# Bethesda North Hospital

## 2022 Community Health Needs Assessment

10500 Montgomery Road
Cincinnati, Ohio 45242
Hamilton County

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Cincinnati, Ohio 45220-2475

EIN: 31-0537122
Date of Board approval: June 22, 2022
Date of initial posting: June 24, 2022

Introduction

Bethesda North Hospital | TriHealth's (BNH) continues to grow along with our community, and continually assesses the needs of our communities as we develop new programs and services. Over the last year, we have completed a comprehensive Community Health Needs Assessment (CHNA). Our CHNA included input from a wide variety of sources, including, but not limited to customers, community leaders, physicians, county health departments and a paid external consultant.

Through our CHNA, BNH has identified the greatest health needs in our community, which will allow BNH to direct our resources appropriately toward education, prevention programs, and wellness opportunities. The significant health needs of the BNH community served are in order of priority:

1. Cardiovascular Conditions (Hypertension)
2. Mental Health (Depression and Anxiety)
3. Arthritis
4. Lung/Respiratory Health
5. Dental
6. Maternal health concerns
7. Prevention-related needs

Note that these priority health needs align with the 2020-2022 Ohio Department of Health's State Health Improvement Plan's priority topics "Health Behaviors", "Access to Healthcare", "Mental health and addiction" and "Chronic Disease".

The following document is a detailed CHNA for BNH, with the main campus located at 10500 Montgomery Road, Cincinnati, Hamilton County, Ohio 45242.. BNH is an affiliate with TriHealth, Inc., which is an integrated health care system, whose mission and vision, leadership and resources help us serve our communities. Through our affiliation with TriHealth, Inc. the resources of Good Samaritan Hospital, Bethesda Butler Hospital, and McCullough Hyde Memorial Hospital are also available to our clients.

BNH's campus includes a seven-story patient tower and the Bethesda North Outpatient Imaging building, which houses the Mary Jo Cropper Family Center for Breast Care. These facilities have allowed us to build on our reputation of excellence in meeting the health care needs of the region. BNH was first created as a satellite facility of the now-closed Bethesda Hospital in Avondale, founded in 1896 by German Methodist deaconesses seeking to care for Cincinnati's sick and poor.

BNH offers award-winning heart care to maternity services and senior-focused ER rooms. We recently received the designation as a Blue Distinction Center for Cardiac Care from Blue Cross Blue Shield. The Blue Distinction Centers designation signifies that our cardiac Program met nationally established Selection Criteria by demonstrating expertise in delivering quality specialty care, safely and effectively.

BNH recognizes that a CHNA is required to meet current government regulations for 501(c)(3) tax exempt hospitals and this assessment is intended to fulfill this purpose. We also recognize the importance of this assessment in helping to meet the needs of our communities.

BNH participated in the broader Regional CHNA process to assess the region's community health needs. The Regional Community Health Needs Assessment 2021 Report is available at https://healthcollab.org/wp-content/uploads/2022/02/2021-Regional-Community-Health-Needs-

Assessment-cobranded.pdf. BNH carefully considered the health needs identified in the Regional CHNA for the community served by BNH. This CHNA was completed in 2022, however; all data collection was completed in 2021. This BNH CHNA is the foundation for our implementation plan as required by the applicable regulations. The question of how the hospital can best use its limited resources to assist communities is addressed in our implementation plan. GSH has taken a leadership role in both the CHNA and in our communities' plans to address the needs identified.

Please contact Frank Nation, VP Mission and Culture, at 513-569-6248 or at Frank_Nation@trihealth.com to obtain a hard copy of the CHNA report at no charge. Written comments regarding this CHNA report and related implementation strategy may be submitted to Frank_Nation@trihealth.com.

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# Summary of Regional Approach and Health Findings Introduction

*We envision a region where everyone has the opportunity to be healthy. To achieve this vision, our region is working on eliminating health disparities by embracing community voice, investing in trusted partnerships, and implementing evidence-based strategies and best practices to achieve equitable health outcomes for all.*

To move this vision forward with data-driven action, area Health Systems and hospitals, public health agencies and other health care providers commissioned The Health Collaborative (THC), in partnership with the Greater Dayton Area Hospital Association (GDAHA), to facilitate the 2021 Regional Community Health Needs Assessment (CHNA). This Regional CHNA includes 36 hospitals, 22 health departments, across 26 counties in southwest Ohio and the Greater Dayton Area, southeast Indiana, and northern Kentucky.

Data collection, analysis, and synthesis was conducted by Measurement Resources Company (MRC) and subcontractor Scale Strategic Solutions. A comprehensive, inclusive, and balanced mixed-method approach, and best practices in community engagement, were used in data collection to ensure a representative sample of community members, specifically the voices of marginalized populations and the inclusion of providers across health and social services sectors.

In this Regional CHNA, health encompasses physical, mental, and social conditions. Health care is inclusive of hospitals and emergency rooms, primary care, behavioral health, specialty care (i.e., vision, dental, chiropractic, etc.) and social services that support health or link community members to health care.

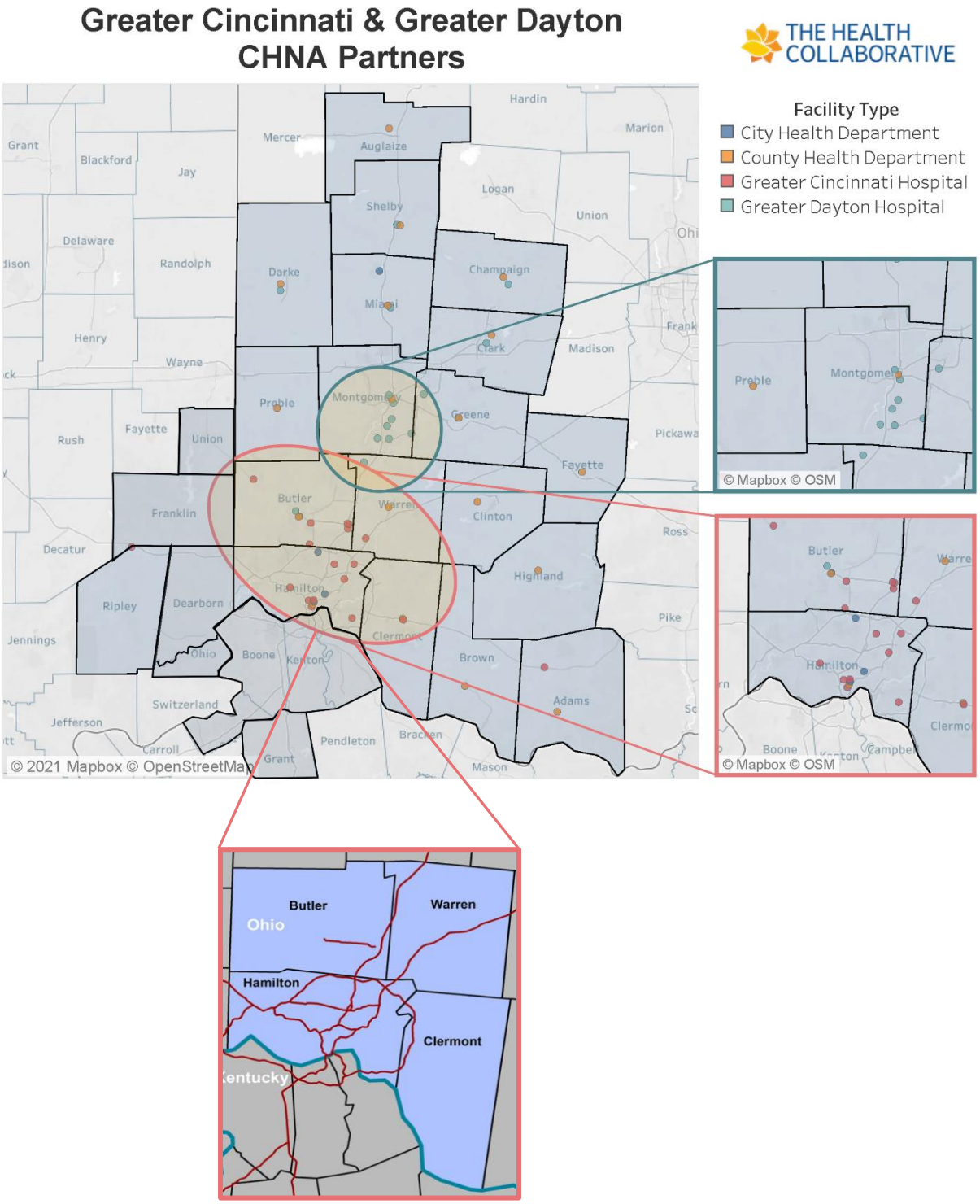
The Regional CHNA was guided by the Advisory Committee. A total of 42 individuals are part of the advisory committee representing hospitals, health departments, and community partners in southwest Ohio and the Greater Dayton Area, southeast Indiana, and northern Kentucky. The advisory committee met monthly from January, 2021 through December, 2021, with THC, GDAHA, MRC and Scale Strategic Solutions to oversee the work and keep THC accountable to the inclusive process.

THC will use the Regional CHNA to inform how they direct energy and resources to equitably meet the healthcare needs of the community. The results will encourage innovative healthcare delivery models designed to unite region-wide efforts in providing high-quality care, increasing access to care, and achieving improved health outcomes for all.

## Alignment to the State Health Improvement Plan of Ohio

This Regional CHNA includes a comprehensive data-driven approach to define the current state of health and health equity with the goal of informing a collective, prioritizing an actionable agenda for improving health outcomes across the region over the next three years. Like the Statewide Health Improvement Plan (SHIP) for Ohio, this Regional CHNA explores the priority factors that influence health including perceptions of healthcare quality and access, health behaviors and community conditions (i.e., social determinants of health). Guided by the SHIP, the Regional CHNA focuses on the priority health outcomes related to chronic disease, mental health and addiction, and maternal and infant health. The recommendations put forth in this Needs Assessment support the priorities of the SHIP and provide a framework for working collaboratively in addressing disparities and barriers to a healthier community.

## Regional CHNA Geographic Area



# Regional CHNA Participating Organizations

## HOSPITALS/HEALTH SYSTEMS

Bon Secours Mercy Health
- Bon Secours Mercy Health Anderson Hospital
- Bon Secours Mercy Health Clermont Hospital
- Bon Secours Mercy Health Fairfield Hospital
- Bon Secours Mercy Health Jewish Hospital
- Bon Secours Mercy Health West Hospital

Cincinnati Children's Hospital
- Cincinnati Children's Burnet Campus
- Cincinnati Children's Liberty Campus
- Cincinnati Children's College Hill Campus

The C&F Lindner Center of HOPE

The Christ Hospital, Mt. Auburn

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

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

Greater Dayton Area Hospital Association (GDAHA):
- Kettering
  - Kettering Medical Center
  - Sycamore Medical Center
  - Kettering Behavioral Medical Center
  - Grandview Medical Center
  - Southview Medical Center
  - Soin Medical Center
  - Greene Memorial Hospital
  - Fort Hamilton Hospital

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

Wilson Memorial Health
Wayne Healthcare
Mercy Health Springfield Regional Medical Center
Mercy Health Urbana Hospital

Adams County Regional Medical Center
Margaret Mary Health

## LOCAL HEALTH DEPARTMENTS

City: Cincinnati, Hamilton (City), Norwood, Piqua, Springdale
County: Adams, Auglaize, Brown, Butler, Champaign, Clark, Clermont, Clinton, Darke, Fayette, Greene, Hamilton, Highland, Miami, Montgomery, Preble, Shelby, Warren

## COUNTIES

Indiana: Franklin, Dearborn, Ohio, Ripley, Union
Kentucky: Campbell, Boone, Grant, Kenton
Ohio: Adams, Auglaize, Brown, Butler, Champaign, Clark, Clermont, Clinton, Darke, Greene, Hamilton, Highland, Miami, Montgomery, Preble, Shelby, Warren

*Notes/Limitations:*

- *4 Kentucky counties are managed by 1 NKY Health Department and did not officially participate. These counties are however in the services areas of participating hospitals (Christ, CCHMC) and therefore are included in the county number.*
- *5 Indiana counties do have their own health department/county but did not officially participate. They are included in multiple hospital service areas (GDAHA, MMH, CCHMC) and therefore were included in the county number.*
- *5 additional city health departments were engaged, all located within participating counties in Ohio*

**Populations Represented**

Hospitals/Health Systems and Local Health Departments represent all populations within their communities, including underserved, low-income and minority populations.

Local health departments provide knowledge of and/or expertise in public health.

C & F Lindner Center for HOPE is a nonprofit, mental health center staffed by a diverse team, united in the philosophy that by working together, we can best offer hope for people living with mental illness.

Input from all required sources was obtained.

No written comments on BNH's 2019 CHNA report or implementation strategy were received.

## Regional CHNA Advisory Committee

| ADVISORY COMMITTEE | | |
|---|---|---|
| **Participants** | **Organization** | **Groups Represented** |
| Denisha Porter | All in Cincinnati | All-In Cincinnati aims to deepen, amplify, and multiply local and regional efforts to build equitable, thriving neighborhoods. Embracing equity means embracing the idea that a person's opportunities shouldn't be determined by race, ethnicity, gender, nativity, religion, sexual orientation, disability status, zip code or family income. |
| Kiana Trabue | bi3 | Transform the health and well-being of all people in Greater Cincinnati by investing in innovative ideas and supporting Bethesda entities and TriHealth to be market leaders. |
| Lauren Brinkman | Cincinnati Children's | We're here for every family, every child, every future. |
| Monica Mitchell | Cincinnati Children's | We're here for every family, every child, every future. |
| Jeanne Bowman | Champaign Health District | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Maryse Amin | Cincinnati HD | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Susan Tilgner | Cincinnati HD | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Anna Jean Sauter | Clark County Combined Health District | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Emma Smales | Clark County Combined Health District/Public Health Dayton Montgomery County | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Dani Isaacsohn | CoHear | We help leaders develop meaningful solutions to difficult problems by organizing and engaging with community members with lived experience. |

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|---|---|---|
| Jamahal Boyd | Crossroads Center | The Crossroads Center is a full service non-profit behavioral healthcare agency providing services within the Hamilton County and Greater Cincinnati Area. |
| Lisa Henderson | Greater Dayton Area Hospital Association (GDAHA) | The Greater Dayton Area Hospital Association (GDAHA) ensures that our healthcare community is providing quality medical treatment in the Miami Valley. |
| Becca Stowe | Hamilton County Public Health | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Greg Kesterman | Hamilton County Public Health | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Sarah Mills | HealthCare Access Now (HCAN) | HCAN was started by community leaders in 2009 to improve the overall health status of Greater Cincinnati's most vulnerable residents – those who are likely to have poor health outcomes because they do not have consistent medical care; access to behavioral health care and specialty care; lack support in successfully managing chronic diseases. |
| Jolene Joseph | Healthcare Connection | Provide quality, culturally sensitive and accessible primary healthcare services focusing on the medically underserved, underinsured and uninsured residing in northern Hamilton County and surrounding areas. |
| Colleen Desmond | Interact for Health | Interact for Health is improving the health of all people in our region. We serve as a catalyst by promoting health equity through grants, education, research, policy and engagement. |
| Kelly Adcock | Interact for Health | Interact for Health is improving the health of all people in our region. We serve as a catalyst by promoting health equity through grants, education, research, policy and engagement. |
| Jonathan Duffy | Kettering Health Network | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Molly Hallock | Kettering Health Network | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Jayda Carlton | Mercy Health/Bon Secours | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Allison Luntz | Mercy Health/Bon Secours | Represents all populations, including the medically underserved, low-income, and minority populations. |

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| Gina Hemenway | Mercy Health | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Carolyn Young | Mercy Health Springfield | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Geralyn Litzinger | Margaret Mary Health | Margaret Mary Health is a not-for-profit critical access hospital providing inpatient and outpatient services. |
| Barbara Marsh | Montgomery/Dayton County Public Health | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Dawn Ebron | Montgomery/Dayton County Public Health | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Brian Williamson | Norwood Health Department | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Sarah Moore | Norwood Health Department | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Roopsi Narayan | Premier Health | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Erik Balster | Southwest Association of Ohio Health Commissioners (AOHC)/ Preble County Public Health | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Ashley Clos | The Christ Hospital | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Jessica Coyle | The Christ Hospital | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Shelley Spencer | The Christ Hospital | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Frank Nation | TriHealth | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Susan Murray | TriHealth | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Regan Johnson | University of Cincinnati | Represents all populations, including the medically underserved, low-income, and minority populations. |

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| Dan Maxwell | UC Health | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Lindsey Cencula | UC Health | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Laura Nabors | University of Cincinnati | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Gabe Jones | West Central Association of Ohio Health Commissioners (AOHC)/Champaign County Public Health | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Bruce Jeffery | YMCA Cradle to Career | Working together, through Collective Impact, we can better support the spirit, mind, and body development of our children. |

| CORE CIRCLE | | |
|---|---|---|
| **Participants** | **Organization** | **Groups Represented** |
| Lisa Henderson | Greater Dayton Area Hospital Association | The Greater Dayton Area Hospital Association (GDAHA) ensures that our healthcare community is providing quality medical treatment in the Miami Valley. |
| Erik Balster | Preble County Public Health | Represents all populations, including the medically underserved, low-income, and minority populations. |
| Lauren Bartoszek | The Health Collaborative | We've imagined a community where good health and quality healthcare are a right, not a privilege. Where everyone has the same opportunities, healthcare is designed with intention, and complex problems are solved collaboratively. Together, we're building a healthier Greater Cincinnati through partnerships, data-driven healthcare and innovation, and an unrelenting commitment to improve outcomes. |
| Ericson Imarenezor | The Health Collaborative | We've imagined a community where good health and quality healthcare are a right, not a privilege. Where everyone has the same opportunities, healthcare is designed with intention, and complex problems are solved collaboratively. Together, we're building a healthier Greater Cincinnati through partnerships, data-driven healthcare and innovation, and an unrelenting commitment to improve outcomes. |

| | | |
|---|---|---|
| Elizabeth Pafford | Measurement Resources Company | Measurement Resources uses data-driven management tools, such as evaluation, organizational development, and performance measurement to help organizations. |
| Sheri Chaney Jones | Measurement Resources Company | Measurement Resources uses data-driven management tools, such as evaluation, organizational development, and performance measurement to help organizations. |
| Eliza Gardiner | Measurement Resources Company | Measurement Resources uses data-driven management tools, such as evaluation, organizational development, and performance measurement to help organizations. |
| Alyssa Petty | Measurement Resources Company | Measurement Resources uses data-driven management tools, such as evaluation, organizational development, and performance measurement to help organizations. |
| Harley Vossler | Measurement Resources Company | Measurement Resources uses data-driven management tools, such as evaluation, organizational development, and performance measurement to help organizations. |
| Calista Smith | Scale Strategic Solutions | We help organizations and systems execute their visions with data driven management consulting and program evaluation. |

# Regional CHNA Methodology and Data Collection

## Methodology – Regional CNHA

The Regional CHNA methodology and results were generated through an inclusive, comprehensive, and balanced data collection strategy.

### Comprehensive Data Collection

The needs assessment utilized a mixed-method approach to data collection including secondary quantitative data and primary quantitative (Regional CHNA community and provider surveys) and qualitative (focus groups and interviews) data.

Secondary data collection, beginning in January of 2021, sought to understand the greatest health conditions of the region, including prevalence and impact on community members. These results informed the creation of survey items that were organized around a set of co-created research questions.

Each data collection strategy adhered to a recruitment plan to ensure a representative sample of community members, voices of marginalized populations, and providers across the health and social services sectors were captured. All results are summarized for the region which includes the Cincinnati Metropolitan Statistical Area (MSA),[1] Dayton-Kettering MSA (to include Clark County which is not part of the Dayton MSA but is similar in that it borders the Dayton MSA and is not a rural county),[2] and other rural counties in the geographic service area that are predominately rural and not included in other MSAs.[3]

Overall, the scope of data collection was robust and informed the results of this Regional CHNA. This includes:

8,321 community surveys available April, 2021 through June, 2021, in five languages. Within this sample, representation was seen across 26 counties, males, females, ages 18-65+, Black/African American, Multiracial, Asian, American Indian, Alaskan Native, White, and Hispanic/Latino populations.

859 provider surveys, available April, 2021 through May, 2021, inclusive of behavioral health, education, emergency medical services, faith-based organizations, federally qualified health centers, justice/corrections, medical care (adult, geriatric, pediatric) oral health, organizations addressing health related social needs and social determinants of health, pharmaceutical, and public health departments.

- Providers also represented administration, direct patient care, academic, support staff, and supervisors/management.
- Providers reported serving a variety of populations including children/youth, people with disabilities, ethnic minorities, people experiencing homelessness, people in the justice system, veterans, young adults, low-income populations, and LGBTQ+ populations.

[1] Includes the following counties: Grant, Butler, Clermont, Hamilton, Warren, Dearborn, Kenton, Boone, Campbell, Brown, Ohio, Union, and Franklin.

[2] Includes the following counties: Clark, Montgomery, Miami, and Greene.

[3] Includes the following counties: Clinton, Highland, Adams, Preble, Shelby, Darke, Auglaize, and Champaign.

51 focus groups with 234 people were held from May, 2021 through July, 2021, representing all three MSAs. Specifically, recruitment for these focus groups were based on advisory committee identification of populations who are traditionally underrepresented, marginalized, or experience greatest health disparities.

- Populations represented in these focus groups include adult men, those experiencing foster care or foster parenting, youth and adults with disabilities, ethnic, cultural and language minorities, first and second-generation immigrants, people experiencing homelessness, those involved in the justice system, low-income families and individuals, parents, veterans, older adults, community members with lived experience of mental health and/or addiction, and first responders.

