CAMC General Hospital

CAMC Memorial Hospital

CAMC Women and Children's Hospital

2020 Community Health Needs Assessment and 2020-2022 Implementation Strategy

The Community Benefit Report is made available to the public via the CAMC Health System website at www.camc.org and is available upon request from the hospital facility.

Approved by the CAMC Board of Trustees, January 27, 2021

Charleston Area Medical Center

Charleston Area Medical Center

CAMC General Hospital, CAMC Memorial Hospital and CAMC Women and Children's Hospital
Charleston, West Virginia

2020 Community Health Needs Assessment and Implementation Plan

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Charleston Area Medical Center
CAMC General Hospital, CAMC Memorial Hospital and CAMC Women and Children's Hospital
Charleston, West Virginia

2020 Community Needs Assessment

Executive Summary

This Community Needs Assessment provides the basis for the community benefit programs that Charleston Area Medical Center will address from 2020-2022 to improve the health of our community.

Our programs and services go well beyond the traditional health care we often think of when we consider hospital care and are delivered both inside and outside the walls of our hospitals. They are driven by our mission, *Striving to provide the best health care to every patient, every day.* Our hospitals and outpatient programs and services bring our mission to life – providing effective, efficient, equitable, timely and safe care to all, regardless of ability to pay.

Charleston Area Medical Center is a not-for-profit four-hospital system comprised of CAMC Memorial Hospital, CAMC General Hospital, CAMC Women and Children's Hospital and CAMC Teays Valley Hospital. Our hospitals operate under one administrative structure and participate in joint strategic planning and budgeting processes. Each hospital has responsibility for key service lines. Our hospitals are designed to provide care for our community residents throughout every stage of their lives. Our patients depend on us to provide convenient and compassionate care – care delivered regardless of a patient's ability to pay. CAMC's Kanawha County hospitals serve as resident teaching facilities for Cardiovascular Disease, Emergency Medicine, Family Medicine, Internal Medicine, Medicine-Psychiatry, Obstetrics & Gynecology, Pediatrics, Psychiatry, Pulmonary Critical Care, Surgery, Urology, Vascular Surgery, Vascular Surgery fellowship, Oral & Maxillofacial, and Pharmacy. We provide our community with programs of excellence in cardiovascular services, medicine, surgery, oncology, trauma, neurology, orthopedics, rehabilitation, bariatrics, and women and children's services. CAMC Teays Valley Hospital addresses community benefit for its Putnam County service area and completes its own community health needs assessment in conjunction with others in Putnam County. As a community hospital, CAMC Teays develops its own implementation strategies for its service area.

CAMC General Hospital

CAMC Memorial Hospital

CAMC Women and Children's Hospital

2020 Community Health Needs Assessment

2020 COMMUNITY HEALTH NEEDS ASSESSMENT

Charleston Area Medical Center conducted its eighth triennial community health needs assessment through the Kanawha Coalition for Community Health Improvement in the first quarter of 2020. Through our strategic planning process, the community health needs assessment is used to set community health priorities for CAMC and for each of the CAMC hospitals in Kanawha County.

CAMC Memorial Hospital, CAMC General Hospital and CAMC Women and Children's Hospital are all located in Charleston, West Virginia (Kanawha County) and together make up Charleston Area Medical Center. Although separately licensed, the hospitals all operate under one tax ID and one provider number. Each hospital specializes in services: CAMC Memorial (cardiology, vascular, oncology); CAMC General (neurosciences, orthopedics, trauma, medical rehabilitation); CAMC Women and Children's (women, children, NICU, PICU). General medicine and surgery are at both CAMC Memorial and CAMC General Hospitals. The fourth CAMC hospital, CAMC Teays Valley Hospital is located in Putnam County, West Virginia and completes its own Community Health Needs Assessment and Implementation Strategies.

The Kanawha Coalition for Community Health Improvement defines its community as Kanawha County. Because of the size and scope of our services, the approach we use at CAMC to identify our community is based on our strategic objectives, key stakeholder needs, and our capacity. For our CAMC community strategy, community is defined by the need identified and population to be addressed. For example, some include a number of counties and others may be neighborhood specific.

