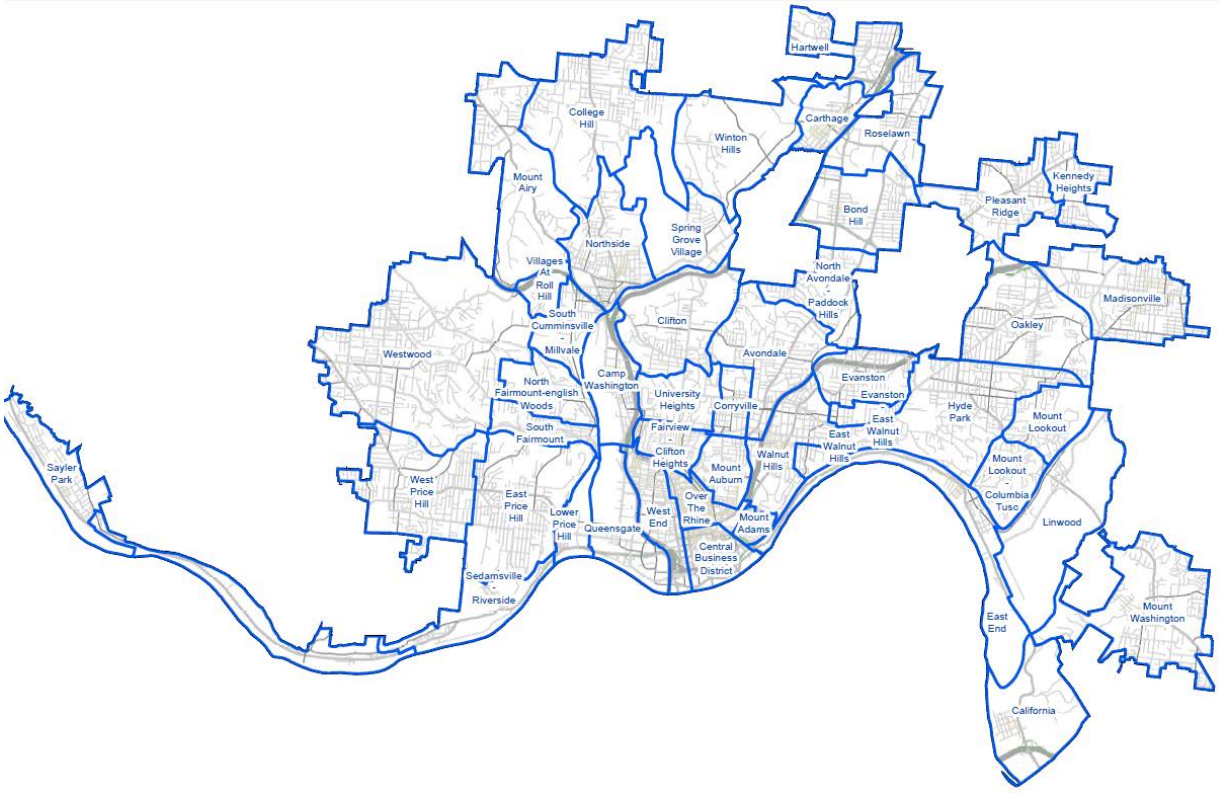
city of CINCINNATI
HEALTH DEPARTMENT

City of Cincinnati



Community Health Assessment

Updated, December 21, 2017

This report is produced by the City of Cincinnati Health Commissioner's Accreditation Lead Team.
For more information and updates, please call 513-357-7272 or visit http://www.cincinnati-oh.gov/health

MESSAGE FROM THE HEALTH COMMISSIONER

Marilyn Crumpton, MD, MPH
Interim Health Commissioner

The Health Department vision for Cincinnati is that we become one of the healthiest cities in the nation. It requires that we collect data on factors that affect health such as education, employment, income and housing as well as health data such as access to care, general health status, infant mortality and chronic conditions. This Community Health Assessment compares our neighborhoods and our city information to the county and the state information.

At the Cincinnati Health Department, our responsibility is to measure, understand and share this information. As we share this information with the community, we are partnering with organizations and community members to develop strategies to address the issues that affect our health. Importantly, we know we will not make the desired progress in health until we address those conditions that lead to health inequities, including continued racial discrimination.

Cincinnati is a vibrant, growing city, and our city leadership works with the fifty-two neighborhoods to identify needs and to create resources for improvements. The Health Department works to protect and promote the health of those who live, work and play in the city. Progress is a result of working collaboratively with other city departments, community members, businesses, other health departments, and other community organizations.

EXECUTIVE SUMMARY

According to the 2011-2015 U.S. Census Bureau's American Community Survey, the City of Cincinnati's population is 297,397, with 52.5% female and 47.5% male, which is similar to Hamilton County and the state of Ohio. Cincinnati (median age of 32.5) has a slightly younger population than the state of Ohio (median age of 39.2) overall, with 11.4% of residents over the age of 65, compared to 15.1% of Ohioans. Cincinnati is more diverse compared to the state of Ohio; just under half of the city (45%) self-reports as African American and 53.6% reports as White. Cincinnati's foreign-born population is predominantly from Asia (36.1%), Latin America (23.6%) and Africa (21.3%).

Poverty and Unemployment

The median family income for the City of Cincinnati is $33,604 as compared to Hamilton County ($49,013) and Ohio ($49,929) overall, and 30.5% of Cincinnati families earned below the Federal Poverty Level (FPL), twice the Ohio rate. Based on 2010-2015 survey data, childhood poverty rates in Cincinnati (45.5%) were twice the rate in the state of Ohio (22.8%).

In Cincinnati in 2015, among individuals aged 16 years and older, 12.5% reported being unemployed in the past year. Access to health care is a key social determinant of health. Among adults 18-64 years of age in Cincinnati, 16.8% are uninsured, 18.5% could not afford a physician and 17.2% could not afford medications. Thirty-six percent of adults 18-64 years were uninsured for dental care in 2008. Among individuals from Cincinnati with household income at or below the FPL, 51.1% self-reported mouth and teeth in poor condition, and 53.7% report delayed access to dental care in the past year. Additionally, approximately, 8.2% of those in Cincinnati lack a vehicle.

A Community Need Index (CNI), an assessment to determine vulnerable communities in Hamilton County showed that the neighborhoods of greatest need that were within the City of Cincinnati limits were Millvale, Price Hill and Winton Hills. The highest need neighborhoods status was based on socio-economic factors such as income, education, health insurance and housing status. According to the VESTA Community Data 2014 Report, approximately 7,810 individuals in Cincinnati report as homeless. Homelessness is associated with many other health risk factors, such as chronic mental illness, drug or alcohol abuse and children in poverty.

An analysis of the age-adjusted death rates for the top 10 causes of death in Cincinnati determined Heart disease (187.1 per 100,000) is the leading cause of death consistent with national rates, followed by cancer (177.8 per 100,000) and stroke (49.8 per 100,000). Overall, African Americans have higher mortality rates associated with the 6 of the top 10

leading causes of death, and among youth, young African American males have the highest mortality rates. For all youth aged 10-14 years, the top cause of death is unintentional injuries (6.57 per 100,000) and for youth aged 15-19 years, homicide is the leading cause of death (28.97 per 100,000). Common chronic diseases in Cincinnati include hypertension, obesity and being a current smokers. Diabetes and asthma rates are higher in Cincinnatians compared to Ohio rates.

Violence

The death rate due to homicide in Cincinnati from 2001-2007 was 19.1/100,000, more than twice the average rate in Ohio large metropolitan regions (9.0/100,000), and more than three times the homicide rate in the US (5.9/100,000). The majority of homicide deaths were due to fire arms. The total number of adult hospital admissions in Cincinnati for gunshot wounds has increased dramatically since 2000, particularly for African-Americans. In 2010, there were 72 reported homicides; in 2011, there were 66. The ratio of survivable gunshot injuries to gunshot deaths is 8:1.

Life Expectancy

The current life expectancy at birth for a Cincinnati resident is 76.7 years, two years less than the national US average, suggesting that we are not as healthy as the rest of the nation, with a gap between the life expectancy for men (73.6 years) and for women (79.6 years) in Cincinnati. African American men and women in Cincinnati have lower life expectancy than their White counterparts. On average, life expectancy for African American men in Cincinnati is ten years less than White men (63.8 years vs. 73.8 years), and for African American women is six and a half years less than White women (72.4 years vs. 79 years). While disparities exist at the state and national level, African American women have lower life expectancy at birth in Cincinnati (72.4 years) than in Ohio (76.5 years) and the US (77.4 years) as a whole, and the same holds true for African American men (63.8 years vs. 69.8 years) for Ohio overall and 70.9 years for the US. These findings, based on mortality rates from 2001-2009, suggest significant health inequities.

Infant Mortality Rate

Infant mortality rate (IMR), the proportion of babies that die before their first birthday, is another indicator of the overall health of a community. Unfortunately, Cincinnati has long suffered from excessively high IMRs. The IMR for 2006-2010 in Cincinnati was calculated as 13.3 deaths per 1000 live births, twice the US IMR in 2010, which was 6.8. Although, Cincinnati's infant mortality rate has improved, there is significant progress yet to be made. Cincinnati's 2011-2015 IMR was 10.8 infant deaths per 1000 live births, significantly higher than the IMR in Ohio and the national. Additionally, there are significant racial disparities in the burden of infant mortality in Cincinnati. The IMR for

African American families in Cincinnati from 2010-2014 was 15.6, while the IMR for White families in Cincinnati was 6.1 per 1000 live births. Infant mortality in Cincinnati and elsewhere is largely attributable to premature birth. Factors associated with prematurity, include maternal age (too young or too old), the family's level of poverty, stress, smoking or drug use and the mother's pre-existing chronic health conditions (i.e. hypertension, diabetes). Early enrollment into prenatal care can decrease risk of adverse pregnancy outcomes.

Data from the Cincinnati Public School system (CPS) provides a window into the health of schoolchildren (*n* = 24,269 health records available out of *n* = 33,671 students enrolled). For those CPS students with available school health records, one in five is reported to be asthmatic (14.3%). Nearly one in ten students is reported to have an Attention Deficit Disorder (ADD / ADHD (6.9%)). Additionally, one in ten students is reported to have dental problems (13.8%), which includes visible decay or infection. Of concern, an additional 16% of students have reported other chronic illnesses.

Public Health nurses in Cincinnati Public Schools screen students in kindergarten, 3rd, 5th and 9th grades for healthy body weight. More than one in three students have a weight above average for their height, age and gender, 18.7% are obese and another 15.5% are overweight. Obesity during childhood increases the risk of adult obesity, and can often become a lifelong struggle, and can predispose individuals to the development of other chronic illnesses including diabetes, high blood pressure and high cholesterol later in life.

To address the health disparities within the City of Cincinnati, the Cincinnati Health Department (CHD) has developed many interventions, as well as participated in collaborations with other organizations. Regarding childhood poverty, many organizations are collaborating on the Child Poverty Collaborative.

The CHD Strategic Plan for 2017 includes goals and initiatives with the aim to make Cincinnati the healthiest city in which to live, work and play.

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ACRONYMS

AIDS	Acquired-Immune Deficiency Syndrome
A.I.M.	Ask. Inform. Make a Difference.
CHA	Community Health Assessment
CHD	Cincinnati Health Department
CHNA	Community Health Needs Assessment
CNI	Community Need Index
GCCHSS	Greater Cincinnati Community Health Status Survey
GIS	Geographic Information System
HIV	Human Immuno-deficiency Virus
ODH	Ohio Department of Health
STI	Sexually Transmitted Infection
STD	Sexually Transmitted Disease
TB	Tuberculosis
THC	The Health Collaborative
WHO	World Health Organization

INTRODUCTION

Background

A ***Community Health Assessment*** (CHA) is a systematic examination of the health status indicators for a given population that is used to identify key problems and assets in a community.

The ultimate goal of a CHA is to provide data to help develop strategies to address the community's health needs and identified issues. The community health profile included in a CHA report describes the health of people and the conditions in which they live. The profile provides a basis for advocacy, priority setting and increased accountability for community health. According to the World Health Organization, city health profiles are essential tools for change, and should play an integral part in local decision-making and strategic planning processes (WHO, 2017).

Foundations: Life Expectancy Roundtables and the 2016 CHNA

The development of the Cincinnati Community Health Assessment was a complicated process. It was born out of two independent efforts: 1) the 2014 Life Expectancy Roundtable in Cincinnati and 2) the 2016 Community Health Needs Assessment that was coordinated by the Health Collaborative.

In 2014, Cincinnati Health Department (CHD) held a life expectancy roundtable with local neighborhood organizations and other partners, that explored disparities in life expectancy. To prepare, CHD had developed a Cincinnati profile of life expectancy by neighborhood, and created local neighborhood profiles to help explain disparities. Discussion at that roundtable led to plans to conduct a more thorough health assessment that would include many more indicators of community health and also facilitate neighborhood involvement in solutions to issues found.

In 2014, The Health Collaborative also began planning for a large regional Community Health Needs Assessment (CHNA) using the Mobilizing for Action through Planning and Partnerships (MAPP) process. The Health Collaborative is an influential non-profit organization in Cincinnati that works with the health care community, public health entities and other stakeholders to improve the health of residents of Greater Cincinnati. In 2014, The Health Collaborative had assembled a group of 20 hospitals in the Greater Cincinnati region across Southwest Ohio, Southeast Indiana and Northern Kentucky, which were interested in conducting a joint CHNA. As the name suggests, the CHNA was based primarily on requirements for hospitals from the Internal Revenue Service. One of these IRS requirements was the involvement of local health departments. After a great deal of outreach, a total of 23 counties and their health departments participated in CHNA planning, conduct, analysis and dissemination. The City of Cincinnati, which is located within Hamilton County, independently participated in CHNA planning as well as coordinating with Hamilton County Public Health for local data collection and community meetings.

Unfortunately, due to the pre-ponderance of hospitals and counties that participated (and funded) the CHNA, that document had little city-specific data or perspective. After the Regional Community Health Needs Assessment (CHNA) document was published in May, 2016, the City of Cincinnati Health Department Leadership Team felt the need to supplement it with local Cincinnati data. Thus, the idea of creating an updated focus on the health burden of Cincinnati residents was re-affirmed.

The Cincinnati-specific CHA

For the Cincinnati-specific CHA, additional data from multiple topic areas was collected, from both secondary sources and primary sources, then analyzed and summarized. The decision was made to focus on three general areas:

- Issues mentioned as health concerns or priorities by stakeholders from the Hamilton County CHNA meetings;
- Topics that fit into the Action Areas of the CHIP (locally called the *Generation Health* or *Gen-H Initiative*); and
- Topic areas, salient in Cincinnati, but not covered by the CHNA, that CHD felt important for partners, policy makers and the public to understand.

Looking Ahead

We plan to have local residents, decision-makers, and organizations convene to discuss the data presented in this report. In addition, this report will be updated at least every five years in accordance to the public health accreditation board (PHAB) requirements. It will include suggested areas for action to improve health and well-being and list current community-set priorities for improving health equity. The health status findings in the report should be considered as key drivers for the development and action plans for the community health improvement plan (CHIP), as it is revised.

METHODOLOGY

Overview

The development of the Cincinnati Community Health Assessment involved considerable discussions around methodology. To provide context, a brief description will be given here of the methodology employed in the 2016 regional 2016 CHNA.

2016 CHNA

Planning Methodology

The CHNA team depended on a variety of methods for the collaborative design process. As mentioned in the *Introduction* section, the CHNA was developed using the Mobilizing for Action through Planning and Partnerships (MAPP) process. The following were part of that process:

- Review of reports and publications on health, and health-related, topics
- Design and feedback meetings with hospital representatives (2/10, 5/11, 6/15, 8/17)
- Consultation with topic experts (e.g., heroin, Sexually Transmitted Diseases, environmental health)
- Phone calls with local and state health departments and county coroners
- Regular communication with hospital representatives

Analysis Methodology

Data collection included primary data collection and the selection of secondary data sources. Analysis incorporated both qualitative and quantitative methods.

Quantitative

- Use of online databases and other sources to obtain accurate and reliable secondary data;
- (Re)analysis of secondary data, both at the regional level and at the county level
- Calculation of the Community Need Index (CNI);
- Geographic Information System (GIS) mapping programs to identify compelling data and represent data visually; and
- Creation of County Snapshots

Qualitative

- Standard set of stakeholder questions (for individual, agency, meeting, health department);
- SurveyMonkey (Gold) for tracking responses at meetings, from interviews, or on surveys;
- Trained scribes to record every meeting comment and priorities;
- Personal interviews with health commissioners;
- Facilitated brainstorming with individuals and agencies serving vulnerable populations;
- Community meetings that included a ‘3-dot’ process to identify the top three priorities;

- Entry of primary data collected by graduate students in Xavier University's Department of Health Services Administration into SurveyMonkey and other analysis software;
- Proofreading of data entry for accuracy and consistency by graduate student interns;
- Tabulation of qualitative primary data by geographic area and region-wide;
- Comparison of most frequent topics mentioned by stakeholders overall and by geographic area and data source (i.e., individual, agency, meeting, health department);
- Analysis of stakeholder priorities to identify areas of consensus, from all stakeholder groups, by geographic area;
- Categorization and analysis of key phrases and key words in all collected responses from community members and partners;
- Word count to determine frequent categories and to identify dominant topics within a category (e.g., how many times 'heroin' was mentioned within 'Substance abuse' category); and
- Word cloud creation to identify top broad categories

In summary, the assessment for the CHNA included gathering primary data, using qualitative methods of analysis, gathering secondary data and analyzing it with quantitative methods, and producing county snapshots and maps per geographic area. The CHNA was completed and disseminated in 2016.

Cincinnati-specific CHA

Once the regional CHNA was published, CHD decision-makers thought it was important to develop a supplemental local Cincinnati Community Health Assessment (CHA) focusing more narrowly on the City of Cincinnati to determine the specific needs of Cincinnati residents. As you will find in later sections of this report, the City of Cincinnati varies greatly in demographics, social determinants of health, risk and preventive factors, and health outcomes from Hamilton County and the Greater Cincinnati Region. Thus, a local CHA was considered imperative to identify the needs of the local community.

A variety of tools were used to create CHD's 2017 Cincinnati CHA. All analyses were conducted with the results of earlier community engagement and feedback from collaborative partners in mind.

Definitions

The following definitions were used for the Cincinnati CHA. Unless otherwise noted, each definition comes from PHAB's Acronyms and Glossary of Terms (PHAB, 2013).

- *Primary data:* data observed or collected from original sources, ranging from more scientifically rigorous approaches such as randomized control trials to less rigorous approaches such as case studies.
- *Qualitative analysis:* Methods for gathering qualitative data include document reviews, interviews, focus groups, case studies, and observation. Analyses of

qualitative data include examining, comparing and contrasting, and interpreting patterns; OR

Analysis will likely include the identification of themes, coding, clustering similar data, and reducing data to meaningful and important points, such as in grounded theory-building or other approaches to qualitative analysis (CDC).

- *Qualitative data:* data concerning information that is difficult to measure, count or express in numerical terms.
- *Quantitative analysis:* Analysis of quantitative data involves statistical analysis, from basic descriptive statistics to complex analyses (CDC).
- *Quantitative data:* data concerning information that can be expressed in numerical terms, counted, or compared on a scale.
- *Secondary data:* data which have been collected in the past, collected by other parties, or result from combining data or information from existing sources.

Data Sources

Several criteria were applied to select relevant data sources for the 2017 CHA update, such as the following:

- *Geographic Scope:* Data available for Cincinnati neighborhoods or zip codes were preferentially selected; when unavailable, data for Hamilton County or the Greater Cincinnati region was selected if the topic area was deemed crucial to the report;
- *Time Scope:* Data sources with more than one data point (five years preferred) were selected in order to be able to establish trends;
- *Comparability:* Data sources with measures that could be compared to county/ state/national rates were preferentially selected to give context;
- *Quality:* Data sets that were collected with rigorous methodologies were preferentially selected.

For the 2017 CHA update, the following secondary data sets and sources were used:

- Bureau of Labor Statistics
- Centers for Disease Control (CDC)—Behavioral Risk Factor Surveillance Survey (BRFSS) including projections from the 500 Cities Project
- Centers for Disease Control (CDC)—National Center for Health Statistics
- Centers for Disease Control (CDC)—WONDER mortality data
- EpiCenter (syndromic surveillance web database)—injury, especially drug-related
- Interact for Health- Greater—Cincinnati Community Health Status Survey (multiple years)
- Hamilton County Public Health—Quarterly STD, HIV and Tb reports
- The Ohio Commission on Minority Health—2008 Report
- Ohio Department of Health
    - Health Indicators Warehouse (HIW)
    - Healthy Ohio

    - Ohio Disease Reporting System (ODRS)
    - STD Surveillance Division reports
- Southwest Ohio Air Quality Agency—Air Quality data
- United States Census Bureau—American Community Survey (multiple years)
- United States Census Bureau—Population 5-year Estimates
- United States Census Bureau—Small Area Income and Poverty 5-year Estimates

In addition, primary data was collected and analyzed, including:

- Expanded Community Health Status Survey—Cincinnati-specific data
- National Partnership for Action Local Conversations Survey
- Power School – Cincinnati Public Schools student database
- Reproductive Health Needs Assessment
- The Rapid Assessment for Adolescent Preventative Services (RAAPS)
- Vital records data (prior analyses of mortality and life expectancy, by neighborhood)

Description of Data Sources

- *Bureau of Labor Statistics*
  The U.S. Department of Labor's Bureau of Labor Statistics (BLS) provides various types of regional, state and local data to the general public, mainly data relating to social and economic issues.

- *Centers for Disease Control and Prevention (CDC)—Behavioral Risk Factor Surveillance System (BRFSS)*
  BRFSS is a tool to collect behavioral health risks, chronic health conditions, use of preventive services, and emerging health issues by telephone surveys from residents at a state level. BRFSS data, including Cincinnati data collected and projected as part of the 500 Cities Project, were analyzed for this report.

- *Centers for Disease Control (CDC)—National Center for Health Statistics (NCHS)*
  The CDC's National Center for Health Statistics is a national principal health statistics agency that offers data on a variety of health indicators that have significant uses for public health.

- *Centers for Disease Control and Prevention (CDC)—WONDER mortality data*
  CDC Wide-ranging Online Data for Epidemiologic Research (CDC WONDER) is an online application that publicizes various health-related data sets to the worldwide public health community. The data provided on CDC WONDER benefits users in public health research, decision making, priority setting, program evaluation, and resource allocation.

- *EpiCenter*
  EpiCenter is an electronic health monitoring system used in Ohio for syndromic surveillance. This system gathers de-identified information from hospitals, emergency departments, urgent cares and some outpatient clinics. Data on injuries, including those related to the opiate-epidemic, were analyzed and included in this report.

- *Interact for Health—Greater Cincinnati Community Health Status Survey, multiple years*
  The Greater Cincinnati Community Health Status Survey (GCCHSS) is a comprehensive report on the health of the tristate residents based on the periodic population survey distributed by Interact for Health. The survey results give organizations, agencies, policymakers, and residents the local data that can be used to display how the Greater Cincinnati region compares to the rest the country and changes in the region overtime. Oversampling and additional analyses specific to the City of Cincinnati were done in partnership with CHD for this report in 2015.
- *Health Collaborative–2016 Community Health Needs Assessment*
  Some pieces of data collected and/or analyzed for the 2016 regional CHNA by the Health Collaborative were used as secondary data for the Cincinnati CHA. Especially useful were the Community Needs Index scores (calculated using the methodology from Truven Health Analytics) that were calculated for each zip code in the 20 participating counties. This allowed data for Cincinnati neighborhoods and zip codes to be compared.
- *Health Indicators Warehouse (HIW), Ohio Department of Health*
  The Ohio Department of Health's Health Data Warehouse is a resource used to obtain current Ohio public health data.
- *Healthy Ohio, Ohio Department of Health (ODH)*
  Healthy Ohio is a data source administered by the Ohio Department of Health (ODH). One of the ODH Bureau of Health Promotion and the Office of Health Improvement and Wellness's main public health focal points is to produce strong communities to ameliorate all Ohioan's health—living disease and injury free.
- *Local Conversations Survey*
  The City of Cincinnati hosts a large community gathering periodically. In 2016, CHD collected primary data at the event, about perceptions of health issues, needs and priorities and CHD's role in meeting these. See Appendix A for the 2016 discussion questions instrument.
- *Ohio Department of Health−Ohio Disease Reporting System (ODRS)*
  ODRS is an electronic system used to conduct surveillance of mandated disease reporting, as well as to investigate and mitigate cases of disease and outbreaks. Surveillance data for multiple communicable diseases and years were analyzed for this report.
- *Ohio Department of Health−STD Surveillance Division reports*
  The STD Surveillance Division issues reports on various sexually-transmitted infections. Data were taken from this source to showcase trends in Chlamydia, Gonorrhea, HIV and Syphilis.
- *Power School*
  The Cincinnati Health Department's School and Adolescent Health Division collects health information about students using the electronic platform, Power School. CHD collected and analyzed data on student weight (BMI), dental health and immunization status for this report.

- *Rapid Assessment for Adolescent Preventative Services (RAAPS)*
  RAAPS is an age-specific comprehensive risk assessment used to identify risk factors that impact youth health, well-being, and academic success, developed in partnership with the American Public Health Association (APHA). In January 2016, the RAAPS was administered at a Cincinnati high school to gather data about adolescent health and wellness, with a focus on mental health.
- *Reproductive Health Needs Assessment*
  CHD conducted a Reproductive Health Needs Assessment in 2016-2017 to investigate the reproductive health attitudes and behaviors of those living in the Cincinnati area. We surveyed a diverse sample to capture the perspectives of those who are likely to use the Cincinnati Health Department for their reproductive health needs.
- *Southwest Ohio Air Quality Agency*
  The Southwest Ohio Air Quality Agency monitors air quality and regulates industrial air emissions for counties in Southwest Ohio (such as Butler, Clermont, Clinton, Hamilton, and Warren). The Agency provides real-time air quality data, pollen and mold data, and outdoor air-related resources and information. The City of Cincinnati contracts with the Southwest Ohio Air Quality Agency for air quality monitoring.
- *United States Census Bureau—American Community Survey (ACS)*
  The U.S. Census Bureau's American Community Survey (ACS) is an annual portrait of American communities. The survey allows communities and local officials to discover the population changes through year to year and aggregated survey data. This survey provides population, demographics, and housing unit estimates.
- *United States Census—Population Estimates*
  The U.S. Census Bureau's Population Estimates Program (PEP) creates estimates of the population for the United States and U.S. territories', states, counties, cities, and townships. PEP develops data on births, deaths, and relocation yearly to evaluate population adjustments.
- *United States Census—Small Area Income and Poverty Estimates*
  The U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program distributes year by year estimates of U.S. states and counties income, poverty, and the number of children living in poverty.
- *The Ohio Commission on Minority Health's 2008 Report*
  The Ohio Commission on Minority Health provides resources based on the documentation of the needs and interest of the community.

Limitations and Challenges

The most persistent methodological limitation and challenge was the degree of lag time from when data were collected to the time they became available for analysis. This report contains the most recent data available at the time of our analysis. Maternal health, birth outcome and health center preventive and wellness information is usually available within

three years of collection. A secondary limitation is the fact that many data sources do not provide small geographic resolution (e.g. smaller than a county), so fewer data sources are available at the city-level than at larger areas.

Dissemination and Feedback

Community and stakeholder feedback is an important part of the development of a CHA. Once preliminary Cincinnati CHA findings were ready for presentation (in November, 2017), CHD requested time on the agendas of neighborhood Community Council meetings to present priority findings and obtain feedback from residents. The City of Cincinnati supports 49 Community Councils. CHD requested to attend the meetings of those groups scheduled to convene in late November through mid-December. Two Community Councils agreed to have CHD attend, present and receive feedback, Lower Price Hill and Pendleton. Both of these neighborhoods are within zip codes with a high Community Need Index, indicating social and economic obstacles to health and poorer health outcomes are common.

Cincinnati CHA findings were also presented to the Cincinnati Board of Health at the December 12, 2017 meeting. BOH meetings are advertised and open to the community and are televised on cable television. Likewise, CHA data were presented at the December meeting of the Creating Health Communities Coalition, and stakeholder feedback was obtained.

Finally, the Cincinnati CHA findings were posted on the CHD website: https://www.cincinnati-oh.gov/health/reports-publications/, and on CHD's Facebook page, with links to facilitate obtaining community feedback.

Looking Ahead

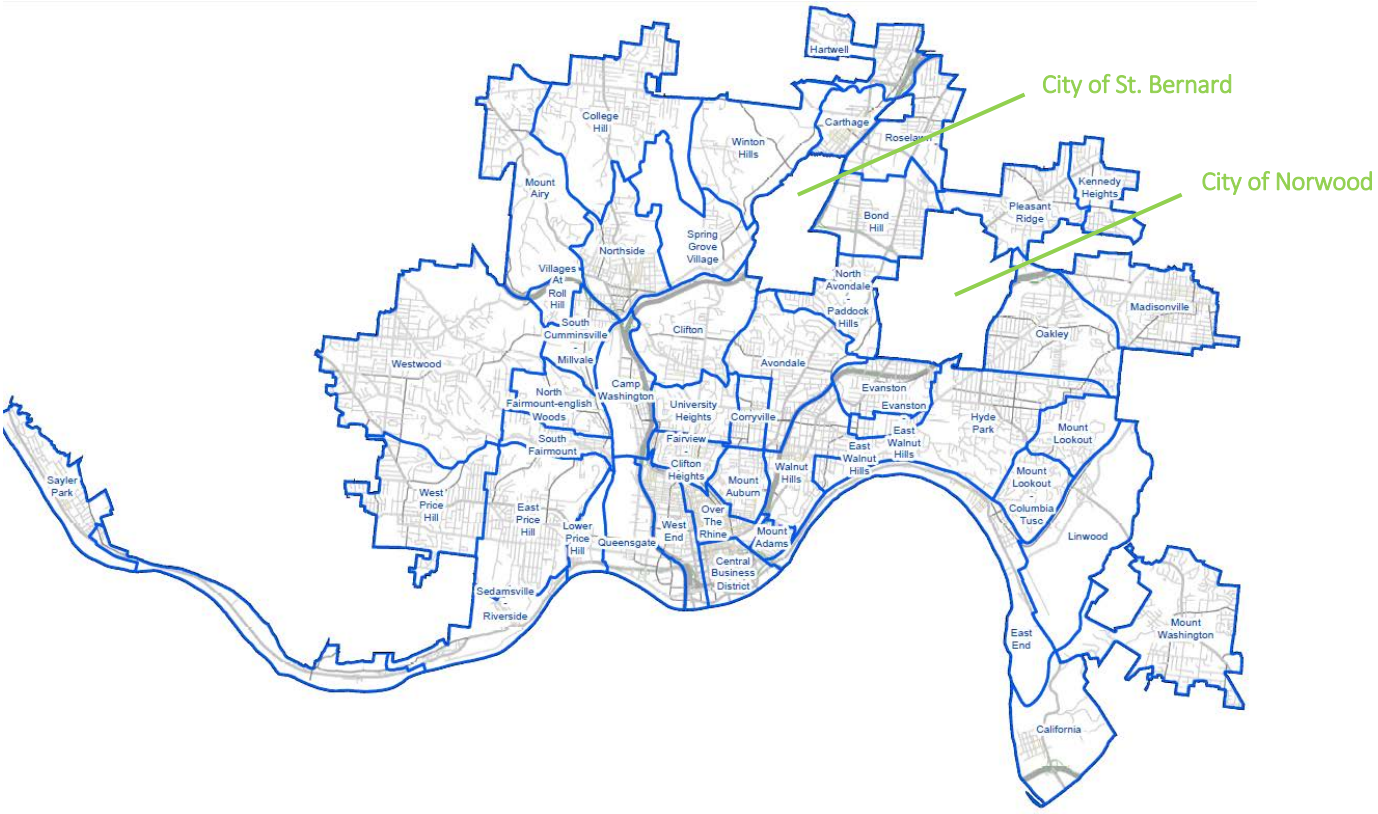
In the future, we will update the Cincinnati CHA every three years and optimally annually. To determine the areas to be updated or added, CHD's Epidemiology Committee will discuss community and program feedback as well as new (or updated) data sources. The CHD senior leadership team will review and approve the plan for the CHA update.

