Community Health Needs Assessment & Strategic Implementation Plan
for 2022-2024

THE MEDICAL CENTER AT BOWLING GREEN
The Medical Center at Bowling Green

Community Health Needs Assessment & Strategic Implementation Plan

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Mission, Vision, and Values

Mission
The Medical Center at Bowling Green’s mission is to care for people and improve the quality of life in the communities we serve.

Vision
The Medical Center at Bowling Green will be an innovative leader in healthcare delivery and outcomes.

What We Value

Quality
We are committed to providing the highest level of care and service at every opportunity.

People
People are our most valuable resource. We work together to achieve our organization’s goals. We treat everyone with honor, dignity and respect.

Accountability
Each of us is responsible for managing our resources ethically and wisely.
Purpose

The Community Health Needs Assessment has been completed for the following reasons:

- To help meet the Hospital’s mission to care for people and improve the quality of life in the communities we serve;
- To comply with the Patient Protection and Affordable Care Act of 2010 and maintain the Hospital’s tax exempt status;
- To establish community health needs for the Hospital’s service area, to determine areas of greatest need, and for the Hospital to develop a strategic plan to address those needs;
- To involve internal and external resources to ensure needs of individuals are met and that efforts are not duplicated; and
- To create a sustainable process for conducting a community health needs assessment that can be continued for future assessments.

Executive Summary

The Patient Protection and Affordable Care Act of 2010 includes a provision that requires every tax exempt, non-governmental hospital to:

- Conduct a Community Health Needs Assessment (CHNA) at least every three years.
- Adopt a Strategic Implementation Plan that includes how the needs identified in the assessment will be met.
- Report to the Internal Revenue Service via its 990 tax form how it is meeting its implementation plan.

The Community Health Needs Assessment Report details the process used to collect, disseminate and prioritize the information in the assessment. Med Center Health used primary data obtained from a community survey in partnership with the BRIGHT Coalition and Barren River Health Department. A secondary survey to community leadership was used as well as secondary market research.

The end result of the assessment process was the development by the hospital of a strategic plan to address the major needs identified.
Organizational Description

Bowling Green-Warren County Hospital Corporation (the "Corporation"), is a non-stock, nonprofit Kentucky corporation that operates a 337 bed hospital facility in Bowling Green, Kentucky under the name "The Medical Center at Bowling Green" and since October 1996, a 25 bed critical access hospital and 110 bed nursing home facility in Scottsville, Kentucky under the name "The Medical Center at Scottsville." In addition, since January 2016, the Corporation has operated a 25 bed critical access acute care hospital in Horse Cave, Kentucky under the name "The Medical Center at Caverna." The three facilities are part of one corporation but are separately licensed by the State of Kentucky. References herein to "The Medical Center" refer to the combined facilities.

The Corporation has been determined by the Internal Revenue Service (the "IRS") to be a charitable organization as described in Section 501(c)(3) of the Internal Revenue Code of 1986, as amended (the "Code") and is exempt from federal income taxation by virtue of Sections 501(a) and 501(c)(3) of the Code.

Together with another area non-profit acute care hospital corporation, the Corporation is an equal owner of the Barren River Regional Cancer Center Inc., (Center) an outpatient radiation therapy care service in Southcentral Kentucky organized as a charitable organization as described in Section 501(c)(3) of the Internal Revenue Code of 1986, as amended (the "Code") and is exempt from federal income taxation by virtue of Sections 501(a) and 501(c)(3) of the Code.

The Corporation is the sole member of Medical Center EMS, LLC (EMS), Medical Center Pharmacy of Bowling Green, LLC (Riverside) and Med Center Health Partners. EMS provides ambulance services in Warren County, Kentucky. Riverside offers retail pharmacy services in Bowling Green, Kentucky. Med Center Health Partners is a Clinically Integrated Network of healthcare providers, working together under a physician-led structure to improve population health, improve patient experience and reduce the cost of healthcare. The Corporation is both the limited partner and a general partner in the Medical Plaza Partners, LLP which provides on-campus space for hospital departments and other non-affiliate medical-related services.

The Corporation is owned and controlled by Commonwealth Health Corporation, Inc., a non-stock, nonprofit Kentucky corporation ("CHC"), under a holding company arrangement which was established in 1984. CHC has been determined by the IRS to be a charitable organization as described in Section 501(c)(3) of the Internal Revenue Code of 1986, as amended (the "Code") as is exempt from federal income taxation by virtue of Sections 501(a) and 501(c)(3) of the Code.

The Medical Center at Bowling Green was originally founded as the City Hospital in 1926. In 1949, the city hospital became jointly owned by the City of Bowling Green, Kentucky and the County of Warren, Kentucky and was operated by the Bowling Green-Warren County Hospital Commission (the “Commission”) as a public hospital. In 1977, the Corporation
became the successor to the Commission with a stated purpose of leasing and operating the existing Commission facilities and financing, constructing and operating a new hospital facility.

The Medical Center at Bowling Green has undergone a series of expansions and has grown to be the largest and most comprehensive hospital facility in Southcentral Kentucky, offering a wide range of acute care and specialty services.

In 1980, The Medical Center at Bowling Green moved into a new six-story, state-of-the-art facility occupying 298,000 square feet on a 17-acre campus. Since 1980, because of an expanding demand for inpatient and outpatient services, several additions to The Medical Center at Bowling Green have been made and both clinical and patient areas have been renovated and modernized.

In 1982, a cancer treatment center was added. In 1984 and again in 1990, the outpatient service area was expanded.

In 1985, the Corporation assisted an affiliate, Commonwealth Medical Plaza Corp., in developing a 29,156 square foot medical office building adjacent to The Medical Center at Bowling Green. Today, the Corporation holds a 92% equity interest in the limited partnership that owns the building.

In 1992, a magnetic resonance imaging facility was acquired adjacent to The Medical Center at Bowling Green campus. In 1997, the Corporation built a 50,000 square foot medical office building adjacent to its outpatient service area.

In 1996, the Corporation acquired the hospital and nursing facility in Scottsville, Kentucky now known as The Medical Center at Scottsville from Health Endowment Properties. The building is located on an approximately 13-acre campus and now totals approximately 106,500 square feet.