Detailed health and socioeconomic information for each of our service area counties is available on the CAMC website (www.camc.org) in the document entitled *Health Indicator Data Sheet*. Primary and chronic disease needs and other health issues of uninsured, low-income persons, and minority groups are considered through all steps of the survey process.

Kanawha Coalition for Community Health Improvement Community Health Needs Assessment Process and Findings

The Kanawha Coalition for Community Health Improvement (KCCHI) has served as the backbone organization for our community's collective efforts to identify and address health needs in Kanawha County since 1994. The Coalition's mission is ***to identify and evaluate health risks and coordinate resources to measurably improve the health of the people of Kanawha County.*** Members of our leadership team include the health department, behavioral health facility, federally qualified health center, United Way, local health department, school system, faith-based partnership, business alliance and the State Bureau for Public Health. The CHNA process has improved over the years through multiple cycles of learning into a rigorous evidence-based process that has been highlighted as a national role model process by both the National Quality Forum (NQF) and the Centers for Disease Control (CDC). KCCHI remains committed to excellence through continuous improvement in its assessment process and its overall operations.

Steering Committee Members include:
Matthew Ballard, President, Charleston Area Alliance
Julia Blackwood, Executive Assistant to the Health Officer, Kanawha-Charleston Health Department
Kerri Cooper, Community Impact Director, United Way of Central West Virginia
Alaina Crislip, Associate General Counsel, Thomas Health System

Ronald Duerring, Ph.D., Superintendent, Kanawha County Schools
David Ferretti, Attorney, Spilman Thomas & Battle, PLLC
Chris Ferro, Vice-President of Economic Development, Charleston Area Alliance
Tamara Fuller, Chief Strategy Officer, Charleston Area Medical Center
Brenda Isaac, Lead School Nurse, Kanawha County Schools
Dan Lauffer, CEO, Thomas Health System, Inc.
Margaret Ann O'Neal, President, United Way of Central West Virginia
Reverend James Patterson, President, Partnership of African American Churches
David Ramsey, CEO, Charleston Area Medical Center
Arthur B. Rubin, Board of Health President, Kanawha-Charleston Health Department
Jessica Wright, Director, Division of Health Promotion and Chronic Disease, WV Bureau for Public Health
Sherri Young, DO, FAAFP, Executive Director, Health Officer, Kanawha-Charleston Health Dept.
Judy Crabtree, Executive Director, Kanawha Coalition for Community Health Improvement

Our leadership understands that the challenges our community faces today and those we will have in the future will require a high level of performance – a commitment to community performance excellence that grows out the recognition that the social determinants of educational achievement, economic vitality, and health status are inextricable interwoven. We understand that these challenges require a commitment among leaders across sectors and generations to take a systems approach to community performance.

In 2017 the Kanawha Coalition for Community Health Improvement joined the first Cohort of Communities in the Nation to embark on a journey to performance excellence by helping refine and improve the Communities of Excellence Framework and better understand the key requirements needed to successfully adopt and sustain positive change in communities.

The Communities of Excellence Framework has helped the Kanawha Coalition for Community Health Improvement further enhance its triennial Community Health Needs Assessment (CHNA) process. The following section highlights improvements that have been incorporated into our 2019 CHNA.

Improvements to our 2019-2020 CHNA Process

Kanawha Coalition leaders identified varying requirements among community groups in Kanawha County based on geography. We developed a Listening Project to learn what residents in the Northern, Central, Eastern, and Western parts of our county believe to be the key challenges and potential solutions under the new priority areas for LIVE, LEARN, WORK and PLAY.

We held 15 listening projects throughout our county. Our partners in these areas assisted us in securing locations for our listening sessions and promoting them within their communities, yet still attendance was low, with only 30 in total attending. KCCHI responded by broadening our methods of data collection to adequately capture the voice of our community residents. These included: paper surveys placed strategically throughout communities; opportunities to complete surveys online; and surveillance at local events and fairs.