COMMUNITIES AND DEMOGRAPHICS

Neighborhoods

The City of Cincinnati is a vibrant city of 297,397 persons, and 52 distinct neighborhoods (see Figure 1) within its 79.5 square miles. Many of these communities have their own neighborhood councils made up of residents and volunteers. The City was first settled by European immigrants in 1788, and was incorporated in 1819 (Wikipedia).

FIGURE 1. MAP OF CINCINNATI NEIGHBORHOODS



Within the City boundaries lie two separate municipalities, the cities of St. Bernard and Norwood. Cincinnati is located within Hamilton County; Kentucky lies across the Ohio River to the south. Three major interstate highways go through Cincinnati; I-75 runs north to south; I-71 runs northeast to south; I-74 begins in Cincinnati and runs northwest through Indiana. The Greater Cincinnati area includes portions of Indiana, Kentucky and Ohio. In 2010, the Metropolitan Statistical Area of Cincinnati-Middletown, OH-KY-IN Metro Area had a population of 2,130,151 (US Census Bureau, 2010 Decennial Census, Table DP-1).

Demographic Profile

TABLE 1. GENERAL DEMOGRAPHICS, 2011-2015

Subject	Cincinnati City		Hamilton County		Ohio	
	Number	Percent	Number	Percent	Number	Percent
TOTAL POPULATION	297,397		804,194		11,575,977	
GENDER						
Male	141,208	47.5%	386,561	48.1%	5,662,893	48.9%
Female	156,189	52.5%	417,633	51.9%	5,913,084	51.1%
AGE						
Median age (years)	32.5		37.0		39.2	
0-19 years	77,362	26.0%	210,042	26.1%	2,973,542	25.7%
20-64 years	186,268	62.6%	482,451	60%	6,855,154	59.2%
65 years and over	33,767	11.4%	111,701	13.9%	1,747,2841	15.1%
RACE*						
White	159,365	53.6%	570,448	70.9%	9,799,302	84.7%
Black or African American	133,775	45.0%	219,200	27.3%	1,585,347	13.7%
American Indian and Alaska Native	2,653	0.9%	5,392	0.7%	96,544	0.8%
Asian	7,295	2.5%	21,876	2.7%	269,614	2.3%
Native Hawaiian and Other Pacific Islander	332	0.1%	1,169	0.1%	10,872	0.1%
Some other race	3,390	1.1%	7,226	0.9%	123,682	1.1%
ETHNICITY*						
Hispanic or Latino (of any race)	8,786	3.0%	22,613	2.8%	390,970	3.4%
Not Hispanic or Latino	288,611	97.0%	781,581	97.2%	11,185,007	96.6%
FOREIGN BORN - TOTAL	15,564	5.2%	40,123	5.0%	476,577	4.1%
Europe	2,411	15.5%	7,187	17.9%	111,330	23.4%
Asia	5,625	36.1%	15,888	39.6%	194,404	40.8%
Africa	3,319	21.3%	6,761	16.9%	58,359	12.2%
Oceania	83	0.5%	225	0.6%	2,327	0.5%
Latin America	3,680	23.6%	8,989	22.4%	95,303	20%
North America	446	2.9%	1,073	2.7%	14,854	3.1%
LANGUAGE (population 5 years and over)						
Speak only English	255,544	92.6%	698,776	93.1%	10,150,246	93.3%
Speak English "less than well"#	7,678	2.8%	19,162	2.6%	259,859	2.4%
Speak Spanish or Spanish Creole	3,163	1.1%	7,7879	1.0%	87,885	0.80%
Speak an African language	1,019	0.4%	1,763	0.2%	13,892	0.10%
Speak French (including Patois, Cajun)	800	0.3%	1,296	0.2%	5,897	0.10%
Speak Chinese	698	0.3%	1,374	0.2%	22,356	0.20%
Speak Arabic	486	0.2%	704	0.1%	14,223	0.10%
Non-English speaking at home^	20,306	7.4%	51,878	6.9%	729,735	6.7%

*Persons of Hispanic/Latino ethnicity can be from any race. The US Census Bureau and the Office of Budget and Management define race and ethnicity as socially-constructed categories by which people are classified, with race relating to skin color and ethnicity relating to language and culture ((US Census Bureau, March 14, 2001, Questions and Answers for Census 2000 data on Race)).

^Speaking a language other than English at home; NOTE this does not necessarily mean that the individual cannot speak English, just that s/he does not do so at home.
#The languages listed in the table are the five most frequently spoken languages among Cincinnati residents who speak English less than well. The figures listed are the number and percentage of speakers of those languages who speak English less than well.
Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

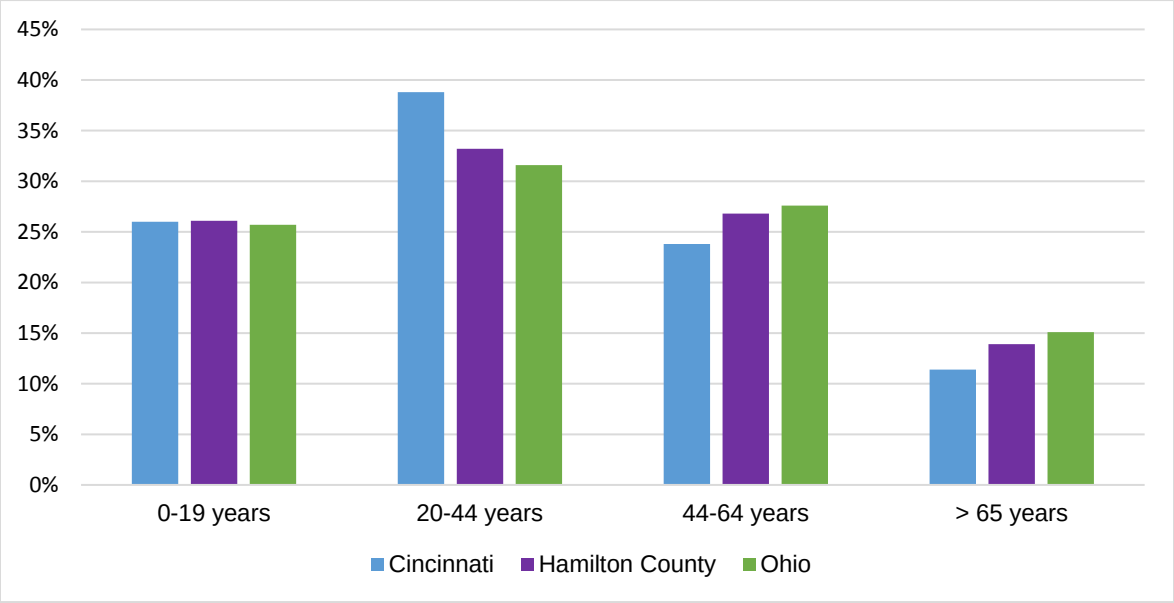
Gender

The city of Cincinnati is home to slightly more females (52%) than males (48%), a trend that is similar to both Hamilton County and the state of Ohio (Table 1).

Age

The City of Cincinnati has a slightly greater population of individuals aged 20-64 years, than Hamilton County and Ohio, (62.6%, 60% and 59.2%, respectively). Only 11.4% of Cincinnati residents are aged 65 and older, as compared to 15.1% of Ohioans (Figure 2).

FIGURE 2. AGE (YEARS) OF RESIDENTS: CINCINNATI, HAMILTON COUNTY AND OHIO, 2011-2015



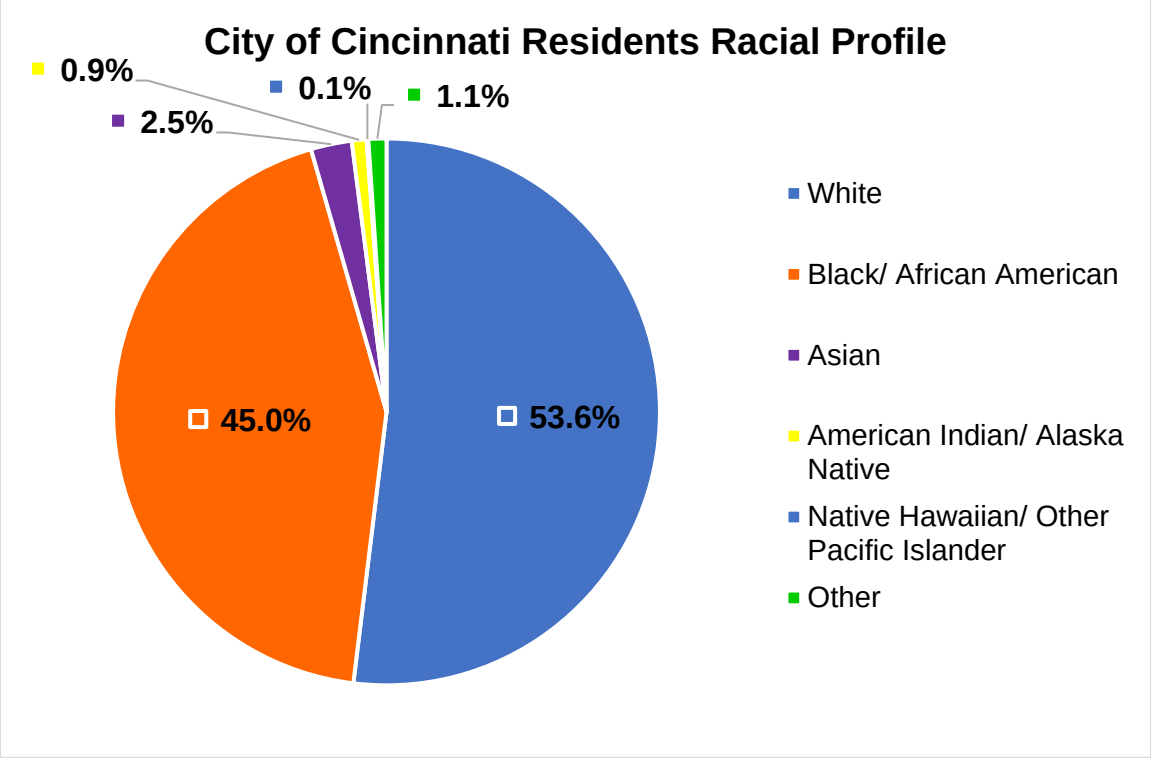
Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

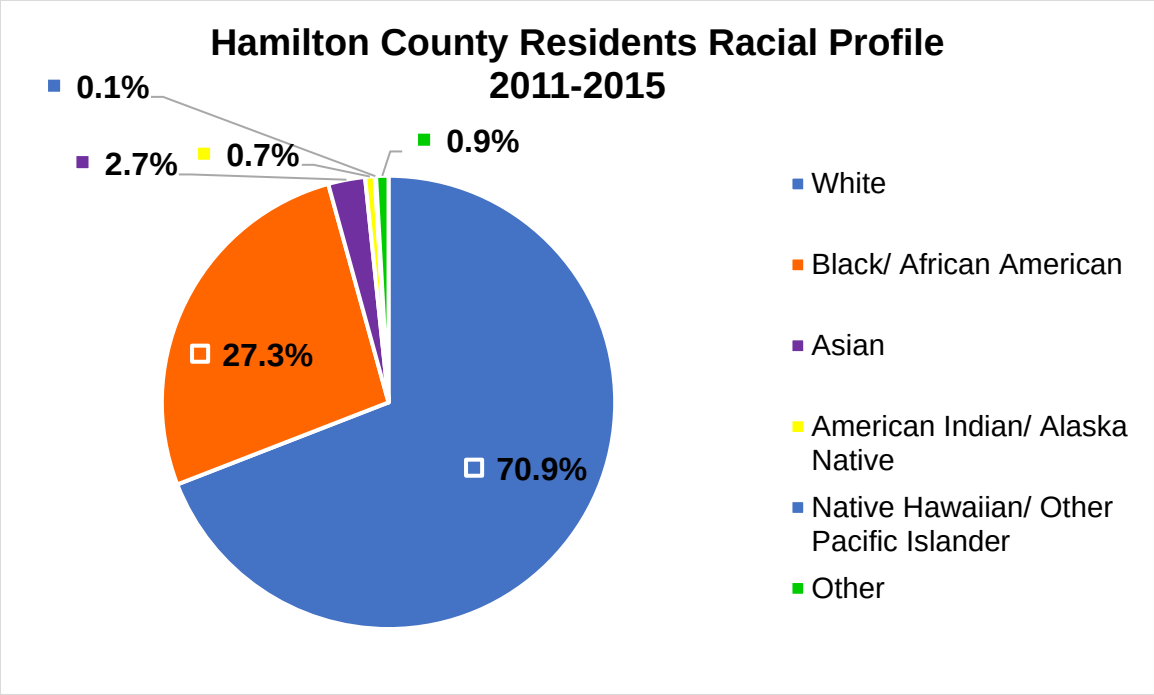
Race and Ethnicity

Both race and ethnicity are defined by the US Census Bureau as being socially-constructed categories by which people are classified, with race relating to skin color and ethnicity relating to language and culture (Marra, 2001). The City is more racially diverse than Hamilton County and the state of Ohio. Cincinnati's African American population is roughly three times the percent of African American residents in Ohio overall as a whole; just under half of the city (45.6%) self-reports as African American (Figure 3).

In 2011, The Ohio Commission on Minority Health (Cincinnati Health Department, 2011) reported that Cincinnati's racial make-up was changing. The White population was reported to be on the decline as families move to more affluent suburbs, creating a greater concentration of non-white residents in low-income, urban neighborhoods. Cincinnati's foreign-born population appears to be immigrating predominantly from Asia (34.2%), Latin America (26.2%), Africa (21.3%), and Europe (15.5%) (Table 1).

FIGURE 3. SELF-REPORTED RACIAL COMPOSITION BY JURISDICTION, 2011-2015

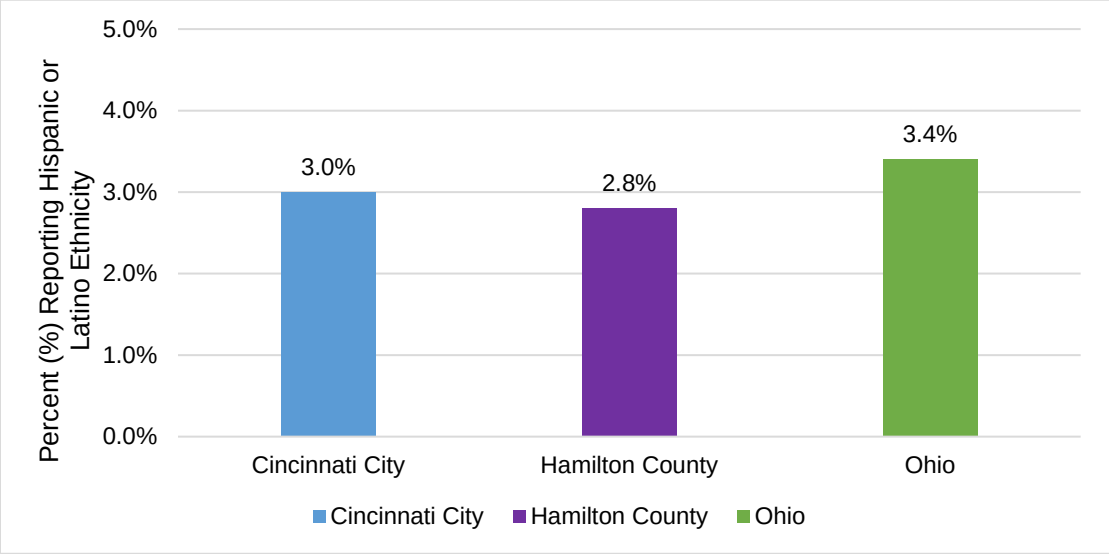




Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

However, Cincinnati has a similar ethnic composition to Hamilton County and Ohio. Approximately 3% of the Cincinnati population self-reports being Hispanic / Latino (Table 1, Figure 4).

FIGURE 4. ETHNICITY OF POPULATION BY JURISDICTION, 2011-2015



Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

SOCIAL DETERMINANTS OF HEALTH / SOCIAL AND ECONOMIC INEQUITIES AND HOW THEY IMPACT HEALTH

People living in poverty and with lower incomes live shorter lives and are more often ill, compared to those with higher incomes (Adler, 2002).This disparity has drawn attention to the remarkable sensitivity of health to the social environment. Social determinants of health are conditions in the environments in which people are born, live, learn, work, play, worship, and age, that affect a wide range of health, functioning, and quality-of-life outcomes and risks. Education, income, percentage of income spent on housing and access to transportation are common social determinants of health and well-being.

TABLE 2. SOCIAL DETERMINANTS OF HEALTH DEMOGRAPHICS (SOCIAL/ INEQUALITY/ DISPARITY INDICATORS), 2011-2015

Determinant Category	Cincinnati City	Hamilton County	State of Ohio
	Total		
	Percent		
Education (Population 18 to 24 years)	***41,168***	***79,783***	***1,102,450***
Less than high school graduate	11.6%	12.6%	14.3%
High school graduate (includes equivalency)	27.8%	31.3%	31.1%
Some college or associate's degree	45.5%	43.1%	45.2%
Bachelor's degree or higher	15.1%	13.0%	9.4%
Education (Population 25 years and over)	***190,920***	***536,866***	***7,817,508***
Less than 9th grade	3.7%	2.9%	3.1%
9th to 12th grade, no diploma	10.6%	7.6%	7.8%
High school graduate (includes equivalency)	25.9%	27.1%	34.1%
Some college, no degree	19.7%	19.6%	20.7%
Associate's degree	7.1%	7.9%	8.2%
Bachelor's degree	19.4%	21.5%	16.4%
Graduate or professional degree	13.6%	13.5%	9.7%
Percent high school graduate or higher	85.8%	89.6%	89.1%
Percent bachelor's degree or higher	33.1%	35.0%	26.1%
Income			
Median household income	$33,604	$49,013	$49,929
Median income per capita	$25,588	$30,360	$26,953
Poverty			
Individuals (All, regardless of income)			
In poverty (below Federal Poverty Line)	30.5%	18.3%	15.8 %
100-185% of Federal Poverty Line	47.8%	32.7%	31.2%
>185% of Federal Poverty Line	52.2%	67.3%	68.8%
Families (All, regardless of income)			
In poverty (below Federal Poverty Line)	24.8%	13.8%	11.5%
100-185% of Federal Poverty Line	41.3%	26.1%	24.4%

>185% of Federal Poverty Line	58.7%	73.9%	75.6%
Transportation			
No vehicle	8.2%	4.1%	3.0%
1 vehicle available	35.8%	25.0%	20.1%
2 vehicles available	37.2%	42.2%	43.1%
3 or more vehicles available	18.7%	28.7%	33.7%

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates, tables DP03, S1701, S1702

Income, Wealth and Poverty

TABLE 3. POVERTY STATUS OF INDIVIDUALS IN THE PAST 12 MONTHS, 2011-2015

Age Group	Income Category								
	< 50% of the poverty level			< 100% of the poverty level			< 125% of the poverty level		
	Cincinnati City	Hamilton County*	Ohio	Cincinnati City	Hamilton County	Ohio	Cincinnati City	Hamilton County	Ohio
<18 years	27.6%	14.6%	11.0%	45.5%	26.8%	22.8%	52.4%	32.4%	28.4%
18 to 64 years	15.3%	8.8%	7.1%	28.0%	17.0%	15.0%	33.2%	21.0%	19.0%
≥65 years	4.2%	2.9%	2.3%	14.8%	9.3%	8.0%	22.7%	14.1%	12.6%
Overall	**16.8%**	**9.4%**	**7.3%**	**30.5%**	**18.3%**	**15.8%**	**36.3%**	**22.7%**	**20.3%**

*Hamilton County data includes the City of Cincinnati.
Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Family Income and Childhood Poverty

The median household income for Cincinnati families ($33,604) is significantly less than Hamilton County families ($49,013) and Ohio families ($49,429) (Table 2). In 2015, almost one-third of Cincinnati families (30.5%) earned below the Federal Poverty Level (FPL), twice the overall Ohio poverty rate. Of concern, two out of five children under the age of 18 (45.5%) are living in families with household incomes below the FPL in Cincinnati, almost double the proportion of children living in poverty in the state of Ohio (22.8%) (Table 3).

Educational Attainment

In Table 2, we compare common social determinants of health for City of Cincinnati to that of Hamilton county and the state of Ohio.

About 14.3% of Cincinnati residents over the age of 25 years have not completed high school, compared to 11% in Ohio (Table 2). This suggests that high school dropout rates may be a concern in Cincinnati; education is known to correlate with both poverty and health. About 33% of Cincinnati residents over the age of 25 years have earned a college degree; this is slightly better than the Ohio rate of 26.1%.

Health disparities, differences in health outcomes between groups, may reflect social inequalities. According to the Centers for Disease Control and Prevention (CDC) 2011 Health Disparities and Inequalities Report, “Since the 1980s, our nation has made substantial progress in improving residents’ health and reducing health disparities, but ongoing racial/ethnic, economic and other social disparities in health are both unacceptable and correctable (Centers for Disease Control Morbidity and Mortality Weekly Report, 2011).” Throughout this report, there are highlights of health disparities within the City of Cincinnati.

Transportation and Access to Fresh Food

According to 2015 US Census reports, 8.2% of Cincinnati residents do not have access to a vehicle; this is about 2.5 times greater than the Ohio rate (3%) (Table 2). Lack of transportation can be a fundamental issue associated with access to employment opportunities and fresh food. Residents without access to a vehicle, who live more than half a mile from a grocery store, or without easy access to a metro line, may face significant challenges in gaining access to fresh and nutritious food. While Cincinnati does have a robust metro/public transit system, residents are limited to bus transportation within the city limits. Additional information on transportation and access to food can be found in the individual neighborhood snapshots developed by the Cincinnati Health Department (U.S. Census Bureau&Ohio Department of Health, Bureau of Vital Statistics, 2010).

Housing and Homelessness

According to the 2011-2015 American Community Survey 5-year estimates, the average household size for families in Cincinnati is 2.3 individuals for owner-occupied homes and 2 individuals for renter-occupied homes. Of the total housing units (162,398) in the City of Cincinnati, 133,039 are occupied of which 38.5% are owner-occupied and 61.5% are renter-occupied. The “median family income” in Cincinnati is $33,604 (Table 2). Forty five percent of renters (45%) spend 35% or more of their monthly income on housing in Cincinnati. (Note: in 2015, City of Cincinnati poverty rate was 30.5%, and the childhood poverty is now greater than 50%).

It is estimated that 25,000 people are homeless in Cincinnati each year with approximately 25% of those homeless being children (The U.S. Department of Housing and Urban Development, Office of Community Planning and Development, 2014). Homelessness and poverty are inextricably linked. Poor people are frequently unable to pay for housing, food, childcare, health care and education. Difficult choices must be made when limited resources cover only some of these necessities. Often it is housing, which absorbs a high proportion of income that must be dropped. Nationally, 16% of the homeless in the United States have severe chronic mental illness, 26% suffer from drug or alcohol abuse and 39% of the homeless are children. (Greater Cincinnati Homeless Coalition, 2017).

Health care for homeless adults and children in Cincinnati is currently provided by mobile medical vans and health centers that are a joint collaborative among area hospitals,

physicians, businesses, charities and the Cincinnati Health Department. Federal funding for housing for the poor has increased significantly in recent years. Data from 2013-2014 National Alliance to End Homelessness indicates that the majority of states have had a drop in the rate of homelessness (National Alliance to End Homelessness, 2015).

ACCESS TO HEALTH CARE AND PREVENTIVE SERVICES

Access to care is often influenced by whether or not an individual has health insurance, has transportation, and/or has the income to pay for uncovered medical costs. Persons who have a medical home—that is, a primary care physician or health clinic where they go for regular check-ups—have better access to care and medical advice when an illness first presents. This allows them to address illness before it reaches a critical stage, avoiding debilitating sickness and possible hospitalization.

Usual Source of Care/Medical Home

Having access to adequate and timely health care can greatly reduce the experience of illness and improve quality of life. Access includes the opportunity to receive recommended preventive services such as annual health exams from a primary care physician, as well as a dental exam at least once a year. Meeting these necessities is facilitated by having a regular source of care, sometimes called a "medical home," as it simplifies finding a care location. A medical home allows better continuity of care. Within our City of Cincinnati community, the Cincinnati Health Department manages 7 health centers, and 13 school based health centers 9 of which include dental services, 2 include vision services and 1 includes behavioral health services). Table 4 below provides a list of health centers in the city by zip code. These health centers serve the medical needs of children and families in the schools and community. Persons with all forms of insurance are accepted including Medicaid are accepted, as well as persons without insurance. This is an approach by which CHD improves access to care for all those in the Greater Cincinnati community.

TABLE 4. LIST OF CITY OF CINCINNATI FUNDED AND MANAGED HEALTH CENTERS PROVIDING SERVICES

Health Center Title	Services Provided	Health Center Zip Code
Ambrose H. Clement Health Center	Medical	45229
Braxton F. Cann Memorial Medical Center	Medical	45227
Citylink Center Health Care	Dental/ Vision	45214
Crest Smile Shoppe	Dental	45229
Elm Street Health Center	Medical/ Dental	45202
Millvale at Hopple Street Health Center	Medical/ Dental	45225
Northside Health Center	Medical/ Dental	45223
Price Hill Health Center	Medical/ Dental	45204
Walnut Street Health Center	Medical	45202
Aiken High School School-Based Health Center (SBHC)	Medical	45224
Academy of World Languages SBHC	Medical	45207
Ethel M. Taylor Academy SBHC	Medical	45225

The Children's Home	Medical/Behavioral Health	45227
John P. Parker Health Center	Medical	45227
Mt. Airy SBHC	Medical	45239
Oyler SBHC	Medical/ Dental/Vision	45204
Riverview East SBHC	Medical	45226
Roll Hill Academy SBHC	Medical	45225
Roberts Paideia Academy SBHC	Medical	45214
Taft High SBHC	Medical	45214
Western Hills & Dater High SBHC	Medical/ Dental	45238
Withrow University High SBHC	Medical/ Dental	45208

Source: Cincinnati Health Department, Division of Clinical Services and Population Health

Access to Care: Medical, Dental, and Vision

Adequate health insurance coverage is essential for good health to maintain routine check-ups and preventative medicine. Lack of health insurance is often a barrier to establishing a medical home. The percentage of medically uninsured residents in Cincinnati (16.8%) is higher than the uninsured rate for Hamilton County (13.5%) and the state of Ohio (13.7%) (Table 5).

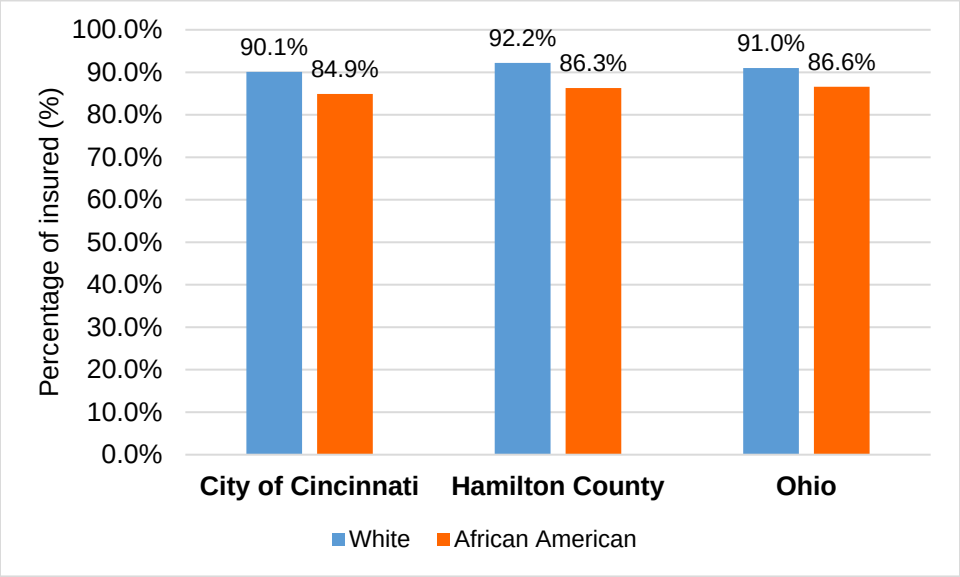
TABLE 5. PERCENT OF ADULTS AGED 18-64 WITH AND WITHOUT HEALTH INSURANCE BY REGION, 2015

Health Insurance Status	Cincinnati (N=297,397)	Hamilton County (N=804,194)	Ohio (N=11,575,977)
Uninsured/do not know	16.8%	13.5%	13.7%
Insured	83.2%	86.5%	86.3%

Source: U.S. Census Bureau, 2015 American Community Survey, 5-Year Estimates

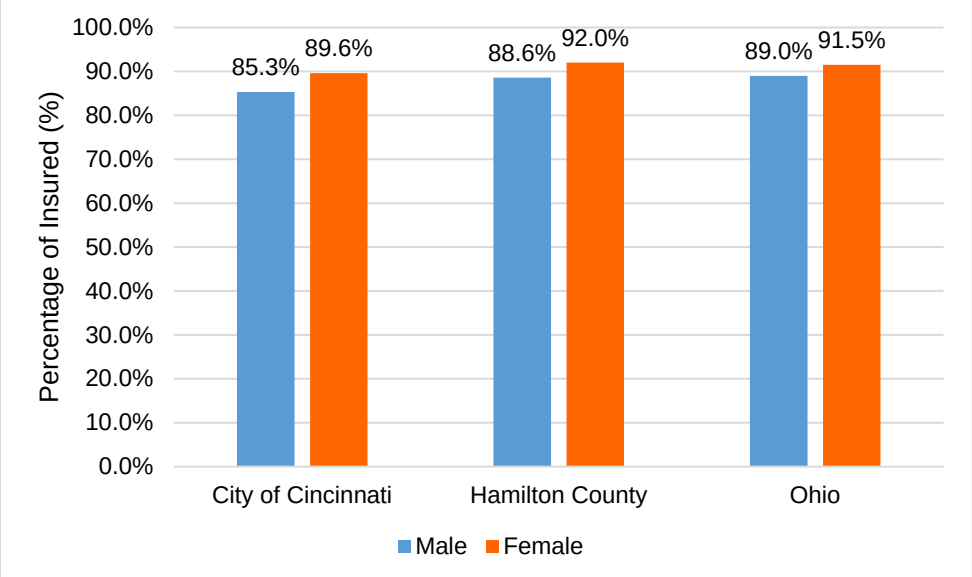
Examining racial disparities in insurance coverage and gender differences, African Americans are slightly less likely to have health insurance than Whites, and males are less likely to be insured than females. This difference is consistent throughout the City of Cincinnati, Hamilton County and overall in Ohio (Figures 5 and 6).