In 2004, The Medical Center at Bowling Green completed new construction of approximately 59,500 square feet to house an expanded new ambulatory surgical area and an expanded emergency department. The two floor structure was constructed across High Street and is connected to the main hospital via an elevated floor housing the post anesthesia care unit. In addition, renovation of 23,000 square feet of the existing facility was completed to relocate and serve the growing needs of the Diagnostic Imaging Center and surgical areas.

In 2009, The Medical Center at Bowling Green completed new construction consisting of two additional floors above the existing Emergency Department and Ambulatory Surgery wing of The Medical Center at Bowling Green. The new additional floors are supported by ancillary services across the connected bridge way. The project includes construction of a new egress stairwell to serve the new third and fourth floors only. The existing second floor is augmented with approximately 953 square feet of new infill construction adjacent to the new stairwell. The new third and fourth floors each contain approximately 23,238
square feet of space and accommodate 24 acute inpatient beds each. This expansion provided space to allow The Medical Center at Bowling Green to bring on-line its entire complement of 337 licensed beds.

In 2012, The Medical Center acquired Western Kentucky Diagnostic Imaging ("WKDI") to expand the hospital’s diagnostic imaging capacity.

In August 2013, The Medical Center completed and opened an approximately 73,471 square foot, three story building known as The Medical Center – WKU Health Sciences Complex. Approximately 80% of the building is leased to Western Kentucky University under a 25 year “triple net” lease. The building houses the University’s School of Nursing and Doctor of Physical Therapy programs. The Medical Center uses the remainder of the building for staff education purposes, including bed labs with state-of-the-art equipment such as patient simulators, including an iStan virtual patient.

In 2016, the Corporation acquired the hospital in Horse Cave, Kentucky, now known as The Medical Center at Caverna. The buildings located on the approximately 37-acre campus total approximately 41,000 square feet.

In October 2018, The Medical Center opened a new two story building with 48,000 square feet of office space adjacent to a five-level, 832-space parking structure. The building includes ground floor office space for The Medical Center and 24,000-square-feet on the second floor for the newly opened University of Kentucky College of Medicine-Bowling Green campus. The medical school provides a home to faculty, staff and a full class of 120 students. Amenities of the second floor include a computer lab, two large classrooms, four multi-purpose rooms, six small group rooms and eight simulation and standardized patient rooms.

In October 2020, The Medical Center opened their Hybrid OR. This new surgery suite combines an operating room with state-of-the-art imaging equipment, including an ARTIS pheno robotic imaging system Siemens. With this system, patients can undergo both endovascular and open surgical procedures in the same setting. The floor-mounted robotic C-arm system allows for individualized preprocedural planning, intraoperative guidance, and immediate checkup — regardless of patient condition or procedure complexity. The hybrid OR is used primarily for heart and vascular patients.

Today, The Medical Center at Bowling Green’s buildings have expanded to contain a total of approximately 578,000 square feet of space located on its approximately 56-acre campus.
**Survey Process**

The BRIGHT (Barren River Initiative to Get Healthy Together) Coalition formed in 2011 to answer the question, “How can leaders of South Central Kentucky’s rural communities work together to improve our overall health status, strengthen the economy, contribute to education successes, and improve quality of life?” Since then, the coalition has grown from its original seven community partners to 47 organizations and is still growing.

Through the BRIGHT Coalition, three survey cycles have been completed. Beginning in July 2021, Med Center Health, in conjunction with the BRIGHT Coalition and the Barren River District Health Department, began the Community Health Assessment/Community Health Improvement Plan (CHA/CHIP) process for the upcoming fourth cycle using the Association for Community Health Improvement’s Community Health Assessment Toolkit. The toolkit (chart shown below) offers a nine-step pathway for conducting a community health assessment and developing implementation strategies.

**Community Health Assessment Toolkit**
Reflection on previous cycle

Reflection of the previous survey cycles raised several questions:

- How do we get more of the underserved populations in our area to participate in taking the CHA survey?
- Based on feedback from the previous survey, how do we create a shorter survey that still gives an adequate assessment of the community needs?
- What do we want to learn from this survey?

A full summary of the 2019–2021 survey activities can be found on our website at https://medcenterhealth.org/community-health-needs-assessment/. The COVID-19 pandemic posed numerous challenges in meeting the implementation strategies set forth for the 2019–2021 health improvement plan. Med Center Health has been able to maintain a high level of education and communication with the community via social media throughout the COVID-19 pandemic. Community partnerships have deepened through the pandemic as area businesses pivoted their efforts to meet the needs of the community during the pandemic. Partnering with SOKY Marketplace and the Community Farmer’s Market, two local farmer’s markets, the Warren County Public Library and City of Bowling Green Parks & Recreation, Med Center Health was able to increase the reach of our education on Facebook using the library’s and the farmer’s market’s Facebook pages to provide ongoing education.

Programs, including Medical Nutrition Therapy and Diabetes Self-Management Education were offered as telehealth services as were primary care and other service lines throughout the hospital system.

Med Center Health also served as a COVID-19 vaccination site starting December 2020 and hit 100,000 vaccinations given on 11/17/2021. Consistent, up to date information and data pertaining to COVID-19 was and has continued to be communicated by Med Center Health to the public on an ongoing basis via media and social media outlets.

During the 2019–2021 cycle, new partnerships were formed with community partners including HOTEL, INC., Goodwill Career Center and Alzheimer’s Association.

Over the 2019–2021 cycle, it was noted the impact that Social Determinants of Health (SDOH) play in recovery after a patient is discharged from the hospital. Knowing that an individual’s neighborhood, access to affordable housing and healthy food, sense of community and belonging can affect their overall health and health outcomes, questions pertaining to the SDOH were added to the inpatient intake form. These issues have been highlighted throughout the community during the COVID-19 pandemic. Resources were gathered and are provided to patients upon recognition of a need related to one or more of the SDOH. If the need cannot be met by a Med Center Health service, a list of resources available in the area is provided to the patient. To make further strides in the SDOH areas, one of the Med Center Health fiscal year community initiatives ‘22 strategic initiatives was
to “partner with key community stakeholders to systematically address social determinants of health”.

