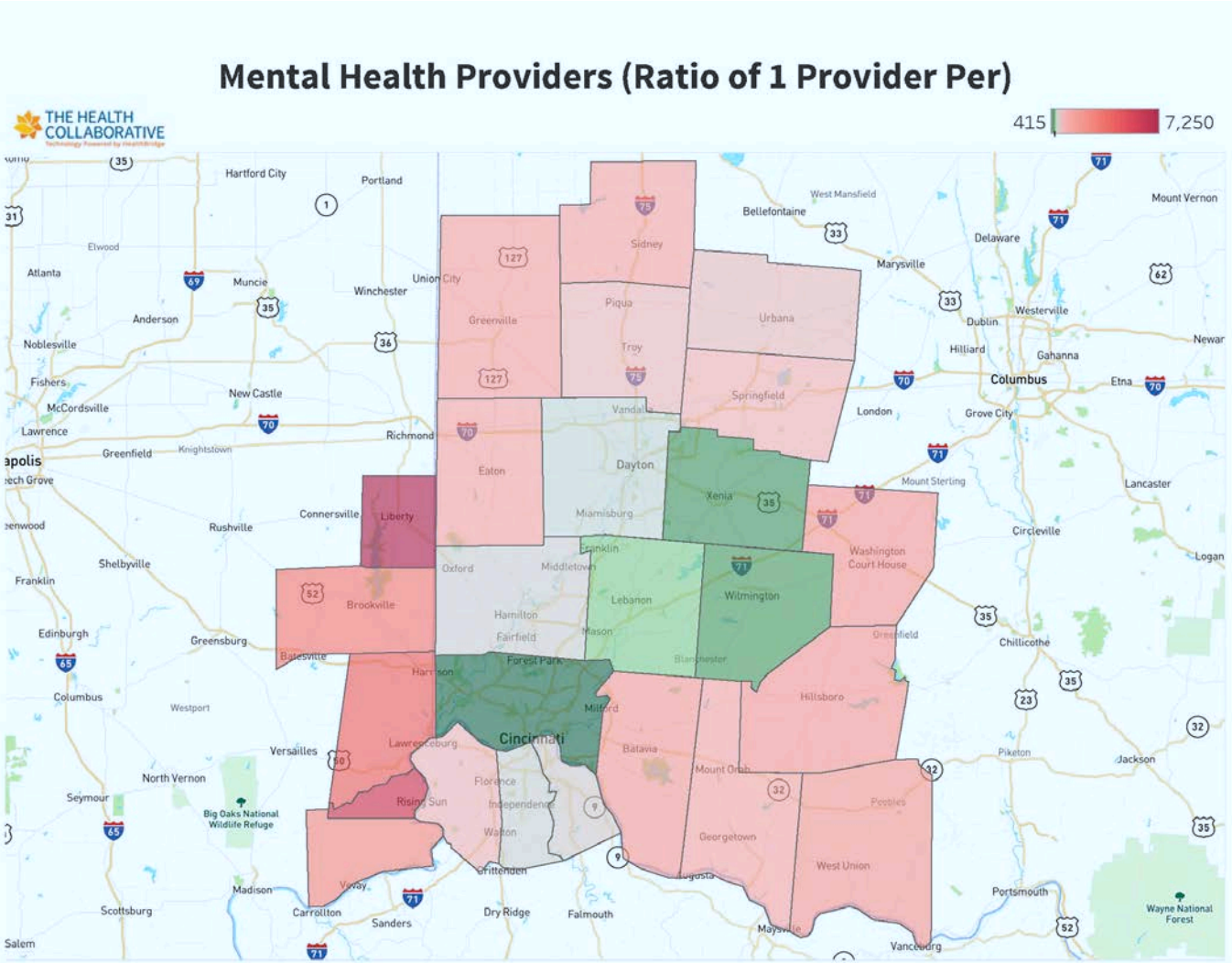
were all high: Indiana at 1 per 1,852 people; Kentucky at 1 per 1,561 people; and Ohio.at 1 per 1,660 people. There is no Healthy People 2020 goal.

- Physical inactivity (%): – 19 counties had high percentages of residents who are physically inactive. The range varied from 16% in Warren County to 43% of residents in both Champaign and Shelby Counties. The national percentage is 25.2%, and all three states had slightly higher rates. The Healthy People 2020 goal is 20.1%.
- Average # of poor mental health days (in past 30 days):– 18 counties had residents with high number of 'poor mental health days' in the previous 30 days. They all exceed the national average of 3.7 days. The highest number was an average of 7.3 days for Preble County residents. Residents of Champaign County had 7 days. Eight counties exceed the region's average of 4.124 days. Fayette County residents reported the fewest with 1.9 days. There is no Healthy People 2020 target.
- Binge, or excessive, drinking (%) – Binge drinking is defined as men having 5 or more drinks in one sitting, or women having 4 or more at a time. 18 counties had percentages at 16% or higher. All counties were under the Healthy People 2020 target of 24.4%, but the region's average of 17% exceeds the national average of 16.6%.
- Diabetes (%): – 18 counties had a higher percentage of residents with diabetes than the national percentage of 10.7%. It's 13% in Kentucky and 11% in Ohio and Indiana. The Healthy People 2020 goal is 16%. Adams (17.5%), Clinton (17%), and Shelby (19.2%) Counties had the highest percentages and exceeded the HP2020 target.
- Primary care physicians (ratio of 1 PCP per): – 18 counties in the region had low numbers of primary care physicians for their residents. The rate of people served by one provider ranged from 920 in Hamilton County to 10,424 in Switzerland County, IN. The average of all three states was 1 primary care physician per 1,441 people. The state ratios ranged from 1 PCP for 1,310 people in Ohio to 1 PCP for approximately 1,500 people in Indiana and Kentucky. There is no Healthy People 2020 goal.
- Adult obesity (%): – 17 counties had percentages of Adult obesity that were higher than the national average of 29.2%. The Healthy People 2020 goal is 30.5%. 52% of residents in Shelby County were obese, and 44% of Darke County residents. What's surprising is that, despite the high obesity percentage, Darke County had one of the lowest percentages of Diabetes (8.4%).
- Alcohol-impaired driving deaths (%)::– 16 counties had higher percentages of motor vehicle accidents with alcohol involvement. The regional and national percentage was 30%, and there is no Healthy People 2020 target. Ohio's percentage was 34%, while Indiana and Kentucky were 22% and 28% respectively. The 4 counties with the highest percentages (39%-42%), surprisingly had low percentages for Binge drinking (Clark, Highland, Montgomery, and Shelby).



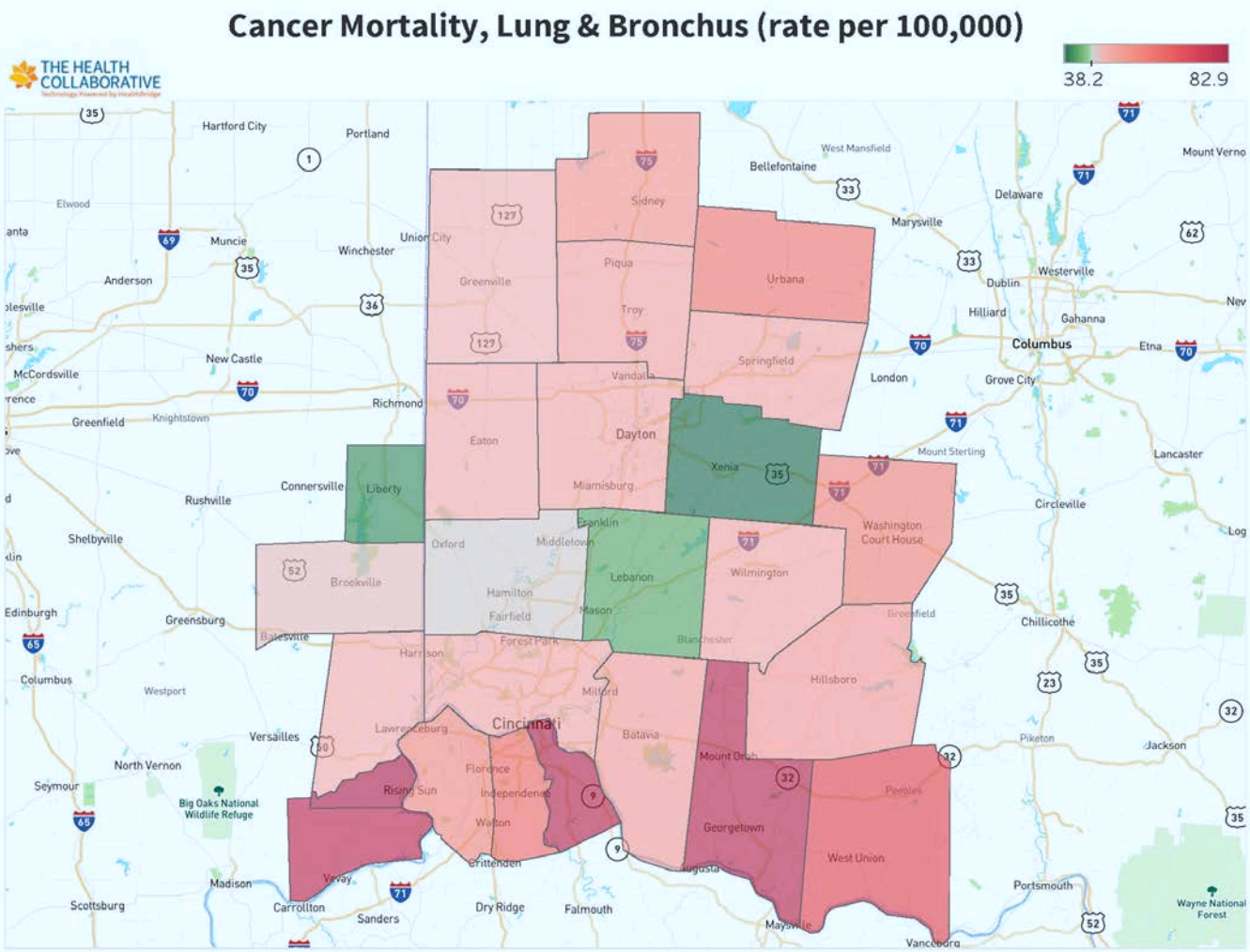
Map shows sum of Injury deaths (per 100,000) - includes intentional (e.g. suicide by firearm, suicide by suffocation, homicide by firearm). The United States average is 45.3 injury deaths per 100,000.

FIGURE 8. INJURY DEATHS (PER 100,000)



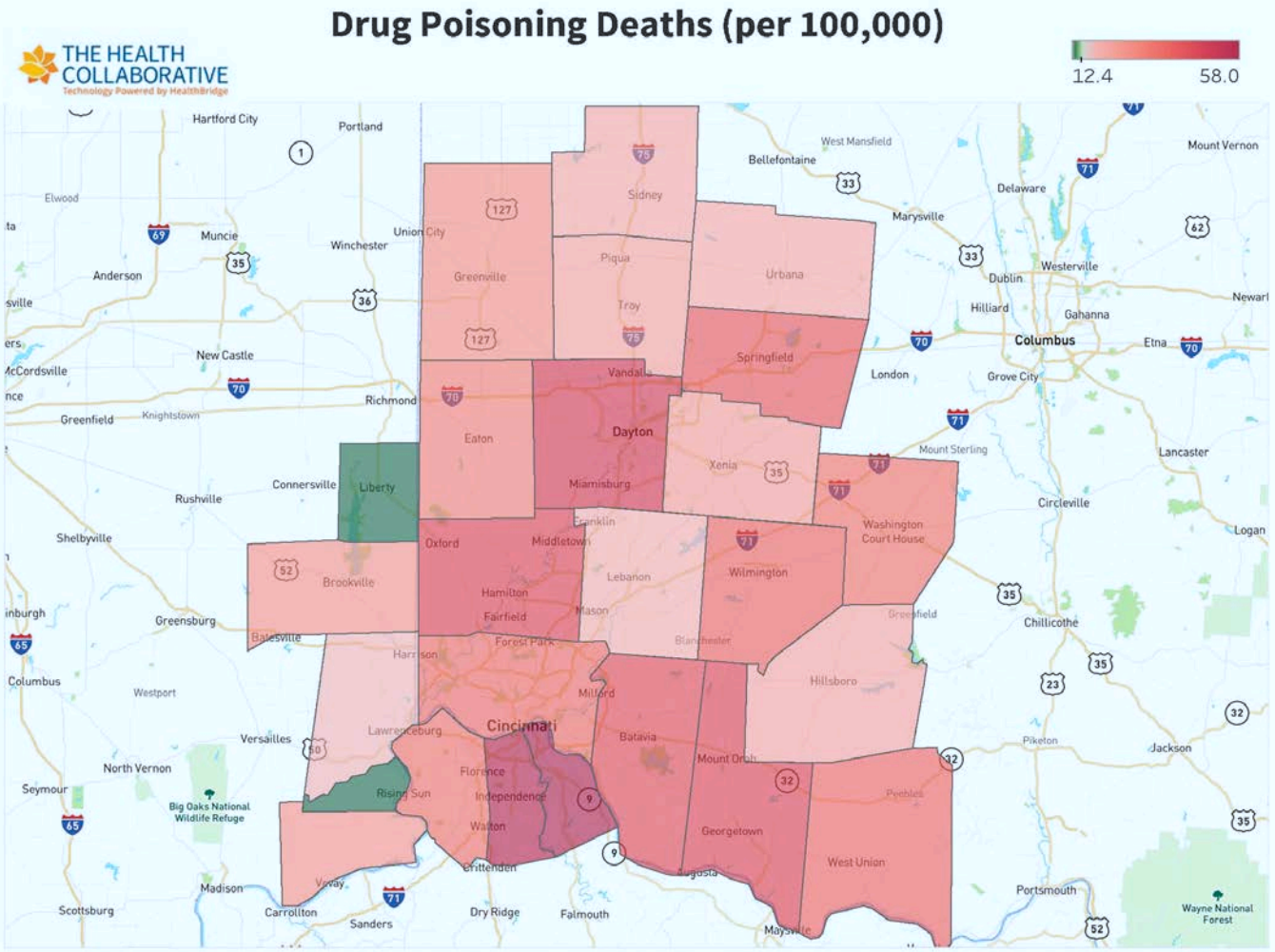
Map shows ratio of mental health providers (number of residents per 1 provider). Details are shown by county. The United States average is 1 provider per 470 residents.

FIGURE 9. MENTAL HEALTH PROVIDERS (RATIO OF POPULATION PER 1 PROVIDER)



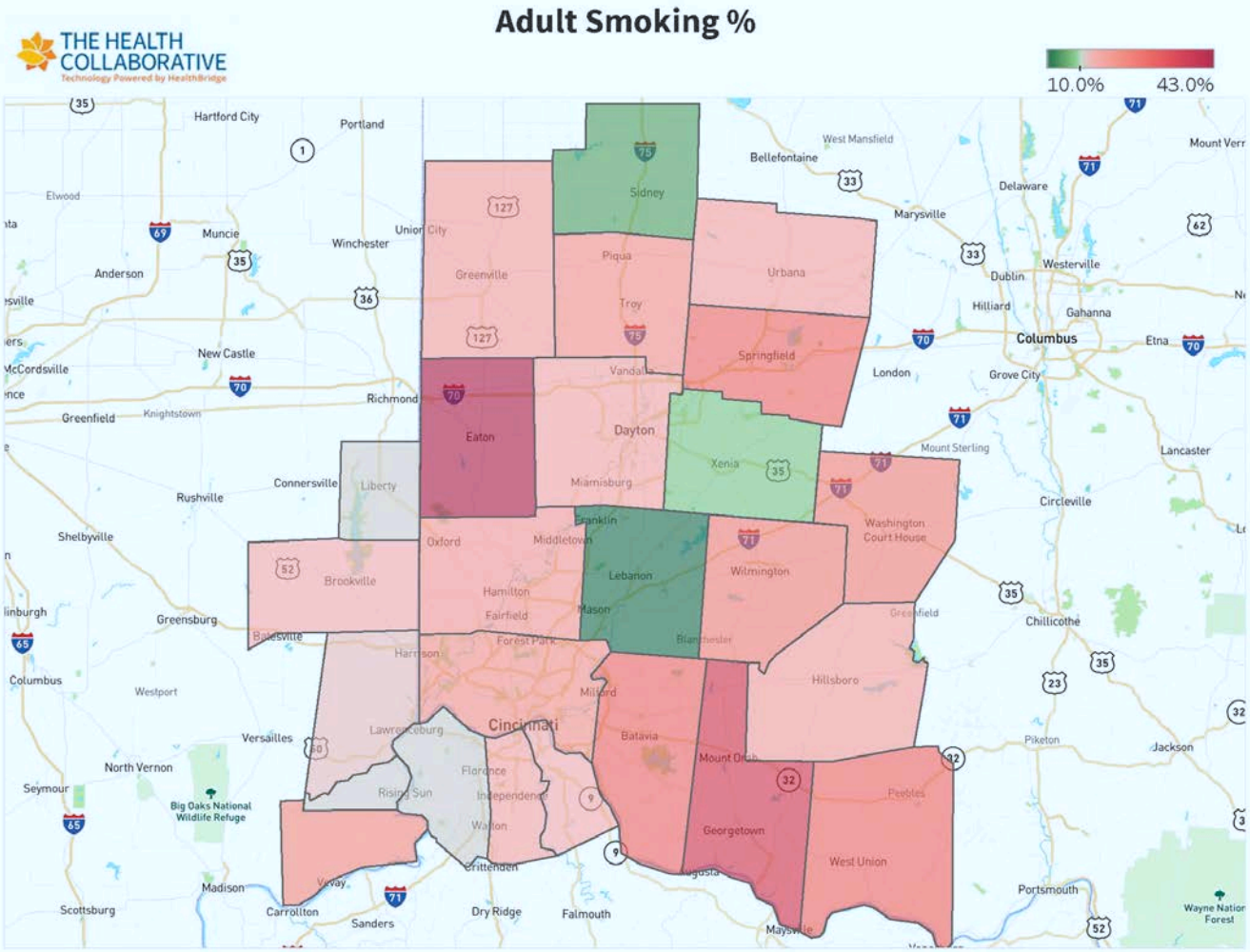
Map shows sum of Cancer mortality, Lung & Bronchus (rate per 100,000). Details are shown by county. The United States average is 39.4 per 100,000.

FIGURE 10. LUNG CANCER MORTALITY (PER 100,000)



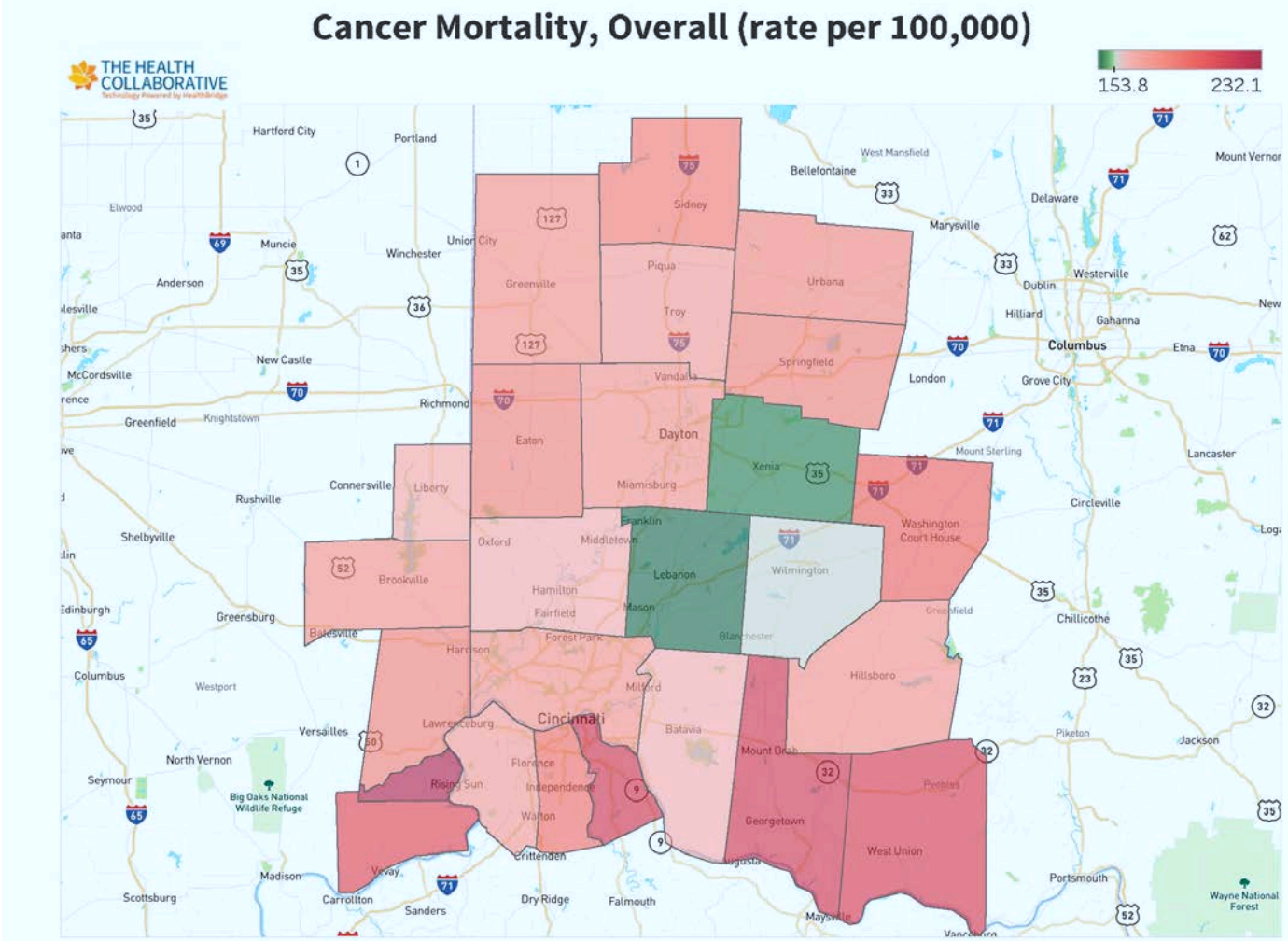
Map shows the ratio of Drug Poisoning Deaths (per 100,000) - including prescription drugs and heroin. Details are shown for each county. The overall United States average is 14.6 per 100,000.

FIGURE 11. DRUG POISONING DEATHS (PER 100,000)



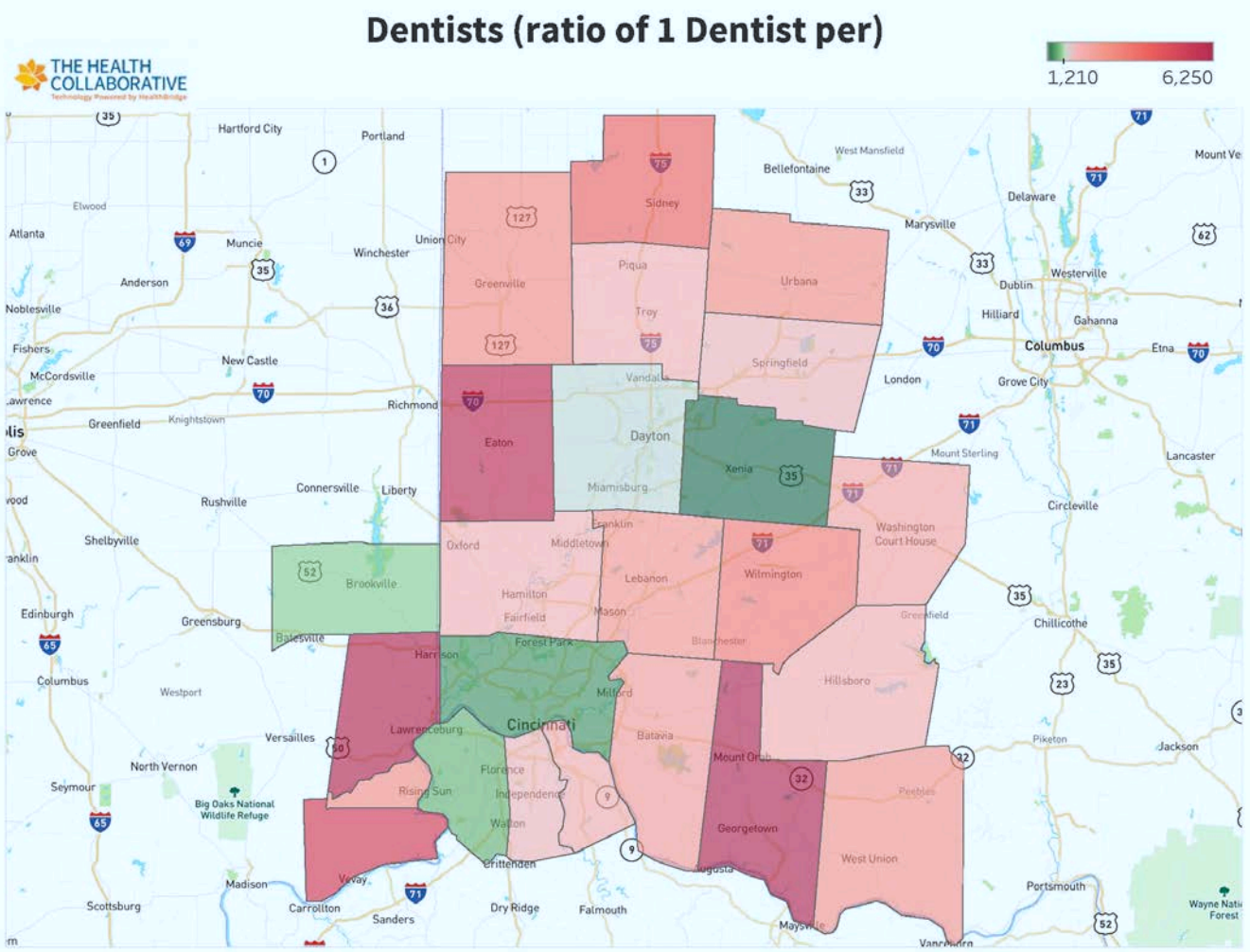
Map shows sum of Adult smoking (%). Details are shown by county. The United States average is 16.5%.

FIGURE 12. ADULTS SMOKING (%)



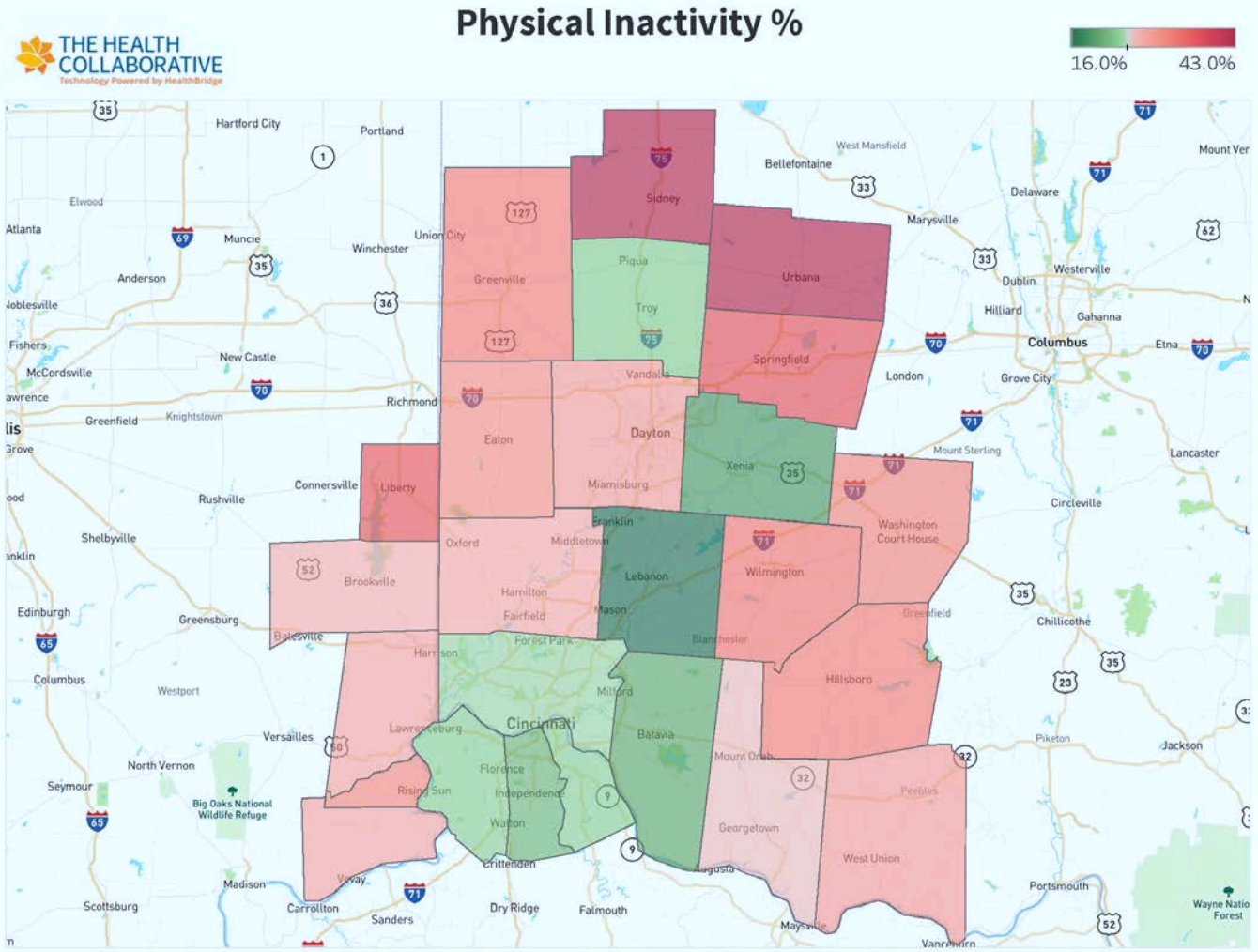
Map\shows sum of Cancer mortality, Overall (rate per 100,000). Details are shown by county. The United States average is 157.1 per 100,000.

FIGURE 13. OVERALL CANCER MORTALITY (PER 100,000)



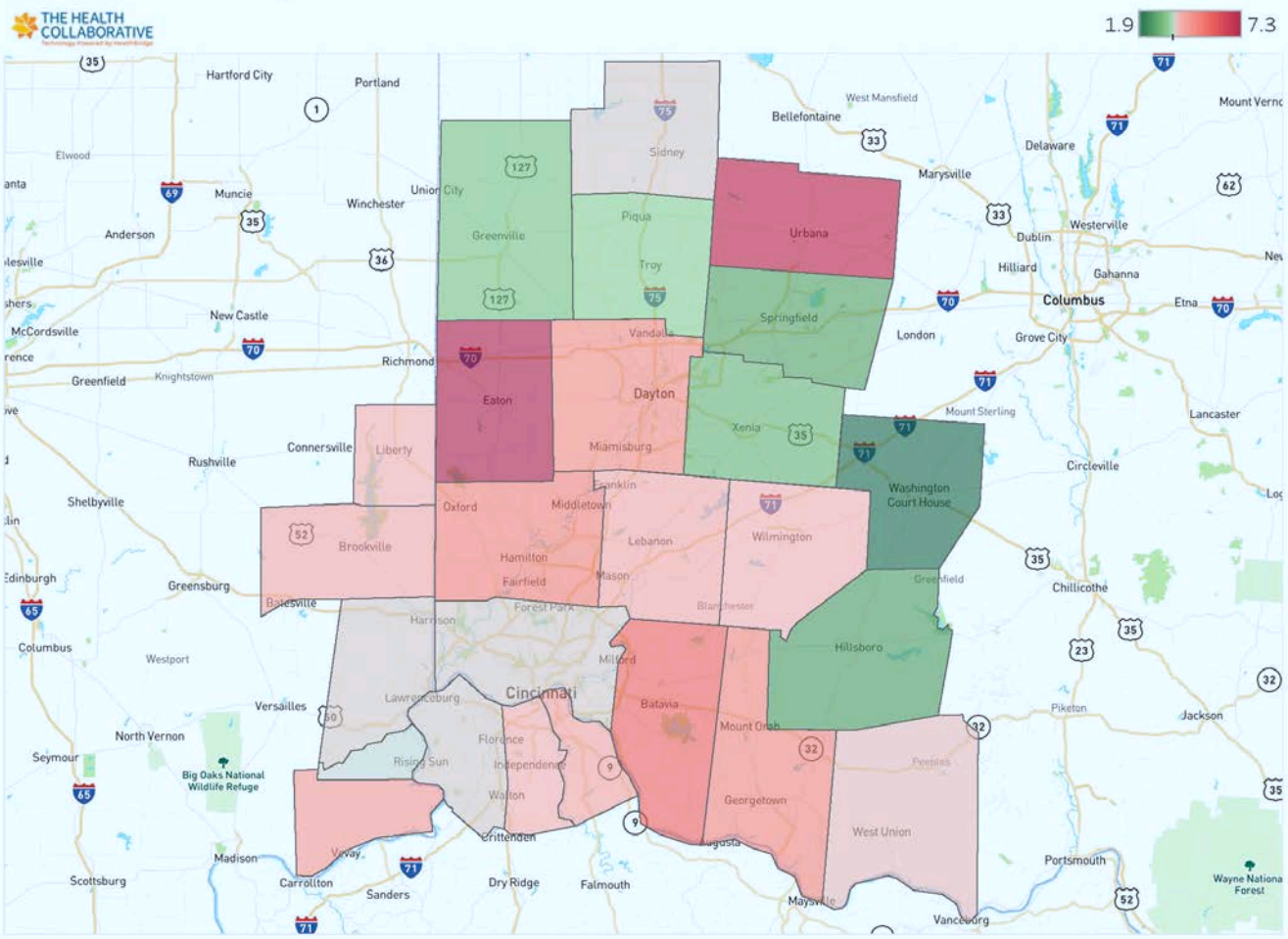
Map shows ratio of Dentists (ratio per 1 dentist). Details are shown by county, however, data was not available for Union County (IN).

FIGURE 14. DENTISTS (RATIO OF POPULATION PER 1 PROVIDER)



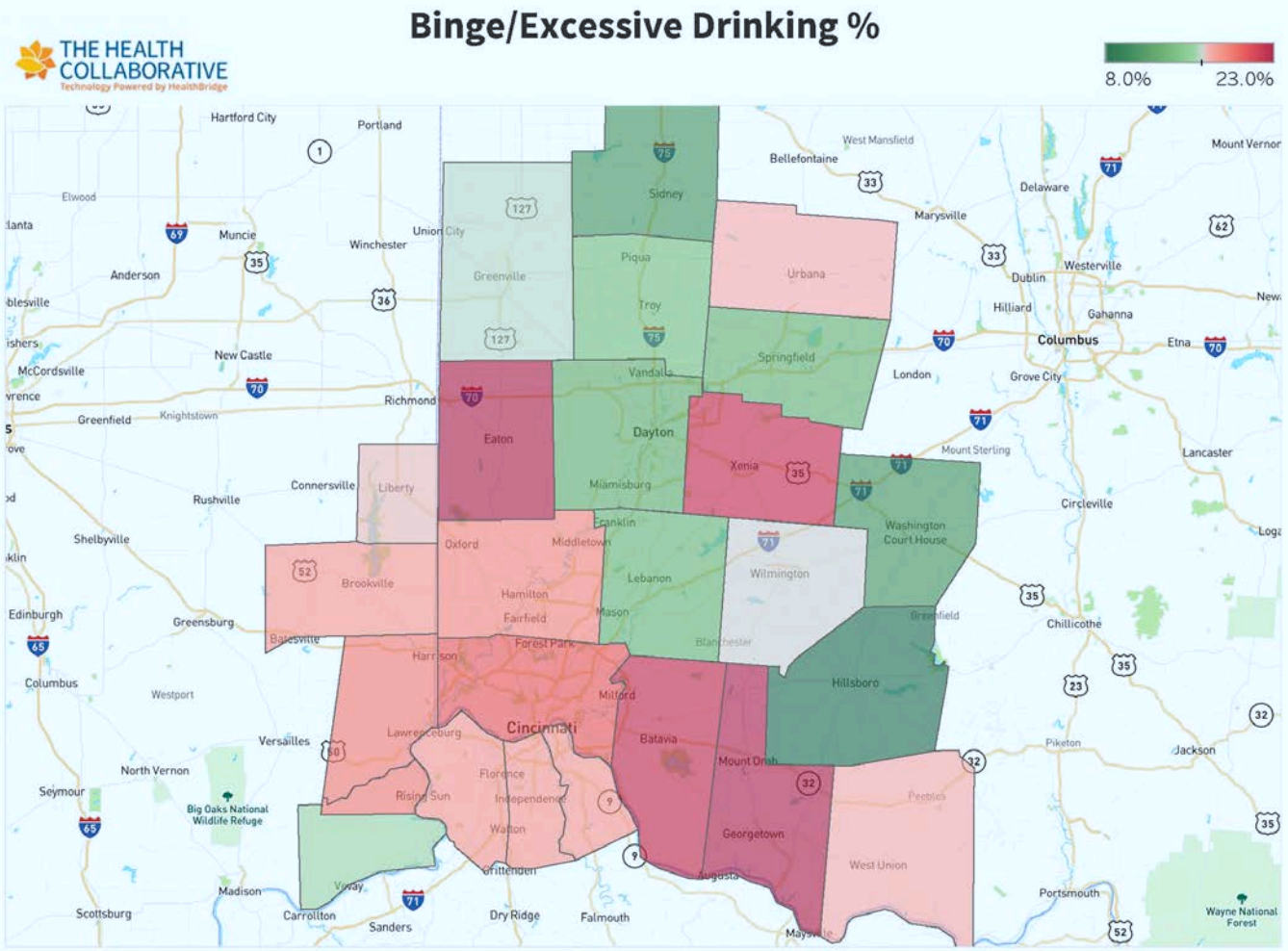
Map shows Physical Inactivity (%). Details are shown by county. The United States average is 25.2%.

FIGURE 15. PHYSICAL INACTIVITY (%)



Map shows average number of poor mental health days (in the last 30 days). Details are shown by county. The United States average is 3.7 days.

FIGURE 16. AVERAGE NUMBER OF POOR MENTAL HEALTH DAYS (IN PAST 30 DAYS)



Map shows Binge/excessive drinking (%) - 5 or more drinks in one sitting for a man; 4 or more for a woman. Details are shown by county. The United States average is 16.6%

FIGURE 17. BINGE/EXCESSIVE DRINKING (%)

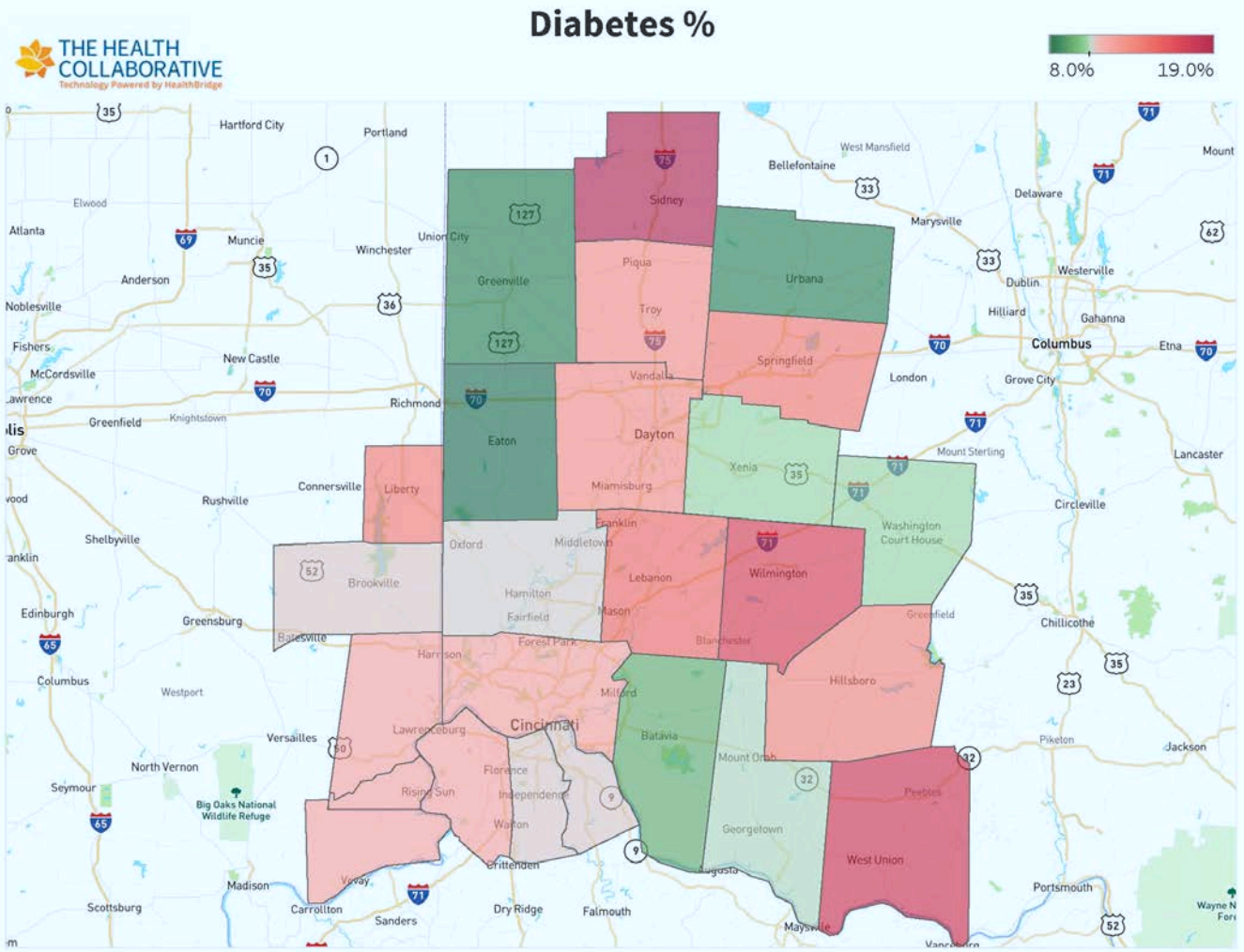
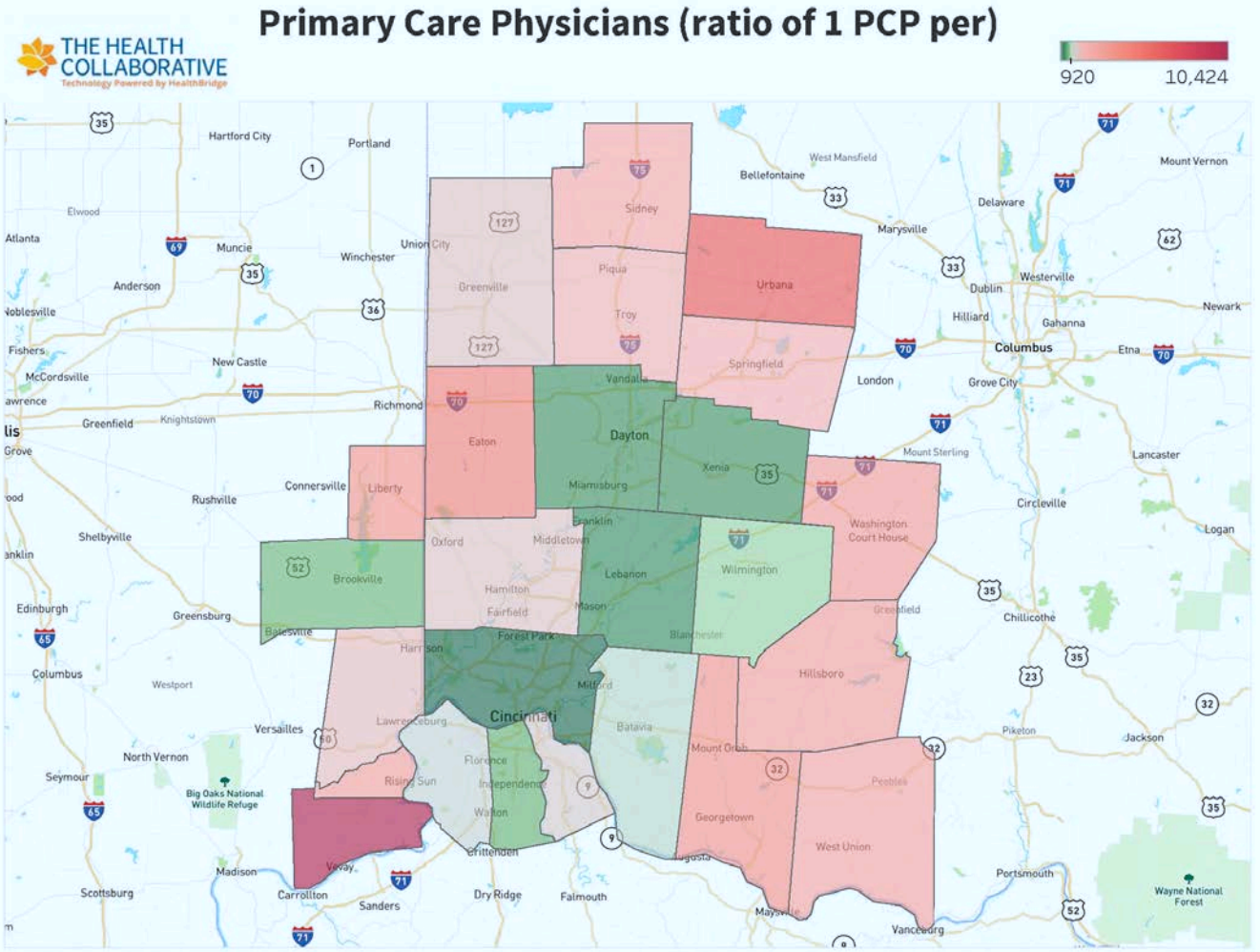
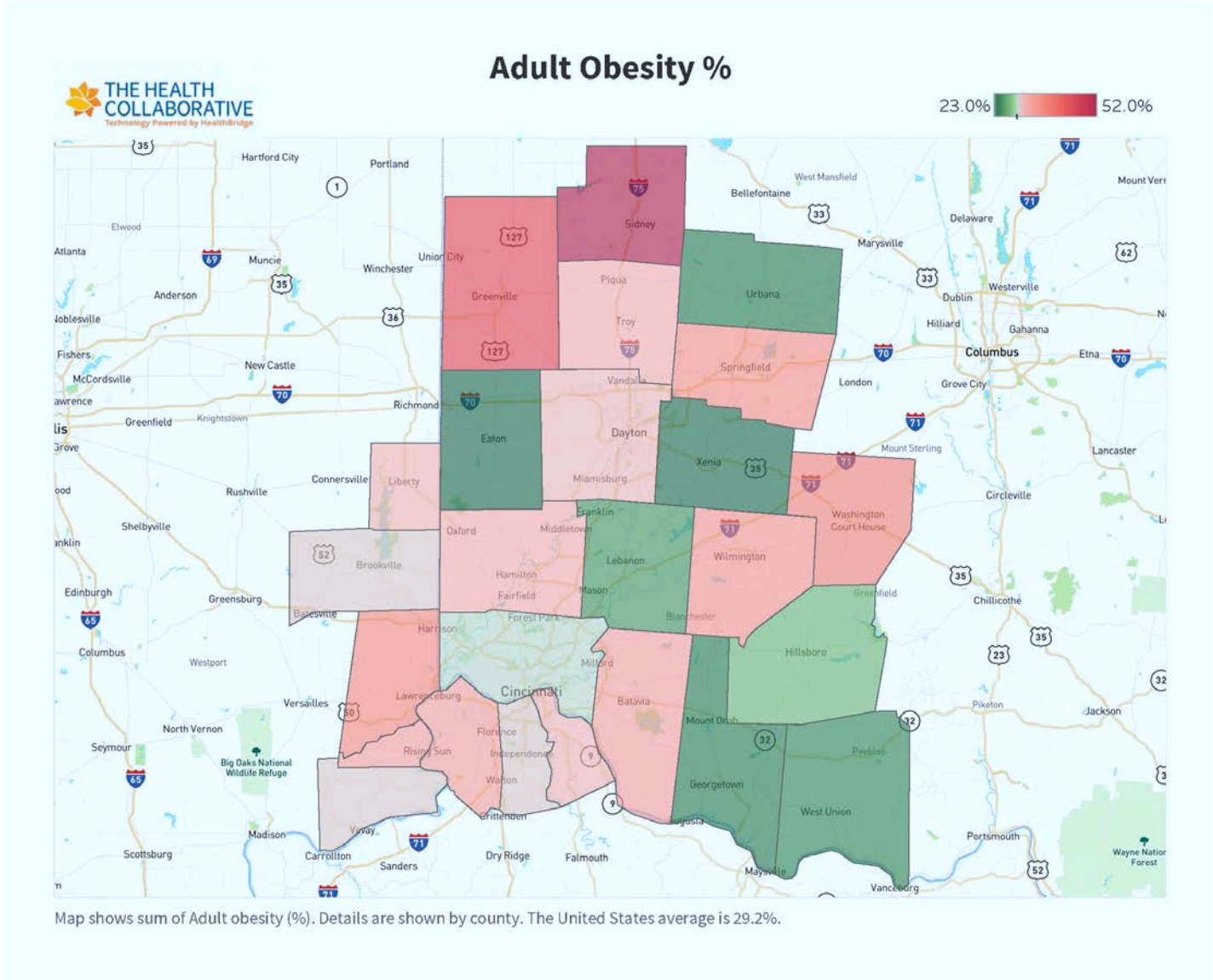


FIGURE 18. DIABETES (%)



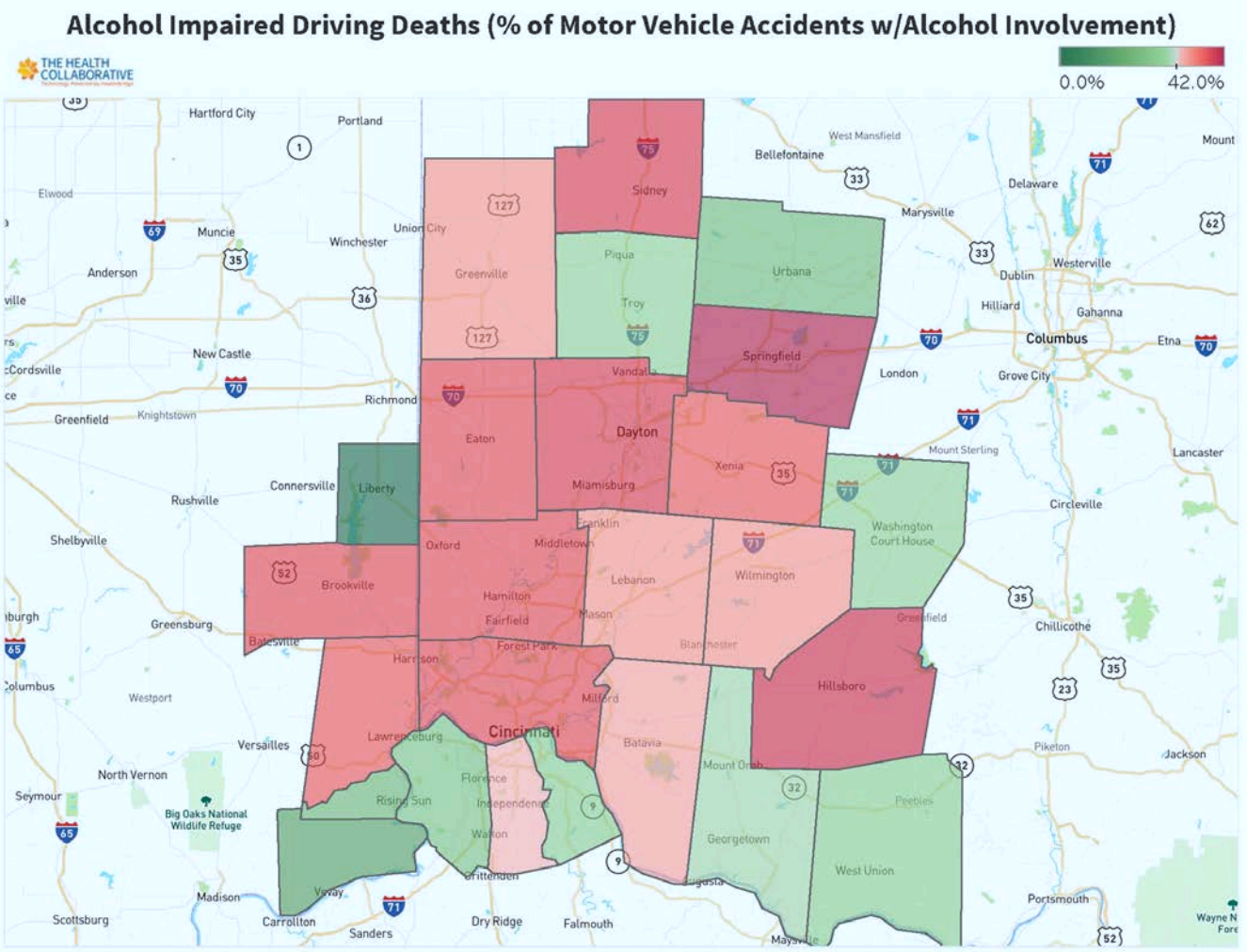
Map shows ratio of Primary Care Physicians (PCPs) (number of residents per 1 provider). Details are shown by county.

FIGURE 19. PRIMARY CARE PHYSICIANS (RATIO OF POPULATION PER 1 PCP)



Map shows sum of Adult obesity (%). Details are shown by county. The United States average is 29.2%.

FIGURE 20. ADULT OBESITY (%)



Map shows the ratio of Alcohol-Impaired Driving Deaths (% motor vehicle accidents with alcohol involvement). Details are shown by county. The United States average is 30%.

FIGURE 21. ALCOHOL-IMPAIRED DRIVING DEATHS (%)

Causes of Death

The CHNA Report provides two ways of viewing data collected from death certificates. The first version is the "15 Leading Causes" report from CDC Wonder. It clusters similar diseases, such as all types of cancers are grouped under 'malignant neoplasms.' See below.