FIGURE 5. PERCENTAGE OF ADULTS WITH HEALTH INSURANCE BY RACE, 2011-2015



Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

FIGURE 6. PERCENTAGE OF ADULTS WITH HEALTH INSURANCE BY GENDER, 2011-2015



Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

There is limited information available on percent of adults with dental health insurance coverage. Rates of dental coverage are generally much lower than medical insurance rates since dental insurance is typically excluded from private health insurance coverage

and must be purchased separately (Khazan, 2014). According to the Ohio Family Health Survey, in 2008, the estimated percentage of Ohio adults 18 to 64 years of age that were uninsured for dental care was 36.2% (Table 6) (Ohio Department of Mental Health, Office of Research and Evaluation, 2008). This is more than three times the percentage of adults in this age range without medical insurance coverage (Ohio Department of Health Oral Health Section, 2014). For adults 65 years and older, the uninsured (dental) rate is significantly higher, at 60.9% (Health Management Associates (HMA) interview, 2015). Medicare, the federal insurance program for adults ages 65 and older, does not include dental benefits.

Fewer children lack dental insurance (16.6%), likely because dental coverage is included in Medicaid and CHIP insurance coverage for children. Dental coverage for children is also included in the "essential health benefits" of insurance plans available in federal and state health exchanges created under the Affordable Care Act. "Dental Coverage in the Marketplace." Note that the federal government determined that within the exchanges, dental health benefits need only be offered, but parents were not required to purchase it (HealthCare.gov).

States have the option of including dental coverage in the scope of covered services for adults on Medicaid. The Ohio Medicaid program provides dental coverage for adults. In 2014, Ohio also expanded Medicaid under the provisions of the Affordable Care Act to adults earning incomes up to 138 percent below FPL. Therefore, current uninsured rates of dental coverage for adults' ages 18 to 64 years of age should be significantly lower than the last survey results in 2008.

Oral Health Access, Status and Needs

The same socio-economic indicators associated with poor medical health such as high rates of poverty, lack of insurance, low educational attainment are also associated with poor oral health status and lack of access to needed dental care for both children and adults. Access to dental services varies considerably by age, in large part, due to differences in historical dental coverage policies of public programs, such as Medicaid and Medicare, and those of private insurance. Table 7, found below, shows three measures of dental care access from 2012.

TABLE 6. ADULT ORAL HEALTH STATUS AND FORGOING NEEDED DENTAL CARE, 2013

Categories:	Mouth and teeth in fair or poor condition (Yes)	Delayed getting dental care in past year (Yes)
Region/Neighborhood		
City of Cincinnati	27.6%	36.2%
Avondale[1]	30.0%	50.0%
Madisonville[2]	31.7%	33.9%
Price Hill[2]	34.1%	50.8%
Hamilton County Suburbs	22.6%	27.3%
Greater Cincinnati	24.0%	32.3%
Poverty		
100% and below FPL	51.1%	53.7%
Between 100% and 200% FPL	27.6%	40.8%
Above 200% FPL	13.5%	24.5%
General Health Status		
Fair/poor	53.5%	51.4%
Good	25.9%	32.4%
Excellent/very good	12.4%	25.5%
Education		
Less than high school	46.9%	39.5%
High school graduate	29.4%	37.6%
Some college	16.0%	34.1%
College graduate	9.5%	19.5%
Health Insurance Status		
Uninsured	43.3%	50.1%
Do not know if insured	20.5%	29.1%
Race Ethnicity		
African American	32.2%	38.0%
White Appalachian	31.0%	34.3%
White non-Appalachian	19.4%	29.7%

1 Statistics for Avondale are from an earlier community survey conducted in 2010.
2 Statistics for Madisonville, Price Hill (including West, East and Lower Price Hill) and Walnut Hills were based on over-samples of the community health status survey conducted in 2013.
Source: Interact for Health, 2014. Greater Cincinnati Community Health Status Survey, Fall 2013.

Receipt of dental care varies greatly by age. Children are the most likely age group to have had a dental visit in the last year (75%). Despite this fact, 12%—or more than 22,000 children under age 18 years in Hamilton County—have never visited a dentist (Table 7). In Hamilton County, 15.1% of adults between 18-64 years of age did not receive needed dental care (Table 7).

TABLE 7. ORAL HEALTH CARE ACCESS BY AGE IN HAMILTON COUNTY, 2012

Access Indicator	Age Group		
	< 18 Years	18-64 Years	65+ Years
Had a dental visit in the last year	74.7%	60.0%	56.4%
Have never visited a dentist	12.1%	N/A	N/A
Could not receive needed dental care	2.6%	15.1%	4.4%

Source: Ohio Oral Health Surveillance System, 2012

GENERAL HEALTH STATUS

Overall Status

The World Health Organization defines health as the state of complete physical, mental and social well-being and not merely the absence of disease or illness. This section presents data on self-reported general health status for residents of the City of Cincinnati, compared to Hamilton County and Ohio.

In 2013, the general health status most commonly self-reported by individuals in Cincinnati, Hamilton County and Ohio is excellent or very good health (47.7%, 48.6% and 50.3%, respectively) (Table 8). The percentage of individuals who reported fair or poor general health has decreased since 2010 (Table 9).

As seen in Table 9, the average life expectancy for individuals in Cincinnati is 76.7 years, which is slightly lower than the life expectancy for Ohio overall, 77.5 years.

TABLE 8. GENERAL HEALTH STATUS BY JURISDICTION, 2013

General Health status	Cincinnati (N=297,117)	Hamilton County (N=803,272)	Ohio (N=11,560,380)
Fair/poor	19.4%	18.9%	18.0%
Good	32.9%	32.5%	31.7%
Excellent/very good	47.7%	48.6%	50.3%

Source: 2013 Ohio Behavioral Risk Factor Surveillance System, state level data

TABLE 9. GENERAL HEALTH STATUS, 2010

Indicator	Cincinnati	Hamilton County	Ohio
Life Expectancy at birth (years)	76.7		77.5
Self-Reported general health is fair or poor (%)	25.4	13.2	16.1
Limited in any way in any activities (%)	14.4	8.2	--
Had 14+ bad mental health days in the past 30 days (%)	15	11.1	--
Days mental health not good in the past 30 days (mean)	4.9	3.3	--
Had 14+ bad physical health days in the past 30 days (%)	19.4	9.9	--
Days physical health not good in the past 30 days (mean)	6.1	3.9	--
Does not meet fruit & vegetable nutrition requirements (%)	77.4	71.3	79

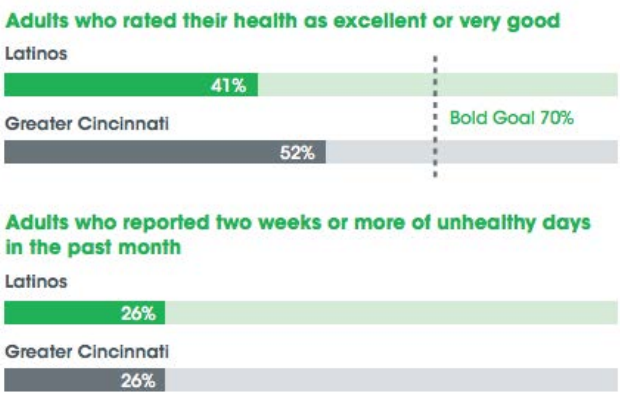
Notes:
Except for life expectancy, the general health status indicators are for adults age 18+ years
Data year: life expectancy, 2001-2009. General health status, 2010
Sources: Death certificates, 2001-2009; the Greater Cincinnati Community Health Status Survey, 2010; the Ohio Behavioral Risk Factor Surveillance System (BRFSS), 2010 (state level data)

Minority Health Status

The 2013 Greater Cincinnati Community Health Status Survey (GCCHSS) analysis of health data from Latinos in our community found that only 4 in 10 Latino adults described their health as excellent or very good. This is less than among all adults in Greater Cincinnati (Figure 7).

Nearly 3 in 10 Latino adults ate the recommended daily amount of both fruits and vegetables, better than results reported in the region. This is likely related to the fact that nearly 9 in 10 Latino adults agreed that it was easy to buy healthy foods in their neighborhood. Latino adults are more likely to be uninsured and more likely to report that someone in their household had not received a doctor's care because they needed the money for food, clothing or to pay for housing. Also, fewer Latino adults had a usual and appropriate source of health care, and fewer had received a routine checkup in the past year than results reported among all adults in the region.

FIGURE 7. ADULTS OF GREATER CINCINNATI HEALTH STATUS SELF-REPORT, 2013



Source: Greater Cincinnati Community Health Status Survey (GCCHSS) 2013

Other Greater Cincinnati Community Health Survey results (2013) indicated that:

- **Community support:** About 7 in 10 Latino adults said that people can depend on each other in their community, lower than the 8 in 10 adults in the region who said this.
- **Alcohol:** The percentage of self-reported heavy drinkers and binge drinkers is lower among Latino adults compared to adults overall in the region.
- **Oral health:** About 6 in 10 Latino adults said the condition of their mouth and teeth, including false teeth and dentures, were very good or good. This is worse than among all adults in the region. Nearly 4 in 10 Latino adults said there had been a time in the past 12 months when they had needed dental care but had not received care or delayed getting care, similar to all adults in the region.

Chronic diseases: Percentages for asthma and chronic lung disease in adults were higher than the percentages for the region. The rate for high blood pressure was higher than in the region.

DISPARITIES IN GENERAL HEALTH STATUS

Disability

Non-institutionalized individuals living with a disability (hearing, vision or cognitive) are less likely to report good or excellent health than those not living with a disability. Those who are disabled can require additional resources and care than the general population.

Among Cincinnati residents who do not live in an institutional setting, (including a long-term care facility, a correctional facility, a dormitory, or the armed forces) nearly 42,000 (14.3%) live with a type of disability that is tracked by the US Census Bureau (US Census Bureau 2016, 2011-2015 5-year ACS estimates, table S1810). The percentage of City residents who live with a disability increases with age, from 0.6% of infants and young children to 51.8% of seniors aged 75 or older (Table 10). In addition, higher percentages of individuals who self-identify as American Indian/Alaska Native, Black/African American and Native Hawaiian/Other Pacific Islander report having some sort of disability than do individuals who self-identify as Asian, White or Some other race. Overall, there is no meaningful difference in the likelihood of living with a disability by gender.

TABLE 10. PERCENTAGE OF RESIDENTS WHO SELF REPORT LIVING WITH A DISABILITY BY DEMOGRAPHIC CATEGORY AND REGION, 2011-2015

Category	Cincinnati City	Hamilton County	Ohio
OVERALL	14.3%	12.5%	13.6%
GENDER			
Male	13.8%	11.8%	13.4%
Female	14.7%	13.2%	13.8%
AGE			
0-4 years	0.6%	0.6%	0.8%
5-17 years	8.3%	6.5%	6.4%
18-34 years	6.2%	5.9%	6.8%
35-64	19.6%	14.1%	14.4%
65-74 years	27.3%	22.4%	22.5%
75 years and over	51.8%	47.2%	48.5%
RACE*			
American Indian and Alaska Native	20.3%	25.4%	25.1%
Asian	3.9%	5.6%	5.5%
Black or African American	16.9%	15%	15.7%
Native Hawaiian and Other Pacific Islander	19.4%	6.9%	9.8%
White	12.7%	11.9%	13.5%
Some other race	7.7%	9.6%	9.1%

Two or more races	13.0%	11%	12.7%
ETHNICITY*			
Hispanic or Latino (of any race)	5.8%	6%	10.1%
Not Hispanic or Latino	13%	12.1%	13.6%

*Persons of Hispanic/Latino ethnicity can be from any race. The US Census Bureau and the Office of Budget and Management define race and ethnicity as socially-constructed categories by which people are classified, with race relating to skin color and ethnicity relating to language and culture ((US Census Bureau, March 14, 2001, Questions and Answers for Census 2000 data on Race)).

Source: US Census Bureau 2016, 2011-2015 5-year ACS estimates, table S1810

The most common reported type of disability among Cincinnati residents is a cognitive difficulty, closely followed by an independent living difficulty (Table 11).

TABLE 11. TYPE OF DISABILITY AMONG CINCINNATI RESIDENTS, 2011-2015

Category	Number	Percentage
Ambulatory difficulty	22,137	8.1%
Cognitive difficulty	17,614	6.5%
Independent living difficulty	14,529	6.4%
Vision difficulty	8,451	2.9%
Self-care difficulty	7,975	2.9%
Hearing difficulty	8,263	2.8%
TOTAL with one or more disability	**41,909**	**14.3%**

Source: US Census Bureau 2016, 2011-2015 5-year ACS estimates, table S1810. * Individual totals are not unique cases.

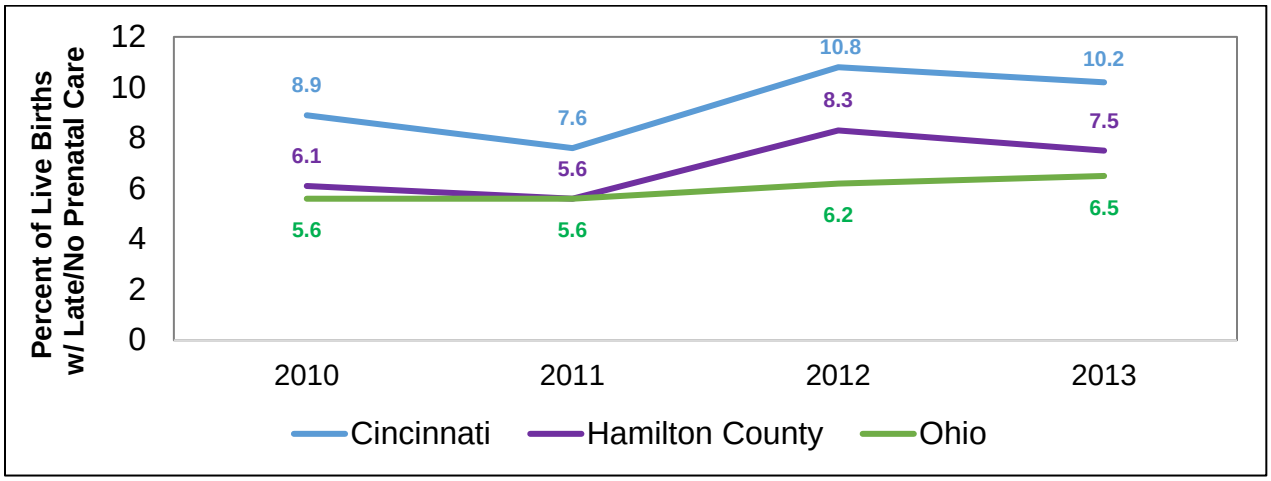
PERINATAL HEALTH

The perinatal period refers to the time immediately before and after birth. This section will focus on outcomes of pregnancy with regard to accessing prenatal care, pregnancy outcomes, and fetal and infant deaths.

Prenatal Care

Early enrollment into prenatal care can facilitate a relationship between the physician and the patient. This will help maintain the patient's health, and can help reduce the risk of premature birth. Similarly, participating in the Women Infant and Children (WIC) Program during pregnancy can provide low-income mothers with access to nutritional food, as well as health services and nutritional counseling. In a study conducted by the Cincinnati Health Department, WIC participation in Hamilton County was shown to improve pregnancy outcomes overall, as well as reduce prematurity, infant mortality and racial disparities in mortality. The percentage of live births for which the mother received late or no prenatal care is higher in Cincinnati than in Hamilton County or Ohio (Figure 8).

FIGURE 8. PERCENT OF LIVE BIRTHS WITH MOTHERS EXPERIENCING LATE/NO PRENATAL CARE, 2010-2013



Source: National Center for Health Statistics, final mortality data. Retrieved from www.marchofdimes.org/peristats

Fetal Deaths

According to the Centers for Disease Control and Prevention (CDC), fetal mortality differs from infant mortality in that a spontaneous intrauterine death of a fetus occurs prior to delivery while the latter is the death of a live born baby before completing his/her first year of life (MacDorman MF & Gregory ECW, 2015; CDC, 2016). An analysis of fetal deaths in Cincinnati was conducted from vital statistics records from 2015. The following is the descriptive data from that analysis (Table 12).

TABLE 12. MATERNAL AND FETAL DEATH CHARACTERISTICS IN CINCINNATI, 2015

Maternal Characteristics		*N*/Mean (% or Range)
Age (years)		29 (14-42)
	≥35 years (*n*)	6 (21.4)
African American[1] (*n*)		29 (51.8)
Education (*n*)		
	8th Grade or Less	5 (8.9)
	9th-12th Grade, No Diploma	4 (7.1)
	High School Graduate or Equivalent GED	15 (26.8)
	Some College	14 (25.0)
	Associate's Degree	3 (5.4)
	Bachelor's Degree	10 (17.9)
	Master's Degree	5 (8.9)
Marital Status (*n*)		
	Single	35 (62.5)
	Married	21 (37.5)
Body Mass Index (BMI)[2] (mean)		28.8 (18.9-47.9)
	Normal (18.5-24.9) (*n*)	22 (42.3)
	Overweight (25.0-29.9) (*n*)	11 (21.2)
	Obese class I (30.0-34.9) (*n*)	10 (19.2)
	Obese class II (35.0-39.9) (*n*)	1 (2.0)
	Obese class III (≥40.0) (*n*)	8 (15.4)
Smoked During Pregnancy (*n*)		8 (14.3)
Number of Prenatal Visits[3] (*n*)		7 (1-20)
Had Previous Preterm Birth[4] (*n*)		10 (18.5)
Received WIC [5] (*n*)		24 (45.3)
Inter-Outcome Interval (weeks)[6] (mean)		227.75 (28-667)
	<78 (18 mo) (*n*)	6 (37.5)
	>100 (23 mo) (*n*)	10 (62.5)
Fetal Characteristics (*n*)		
Male		30 (53.6)
Gestational Age at Delivery (weeks)		27 (20-41)
	<23	21 (37.5)
	<32	41 (73.2)
	<37	49 (87.5)
	≥37	7 (12.5)
Weight (g)[7] (mean)		956.1 (65-4491)
Autopsy Performed (*n*)		5 (8.9)

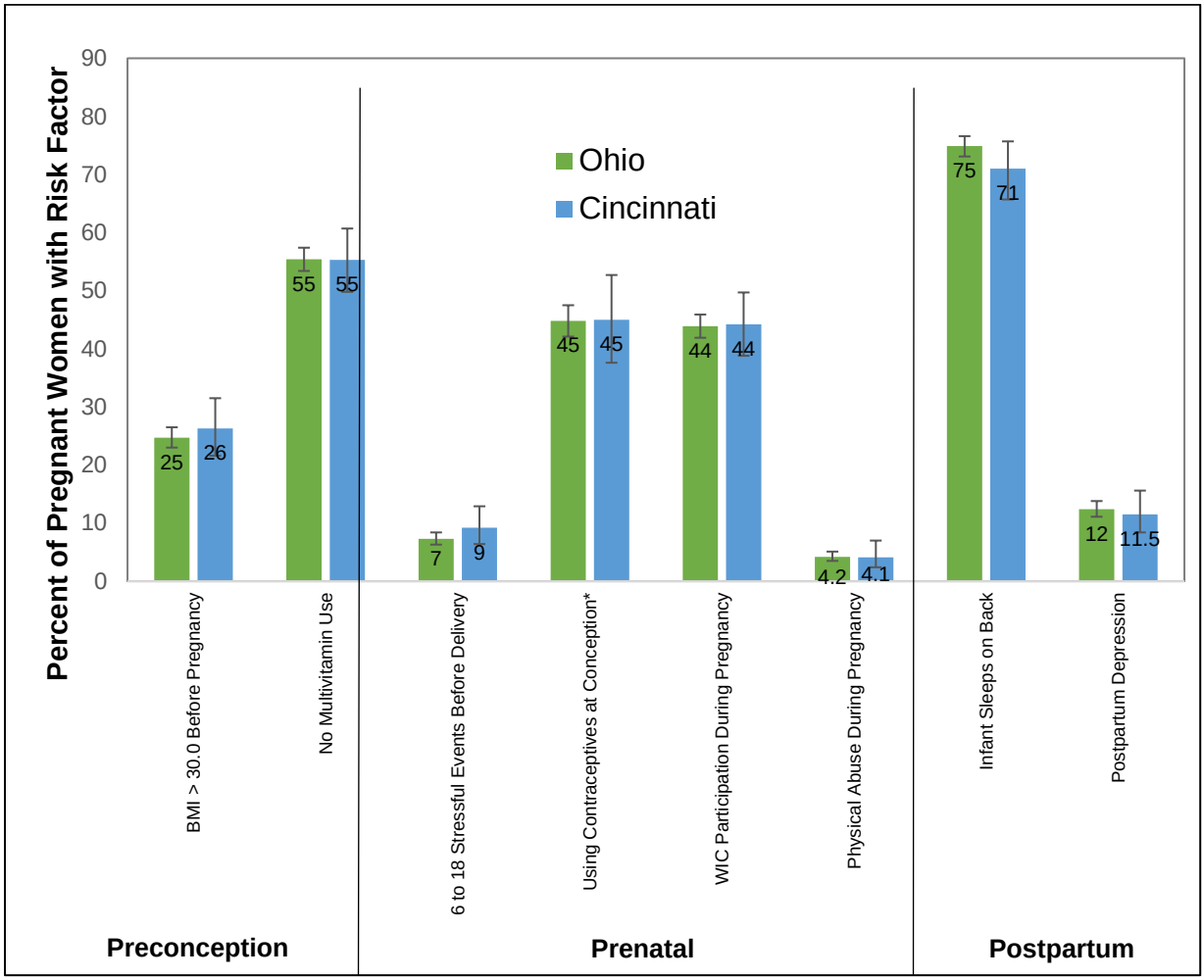
[1]Other races include White, Hispanic/Latino, Mali, Ethiopian, and mixed African American and Indian; [2]*N*=52; [3]*N*=47; [4]*N*=54; [5]WIC=Women, Infants, and Children, *N*=53; [6]*N*=16; [7]*N*=54.

Source: Cincinnati Health Department, Vital Statistics

Pregnancy Risk Factors and Outcomes

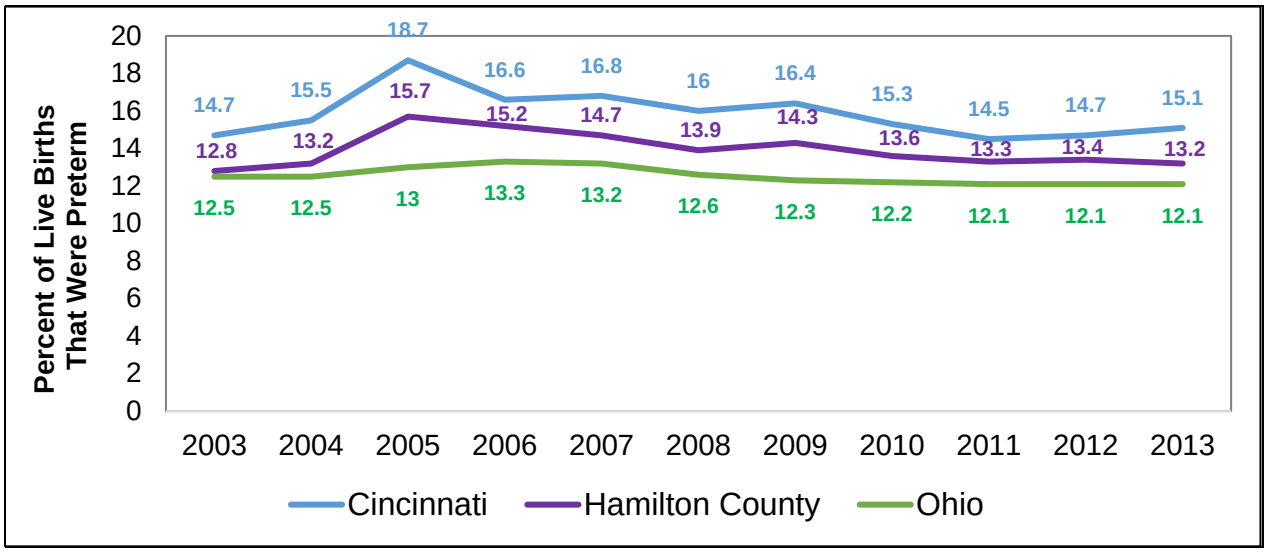
Cincinnati has been identified by the Ohio Department of Health (ODH) as a high risk region for infant mortality. As shown by the following figures, our City experiences a higher percentage of preterm birth than the state as a whole (Figures 9, 10, 11). Pre-term birth is our largest contributor to infant mortality. In addition, there are disparities in the percent of births with low birth weight babies based on race/ethnicity with African Americans at greatest risk for low birthweight infants.