**Stakeholders**

With a diverse membership, the BRIGHT Coalition has a large group of stakeholders. Coalition members are consistently encouraged to invite potentially interested stakeholders to the table to get involved with our collective efforts.

The BRIGHT Coalition consists of the following active organizations:

- Allen County Health Department
- Barren River Area Development District (BRADD)
- Barren River District Health Department
- City of Bowling Green
- Community Action of Southern Kentucky
- Community Farmers Market
- Barren River District Health Department
- Commonwealth Regional Specialty Hospital
- Fairview Community Health Center
- Lifeskills, Inc.
- Med Center Health Bowling Green
- Med Center Health Caverna
- Med Center Health Franklin
- Med Center Health Scottsville
- T.J. Regional Health
- Warren County Library
- WKU Department of Public Health
Community

The Barren River District serves Allen, Barren, Butler, Edmonson, Hart, Logan, Metcalfe, Monroe, Simpson and Warren Counties. Due to an underwhelming number of responses from the underserved population in each county with the last survey, it was a priority this cycle to survey a diverse population in each area.

Service Area Description

The primary service area for The Medical Center is Warren County and the contiguous counties of Allen, Barren, Butler, Edmonson, Logan and Simpson, as of the 2020 US Census redistricting data set, had a population of approximately 271,140. The total population of all 10 counties in the BRADD area is 312,062. Bowling Green, Kentucky, where the Corporation’s major facilities are located, is the county seat of Warren County. According to the 2020 U.S. Census estimate, Bowling Green had a population of approximately 72,294 and Warren County had an estimated population of 134,544. Scottsville, Kentucky, where the Corporation’s Scottsville facility is located, is the county seat of Allen County, Kentucky, which had a population of approximately 20,588 per the 2020 U.S. census population estimates.

The Medical Center at Bowling Green CHNA Service Area

The Medical Center at Bowling Green
## Demographics: Warren County, Kentucky

**Data Source:** [https://www.countyhealthrankings.org/app/kentucky/2021/rankings/warren/county/outcomes/overall/snapshot](https://www.countyhealthrankings.org/app/kentucky/2021/rankings/warren/county/outcomes/overall/snapshot)

<table>
<thead>
<tr>
<th>Population</th>
<th>Warren County</th>
<th>Kentucky</th>
</tr>
</thead>
<tbody>
<tr>
<td>% below 18 years of age</td>
<td>22.90%</td>
<td>22.40%</td>
</tr>
<tr>
<td>% 65 and older</td>
<td>13.10%</td>
<td>6.80%</td>
</tr>
<tr>
<td>% Non-Hispanic Black</td>
<td>9.50%</td>
<td>8.20%</td>
</tr>
<tr>
<td>% American Indian &amp; Alaska Native</td>
<td>0.30%</td>
<td>0.30%</td>
</tr>
<tr>
<td>% Asian</td>
<td>4.60%</td>
<td>1.60%</td>
</tr>
<tr>
<td>% Native Hawaiian/Other Pacific Islander</td>
<td>0.50%</td>
<td>0.10%</td>
</tr>
<tr>
<td>% Hispanic</td>
<td>5.60%</td>
<td>3.90%</td>
</tr>
<tr>
<td>% Non-Hispanic White</td>
<td>77.60%</td>
<td>84.10%</td>
</tr>
<tr>
<td>% Not proficient in English</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>% Females</td>
<td>51%</td>
<td>50.70%</td>
</tr>
<tr>
<td>% Rural</td>
<td>31.20%</td>
<td>41.60%</td>
</tr>
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<table>
<thead>
<tr>
<th>Health Outcomes</th>
<th>Warren County</th>
<th>Kentucky</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor or fair health</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>Poor physical health days</td>
<td>4.60%</td>
<td>4.60%</td>
</tr>
<tr>
<td>Poor mental health days</td>
<td>4.80%</td>
<td>5%</td>
</tr>
<tr>
<td>Low birthweight</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Diabetes prevalence</td>
<td>8%</td>
<td>13%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health Factors</th>
<th>Warren County</th>
<th>Kentucky</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to exercise opportunities</td>
<td>55%</td>
<td>71%</td>
</tr>
<tr>
<td>Excessive drinking</td>
<td>16%</td>
<td>17%</td>
</tr>
<tr>
<td>Alcohol-impaired driving deaths</td>
<td>22%</td>
<td>25%</td>
</tr>
<tr>
<td>Drug overdose deaths</td>
<td>14%</td>
<td>32%</td>
</tr>
<tr>
<td>Motor vehicle crash deaths</td>
<td>12%</td>
<td>17%</td>
</tr>
<tr>
<td>Insufficient sleep</td>
<td>40%</td>
<td>24%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clinical Care</th>
<th>Warren County</th>
<th>Kentucky</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uninsured</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>Primary care physicians</td>
<td>1,490:1</td>
<td>1,540:1</td>
</tr>
<tr>
<td>Dentists</td>
<td>1,380:1</td>
<td>1,490:1</td>
</tr>
<tr>
<td>Mental health providers</td>
<td>370:1</td>
<td>420:1</td>
</tr>
<tr>
<td>Preventable hospital stays</td>
<td>5,418</td>
<td>5,615</td>
</tr>
</tbody>
</table>
Social & Economic Factors

<table>
<thead>
<tr>
<th></th>
<th>Warren County</th>
<th>Kentucky</th>
</tr>
</thead>
<tbody>
<tr>
<td>High school completion</td>
<td>88%</td>
<td>86%</td>
</tr>
<tr>
<td>Some college</td>
<td>68%</td>
<td>62%</td>
</tr>
<tr>
<td>Unemployment</td>
<td>3.90%</td>
<td>4.30%</td>
</tr>
<tr>
<td>Children in poverty</td>
<td>19%</td>
<td>21%</td>
</tr>
<tr>
<td>Children in single-parent households</td>
<td>25%</td>
<td>26%</td>
</tr>
<tr>
<td>Median household income</td>
<td>$53,200</td>
<td>$52,300</td>
</tr>
<tr>
<td>Severe housing problems</td>
<td>15%</td>
<td>14%</td>
</tr>
</tbody>
</table>