TABLE 16. REGION: 15 LEADING CAUSES OF DEATH, 2014-2016

15 Leading Causes of Death		
(age-adjusted rates per 100,000)		
2014	**2015**	**2016**
Malignant neoplasms (180.0)	Diseases of heart (181.8)	Diseases of heart (175.8)
Diseases of heart (176.4)	Malignant neoplasms (178.0)	Malignant neoplasms (174.2)
Accidents (unintentional injuries) (63.1)	Accidents (unintentional injuries) (71.2)	Accidents (unintentional injuries) (74.8)
Chronic lower respiratory diseases (46.6)	Chronic lower respiratory diseases (49.6)	Chronic lower respiratory diseases (46.1)
Cerebrovascular diseases (43.2)	Cerebrovascular diseases (45.8)	Cerebrovascular diseases (45.8)
Alzheimer's disease (31.7)	Alzheimer's disease (33.1)	Alzheimer's disease (35.8)
Diabetes mellitus (24.9)	Diabetes mellitus (24.3)	Diabetes mellitus (24.4)
Influenza and pneumonia (18.3)	Influenza and pneumonia (17.2)	Nephritis, nephrotic syndrome and nephrosis (15.3)
Nephritis, nephrotic syndrome and nephrosis (14.7)	Nephritis, nephrotic syndrome and nephrosis (14.7)	Influenza and pneumonia (15.2)
Septicemia (12.7)	Septicemia (14.1)	Septicemia (14.2)
Intentional self-harm (suicide) (13.5)	Intentional self-harm (suicide) (13.8)	Intentional self-harm (suicide) (14.0)
Chronic liver disease and cirrhosis (9.7)	Chronic liver disease and cirrhosis (9.5)	Chronic liver disease and cirrhosis (9.7)
Essential hypertension and hypertensive renal disease (9.0)	Essential hypertension and hypertensive renal disease (8.6)	Essential hypertension and hypertensive renal disease (7.4)
Parkinson's disease (8.3)	Parkinson's disease (8.2)	Parkinson's disease (7.4)
Pneumonitis due to solids and liquids (6.1)	Pneumonitis due to solids and liquids (6.7)	Pneumonitis due to solids and liquids (6.5)

The top 15 have not changed in the three years from 2014 to 2016, although a couple have switched places from year to year.

The “Underlying Causes” table shows the single underlying cause. Lung cancer has remained #1. The table also reveals that accidental drug poisoning is a major component of the unintentional injury deaths.

TABLE 17. REGION: UNDERLYING CAUSES OF DEATH, 2014-2016

Underlying Causes of Death		
(age-adjusted rates per 100,000)		
2014	**2015**	**2016**
Bronchus or lung, unspecified - Malignant neoplasms (52.3)	Bronchus or lung, unspecified - Malignant neoplasms (52.0)	Bronchus or lung, unspecified - Malignant neoplasms (47.7)
Atherosclerotic heart disease (50.0)	Atherosclerotic heart disease (46.4)	Atherosclerotic heart disease (42.2)
Unspecified dementia (43.5)	Unspecified dementia (39.1)	Unspecified dementia (37.3)
Chronic obstructive pulmonary disease, unspecified (34.5)	Chronic obstructive pulmonary disease, unspecified (34.0)	Alzheimer's disease, unspecified (33.7)
Acute myocardial infarction, unspecified (33.0)	Acute myocardial infarction, unspecified (33.6)	Chronic obstructive pulmonary disease, unspecified (33.7)
Alzheimer's disease, unspecified (30.2)	Alzheimer's disease, unspecified (32.0)	Accidental poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified (31.7)
Stroke, not specified as haemorrhage or infarction (20.8)	Accidental poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified (27.8)	Acute myocardial infarction, unspecified (28.7)
Accidental poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified (20.2)	Congestive heart failure (21.3)	Congestive heart failure (20.9)
Congestive heart failure (19.2)	Stroke, not specified as haemorrhage or infarction (21.2)	Stroke, not specified as haemorrhage or infarction (19.0)
Pneumonia, unspecified (15.4)	Accidental poisoning by and exposure to other and unspecified drugs, medicaments and biological substances (15.0)	Accidental poisoning by and exposure to other and unspecified drugs, medicaments and biological substances (14.1)
Accidental poisoning by and exposure to other and unspecified drugs, medicaments and biological substances (14.2)	Pneumonia, unspecified (14.2)	Atherosclerotic cardiovascular disease, so described (13.7)
Atherosclerotic cardiovascular disease, so described (13.1)	Atherosclerotic cardiovascular disease, so described (13.4)	Pneumonia, unspecified (13.6)

Underlying Causes of Death, continued		
Breast, unspecified - Malignant neoplasms (12.2)	Breast, unspecified - Malignant neoplasms (13.3)	Septicaemia, unspecified (13.4)
Septicaemia, unspecified (11.8)	Septicaemia, unspecified (13.1)	Breast, unspecified - Malignant neoplasms (12.1)
Pancreas, unspecified - Malignant neoplasms (11.4)	Pancreas, unspecified - Malignant neoplasms (12.4)	Colon, unspecified - Malignant neoplasms (11.9)
Colon, unspecified - Malignant neoplasms (10.8)	Colon, unspecified - Malignant neoplasms (11.5)	Pancreas, unspecified - Malignant neoplasms (11.3)
Unspecified diabetes mellitus, without complications (9.3)	Unspecified diabetes mellitus, without complications (8.8)	(8.2)Hypertensive heart disease without (congestive) heart failure
Malignant neoplasm without specification of site (8.8)	Parkinson's disease (8.1)	Malignant neoplasm without specification of site (8.1)
Parkinson's disease (8.2)	Malignant neoplasm without specification of site (7.9)	Unspecified diabetes mellitus, without complications (8.1)

State Health Priorities

The consultants researched and kept in mind the priorities established by the States of Ohio and Indiana and by the Commonwealth of Kentucky. Comments at meetings and on surveys echo many of these priorities. The following tables provide the health priorities and sub-priorities for Ohio, Indiana, and Kentucky, developed from their Community Health Assessments and detailed in their State Health Improvement Plans.

TABLE 18. OHIO STATE HEALTH IMPROVEMENT PLAN, 2017-2019

Ohio Health Priorities, 2017-2019

Priority and Sub-Priority Topics		
Mental Health and Addiction	Chronic Disease	Maternal & Infant Health
Reduce depression	Reduce heart disease	Reduce preterm births
Reduce suicide deaths	Reduce diabetes	Reduce low birth-weight births
Reduce drug dependence/abuse	Reduce child asthma morbidity	Reduce infant mortality
Reduce unintentional drug overdose deaths		

In preparation for developing the next set of priorities for Ohio and the 2020-2022 State Health Improvement Plan, the Ohio Department of Health, Health Policy Institute of Ohio, and the Hospital Council of Northwest Ohio held State Health Assessment forums in five regions of the state. At the Southwest Ohio forum in Dayton, they shared an update on the 2017-2019 outcomes. The Southwest region comprises the same 17 Ohio counties covered by this report.

TABLE 19. REGION: PROGRESS ON OHIO'S 2017-2019 SHIP OUTCOMES

Progress on SHIP outcomes for Ohio and SW region

Desired Outcome	Indicator	Ohio 2015 (Baseline)	Ohio 2017	SW OH region 2017
Improve overall health status	% adults with fair or poor health	16.5%	18.9%	20.4%
Reduce premature death	Years of potential life lost before age 75 (per 100,000)	7,876.1	8,774.5	9,685.4
Reduce suicide deaths	# deaths due to suicide (per 100,000)	13.9	14.8	14.0
Reduce unintentional drug overdose deaths	# deaths due to unintentional drug overdoses (per 100,000)	27.7	44.1	65.3
Reduce heart disease	% adults ever diagnosed with coronary heart disease	4.2%	4.7%	5.1%
Reduce heart disease	% adults ever diagnosed with heart attack	4.9%	5.5%	5.8%
Reduce heart disease	% adults ever diagnosed with hypertension	34.3%	34.7%	33.3%
Reduce diabetes	% adults told by a health professional that they have diabetes	11%	11.3%	10.9%
Reduce preterm births	% live births born earlier than 37 weeks	10.3%	10.4%	10.42%
Reduce preterm births	% live births born earlier than 32 weeks	1.7%	1.8%	1.74%
Reduce low birth weights	% births where baby weighed <2500 grams	8.5%	8.7%	8.55%
Reduce infant mortality	Rate of infant deaths per 1,000 live births	7.2	7.2	7.22
Reduce infant mortality	Rate of neonatal infant deaths per 1,000 live births	4.8	5	5.09
Reduce infant mortality	Rate of post-neonatal infant deaths per 1,000 live births	2.4	2.2	2.13

The table above shows that there have been no areas of improvement in Ohio or in the Southwest region, for those measures where data is available. Improvement was measured by a positive change of 10% or more. There was little or no detectable change in Southwest Ohio for:

- Number of suicide deaths
- Percent of adults diagnosed with hypertension
- Percent of adults diagnosed with diabetes
- Percent of preterm and very preterm births
- Percent of low birth-weight babies
- Infant mortality rates

Southwest Ohio was getting worse for:

- Percent of adults with fair or poor health
- Years of potential life lost before age 75
- Number of deaths due to unintentional drug overdoses
- Percent of adults diagnosed with coronary heart disease or heart attack (and worse than state)

TABLE 20. INDIANA STATE HEALTH IMPROVEMENT PLAN, 2018-2021

Indiana Health Priorities, 2018-2021

Priority and Sub-Priority Topics			
Maternal & Infant Health	Opioid Epidemic	Chronic Disease	Public Health Infrastructure
Infant mortality	Prevent Substance Use Disorder (SUD)	Obesity	Maintain & develop partnerships
Maternal & infant health outcomes	Minimize harm due to SUD	Active living	Timely & accurate data available
Safe sleep	Treatment for Opioid Use Disorder	Healthy eating	Increased capacity of public health to deliver quality & equitable care
Prenatal care		Tobacco use	
		Chronic disease self-management (diabetes & cardiovascular)	
		Asthma	
		Cancer screening	

TABLE 21. KENTUCKY STATE HEALTH IMPROVEMENT PLAN, 2017-2022

Kentucky Health Priorities, 2017-2022

Priority and Sub-Priority Topics				
Substance Abuse Disorder	Smoking	Obesity	Adverse Childhood Experiences	Integration to Health Access
Early childhood education	Reduce youth and adult smoking	Increase breastfeeding	Increase awareness	Reduce health insurance complexity
Non-medical use of pain relievers	Secondhand smoke	Access to healthier foods	Knowledge and skills for treatment	Expand access to healthcare services
Non-opioid pain reduction therapies	Treatment to quit smoking	Increase physical activity	Collaboration with partners	Cross-sector health coalitions
Patient experience with non-fatal overdose in ED	Reduce lung cancer mortality			
Naloxone	Quality of care for COPD patients			
Treatment for substance abuse disorder				

Hospital Utilization

The local health departments in Ohio requested hospitalization data, to which they have not had access in the past. GDAHA and THC ensured that there were data sharing agreements in place that permitted sharing as part of the CHNA. Since hospitals are already familiar with their own information, and since the CHNA is intended to include residents who are not being served, these data are not included in the CHNA's analysis. Here are some regional statistics for the residents of the 17 Ohio counties in this CHNA. (All data used the place of residence and not the place of service.) This will be useful to health departments where many residents need to leave the county to obtain some healthcare services.

In 2016, there were 404,647 hospital discharges of SW Ohio residents, with an average length of stay of 4.3 days. Here is demographic information for patients admitted or seen in the Emergency Department.

TABLE 22. REGION: DEMOGRAPHICS FROM HOSPITAL UTILIZATION DATA, 2016

Demographic Information from 2016 Hospital Utilization Data

	# Emergency Visits	# Admissions
PAYER/INSURANCE TYPE		
Medicaid	776,622	131,471
Medicare	306,238	143,436
Private commercial	426,297	112,352
Self-pay and charity	135,426	10,498
Workers Comp	23,020	893
Other Government	12,135	3,364
Other	24,379	4,427
GENDER		
Female	973,237	234,075
Male	730,862	172,404
AGE		
Ages 0-17	303,799	62,676
Ages 18-64	1,125,871	196,827
Ages 65 years and older	274,476	146,992
RACE/ETHNICITY		
Black	368,306	61,291
White	1,226,748	321,853
Latino	37,576	8,007

See the table below for the most common diagnoses for Emergency Department visits for the residents of Southwest Ohio. The most visits were for acute upper respiratory infection. The common cold is the best known upper respiratory infection. Uncomplicated upper respiratory infections also account for millions of visits every year to physician offices and clinics.[22]

TABLE 23. REGION: EMERGENCY VISIT DIAGNOSES, 2016

Common Diagnoses in SW Ohio Region – 2016 Emergency Department Visits

Diagnosis *(based on ICD Codes)*	**# Visits**
Acute upper respiratory infection, unspecified	37,220
Chest pain, unspecified	33,357
Other chest pain	33,032
Urinary tract infection, site not specified	28,746
Fever, unspecified	24,747
Unspecified abdominal pain	22,010
Low back pain	21,923
Nausea with vomiting, unspecified	19,235
Acute pharyngitis, unspecified	17,779
Age-related physical debility	14,679
Unspecified injury of head, initial encounter	14,298
Chronic obstructive pulmonary disease with (acute) exacerbation	12,608
Epigastric pain	12,402
Pneumonia, unspecified organism	11,183
Strain of muscle, fascia and tendon of lower back	11,035
Other symptoms and signs with cognitive functions and awareness	10,203
Strain of muscle, fascia and tendon at neck level	9,866
Acute bronchitis, unspecified	7,537
Sepsis, unspecified organism	6,449
Generalized abdominal pain	5,664

[22] Zoorob, R. et al. (2012) Antibiotic use in acute upper respiratory tract infections. *Am Fam Physician.* Nov 1;86(9):817-822.

The table below shows conditions requiring hospitalization. Childbirth is a major reason for admission. Delivery of infants is prominently represented in this table.

TABLE 24. REGION: ADMISSION DIAGNOSES, 2016

Common Diagnoses in SW Ohio Region – 2016 Hospitalized Patients

Diagnosis *(based on ICD Codes)*	**# Admissions**
Single liveborn infant, delivered vaginally	26,069
Sepsis, unspecified organism	15,471
Single liveborn infant, delivered by cesarean	12,060
Acute kidney failure, unspecified	7,153
Pneumonia, unspecified organism	6,932
Chronic obstructive pulmonary disease with (acute) exacerbation	6,338
Non-ST elevation (NSTEM) myocardial infarction	5,296
Maternal care for scar from previous cesarean delivery	3,781
Unilateral primary osteoarthritis, right knee	3,656
Unilateral primary osteoarthritis, left knee	3,356
Acute on chronic diastolic (congestive) heart failure	3,178
Urinary tract infection, site not specified	3,059
Acute and chronic respiratory failure with hypoxia	2,537
Cerebral infarction, unspecified	2,402
Acute on chronic systolic (congestive) heart failure	2,394
Post-term pregnancy	2,346
Acute respiratory failure with hypoxia	2,024
Major depressive disorder, single episode, unspecified	1,660
Major depressive disorder, recurrent sever w/o psych features	1,525
Complication of labor and delivery, unspecified	1,344

The next table, below, shows the number of visits to hospital Emergency Departments for injuries, chronic diseases, and mental health. These data support many of the primary data collected and prioritized for the CHNA report. Mental illness, substance abuse, dental problems, falls, motor vehicle accidents, and suicide are all represented as well as chronic diseases. They are listed in descending order by number of visits.

TABLE 25. REGION: ED VISITS—INJURIES, CHRONIC DISEASE & MENTAL HEALTH, 2016

Diagnoses for Emergency Department Visits in SW Ohio Region – 2016
Injuries, Chronic Disease, and Mental Health

Diagnosis	# Visits
Hypertension, primary	303,070
Diabetes, Type 2	156,813
Accidents (falls)	135,629
Anxiety, dissociative, stress-related, somatoform & oth nonpsychotic mental disorders	134,149
Asthma	125,723
Major depressive disorder	104,854
Accidents (transport)	41,100
Bipolar disorder	32,612
Dental	32,050
Alcohol-related disorders	30,947
Opioid-related disorders	18,366
Assault	11,673
Opioid poisoning & adverse effects	11,124
Schizophrenia	9,654
Heart attack	6,525
Stroke	4,519
Intentional self-harm	1,550
Hypertension, secondary	1,413
Alcohol toxic effects	33

Here are the same diagnostic codes for hospital admissions, in descending order of frequency. Some Emergency Department visits result in a hospital admission. Some people may have more than one visit to the Emergency Department and/or hospital admission.

TABLE 26. REGION: ADMISSIONS—INJURIES, CHRONIC DISEASE & MENTAL HEALTH, 2016

Diagnoses for Hospital Admissions in SW Ohio Region – 2016
Injuries, Chronic Disease, and Mental Health

Diagnosis	# Admissions
Hypertension, primary	121,641
Diabetes, Type 2	79,415
Anxiety, dissociative, stress-related, somatoform & oth nonpsychotic mental disorders	55,118
Major depressive disorder	47,789
Asthma	34,411
Alcohol-related disorders	16,832
Accidents (falls)	15,006
Bipolar disorder	11,813
Heart attack	10,829
Opioid-related disorders	9,516
Stroke	6,569
Schizophrenia	3,938
Opioid poisoning & adverse effects	3,740
Accidents (transport)	2,500
Dental	1,286
Assault	544
Intentional self-harm	462
Hypertension, secondary	456

REGIONAL PRIORITIES

Criteria were applied to determine which health and health-related issues were regional priorities:

- Regional rates lagging state and/or national rates
- Worsening trend
- Risk factor for serious disease
- Local rates not meeting national targets of Healthy People 2020
- Measure is a state priority

The table on the next page shows the combined regional priorities from all five data sources: Meetings, consumer surveys, agency surveys, health departments, and secondary data.

Heart disease and cancer are the top two killers in the nation and will always be priorities in health care. However, for the secondary data column in the table below, the focus is on those issues impacting many counties across the region and where the regional data lags the nation. Many of the health factors and health behaviors influence the development of serious diseases that can lead to death.

Five issues appear as the region's top priorities overall, across all five sources of input (four primary sources plus the secondary data). They are sorted in descending order according to average placement, where 1 = first place, and 10 = tenth place. These priorities are key findings of the CHNA report, because they show the areas of agreement between secondary data and all sources of primary data for the region.

- **Substance abuse (2.2)** (e.g., abuse of alcohol and/or drugs)
- **Mental health (3.2)** (e.g., depression, suicide, lack of providers, # of poor mental health days)
- **Access to care/services (3.8)** (e.g., cost, insurance, lack of providers, transportation)
- **Chronic disease (4.4)** (eg., cancer, diabetes, heart, respiratory diseases, stroke)
- **Healthy behaviors (6.4)** (e.g., doctor visits, exercise, quit smoking, self-care, weight loss)

Two issues appear four times.

- Healthy food/Nutrition (7) – (meetings, consumers, agencies, and secondary data)
- Care for children (8.25) – (meetings, agencies, health departments, and secondary data)

Two issues appear as priorities three times.

- Obesity (4.67) – (consumers, agencies, health departments)
- Infant mortality (6.3) – (agencies, health departments, and secondary data)

There are three issues that surfaced the most only in community meetings.

- Social Determinants of Health (2nd place)
- Parenting/Families (5th place)
- Health education/Promotion (8th place)

TABLE 27. REGION: COMBINED TOP PRIORITIES OF PRIMARY AND SECONDARY DATA
(in descending order)

Meetings	Consumers	Agencies	Health Departments	Secondary Data
Access to care/services	Substance abuse	Substance abuse	Substance abuse	Injury deaths
Social determinants of health (especially Discrimination)	Chronic disease	Mental health	Mental health	Access to care: Lack of providers (Mental health; Dental; Primary care)
Mental health	Mental health	Access to care/services (esp. cost, specialty care/ services, transportation)	Chronic disease	Chronic disease (esp. cancer; diabetes; heart; respiratory; stroke)
Substance abuse	Obesity	Chronic disease (esp. diabetes; cancer; heart)	Obesity	Substance abuse (esp. binge drinking; drug poisoning; heroin poisoning overdose)
Parenting/Families	Access to care/services	Infant mortality	Care for children	Healthy behaviors (esp. drinking, smoking, obesity, physical inactivity)
Healthy behaviors	Healthy food/Nutrition	Obesity	Healthy behaviors	Mental health (esp. poor mental health days; suicide; depression)
Healthy food/Nutrition	Healthy behaviors	Healthy food/Nutrition (esp. nutrition)	Maternal & child health / Infant mortality	Infant mortality
Health education /Promotion		Healthy behaviors (esp. smoking/tobacco)	Access to care/services	Food insecurity
Care for children		Care for children		Motor vehicle crash deaths
Chronic disease				Children in poverty

Parenting/Families seems to be an emerging issue, and community meetings were a conducive atmosphere for discussion of the topic. Health education/Promotion was often mentioned in conjunction with many other issues, where the lack of awareness and knowledge was perceived as a contributing factor to other serious issues. There are two issues that only one source reported, but they are worth noting in more detail: Injury deaths and Social Determinants of Health.

The statistic for Injury deaths were not echoed directly in the primary sources of data. Every county has rates of injury deaths higher than the national rate of 45.3 deaths per 100,000. Regional rates go as high as 97.6. Injury deaths include motor vehicle crashes, intentional harm (suicide), unintentional harm (drug overdose, poisoning, firearm accident), violence (homicide, rape, child abuse/neglect), sports injuries, and falls, among other causes. Considering the numerous sub-categories, the rate of Injury deaths is aligned with concerns about Mental health, Substance abuse, Care for children, and Care for elderly that were expressed at meetings and in surveys.

Social Determinants of Health, especially discrimination, received votes in 14 counties, with the highest number of votes at meetings in Cincinnati and Dayton, where a lot of people are impacted.

Chapter 5. Regional Assessment of Child Health Needs

Cincinnati Children's is a partner of this collaborative CHNA and analyzed this year's meeting and survey data while also drawing on their own sources to contribute a section dedicated to child health needs in Greater Cincinnati (Butler, Clermont, Hamilton, and Warren Counties in Ohio; Boone, Campbell, and Kenton Counties in Kentucky; and Dearborn County in Indiana). Their summary of Child Health in Greater Cincinnati begins on page 106.

Dayton Children's concluded their most recent CHNA in 2017. For this report, the consultants are sharing Dayton Children's priorities and supplementing it with the results they have obtained in 2018. The results include the answers to three questions, specific to child health, from the community meetings and survey responses from consumers, agencies, and health departments in these counties: Champaign, Clark, Darke, Greene, Miami, Montgomery, Preble, and Shelby Counties in Ohio.

OHIO TRENDS

The health of children in Ohio has become an increasing topic of concern, similar to other communities in the country. A recent study conducted by the Health Policy Institute of Ohio states that approximately 80% of children's health issues are ultimately "affected by factors beyond medical care" and include issues more related to their environment, health behaviors, and socioeconomic status. Ohio ranks 'poor' in the categories of obesity, child hospitalizations for asthma, and infant mortality.[23]

Another factor that can have profound impact on the health of a child is an Adverse Childhood Experience (ACE). Examples of ACEs are traumatic experiences that have occurred within a child's environment (e.g., emotional or physical abuse or neglect; divorce; death of a parent; violence in the immediate neighborhood; substance abuse in the home; parent in prison; family member with mental illness). Ohio is one of the five worst states for ACEs. One in seven Ohio children have experienced three or more ACEs.[24]

[23] Neese, A.W. (2018). Report: Ohio needs to do more to tackle challenges affecting children's health. *The Columbus Dispatch,* September 27. Accessed 10/10/18: https://www.dispatch.com/news/20180927/report-ohio-needs-to-do-more-to-tackle-challenges-affecting-childrens-health

[24] Sacks, V. and Murphey, D. (2018). The prevalence of adverse childhood experiences, nationally, by state, and by race or ethnicity. *Child Trends*. February 12. Accessed 10/10/18 at https://www.childtrends.org/publications/prevalence-adverse-childhood-experiences-nationally-state-race-ethnicity

As the State of Ohio embarks on the next State Health Assessment, its Maternal, Infant and Early Childhood Home Visiting partnership is focused on the following benchmarks:[25]

- Improvements in maternal and newborn health;
- Improvements in school readiness and achievement;
- Improvements in Family Economic Self-Sufficiency;
- Reduction of Child Injuries, Child Abuse, Neglect, or Maltreatment and Reduction of Emergency Department Visits;
- Reduction of Domestic Violence; and
- Improvement in Coordination and Referrals for other Community Resources and Supports

The State Health Assessment Forum included a chart that connects to the concerns expressed at CHNA meetings and in surveys about child mental health and depression in general. A higher percentage of Ohio youth are experiencing major depressive episodes than national percentages.

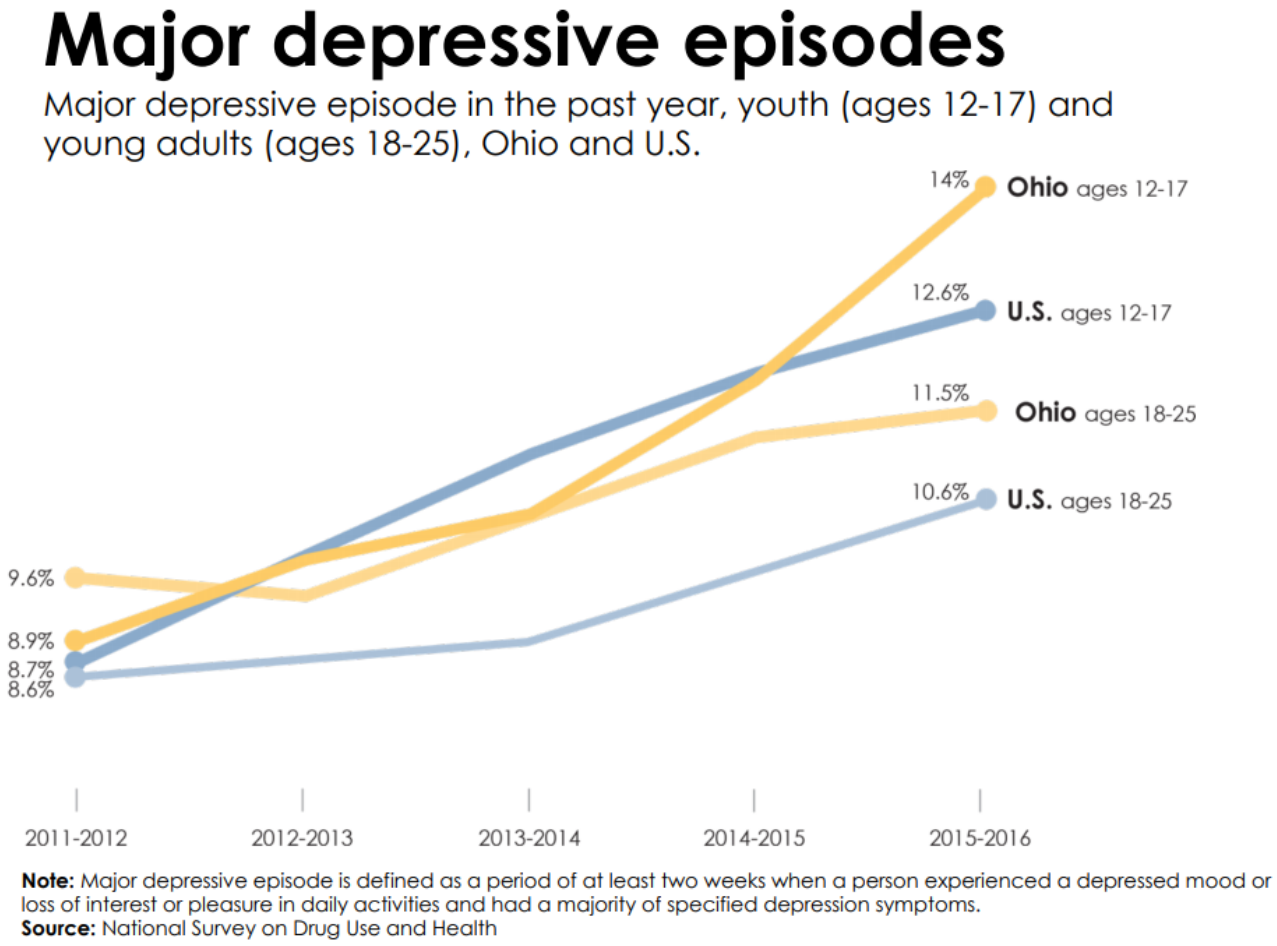


FIGURE 22. CHILD HEALTH: MAJOR DEPRESSIVE EPISODES – OH & US[26]

[25] Health Policy Institute of Ohio (2018). SHA Forum: Maternal and Child Health Presentation. October 12. Accessed 11/7/18 at https://www.healthpolicyohio.org/wp-content/uploads/2018/10/MCH_Forum_Presentation_combined_SouthwestOhio_FINAL.pdf
[26] Op. cit.

Hospital Utilization by Diagnosis

According to hospital utilization data for the 25-county region, there were 303,799 Emergency visits and 62,676 hospital admissions for ages 0-17. The most common reason for a child to visit a hospital's Emergency Department was acute upper respiratory infection.

TABLE 28. CHILD HEALTH: ED DIAGNOSES

Common Diagnoses in Region – 2016 Emergency Visits for Ages 0-17

Diagnosis *(based on ICD Codes)*	**# Visits**
Acute upper respiratory infection, unspecified	22,319
Fever, unspecified	8,828
Acute pharyngitis, unspecified	8,189
Other long term (current) drug therapy	7,235
Streptococcal pharyngitis	7,096
Contact with and exposure to environ tobacco smoke	6,966
Unspecified injury of head, initial encounter	5,948
Viral infection, unspecified	5,764
Hemorrhage from respiratory passages, unspecified	4,307
Nausea with vomiting, unspecified	4,193
Constipation, unspecified	4,059
Vomiting, unspecified	3,840
Unspecified asthma, uncomplicated	3,636
Acute obstructive laryngitis (croup)	3,607
Presence of alcohol in blood, level not specified	2,508
Diarrhea, unspecified	2,225
Laceration w/o foreign body of other part of head, initial encounter	2,063
Otitis media, unspecified, right ear	1,979
Unspecified asthma with (acute) exacerbation	1,921
Noninfective gastroenteritis and colitis, unspecified	1,839

TABLE 29. CHILD HEALTH: DIAGNOSES FOR ADMISSIONS

Common Diagnoses in Region – 2016 Admitted Patients Ages 0-17

Diagnosis	# Admitted
Single liveborn infant, delivered vaginally	26,069
Single liveborn infant, delivered by cesarean	12,060
Carrier of infectious disease, unspecified	11,674
Neonatal jaundice, unspecified	2,162
Other heavy for gestational age newborn	1,069
Dehydration	913
Neonatal jaundice associated with preterm delivery	793
Gastro-esophageal reflux disease without esophagitis	695
Twin liveborn infant, delivered by cesarean	695
Unspecified enterovirus as the cause of diseases classified elsewhere	684
Hypoxemia	643
Other viral agents as the cause of diseases classified elsewhere	616
Major depressive disorder, single episode, unspecified	543
Newborn affected by maternal infec/parasitic diseases	531
Acute upper respiratory infection, unspecified	517
Encounter for routine and ritual male circumcision	509
Other neonatal hypoglycemia	479
Constipation, unspecified	472
Contact with and exposure to environ tobacco smoke	462
Feeding problem of newborn, unspecified	440

GREATER DAYTON – CHILD HEALTH

Dayton Children's has already completed their CHNA. For the portrait of child health in Greater Dayton, the report includes excerpts from Dayton Children's CHNA and Implementation Plan. Their service area includes 92 ZIP Codes from 5 counties: Clark, Greene, Miami, Montgomery, and Warren. To complement their findings, our CHNA results from meetings and surveys are summarized below. The consultants used 8 counties to filter the answers to three child health questions: Champaign, Clark, Darke, Greene, Miami, Montgomery, Preble, and Shelby. (Warren was not included because it is part of the Cincinnati Children's section.)

Dayton Children's

Recent trends reveal that children (ages 0-11) in the Greater Dayton Area are diagnosed with asthma at a higher rate than children in Ohio and the United States. Data from the 2017-2021 Dayton Children's Implementation Plan provides additional support for this finding, as reducing asthma is listed as a health outcome for the chronic disease priority. According to their data, 7% of parents with a child aged 0-5 stated that their child had been diagnosed with asthma, and 10% of parents with a child aged 6-11 stated that their child had been diagnosed with asthma.

TABLE 30. CHILD HEALTH: DAYTON CHILDREN'S PRIORITIES, 2017-2020

Dayton Children's Implementation Plan Priorities, 2017-2020

Priority and Health Outcome Areas		
Mental Health and Addiction	Chronic Disease	Maternal and Infant Health
Child/family mental health	Obesity	Safe Sleep
Substance abuse	Food insecurity	Breastfeeding
	Asthma	

Dayton Children's CHNA data states that approximately 36% of Greater Dayton Area parents reported their child experienced an ACE. Nine percent had two or more ACEs. Depression is one potential outcome of ACEs, and data suggests that children residing in the Greater Dayton Area are diagnosed with depression at a rate slightly higher than children in Ohio. The Ohio percentage exceeds the U.S. percentages. This is just one example of the negative impact of ACEs and their effects on child health. In a May 2018 update to its Implementation Plan, Dayton Children's reported a "32% increase in the number of referrals to the Mental Health Resource Connection over the last year" and more than a "35% increase in both psychology and psychiatry visits over the last fiscal year."[27]

The priorities also reflect the high rates of infant mortality and substance abuse in Southwest Ohio. Half of the children sampled were overweight (14%) or obese (36%). Nineteen percent of children had allergies. Thirteen percent of parents reported food insecurity.

CHNA Findings from Meetings and Surveys

At the request of Cincinnati Children's, the consultants added three child health questions to meetings and surveys. Respondents in all counties answered the questions. Cincinnati Children's analyzed the data for their service area – see the next section. Below are results from respondents in the Greater Dayton area. The consultants analyzed results from community meetings, consumer surveys, local health department surveys, and agency surveys. The tables below show the most common answers to the three questions:

- What are the most important child health issues in your community?
- What is the most important thing that can be done to improve child health?
- What is the biggest barrier to child wellness?

Access to care and/or services and Social Determinants of Health were areas of agreement that surfaced in answers to all three questions. They are cited as very important issues, barriers to wellness, and also the best areas of opportunities for improving child health. More detail follows. Answers were included if they received at least two mentions.

[27] Dayton Children's (2018). Community Health Needs Assessment: Action step updates. May. Accessed 10/17/18 at https://www.childrensdayton.org/sites/default/files/CHNA%20Updates%20May%202018.pdf

TABLE 31. CHILD HEALTH—GREATER DAYTON: MOST IMPORTANT ISSUES

Primary Data Responses – Most Important Child Health Issues

(in descending order of mentions)

Meeting Attendees	Consumers	Health Departments	Agencies
Social Determinants of Health (esp. Violence & Poverty)	Healthy behaviors	Mental health	Parenting/Family
Social/Emotional health	Chronic disease	Healthy behaviors	Obesity
Mental health	Substance abuse	Obesity	Social Determinants of Health (esp. Violence & Poverty)
Healthy behaviors	Healthy food/Nutrition	Access to care: Dental	Healthy behaviors
Healthy food/Nutrition	Social Determinants of Health	Social Determinants of Health: Education	Mental health
Parenting/Family	Care for children	Infant mortality	Healthy food/Nutrition
Substance abuse	Access to care (esp. dental)	Parenting/Family	Access to care (esp. Dental)
Access to care	Mental health	Technology	Social/Emotional health: Bullying
Infant mortality	Infant mortality	Wellness	Chronic disease
			Substance abuse

The following issues were shared as the 'most important' by all 4 primary sources:

- Healthy behaviors
- Social determinants of health, especially poverty and violence
- Mental health
- Access to care, especially for dental health

Three out of 4 sources agreed on these issues as 'most important:'

- Parenting/Family
- Healthy food/Nutrition
- Substance abuse
- Infant mortality

Issues shared as 'most important' by 2 out of 4 sources include:

- Obesity
- Social/Emotional health
- Chronic disease

TABLE 32. CHILD HEALTH—GREATER DAYTON: WAYS TO IMPROVE CHILD HEALTH

Primary Data Responses – Ways to Improve Child Health
(in descending order of mentions)

Meeting Attendees	Consumers	Health Departments	Agencies
Social Determinants of Health	Healthy food/Nutrition	Access to care/services	Access to care/services (esp. Dental)
Health education/ Promotion	Social Determinants of Health	Parenting/Family	Healthy behaviors
Parenting/Family	Access to care/services	Healthy behavior s	Parenting/Family
Access to care/services	Healthy behaviors	Mental health	Healthy food/Nutrition
Healthy behaviors	Substance abuse	Social Determinants of Health	Social Determinants of Health
Healthy food/Nutrition	Wellness		Mental health
Mental health	Reproductive health		Healthy environment
Social/Emotional health	Chronic disease		
Wellness	Mental health		

All 4 primary sources agreed on these areas for improving child health:

- Access to Care/Services
- Social Determinants of Health
- Healthy behaviors
- Mental health

Three out of 4 primary sources agreed on these areas for improvement:

- Parenting/Family
- Healthy food/Nutrition

TABLE 33. CHILD HEALTH—GREATER DAYTON: BARRIERS

Primary Data Responses – Barriers to Child Wellness
(in descending order of mentions)

Meeting Attendees	Consumers	Health Departments	Agencies
Access to care/services	Social Determinants of Health	Access to care/services	Social Determinants of Health
Education	Parenting/Family	Parenting/Family	Parenting/Family
Care for children	Access to care/services	Social Determinants of Health	Access to care/services (incl. Dental)
Cultural competency	Healthy food/Nutrition		Health education/Promotion
Substance abuse	Healthy behaviors		Healthy behaviors
Social Determinants of Health (not incl. Education)	Substance abuse		
	Environmental health		
	Wellness		

All 4 primary sources agreed on these barriers to child wellness:

- Access to care/services
- Social Determinants of Health (Education was cited in 80% of all SDH mentions).

Three out of 4 primary sources agreed on these barriers to child wellness:

- Parenting/Family

Two out of 4 primary sources agreed on these barriers:

- Healthy behaviors
- Substance abuse

GREATER CINCINNATI – CHILD HEALTH[28]

Cincinnati Children's conducted the Regional Assessment of Child Health Needs in collaboration with The Health Collaborative and other health and community partners. The methodology and findings are summarized below:

Methodology

To assess the child health needs of the community, Cincinnati Children's used internal and external secondary data, community surveys, key informant interviews, and focus group data.

Secondary Data

Cincinnati Children's collected secondary local and national data from a wide range of sources outside the hospital, including:

- Centers for Disease Control
- Cincinnati Health Department
- Cincinnati Public Schools
- Cradle Cincinnati
- Data Resource Center for Child and Adolescent Health
- Every Child Succeeds
- Hamilton County Department of Health
- Interact for Health
- National Children's Alliance
- Ohio Department of Health
- Ohio Hospital Association
- Substance Abuse and Mental Health Services Administration
- Success by 6
- United States Census Bureau

Data were also collected through specialized internal programs addressing child and community health issues, and some sources included:

- Asthma Improvement Collaborative
- Behavioral Medicine and Clinical Psychology
- Comprehensive Children's Injury Center
- Division of Psychiatry
- General Pediatrics
- James M. Anderson Center for Health Systems Excellence
- Mayerson Center for Safe and Healthy Children
- Perinatal Institute

In addition to using secondary data, the survey team conducted a community survey, completed key informant interviews, and completed community focus group meetings to identify issues of need in the community (See Appendix M).

[28] The Community Health Needs Assessment Report will be available on Cincinnati Children's website in 2019.

Community Surveys

Cincinnati Children's partnered with Interact for Health and the Institute for Policy Research (IPR) to conduct the Child Well Being Survey throughout Greater Cincinnati and Northern Kentucky region. The telephone interviews were done by random-digit-dial, with phone numbers purchased through Survey Sampling. The calls were made to both landlines and cellular phones to ensure a diverse sampling. Screening questions then determined if there were children under age 18 living in the household and the caller randomly selected a member of the household over the age of 18 who has the most recent birthday to complete the survey. This process ensures that each child in a household has an equal chance of being selected. Among survey respondents, 20.2% of the respondent's children are African-American, 71.8% are Caucasian and 8.0% are other races. The majority of survey respondents live in the City of Cincinnati (30.8%), Boone, Campbell, Grant or Kenton County Kentucky (24.3%) and Hamilton County Suburbs (16.8%). Additionally, 15.5% were below 100% of the Federal Poverty Guidelines (FPG),[29] 20.4% were between 101% and 200% FPG, and 64.1% were above 200% FPG.

The questions, covering a range of topics, gathered information about the child's health and education, as well as the caregiver's access to healthcare services and healthcare information. The questions were developed from national models and community input. For a full list of questions, see Appendix N.

The 2017 spring/summer survey, conducted June-July 2017, interviewed 2,757 randomly selected caregivers. Data was compiled and analyzed to determine key themes and priority health needs.

Key Informant Interviews

Key informant interviews were conducted with 29 individuals representing 23 organizations from across Cincinnati Children's eight-county primary service area. Organizations included social service agencies, government agencies, and health departments who serve medically underserved, low-income and minority populations. Key informants were selected because of their knowledge and professional experience working on major child health issues in the community and their valuable insight into current challenges and future opportunities. Interviews were conducted by phone, by a person working for Cincinnati Children's Human Resources and a third-party institution, and via internet survey from February 2018 to May 2018. Key informant interviews included both closed-ended questions and open-ended questions to allow key informants to rate well-determined child health needs and to allow for exploration of needs affecting the community. Questions addressed the general health of children in Greater Cincinnati, specific health conditions, as well as barriers, facilitators, and next steps in achieving improved child health.

Community Focus Groups

Cincinnati Children's partnered with The Health Collaborative, a 501c3 non-profit with the mission of improving health and healthcare in Greater Cincinnati, to conduct focus groups in each of our primary service areas and beyond during the Summer of 2018. The focus group sessions were conducted across 25 counties in Ohio, Kentucky and Indiana. The counties included: Adams, Brown, Butler, Champaign,

[29] In 2018, 100% FPG was $25,100 for a family of four and 200% FPG was $50,200. https://aspe.hhs.gov/poverty-guidelines

Clark, Clermont, Clinton, Darke, Fayette, Greene, Hamilton, Highland, Miami, Montgomery, Preble, Shelby and Warren in Ohio; Boone, Campbell and Kenton in Kentucky; and Dearborn, Franklin, Ohio, Switzerland and Union in Indiana. The focus groups included participants representing government agencies, FQHCs, health departments, and other social service organizations who serve thousands of people throughout the counties. Participants were invited to learn about the health of their county and respond to discussion questions about the health of their county. Participants were asked for their opinion about health issues and what could be done to improve health challenges facing their community. Specifically for child health, participants were asked:

1. What would you say is the most important child health issue in your community?
2. What would you say is the most important thing that can be done to improve child health in your community?
3. What is the biggest barrier to child wellness in your community?

Child Health Needs in the Greater Cincinnati Region

The Cincinnati Children's health needs assessment identified eight child health priority areas as well as other health needs. Barriers to child health and wellness were also identified. They are summarized in alphabetical order below:

Access to Care/Primary Care

Cincinnati Children's serves children across our primary service area with five primary care offices and three school based health centers. In the 2017 community survey, 98.2% of caregivers reported that their child had a place to go when sick or in need of advice about their health. Of caregivers with a usual place to go, 74.4% identified their preferred place as a private doctor's office. In the past 12 months, 85.1% of caregivers reported their child had received preventative care and only 7.5% reported that there was a time where care was delayed or not received.

Key informants also identified a number of barriers to care, including inflexible clinic hours for families with hectic work or life schedules, insufficient funding for public health clinics, lack of medical homes, lack of transportation to healthcare providers, long wait times for appointments, the need for specialists, a shortage of primary care providers accepting patients insured through Medicaid, and poverty. The Greater Cincinnati and Tri-State region rank among the highest in poverty with more than 100,000 children living below the Federal Poverty Level based on 2017 Census Data.

Asthma

According to the Centers for Disease control, asthma is the leading chronic disease in children and affects 8.3% of children in the United States. Locally, the Cincinnati Health Department reported that one in six students in Cincinnati Public Schools has asthma (https://www.cincinnati-oh.gov/health/assets/File/EDIT%20THIS%20CHA_12_21_17%20FINAL.pdf). In 2016, there were 2,693 visits to the Cincinnati Children's Emergency Department for asthma and 850 hospital admissions. In 2017, the numbers were slightly better with 2,623 visits to the Emergency Department and 772 hospital admissions for asthma. The community survey found that 12.9% of caregivers were told by a doctor or healthcare provider that their child has asthma. Key informants believe that asthma is a high or very high child health need (72.4%) and that asthma is staying the same or getting worse in the community (68.9%).

TABLE 34. ASTHMA EMERGENCY DEPARTMENT VISITS AND HOSPITAL ADMISSIONS[30]

	Emergency Department Visits	Hospital Admissions
2014	2,281	1,053
2015	2,471	934
2016	2,693	850
2017	2,623	772

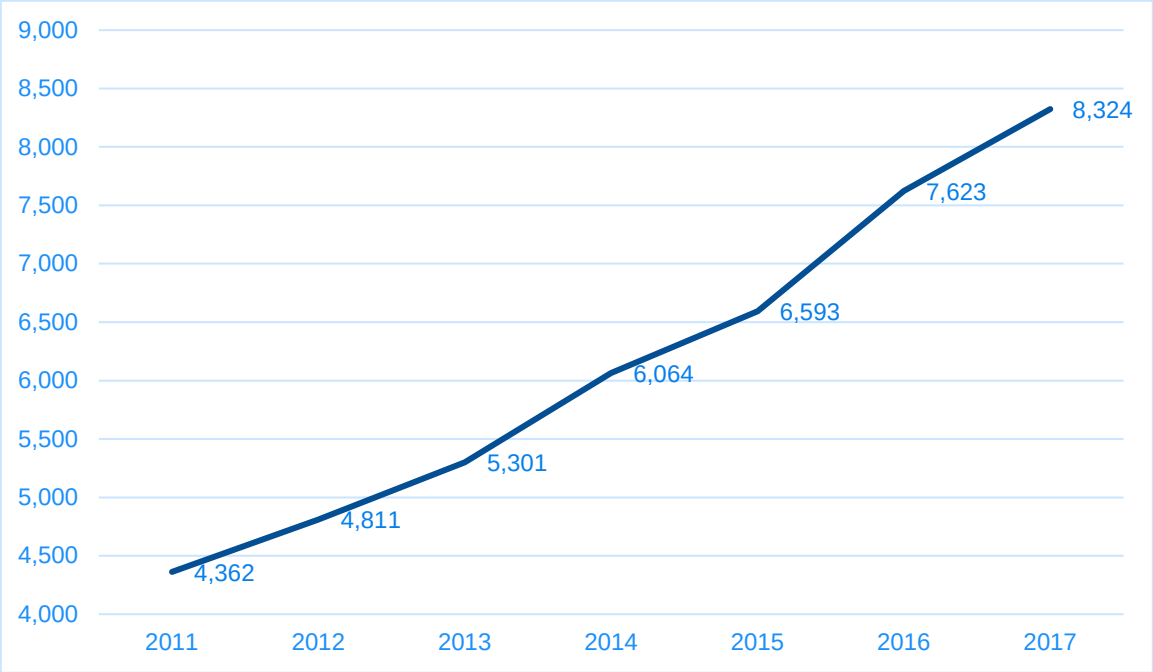
Child Mental Health

Child mental health is a continuing and growing concern throughout the Greater Cincinnati area. In 2016-2018, more than 35,000 patients each year were seen at Cincinnati Children's a year for mental health as a primary or secondary diagnosis and another 14,000 patients each year were seen in outpatient clinics. Cincinnati Children's Emergency Department has seen more than 15,000 children a year in 2016 and 2017 for mental health evaluation. The Cincinnati Children's Psychiatry Department has seen a 91% rise in the number of children coming to the Emergency Department for mental health evaluation (from 4,362 in 2011 to 8,324 in 2017) and a 113% rise in outpatient visits (from 6,064 in 2014 to 8,324 in 2017) and a 41% rise in outpatient visits (from 37,430 in 2014 to 52,605 in 2017). Additionally, Cincinnati Children's has seen a 25% rise in inpatient Psychiatric bed days (from 26,315 in 2014 to 32,868 in 2017).

Caregivers completing the community survey reported that 13% of their children were identified by a doctor or healthcare provider as having ADHD, 5.1% as having depression, and 11.5% as having anxiety. Caregivers reported that in the past 12 months, 12.6% of children had received treatment or counseling from a mental health professional. In addition, 5.4% of Caregivers rate their child's mental or emotional health as fair or poor. In 2016, caregivers completing the community survey said that 11.6% of their children were identified by a doctor or healthcare provider as having a mental health challenge. Among key informants surveyed, 96.7% believe that child mental health is a high or very high need, and 86.6% believe child mental health need is getting worse. Community focus groups identified mental health as a top child health need, with 22% choosing mental health as the top child health need for our region.

[30] Based on Inpatient and Outpatient admission to Cincinnati Children's

TABLE 35. CINCINNATI CHILDREN'S MENTAL HEALTH EMERGENCY DEPARTMENT VISITS BY YEAR[31]



Child Safety and Unintentional Injury

Nationally, unintentional injury is the leading cause of death for children ages 1 to 19 (https://www.cdc.gov/injury/wisqars/LeadingCauses.html). At Cincinnati Children's, more than 2000 patients are admitted to the hospital each year for injuries (Cincinnati Children's Trauma Registry). In 2017, 2,153 patients were seen inpatient for injuries and an additional 35,982 were seen in the Emergency Room or Urgent Care.

Safety and violence were also mentioned as child health issues in our community. The Mayerson Center for Safe and Healthy Children — a program at Cincinnati Children's for children who are victims of physical and sexual abuse and neglect — served 1,224 children in 2017. Hamilton County had 5,594 new reports of child abuse and neglect in 2017; Clermont County had 1,348 new reports; Butler County had 2,992 new reports; and Warren County had 788 new reports (Public Children Services Association of Ohio, http://www.pcsao.org/resources/safety-reports).

[31] Cincinnati Children's Division of Psychiatry

TABLE 36. UNINTENTIONAL INJURY DATA BY YEAR[32]

	2015	2016	2017
All CCHMC Admitted Patients	2,540	2,499	2,154
All CCHMC Ohio Patients	1,959	1,924	1,677
Butler	340	299	278
Clermont	252	254	196
Hamilton	1,037	1,054	917
IN Dearborn County	45	55	41
KY Boone County	102	133	86
KY Campbell County	89	82	49
KY Kenton County	159	125	144
Warren	137	106	139

Childhood Obesity

Childhood obesity is another key priority throughout Cincinnati Children's primary service area. Cincinnati Health Department collected data according to the Ohio Department of Education Guidelines the data showed students from Cincinnati Public Schools for the 2016-17 school year (most recent data available) shows 36.3% of students were obese or overweight. Compared to the 2013-14 where 33% of Cincinnati Public students were obese or overweight. Caregivers responding to the community survey said that 37.9% of children were severely or very severely obese.

Caregivers reported in the 2017 community survey, that 10.9% of children were severely obese and 27.0% were very severely obese. Caregivers also reported that 27.3% of their child exercised or participated in physical activity for at least 60 minutes every day. Additionally, 7.2% of caregivers responded that is it difficult to purchase healthy food in their neighborhoods with the main reason being food costs too much (34.6%). Key informants rated obesity as a high or very high need (80%) and reported childhood obesity is getting worst or staying the same (90%).

Dental

Pediatric dental care is a growing concern in Cincinnati Children's primary service area. In the 2017 community survey, 70.6% of caregivers reported that their child's teeth were in excellent or very good condition. Additionally, 54.5% of caregivers reported that their child had been seen by a dentist for a preventative care visit. However, 30.6% of caregivers that had delayed care for their child reported the care needed was dental. According to the Cincinnati Department of Health, 42.7 % of Cincinnati Public Schools students during the 2017-18 school year required a referral for follow-up, an indication of dental disease.33 Poverty is a risk factor for dental disease in children.34 In key informant interviews, dental care was identified as a gap in resources for child health.

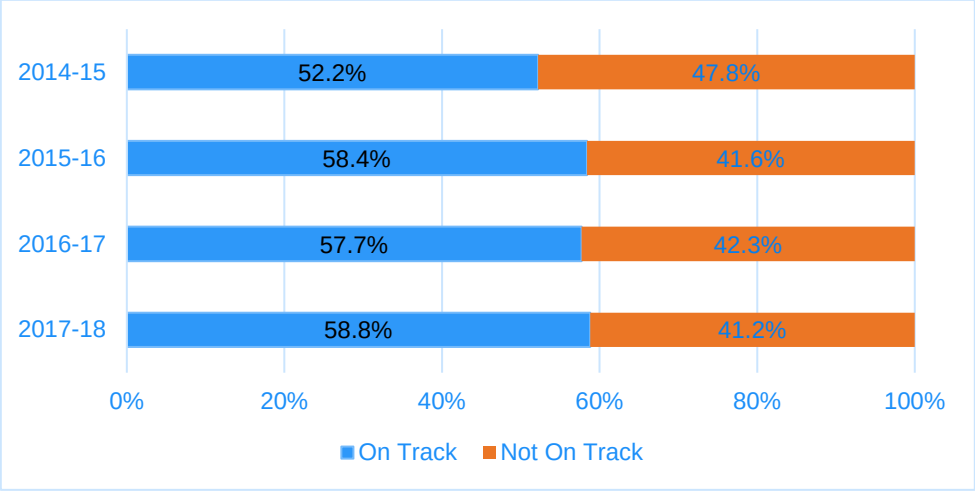
[32] Cincinnati Children's In House Trauma Registry Patients
[33] Office of Community Oral Health Programs, Cincinnati Health Department
[34] Centers for Disease Control

Early Literacy/School Readiness

Early literacy plays an important part in child health and development. For Cincinnati Public Schools Kindergarteners, the percentage of students ready for kindergarten in the 2014-15 school year was 52.2%, compared to 58.8% in the 2017-18 school year based on the Kindergarten Readiness Assessment. Key informants rate child literacy and reading as a high or very high need (86%), however 44.8% of key informants believe the need is improving.

Caregivers with children in child care settings completing the community survey reported that 40% of children were in a child care center, public or private preschool or Headstart or Early Headstart. A key indicator of school readiness and literacy is preschool attendance. Of 2017-18 kindergartners at Cincinnati Public who attended preschool were before kindergarten, 67.9% were ready for kindergarten based on the KRA compared to 55.1% of kindergarteners who did not attend preschool.