FIGURE 9. PREVALENCE OF RISK FACTORS FOR ADVERSE PREGNANCY OUTCOMES IN CINCINNATI AND OHIO, 2009-2011



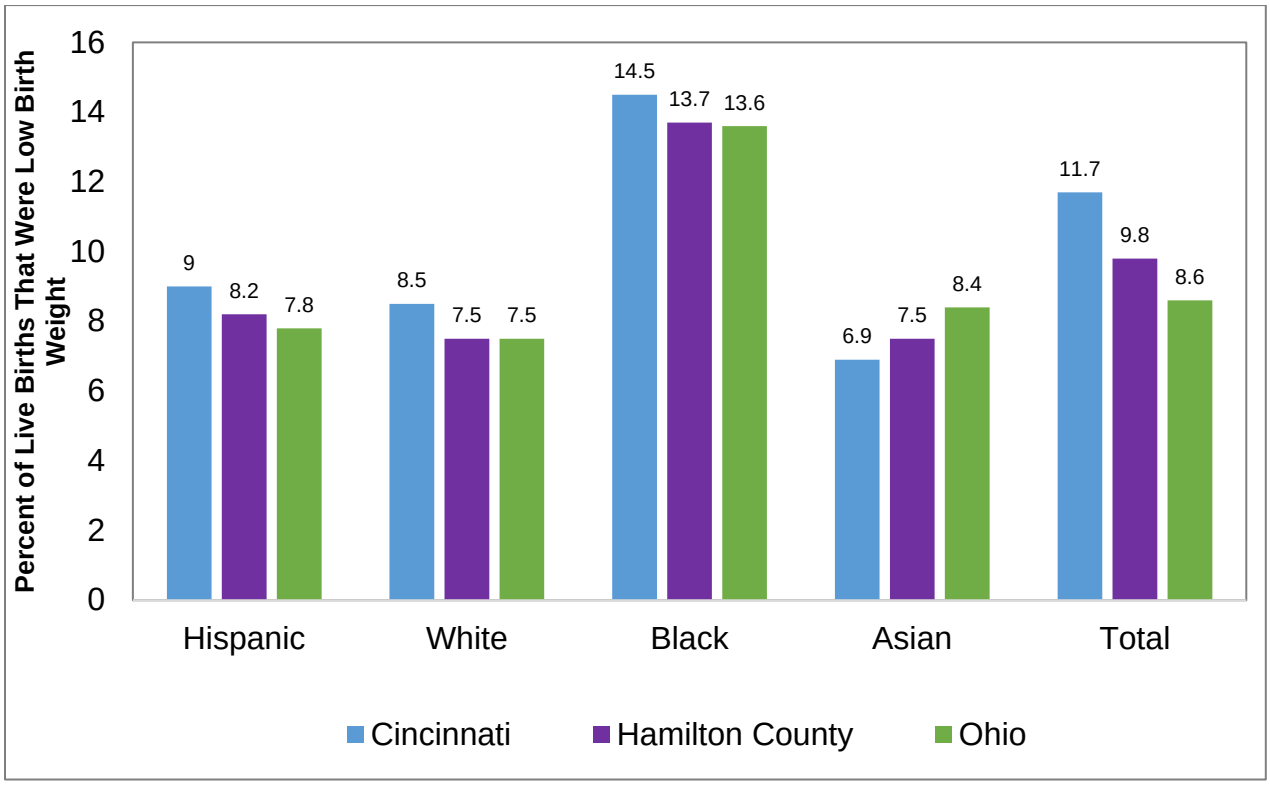
*Among women not seeking pregnancy.
Error bars are based on 95% confidence intervals.
Source: Ohio PRAMS Perinatal Region Data Summary, 2009-2011

FIGURE 10. PERCENT OF WOMEN WITH LIVE BIRTHS EXPERIENCING PRETERM BIRTH BY REGION, 2003-2013



Source: National Center for Health Statistics, final mortality data. Retrieved from www.marchofdimes.org/peristats

FIGURE 11. PERCENT OF LIVE BIRTHS THAT WERE LOW BIRTH WEIGHT BY MOTHERS RACE/ETHNICITY AND REGION, 2011-2013

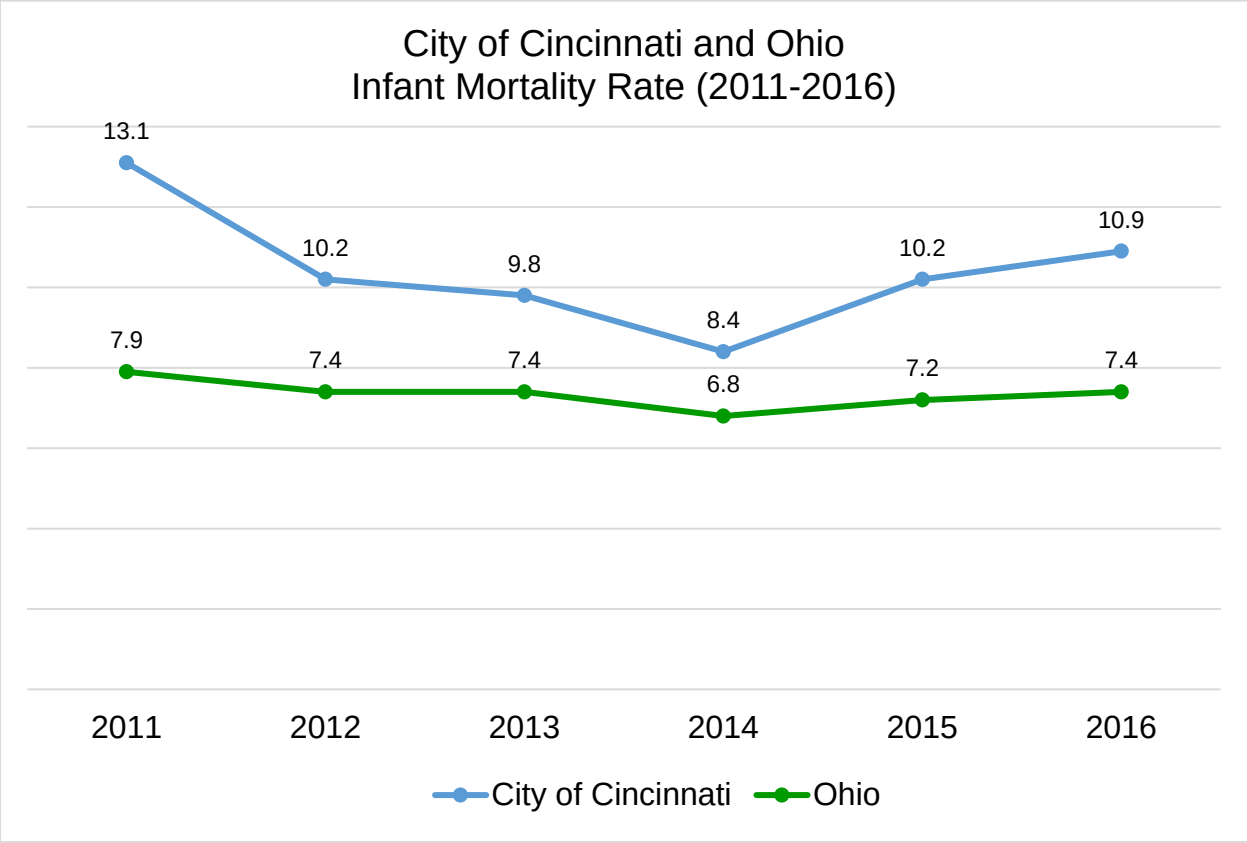


Source: National Center for Health Statistics, final mortality data. Race and Ethnicity of the infant are determined by mother's race and ethnicity. Retrieved from www.marchofdimes.org/peristats

Infant Mortality

Infant mortality rate (IMR), the proportion of babies that die before their first birthday, is an important indicator of the overall health of a community. Unfortunately, Cincinnati has long suffered from excessively high IMRs. The IMR for 2006-2010 in Cincinnati was calculated as 13.3 deaths per 1000 live births, twice the US IMR in 2010, which was 6.8. Although, Cincinnati's infant mortality rate has improved since then, there is significant progress yet to be made. Cincinnati's 2011-2015 IMR was 10.8 deaths per 1000 live births, significantly higher than both Ohio's and the national IMRs (Figure 12). Additionally, there are significant racial disparities in the burden of infant mortality in Cincinnati. The IMR for Black families in Cincinnati from 2010-2014 was 15.6, while the IMR for White families in Cincinnati was 6.1 per 1000 live births. In 2014 and 2015, IMR for the City of Cincinnati dropped to 7.9, below that of Hamilton County.

FIGURE 12. TRENDS IN INFANT MORTALITY RATE (IMR), CITY OF CINCINNATI AND HAMILTON COUNTY BY YEAR, 2011-2015



Note: IMR is infant deaths per 1,000 live births.
Source: Ohio Department of Health, Vital Statistics and Cincinnati Health Department, Vital Statistics

Infant mortality in Cincinnati and elsewhere is largely attributable to preterm birth. Many causes associated with prematurity include maternal age (too young or too old), the family's level of poverty, stress, smoking, drug use, and any pre-existing conditions affecting the mother (i.e. obesity, diabetes).

In 2008, the Cincinnati Health Department established the *Infant Vitality Surveillance Network* to address the root causes of disparities in infant vitality by: 1) using data to make decisions; 2) assisting to empower, mobilize and enfranchise communities; 3) monitoring, evaluating, and providing feedback that led to ongoing adaptations and improvements 4) facilitating a common understanding of the connection between health and development; and 5) identifying shared priorities and key obstacles to achieving health and equitable maternal and infant health improvement.

In 2012, the First Steps Program was established by the Cincinnati Health Department in partnership with home visitation agencies and 2 of the 3 major delivery hospitals in Cincinnati. The First Steps Program connects mothers and their babies in 19 targeted zip codes with double digit IMRs, with services including Access to Health Services, Education, Care Coordination, and Home Visitation (regardless of income or insurance status). Additionally, in 2012, the Cincinnati-Hamilton County Reproductive Health and Wellness Program began providing preventive reproductive health care to women and men in Cincinnati. The aim of this program is to reduce the rate of unintended pregnancy in the Cincinnati and Hamilton County area (Table 13). By providing comprehensive, reduced-cost reproductive health services to nearly 5,500 women in the Cincinnati area, we estimate that 1,170 unintended pregnancies have been prevented with 90 unplanned preterm/low birth weight births being prevented (Frost JJ, 2014). However, there is much work to be done. The Guttmacher Institute estimates that 52,620 women in Hamilton County are in need of public assistance to access contraception (Frost, 2014).

TABLE 13. UNINTENDED PREGNANCY IN CINCINNATI AREA, 2009-2011

	Unintended Pregnancy % of All Pregnancies
Cincinnati	45.2%
Hamilton County	--
Ohio	55%
U.S.	49%

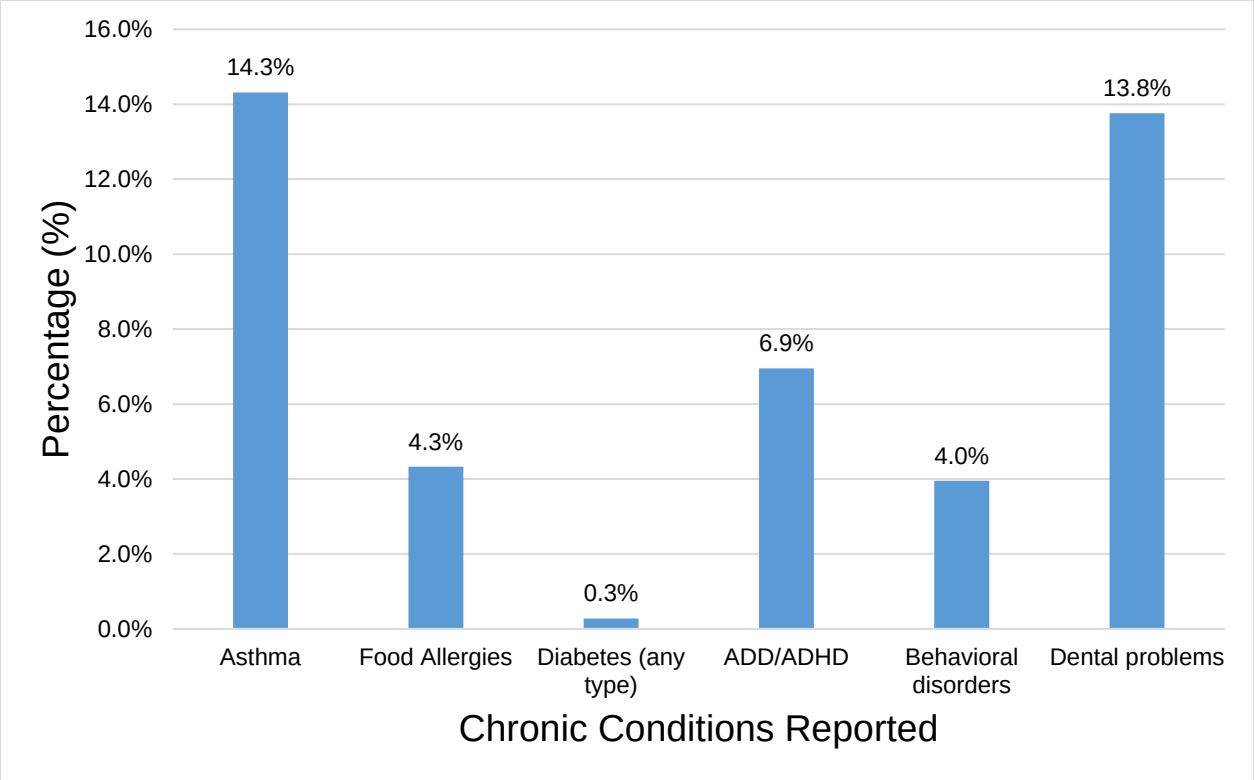
Source: Ohio Pregnancy Risk Assessment Monitoring System (PRAMS), 2009-2011 for Region 1 - Cincinnati. PRAMS is known to underreport pregnancies ending in abortion.

HEALTH AND WELL-BEING AMONG CHILDREN AND ADOLESCENTS

Chronic Conditions

Although, there is not a general registry available to describe the health of non-hospitalized children aged 18 years and younger in Cincinnati, data on student health from the Cincinnati Public Schools system (CPS) PowerSchool provides a window into the health of our young people (*n* =24,269 health records available out of *n* = 33,671 students enrolled) (Table 14). This data does not include students who attend charter or private schools. (Note: Data on the presence of chronic disease is available for ~ 72% of students.)

FIGURE 13. PREVALENCE OF MAJOR CHRONIC CONDITIONS AMONG CURRENTLY ENROLLED CINCINNATI PUBLIC SCHOOL STUDENTS, 2015-2016 ACADEMIC YEAR



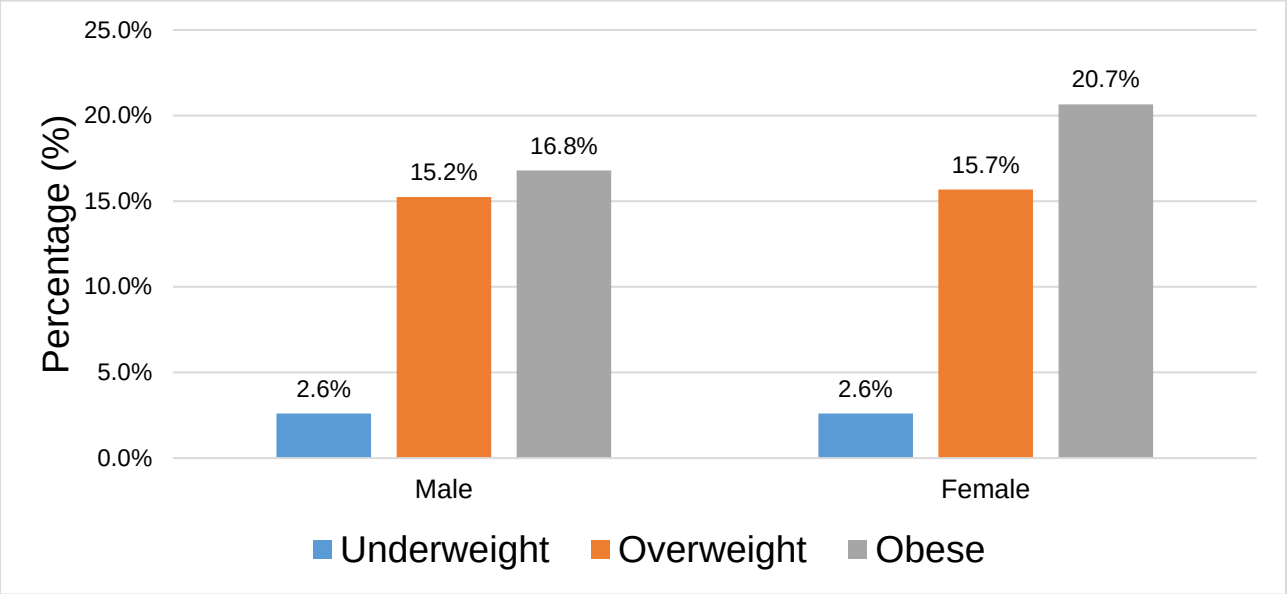
* Students screened in all grades.
Notes: Data Year: Academic year 2015-2016.
Source: Division of School and Adolescent Health, Cincinnati Health Department

Comparative data for similar school districts in Ohio and the nation are not readily available, making it challenging to draw conclusions from this data. However, these indicators raise important questions to be further investigated. For those CPS students with school health records, almost one in six is reported to be asthmatic (14.3%) (Figure 13). Seven percent of students are reported to have an Attention Deficit Disorder (ADD /

ADHD) (6.9%) and 13.8% are reported to have dental problems, which includes visible decay or infection. Of concern, an additional 16% of students have reported other chronic illnesses. An overview of student health is available in Table 14.

Public Health nurses in Cincinnati Public Schools annually screen students in grades kindergarden, 3, 5 and 9 for healthy body weight. Figure 14 depicts the percentage of CPS students who are overweight or obese (32-36%, respectively) in 2015-2016. More than one in three students weigh above average for their height, age and gender. The percent of obese (18.7%) students is slightly higher than overweight (15.5%) students. Obesity can often become a lifelong struggle, and can predispose individuals to the development of other chronic illnesses including diabetes, high blood pressure and high cholesterol later in life.

FIGURE 14. BODY MASS INDEX (BMI) SCREENINGS IN CINCINNATI PUBLIC SCHOOLS BY GENDER, 2015-2016



* Students screened in grades K, 3, 5 and 9.
Notes: Data Year: Academic year 2015-2016.
Source: Division of School and Adolescent Health, Cincinnati Health Department

TABLE 14. CINCINNATI PUBLIC SCHOOLS STUDENT HEALTH INDICATORS, 2015-2016

Student Health Indicators	
Students Enrolled (*n*)	33,671
Immunization Compliance	91.1%
Percent Low-Income	53.3%
Health Records Available (*n*)	**24,269**
Students reporting Asthma	4820
Students reporting Food Allergies	1458
Students reporting Diabetes (any type)	93
Students reporting ADHD/ADD	2340
Students reporting behavioral disorders	1331
Students reporting dental problems	4633
Body Mass Index Screenings*	
Students Screened (*n*)	**12,787**
Percent Overweight	15.5%
Percent Obese	18.7%

*Students health records are screened in all grades. Body Mass Index screenings are in grades K, 3, 5 and 9.
Notes:
Data Year: Academic year 2015-2016
Source: Division of School and Adolescent Health, Cincinnati Health Department

Oral Health for Children and Adolescents

The Cincinnati Health Department conducts dental screenings in all 55 elementary, middle and high schools in the City of Cincinnati Public Schools. The department screens children in kindergarten, 1st, 3rd, 5th and 9th grades. Between June 30, 2016, and July 1, 2017, a total of 16,283 children were screened for visible dental caries, severe dental caries, toothaches and abscesses. We calculated the positive screening rates and aggregated them by severity of oral health problem. The percent of dental screens that were abnormal ranged widely, from 3% to 23% (Table 15).

TABLE 15. DENTAL SCREENINGS IN CINCINNATI PUBLIC SCHOOL STUDENTS, 2016-2017 ACADEMIC YEAR

Screening diagnosis	**Screened**	**Percentage (%)**
Normal dental screening	10,447	64%
Some visible dental caries	3,708	22.7%
Severe dental caries/ toothache/ abscess	534	3.2%
Dental injury	18	0.1%
Dental screening refusal	834	5.1%
Dental screening absent > 3x	246	1.5%
Untestable	28	0.17%
Dental problem – other	102	0.62%
TOTAL	**16,283**	**100%**

*Students screened in grades K, 1, 3 ,5 and 9. Notes: Data Year: Academic year 2016-2017
Source: Division of School and Adolescent Health, Cincinnati Health Department

In their 2013 Community Health Needs Assessment, Cincinnati Children's Hospital Medical Center surveyed parents of children in their service area, which includes Hamilton County, about the presence of oral health problems within the past six months. The survey found that overall, 17.2% of children had a toothache and 23% had dental caries (Table 16). Children living in Cincinnati with family income below 100 percent of the federal poverty level had the highest prevalence for a toothache (15.1%) and among the highest prevalence for tooth decay (24.1%). Children enrolled in Medicaid or CHIP also had relatively high rates of toothache (15%), but only slightly higher rates of dental caries (18%) than the overall average. More than one-third (35%) of parents of uninsured children reported their child had at least one cavity.

African American children (11.1%) were more likely to have a toothache than Hispanic (9.6%) or white, non-Hispanic children (7.6%), but white children had higher reported rates of cavities (17%) than black (15%) or Hispanic (13%) children. Children ages 6 to 12 had the highest rate of both reported toothaches (11%) and cavities (22%), compared to younger and older children.

TABLE 16. ORAL HEALTH STATUS AMONG CHILDREN IN THE CINCINNATI CHILDREN'S HOSPITAL MEDICAL CENTER SERVICE AREA, 2013

	Toothache	Dental Caries
Region		
City of Cincinnati	17.2%	23.0%
Hamilton County Suburbs	1.1%	10.9%
Age		
1-5 years	5.9%	10.1%
6-12 years	10.9%	22.0%
13-17 years	5.9%	15.9%
Poverty (Household income relative to FPL)		
Below 100%	15.1%	24.1%
100% to 200%	9.6%	23.3%
201% to 300%	7.2%	12.1%
Above 300%	4.9%	14.0%
Health Insurance Status		
Uninsured	2.2%	35.0%
Insured	8.3%	16.4%
Public	14.9%	18.3%
Private	6.0%	15.8%
Race Ethnicity		
Black, non-Hispanic	11.1%	14.7%
Hispanic	9.6%	12.9%
White, non-Hispanic	7.6%	16.8%

Source: Cincinnati Children's Hospital Community Health Needs Assessment, 2013

Youth Behavioral Health

Youth suicides have increased in recent years. The table below shows county level data displaying the trend in the number of suicdes from 2007-2016 for Southwest Ohio. The greatest number of youth suicides in 2016 was observed in Hamilton county, 23 suicides in youth aged 0-24 years of age (Table 17). These data are for Hamilton County, but the City of Cincinnati represents approximately 38% of the total county population.

TABLE 17. SOUTHWEST OHIO RESIDENT SUICIDE DEATHS, AGED 0-24 YEARS, 2007-2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
County	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count
H*amilto*n *N* = 804,194	18	18	17	15	8	9	16	14	18	23	156
Butler *N* = 372,538	7	7	2	8	10	8	2	6	4	6	60
Clermont *N* = 200,285	3	5	8	7	5	4	1	3	2	6	44
Montgomery *N* = 533,763	8	8	7	13	10	10	8	9	12	17	102
Preble *N* = 41,682	1	1	1	0	0	2	1	0	0	0	6
Warren *N* = 219,916	3	2	2	4	2	2	4	4	4	5	32
Total	**40**	**41**	**37**	**47**	**35**	**35**	**32**	**36**	**40**	**57**	**400**

* *N* = population estimates based on 2011-2015 American Community Survey 5-Year Estimates.
Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates, Ohio Department of Health Vital Statistics

Youth Mortality

In the City of Cincinnati, the youth mortality rate is higher for males versus females, in age categories of 10-14 years (31 vs 12.3 per 100,000) and 15-19 years (100.64 vs 24.14 per 100,000) (Table 18). Furthermore, black males aged 15-19 years (223 per 100,000) have a greater mortality rate compared to all other age and racial groups (Table 18).

The top causes of death for youth in Cincinnati, were unintentional injuries and homicides, for youth aged 10-14 and 15-19 years. The mortality rate for unintentional injuries is 6.57/100,000 and 13.84/100,000, for ages 10-14 years and 15-19 years, respectively. For homicides, the mortality rates are 4.04/100,000 and 28.97/100,000, respectively for ages 15-19 years (Table 19).

TABLE 18. YOUTH MORTALITY RATES BY AGE AND SEX, CINCINNATI, 2001-2009

Youth mortality rates by age and sex, Cincinnati, 2001-2009		
	Ages 10-14 years	**Ages 15-19 years**
	Mortality Rate (per 100,000)	**Mortality Rate (per 100,000)**
Sex		
Males	31.00	100.64
Females	12.27	24.14
Race		
Black	33.75	133.63
White	20.04	36.06
Race and Sex		
Black males	50.74	223.31
White males	24.38	53.52
Black females	16.44	46.93
White females	15.60	18.23
Total	21.74	62.27

Source: Cincinnati Health Department, Vital Statistics, Ohio Department of Health Vital Statistics

TABLE 19. TOP FIVE CAUSES OF DEATH IN YOUTH IN CINCINNATI, 2001-2009

Top 5 Causes of Death in Youth, by Age Group	
10-14 years	Rate per 100,000
Unintentional injury	6.57
Homicide	4.04
Cancer	2.53
Congenital diseases	2.02
Other/unclassified	2.02
15-19 years	Rate per 100,000
Homicide	28.97
Unintentional injury	13.84
Other/unclassified	6.05
Suicide	4.78
Heart disease	2.59

Source: Cincinnati Health Department, Vital Statistics, Ohio Department of Health Vital Statistics

CHRONIC DISEASE AMONG ADULTS

Chronic diseases are conditions that last a long time; many chronic diseases also take a long time to develop, giving opportunities to develop prevention. Health risk factors are behaviors, conditions and characteristics that make people more likely to develop new or worsened disease. Being aware of these risk factors can help people to make healthier choices about their activities, habits and diet, and thereby reduce the likelihood of experiencing chronic disease. Certain conditions, like diabetes (sugar), high blood pressure and high cholesterol, are chronic illnesses as well as risk factors for heart disease and should be monitored by a health provider. These risk factors may be able to be prevented, reversed, or managed in such a way that additional severe health complications do not develop.

Behavioral Risk Factors

Below are tables comparing the prevalence of disease outcomes in the City of Cincinnati to the United States (Tables 20, 21, 22). Cincinnati residents have greater prevalence of asthma, chronic obstructive pulmonary disease, poor mental health and physical health (Table 20). Health care access issues in Cincinnati include lack of health insurance for adults and visiting a doctor for routine checkups (Table 21). Smoking and obesity continue to be significant health risk for individuals in Cincinnati (Table 22).

TABLE 20. 500 CITIES: LOCAL DATA FOR BETTER HEALTH OUTCOMES COMPARING THE US TO CINCINNATI, 2016

Measure	Data Type	United States	Cincinnati, OH
Arthritis among adults aged >=18 years – 2014	Crude prevalence % (95% CI)	25.6 (25.4 – 25.9)	26.6 (26.5 – 26.7)
	Age-adjusted prevalence % (95% CI)	23.5 (23.3 – 23.7)	28.7 (28.5 – 28.8)
Current asthma among adults aged >=18 years – 2014	Crude prevalence % (95% CI)	8.9 (8.7 – 9.1)	11.5 (11.4 – 11.6)
	Age-adjusted prevalence % (95% CI)	8.8 (8.7 – 9.0)	11.4 (11.3 – 11.5)
High blood pressure among adults aged >=18 years –2013	Crude prevalence % (95% CI)	32.4 (32.1 – 32.7)	34.5 (34.4 – 34.7)
	Age-adjusted prevalence % (95% CI)	30.2 (30.0 – 30.5)	36.9 (36.8 – 37.0)
	Crude prevalence % (95% CI)	6.4 (6.3 – 6.6)	5.1 (5.1 – 5.2)

Cancer (excluding skin cancer) among adults aged >=18 years – 2014	Age-adjusted prevalence % (95% CI)	5.9 (5.8 – 6.0)	5.7 (5.6 – 5.7)
High cholesterol among adults aged >=18 years who have been screened in the past 5 years – 2013	Crude prevalence % (95% CI)	39.1 (38.8 – 39.5)	35.5 (35.3 – 35.7)
	Age-adjusted prevalence % (95% CI)	33.2 (32.9 – 33.5)	32.8 (32.7 – 32.9)
Chronic kidney disease among adults aged >=18 years –2014	Crude prevalence % (95% CI)	2.8 (2.7 – 2.9)	3.4 (3.3 – 3.4)
	Age-adjusted prevalence % (95% CI)	2.6 (2.5 – 2.7)	3.6 (3.6 – 3.7)
Chronic obstructive pulmonary disease among adults aged >=18 years – 2014	Crude prevalence % (95% CI)	6.6 (6.5 – 6.7)	8.4 (8.2 – 8.5)
	Age-adjusted prevalence % (95% CI)	6.1 (6.0 – 6.2)	8.8 (8.7 – 8.9)
Coronary heart disease among adults aged >=18 years –2014	Crude prevalence % (95% CI)	6.7 (6.5 – 6.8)	6.7 (6.7 – 6.8)
	Age-adjusted prevalence % (95% CI)	6.0 (5.9 – 6.1)	7.3 (7.3 – 7.4)
Diagnosed diabetes among adults aged >=18 years –2014	Crude prevalence % (95% CI)	10.5 (10.3 – 10.7)	12.7 (12.6 – 12.8)
	Age-adjusted prevalence % (95% CI)	9.4 (9.3 – 9.6)	13.8 (13.7 – 13.9)
Mental health not good for >=14 days among adults aged >=18 years – 2014	Crude prevalence % (95% CI)	11.5 (11.3 – 11.7)	15.0 (14.8 – 15.1)
	Age-adjusted prevalence % (95% CI)	11.5 (11.3 – 11.7)	14.7 (14.6 – 14.9)
Physical health not good for >=14 days among adults aged >=18 years – 2014	Crude prevalence % (95% CI)	12.0 (11.8 – 12.2)	14.3 (14.1 – 14.4)
	Age-adjusted prevalence % (95% CI)	11.6 (11.4 – 11.8)	14.9 (14.7 – 15.0)
All teeth lost among adults aged >=65 years – 2014	Crude prevalence % (95% CI)	14.9 (14.6 – 15.3)	22.4 (21.7 – 23.2)
	Age-adjusted prevalence % (95% CI)	15.4 (15.0 – 15.8)	22.3 (21.6 – 23.1)
Stroke among adults aged >=18 years – 2014	Crude prevalence % (95% CI)	3.1 (3.0 – 3.2)	3.8 (3.8 – 3.9)
	Age-adjusted prevalence % (95% CI)	2.8 (2.7 – 2.9)	4.2 (4.1 – 4.2)

Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. 500 Cities Project Data [online]. 2016 [accessed Oct 24, 2017]. URL: https://www.cdc.gov/500cities.
Age-adjusted estimates based on the 2010 U.S.Census population.

TABLE 21. 500 CITIES: LOCAL DATA FOR BETTER HEALTH, PREVENTION MEASURES COMPARING THE US TO CINCINNATI, 2016

Measure	Data Type	United States	Cincinnati, OH
Current lack of health insurance among adults aged 18–64 years – 2014	Crude prevalence % (95% CI)	14.1 (13.8 – 14.3)	18.7 (18.3 – 19.0)
	Age-adjusted prevalence % (95% CI)	14.9 (14.6 – 15.2)	17.3 (17.0 – 17.6)
Visits to doctor for routine checkup within the past year among adults aged >=18 years – 2014	Crude prevalence % (95% CI)	70.0 (69.7 – 70.3)	71.6 (71.5 – 71.8)
	Age-adjusted prevalence % (95% CI)	68.7 (68.4 – 69.0)	72.7 (72.5 – 72.8)
Visits to dentist or dental clinic among adults aged >=18 years – 2014	Crude prevalence % (95% CI)	64.4 (64.1 – 64.7)	58.0 (57.5 – 58.5)
	Age-adjusted prevalence % (95% CI)	64.1 (63.8 – 64.4)	58.1 (57.6 – 58.5)
Taking medicine for high blood pressure control among adults aged >=18 years with high blood pressure –2013	Crude prevalence % (95% CI)	77.1 (76.6 – 77.5)	76.6 (76.4 – 76.7)
	Age-adjusted prevalence % (95% CI)	58.2 (57.5 – 58.8)	65.0 (64.8 – 65.1)
Cholesterol screening among adults aged >=18 years – 2013	Crude prevalence % (95% CI)	76.4 (76.1 – 76.6)	70.0 (69.6 – 70.3)
	Age-adjusted prevalence % (95% CI)	74.8 (74.6 – 75.1)	73.2 (72.9 – 73.4)
Mammography use among women aged 50–74 years –2014	Crude prevalence % (95% CI)	75.8 (75.4 – 76.2)	72.7 (72.4 – 73.1)
	Age-adjusted prevalence % (95% CI)	75.5 (75.1 – 75.9)	74.6 (74.3 – 75.0)
Papanicolaou smear use among adult women aged 21–65 years – 2014	Crude prevalence % (95% CI)	81.8 (81.3 – 82.2)	77.3 (77.0 – 77.6)
	Age-adjusted prevalence % (95% CI)	81.1 (80.6 – 81.6)	78.3 (78.0 – 78.6)
Fecal occult blood test, sigmoidoscopy, or colonoscopy among adults aged 50–75 years – 2014	Crude prevalence % (95% CI)	63.7 (63.3 – 64.1)	59.2 (58.8 – 59.6)
	Age-adjusted prevalence % (95% CI)	64.0 (63.5 – 64.5)	61.1 (60.8 – 61.5)

Older adult men aged >=65 years who are up to date on a core set of clinical preventive services: Flu shot past year, PPV shot ever, Colorectal cancer screening – 2014	Crude prevalence % (95% CI)	32.3 (31.5 – 33.0)	32.4 (31.9 – 32.9)
	Age-adjusted prevalence % (95% CI)	32.9 (32.1 – 33.6)	32.9 (32.4 – 33.4)
Older adult women aged >=65 years who are up to date on a core set of clinical preventive services: Flu shot past year, PPV shot ever, Colorectal cancer screening, and Mammogram past 2 years – 2014	Crude prevalence % (95% CI)	30.7 (30.1 – 31.3)	24.3 (23.9 – 24.8)
	Age-adjusted prevalence % (95% CI)	30.7 (30.2 – 31.4)	25.0 (24.5 – 25.4)

Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. 500 Cities Project Data [online]. 2016 [accessed Oct 24, 2017]. URL: https://www.cdc.gov/500cities.
Age-adjusted estimates based on the 2010 U.S.Census population.