38 stakeholder interviews were held September 27, 2021 through October 31, 2021, across health and social service providers, specifically with the following being represented: mental health and substance use disorder (SUD), public health, hospital systems, Federally Qualified Health Centers (FQHCs), transportation, housing, food access, healthcare access and policy, school-based health and children's health care, maternal and infant care, LGBTQ+ health care, pharmacy access, and healthcare workforce development.

Appendix C contains a detailed description of each data collection strategy including the sampling or recruitment strategy, and analysis.

Data collection was also comprehensive in that community members, social service providers and healthcare professionals were not only asked "what could be better," but also "what is working." As a result, this Regional CHNA includes a collection of assets and recommended policy and practice initiatives identified by the community that directly tie to system barriers. The symbol (to the left) can be found throughout this report. This symbol identifies a policy or practice that addresses the health need discussed in that section. No data information gaps were identified while conducting the CHNA.

## Co-Created Research Questions

To create the guiding research questions, the healthcare providers participated in a group process, facilitated by MRC, to identify the emerging curiosities related to community health. The exercise focused on moving beyond what is known through secondary data and asking questions that can lead to action. The following research questions were co-created by the advisory committee.

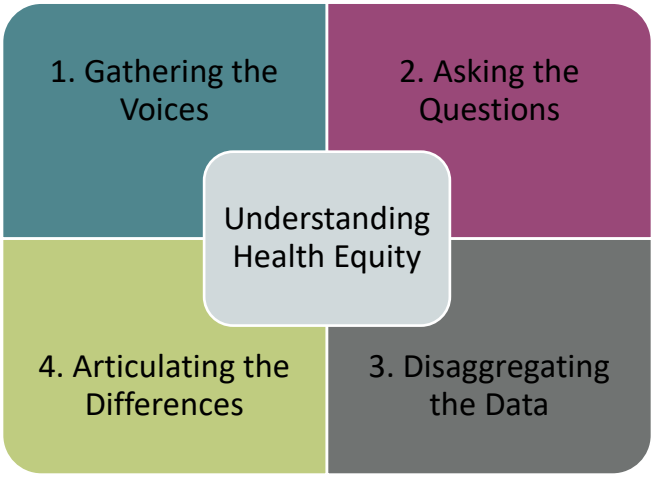
1. What are the greatest health needs in the community?
2. How do the greatest health needs differ across communities and community members?
3. What Social Determinants of Health (SDOH) drive these greatest health needs among different communities and community members?
4. What are the systemic barriers of these greatest health needs among different communities and community members?
5. What are the structural barriers providers face in meeting the needs of the community?
6. What specific action steps can be taken by various partners to address the root causes and achieve more equitable health outcomes?
    a. What community-based expertise should be leveraged?

b. What best practices are being implemented?

To answer these research questions, a framework was developed for centering equity and a comprehensive understanding of the drivers of health conditions. From this framework, MRC and the Advisory Committee co-created a mixed-method data collection strategy.

## Equity-Centered Framework

Health equity means everyone has a fair and just opportunity to be as healthy as possible.[i] To achieve an understanding of health equity, each data collection strategy included mechanisms to:




1. Hear the voices of community members and be intentional about engaging community members who are historically underrepresented in community data.

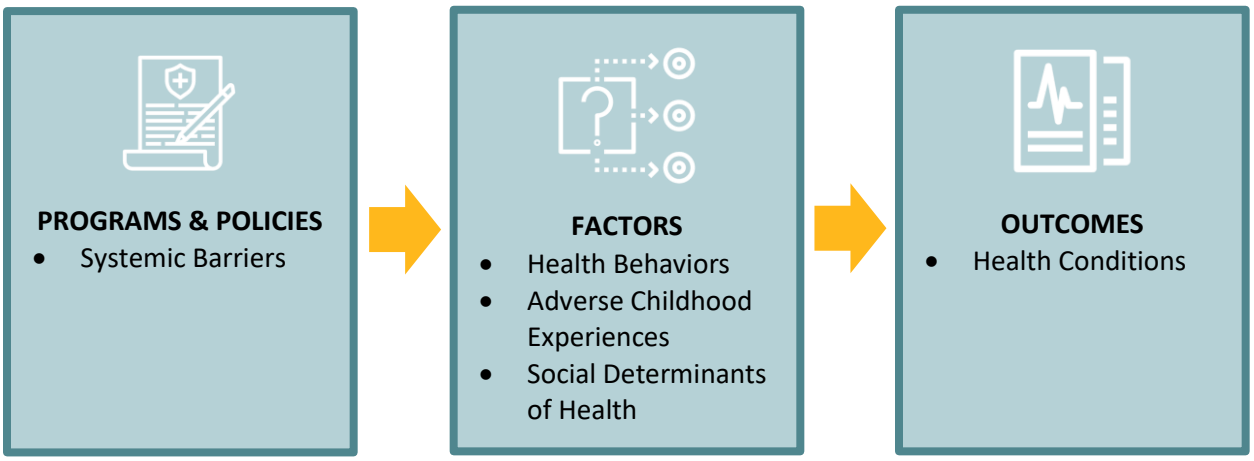
2. Ask questions about health experiences, outcomes, barriers, and solutions.

3. Disaggregate the data by region, age, race, and gender and other characteristics with sufficient sample sizes.

4. Use the data to clearly identify the unique experiences of community members.

## Comprehensive Drivers of Health Outcomes

The following framework helps us understand the drivers of health outcomes and provides the basis for organizing the health needs assessment. In summary, community members experience health conditions because of the risk and protective factors that are present in their life. Those factors are driven by the programs and policies that govern society.



## Programs and Policies

### Systemic Barriers

The governing policies rooted in structural bias perpetuate health disparity and unhealthy behaviors (i.e., not seeking services, self-medicating, etc.). In this Needs Assessment, systemic barriers were assessed from the gender and race lens, perceptions related to stigma, and barriers specific to health care (i.e., workforce shortage, cost reimbursement, etc.).

## Factors

### Health Behaviors

Health behaviors are actions of community members that impact health. Health behaviors can improve health or put health at risk. Behaviors include diet and nutrition, exercise, sleep, substance use, etc. In this Needs Assessment, the literature around each of the health behaviors are explored to determine their impact on health outcomes and disparities in health conditions.

### Adverse Childhood Experiences Framework

Adverse childhood experiences (ACEs) are also a significant risk factor that can lead to poor health, chronic disease and early death. ACEs are traumatic events experienced as a child including abuse, neglect, violence, incarceration of relatives, parental divorce, etc. Exposure to trauma from an early age can disrupt the development of a young person's brain, ultimately leading to higher rates of chronic risk behavior, disease, mental illness, and early death if appropriate interventions and protective factors are not present. As a child's ACEs increase, so does their likelihood of chronic disease and early death.[ii] Secondary data and literature were used to inform the discussion of ACEs and ACEs-related disparities.

### Social Determinants of Health Framework

Social Determinants of Health (SDOH) are the structural and social conditions in the environment that affect a wide range of health, functioning, and quality-of-life outcomes and risks.[iii] The Healthy People 2030 SDOH[iv] framework provided guidance for this Regional CHNA in identifying the community conditions that impact the health of community members. These community conditions include (not in rank order):

- Economic stability
- Neighborhood and built environment
- Education access and quality
- Social and community context
- Healthcare access and quality

SDOH are explored in all data collection strategies to understand their relationship to the region's greatest health needs and disparities in health conditions.

## Outcomes

### Health Conditions

The health conditions of our communities are driven by factors within and outside an individual's control. A study from the University of Wisconsin Population Health Institute showed that about 80% of people's health is the result of physical, environmental and behavioral factors.[v] In this Regional CHNA, health factors were explored to understand what impacts the most prevalent health conditions in the region.

## Summary Of Regional (26 County) CHNA Results – Significant Health Care Needs

Based on the data and criteria described in the research questions, the significant health care needs were identified.

This page identifies the significant health care needs to consider in the prioritization process.

| Most Significant Health Conditions | Health Conditions Most Untreated | Health Conditions Most Impacted By SDOH |
|---|---|---|
| • Cardiovascular Conditions (Hypertension)<br>• Mental Health (Depression and Anxiety)<br>• Arthritis<br>• Lung/Respiratory Health<br>• Dental<br>• Maternal health concerns<br>• Prevention- related health needs | • Vision<br>• Dental<br>• Allergy<br>• Mental Health (Depression and Anxiety)<br>• Arthritis<br>• Cardiovascular Conditions (Hypertension)<br>• Maternal health concerns | • Cardiovascular Conditions (Hypertension)<br>• Mental Health (Depression and Anxiety)<br>• Vision<br>• Lung/Respiratory Health<br>• Diabetes |

### SDOH Factors Impacting Health in the Region

- Economic stability *(Stable housing, food security, paying bills)*
- Neighborhood and Built Environment *(Access to reasonable transportation, parks/outdoor activities, stable phone, and internet)*
- Education Access and Quality *(Perception of quality of schools and childcare that are available)*
- Social and Community Connectedness *(Having someone to talk to and feeling connected to the community)*
- Healthcare Access and Quality *(Perception of quality of health care available, cultural relevancy of health care, ease of finding desired health care, ease of navigating healthcare costs)*

### Structural Barriers in the Region's Healthcare System

- Competition across healthcare organizations/systems
- Workloads and caseloads are high
- Lack of effective clinical-community linkages
- Language barriers and cultural differences
- High cost of services
- Limited workforce
- Inflexible and restricted funding structures and/or investment in community
- Lack of culturally relevant communication strategies and services across providers
- Limited implementation of DEI practices within organizations
- Community member distrust in the healthcare ecosystem (providers, insurers, pharmacies, etc.)
- Limited implementation of best practices of trauma-informed care

### Systemic Barriers

- Structural racism
- High-Cost healthcare system
- Structural divide between healthcare system, holistic wellness providers, and social service providers

### Address Health Needs

- Increase access to services in order to improve equitable outcomes for the region's top health needs: behavioral health, cardiovascular disease, dental, and vision.
- Address access to and use of resources for food security and housing with a focus on the development and strengthening of partnerships between providers and community-based organizations.

- Strengthen workforce pipeline and diversity, including cultural competence, within the healthcare ecosystem.

## Most Prevalent Health Conditions in the Region – Prioritized Significant Health Care Needs

Greatest health needs across the region were identified utilizing multiple data sources, including self-report Regional CHNA community survey results, hospitals' utilization data (see Appendix C for details), and county-level Center for Disease Control (CDC) leading cause of death data. In review of these varying data sources, the most prevalent health conditions across the region include, in prioritized order:

1. Cardiovascular-related conditions (i.e., high blood pressure and/or high cholesterol)

Approximately three in ten residents from the Regional CHNA community survey report needing treatment for high blood pressure and/or high cholesterol. As cardiovascular-related conditions, including high blood pressure/high cholesterol are the leading health needs among residents and are major risk factors for heart disease,[4] it is of no surprise that Diseases of the Heart, particularly Major Cardiovascular Disease, was the leading cause of death in 2019, with an average age-adjusted rate of 251 per 100,000 individuals.[5] Nationally, heart disease is the leading cause of death.[vi] Further, among emergency room and inpatient hospital visits in the region from January 2019 through June 2020, seven percent (or 72,889) of the visits were due to primary diagnoses of the circulatory system (after removing visits due to symptoms, signs, and abnormal clinical and laboratory findings).

2. Mental health-related conditions (i.e., depression and anxiety disorders)

Across the region, approximately two in ten residents from the Regional CHNA community survey report needing treatment to support their mental health (i.e., depression, anxiety, etc.). This is consistent with national rates.[vii] Further, among emergency room and inpatient hospital visits in the region from January 2019 through June 2020, three percent (or 22,112) of the visits were due to primary diagnoses of mood/affective and anxiety/stress-related disorders (after removing visits due to symptoms, signs, and abnormal clinical and laboratory findings).

3. Arthritis or osteoporosis

Across the region, approximately one in ten residents from the Regional CHNA community survey report needing treatment for arthritis or osteoporosis. This is slightly lower than national trends with an estimated two in ten U.S. residents having been diagnosed with arthritis.[viii] Further, among emergency room and inpatient hospital visits in the region from January 2019 through June 2020, one percent (or 10,498) of the visits were due to primary diagnoses of osteoarthritis

[4] https://www.cdc.gov/heartdisease/risk_factors.htm

[5] Age-adjusted rates were obtained from CDC Wonder, Underlying Cause of Death (https://wonder.cdc.gov/wonder/help/DataExport.html#Excel) and averaged across all counties within the region (with exception of Ohio and Union Counties due to limited data), ranging from 189.8 in Ripley County to 325.4 in Adams County.

and osteoporosis (after removing visits due to symptoms, signs, and abnormal clinical and laboratory findings).

4. Lung/respiratory-related conditions, including asthma 

   Across the region, approximately one in ten residents from the Regional CHNA community survey report they needed treatment for lung health conditions (including asthma, COPD, emphysema, chronic bronchitis) and, similarly, for COVID-19. This is higher than national trends. Across the U.S., approximately 8% of adults have asthma and 4.6% have chronic obstructive pulmonary disease (COPD). In terms of the Regional CHNA community survey, need for treatment prevalence for lung-related conditions ranked fifth in terms of the conditions surveyed, however, hospital data reveals that it is among the leading reasons (among the priority health conditions) why people visit the ER or are hospitalized as inpatient. From January 2019 through June 2020, 11 percent (or 111,301) of the visits were due to primary diagnoses of diseases of the respiratory system[6] (after removing visits due to symptoms, signs, and abnormal clinical and laboratory findings).

5. Oral/Dental disease 

   Across all communities, there is a need for access to dental services. Because dental services are not under the system's 'healthcare' umbrella, dental care often requires supplemental insurance. In focus groups, dental services were identified as a need across many community members.

6. Maternal health complications 

   Maternal health complications were a priority health area for women. Across the region, less than one in ten residents reported they needed treatment for maternal health complications (a lower rate relative to other conditions is to be expected given this can only apply to pregnant women). Further, among emergency room and inpatient hospital visits in the region from January 2019 through June 2020, three percent (or 30,363) of the visits were due to primary diagnoses of pregnancy, childbirth, and the certain conditions originating in the perinatal period.

7. Prevention services 

   While community members reported needing treatment for the above specific conditions, when asked in focus groups and interviews, community members and providers alike identified the need for prevention services in the region. Prevention services are needed across the life span, with community members highlighting the need for more mental health and addiction prevention programs for youth, adults, and older adults (e.g., mindfulness); preventative reproductive health care for youth and adults; nutritional education; programs that promote social connectivity; and programs that promote exercise and coping with stress.

[6] Based on ICD10 codes provided in the hospital data, we were unable to determine if this accounts for COVID-19.

## Prioritization of Health Needs for Regional (26 County) CHNA

The health needs of this region were identified (Table 1) through a series of robust quantitative and qualitative data collection methods across community members, healthcare and social service providers, subject matter experts in hospitals, health departments, community-based organizations, and through review of secondary data and an extensive literature review.

Table 1. Prioritized Significant Health Needs for the Greater Cincinnati/Greater Dayton Regional CHNA

| Most Significant Health Conditions (Prioritized) | Health Conditions Most Untreated | Health Conditions Most Impacted By SDOH |
|---|---|---|
| 1. Cardiovascular Conditions (Hypertension)<br>2. Mental Health (Depression and Anxiety)<br>3. Arthritis<br>4. Lung/Respiratory Health<br>5. Dental<br>6. Maternal health concerns<br>7. Prevention-related needs | • Vision<br>• Dental<br>• Allergy<br>• Mental Health (Depression and Anxiety)<br>• Arthritis<br>• Cardiovascular Conditions (Hypertension)<br>• Maternal health concerns | • Cardiovascular Conditions (Hypertension)<br>• Mental Health (Depression and Anxiety)<br>• Vision<br>• Lung/Respiratory Health<br>• Diabetes |

**SDOH Factors Impacting Health in the Region**

- Economic stability *(Stable housing, food security, paying bills)*
- Neighborhood and Built Environment *(Access to reasonable transportation, parks/outdoor activities, stable phone, and internet)*
- Education Access and Quality *(Perception of quality of schools and childcare that are available)*
- Social and Community Connectedness *(Having someone to talk to and feeling connected to the community)*
- Healthcare Access and Quality *(Perception of quality of health care available, cultural relevancy of health care, ease of finding desired health care, ease of navigating healthcare costs)*

**Structural Barriers in the Region's Healthcare System**

- Competition across healthcare organizations/systems
- Workloads and caseloads are high
- Lack of effective clinical-community linkages
- Language barriers and cultural differences
- High cost of services
- Limited workforce
- Inflexible and restricted funding structures and/or investment in community
- Lack of culturally relevant communication strategies and services across providers
- Limited implementation of DEI practices within organizations
- Community member distrust in the healthcare ecosystem (i.e., providers, insurers, pharmacies, etc.)
- Limited implementation of best practices of trauma-informed care

| Systemic Barriers |
|---|

- Structural racism, including workforce diversity and cultural competence of healthcare delivery
- High-Cost healthcare system
- Structural divide between healthcare system, holistic wellness providers, and social service providers

A total of 25 one-on-one stakeholder meetings were conducted from September 27, 2021 to October 31, 2021 by The Health Collaborative to review results of the robust data collection process, and prioritize the significant health needs using a list of data-driven, actionable recommended priorities.[7] Prioritization of these needs began with a list of recommended priorities that were data driven and action focused. Using a set of five criteria, the top priorities were finalized.

The criteria for prioritization included:

1. Burden and Severity: Are the health conditions the greatest burden for our region, across prevalence, those most often gone untreated, and those that were most impacted by social determinants of health? Would addressing this have an impact on the greatest number of community members?
2. Equity: Do the health conditions/social determinants of health have extreme health disparities across prevalence and qualitative data for our community members? Would addressing this priority significantly address health disparities?
3. Value to Stakeholders: Are the health conditions, social determinants of health, and/or systemic root causes important to address across stakeholders? Would addressing this be a high priority for stakeholders/organizations for the community members they serve?
4. Capacity and Feasibility: Does our region have the ability to address the need, through partnerships, resources, community will, and funding opportunities?
5. Alignment: The level of alignment of the recommended priority. Does the priority align with:
    a. internal strategic plans at stakeholder organizations?
    b. the Ohio State Health Assessment (SHA) and Ohio State Health Improvement Plan (SHIP)?
    c. national goals through Healthy People 2030?

Each meeting was documented with qualitative data of comments, feedback, concerns, and ideas for prioritizing needs for the region. Additionally, quantitative data was collected on the recommended priorities list by asking each stakeholder to name their top three priorities using a series of strategic questions.

Strategic Questions:

1. Based on your subject matter expertise, what should the top three priorities be for the region?
2. Based on your expertise within your organization, and as a representative of your organization, what should the top three priorities be for the region?

[7] THC and the CHNA Advisory Team reviewed the Regional CHNA Report and data-driven recommendations (Section 5) drafted by MRC. From the report and data-driven recommendations, THC and the Advisory Committee completed the prioritization methodology outlined in the chapter.

3. To move the needle on advancing health and reducing health disparities for our community, what should the top three priorities be for the region?

Results of the prioritized significant health care needs:

1. Cardiovascular Conditions (Hypertension)
2. Mental Health (Depression and Anxiety)
3. Arthritis
4. Lung/Respiratory Health
5. Dental
6. Maternal health concerns
7. Prevention-related needs

Based on the themes that emerged from multiple data collection strategies, the following broad recommendations were proposed to guide THC in the setting of regional health priorities.

Research demonstrates that community members experiencing lower economic stability, and access to quality health care are at greater risk of heart disease, diabetes, obesity, disability, lung disease, maternal complications, mental health, arthritis, vision concerns, dental concerns and allergies. To address these health concerns, the community will need to address housing stability, food security, healthcare affordability, and improving patient-provider relationships.

**Recommendation 1**: Improve healthcare access and quality.

The health of the community hinges on access to quality health care. To address the healthcare access and quality needs defined by the community across the region, The Health Collaborative may consider the following priorities:

- Strengthen collaboration with community partners who serve priority populations (i.e., increase in resources provided to community-based organization (CBOs), consulting with CBOs as community health experts, and committing to more long-term partnerships that CBOs can count on.)
- Increase workforce diversity across health fields and at every level
- Improve patient-provider interactions to increase trust and transparency
- Increase transparency of costs of health care and financial assistance policies

**Recommendation 2**: Improve economic stability through collaboration and coordination.

Economic stability (i.e., having enough food, money to pay bills, and a safe place to live) is a key predictor of several health needs. One's economics is also correlated with one experiencing structural barriers (i.e., high-cost healthcare system) and access barriers (i.e., lack of insurance, unable to afford medications or a doctor's visit, etc.). Therefore, a regional approach to improve health will be limited if the economic factors are not addressed. These factors include:

- Safe and stable housing
- Food security
- Health care affordability

Potential priorities for THC may be:

- Increase collaboration with local food security and housing stability efforts.
- Improve communication, referral and data sharing with partners who are addressing healthcare affordability (i.e., including bringing community health workers and social workers on-site (in ERs, clinics, offices, etc.).

**Recommendation 3**: Adapt metrics to monitor diversity, equity and inclusion (DEI) across all priorities.

The above recommendations are inclusive of DEI best practices for service providing organizations. The Health Collaborative leadership are also committed to DEI, which is another necessary component of successful DEI strategies. To ensure implementation of strategies that support DEI, THC should take the time to establish metrics for all priorities that will allow the region to track progress towards DEI goals.

## Bethesda North Hospital's Service Area

BNH's service area is Hamilton, Butler, Clermont, and Warren Counties, Ohio. BNH's service area is determined by the county of residence for inpatients. BNH gets more than 87% of its inpatients from this four-county region in Southwest Ohio, with 40% of the population in Hamilton and Butler Counties.