TABLE 37. KINDERGARTEN READINESS ASSESSMENT LEVELS FOR CINCINNATI PUBLIC SCHOOLS[35]



Infant Mortality

Hamilton County ranks among the worst 10% for infant mortality in the country. The Cradle Cincinnati Annual Report[36] reports that in 2017, 97 infants died in Hamilton County. In 2008-2012, Hamilton County had an infant mortality rate of 10.24 compared to 2013-2017 where the infant mortality rate decreased to 8.98. The infant mortality rate among African-Americans is 15.73 over the same time period. Infant mortality was rated as a high or very high need by 57% of key informants. Key informants (63.3%) also believed that infant mortality is improving in the community.

[35] Kindergarten Readiness Assessment Report
[36] https://www.cradlecincinnati.org/wp-content/uploads/2018/04/CC-2017-Annual-Report-Web.pdf

Other Identified Child Health Needs

In addition to these eight priorities, community members and key informants identified a number of other issues of concern:

Medical:

- Allergies
- Drug and alcohol abuse
- Emotional trauma
- Heart disease
- Lead poisoning
- Reproductive health education and services
- Sexually transmitted diseases
- Sickle cell disease
- Teen pregnancy and births
- Toxic stress
- Untreated parental Mental Health Issues
- Vaccinations
- Vision care

Social:

- Food insecurity (highest rated)
- Housing conditions
- Transportation
- Unemployment of parents

Community Strengths and Resources

While key informants and community members identified a list of needs and barriers, they also identified many community strengths. High among them is the ability of the community to work together.

A strength identified was that the Cincinnati community has strong institutions and strong partnerships to support youth initiatives. The community is actively looking for ways to coordinate programs and care. Key informants and community members supported Cincinnati Children's for community-focused initiatives that are contributing to improved child health, such as work to prevent violence and to improve outcomes for children with asthma. Cincinnati Children's efforts to improve child health are summarized below.

TABLE 38. CHILD HEALTH COMMUNITY EFFORTS

Issue	Programs and Partners
Asthma	Asthma Improvement Collaborative, Collaboration to Lessen Environmental Asthma Risks (CLEAR)
Dental/ Access to Care/ Prevention	Cincinnati Children's Pediatric Primary Care Clinics, School-Based Health Centers; Growing Well Cincinnati; Cincinnati Children's clinical network; First Ladies for Health Initiative; Every Child Succeeds; The Community Builder's Health Champions;
Early Literacy/School Readiness	Cincinnati Public Schools Quality Improvement Initiative; Imagination Library; Reach Out and Reading; Reading Bears; Reading and Crafts; and School Partnerships
Infant Mortality	Perinatal Institute; Cradle Cincinnati; Every Child Succeeds
Mental Health	Behavioral Medicine and Clinical Psychology Integration into Primary Care; Bridge Clinic; Cincinnati Children's College Hill Campus; MindPeace; Surviving the Teens; Parents on Point
Obesity	Bengals Play 60; Center for Better Health and Nutrition; Healthworks!; Keeping Kids Nourished and Developing (KIND); Recess at the Stadium
Unintentional Injury and Child Safety	Comprehensive Child Injury Center; Child HELP (Child Health-Law Partnership); Injury Free Coalition for Kids; Mayerson Center for Safe and Healthy Children
Other Child Health/Parenting	All Children Thrive; Avondale Mothers Empowered to Nurse; The Community Builder's Health Champions; Ongoing coordination with county and local health departments on child health prevention and interventions

Chapter 6. Urban Health

In the 2016 CHNAs for Cincinnati and Dayton, Social Determinants of Health were mentioned often in the region's two largest cities. But the regional results diluted that emphasis. For that reason, the consultants decided to add a question on the survey to designate urban, suburban, small town, or rural place of residence or service and added this chapter based on the responses from self-designated urbanites.

PRIORITIES OF URBAN CONSUMERS

More than one-third of, or 255, consumers checked the box 'Urban,' to describe where they lived. Substance abuse attracted almost one-fourth of all responses. Social Determinants of Health came next, with a variety of SDHs mentioned. Tied for 3rd place was Access to care/services; Chronic disease; and Mental health. These respondents provided a lot of examples.

TABLE 39. URBAN: CONSUMER PRIORITIES

Urban Consumer Survey Priorities

Priority	# Mentions	% Mentions
Substance abuse (Opioids=11, Addiction=11)	61	23.9%
Social Determinants of Health (Housing=4, Safety=4, Violence=3, Poverty=2 Education=2, Employment=2, Environmental health=2, Income inequality=2,)	28	11.0%
Access to care/services (Insurance=4, Transportation=1)	23	9.0%
Chronic disease (Cardiovascular=4, Hypertension=4)	23	9.0%
Mental health (Trauma=2, Child mental health=1)	23	9.0%
Obesity	20	7.8%
Healthy food/Nutrition (Food insecurity=1)	18	7.1%
Healthy behaviors (Tobacco=3, Exercise=2, Stress=1)	17	6.7%
Care for children	13	5.1%
Infant mortality	5	2.0%

PRIORITIES OF HEALTH DEPARTMENTS SERVING URBAN POPULATIONS

Most urban residents live in Hamilton and Montgomery Counties. The top 4 priorities (among 21 mentions) from the health departments serving those two counties are listed below. Substance abuse was #1, with a three-way tie for 2nd place among Mental health, Chronic disease, and Maternal & child health/Infant mortality.

TABLE 40. URBAN: HEALTH DEPARTMENTS SERVING LARGEST URBAN POPULATIONS

Priorities of Health Departments Serving Cities in Hamilton and Montgomery Counties

Priority	# Mentions	% Mentions
Substance abuse	4	19.0%
Mental health	3	14.3%
Chronic disease	3	14.3%
Maternal & child health/Infant mortality	3	14.3%

Eleven health departments served 9 counties with cities. They provided 41 priority topics. The top 4 priorities are identical to the table above. Here are the top mentions from the big cities and some smaller ones:

TABLE 41. URBAN: HEALTH DEPARTMENT PRIORITIES

Priorities of Health Departments Serving Nine Counties with Cities

Priority	# Mentions	% Mentions
Substance abuse	7	17.1%
Mental health	6	14.6%
Chronic disease	5	12.2%
Maternal & child health/Infant mortality	5	12.2%
Obesity	4	9.8%
Healthy behaviors	3	7.3%
Health education/Promotion	2	4.9%

UNMET NEEDS

The majority of responses are represented by these five issues that are not addressed enough. These topics totaled 61% mentions by consumers, 66% of mentions by agencies, and 63% of mentions by health departments.

TABLE 42. URBAN: UNMET NEEDS

Top Five Unmet Needs

Consumer	Agency	Health Department
Substance abuse (17%)	Access to care/services (19%)	Social Determinants of Health, (15%)
Mental health (12%)	Social Determinants of Health (15%)	Substance abuse (15%)
Access to care/services (11%)	Healthy behaviors (11%)	Access to care/services (13%)
Healthy behaviors (11%)	Mental health (11%)	Mental health (12%)
Social Determinants of Health, especially Housing (11%)	Substance abuse, esp. Addiction (10%)	Healthy behaviors (7%)

ISSUES HANDLED WELL

Three topics accounted for most of the mentions by consumers, agencies, and health departments: Substance abuse, Access to care/services; and Chronic disease. Bear in mind, that many consumers applauded the community initiatives aimed at reducing opioid overdoses but recognized that more would need to be done. These three topics comprised 46% of mentions by consumers, 43% of mentions by agencies, and 52% of mentions by health departments. See below.

TABLE 43. URBAN: ISSUES HANDLED WELL

Top Three Issues Handled Well

Consumer	Agency	Health Department
Chronic disease (19%)	Substance abuse (17%)	Substance abuse (29%)
Substance abuse (15%)	Access to care/services (13%)	Access to care (14%)
Access to care/services (12%)	Chronic disease (12%)	Chronic disease (9%)

IMMIGRANT HEALTH

The biggest difference between the Latino residents and the refugees from conflict in Rwanda was, for many of them, their legal status. Refugees are eligible for Medicaid, while undocumented Latinos do not have insurance. With both the Latino and Rwanda refugee respondents, the concerns about drugs and violence were connected directly to the safety of their children at school and in the lower-income neighborhoods where they live.

Latino Residents

Focus Groups

Five Latino people attended a meeting in Dayton, and they all mentioned obesity as a priority. Other concerns were: healthy behaviors, low-paying jobs, and education for parents.

Surveys

Here are the comments from 74 clients of Santa Maria Community Services and TriHealth. They lived in Butler and Hamilton Counties.

TABLE 44. URBAN: LATINO PRIORITIES

Survey Responses from Latino Residents

Priorities	# Mentions	% Mentions
Access to Care	29	37.7%
Lack of medical insurance	9	11.7%
Care for children	7	9.1%
Substance abuse	6	7.8%
Health education/Promotion	6	7.8%
Violence	3	3.9%
Social Determinants of Health	3	3.9%
Chronic Disease, esp. Diabetes	2	2.6%
Prenatal Care	2	2.6%
Prostitution	2	2.6%
Transportation	2	2.6%

Refugees from Rwanda

These results emerged from a natural consensus. What began as one-on-one survey administration became a quasi focus group. As the community health worker asked questions, the interviewees started to compare notes. When a group discovered an answer that resonated, then they all gave that answer when it was their turn to complete the survey. As stated before, the refugees were very concerned about the conditions where they lived and the risks faced by their children. They lived in Butler and Hamilton Counties.

TABLE 45. URBAN: PRIORITIES OF REFUGEES FROM RWANDA

Survey Responses from Refugees from Rwanda

Priorities	# Mentions	% Mentions
Substance Abuse	27	45.0%
Violence	22	36.7%
Environmental Health	6	10.0%
Healthy food/nutrition	3	5.0%

LGBTQ+ FOCUS GROUPS

Three meetings occurred in Dayton and one in Cincinnati. A total of 28 people attended. Here are the priorities that were mentioned more than once:

- Culturally competent care/providers: 19
- Suicide: 7
- Safe places/programs/services for trans youth: 6
- Insurance: 5
- Mental health (not including suicide): 5
- Access to care/services: 4
- Healthy foods/Nutrition: 4
- Birth certificates with incorrect gender: 3
- Substance abuse: 3
- Violence toward trans people: 3
- Health education/Promotion: 2
- Sexually transmitted diseases, including HIV: 2
- Social/emotional health: 2

AIR QUALITY: OZONE LEVEL

This measure reflects adverse conditions for eight counties, including but not limited to the most populous. An increase in ozone level is not exclusively an urban concern, but the table is placed here because it is not region-wide and there are several urban counties on the list. Of most concern are the counties where there was an increase in the number of poor air quality days. Even one day is not acceptable. See below.

TABLE 46. AIR QUALITY: OZONE LEVEL

Number of Days Exceeding National Ambient Air Quality Standard
(maximum 8-hour average ozone concentration)

County	2015	2016
Boone Co., KY	1	0
Campbell Co., KY	5	3
Butler Co., OH	3	11
Clark Co., OH	4	6
Clermont Co., OH	3	5
Clinton Co., OH	3	4
Fayette Co., OH	3	1
Greene Co., OH	4	1
Hamilton Co., OH	5	12
Miami Co., OH	2	3
Montgomery Co., OH	2	6
Preble Co., OH	1	1
Warren Co., OH	4	9

"There are so many environmental allergies in this community. I never knew people had so many sinus allergies until I moved to this area.."

- Green County resident

CAUSE OF DEATH FOR METROPOLITAN COUNTIES

One of the report options with CDC Wonder is a filter for what the CDC calls 'large central metro counties.' The definition is:

> "Counties in a Metropolitan Statistical Area (MSA) of 1 million population that:
> 1) contain the entire population of the largest principal city of the MSA, or
> 2) are completely contained within the largest principal city of the MSA, or
> 3) contain at least 250,000 residents of any principal city in the MSA."

Metropolitan counties are home to 809,099 residents or 24% of the region's total population of 3,399,267 (per CDC Wonder for 2016).

TABLE 47. 2016 CAUSES OF DEATH IN METROPOLITAN COUNTIES

Metropolitan Counties – Underlying Causes of Death in 2016		
Cause	# of Deaths	Age-adjusted Rate per 100,000
Bronchus or lung, unspecified – Malignant neoplasms	427	44.6
Atherosclerotic heart disease	415	41.3
Unspecified dementia	380	37.8
Alzheimer's disease, unspecified	301	29.4
Chronic obstructive pulmonary disease, unspecified	272	28.0
Accidental poisoning by and exposure to narcotics and psychodysleptics (hallucinogens), not elsewhere classified	249	32.0
Acute myocardial infarction, unspecified	216	22.3
Congestive heart failure	204	20.5
Stroke, not specified as hemorrhage or infarction	172	17.0
Septicemia, unspecified	131	13.8
Colon, unspecified – Malignant neoplasms	123	13.1
Pneumonia, unspecified	122	12.5
Breast, unspecified – Malignant neoplasms	121	12.9
Hypertensive heart disease without (congestive) heart failure	108	11.5
Pancreas, unspecified – Malignant neoplasms	106	11.0
Cardiac arrest, unspecified	104	10.8
Chronic kidney disease, stage 5	99	10.3
Atherosclerotic cardiovascular disease, so described	90	9.5
Heart failure, unspecified	84	8.5
Malignant neoplasm of prostate	81	8.4

500 CITIES PROJECT: LOCAL DATA FOR BETTER HEALTH

The CDC's National Center for Chronic Disease Prevention and Health Promotion has gathered and shared data from 500 cities. Below is a table showing how Cincinnati and Dayton fare compared to the United States for a variety of health measures.

TABLE 48. 500 CITIES: CINCINNATI & DAYTON

500 Cities Project: Local Data for Better Health			
Comparison of Cincinnati and Dayton to United States (age-adjusted prevalence %)			
Measure	**United States**	**Cincinnati**	**Dayton**
HEALTH OUTCOMES			
High cholesterol among adults aged >= 18 years who have been screened in the past 5 years (2015)	31.1	32.9	34.0
High blood pressure among adults aged >= 18 years (2015)	29.4	36.5	41.7
Arthritis among adults aged >= 18 years (2015)	22.5	25.8	30.6
All teeth lost among adults aged >= 65 years (2014)	15.4	22.3	27.5
Mental health not good for >= 14 days among adults aged >= 18 years (2015)	11.6	13.8	16.6
Physical health not good for >=14 days among adults aged >= 18 years (2015)	11.5	14.7	17.7
Diagnosed diabetes among adults aged >= 18 years (2015)	9.3	13.7	15.8
Current asthma among adults aged >= 18 years (2015)	8.7	10.9	11.6
Cancer (excluding skin cancer) among adults aged >= 18 years (2015)	6.0	5.9	6.0
Chronic obstructive pulmonary disease among adults aged >= 18 years (2015)	5.7	8.5	10.5
Coronary heart disease among adults aged >= 18 years (2015)	5.6	7.0	8.4
Stroke among adults aged >= 18 years (2015)	2.8	4.3	5.1
Chronic kidney disease among adults aged >= 18 years (2015)	2.5	3.3	3.7
PREVENTION			
Pap smear use among adult women aged 21-65 years (2014)	81.1	78.3	74.8
Mammography use among women aged 50-74 years (2014)	75.5	74.6	73.4
Cholesterol screening among adults aged >= 18 years (2015)	75.2	73.3	70.2
Visits to doctor for routine checkup within the past year among adults aged >= 18 years (2015)	68.6	74.4	73.8
Visits to dentist or dental clinic among adults aged >= 18 years (2014)	64.1	58.1	48.5
Fecal occult blood test, sigmoidoscopy, or colonoscopy among adults aged 50-75 years (2014)	64.0	61.1	57.2
Taking medicine for high blood pressure control among adults aged >= 18 years with high blood pressure (2015)	57.7	67.7	67.8

500 Cities Project, continued

Measure	United States	Cincinnati	Dayton
UNHEALTHY BEHAVIORS			
Sleeping less than 7 hours among adults aged >= 18 years (2014)	35.1	38.9	45.7
Obesity among adults aged >= 18 years (2015)	28.7	35.6	39.7
No leisure-time physical activity among adults aged >= 18 years (2015)	25.5	29.6	35.5
Binge drinking among adults aged >= 18 years (2015)	17.2	16.5	13.5
Current smoking among adults aged >= 18 years (2015)	17.1	23.1	27.5

CITY OF CINCINNATI PROFILE

The Cincinnati Health Department contributed the following tables, charts and narrative to illustrate the health issues and priorities for the residents they serve in the City of Cincinnati.

Overview

The City of Cincinnati has a vibrant and diverse population, with strong healthcare, educational, and business institutions. It is the largest city in the region and is comprised of 52 distinct neighborhoods. As of 2016, there were 298,011 residents, of which 50.7% were Caucasian and 43.1% African American,[37] a racial distribution that differs from the surrounding areas in Hamilton County. Age, education and income distributions also differ between the City and the rest of the county. Nearly 45% of Cincinnati children live in poverty, compared to just over a quarter in the entire county. These and other social and economic factors affect the health status of the residents (for example, see Figure 23). For this reason, a Cincinnati-specific profile is included to identify unique Cincinnati needs and challenges.

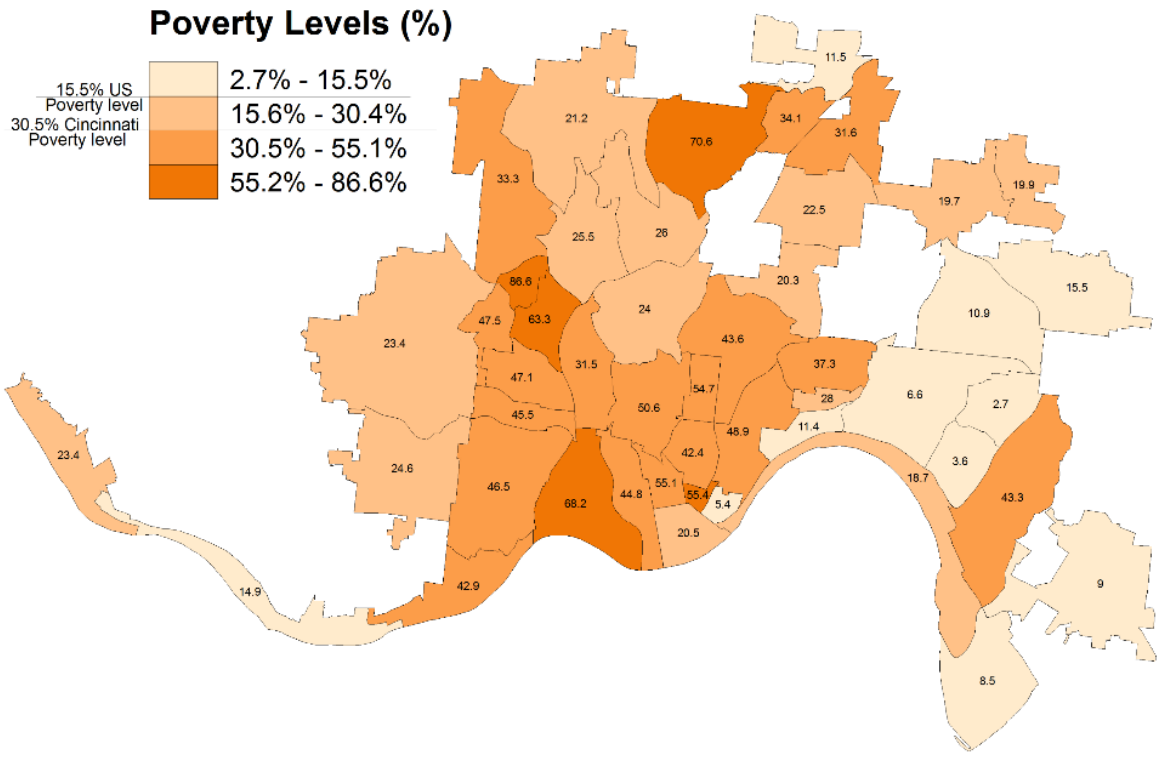


FIGURE 23. FAMILY POVERTY LEVELS (%) IN CINCINNATI, 2011-2015[38]

The regional collaborative Community Health Improvement Plan, called the Generation Health (Gen-H) initiative, has identified the following priorities to address: healthy behaviors, especially those related to preventing chronic diseases and promoting good mental health; delivery of quality health care; and

[37] *Source:* 2012-2016 American Community Survey 5-Year Estimates
[38] *Source:* 2011-2015 American Community Survey 5-Year Estimates

sustainable financial infrastructure. As part of the CHNA process, the Cincinnati Health Department (CHD) held community meetings to determine which major health issues face our community; mental health was ranked as the top priority (Table 49 below). Additionally, a survey distributed to agencies and consumers found that their top health priority was substance abuse (Table 50).

Access to healthcare issues includes lack of insurance coverage. As shown in the Cincinnati snapshot on the next page, 14.4% of the Cincinnati population does not have health insurance. To increase access to care, the CHD, the Cincinnati Health Network, WinMed and Crossroad operate federally qualified health centers. The City of Cincinnati Primary Care (CCPC) health centers operated by the CHD serve over 40,000 people, approximately 13% of the city's population. CCPC offers dental and vision services in addition to primary care. Moreover, CCPC health centers have added Medication-assisted treatment (MAT) services to help address the need for substance abuse treatment providers.

A focus on child health has motivated many institutions to expand services in creative ways. For instance, Cincinnati Children's Hospital Medical Center has a large number of clinic locations and works with community residents and stakeholders to address social determinants of health such as housing environments. The CHD contracts with the Cincinnati Public School District contracts to provide comprehensive public health nursing services in the schools, and also provides 11 school-based health centers at which children can receive primary care. The services of the CHD's School and Adolescent Health Program contribute to high rates of compliance for mandated vaccinations in students in the Cincinnati Public Schools (91.6% for the 2017-2018 school year).

Priority Issues for the City of Cincinnati

Community partner meetings were held 6/4, 6/14, and 7/11/18 for the City of Cincinnati. Forty-six individuals from agencies serving the City of Cincinnati attended the meetings. Each individual was given three dots to choose their top three priorities based on topics when asked, "Given the health issues facing the community, which ones would be your top priorities?"

TABLE 49. CITY OF CINCINNATI PARTNER AGENCY MEETING PRIORITIES

Priority	# Votes	% Votes
Mental Health	17	37%
Healthy Foods/ Nutrition	13	28%
Social Determinants of Health	10	22%
Poverty	7	15%
Substance Abuse	6	13%
Housing	6	13%

Surveys were distributed to agencies who serve the City of Cincinnati community, their consumers, and Cincinnati community members, including Latino and Rwandan refugees. The surveys were completed between 4/11/18 and 8/27/18. The most common responses are to answer the question "Given the health issues facing the community, which ones would be your top priorities?" There were 193 responses to the survey.

TABLE 50. CITY OF CINCINNATI RESIDENTS, CONSUMER AND AGENCY PRIORITIES

Priority	# Mentions	% Participants
Substance Abuse	65	34%
Violence	27	14%
Access to Medical and Dental Care	15	8%
Mental Health	13	7%
Access to Healthy Foods	12	6%

Environmental Exposure

Given the older housing stock in the city, many Cincinnati children are exposed to lead paint. The overall prevalence of elevated blood lead levels (EBLL) ≥ 5 µg/dL in Cincinnati children is 3.8%, compared to the Ohio (2.8%). Additionally, some neighborhoods have a dramatically higher percentage of children with EBLL (Figure 25). The effects of lead poisoning are irreversible and may be severe, including mental retardation, increased risk of developing disruptive behavioral issues, and lower lifelong earning potential.[39] As shown in Figure 25, neighborhoods greatly affected by lead exposure also have greater family poverty levels.

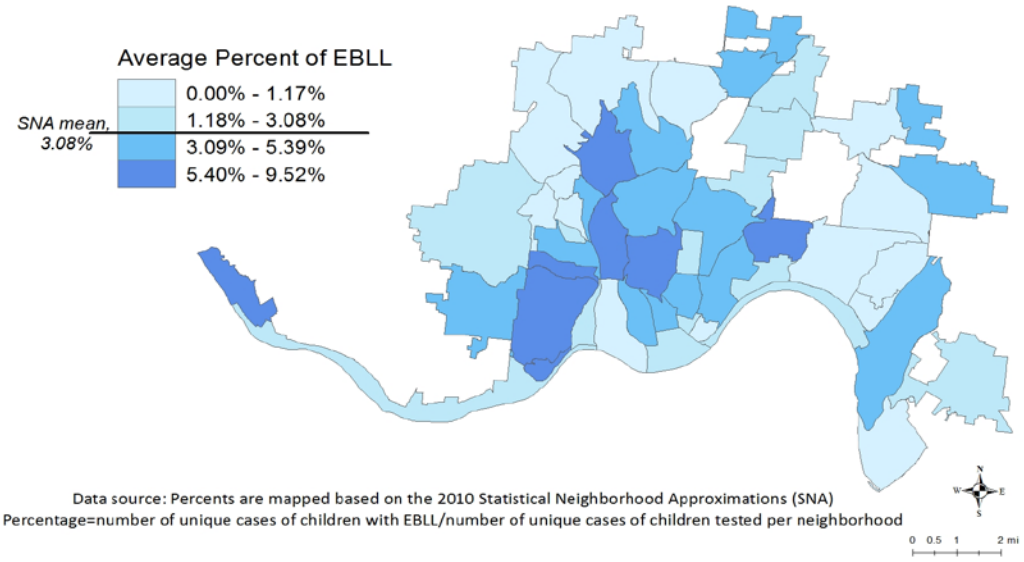


FIGURE 24. ELEVATED BLOOD LEAD LEVEL (>= 5 UG/DL) IN CHILDREN AGED < 6 YEARS, BY NEIGHBORHOOD IN CINCINNATI, 2013-2017[40]

TABLE 51. URBAN: CINCINNATI VS. HAMILTON COUNTY

[39] Lanphear, B. P., Dietrich, K., Auinger, P., & Cox, C. (2000). Cognitive deficits associated with blood lead concentrations <10 microg/dL in US children and adolescents. *Public health reports (Washington, D.C.: 1974)*, *115*(6), 521-9.

[40] *Source:* Ohio Department of Health Healthy Homes and Lead Poisoning Prevention Program

City of Cincinnati Health Snapshot

Pop.: 298,011

Measure/Indicator	City of Cincinnati	Hamilton County	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)*	17.5	24.4	22.2	20.2
Cancer mortality, Lung (rate per 100,000)*	59.3	50.6	48.2	39.4
Cancer mortality, Overall (rate per 100,000)*	204.1	179.1	174.3	157.1
Cancer mortality, Colon & Rectum (rate per 100,000)*	18.5	17.3	15.5	14.0
Child mortality (rate per 100,000 1-17 yrs.)*	35.3	23.7	20.1	19.9
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 100,000)*	315.8	271.8	316.1	270.9
Diabetes (%)##	13.7	12.1	11.1	10.7
Heart Disease Deaths (rate per 100,000)*	205.4	174.1	188.4	167
Infant Mortality (rate per 1,000 live births)*	11.0	9.0	7.2	5.9
Injury Deaths (rate per 100,000)*	65.2	63.8	61.2	45.3
Low birthweight (%)*	11.9	9.4	8.5	8.2
Preterm Birth (%)*	11.0	10.7	10.3	9.6
Stroke Deaths (rate per 100,00)*	62.1	49.3	40.6	37.5
Health Behaviors				
Adult Obesity (%)##	35.6	29.1	30.6	29.2
Adult Smoking (%)##	23.1	22.9	22.0	16.5
Adults with high blood pressure (% Yes)##	36.5	34.3	33.9	32.0
Alcohol-impaired driving deaths (%)	U	38.0	34.0	30.0
Chlamydia incidence (rate per 100,000)@	2273.7	858.1	521.6	497.3
Gonorrhea incidence (%)@	950.3	355.5	176.8	145.8
HIV prevalence (rate per 100,000)	U	369.1	199.5	305.2
Homicide (rate per 100,000)*	19.0	9.8	5.9	5.5
Motor vehicle crash deaths (rate per 100,000)*	8.8	7.1	10.3	11.5
Physical inactivity (%)##	29.6	24.5	26.4	25.2
Substance Abuse/Mental Health				
Depression (%)	U	18.5	18.5	17.1
Drug poisoning deaths (rate per 100,000)*	41.8	35.5	26.2	14.6
Fentanyl & related drug OD deaths (rate per 100,000)*	16.1	15.0	9.0	2.6
Heroin poisoning overdose deaths (rate per 100,000)	24.9	21.4	10.9	3.5
Prescription opioid overdose deaths (rate per 100,000)	9.1	7.4	5.9	4.0
Suicide (rate per 100,000)*	12.8	12.6	13.3	13.0
Access to Care				
Dentists (patient:provider ratio)^	1389:1	1380:1	1660:1	U
Mammography screening (%)	U	67.5	68.4	65.5
Mental health providers (patient:provider ratio)^	414:1	415:1	636:1	501:1
Primary care physicians (patient:provider ratio)^	952:1	920:1	1310:1	U
Uninsured (%)#	14.4	7.9	7.6	11.8
Socio-Economic/Demographic				
Children in poverty (%)#	44.6	26.1	22.1	21.2
Hispanic (%)#	3.2	2.9	3.5	17.3
African American (%)#	42.8	25.7	12.1	12.3
Population that is 65 and older (%)#	11.6	14.2	23.0	22.3
Population below 18 years of age (%)#	22.1	23.3	14.5	16.0

Top Causes of Death
Heart Disease
Cancer
Injury
Stroke

Homicide Deaths
Rate is higher than Hamilton County, OH, and US rates

STIs
Higher rates of chlamydia and gonorrhea than Hamilton County, OH, and US rates

Drug ODs
Death rates are higher than Hamilton County, OH, and US for drug poisoning, heroin &

% Uninsured Residents
Higher than Hamilton County,

Children
Higher infant and child mortality rates and higher percentage of children living in poverty than Hamilton County, OH and US

City of Cincinnati Data Sources: *Ohio Department of Health, Vital Statistics, 2012-2016; @Ohio Department of Health, STD Surveillance Program, 2016; #2012-2016 American Community Survey 5-Year Estimates; ##500 Cities Data Project; ^Data USA: Cincinnati, OH. U = Unavailable.

Key Indicators of Health: Cincinnati Snapshot

The snapshot shows how the health of Cincinnati residents compares to that of residents of Hamilton County, the state of Ohio, and the United States, as a whole. See Table 51 on the previous page.

Causes of Mortality

While the Snapshot (Table 51) compared the health of residents of the City of Cincinnati to those of Hamilton County as a whole, this section explores the relative importance of different causes to mortality within the City.

For Cincinnati residents as a whole, heart disease and cancer are top two causes of death (Table 52). Drug overdose is a major contributor to unintentional injury, making it the third most common cause of death (see also the *Opioid Epidemic* section, below).

TABLE 52. LEADING CAUSE OF DEATH FOR THE CITY OF CINCINNATI, 2012-2016[41]

	Leading Cause of Death	Mortality Rate (per 100,000)
	All Cause	995.6
1	Diseases of the heart	205.8
2	Malignant neoplasms (Cancer)	204.1
3	Accidents (unintentional injuries)	65.2
4	Cerebrovascular diseases	62.1
5	Chronic lower respiratory diseases	46.9
6	Diabetes Mellitus	33.9
7	Alzheimer's disease	29.2
8	Nephritis, nephrotic syndrome and nephrosis	24.4
9	Influenza and pneumonia	19.6
10	Assault (Homicide)	18.9

Table 53, below, shows the relative contribution of the different types of cancer to Cincinnati mortality.

[41] *Source:* Ohio Department of Health, Vital Statistics; Cincinnati Health Department, Vital Records and Statistics, 2012-2016.

TABLE 53. LEADING CAUSE OF CANCER DEATH FOR THE CITY OF CINCINNATI[42]

	Cancer Type	Mortality Rate (per 100,000)
	All Cancer	204.1
1	Lung and Bronchus	59.3
2	Colon and Rectum	18.5
3	Breast (F)	17.5
4	Pancreas	13.3
5	Prostate	9.5
6	Kidney	4.9
7	Corpus Uteri	4.0
8	Oral Pharynx	3.1
9	Cervix Uteri	1.0

As seen in Tables 54 and 55, there are large disparities in the mortality rates by gender and race. As shown, men more burdened by heart disease and cancer while women are more burdened by stroke (Table 54). Caucasians have higher mortality rates than African Americans for all three of these causes, while African Americans have higher mortality rates due to causes such as homicide (Table 55).

Cincinnati children are more likely to die before their first birthday than children in the rest of the county, state or the U.S., with an infant mortality rate of 11.0 per 1,000 live births in Cincinnati. Contributing factors to infant mortality include low birthweight, preterm birth, and unsafe sleeping conditions. Many institutions and residents have joined together to address this problem and have created Cradle Cincinnati as a collaborative effort to reduce infant mortality.

While the City closely tracks the nation in terms of the leading causes of death, mortality rates are often higher in Cincinnati than in Hamilton County, Ohio and the United States, and homicide is within the top 10 causes in Cincinnati.

[42] *Source:* Ohio Department of Health, Vital Statistics; Cincinnati Health Department, Vital Records and Statistics, 2012-2016.

TABLE 54. LEADING CAUSE OF DEATH BY GENDER FOR THE CITY OF CINCINNATI[43]

	Gender	Leading Cause of Death	Mortality Rate (per 100,000)
1	Female	Malignant neoplasms	199.3
2		Diseases of the heart	196.5
3		Cerebrovascular diseases	70.1
4		Chronic lower respiratory diseases	51.9
5		Accidents (unintentional injuries)	44.9
6		Alzheimer's disease	42.2
7		Diabetes mellitus	32.7
8		Nephritis, nephrotic syndrome and nephrosis	24.1
9		Influenza and pneumonia	21.5
10		Septicemia	17.7
1	Male	Disease of the heart	215.7
2		Malignant neoplasms	209.4
3		Accidents (unintentional injuries)	86.8
4		Cerebrovascular diseases	53.7
5		Chronic lower respiratory diseases	41.5
6		Diabetes mellitus	35.3
7		Assault (homicide)	33.3
8		Nephritis, nephrotic syndrome and nephrosis	24.7
9		Intentional self-harm (suicide)	19.7
10		Influenza and pneumonia	17.7

[43] *Source*: Ohio Department of Health, Vital Statistics; Cincinnati Health Department, Vital Records and Statistics, 2012-2016.

TABLE 55. LEADING CAUSE OF DEATH BY RACE FOR THE CITY OF CINCINNATI[44]

	Race	Leading Cause of Death	Mortality Rate (per 100,000)
1	African American	Malignant neoplasms	209.7
2		Diseases of the heart	188.5
3		Cerebrovascular diseases	57.9
4		Accidents (unintentional injuries)	43.4
5		Diabetes mellitus	40.6
6		Assault (homicide)	36.3
7		Nephritis, nephrotic syndrome and nephrosis	33.8
8		Chronic lower respiratory diseases	
9		Certain conditions originating in the perinatal period	18.3
10		Septicemia	16.6
1	Caucasian	Disease of the heart	247.5
2		Malignant neoplasms	225
3		Accidents (unintentional injuries)	94.4
4		Cerebrovascular diseases	74.2
5		Chronic lower respiratory diseases	67.7
6		Alzheimer's disease	47.4
7		Diabetes mellitus	31.1
8		Influenza and pneumonia	27.3
9		Nephritis, nephrotic syndrome and nephrosis	18.6
10		Intentional self-harm (suicide)	18.3

Opioid Epidemic

Cincinnatians die in greater numbers from opioids and other drug-related causes than Hamilton County residents and are more likely to die from homicide (see Profile above). The City of Cincinnati bears a disproportionate burden of drug-overdose related costs—people buy drugs in the City, overdose in the City (personnel costs of police and fire department response) and are often treated in the City even if they are not residents. This economic burden on Cincinnati diverts funds that could be used to address other challenges. Figure 25 shows the type of opioid overdoses between 2007 and 2017, with synthetic narcotics being a greater cause of overdose deaths in more neighborhoods in 2017 compared to such deaths in 2007. Table 56 shows the growing count of drug overdose deaths from 2012 to 2016 with drug overdoses by heroin and synthetic opioids rapidly increasing over time. Exposure to violence, especially in childhood, is highly stressful and can lead to poor physical health as well as mental health challenges.

[44] *Source:* Ohio Department of Health, Vital Statistics; Cincinnati Health Department, Vital Records and Statistics, 2012-2016.

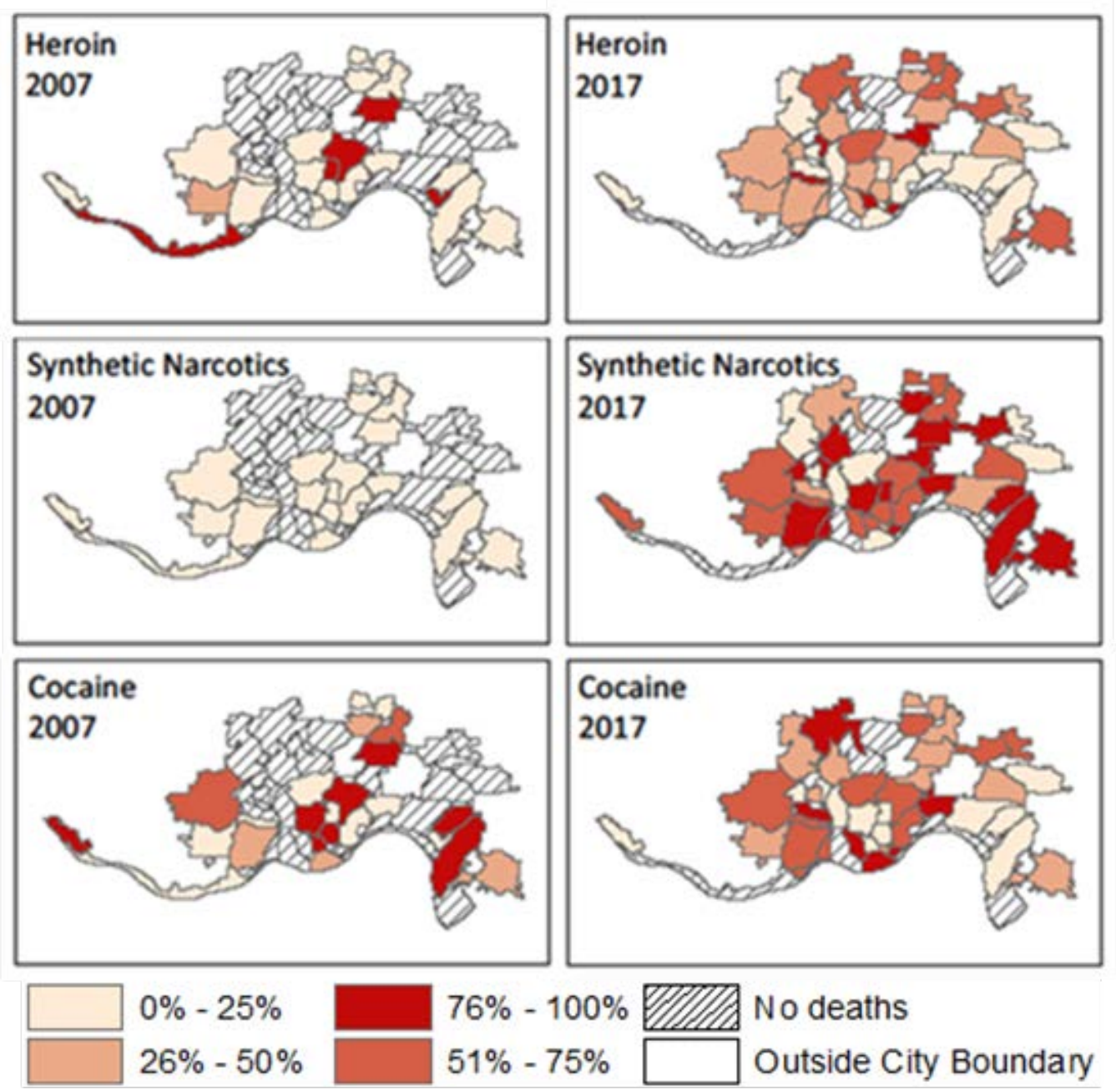


FIGURE 25. PERCENTAGE OF OVERDOSE DEATHS INVOLVING HEROIN, SYNTHETIC OPIOIDS AND COCAINE BY NEIGHBORHOOD, 2007 AND 2017[45]

[45] *Source:* Ohio Department of Health, Vital Statistics; Cincinnati Health Department, Vital Records and Statistics, 2012-2016.

TABLE 56. TOTAL OVERDOSE DEATHS BY DRUG POISONING FOR THE CITY OF CINCINNATI[46]

Drug Categories	2012	2013	2014	2015	2016	Total
Total Drug Overdose Deaths	65	94	108	166	148	581
Poisoning by Heroin	36	66	54	103	91	350
Poisoning by Natural or Semisynthetic Opioids*	14	13	24	27	26	104
Poisoning by Methadone**	3	4	3	9	4	23
Poisoning by Synthetic Opioids other than Methadone***	1	8	39	96	83	227
Poisoning by Unspecified Opioids	2	2	2	8	5	19

Notes:

*Natural opioids include morphine and codeine, and semisynthetic opioids include drugs such as oxycodone, hydrocodone, hydromorphone, and oxymorphone.

**Methadone is a synthetic opioid.

***Synthetic opioids other than methadone, include drugs such as tramadol and fentanyl.

Some deaths involved more than one type of opioid. These deaths were included in the counts for each category. Therefore, categories presented are not mutually exclusive.

[46] *Source:* Ohio Department of Health, Vital Statistics; Cincinnati Health Department, Vital Records and Statistics, 2012-2016.

Chapter 7. Community Profiles

For each county, or group of counties, the community profile includes results from the community meeting, consumer surveys, agency surveys, health department responses, Snapshot of secondary data, and the CNI maps with ZIP Code scores.

Trend arrows represent a trend going in the ‘wrong’ direction, so its meaning depends on the measure. For example, an up arrow for adult obesity means that the percentage of obese adults is continuing to rise. An up arrow for mammography screening is a good thing; it means that more women are being screened for breast cancer. A hyphen (-) means there is no discernible trend. An asterisk (*) means the measure is worse than the benchmark.

State departments of health will suppress numbers in a small community to avoid disclosing a patient’s identity inadvertently. A ‘U’ means that the data was suppressed, was not available, or was not deemed reliable for comparison. This could be due to jurisdictions applying different standards or methods of measurement.

The population charts provide a quick reference for such valuable information as fewer working age adults (18-64), an increasing or dwindling elderly population (65+), or an increasing population of children (0-17), compared to national trends. This information might indicate where resources or future efforts might be directed.

DEARBORN/OHIO/SWITZERLAND COUNTIES

Dearborn County is the largest of the three counties and contains the City of Lawrenceburg. Ohio County is the least populous county in Indiana. Ohio and Switzerland Counties are both considered 100% rural. Switzerland County has one ZIP Code that has a CNI score of 3.4, indicating health disparities may exist. Injury deaths in all three counties are at or above the Indiana and U.S. averages. All three counties have far fewer mental health providers than the Indiana and U.S. ratios.

Dot Voting in Lawrenceburg, IN

Population Charts

The following are population charts for Dearborn, Ohio and Switzerland County from years 2012-2016.

FIGURE 26. DEARBORN COUNTY POPULATION

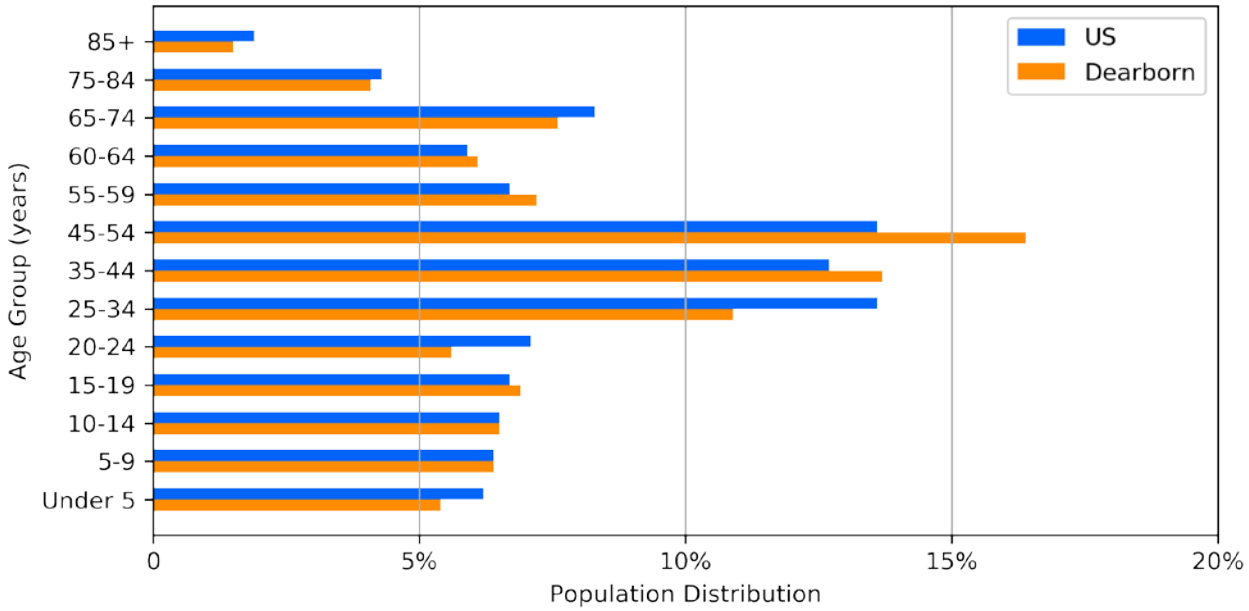


FIGURE 27. OHIO COUNTY POPULATION

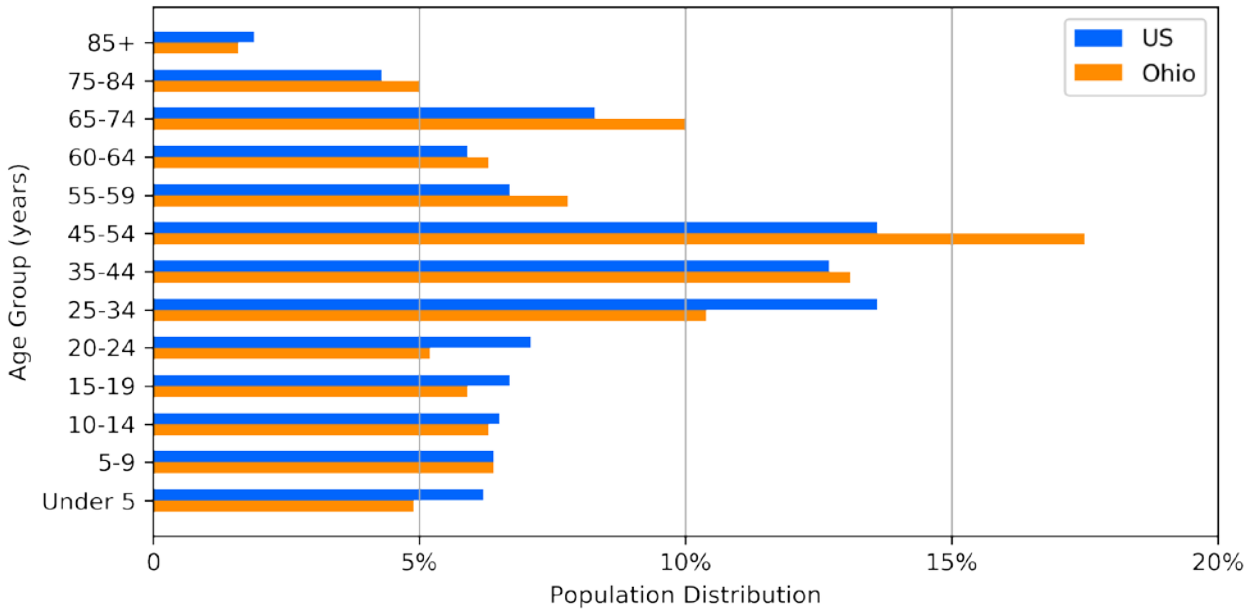
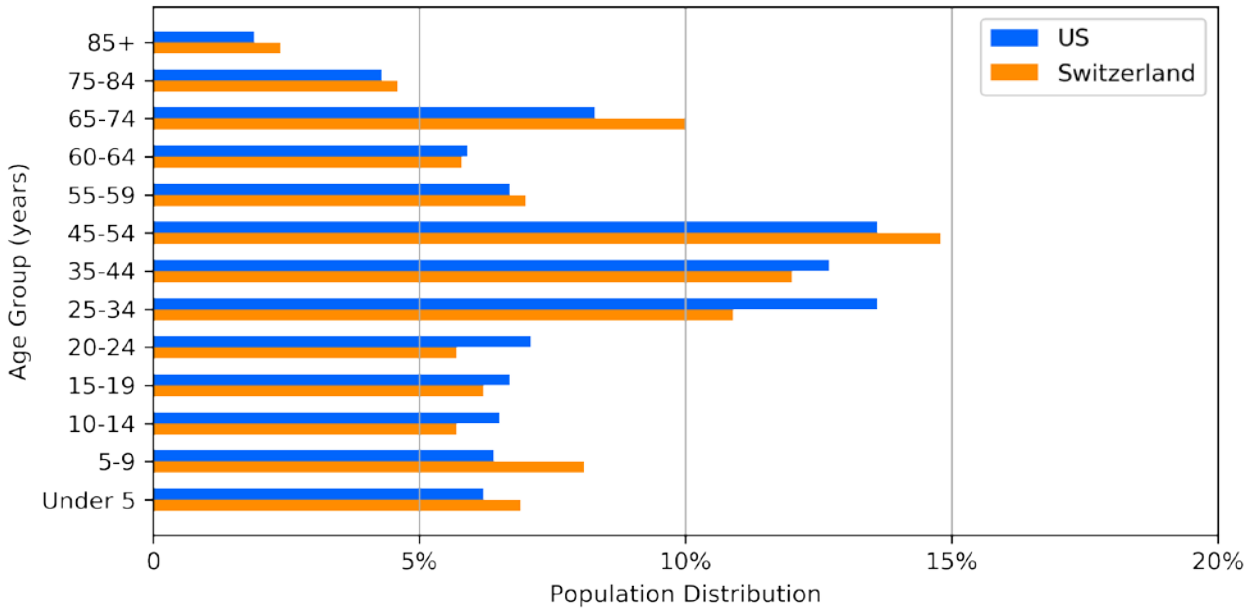


FIGURE 28. SWITZERLAND POPULATION



Consensus on Priorities

Substance abuse and addiction were mentioned as a top priority across all surveys and by the three Health Departments. Healthy behaviors, including being responsible for one's health and smoking, were mentioned as priorities in the community meetings. Mental health was consistently mentioned, with

emphasis on childhood trauma at the community meeting. Care for children and family/parenting education was mentioned consistently.

Top Causes of Death

Death data for Franklin and Union Counties were suppressed and/or unreliable due to small numbers. The top causes of death in Dearborn/Ohio/Switzerland Counties for 2016 were, in descending order:

- Dementia
- Acute Myocardial Infarction (AMI), or heart attack
- Lung Cancer

Priorities from Community Meeting on May 23, 2018

Thirty-six people contributed votes to identify a total of twelve priorities. Below are the topics receiving at least 5% of votes.

TABLE 57. DEARBORN/OHIO/SWITZERLAND COUNTIES: MEETING PRIORITIES

Priority	# Votes	% Votes
Healthy behaviors (Be responsible, 11 and Smoking, 4)	22	21%
Substance abuse	19	18.1%
Mental health (Childhood trauma, 3)	17	16.2%
Access (Transportation, 8)	14	13.3%
Parenting/Family	12	11.4%

Survey Responses

Below are the most frequent responses from individual consumers, living in Dearborn/Ohio/Switzerland Counties, who completed a survey between 6/19/18 and 8/3/18. Six people participated. Respondents all answered the question, “Given the health issues facing the community, which ones would be your top priorities?” They mentioned 23 health and/or health-related issues of particular concern to them. The following table contains the issues that received more than 5% of all mentions.

TABLE 58. DEARBORN/OHIO/SWITZERLAND COUNTIES: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	5	21.7%
Chronic disease	4	17.4%
Healthy behaviors	4	17.4%
Care for children	4	17.4%

Five organizations serving County residents, especially vulnerable populations, responded with their priorities. The priorities that received more than 5% of mentions are listed below.

TABLE 59. DEARBORN/OHIO/SWITZERLAND COUNTIES: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	4	33%
Violence	2	17%
Infant mortality	2	17%

Responses from Health Departments

A team of nurse health educators and public health nurses from Dearborn County, a public health nurse from Ohio County Health Department, and a health administrator from Switzerland County Health Department provided the priorities listed below:

TABLE 60. DEARBORN/OHIO/SWITZERLAND COUNTIES: HEALTH DEPARTMENT PRIORITIES

Health Department	Priority 1	Priority 2	Priority 3
Dearborn	Addiction (Substance abuse)	Recovery housing	Mental health
Ohio	Addiction (Substance abuse)	Parenting/Family	Care for children
Switzerland	Addiction (Substance abuse)	Obesity	

> *"State benefits pay about $11/hour. Local jobs pay $9/hour."*
>
> - Dearborn/Ohio/Switzerland County resident

Dearborn County Health Snapshot

Pop.: 49,331

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	17.4	-	21.8	21.2
Cancer mortality, Lung (rate per 100,000)	49.5	↑	55.1	39.4
Cancer mortality, Overall (rate per 100,000)	186.6	↑*	182.2	157.1
Child Mortality (rate per 100,000, 1-17 yrs.)	30.0	-	59.8	50.0
Diabetes (%)	12.0	↑*	11.0	10.7
Heart Disease Deaths (rate per 100,000)	63.2	↑	182.3	167
Infant Mortality (rate per 1,000 live births)	6.0	-	7.0	5.9
Injury Deaths (rate per 100,000)	79.0	↑	70.0	45.3
Low birthweight (%)	8.0	-	8.0	8.0
Poor physical health days (last 30 days)	3.5	-	3.9	3.9
Poor mental health days (last 30 days)	3.8	-	4.3	3.7
Stroke Deaths (rate per 100,000)	48.5	↓*	39.1	37.5
Health Behaviors				
Access to exercise opportunities (%)	70.0	-	77.0	83.0
Adult Obesity (%)	36.0	↑*	32.0	29.2
Adult Smoking (%)	18.0	-	21.0	16.5
Alcohol-impaired driving deaths (%)	37.0	↓*	22.0	30.0
Chlamydia incidence (rate per 100,000)	216.0	↑	438.0	497.3
HIV prevalence (rate per 100,000)	38.0	↑	196.0	305.2
Motor vehicle crash deaths (rate per 100,000)	13.0	↓*	12.0	11.5
Physical inactivity (%)	28.0	*	27.0	23.0
Substance Abuse/Mental Health				
Excessive drinking (%)	19.0	-	19.0	16.6
Drug overdose mortality rate (per 100,000)	18.0	-	20.0	17.0
Suicide (rate per 100,000)	16.4	↑*	14.3	13.4
Access to Clinical Care				
Dentists (ratio)	6170:1	*	1852:1	1480:1
Mammography screening (%)	66.0	-	62.1	72.7
Mental health providers (ratio)	840:01:00	*	701:1	470:1
Primary care physicians (ratio)	1980:01:00	↓	1505:1	1320:1
Uninsured (%)	9.0	↑	11.0	11.0
Socio-Economic/Demographic				
Children in poverty (%)	18.2	↓	20.0	20.0
Hispanic (%)	1.3		6.8	17.8
African American (%)	0.6		9.3	12.4
Population that is 65 and older (%)	16.2	*	14.9	16
Population below 18 years of age (%)	22.9	↓	23.8	22.3

Source data range: 2014-2017

* = higher than state and national averages

Top Causes of Death
Heart Attack
Heart Disease
Lung Cancer

Injury Deaths
Rate increasing and > IN and US

Obesity
Rate increasing and > IN & US; Physical inactivity rate > IN & US

STIs
Chlamydia incidence & HIV prevalence rates increasing

Populaton
Age 65 and older increasing
Age 18 and under decreasing

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. None of the County's Zip Codes exceed a 2.6 score.