TABLE 22. 500 CITIES: LOCAL DATA FOR BETTER HEALTH, UNHEALTHY BEHAVIORS COMPARING THE US TO CINCINNATI, 2016

Measure	Data Type	US	Cincinnati, OH
Binge drinking among adults aged >=18 years – 2014	Crude prevalence % (95% CI)	16.0 (15.8 – 16.2)	16.9 (16.8 – 17.0)
	Age-adjusted prevalence % (95% CI)	16.8 (16.6 – 17.1)	15.9 (15.8 – 16.0)
Current smoking among adults aged >=18 years – 2014	Crude prevalence % (95% CI)	17.4 (17.2 – 17.7)	24.2 (23.9 – 24.6)
	Age-adjusted prevalence % (95% CI)	17.7 (17.5 – 18.0)	24.0 (23.7 – 24.4)
No leisure-time physical activity among adults aged >=18 years – 2014	Crude prevalence % (95% CI)	23.7 (23.5 – 24.0)	26.2 (26.0 – 26.5)
	Age-adjusted prevalence % (95% CI)	23.3 (23.0 – 23.6)	27.0 (26.8 – 27.3)
Obesity among adults aged >=18 years – 2014	Crude prevalence % (95% CI)	28.9 (28.6 – 29.2)	30.0 (30.0 – 30.1)
	Age-adjusted prevalence % (95% CI)	28.7 (28.4 – 29.0)	36.5 (36.3 – 36.6)
Sleeping less than 7 hours among adults aged >=18 years – 2014	Crude prevalence % (95% CI)	34.8 (34.5 – 35.1)	38.6 (38.4 – 38.8)
	Age-adjusted prevalence % (95% CI)	35.1 (34.8 – 35.5)	38.9 (38.7 – 39.1)

Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. 500 Cities Project Data [online]. 2016 [accessed Oct 24, 2017]. URL: https://www.cdc.gov/500cities. https://nccd.cdc.gov/500_Cities/rdPage.aspx?rdReport=DPH_500_Cities.ComparisonReport&Locations=3915000. Age-adjusted estimates based on the 2010 U.S.Census population.

Cincinnati residents report worse health behaviors and neighborhood characteristics than residents of Hamilton County as a whole on all indicators. At this time, comparative data for Ohio is unavailable. For additional details, please see Tables 23 and 24.

According to the Behavioral Risk Factor Surveillance System (BRFSS), the proportion of adults living in the City of Cincinnati who report that it is easy to purchase healthy food options is 65.3%, compared to 87.5% and 81.1%, respectively for those living in Hamilton County and Greater Cincinnati (Table 23).

Diabetes was the 5th leading cause of death in Cincinnati, with a mortality rate of 44.8 per 100,000 mortality rate compared to, 29.7 in Ohio, and 24.9 nationally (Table 24). Diabetes is also one of the Cincinnati Health Department's health center patients top diagnoses among adults.

TABLE 23. NEIGHBORHOOD CHARACTERISTICS AND HEALTH BEHAVIORS/ BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM QUESTIONS, 2013

GCCHSS Variables/ Healthy People 2020 Goals/ BRFSS Questions	City of Cincinnati	Hamilton County	Greater Cincinnati Region
Greater Cincinnati as healthy place to live Proportion of adults who rated Greater Cincinnati excellent, very good or good	63.0	74.9	70.0
Neighborhood as healthy place to live Proportion of adults who rated their neighborhood excellent, very good or good	53.1	83.7	78.2
Condition of homes in neighborhood Proportion of adults who rated homes in their neighborhood as excellent, very good or good	62.1	86.6	83.6
Condition of own home Proportion of adults who rated their own home as excellent, very good or good	81.3	92.7	91.9
Availability of recreation facilities Proportion of adults who rate the availability of recreation facilities as excellent, very good or good	64.0	85.1	74.2
Ease of purchasing healthy foods Proportion of adults who agree that is easy to purchase healthy food options	65.3	87.5	81.1
Physical Activity (no physical activity) Proportion of adults who report doing no physical activity in the past month	21.2	21.6	25.5
Physical Activity (no strength exercise) Proportion of adults who report no strengthening exercises in the past month	58.0	55.7	61.6

Source: Behavioral Risk Factor Surveillance System, 2013

TABLE 24. HEALTH RISK FACTORS AND CHRONIC DISEASE, 2010

Indicator (percent with the condition)	Cincinnati	Hamilton County	Ohio
Excessive Alcohol Consumption			
Binge Drinking in the past 30 days	18.5	18.2	17.2
Heavy Drinker	5.5	3.7	--
Did not participate in any physical activity	21.5	15.9	26.1
Obese (BMI ≥ 30)	31.3	26.4	29.7
Current Smoker	30	23.1	22.5
Have been told have high blood cholesterol	76.1	68.5	--
Have been told have high blood pressure/ hypertension	35.6	29.8	--
Have been told have heart trouble or angina	14	10.2	--
Have been told have diabetes	12.6	9.4	10.1
Have been told have depression	22.1	18.5	--
Have been told have asthma	15.2	15.5	13.4

Notes: Unless specified, data are for adults age 18+.
Source: the Greater Cincinnati Community Health Status Survey, 2010; ODH Behavior Risk Factor Surveillance System (BRFSS), 2010 (state level data)

Prevalence of Chronic Conditions and Diseases

Among adult patients who received medical care at the City of Cincinnati Health Department Health Centers, overweight, obesity and hypertension were most common diagnoses. These chronic conditions are risk factors that are associated with the leading causes of death such as heart disease, cancer and stroke. Table 25 shows data from the 30,117 unique patients seen at the Cincinnati Health Department Health Centers in 2016 for a medical consultation. The total population of patients served at the CHD Health Centers in 2016 all services is 43,280 for all ages, youth and adult. Based on the most common diagnoses, the appropriate intervention is determined during patient visits (Table 25).

According to the 2013 report from AIM for Better Health (AIM for Better Health, 2013), the increases in high blood pressure and high cholesterol are consistent with rising obesity rates in the region, which rose from 22 % in 1999 to 31 % in 2010. The diabetes prevalence rate in Greater Cincinnati (11 %) is higher than the national rate of 8.3 %. Diabetes is the leading cause of kidney failure, non-traumatic lower-limb amputations and new cases of blindness among adults in the United States (Division of Diabetes Translation, 2016). It is also a major risk factor for heart disease and stroke and is the 7th leading cause of death in the United States.

Cincinnati residents have substantially higher rates of hypertension, obesity and diabetes than the county and/or state (Tables 24 and 25). On average, Cincinnati rates also appear

to be somewhat higher for diabetes and asthma, compared to Ohio rates, and higher for depression compared to county rates.

In the 2008 Centrum Healthiest Cities Study, Cincinnati was ranked among the least healthy cities nationwide (ranked 48 out of 50) (Sperlings Best Places, 2017). Two-thirds of the 2010 GCCHSS respondents (64%) reported having a chronic condition such as hypertension, high cholesterol and/ or triglycerides, diabetes, depression, asthma or history of stroke. Respondents reporting chronic conditions were more likely to be African American, White Appalachian, or over the age of 46 years.

TABLE 25. CINCINNATI HEALTH DEPARTMENT PRIMARY CARE CENTER MOST COMMON PATIENT DIAGNOSES, 2016

Diagnosis	Number of patients with diagnosis	Percentage of total patients (%)
Overweight and obesity	7,157	23.8%
Hypertension	4,739	15.7%
Asthma	3,362	11.1%
Depression and other mood disorders	1,974	6.5%
Diabetes mellitus	1,794	5.9%
Contact dermatitis and other eczema	1,249	4.1%
Anxiety disorders including PTSD	1,202	3.9%
Sexually transmitted infections (STI)	860	2.8%
Attention deficit and disruptive behavior disorders	800	2.7%
Heart disease	596	1.9%

*Unduplicated users, 30,117 medical visit patients in 2016, Patients could have more than one diagnosis.
Source: Cincinnati Health Department, Primary Care Centers

ENVIRONMENTAL HEALTH

Environmental Risk Factors

Tobacco Smoke

Individuals living in multi-unit housing under the authority of the Cincinnati Metropolitan Housing Authority (CMHA) were asked about smoking in select Cincinnati apartment complexes, The Evanston and Marquette Manor. Based on the 31 residents who completed the survey, 23% reported smoking regularly and 32% reported smelling secondhand smoke which bothered them (Table 26). As a result of this survey in collaboration between CMHA and Cincinnati Health Departments' Tobacco Control and Prevention Program, a smoking ban policy was developed in multi-unit housing under the authority of the CMHA. This policy helps reduce exposure to secondhand smoke for residents and children living in close proximity to people who smoke.

TABLE 26. CINCINNATI METROPOLITAN HOUSING AUTHORITY (CMHA) RESIDENT SURVEY ON TOBACCO USE, 2016

Measures	Count (average or %)
Number of residents completing survey	*N* = 31
Average number of residents living in each apartment	1.2
Average number of children/adolescents in each apartment	0.1
% of residents in each apartment with chronic illness	58%
Average number of smokers in apartment	0.5
% of apartments where residents smoke regularly	23%
% of apartments where residents smoke occasionally	19%
% of apartments where residents do not smoke	45%
% of residents who smell secondhand smoke and it bothers them	32%
% of residents who smell secondhand smoke and it does not bother them	16%
% of residents who want a smoke-free property	26%
% of residents who want smoke-free units and designated smoking areas	26%
% of residents who want designated smoking areas only	16%

Data based on residents living in the Evanston and Marquette Manor housing.
Source: Cincinnati Metropolitan Housing Authority (CMHA) survey, 2016

Lead (Pb) Exposure

Lead is a dangerous environmental hazard, especially for children, because ingested lead has been associated with cognitive disruption and behavioral problems, particularly when exposure occurs at an early age (prenatal exposure to age 6).

The extremely prevalent use of lead prior to 1978 caused substantial environmental contamination and resulted in human exposure, and significant public health issues. The most common sources of lead are paint in homes built before 1978, lead dust, and

contaminated soil. Use of lead paint was banned in homes in 1978. The number and percent of housing units built prior to 1940 in Cincinnati as well as the number and percent of these housing units within the city that were occupied as of 2015 are presented in table 20. According to United States Census Bureau data, 41.7% of the total 162,398 housing units in the city as of 2015 were built prior to 1940; in addition, 61.5% of these pre-1940 housing units were occupied in 2015 (Table 27). In 2015, 63,701 housing units dated pre-1940 were occupied in the City of Cincinnati. This data demonstrates that the possible exposure to lead is an important public health concern for the City of Cincinnati. Hence, the Cincinnati Health Department's Childhood Lead Poisoning Prevention Program (CLPPP), the Cincinnati Buildings department, Greater Cincinnati Water Works (GCWW), and other organizations are striving to educate the population about lead exposure and to increase lead abatement in the City of Cincinnati.

TABLE 27. NUMBER AND PERCENT OF HOUSING UNITS IN THE CITY AND COUNTY DATED PRE-1940'S, 2015

	City of Cincinnati	Hamilton County
Total housing units	162,398	377,126
Number of pre-1940 occupied rental housing units	37,620	40,340
Number of pre-1940 occupied owner occupied housing units	26,081	50,928
Number of pre-1940 vacant rental housing units	4,042	6,380
Total number of pre-1940 housing units	67,743	97,648
Percentage of pre-1940 housing units	41.7%	26.0%
Percentage of occupied pre-1940 housing units	61.5%	47.8%

Source: 2015 American Community Survey 5-Year Data Profiles, http://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/

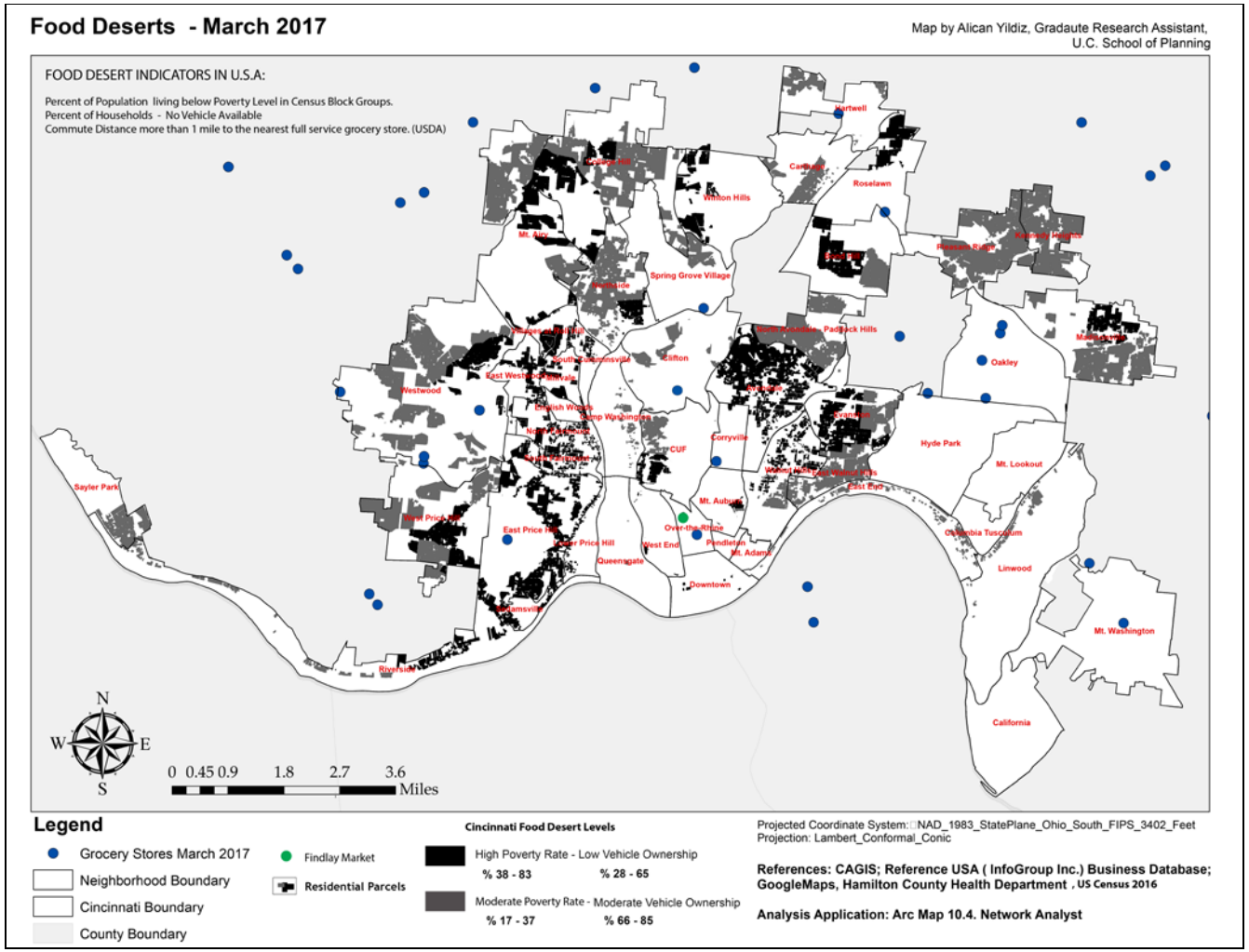
Food Deserts

According to the United States Department of Agriculture (USDA), "food deserts are defined as parts of the country devoid of fresh fruit, vegetables, and other healthful whole foods, usually found in impoverished areas, and this is largely due to a lack of grocery stores, farmers' markets, and healthy food providers."

Accessing healthy food is a challenge for some Cincinnatians, particularly those living in moderate to highly impoverished neighborhoods. The deficiency in access to healthy foods can be associated with a higher risk for obesity and other diet-related chronic diseases. Many residents of neighborhoods that have moderate and/ or high poverty rates live over a mile away from a grocery store (Figure 15). Some Cincinnati communities do not have any grocery store in their neighborhood. Neighborhoods with moderate and high poverty levels in Cincinnati also have a high number of residents without access to a vehicle. Lack of a vehicle creates fewer opportunities for an individual to access better food options, since these community members must either walk, use public transportation, or find another means to get food. Lack of access to fresh healthy food does not only make it challenging for people to eat well, but it also can increase the city's

obesity rate and the acute health issues associated with obesity because of reliance on more fast food.

FIGURE 15. "FOOD DESERTS" IN THE CITY OF CINCINNATI, 2017



Source: Food Desert Map –Alican Yildiz, Graduate Research Assistant, University of Cincinnati School of Planning
https://greenumbrella.org/resources/GU%20Initiatives/Food%20Policy%20Council/Grocery%20Access%20in%20Cincinnati.pdf

INFECTIOUS DISEASE

For millennia, infectious diseases were a leading cause of death (Connolly, 2002) (Cable News Network , 2008). Scientific breakthroughs in understanding their causes coupled with scientific and medical advances in preventing and treating these conditions have decreased their burden on the population. However, infectious diseases remain a threat to health and well-being in the community. In recognition of this threat, the Ohio Revised Code requires that health providers report selected infectious diseases and conditions to public health officials for the purposes of surveillance, prevention, and outbreak detection (LAWriter Ohio Laws and Rules, 2016). These diseases and conditions are caused by a variety of organisms (e.g. bacteria, viruses, fungi, parasites) and are transmitted to people through a variety of means. This section describes the diseases and conditions mandated to be reported by Ohio law.

Trends in Infectious Disease Incidence

Table 28 presents the number of confirmed and probable cases of newly reported diseases in Cincinnati from 2012-2016. Note that some diseases fit into more than one category; the table indicates where this is the case. Given that drawing attention to trends is the goal for this table, any diseases or conditions that were made reportable in Ohio during this period or which were taken off the Ohio reportable disease list during the period were excluded from the table (e.g. *Mycobacterium* other than Tuberculosis). Readers who wish to learn more details about particular diseases or conditions are directed to either Ohio Department of Health *Infectious Disease Control Manual* (http://www.odh.ohio.gov/healthResources/infectiousDiseaseManual.aspx), or the website of the US Centers for Disease Control and Prevention (www.cdc.gov). The most commonly reported categories are discussed individually later in this section.

TABLE 28. CASES OF REPORTABLE INFECTIOUS DISEASE IN THE CITY OF CINCINNATI, 2012-2016

Category	Condition[1,2]	2012	2013	2014	2015	2016	2012-2016 AVERAGE[3]
Food- or Waterborne		***125***	***125***	***67***	***216***	***214***	***149***
	Amebiasis	0	0	0	2	0	0
	Botulism - infant	0	1	0	1	0	0
	Botulism, foodborne	0	0	2	0	0	0
	Campylobacteriosis	28	27	16	21	37	26
	Cryptosporidiosis	11	7	6	6	12	8
	E. coli, enterohemorrhagic or Shiga-toxin producing	2	3	4	6	4	4
	Giardiasis	15	20	8	8	13	13
	Hepatitis A (also viral	1	0	0	0	0	0
	Listeriosis	0	1	1	1	1	1

	Salmonellosis	16	28	25	33	49	30
	Shigellosis	52	36	6	141	97	66
	Typhoid Fever* (also vaccine-preventable)	0	3	0	0	1	1
	Yersiniosis	0	0	1	0	0	0
Category	**Condition[1,2]**	**2012**	**2013**	**2014**	**2015**	**2016**	**AVERAGE[3]**
Vaccine-Preventable		***140***	***228***	***475***	***157***	***191***	***238***
	Haemophilus influenzae,	2	5	5	6	7	5
	Influenza-associated hospitalization	59	139	362	78	116	151
	Measles[&]	1	0	0	0	0	0
	Mumps	0	0	4	0	2	1
	Pertussis	22	34	58	27	25	33
	S. pneumoniae, invasive (abx sus/unk[$])	39	37	31	25	20	30
	S. pneumoniae, invasive (abx resistant[$])	8	11	6	13	14	10
	Varicella (chickenpox and	8	2	9	8	7	7
Vectorborne		***3***	***6***	***1***	***9***	***1***	***4***
	Chikungunya Virus Disease*	0	0	0	1	1	0
	Dengue or Dengue Hemorrhagic Fever*	0	0	1	3	0	1
	Ehrlichiosis[&]	0	1	0	0	0	0
	Lyme disease	0	0	0	0	0	0
	Malaria*	3	5	0	2	0	2
	Spotted Fever Rickettsiosis, including Rocky Mountain spotted fever	0	0	0	2	0	0
	West Nile Virus Disease	0	0	0	1	0	0
	Zika Virus Infection*,^	0	0	0	0	0	0
Viral Hepatitis		***374***	***430***	***487***	***747***	***886***	***585***
	Hepatitis B, acute	15	10	18	18	9	14
	Hepatitis B (including delta) - acute/chronic status not determined	15	10	18	18	9	14
	Hepatitis B, chronic, newly	55	53	71	86	102	73
	Hepatitis B, Perinatal	0	0	0	0	0	0
	Hepatitis C, acute	0	1	1	0	3	1
	Hepatitis C - acute/chronic status not determined	0	0	0	0	0	0
	Hepatitis C - chronic	289	356	379	625	762	482
	Hepatitis E	0	0	0	0	1	0
Other Reportable Conditions		***53***	***52***	***37***	***63***	***53***	***52***
	Coccidioidomycosis	0	0	1	2	0	1
	Meningitis, aseptic	32	31	19	31	32	32
	Meningitis, bacterial (not N. meningitidis)	2	2	2	6	2	3
	Toxic Shock Syndrome (S.	0	0	1	0	0	0
	Streptococcal, Grp A, invasive disease	15	12	8	21	15	15

	Streptococcal, Grp B, newborn	4	7	6	3	4	5
TOTAL		***695***	***841***	***1,067***	***1,192***	***1,345***	***1,028***

1) Confirmed and probable cases reported by health care providers among residents of the City of Cincinnati by date of event (most frequently, the date of event is the date of illness onset).

2) List includes only reportable conditions for which at least one case was reported in either current or previous year; full list of reportable conditions in Ohio can be found at http://www.odh.ohio.gov/healthResources/infectiousDiseaseManual.aspx. *Note that when a specific agent is named, italics are used for the genus and species name.*

3) Yearly average number of cases based on 2012-2016 numbers.

^Zika Virus Infection was reportable throughout this period, however, until 2016, it was reported as Viral Hemorrhagic Fever (VHF); a new category was created during 2016 for Zika Virus alone.

**All cases were imported due to international travel.*

[&]All cases were imported from out of state.

[$]abx sus/unk = antibiotic susceptible or susceptibility unknown; abx resistant = antibiotic resistant

[#]Note that sexually-transmitted infections, Human Immunodeficiency Virus (HIV) infections (including AIDS), and Tuberculosis are investigated and reported by Hamilton County Public Health and are not included in this table.

Table 29 presents the annual incidence rate (per 100,000 population) and 5-year average annual incidence rate for the same diseases and conditions as Table 28. Rates take into account the changing population of the City of Cincinnati, and can thus help to identify trends in disease occurrence that are independent of changes in the number of residents.

TABLE 29. TRENDS IN INCIDENCE RATE[3] PER 100,000 OF REPORTABLE INFECTIOUS DISEASES IN THE CITY OF CINCINNATI, 2012-2016

Category	Condition[1,2]	2012	2013	2014	2015	2016	AVERAGE[3]
Food- or Waterborne		***42.2***	***42.0***	***22.5***	***72.4***	***71.7***	***50.1***
	Amebiasis	0.0	0.0	0.0	0.7	0.0	0.1
	Botulism - infant	0.0	0.3	0.0	0.3	0.0	0.1
	Botulism, foodborne	0.0	0.0	0.7	0.0	0.0	0.1
	Campylobacteriosis	9.4	9.1	5.4	7.0	12.4	8.7
	Cryptosporidiosis	3.7	2.4	2.0	2.0	4.0	2.8
	E. coli, enterohemorrhagic or Shiga-toxin producing	0.7	1.0	1.3	2.0	1.3	1.3
	Giardiasis	5.1	6.7	2.7	2.7	4.4	4.3
	Hepatitis A *(also viral Hepatitis)*	0.3	0.0	0.0	0.0	0.0	0.1
	Listeriosis	0.0	0.3	0.3	0.3	0.3	0.3
	Salmonellosis	5.4	9.4	8.4	11.1	16.4	10.1
	Shigellosis	17.5	12.1	2.0	47.2	32.5	22.3
	Typhoid Fever* *(also vaccine-preventable)*	0.0	1.0	0.0	0.0	0.3	0.3
	Yersiniosis	0.0	0.0	0.3	0.0	0.0	0.1
Vectorborne		***1.0***	***2.0***	***0.3***	***3.0***	***0.3***	***1.3***
	Chikungunya Virus Disease*	0.0	0.0	0.0	0.3	0.3	0.1
	Dengue or Dengue Hemorrhagic Fever*	0.0	0.0	0.3	1.0	0.0	0.3
	Ehrlichiosis[&]	0.0	0.3	0.0	0.0	0.0	0.1
	Lyme disease	0.0	0.0	0.0	0.0	0.0	0.0
	Malaria*	1.0	1.7	0.0	0.7	0.0	0.7
	Spotted Fever Rickettsiosis, including Rocky Mountain spotted fever	0.0	0.0	0.0	0.7	0.0	0.1

	West Nile Virus Disease	0.0	0.0	0.0	0.3	0.0	0.1
	Zika Virus Infection*,^	0.0	0.0	0.0	0.0	0.0	0.0
Category	**Condition[1,2]**	**2012**	**2013**	**2014**	**2015**	**2016**	**AVERAGE[3]**
Vaccine-Preventable		*47.2*	*76.6*	*159.3*	*52.6*	*64.0*	*79.9*
	Haemophilus influenzae, invasive disease	0.7	1.7	1.7	2.0	2.3	1.7
	Influenza-associated hospitalization	19.9	46.7	121.4	26.1	38.9	50.6
	Measles[&]	0.3	0.0	0.0	0.0	0.0	0.1
	Mumps	0.0	0.0	1.3	0.0	0.7	0.4
	Pertussis	7.4	11.4	19.5	9.0	8.4	11.1
	S. pneumoniae, invasive (abx sus/unk[$])	13.2	12.4	10.4	8.4	6.7	10.2
	S. pneumoniae, invasive (abx resistant[$])	2.7	3.7	2.0	4.4	4.7	3.5
	Varicella (chickenpox and shingles)	2.7	0.7	3.0	2.7	2.3	2.3
Viral Hepatitis		***126.1***	***144.5***	***163.3***	***250.2***	***296.8***	***196.2***
	Hepatitis B, acute	5.1	3.4	6.0	6.0	3.0	4.7
	Hepatitis B (including delta) - acute/chronic status not determined	5.1	3.4	6.0	6.0	3.0	4.7
	Hepatitis B, chronic, newly identified	18.5	17.8	23.8	28.8	34.2	24.6
	Hepatitis B, Perinatal	0.0	0.0	0.0	0.0	0.0	0.0
	Hepatitis C, acute	0.0	0.3	0.3	0.0	1.0	0.3
	Hepatitis C - acute/chronic status not determined	0.0	0.0	0.0	0.0	0.0	0.0
	Hepatitis C - chronic	97.5	119.7	127.1	209.4	255.2	161.7
	Hepatitis E	0.0	0.0	0.0	0.0	0.3	0.1
Other Reportable Conditions[#]		***17.9***	***17.5***	***12.4***	***21.1***	***17.8***	***17.3***
	Coccidioidomycosis	0.0	0.0	0.3	0.7	0.0	0.2
	Meningitis, aseptic	10.8	10.4	6.4	10.4	10.7	10.7
	Meningitis, bacterial (not *N. meningitidis*)	0.7	0.7	0.7	2.0	0.7	0.9
	Toxic Shock Syndrome (*S. aureus*)	0.0	0.0	0.3	0.0	0.0	0.1
	Streptococcal, Grp A, invasive disease	5.1	4.0	2.7	7.0	5.0	5.0
	Streptococcal, Grp B, newborn	1.3	2.4	2.0	1.0	1.3	1.6
TOTAL		***234.4***	***282.7***	***357.9***	***399.3***	***450.5***	***344.9***

1) Confirmed and probable cases reported by health care providers among residents of the City of Cincinnati by date of event (most frequently, the date of event is the date of illness onset).

2) List includes only reportable conditions for which at least one case was reported in either current or previous year; full list of reportable conditions in Ohio can be found at http://www.odh.ohio.gov/healthResources/infectiousDiseaseManual.aspx. *Note that when a specific agent is named, italics are used for the genus and species name.*

3) Annual incidence rates are calculated by dividing the number of reported new probable or confirmed case per year by the population for that year and multiplying by 100,000. The average annual rate is calculated by totaling the cases for the five-year period, dividing by 5 as well as by the population of the middle year [in this case2014], then multiplying by 100,000.

^Zika Virus Infection was reportable throughout this period, however, until 2016, it was reported as Viral Hemorrhagic Fever (VHF); a new category was created during 2016 for Zika Virus alone.

**All cases were imported due to international travel.*

[&]All cases were imported from out of state.

[$]abx sus/unk = antibiotic susceptible or susceptibility unknown; abx resistant = antibiotic resistant
[#]Note that sexually-transmitted infections, Human Immunodeficiency Virus (HIV) infections (including AIDS), and Tuberculosis are investigated and reported by Hamilton County Public Health and are not included in this table.

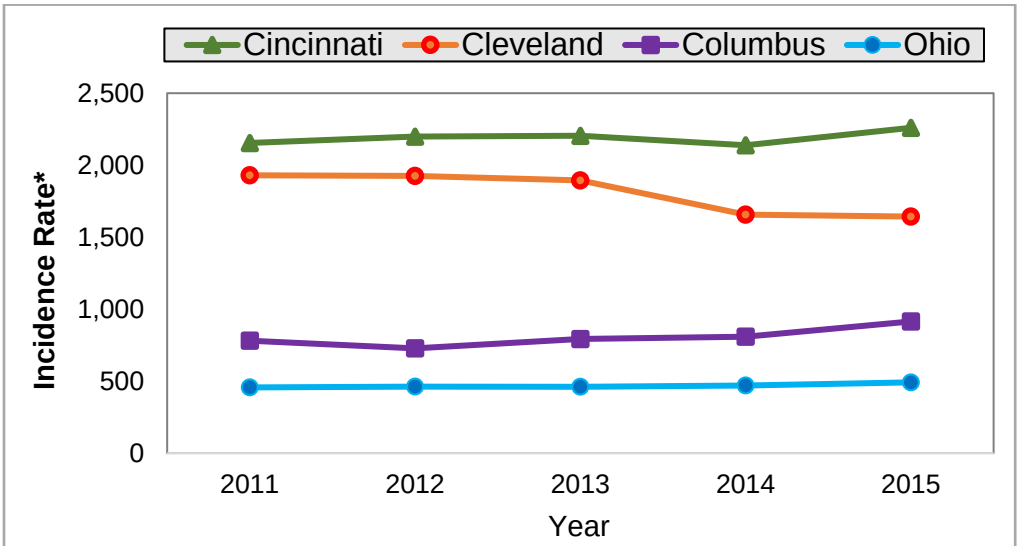
The following sub-sections present tables and figures illustrating epidemiological trends of some of the most prevalent reportable infectious diseases in Cincinnati. The diseases are categorized into groups and presented in the order of the most commonly reported categories of conditions.