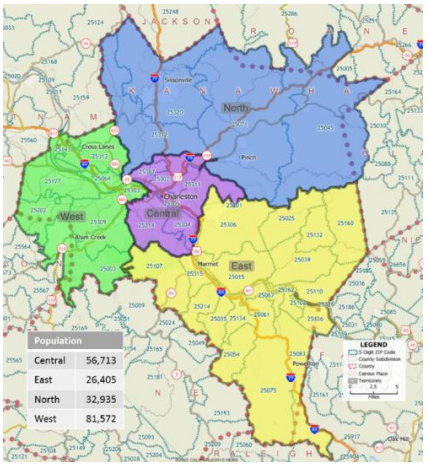


Figure P.1-4 Community Groups

Community Group	Key Characteristics	Recent Changes in Need	Key Requirements
North	Rural; Small towns; Most residents are descendants from the area; High rate of home ownership; Strong local governments; Strong community leadership; Declining population; Inadequate broadband	Decline in coal resulting in loss of jobs and impact on the economy; Flood recovery	• Feel valued • Input and inclusion • Involvement of local champions
West	Bedroom communities of Charleston; High traffic area in Cross Lanes; Strong local identity; Chemical industry; Higher education presence; West End of Charleston focus for grants and improvement efforts	New sports complex; New chemical business	• Integrated with Charleston
Central	Most population density and diversity; Business hub; State, county and city government; Losing population; Higher education presence, Health care hub	Population loss in the city of Charleston; New industry and innovation in the Civic Center design	• Voice from all segments of the community • Desire to make Charleston a better place
East	Most rural; Most residents are descendants from the area; High rate of home ownership; Economy fluctuates with the coal industry; Lower income; Feel isolated; Inadequate broadband; Suspicious of outsiders; Internally focused; Everyone knows everyone	Decline in the coal industry; Local college left the area	• Feel valued and connected • Create inclusion without coming to Charleston to participate • Maintain confidentiality

Our Customers

The Kanawha Coalition has expanded our definition of who our customers are to include, in addition to our residents, employers, visitors and tourists, people who commute here from other areas to work, legislators, and our contiguous counties. The Kanawha Coalition has incorporated listening strategies to hear the opinions and recommendations from each of these customer groups around our priorities under LIVE, LEARN, WORK and PLAY.

Social Determinants of Health

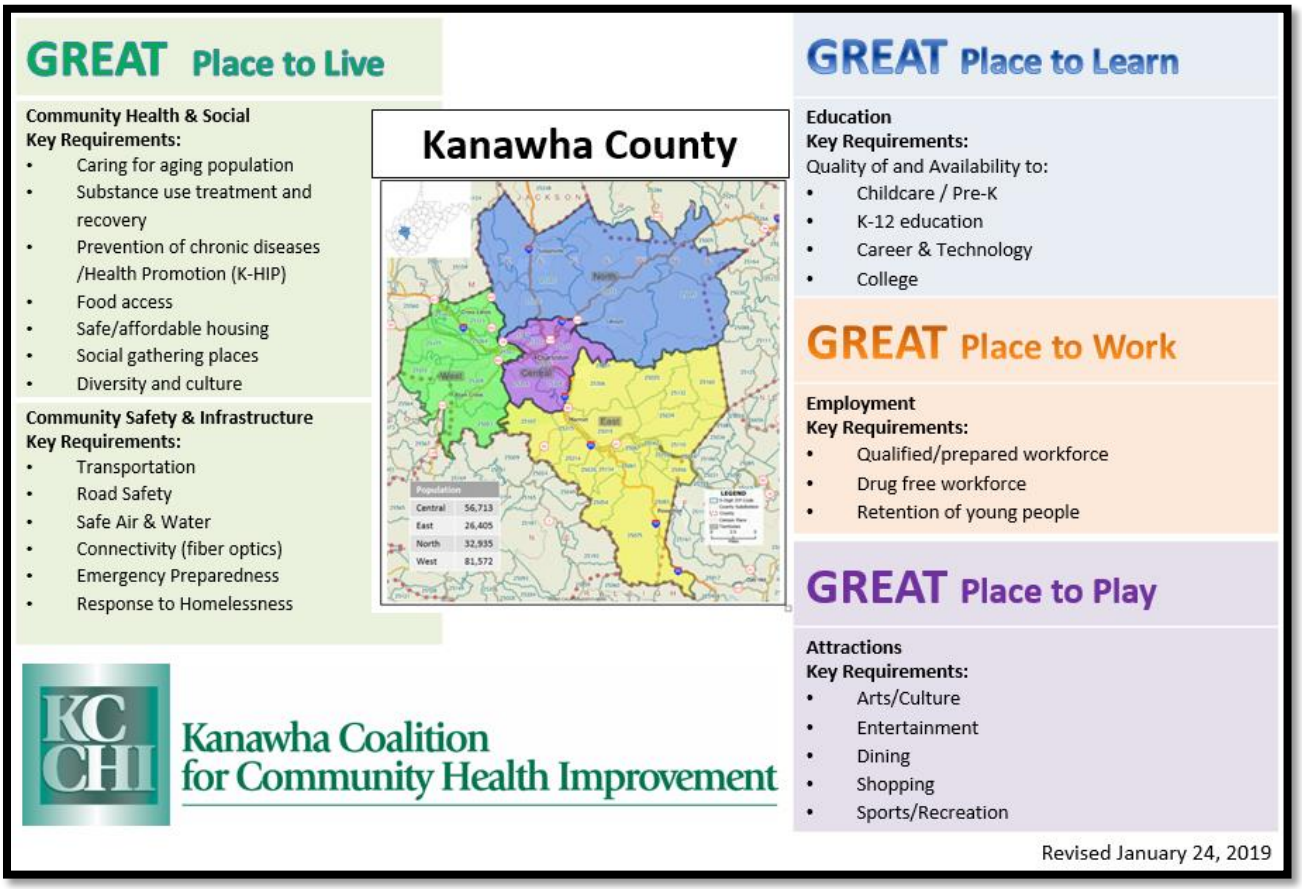
The World Health Organization defines Social Determinants of Health as circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics.