Ohio County Health Snapshot

Pop.: 5,932

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	U		21.8	21.2
Cancer mortality, Lung (rate per 100,000)	79.2	↓*	55.1	39.4
Cancer mortality, Overall (rate per 100,000)	194.1	↑*	182.2	157.1
Child Mortality (rate per 100,000, 1-17 yrs.)	U		59.8	50.0
Diabetes (%)	12.0	-	11.0	10.0
Heart Disease Deaths (rate per 100,000)	162.2	-	182.3	167.0
Infant Mortality (rate per 1,000 live births)	U		7.0	5.9
Injury Deaths (rate per 100,000)	73.0	↑*	70.0	65.0
Low birthweight (%)	8.0	-	8.0	8.0
Poor physical health days (last 30 days)	3.3	-	3.9	3.7
Poor mental health days (last 30 days)	3.7	-	4.3	3.8
Stroke Deaths (rate per 100,000)	U		39.1	37.5
Health Behaviors				
Access to exercise opportunities (%)	64.0	-	77.0	83.0
Adult Obesity (%)	33.0	↑*	32.0	28.0
Adult Smoking (%)	17.0	↓	21.0	17.0
Alcohol-impaired driving deaths (%)	20.0	↓	22.0	29.0
Chlamydia incidence (rate per 100,000)	198.8	↑	438.0	478.8
HIV prevalence (rate per 100,000)	U		196.0	305.2
Motor vehicle crash deaths (rate per 100,000)	U		12.0	11.5
Physical inactivity (%)	31.0	↓*	27.0	23.0
Substance Abuse/Mental Health				
Excessive drinking (%)	19.0	-	19.0	18.0
Drug overdose mortality rate (per 100,000)	12.4	-	20.0	17.0
Suicide (rate per 100,000)	14.8	*	14.3	13.0
Access to Clinical Care				
Dentists (ratio)	2970:1	*	1852:1	1480:1
Mammography screening (%)	58.0	*	62.1	72.7
Mental health providers (ratio)	5930:1	*	701:1	470:1
Primary care physicians (ratio)	2970:1	*	1505:1	1320:1
Uninsured (%)	12.0	↓	11.0	11.0
Socio-Economic/Demographic				
Children in poverty (%)	16.0	↓	20.0	20.0
Hispanic (%)	1.3		6.8	17.8
African American (%)	0.7		9.3	12.4
Population that is 65 and older (%)	20.8	↑	14.9	15.2
Population below 18 years of age (%)	19.0	-	23.8	22.8

Cancer Deaths
Lung cancer and overall rate > IN and US

Adult Obesity
Rate increasing and > IN and US

Alcohol-impaired Driving Deaths
Rate ↓ but > IN and US

Injury Deaths
Rate increasing and > IN and US

Mental Health
Few mental health providers; Suicide rate > IN and US rates

Source data range: 2014-2017
U = Unavailable, unreliable, or suppressed due to small numbers.
*=higher than state and national averages

Community Need Index
A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. None of the County's Zip Codes exceed a 2.8 score.

Switzerland County Health Snapshot

Pop.: 10,613

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	17.5	-	21.8	21.2
Cancer mortality, Lung (rate per 100,000)	80.0	*	56.3	46
Cancer mortality, Overall (rate per 100,000)	210	↓*	182.2	157.1
Child Mortality (rate per 100,000, 1-17 yrs.))	93.5	*	59.8	50.0
Diabetes (%)	12.0	↑*	11.0	10.0
Infant Mortality (rate per 1,000 live births)	U		7.0	5.9
Injury Deaths (rate per 100,000)	88.0	↑*	70.0	65.0
Low birthweight (%)	8.0	↑	8.0	8.0
Poor physical health days (last 30 days)	4.5	*	3.9	3.7
Poor mental health days (last 30 days)	4.4	↑*	4.3	3.8
Stroke Deaths (rate per 100,000)	18.2	-	39.1	37.5
Health Behaviors				
Access to exercise opportunities (%)	56.0	↑	77.0	83.0
Adult Obesity (%)	30.0	-	32.0	28.0
Adult Smoking (%)	24.0	*	21.0	17.0
Alcohol impaired driving deaths (%)	14.0	↓	22.0	29.0
Chlamydia incidence (rate per 100,000)	21.0	-	438.0	478.8
HIV prevalence (rate per 100,000)	139.0	↑	196.0	362.0
Motor vehicle crash deaths (rate per 100,000)	20.0	*	12.0	11.0
Physical inactivity (%)	28.0	↓*	27.0	23.0
Substance Abuse/Mental Health				
Excessive Drinking (%)	16.0	-	19.0	18.0
Drug Poisoning deaths (rate per 100,000)	25.9	↑*	20.0	17.0
Suicide (rate per 100,000)	U		14.3	13.0
Access to Clinical Care				
Dentists (ratio)	5260:1	↓*	1852:1	1480:1
Mammography screening (%)	46.0	↓*	62.1	63.0
Mental health providers (ratio)	2630:1	↓*	701:1	470:1
Primary care physicians (ratio)	10,424:1	*	1505:1	1320:1
Uninsured (%)	13.0	↓*	11.0	11.0
Socio-Economic/Demographic				
Children in poverty (%)	28.0	↓*	19.0	20.0
Hispanic (%)	2.2		6.8	17.8
African American (%)	0.3		9.3	12.4
Population that is 65 and older (%)	16.9	↑	14.9	15.2
Population below 18 years of age (%)	24.9	-*	23.8	22.8

Source data range: 2014-2017

U = Unavailable, unreliable, or suppressed due to small numbers.

* = higher than state and national averages

Cancer
Lung cancer and overall rate > than IN and US

Injury Deaths
Increasing and > IN and US rate

Drug Poisoning Deaths
Higher than IN and US rates

Smoking
Higher than IN and US rates

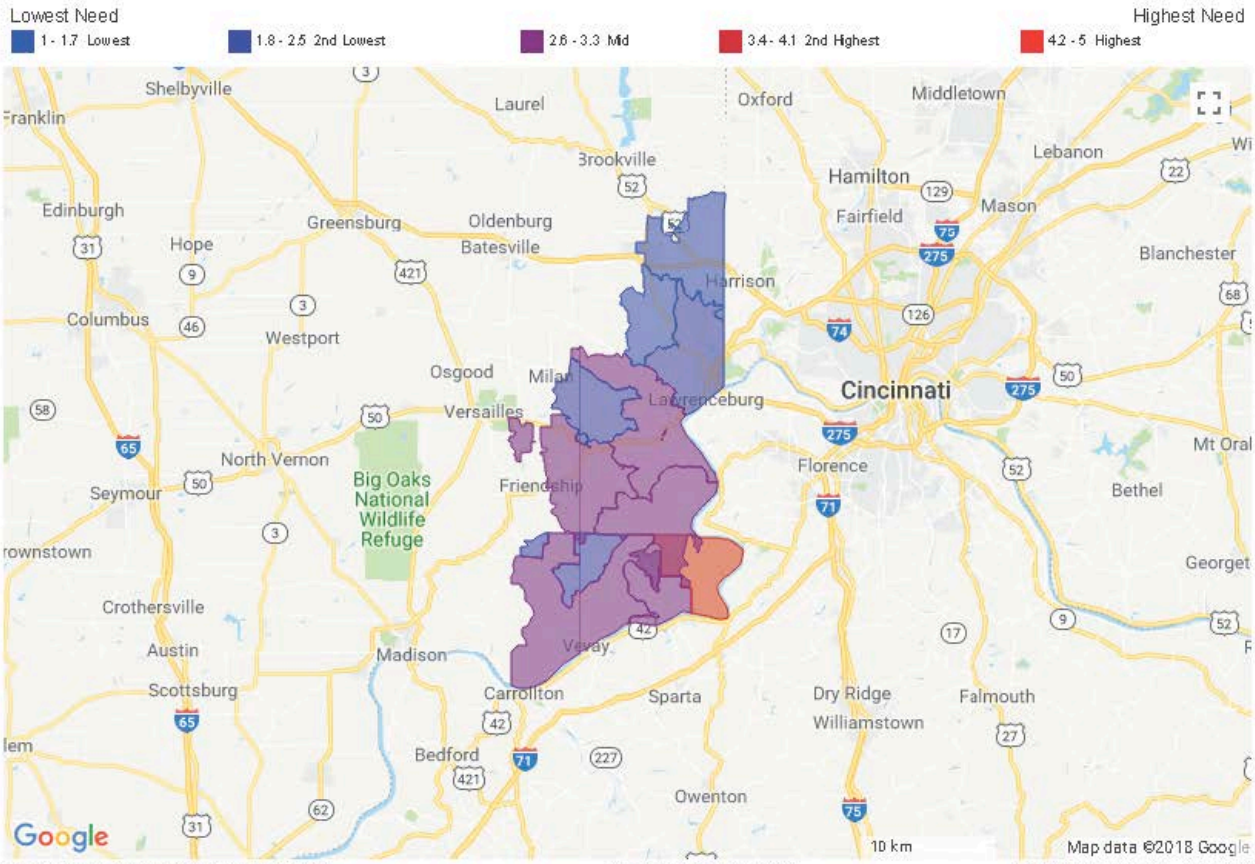
Mammography Screening
Lower than state & national rate

Children
Mortality and poverty rates are both > IN & US

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. One of the County's ZIP codes has a 3.4 score.

Dignity Health.



Mean(zipcode): 2.5 / Mean(person): 2.3 CNI Score Median: 2.6 CNI Score Mode: 1.4, 2.6, 3.2

Zip Code	CNI Score	Population	City	County	State
47020	3.2	1184	Switzerland County	Switzerland	Indiana
47038	3.4	1385	Patriot	Switzerland	Indiana
47011	2.4	1164	Switzerland County	Switzerland	Indiana
47043	3.2	5299	Vevay	Switzerland	Indiana
47040	2.8	5186	Rising Sun	Ohio	Indiana
47025	2.2	22286	Lawrenceburg	Dearborn	Indiana
47018	2.6	4162	Dillsboro	Dearborn	Indiana
47001	2.6	10104	Aurora	Dearborn	Indiana
47032	2	3558	Moores Hill	Dearborn	Indiana
47060	1.4	7032	West Harrison	Dearborn	Indiana
47022	1.4	3480	Guilford	Dearborn	Indiana

TRUVEN HEALTH ANALYTICS

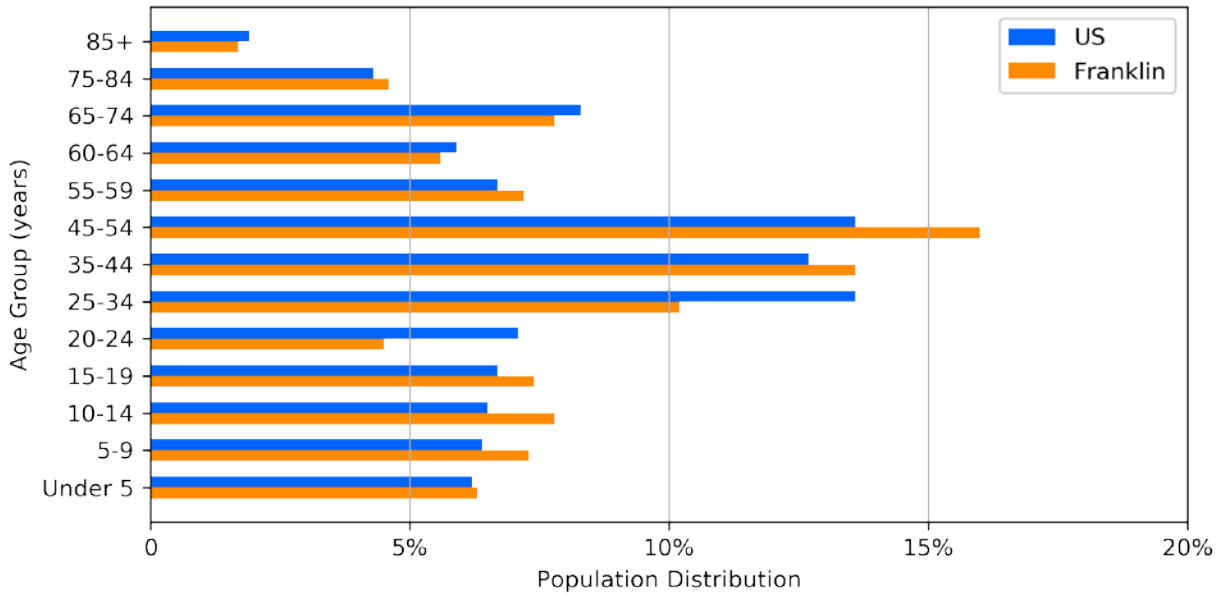
FRANKLIN/UNION COUNTIES

Union County is 100% rural. Ratios of primary care and mental health providers are significantly worse than Indiana and U.S. averages. The adult smoking rate in Union is lower than the Indiana average and decreasing. Union County has one ZIP Code that a CNI score of 3.4, indicating the likelihood of health disparities. Alcohol-impaired driving deaths and injury death rates in Franklin County are higher than Indiana averages. Rates of children living in poverty are lower than the U.S. and Indiana rates and decreasing.

Population Charts

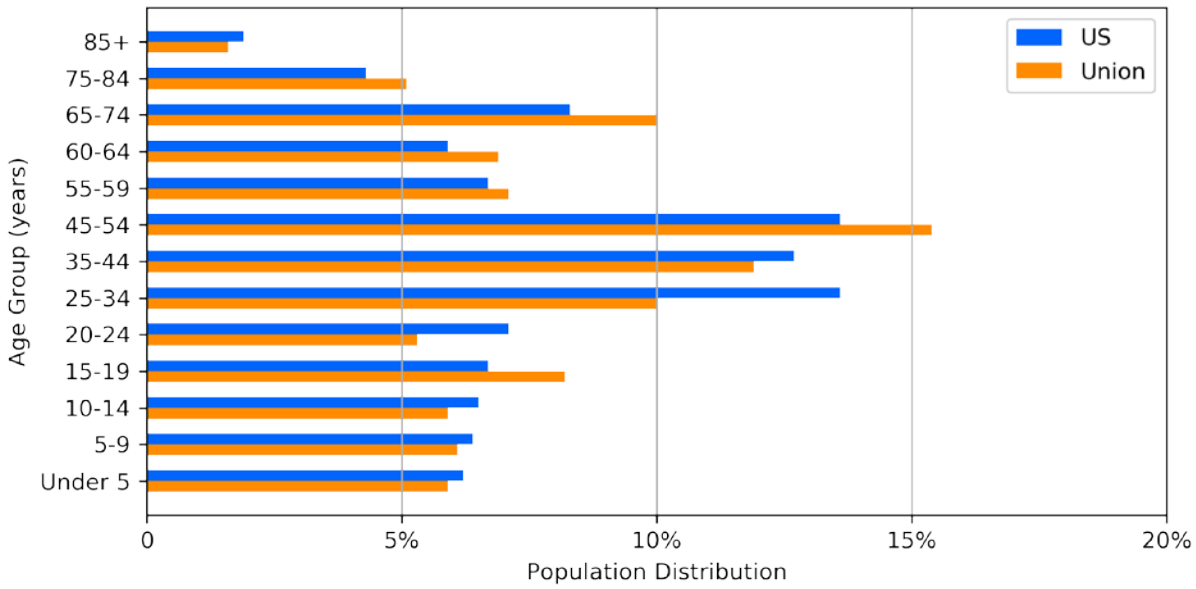
The following are population charts for Franklin and Union County from years 2012-2016.

FIGURE 29. FRANKLIN COUNTY POPULATION



> *"I overhear citizens being cruel to each other often."*
>
> \- Union County resident

FIGURE 30. UNION COUNTY POPULATION



Consensus on Priorities

Substance abuse is a major health issue in this area of Indiana and was mentioned in all surveys. Opioids, and addiction specifically, were mentioned as top priorities in the Substance abuse category. In Franklin, access issues around lack of transportation were mentioned. In Union County, Chronic disease and Mental health are top priorities of the Health Department. The need for Health education/Promotion was mentioned as the top priority in the community meeting. Agencies serving both counties mentioned violence as a priority.

Top Causes of Death

The top causes of death for 2016 were, in descending order:

- Chronic Obstructive Pulmonary Disease (COPD)
- Heart disease
- Acute Myocardial Infarction (AMI), or heart attack

Priorities from Community Meetings on April 10, 2018 and April 26, 2018

Three people from Franklin County and six people from Union County contributed votes to identify a total of nine priorities. Below are the topics receiving at least 5% of votes.

TABLE 61. FRANKLIN/UNION COUNTIES: MEETING PRIORITIES

Franklin County Priorities	# Votes	% Votes
Substance abuse (Opioids,2)	3	25.0%
Access (Transportation, 3)	3	25.0%
Mental health	2	16.7%

Union County Priorities	# Votes	% Votes
Health Education/Promotion	4	33.3%
Substance abuse (Opioids, 2)	3	25.0%

Survey Responses

Below are the most frequent responses from individual consumers, living in Franklin and Union Counties, who completed a survey between 6/19/18 and 8/3/18. Five people participated. Respondents all answered the question, “Given the health issues facing the community, which ones would be your top priorities?” They mentioned four health and/or health-related issues of particular concern to them. The following tables contain the issues reported.

TABLE 62. FRANKLIN/UNION COUNTIES: CONSUMER PRIORITIES

Priority	# Votes	% Votes
Substance abuse (Opioids, 1)	2	50%
Healthy behaviors	2	50%

Three organizations serving County residents, especially vulnerable populations, responded with their priorities. The priorities are listed below.

TABLE 63. FRANKLIN/UNION COUNTIES: AGENCY PRIORITIES

Priority	# Votes	% Votes
Substance abuse (Addiction, 1)	2	66%
Violence	1	33%

Responses from Health Departments

Staff from both the Franklin and Union County Health Departments responded. The priorities are listed below.

TABLE 64. FRANKLIN/UNION COUNTIES: HEALTH DEPARTMENT PRIORITIES

Health Department	Priority 1	Priority 2
Franklin	Addiction (Substance abuse)	
Union	Chronic disease	Mental health

> *"The Internet and the health department are the only [resources]."*
>
> -Union County consumer

Franklin County Health Snapshot

Pop.: 22,715

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Lung (rate per 100,000)	47.7	↓	55.1	39.4
Cancer mortality, Overall (rate per 100,000)	179.9	↑	182.2	157.1
Diabetes (%)	11	-	11	10
Heart Disease Deaths (rate per 100,000)	158.7	-	182.3	167
Injury Deaths (rate per 100,000)	71	↑*	70	45.3
Poor physical health days (last 30 days)	3.7	-	3.9	3.9
Poor mental health days (last 30 days)	4.1	-	4.3	3.7
Stroke Deaths (rate per 100,000)	43.6	↓*	39.1	37.5
Health Behaviors				
Adult Obesity (%)	30	↑	32	29.2
Adult Smoking (%)	19	-	21	16.5
Alcohol-impaired driving deaths (%)	38	↓*	22	30
Chlamydia incidence (rate per 100,000)	135.2	-	438	497.3
Excessive drinking (%)	18	-	19	16.6
Motor vehicle crash deaths (rate per 100,000)	20	↓*	12	11.5
Physical inactivity (%)	27	-	27	25.2
Substance Abuse/Mental Health				
Drug overdose mortality rate (per 100,000)	26	↑*	20	17
Suicide (rate per 100,000)	14.8	-*	14.3	13.4
Access to Clinical Care				
Dentists (ratio)	1620:1	↓	1852:1	1480:1
Mental health providers (ratio)	3250:1	↓*	701:1	470:1
Primary care physicians (ratio)	1270:1	↓	1505:1	1320:1
Uninsured (%)	11	↓	11	11
Socio-Economic/Demographic				
Children in poverty (%)	14	↓	20	20
African American (%)	0.3		9.3	12.4
Population that is 65 and older (%)	16.8	↑*	14.9	16
Population below 18 years of age (%)	23.9	↓*	23.8	22.3

Source data range: 2014-2017

*=higher than state and national averages

Top Causes of Death
Heart Disease
Cancer

Alcohol-impaired Driving Deaths
Rate >IN and US rates but decreasing

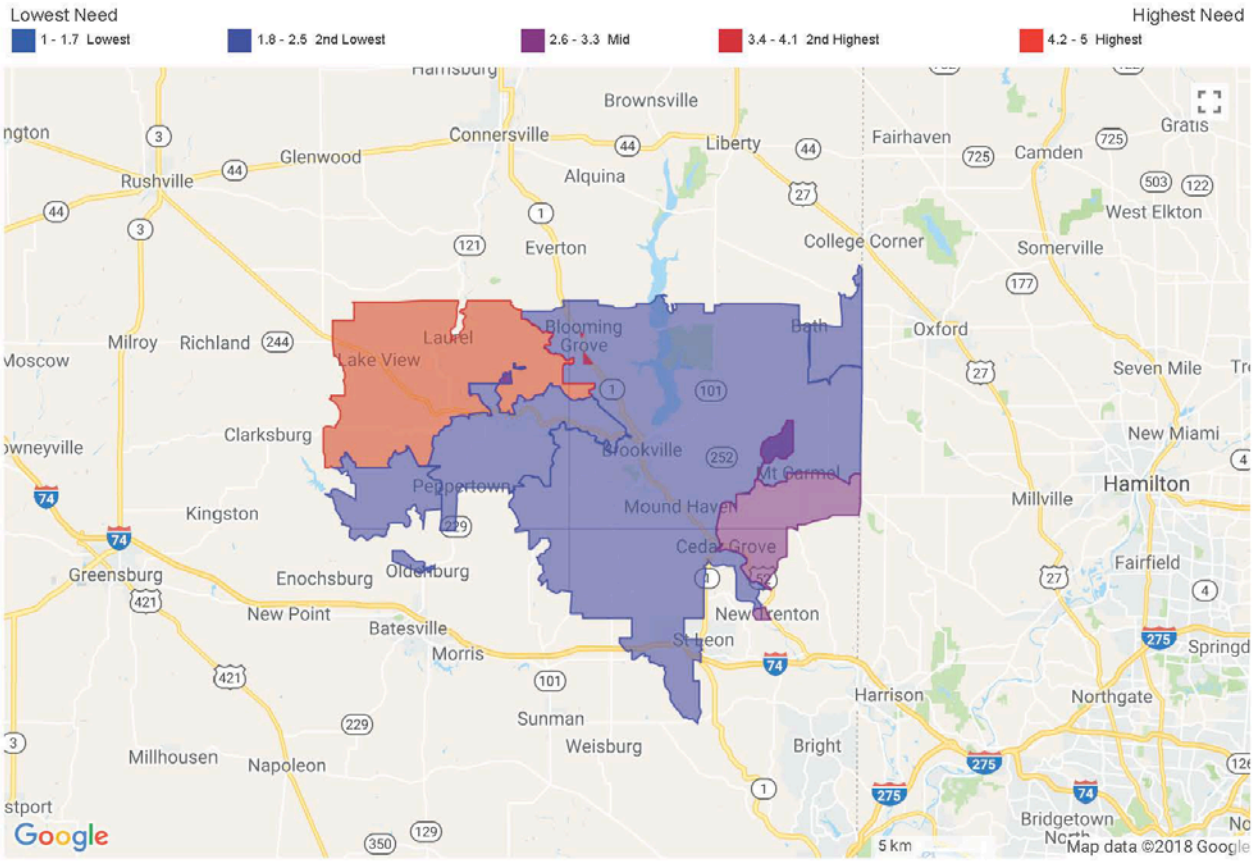
Drug Poisoning Deaths
Rate increasing but still below the IN & US rates

Mental Health
Suicide rate > US and IN averages
Few mental health providers

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services.
None of the County's Zip Codes exceeded a 2.6 score.

Dignity Health.



Mean(zipcode): 2.5 / Mean(person): 2.6 CNI Score Median: 2.6 CNI Score Mode: 2.2

Zip Code	CNI Score	Population	City	County	State
47010	1.8	269	Bath	Franklin	Indiana
47012	2.4	9755	Brookville	Franklin	Indiana
47016	2.8	905	Cedar Grove	Franklin	Indiana
47024	3.4	3089	Laurel	Franklin	Indiana
47030	2.2	1629	Metamora	Franklin	Indiana
47035	2.6	237	New Trenton	Franklin	Indiana
47036	2.2	996	Oldenburg	Franklin	Indiana

TRUVEN HEALTH ANALYTICS

Union County Health Snapshot

Pop.: 7,516

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	37.4	↑*	11.9	20.2
Cancer mortality, Lung (rate per 100,000)	40.2	↓	53.3	39.4
Cancer mortality, Overall (rate per 100,000)	169.9	↓	180.4	157.1
Diabetes (%)	14	↑*	11	10
Injury Deaths (rate per 100,000)	69	↑	70	65
Low birthweight (%)	6	↑	8	8
Poor physical health days (last 30 days)	3.8	↑	3.9	3.7
Poor mental health days (last 30 days)	4	↑	4.3	3.8
Health Behaviors				
Adult Obesity (%)	31	↓	32	28
Adult Smoking (%)	17	↓	21	17
Alcohol-impaired driving deaths (%)	0	↓	22	29
Excessive drinking (%)	17	–	19	18
HIV prevalence (rate per 100,000)	U	↑	196	362
Motor vehicle crash deaths (rate per 100,000)	19	↓*	12	11
Physical inactivity (%)	36	↑*	27	23
Substance Abuse/Mental Health				
Drug overdose mortality rate (per 100,000)	U	↑	20	17
Access to Clinical Care				
Dentists (ratio)	U	–	1852:1	1480:1
Mammography screening (%)	50	*	62.1	63
Mental health providers (ratio)	7250:1	*	701:1	470:1
Primary care physicians (ratio)	3590:1	↑*	1505:1	1320:1
Uninsured (%)	11	↓	11	11
Socio-Economic/Demographic				
Children in poverty (%)	20	↓	19	20
African American (%)	0.7		9.3	12.4
Population that is 65 and older (%)	18.5	↑*	14.9	15.2
Population below 18 years of age (%)	21.3	↓	23.8	22.8

Source Data: 2014-2017

U = Unavailable, unreliable, or suppressed due to small numbers.

Lung Cancer Mortality
More than 20% lower than IN rate

Mammography Screening
Nearly 20% lower than national rate

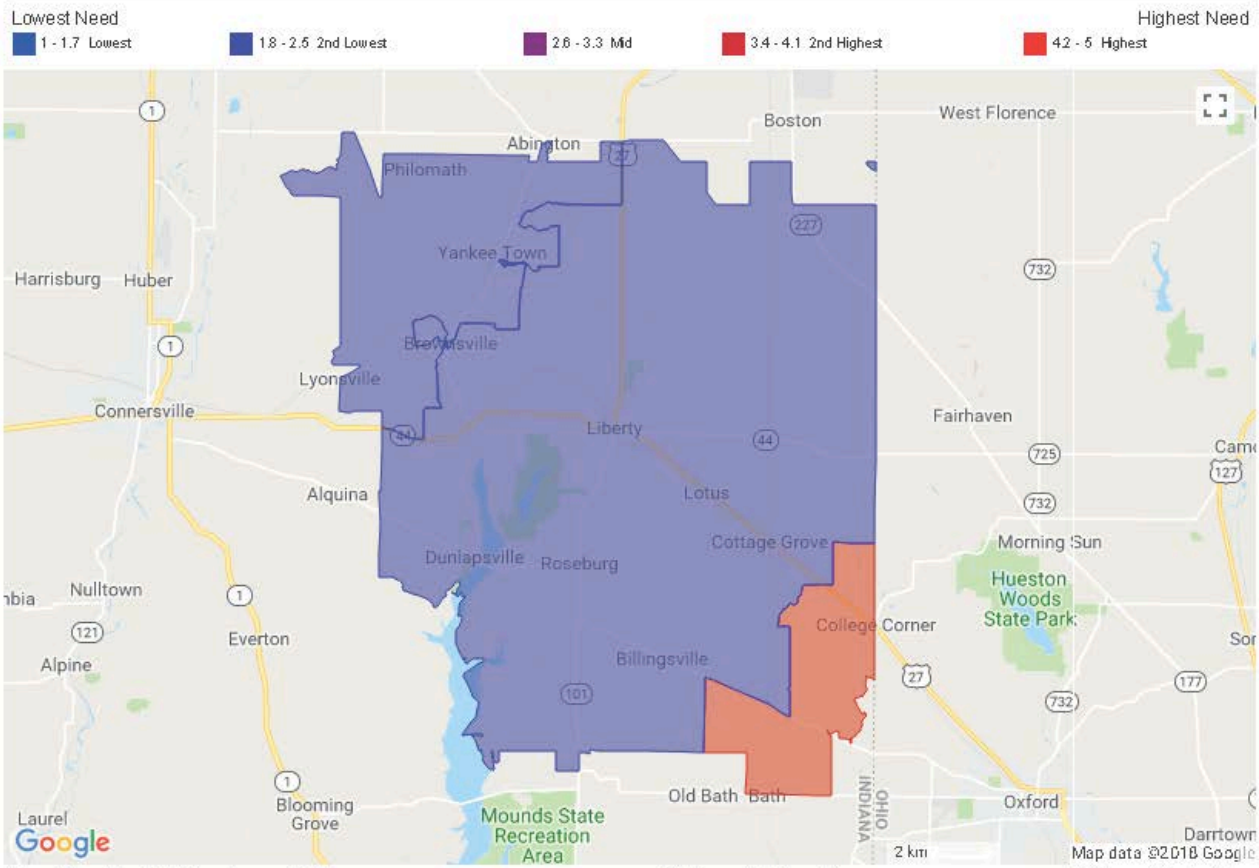
Ages 65+
Nearly 20% higher than national rate

Physical Inactivity Rate
Over 40% higher than national rate

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. One of the County's ZIP Codes has a 3.4 score.

Dignity Health.



Mean(zipcode): 2.6 / Mean(person): 2.5 CNI Score Median: 3.4 CNI Score Mode: None

Zip Code	CNI Score	Population	City	County	State
47003	3.4	1081	West College Corner	Union	Indiana
47325	2	729	Brownsville	Union	Indiana
47353	2.4	5455	Liberty	Union	Indiana

TRUVEN HEALTH ANALYTICS

NORTHERN KENTUCKY COUNTIES: BOONE/CAMPBELL/KENTON

Boone, Campbell, and Kenton Counties are located in Northern Kentucky, across the Ohio River from Cincinnati. Many residents live in these Kentucky counties and work in Cincinnati or vice versa. The urban cities of Covington and Newport are both located here, but there are rural areas in both Boone and Campbell Counties. The Northern Kentucky Independent District Health Department serves all three counties. Cancer rates in Boone County have been decreasing, however cancer is still among the top causes of death in each county. Substance abuse issues in Kentucky continue to receive national attention. As injection drug use rises, HIV prevalence rates continue to increase. Diabetes death rates are above average and increasing in Boone and Kenton Counties. As smoking rates remain stagnant or decrease, the rate of lung cancer follows the trend. Two Campbell County ZIP Codes have a CNI score of 3.4 or higher, indicating the likelihood of health disparities.

> *"I don't know the difference between premium, co-pay, and deductible."*
>
> -Campbell County consumer

Population Charts

The following are population charts for Boone, Campbell, and Kenton from years 2012-2016.

FIGURE 31. BOONE COUNTY POPULATION

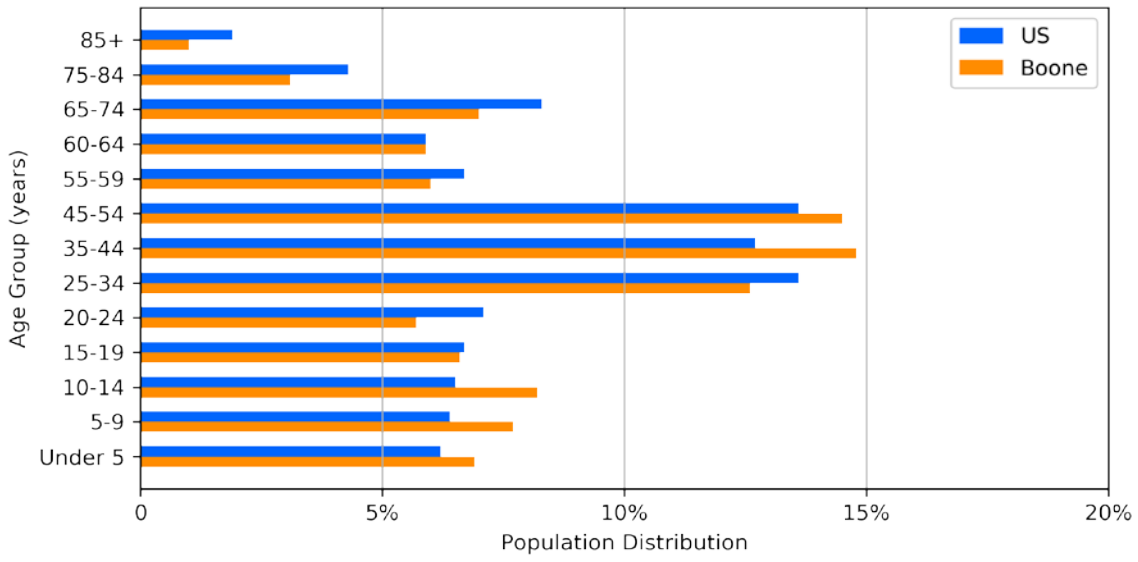


FIGURE 32.CAMPBELL COUNTY POPULATION

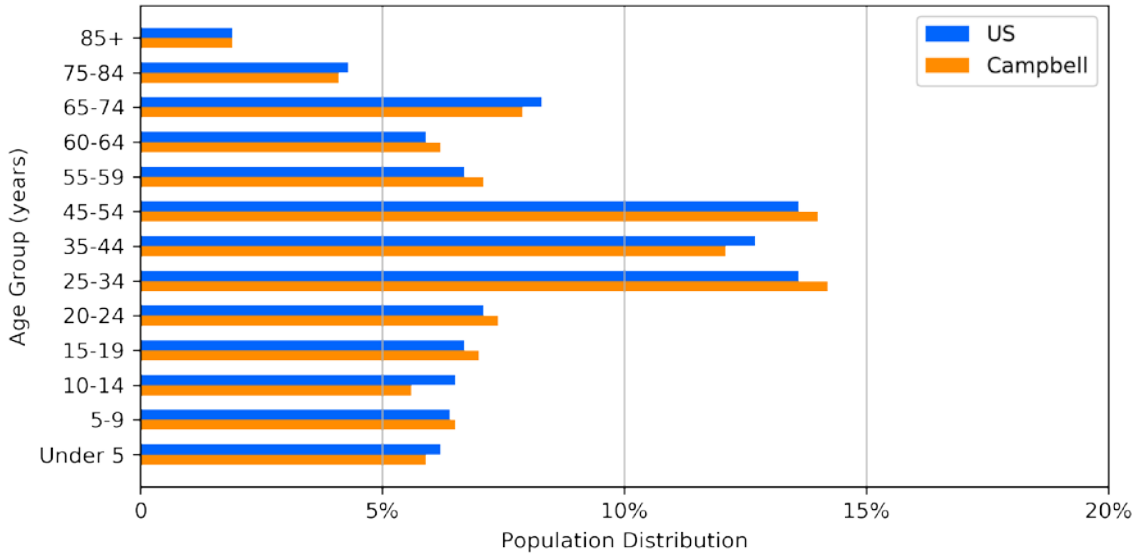
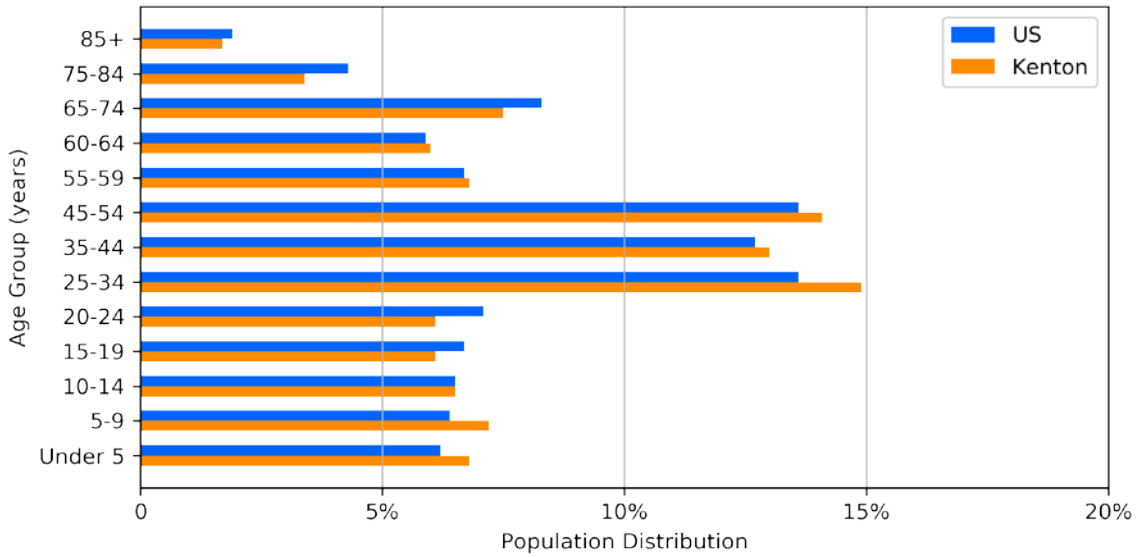


FIGURE 33. KENTON COUNTY POPULATION



Consensus on Priorities

There is compelling consensus in Northern Kentucky on multiple issues. Mental health was mentioned by all 4 primary sources as the top priority. Substance abuse was the #1 or #2 priority at community meetings and in consumer and agency surveys. Healthy behaviors were priorities for the health department, in the community meetings, and in the consumer surveys. Chronic disease and Access to care were in the top 3 for consumers and agencies.

Top Causes of Death

The top causes of death in this area for Boone, Campbell, and Kenton in 2016 are listed below. Dementia, heart disease, and lung cancer were among the top three causes of death in all three counties. COPD appeared in the top five causes of death for each county. Accidental drug poisoning was the 4th cause of death in Kenton County. AMI, or heart attack, was the 5th cause of death in Kenton County.

TABLE 65. NORTHERN KENTUCKY: CAUSES OF DEATH

Cause of Death *(in descending order)*		
Boone	**Campbell**	**Kenton**
Lung cancer	Dementia	Lung cancer
Heart disease	Lung cancer	Dementia
Dementia	Heart disease	Heart disease
Alzheimer's disease	Accidental drug poisoning	COPD
COPD	COPD	AMI

Priorities from Community Meeting

There were 11 attendees at meetings held in Northern Kentucky, between 4/18/18 and 5/2/18.

TABLE 66. NORTHERN KENTUCKY: MEETING PRIORITIES

Priority	County			Total	
	Boone	Campbell	Kenton	# Votes	% Votes
Mental health	4	1	3	8	28.6%
Substance abuse	1		4	5	17.9%
Health education/promotion	1	3	1	5	17.9%
Healthy behaviors		2	1	3	10.7%
Diabetes	2			2	7.1%
Cost		2		2	7.1%
Parenting/family			2	2	7.1%

Survey Priorities

Below are the most common responses from individual consumers, living in Boone, Campbell, or Kenton County, who completed a survey between 6/19/18 and 8/3/18. There were 34 people who participated, and they all answered the question, “Given the health issues facing the community, which ones would be your top priorities?” They mentioned 58 health and/or health-related issues of particular concern. The following table contains the issues that received more than 5% of all mentions. Although receiving fewer mentions, Hepatitis A and C were identified as priorities in Boone County’s responses.

TABLE 67. NORTHERN KENTUCKY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	14	24.1%
Chronic disease	11	19.0%
Access to care	6	10.3%
Mental health	6	10.3%
Healthy behaviors *(Smoking mentioned 4 times)*	5	8.6%
Obesity	4	6.9%

Twenty-three agencies serving one or more counties responded with their priorities. The following table contains the issues that received more than 5% of all mentions.

TABLE 68. NORTHERN KENTUCKY: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Chronic disease	4	22%
Substance abuse	3	17%
Access to care	2	11%
Infant mortality	2	11%
Mental health	2	11%
Social determinants of health	2	11%

Response from Health Department

The Northern Kentucky Independent District Health Department priorities include Boone, Campbell, Kenton, and Grant Counties. It is important to note that Grant County was NOT included in the CHNA's area. The following are its health priorities:

- Access to safe places to exercise
- Access to healthy foods (within all neighborhoods and accessible by bus lines)
- Mental health

> *"Survival becomes the priority."*
>
> -Campbell County consumer

Boone County Health Snapshot

Pop.:128,536

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	21.3	↓	21.6	20.2
Cancer mortality, Prostate (rate per 100,000)	18.5	↓	19.4	19.1
Cancer mortality, Lung (rate per 100,000)	57.2	↓	67.3	39.4
Cancer mortality, Overall (rate per 100,000)	175.3	↓	197.8	157.1
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 100,000)	277.7	–	U	270.9
Diabetes Deaths (rate per 100,000)	31.9	↑*	28.4	21.2
Diabetes (%)	12.0	↑	13.0	10.7
Heart Disease Deaths (rate per 100,000)	137.7	–	203.0	167.0
Infant Mortality (rate per 1,000 live births)	5.0	–	7.0	5.9
Injury Deaths (rate per 100,000)	66.0	↑	88.0	45.3
Low birthweight (%)	7.0	–	9.0	8.2
Premature Age Adjusted Mortality (rate per 100,000)	320.0	–	467.0	341.0
Poor physical health days (last 30 days)	3.8	↑	4.8	3.9
Poor mental health days (last 30 days)	3.8	↑	4.8	3.7
Health Behaviors				
Adult Obesity (%)	33.0	–	34.0	29.2
Adult Smoking (%)	17.0	–	24.0	16.5
Alcohol-impaired driving deaths (%)	23.0	–	28.0	30.0
Chlamydia incidence (rate per 100,000)	324.3	–	395.0	497.3
Excessive drinking (%)	18.0	↑*	16.0	16.6
HIV prevalence (rate per 100,000)	101.0	↑	180.0	305.2
Motor vehicle crash deaths (rate per 100,000)	8.0	–	17.0	11.5
Physical inactivity (%)	24.0	–	28.0	25.2
Substance Abuse/Mental Health				
Drug overdose mortality rate (per 100,000)	34.0	↑*	28.0	17.0
Heroin poisoning overdose deaths (rate per 100,000)	10.1	–	22.9	3.5
Suicide (rate per 100,000)	14.4	–	16.8	13.4
Access to Clinical Care				
Dentists (ratio)	1510:1	↓	1561:1	1480:1
Mammography screening (%)	70.0	–	58.9	72.7
Mental health providers (ratio)	1110:1	↓*	525:1	470:1
Primary care physicians (ratio)	1500:1	↓	1507:1	1320:1
Socio-Economic/Demographic				
Children in poverty (%)	10.0	↓	24.0	21.2
Population that is 65 and older (%)	12.0	↑	15.6	16.0
Population below 18 years of age (%)	26.9	↓*	22.8	22.3

Source data range: 2014-2017

U = Unavailable, unreliable, or suppressed due to small numbers.

* = Higher than state and national rate

Top Causes of Death
Lung Cancer
Diabetes
Injury Deaths

STDs
HIV Prevelance
18% increase over 2 years

Mental Health
Excessive Drinking above state rate

Heroin Poisoning Overdose Deaths above national rate

Diabetes
% and deaths are increasing

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. None of the County's ZIP Codes exceed a 3.4 score.

Campbell County Health Snapshot

Pop.: 92,211

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	19.5	↑	21.6	20.2
Cancer mortality, Lung (rate per 100,000)	58.1	–	67.3	39.4
Cancer mortality, Overall (rate per 100,000)	187.9	↑	197.8	157.1
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 100,000)	277.7	–	U	270.9
Diabetes (%)	11.0	–	13.0	10.7
Diabetes Deaths (rate per 100,000)	24.9	–	28.4	21.2
Heart Disease Deaths (rate per 100,000)	167.0	↓	203.0	167.0
Infant Mortality (rate per 1,000 live births)	5.0	↓	7.0	5.9
Injury Deaths (rate per 100,000)	97.0	↑*	88.0	45.3
Low birthweight (%)	9.0	–	9.0	8.2
Premature Age Adjusted Mortality (rate per 100,000)	370.0	↓	467.0	341.0
Poor physical health days (last 30 days)	4.1	–	4.8	3.9
Poor mental health days (last 30 days)	4.2	–	4.8	3.7
Stroke Deaths (rate per 100,000)	32.5	↓	40.4	37.5
Health Behaviors				
Adult Obesity (%)	31.0	↓	34.0	29.2
Adult Smoking (%)	19.0	–	24.0	16.5
Alcohol-impaired driving deaths (%)	26.0	–	28.0	30.0
Chlamydia incidence (rate per 100,000)	423.6	↑	395.0	497.3
Excessive drinking (%)	18.0	↑*	16.0	16.6
HIV prevalence (rate per 100,000)	145.0	↑	180.0	305.2
Motor vehicle crash deaths (rate per 100,000)	9.0	–	17.0	11.5
Physical inactivity (%)	24.0	–	28.0	25.2
Substance Abuse/Mental Health				
Drug overdose mortality (rate per 100,000)	58.0	↑*	28.0	17.0
Heroin poisoning overdose deaths (rate per 100,000)	33.6	–*	22.9	3.5
Suicide (rate per 100,000)	11.9	–	16.8	13.4
Access to Clinical Care				
Dentists (ratio)	2190:1	–*	1561:1	1480:1
Mammography screening (%)	68.0	–	58.9	72.7
Mental health providers (ratio)	730:1	↓*	525:1	470:1
Primary care physicians (ratio)	1700:1	↓*	1507:1	1320:1
Socio-Economic/Demographic				
Children in poverty (%)	17.0	–	24.0	21.2
Population that is 65 and older (%)	14.6	↑	15.6	16.0
Population below 18 years of age (%)	21.4	↓	22.8	22.3

Source data range: 2014-2017

U = Unavailable, unreliable, or suppressed due to small numbers.

* = Higher than state and national rate

Top Causes of Death

Cancer
Diabetes

Injury Deaths

Rate > KY & US

STDs

HIV Prevalence 23% increase over 2 years

Mental Health

Excessive Drinking % and Drug Overdose Mortality Rate > KY and US

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. Two Zip Codes have a high score: 41074 has a 3.4 score and 41071 has a score of 3.8.

Kenton County Health Snapshot

Pop.: 164,945

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	22.3	↓	21.6	20.2
Cancer mortality, Lung (rate per 100,000)	63.0	-	67.3	39.4
Cancer mortality, Overall (rate per 100,000)	193.3	↑	197.8	157.1
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 100,000)	277.7	-	U	270.9
Diabetes Deaths (rate per 100,000)	40.6	↑*	28.4	21.2
Diabetes (%)	11.0	-	13.0	10.0
Heart Disease Deaths (rate per 100,000)	176.4	↓	203	167.0
Infant Mortality (rate per 1,000 live births)	9.0	*	7.0	7.0
Injury Deaths (rate per 100,000)	89.0	↑*	88.0	65.0
Premature Age Adjusted Mortality (rate per 100,000)	440	↑	467	340
Poor physical health days (last 30 days)	4.0	↑	4.8	3.8
Poor mental health days (last 30 days)	4.0	↓	4.8	3.7
Stroke Deaths (rate per 100,000)	21.8	↓	40.4	37.5
Health Behaviors				
Adult Obesity (%)	30.0	↑	34.0	28.0
Adult Smoking (%)	20.0	↓	24.0	17.0
Alcohol-impaired driving deaths (%)	31.0	*	28.0	29.0
Chlamydia incidence (rate per 100,000)	453.2	↑	395.0	478.8
Excessive drinking (%)	18.0	↑	16.0	18.0
HIV prevalence (rate per 100,000)	182.0	↑*	180.0	362.0
Motor vehicle crash deaths (rate per 100,000)	9.0	-	17.0	11.0
Physical inactivity (%)	22.0	↓	28.0	23.0
Substance Abuse/Mental Health				
Drug overdose mortality (rate per 100,000)	56.0	↑*	28.0	17.0
Heroin poisoning overdose deaths (rate per 100,000)	12.1	-	22.9 (2015)	3.5
Suicide (rate per 100,000)	15.9	-	16.8	13.0
Access to Clinical Care				
Dentists (ratio)	2040:1	↓*	1561:1	1480:1
Mammography screening (%)	67.0	↑	58.9	63.0
Mental health providers (ratio)	710:1	↓*	525:1	470:1
Primary care physicians (ratio)	1250:1	-	1507:1	1320:1
Socio-Economic/Demographic				
Children in poverty (%)	10.0	↓	24.0	20.0
Population that is 65 and older (%)	12.0	↑	15.6	15.2
Population below 18 years of age (%)	24.1	↓	22.8	22.8

Source data range: 2014-2017

U = Unavailable, unreliable, or suppressed due to small numbers.

* = Higher than state and national rates

Premature Age Adjusted Mortality
Nearly 30% higher than national rate

STDs
Chlamydia rate higher than KY

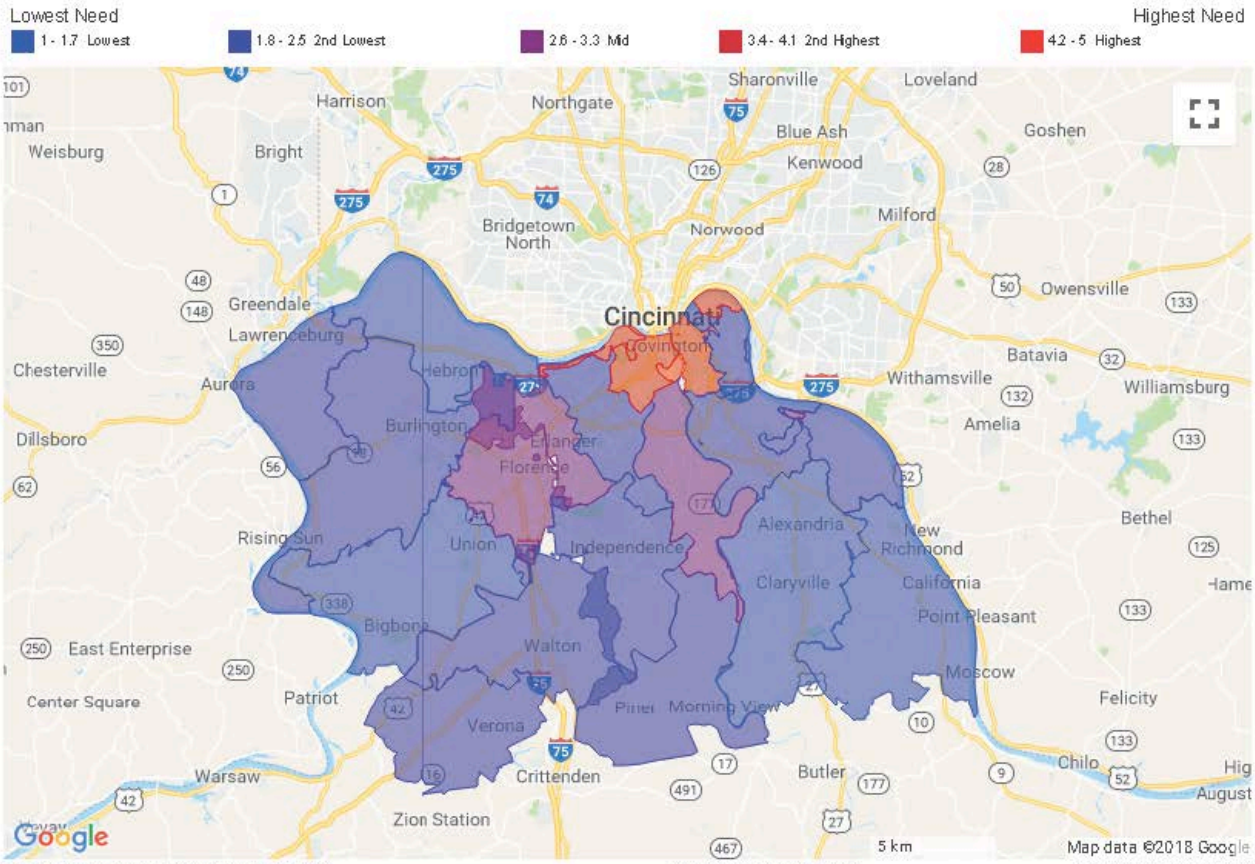
Mental Health
Drug Poisoning Deaths double KY average.
Not enough providers

Mammography Screening
Better than state and national rates

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. Three of the County's ZIP codes exceed a 3.4 score.

Dignity Health.