Sexually-Transmitted Infections

Due to state funding arrangements, sexually-transmitted infections among Cincinnati residents are reported to Hamilton County Public Health Department, which investigates the cases and conducts follow-ups. Thus, they do not appear in Tables 28 or 29 above. However, sexually-transmitted infections (STIs) constitute the most commonly reported category of conditions for Cincinnati residents. Treatment for most of these conditions does not prevent people from becoming re-infected in the future.

Chlamydia and Gonorrhea are highly burdensome STIs that can affect fertility and cause other health problems. These two conditions are most frequently diagnosed among young adults. Figure 16 below shows the incidence rate of reported suspect, probable, and confirmed cases of Chlamydia for selected Ohio cities between 2011 and 2015. Cincinnati has the highest incidence rates of Chlamydia each year among these jurisdictions.

FIGURE 16. CHLAMYDIA INCIDENCE RATES IN SELECTED OHIO CITIES, 2011-2015

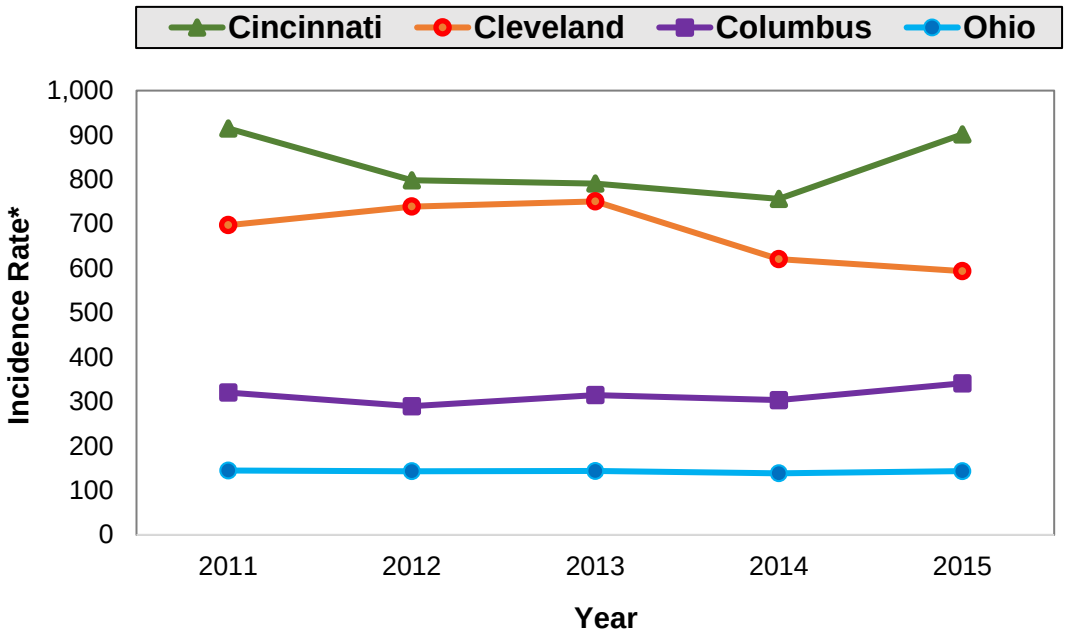


**Annual rate of new confirmed and probable cases of Chamydia cases per 100,000 residents.*
Source: *Ohio Department of Health,* 2011-2015 Ohio Infectious Disease Status Report*:* Chlamydia *see http://www.odh.ohio.gov/healthStats/disease/std/std1.aspx*

Figure 17 shows the same pattern for Gonorrhea: Cincinnati has the highest rates of Gonorrhea each year among these jurisdictions. Access to care, patient education, contact tracing and testing are the primary methods of control for these STIs. US practice

guidelines call for screening all sexually-active women younger than 25 years and all pregnant women for both Chlamydia and Gonorrhea, since these can be harmful to the fetus (CDC, 2013). Gonorrhea strains are increasingly resistant to the antibiotics typically used to treat this infection (CDC, November 2013), making it more crucial to prevent people from becoming infected in the first place (CDC, 2013).

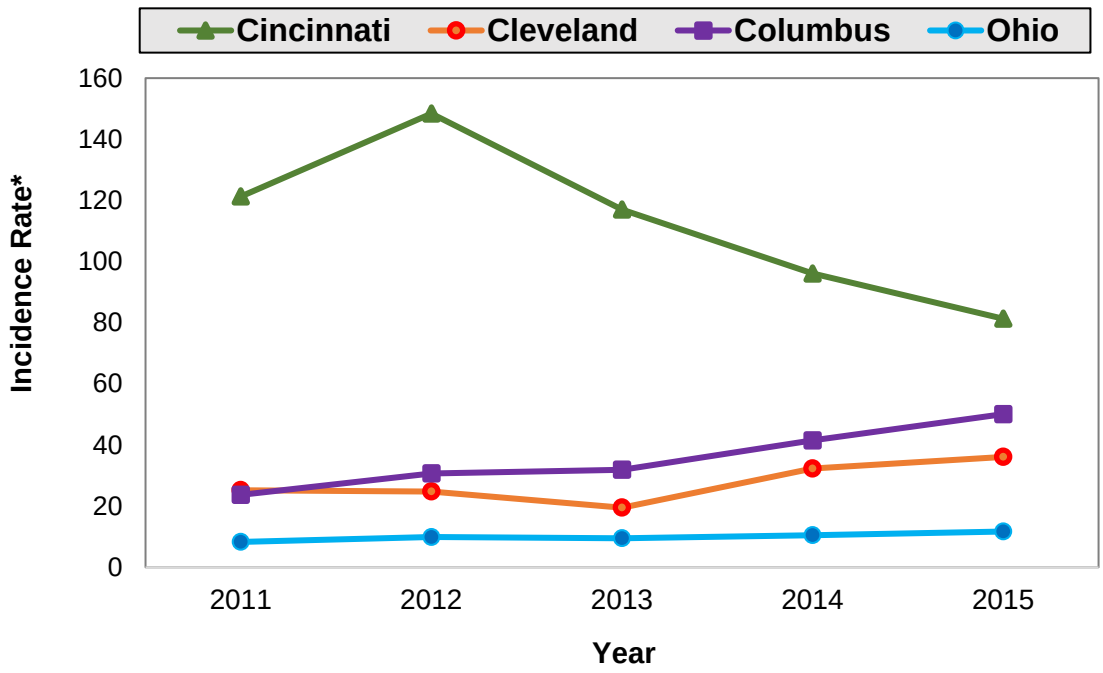
FIGURE 17. GONORRHEA INCIDENCE RATES IN SELECTED OHIO CITIES, 2011-2015



**Annual rate of new confirmed and probable cases of Gonorreha cases per 100,000 residents.*
Source: *Ohio Department of Health,* 2011-2015 Ohio Infectious Disease Status Report: Gonorrhea *see http://www.odh.ohio.gov/healthStats/disease/std/std1.aspx*

Syphilis is a condition caused by a bacterial infection. Syphilis is fairly easy to treat in its early stages; however, once the infection has progressed it can cause permanent neurological damage and other complications, even death (CDC, 2017). Figure 18 shows the incidence of reported confirmed and probable syphilis cases at any stage of diagnosis in Cincinnati, Columbus, and Cleveland between 2011 and 2015. As shown, the incidence of Syphilis is much higher in Cincinnati than the other two major cities. However, syphilis incidence has decreased in Cincinnati between 2012 (148.4 cases per 100,000 residents) and 2015 (81.3 cases per 100,000 residents), while increasing in the other two cities during this time.

FIGURE 18. INCIDENCE RATES OF SYPHILIS (ANY STAGE) IN SELECTED OHIO CITIES, 2011-2015



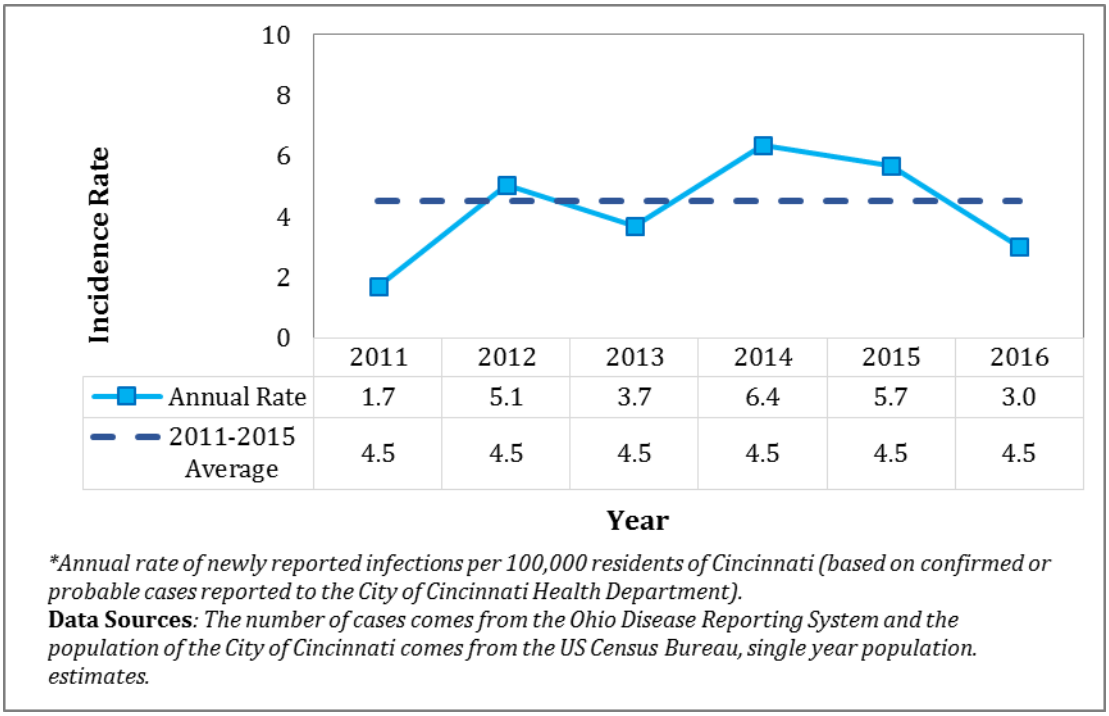
**Rate of confirmed and probable cases of newly diagnosed Syphilis (at any stage) cases per 100,000 residents.*
Source: *Ohio Department of Health,* Ohio Total Syphilis Cases, 2011-2015*; see http://www.odh.ohio.gov/-/media/ODH/ASSETS/Files/bid/std-surveillance/TotSyp1115.pdf?la=en*

Viral Hepatitis

As shown in Table 28 above, the second most commonly reported category of conditions for the 2012-2016 time period was viral Hepatitis, which consists of Hepatitis A, Hepatitis B, Hepatitis C (and, more rarely, other forms). Since Hepatitis A is primarily transmitted through food, that condition is discussed in the Food and Waterborne Disease section below. Infection with either Hepatitis B or C virus can cause an acute illness followed by a chronic infection associated with progressive damage to the liver and other body organs, and can affect functioning over decades. Most infections with Hepatitis B and C virus do not produce obvious symptoms and may not be diagnosed for a long time (Ohio Department of Health, 2015) (CDC, 2015). Thus, the number of reported cases is an under-count of the true number of residents who are infected.

Hepatitis B is a vaccine-preventable viral infection of the liver that is transmitted from person-to-person primarily through sexual contact. It is also spread efficiently through blood exchange. Specifically, injection drug use is a risk factor for Hepatitis B (CDC, 2017). As Table 28 showed, an average of 14 cases of acute (symptomatic) Hepatitis B is reported among Cincinnati residents each year.

FIGURE 19. ACUTE HEPATITIS B INCIDENCE RATE, CITY OF CINCINNATI, 2011-2016



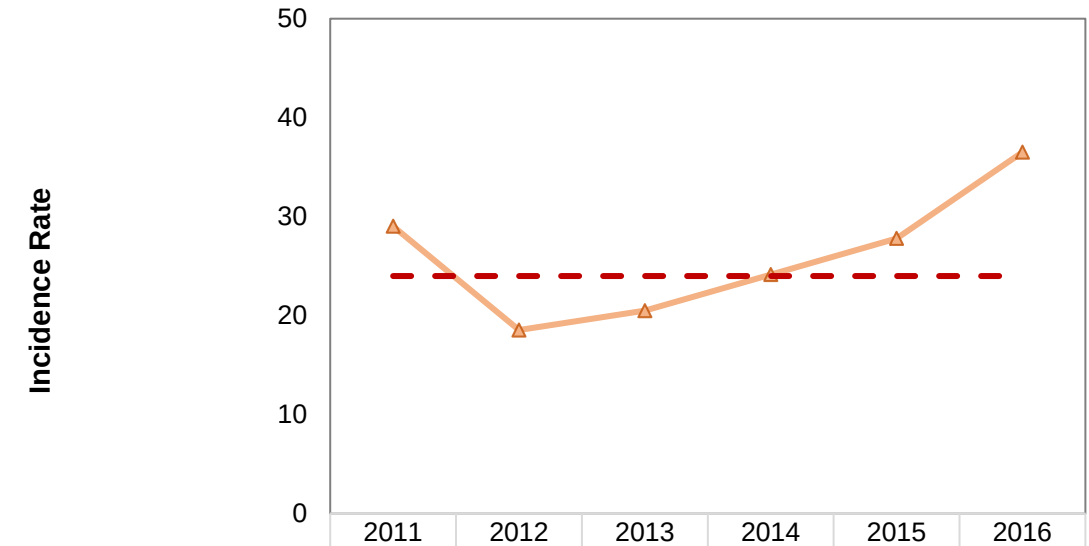
**Annual rate of newly reported infections per 100,000 residents of Cincinnati (based on confirmed or probable cases reported to the City of Cincinnati Health Department).*

Data Sources: *The number of cases comes from the Ohio Disease Reporting System and the population of the City of Cincinnati comes from the US Census Bureau, single year population. estimates.*

Figure 19 above shows the incidence rate of reported acute Hepatitis B cases among residents of Cincinnati each year between 2011 and 2016, as well as the average annual rate for 2011 to 2015. While the rate changed during this time, there is no clear trend (i.e. increasing or decreasing) over the time period, which is not uncommon when the overall number of reports is low. Nationwide, the number of case reports of newly diagnosed acute Hepatitis B has risen each year since 2011 except for 2014.

An average of 73 cases of chronic Hepatitis B infections is reported among Cincinnati residents annually (Table 28). Figure 20 below shows the rate of newly diagnosed confirmed and probable cases of chronic Hepatitis B reported to the Cincinnati Health Department among residents of Cincinnati each year between 2011 and 2016 as well as the average rate for 2011 to 2015. A clear increasing trend is seen between 2012 and 2016.

FIGURE 20. CHRONIC HEPATITIS B INCIDENCE RATE, CITY OF CINCINNATI, 2011-2016



	2011	2012	2013	2014	2015	2016
Annual Rate	29.0	18.5	20.5	24.1	27.8	36.5
2011-2015 Average	24.0	24.0	24.0	24.0	24.0	24.0

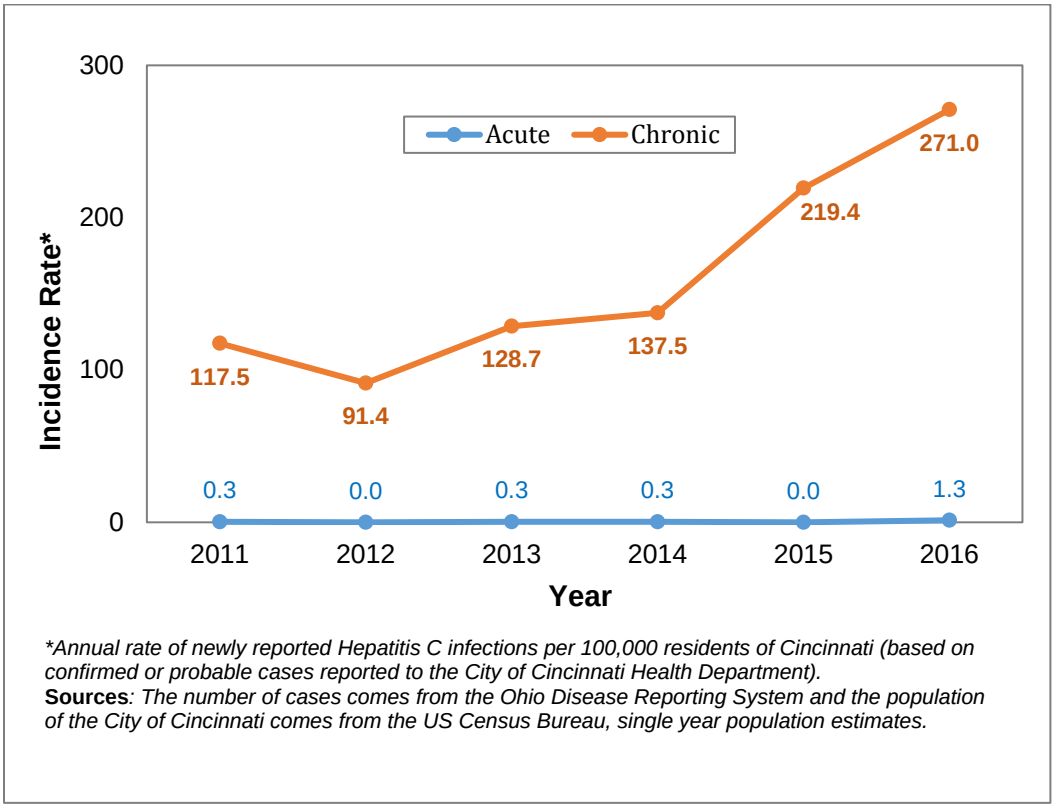
Year

Annual rate of newly reported chronic Hepatitis B infections per 100,000 residents of Cincinnati (based on confirmed or probable cases reported to the City of Cincinnati Health Department).
Sources: *The number of cases comes from the Ohio Disease Reporting System and the population of the City of Cincinnati comes from the US Census Bureau, single year population estimates.*

Like Hepatitis B, Hepatitis C is a viral infection of the liver that can advance to a chronic infection causing serious problems and early death. However, unlike Hepatitis B, no vaccine is (yet) available to protect against Hepatitis C infection. Fortunately, treatment for Hepatitis C has been developed in the past decade. Hepatitis C is usually spread through blood exchange, with injection drug use being the most common risk factor (CDC, 2017). Between 2012 and 2016, an average of 483 newly diagnosed Hepatitis C cases was reported among Cincinnati residents each year. The vast majority of reported cases in Cincinnati are of chronic Hepatitis C; on average, less than one case of acute Hepatitis C is reported each year for Cincinnati residents. National surveillance data (calculated to adjust for the problem of underreporting) by CDC (May 2017) show an increase in incidence of acute Hepatitis C in the US, which has been hypothesized to be linked to the opiate epidemic (CDC, 2016) (Hamborsky J, 2015).

In Cincinnati, the incidence of chronic Hepatitis C increased dramatically between 2011 and 2016 among Cincinnati residents (Figure 21). Among Cincinnati residents, 55% of the chronic Hepatitis C cases newly reported during this time period were male and 45% were female. Race was not reported for nearly 1/3 of reported cases, while 22% were black, 46% were white and 1% were of another race.

FIGURE 21. ANNUAL INCIDENCE RATES OF ACUTE AND CHRONIC HEPATITIS C, 2011-2016



**Annual rate of newly reported Hepatitis C infections per 100,000 residents of Cincinnati (based on confirmed or probable cases reported to the City of Cincinnati Health Department).*
Sources: *The number of cases comes from the Ohio Disease Reporting System and the population of the City of Cincinnati comes from the US Census Bureau, single year population estimates.*

Vaccine-Preventable Diseases

The third most commonly reported category of communicable diseases in Cincinnati are those that are vaccine-preventable. The number of communicable conditions that can be prevented by vaccination grew dramatically over the past century. The US Advisory Committee on Immunization Practice recommends periodic changes to the vaccination schedules for individuals of different ages to medical providers and the Centers for Disease Control and Prevention. Vaccination is recommended for all age groups; however, children (0-18 years) are the age group with the largest number of recommended vaccinations. Vaccination status of children is reviewed upon school entry; however, Ohio allows exemptions due to conscience or religious convictions.

In addition to providing the vaccinated individual protection against illness, vaccination can help protect individuals associated with that person, including those that cannot be vaccinated (e.g. young infants and individuals with particular medical conditions). “Herd immunity” is the term used for this protection. Communicable diseases must find susceptible persons to infect or they will cease to spread. The more vaccinated people in a community, the less likely a communicable disease will be able to spread. Diseases can even be locally eradicated with high vaccination rates. Diseases vary in communicability (the ease of spreading to other people). Thus, herd immunity varies across diseases. For example, measles is highly contagious; at least 90-95% of the

population must be immune from measles (i.e. vaccinated or recovered from illness) for measles spread to halt in a community (Fox, 1983) (Hamborsky J, 2015).

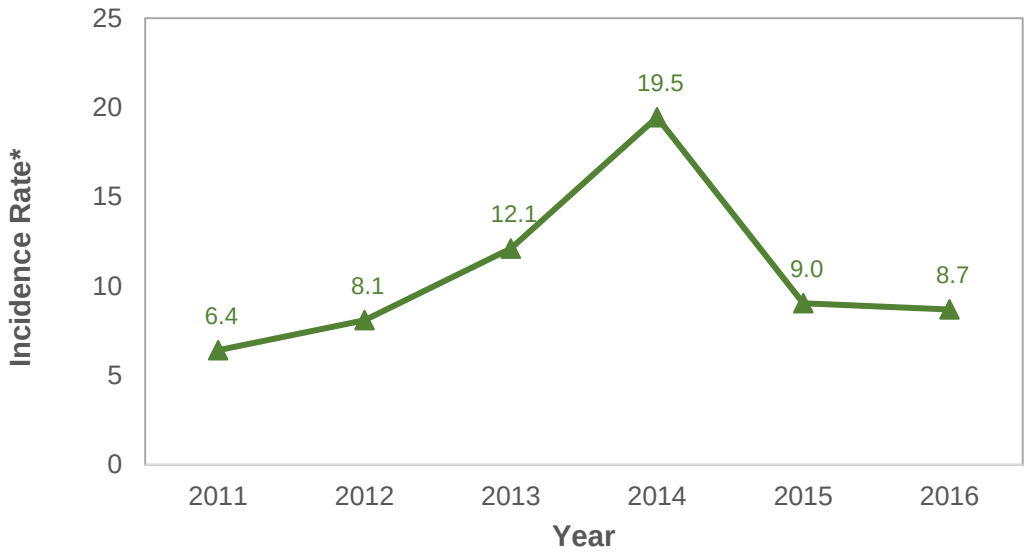
Tables 28 and 29 show the number and rate of eight of the most common vaccine-preventable diseases reported in the City of Cincinnati. On average, 238 such cases are reported each year, although the numbers vary widely from year to year, due to the occurrence outbreaks. It is important to recognize that conditions other than these eight are vaccine-preventable, including many listed under other categories in Tables 28 and 29.

Pertussis, also called Whooping Cough, is a vaccine-preventable condition whose incidence has increased across the US in recent years (CDC, 2017). Pertussis is transmitted person-to-person to susceptible people through respiratory secretions (cough droplets). It is particularly dangerous and potentially fatal to very small infants who are too young to be immunized.

Figure 22 below shows a dramatic increase in Pertussis for Cincinnati residents between 2011 and 2014. Across the US, Pertussis incidence rates peaked in 2012 (CDC, 2017). Since 2014, incidence rates have decreased in Cincinnati.

The Cincinnati Health Department's Immunization Program works closely with the Cincinnati Public Schools to increase vaccination among school children and promote public awareness of its importance. There is also significance in the education of the "cocooning" strategy to parents of infants and providers, which is the practice of vaccinating those who will care for or interact with the baby (e.g. grandparents, baby sitters and older siblings; CDC, (CDC, 2017) (CDC, 2016). Following CDC recommendations, CHD has provided provider and public education to increase vaccination among pregnant women (ideally between 27 and 36 weeks' gestation). Parent and provider education, public-private collaboration, prompt case identification with post-exposure prophylaxis, and outbreak detection and investigation are the primary strategies that CHD has used to combat Pertussis.

FIGURE 22. ANNUAL INCIDENCE RATES OF PERTUSSIS IN CINCINNATI, 2011-2016



**Annual rate of newly reported Hepatitis C infections per 100,000 residents of Cincinnati (based on confirmed or probable cases reported to the City of Cincinnati Health Department).*
***Source:** The number of cases comes from the Ohio Disease Reporting System and the population of the City of Cincinnati comes from the US Census Bureau, single year population estimates.*

Food and Water Borne Diseases

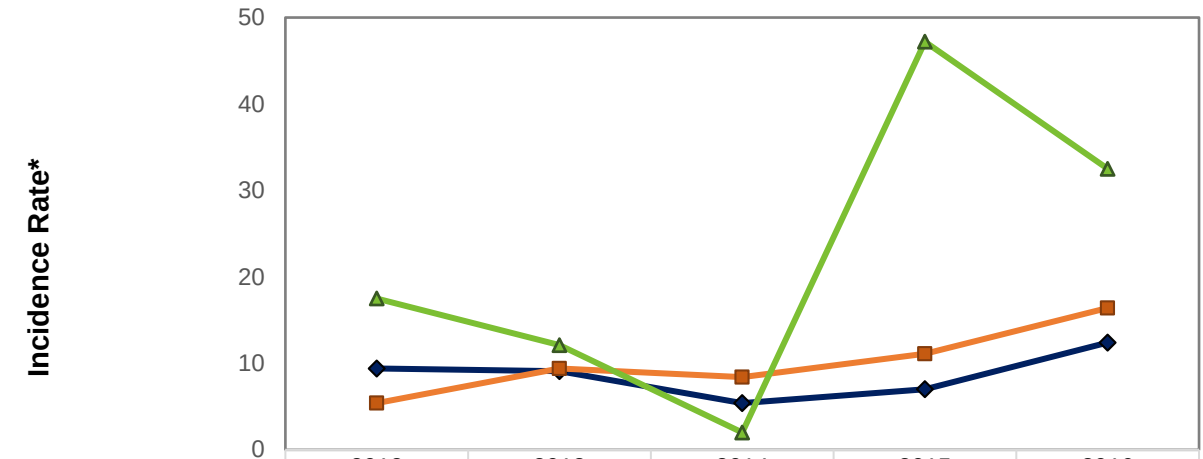
Diseases transmitted through food or water constitute the 4th most commonly reported category of communicable diseases in Cincinnati. Between 2012-2016 an average of 149 food- and waterborne illnesses are individually reportable in Ohio, although an outbreak of any disease is reportable. These illnesses can be caused by bacteria, fungi, viruses, and toxins. The Centers for Disease Control and Prevention estimates that 1 out of every 6 Americans gets sick from food or beverages each year (CDC, 2017). Investigating and stopping outbreaks, public education, and maintaining safe food and water supplies are the major public health strategies effective in combatting these diseases.

Figure 23 shows the incidence rate of three foodborne conditions in Cincinnati over the past five years. Campylobacteriosis is a disease caused by the Campylobacter bacterium that often infects poultry, although poultry normally show no symptoms. Humans with Camplyobacteriosis often have abdominal cramps, diarrhea and fever for about a week. Infection with Campylobacter can also lead to long-term issues, including kidney problems and arthritis. Most Campylobacteriosis is caused by eating undercooked poultry, or by eating or drinking something that was contaminated by poultry or poultry feces, including unpasteurized milk (CDC, 2017). An average of 26 cases of Campylobacteriosis are reported in Cincinnati residents each year (see Table 28).

Salmonellosis is another illness caused by several serotypes of the Salmonella bacterium that can contaminate food and beverages. People can also get Salmonellosis from animals, including livestock, pets, and reptiles (e.g. snakes, turtles). In addition to nausea, vomiting, abdominal cramps and diarrhea, *Salmonella* infection can cause long-term issues with the heart and joints. Approximately 30 Cincinnati residents are diagnosed with Salmonellosis (other than Typhoid Fever) each year (CDC, 2017); see Table 28).

Shigellosis is also a gastro-intestinal illness caused by the Shigella bacterium. It is characterized by fever, cramping and diarrhea (sometimes bloody). Unlike the two conditions above, Shigellosis only infects humans, and so cannot be caught from animals. Thus, transmission is from person-to-person, either directly, or indirectly by accidental ingestion of contaminated food or water (CDC, 2017). While Table 28 shows that an average of 66 cases of Shigellosis are reported among Cincinnati residents per year, this number is highly variable because Shigellosis often causes outbreaks. In 2014, only 6 cases were reported, while in 2015, 147 cases were reported.