### Cities with ZIP codes primarily within BNH's four county service area:

| Hamilton County | Butler County | Clermont County | Warren County |
|---|---|---|---|
| Addyston 45001 | College Corner 45003 | Amelia 45102 | Franklin 45005 |
| Cleves 45002 | Collinsville 45004 | Batavia 45103 | Harveysburg 45032 |
| Harrison 45030 | Hamilton 45011, 45012, 45013, 45015 | Bethel 45106 | Kings Mills 45034 |
| Hooven 45033 | Fairfield, 45014, 45018 | Chilo 45112 | Lebanon 45036 |
| Miamitown 45041 | Middletown 45042, 45044 | Felicity 45120 | Maineville 45039 |
| Mount St. Joseph 45051 | Monroe 45050 | Goshen 45122 | Mason 45040 |
| North Bend 45052 | Okeana 45053 | Loveland 45140 | Oregonia 45054 |
| Camp Dennison 45111 | Overpeck 45055 | Miamiville 4147 | South Lebanon 45065 |
| Terrace Park 45174 | Oxford 45056 | Milford 45150 | Springboro 45066 |
| Cincinnati 45210-45209 45211-45227 45229-45239 | Ross 45061 | Moscow 45153 | Waynesville 45068 |
| | Seven Mile 45062 | Neville 45156 | Morrow 45152 |
| | Shandon 45063 | New Richmond 45157 | Pleasant Plain 45162 |
| | Somerville 45064 | Newtonsville 45158 | |
| | Trenton 45067 | Owensville 45160 | |
| | West Chester 45069, 45071 | Williamsburg 45176 | |
| | | Cincinnati 45245 | |

## Existing Health Care Facilities and Resources to Address Significant Health Care Needs

Below is a list of community resources available to help address the significant health needs of the community served.

| Organization | Role | Focus |
|---|---|---|
| American Heart Association | Advocacy, community education | Chronic Conditions, Obesity |
| American Lung Association | Advocacy, community education | Chronic Conditions, Obesity |
| Cradle Cincinnati | Neighborhood Based Woman Centered Medical Home - Funding | Infant mortality/ Maternal Health |
| Family Nurturing Center | Post treatment support | Mental Health |
| Fernside | Fernside Children and Family Bereavement Support Groups | Mental Health |
| Freestore Foodbank | Advocacy, food for pantries | Nutrition Disparities |
| Greater Cincinnati Foundation | Collective Impact: Grants, support for organizations addressing social determinants of health | Obesity |
| GSH | Alcohol and Drug Rehab/Treatment | Substance Abuse |
| GSH | Good Samaritan Free Health Clinic | Chronic Conditions |
| GSH | Good Samaritan Free Health Clinic | Infant mortality/ Maternal Health |
| GSH | Good Samaritan Free Health Clinic | Mental Health |
| GSH | Urban Health Project free office space - medical students were placed in eight-week internships providing service to underserved populations in Greater Cincinnati, including the homeless, mentally ill, disadvantaged women, children, the elderly, at-risk youth, minority populations, refugees, and individuals who struggle with mental disorders or addiction. | Infant mortality/ Maternal Health |
| GSH | Urban Health Project free office space - medical students were placed in eight-week internships providing service to underserved populations in Greater Cincinnati, including the homeless, mentally ill, disadvantaged women, children, the elderly, at-risk youth, minority populations, refugees, and individuals who struggle with mental disorders or addiction. | Mental Health |
| Hamilton County Addiction Services Counsel | Identify issues to focus on for Hamilton County residents | Substance Abuse |
| Healthy Beginnings | OB care for underserved | Infant mortality/ Maternal Health |
| Healthy Moms and Babes | Home visits and pre-natal services Hamilton County | Infant mortality/ Maternal Health |

| | | |
|---|---|---|
| Interact for Health | Grants, education, policy | Chronic Conditions |
| Interact for Health | Grants, education, policy | Substance Abuse |
| March of Dimes | Research and grants to prevent premature birth, birth defects and infant mortality | Infant mortality/ Maternal Health |
| NAMI Southwest Ohio | Programs, classes and support groups, education/data | Mental Health |

# Progress Made Since 2019 CHNA

See inserts - N:\Planning\Community Health Needs Assessments\CHNA 2022\TriHealth Report

Four priority areas were identified in the Bethesda North Hospital 2019 Community Health Needs Assessment.

## Bethesda North Hospital

1. Substance abuse/mental health: The Substance Use Treatment Coordinator (SUTC) program has had a significant impact on TriHealth patient's ability to access resources, linkage to care, and recovery services pertaining to substance use disorders. The Substance Use Treatment Coordinator program is staffed by Registered Nurses and Peer Recovery Specialists who provide services to those in an inpatient setting, as well as maintain focus on Emergency Department admissions at Bethesda North Hospital (BNH). The Substance Use Treatment Program has systematically worked with departments across TriHealth to increase our ability to provide patients in need with the resources necessary for successful recovery. In addition, we have focused on increasing our community involvement and streamlining the process by which we track data in order to become more effective in developing the methods used to identify patients struggling with Substance Use Disorders. Those services and departments include:

    - Narcan distribution in all TriHealth Emergency Departments through the Ohio Department of Health (Project Dawn) in conjunction with Pharmacy, Emergency Department Leadership, Emergency Department staff, and Healthcare Informatics. It is estimated that we distribute 50-100 Narcan kits monthly across all six TriHealth Emergency departments.

    - Telehealth Services in our Emergency Departments at Bethesda North in conjunction with Telehealth Project Management, Information Systems, Care Management, Emergency Department leadership, and Emergency Department Staff. Telehealth allows us to overcome the barriers commonly faced by the patient demographic including transportation, access to healthcare, and resources necessary to address recovery services in the long term.

    - Data tracking and documentation of services through the development of a Substance Use Treatment Coordinator Navigator within Epic allows us to automate pertinent data such as demographic information, substance of choice, patient readmission rates, retention of services, and number of visits.

    - Increased community involvement and interaction with community treatment resources such as the WRAP council which involves Hamilton County Sherriff McGuffey. In addition, Crisis Intervention Training for education on Mental Health and Substance Use Disorders in the community and Together Tuesday which allows us the opportunity to mitigate transportation and housing barriers by providing resources in person at various locations within Cincinnati.

    - If the Peer Recovery specialists are effective in reaching out to patients that might otherwise be reluctant to enter recovery, this function will be evaluated for expansion.

- Tracking Outcomes: TriHealth is tracking the relative effectiveness of the RN SUTCs vs the Peer Recovery Specialists to deploy most appropriate resources in its emergency departments over time.

- The Opiate Steering Committee was paused during the Covid pandemic but will return to tracking overall outcomes such as utilization of substance use withdrawal management order sets, Buprenorphine induction (medication used to treat opiate addiction), Narcan dispensing etc. This allows us to monitor the effectiveness of our initiatives.

2. Infant mortality:

### Pre-Natal Care

In 2013, a team of TriHealth clinicians and Cincinnati non-profit leaders trialed a team-based prenatal care model with pregnant women in Avondale, Ohio, a zip code with the highest incidence of infant mortality and preterm births in Hamilton County and with healthcare racial disparities. Working together with our community partners bi3, Every Child Succeeds, Cradle Cincinnati, the Cincinnati Children's Hospital and UC Medical Center, we found that addressing social determinants such as substance abuse, lack of transportation, financial hardship, housing and food insecurity, and lack of access to baby supplies such as diapers and clothing directly improves the poor birth outcomes that had previously persisted among this population. This team of caregivers and community partners successfully designed and then implemented a complex network of care, delivered by dedicated case managers, social workers, lactation consultants, behavioral health consultants, community health workers, financial counselors, and legal aid consultants to completely eliminate extreme pre-term births (a metric sustained for over 2 years) and greatly reduce the rate of infant deaths in this zip code. This place-based care team, known as *Start Strong*, was then permanently implemented as the *Woman Centered Medical Home* model in the Good Samaritan and Bethesda North OB Gyn Center and is thriving today.

In 2022 and beyond, TriHealth is more focused than ever on closing the healthcare racial disparity gap for pregnant black and brown patients. With black infants being 2.5x more likely to die in the first year of life than their white counterparts, our work to eliminate infant mortality in the Greater Cincinnati region is rooted in our mission at TriHealth to improve the health of those we serve. Dedicated to caring for these underserved populations with two locations conveniently located inside the Good Samaritan Hospital and on the campus of BNH in Cincinnati OH, the OB Gyn Center is a testament to both the power of care teams to improve social determinants that so often prevent patients from accessing care and to the investment that TriHealth and our community partners have made in improving the health outcomes of black and brown pregnant women and infants. Additional onsite support services available inside the OB Gyn Center help to further ensure a healthy pregnancy:

- Dedicated case manager to support patient to have a healthy pregnancy and birth.
- Lactation education provided during prenatal appointments.
- Centering Pregnancy delivers group prenatal care to encourage community building among women who are at risk of isolation and stress during their pregnancy.
- Behavioral health care provided by Licensed Independent Social Workers is integrated into prenatal appointments, and long-term support throughout pregnancy and postpartum is provided by onsite psychiatrists and nurse practitioners.

- Registered dieticians provide food and nutrition counseling during prenatal appointments and also provide one-on-one therapy in scheduled sessions.
- Genetic counseling provided by Board Certified Genetic Counselors.
- Transportation to and from medical appointments provided by Uber Health and Cincinnati Metro.
- Remote hypertension monitoring provided to manage high-blood pressure during and after pregnancy, ensuring immediate intervention to prevent poor birth and postpartum outcomes.
- Smoking cessation therapy available to any pregnant patient who is trying to quit smoking tobacco or other substances.
- Home furnishings and baby items provided during prenatal visit or arranged for delivery to the patients' home.
- In-person Spanish and Uzbek interpreters, provided upon request. Virtual interpreter services provided for all other languages.
- Diapers and period products provided during prenatal and postpartum visits.
- On-site food pantry in partnership with Freestore Foodbank, to launch in the Summer of 2022.

The OB Gyn Center also partners with several community organizations to further support our underserved patient populations. TriHealth case managers, social workers, community health workers and care coordinators connect patients with resources provided by the following partners:

- *Cincinnati Children's Hospital:*
    - *Fetal Care Center* cares for high-risk deliveries and rare fetal conditions.
    - *Every Child Succeeds* provides professional home visitors to work closely with pregnant women and new mothers to develop parenting skills, improve maternal and child health, create stimulating and nurturing home environments.
    - *Moving Beyond Depression* gives mothers participating in home visiting and who also suffer from depression the treatment that they need to function optimally and support their child's development.
- *Think First for Your Baby* provides injury prevention programs with a goal to reduce unintentional harm to infants under the age of one year through prenatal education and postpartum follow-up.
- *Legal Aid of Greater Cincinnati's M-HeLP* program is a maternal health law partnership that addresses legal determinants that can negatively impact birth outcomes such as unsafe housing, benefits, and domestic abuse. Patients self-refer or can be referred by their provider.
- *Coverd's Sweet Cheeks* and *Tidal Babe* programs, providing diapers and period products to patients and their children.
- *Healthy Moms and Babes* ensures that women and children have access to needed services through the use of mobile units and home visits. Focusing on the individual, this program commits to helping the community's most vulnerable women achieve successful pregnancies, thriving babies, enhanced parenting skills, expanded understanding of personal health, and progress toward self-sufficiency.
- *March of Dimes March for Babies* program engages people nationwide to unite, connect and fight for the health of every family. The U.S. remains among the most dangerous developed nations for childbirth, especially for women and babies of color.
- *Cradle Cincinnati Back to Sleep & Infant Mortality Reduction* aim to reduce infant mortality through education and awareness. Goals are to prevent premature births, reduce tobacco use and substance abuse, and promote safe sleep for babies through communication, medicine, and community.

- *Talbert House Fatherhood Project* assists men in their efforts to become the responsible, committed, and nurturing fathers they want to be.
- *Easterseals Prosperity for All* is a grassroots program that connects Ohio citizens and employers in a mutually beneficial capacity. In a strictly supervised environment, PfA participants pursue GED, vocational or college educational program in the most in-demand job categories: manufacturing, pharmacy tech, phlebotomy, technology, and logistics.
- *Childbirth Education Association* offers over 25 childbirth, parenting, health, and education classes in-person or online.

All of the services and support provided by the OB Gyn Center, in addition to high-quality gynecology and obstetrics care delivered by a team of residents, physicians, nurse practitioners and midwives, work together to help reduce preterm births and prevent infant deaths in the region's underserved populations. Over the past two years, our rates of extreme preterm birth and preterm birth have remained low, which is a leading factor in our success in reducing infant mortality in the Greater Cincinnati region. Cradle Cincinnati and TriHealth data show that infant mortality, preterm births, and racial disparities are responding well to our collaborative efforts.

| Cradle Cincinnati Goal | Baseline (2013-2017) | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Reduce extreme preterm birth (less than 28-week births) by 20% in 12 zip codes. | 12.3 extreme preterm births per 1,000 live births | 15.0/1,000 | 10.7/1,000 | 8.9/1,000 |
| Eliminate racial disparities in <28 week births in 12 zip codes. | Black extreme preterm birth rate was 2.2X that of the White rate. | 1.4X | 2.9X | 1.6X |
| | | | | |
| Reduce previable preterm birth (less than 23-week births) by 20% in 12 zip codes. | 4.5 previable births per 1,000 | 3.5/1,000 | 1.7/1,000 | 1.0/1,000 |
| Eliminate racial disparities in <23 week births in 12 zip codes. | Black previable birth rate was 4.5X that of the white rate. | 2.0X | 2.2X | 1.0X<br>(No disparity) |
| | | | | |
| Reduce infant death by 20 percent in 12 zip codes. | 37 infant deaths per year.<br>3228 live births per year<br>IMR = 11.5 | 39 deaths<br>3159 live births<br>IMR = 12.3 | 30 deaths<br>2915 live births<br>IMR = 10.3 | 30 deaths<br>2903 live births<br>IMR = 10.3 |

| **BNH OB GYN Center Data** | **2019** | **2020** | **2021** |
|---|---|---|---|
| Total Patients Served | 2,559 | 2,416 | 2,461 |

| BNH OB GYN Center Data | 2019 | 2020 | 2021 |
|---|---|---|---|
| Total Visits | 11,339 | 10,885 | 10,550 |
| Total Pregnant Patients Served* | 781 | 736 | 764 |
| Pregnant Patients Covered by Medicaid | 342 *(44%)* | 454 *(62%)* | 401 *(52%)* |
| Pregnant Patients Enrolled in CenteringPregnancy | 68 (55 Hispanic patients) | **26 (24 Hispanic patients) | 29 (40 Hispanic patients) |
| Hispanic Pregnant Patients | 252 *(32%)* | 256 *(35%)* | 289 (38%) |
| Hispanic babies delivered at <28 weeks (extreme preterm) | 3 *(1%)* | 4 *(2%)* | 5 (2%) |
| All other babies delivered at <28 weeks (extreme preterm) | 7 *(1%)* | 7 *(1%)* | 7 *(1%)* |
| Hispanic babies delivered at 28<>38 weeks (preterm) | 23 *(9%)* | 34 *(16%)* | 25 *(9%)* |
| All other babies delivered at 28<> weeks (preterm) | 56 *(11%)* | 77 *(10%)* | 44 *(9%)* |
| All pregnant patients in underserved zip codes*** | 53 *(7%)* | 74 *(10%)* | 98 *(1%)* |

* Total number of babies delivered to mothers receiving prenatal care in the GSH OB GYN Center was used to calculate percentages for each data point.

**Volume significantly reduced from potential volume due to COVID-19 gathering restrictions to fewer than 4-10 people at a time.

***Cradle Cincinnati Disadvantaged Zip Codes: 45202, 45229, 45237, 45205, 45214, 45225, 45224, 45232, 45239, 45211, 45223

Our outcomes in the OB Gyn Center show that investments in wrap-around services that address the social determinants of health such as housing, food, employment, childcare, and transportation instability do improve pregnancy outcomes and reduce racial disparity among underserved populations. Equally as important are the community partnerships that help support a patient's development as a parent and maintaining a healthy family for their new baby. We are proud of the Woman Centered Medical Home we have created at TriHealth and the partnerships we maintain in the community that help underserved women achieve a healthy pregnancy and birth, and we will continue this work even after we eliminate infant mortality in our region because evidence now shows that support services are necessary for underserved populations to thrive.

### Infant Injury Prevention

The TriHealth Think First for Your Baby Program is an infant injury prevention and education program geared towards low income expectant mothers (English and Spanish speaking). Program referrals are from, but not limited to the following: Bethesda North Women's Clinic and Perinatal Programs, Good Samaritan Hospital Faculty Medical Center Women's Clinic and Perinatal Programs, Pregnancy Care Center (multiple locations), Bethesda Family Practice, YWCA, Life Forward Cincinnati and Life Forward Springdale, Health Care Access Now and Cincinnati Children's Medical Center, among other local agencies.

Classes are held at Bethesda North for Spanish speaking expectant mothers (most of whom reside in Butler County) for women who have established a pre-natal care relationship with the bilingual professionals at that location. Classes for English speaking expectant low income mothers are held at Good Samaritan Hospital. For mothers to qualify they have to be screened by perinatal staff for income-based need, as well as plan to deliver their baby at a TriHealth hospital (for program liability coverage).

Mothers who participate in the program complete an educational program that covers the following:

- SAFE SLEEP (with portable crib provided for those in need of one)
- Child Development and Parenting
- Shaken Baby Syndrome/Abusive Head Trauma Prevention
- Childproofing and Home Safety
- Child Passenger Safety (Car seats)
- Intimate Partner Violence prevention/Developing a Safety plan

Participants are provided with a childproofing kit and a few baby essentials at the end of the class. A virtual home visit follow-up occurs with participants receiving a car seat and baby gate as needed upon home visit completion.

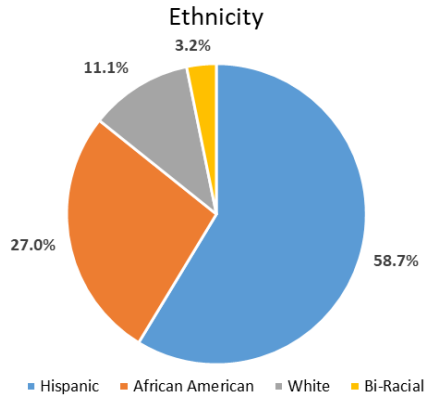
Program participants complete a pre and post program evaluation, as well as home visit data collected at completion of their virtual home visit.

This program has been supported financially by Bethesda Foundation.

This program is measured and has been effective at educating new mothers as indicated by ongoing questionnaires pre and post classes.

**Demographic Characteristics of Program Participants**

| Annual Income Level | Number | Percent |
|---|---|---|
| Less than $5,000 | 28 | 44.4 |
| $5-$10,000 | 19 | 30.2 |
| $10-15,000 | 5 | 7.9 |
| $15-20,000 | 3 | 4.8 |
| $20-30,000 | 5 | 7.9 |
| $30,000 or more | 3 | 4.8 |
| Total | 63 | 100 |




**Overall Knowledge Improvement in Program Segments**

The change in overall knowledge score was statistically significant ($t_{(62)}$=9.794, $p < .0001$), with an increase of 14.5 percentage points. The mean pre-test score was 25.2 out of 33 (SD=3.40), or 76.4%, and the mean post-test score was 30.0 out of 33 (SD=1.70), or 90.9%.

When broken out into the various program segments, each demonstrated a statistically significant improvement in knowledge from pre- to post-test. The highest change from pre- to post-test score was in the Child Development, with an increase of 20.3 percentage points. The next highest was Home Safety with an increase of 17.7 percentage points. The Personal Safety component was next with an increase of 14.2 percentage points. Following that were the Childproofing (increase of 13.0 percentage points), Child Passenger Safety (increase of 10.2 percentage points), and Shaken Baby Syndrome (increase of 8.0 percentage points).

The highest rate of knowledge improvement was seen in the topic of Child Development, which resulted in a statistically significant improvement in knowledge score ($t_{(62)}$= 9.894, $p < .0001$). The mean change was 20.3 percentage points from pre- to post-tests. The mean score on the pre-test was 5.37 (SD=1.08) out of 7 (76.7%) and at the post-test it was 6.79 (SD=0.41) out of 7 (97.0%).

The next highest rate of knowledge improvement was the Home Safety segment ($t_{(62)}$= 7.536, $p < .0001$). The mean score at the pre-test was 5.41 (SD=1.13) out of 7 (77.3%) and at the post-test it was a 6.65 (SD=0.65) out of 7 (95.0%), resulting in a mean change of 17.7 percentage points.

The Personal Safety topic represented the next highest rate of knowledge improvement. This improvement was statistically significant ($t_{(62)}$= 6.819, $p < .0001$). The mean score on the pre-test was 4.10 (SD=0.78) out of 5 (82.0%) and at the post-test it was 4.81 (SD=0.40) out of 5 (96.2%), resulting in a mean change of 14.2 percentage points.

The Childproofing section was the next highest in terms of improvement with a statistically significant improvement ($t_{(62)}$= 4.286, $p = 0.001$) from pre- to post-test of 13 percentage points, from a 2.17 (SD=0.66) out of 3 (72.3%) at the pre-test to 2.56 (SD=0.61) out of 3 (85.3%) at the post-test.

Next, the Child Passenger Safety topic also resulted in statistically significant improvement from pre- to post-test ($t_{(62)}$= 3.398, p = .001). The mean score at the pre-test was 4.71 (SD=1.35) out of 6 (78.5%) and at the post-test it was 5.32 (SD=0.64) out of 6 (88.7%), resulting in a mean change in knowledge score of 10.2 percentage points.