BRADD Demographics

Education Level

<table>
<thead>
<tr>
<th>County</th>
<th>High School Graduation</th>
<th>Some College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen</td>
<td>82%</td>
<td>50%</td>
</tr>
<tr>
<td>Barren</td>
<td>83%</td>
<td>52%</td>
</tr>
<tr>
<td>Butler</td>
<td>80%</td>
<td>45%</td>
</tr>
<tr>
<td>Edmonson</td>
<td>78%</td>
<td>52%</td>
</tr>
<tr>
<td>Hart</td>
<td>76%</td>
<td>39%</td>
</tr>
<tr>
<td>Logan</td>
<td>85%</td>
<td>51%</td>
</tr>
<tr>
<td>Metcalfe</td>
<td>76%</td>
<td>48%</td>
</tr>
<tr>
<td>Monroe</td>
<td>75%</td>
<td>46%</td>
</tr>
<tr>
<td>Simpson</td>
<td>87%</td>
<td>48%</td>
</tr>
<tr>
<td>Warren</td>
<td>88%</td>
<td>68%</td>
</tr>
<tr>
<td>Kentucky</td>
<td>86%</td>
<td>62%</td>
</tr>
</tbody>
</table>

## Poverty Level and Median Household

<table>
<thead>
<tr>
<th>County</th>
<th>Children in Poverty, Percent</th>
<th>Median Household Income in 2019 dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen</td>
<td>24%</td>
<td>$47,300</td>
</tr>
<tr>
<td>Barren</td>
<td>26%</td>
<td>$44,900</td>
</tr>
<tr>
<td>Butler</td>
<td>27%</td>
<td>$46,300</td>
</tr>
<tr>
<td>Edmonson</td>
<td>22%</td>
<td>$47,500</td>
</tr>
<tr>
<td>Hart</td>
<td>27%</td>
<td>$42,700</td>
</tr>
<tr>
<td>Logan</td>
<td>22%</td>
<td>$48,900</td>
</tr>
<tr>
<td>Metcalfe</td>
<td>32%</td>
<td>$39,000</td>
</tr>
<tr>
<td>Monroe</td>
<td>31%</td>
<td>$36,500</td>
</tr>
<tr>
<td>Simpson</td>
<td>19%</td>
<td>$52,900</td>
</tr>
<tr>
<td>Warren</td>
<td>19%</td>
<td>$53,200</td>
</tr>
<tr>
<td>Kentucky</td>
<td>24%</td>
<td>$52,300</td>
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</table>


## Health Statistics and Rankings

### Health Behaviors

<table>
<thead>
<tr>
<th>Health Behaviors</th>
<th>Kentucky</th>
<th>Warren</th>
<th>Allen</th>
<th>Barren</th>
<th>Butler</th>
<th>Edmonson</th>
<th>Hart</th>
<th>Logan</th>
<th>Metcalfe</th>
<th>Monroe</th>
<th>Simpson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult smoking</td>
<td>24%</td>
<td>22%</td>
<td>28%</td>
<td>28%</td>
<td>28%</td>
<td>27%</td>
<td>28%</td>
<td>25%</td>
<td>29%</td>
<td>28%</td>
<td>24%</td>
</tr>
<tr>
<td>Adult obesity</td>
<td>35%</td>
<td>28%</td>
<td>37%</td>
<td>36%</td>
<td>36%</td>
<td>40%</td>
<td>30%</td>
<td>37%</td>
<td>34%</td>
<td>35%</td>
<td>39%</td>
</tr>
<tr>
<td>Physical inactivity</td>
<td>29%</td>
<td>24%</td>
<td>40%</td>
<td>38%</td>
<td>38%</td>
<td>25%</td>
<td>32%</td>
<td>34%</td>
<td>32%</td>
<td>33%</td>
<td>29%</td>
</tr>
<tr>
<td>Food Insecurity</td>
<td>15%</td>
<td>14%</td>
<td>15%</td>
<td>17%</td>
<td>17%</td>
<td>17%</td>
<td>16%</td>
<td>14%</td>
<td>17%</td>
<td>17%</td>
<td>13%</td>
</tr>
<tr>
<td>Limited access to healthy foods</td>
<td>6%</td>
<td>6%</td>
<td>0%</td>
<td>4%</td>
<td>4%</td>
<td>1%</td>
<td>4%</td>
<td>7%</td>
<td>1%</td>
<td>1%</td>
<td>6%</td>
</tr>
<tr>
<td>Diabetic prevalence</td>
<td>13%</td>
<td>8%</td>
<td>13%</td>
<td>15%</td>
<td>14%</td>
<td>15%</td>
<td>11%</td>
<td>11%</td>
<td>12%</td>
<td>17%</td>
<td>9%</td>
</tr>
</tbody>
</table>

### Quality of Life

| Diabetes prevalence            | 13%      | 8%     | 13%   | 15%    | 14%    | 15%      | 11%  | 11%   | 12%      | 17%    | 9%      |

### Clinical Care

| Mental health providers        | 420:1    | 370:1  | 1640:1| 640:1  | 1280:1 | 3030:1   | 1550:1 | 1770:1 | 1010:1   | 1330:1 | 1160:1  |
Assessment Process

Questions developed for the CHA were based on SDOH, as well as, input from the BRIGHT Coalition membership and the needs of the different organizations involved. A complete survey was developed through a series of BRIGHT board meetings, feedback from Dr. Gretchen Macy with the Department of Public Health at Western Kentucky University and feedback from the BRIGHT Coalition membership.

As stated previously, SDOH are conditions where people are born, live, and work that affect health as well as quality of life risks and outcomes. The social determinants of health include economic stability, access to and quality of education, healthcare access and quality, neighborhood and built environment and social and community context. While Med Center Health does not have the resources to fulfill or improve upon all of these potential priority areas, it is important to understand the need in the communities we serve.

The survey was distributed from October 1, 2021–November 30, 2021 throughout the ten counties in the BRADD area by the BRIGHT Coalition members. Surveys were sent to various community partners including libraries, schools for dissemination in their online newsletters to parents, housing authorities, churches, medical offices, Chamber of Commerce and various businesses. QR codes were placed around towns, taken to events, factories, trunk or treats, employee newsletters, etc. Surveys and QR codes were shared at community events, including events at the Foundry and the PRIDE festival in hopes of capturing underserved populations.