FIGURE 23. ANNUAL INCIDENCE RATES OF SELECT FOOD-BORNE ILLNESS IN CINCINNATI, 2011-2016



	2012	2013	2014	2015	2016
Campylobacteriosis	9.4	9.1	5.4	7.0	12.4
Salmonellosis	5.4	9.4	8.4	11.1	16.4
Shigellosis	17.5	12.1	2.0	47.2	32.5

Year

**Rate of confirmed and probable cases of select foodborne disease cases per 100,000 residents*
Source: *The number of cases comes from the Ohio Disease Reporting System and the population of the City of Cincinnati comes from the US Census Bureau, single year population. estimates.*

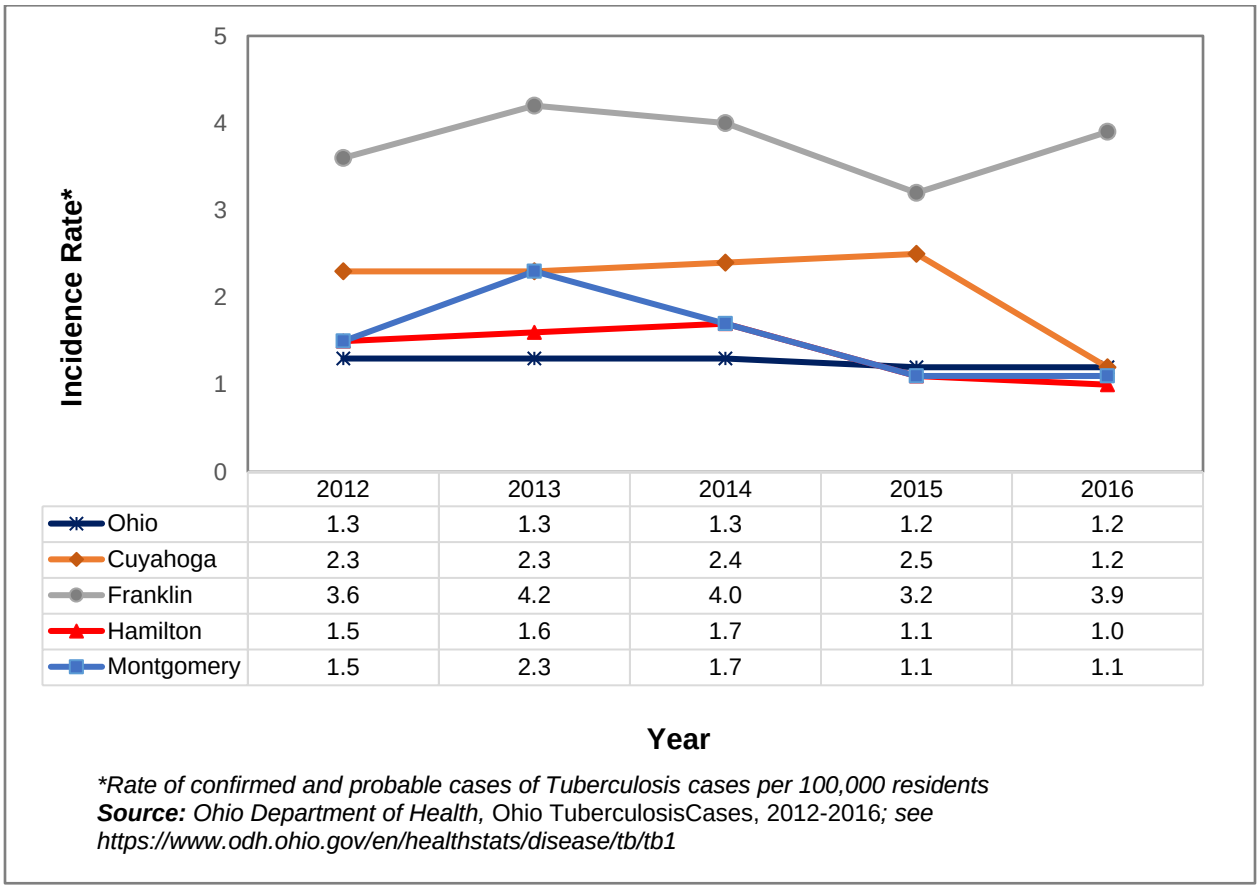
Vector-borne Diseases

Vector-borne diseases are those that are spread by mosquitos, fleas, and ticks. Mosquito-borne diseases include West Nile Virus, Malaria, Yellow Fever, Chikungunya, Dengue, and Zika Virus Disease. The Cincinnati area is home to the types of mosquitoes that can spread West Nile, Chikungunya, Dengue and Zika viruses. However, at present, only West Nile Virus has been documented to have been acquired through local transmission. The other vector borne conditions mentioned above are sometimes detected in patients in Cincinnati, but are found to have been acquired elsewhere, usually due to international travel. Preventing the establishment of local pools of infected mosquitos in Cincinnati is a major public health priority, as is combatting human infection by West Nile Virus that is already established in local mosquito pools. Educating people how to avoid mosquito bites, and controlling the density of mosquito populations are strategies that CHD has implemented to decrease transmission of mosquito borne illnesses.

Other Conditions

Tuberculosis (Tb) is a disease, usually affecting the lungs, caused by a bacterium. Tuberculosis can be spread from person to person when someone with active infection coughs, sneezes, or spits, causing bacteria to become aerosolized. Tuberculosis is among the top 10 causes of death worldwide (World Health Organization, 2017). Under Ohio law, Hamilton County Public Health Department oversees surveillance for, investigation of and treatment for tuberculosis. Figure 24 shows that tuberculosis incidence has slightly decreased in Hamilton County over the time period 2012-2016.

FIGURE 24. ANNUAL INCIDENCE RATES OF TUBERCULOSIS IN SELECT OHIO COUNTIES, 2012-2016



	2012	2013	2014	2015	2016
Ohio	1.3	1.3	1.3	1.2	1.2
Cuyahoga	2.3	2.3	2.4	2.5	1.2
Franklin	3.6	4.2	4.0	3.2	3.9
Hamilton	1.5	1.6	1.7	1.1	1.0
Montgomery	1.5	2.3	1.7	1.1	1.1

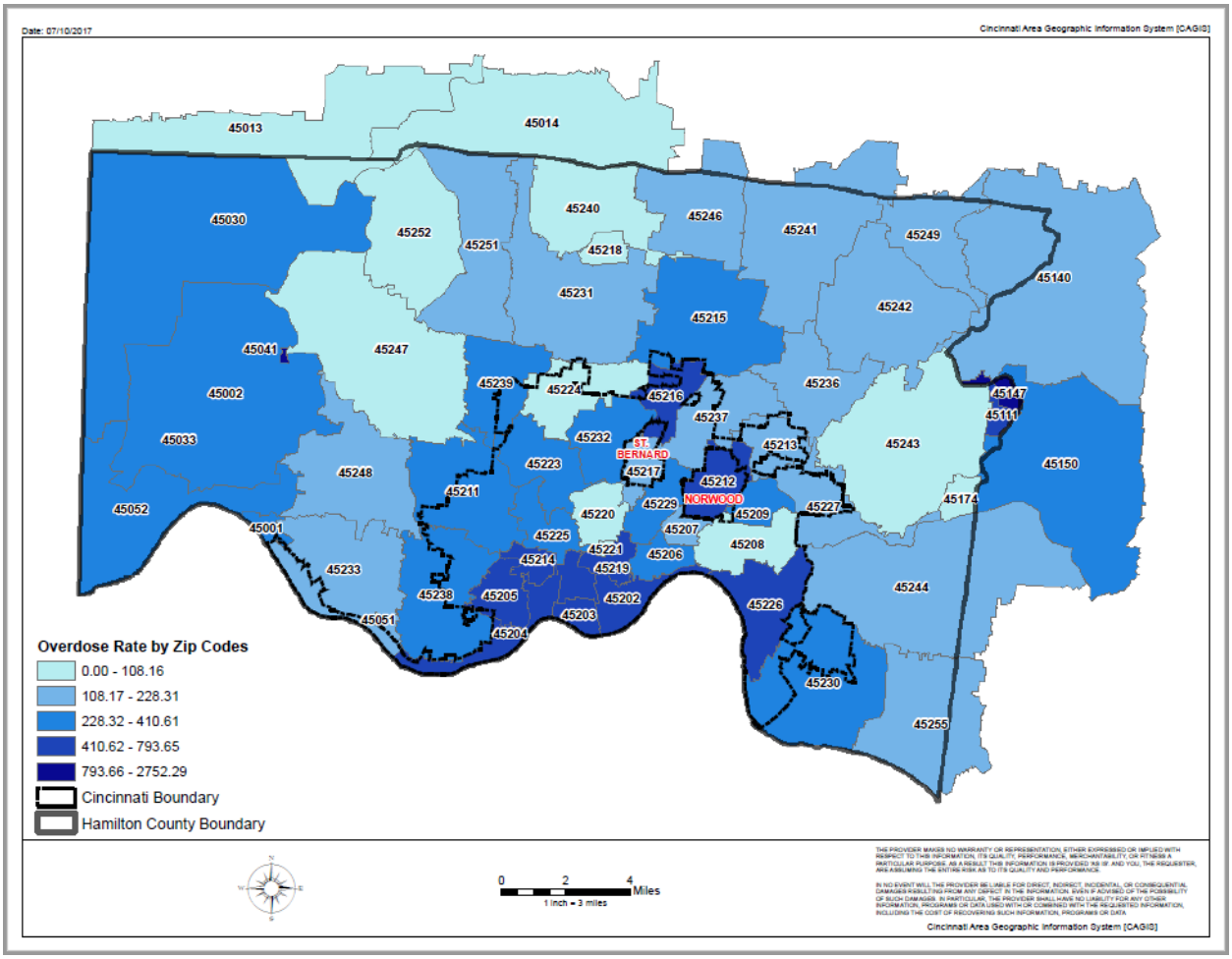
Year

**Rate of confirmed and probable cases of Tuberculosis cases per 100,000 residents*
Source: *Ohio Department of Health,* Ohio TuberculosisCases, 2012-2016*; see https://www.odh.ohio.gov/en/healthstats/disease/tb/tb1*

BEHAVIORAL HEALTH

Substance Abuse

FIGURE 25. RATE OF OVERDOSE VISITS TO HAMILTON COUNTY HOSPITALS AND EMERGENCY ROOMS, BY RESIDENTIAL ZIP CODE IN 2016, PER 100,000



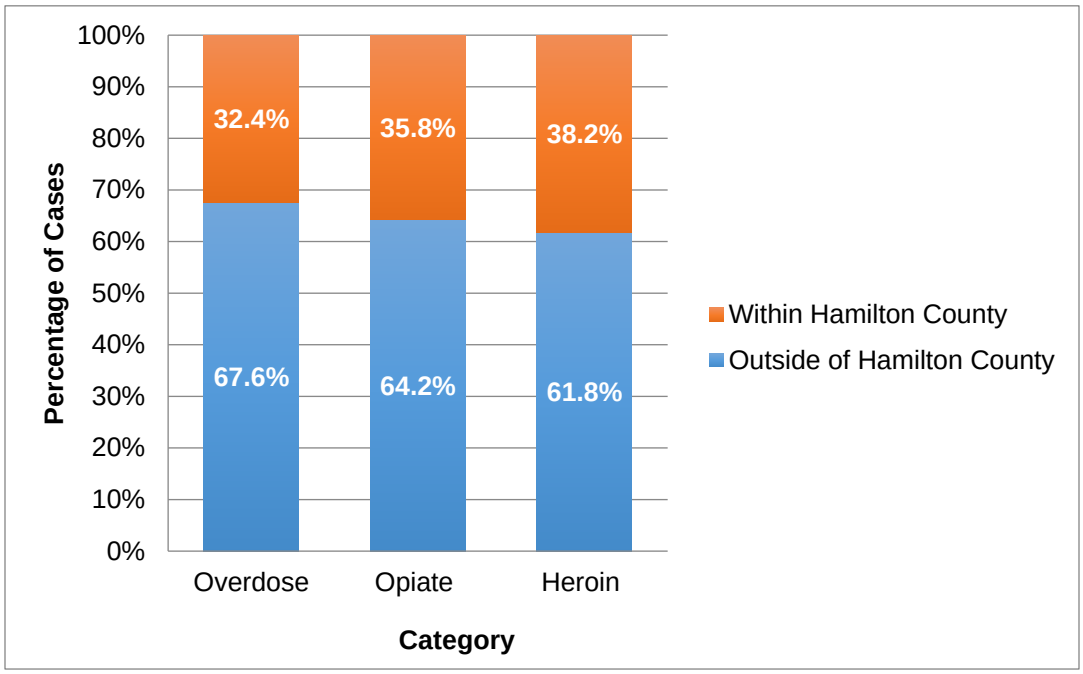
Source: Ohio EpiCenter, 2016

TABLE 30. TOP TEN ZIPCODES FOR OVERDOSE, OPIOID AND HEROIN VISITS TO HAMILTON COUNTY HOSPITALS AND EMERGENCY ROOMS, BY COUNT AND INCIDENCE IN 2016, PER 100,000

	Overdose				Opioid				Heroin			
Rank	Zipcode	Count	Zipcode	Rate	Zipcode	Count	Zipcode	Rate	Zipcode	Count	Zipcode	Rate
1	45238	168	45041	2,752.30	45238	103	45041	4,166.70	45238	83	45147	2,083.30
2	45205	153	45147	2,083.30	45205	98	45147	2,752.30	45205	82	45047	1,834.90
3	45212	133	45111	793.7	45211	65	45111	1,190.50	45211	53	45111	793.7
4	45211	118	45205	792.3	45212	61	45205	507.5	45212	48	45205	424.6
5	45219	100	45214	698.8	45202	43	45214	465.5	45219	36	45001	345
6	45150	91	45203	655.9	45219	43	45203	424.3	45215	35	45214	336.9
7	45140	86	45212	600.2	45230	41	45212	349.8	45230	35	45204	315.3
8	45215	81	45202	565.2	45215	39	45202	345	45150	33	45216	251.3
9	45230	79	45219	556	45150	36	45219	315.6	45202	30	45226	223.7
10	45202	77	45226	549	45214	34	45226	284.7	45214	27	45202	220.2

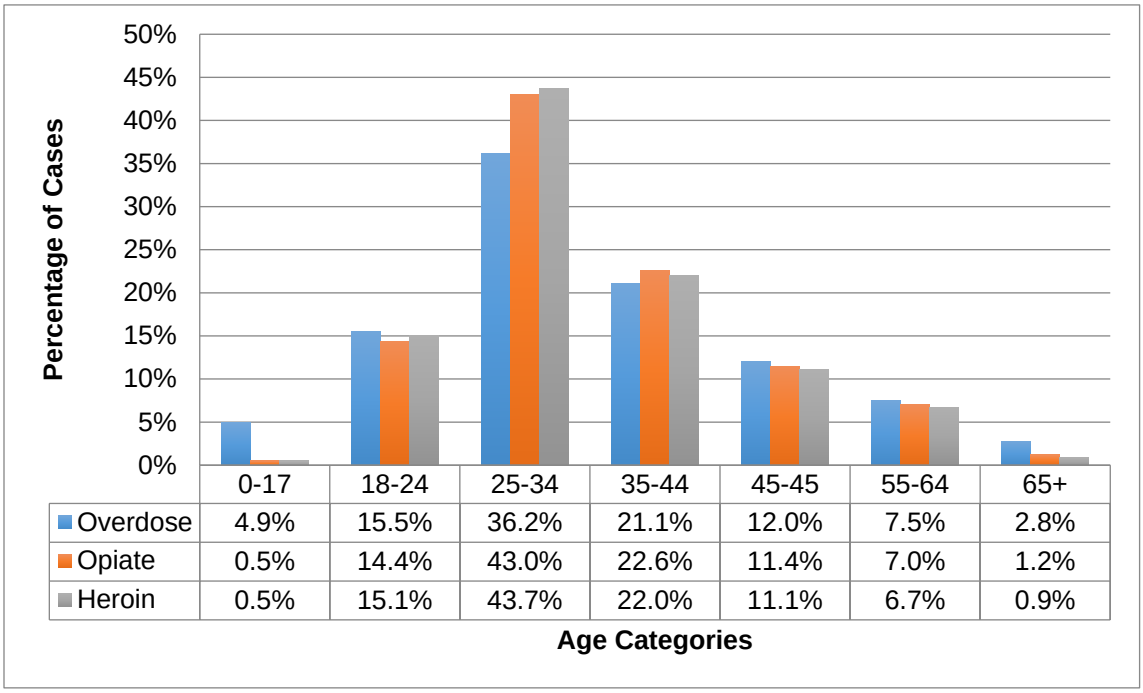
Source: Ohio EpiCenter, 2016

FIGURE 26. PERCENTAGE OF OVERDOSE, OPIOID AND HEROIN VISITS TO HAMILTON COUNTY HOSPITALS AND EMERGENCY ROOMS, BY RESIDENTIAL AREA IN 2016



Source: Ohio EpiCenter, 2016

FIGURE 27. PERCENTAGE AGE DISTRIBUTION OF PATIENTS WHO MADE OVERDOSE, OPIOID AND HEROIN VISITS TO HAMILTON COUNTY HOSPITALS AND EMERGENCY ROOMS IN 2016



	0-17	18-24	25-34	35-44	45-45	55-64	65+
Overdose	4.9%	15.5%	36.2%	21.1%	12.0%	7.5%	2.8%
Opiate	0.5%	14.4%	43.0%	22.6%	11.4%	7.0%	1.2%
Heroin	0.5%	15.1%	43.7%	22.0%	11.1%	6.7%	0.9%

Source: Ohio EpiCenter, 2016

In 2015, Ohio had the fourth highest state drug overdose rate (29.9 per 100,000) in the United States. This epidemic, driven by opioids, continues to grow and disproportionately affects areas of southern Ohio including Hamilton County. Data from hospitalizations and emergency department visits in 2016 that were classified as due to “traumatic injury” or “drugs” (*n* = 5,774) were downloaded from the Ohio EpiCenter database.

Each of the three categories represents visits to Hamilton County hospitals and emergency departments in 2016. This data should not be interpreted as indicative of population prevalence or of a seasonal trend.

There were considerable differences in the number and rate of visits by residential zipcode for each category. The highest rates of overdose visits by zipcode were scattered in small rural areas outside of the city boundary, as seen in Figure 25. Table 30 shows the top ten residential zipcodes by count and by incident rate for visits attributable to overdose, opioid use and heroin use. The highest count of overdose visits corresponds to the 45238 (*n* = 168) zipcode, whereas the highest rate (2,752.3 visits per 100,000 visits) corresponds to the 45041 zipcode.

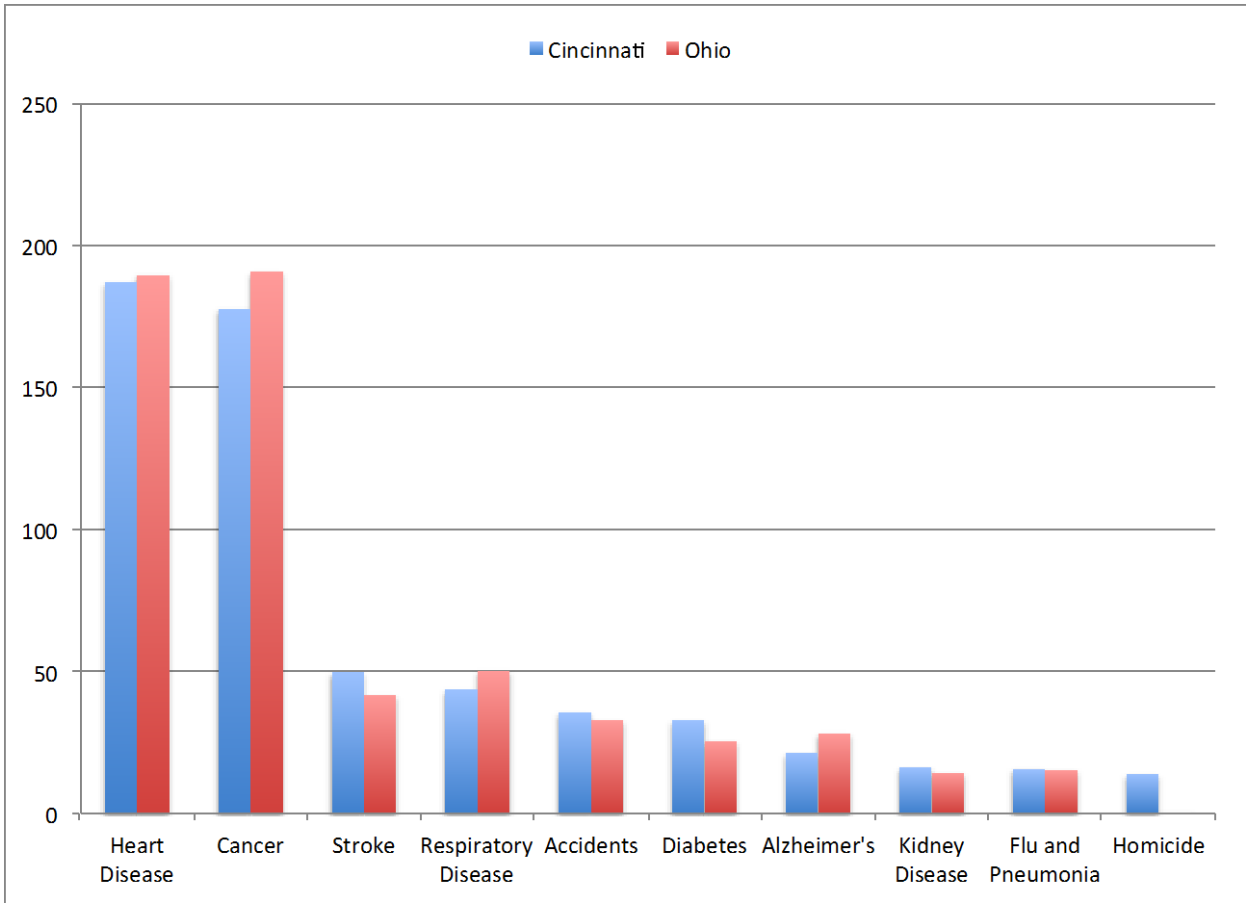
The proportion of visits attributed to overdoses, opioid use, and heroin use within Hamilton County was less than the percent of cases outside of Hamilton County (Figure 26).

According to Figure 27, adults aged 25-34 years experienced the most non-fatal drug overdoses. People of this age group also used the most opioids and heroin (Figure 27).

LEADING CAUSES OF DEATH

In the simplest terms, mortality rates tell us how many people are dying in a defined population during a particular time period. Mortality rates are typically presented as deaths per 100,000 people in the particular time period. The mortality rates presented here have been age-adjusted so that they can be directly compared to state and national mortality rates.

FIGURE 28. TOP 10 MOST COMMON CAUSES OF DEATH AND MORTALITY RATES (PER 100,000 FOR CINCINNATI, 2001-2009, WITH OHIO COMPARISONS, 2009



Source: Cincinnati Health Department, Vital records, Ohio Department of Health. Rate: age-adjusted rate per 100,000.

The ten most common causes of death for Cincinnati residents are listed in Table 31 and in Figure 28. Figure 28 provides a visual comparison between Cincinnati and Ohio. Although heart disease and cancer rates are lower in the city of Cincinnati, Cincinnati shows substantially higher mortality rates for stroke, diabetes and homicide. In 2010, homicide does not rank in the top ten causes of death for Ohio; instead, the 10th leading cause of death in Ohio is suicide, with a rate of 11.8 per 100,000.

The leading causes of death for Cincinnati should be considered in relation to associated risk factors. For example, heart disease and diabetes are chronic conditions influenced by many factors, including body weight and activity level. If an individual lives in a neighborhood without easy access to fresh and nutritious food, with few residents who have access to a vehicle for transportation, and with many residents who spend more than half of their income on housing, or who do not have a primary care physician (medical home), or who are reluctant to walk or exercise due to safety concerns, then all of these risk factors need to be modified to reduce and prevent deaths associated with heart disease and diabetes in that neighborhood.

TABLE 31. LEADING CAUSES OF DEATH IN CINCINNATI AND OHIO, 2001-2009

Leading Causes of Death	Cincinnati		Ohio
	Rate*	Count	Rate
Total / All-Cause Mortality	805.2	26,087	858.6
Heart Disease	187.1	6,122	189.7
Cancer	177.8	5,564	190.9
Stroke	49.8	1,648	41.8
Chronic Lower Respiratory Disease (CLRD)	43.7	1,387	50.4
Accidents	35.6	1,046	32.9
Diabetes (Sugar)	32.9	1,038	25.7
Alzheimer's Disease	21.4	757	28.7
Kidney Disease	16.3	524	14.4
Flu and Pneumonia	15.8	528	15.4
Assault (Homicide)	13.9	474	5.1^

Notes:
*Rate: age-adjusted rate per 100,000
^Due to data availability, this rate is for 2010
Date year: Cincinnati, 2001-2009; Ohio, 2009 except where noted
Sources: Cincinnati death certificates, 2001-2009; Ohio data from the National Vital Statistics Reports, Vol. 59, No. 10, Table 19.

Please refer to the individual Neighborhood Profiles that can be accessed on the Cincinnati Health Department webpage, under Community Health Data, at http://www.cincinnati-oh.gov/health/data-studies/, and select Neighborhood Specific Mortality Data to view the top three leading causes of death for each City of Cincinnati neighborhood grouping Table 32).

According to Mercy Health 2013 CHNA report, the leading cause of cancer death in Hamilton County was lung cancer with 706 cases, followed by female breast cancer (638 cases), prostate (586 cases) and then colon/rectum (475 cases) in terms of incidence. The rates for the City of Cincinnati were not available.

The 2011 Ohio Commission on Minority Health report found that overall mortality rates are higher in Cincinnati in males and females, blacks and whites, and in all age groups,

compared to Ohio rates. In addition, cause-specific mortality rates for the top 10 causes of death in Cincinnati in 2001-2007 are elevated compared to other areas of Ohio, and to United States rates (Table 31).

TABLE 32. MORTALITY RATES FOR THE CITY OF CINCINNATI, OHIO AND US – ALL AGES, 2001-2007

Mortality Rates (per 100,000 population) for the top 10 causes of death in Cincinnati, Compared to Ohio Large Metropolitan Areas, and the United States, CDC Wonder Compressed Mortality Files, 2001-2007			
Causes of Death	**Cincinnati 2001-2007**	**Ohio Large Metro 2001-2007**	**USA 2004**
Heart Disease	265.2	221.1	222.2
Malignant Neoplasms (Cancer)	230.8	217.4	188.6
Cerebrovascular Diseases (Stroke)	71.1	54.6	51.1
Chronic Lower Respiratory Diseases	56.1	44.9	41.5
Diabetes Mellitus	44.8	29.7	24.9
Accidents	42.6	32.9	38.1
Alzheimer's Disease	29.8	25.6	22.5
Nephritis / Nephrosis (Kidney Disease)	23.2	18.2	14.5
Influenza and Pneumonia	21.9	18.3	20.3
Assault (Homicide)	19.1	9.0	5.9

Source: Cincinnati Health Department, Vital Statistics, Ohio Department of Health, Vital Statistics, National Center for Health Statistics

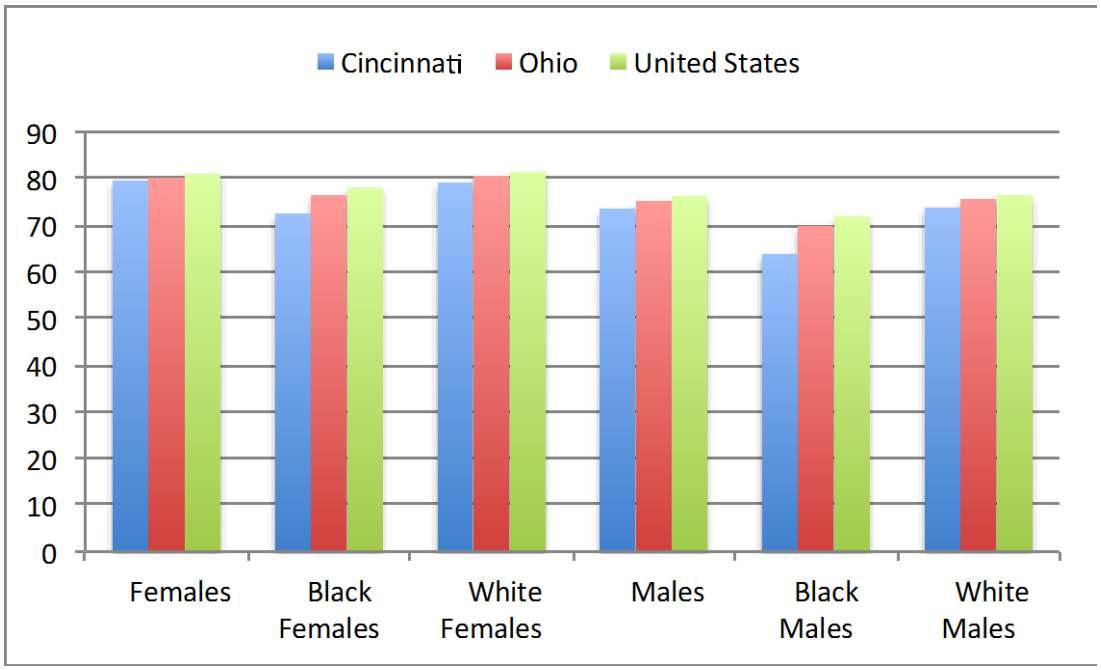
Gun Violence

The total number of adult hospital admissions (in Cincinnati) for gunshot wounds rose dramatically between 2000 and 2010, particularly for African-Americans. In 2010, there were 72 reported homicides; in 2011, there were 66. The ratio of survivable gunshot injuries to gunshot deaths is 8:1. The homicide death rate in Cincinnati from 2001-2007 was 19.1/100,000, more than twice the rate in Ohio large metropolitan regions (9.0), and more than three times the homicide rate in the US (5.9). The majority of these deaths were due to firearms. While the effects of violence and fear of violence were not among the top priority issues identified by the Local Conversation participants, many of the concerns raised by Local Conversations participants are impacted by and could impact rates of assault and homicide. Grassroots efforts to address violence are an example of how communities can come together to address high priority issues.

LIFE EXPECTANCY

Life expectancy is estimated as the average number of years an infant born today could expect to live, if current age specific mortality (death) rates stay the same over that infant's entire life. For example, we estimate that the average Cincinnati infant born today may expect to live 76.7 years assuming that the death rates in Cincinnati do not change over the course of their life.

FIGURE 29. LIFE EXPECTANCY (YEARS) BY GENDER AND RACE IN CINCINNATI, OHIO AND THE US, 2001-2009



Source: Cincinnati Health Department, Vital records, Ohio Department of Health

The estimated life expectancy at birth in Cincinnati is 76.7 years, two years less than the national US average, which suggests that we are not as healthy as the rest of the nation. Figure 29 shows the gap that exists between the life expectancy for men (73.6 years) and for women (79.6 years) in Cincinnati. While this disparity is seen across all geographical areas, men and women in Cincinnati still live slightly less than both the average Ohioan and US resident.

Similarly, African American men and women in Cincinnati do not have as long a life expectancy as their white counterparts. On average, African American men live ten years less than White men (63.8 years vs. 73.8 years), and African American women live about six and a half years less than White women (72.4 years vs. 79 years). While disparities exist at the state and national level, African American women are living far shorter lives in Cincinnati (72.4 years) than in Ohio (76.5 years) and the US (78 years) as a whole, and the same holds true for African American men (63.8 years vs. 69.8 years) for Ohio

overall and 71.8 years for the US (Table 33). These findings point to significant health inequities that must be addressed as a city.