Finally, the Shaken Baby Syndrome topic also achieved statistically significant improvement ($t_{(62)}$= 3.470, p = .001). The mean score at the pre-test was 3.46 (SD=0.88) out of 5 (69.2%) and at the post-test it was 3.86 (SD=0.40) out of 5 (77.2%). This is a mean change of 8.0 percentage points.

### Cribs For Kids

Sleep-related deaths remained the number one cause of infant deaths after the first month of age. Cribs for Kids provide cribs to babies whose mothers cannot afford them and educates mothers about the dangers of unsafe sleep environments.

TriHealth supports Cribs For Kids in Greater Cincinnati via community fundraising and grant applications. TriHealth also provides the staffing to implement the program, which is not covered in the external fundraising.

Over the past 3.5 years, Bethesda North distributed the following # of cribs:

| BNH | 2019 | 2020 | 2021 | FY22 YTD (12/21) |
|---|---|---|---|---|
| Cribs/Crib Sheets | 138 | 120 | 106 | 115 |
| % African American | Not tracked | 2.5% | 4% | 7% |
| % Caucasian | Not tracked | 2.5% | 2% | 2% |
| % Hispanic | Not tracked | 95% | 91% | 88% |

Notes:
There is also a small "other" category.
In 2019 the data was reported for the TriHealth system, so the # for Bethesda North is estimated based on normalized BNH % of total cribs distributed (61% of system total)

3. Cancer:

BNH planned to continue TriHealth's melanoma and lung free screenings and follow ups in underserved neighborhoods. TriHealth also operates a mobile mammography van that was targeting both Avondale area in Hamilton County and the city of Hamilton in Butler County.

Unfortunately the pandemic put face to face screenings on hold during 2019 into 2021, and clearly the goals to get out into the community were severely curtailed. TriHealth Mobile Mammography operations were completely shut down at the end of March and into May of 2020. Once the van went back out, it was impacted in terms of the number of women who could be seen on the van due to social distancing and the cleaning that was required between patients. There was also significantly less demand from community organizations who were shying away from assembling.

- Appointments shifted from every 10 minutes to every 20 minutes, to make sure only one patient was on the van at a time.

- **Overall volume dropped about 38% with 2,581 women screened in 2019 and 1,624 women screened in 2020.**

Despite increasing demand, staffing issues then came into play, so the van did not operate in January and was lightly scheduled in February 2022.

TriHealth did commit financial support, though less "in kind" work due to the pandemic, of Ohio Cancer Research which is an independent, statewide, nonprofit organization dedicated to the cure and prevention of the many forms of cancer and the reduction of its debilitating effects through aggressive basic seed money research, cancer information, and awareness.

4. Access to Care:

Good Samaritan Hospital (GSH) funds the only free health center in Southwest Ohio open six days per week. It provides access to comprehensive, personalized healthcare services to more than 1500 uninsured patients annually. GSH Foundation secures community donations and grants to fund the Center, which has a small staff but relies on more than 130 volunteers to provide primary, specialty and dental care, as well as behavioral health and social support services to patients. The staff are also able to refer patients for diagnostic and other services as their needs require.

The Center has a long history of serving community members who have no insurance.

Good Samaritan
FREE HEALTH CENTER

| | Estimated Donated Value to Community | Number of Appointments Made | Number of Volunteer Hours |
|---|---|---|---|
| **FY 2012** | $671,670 | 2,694 | N/A |
| **FY 2013** | $1,181,808 | 4,893 | 2,382 |
| **FY 2014** | $1,816,523 | 7,429 | 8,657 |
| **FY 2015** | $2,331,948 | 8,892 | 5,634 |
| **FY 2016** | $2,552,438 | 8,923 | 8,811 |
| **FY 2017** | $2,851,027 | 11,349 | 8,328 |
| **FY 2018** | $3,261,998 | 13,111 | 8,768 |
| **FY 2019** | $3,057,792 | 14,861 | 7,563 |
| **FY 2020** | $2,790,106 | 14,304 | 6,140 |
| **FY 2021** | $2,794,930 | 14,304 | 6,012 |
| **FY 2022 – Partial Year** | $2,212,751 | 10,012 | 4,566 |
| **Total** | $25,525,967 | 110,772 | 66,861 |

**Services Offered:**
Primary Care
Dental
Oral Surgery
Dermatology
Gynecology
Gastroenterology
Medication Education
Neurology
Nephrology
Nutrition Counseling
Orthopedics
Physical Therapy
Psychiatry/ Mental Health
Rheumatology
Screening Mammograms
Smoking Cessation
Vision Screenings

| | |
|---|---|
| **Medical Providers** | 75 |
| **Nurses** | 24 |
| **Dental Providers** | 18 |
| **Dental Hygiene Providers** | 12 |
| **Behavioral Health Providers** | 4 |

BNH provides transportation for needy patients with bus tokens and paid Uber rides through RideCincinnati grants.

TriHealth intended to identify other avenues to expand this type of service and into other access services. It is not something that had a natural connection to a hospital or health system like the other priorities. Given the focused intensity the health system had in fiscal 2019 and 2020 on vaccinating the community and managing day to day demands for pandemic related hospitalizations, TriHealth was not able to pursue additional services in the Access Category.

Once vaccines were approved TriHealth administered almost 200,000 doses at its sites.

## Contracted Consultants

**Bricker & Eckler LLP/INCompliance Consulting, Jim Flynn and Christine Kenney** – located at 100 South Third Street, Columbus, Ohio 43215. Bricker & Eckler LLP / INCompliance Consulting was contracted to review this CHNA report. Jim Flynn is managing partner with Bricker & Eckler's healthcare group, where he has practiced for 31 years. His general healthcare practice focuses on health planning matters, certificates of need, nonprofit and tax-exempt healthcare providers, and federal and state regulatory issues. Mr. Flynn has provided consultation to healthcare providers, including nonprofit and tax-exempt healthcare providers as well as public hospitals, on community health needs assessments. Christine Kenney is the director of regulatory services with INCompliance Consulting, an affiliate of Bricker & Eckler LLP. Ms. Kenney has more than 42 years of experience in healthcare planning and policy development, federal and state regulations, certificate of need regulations, and Medicare and Medicaid certification. She has been conducting CHNAs since 2012, providing expert testimony on community needs and offering presentations and educational sessions regarding CHNAs.

**Measurement Resources** – located at 1480 Manning Parkway, Suite A, Powell, Ohio 43065**.** Measurement Resources' team brings together strategic public sector planning experts, social determinants of health researchers, facilitators, and industrial and organizational psychologists. They are experts in gathering and analyzing the most relevant data and information, and coupling that analysis with strategic community engagement initiatives, change management and implementation science. The work requires design thinking, the collection and analysis of secondary data, design and implementation of primary data collection strategies and analysis, and scientific writing.

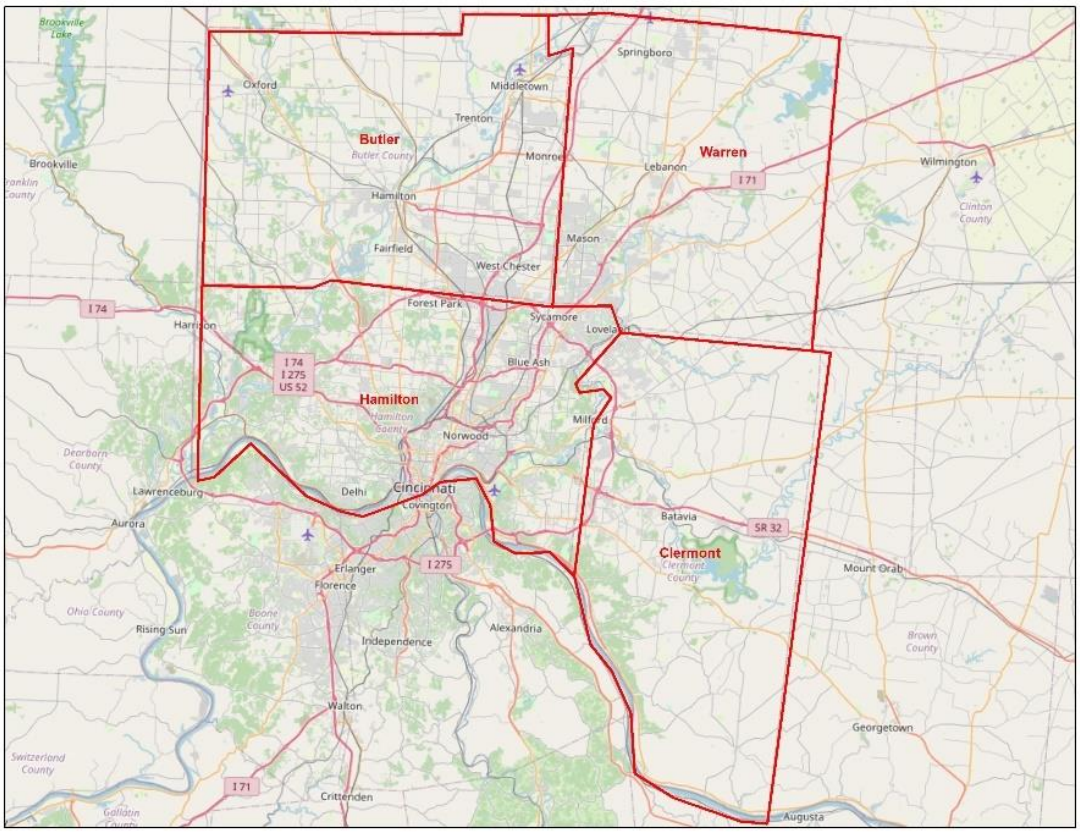
For more information, please refer to the web site at:
https://measurementresourcesco.com/about/team/

**Scale Strategic Solutions** - Transforms information into action through our data-driven management consulting and program evaluation services. They help organizations and systems execute to their visions, understand their impact, and inform their work. Services include program and evaluation assessment, project management and initiative implementation, capacity building and organizational development, strategic planning and market research, and stakeholder engagement and facilitation.

For more information, please refer to the web site at: https://www.scalestrategicsolutions.com/about

## Appendix A: BNH's Service Area and Demographics

Bethesda North Hospital (BNH) defines its service area to be Hamilton, Butler, Clermont and Warrant Counties, Ohio, as determined by the county of origin for inpatients. BNH gets more than 87% of its inpatients from a four-county region in Southwest Ohio, with 40% of the population in Hamilton and Butler Counties.




Service Area Demographics

| Demographic | Hamilton Co. | Butler Co. | Clermont Co. | Warren Co. |
|---|---|---|---|---|
| 2020 census population | 830,639 | 390,357 | 208,601 | 242,337 |
| 2030 projected population | 785,900 | 410,960 | 214,090 | 235,640 |
| Population by race | | | | |
| White | 67.4% | 84.4% | 95.1% | 88.4% |
| African-American | 25.5% | 8.0% | 1.4% | 3.4% |
| Native American | 0.1% | 0.3% | 0.1% | 0.1% |
| Asian | 2.6% | 0.1% | 1.2% | 5.8% |
| Pacific Islander | 0.1% | 1.1% | 0.0% | 0.0% |

| Demographic | Hamilton Co. | Butler Co. | Clermont Co. | Warren Co. |
|---|---|---|---|---|
| Other | 1.0% | 2.8% | 0.2% | 0.5% |
| 2 or more races | 3.3% | 4.7% | 1.8% | 1.8% |
| Hispanic (may be of any race) | 3.3% | 4.7% | 1.9% | 2.8% |
| Total Minority | 34.8% | 19.0% | 6.5% | 13.8% |
| Population by age | | | | |
| <5 | 6.6% | 6.1% | 5.8% | 5.8% |
| 5-17 | 16.5% | 17.5% | 17.5% | 19.2% |
| 18-24 | 9.4% | 12.3% | 7.8% | 7.7% |
| 25-44 | 26.9% | 23.8% | 24.9% | 25.1% |
| 45-64 | 25.6% | 25.9% | 28.3% | 28.2% |
| ≥65 | 15.1% | 14.4% | 15.7% | 14.0% |
| Median age | 36.8 | 36.7 | 40.0 | 39.4 |
| Family income below poverty level | 11.0% | 7.9% | 6.4% | 3.4% |

Source: Ohio Department of Development. County Profiles. (2021). Retrieved from https://devresearch.ohio.gov/reports_countytrends_map.htm

Key community need metrics that indicate the largest disparities are shown in the below summary table.

| Significant Disparity | Hamilton | Butler | Warren | Clermont |
|---|---|---|---|---|
| | Variation from Cincinnati MSA OR from County Avg | | | |
| Heart Disease Death Rate – all Males[1]<br>Heart Disease Death Rate – Black Males<br>Per 100,000 | +16%<br>+69% | +32% | +16% | +19% |
| Cancer Death Rates – All Males[1]<br>Cancer Death Rates – Black Males<br>Per 100,000 | +26%<br>+40% | +16%<br>- | -<br>- | +25%<br>- |
| Avg Over Dose Death Rates[2]<br>Per 100,000 | +27pt | +7.5pts | - | - |
| Preventable Hospitalizations (Medicare)[4]<br>Per 100,000 | - | +8% | - | +7% |
| Infant Mortality Rate[5]<br><1, per 1000 births | +18% | - | - | - |
| Childhood Mortality Rate[6]<br><18, per 100,000 | +24% | - | - | - |
| % Uninsured Population[12] | 8% | - | - | 8% |

Variances of 15% or greater
All Males = Black, White, non-Hispanic and Latino

1. CDC Wonder, Underlying Cause of Death (https://wonder.cdc.gov/wonder/help/DataExport.html#Excel); Life expectancy by race is from 2021 County Health Rankings data, a different source than the five Mortality Rate plots, therefore an aligned breakdown of race cannot be guaranteed. Available data related to race breakdown was reported.
1., 2., 4., 5., 6. County Health Rankings: 2021 https://www.countyhealthrankings.org/explore-health-rankings/measures-data-sources/2021-

In addition, self-reported unmet treatment needs across the four county area noted Mental Health and Substance Abuse issues prominently.

THE HEALTH COLLABORATIVE

regional community health needs assessment 2021

# Hamilton County

**2022 Population = 840,689**

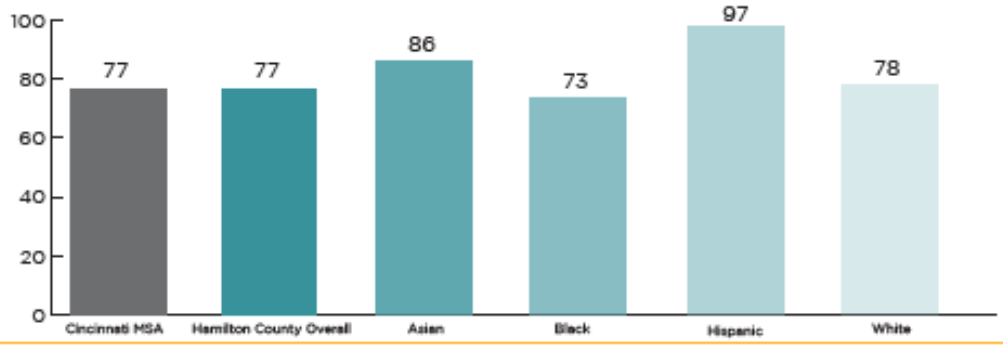
## LOCAL HEALTH INDICATORS

SECONDARY DATA 2019 OR PRIOR (PRE-COVID-19)

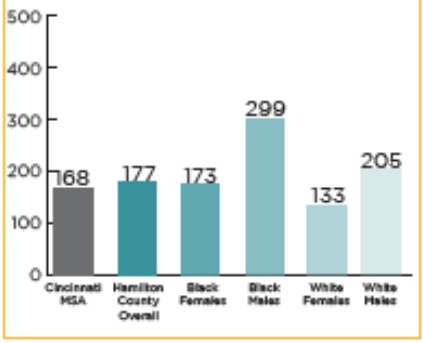
## Cause of Death Summary (by Race) Age-adjusted Mortality Rates[1]

*Rates per 100,000*

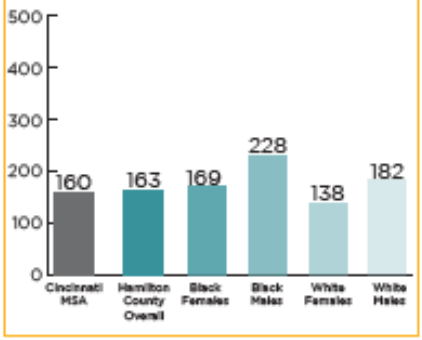
### Life Expectancy by Race



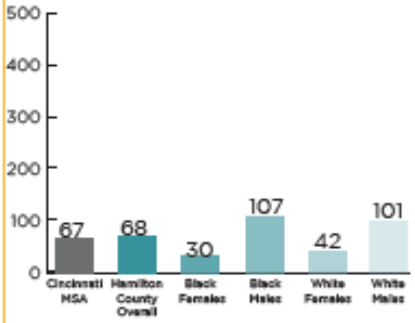

### Diseases of the Heart




### Cancer




### Accidents/Unintentional Injuries




## Other Causes of Death[2]

| | Cincinnati MSA | Hamilton County |
|---|---|---|
| Drug Overdose Deaths | 46.9 | 49.6 |
| Firearm-related Fatality | 12.3 | 15.1 |
| Suicide | 13.8 | 12.9 |
| Homicide | 5.6 | 10.0 |

*Rate per 100,000*

## Prevalence of Disease[3]

| | Cincinnati MSA | Hamilton County |
|---|---|---|
| Heart Disease *(of population over 18)* | 7.3% | 7.6% |
| Frequent Mental Distress *(14 days or more per month of mental distress)* | 14.7% | 14% |

## Preventable Hospitalization Rate[4]

Cincinnati MSA: **4,748**

Hamilton County: **4,458**

*per 100,000 Medicare enrollees*

## Infant Mortality Rate[5]

*Under 1*

Cincinnati MSA: **7.6**

Hamilton County: **9.0**

*per 1,000 live births*

## Childhood Mortality Rate[6]

*Under 18*

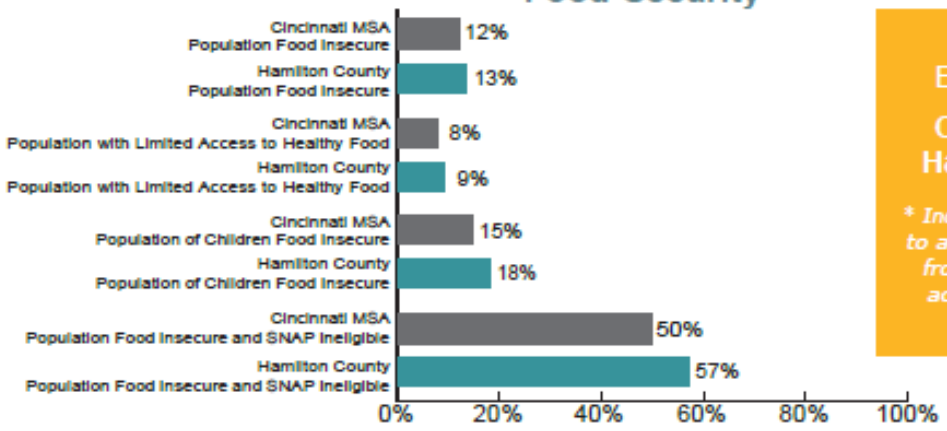
Cincinnati MSA: **58.8**

Hamilton County: **72.9**

*per 100,000*

# HEALTH-RELATED SOCIAL INDICATORS

## Food Security[7]




**Food Environment Index***

**Cincinnati MSA: 7.7**
**Hamilton County: 7.3**

** Index of factors that contribute to a healthy food environment, from 0 (worst) to 10 (best), according to County Health Rankings & Roadmaps.*

## Education[8]

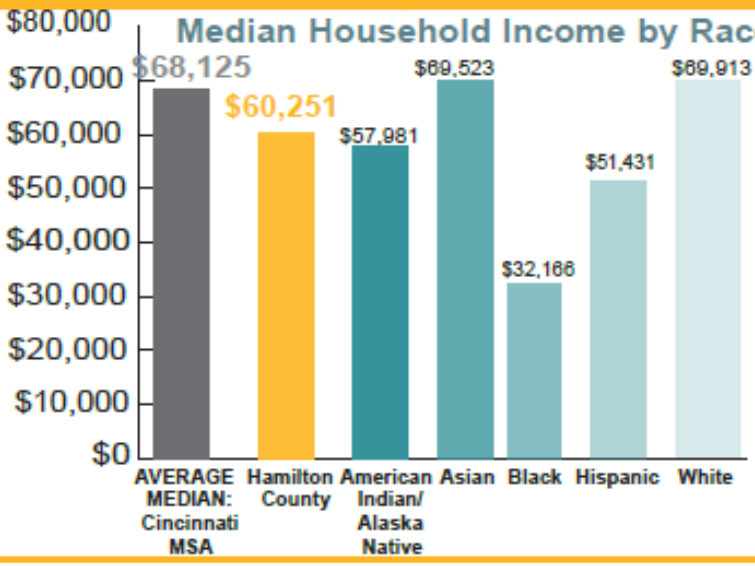
| | Cincinnati MSA | Hamilton County |
|---|---|---|
| High School Graduation Rate | 87.4% | 81.7% |
| Some College Experience | 69.2% | 72.2% |