Health starts in our homes, schools, workplaces, neighborhoods, and communities. We know that taking care of ourselves by eating well and staying active, not smoking, getting the recommended immunizations and screening tests, and seeing a doctor when we are sick all influence our health. Our health is also determined in part by access to social and economic opportunities; the resources and supports available in our homes, neighborhoods, and communities; the quality of our schooling; the safety of our workplaces; the cleanliness of our water, food, and air; and the nature of our social interactions and relationships. The conditions in which we live explain in part why some Americans are healthier than others and why Americans more generally are not as healthy as they could be. (www.healthypeople.gov)

The County Health Rankings (CHR) program measures the health of nearly all counties in the Nation. CHR is the collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute.

This report shares findings from the Kanawha Coalition's 2019-2020 Community Health Needs Assessment (CHNA) which include surveying community key informants, a randomly selected household survey, and holding community focus groups. The report will provide these findings within the context of the Social Determinants of Health and include data measured by the 2019 County Health Rankings. By aligning the primary data collected through our CHNA with secondary data measured by the County Health Rankings, we strive to present a more robust interpretation.

Revisions include an expansion from a health focused model to one that assesses issues across social determinates of health under the categories of Live, Learn, Work and Play. Live is broken into two distinct sections; Health and Social and Safety and Infrastructure.



Our Key Community Work Systems

COMMUNITY HEALTH NEEDS ASSESSMENT (CHNA) PROCESS

The Kanawha Coalition enhanced the ways that stakeholders and experts from key sectors can become engaged in our work to improve health in Kanawha County. Our leadership team identified 283 individual experts in the areas of Live, Learn, Work and Play and invited them to participate in our Expert Opinion Survey. 218 experts participated. Seventy experts participated in Steps 1, 25 in Step 2, and 123 in Step 3 of our new Assessment Process. This resulted in a significant representation from key sectors.

STEP 1: Expert Opinion Survey

Experts were invited to participate in an online Expert Opinion Survey. The survey asked for opinions across a broad list of topics under the Categories of LIVE-Health and Social, LIVE-Safety and Infrastructure, LEARN, WORK, and PLAY.

STEP 2: Convening of Experts

Experts were invited to convene to further discuss and decide which top challenges under each category should move forward to the final ranking.

TABLE FACILITATORS INSTRUCTIONS

Time	STEPS
5 minutes	1. Hand out Survey Highlights document 2. Ask individuals to review silently
40 minutes	3. Hand out Challenge Ranking Tool (Colored sheets) 4. Discuss the following: • Can any challenges be merged (addressed together?) • Should some challenges be more specific (are any too broad?) • Does the group think a challenge needs to be added to the list? (Optional) NOTE: Do not exceed 10 challenges total.
5 minutes	5. Ask individuals to change their ranking sheets to reflect any changes made above in Step 4.
10minutes	6. Ask individuals to select up to 5 challenges (on their Challenge Ranking Tool) they would like addressed through the Kanawha Communities of Excellence plan. *(On a scale of 1 – 5, with 5 being the highest priority and 1 being the lowest)*
15 minute Break	7. Facilitators take completed Challenge Ranking Sheets to Small Conference Room to be tabulated.