An online link to the survey was placed on the Med Center Health homepage as a pop-up prompting anyone who logged on to the Med Center Health website to take the survey. Links were posted weekly on Med Center Health Facebook pages. Surveys were distributed and collected by the cancer patient navigator to the patrons of the Cancer Center.

In an effort to reach more of the underserved and low income population, individual entities serving the underserved populations were asked to share the survey with their clientele. HOTEL, INC., serving the impoverished and homeless in Warren County and the Housing Authority of Bowling Green distributed surveys to employees and residents. The Goodwill Career Center in Bowling Green distributed surveys to their clientele. The Foundry, a preschool and afterschool serving the West Side of Bowling Green, invited Med Center Health/BRIGHT Coalition to attend a Community Baby Shower, as well as, a 5K race they were hosting for their families and surrounding community. With an interpreter present for the Hispanic attendees, we were able to gather multiple surveys from this population. In an effort to reach the LGBTQ community, the BRIGHT Coalition set up a table with surveys at the PRIDE Festival as well.
The COVID-19 pandemic presented barriers with getting the survey out to as many people as possible. A surge of the COVID-19 Delta variant in July 2021 and spreading into the fall months lead to event cancellations and increased precautions with gatherings in the community to decrease potential spread of the virus. Every effort was made to make the survey easily accessible in as many areas as possible.

Supplemental surveys were sent to medical and community stakeholders.

Results were reviewed by the Med Center Health CHNA committee and needs were prioritized based on results from the overall survey, stakeholder input, community data review, as well as, Med Center Health’s ability to impact the issue with services provided. The Community Needs Improvement Plan was approved by the CHC Board of Directors.

Survey Results

*Community Survey Demographics of Respondents*

*Age*

![Age Distribution](image)

*What county do you live in?*

![County Distribution](image)
What is the highest degree or level of education you have completed?

Gender

Household Income
### Survey Results

#### What is your ethnicity?

- Hispanic or Latino: 0
- Not Hispanic or Latino: 1800

#### How do you rate the overall health of your county?

- Very Unhealthy: 0
- Unhealthy: 400
- Somewhat healthy: 1000
- Healthy: 200
- Very Healthy: 0

#### How do you rate your overall health?

- Very Unhealthy: 0
- Unhealthy: 200
- Somewhat healthy: 600
- Healthy: 800
- Very Healthy: 0
Where do you go for routine healthcare?

What keeps you from receiving healthcare?

Do you use tobacco or nicotine products (including e-cigarettes, vapes, chewing tobacco, dip, snuff, snus and dissolvable)?
What do you think are the 5 greatest health problems affecting your household?

What do you think are the 5 most risky behaviors in your community?

Do you find it difficult to provide healthy meals for your family?
If yes, which of the following make it difficult to provide healthy meals for your family?

- I am too busy
- I struggle to have
- I run out of money
- I don't qualify for
- Healthy food is too
- I don't know where
- I don't live close to a
- Eating healthy is not
- Not applicable
- Other

Do you find it difficult to be physically active?

- Yes
- No

If yes, what makes it difficult for you to be physically active daily? (select all that apply)

- I don't feel safe
- I work long hours
- I do not have access
- Exercise is not a priority
- I do not know how to
- I don't feel confident
- Lack of disability
- I don't find it difficult
- Other
Foreign-Born Residents

The graph below shows the foreign-born population for the BRADD area. Warren County is home to the International Center of Kentucky. The agency is a refugee resettlement agency that has helped resettle over 10,000 refugees, victims of human trafficking and immigrants from 30 countries around the world. Approximately 82% of the foreign-born population in BRADD reside in Warren County per the 2020 U.S. Census Bureau data.

http://datausa.io/profile/geo/warren-county-ky#demographics

Ensuring the refugee and immigrant population’s health needs are met is an important part of integrating them into the local community. The health department was able to conduct an in-person interview with a key stakeholder in the refugee and migrant populations (Swahili-speaking, Hispanic and Burmese) which were underrepresented in the survey results.

Information collected in the interview included the fact that surveys do not work well for this population. Giving opinions isn’t normal in these cultures. It was suggested to use native language focus groups with an incentive for participation to get direct information from this group in the future.

A concern expressed was that fresh vegetables these populations are used to consuming are hard to find locally and often too expensive for their limited budgets. Many of the families rely on food stamps/EBT. Food insecurity as a whole is a rising issue in Bowling Green and is affecting multiple populations. According to Feeding America, 1 in 7 people (15.2%) living in Warren County are food-insecure. The COVID pandemic has exacerbated the situation with Feed America increasing their handout each month from one time per month to three times per month.

Further information collected in the interview revealed that it is perceived that families “get sick more often here” especially with diabetes and arthritis. Frustration was
expressed with the diagnosis and treatment of such health conditions, and that enough emphasis is not placed on prevention in the healthcare setting. The need was expressed for a targeted community health worker to directly focus on the unique needs and cultural values of each community.

According to the U.S. Census Bureau, an estimated 6.8% of the BRADD population speaks a language other than English at home. Of the population that doesn’t speak English at home, an estimated 43.7% speak English less than “very well”. Language access when seeking medical care is an issue. Patients are often asked to bring an interpreter to appointments with them.

**Other Data Collected**

Med Center Health Bowling Green sent a separate survey to medical and community professionals throughout the area. See survey on page 39. Three surveys were returned.

The Parent & Community Council Members that represent The Foundry collectively completed a survey. The Foundry serves the West End neighborhoods in Bowling Green. This area represents lower income residents.

The responses to the question “What do you think are the 5 greatest health problems affecting those you serve?” reflect the community survey results. The following were their responses:

- Alcohol abuse
- Diabetes
- High blood pressure
- Overweight/obesity
- Depression/mental health problems
- Smoking/tobacco use
- Heart disease.