## Children in Poverty[11]

| Cincinnati MSA | Hamilton County |
|---|---|
| 15.3% | 20.8% |

**Percent of Households that are Housing Cost Burdened[9]**
*26% Cincinnati MSA | 30% Hamilton County*

## Median Household Income by Race[10]




## Health Insurance[12]

Percent Uninsured

| Cincinnati MSA | Hamilton County |
|---|---|
| 6.5% | 7.0% |

## Primary Care, Mental Health, Dental[13]

*Rates of providers per 100,000 residents*

Primary Care Physicians

| Cincinnati MSA | Hamilton County |
|---|---|
| 83.7 | 111.9 |

Mental Health Providers

| Cincinnati MSA | Hamilton County |
|---|---|
| 260.5 | 398.2 |

Dentists

| Cincinnati MSA | Hamilton County |
|---|---|
| 57.9 | 75.7 |

# HEALTH BEHAVIORS

### Frequency of Check-up Over Age 18[14]
*(Age-adjusted)*

79.0%

### % of Adults Reporting No Leisure-time Physical Activity[15]
*(Age 20 and Over)*

| Cincinnati MSA | Hamilton County |
|---|---|
| 24.2% | 23.4% |

### Healthy Eating Habits[16]
*(Age 20 and Over)*

| | Cincinnati MSA | Hamilton County |
|---|---|---|
| Obesity | 32.4% | 30.7% |
| Diabetes | 11.8% | 11.9% |

### Adult Smoking[17]
*(Age-adjusted)*

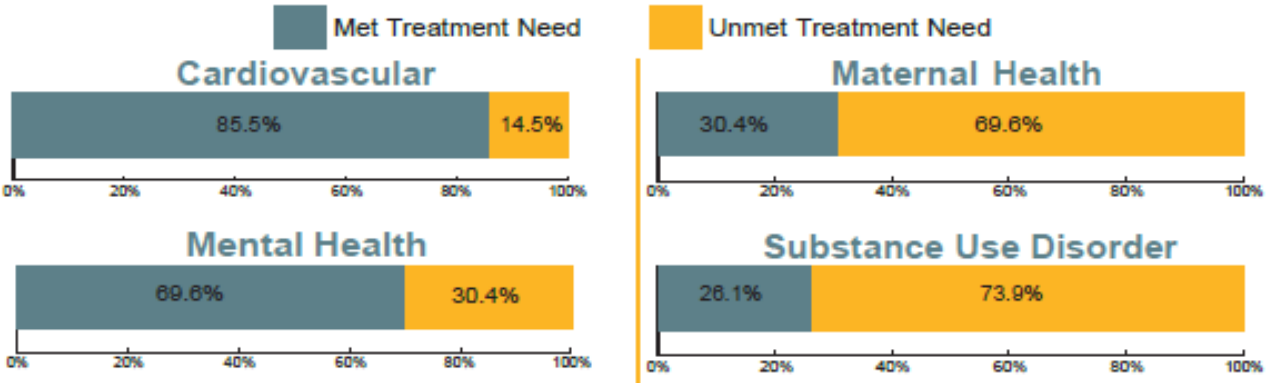
| Cincinnati MSA | Hamilton County |
|---|---|
| 20.3% | 20.0% |

### Excessive Drinking[18]
*(% of Adults Reporting Binge or Heavy Drinking, Age-adjusted)*

| Cincinnati MSA | Hamilton County |
|---|---|
| 19.2% | 20.3% |

# CINCINNATI MSA[19] MET AND UNMET HEALTH NEEDS

*Between April 2020 and March 2021, the proportion of met and unmet treatment needs among those who reported needing treatment:*




# CINCINNATI MSA OTHER UNTREATED HEALTH CONDITIONS
(BETWEEN APRIL 2020–MARCH 2021)

### Vision
Unmet Treatment Need: 21.4%

### Dental
Unmet Treatment Need: 19.3%

## Notes

*The regional comparison measures are weighted means, weighted using County population data from the 2019 ACS. Regions were created based off our grouping in the 2020 CHNA full report.*

1. CDC Wonder, Underlying Cause of Death (https://wonder.cdc.gov/wonder/help/DataExport.html#Excel); Life expectancy by race is from 2021 County Health Rankings data, a different source than the five Mortality Rate plots, therefore an aligned breakdown of race cannot be guaranteed. Available data related to race breakdown was reported.

1., 2., 3., 4., 5., 6. County Health Rankings: 2021 https://www.countyhealthrankings.org/explore-health-rankings/measures-data-sources/2021-measures

3. Estimated County-Level Prevalence of Selected Underlying Medical Conditions Associated with Increased Risk for Severe COVID-19 Illness — United States, 2018: https://stacks.cdc.gov/view/cdc/90519

7. 2019 County Rankings: https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation; Feeding America's 2019 County Data: https://www.feedingamerica.org/research/map-the-meal-gap/by-county; Map the Meal Gap: https://map.feedingamerica.org/

8. , 10., 11., 12., 13. 2021 County Rankings: https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation

9. 2019 ACS

14. , PLACES Map

15., 16., 17., 18. 2021 County Rankings: https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation

19. For list of counties included in this MSA, please see The Health Collaborative's full Community Health Needs Assessment 2021 report.

Research conducted by: Measurement Resources

# HAMILTON COUNTY SURVEY RESPONSES AND DEMOGRAPHICS

n = 1,993

*The following data represents community members' engagement in the survey.*

## Age

| | | | |
|---|---|---|---|
| 18-24 | 2.9% | 45-64 | 36.1% |
| 25-34 | 12.5% | 65+ | 29.9% |
| 35-44 | 18.6% | | |

## Race

| | | | |
|---|---|---|---|
| American Indian/ Alaska Native | 0.7% | Multi-racial | 2.6% |
| Asian/Pacific Islander | 2.2% | Other | 0.2% |
| Black | 10.7% | White | 82.1% |
| Hispanic | 1.5% | | |

## Sex

| | | | |
|---|---|---|---|
| Female | 77.8% | Male | 22.2% |

## Insurance

| | | | |
|---|---|---|---|
| No Private Insurance | 34.3% | Private Insurance | 65.7% |

## Gender Identification

| | | | |
|---|---|---|---|
| Male | 21.6% | Agender | 0% |
| Female | 77.5% | Gender Fluid | 0.2% |
| Female to Male | 0.1% | Two-Spirited | 0.1% |
| Male to Female | 0.2% | Other Gender | 0.1% |

## Military Status

| | | | |
|---|---|---|---|
| Currently Serving | 0.3% | No Military | 94.3% |
| Veterans | 4.5% | Decline to State | 0.9% |

## Employment

| | | | |
|---|---|---|---|
| Working Full Time | 51.7% | Retired | 26.5% |
| Working Part Time | 12.4% | Disabled, Unable to Work | 2.0% |
| Unemployed, Looking for Work | 2.9% | Decline to State | 0.7% |
| Unemployed, Not Looking for Work | 3.8% | | |

## English Ability

| | | | |
|---|---|---|---|
| Fluent | 99.1% | None | 0.1% |
| Limited | 0.7% | Decline to State | 0.1% |

## Education

| | | | |
|---|---|---|---|
| Less Than High School | 0.3% | Bachelor's Degree | 32.2% |
| Some High School | 0.7% | Graduate Degree or Higher | 34.3% |
| Diploma/GED | 7.8% | Decline to State | 0.8% |
| Some College/Associates Degree | 23.9% | | |

## Household Income

| | | | |
|---|---|---|---|
| < $25,000 | 5.9% | $75,000+ | 48.2% |
| $25,000 - $34,999 | 5.5% | Unsure of Income | 1.5% |
| $35,000 - 49,999 | 7.8% | Decline to State | 12.5% |
| $50,000 - 74,999 | 18.6% | | |

THE HEALTH COLLABORATIVE

regional community health needs assessment 2021

# Butler County

**2022 Population = 386,883**

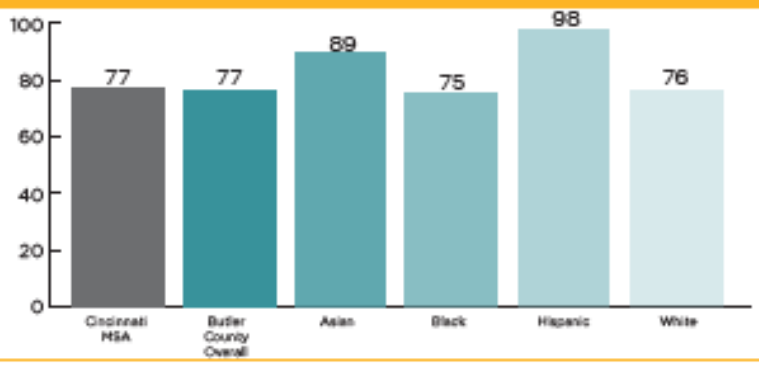
## LOCAL HEALTH INDICATORS

SECONDARY DATA 2019 OR PRIOR (PRE-COVID-19)

### Cause of Death Summary (by Race) Age-adjusted Mortality Rates[1]

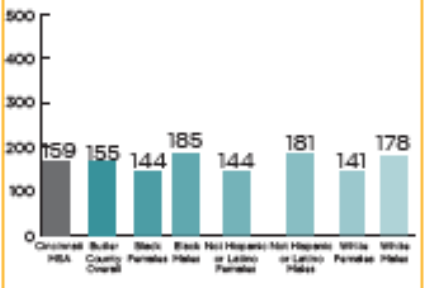
*Rates per 100,000*

#### Life Expectancy by Race

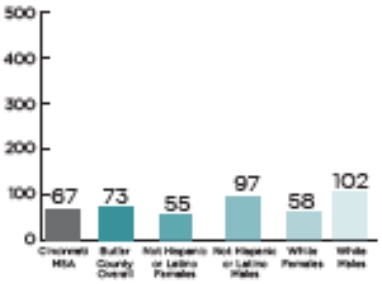



#### Diseases of the Heart


#### Cancer




#### Accidents/Unintentional Injuries




### Other Causes of Death[2]

| | Cincinnati MSA | Butler County |
|---|---|---|
| Drug Overdose Deaths | 46.9 | 54.4 |
| Firearm-related Fatality | 12.3 | 11.4 |
| Suicide | 13.8 | 13.5 |
| Homicide | 5.6 | 4.1 |

*Rate per 100,000*

### Prevalence of Disease[3]

| | Cincinnati MSA | Butler County |
|---|---|---|
| Heart Disease *(of population over 18)* | 7.3% | 6.9% |
| Frequent Mental Distress *(14 days or more per month of mental distress)* | 14.7% | 15.1% |

### Preventable Hospitalization Rate[4]

Cincinnati MSA: **4,748**

Butler County: **5,151**

*per 100,000 Medicare enrollees*

### Infant Mortality Rate[5]

*Under 1*

Cincinnati MSA: **7.6**

Butler County: **7.5**

*per 1,000 live births*

### Childhood Mortality Rate[6]

*Under 18*

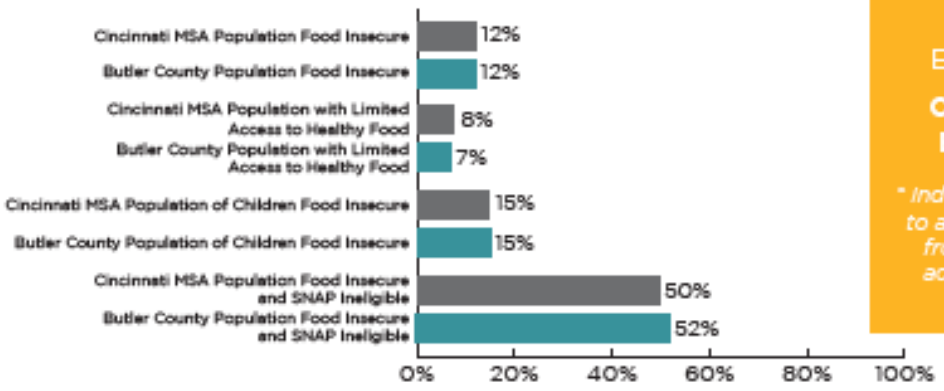
Cincinnati MSA: **58.8**

Butler County: **52.4**

*per 100,000*

# HEALTH-RELATED SOCIAL INDICATORS

## Food Security[7]




Food Environment Index*

**Cincinnati MSA: 7.7**
**Butler County: 7.8**

** Index of factors that contribute to a healthy food environment, from 0 (worst) to 10 (best), according to County Health Rankings & Roadmaps.*

## Education[8]

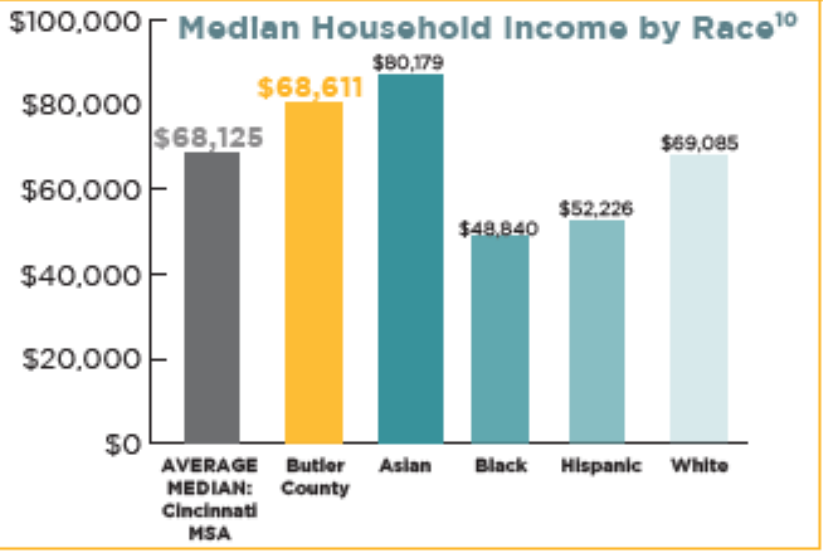
| | Cincinnati MSA | Butler County |
|---|---|---|
| High School Graduation Rate | 87.4% | 87.2% |
| Some College Experience | 69.2% | 64.5% |

## Children in Poverty[11]

| Cincinnati MSA | Butler County |
|---|---|
| 15.3% | 14.1% |

**Percent of Households that are Housing Cost Burdened[9]**
*26% Cincinnati MSA | 25% Butler County*

## Median Household Income by Race[10]




## Health Insurance[12]

Percent Uninsured

| Cincinnati MSA | Butler County |
|---|---|
| 6.5% | 6.8% |

## Primary Care, Mental Health, Dental[13]

*Rates of providers per 100,000 residents*

Primary Care Physicians

| Cincinnati MSA | Butler County |
|---|---|
| 83.7 | 54.1 |

Mental Health Providers

| Cincinnati MSA | Butler County |
|---|---|
| 260.5 | 240.9 |

Dentists

| Cincinnati MSA | Butler County |
|---|---|
| 57.9 | 51.9 |

# HEALTH BEHAVIORS

### Frequency of Check-up Over Age 18[14]
*(Age-adjusted)*

77.8%

### % of Adults Reporting No Leisure-time Physical Activity[15]
*(Age 20 and Over)*

| Cincinnati MSA | Butler County |
|---|---|
| 24.2% | 23.4% |

### Healthy Eating Habits[16]
*(Age 20 and Over)*

| | Cincinnati MSA | Butler County |
|---|---|---|
| Obesity | 32.4% | 32.3% |
| Diabetes | 11.8% | 12.0% |

### Adult Smoking[17]
*(Age-adjusted)*

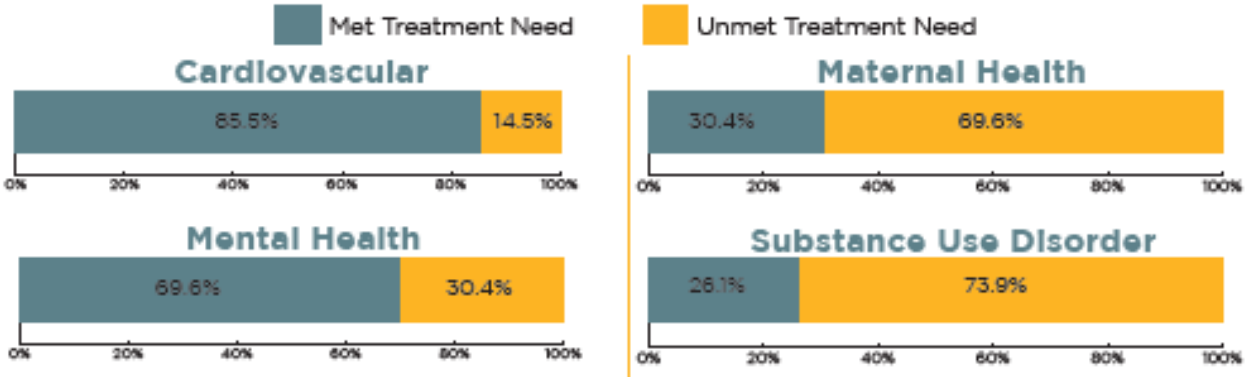
| Cincinnati MSA | Butler County |
|---|---|
| 20.3% | 21.4% |

### Excessive Drinking[18]
*(% of Adults Reporting Binge or Heavy Drinking, Age-adjusted)*

| Cincinnati MSA | Butler County |
|---|---|
| 19.2% | 19.0% |

# CINCINNATI MSA[19] MET AND UNMET HEALTH NEEDS

*Between April 2020 and March 2021, the proportion of met and unmet treatment needs among those who reported needing treatment:*




# CINCINNATI MSA OTHER UNTREATED HEALTH CONDITIONS
(BETWEEN APRIL 2020–MARCH 2021)

### Vision
Unmet Treatment Need: **21.4%**

### Dental
Unmet Treatment Need: **19.3%**

*Notes*

*The regional comparison measures are weighted means, weighted using County population data from the 2019 ACS. Regions were created based off our grouping in the 2020 CHNA full report.*

1. CDC Wonder, Underlying Cause of Death (https://wonder.cdc.gov/wonder/help/DataExport.html#Excel); Life expectancy by race is from 2021 County Health Rankings data, a different source than the five Mortality Rate plots, therefore an aligned breakdown of race cannot be guaranteed. Available data related to race breakdown was reported.

1., 2., 3., 4., 5., 6. County Health Rankings: 2021 https://www.countyhealthrankings.org/explore-health-rankings/measures-data-sources/2021-measures

3. Estimated County-Level Prevalence of Selected Underlying Medical Conditions Associated with Increased Risk for Severe COVID-19 Illness — United States, 2018: https://stacks.cdc.gov/view/cdc/90519

7. 2019 County Rankings: https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation; Feeding America's 2019 County Data: https://www.feedingamerica.org/research/map-the-meal-gap/by-county; Map the Meal Gap: https://map.feedingamerica.org/

8., 10., 11., 12., 13. 2021 County Rankings: https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation

9. 2019 ACS

14., PLACES Map

15., 16., 17., 18. 2021 County Rankings: https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation

19. For list of counties included in this MSA, please see The Health Collaborative's full Community Health Needs Assessment 2021 report.