STEP 3: Top Challenge Ranking Survey

Experts were invited to participate in the final ranking of top challenges that would move forward to Step 4 for community input. The top challenges were identified through the initial Expert Opinion Survey and refined through our Conversation with Experts meeting.

Ranking Criteria:

- This challenge appears to be greater in certain parts of the county or specific populations
- There is baseline data that would help us measure our impact for this challenge
- Other communities, like ours, have been able to overcome this challenge
- We can resolve this challenge in 3-5 years or less and sustain the improvements
- To my knowledge, no one is working to address this challenge at this time
- We can create a major improvement in the quality of life by addressing this challenge
- We can reduce long-term cost to the community by addressing this challenge

Participating Experts: *(Please note that the list below is not all inclusive due to the anonymity of the top challenge ranking process)*

Aila Accad	Future of Nursing WV
Pamela L. Alderman	University of Charleston
Jeffrey S. Allen	West Virginia Council of Churches
Erin Andrews- Sharer	Appalachia Service Project
Sandra Steiner Ball	The United Methodist Church
Maria Belcher	FestivALL Charleston
Jason E. Bibbee	Tyler Mountain Cross Lanes Community Services
Michele Bowles	Regional FRN
Tim Brady	Charleston CVB
Ellen Bullock	Kiwanis Club of West Charleston
Ronald Butlin	Charleston Urban Renewal Authority
Kelli Caseman	West Virginians for Affordable Health Care
Michelle Coon	CAMC/PIHN
Kerri Cooper	United Way Central West Virginia
Amber Crist	Cabin Creek Health Systems
Glenn Crotty Jr., MD	Charleston Area Medical Center
Jared Davis	Camp Appalachia
Pamela J. Dickerscheid	West Virginia Symphony Orchestra

Heidi Edwards	Charleston Area Medical Center
Loren Friend Farmer	Bob Burdette Center, Inc.
Michelle Foster	The Greater Kanawha Valley Foundation
Tamara Fuller	Charleston Area Medical Center
Julia Gonzales	FJG Enterprises LLC
Jeff Goode	Charleston Area Medical Center
Danial Gum	Goodwill Industries of Kanawha Valley
Paula Hamady	DHHR/Bureau for Medical Services
Cindy Hanna	CAMC Health Education and Research Institute, Inc.
Laura Dice Hill	WV Food and Farm Coalition
Roseshalla Holmes	Four Points by Sheraton
Lisa Hudnall	United Way Central West Virginia
Stephanie Hyre	The Greater Kanawha Valley Foundation
Brenda C. Isaac	Kanawha County Schools
Paulette Susan Justice	Kanawha Valley Senior Services, Inc.
Travis Kahle	University of Charleston
Sharon Lansdale	Center for Rural Health Development, Inc.
Daniel Lauffer	Thomas Health System
Valicia Leary	Children's Therapy Clinic
Sharon Malcolm	WV Delegate
Tara Martinez	Manna Meal, Inc.
Johanna Miesner	Charleston Ballet
Mack Miles	Mack Miles Studio
Martha Minter	Community Access Inc. / Red Barn Stables LLC
Doug Paxton	Sand Run Gospel Tabernacle
Elizabeth Pellegrin	Charleston Area Medical Center
Gail Pitchford	CAMC Foundation
Tina Ramirez	Marshall Health
Errol Randle	Catalyst Ministries / The Grace Project
Dominique Ranieri	Yeager Airport (CRW)
Gloria Rhem	Eastern Kanawha Prevention Partnership/ Booker T Washington Community Center
Morgan Robinson	The Clay Center