The responses to “What do you think are the 5 riskiest behaviors in the community you serve?” mimicked the community survey as well. The following were their responses:

- Substance abuse,
- Being overweight
- Poor diet/eating habits
- Smoking/vaping/tobacco use

The following responses were received regarding food insecurity and housing:

- Food prices are outrageously high; it is hard to prep and plan; most people buy fast food; healthier food is more expensive and unhealthy food can be addictive
• Housing not up to code; no consequences for landlords when properties are subpar; available housing is not affordable; rent is ridiculously expensive

When asked to share other insight to health needs, the following responses were provided:

• Offering education to all patients about your financial assistance program to help them not drown in debt over medical bills
• More traveling services, transportation to and from clinics – not affordable
• Access to resources like hygiene, clothing, food banks, libraries and jobs
• Lack of interpreters in healthcare settings; communication too difficult/frustrating

The Elderly/Disabled Service Coordinator for the Housing Authority of Bowling Green serving Warren County completed a survey. Her responses, shown below, reflect the community survey results.

• “What do you think are the 5 greatest health problems affecting those you serve?”
  o Alcohol abuse
  o Cancer
  o Diabetes
  o Depression
  o Mental health problems

• “What do you think are the 5 riskiest behaviors in the community you serve?”
  o Alcohol misuse
  o Being overweight
  o Poor diet/eating habits
  o Smoking/vaping/tobacco use.

Her open response to food insecurity is as follows: Healthy foods are more expensive and many only get $15 in food stamps and many don’t like to cook for just one person.

The director for SOKY Marketplace, a community oriented non-profit corporation that supports local farmers and artisans by offering opportunities for their business to thrive in the community, replied with the following responses:

• What do you think the 5 greatest health problems affecting those you serve?
  o Dental problems
  o High blood pressure
  o Depression
  o Smoking/tobacco use

• What do you think are the 5 riskiest behaviors in the community you serve?
  o No health insurance
  o Alcohol misuse
- Being overweight
- Poor diet/eating habits
- Not getting vaccinations to prevent disease
Community Health Improvement Plan

Prioritized Community Health Issues

<table>
<thead>
<tr>
<th>5 Biggest Issues in your Home</th>
<th>5 Most Risk Behaviors in your Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overweight/Obesity</td>
<td>Substance Abuse</td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td>Being Overweight/Obesity</td>
</tr>
<tr>
<td>Depression</td>
<td>Poor Diet/Eating Habits</td>
</tr>
<tr>
<td>Mental Health</td>
<td>Smoking/Vaping</td>
</tr>
<tr>
<td>Dental Problems/Diabetes</td>
<td>Alcohol Misuse</td>
</tr>
</tbody>
</table>

The above chart outlines the identified health needs from the community needs assessment. After thorough review of the survey results along with data, Med Center Health Bowling Green has prioritized the following community health issues:

- Obesity/overweight
- High blood pressure
- Diabetes/Prediabetes
- Smoking/Vaping

According to data from the County Health Rankings, 28% of adults in Warren County are obese. Obesity is defined as a BMI >30. Being overweight or obese can increase a person’s risk for developing chronic diseases including type 2 diabetes, high blood pressure and sleep apnea among other health conditions.

Managing weight can be overwhelming for many people. Misinformation around weight loss/management, lack of access to healthy foods, lack of education surrounding healthy eating, sedentary work environment, lack of safe place to be physically active and other barriers can pose challenges in maintaining a healthy weight and losing weight.

Partnering with other businesses in the community to focus on healthy weight management education has been and will continue to be a focus for Med Center Health. Additionally, simple, realistic ways to make lifestyle changes will continue to be shared through classes, social media posts and health fairs.

High blood pressure affects almost 50% of American adults, but according to the CDC, only 1 in 4 adults with high blood pressure have their condition under control. Chronic high blood pressure increases risk of heart attack, stroke, heart failure and vascular dementia. Education addressing normal blood pressure target range, when to seek medical help for elevated blood pressure, and the importance of blood pressure management is important to reduce stroke and heart attack incidence. Targeted
education toward higher risk populations including Black and Hispanic communities, is a priority as well.

Prediabetes is a growing issue affecting an estimated 1 in 3 adults in America. Prediabetes prevalence in the BRADD area is 10.3% and 11.8% statewide. Prediabetes can be a precursor to type 2 diabetes. With a 7% weight loss and increased physical activity, prediabetes can be reversed or delayed from developing into type 2 diabetes. A pressing goal is to continue to increase awareness around the potential long term negative health impacts of unmanaged prediabetes, as well as, the importance of managing prediabetes to prevent type 2 diabetes.

Type 2 diabetes affects 11.6% of the BRADD area and 13.7% of the adult population statewide. Per the 2020 Kentucky Diabetes Fact Sheet, Kentuckians with diabetes are more likely to have other chronic health conditions such as high blood pressure, heart disease and obesity. Maintaining blood sugars within normal limits helps prevent development of chronic diseases that are related to uncontrolled diabetes. It will be a priority to continue to educate the public on the importance of early lifestyle changes and interventions in newly diagnosed type 2 diabetes. We will continue to encourage healthcare providers to send their patients to diabetes self-management education and medical nutrition therapy upon diagnosis of type 2 diabetes.

Kentucky ranks number two in the nation for adult smoking rates with an estimated 24.1% population. Smoking is the number one preventable cause of lung cancer. Per Truth Initiative, 8.9% of high school students in Kentucky smoke. In 2019, 26.1% of Kentucky high school students used electronic vapor products at least one day in the past 30 days. Reducing the usage of e-cigarettes among adults and children is a priority. There is a perception among youth as well as parents that e-cigarettes are safer than other forms of tobacco. Many parents are also not aware that their child may be “vaping” because most e-cigarettes do not smell and can be easy to hide. This will also be a priority of the BRIGHT Coalition so we will collaborate in our efforts of education toward youth and parents.

**COVID-19**

The COVID-19 pandemic continues to be an ongoing issue for the world, as well as the communities Med Center Health serves that strain hospital staff and resources, New variants and community illness surges result in increased hospitalizations. Med Center Health will continue to prioritize education around COVID-19 prevention and the importance of COVID-19 vaccination. We will continue to offer vaccinations to the communities we serve. We will stay on the forefront of research, CDC guidelines, etc. and communicate updates with the public on a continuous basis.
Priorities of need that will not be addressed at this time:

There are particular priorities of need identified in the assessment which will be addressed through the work of other community partners and resources and not prioritized solely by Med Center Health. Examples include: mental health, depression, substance abuse, dental problems and alcohol misuse.