Research conducted by: Measurement Resources

# BUTLER COUNTY SURVEY RESPONSES AND DEMOGRAPHICS

n = 404

*The following data represents community members' engagement in the survey.*

## Age

| | | | |
|---|---|---|---|
| 18-24 | 8.9% | 45-64 | 42.6% |
| 25-34 | 23.0% | 65+ | 8.4% |
| 35-44 | 17.1% | | |

## Race

| | | | |
|---|---|---|---|
| American Indian/ Alaska Native | 4.0% | Multi-racial | 4.2% |
| Asian/Pacific Islander | 3.0% | Other | 0.7% |
| Black | 6.2% | White | 78.9% |
| Hispanic | 3.0% | | |

## Sex

| | | | |
|---|---|---|---|
| Female | 76.5% | Male | 23.5% |

## Insurance

| | | | |
|---|---|---|---|
| No Private Insurance | 24.5% | Private Insurance | 75.5% |

## Gender Identification

| | | | |
|---|---|---|---|
| Male | 22.9% | Agender | 0.6% |
| Female | 75.3% | Gender Fluid | 0.3% |
| Female to Male | 0.3% | Two-Spirited | 0% |
| Male to Female | 0.3% | Other Gender | 0.3% |

## Military Status

| | | | |
|---|---|---|---|
| Currently Serving | 6.6% | No Military | 82.9% |
| Veterans | 9.9% | Decline to State | 0.6% |

## Employment

| | | | |
|---|---|---|---|
| Working Full Time | 70.4% | Retired | 5.0% |
| Working Part Time | 18.7% | Disabled, Unable to Work | 0% |
| Unemployed, Looking for Work | 2.8% | Decline to State | 0.3% |
| Unemployed, Not Looking for Work | 2.8% | | |

## English Ability

| | | | |
|---|---|---|---|
| Fluent | 94.5% | None | 0.5% |
| Limited | 5.0% | Decline to State | 0% |

## Education

| | | | |
|---|---|---|---|
| Less Than High School | 0.6% | Bachelor's Degree | 28.9% |
| Some High School | 3.3% | Graduate Degree or Higher | 20.9% |
| Diploma/GED | 13.5% | Decline to State | 0% |
| Some College/Associates Degree | 32.8% | | |

## Household Income

| | | | |
|---|---|---|---|
| < $25,000 | 3.9% | $75,000+ | 47.6% |
| $25,000 - $34,999 | 10.5% | Unsure of Income | 2.2% |
| $35,000 - 49,999 | 12.7% | Decline to State | 6.6% |
| $50,000 - 74,999 | 16.5% | | |

THE HEALTH COLLABORATIVE

regional community health needs assessment 2021

# Warren County

**2022 Population = 224,660**

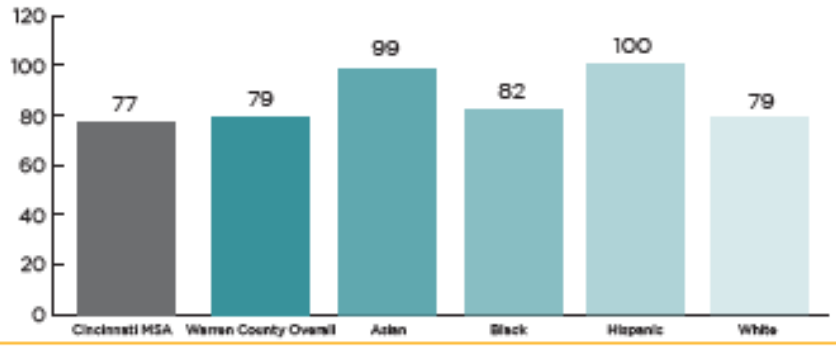
## LOCAL HEALTH INDICATORS

SECONDARY DATA 2019 OR PRIOR (PRE-COVID-19)

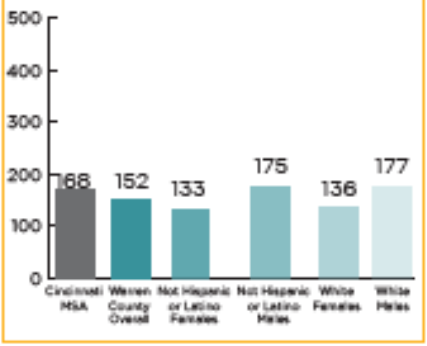
### Cause of Death Summary (by Race) Age-adjusted Mortality Rates[1]

*Rates per 100,000*

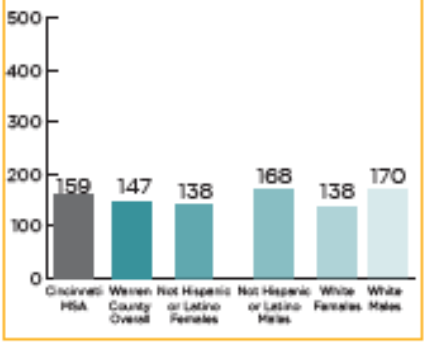
#### Life Expectancy by Race



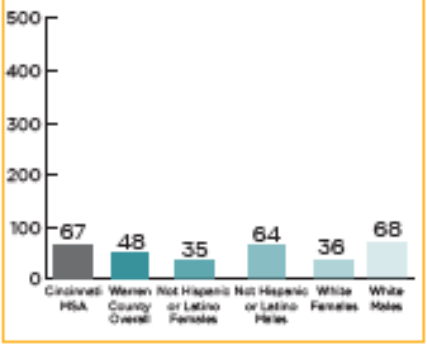

#### Diseases of the Heart




#### Cancer




#### Accidents/Unintentional Injuries




### Other Causes of Death[2]

| | Cincinnati MSA | Warren County |
|---|---|---|
| Drug Overdose Deaths | 46.9 | 25.3 |
| Firearm-related Fatality | 12.3 | 7.7 |
| Suicide | 13.8 | 11.8 |
| Homicide | 5.6 | 1.7 |

*Rate per 100,000*

### Prevalence of Disease[3]

| | Cincinnati MSA | Warren County |
|---|---|---|
| Heart Disease *(of population over 18)* | 7.3% | 6.2% |
| Frequent Mental Distress *(14 days or more per month of mental distress)* | 14.7% | 12.6% |

### Preventable Hospitalization Rate[4]

Cincinnati MSA: **4,748**

Warren County: **4,019**

*per 100,000 Medicare enrollees*

### Infant Mortality Rate[5]

*Under 1*

Cincinnati MSA: **7.6**

Warren County: **4.4**

*per 1,000 live births*

### Childhood Mortality Rate[6]

*Under 18*

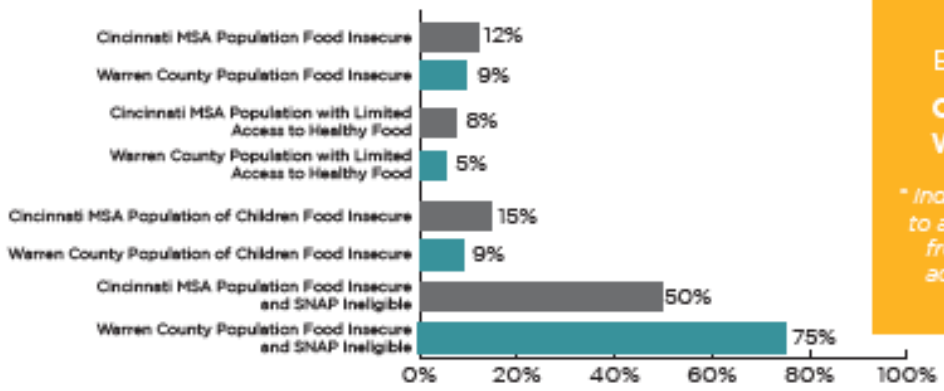
Cincinnati MSA: **58.8**

Warren County: **37.2**

*per 100,000*

# HEALTH-RELATED SOCIAL INDICATORS

## Food Security[7]




Food Environment Index*

**Cincinnati MSA: 7.7**
**Warren County: 8.5**

** Index of factors that contribute to a healthy food environment, from 0 (worst) to 10 (best), according to County Health Rankings & Roadmaps.*

## Education[8]

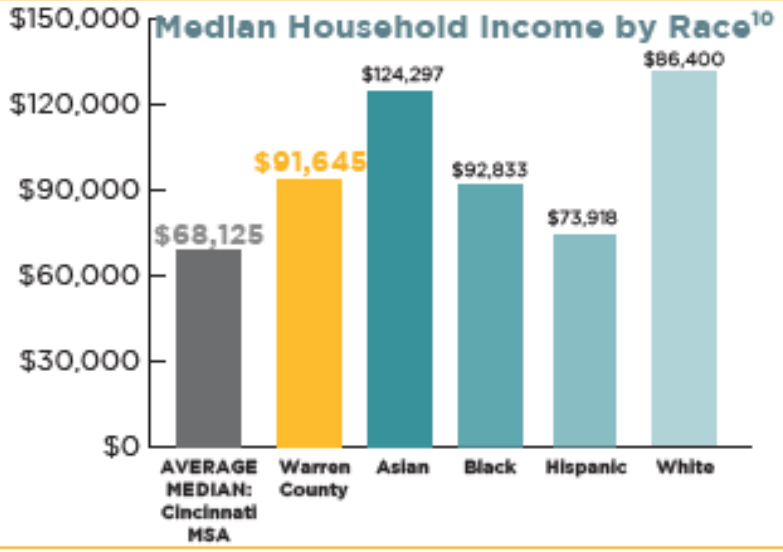
| | Cincinnati MSA | Warren County |
|---|---|---|
| High School Graduation Rate | 87.4% | 89.6% |
| Some College Experience | 69.2% | 74.0% |

## Children in Poverty[11]

| Cincinnati MSA | Warren County |
|---|---|
| 15.3% | 5.1% |

**Percent of Households that are Housing Cost Burdened[9]**
*26% Cincinnati MSA | 20% Warren County*

## Median Household Income by Race[10]




## Health Insurance[12]

Percent Uninsured

| Cincinnati MSA | Warren County |
|---|---|
| 6.5% | 5.4% |

## Primary Care, Mental Health, Dental[13]

*Rates of providers per 100,000 residents*

Primary Care Physicians

| Cincinnati MSA | Warren County |
|---|---|
| 83.7 | 90.9 |

Mental Health Providers

| Cincinnati MSA | Warren County |
|---|---|
| 260.5 | 240.8 |

Dentists

| Cincinnati MSA | Warren County |
|---|---|
| 57.9 | 40.9 |

# HEALTH BEHAVIORS

### Frequency of Check-up Over Age 18[14]
*(Age-adjusted)*

**76.3%**

### % of Adults Reporting No Leisure-time Physical Activity[15]
*(Age 20 and Over)*

| Cincinnati MSA | Warren County |
|---|---|
| 24.2% | 21.2% |

### Healthy Eating Habits[16]
*(Age 20 and Over)*

| | Cincinnati MSA | Warren County |
|---|---|---|
| Obesity | 32.4% | 27.9% |
| Diabetes | 11.8% | 10.7% |

### Adult Smoking[17]
*(Age-adjusted)*

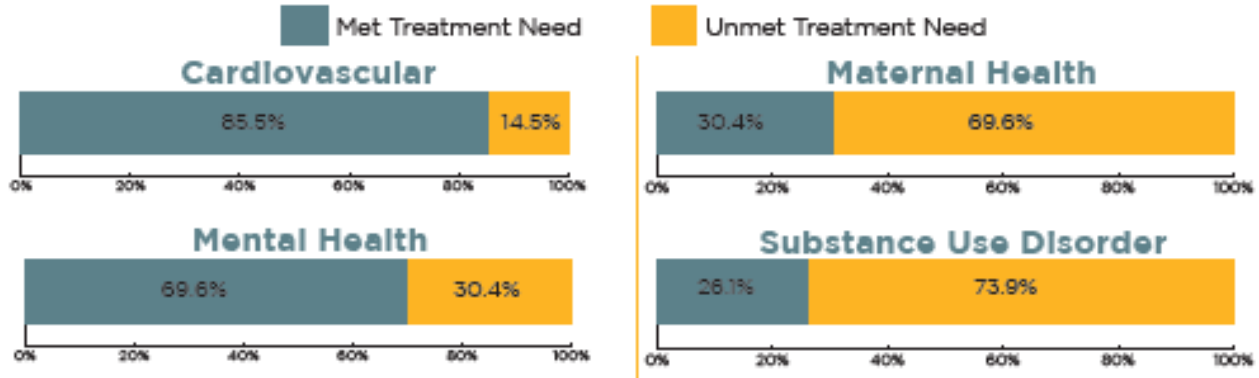
| Cincinnati MSA | Warren County |
|---|---|
| 20.3% | 16.6% |

### Excessive Drinking[18]
*(% of Adults Reporting Binge or Heavy Drinking, Age-adjusted)*

| Cincinnati MSA | Warren County |
|---|---|
| 19.2% | 17.2% |

# CINCINNATI MSA[19] MET AND UNMET HEALTH NEEDS

*Between April 2020 and March 2021, the proportion of met and unmet treatment needs among those who reported needing treatment:*




# CINCINNATI MSA OTHER UNTREATED HEALTH CONDITIONS
(BETWEEN APRIL 2020–MARCH 2021)

### Vision
Unmet Treatment Need: **21.4%**

### Dental
Unmet Treatment Need: **19.3%**

## *Notes*

*The regional comparison measures are weighted means, weighted using County population data from the 2019 ACS. Regions were created based off our grouping in the 2020 CHNA full report.*

1. CDC Wonder, Underlying Cause of Death (https://wonder.cdc.gov/wonder/help/DataExport.html#Excel); Life expectancy by race is from 2021 County Health Rankings data, a different source than the five Mortality Rate plots, therefore an aligned breakdown of race cannot be guaranteed. Available data related to race breakdown was reported.

1., 2., 3., 4., 5., 6. County Health Rankings: 2021 https://www.countyhealthrankings.org/explore-health-rankings/measures-data-sources/2021-measures

3. Estimated County-Level Prevalence of Selected Underlying Medical Conditions Associated with Increased Risk for Severe COVID-19 Illness — United States, 2018: https://stacks.cdc.gov/view/cdc/90519

7. 2019 County Rankings: https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation; Feeding America's 2019 County Data: https://www.feedingamerica.org/research/map-the-meal-gap/by-county; Map the Meal Gap: https://map.feedingamerica.org/

8., 10., 11., 12., 13. 2021 County Rankings: https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation

9. 2019 ACS

14., PLACES Map

15., 16., 17., 18. 2021 County Rankings: https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation

19. For list of counties included in this MSA, please see The Health Collaborative's full Community Health Needs Assessment 2021 report.

Research conducted by: Measurement Resources

# WARREN COUNTY SURVEY RESPONSES AND DEMOGRAPHICS

n = 324

*The following data represents community members' engagement in the survey.*

## Age

| | | | |
|---|---|---|---|
| 18-24 | 3.7% | 45-64 | 47.2% |
| 25-34 | 21.0% | 65+ | 7.4% |
| 35-44 | 20.7% | | |

## Race

| | | | |
|---|---|---|---|
| American Indian/ Alaska Native | 3.1% | Multi-racial | 2.5% |
| Asian/Pacific Islander | 4.0% | Other | 0.3% |
| Black | 5.3% | White | 83.6% |
| Hispanic | 1.2% | | |

## Sex

| | | | |
|---|---|---|---|
| Female | 70.7% | Male | 29.3% |

## Insurance

| | | | |
|---|---|---|---|
| No Private Insurance | 14.2% | Private Insurance | 85.8% |

## Gender Identification

| | | | |
|---|---|---|---|
| Male | 26.0% | Agender | 0% |
| Female | 72.8% | Gender Fluid | 0.2% |
| Female to Male | 0.3% | Two-Spirited | 0.1% |
| Male to Female | 0% | Other Gender | 0.3% |
| | | Declined to State | 0.3% |

## Military Status

| | | | |
|---|---|---|---|
| Currently Serving | 3.4% | No Military | 85.4% |
| Veterans | 10.9% | Decline to State | 0.3% |

## Employment

| | | | |
|---|---|---|---|
| Working Full Time | 80.7% | Retired | 2.0% |
| Working Part Time | 15.6% | Disabled, Unable to Work | 0% |
| Unemployed, Looking for Work | 1.0% | Decline to State | 0.7% |
| Unemployed, Not Looking for Work | 0% | | |

## English Ability

| | | | |
|---|---|---|---|
| Fluent | 97.3% | None | 0% |
| Limited | 2.7% | Decline to State | 0% |

## Education

| | | | |
|---|---|---|---|
| Less Than High School | 0% | Bachelor's Degree | 34.2% |
| Some High School | 0.3% | Graduate Degree or Higher | 29.0% |
| Diploma/GED | 8.8% | Decline to State | 0.7% |
| Some College/Associates Degree | 27.0% | | |

## Household Income

| | | | |
|---|---|---|---|
| < $25,000 | 0.7% | $75,000+ | 62.4% |
| $25,000 - $34,999 | 6.8% | Unsure of Income | 0.7% |
| $35,000 - 49,999 | 5.0% | Decline to State | 10.5% |
| $50,000 - 74,999 | 13.9% | | |

THE HEALTH COLLABORATIVE

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# Clermont County

**2022 Population = 221,014**

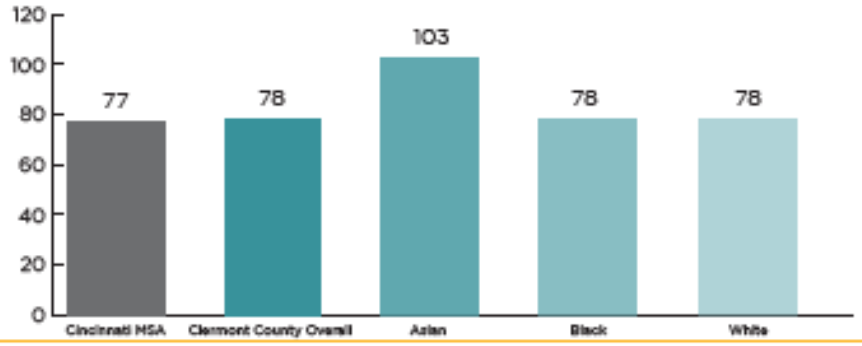
## LOCAL HEALTH INDICATORS

SECONDARY DATA 2019 OR PRIOR (PRE-COVID-19)

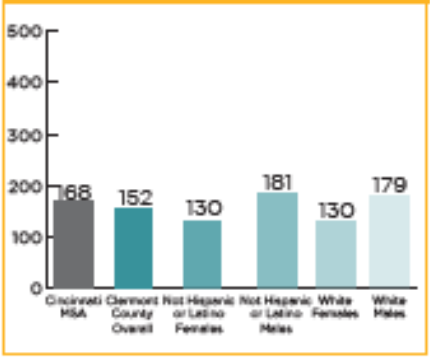
### Cause of Death Summary (by Race) Age-adjusted Mortality Rates[1]

*Rates per 100,000*

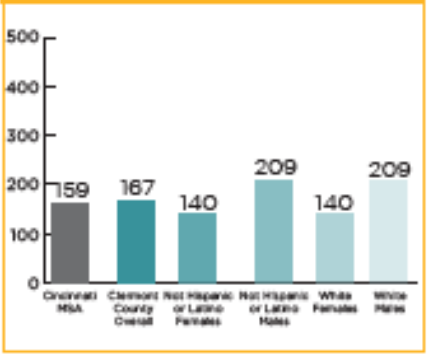
#### Life Expectancy by Race



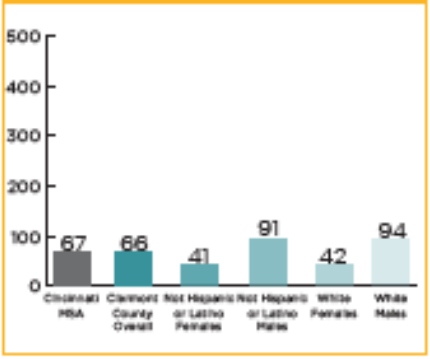

#### Diseases of the Heart




#### Cancer




#### Accidents/Unintentional Injuries




### Other Causes of Death[2]

| | Cincinnati MSA | Clermont County |
|---|---|---|
| Drug Overdose Deaths | 46.9 | 41.9 |
| Firearm-related Fatality | 12.3 | 10.5 |
| Suicide | 13.8 | 14.5 |
| Homicide | 5.6 | 1.3 |

*Rate per 100,000*

### Prevalence of Disease[3]

| | Cincinnati MSA | Clermont County |
|---|---|---|
| Heart Disease *(of population over 18)* | 7.3% | 7.4% |
| Frequent Mental Distress *(14 days or more per month of mental distress)* | 14.7% | 15.3% |

### Preventable Hospitalization Rate[4]

Cincinnati MSA: **4,748**

Clermont County: **5,075**

*per 100,000 Medicare enrollees*

### Infant Mortality Rate[5]

*Under 1*

Cincinnati MSA: **7.6**

Clermont County: **6.0**

*per 1,000 live births*

### Childhood Mortality Rate[6]

*Under 18*

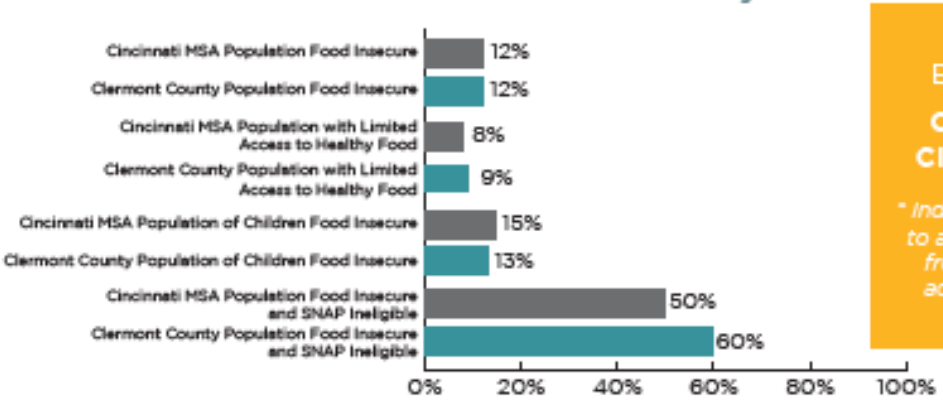
Cincinnati MSA: **58.8**

Clermont County: **46.4**

*per 100,000*

# HEALTH-RELATED SOCIAL INDICATORS

## Food Security[7]




Food Environment Index*

**Cincinnati MSA: 7.7**
**Clermont County: 7.8**

** Index of factors that contribute to a healthy food environment, from 0 (worst) to 10 (best), according to County Health Rankings & Roadmaps.*

## Education[8]

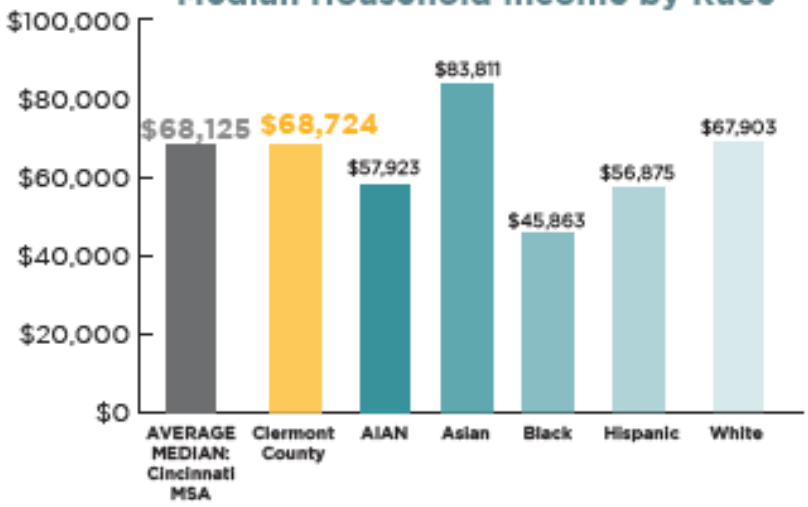
| | Cincinnati MSA | Clermont County |
|---|---|---|
| High School Graduation Rate | 87.4% | 92.0% |
| Some College Experience | 69.2% | 65.5% |