Mean(zipcode): 2.6 / Mean(person): 2.6 CNI Score Median: 2.3 CNI Score Mode: 2.2

Zip Code	CNI Score	Population	City	County	State
41092	2.2	3600	Verona	Boone	Kentucky
41063	2.4	3159	Kenton County	Kenton	Kentucky
41091	1.4	20065	Union	Boone	Kentucky
41094	2.2	13551	Walton	Boone	Kentucky
41001	1.4	17506	Alexandria	Campbell	Kentucky
41007	1.2	3909	California	Campbell	Kentucky
41042	3.2	54064	Florence	Boone	Kentucky
41051	2	31006	Independence	Kenton	Kentucky
41005	2.2	24098	Burlington	Boone	Kentucky
41071	3.8	21870	Newport	Campbell	Kentucky
41059	2.2	2853	Melbourne	Campbell	Kentucky
41085	3	378	Silver Grove	Campbell	Kentucky
41018	3	27929	Boone County	Kenton	Kentucky
41014	4.4	7093	Covington	Kenton	Kentucky
41015	3	21180	Ryland Heights	Kenton	Kentucky
41048	1.4	16579	Hebron	Boone	Kentucky
41017	2.2	40247	Fort Mitchell	Kenton	Kentucky
41011	4	26077	Park Hills	Kenton	Kentucky
41016	3.6	5879	Bromley	Kenton	Kentucky
41076	2.2	18670	Newport	Campbell	Kentucky
41080	2.4	1840	Petersburg	Boone	Kentucky

41075	2.2	15928	Fort Thomas	Campbell	Kentucky
41073	2.4	5918	Bellevue	Campbell	Kentucky
41074	3.4	5476	Dayton	Campbell	Kentucky

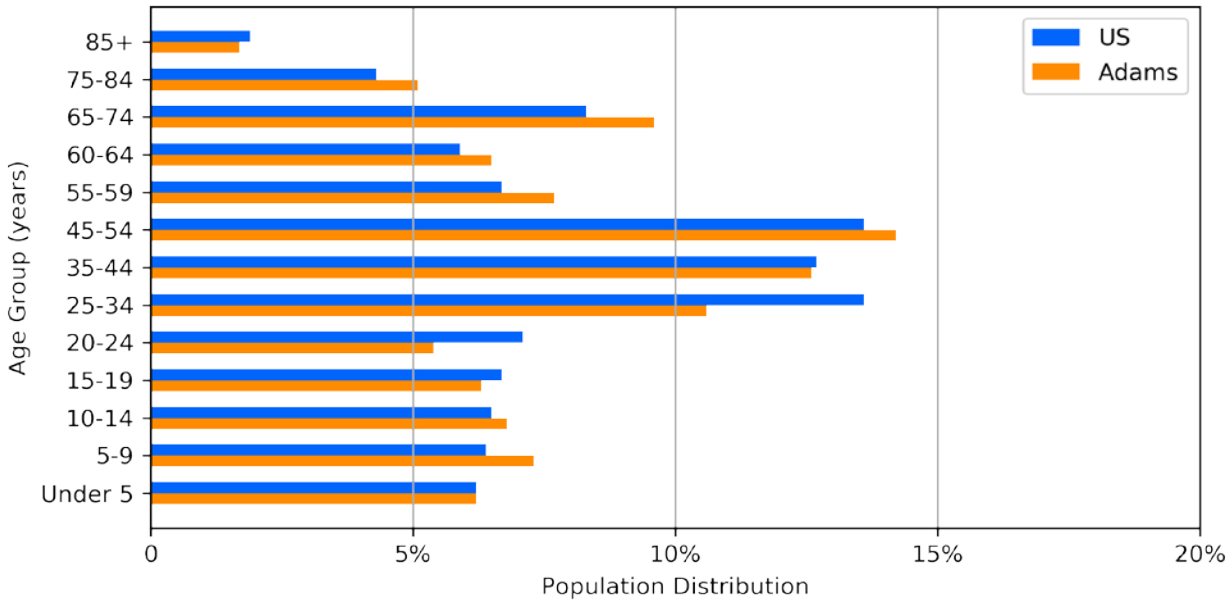
ADAMS COUNTY, OHIO

Adams is a mostly rural county that is part of Appalachia. The top causes of death are lung cancer, COPD, and heart disease. The rate of older women receiving mammograms is much higher than the Ohio and U.S. averages. The rate of obesity is lower than average and decreasing. There is a high rate of depression, and the heroin poisoning overdose death rate is nearly double the Ohio average. Access to care is challenging for residents, with the County's having limited numbers of healthcare, dental, and mental health providers. Transportation is a challenge across the County. Four of the 7 ZIP Codes in the County have elevated CNI scores, indicating the possible presence of health disparities.

Population Chart

The following is a population chart for Adams County from years 2012-2016.

FIGURE 34. ADAMS COUNTY POPULATION



Consensus on Priorities

Substance abuse is a major health issue across Ohio, and all 4 primary sources included it as their #1 or #2 priority. Substance abuse as a mental illness was discussed at length in the community meeting. Meeting attendees and the Health Department both prioritized Mental health. Access to care issues were prioritized at the meeting and in agency surveys. Access included lack of transportation, not enough providers, and general lack of access to care and/or services. Poverty ranked in 3rd place among meeting priorities.

Top Causes of Death

The top causes of death for 2016 were, in descending order:

- Lung cancer
- Chronic Obstructive Pulmonary Disease (COPD)
- Atherosclerotic heart disease
- Acute Myocardial Infarction (AMI), or heart attack

Priorities from Community Meeting on June 20, 2018

Twenty-one people contributed votes to identify a total of 9 priorities. Below are the topics receiving at least 5% of votes.

TABLE 69. ADAMS COUNTY: MEETING PRIORITIES

Priority	# Votes	% Votes
Substance abuse	16	30.2%
Mental health	11	20.8%
Poverty	9	17.0%
Access (Transportation, 5)	6	11.3%
Healthy Behaviors (Obesity, 4)	5	9.4%

Survey Responses

Below are the most frequent responses from individual consumers, living in Adams County, who completed a survey between 6/19/18 and 8/3/18. Eight people participated. Respondents all answered the question, “Given the health issues facing the community, which ones would be your top priorities?” They mentioned 11 health and/or health-related issues of particular concern to them. The following table contains the issues that received more than 5% of all mentions.

TABLE 70. ADAMS COUNTY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	4	36.4%
Obesity	3	27.3%

Twelve organizations serving County residents, especially vulnerable populations, responded with their priorities. The priorities that received more than 5% of mentions are listed below.

TABLE 71. ADAMS COUNTY: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Chronic disease	8	31%
Substance abuse	7	27%
Social Determinants of Health	4	15%
Access to care	3	12%

Response from Health Department

Staff from the Adams County Public Health provided the following health priorities for the community:

- Mental health
- Substance abuse

> *"Providers don't accept marketplace insurance."*
>
> -Adams County resident

Adams County Health Snapshot

Pop.:28,111

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Colon & Rectum (rate per 100,000)	34.3	*	22.4	20.2
Cancer mortality, Lung (rate per 100,000)	70.7	↓*	49.6	39.4
Cancer mortality, Overall (rate per 100,000)	214.2	↓*	174.3	157.1
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 100,000)	450.5	↓*	316.1	270.9
Diabetes (%)	17.5	↑*	12.0	10.0
Heart Disease Deaths (rate per 100,000)	241.7	↑*	188.4	167
Infant Mortality (rate per 1,000 live births)	10.1	↑*	7.0	6.0
Injury Deaths (rate per 100,000)	97.6	↓*	75.0	65.0
Low birthweight (%)	10.4	↑*	9.0	8.0
Preterm Birth (%)	12.8	*	10.3	9.6
Poor physical health days (last 30 days)	7.3	↑*	4.0	3.7
Poor mental health days (last 30 days)	3.9	–	4.3	3.8
Stroke Deaths (rate per 100,000)	35.4	↓	40.6	37.5
Health Behaviors				
Adult Obesity (%)	24.5	↓	32.0	28.0
Adult Smoking (%)	29.0	↑*	23.0	17.0
Alcohol-impaired driving deaths (%)	26.0	–	34.0	29.0
Chlamydia incidence (rate per 100,000)	221.2	–	489.0	478.8
Excessive drinking (%)	17.3	–	19.0	18.0
Physical inactivity (rate per 100,000)	29.0	↓	26.0	23.0
Substance Abuse/Mental Health				
Depression (%)	23.0	*	18.5	17.1
Drug overdose mortality rate (per 100,000)	36.6	↑*	30.0	17.0
Heroin poisoning overdose deaths (rate per 100,000)	19.6	↓*	10.9	3.5
Suicide (rate per 100,000)	15.3	↓*	13.3	13.0
Access to Clinical Care				
Dentists (ratio)	2790:1	↓*	1656:1	1480:1
Mammography screening (%)	75.7	↑*	61.2	63.0
Mental health providers (ratio)	2002:1	↓*	561:1	470:1
Primary care physicians (ratio)	2800:1	-*	1307:1	1320:1
Socio-Economic/Demographic				
Children in poverty (%)	32.6	↓*	20.0	20.0
African American (%)	0.4		12.5	12.4
Population that is 65 and older (%)	16.4		16.2	15.2
Population below 18 years of age (%)	24.6	*	22.5	22.8

U = Unavailable, unreliable, or suppressed due to small numbers. Source data range: 2014-2017

*=Higher than state and national rate

Top Causes of Death
Lung Cancer
COPD
Heart Disease

Infant Mortality
rate and Low birthweight % are rising and > OH & US

Smoking
Rising and > OH & US %

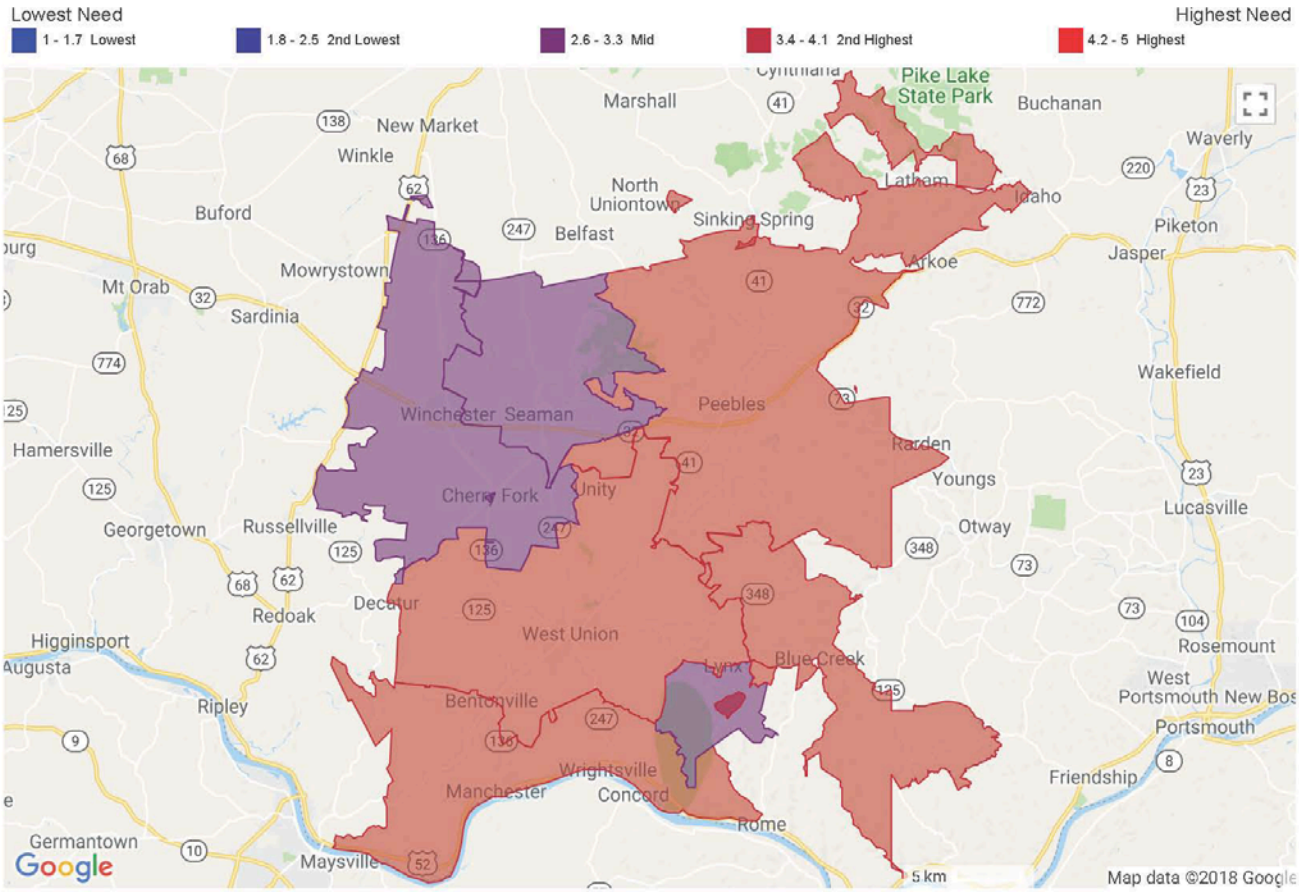
Mental Health
Depression % & Suicide rate > OH & US

Substance Abuse
Drug OD deaths rising; > OH & US

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. Two of the County's ZIP Codes exceed a 3.4 score.

Dignity Health.



Mean(zipcode): 3.3 / Mean(person): 3.4 CNI Score Median: 3.4 CNI Score Mode: 3.2,3.4

Zip Code	CNI Score	Population	City	County	State
45144	3.4	4184	Manchester	Adams	Ohio
45616	3.4	1284	Blue Creek	Adams	Ohio
45650	3.2	338	Lynx	Adams	Ohio
45660	3.6	8582	Peebles	Adams	Ohio
45679	3.2	2899	Seaman	Adams	Ohio
45693	3.6	8997	West Union	Adams	Ohio
45697	3	4953	Winchester	Adams	Ohio

TRUVEN HEALTH ANALYTICS

BROWN COUNTY, OHIO

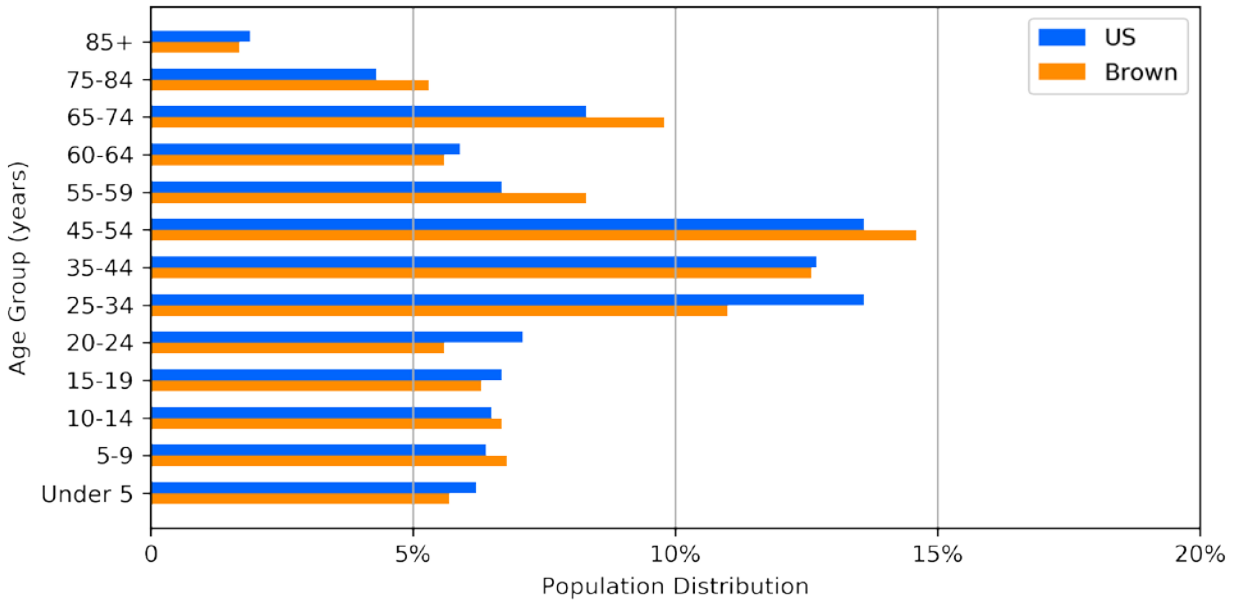
Brown County is a rural county in Appalachia. The average number of poor physical health days experienced by people living in this County are lower than the Ohio and U.S. averages. The top causes of death are lung cancer, Alzheimer's and heart disease. The adult smoking rate and lung cancer mortality rate are more than double the U.S. and Ohio rates. Access to care is challenging for residents, with the County's having limited numbers of healthcare, dental, and mental health providers. Transportation is a challenge across the County. The number of children living in poverty is higher than the U.S. and Ohio rates, but decreasing. The two ZIP Codes containing the cities of Aberdeen and Ripley have elevated CNI scores, indicating health disparities may be present.

> *"Poverty is hidden. People who would qualify for assistance won't ask for it."*
>
> -Brown County consumer

Population Chart

The following is a population chart for Brown County from years 2012-2016.

FIGURE 35. BROWN COUNTY POPULATION



Consensus on Priorities

Substance abuse was a high priority for all 4 sources of primary data. Chronic disease was atop concern mentioned in the consumer survey, agency survey, and at community meetings. Issues prioritized at two sources included: Access to care, Social Determinants of Health (especially Poverty), Mental health, and Care for children. Poverty and "hidden poverty" was discussed in the community meeting. Many residents who qualify for public assistance do not accept it, or even admit they needed help. Access to care is a major challenge this area. Access includes lack of transportation and the low number of health and mental health providers.

Top Causes of Death

The top causes of death for 2016 were, in descending order:

- Lung cancer
- Alzheimer's disease
- Atherosclerotic heart disease

Priorities from Community Meeting on June 7, 2018

Brown County Public Health spread the word about the community meeting and attracted a group from a variety of organizations to attend the meeting at Brown County Public Library. The group spent a majority of the meeting discussing concerns around access to care since the local Brown County Hospital recently closed. In addition to talking about poverty and 'hidden poverty,' there was discussion about sub-standard rental housing in the county, with some rentals having dirt floors and no running water. The group expressed concern about the high number of children going into foster care, or living with grandparents, due to parents suffering from issues related to substance abuse. Six people contributed votes to identify a total of 5 priorities.

TABLE 72. BROWN COUNTY MEETING PRIORITIES

Priority	# Votes	% Votes
Access to care (transportation, 1)	7	46.7%
Substance abuse	3	20%
Poverty	3	20%
Chronic Disease	1	6.7%
Care for children	1	6.7%

> *"98% of kids in foster care in Brown County are there, because their parents are using drugs."*
>
> - Brown County resident

Survey Responses

Below are the most frequent responses from individual consumers, living in Brown County, who completed a survey between 6/19/18 and 8/3/18. Thirteen people participated. Respondents all answered the question, “Given the health issues facing the community, which ones would be your top priorities?” They mentioned 27 health and/or health-related issues of particular concern to them. The following table contains the issues that received more than 5% of all mentions.

TABLE 73. BROWN COUNTY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Chronic disease	12	44.4%
Mental health	7	26.0%
Substance abuse	6	22.2%

Twelve organizations serving County residents, especially vulnerable populations, responded with their priorities. The priorities that received more than 5% of mentions are listed below.

TABLE 74. BROWN COUNTY: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Chronic disease	9	35%
Substance abuse	8	31%
Social Determinants of Health	4	15%
Access to care	2	8%
Mental health	2	8%

Responses from Health Department

The Brown County Health Commissioner provided its health priorities:

- Opioid abuse and effects on:
  - Care for children affected by opioid abuse in the family
  - Home environment
  - Food security

Brown County Health Snapshot

Pop.: 44,509

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Lung (rate per 100,000)	81.2	↑*	48.2	39.4
Cancer mortality, Overall (rate per 100,000)	217.8	*	174.3	157.1
Diabetes (%)	10.6	–	11.1	10.7
Infant Mortality (rate per 1,000 live births)	7.5	*	7.2	5.9
Injury Deaths (rate per 100,000)	97.2	↑*	61.2	45.3
Low birthweight (%)	7.4	↓	8.5	8.2
Poor mental health days (in last 30 days)	4.8	*	4.0	3.7
Poor physical health days (in last 30 days)	3.0	↓	4.0	3.9
Preterm Birth (%)	8.8	–	10.3	9.6
Stroke Deaths (rate per 100,000)	45.3	↑*	40.6	37.5
Suicide (rate per 100,000)	19.7	↑*	13.3	13.0
Health Behaviors				
Adult Obesity (%)	24.0	–	30.6	29.2
Adult Smoking (%)	36.8	*	22.0	16.5
Alcohol-impaired driving deaths (%)	28.0	–	34.0	30.0
Gonorrhea incidence (rate per 100,000)	68.4	↑	176.8	145.8
Excessive drinking (%)	23.0	↑*	18.1	16.6
Motor vehicle crash deaths (rate per 100,000)	20.4	↑*	10.3	11.5
Physical inactivity (%)	26.4	↓	26.4	25.2
Substance Abuse/Mental Health				
Depression (%)	21.8	*	18.5	17.1
Drug poisoning deaths (per 100,000)	44.9	↑*	26.2	14.6
Fentanyl & related drugs overdose deaths (per 100,000)	14.8	*	9.0	2.6
Heroin poisoning overdose deaths (per 100,000)	18.8	*	10.9	3.5
Access to Clinical Care				
Dentists (ratio)	6250:1	↓*	1656:1	1480:1
Diabetic screening (% HbA1c)	78.4	↓	57.4	57.5
Mammography screening (%)	67.3	↑	73.7	72.7
Mental health providers (ratio)	1512:1	↓*	561:1	470:1
Primary care physicians (ratio)	3,650:1	-*	1307:1	1320:1
Uninsured (%)	15.5	*	7.6	11.8
Socio-Economic/Demographic				
Children in poverty (%)	24.2	↓*	22.1	21.2
Hispanic (%)	0.8		3.5	17.3
African-American (%)	1.0		12.1	12.3
Population that is 65 and older (%)	16.8	↑*	14.5	16.0
Population below 18 years of age (%)	23.3	-	23.0	22.3

* = Rate or percent is higher than the state and national rate or percent

U = Unavailable, unreliable, or suppressed due to small numbers.

Top Causes of Death
Lung Cancer
Alzheimer's
Heart Disease
COPD

Mental Health/ Substance Abuse
Suicide, Drug poisoning deaths & Excessive drinking are all increasing and > OH & US

Stroke Deaths
Increasing & > OH & US

Injury Deaths
Increasing and > OH & US

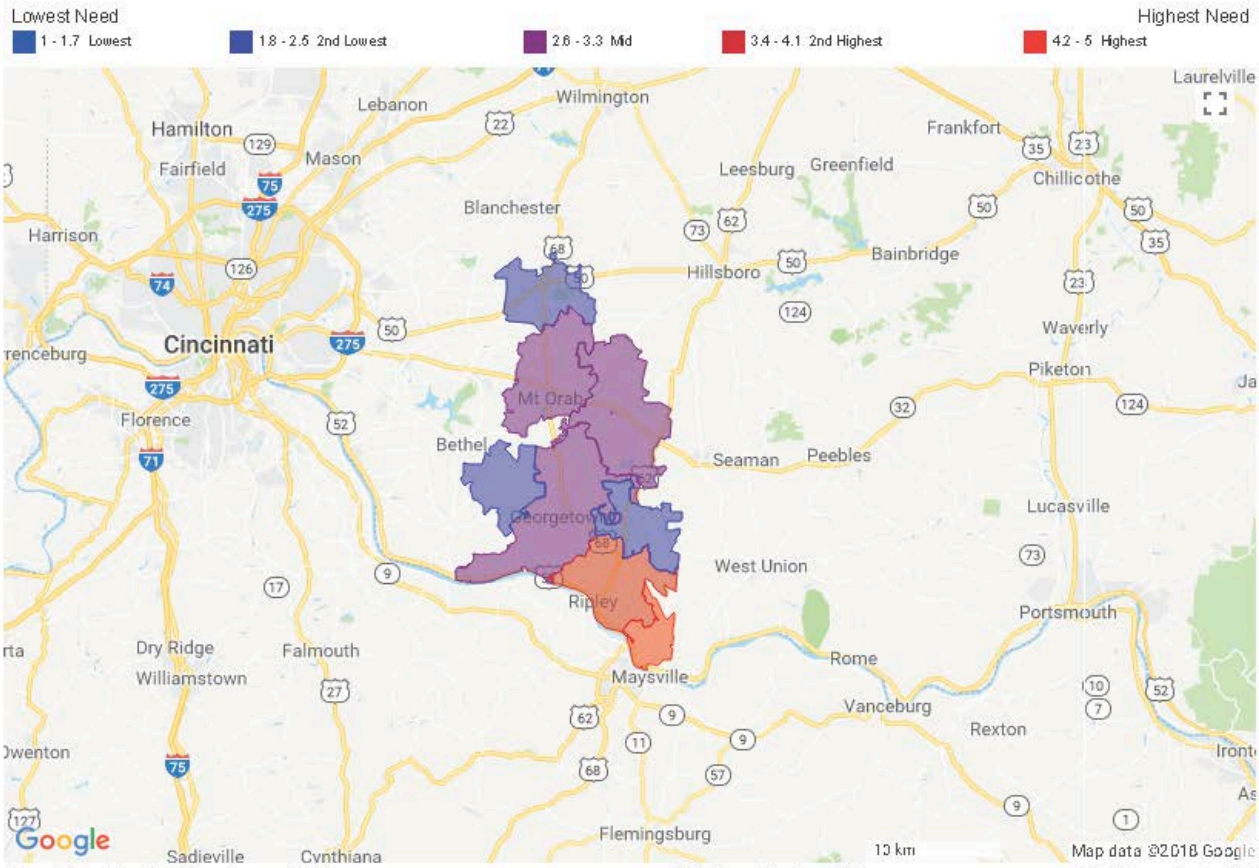
Motor Vehicle Crash Deaths
Increasing & > OH & US

Lung Cancer Mortality
Rates increasing and > OH & US

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. One of the County's ZIP Codes has a score above 3.4.

Dignity Health.



Mean(zipcode): 2.9 / Mean(person): 2.9 CNI Score Median: 2.8 CNI Score Mode: 2.4

Zip Code	CNI Score	Population	City	County	State
45101	4.2	2055	Aberdeen	Brown	Ohio
45118	2	3514	Fayetteville	Brown	Ohio
45121	3.2	9235	Georgetown	Brown	Ohio
45130	2.4	3581	Hamersville	Brown	Ohio
45154	2.6	9314	Mount Orab	Brown	Ohio
45167	3.4	3527	Ripley	Brown	Ohio
45168	2.4	1475	Russellville	Brown	Ohio
45171	3	6142	Sardinia	Brown	Ohio

TRUVEN HEALTH ANALYTICS

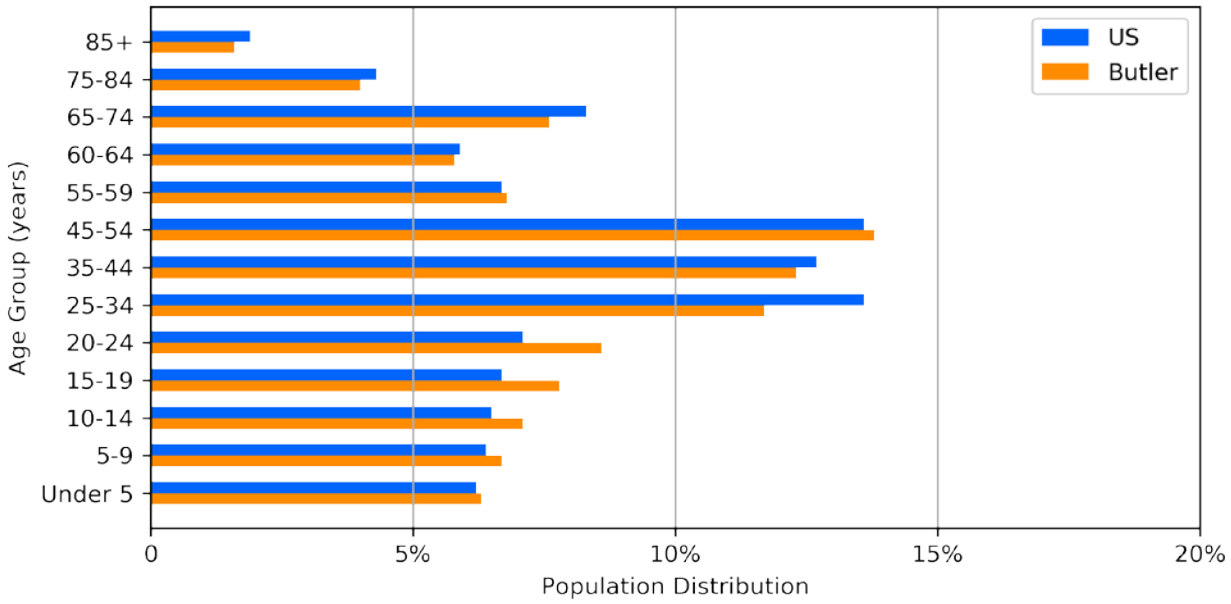
BUTLER COUNTY, OHIO

Butler County is one of the most populated counties in the region and includes the cities of Hamilton and Middletown, former hubs of industry. Many of the cities in the County are experiencing growth, and only about 9% is considered rural. The City of Oxford is located in Butler County and is home to Miami University. Of all the counties, Butler has the highest percentage of households with children (age 0-17). Rates of deaths from heroin poisoning, fentanyl and other prescription opioids are significantly higher than the Ohio and U.S. rates. The suicide rate is below the Ohio and U.S. rate, but increasing. Butler County is one of the 8 counties in the region that experienced an increase in the number of days with an increase in ozone level. There are 12 ZIP Codes in the County; 45015 in Hamilton and 45044 in Middletown have elevated CNI scores, indicating the likelihood of health disparities.

Population Chart

The following is a population chart for Butler County from years 2012-2016.

FIGURE 36. BUTLER COUNTY POPULATION



Consensus on Priorities

Substance abuse is a major health issue in Butler County and was the top priority mentioned across all sources. Addiction and opioids were mentioned specifically. Mental health was mentioned at meetings and in the consumer and agency surveys. Infant mortality was mentioned in survey responses from consumers, agencies, and the County's health department.

Top Causes of Death

The top causes of death for 2016 were, in descending order:

- Lung cancer
- Dementia, unspecified
- Atherosclerotic heart disease

Priorities from Community Meetings

Eleven people contributed votes to identify a total of 8 priorities. Below are the topics receiving at least 5% of votes.

TABLE 75. BUTLER COUNTY: MEETING PRIORITIES

Priority	# Votes	% Votes
Substance abuse	11	35.5%
Mental health	7	22.6%
Access (Transportation, 2)	5	16.1%
Healthy Behaviors (Obesity, 2)	4	12.9%

Survey Responses

Below are the most frequent responses from individual consumers, living in Butler County, who completed a survey between 6/19/18 and 8/3/18. Sixty-eight people participated. Respondents all answered the question, “Given the health issues facing the community, which ones would be your top priorities?” They mentioned 91 health and/or health-related issues of particular concern to them. The following table contains the issues that received more than 5% of all mentions.

TABLE 76. BUTLER COUNTY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse (Addiction, 6 and Opioids, 5)	27	29.7%
Chronic disease (Obesity, 8)	17	18.7%
Mental health	11	12.0%
Infant mortality	6	6.7%

Eighteen organizations serving County residents, especially vulnerable populations, responded with their priorities. The priorities that received more than 5% of mentions are listed below.

TABLE 77. BUTLER COUNTY: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	13	26%
Infant mortality	8	16%
Social Determinants of Health	6	12%
Mental health	5	10%
Chronic disease	5	10%
Access to care	5	10%

Responses from Health Departments

Health Commissioners from Butler County, City of Hamilton, and Middletown City provided the following health priorities for the community. See below.

TABLE 78. BUTLER COUNTY: HEALTH DEPARTMENT PRIORITIES

	Addiction	Health education	Infant mortality	Obesity	Smoking
Butler County	1		1	1	
City of Hamilton				1	1
City of Middletown		1			

> *"Adults need to be reached to instruct on how to care for their own children."*
>
> - Butler County agency

Butler County Health Snapshot

Pop.: 373,638

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	19.8	↓	22.2	20.2
Cancer mortality, Colon & Rectum (rate per 100,000)	15.4	↓	15.5	14.0
Cancer mortality, Overall (rate per 100,000)	168.7	↓	174.3	157.1
Chronic Lower Respiratory Disease (CLRD) deaths age 65+ (rate per 100,000)	306.3	↓	316.1	270.9
Diabetes (%)	10.9	↓	11.1	10.7
Infant Mortality (rate per 1,000 live births)	7.6	*	7.2	5.9
Injury Deaths (rate per 100,000)	83.9	↑*	61.2	45.3
Low birthweight (%)	7.8	–	8.5	8.2
Poor physical health days (last 30 days)	5.0	↑*	4.0	3.9
Poor mental health days (last 30 days)	4.9	*	4.0	3.7
Stroke Deaths (rate per 100,000)	44.0	↓*	40.6	37.5
Suicide (rate per 100,000)	12.9	↑	13.3	13.0
Health Behaviors				
Adult Obesity (%)	31.3	↑*	30.6	29.2
Adult Smoking (%)	22.2	↑*	22.0	16.5
Alcohol-impaired driving deaths (%)	38.0	↓*	34.0	30.0
Chlamydia incidence (rate per 100,000)	370.1	↑	521.6	497.3
HIV prevalence (rate per 100,000)	107.8	↑	199.5	305.2
Motor vehicle crash deaths (rate per 100,000)	9.3	–	10.3	11.5
Naloxone administration rate (per 100,000)	58.5	↑	38.4	U
Physical inactivity (%)	27.6	↑*	26.4	25.2
Violent Crime (rate per 100,000)	354.7	-	300.3	386.3
Substance Abuse/Mental Health				
Depression (%)	19.8	↓*	18.5	17.1
Drug poisoning deaths (per 100,000)	45.2	↑*	26.2	14.6
Fentanyl & related drugs overdose deaths (per 100,000)	18.8	*	9.0	2.6
Heroin poisoning overdose deaths (per 100,000)	22.9	↑*	10.9	3.5
Prescription Opiod overdose deaths (per 100,000)	24.9	*	5.9	4
Access to Clinical Care				
Dentists (ratio)	2090:1	↓	1656:1	1480:1
Diabetic screening (% HbA1c)	55.1	↓	57.4	57.5
Mammography screening (%)	69.1	↑	73.7	72.7
Mental health providers (ratio)	729:1	↓*	561:1	470:1
Primary care physicians (ratio)	1,850:1	-*	1307:1	1320:1
Uninsured (%)	7.0	↓	7.6	11.8
Socio-Economic/Demographic				
Children in poverty (%)	18.6	↓	22.1	21.2
Hispanic (%)	4.4		3.5	17.3
African-American (%)	7.8		12.1	12.3
Population that is 65 and older (%)	13.2	↑	14.5	16.0
Population below 18 years of age (%)	24.2	–	23.0	22.3

U = Unavailable, unreliable, or suppressed due to small numbers. Source data range: 2014-2017

* = Higher than state and national rates

Top Causes of Death
Lung Cancer
Dementia
Heart Disease

Drug Deaths
Rates are higher than OH and US for drug poisoning, heroin, Fentanyl & prescription opioids

Injury Deaths
Increasing & > OH & US rates

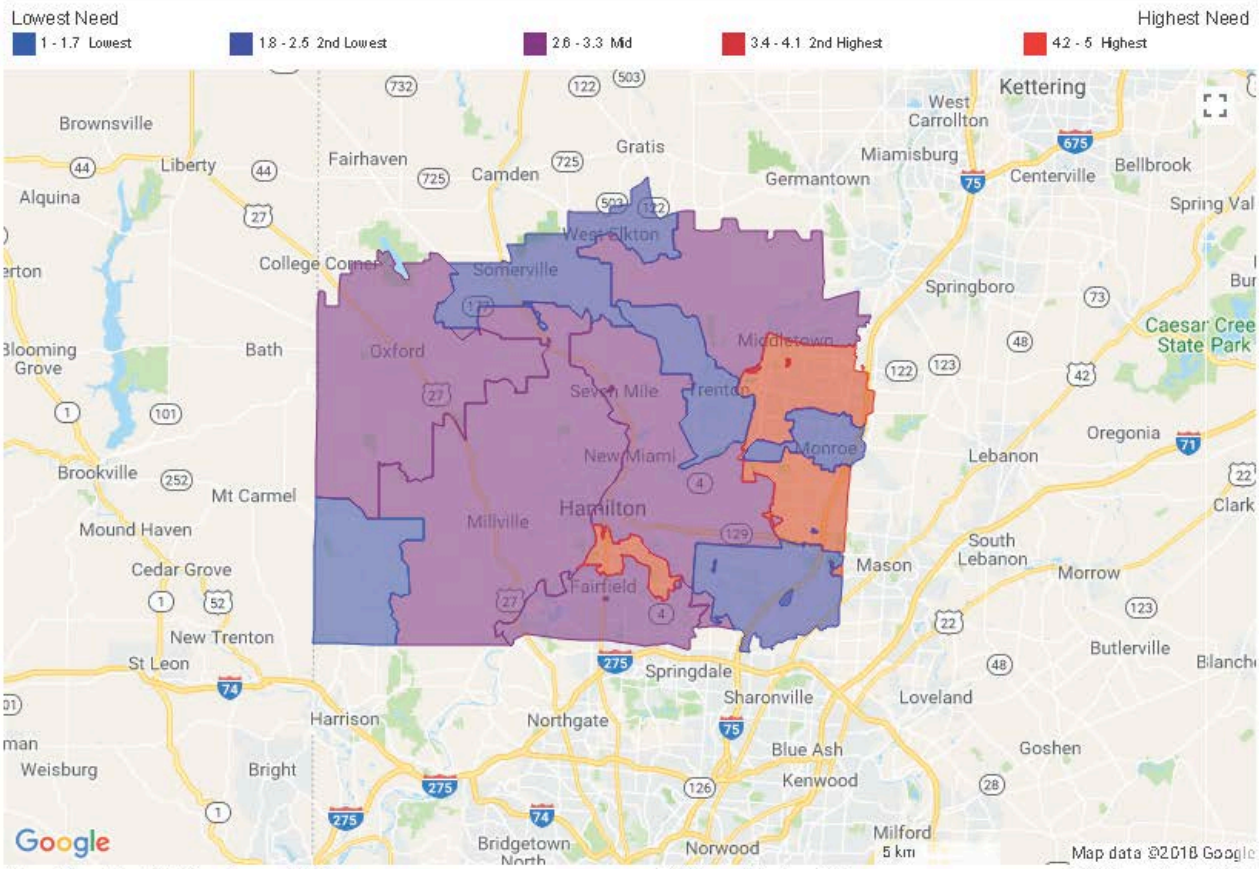
Health Behaviors
Obesity, smoking, & physical inactivity rates are worsening and > OH & US rates

Alcohol-Impaired Driving Deaths
Higher than OH & US rates

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. Two of the County's 12 ZIP Codes exceed a score of 3.4.

Dignity Health.



Mean(zipcode): 2.7 / Mean(person): 2.9 CNI Score Median: 2.9 CNI Score Mode: 3,3.2

Zip Code	CNI Score	Population	City	County	State
45011	3.2	74785	Hamilton	Butler	Ohio
45013	2.8	52749	Hamilton	Butler	Ohio
45014	3	44980	Fairfield	Butler	Ohio
45015	3.8	12000	Hamilton	Butler	Ohio
45042	3.2	25597	Middletown	Butler	Ohio
45044	3.6	53479	Middletown	Butler	Ohio
45050	2.2	10365	Monroe	Butler	Ohio
45053	1.4	3127	Okeana	Butler	Ohio
45056	3	27734	Oxford	Butler	Ohio
45064	1.8	3307	Somerville	Butler	Ohio
45067	2.4	15431	Trenton	Butler	Ohio
45069	2	51050	West Chester	Butler	Ohio

TRUVEN HEALTH ANALYTICS

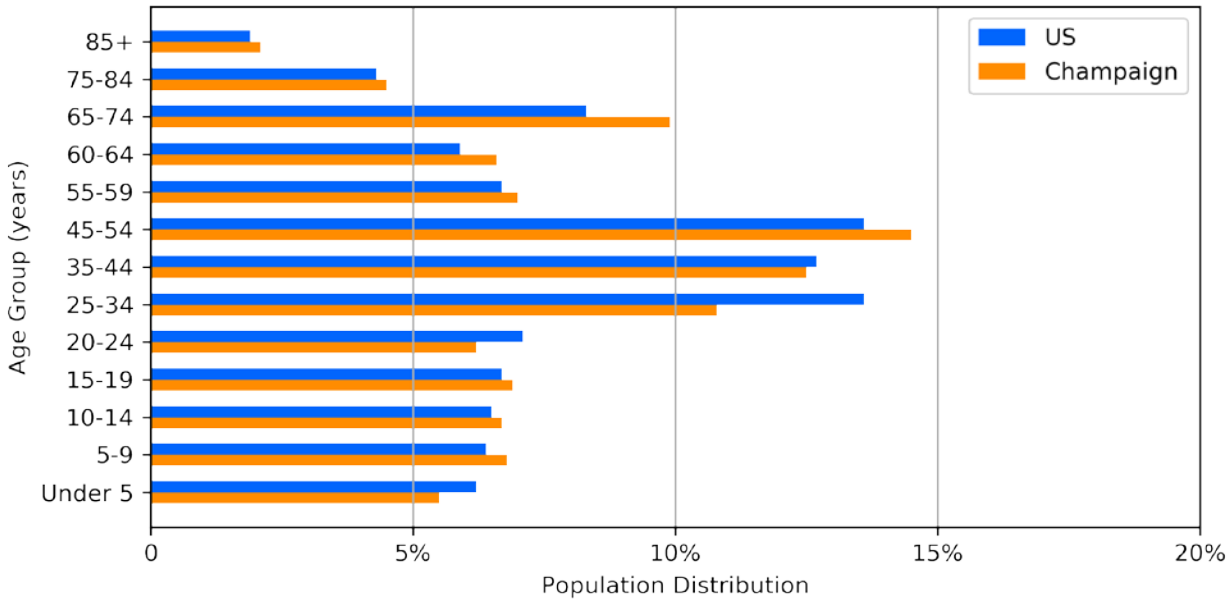
CHAMPAIGN COUNTY, OHIO

Champaign County is home to the city of Urbana and Urbana University. Access to care is an issue here as in many rural counties, with low numbers of primary care, mental health, and dental providers. The suicide rate and the number of poor mental health days are higher than the U.S. and Ohio rates and getting worse. Although the physical activity rate is high, it is slowly decreasing. The rate of adult obesity is lower than the Ohio and U.S. rate.

Population Chart

The following is a population chart for Champaign County from years 2012-2016.

FIGURE 37. CHAMPAIGN COUNTY POPULATION



Consensus on Priorities

Substance abuse is a major health issue in this part of Ohio and was mentioned as a top priority in the community meeting, on the consumer survey, and by the Health Department. Concern for children was expressed at meetings (Kindergarten-readiness), on consumer surveys, and by the Health Department (Early childhood wellness). Discussion at the community meetings included the lack of parenting resources and general child health education. At the meeting and in the health department survey, Mental health was a priority. Lack of transportation was ranked in 2nd place as a priority at the meeting.

Top Causes of Death

The top causes of death for 2016 were, in descending order:

- Lung cancer
- Atherosclerotic heart disease
- Dementia, unspecified

Priorities from Community Meeting on May 15, 2018

The Champaign Health District did a great job of getting the word out and setting up the meeting room at the Champaign County YMCA in Urbana. Attendees explained that the CNI map was not completely accurate from their perspective, because it didn't take into account the challenge of transportation in the most rural areas, and the ZIP Code level scores didn't reflect three pockets of high need: south of Urbana, the trailer park, and North Lewisburg. This useful feedback demonstrates the value of sharing data with members of the community.

Twenty people contributed votes to identify a total of five priorities. Below are the topics receiving at least 5% of votes.

TABLE 79. CHAMPAIGN COUNTY: MEETING PRIORITIES

Priority	# Votes	% Votes
Substance abuse, e.g. addiction epidemic	11	25.6%
Transportation	10	23.3%
Kindergarten readiness	5	14.0%
Senior Center	4	9.3%
Mental health	3	7.0%

Survey Responses

Below are the most frequent responses from individual consumers, living in Champaign County, who completed a survey in June 2018. Three people participated. Respondents all answered the question, "Given the health issues facing the community, which ones would be your top priorities?" They mentioned six health and/or health-related issues of particular concern to them. The following table contains the issues that received more than 5% of all mentions.

TABLE 80. CHAMPAIGN COUNTY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	3	33.3%
Healthy food/Nutrition	2	33.3%
Obesity	1	16.7%
Care for children	1	16.7%

Responses from Health Department

The Champaign Health District provided the following health priorities for the community:

- Mental health
- Substance abuse
- Early childhood wellness
- Healthy living

"Exercise is as good as pharmaceuticals."

-Champaign County resident

Champaign County Health Snapshot

Pop.: 39,175

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Overall (rate per 100,000)	183.9	↑*	174.3	157.1
Cancer mortality, Lung (rate per 100,000)	60.6	↑*	48.2	39.4
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 100,000)	405.2	↑	316.1	270.9
Diabetes Deaths (rate per 100,000)	27.2	↑*	24.9	21.2
Diabetes (%)	8.5	–	10.7	10.7
Heart Disease Deaths (rate per 100,000)	181.1	–	188.4	167.0
Infant Mortality (rate per 1,000 live births)	9.3	–*	7.2	5.9
Injury Deaths (rate per 100,000)	55.0	–	61.2	45.3
Premature Age Adjusted Mortality (rate per 100,000)	440.5	↑*	403.5	341.0
Avg. # of Poor mental health days (in past 30 days)	7.0	↑*	4.0	3.7
Stroke Deaths (rate per 100,000)	43.7	↑*	40.6	37.5
Health Behaviors				
Adult Obesity (%)	24.0	↓	30.6	29.2
Adult Smoking (%)	20.7	↓	22.0	16.5
Chlamydia incidence (rate per 100,000)	295.0	↑	521.6	497.3
Alcohol-impaired driving deaths (%)	21.0	↑	34.0	30.0
Excessive drinking (%)	17.2	–	18.1	16.6
Physical inactivity (%)	42.7	↓*	26.4	25.2
Substance Abuse/Mental Health				
Drug poisoning deaths (per 100,000)	20.5	↑	26.2	14.6
Depression (%)	15.3	–	18.5	17.1
Suicide (rate per 100,000)	18.9	↑*	13.3	13.0
Access to Clinical Care				
Dentists (ratio)	2980:1	-*	1656:1	1480:1
Mammography screening (%)	73.7	↑	73.7	72.7
Mental health providers (ratio)	1026:1	↓*	561:1	470:1
Primary care physicians (ratio)	6,500:1	↑*	1307:1	1320:1
Socio-Economic/Demographic				
Children in poverty (%)	15.7	–	22.1	21.2
Population that is 65 and older (%)	16.6	–*	14.5	16.0
Population below 18 years of age (%)	23.3	↓*	23.0	22.3

Source data range: 2014-2017

* = Higher than state and national rate

Top Causes of Death
Lung Cancer
Dementia
Heart Disease

Respiratory
High Death Rates:
Lung Cancer
CLRD

Infant Mortality
Higher rate than OH & US

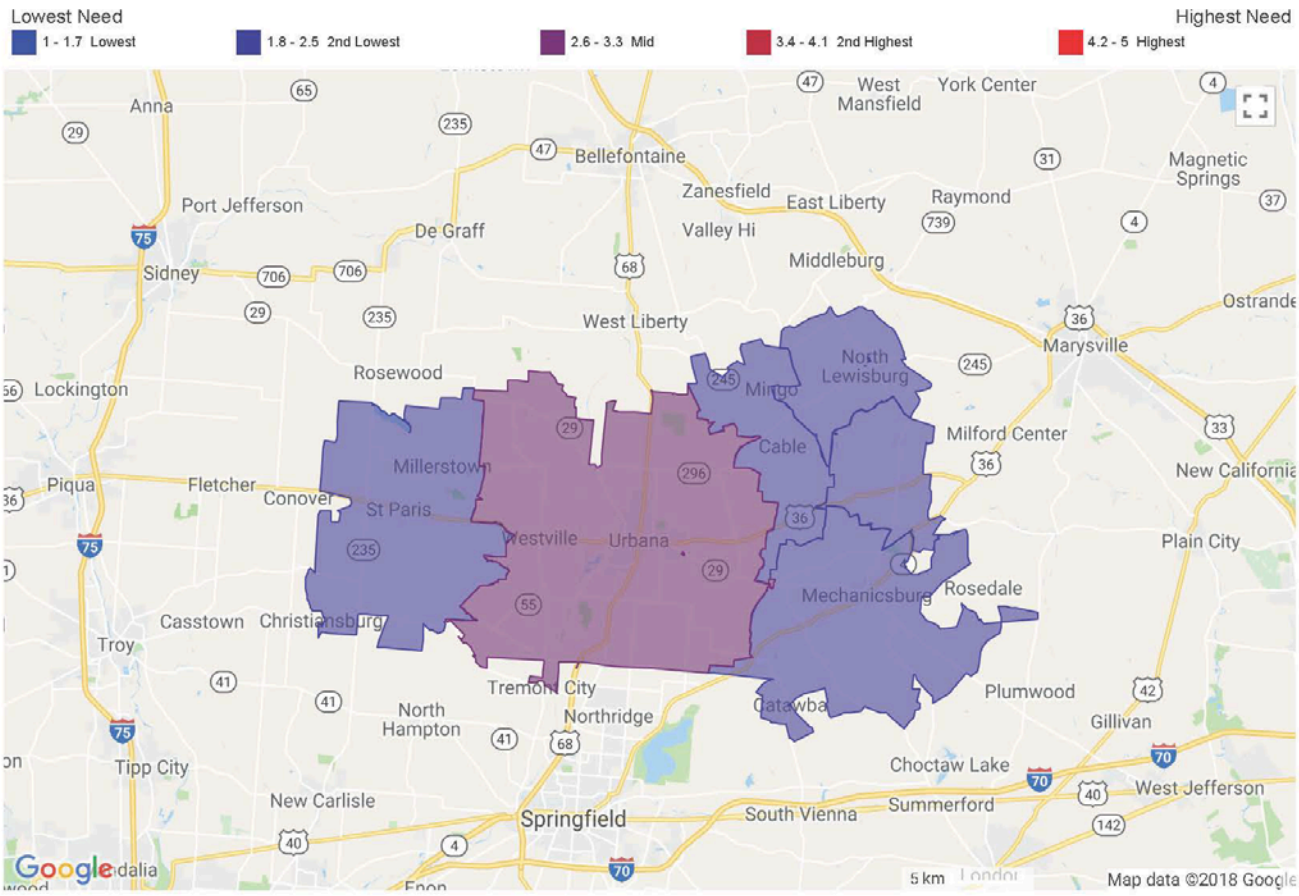
Mental Health
Suicide & # of Poor Mental Health Days > than OH & US

Provider Ratios
Worse than State and National Ratios

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. None of the County's ZIP Codes exceeds a 3.4 score.

Dignity Health.



Mean(zipcode): 2.2 / Mean(person): 2.6 CNI Score Median: 2 CNI Score Mode: 1.8,2

Zip Code	CNI Score	Population	City	County	State
43009	1.8	1844	Cable	Champaign	Ohio
43044	2.4	5626	Mechanicsburg	Champaign	Ohio
43060	2	2477	North Lewisburg	Champaign	Ohio
43072	2	5757	Saint Paris	Champaign	Ohio
43078	3	20512	Urbana	Champaign	Ohio
43084	1.8	760	Woodstock	Champaign	Ohio

TRUVEN HEALTH ANALYTICS

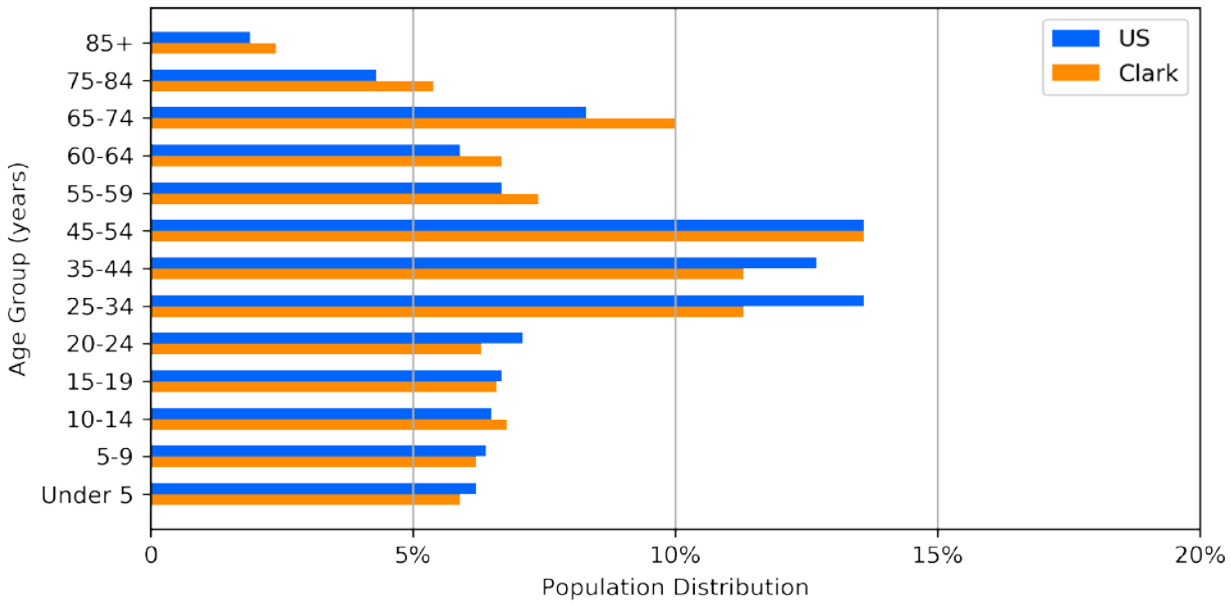
CLARK COUNTY, OHIO

Clark County is the third smallest County in Ohio by area. The county seat is Springfield, which is home to Wittenberg University. The percentage of people that receive public assistance is more than double the average across the Counties. Diabetes rates and deaths are higher than the U.S. and Ohio rates. Drug-related deaths and overdoses are high and increasing. The suicide rate is also rising. Clark County is one of the 8 counties in the region that experienced an increase in the number of days with an increase in ozone level. High CNI scores are recorded for 45505 and 45506, both located in Springfield, indicating the possibility of health disparities.

Population Chart

The following is a population chart for Clark County from years 2012-2016.

FIGURE 38. CLARK COUNTY POPULATION



Consensus on Priorities

All 4 primary sources agreed on Mental health as a priority, with emphasis on trauma at community meetings. Both Substance abuse and Oral health were prioritized by two sources. The lack of fluoride in the water was mentioned specifically at community meetings. Social Determinants of Health were prioritized by meeting attendees and agencies, but it was a dominant issue at meetings with 33 votes, of which Poverty and Environment were prominent SDH sub-categories. Access to care was also a concern at meetings, with transportation and cost being mentioned specifically.