TABLE 33. LIFE EXPECTANCY AT BIRTH, 2001-2009

Indicator	Cincinnati	Hamilton County	Ohio	US*
Life Expectancy at birth (years)	76.7	--	77.5	78.7
Females	79.6	79.9	80.2	81
Males	73.6	74.7	75.1	76.2
Black Life Expectancy at Birth	68.3	--	--	75.1
Black Females	72.4	76.9	76.5	78
Black Males	63.8	70.5	69.8	71.8
White Life Expectancy at Birth	76.5	--	--	78.9
White Females	79	80.8	80.6	81.3
White Males	73.8	75.9	75.6	76.5

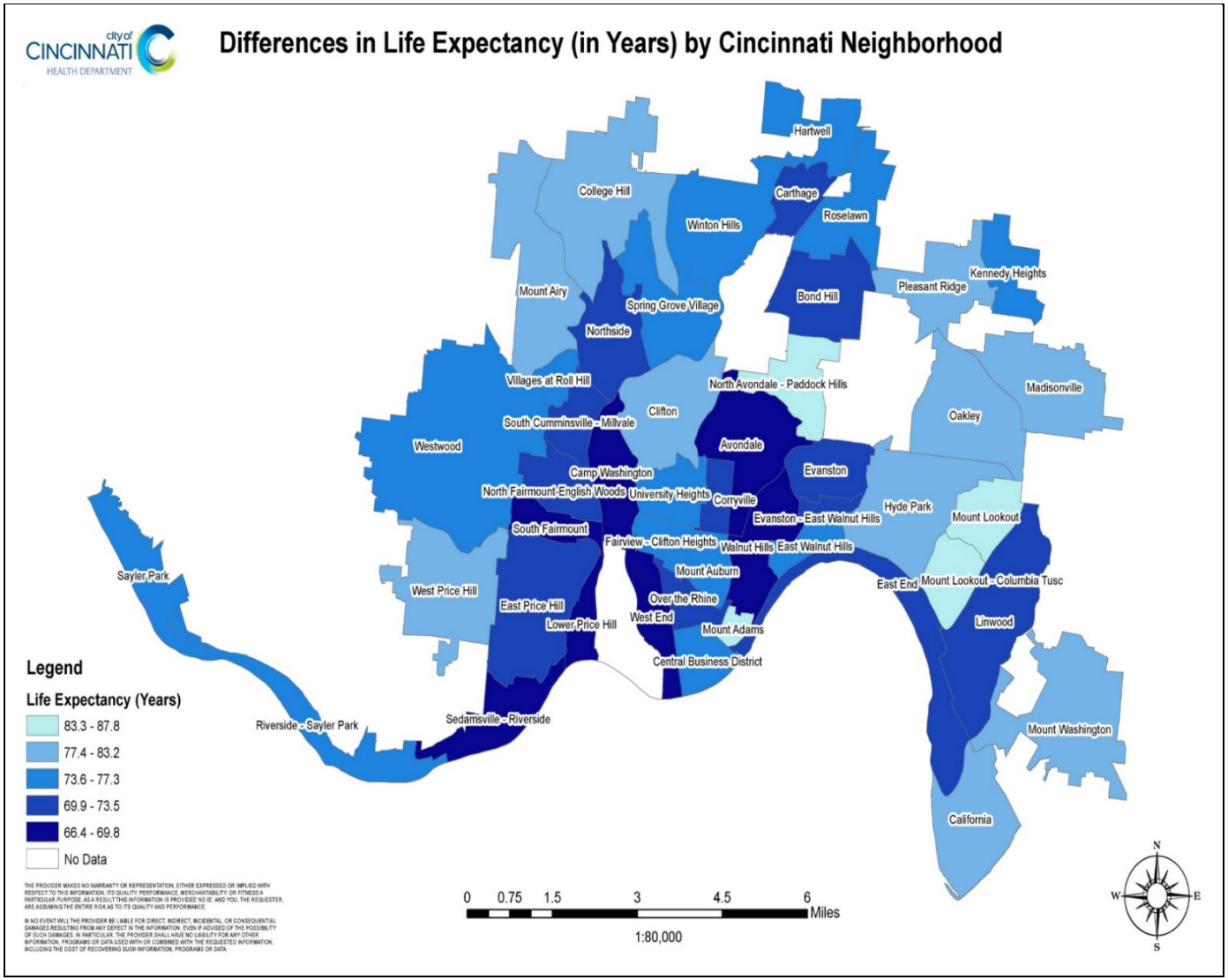
Notes:
Data year: Cincinnati life expectancy, 2001-2009; County and State life expectancy, 2009; US life expectancy, 2010
Sources: Cincinnati death certificates, 2001-2009; Ohio state and county data: Institute for Health Metrics and Evaluation, University of Washington, 2009; US data: Centers for Disease Control: http://www.cdc.gov/nchs/hus/contents2012.htm#018

Differences in Life Expectancy

The Cincinnati Health Department has developed life expectancy estimates for each of 48 City of Cincinnati neighborhood groupings. These data are available individually in each of the Neighborhood Profiles on the City of Cincinnati Health Department website. On the citywide map, darker shaded neighborhoods have lower life expectancy rates than lighter shaded neighborhoods Figure 30. These life expectancy calculations show that residents of some Cincinnati neighborhoods may expect to live as many as 20 years longer than residents of other neighborhoods. This disparity can be seen even in neighborhoods that are right next to each other. For example, residents of North Avondale-Paddock Hills can expect to live to about 87 years, while residents of Avondale have a life expectancy of about 68 years.

These variations in life expectancy help to further identify where factors that adversely impact health and wellbeing may be concentrated. Communities can use the information presented in this profile, coupled with their Neighborhood Snapshots and their own expert knowledge of their neighborhoods, to begin asking the questions and determining solutions that will drive improvements in life expectancy and quality of life.

FIGURE 30. DIFFERENCES IN LIFE EXPECTANCY (IN YEARS) BY CINCINNATI NEIGHBORHOOD, 2001-2009



Source: Cincinnati Health Department, Vital records, Ohio Department of Health

VULNERABLE COMMUNITIES AND POPULATIONS

In the CHNA, to identify areas where specific barriers known to limit health care access were most likely to occur, we used the Community Need Index (CNI) developed by Catholic Healthcare West and Solucient, and now maintained annually by Dignity Health and Truven Health Analytics. The CNI estimates the severity of health disparity based on the following specific characteristics of the neighborhood:

- Percentage of elderly, children, and single parents living in poverty
- Percentage of Caucasian/non-Caucasian and percentage of adults over the age of 25 with limited English proficiency
- Percentage without a high school diploma
- Percentage uninsured
- Percentage unemployed
- Percentage renting houses

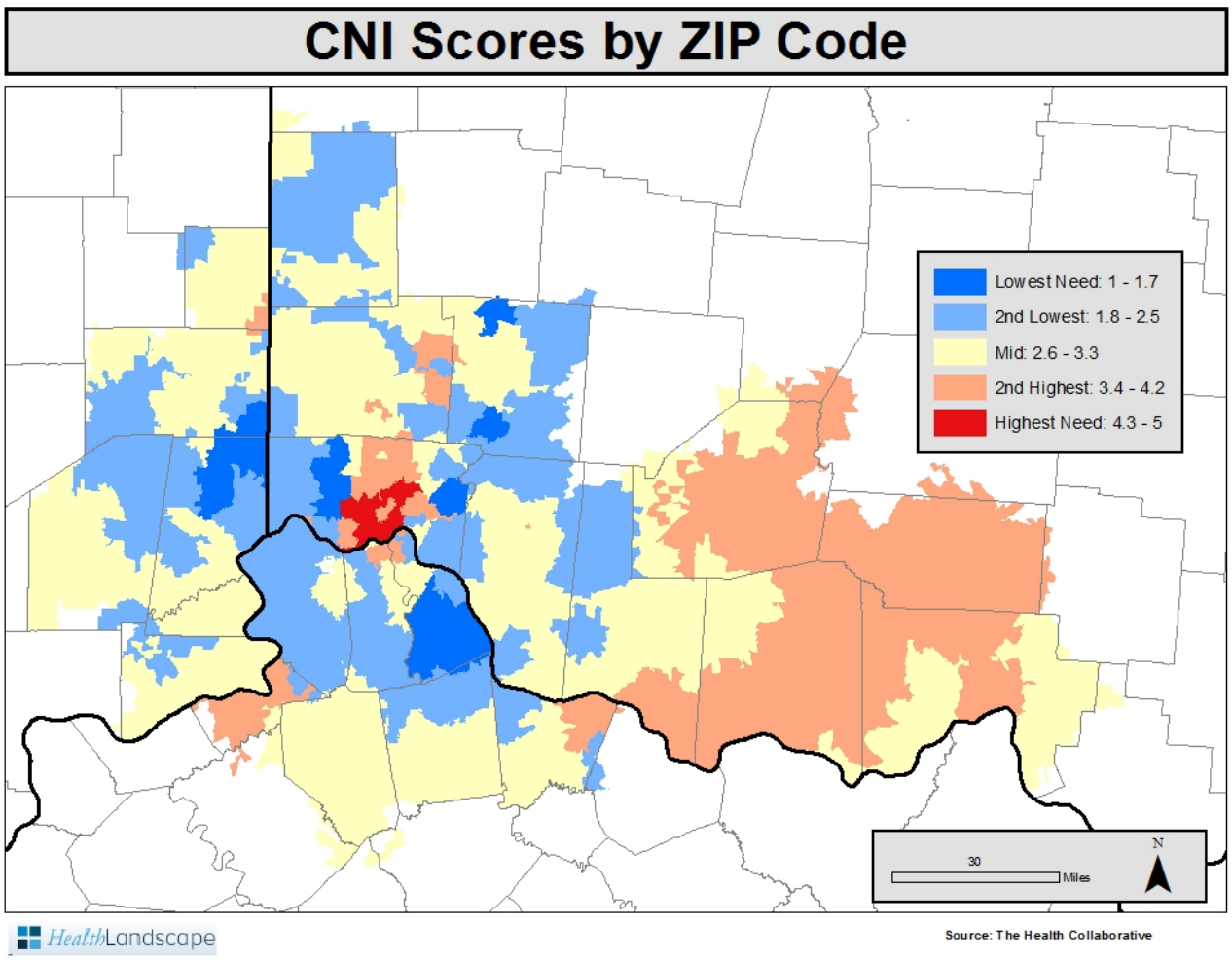
Validity tests were conducted to affirm the association between community need, access to care and preventable hospitalizations. CNI scores ranged from 1 (lowest need) - 5 (highest need). A comparison of CNI county scores to hospital utilization (outpatient, inpatient, readmissions and emergency department admissions) showed a strong correlation between high need and high utilization. Admission rates were more than 60% higher for communities with the highest CNI scores. For ambulatory sensitive conditions, the highest need ZIP Codes had hospital admission rates 97% greater than the lowest need ZIP Codes.

The advantage of the CNI for high-level assessment of likely health disparities is that it broadens the discussion of where and who might suffer from being disadvantage. If someone is lacking access to care, their demographic information will not be included in a patient database, and they can be invisible to the organizations interested in assisting them. The other advantage is that scores are available for almost every ZIP Code in the country, and the scores are unreliable only in communities with fewer than 100 residents.

Because a majority of socio-economic indicators are only available at the county level, to complete the 2013 CNA for UC Medical Center, the UC Health system employed a zip code-level analysis of their service area, which includes Hamilton County. The assessment included a Truven Health Analytics Community Need Index (CNI), which is a statistical tool that takes into account socio-economic factors (e.g., income, education, insurance and housing status) that are associated with barriers to health care and poor health outcomes. They used the CNI to generate a score between one (lowest need) to five (highest need) for each zip code of interest. The resulting “heat map,” presented in Figure 28 below, shows a concentration of relatively poor socio-economic conditions

within and around the City of Cincinnati, as indicated by high CNI scores (between 4-5), and a mean CNI score of 3.4. Neighborhoods of greatest need within the City of Cincinnati limits are observed in red in Figure 31. Table 34 provides a list of the City of Cincinnati areas with the greatest CNI scores, which are determined as vulnerable communities.

FIGURE 31. HEAT MAP/ COMMUNITY NEED INDEX (CNI) SCORES BY HAMILTON COUNTY ZIP CODES, 2015



SOURCE: HEALTH COLLABORATIVE CHNA REPORT 2015-2016

TABLE 34. CITY OF CINCINNATI AREAS WITH THE HIGHEST COMMUNITY NEED INDEX (CNI) SCORES, 2015

Neighborhood	CNI Score
Avondale	4.8
Corryville	4.4
Madisonville	3.6
Millvale	5
Price Hill	5
Walnut Hills	4.8
Westwood	4.4
Winton Hills	5

Source: Health Collaborative CHNA report 2015-2016

The most recent Greater Cincinnati Community Health Status Survey (GCCHSS) included oversampling of some of the Cincinnati neighborhoods identified with the highest CNI scores. Statistics on two measures which are correlated with oral health needs and outcomes, were available for Avondale, Madisonville and Price Hill. As shown in Table 35, 28% to 33% of adult residents in these three Cincinnati neighborhoods report only being in fair or poor health, compared to 21% for the City of Cincinnati and 18% for Hamilton County Suburbs.

TABLE 35. HEALTH AND INSURANCE STATUS OF VULNERABLE COMMUNITIES, CINCINNATI, HAMILTON COUNTY, 2013

	Avondale[1]	Madisonville	Price Hill	City of Cincinnati[2]	Hamilton County Suburbs
General Health Status					
Fair/poor	**33.0%**	**32.3%**	**28.0%**	**21.1%**	**18.0%**
Good	33.0%	32.0%	28.5%	29.0%	30.2%
Excellent/very good	33.0%	35.6%	43.5%	50.0%	51.7%
Health Insurance Status					
Uninsured	40.0%	21.7%	14.3%	18.9%	12.9%
Insured	60.0%	78.3%	85.8%	81.1%	86.1%
Medicaid[3]	N/A	14.4%	31.3%	21.6%	11.3%

[1] Avondale statistics were reported in generalities in the report *Avondale: The Health of Our Community, 2011,* and therefore are estimates; statistical tables for the 2013 survey were not available.
[2] General health status and insurance rates reported in the Greater Cincinnati Community Health Status Survey were for adults, rather than the entire population.
[3] Medicaid included Medicaid only and Medicare-Medicaid (dual-eligible) coverage.
Source: Except for Avondale, statistics are from Interact for Health survey tables from the Greater Cincinnati Community Health Status Survey; see: https://www.interactforhealth.org/greater-cincinnati-community-health-status-survey.

CONCLUSION

The Cincinnati CHNA incorporates data about the priorities and major issues identified by Hamilton County stakeholders during the stakeholder meetings convened during the CHNA process, including issues identified as emerging issues in public health. In this supplemental CHA, the Cincinnati Health Department presents data on a variety of health indicators within the city.

Important Findings

Major findings from the CHA are summarized below.

Determinants of Health

- Significant social and economic inequities exist that are associated with health disparities by race, gender, poverty status and neighborhood.
- Life expectancy at birth varies by up to 20-years difference for residents different Cincinnati neighborhoods.

Overall Health Status

- A smaller percentage of Latinos (41%) self-report “excellent or very good” health than Non-Latinos (52%).

Challenges to Health Care Access

- A smaller percentage of Cincinnati residents are insured than residents of Hamilton County and Ohio, with disparities by race (a lower percentage of African Americans insured that Whites) and gender (a lower percentage of men insured than women).
- A higher percentage of Cincinnati expectant mothers received late or no prenatal care than other Hamilton County mothers or Ohio mothers.

Poorer Perinatal and Infant Health

- Cincinnati has a high infant mortality rate (10.9 per 1,000 live births compared to 7.4 for Ohio).
- The infant mortality rate is higher for racial and ethnic minorities than non-Hispanic Whites.

Health of Children and Adolescents

- Significant proportions of school children are overweight or obese (34.2%), have asthma (14.3%) or dental issues (13/8%).
- A large percentage of school children are up to date on all recommended immunizations (91.1%).
- The most frequent causes of death among children and youth are unintentional injury and intentional injury (i.e. assault, homicide).

- Male and minority youth have higher mortality rates.

Health of Adults

- A higher percentage of Cincinnati adults smoke, get insufficient physical activity, and sleep less than 7 hours per night than US adults.
- Higher percentages of Cincinnati adults have asthma, high blood pressure, chronic kidney disease, chronic obstructive pulmonary disease, and diabetes than US adults.
- However, a smaller percentage of Cincinnati adults have been diagnosed with cancer than US adults.

Environmental Exposures

- A significant proportion of Cincinnati homes were constructed before 1940, elevating the risk of exposure to lead paint hazards among residents.
- Many residents of neighborhoods with moderate and/ or high poverty rates live over a mile away from a grocery store. Residents of these neighborhoods are less likely than those in more affluent neighborhoods to own a car, creating obstacles to accessing and eating healthy food.

Communicable Diseases

- Among conditions that must be reported to local health departments, the most commonly occurring are
    - Sexually-transmitted infections (especially Chlamydia and Gonorrhea) and Viral hepatitis (especially chronic Hepatitis B and C). The rate of new diagnoses of chronic Hepatitis C has surged in the past few years, and is projected to continue to increase.

Behavioral Health

- In 2016, adults aged 25-34 years of age experienced the most non-fatal overdoses.
- The opioid epidemic continues to grow and significantly affect areas of southwestern Ohio.

Common Causes of Death

- Although heart disease and cancer rates are lower in the city of Cincinnati, Cincinnati shows substantially higher mortality rates for stroke, diabetes and homicide.

Community Feedback on CHA Data and Priorities

The data in this CHA have been presented in part in a large number of venues. In addition, the public and stakeholders have had a chance to review the completed supplemental

Cincinnati CHA and provide input in multiple ways (listed below), and their input was carefully considered.

- Publication on website (with comments form)
- Facebook page publication and downloadable files
- Selected data presented at venues including
  - Cincinnati Board of Health (televised)
  - Community Council meetings (2)
  - *State of the City* 2016
  - CHCC Creating Health Communities Coalition (CHCC) meeting

Community members concerns and priorities included poor nutrition, stress management, drugs, asthma, safety and air quality. These community-determined priorities will be considered when developing the next Community Health Improvement Plan (CHIP). Assets and resources that may help address these priorities are listed in Appendix B.

Use of the CHA

The data provided in this CHA will help guide the priorities and areas of need for the City of Cincinnati. The findings of the CHA will inform the new Community Health Improvement Plan (CHIP). Future goals are to improve infant mortality and improve health equity among Cincinnati neighborhoods. In the future, the CHA will be updated every three years; the CHA data will inform subsequent CHIPs.

ACKNOWLEDGMENTS

The Cincinnati Health Department offers a very special thank you to the following people and organizations contributed to this report by providing their time, advice, guidance, health data, community resources, and other various sources that contributed to the production of the 2017 Cincinnati Health Department Community Health Assessment (CHA) Report. In addition, we would like to thank the Ohio Public Health Partnership for funding an Ohio Accreditation mini-grant. Special thank you to the following:

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Lindsay Prescod, MS	City of Cincinnati Health Department - Public Health Associate, CDC, OSTLTS, PHAP

Appendix A: Local Conversation Discussion Questions Instrument

State of the City of Cincinnati Health

Local Conversation

Cincinnati Health Department

WORKSHEET 1: Health Priorities

Table # _____

Name: _____

The purpose of this activity is to begin to discuss health priorities to inform the Cincinnati Health Department. The results of this activity will assist with the development of the Cincinnati Health Department's Initiatives, and will be used along with other sources of information to help guide decision making.

For the purpose of this exercise, please focus on the highest priorities for you, your neighborhood, and your city. I will ask you three questions to be discussed for approximately 40 minutes each. For example, the first question is "What do you think is the most important health issue to you and your family?"
If you think healthy eating is the most important health issue to you, then you would write why healthy eating is an issue. Next you would discuss your answers with the people at your table. I will take notes and report out at the end.
The group should discuss health issues using the following questions as guidelines.

1. What do you think is the most important health issue to you and your family?

2. What do you think is the most important issue in your neighborhood?

3. What services are needed **or** are your health service needs being met?

Appendix B: List of resources in Hamilton County including assets in the City of Cincinnati

Resource	Description
211	United Way's 2-1-1 information and referral phone line
281-Care	Talbert House immediate assistance hotline
Alice Paul	YMCA provides assistance, protective shelter, and necessary support for battered women and children
American Cancer Society	Cancer education Helps individuals find support and treatment
American Red Cross	Disaster response Education Emergency service
Anna Louise Inn	Safe and affordable housing for single women
CAIN	Provides nutritious food**,** crisis assistance, resources for the Northside Community
Cancer Family Care	Activities for children affected by cancer Children's services Free wigs, massage therapy, and healing touch therapy Individual and family counseling Information about cancer-related illness and loss
Catholic Charities of Southwest Ohio	Family services Mental health services Refugee resettlement services Senior servicies Su Casa Hispanic Center
Center for Closing the Health Gap	Advocacy Education Community outreach to combat obesity and promote wellness Annual Health Expo event
Central Community Health Board of Hamilton County (CCHB)	Comprehensive community mental health care facility
The Christ Hospital Health Network	General medical/surgical acute care hospital, plus more than 100

	physician practice and outpatient locations in the Greater Cincinnati Area. These services and programs include but are not limited to: Prescription assistance Social services Patient assistance Emergency assistance Home Health care Urgent Care centers Prenatal clinic Free community education events Adult behavioral health services Financial assistance Wound care Comprehensive support groups Diabetes and endocrine center Subsidized clinics
Cincinnati Association for the Blind	Employment services for people with low vision or blindness, including: Access technology services Counseling Information services
Cincinnati Children's Hospital Medical Center	Asthma Improvement Collaborative Asthma Home Health Pathway Buckle Up for Life Center for Better Health and Nutrition Child HeLP Cincinnati Children's Cincinnati Children's College Hill Campus Cincinnati Children's Primary Care Clinics Cincinnati Children's School Based Health Centers Collaboration to Lesson Environmental Asthma Risks (CLEAR) Comprehensive Child Injury Center Every Child Succeeds Keeping Kids Nourished and Developing (KIND) Mayerson Center for Safe and Healthy Children MindPeace Perinatal Institute at Cincinnati Children's The Health Network by Cincinnati Children's

Cincinnati-Hamilton County Community Action Agency	Ex-offenders/Fresh Start Head Start/HEAP utility assistance Housing support Supportive services Tax preparation assistance Workforce development Youth construction training
Cincinnati Health Department (Primary care, dental care, and pharmacy)	Center for Reproductive Health & Wellness Braxton F. Cann Memorial Medical Center Crest Smile Shoppe Elm Street Health Center Millvale at Hopple Street Health Center Northside Health Center Price Hill Health Center Childhood lead prevention: financial assistance to control lead hazards; Paint chip testing Environmental health services, including licensing, inspection and enforcement of state and municipal laws and regulations. Vital Records Health promotion and worksite wellness Emergency preparedness and response Epidemiology and assessment
Cincinnati Metropolitan Housing Authority (CMHA)	Provides affordable rental housing for low income people and vouchers
Cincinnati Recreation Commission	Centers for recreation and exercise throughout City of Cincinnati
Cincinnati Works	Job readiness and acquisition Childcare resources Behavioral counseling Legal advocacy Support services to break the cycle of poverty Transportation assistance
CityLink Center	Childcare Education Financial education Health and wellness

	Housing advocacy Workforce development
Council on Aging	Advocacy Caregiver support Programs and services for older adults and people with disabilities Wellness programming, information and resource center
Cradle Cincinnati	Collaborative initiative focused on spacing, smoking, and sleep to reduce infant mortality rates in Cincinnati and Hamilton County
Crossroads Health Center	Federally Qualified Health Center offering primary care for all ages: Alcohol and drug assessment and treatment Bilingual staff Licensed daycare Medication assisted treatment programs Mental health counseling and treatment
Family Nurturing Center	Child abuse treatment services
Freestore Foodbank (emergency food and services provider)	Food distribution Clothing assistance Financial assistance Cincinnati Cooks! and Kids Café Social services
Gabriel's Place	Food education from seed to table in Avondale
Good Samaritan Free Health Center – Price Hill	Dental care Chronic disease care Gastroenterological care Gynecological care Mammograms Physical therapy Rheumatology services Sick visits
Green Umbrella	Environmental sustainability of Greater Cincinnati
Growing Well Cincinnati	Coalition of local providers that coordinates health services within Cincinnati Public Schools
Hamilton County Public Health	Disease prevention Health promotion and education Birth/death certificates Nursing Emergency preparedness and response

	Epidemiology and assessment Permitting, licensing and inspections
Healthcare for the Homeless (Cincinnati Health Network's partners serving the homeless)	Intensive collaborative case management Oral healthcare Primary and mental health care Respite care Social support services Substance abuse and addiction treatment
Healthy Beginnings	Prenatal care Maternal services
Hope Clinic at Good Samaritan Hospital	Case management Financial counseling Nutrition counseling Prenatal care Referrals to treatment and community support services Referrals & follow-up to Methadone Maintenance Treatment facilities / Subutex providers Social work support
Injury Free Coalition for Kids	Coalition to prevent childhood injuries
Interact For Health	Awards funds to non-profit and governmental organizations for programs and activities that improve health in Cincinnati and surrounding counties
Lighthouse Youth Services	Social services for children, youth and families in need, including: Community School, grades 6-12 Help Me Grow Transitional housing and services for homeless youth
Mental Health Access Point, division of Central Clinic	Application assistance for medical and disability benefits Assessment, support and connections for those in need of mental health services Housing assessments Mental health assessments Transitional case management
Mercy Health – St. John	Basic Needs - Food, clothing, personal hygiene and household items, and bus cards Bridges program - Job readiness and computer training

	Emergency assistance with rent and utilities Homelessness prevention Medical clinic Prescription assistance and vision assistance Social services Youth Development program
People Working Cooperatively	Home repairs for low-income, elderly, and disabled homeowners Home maintenance Mobility modification Weatherization Work/Life quality and flexibility
Pregnancy Centers	Pregnancy testing and information Prenatal care Earn While You Learn – one-on-one, 8-week program for expectant mothers who receive baby items after completing life skills and parenting education
PreventionFirst!	Annual administration of student drug use survey Greater Cincinnati Evaluation Center Group facilitation Prevention education sessions Substance abuse prevention specialist
Produce Perks Midwest	Doubles the purchasing power for low-income shoppers – providing a $1 for $1 match for families and individuals receiving SNAP (formerly known as food stamps) when spent on healthy foods
Salvation Army	Adult rehabilitation Combating human trafficking Disaster relief Donated goods Elderly services Housing and homeless services Hunger relief Missing persons Prison ministries Veterans' services Youth camps and recreation
Santa Maria Community Services	Early childhood and youth development Bienestar Hispanic Health Access program and services

	Health and Wellness programming that reaches out to older adults, Appalachians, African-Americans, and Latino immigrants Workforce development
Shelterhouse- Drop Inn Center	Emergency shelter for adults Recovery program Shelter-based case management Supportive services for chronically homeless
The Strive Partnership	Education partnership dedicated to support children academically from cradle to career
Su Casa Hispanic Center	Program of Catholic Charities of SW Ohio Primary provider of social, educational, language, employment, and health care services to Hispanic/Latino community
Talbert House	Network of services focusing on prevention, assessment, treatment, and reintegration: Adult and youth behavioral health Court and corrections Housing Substance abuse
TriHealth Hospitals	Healthcare system including Bethesda North and Good Samaritan Clinical, preventive, educational, and social programs provided throughout more than 125 locations in the Greater Cincinnati area
UC Hospital	General adult medical/surgical acute care hospital and teaching facility
United Way	Serves communities relating to health, education, and financial stability such as their program called, Success by Six--strategy focused on improving school readiness
Urban League of Greater Southwestern Ohio	African-American business development Leadership program Sickle Cell Awareness Group Workforce development
Women, Infants, and Children (WIC) program	Supplemental nutrition program for women who are pregnant, breastfeeding or postpartum

WinMed Health Services	Federally Qualified Health Center offering: Family health care (including OB/Gyn) Pediatric care Screenings and testing
Women Helping Women	Services for victims of domestic abuse, including Education Prevention
YWCA	Dedicated to eliminating racism and empowering women, providing: Coordination of Breast Cancer and Cervical Health Network to ensure education and screening for under-served women Child care Domestic violence - education and shelter Food pantry Health and fitness

LIST OF LINKS

1. AIM for Better Health
   http://www.gchc.org/newsletter/Community_Health_Needs_Assessment.pdf

2. Children's Shriner's Hospital - Cincinnati
   http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0CDMQFjAD&url=http%3A%2F%2Fwww.shrinershospitalsforchildren.org%2F~%2Fmedia%2FSHC%2FFiles%2FLocations%2FCincinnati%2FCincinnati_CHNA_%25202012.pdf&ei=zK2SVZDvNMey-AGTxoGABA&usg=AFQjCNGPtZzzNlcMEsDe7lTQR-VkJcVu4Q&sig2=G3uF-wvuHc_5FZi3r9WQdg

3. Cincinnati Children's Hospital Medical Center
   http://www.cincinnatichildrens.org/about/community/health-needs-assessment/

4. Good Samaritan Hospital
   http://www.trihealth.com/about-trihealth/community/health-needs-assessment/

5. Mercy Hospital – West
   http://www.mercy.com/corporate/PDFs/CHNA_West_Final.pdf

6. The Christ Hospital
   http://assets.thehcn.net/content/sites/thechristhospital/Community_Health_Needs_Assessment_Final_Board_Approved.pdf

7. University Hospital Medical Center – UC Health
   http://uchealth.com/wp-content/uploads/2013/06/UCMC-Assessment-FINAL.pdf

8. American College of Sports Medicine's American Fitness Index CNA – 2014
   http://acsm.org

9. The Greater Cincinnati Homeless Coalition
   http://cincihomeless.org/fact-sheet/

10. OASIS, Interact for Health
    http://www.oasisdataarchive.org/index.cfm

11. Greater Cincinnati Urban League
    http://www.gcul.org/the-state-of-black-cincinnati-2015-report/

Other Community Reports and Data Sources

12. 2015 Community Action - CAA Community Forum on Poverty

13. Cincinnati Health Department – Local Conversations on Minority Health 2011 Report

14. City of Cincinnati Mortality Data – 2013

15. Ohio Commission on Minority Health (OCMH) – Local Conversation on Minority Health

16. Interact for Health – 2013 Community Health Assessment Status Survey Field Version (8/20/13)
    - Blank Surveys
    - Survey Categories
    - City Level Raw Data Reports from Interact For Health -2013
    - “Improving Public Health & Preventing Chronic Disease: CHW’s Community Need Index”

17. Analysis of CNI Scores

18. Causes of Death by Community

19. Sample Meeting Agenda 2015

20. Sample Meeting Flyer 2015

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