## Children in Poverty[11]

| Cincinnati MSA | Clermont County |
|---|---|
| 15.3% | 11.7% |

**Percent of Households that are Housing Cost Burdened[9]**
*26% Cincinnati MSA | 24% Clermont County*

## Median Household Income by Race[10]




## Health Insurance[12]

Percent Uninsured

| Cincinnati MSA | Clermont County |
|---|---|
| 6.5% | 7.0% |

## Primary Care, Mental Health, Dental[13]

*Rates of providers per 100,000 residents*

Primary Care Physicians

| Cincinnati MSA | Clermont County |
|---|---|
| 83.7 | 68.6 |

Mental Health Providers

| Cincinnati MSA | Clermont County |
|---|---|
| 260.5 | 107.5 |

Dentists

| Cincinnati MSA | Clermont County |
|---|---|
| 57.9 | 41.7 |

# HEALTH BEHAVIORS

### Frequency of Check-up Over Age 18[14]
*(Age-adjusted)*

74.7%

### % of Adults Reporting No Leisure-time Physical Activity[15]
*(Age 20 and Over)*

| Cincinnati MSA | Clermont County |
|---|---|
| 24.2% | 28.7% |

### Healthy Eating Habits[16]
*(Age 20 and Over)*

| | Cincinnati MSA | Clermont County |
|---|---|---|
| Obesity | 32.4% | 38.2% |
| Diabetes | 11.8% | 12.9% |

### Adult Smoking[17]
*(Age-adjusted)*

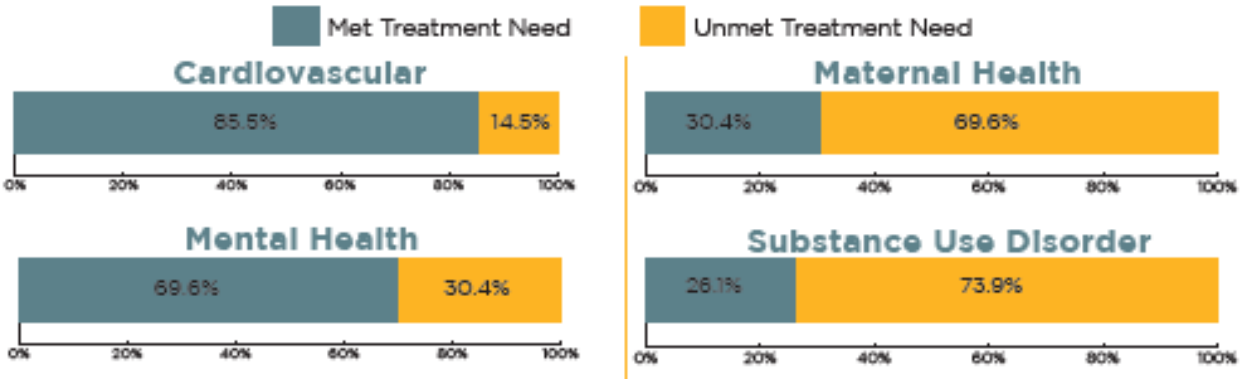
| Cincinnati MSA | Clermont County |
|---|---|
| 20.3% | 22.4% |

### Excessive Drinking[18]
*(% of Adults Reporting Binge or Heavy Drinking, Age-adjusted)*

| Cincinnati MSA | Clermont County |
|---|---|
| 19.2% | 19.1% |

# CINCINNATI MSA[19] MET AND UNMET HEALTH NEEDS

*Between April 2020 and March 2021, the proportion of met and unmet treatment needs among those who reported needing treatment:*




# CINCINNATI MSA OTHER UNTREATED HEALTH CONDITIONS
(BETWEEN APRIL 2020-MARCH 2021)

### Vision
Unmet Treatment Need: **21.4%**

### Dental
Unmet Treatment Need: **19.3%**

## *Notes*

*The regional comparison measures are weighted means, weighted using County population data from the 2019 ACS. Regions were created based off our grouping in the 2020 CHNA full report.*

1. CDC Wonder, Underlying Cause of Death (https://wonder.cdc.gov/wonder/help/DataExport.html#Excel); Life expectancy by race is from 2021 County Health Rankings data, a different source than the five Mortality Rate plots, therefore an aligned breakdown of race cannot be guaranteed. Available data related to race breakdown was reported.

1., 2., 3., 4., 5., 6. County Health Rankings: 2021 https://www.countyhealthrankings.org/explore-health-rankings/measures-data-sources/2021-measures

3. Estimated County-Level Prevalence of Selected Underlying Medical Conditions Associated with Increased Risk for Severe COVID-19 Illness — United States, 2018: https://stacks.cdc.gov/view/cdc/90519

7. 2019 County Rankings: https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation; Feeding America's 2019 County Data: https://www.feedingamerica.org/research/map-the-meal-gap/by-county; Map the Meal Gap: https://map.feedingamerica.org/

8., 10., 11., 12., 13. 2021 County Rankings: https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation

9. 2019 ACS

14., PLACES Map

15., 16., 17., 18. 2021 County Rankings: https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation

19. For list of counties included in this MSA, please see The Health Collaborative's full Community Health Needs Assessment 2021 report.

Research conducted by: Measurement Resources

# CLERMONT COUNTY SURVEY RESPONSES AND DEMOGRAPHICS

n = 122

*The following data represents community members' engagement in the survey.*

## Age

| | | | |
|---|---|---|---|
| 18-24 | 11.5% | 45-64 | 29.5% |
| 25-34 | 34.4% | 65+ | 4.9% |
| 35-44 | 19.7% | | |

## Race

| | | | |
|---|---|---|---|
| American Indian/ Alaska Native | 10.7% | Multi-racial | 4.9% |
| Asian/Pacific Islander | 0.8% | Other | 0% |
| Black | 5.7% | White | 65.6% |
| Hispanic | 12.3% | | |

## Sex

| | | | |
|---|---|---|---|
| Female | 66.4% | Male | 33.6% |

## Insurance

| | | | |
|---|---|---|---|
| No Private Insurance | 35.3% | Private Insurance | 64.7% |

## Gender Identification

| | | | |
|---|---|---|---|
| Male | 35.2% | Agender | 0% |
| Female | 61.1% | Gender Fluid | 0% |
| Female to Male | 1.9% | Two-Spirited | 0.9% |
| Male to Female | 0.9% | Other Gender | 0% |

## Military Status

| | | | |
|---|---|---|---|
| Currently Serving | 14.0% | No Military | 64.5% |
| Veterans | 20.6% | Decline to State | 0.9% |

## Employment

| | | | |
|---|---|---|---|
| Working Full Time | 59.3% | Retired | 4.6% |
| Working Part Time | 21.3% | Disabled, Unable to Work | 0.9% |
| Unemployed, Looking for Work | 11.1% | Decline to State | 0.9% |
| Unemployed, Not Looking for Work | 1.9% | | |

## English Ability

| | | | |
|---|---|---|---|
| Fluent | 78.3% | None | 3.8% |
| Limited | 17.9% | Decline to State | 0% |

## Education

| | | | |
|---|---|---|---|
| Less Than High School | 0.9% | Bachelor's Degree | 30.6% |
| Some High School | 9.3% | Graduate Degree or Higher | 19.4% |
| Diploma/GED | 9.3% | Decline to State | 0% |
| Some College/Associates Degree | 30.5% | | |

## Household Income

| | | | |
|---|---|---|---|
| < $25,000 | 3.7% | $75,000+ | 43.0% |
| $25,000 - $34,999 | 12.2% | Unsure of Income | 0.9% |
| $35,000 - 49,999 | 15.0% | Decline to State | 3.7% |
| $50,000 - 74,999 | 21.5% | | |

# Appendix B: Philosophical Approach – Insights Into What Is an Underserved Population

## Demographics

There is a myriad of factors that can explain why individuals have unmet health needs (defined as needing treatment for a condition and not receiving it), ranging from individual factors (e.g., choosing not to seek out health care due to the assumption symptoms will improve on their own), family/personal responsibilities (e.g., prioritizing caregiving responsibilities over one's own health needs), and system-level factors (e.g., lack of availability or accessibility to care). Regardless of the reason why individuals have unmet needs, understanding for whom unmet health needs are most prevalent is critical to inform targeted interventions and/or outreach efforts to ensure residents throughout the region understand when, where, and how to get treatment. The following lists for whom unmet needs are most common and the following sections will provide greater context behind the reasons why treatment is not sought.

- Males. Among the greatest unmet needs across the regions, males, relative to females, are significantly more likely to have unmet health needs for vision concerns (1.2 times as likely),[8] dental concerns (1.3 times as likely),[9] and mental health (2.2 times as likely).[10]
- Black, Multiracial, Asian, and American Indian/Alaskan Native. Among the greatest unmet needs across the regions, Black/African American individuals, relative to White individuals, are significantly more likely to have unmet health needs for dental (1.3 times as likely)[11] and allergy-related concerns (1.6 times as likely),[12] as well as mental health (1.6 times as likely).[13] Multiracial individuals were also significantly more likely to have unmet dental needs (1.5 times as likely) relative to White individuals.[14] Finally, individuals identifying as Asian, American Indian/Alaskan Native, Native Hawaiian or Pacific Islander or another race (that is not Black, White or multiracial) relative to those identifying as White, are significantly more likely to have unmet mental health (1.8 times as likely)[15] and allergy needs (1.7 times as likely).[16]

[8] The odds of having an unmet vision need for males is 1.2 times as large as it is for females ($b = .15$, $p < .05$).
[9] The odds of having an unmet dental need for males is 1.3 times as large as it is for females ($b = .24$, $p < .05$).
[10] The odds of having an unmet mental health need for males is 2.2 times as large as it is for females ($b = .80$, $p < .05$).
[11] The odds of having an unmet dental need for Black/African American individuals is 1.3 times as large as it is for White individuals ($b = .29$, $p < .05$).
[12] The odds of having an unmet allergy need for Black/African American individuals is 1.6 times as large as it is for White individuals ($b = .45$, $p < .001$).
[13] Greater unmet mental health needs for Black/African American individuals mainly derived from qualitative data collection. The logistic regression results were not statistically significant at $p < .05$, though the effect size, odds ratio, for having an unmet mental health need was rather sizeable for Black individuals relative to White individuals (odds were 1.6 times as large; $b = .47$, $p = .059$).
[14] The odds of having an unmet dental need for Multiracial individuals is 1.5 times as large as it is for White individuals ($b = .43$, $p < .05$).
[15] The odds of having an unmet mental health need for individuals identifying as Asian, American Indian/Alaskan Native, Native Hawaiian or Pacific Islander, or identified as another race that is not Black, White or multiracial is 1.8 times as large as it is for White individuals ($b = .57$, $p < .05$).
[16] The odds of having an unmet allergy need for individuals identifying as Asian, American Indian/Alaskan Native, Native Hawaiian or Pacific Islander, or identified as another race that is not Black, White or multiracial is 1.7 times as large as it is for White individuals ($b = .51$, $p < .001$).

- Younger Individuals. Among the greatest unmet health needs throughout the region, younger individuals[17] are significantly more likely to experience unmet needs among nearly all the conditions, including dental,[18] allergy,[19] mental health,[20] arthritis/osteoporosis,[21] and cardiovascular-related conditions.[22] Thus, though younger individuals are less likely to need treatment for these conditions, when they do need treatment, they are also less likely to get it. (See footnotes for effect sizes.)
- LGBTQ+ Individuals. The exposure to chronic and pervasive stress, in line with the minority stress model,[ix] creates results in health disparities among LGBTQ+ individuals when compared to heterosexual, cisgender individuals (Caceres 2020).[x] The health disparity among LGBTQ+ individuals has primarily been studied in relationship to cardiovascular disease and mental health, with research concluding that rates of occurrence are higher in both cases (Gonzales 2017; Merschel 2020).[xi] Certain health conditions are found to be more prevalent among LGBTQ+ adults including high blood pressure and obesity.[xii] Because LGBTQ+ individuals report high levels of discrimination when accessing health care (between 50-70% depending on sexual orientation and gender identity), they are more apt to "delay primary or preventative care" and display mistrust in health care.[xiii]
- Maternal Age Women. Unmet needs for maternal age women highlight racial and ethnic discrepancies in health care. In Dayton and Cincinnati MSAs, individuals who are Hispanic as well as individuals who are Black have lower rates of receiving prenatal care during the first trimester, with first trimester prenatal care rates up to 19% lower for these individuals relative to other populations in these regions.[23] Overall, rates of pre-pregnancy obesity, as well as chronic illness during pregnancy including diabetes and hypertension, have all increased by an average of two percent (Cradle Cincinnati 2020). Other conditions such as drug exposure, postpartum depression, unintentional pregnancies, and those with an underweight pre-pregnancy body mass index have all decreased in recent years (Cradle Cincinnati 2020).
- Veterans and Active Military. Active military, relative to non-active military, are significantly more likely to have unmet mental health (2.5 times as likely),[24] arthritis/osteoporosis (2.8 times as

[17] Age is treated as a continuous variable and thus differences in unmet need based on age is interpreted as each additional year younger.

[18] For each additional year increase in age, the odds of having an unmet dental need are .7% less ($b = -.007$, $p < .05$). Thus, the odds of having an unmet need for an individual aged 55 are .7% less relative to an individual aged 54; the odds of having an unmet need for an individual aged 55 are 6.4% less than an individual aged 45.

[19] For each additional year increase in age, the odds of having an unmet allergy need are 1.6% less ($b = -.02$, $p < .001$).

[20] For each additional year increase in age, the odds of having an unmet mental health need are 3.0% less ($b = -.03$, $p < .001$).

[21] For each additional year increase in age, the odds of having an unmet arthritis/osteoporosis need are 4.5% less ($b = -.05$, $p < .001$).

[22] For each additional year increase in age, the odds of having an unmet cardiovascular need are 7.4% less ($b = -.08$, $p < .001$).

[23] https://wonder.cdc.gov/wonder/help/DataExport.html#Excel; estimates are limited to counties with sufficient data needed for CDC to calculate reliable estimates. These counties include: Boone, Kenton, Butler, Clermont, Hamilton, Warren, Clark, Greene, Miami, and Montgomery.

[24] The odds of having an unmet mental health need for active military is 2.5 times as large as it is for non-active military ($b = .90$, $p < .01$).

likely),[25] and cardiovascular-related needs (2.7 times as likely).[26] Further, veterans, relative to non-veterans, are significantly more likely to have unmet mental health needs (2.3 times as likely).[27]

- Individuals with Disabilities. Individuals with disabilities, relative to those without disabilities, are significantly more likely to have unmet vision (1.7 times as likely),[28] dental (1.7 times as likely),[29] and allergy needs (1.4 times as likely).[30]
- Caregivers of Individuals with Disabilities. Individuals caring for others with a disability are significantly more likely to have unmet needs for nearly all of the greatest unmet needs in the region (except cardiovascular-related), including mental health (1.5 times as likely),[31] dental (1.7 times as likely),[32] vision (1.5 times as likely),[33] allergy (1.2 times as likely),[34] and arthritis/osteoporosis (2.1 times as likely).[35]
- Individuals without Private Insurance. Individuals without private insurance (those not insured and those publicly insured) are significantly more likely to have unmet mental health (.6 times as likely),[36] dental (.7 times as likely),[37] and cardiovascular-related needs (.6 times as likely),[38] relative to privately insured individuals.

[25] The odds of having an unmet arthritis/osteoporosis need for active military is 2.8 times as large as it is for non-active military ($b = 1.01$, $p < .05$).

[26] The odds of having an unmet cardiovascular need for active military is 2.7 times as large as it is for non-active military ($b = .98$, $p < .01$).

[27] The odds of having an unmet mental health need for veterans is 2.3 times as large as it is for non-veterans ($b = .82$, $p < .001$).

[28] The odds of having an unmet vision need for individuals with disabilities is 1.7 times as large as it is for those without disabilities ($b = .52$, $p < .001$).

[29] The odds of having an unmet dental need for individuals with disabilities is 1.7 times as large as it is for those without disabilities ($b = .53$, $p < .001$).

[30] The odds of having an unmet allergy need for individuals with disabilities is 1.4 times as large as it is for those without disabilities ($b = .30$, $p < .001$).

[31] The odds of having an unmet mental health need for caregivers of individuals with disabilities is 1.5 times as large as it is for those who are not caregivers ($b = .40$, $p < .01$).

[32] The odds of having an unmet dental need for caregivers of individuals with disabilities is 1.7 times as large as it is for those who are not caregivers ($b = .53$, $p < .001$).

[33] The odds of having an unmet vision need for caregivers of individuals with disabilities is 1.5 times as large as it is for those who are not caregivers ($b = .44$, $p < .001$).

[34] The odds of having an unmet allergy need for caregivers of individuals with disabilities is 1.2 times as large as it is for those who are not caregivers ($b = .18$, $p < .05$).

[35] The odds of having an unmet arthritis/osteoporosis need for caregivers of individuals with disabilities is 2.1 times as large as it is for those who are not caregivers ($b = .74$, $p < .001$).

[36] The odds of having an unmet mental health need for privately insured is .6 times as large (i.e., less likely) as it is for those who are not privately insured ($b = -.51$, $p < .001$).

[37] The odds of having an unmet dental need for privately insured is .7 times as large (i.e., less likely) as it is for those who are not privately insured ($b = -.34$, $p < .001$).

[38] The odds of having an unmet cardiovascular need for privately insured is .6 times as large (i.e., less likely) as it is for those who are not privately insured ($b = -.51$, $p < .01$).

- Individuals with Lower Educational Attainment. Individuals with lower educational attainment are significantly more likely to have unmet vision,[39] dental,[40] and cardiovascular needs.[41]
- Women with past traumas of physical abuse and/or sex trafficking identified a need for chiropractic care but the cost can be too high, the care is not often covered by insurance, and/or the service is not accessible from shelters or group homes.
- Incarcerated community members and community members transitioning back into the community identified a need for greater access to longer term mental health services, particularly coordination of services.
- Community members in addiction recovery reported needing dental repair and/or dentures.
- Older adults and youth need prevention services in both mental health and addiction.

Themes from qualitative, secondary, and survey data highlight specific populations within the region most likely to have unmet needs. All differences reported below (except for qualitative data summaries) are after accounting for all other demographic variables listed in Table 2.

Table 2. Populations most likely to have unmet needs among the largest unmet health conditions in the regions.

| Disparity | Vision | Dental | Allergy-Related | Mental Health | Arthritis/ Osteoporosis | Cardio-vascular | Maternal Complications |
|---|---|---|---|---|---|---|---|
| Males | X | X | | X | | | |
| Younger individuals | | X | X | X | X | X | |
| Older individuals | X | | | | | | |
| Black individuals | | X | X | * | | | * |
| Multiracial individuals | | X | | | | | |
| Asian, American Indian/Alaskan Native, Native Hawaiian or Pacific Islander or another race that is not White or Black or Multiracial | | | X | X | | | |

[39] The odds of having an unmet vision need for those with a college degree and those with a graduate degree are .81, and .76 times as large (i.e., less likely), respectively, as it is for those with only a high school degree ($b = -.22$, $p < .05$; $b = -.28$, $p < .05$, respectively).

[40] The odds of having an unmet dental need for those with a college degree and those with a graduate degree are .71, and .59 times as large (i.e., less likely), respectively, as it is for those with only a high school degree ($b = -.33$, $p < .05$; $b = -.53$, $p < .05$, respectively).

[41] The odds of having an unmet cardiovascular need for those with a graduate degree are .46 times as large (i.e., less likely) as it is for those with only a high school degree ($b = -.77$, $p < .05$).

Table 2. Populations most likely to have unmet needs among the largest unmet health conditions in the regions.

| Disparity | Vision | Dental | Allergy-Related | Mental Health | Arthritis/ Osteoporosis | Cardio-vascular | Maternal Complications |
|---|---|---|---|---|---|---|---|
| Active military | | | | X | X | X | |
| Military veterans | | | | X | | | |
| Individuals without private insurance | | X | | X | | X | |
| Individuals with disabilities | X | X | X | | | | |
| Individuals with lower education | X | X | | | | X | |
| Individuals caring for a disabled individual | X | X | X | X | X | | |
| LGBTQ+ individuals | | | | * | | * | |
| Cincinnati MSA | | | X | | | | |
| Dayton MSA | | | | | | X | |

Data source: Regional CHNA community survey
Note. "X" indicates significant, negative effects (i.e., greater likelihood of having an unmet need relative to the reference, such as males compared to females or Black/African American compared to White) from logistic regression analyses. Each unmet health condition was a separate analysis with the same predictors across all models: gender, age, race, ethnicity, education, military/veteran status, disability status, private insurance, sexual orientation, and caregiver of an individual with a disability. Thus, all negative effects are after controlling for all other variables in the model. "*" indicates an additional theme gathered from interviews/focus groups or secondary data, not effects from regression analyses.

### Places With Unmet Needs

Differences between subregions were not very common with respect to unmet health needs (i.e., after accounting for individual demographic differences, there were often not meaningful differences by subregion). However, two themes emerged.

- Relative to Dayton MSA, individuals in Cincinnati MSA are significantly more likely to have unmet allergy needs.[42]

[42] The odds of having an unmet allergy need for individuals living in Cincinnati MSA are 1.7 times as large as it is for those living in Dayton MSA, adjusting for age, sex, race, ethnicity, education level, military status, disability status, and caring for a disabled person. (b = .29, p < .001).

- Relative to individuals living in Cincinnati MSA, individuals living in Dayton MSA are significantly more likely to have unmet cardiovascular-related needs.[43]

## SDOH Driving Health in the 26 County Region - Excerpted

Only a part of an individual's health status depends on their genetics and behaviors. Social Determinants of Health (SDOH) are the structural and social conditions that affect a wide range of health, functioning, and quality-of-life outcomes and risks.[xiv] In line with Healthy People 2030 SDOH framework, five categories of Social Determinants of Health were identified as key drivers of health in this Region (not in a rank order):

- Economic stability
- Neighborhood and built environment
- Education access and quality
- Social and community connectiveness
- Healthcare access and quality

As a driving factor of health, strategies to improve health at the community level will need to address all SDOH.

Different SDOH impact different health conditions and SDOH are experienced differently depending on specific people, groups and places as identified through the community survey and the Healthy People 2030 Framework.