Top Causes of Death

The top causes of death for 2016 were, in descending order:

- Atherosclerotic heart disease
- Lung cancer
- Acute Myocardial Infarction (AMI), or heart attack

Priorities from Community Meetings

A total of six community meetings were held in Clark County. One was conducted by the THC/GDAHA consultants, and five were conducted by the Clark County Combined Health District. Sixty-eight people contributed votes to identify a total of 18 priorities. Below are the topics receiving at least 4.5% of the vote.

TABLE 81. CLARK COUNTY: MEETING PRIORITIES

Priority	# Votes	% Votes
Access (Transportation, 8; cost, 6)	34	19.2%
Mental health (Trauma, 5)	25	14.1%
Substance abuse	14	7.9%
Poverty (Children, 2)	13	7.3%
Environment	11	6.2%
Healthy behaviors (Smoking, 2)	10	5.7%
Social/emotional/community interaction	9	5.0%
Social Determinants of Health	9	5.0%
Fluoride	8	4.5%

Survey Responses

Below are the most frequent responses from individual consumers, living in Clark County, who completed a survey between 6/19/18 and 8/3/18. Seven people participated. Respondents all answered the question, “Given the health issues facing the community, which ones would be your top priorities?” They mentioned thirteen health and/or health-related issues of particular concern to them. The table below contains the issues that received at least two mentions.

TABLE 82. CLARK COUNTY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	5	38.5%
Mental health	3	23.1%
Dental	2	15.3%

Eight organizations serving County residents, especially vulnerable populations, responded with their priorities. The priorities that received more than 2 mentions are listed below.

TABLE 83. CLARK COUNTY: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Obesity	4	33%
Social determinants of health	3	25%
Mental health	2	17%

Response from Health Department

The Clark County Combined Health District provided the following health priorities for the community:

- Obesity
- Diabetes
- Heart disease
- Mental health

> *"We don't have (local) inpatient care or services for children."*
>
> - Clark County resident

Clark County Health Snapshot

Pop.: 136,175

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	29.5	-*	22.2	20.2
Cancer mortality, Lung (rate per 100,000)	51.0	-*	48.2	39.4
Cancer mortality, Overall (rate per 100,000)	186.4	-*	174.3	157.1
Diabetes (%)	14.1	-*	11.1	10.7
Homicide (rate per 100,000)	7.0	*	5.9	5.5
Infant Mortality (rate per 1,000 live births)	8.2	-*	7.2	5.9
Injury Deaths (rate per 100,000)	93.2	-*	61.2	45.3
Low birthweight (%)	8.7	-*	8.5	8.2
Poor physical health days (in last 30 days)	4.3	-*	4.0	3.9
Preterm Birth (%)	11.8	*	10.3	9.6
Stroke Deaths (rate per 100,000)	65.9	-*	40.6	37.5
Suicide (rate per 100,000)	15.4	-*	13.3	13.0
Health Behaviors				
Adult Obesity (%)	35.4	-*	30.6	29.2
Adult Smoking (%)	28.6	*	22.0	16.5
Alcohol-impaired driving deaths (%)	42.0	-*	34.0	30.0
Gonorrhea incidence (rate per 100,000)	205.2	-*	176.8	145.8
Excessive drinking (%)	13.4	*	18.1	16.6
Motor vehicle crash deaths (rate per 100,000)	16.9	-*	10.3	11.5
Physical inactivity (rate per 100,000)	36.6	-*	26.4	25.2
Substance Abuse/Mental Health				
Depression (%)	16.4	-	18.5	17.1
Drug poisoning deaths (per 100,000)	39.9	-*	26.2	14.6
Fentanyl & related drugs overdose deaths (per 100,000)	20.2	*	9.0	2.6
Heroin poisoning overdose deaths (per 100,000)	13.8	-*	10.9	3.5
Prescription Opioid overdose deaths (per 100,000)	9.8	*	5.9	4.0
Access to Clinical Care				
Dentists (ratio)	2040:1	↓*	1656:1	1480:1
Diabetic screening (% HbA1c)	49.3	-	57.4	57.5
Mammography screening (%)	80.9	*	73.7	72.7
Mental health providers (ratio)	1152:1	-*	561:1	470:1
Primary care physicians (ratio)	2230:1	↑*	1307:1	1320:1
Uninsured (%)	14.2	*	7.6	11.8
Socio-Economic/Demographic				
Children in poverty (%)	27.8	*	22.1	21.2
Hispanic (%)	0.0		3.5	17.3
African-American (%)	0.1		12.1	12.3
Population that is 65 and older (%)	17.8	*	14.5	16.0
Population below 18 years of age (%)	22.9	-	23.0	22.3

* = Rate or percent is higher than the state and national rate or percent

U = Unavailable, unreliable, or suppressed due to small numbers.

Top Causes of Death
Heart Disease
Lung Cancer
Heart Attack

Diabetes
Deaths and % > OH & US

Driving Deaths
> OH & US for crash deaths & alcohol-impaired

Injury Deaths
Increasing and > OH & US

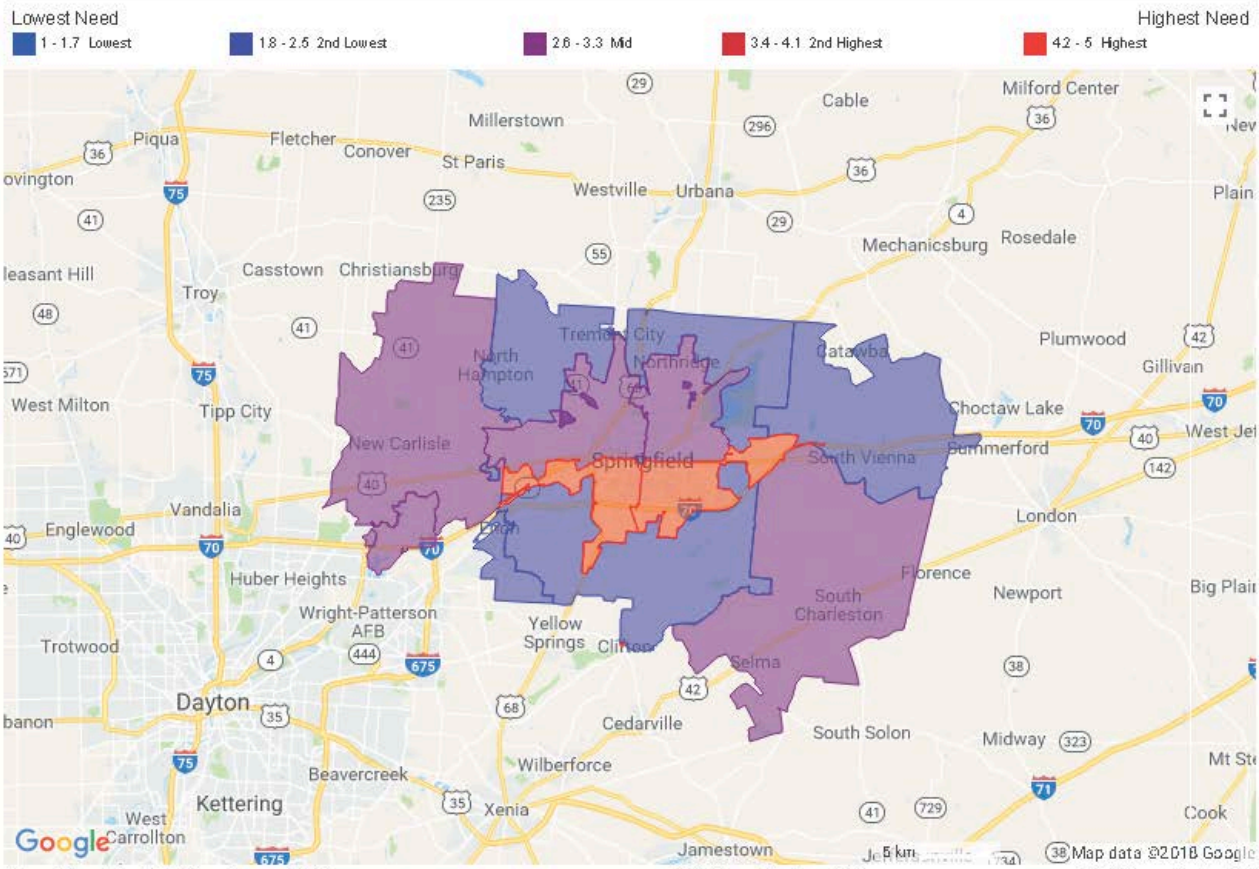
Stroke Deaths
Rates are increasing and > OH & US

Children
Infant & child mortality rates increasing and > OH & US

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. Two of the County's ZIP Codes have a score above 3.4.

Dignity Health.



Mean(zipcode): 2.8 / Mean(person): 3.3 CNI Score Median: 2.8 CNI Score Mode: 2.4

Zip Code	CNI Score	Population	City	County	State
43010	2.4	210	Catawba	Clark	Ohio
45319	1.6	202	Donnelsville	Clark	Ohio
45323	2.4	5340	Enon	Clark	Ohio
45341	2.8	3802	Medway	Clark	Ohio
45344	3	16777	New Carlisle	Clark	Ohio
45368	2.8	4560	South Charleston	Clark	Ohio
45369	2	3312	South Vienna	Clark	Ohio
45372	2.4	285	Tremont City	Clark	Ohio
45502	2	16631	Springfield	Clark	Ohio
45503	3.2	32340	Springfield	Clark	Ohio
45504	3.2	17479	Springfield	Clark	Ohio
45505	4.6	19950	Springfield	Clark	Ohio
45506	4.4	13582	Springfield	Clark	Ohio

TRUVEN HEALTH ANALYTICS

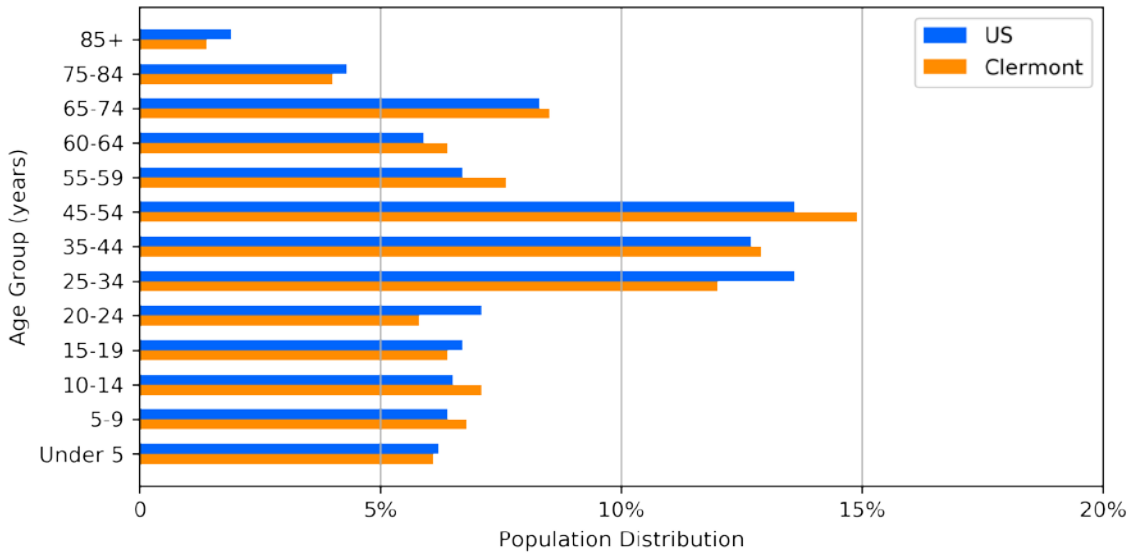
CLERMONT COUNTY, OHIO

Clermont County is a large county with a population of more than 200,000. The County was once mostly rural, but has become more suburban. It is one of Ohio's Appalachian counties. The rate of deaths from stroke and the smoking rates are both higher than the U.S. and Ohio rates and increasing. Clermont County is one of the 8 counties in the region that experienced an increase in the number of days with an increase in ozone level. Clermont County Public Health arranged for meeting space in the county seat, Batavia, and conducted two additional community meetings in Felicity and Miami Township. They offered $10 Walmart gift cards as incentives for participation.

Population Chart

The following is a population chart for Clermont County from years 2012-2016.

FIGURE 39. CLERMONT COUNTY POPULATION



Consensus on Priorities

All four sources of input – meeting, agency survey, consumer survey, and health department – agreed on Substance abuse as a top priority. Access to care, especially Transportation, was also a priority for all 4 primary sources. Mental health was prioritized by 3 sources: in the meeting, consumer survey, and health department responses. Healthy behaviors was prioritized at the meetings, and that includes use of tobacco/nicotine – a Public Health priority. They also agreed on Obesity. Agencies and meeting attendees agreed on Healthy food/Nutrition and Social Determinants of Health as priorities.

Top Causes of Death

The top causes of death for 2016 were, in descending order:

- Lung cancer
- Atherosclerotic heart disease
- Dementia, unspecified
- Accidental poisoning by and exposure to narcotics and hallucinogens

Priorities from Community Meetings on May 1, 2, and 3, 2018

From the three meetings, 17 people contributed their votes to identify their priorities. Below are the topics receiving at least 5% of votes.

TABLE 84. CLERMONT COUNTY: MEETING PRIORITIES

Priority	# Votes	% Votes
Substance abuse	10	27.8%
Access (Transportation, 1)	7	19.4%
Healthy food/Nutrition	6	16.7%
Mental health	5	13.9%
Social Determinants of Health	3	8.3%
Healthy Behaviors	3	8.3%
Obesity	2	5.6%

Survey Responses

Below are the most frequent responses from individual consumers, living in Clermont County, who completed a survey between 6/19/18 and 8/3/18. Forty-one people participated. Respondents all answered the question, “Given the health issues facing the community, which ones would be your top priorities?” They mentioned 11 health and/or health-related issues of particular concern to them. The following table contains the issues that received more than 5% of all mentions.

TABLE 85. CLERMONT COUNTY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	27	34.5%
Mental health	12	15.8%
Access to care	12	15.8%
Cancer	10	13.2%

Twenty-one organizations serving County residents, especially vulnerable populations, responded with their priorities. The priorities that received more than 5% of mentions are listed below.

TABLE 86. CLERMONT COUNTY: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	13	25%
Social Determinants of Health	11	21%
Chronic disease	10	19%
Access to care (Transportation, 3)	7	13%
Healthy food/Nutrition	3	6%
Infant mortality	3	6%

Response from the Health Department

Clermont County Public Health provided its health priorities for the community:

- Substance Use Disorder (SUD)
- Child welfare associate with SUD
- Obesity
- Access to care
- Mental health
- Tobacco and nicotine use

Clermont County Voting

Clermont County Health Snapshot

Pop.: 201,092

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	20.5	↑	22.2	20.2
Cancer mortality, Lung (rate per 100,000)	52.6	↓*	48.2	39.4
Cancer mortality, Overall (rate per 100,000)	168	↓	174.3	157.1
Diabetes (%)	9.5	↑	11.1	10.7
Infant Mortality (rate per 1,000 live births)	6.8	-	7.2	5.9
Injury Deaths (rate per 100,000)	76.2	↑*	61.2	45.3
Low birthweight (%)	7.1	↑	8.5	8.2
Preterm Birth (%)	8.8	↑	10.3	9.6
Poor physical health days (last 30 days)	5	↑*	4	3.9
Poor mental health days (last 30 days)	5.5	↑*	4	3.7
Stroke Deaths (rate per 100,000)	55.5	↑*	40.6	37.5
Suicide (rate per 100,000)	14.8	↓*	13.3	13
Health Behaviors				
Adult Obesity (%)	33	↑*	30.6	29.2
Adult Smoking (%)	29.1	↑*	22	16.5
Alcohol-impaired driving deaths (%)	32	↑	34	30
Chlamydia incidence (rate per 100,000)	283.2	↑	521.6	497.3
HIV prevalence (rate per 100,000)	70.9	↑	199.5	305.2
Motor vehicle crash deaths (rate per 100,000)	9.5	↓	10.3	11.5
Naloxone administration rate (per 100,000)	32.2	↑	38.4	NA
Physical inactivity (%)	20.8	↓	26.4	25.2
Substance Abuse/Mental Health				
Depression (%)	26.2*	-	18.5	17.1
Drug poisoning deaths (per 100,000)	43.4*	↑	26.2	14.6
Fentanyl & related drugs overdose deaths (per 100,000)	16.6*	-	9	2.6
Heroin poisoning overdose deaths (per 100,000)	25.5*	↓	10.9	3.5
Prescription Opioid overdose deaths (per 100,000)	9.8*	↑	5.9	4
Access to Clinical Care				
Dentists (ratio)	2640:1	↑*	1656:1	1480:1
Diabetic screening (% HbA1c)	51.2	↓	57.4	57.5
Mammography screening (%)	63.1	↓	73.7	72.7
Mental health providers (ratio)	1880:1	↓*	561:1	470:1
Primary care physicians (ratio)	1430:1	-*	1307:1	1320:1
Uninsured (%)	8.1	↓	7.6	11.8
Socio-Economic/Demographic				
Children in poverty (%)	13.5	↓	22.1	21.2
Population that is 65 and older (%)	14	*	14.5	16
Population below 18 years of age (%)	24.3	*	23	22.3

Source data range: 2014-2018

* = Higher than state and national rates

Top Causes of Death
Lung Cancer
Heart Disease

Injury Deaths
Increasing and > state and national rate

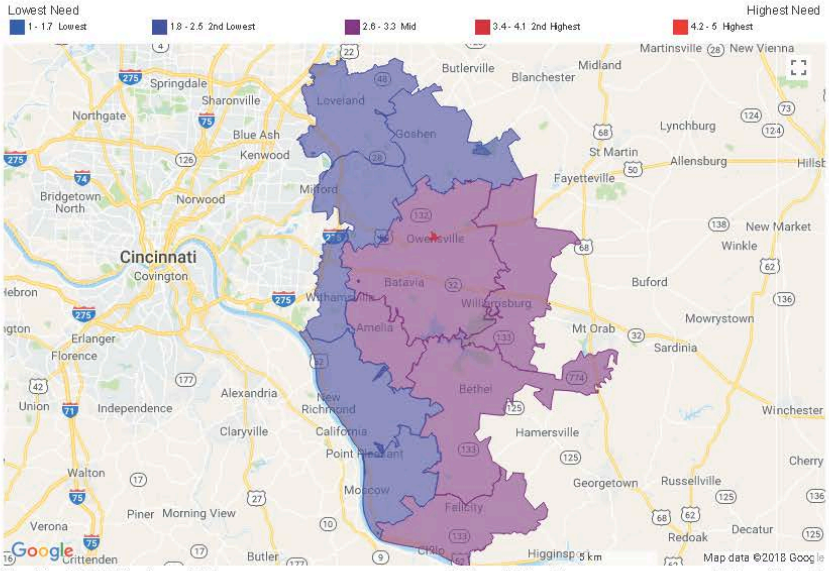
Strokes
Deaths increasing and > state & US
&
Smoking
increasing and > than state and US

Rx Opioid Overdose Deaths
Rate > state and national rates

Depression
Rate > state and national rates

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. One ZIP Code exceeds a score of 3.4, but it is a statistical anomaly.



Mean(zipcode): 2.5 / Mean(person): 2.3 | CNI Score Median: 2.5 | CNI Score Mode: 2.6

Zip Code	CNI Score	Population	City	County	State
45102	2.6	24435	Amelia	Clermont	Ohio
45103	2.6	33678	Batavia	Clermont	Ohio
45106	2.6	12196	Bethel	Clermont	Ohio
45120	3	3332	Felicity	Clermont	Ohio
45122	2.2	11088	Goshen	Clermont	Ohio
45140	2	54662	Loveland	Clermont	Ohio
45150	2.2	31965	Milford	Clermont	Ohio
45153	2.2	1915	Moscow	Clermont	Ohio
45157	2.4	9859	New Richmond	Clermont	Ohio
45160	3.6	724	Owensville	Clermont	Ohio
45176	2.6	9613	Williamsburg	Clermont	Ohio
45245	2	19091	Cincinnati	Clermont	Ohio

TRUVEN HEALTH ANALYTICS

Note:

The high CNI score in Owensville (45160) is an anomaly.
Clermont County does not have CNI scores above 3 (Felicity).

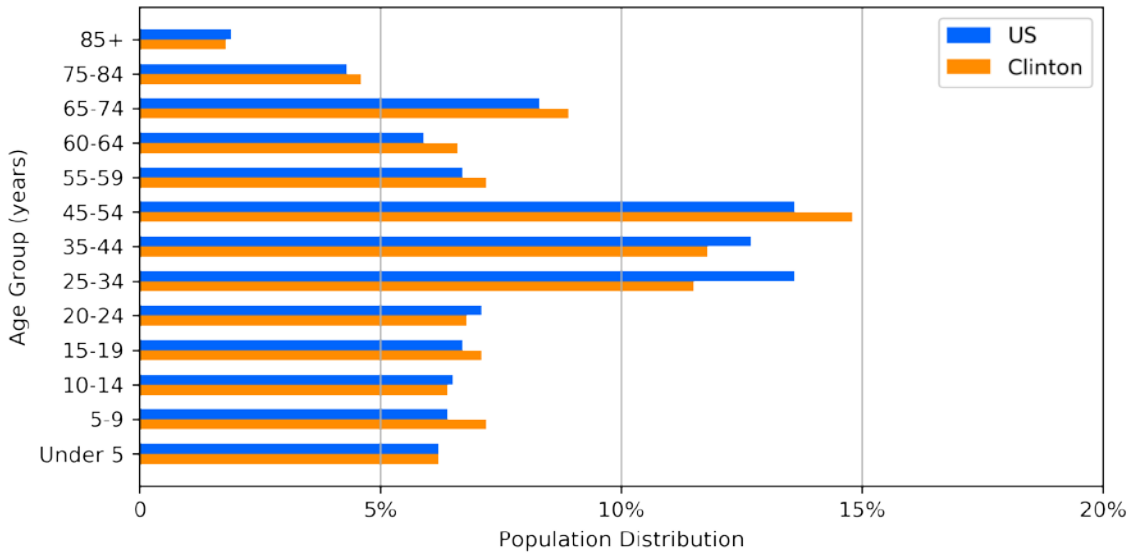
CLINTON COUNTY, OHIO

The largest city in Clinton County is Wilmington, which is also the county seat. The entire County sits within the Little Miami watershed. The rates of death from Lung cancer and Chronic Lower Respiratory Disease are higher than the U.S. and Ohio rates. Clinton County is one of the 8 counties in the region that experienced an increase in the number of days with an increase in ozone level. There is an increased rate of death from drug poisoning, fentanyl, and other related drugs. The 45177 ZIP Code in Wilmington has an elevated CNI score.

Population Chart

The following is a population chart for Clinton County from years 2012-2016.

FIGURE 40. CLINTON COUNTY POPULATION



Consensus on Priorities

Substance abuse was the #1 priority in the consumer survey, agency survey, and reported by the health department. Chronic disease was in 2nd place, and Mental health was in 3rd place in both the agency and health department responses. Consumers mentioned as priorities two components of SDHs: Environmental health and Education. At the community meeting for Clinton County, it was revealed that access to care was a concern; with transportation mentioned as the most influential barrier to accessing care.

Top Causes of Death

The top causes of death for 2016 were, in descending order:

- Lung cancer
- Atherosclerotic heart disease
- Hypertensive heart disease without congestive heart failure

Priorities from Community Meetings on May 9, 2018

One person, who works for a nonprofit agency, identified 8 serious health issues. Below are her top priorities.

- Access
- Transportation
- Health education/Promotion

Survey Responses

Below are the most frequent responses from individual consumers, living in Clinton County, who completed a survey between 6/19/18 and 8/3/18. Five people participated. Respondents all answered the question, “Given the health issues facing the community, which ones would be your top priorities?” They mentioned 7 health and/or health-related issues of particular concern to them, of which 5 issues were deemed priorities.

TABLE 87. CLINTON COUNTY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	3	42.9%
Parenting/Family	2	28.6%
Environmental health	1	14.3%
Education	1	14.3%

Nine organizations serving County residents, especially vulnerable populations, responded with their priorities. The priorities that received more than 5% of mentions are listed below.

TABLE 88. CLINTON COUNTY: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse (Addiction, 2)	5	28%
Chronic disease	3	17%
Mental health	3	17%
Community collaboration	3	17%

Response from Health Department

Clinton County Health Department provided its health priorities for the community:

- Substance abuse
- Mental health
- Chronic disease (diabetes, hypertension, stroke)

> *"We have the providers, but they won't take Medicaid."*
>
> - Clinton County consumer

Clinton County Health Snapshot

Pop.: 41,854

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Lung (rate per 100,000)	51.0	↑*	48.2	39.4
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 100,000)	368.2	*	316.1	270.9
Diabetes Deaths (rate per 100,000)	30.6	-	24.9	21.2
Diabetes (%)	17.0	↑*	10.7	10.7
Heart Disease Deaths (rate per 100,000)	209.5	↑*	188.4	167.0
Infant Mortality (rate per 1,000 live births)	9.0	↑*	7.2	5.9
Injury Deaths (rate per 100,000)	86.8	↑*	61.2	45.3
Premature Age Adjusted Mortality (rate per 100,000)	399.5	↑	403.5	341.0
Poor or fair health (%)	10.4	↓	17.3	17.8
Stroke Deaths (rate per 100,000)	58.6	*	40.6	37.5
Health Behaviors				
Adult Obesity (%)	34.6	↑*	30.6	29.2
Adult Smoking (%)	25.8	*	22.0	16.5
Chlamydia incidence (rate per 100,000)	283.9	↑	521.6	497.3
Alcohol-impaired driving deaths (%)	33.0	-	34.0	30.0
Excessive Drinking	16.7	-	18.1	16.6
Motor vehicle crash deaths (rate per 100,000)	16.9	↓*	10.3	11.5
Physical inactivity (%)	32.8	↑*	26.4	25.2
Substance Abuse/Mental Health				
Drug poisoning deaths (per 100,000)	37.0	↑*	26.2	14.6
Fentanyl and related drugs overdose deaths (rate per 100,000)	13.1	*	9.0	2.6
Heroin poisoning overdose deaths (rate per 100,000)	11.9	*	10.9	3.5
Suicide (rate per 100,000)	11	-	13.3	13.0
Access to Clinical Care				
Dentists (ratio)	3490:1	-*	1656:1	1480:1
Mammography screening (%)	64.7	-	73.7	72.7
Mental health providers (ratio)	499:1	↓	561:1	470:1
Primary care physicians (ratio)	1400:1	-*	1307:1	1320:1
Socio-Economic/Demographic				
Children in poverty (%)	20.6	↑	22.1	21.2
Population that is 65 and older (%)	15.2	↑	14.5	16.0
Population below 18 years of age (%)	24.0	-*	23.0	22.3

Source data range: 2014-2017

* = Higher than state and national rate

Top Causes of Death
Stroke
Diabetes
Heart Disease

Respiratory
High Death Rates:
Lung Cancer
CLRD

Accidents
Above OH & US Rate: Injury Deaths
Motor Vehicle Crash Deaths

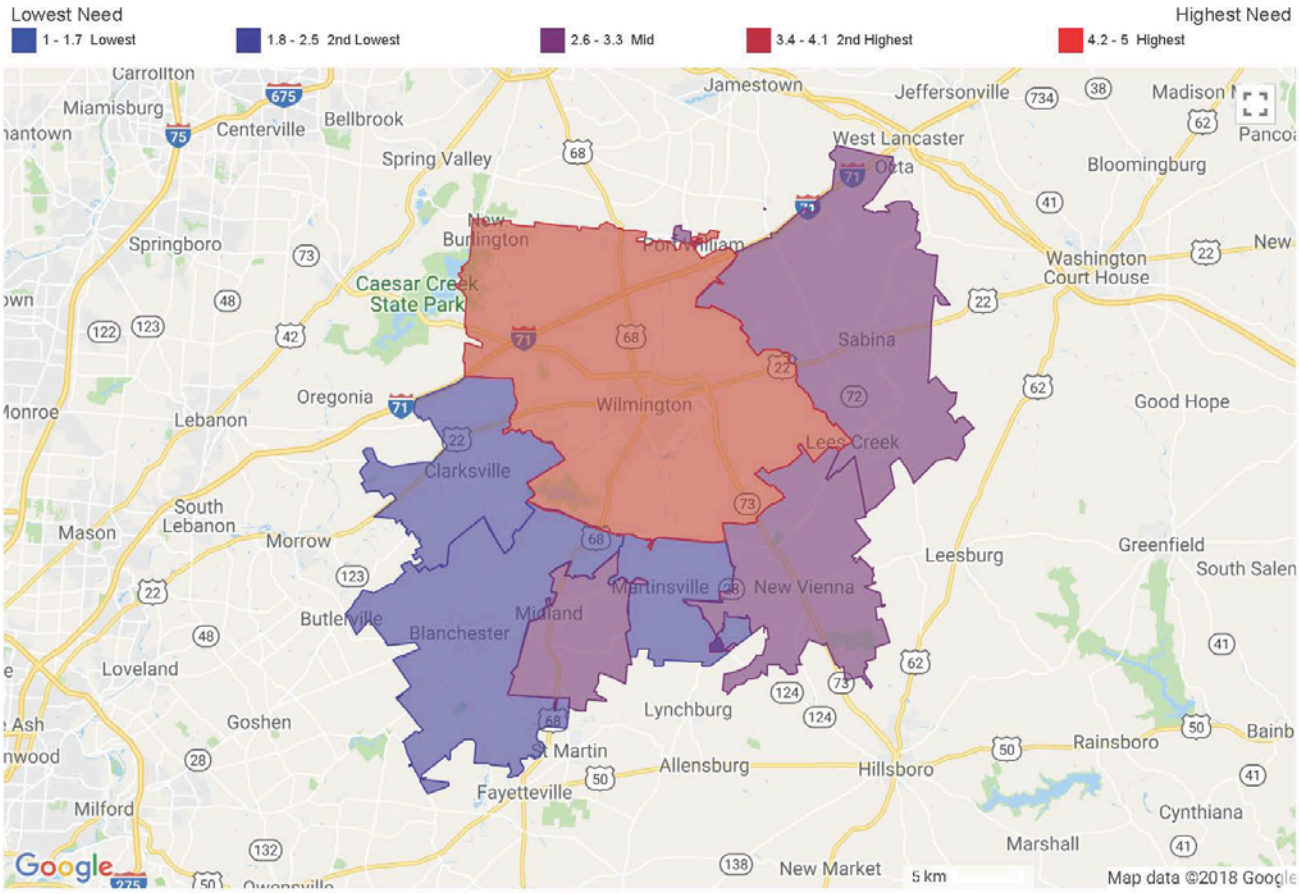
Substance Abuse
High Death Rates:
Drug Poisoning; Fentanyl & Related Drugs; and Heroin Poisoning

Provider Ratios
Ratio of dentists per population worse than OH & US ratios

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. Three of the County's ZIP Codes exceed a 3.4 score.

Dignity Health.



Mean(zipcode): 2.8 / Mean(person): 3.1 CNI Score Median: 2.8 CNI Score Mode: 2.8,3.2

Zip Code	CNI Score	Population	City	County	State
45107	2.4	9631	Blanchester	Clinton	Ohio
45113	1.8	4291	Clarksville	Clinton	Ohio
45146	2	1360	Martinsville	Clinton	Ohio
45148	2.8	1573	Midland	Clinton	Ohio
45159	3.2	3428	New Vienna	Clinton	Ohio
45164	2.8	187	Port William	Clinton	Ohio
45169	3.2	4804	Sabina	Clinton	Ohio
45177	3.8	22288	Wilmington	Clinton	Ohio

TRUVEN HEALTH ANALYTICS

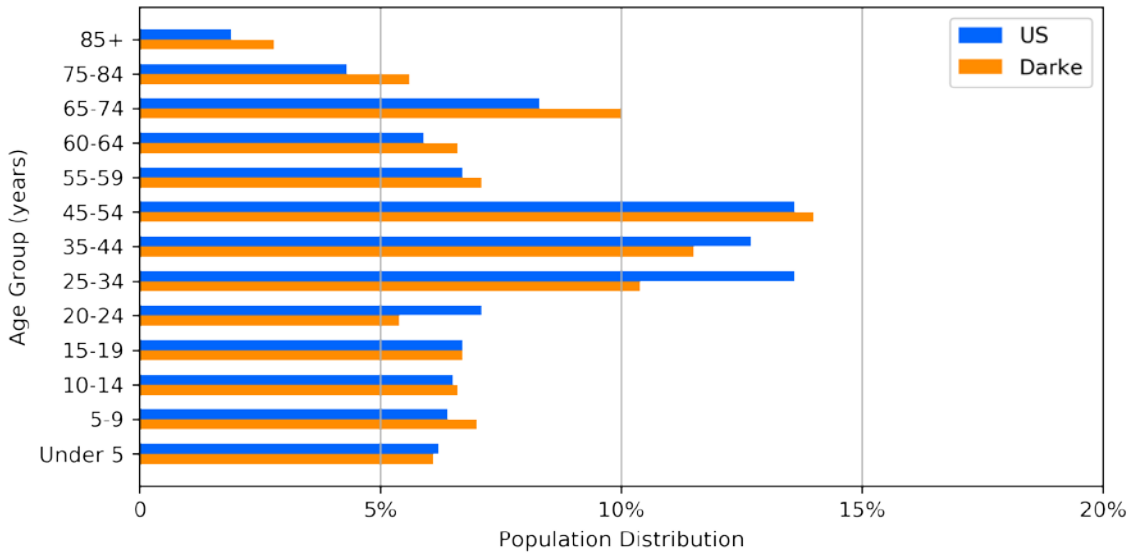
DARKE COUNTY, OHIO

Darke County is located to the far western border of Ohio. The county seat and largest city is Greenville. The rate of cancer deaths is rising and higher than the U.S. and Ohio averages. Drug overdose mortality rates in the County are rising and above the Ohio and U.S. averages. The population aged 65 and over is above the Ohio average and rising.

Population Chart

The following is a population chart for Darke County from years 2012-2016.

FIGURE 41. DARKE COUNTY POPULATION



Consensus on Priorities

Substance abuse proved to be an issue of concern as it was prioritized in the top 3 at the community meeting and in consumer and agency surveys. Access to care issues were prioritized highly at the meeting and by agencies and the Health District. Mental health was a lower priority, but mentioned at the meeting, and in consumer and agency surveys.

Top Causes of Death

The top causes of death for 2016 were, in descending order:

- Atherosclerotic heart disease
- Lung cancer
- Acute Myocardial Infarction (heart attack)

Priorities from Community Meeting on May 15, 2018

Fifteen people contributed votes to identify a total of 8 priorities. Below are the topics receiving at least 5% of votes.

TABLE 89. DARKE COUNTY: MEETING PRIORITIES

Priority	# Votes	% Votes
Access to care (Transportation, 3)	17	29.3%
Care for elderly	8	13.8%
Substance abuse (Addiction)	6	10.3%
Care for children	5	8.6%
Health education/Promotion	5	8.6%
Mental health	4	6.9%
Parenting	4	6.9%

Survey Responses

Below are the most frequent responses from individual consumers, living in Darke County, who completed a survey between 6/19/18 and 8/3/18. 56 people participated. Respondents all answered the question, “Given the health issues facing the community, which ones would be your top priorities?” They mentioned 27 health and/or health-related issues of particular concern to them. The following table contains the issues that received more than 5% of all mentions.

TABLE 90. DARKE COUNTY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Chronic disease (Cancer, 11 Obesity, 18)	36	36.7%
Substance abuse (Addiction, 13)	34	34.7%
Mental health	8	8.2%

Six organizations serving Darke County residents, especially vulnerable populations, responded with their priorities. Their priorities are listed below.

TABLE 91. DARKE COUNTY: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Access to care	3	38%
Substance abuse	2	25%
Community collaboration	1	13%
Mental health	1	13%
Violence	1	13%

Response from the Health District

Darke County Public Health provided its health priorities for the community:

- Communicable disease
- Healthcare provider shortage

"Create programs to introduce children & parents to fun physical activities."

- Darke County resident

.

Darke County Health Snapshot

Pop.: 51,778

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	16.7	-	22.4	20.2
Cancer mortality, Lung (rate per 100,000)	53.4	*	49.6	39.4
Cancer mortality, Overall (rate per 100,000)	180.6	↑*	174.3	157.1
Childhood asthma (%)	10.7	-	11.0	8.4
Diabetes (%)	12.0	*	11.1	10.7
Heart Disease Deaths (rate per 100,000)	207.0	*	188.4	167.0
Infant Mortality (rate per 1,000 live births)	6.0	-	7.2	5.9
Injury Deaths (rate per 100,000)	94.0	*	61.2	45.3
Low birthweight (%)	6.0	-	8.5	8.2
Preterm Birth (%)	7.5	-	10.3	9.6
Poor physical health days (last 30 days)	2.4	-	4.0	3.9
Poor mental health days (last 30 days)	4.1	*	4.0	3.7
Stroke Deaths (rate per 100,000)	39.6	-	40.6	37.5
Health Behaviors				
Adult Obesity (%)	34.0	↑*	30.6	29.2
Adult Smoking (%)	20.0	-	22.0	16.5
Alcohol-impaired driving deaths (%)	29.0	↓	34.0	30.0
Chlamydia incidence (rate per 100,000)	222.2	↑	521.6	497.3
Excessive drinking (%)	18.0	-	18.1	16.6
HIV prevalence (rate per 100,000)	74.0	-	199.5	305.2
Motor vehicle crash deaths (rate per 100,000)	17.0	↑*	10.3	11.5
Physical inactivity (%)	29.0	-	26.4	225.2
Substance Abuse/Mental Health				
Depression (%)	9.7	-	18.5	17.1
Drug overdose mortality rate (per 100,000)	31.0	↑*	26.2	17.0
Suicide (rate per 100,000)	15.6	*	13.3	13.4
Access to Clinical Care				
Dentists (ratio)	3050:1	↓*	1656:1	1480:1
Mammography screening (%)	66.0	↑	73.7	72.7
Mental health providers (ratio)	1440:1	-*	561:1	470:1
Primary care physicians (ratio)	1860:1	↓*	1307:1	1320:1
Uninsured (%)	8.0	↓	8.0	11.0
Socio-Economic/Demographic				
Children in poverty (%)	18.2	↓	22.1	20.0
African American (%)	0.6		12.1	12.4
Population that is 65 and older (%)	19.1	↑*	14.5	16.0
Population below 18 years of age (%)	24.0	*	23.0	22.3

Source data range: 2014-2017

*=higher than state and national averages

Top Causes of Death
Heart Disease
Lung Cancer
AMI (Heart Attack)

Adult Obesity
Rate increasing and higher than OH & US percentages

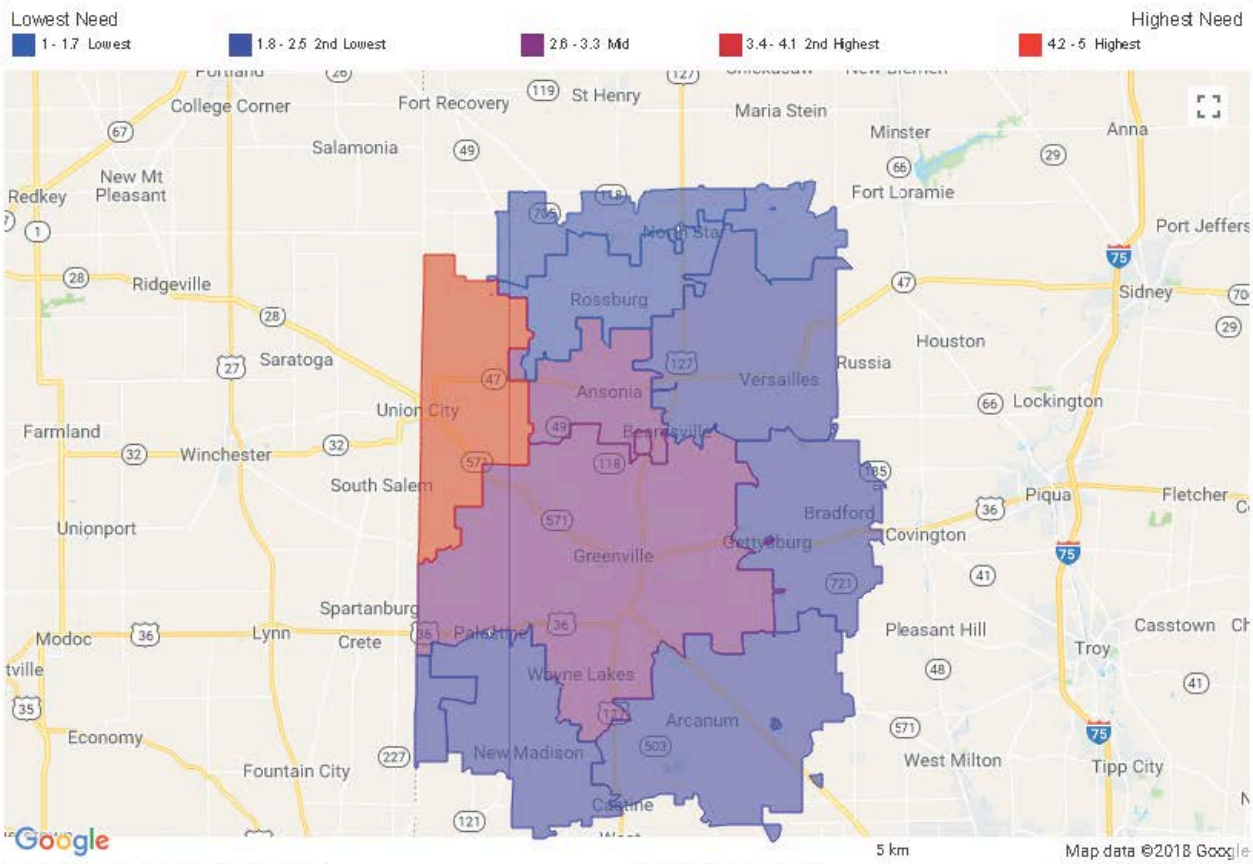
Rising Death Rates
(Higher than OH & US)
Cancer;
Motor vehicle crash;
Drug overdose;

Mental Health
Fewer providers and higher suicide rates than OH & US

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. None of the County's Zip Codes exceed a 2.6 score.

Dignity Health.



Mean(zipcode): 2.3 / Mean(person): 2.7 CNI Score Median: 2.4 CNI Score Mode: 1.4,2.4

Zip Code	CNI Score	Population	City	County	State
45303	2.8	2071	Ansonia	Darke	Ohio
45304	1.8	7317	Arcanum	Darke	Ohio
45308	2.4	5234	Bradford	Darke	Ohio
45331	3.2	22944	Greenville	Darke	Ohio
45332	2.4	581	Hollansburg	Darke	Ohio
45346	2.2	2161	New Madison	Darke	Ohio
45348	1.4	1118	New Weston	Darke	Ohio
45362	1.4	1177	Rossburg	Darke	Ohio
45380	2	5248	Versailles	Darke	Ohio
45388	1.6	1045	Yorkshire	Darke	Ohio
45390	4	3483	Union City	Darke	Ohio

TRUVEN HEALTH ANALYTICS

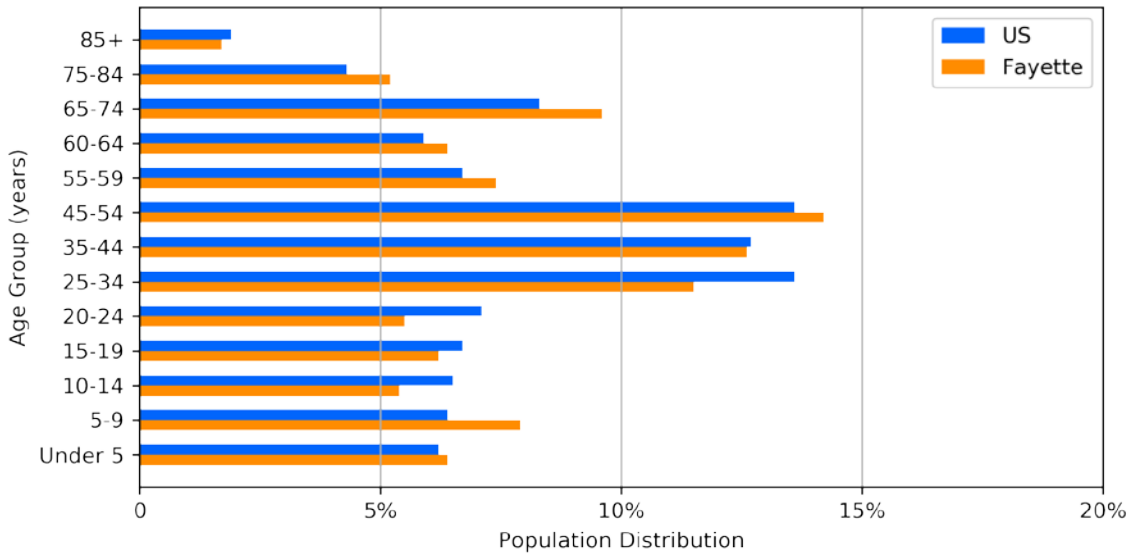
FAYETTE COUNTY, OHIO

The county seat of Fayette County is Washington Courthouse. Respiratory issues are common in the County and the top causes of death are Lung cancer and COPD. The rate of death from chronic lower respiratory disease is higher than the Ohio and U.S. averages, but is slowly declining. Access to care is a challenge, and there are fewer primary care, dental and mental health providers than the Ohio and U.S. averages. The infant mortality rate is unknown, because no babies are delivered in the County and there is no prenatal care available. All ZIP Codes in the County have elevated CNI scores.

Population Chart

The following is a population chart for Fayette County from years 2012-2016.

FIGURE 42. FAYETTE COUNTY POPULATION



Consensus on Priorities

Substance abuse and Chronic diseases were top priorities for consumers, agencies, and public health, based on survey responses. Two sources agreed on 3 issues. Meeting attendees and agency surveys were very concerned about Parenting and Social Determinants of Health. In survey responses, consumers and agencies prioritized Mental health.

Top Causes of Death

The top causes of death for 2016 were, in descending order:

- Lung cancer
- Chronic Obstructive Pulmonary Disease

Priorities from Community Meeting on June 6, 2018

Four people agreed on 4 priorities. Below are the topics receiving at least 2 mentions.

TABLE 92. FAYETTE COUNTY: MEETING PRIORITIES

Priority	# Votes	% Votes
Parenting	4	33%
Healthy behaviors	3	25%
Smoking	2	16.7%
Social determinants of health	2	16.7%

Survey Responses

Below are the most frequent responses from individual consumers, living in Fayette County, who completed a survey between 6/19/18 and 8/3/18. Twenty people participated. Respondents all answered the question, “Given the health issues facing the community, which ones would be your top priorities?” They mentioned 12 health and/or health-related issues of particular concern to them. The following table contains the issues that received more than 5% of votes.

TABLE 93. FAYETTE COUNTY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Chronic disease (Cancer=7, Obesity=6)	19	48.7%
Substance abuse	11	28.2%
Mental health	5	12.8%
Wellness	2	5.1%

Eight organizations serving County residents, especially vulnerable populations, responded with their priorities. The priorities that received more than 5% of mentions are listed below.

TABLE 94. FAYETTE COUNTY: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	8	24%
Access to care	6	18%
Chronic disease (Cancer, 2, Obesity, 2)	5	15%
Parenting/Family	3	9%
Social Determinants of Health	2	6%
Mental health	2	6%

Responses from Health Department

Fayette County Public Health provided its health priorities for the community:

- Substance abuse
- Cancer
- Healthy kids
- Chronic diseases

Dot Voting in Fayette County

Fayette County Health Snapshot

Pop.: 28,719

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Lung (rate per 100,000)	58.0	↑*	49.6	39.4
Cancer mortality, Overall (rate per 100,000)	197.4	-*	174.3	157.1
Childhood asthma (%)	14.2	*	11.0	8.4
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 100,000)	344.9	↓*	316.1	270.9
Diabetes (%)	10.5	-	11.1	10.7
Heart Disease Deaths (rate per 100,000)	306.1	-*	188.4	167.0
Injury Deaths (rate per 100,000)	74.1	↓*	61.2	45.3
Low birthweight (%)	7.7	-	8.5	8.2
Preterm Birth (%)	10.3	-	10.3	9.6
Poor physical health days (last 30 days)	2.9	↓	4.0	3.9
Poor mental health days (last 30 days)	1.9	-	4.0	3.7
Stroke Deaths (rate per 100,000)	50.4	↑*	40.6	37.5
Health Behaviors				
Adult Obesity (%)	37.0	↓*	30.6	29.2
Adult Smoking (%)	25.4	↑*	22.0	16.5
Alcohol-impaired driving deaths (%)	27.0	-	34.0	30.0
Chlamydia incidence (rate per 100,000)	313.8	↓	521.6	497.3
Excessive drinking (%)	11.1	-	18.1	16.6
HIV prevalence (rate per 100,000)	69.7	↑	199.5	305.2
Physical inactivity (%)	31.4	↑*	26.4	25.2
Substance Abuse/Mental Health				
Depression (%)	16.5	-	18.5	17.1
Drug overdose mortality rate (per 100,000)	33.9	↑*	26.2	17.0
Suicide (rate per 100,000)	14.4	-	13.3	13.4
Access to Clinical Care				
Dentists (ratio)	2390:1	↓*	1656:1	1480:1
Mammography screening (%)	80.0	↑*	73.7	72.7
Mental health providers (ratio)	2049:1	-*	561:1	470:1
Primary care physicians (ratio)	3190:1	↑*	1307:1	1320:1
Uninsured (%)	8.0	-	8.0	11.0
Socio-Economic/Demographic				
Children in poverty (%)	29.3	*	22.1	20.0
Population that is 65 and older (%)	16.5	↑*	14.5	16.0
Population below 18 years of age (%)	23.9	-	23.0	22.3

Source data range: 2014-2017

*=higher than state and national averages

Top Causes of Death
Lung Cancer
COPD

Injury Deaths
Decreasing but > than OH & US

Mental Health
Provider ratio and suicide rate worse than OH & US

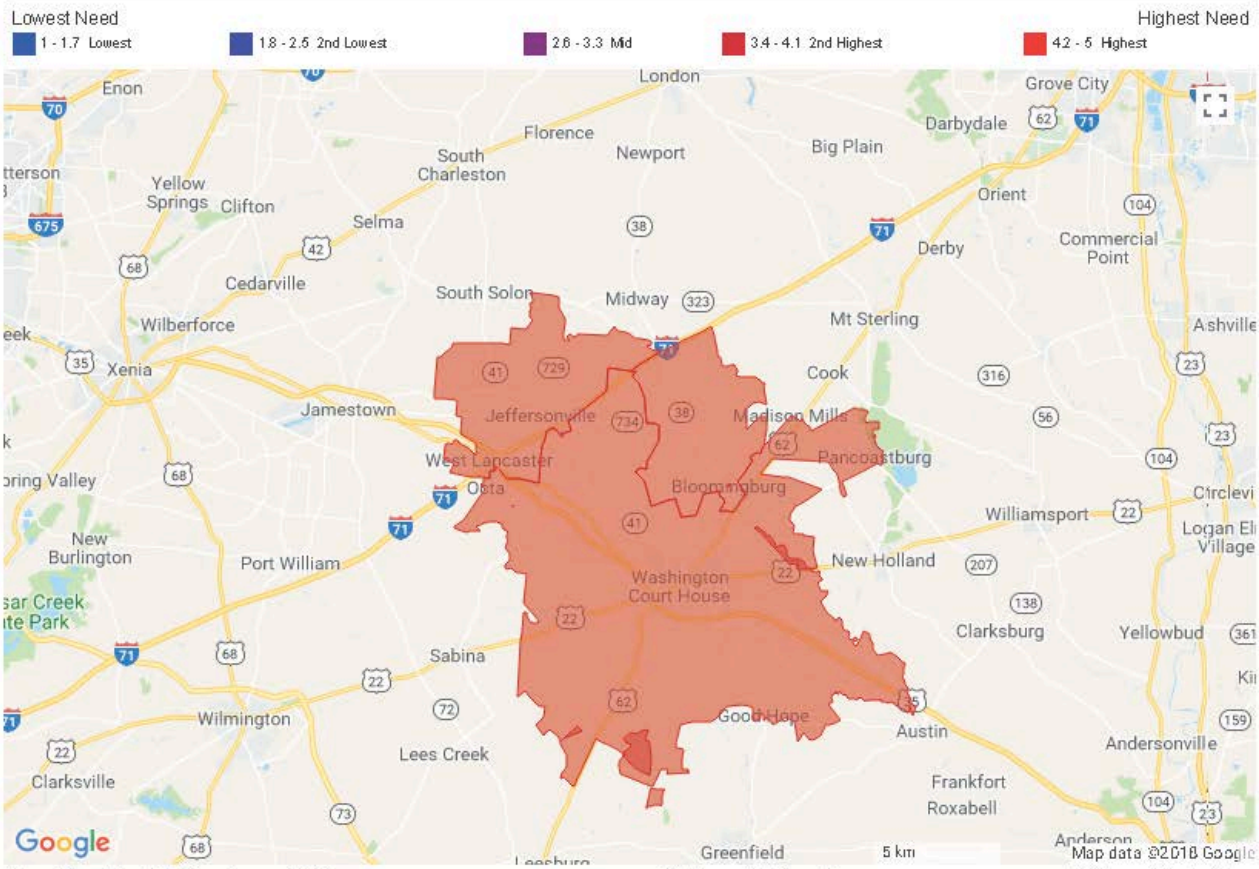
Access to Care
Fewer primary care, dental & mental health providers than OH & US ratios

Children in Poverty
Rate > OH & US rates

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. There are 3 ZIP Codes with higher CNI scores: 43106 (3.8); 43160 (3.6), and 43128 (3.4).

Dignity Health.