Mental health and depression have increased throughout the COVID-19 pandemic due to many factors and the CHA results reflect this increase. There are numerous services provided in the community to address this need including the Med Center Health Outpatient Behavioral Health Services. With the help and skills from LifeSkills, Inc., mental health will be a priority area for the BRIGHT Coalition. Med Center Health will assist with these efforts as our resources allow.

Substance abuse services and resources, including alcohol misuse, will be provided and communicated to patients/the community as needed. BRIGHT Coalition has chosen substance abuse as a priority issue to focus on. Med Center Health will assist with these efforts as services allow for collaboration, assistance, etc.

Med Center Health offers low cost dental care through our Dental Clinic. Basic care, annual exams, fillings and tooth extractions are offered through the Dental Clinic for people without private pay dental insurance.
THE MEDICAL CENTER at BOWLING GREEN IMPLEMENTATION STRATEGIES FOR ADDRESSING COMMUNITY HEALTH NEEDS 2022-2024

Through the research and recommendations from the Community Health Needs Assessment and hospital staff, administration and Board of Directors, the following strategies will guide The Medical Center leadership in addressing our community’s health needs over the next three years.

Partnerships with Key Community Health Providers & Organizations

Key Partners:

- National Stroke Association
- Kentucky Heart Disease and Stroke Prevention Task Force
- American Lung Association
- American Heart Association
- UK Markey Cancer Center
- Norton Healthcare & UK Healthcare Stoke Care Network
- Barren River District Health Department
- Fairview Community Health Center
- American Cancer Society - Warren Co. Chapter
- Kentucky Cancer Program
- International Center
- HOTEL INC
- Western Kentucky University
- Warren County Schools/Bowling Green Independent City Schools
- SOKY Marketplace
- Community Farmers Market
- WBKO
- UK Extension Office
- LifeSkills, Inc.
- Goodwill, Inc.
- Alzheimer’s Association
- Warren County Public Library
- Bowling Green City Parks & Recreation
- Housing Authority of Bowling Green
- The Foundry
- Drug Free Warren County
Implementation Strategies

**Identified Priority:** Obesity/overweight with an emphasis on how to make healthy eating affordable, as well as chronic disease prevention and chronic disease management. Efforts toward disease management will be specifically focused on high blood pressure, prediabetes and diabetes.

**Partners:**
- National Stroke Association
- Kentucky Heart Disease and Stroke Prevention Task Force
- HOTEL INC
- UK Extension Office
- SOKY Marketplace
- Community Farmers Market
- Norton Healthcare & UK Healthcare Stoke Care Network
- International Center
- Warren County Public Schools/Bowling Green Independent City Schools
- Barren River District Health Department

**Goals:**
- Provide education to the community on healthy weight management.
- Emphasize the importance of lifestyle management (i.e. sleep, stress management, movement) in the role of weight management & chronic disease management.
- Promote resources available to reduce obesity, manage high blood pressure, prevent and manage diabetes.
- Increase awareness of the dangers of chronic high blood pressure.
- Provide resources and education to make healthy eating easier for those on a limited budget.
- Promote chronic disease prevention.

**Plan:**
1. Partner with local entities including SOKY Marketplace, Community Farmers Market, UK Extension office to offer classes on healthy food choices and preparation on a budget.
2. Provide continued education via social media specifically around healthy weight management, chronic disease management, disease prevention and healthy eating.
3. Continue to offer the annual Med Center Health 10K Classic and Children’s Classic to the community to encourage physical activity.
4. Offer blood glucose, blood pressure and body fat screenings at community events/health fairs.
5. Offer blood glucose, blood pressure, body fat screenings as well as education and resources addressing numerous disease topics at the annual Med Center Health & Wellness Expo.
6. Provide free prediabetes class to the public quarterly.
7. Utilize technology for more programming in an effort to reach more people.
8. Continue to offer the Med Center Cares blood pressure self-management program to the public.
9. Continue to promote and offer the Diabetes Self-Management Training classes and outpatient Medical Nutrition Therapy.

Identified Priority: Smoking/Vaping specifically targeting middle and high school students, as well as parents.

Partners:
- American Cancer Society
- American Lung Association
- Warren County Schools/Bowling Green Independent City Schools
- Bowling Green City Parks & Recreation
- Drug Free Warren County
- Barren River District Health Department

Goals:
- Smoking/tobacco cessation program for the community
- Enhance public understanding of the dangers of smoking, specifically targeting e-cigarettes.
- Provide education to schools around smoking, vaping and tobacco use dangers.

Plan:
1. Increase social media messaging around the dangers of vaping/e-cigarettes.
2. Offer a 1:1 tobacco cessation program.
3. Educate youth through school events, classes, health fairs and media on the dangers of tobacco use and smoking.
4. Provide resources available to aid in tobacco addiction relief.
5. Educate parents on the dangers of e-cigarettes.
Communication Plan

The Medical Center Bowling Green will publish the Community Health Needs Assessment, including the survey results and strategic plan, on its web site and make hard copies available to the public upon request. The results will also be incorporated into the hospital’s annual IRS tax form 990 submission.
2021 Needs Assessment Survey

Thank you for taking the time to take our survey. Your participation will help us understand the true needs of our communities and better serve you and your family. This is a project managed by the Barren River Initiative to Get Healthy Together (BRIGHT Coalition). We appreciate you taking the time to take our survey.