Methods utilized to assess these themes are further explained in the respective SDOH sections below. It should be noted that the lack of statistical significance in survey analysis does not mean there is not a need for a particular population group; rather such a need was not detected after accounting for all other demographic variables in the models in the context of the survey sample.

### Key Takeaways:

- Healthcare access and quality as a SDOH is associated with the largest number of health conditions, using national Healthy People 2030 data. Using Regional CHNA community survey data, economic stability factors are associated with the largest number of health conditions.
- Regional CHNA community survey data shows that Black community members in the region are significantly more impacted (negatively) in every SDOH when compared to White community members, followed by community members who identify as Asian, American Indian/Alaskan Native, Native Hawaiian or Pacific Islander, or identified as another race and community members with lower levels of education.
- Regional CHNA community survey data shows that community members in rural counties reported significantly lower perceptions of their neighborhood and built environment.

[43] The odds of having an unmet cardiovascular need for individuals living in Cincinnati MSA are .66 times as large (i.e., less likely) as it is for those living in Dayton MSA, adjusting for age, sex, race, ethnicity, education level, military status, private insurance or lack thereof, caring for a disabled person, and sexual orientation. ($b = -.42$, $p < .05$).

# Appendix C: Methodology – Regional (26 County) CHNA

Appendix C contains a detailed description of each data collection strategy including the sampling or recruitment strategy, and analysis.

## Comprehensive Data Collection

The needs assessment utilized a mixed-method approach to data collection including secondary quantitative data and primary quantitative and qualitative data. Each data collection strategy adhered to a recruitment plan to ensure a representative sample of community members, voices of underrepresented populations and providers across the health and social services sectors were captured. Below, each data collection strategy is outlined to include the sampling or recruitment strategy, and analysis.

### Secondary Data

Secondary data sources were used to capture community-level data on health conditions, healthcare access, and risk factors. Data sources are cited throughout the report. Large secondary data sources include the American Community Survey (ACS), National Center for Health Statistics, CDC's Behavioral Risk Factor Surveillance System, and Ohio Hospital Association (OHA) and Health Information Exchange (HIE) hospital and emergency department utilization data. Other secondary data regarding social determinants of health were pulled from 2021 County Health Rankings National Data (CHR).

### Provider Survey

The primary goal of the provider survey was to assess the current state of system barriers to providing health care and to addressing the greatest health needs of the community, and to identify solutions to overcoming system and SDOH-related barriers. The online survey was open from April 2021 to May 2021. Below outlines the sampling and analysis strategy for the provider survey.

#### Sampling

A total of 859 provider surveys were included in the analysis.[44] Across the three regions, the representation of providers from different fields were relatively equal (Table A1) with the exception of Dayton-Kettering MSA where there was much higher representation from Medical Health professionals (general population; 29%) compared to Cincinnati MSA (10%) and Rural Counties (14%). As shown in Table A2, among healthcare professionals, more than half in each region provide direct patient care. Among social service professionals, the most common roles among respondents were in Administration/Senior Management. Providers also reported serving the Regional CHNA target populations with 50% or more serving children/youth, disabled, ethnic minority, homeless, low-income, parent/caretaker and older adult populations (Table A3).

[44] 974 individuals began and/or completed the provider survey, with 113 responses removed due to incompleteness (i.e., did not provide answers to questions beyond the counties they serve and their role). Another two responses were removed because the individuals did not work within the region.

| Table A1. Percent of Survey Respondents from Each Region by Provider Type | | | |
|---|---|---|---|
| Provider Type | Cincinnati MSA (n = 596) | Dayton-Kettering MSA and Clark County (n = 300) | Rural Counties (n = 335) |
| Behavioral Health, Non-School-Based | 7% | 8% | 10% |
| Behavioral Health, School-Based | 10% | 5% | 7% |
| Education: College/University | 9% | 6% | 7% |
| Education: Early Childhood | 6% | 2% | 4% |
| Education: K-12 | 3% | 2% | 4% |
| Emergency Medical Services/First Responder | 5% | 6% | 6% |
| Faith-Based Organization | 4% | 3% | 5% |
| Federally Qualified Health Center | 3% | 1% | 2% |
| Justice or Corrections | 2% | 4% | 3% |
| Medical Health -Adult | 8% | 12% | 8% |
| Medical Health -General Population | 10% | 29% | 14% |
| Medical Health -Geriatric | 2% | 2% | 2% |
| Medical Health -Pediatric | 3% | 2% | 2% |
| Oral Health | 7% | 5% | 6% |
| Other organizations addressing social determinants of health | 5% | 6% | 5% |
| Pharmaceutical | 4% | 2% | 5% |
| Public Health Department | 7% | 3% | 6% |
| Other | 5% | 4% | 4% |

| Table A2. Percent of Survey Respondents from Each Region by Provider Role | | | |
|---|---|---|---|
| Provider Roles | Cincinnati MSA (n = 596) | Dayton-Kettering MSA and Clark County (n = 300) | Rural Counties (n = 334) |
| Health-Related | | | |
| Administration | 33% | 23% | 37% |
| Provide direct patient care | 59% | 68% | 54% |
| Academic | 7% | 4% | 6% |
| Other Role | 2% | 4% | 3% |
| Social Service-Related | | | |
| Administrative Support Staff | 14% | 9% | 11% |
| Administrator/Senior Management | 52% | 47% | 64% |
| Direct Service Provider | 21% | 28% | 17% |
| Manager or Supervisor | 10% | 14% | 5% |
| Other Role | 3% | 1% | 3% |

| Table A3. Percent of Survey Respondents from Each Region by Populations Served | | | |
|---|---|---|---|
| Populations Served | Cincinnati MSA (n = 594) | Dayton-Kettering MSA and Clark County (n = 300) | Rural Counties (n = 335) |
| All Residents | 43% | 56% | 48% |
| Children/Youth | 28% | 22% | 24% |
| Disabled | 20% | 22% | 19% |
| Ethnic Minorities | 22% | 25% | 21% |
| Homeless | 19% | 22% | 20% |
| Justice-Involved Individuals | 9% | 13% | 11% |
| Language Minorities | 10% | 13% | 7% |
| LGBTQ+ | 11% | 18% | 11% |
| Low-Income Populations | 22% | 25% | 19% |
| Older Adults | 26% | 32% | 30% |
| Parents/Caretakers | 16% | 19% | 17% |
| Veterans | 8% | 15% | 10% |
| Young Adults | 13% | 17% | 10% |
| Another Population | 2% | 4% | 2% |

### Analysis

The provider survey analysis assessed overall perceptions among providers in THC's region, as well as differences in perceptions and experiences among different types of providers. For overall perceptions and experiences, frequency and descriptive analyses were conducted.

To assess for differences in perceptions and experiences by provider characteristics, descriptive and frequency statistics were compared by provider types (e.g., behavioral healthcare providers compared to medical providers) and regions served. Multiple regression analysis was conducted to assess the extent to which best practice utilization impacts providers' perceptions of barriers. Table A4 outlines the research questions and subsequent analysis types including the outcome and predictor variables that were used in analysis.

| Table A4. Population Survey Planned Analysis and Research Questions | | | |
|---|---|---|---|
| Research Question | Analysis | Outcome | Predictors |
| How do barriers providers face in addressing the needs of the community differ by provider characteristics? | Frequencies and descriptive statistics | Barriers scale scores | Provider region and type of provider |
| How do best practices to overcome these barriers to addressing the needs of the community differ by provider characteristics? | Frequencies and descriptive statistics | Has Successfully implemented this/Has not | Provider region and type of provider |

| | | | |
|---|---|---|---|
| Does best practice utilization significantly predict the extent to which providers experience barriers to providing care? | Multiple Regression | Barriers scale scores | Sum score of best practices successfully implemented, Provider region, and type of provider |

## Population Survey

The primary goal of the population survey was to gather a wide range of voices to share their experiences and insights with health conditions, risk factors, and structural barriers. The electronic survey was open from April 2021 to June 2021 and available in Arabic, English, French, Nepali, and Spanish. Paper surveys were provided when requested. To improve response rates, there were two drawings for a $100 Amazon gift card. An overview of the sampling and analysis strategies for the population survey are provided below.

### Sampling

To ensure a representative sample of THC's geographic service area, three separate stratified sampling strategies were developed to reflect the age, race, and gender of Cincinnati Metropolitan Statistical Area (MSA),[45] Dayton-Kettering MSA (to include Clark County which is not part of the Dayton MSA but is similar in that it borders the Dayton MSA and is not a rural county),[46] and other rural counties in the geographic service area that are predominately rural and not included in other MSAs.[47] Over 11,000 individuals responded to an online survey with 8,321 valid responses.[48] Table A5 provides a description of the valid sample represented in the results.

Table A5. Percent of Population Survey Respondents by Region

| Demographic | Cincinnati | | Dayton-Kettering | | Other Rural Counties | |
|---|---|---|---|---|---|---|
| | MSA n=1,646,873 | Sample n=4,415 | MSA n=729,904 | Sample n=2,543 | MSA n=257,910 | Sample n=1,363 |
| | % | % | % | % | % | % |
| Age | | | | | | |
| 18-24 | 12% | 8% | 12% | 6% | 11% | 7% |
| 25-34 | 18% | 30% | 17% | 20% | 14% | 30% |
| 35-44 | 16% | 16% | 15% | 22% | 15% | 16% |
| 45-64 | 35% | 29% | 34% | 44% | 37% | 33% |
| 65+ | 19% | 17% | 22% | 9% | 23% | 13% |
| Race | | | | | | |

[45] Includes the following counties: Grant, Butler, Clermont, Hamilton, Warren, Dearborn, Kenton, Boone, Campbell, Brown, Ohio, Union, and Franklin.

[46] Includes the following counties: Clark, Montgomery, Miami, and Greene.

[47] Includes the following counties: Clinton, Highland, Adams, Preble, Shelby, Darke, Auglaize, and Champaign.

[48] 11,615 total responses were gathered from our survey results. From here, 2,343 respondents were dropped from analysis due to listing their zip code as one clearly outside of our regions of interest. An additional 38 respondents were dropped based on unreliable reporting of needing treatment for five major diseases in the past year. 198 individuals were dropped due to their written selection for race being uninformative or unreliable. An additional 333 respondents were dropped for low question response rate (15 or less answered questions). 139 respondents were dropped for likely duplicate entries. Finally, those who did not have complete responses for MSA, age, sex, and race were dropped from analysis, resulting in 8,321 valid responses.

| Table A5. Percent of Population Survey Respondents by Region | | | | | | |
|---|---|---|---|---|---|---|
| Demographic | Cincinnati | | Dayton-Kettering | | Other Rural Counties | |
| Black or African American | 12% | 8% | 14% | 8% | 1% | 2% |
| Multiracial | 1% | 4% | 2% | 3% | 1% | 2% |
| Asian, American Indian/Alaskan Native, Native Hawaiian or Pacific Islander or another race that is not White or Black or Multiracial | 5% | 12% | 4% | 7% | 2% | 10% |
| White or Caucasian | 82% | 76% | 80% | 83% | 96% | 85% |
| Ethnicity | | | | | | |
| Hispanic or Latino | 2% | 4% | 2% | 3% | 1% | 5% |
| Not Hispanic or Latino | 98% | 96% | 98% | 97% | 99% | 95% |
| Gender | | | | | | |
| Male | 48% | 34% | 48% | 20% | 49% | 30% |
| Female | 52% | 66% | 52% | 80% | 51% | 70% |

As shown in Table A5, as is often the case, the sample characteristics do not perfectly align to the population within the Health Collaborative's region. In order to make population-level conclusions and observations from our data, a survey data weighting method was applied to ensure the sample distribution of demographics align with the population distribution. The method of survey weighting used in this analysis is called raking. This method is also used by Pew Research Center, and the CDC also uses raking in their Behavioral Risk Factor Surveillance System (BRFSS) data.

### Analysis

For overall perceptions and experiences, frequency and descriptive analyses were conducted using survey response weighting described above. To assess for differences in perceptions and experiences related to health, logistic and multiple regression analyses were conducted. Table A6 outlines the research questions and subsequent analysis types including the outcome, predictor, and control variables that were used. Because much of the needs assessment was focused on determining which individuals and in which regions individuals are experiencing the greatest health needs or gaps, reference groups were selected based on the literature and previous research which inform groups of individuals who are most likely to be negatively impacted relative to majority or historically not-underrepresented groups (e.g., White individuals, individuals from higher socioeconomic statuses, individuals without disabilities); choice of reference group does not change the reliability or validity of the statistics or model, but rather provides targeted insights into group differences.

| Table A6. Population Survey Planned Analysis and Research Questions | | | | |
|---|---|---|---|---|
| Research Question | Analysis | Outcome | Predictors | Controls |
| How does need/prevalence of health conditions differ across communities and members? | Logistic Regression | Needed (received or not) for each of the health conditions of interest | Gender identity, sexual orientation, age, race/ethnicity, income or education, disability status, employment status, region, insurance, children in household, military status | The behavioral/health risk factors correlated with each health condition (options: alcohol, healthy diet, high blood pressure, high cholesterol, tobacco, exercise, BMI) |
| How do barriers to care differ across communities and members? | Multiple Regression | Each of the Barrier subscales as separate outcomes | Gender identity, sexual orientation, age, race/ethnicity, income or education, disability status, employment status, region, insurance, children in household, military status | |
| How does receipt of preventive care differ across communities and members? | Multiple Regression | Preventive Care frequency | Gender identity, sex orientation, age, race/ethnicity, income or education, disability status, employment status, region, insurance, children in household, military status | |

| | | | | |
|---|---|---|---|---|
| Which SDOH are most predictive of need/prevalence of health conditions? | Logistic Regression | Needed (received or not) for each of the health conditions of interest | Each of the SDOH construct scale scores | The behavioral/health risk factors correlated with each health condition (options: alcohol, healthy diet, high blood pressure, high cholesterol, tobacco, exercise, BMI) |
| How does access to care (needing and not receiving relative to needing and receiving care) differ across communities and members? | Logistic Regression | Needed and Not Received vs. Needed and Received | gender identity, sex orientation, age, race/ethnicity, income or education, Disability status, Employment status, Region, Insurance, Children in household, Military Status | |
| How do experiences of SDOH differ across communities and community members? | Multiple Regression | Each of the SDOH subscales | gender identity, sex orientation, age, race/ethnicity, income or education, Disability status, Employment status, Region, Insurance, Children in household, Military Status | |

| | | | | |
|---|---|---|---|---|
| How does the effect of COVID-19 on access to care (delaying or going without) differ across communities and members? | Multiple Regression | Post COVID-19 access | gender identity, sex orientation, age, race/ethnicity, income or education, Disability status, Employment status, Region, Insurance, Children in household, Military Status | Pre COVID-19 access |

### Focus Groups

The goal of focus groups was to document the unique health needs and experiences of community members known to experience health disparities or that do not tend to participate in online surveys. Focus group discussions centered around the following three broad questions:

- How do health needs differ across communities and community members?
- What are the personal experiences, local contexts, and social conditions (e.g., SDOH and root causes) driving the greatest health needs in and across community groups?
- How can healthcare providers better reach community members?

Focus groups were conducted, virtually from May, 2021 through July, 2021, by researchers from MRC, Scale Strategic Solutions, and a team of University of Cincinnati (UC) faculty and students, with MRC facilitating the collaborative effort. Researchers collaborated with community champions in order to identify community members to participate. Focus groups lasted one hour, were conducted in person or via Zoom, and each participant received a $25 grocery gift card (Amazon, Walmart, or Kroger) for their expertise in the focus group. An overview of the recruiting and analysis strategies for the focus groups are provided below.

#### Recruiting

Based on the population groups the advisory committee identified as experiencing health disparities or being underrepresented in community data, MRC designed a recruitment strategy to ensure all the population groups were included. A total of 51 focus groups were conducted, with a total of 234 community members (65% female, 31% male). Table A7 identifies some of the unique populations represented in the focus groups.

Table A7. Population Representation in Focus Groups by Region

| Population Category | Cincinnati MSA | Dayton-Kettering MSA | Other Rural Counties |
|---|---|---|---|
| Adult Men | ✓ | ✓ | ✓ |
| Experience in Foster Care, or Foster Care Parent | ✓ | | |
| Disabled Youth and Adults | ✓ | ✓ | |

| Table A7. Population Representation in Focus Groups by Region | | | |
|---|---|---|---|
| Population Category | Cincinnati MSA | Dayton-Kettering MSA | Other Rural Counties |
| Ethnic, Cultural and Language Minorities | ✓ | ✓ | ✓ |
| First- and Second- Generation Immigrants | ✓ | ✓ | |
| Homeless Community Members | ✓ | ✓ | |
| Justice-involved Individuals | ✓ | | ✓ |
| Low-income Families/Individuals | ✓ | ✓ | ✓ |
| Older Adults | ✓ | ✓ | ✓ |
| Parents | ✓ | ✓ | ✓ |
| Veterans | ✓ | ✓ | |
| Young Adults (18-30 years) | ✓ | ✓ | ✓ |
| Youth (high school) | ✓ | ✓ | ✓ |
| Community Members with lived experience of mental health and/or addiction (including Peer Supporters) | ✓ | ✓ | |

### Analysis

Focus group discussions were transcribed, and content analyzed for common clusters of similar statements, organized by categories of clusters, and then analyzed for larger themes that summarize the global and unique perspectives of focus group participants.

## Interviews

The goal of interviews was to assess the current state of system barriers to providing health care and to addressing the greatest health needs of the community, and to identify solutions to overcoming system and SDOH-related barriers. Interviews were designed around the following broad questions:

- What are the system barriers providers face in addressing the needs of community groups?
- What recommendations or best practices can be recommended to overcome system barriers to addressing the health needs of the community?
- What are the historical traumas, local contexts, and social conditions (e.g., SDOH and root causes) driving the greatest health needs of your communities?
- What specific action steps can be taken by various providers to address root causes to health disparities and achieve more equitable health outcomes?

Interviews were conducted from September 27, 2021 through October 31, 2021, via phone or virtually. MRC, Scale Strategic Solutions, and the UC research teams conducted interviews, each lasting approximately 45 minutes. An overview of the sampling and analysis strategies for the interviews are provided below.

### Recruiting

MRC and UC worked with the Advisory Team to identify system experts and organizational-level stakeholders representing governmental, Regional CHNA partners, healthcare providers and community-based leaders. A total of 38 interviews were conducted, representing experience from the following health and social service sectors shown in Table A8.

| Table A8. System Representation in Interviews by Region | | | |
|---|---|---|---|
| Provider Category | Cincinnati MSA | Dayton-Kettering MSA | Rural Counties |
| Community Health Centers and Federally Qualified Health Centers | ✓ | ✓ | |
| Public Health and County Health Departments | ✓ | ✓ | ✓ |
| Hospital Systems | ✓ | ✓ | |
| Mental and SUD Health Care | ✓ | ✓ | ✓ |
| Medical Health -Geriatric | | ✓ | |
| SDOH -Housing | | ✓ | |
| SDOH -Economic Disparity | ✓ | ✓ | ✓ |
| SDOH -Transportation | | ✓ | ✓ |
| LGBTQ+ Health Care | ✓ | | |
| Emergency Health Care | ✓ | | |
| Healthcare Access and Policy Experts | ✓ | ✓ | ✓ |
| SDOH -Food Access | ✓ | ✓ | ✓ |
| Pharmacy Access Experts | ✓ | ✓ | ✓ |
| Healthcare Workforce Development Experts | ✓ | ✓ | ✓ |
| Correctional Facility-based Health Care | | | ✓ |
| School-based and Children's Health Care | ✓ | ✓ | ✓ |

### Analysis

All individual stakeholder responses are confidential. Interviews were transcribed and content analyzed for common clusters of similar statements, organized by categories of clusters, and then analyzed for larger themes that summarize the global and unique perspectives of interview participants.

This comprehensive and inclusive data collection strategy resulted in a balanced representation across all three regions of the Regional CHNA. The success of the data collection is due largely to the advisory committee, community partners, and community champions.

## Collaborative Data Collection

The University of Cincinnati (UC) received an applied research grant to conduct field research related to child and youth health. This grant allowed the Regional CHNA to expand data collection to include children and youth with wider representation. It is critical to uncover how to help youth, college students and families in our region, and to understand their perceptions.

The UC Team for the Regional CHNA utilized interviews and focus groups to understand perceptions of what it is to be healthy, needs of interest groups (focusing on youth and college students as well as families), barriers to health, ideas for overcoming barriers, perceptions of telehealth, needs for advocacy, healthcare access, healthcare successes in the region, and ideas for improving care and ways of interacting with patients. Twelve focus groups and 14 interviews were conducted by the UC team from May, 2021, through July, 2021, and the results were analyzed using deductive coding methods. The results were integrated into the final qualitative dataset for analysis. (Samples are included in Tables A7 and A8 above).

## Data Considerations (Limitations)

When using the Regional CHNA community survey data to make generalizations of the population at large, it should be noted that a targeted snowball sampling methodology was utilized. Based on the importance and, often, largely differing perceptions of health by age, race, and gender, the sampling strategy prioritized oversampling numerically underrepresented populations to ensure a sufficient sample to conduct statistical analyses by key demographic variables. As a result, the Regional CHNA community survey has an overrepresentation of females, individuals ages 25 to 34 years, individuals classified as a race other than White, Black, or Multiracial, and Hispanic individuals. Because of this overrepresentation, MRC conducted a weighted analysis as previously described to show frequency and descriptive statistics for the three regions overall. Using the unweighted survey data, regression analyses were performed to understand differing perceptions by demographics.

# Endnotes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[iv] ibid

[v] National Conference of State Legislatures. (2013). Racial and ethnic health disparities: what state legislators need to know. https://www.ncsl.org/portals/1/documents/health/HealthDisparities1213.pdf

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