Mean(zipcode): 3.6 / Mean(person): 3.6 CNI Score Median: 3.8 CNI Score Mode: None

Zip Code	CNI Score	Population	City	County	State
43106	3.8	1569	Bloomingburg	Fayette	Ohio
43128	3.4	2221	Jeffersonville	Fayette	Ohio
43160	3.6	21787	Washington Court House	Fayette	Ohio

TRUVEN HEALTH ANALYTICS

GREENE COUNTY, OHIO

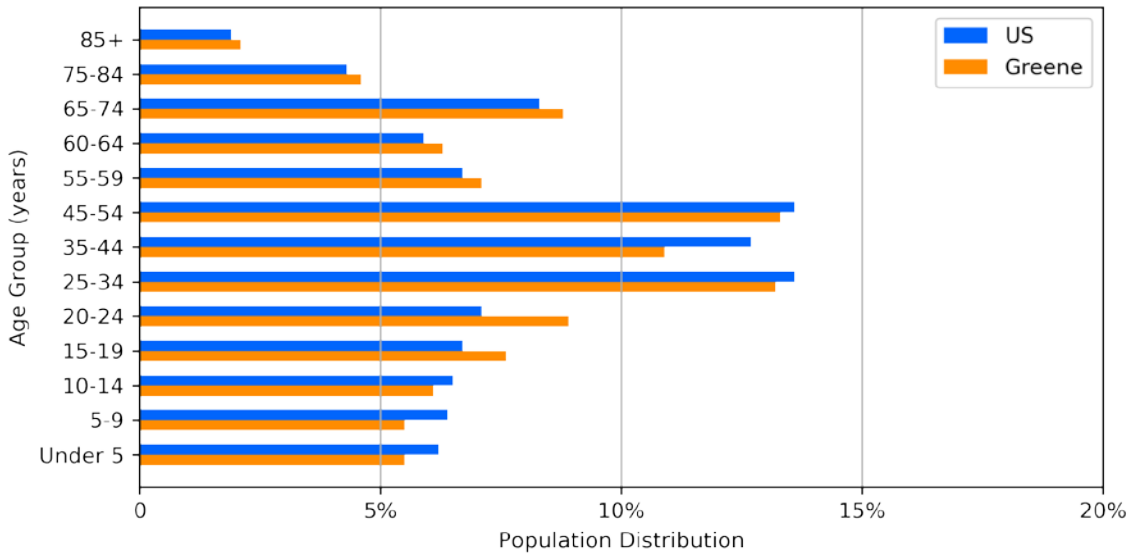
Xenia is the county seat of Greene County. The rate of depression is decreasing, and the number of mental health providers have increased. Despite this, drug poisoning deaths are increasing, more students are reporting marijuana use, and the binge drinking rates are higher than the Ohio and U.S. averages. Two ZIP Codes have increased CNI scores: 45324 and 45385.

> *"There are no sidewalks in our neighborhood and so no place for my kids to ride their bikes or for people to exercise."*
>
> - Greene County resident

Population Chart

The following is a population chart for Greene County from years 2012-2016.

FIGURE 43. GREENE COUNTY POPULATION



Consensus on Priorities

Obesity was an overt and implicit concern. It was a high priority at the meeting and in the consumer surveys. Agencies had Healthy food/Nutrition as their 2nd highest priority, and Greene County Public Health had Chronic disease as one of its top 4 priorities. Obesity is a contributing factor for several chronic diseases, such as heart disease, diabetes, and cancer. Access to healthy good and nutritional

guidance are important to maintaining a health weight. Access to care was of top importance at the meeting and in consumer and agency surveys. Discrimination was mentioned specifically at the meeting and in consumer surveys. Substance abuse was mentioned at the meeting and by agencies.

Top Causes of Death

The top causes of death for 2016 were, in descending order:

- Atherosclerotic heart disease
- Alzheimer's disease
- Lung cancer

Priorities from Community Meeting on May 17, 2018

A total of fifteen people contributed votes to identify a total of eight priorities. Below are the topics receiving 5% of the vote; mental health is included since it has been a major regional issue. An issue not captured in the priorities was child safety. It was a topic of discussion and agreement, especially concerned with child abduction and human trafficking. (Ohio ranks 4th in the nation for most reported cases of human trafficking.)[47]

TABLE 95. GREENE COUNTY: MEETING PRIORITIES

Priority	# Votes	% Votes
Access (Transportation, 4)	7	29.2%
Social Determinants of Health (Environment, 3; Discrimination, 3)	6	25.0%
Obesity	4	16.7%
Health education/Promotion	3	12.5%
Substance abuse	2	8.3%
Mental health	1	4.2%

Survey Responses

Below are the most frequent responses from individual consumers, living in Greene County, who completed a survey between 6/19/18 and 8/3/18. Eight people participated. Respondents all answered the question, "Given the health issues facing the community, which ones would be your top priorities?" They mentioned 10 health and/or health-related issues of particular concern to them. The following table contains the issues that they prioritized.

[47] Naquin, S. (2018). State invests more into ending human trafficking as Ohio ranks 4th in most reported cases. ABC 6. May 23. Accessed 11/10/18 t https://abc6onyourside.com/news/local/state-invests-more-into-ending-human-trafficking-as-ohio-ranks-4th-in-most-reported-cases

TABLE 96. GREENE COUNTY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Obesity	2	20%
Mental health	2	20%
Substance abuse (Opioids, 2)	2	20%
Access to care	1	10%
Communicable disease	1	10%
Discrimination	1	10%
Parenting/Family	1	10%

Six organizations serving Greene County residents, especially vulnerable populations, responded with their priorities. Their priorities are listed below.

TABLE 97. GREENE COUNTY: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Access to care	3	33%
Healthy food/Nutrition	2	22%
Mental health	1	11%
Physical activity	1	11%
Substance abuse	1	11%
Community collaboration	1	11%

Response from Health Department

Greene County Public Health provided its health priorities for the community:

- Maternal child health
- Injury prevention
- Chronic disease
- Substance abuse

Greene County Health Snapshot

Pop.: 164,325

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	21.1	-	22.2	20.2
Cancer mortality, Colon & Rectum (rate per 100,000)	15.4	-	15.5	14.0
Cancer mortality, Lung (rate per 100,000)	38.2	-	48.2	39.4
Cancer mortality, Overall (rate per 100,000)	155.3	-	174.3	157.1
Child mortality (rate per 100,000, 1-17 yrs.)	22.8	-*	20.1	19.9
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 100,000)	224.6	-	316.1	270.9
Diabetes (%)	10.5	-	11.1	10.7
Heart Disease Deaths (rate per 100,000)	162.5	-	188.4	167
Infant Mortality (rate per 1,000 live births)	4.3	-	7.2	5.9
Injury Deaths (rate per 100,000)	52.4	-	61.2	45.3
Low birthweight (%)	7.6	-	8.5	8.2
Preterm Birth (%)	10.3	-	10.3	9.6
Poor physical health days (last 30 days)	3.5	-	4.0	3.9
Poor mental health days (last 30 days)	3.1	-	4.0	3.7
Stroke Deaths (rate per 100,000)	33.1	-	40.6	37.5
Health Behaviors				
Adult Obesity (%)	22.5	-	30.6	29.2
Adult Smoking (%)	15.2	-	22.0	16.5
Alcohol-impaired driving deaths (%)	37.0	*	34.0	30.0
Gonorrhea incidence (%)	96.7	-	176.8	145.8
Motor vehicle crash deaths (rate per 100,000)	8.0	-	10.3	11.5
Physical inactivity (%)	19.4		26.4	25.2
Substance Abuse/Mental Health				
Binge drinking (%)	22.1	*	18.1	16.6
Depression (%)	12.3	-	18.5	17.1
Drug poisoning deaths (rate per 100,000)	23.2	-	26.2	14.6
Fentanyl & related drug OD deaths (rate per 100,000)	8.4	-	9.0	2.6
Heroin poisoning overdose deaths (rate per 100,000)	6.6	-	10.9	3.5
Student marijuana use (%)	18.4	-*	6.2	14.5
Suicide (rate per 100,000)	13.4	*	13.3	13.0
Access to Clinical Care				
Dentists (ratio)	1210:1	-	1656:1	1480:1
Mammography screening (%)	66.7	-	68.4	65.5
Mental health providers (ratio)	489:1	↓	561:1	470:1
Primary care physicians (ratio)	1100:1	-	1307:1	1320:1
Uninsured (%)	4.7	-	7.6	11.8
Socio-Economic/Demographic				
Children in poverty (%)	18.0	-	22.1	21.2
African American (%)	7.0		12.1	12.3
Population that is 65 and older (%)	15.5	*	23.0	22.3
Population below 18 years of age (%)	20.8	*	14.5	16.0

U = Unavailable, unreliable, or suppressed due to small numbers. Source data range: 2014-2017

* = Higher than state and national rates

Top Causes of Death
Heart Disease
Alzheimer's
Lung Cancer

Mental Health
Depression % & ratio of mental health providers better than OH & US

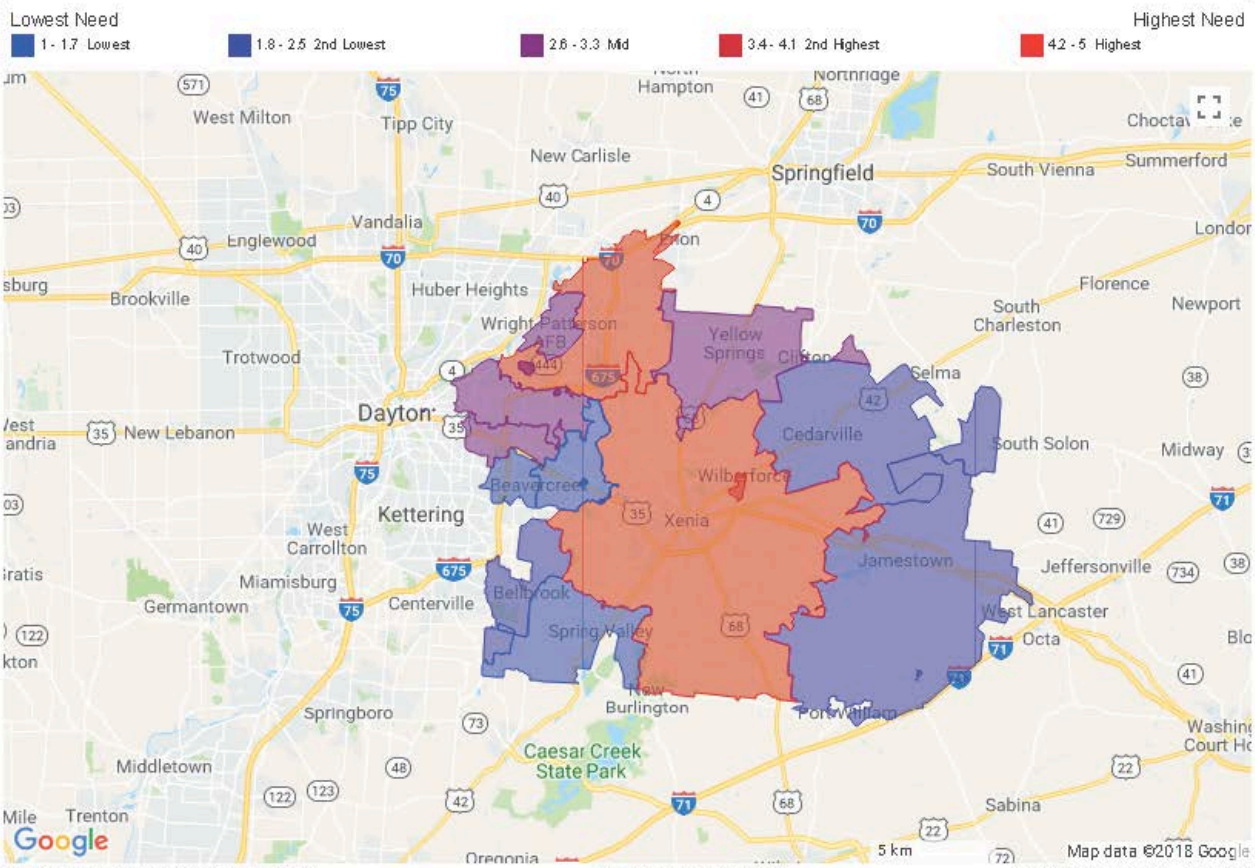
Child Mortality
Rate higher than OH & US

Substance Abuse
Drug poisoning deaths up. 44% increase in students using marijuana. Binge drinking higher than OH & US rates.

Providers
Ratios better than OH ratios

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. Two ZIP Codes in Greene County have higher scores: 45324 (3.8) and 45385 (3.6).



Mean(zipcode): 2.3 / Mean(person): 3 | CNI Score Median: 2.2 | CNI Score Mode: 1.4, 2.2, 2.6

Zip Code	CNI Score	Population	City	County	State
45301	1.4	136	Alpha	Greene	Ohio
45305	1.8	11082	Bellbrook	Greene	Ohio
45314	2.2	5574	Cedarville	Greene	Ohio
45324	3.8	41504	Fairborn	Greene	Ohio
45335	2.2	7216	Jamestown	Greene	Ohio
45370	1.2	2355	Spring Valley	Greene	Ohio
45385	3.6	39615	Xenia	Greene	Ohio
45387	2.8	5484	Yellow Springs	Greene	Ohio
45430	1.6	7401	Dayton	Greene	Ohio
45431	3.2	28767	Dayton	Greene	Ohio
45432	2.6	14332	Dayton	Greene	Ohio
45433	2.6	1202	Dayton	Greene	Ohio
45434	1.4	12576	Dayton	Greene	Ohio

HAMILTON COUNTY, OHIO

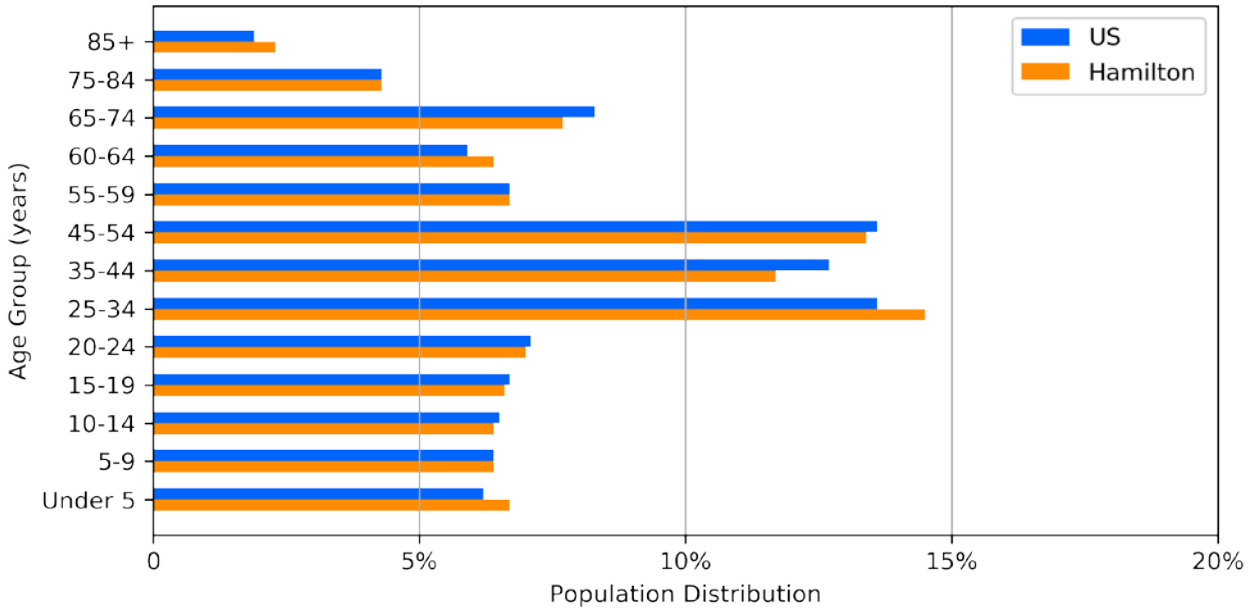
Hamilton County is the most populated County in the region and is home to the largest city, Cincinnati. The County continues to struggle with higher than average rates of poverty, infant mortality, homicide, and sexually transmitted diseases. Community collaborations are addressing infant mortality and the heroin epidemic. There is an above average number of children living in the County and a high number of children living in poverty. Hamilton County is one of the 8 counties with an increase in unacceptable ozone levels, from 5 days to 12 days. Of the County's 51 ZIP Codes, 27 have elevated CNI Scores, indicating the likelihood of health disparities. In addition to the community meeting at the Urban League, the Cincinnati Health Department hosted 3 additional community meetings, and the CHNA team conducted an additional meeting around LGBTQ+ issues (summarized in the Urban Health chapter). Hamilton County Public Health contributed 666 resident surveys as part of its WeTHRIVE! initiative. These residents lived outside the City of Cincinnati but within Hamilton County.

> *"You can't get fresh produce, but you can get all the alcohol you want."*
>
> \- Hamilton County consumer

Population Chart

The following is a population chart for Hamilton County from years 2012-2016.

FIGURE 44. HAMILTON COUNTY POPULATION



Consensus on Priorities

For Hamilton County, the consultants had input from 4 health departments and WeTHRIVE! survey respondents as well as the meetings, consumer surveys, and agency surveys. Substance abuse, specifically addiction, was on each group's list of priorities, and it was in top place for each source except the meeting attendees. Mental health was a shared priority at the meeting, on consumer surveys, and with health departments. Access to care was the next highest shared priority for every group, except the WeTHRIVE! respondents. Transportation was a major topic at the meeting. Chronic disease was a top-ranked priority for health departments and on consumer and agency surveys. Social Determinants of Health were discussed broadly at the meeting and echoed on the agency surveys. Some sub-categories of SDHs attracted so many votes at the meeting, that they are listed separately, such as Poverty and Discrimination. The health of infants concerned both agencies and health departments. Access, availability, and affordability of healthy food and nutrition information were mentioned on consumer surveys and at the meeting. The discussion included the topics of food insecurity and food deserts.

Top Causes of Death

The top causes of death for 2016 were, in descending order:

- Lung cancer
- Atherosclerotic heart disease
- Dementia, unspecified
- Accidental poisoning by and exposure to narcotics and hallucinogens, not elsewhere classified
- Alzheimer's disease

Priorities from Community Meeting on June 12, 2018

Twenty-seven people contributed votes to identify a total of 44 priorities. Below are the topics receiving the most votes.

TABLE 98. HAMILTON COUNTY: MEETING PRIORITIES

Priority	# Votes	% Votes
Social Determinants of Health (Education/Literacy = 9, Housing = 8, Environment = 6, Employment = 5), not including Poverty or Discrimination	37	18.4%
Mental Health (ACEs = 6, Suicide = 2)	26	12.9%
Access (Transportation = 15)	25	12.4%
Healthy Food/Nutrition	16	8.0%
Discrimination (Racism=6)	14	7.0%
Health education/Promotion	12	6.0%
Poverty	11	5.5%
Substance abuse	8	4.0%

Survey Responses

Below are the most frequent responses from individual consumers, living in Hamilton County, who completed a survey 5/14/18 and 8/3/18. 434 people participated. Respondents all answered the question, "Given the health issues facing the community, which ones would be your top priorities?" They mentioned 68 health and/or health-related issues of particular concern to them. The following table contains the issues that received more than 5% of all mentions.

TABLE 99. HAMILTON COUNTY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	72	19.94%
Chronic disease	69	19.11%
Access to care	44	12.19%
Mental health	32	8.86%
Healthy behaviors	22	6.09%
Healthy food/Nutrition	20	5.54%

Hamilton County Public Health shared resident responses from its WeTHRIVE! survey. There were 666 responses of which 558 expressed a health or health-related concern. (Not included were concerns about code enforcement, general civic matters, private property complaints, general public services, or staffing.)

TABLE 100. HAMILTON COUNTY: WETHRIVE! RESULTS

Priority	# Mentions	% Mentions
Drugs	202	16%
Crime	147	12%
Recreation activities	108	9%
Care for children	102	8%
Public safety	91	7%
Traffic & sidewalks (with focus on safety)	74	6%

Thirty-four organizations serving County residents, especially vulnerable populations, responded with their priorities. The priorities that received more than 5% of mentions are listed below.

TABLE 101. HAMILTON COUNTY: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	17	21%
Chronic disease	14	17%
Social Determinants of Health	10	12%
Infant mortality	9	11%
Access to care	8	10%

Responses from Health Departments

There were 4 categories where these 4 health departments agreed. The largest area of agreement was Addiction. The next 4 were prioritized by 2 health departments: Mental health; Maternal, infant & child health and/or Infant mortality; Chronic disease and/or Obesity; and Access to care (healthcare in general for Springdale and oral health for Hamilton County.)

TABLE 102. HAMILTON COUNTY: HEALTH DEPARTMENT PRIORITIES

	Addiction	Mental health	Mat., infant & child health/Infant mortality	Chronic disease/ Obesity	Access to care
Hamilton County	1	1	1	1	1
City of Cincinnati	1	1	1	1	
City of Norwood	1				
City of Springdale	1				1

> *"Systems not speaking to each other end up sending people from here to there to here to there."*
>
> - Hamilton County consumer

Note:

There is a separate snapshot for the City of Cincinnati in the Urban Health chapter.

Hamilton County Health Snapshot

Pop.: 805,965

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	24.4	*	22.2	20.2
Cancer mortality, Lung (rate per 100,000)	50.6	-*	48.2	39.4
Cancer mortality, Overall (rate per 100,000)	179.1	-*	174.3	157.1
Cancer mortality, Colon & Rectum (rate per 100,000)	17.3	-*	15.5	14.0
Child mortality (rate per 100,000, 1-17 yrs.)	23.7	*	20.1	19.9
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 100,000)	271.8	-	316.1	270.9
Diabetes (%)	12.1	*	11.1	10.7
Heart Disease Deaths (rate per 100,000)	174.1	-	188.4	167
Infant Mortality (rate per 1,000 live births)	9.0	*	7.2	5.9
Injury Deaths (rate per 100,000)	63.8	-*	61.2	45.3
Low birthweight (%)	9.4	*	8.5	8.2
Preterm Birth (%)	10.7	*	10.3	9.6
Stroke Deaths (rate per 100,000)	49.3	*	40.6	37.5
Health Behaviors				
Adult Obesity (%)	29.1	-	30.6	29.2
Adult Smoking (%)	22.9	*	22.0	16.5
Adults with high blood pressure (% Yes)	34.3	*	33.9	32.0
Alcohol-impaired driving deaths (%)	38.0	-*	34.0	30.0
Chlamydia incidence (rate per 100,000)	858.1	-*	521.6	497.3
Gonorrhea incidence (%)	355.5	-*	176.8	145.8
HIV prevalence (rate per 100,000)	369.1	-*	199.5	305.2
Homicide (rate per 100,000)	9.8	*	5.9	5.5
Motor vehicle crash deaths (rate per 100,000)	7.1	-	10.3	11.5
Physical inactivity (%)	24.5	-	26.4	25.2
Substance Abuse/Mental Health				
Depression (%)	18.5	-	18.5	17.1
Drug poisoning deaths (rate per 100,000)	35.5	-*	26.2	14.6
Fentanyl & related drug OD deaths (rate per 100,000)	15.0	-*	9.0	2.6
Heroin poisoning overdose deaths (rate per 100,000)	21.4	-*	10.9	3.5
Prescription opioid overdose deaths (rate per 100,000)	7.4	*	5.9	4.0
Suicide (rate per 100,000)	12.6	-	13.3	13.0
Access to Clinical Care				
Dentists (ratio)	1380:1	-	1656:1	1480:1
Mammography screening (%)	67.5	-	68.4	65.5
Mental health providers (ratio)	415:1	↓	561:1	470:1
Primary care physicians (ratio)	920:1	↓	1307:1	1320:1
Uninsured (%)	7.9	-	7.6	11.8
Socio-Economic/Demographic				
Children in poverty (%)	26.1	*	22.1	21.2
Hispanic (%)	2.9		3.5	17.3
African American (%)	25.7		12.1	12.3
Population that is 65 and older (%)	14.2		23.0	22.3
Population below 18 years of age (%)	23.3	*	14.5	16.0

* = Higher than state and national rates. Source data range: 2014-2017. U = Unavailable or unreliable data

Top Causes of Death
Lung Cancer
Heart Disease
Dementia

Injury Deaths
Rate is rising and higher than OH and US rates

Drug ODs
Deaths rising and higher than OH and US for drug poisoning, heroin & Fentanyl

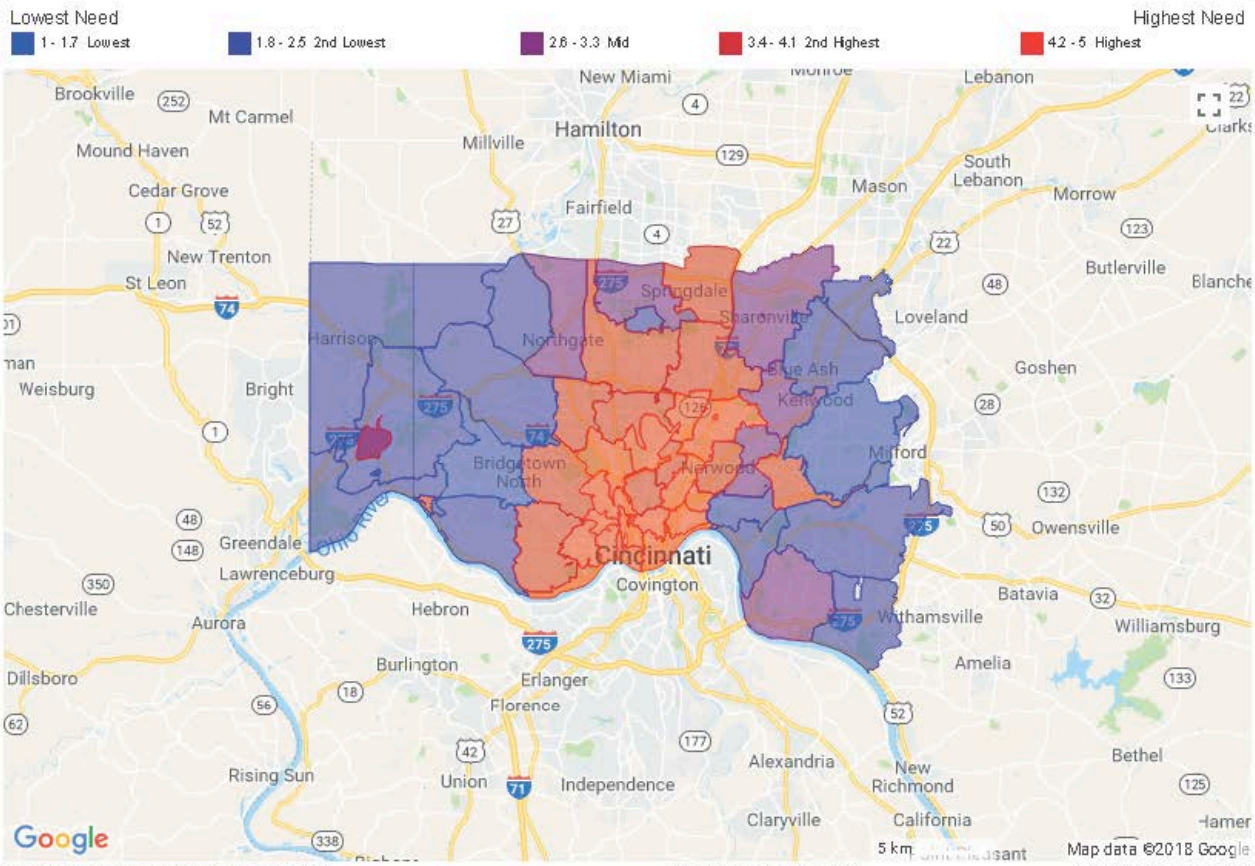
STIs
Rising rates of chlamydia, gonorrhea & HIV and > OH & US

Children
Large population under 18 and high percentage living in poverty

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. More than half, or 27, of Hamilton County's 51 ZIP Codes have high scores.

Dignity Health.



Mean(zipcode): 3.3 / Mean(person): 3.2 CNI Score Median: 3.6 CNI Score Mode: 3.6

Zip Code	CNI Score	Population	City	County	State
45001	3.6	777	Addyston	Hamilton	Ohio
45002	2	14448	Cleves	Hamilton	Ohio
45030	1.8	18831	Harrison	Hamilton	Ohio
45033	3.6	430	Hooven	Hamilton	Ohio
45052	2	4229	North Bend	Hamilton	Ohio
45111	2.2	380	Camp Dennison	Hamilton	Ohio
45174	1	2235	Terrace Park	Hamilton	Ohio
45202	4.2	17062	Cincinnati	Hamilton	Ohio
45203	4.8	2381	Cincinnati	Hamilton	Ohio
45204	4.6	6930	Cincinnati	Hamilton	Ohio
45205	4.8	18858	Cincinnati	Hamilton	Ohio
45206	4.6	10679	Cincinnati	Hamilton	Ohio
45207	4.8	7939	Cincinnati	Hamilton	Ohio
45208	2.4	17880	Cincinnati	Hamilton	Ohio
45209	3	9501	Cincinnati	Hamilton	Ohio
45211	4	36531	Cincinnati	Hamilton	Ohio
45212	3.8	21851	Cincinnati	Hamilton	Ohio
45213	3.2	11817	Cincinnati	Hamilton	Ohio
45214	5	8840	Cincinnati	Hamilton	Ohio
45215	3.6	29399	Cincinnati	Hamilton	Ohio
45216	4.4	9831	Cincinnati	Hamilton	Ohio

45217	4	6557	Cincinnati	Hamilton	Ohio
45218	2.4	3798	Cincinnati	Hamilton	Ohio
45219	4.2	16953	Cincinnati	Hamilton	Ohio
45220	3.6	14964	Cincinnati	Hamilton	Ohio
45223	4.6	12272	Cincinnati	Hamilton	Ohio
45224	4	19077	Cincinnati	Hamilton	Ohio
45225	5	9009	Cincinnati	Hamilton	Ohio
45226	2.4	5992	Cincinnati	Hamilton	Ohio
45227	3.6	18323	Cincinnati	Hamilton	Ohio
45229	4.8	13148	Cincinnati	Hamilton	Ohio
45230	2.6	27983	Cincinnati	Hamilton	Ohio
45231	3.4	42342	Cincinnati	Hamilton	Ohio
45232	4.8	7224	Cincinnati	Hamilton	Ohio
45233	1.8	16148	Cincinnati	Hamilton	Ohio
45236	2.8	24701	Cincinnati	Hamilton	Ohio
45237	4.2	20257	Cincinnati	Hamilton	Ohio
45238	3.6	45806	Cincinnati	Hamilton	Ohio
45239	3.8	27846	Cincinnati	Hamilton	Ohio
45240	3.2	27005	Cincinnati	Hamilton	Ohio
45241	2.6	23303	Cincinnati	Hamilton	Ohio
45242	2	21359	Cincinnati	Hamilton	Ohio
45243	1.4	14178	Cincinnati	Hamilton	Ohio
45244	1.8	28668	Cincinnati	Hamilton	Ohio
45246	3.6	15515	Cincinnati	Hamilton	Ohio
45247	2	22981	Cincinnati	Hamilton	Ohio
45248	1.4	25433	Cincinnati	Hamilton	Ohio
45249	2.4	13576	Cincinnati	Hamilton	Ohio
45251	2.8	21862	Cincinnati	Hamilton	Ohio
45252	1.8	4656	Cincinnati	Hamilton	Ohio
45255	2.2	21660	Cincinnati	Hamilton	Ohio

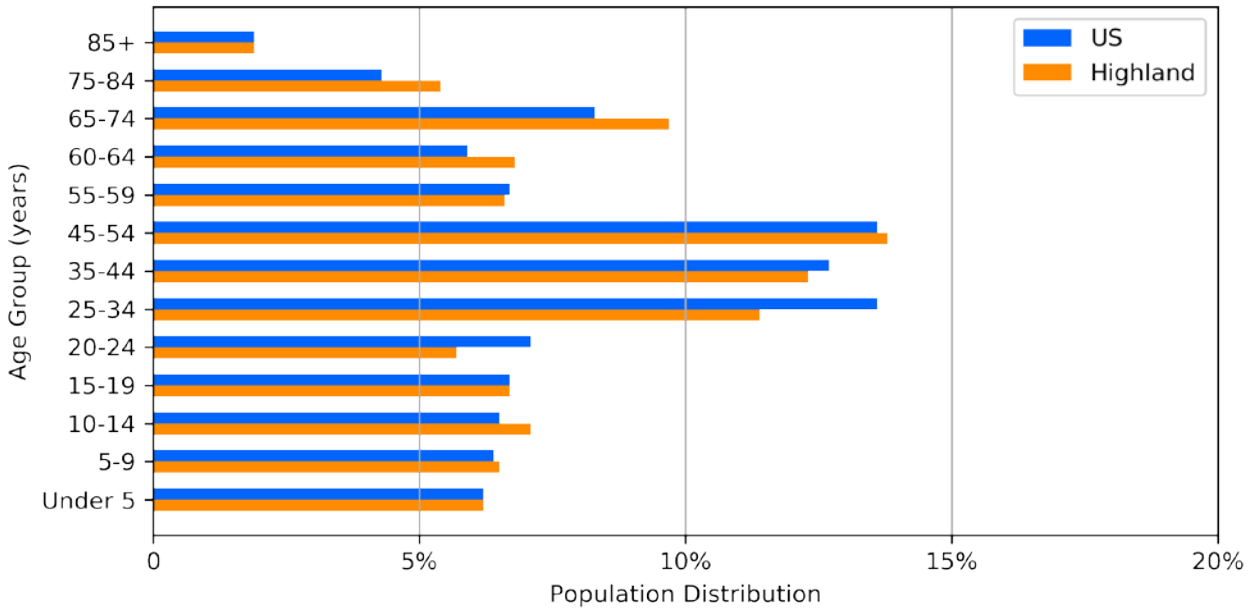
HIGHLAND COUNTY, OHIO

Highland County is named for its hilly terrain and is located in Appalachia. The county seat is Hillsboro. The overall heart disease rate is increasing steadily and is higher than the Ohio and U.S. averages. The number of children living in poverty is 50% higher than the Ohio and U.S. rates. The rates of depression and suicide are above the Ohio and U.S. rates, and there are few mental health providers. Two ZIP Codes have elevated CNI scores, indicating the likelihood of health disparities: 45123 and 45133.

Population Chart

The following is a population chart for Highland County from years 2012-2016.

FIGURE 45. HIGHLAND COUNTY POPULATION



Consensus on Priorities

Substance abuse was identified as a top health priority among all groups for Highland County. The health department prioritized Obesity, which can be a contributing factor to Chronic diseases – prioritized in agency and consumer surveys. All other shared priorities only had agreement of two primary sources. Meeting attendees and consumer surveys agreed that mental health and child health/care for children were important. Consumer surveys and the health department agreed on emphasizing Healthy behaviors, especially use of tobacco. Access to care was the top priority at the meeting and the third highest priority for agencies.

Top Causes of Death

The top causes of death for 2016 were, in descending order:

- Acute myocardial infarction (heart attack)
- Chronic Obstructive Pulmonary Disease
- Lung cancer

Priorities from Community Meeting on May 1, 2018

Two attendees came to the Highland County YMCA in Hillsboro OH to offer their insights into the health needs of the County. Here are their priorities, below.

TABLE 103. HIGHLAND COUNTY: MEETING PRIORITIES

Priority	# Votes	% Votes
Access to care	4	40%
Mental health	2	20%
Substance abuse	2	20%
Care for children	2	20%

Survey Responses

Below are the most frequent responses from individual consumers, living in Highland County, who completed a survey in June 2018. Eight people participated. Respondents all answered the question, “Given the health issues facing the community, which ones would be your top priorities?” They mentioned eleven health and/or health-related issues of particular concern to them. The following table contains the issues that received more than 5% of all mentions.

TABLE 104. HIGHLAND COUNTY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	3	27.27%
Mental health	3	27.27%
Healthy behaviors	2	18.18%
Healthy food/Nutrition	1	9.09%
Chronic disease	1	9.09%
Child health	1	9.09%

Ten organizations serving County residents, especially vulnerable populations, responded with their priorities. The priorities that received more than 5% of mentions are listed below.

TABLE 105. HIGHLAND COUNTY: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Chronic disease	10	48%
Substance abuse	5	24%
Access to care	2	10%
Social Determinants of Health	2	10%
Community collaboration	1	5%
Wellness	1	5%

Response from Health Department

Highland County Public Health provided its health priorities for the community:

- Opiates
- Obesity
- Tobacco

> *"Providing opportunities for ALL children to exercise, play sports, etc."*
>
> - Highland County agency

Highland County Health Snapshot

Pop.: 43,029

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	19.9	↓	22.4	20.2
Cancer mortality, Lung (rate per 100,000)	52.1	↓*	49.6	39.4
Cancer mortality, Overall (rate per 100,000)	171.7	↓	174.3	157.1
Childhood asthma (%)	12.3	*	11.0	8.4
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 100,000)	436.8	*	316.1	270.9
Diabetes (%)	12.0	*	11.1	10.7
Heart Disease Deaths (rate per 100,000)	251.5	↑*	188.4	167.0
Infant Mortality (rate per 1,000 live births)	10.0	↑*	7.2	5.9
Injury Deaths (rate per 100,000)	53.0	↓	61.2	45.3
Low birthweight (%)	9.0	*	8.5	8.2
Preterm Birth (%)	9.8	-	10.3	9.6
Poor physical health days (last 30 days)	4.3	↓*	4.0	3.9
Poor mental health days (last 30 days)	4.2	*	4.0	3.7
Stroke Deaths (rate per 100,000)	49.6	↑*	40.6	37.5
Health Behaviors				
Adult Obesity (%)	31.0	*	30.6	29.2
Adult Smoking (%)	22.0	↓	22.0	16.5
Alcohol-impaired driving deaths (%)	40.0	↓*	34.0	30.0
Chlamydia incidence (rate per 100,000)	241.7	-	521.6	497.3
Excessive drinking (%)	16.0	-	18.1	16.6
HIV prevalence (rate per 100,000)	50.0	-	199.5	305.2
Motor vehicle crash deaths (rate per 100,000)	16.0	*	10.3	11.5
Physical inactivity (%)	26.0	↓	26.4	25.2
Substance Abuse/Mental Health				
Depression (%)	20.0	*	18.5	17.1
Drug overdose mortality rate (per 100,000)	21.5	↑	26.2	17.0
Suicide (rate per 100,000)	19.6	*	13.3	13.4
Access to Care				
Dentists (ratio)	2150:1	-*	1656:1	1480:1
Mammography screening (%)	75.3	↑*	73.7	72.7
Mental health providers (ratio)	2040:1	↓*	561:1	470:1
Primary care physicians (ratio)	3070:1	↑*	1307:1	1320:1
Uninsured (%)	7.7	↓	8.0	11.0
Socio-Economic/Demographic				
Children in poverty (%)	30.0	↓*	22.1	21.2
African American (%)	1.4	-	12.1	12.4
Population that is 65 and older (%)	17.7	*	14.5	16.0
Population below 18 years of age (%)	24.0	*	23.0	22.3

Source data range: 2014-2017

*=higher than state and national rate or %

Top Causes of Death
Heart Disease
Cancer

Heart Disease Deaths
Increasing steadily; > than OH & US

STD Rates
Chlamydia and HIV rates much lower than OH & US

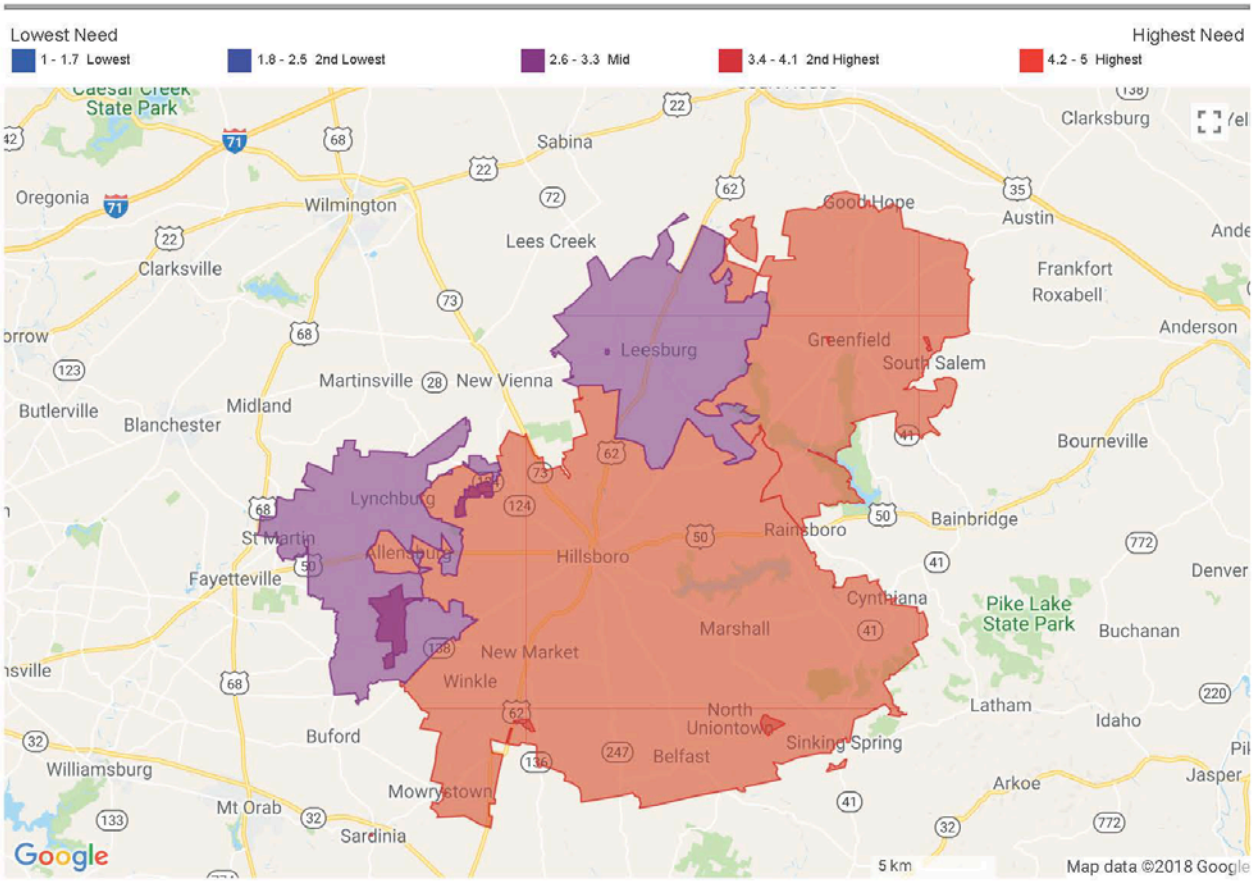
Providers
Primary care and mental health provider ratios much higher than OH & US

Children in Poverty
Rate decreasing but 50% higher than OH & US rate

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. Zip Code 45123 has a score of 3.6 and Zip Code 45133 has a score of 3.4.

Dignity Health.



Mean(zipcode): 3.1 / Mean(person): 3.3 CNI Score Median: 3.1 CNI Score Mode: None

Zip Code	CNI Score	Population	City	County	State
45123	3.6	8775	Greenfield	Highland	Ohio
45133	3.4	23663	Hillsboro	Highland	Ohio
45135	2.8	5012	Leesburg	Highland	Ohio
45142	2.6	4529	Lynchburg	Highland	Ohio

TRUVEN HEALTH ANALYTICS

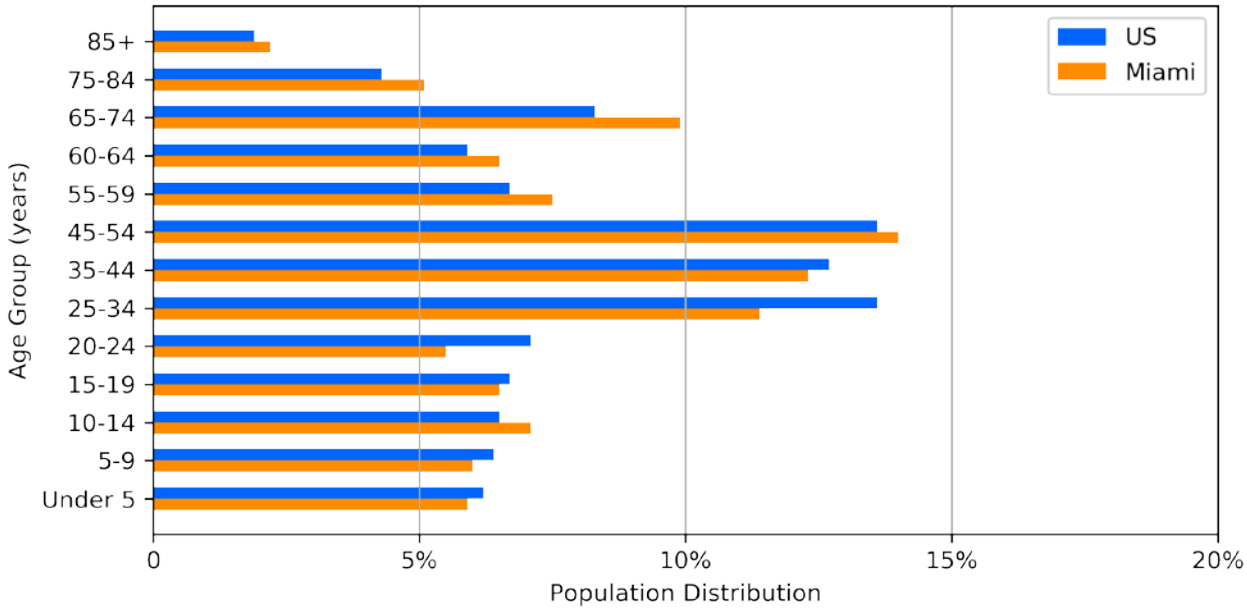
MIAMI COUNTY, OHIO

Miami County is located on the western side of Ohio. The county seat is Troy. Lung, colon and pancreas cancer deaths are rising and higher than the Ohio and U.S. rates. Although the adult smoking and obesity rates are above average, they are declining. The rate of Naloxone administration has increased by 544% in the past three years and is double the Ohio average. Miami County was one of the 8 counties where there was an increase in the number of days with an unacceptable ozone level. It is also one of the few Ohio counties without a 2-1-1 information and referral service. The ZIP Code of 45356 in Piqua has a high CNI score.

Population Chart

The following is a population chart for Miami County from years 2012-2016.

FIGURE 46. MIAMI COUNTY POPULATION



Consensus on Priorities

There is limited consensus on the priorities for Miami County, as the primary sources had a range of responses. The public health, agency, and consumer surveys identified mental health and substance abuse, specifically addiction, as top priorities. Chronic disease was identified on the health department and consumer surveys. Parenting/Family issues were identified as a priority area at the community meeting as well as from the consumer survey. There was considerable discussion at the meeting on the need to educate and support families in order to help their children.

Top Causes of Death

The top causes of death for 2016 were, in descending order:

- Lung cancer
- Dementia, unspecified
- Atherosclerotic heart disease
- Chronic Obstructive Pulmonary Disease

Priorities from Community Meeting on May 10, 2018

Six people identified 2 top priorities.

TABLE 106. MIAMI COUNTY: MEETING PRIORITIES

Priority	# Votes	% Votes
Parenting/Family	7	77.8%
Healthy food/Nutrition	2	22.2%

> *"Young people have total acceptance of marijuana as safer than alcohol."*
>
> - Miami County consumer

Survey Responses

Below are the most frequent responses from individual consumers, living in Miami County, who completed a survey between 6/10/18 and 8/3/18. Eleven people participated. Respondents all answered the question, "Given the health issues facing the community, which ones would be your top priorities?" They mentioned 12 health and/or health-related issues of particular concern to them. The following table contains the issues that received more than 2 mentions.

TABLE 107. MIAMI COUNTY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Chronic disease	3	23.08%
Substance abuse	3	23.08%
Parenting/Family	2	15.38%

Seven organizations serving County residents, especially vulnerable populations, responded with their priorities. The priorities that received more than 5% of mentions are listed below.

TABLE 108. MIAMI COUNTY: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	4	33%
Access to care	3	25%
Mental health	2	17%

Response from Health Department

Miami County Public Health provided its health priorities for the community:

- Chronic disease
- Mental health and addiction
- Maternal and family health

> *" There are even higher deductibles and co-pays for substance abuse and mental health services. "*
>
> - Miami County consumer

Miami County Health Snapshot

Pop.: 103,864

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	20.0	↓	22.2	20.2
Cancer mortality, Lung (rate per 100,000)	51.4	↑*	48.2	39.4
Cancer mortality, Overall (rate per 100,000)	175.8	↑*	174.3	157.1
Child mortality (rate per 100,000, 1-17 yrs.)	23.3	*	20.1	19.9
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 1000,000)	279.1	↑	316.1	270.9
Diabetes (%)	13.1	↑*	11.1	10.7
Heart Disease Deaths (rate per 100,000)	205.6	↑*	188.4	167
Infant Mortality (rate per 1,000 live births)	3.6	↑	7.2	5.9
Injury Deaths (rate per 100,000)	60.4	↑	61.2	45.3
Low birthweight (%)	5.8	↓	8.5	8.2
Preterm Birth (%)	8.3	↓	10.3	9.6
Poor physical health days (last 30 days)	2.8	-	4	3.9
Poor mental health days (last 30 days)	3.5	↓	4	3.7
Stroke Deaths (rate per 100,000)	43.4	↑*	40.6	37.5
Health Behaviors				
Adult Obesity (%)	31.3	↓*	30.6	29.2
Adult Smoking (%)	23.3	↓*	22.0	16.5
Alcohol-impaired driving deaths (%)	27.0	↑	34.0	30.0
HIV prevalence (rate per 100,000)	61.1	↓	199.5	305.2
Motor vehicle crash deaths (rate per 100,000)	12.3	↑*	10.3	11.5
Physical inactivity (%)	23.7	-	26.4	25.2
Substance Abuse/Mental Health				
Depression (%)	8.2	↓	18.5	17.1
Heroin poisoning overdose deaths (rate per 100,000)	5.5	↑	10.9	3.5
Naloxone administration (rate per 100,000)	72.9	↑*	38.4	U
Suicide (rate per 100,000)	12.9	↓	13.3	13
Access to Clinical Care				
Dentists (ratio)	2090:1	↓*	1656:1	1480:1
Mammography screening (%)	74.3	↑*	68.4	65.5
Mental health providers (ratio)	1074:1	↓*	561:1	470:1
Primary care physicians (ratio)	2170:1	↑*	1307:1	1320:1
Uninsured (%)	5.8	↓	7.6	11.8
Socio-Economic/Demographic				
Children in poverty (%)	15.8	↓	22.1	21.2
Population that is 65 and older (%)	17.2	-	23.0	22.3
Population below 18 years of age (%)	23.2	*	14.5	16

U = Unavailable, unreliable, or suppressed due to small numbers. Source data range: 2014-2017

* = Higher than state and national rates

Top Causes of Death
Lung Cancer
Dementia
Heart Disease

Poor/Fair Health
Responses increased 84%

Cancer Deaths
Lung, Colon & Pancreas rising & > OH or US rates

Naloxone
544% increase & > OH rate

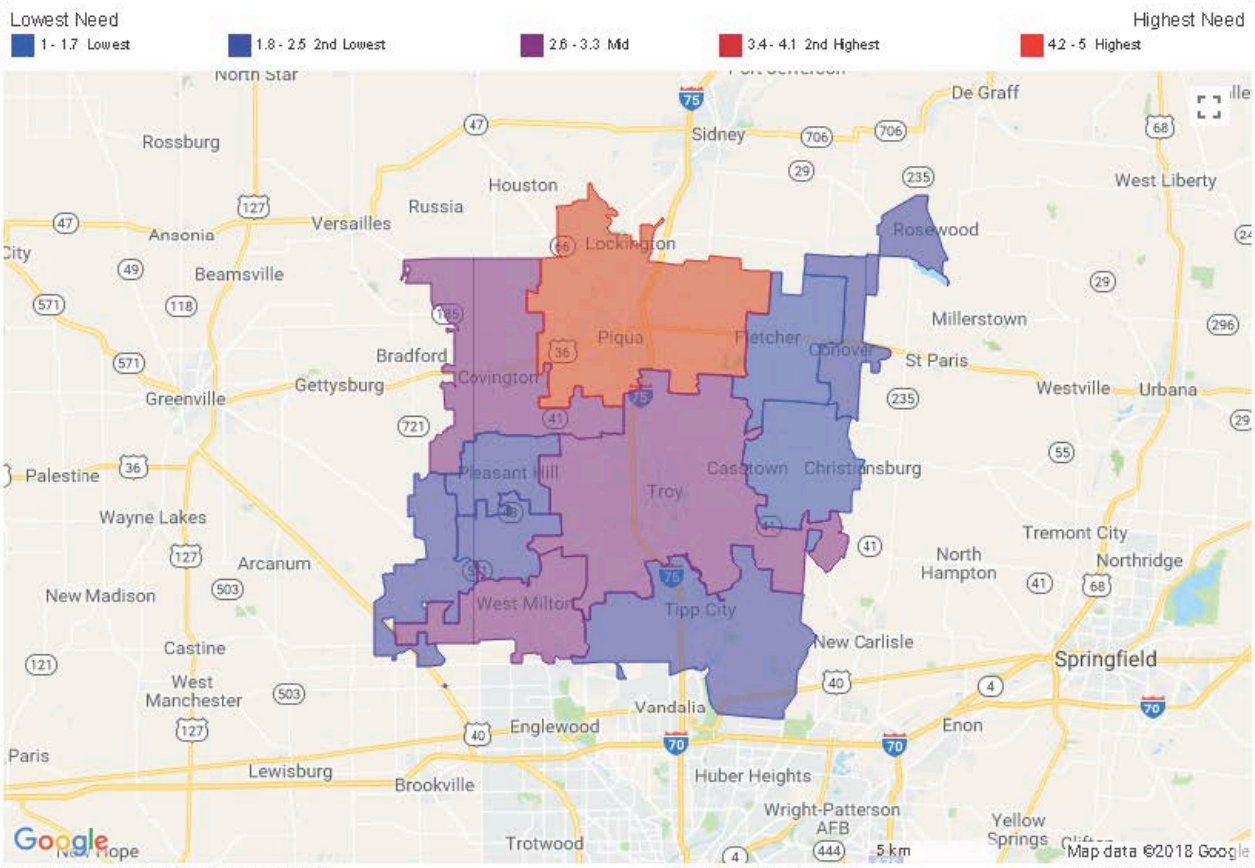
Child Mortality
Higher than OH & US rates

Injury Deaths
20% increase

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. One of the County's ZIP codes has a 3.4 score.

Dignity Health.