1. How do you rate the overall health of your county?
   a. Very unhealthy
   b. Unhealthy
   c. Somewhat healthy
   d. Healthy
   e. Very healthy

2. How do you rate your overall health?
   a. Very unhealthy
   b. Unhealthy
   c. Somewhat healthy
   d. Healthy
   e. Very healthy

3. Where do you go for routine healthcare?
   a. Physician’s office
   b. Emergency room
   c. Health department
   d. Urgent care center/ Walk-in clinic
   e. I do not receive routine health care
   f. Other______________

4. What keeps you from receiving healthcare? (Please select all that apply):
   o Cost, Copay/Deductible
   o I cannot leave or miss work to get routine care
   o Childcare
   o No insurance
   o Lack of medical providers in the area
   o Fear
   o Transportation
   o Time away from home
   o Provider trust
   o Other (please specify): ______________

5. Do you use tobacco, or nicotine products (including e-cigarettes, vapes, chewing tobacco, dip, snuff, snus, and dissolvable)?
   o Yes
   o No
6. What do you think are the 5 greatest health problems in your household?

- Aging problems (Alzheimer’s, falls, isolation, etc.)
- Mental health problems
- Alcohol abuse
- Environmental concerns
- Prescription drug abuse
- (lead, radon, air quality, secondhand smoke, etc.)
- Street drug use
- Smoking/tobacco use
- Cancer
- STDs/infections
- Child abuse/neglect
- Teen pregnancy
- Dental problems
- Heart disease/stroke
- Diabetes
- Infant deaths
- Other
- High blood pressure
- Respiratory/lung disease
- Motor vehicle injuries
- Overweight/obesity
- Depression
- Poor diet/eating habits
- Bullying
- Not getting vaccinations to prevent disease

7. What do you think are the 5 most risky behaviors in your community?

- No health insurance
- Unsecured firearms
- Alcohol misuse
- Hate crimes
- Substance abuse
- Domestic violence
- Being overweight
- Rape/sexual assault
- Distracted driving
- Homicide
- Dropping out of school
- Other
- Poor diet/eating habits
- Not having access to birth control
- Distracted driving
8. Do you have trouble providing healthy meals to your family?
   - Yes
   - No

9. If yes, what makes it difficult for you to provide healthy meals for your family? (Please select all that apply):
   - Don’t qualify for assistance
   - Healthy food is too expensive
   - I don’t know where to find healthy foods to prepare meals
   - I don’t know how to cook healthy meals
   - Other (Please specify): ___________________________

10. Do you find it difficult to be physically active?
    - Yes
    - No

11. If yes, what makes it difficult for you to be physically active daily? (Please select all that apply):
    - I don’t feel safe walking/running/biking in my neighborhood
    - I work long hours
    - I do not have access to childcare so that I can exercise
    - Exercise is not a priority
    - I do not know how to exercise properly
    - I don’t feel confident that I can exercise
    - Other (Please specify): ___________________________

Age (Please fill in the blank): __________

What is the highest degree or level of education you have completed? (Please select one option from the list below):
   - Less than high school degree
   - High school degree or equivalent
   - Some College but no degree
   - Associate degree
   - Bachelor degree
   - Graduate degree

Gender:
   - Male
   - Female
   - Transgender
   - Nonbinary
   - Prefer not to answer
Household income (Please select one option from the list below):

Under $15,000
- $15,000 - $29,999
- $30,000 - $49,999
- $50,000 - $74,999
- $75,000 - $99,999
- $100,000 - $150,000
- Over $150,000

Employment Status:
- Employed
  - Part Time
  - Full Time
- Unemployed
- Retired

What language do you speak at home? (Please select all that apply):

- English
- Kinyarwanda
- Other
- Russian
- Khmer
- Chinese
- Karen
- German
- Kayah
- Italian
- Korean
- Arabic
- Nepali

What is your Race? What is your ethnicity?

- White/Caucasian
- Hispanic or Latino
- Black or African American
- Not Hispanic or Latino
- American Indian or Alaska Native
What county do you live in?

- Allen
- Barren
- Butler
- Edmonson
- Hart
- Logan
- Metcalfe
- Monroe
- Simpson
- Warren
- Logan
Special Interest Survey

As a non-profit hospital organization, Med Center Health is required to conduct a community needs health assessment every 3 years. Med Center Health conducts this survey in conjunction with the BRIGHT Coalition. The goal of the survey is to identify community health needs and adopt an implementation strategy to meet the needs.

As an organization that serves medically underserved, low-income or minority populations we would greatly appreciate your input. This information will be used in considering Med Center Health priorities, as well as, the priorities of the BRIGHT Coalition when moving forward.

What organization do you work for? _____________________________________________________

Describe the population you serve? _____________________________________________________

What county/counties do you serve? _____________________________________________________

What keeps the people you serve from receiving healthcare? (Please select all that apply):

- Cost, Copay/Deductible
- Unable leave or miss work to get routine care
- Childcare
- No insurance
- Lack of medical providers in the area
- Fear
- Transportation
- Time away from home
- Provider trust
- They don’t have problems getting healthcare
- Other (please specify): ____________________________

What do you think are the 5 greatest health problems affecting those you serve?

- Aging problems (Alzheimer’s, falls, isolation, etc.)
- Depression
- Alcohol abuse
- Mental health problems
- Prescription drug abuse
- Environmental concerns
- Street drug use
- (lead, radon, air quality, secondhand smoke, etc.)
- Cancer
- Smoking/tobacco use
- Child abuse/neglect
- STDs/infections
- Dental problems
- Teen pregnancy
- Cancer
- Heart disease/stroke
- Diabetes
- Respiratory/lung disease
- Infectious disease (HIV/AIDS, TB, Hep B, etc.)
- Other
- High blood pressure
- Infant deaths
- Other
- Motor vehicle injuries
- Overweight/obesity
What do you think are the 5 riskiest behaviors in the community you serve?

- No health insurance
- Alcohol misuse
- Substance abuse
- Being overweight
- Distracted driving
- Dropping out of school
- Poor diet/eating habits
- Bullying
- Not getting vaccinations to prevent disease
- Racism
- Smoking/vaping/tobacco use
- Unprotected/unsafe sex practices
- Not having access to birth control
- Not using seat belts/child safety seat

Is food insecurity/providing healthy meals for themselves and/or their family an issue? If yes, please elaborate.

- Yes _____________________________________________
- No

Is housing an issue for the community you serve? If yes, please elaborate.

- Yes _____________________________________________
- No

Please share any other insight that would be helpful to us in identifying significant health needs in the community. _____________________________________________

____________________________________

____________________________________

____________________________________