Mean(zipcode): 2.3 / Mean(person): 2.8 CNI Score Median: 2.4 CNI Score Mode: 2.2

Zip Code	CNI Score	Population	City	County	State
45312	1	1711	Casstown	Miami	Ohio
45317	2	1141	Conover	Miami	Ohio
45318	2.8	5401	Covington	Miami	Ohio
45326	1.4	1081	Fletcher	Miami	Ohio
45337	2.4	2043	Laura	Miami	Ohio
45339	2.2	1299	Ludlow Falls	Miami	Ohio
45356	3.4	25331	Piqua	Miami	Ohio
45359	2.2	1791	Pleasant Hill	Miami	Ohio
45371	2.2	19297	Tipp City	Miami	Ohio
45373	3	36579	Troy	Miami	Ohio
45383	2.8	6761	West Milton	Miami	Ohio

TRUVEN HEALTH ANALYTICS

MONTGOMERY COUNTY, OHIO

Montgomery County is the fifth most populous County in Ohio. Chronic lower respiratory disease and injury deaths are rising, and the rates are higher than the Ohio and U.S. rates. Deaths from drug overdoses are also on the increase. High CNI scores are recorded for 12 of the 30 ZIP Codes in the County. Montgomery County is one of the 8 counties with an increase of days with unacceptable ozone levels.

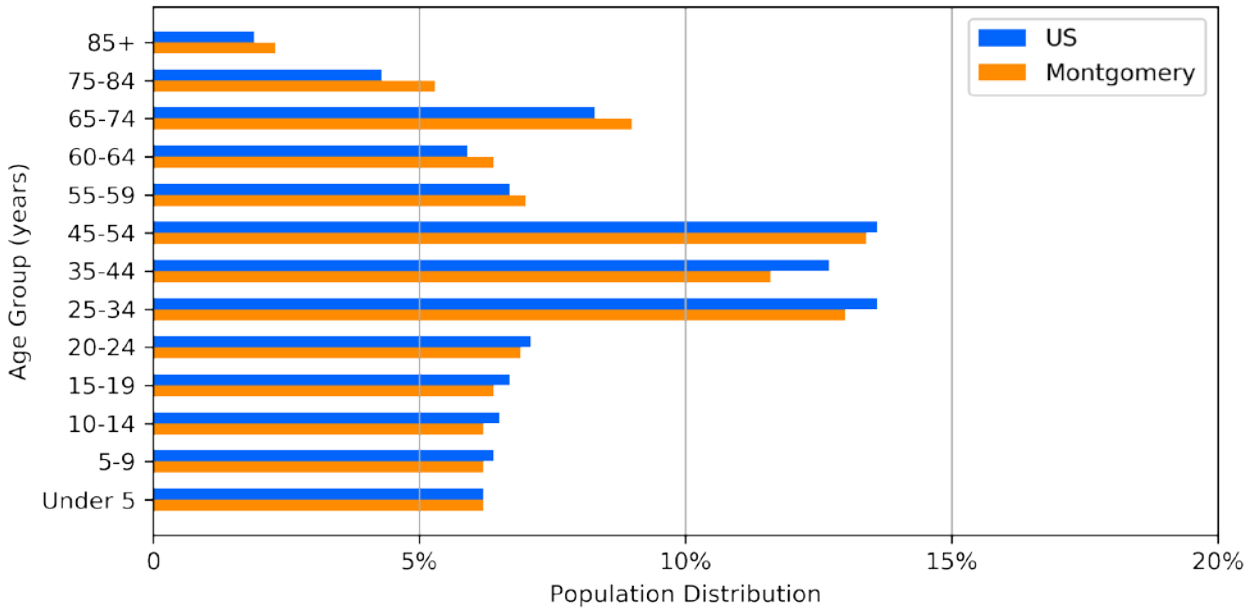
Two meetings were held, one at BarryStaff Community Room and another in West Dayton to make sure there were enough opportunities for public input. The comments reflected the announcement earlier in 2018 that one of Dayton's hospitals was closing within the year. The Public Health Department - Dayton & Montgomery County hosted additional community meetings in order to hear from gay and transgender residents, African-American adults and youth, and Latino residents. (The Latino and LGBTQ focus group results are in the Urban Health chapter.)

> *"People don't know how to be parents."*
>
> - Montgomery County resident

Population Chart

The following is a population chart for Montgomery County from years 2012-2016.

FIGURE 47. MONTGOMERY COUNTY POPULATION



Consensus on Priorities

Mental health was a top priority across the primary data sources. Three groups identified Healthy Food issues, especially food deserts: at meetings, the African-American focus groups, and on consumer surveys. Access to care was important at the meetings and on consumer and agency surveys. Other Substance abuse was one of the top two health issues from meetings and in consumer surveys. Infant mortality/birth outcomes was a priority for Public Health and the African-American adults. issues on which two sources agreed were: Chronic disease; Health education; and Social Determinants of Health. Discrimination was the top priority from the community meetings, with enough votes to become a separate category.

Top Causes of Death

The top causes of death for 2016 were, in descending order:

- Lung cancer
- Accidental poisoning by and exposure to narcotics and hallucinogens
- Alzheimer's disease, unspecified

Priorities from Community Meeting on June 5, 2018

Public Health - Dayton & Montgomery County provided dinner from Panera and recruited participants, which resulted in a packed room. There were 14 individuals and 43 representatives from organizations (with 2 people who represented themselves and an agency). Nine of the attendees were with Sinclair College. Fifty-five people contributed votes to identify a total of 24 priorities. Below are the topics receiving at least 5% of votes.

TABLE 109. MONTGOMERY COUNTY MEETING PRIORITIES

Priority	# Votes	% Votes
Discrimination	39	17.0%
Mental health (Suicide among LGBTQ = 5; Trauma = 3)	33	14.3%
Substance abuse, especially addiction epidemic	27	11.7%
Access to care (Transportation =2; not including Insurance)	19	8.3%
Healthy Food/Nutrition (Food deserts = 5)	12	5.2%
Insurance (5 = Cost of co-pay)	12	5.2%

TABLE 110. MONTGOMERY COUNTY: AFRICAN-AMERICAN FOCUS GROUPS

Issue	African-American Adults (7 attendees on 7/10/18)	African-American Youth (6 attendees on 7/11/18)
Care coordination	4	
More caseworker involvement	4	
Food deserts	2	3
Infant mortality	2	
Health education/Promotion		4
Mental health		4
Parent education		2
Peer support/community advocates		2

Survey Responses

Below are the most frequent responses from individual consumers, living in Montgomery County, who completed a survey between 6/5/18 and 7/26/18. Fifty-three people participated. Respondents all answered the question, “Given the health issues facing the community, which ones would be your top priorities?” They mentioned thirty-one health and/or health-related issues of particular concern to them. The following table contains the issues that received more than 5% of all mentions.

TABLE 111. MONTGOMERY COUNTY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	15	21.74%
Access to care	9	13.04%
Mental health	8	11.59%
Chronic disease	7	10.14%
Healthy behaviors	7	10.14%
Healthy food/Nutrition	6	8.7%
Health Education/Promotion	5	7.25%
Wellness	4	5.8%

Eight organizations serving County residents, especially vulnerable populations, responded with their priorities. The priorities that received more than 5% of mentions are listed below.

TABLE 112. MONTGOMERY COUNTY: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Access to care	4	27%
Substance abuse	3	20%
Mental health	2	13%
Social Determinants of Health	2	13%

Response from Health Department

Public Health - Dayton & Montgomery County provided its health priorities for the community:

- Behavioral health
- Birth outcomes
- Chronic disease prevention

> *"Parents don't know how to be parents. It's our responsibility to teach them so the next generation is better informed on child health and child behavior."*
>
> - Montgomery County consumer

Montgomery County Health Snapshot

Pop.: 532,761

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	24.4	*	22.2	20.2
Cancer mortality, Lung (rate per 100,000)	50.5	*	48.2	39.4
Cancer mortality, Overall (rate per 100,000)	178.7	*	174.3	157.1
Child mortality (rate per 100,000, 1-17 yrs.)	20.2	*	20.1	19.9
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 100,000)	334.2	-*	316.1	270.9
Diabetes (%)	13.1	-*	11.1	10.7
Heart Disease Deaths (rate per 100,000)	184.8	-	188.4	167
Infant Mortality (rate per 1,000 live births)	6.8	-	7.2	5.9
Injury Deaths (rate per 100,000)	91.9	-*	61.2	45.3
Low birthweight (%)	9.4	*	8.5	8.2
Preterm Birth (%)	11.3	*	10.3	9.6
Poor physical health days (last 30 days)	4.3	*	4.0	3.9
Poor mental health days (last 30 days)	4.7	-*	4.0	3.7
Stroke Deaths (rate per 100,000)	50.0	↑*	40.6	37.5
Health Behaviors				
Adult Obesity (%)	30.8	-	30.6	29.2
Adult Smoking (%)	20.1	-	22.0	16.5
Adults with high blood pressure (% Yes)	39.2	-*	33.9	32
Alcohol-impaired driving deaths (%)	39.0	*	34.0	30.0
Chlamydia incidence (rate per 100,000)	658.1	-*	521.6	497.3
Gonorrhea incidence (%)	266.4	-*	176.8	145.8
HIV prevalence (rate per 100,000)	267.9	-	199.5	305.2
Total syphilis (rate per 100,000)	14.1	-	13.8	27.4
Motor vehicle crash deaths (rate per 100,000)	10.7	-	10.3	11.5
Physical inactivity (%)	28.9	-*	26.4	25.2
Substance Abuse/Mental Health				
Depression (%)	21.3	-	18.5	17.1
Drug poisoning deaths (rate per 100,000)	48.1	-*	26.2	14.6
Fentanyl & related drug OD deaths (rate per 100,000)	19.3	-*	9.0	2.6
Heroin poisoning overdose deaths (rate per 100,000)	13.9	-*	10.9	3.5
Prescription opioid overdose deaths (rate per 100,000)	6.6	-*	6.2	14.5
Suicide (rate per 100,000)	15.1	*	13.3	13
Access to Clinical Care				
Dentists (ratio)	1690:1	-*	1656:1	1480:1
Mammography screening (%)	66.8	-	68.4	65.5
Mental health providers (ratio)	634:1	↓*	561:1	470:1
Primary care physicians (ratio)	1100:1	-	1307:1	1320:1
Uninsured (%)	9.0	-	7.6	11.8
Socio-Economic/Demographic				
Children in poverty (%)	28.5	*	22.1	21.2
African American (%)	20.5		12.1	12.3
Population that is 65 and older (%)	16.6		23.0	22.3
Population below 18 years of age (%)	22.5	*	14.5	16

Top Causes of Death

Lung cancer
Drug poisoning
Alzheimer's

Other Deaths

CLRD & Injury death rates rising and higher than OH and US rates

Drug ODs

Deaths rising; higher than OH and US for heroin, Fentanyl, prescription opioids & others

Stroke

Rates of stroke deaths and hypertension are rising and > than OH & US

STIs

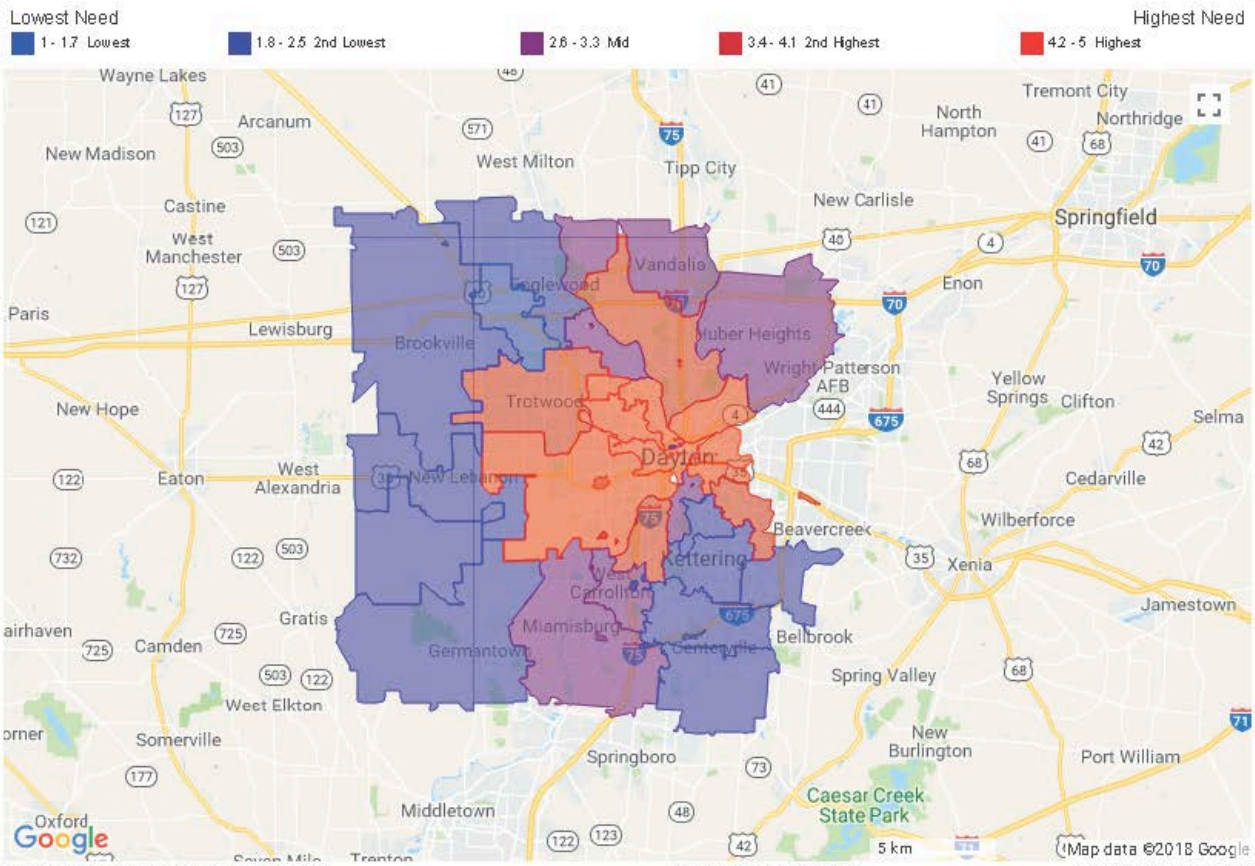
Rising rates of chlamydia, gonorrhea, HIV & syphilis

* = Higher than state and national rates. Source data range: 2014-2017; U = Unavailable, unreliable, or suppressed due to small numbers.

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. Eleven ZIP Codes in Montgomery County have high scores.

Dignity Health.



Mean(zipcode): 3.2 / Mean(person): 3.2 CNI Score Median: 3.1 CNI Score Mode: 2.2

Zip Code	CNI Score	Population	City	County	State
45322	2.4	21804	Englewood	Montgomery	Ohio
45325	2.2	2526	Farmersville	Montgomery	Ohio
45327	2.2	8942	Germantown	Montgomery	Ohio
45342	3.2	38319	Miamisburg	Montgomery	Ohio
45345	2.4	6385	New Lebanon	Montgomery	Ohio
45377	2.8	14584	Vandalia	Montgomery	Ohio
45402	4.8	11435	Dayton	Montgomery	Ohio
45403	4.6	14653	Dayton	Montgomery	Ohio
45404	4.6	10075	Dayton	Montgomery	Ohio
45405	4.6	18180	Dayton	Montgomery	Ohio
45406	4.2	20725	Dayton	Montgomery	Ohio
45409	3	9546	Dayton	Montgomery	Ohio
45410	4.4	15689	Dayton	Montgomery	Ohio
45414	4	21113	Dayton	Montgomery	Ohio
45415	3.2	12322	Dayton	Montgomery	Ohio
45417	5	30572	Dayton	Montgomery	Ohio
45419	2	15323	Dayton	Montgomery	Ohio
45424	2.8	50242	Dayton	Montgomery	Ohio
45426	3.8	15580	Dayton	Montgomery	Ohio
45429	2	25101	Dayton	Montgomery	Ohio
45439	3.8	11187	Dayton	Montgomery	Ohio

45440	2.4	21037	Dayton	Montgomery	Ohio
45449	3.2	18608	Dayton	Montgomery	Ohio
45458	2.2	32189	Dayton	Montgomery	Ohio
45459	2.2	26900	Dayton	Montgomery	Ohio
45469	3	3225	Dayton	Montgomery	Ohio
45315	1.6	4916	Clayton	Montgomery	Ohio
45420	3.4	23507	Dayton	Montgomery	Ohio
45309	2.2	12199	Brookville	Montgomery	Ohio
45416	4.4	5516	Dayton	Montgomery	Ohio

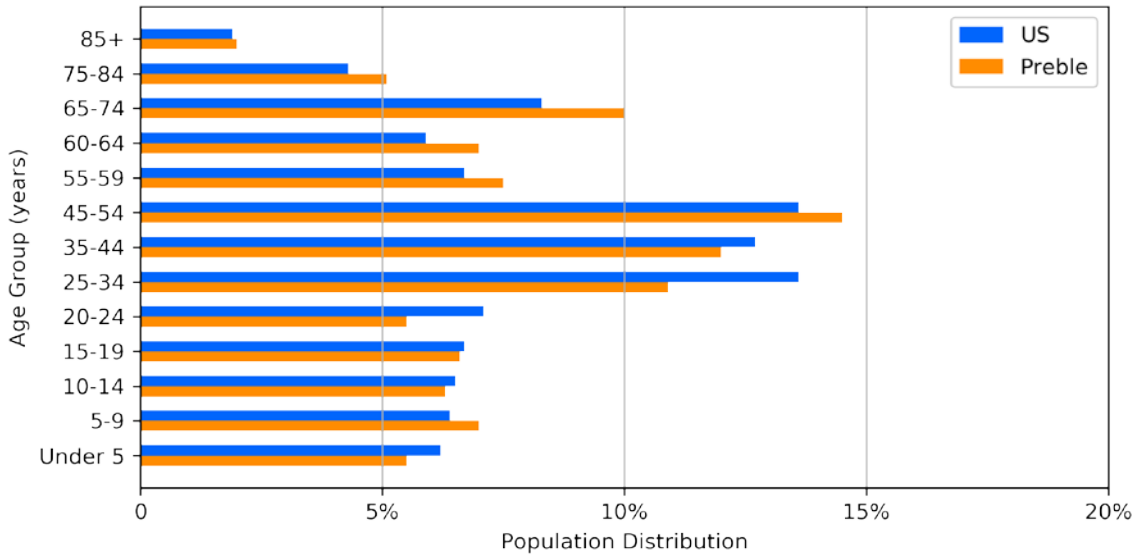
PREBLE COUNTY, OHIO

More than 69% of Preble County is considered rural. The county seat is Eaton. Injury deaths in the County are above the Ohio and U.S. rates and rising. There are fewer mental health providers and higher suicide rates in the County than the Ohio and U.S. rates. There are fewer primary care and dental providers in the County than the Ohio and U.S. ratios.

Population Chart

The following is a population chart from Preble county from years 2012-2016.

FIGURE 48. PREBLE COUNTY POPULATION



Consensus on Priorities

Substance abuse was a top priority on the consumer, agency, and health department surveys; Preble County Public Health singled out the opioid epidemic in particular. Mental health and access to care were mentioned at the community meetings and on the consumer and agency surveys. Dental care was a priority mentioned at the meeting that can be considered an issue of access. Chronic diseases and care for children were important to meeting attendees and on consumer surveys.

Top Causes of Death

The top causes of death for Preble County in 2016 were, in descending order:

- Lung cancer
- Atherosclerotic heart disease
- Congestive heart failure

Priorities from Community Meeting on April 11, 2018

The afternoon meeting brought together very knowledgeable county representatives including the health commissioner, a YMCA senior director, a nurse from Kettering Emergency Department, a journalist, and two city council-women from Village of New Paris.

TABLE 113. PREBLE COUNTY: MEETING PRIORITIES

Priority	# Votes	% Votes
Mental health	6	28.6%
Access to care	5	23.8%
Care for children	3	14.3%
Chronic disease	3	14.3%
Dental	2	9.5%

Survey Priorities

Below are the most common responses from individual consumers, living in Preble County, who completed a survey between 6/19/18 and 8/3/18. There were 12 people who participated, and they all answered the question, “Given the health issues facing the community, which ones would be your top priorities?” They mentioned 23 health and/or health-related issues of particular concern. The following table contains the issues that received more than 5% of all mentions.

TABLE 114. PREBLE COUNTY: CONSUMER PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	6	26.0%
Chronic disease	3	13.0%
Access to care	3	13.0%
Care for children	3	13.0%
Communicable disease	2	8.7%
Healthy behaviors	2	8.7%
Mental health	2	8.7%

Eleven organizations, serving Preble County, responded with their priorities. The priorities that received more than 5% of mentions are listed below.

TABLE 115. PREBLE COUNTY: AGENCY PRIORITIES

Priority	# Mentions	% Mentions
Substance abuse	8	29.0%
Mental health	6	21.0%
Access to care	4	14.0%
Obesity	3	11.0%
SDH	3	11.0%

Response from Health Department

The Health Department provided its health priorities for the community:

- Opioid epidemic

Dot Voting in Preble County

Preble County Health Snapshot

Pop.: 41,247

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	20.2	-	22.4	20.2
Cancer mortality, Lung (rate per 100,000)	49.4	-	49.6	39.4
Cancer mortality, Overall (rate per 100,000)	186.0	↑*	174.3	157.1
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 100,000)	255.2	↓	316.1	270.9
Childhood asthma (%)	14.2	*	11.0	8.4
Diabetes (%)	13.0	*	11.1	10.7
Heart Disease Deaths (rate per 100,000)	199.2	↓*	188.4	167.0
Infant Mortality (rate per 1,000 live births)	6.1	-	7.2	5.9
Injury Deaths (rate per 100,000)	88.7	↑*	61.2	45.3
Low birthweight (%)	8.0	-	8.5	8.2
Preterm Birth (%)	10.8	-	10.3	9.6
Poor physical health days (last 30 days)	3.7	↓	4.0	3.9
Poor mental health days (last 30 days)	4.1	-	4.0	3.7
Stroke Deaths (rate per 100,000)	39.0	-	40.6	37.5
Health Behaviors				
Adult Obesity (%)	30.0	-	30.6	29.2
Adult Smoking (%)	20.0	↓	22.0	16.5
Alcohol-impaired driving deaths (%)	34.0	-	34.0	30.0
Chlamydia incidence (rate per 100,000)	237.1	↓	521.6	497.3
Excessive drinking (%)	18.0	↓	18.1	16.6
HIV prevalence (rate per 100,000)	55.0	↑	199.5	305.2
Motor vehicle crash deaths (rate per 100,000)	22.4	*	10.3	11.5
Physical inactivity (rate per 100,000)	30.0	-*	26.4	25.2
Substance Abuse/Mental Health				
Depression (%)	10.8	-	18.5	17.1
Drug overdose mortality rate (per 100,000)	36.0	↑	26.2	17.0
Heroin poisoning overdose deaths (rate per 100,000)	23.7		10.9	3.5
Suicide (rate per 100,000)	17.3	-	13.3	13.4
Access to Clinical Care				
Dentists (ratio)	5890:1	-*	1656:1	1480:1
Mammography screening (%)	83.3	↑	73.7	72.7
Mental health providers (ratio)	1530:1	*	561:1	470:1
Primary care physicians (ratio)	4590:1	↓*	1307:1	1320:1
Uninsured (%)	8.0	-	8.0	11.0
Socio-Economic/Demographic				
Children in poverty (%)	17.0	↓	22.1	20.0
African American (%)	0.6		12.4	12.1
Population that is 65 and older (%)	18.3	↑	14.5	16.0
Population below 18 years of age (%)	22.9	-	23.0	22.3

Source data range: 2014-2017

*=higher than state and national averages

Top Causes of Death
Lung Cancer
Heart Disease

Childhood Asthma Rate
Increasing and > than OH & US

Injury Deaths
Rate > OH & US
Motor vehicle crash deaths more than double state rate

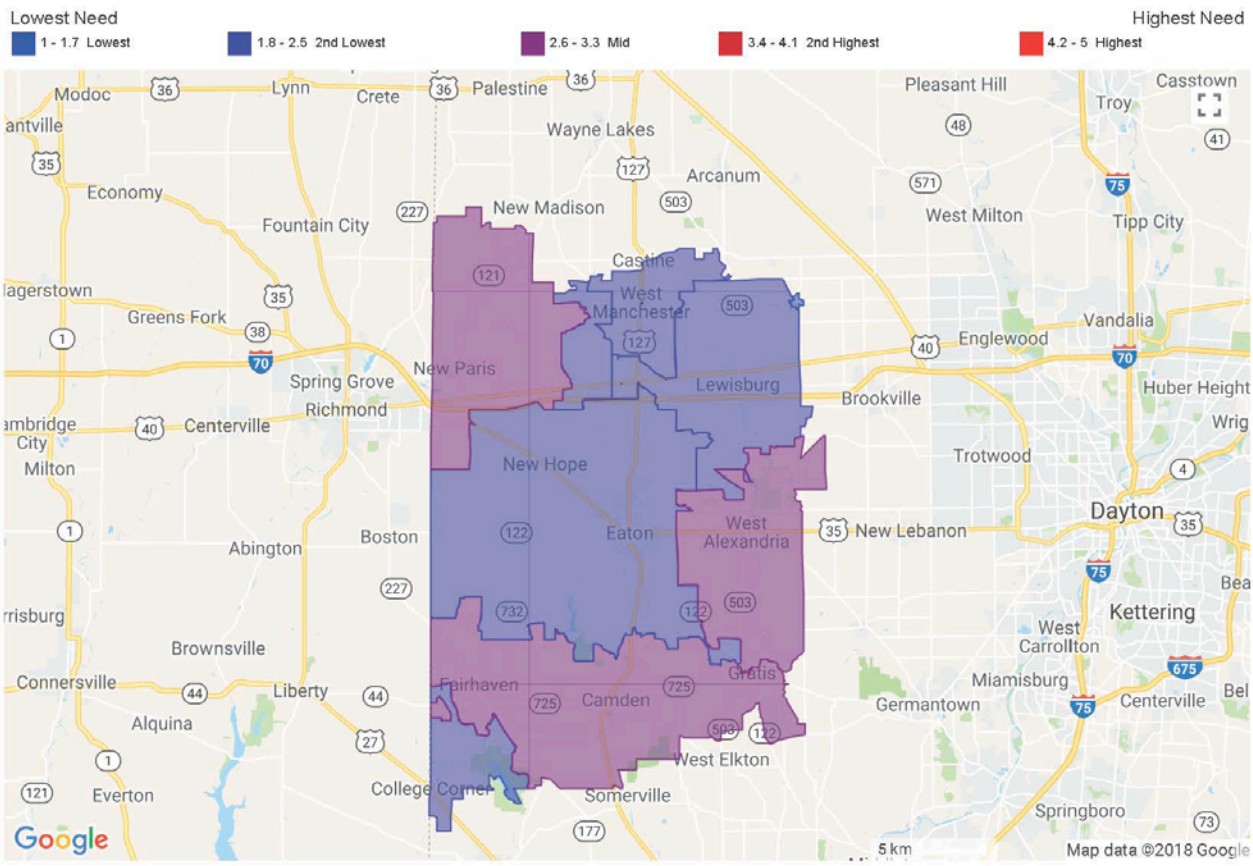
Mental Health
Fewer providers and higher suicide rates than OH & US

Substance Abuse
Overdose deaths > OH & US rates.
HIV prevalence increasing

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services.
None of the County's Zip Codes exceeds a 2.6 score.

Dignity Health.



Mean(zipcode): 2.3 / Mean(person): 2.5 CNI Score Median: 2.4 CNI Score Mode: 2,2.4,2.6

Zip Code	CNI Score	Population	City	County	State
45003	2	793	College Corner	Preble	Ohio
45311	2.6	6171	Camden	Preble	Ohio
45320	2.4	15816	Eaton	Preble	Ohio
45321	2.4	953	Eldorado	Preble	Ohio
45338	2	5328	Lewisburg	Preble	Ohio
45347	3.2	4194	New Paris	Preble	Ohio
45378	1.6	329	Verona	Preble	Ohio
45381	2.6	5738	West Alexandria	Preble	Ohio
45382	2.2	1067	West Manchester	Preble	Ohio

TRUVEN HEALTH ANALYTICS

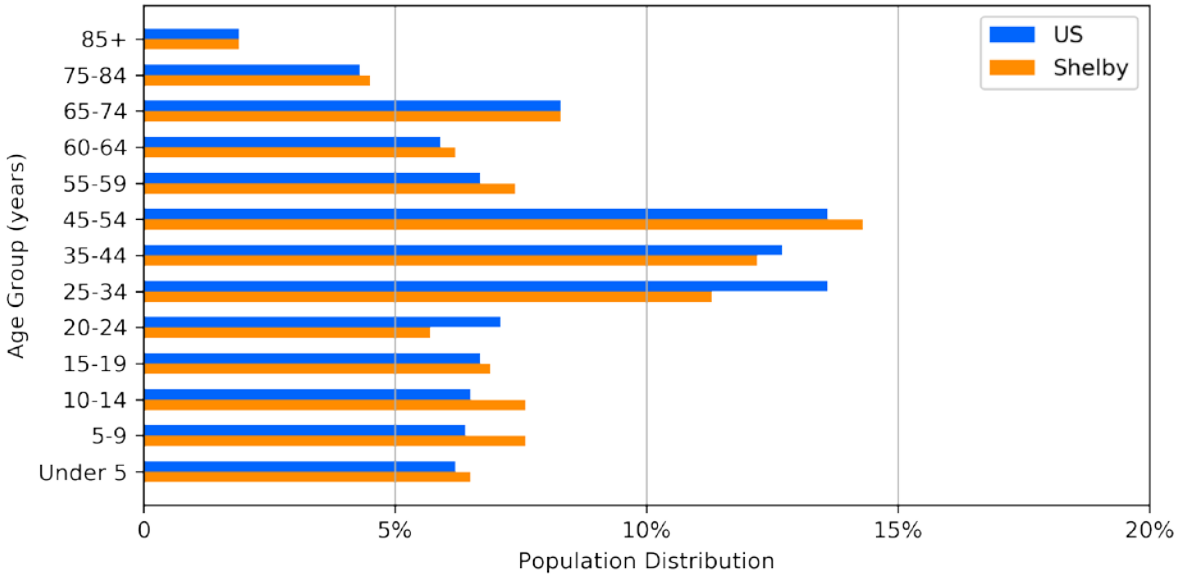
SHELBY COUNTY, OHIO

The county seat is Sidney. Rates of breast, lung and overall cancer are higher than the Ohio and U.S. averages. There are fewer primary care, mental health and dental health providers than the Ohio and U.S. average ratios.

Population Chart

The following is a population chart for Shelby county from years 2012-2016.

FIGURE 49. SHELBY COUNTY POPULATION



Consensus on Priorities

Substance abuse was mentioned as a top priority by all four response groups. Respondents from the community meeting and health department specifically referred to the opioid crisis. Access to care was a priority mentioned at the community meeting, in the agency surveys, and from the health department. Additionally, mental health was conveyed as a priority at the community meeting and in the agency surveys. Chronic disease was also mentioned as a priority in the consumer and agency surveys.

Top Causes of Death

The top causes of death for Shelby County in 2016 were, in descending order:

- Lung cancer
- Atherosclerotic heart disease

Priorities from Community Meeting on April 24, 2018

The fourteen attendees represented a diverse group of community agencies and local government. A total of 37 priorities were mentioned. The following table contains the issues that received more than 5% of all mentions.

TABLE 116. SHELBY COUNTY: MEETING PRIORITIES

Priority	# Votes	% Votes
Access to care	8	21.6%
Health education/Promotion	7	18.9%
Substance abuse *(Opioid addiction mentioned 4 times)*	7	18.9%
Mental health	6	16.2%
Dental	3	8.1%
Healthy food/Nutrition	2	5.4%
Funding	2	5.4%

Survey Priorities

Below are the most common responses from individual consumers, living in Shelby County, who completed a survey between 6/19/18 and 8/3/18. There were 3 people who participated, and they all answered the question, “Given the health issues facing the community, which ones would be your top priorities?” They mentioned 2 health and/or health-related issues of particular concern. The following table contains the issues that received more than 5% of all mentions.

> *“People suffering from mental illness don’t always know how to advocate for themselves or have family who can advocate for them.”*
>
> \- Shelby County resident

TABLE 117. SHELBY COUNTY: CONSUMER PRIORITIES

Priority	# Votes	% Votes
Chronic disease *(especially Obesity)*	1	50%
Substance abuse	1	50%

Ten organizations, serving Shelby County, responded with their priorities. The priorities that received more than 5% of mentions are listed below.

TABLE 118. SHELBY COUNTY: AGENCY PRIORITIES

Priority	# Votes	% Votes
Substance abuse	5	26%
Access to care	3	16%
Chronic disease	2	11%
Mental health	2	11%
Social Determinants of Health	2	11%
Physical activity	2	11%

Response from Health Department

The Sidney-Shelby County Health Department provided its health priorities for the community:

- Opioid crisis
- Affordable/available health care

Shelby County Health Snapshot

Population: 48

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 1,000)	24.0	*	22.4	20.2
Cancer mortality, Lung (rate per 1,000)	55.3	*	49.6	39.4
Cancer mortality, Overall (rate per 1,000)	185.1	↑*	174.3	157.1
Childhood asthma (%)	10.6		11.0	8.4
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 100,000)	313.1	↑	316.1	270.9
Diabetes (%)	11.0	—	11.1	10.7
Heart Disease Deaths (rate per 100,000)	188.2	—	188.4	167.0
Infant Mortality (rate per 1,000 live births)	5.0	—	7.2	5.9
Injury Deaths (rate per 100,000)	58.0	↑	61.2	45.3
Low birthweight (%)	6.0	—	8.5	8.2
Preterm Birth (%)	8.4	—	10.3	9.6
Poor physical health days (last 30 days)	3.4	—	4.0	3.9
Poor mental health days (last 30 days)	3.7	—	4.0	3.7
Stroke Deaths (rate per 100,000)	38.0	↓	40.6	37.5
Health Behaviors				
Adult Obesity (%)	32.0	-*	30.6	29.2
Adult Smoking (%)	18.0	↓	22.0	16.5
Alcohol-impaired driving deaths (%)	44.0	↑*	34.0	30.0
Chlamydia incidence (rate per 100,000)	302.3	↑	521.6	497.3
Excessive drinking (%)	19.0	—	18.1	16.6
HIV prevalence (rate per 100,000)	72.0	↑	199.5	305.2
Motor vehicle crash deaths (rate per 100,000)	12.0	*	10.3	11.5
Physical inactivity (%)	24.0	—	26.4	25.2
Substance Abuse/Mental Health				
Depression (%)	15.8	—	18.5	17.1
Drug overdose mortality rate (per 100,000)	20.0	↑	26.2	17.0
Suicide (rate per 100,000)	8.6	—	13.3	13.4
Access to Care				
Dentists (ratio)	4050:1	↑*	1656:1	1480:1
Mammography screening (%)	54.0	—	73.7	72.7
Mental health providers (ratio)	1520:1	↓*	561:1	470:1
Primary care physicians (ratio)	2570:1	↑*	1307:1	1320:1
Uninsured (%)	6.0	↓	8.0	11.0
Socio-Economic/Demographic				
Children in poverty (%)	14.0	↑	22.1	21.2
African American (%)	2.1		12.1	12.4
Population that is 65 and older (%)	15.6	↑	14.5	16.0
Population below 18 years of age (%)	25.5	—	23.0	22.3

Source data range: 2014-2017

*=higher than state and national rates or %

Top Causes of Death
Lung Cancer
Heart Disease

Alcohol-Impaired Driving Deaths
Increasing and > than OH & US

STDs
HIV prevalence and Chlamydia incidence increasing but < than OH & US

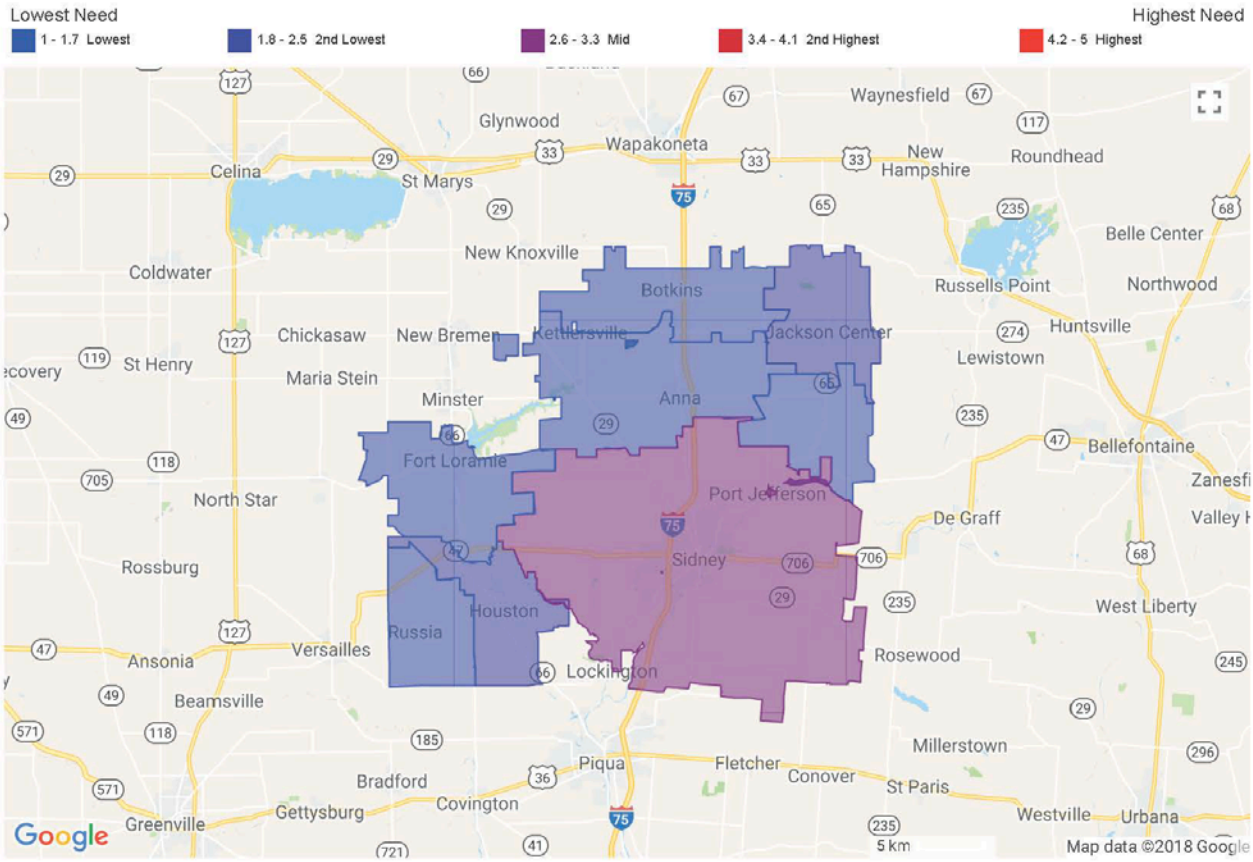
Dentists
Fewer than half the dentists per population for OH or US

Children in Poverty
Rate < OH and US but increasing

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. None of the County's Zip Codes exceeds a 3 score.

Dignity Health.



Mean(zipcode): 1.7 / Mean(person): 2.5 CNI Score Median: 1.5 CNI Score Mode: 1.2

Zip Code	CNI Score	Population	City	County	State
45302	1.2	4119	Anna	Shelby	Ohio
45306	1.4	2538	Botkins	Shelby	Ohio
45333	1.8	1371	Houston	Shelby	Ohio
45334	2	2043	Jackson Center	Shelby	Ohio
45340	1.2	771	Maplewood	Shelby	Ohio
45363	1.6	1684	Russia	Shelby	Ohio
45365	3	30453	Sidney	Shelby	Ohio
45845	1.2	3200	Fort Loramie	Shelby	Ohio

TRUVEN HEALTH ANALYTICS

WARREN COUNTY, OHIO

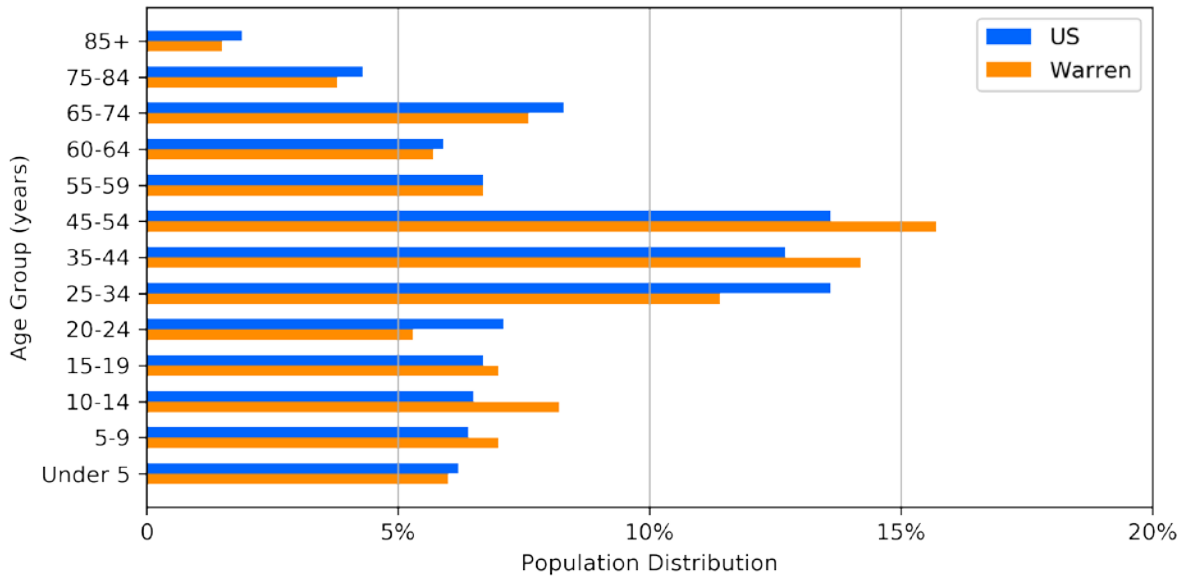
Warren County is one of the fastest growing counties in Ohio, both in residential and commercial growth. The death rate for drug poisoning, fentanyl and prescription opiates are increasing and higher than the Ohio and U.S. rates. The rates of chlamydia, gonorrhea and syphilis are increasing. It is one of the 8 counties with an increase in the number of days with unacceptable ozone levels.

> *"Many grandparents and other "kin" are raising kids in our community and struggling. …since the children are not legally in "foster care," the state does not provide money or resources to care for them."*
>
> \- Warren County resident

Population Chart

The following is a population chart for Warren County from years 2012-2016.

FIGURE 50. WARREN COUNTY POPULATION



Consensus on Priorities

Mental health was the top priority, shared at the community meetings, in the consumer and agency surveys, and from public health. At the community meetings, childhood trauma emerged specifically. Correspondingly, access to care was mentioned by three sources of input. In particular, the Health District mentioned the access to primary care for those in the behavioral health system. Substance abuse was identified as a priority at community meetings and in consumer and agency surveys. Access to care was an issue on survey results from consumers, agencies, and public health. The agency and consumer survey cited chronic disease as a concern.

Top Causes of Death

The top causes of death for Warren County in 2016 were, in descending order:

- Alzheimer's disease, unspecified
- Atherosclerotic heart disease
- Dementia, unspecified

Priorities from Community Meeting on June 19, 2018

The meeting attracted 8 people who gave their detailed responses. There were attendees from Solutions CCRC, the Regional Planning Commission, United Way plus the police chief and fire chief.

TABLE 119. WARREN COUNTY: MEETING PRIORITIES

Priority	# Votes	% Votes
Substance abuse	8	40%
Mental health *(Childhood trauma mentioned 3 times)*	4	20%
Healthy food/nutrition	3	15%
Parenting	2	10%
Social determinants of health	2	10%

Survey Priorities

Below are the most common responses from individual consumers, living in Warren County, who completed a survey between 6/19/18 and 8/3/18. There were 27 people who participated, and they all answered the question, "Given the health issues facing the community, which ones would be your top priorities?" They mentioned twenty-eight health and/or health-related issues of particular concern. The following table contains the issues that received more than 5% of all mentions.

TABLE 120. WARREN COUNTY: CONSUMER PRIORITIES

Priority	# Votes	% Votes
Substance abuse	10	35.7%
Chronic disease	4	14.3%
Healthy behaviors	4	14.3%
Access to care	2	7.1%
Care for children	2	7.1%
Mental health	2	7.1%

Nine organizations, serving Warren County, responded with their priorities. The priorities that received at least 2 mentions are listed below.

TABLE 121. WARREN COUNTY: AGENCY PRIORITIES

Priority	# Votes	% Votes
Infant mortality	3	19%
Mental health	3	19%
Substance abuse	3	19%
Access to care	2	13%
Community collaboration	2	13%
Chronic disease	2	13%

Response from Health Department

The Warren County Health District provided its health priorities for the community:

- Access to behavioral health
- Access to primary care for those in the behavioral health system

" [We shame] people with drug addiction saying they did it to themselves…. But then we support people with chronic diseases which were caused by obesity, eating unhealthy, and smoking."

- Warren County resident

Warren County Health Snapshot

Pop.: 222,184

Measure/Indicator	County	Trend	State	U.S.
Health Outcomes				
Cancer mortality, Breast (rate per 100,000)	22.6	-	22.2	20.2
Cancer mortality, Lung (rate per 100,000)	41.9	-	48.2	39.4
Cancer mortality, Overall (rate per 100,000)	153.8	-	174.3	157.1
Cancer mortality, Prostate (rate per 100,000)	19.2	-	19.3	19.1
Child mortality (rate per 100,000, 1-17 yrs.)	11.5	-	20.1	19.9
Chronic Lower Respiratory Disease (CLRD) deaths age 65 and up (rate per 100,000)	260.5	-	316.1	270.9
Diabetes (%)	14.8	-*	11.1	10.7
Heart Disease Deaths (rate per 100,000)	147.5	-	188.4	167
Infant Mortality (rate per 1,000 live births)	3.5	-	7.2	5.9
Injury Deaths (rate per 100,000)	45.4	-	61.2	45.3
Low birthweight (%)	7.4	-	8.5	8.2
Preterm Birth (%)	9.3	-	10.3	9.6
Stroke Deaths (rate per 100,000)	34.0	-	40.6	37.5
Health Behaviors				
Adult Obesity (%)	25.3	-	30.6	29.2
Adult Smoking (%)	10.2	-	22.0	16.5
Adults with high blood pressure (%)	37.8	-*	33.9	32.0
Alcohol-impaired driving deaths (%)	33.0	-	34.0	30.0
Chlamydia incidence (rate per 100,000)	210.3	-	521.6	497.3
Diabetes (%)	14.8	-*	11.1	10.7
Gonorrhea incidence (%)	41.0	-	176.8	145.8
HIV prevalence (rate per 100,000)	68.3	-	199.5	305.2
Total syphilis (rate per 100,000)	4.9	-	13.8	27.4
Substance Abuse/Mental Health				
Depression (%)	17.5	-	18.5	17.1
Drug poisoning deaths (rate per 100,000)	19.2	-	26.2	14.6
Fentanyl & related drug OD deaths (rate per 100,000)	7.1	-	9.0	2.6
Heroin poisoning overdose deaths (rate per 100,000)	7.1	-	10.9	3.5
Prescription opioid overdose deaths (rate per 100,000)	9.2	*	5.9	4.0
Suicide (rate per 100,000)	11.4	-	13.3	13.0
Access to Clinical Care				
Dentists (ratio)	2770:1	-*	1656:1	1480:1
Mammography screening (%)	83.5	-	68.4	65.5
Mental health providers (ratio)	582:1	↓*	561:1	470:1
Primary care physicians (ratio)	1070:1	-	1307:1	1320:1
Uninsured (%)	1.7	-	7.6	11.8
Socio-Economic/Demographic				
Children in poverty (%)	6.5	↑	22.1	21.2
Hispanic (%)	2.5		3.5	17.3
African American (%)	3.4		12.1	12.3
Population that is 65 and older (%)	12.9	↑	23.0	22.3
Population below 18 years of age (%)	25.9	*	14.5	16.0

* = Higher than state and national rates. Source data range: 2014-2017. U = Unavailable or unreliable data

Top Causes of Death
Alzheimer's
Heart Disease
Dementia
Lung Cancer

Drug ODs
Deaths rising for drug poisoning & Fentanyl. Prescription opioid OD death rate is > OH & US

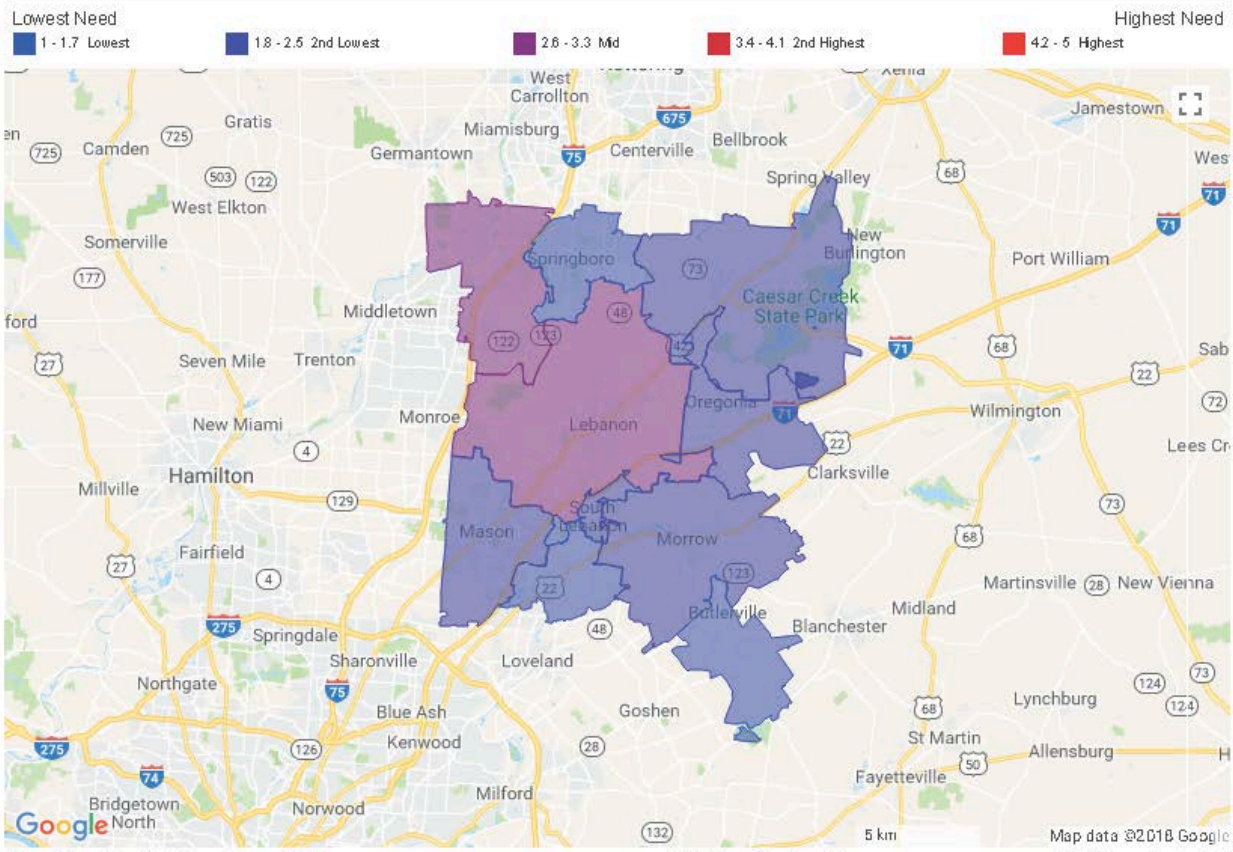
STIs
Rising rates of chlamydia, gonorrhea & syphilis

Chronic Disease
% of people with high blood pressure or diabetes is increasing and > OH & US

Community Need Index

A high CNI score (3.4 to 5.0) is an indicator for socioeconomic variation, barriers to care, and an increased need for health care services. None of Warren County's 11 ZIP Codes have high scores.

Dignity Health.



Mean(zipcode): 1.9 / Mean(person): 2.1 CNI Score Median: 2 CNI Score Mode: 1.4

Zip Code	CNI Score	Population	City	County	State
45005	3	30732	Franklin	Warren	Ohio
45034	1.4	1094	Kings Mills	Warren	Ohio
45036	2.8	38905	Lebanon	Warren	Ohio
45039	1.4	25128	Maineville	Warren	Ohio
45040	1.8	55581	Mason	Warren	Ohio
45054	2	2254	Oregonia	Warren	Ohio
45065	2.2	5930	South Lebanon	Warren	Ohio
45066	1.6	24945	Springboro	Warren	Ohio
45068	1.8	11367	Waynesville	Warren	Ohio
45152	2	11862	Morrow	Warren	Ohio
45162	1.4	2711	Pleasant Plain	Warren	Ohio

TRUVEN HEALTH ANALYTICS

Chapter 8. Community Resources

During the data collection and community input process, participants identified many specific community resources. They also identified types of resources that exist in many communities. Resources can address basic needs, emergency services, education, information, support, direct care, and/or social services. The following is the list of suggestions that were not limited to one specific location. These resources were mentioned in community meetings, written in online surveys, or contributed by public health departments. Appendix O contains a list of specific resource recommendations.

Types of Community Resources:

- 2-1-1 information and referral phone line
- After-school programs
- Churches
- Community education
- Community gardens
- Community health centers
- Community-based coalitions
- Counseling services
- Department of Job and Family Services
- Developmental Disability services
- Diabetes Prevention & Education programs
- Doctors
- Domestic Violence services
- Early Childhood Education
- Emergency Medical Services
- Emergency Shelter
- Employment Assistance
- Faith-based community
- Farmers' markets
- Federally Qualified Healthcare Centers
- Fitness centers
- Food pantries
- Foundations
- Head Start
- Health departments
- Hospitals
- Housing services
- Internet
- Job Training
- Kindergarten readiness programs
- Libraries
- Mammography vans
- Mental Health services
- Nonprofit organizations
- Nutrition education and services
- Parenting classes
- Parks and park districts
- Pharmacies
- Planned Parenthood
- Pregnancy Centers
- Primary care physicians/providers
- Recreation centers
- School nurses
- School-based health centers
- Schools
- Senior centers
- Senior services
- Substance abuse support groups
- Substance abuse treatment centers
- Summer food programs
- Support groups
- Transportation services
- United Way
- Urgent care
- Veteran's services
- Women, Infants, and Children (WIC)
- YMCA
- Youth services
- YWCA