Christena Ross	CAMC Health Education and Research Institute, Inc.
Marty Roth	University of Charleston
Beth Scohy	Daymark
Serena Seen	Charleston-Kanawha Housing Authority
Angie Settle	WV Health Right
CW Sigman	Kanawha Emergency Management
Megan Simpson	The Greater Kanawha Valley Foundation
Melissa Stewart	West Virginia National Guard
Annie Stroud	Buzz Food Service
Jeremy Taylor	West Virginia Power Baseball, LLC
Jennifer Waggener	Faith in Action of the Greater Kanawha Valley, Inc.
Matthew J. Watts	HOPE CDC
Andrew S. Weber	Charleston Area Medical Center
Barbara Wessels	UniCare Health Plan
Courtney White	YWCA of Charleston, Resolve Family Abuse Program
Bob Whitler	Charleston Area Medical Center
Michael D. Williams	Charleston Area Medical Center
Jessica Wright	WV Bureau for Public Health / Health Promotion & Chronic Disease
Larry Wunderly	Buckskin Council, BSA
Sherri Young	Kanawha Charleston Health Department.

Step 4: Customer Feedback (Community Input)

During this step of the CHNA process, the top priority areas ranked by participating stakeholders and experts were shared with people who live and/or work in Kanawha County. Employees at 18 worksites participated in our community-based survey. We conducted 15 listening sessions which drew a low attendance, therefore we expanded our outreach to include paper and online surveying. Below is the breakdown for number of participants in Step 4.

Community Input:

- 15 Listening sessions (30 attendees)
- 91 clip board surveys
- 165 paper surveys (642 responses)
- 1235 online survey responses:
  LIVE Health & Social = 330
  LIVE Safety & Infrastructure = 242
  LEARN = 207

Employee Surveys:

Cabin Creek Health Center
Charleston Area Alliance
Charleston Area Medical Center
Covenant House
DOW
FamilyCare
First Choice/211

WORK = 234
PLAY = 222

Inclusion of Vulnerable Populations:

- Homeless
- People with Substance Use Disorder
- Low Income
- Single parents
- Domestic violence survivors
- Senior citizens

Highland Hospital
Kanawha County Commission
Kanawha County Schools
Kanawha County Sheriff's Department
Manna Meal
Regional 3 Workforce Investment Board
Thomas Memorial Hospital
University of Charleston
WV Attorney General's Office
WV Health Right
YWCA

Steps 5 and 6, Planning and Implementation, will occur once our new Community Health Improvement Councils are formed for each new priority. Councils will be comprised of both subject experts and community residents.

EXPERT OPINION SURVEY RESULTS

LIVE: Health and Social

Total Expert Opinions: 60

Top Challenges:

- **Access to substance use disorder treatment and recovery**
- **Access to substance abuse prevention education**
- **Access to health promotion and chronic disease prevention education**
- **Lack of services for the aging**
- **Safe and affordable housing**

LIVE: Safety and Infrastructure

Total Expert Opinions: 34

Top Challenges:

- **Homelessness**
- **Lack of connectivity (fiber optics/Internet)**
- **Lack of access to transportation**
- **Safe air and water**
- **Safe roads**

LEARN

Total Expert Opinions: 34

Top Challenges:

- **Lack of affordable childcare options**
- **Lack of support for children and families**
- **Lack of support for quality education K-12**
- **Lack of career and technology education to meet workforce demand**
- **Lack of coordination among higher educational institutions**
- **Lack of access to affordable higher education**

WORK

Total Expert Opinions: 40

Top Challenges:

- **Lack of a drug free workforce**
- **Poor retention of young people in our local job market**
- **Shortage of skilled workforce due to inadequate education/training**
- **Lack of job education and training opportunities**
- **Workforce readiness, inability to obtain and keep jobs**
- **Lack of diverse job opportunities**
- **Low wages**

PLAY

Total Expert Opinions: 21

Top Challenges:

- **Lack of access for all to the arts, cultural and entertainment opportunities**
- **Lack of funding to support the arts, culture and entertainment**
- **Lack of /decline in shopping opportunities**
- **Lack of support for small businesses**
- **Lack of safe and adequate recreational spaces in neighborhoods**
- **Underutilization of available river access for recreation**
- **Lack of financial support for recreational opportunities**
- **Decline in population affecting ability to support the arts, culture and recreation**

CONVENING OF EXPERTS

The Kanawha Coalition for Community Health Improvement held a Convening of Community Experts, August 20, 2019 at the West Virginia Regional Technology Center.

Attendees were presented highlights from the initial Expert Opinion Survey (from Step 1).

Breakout sessions were held to review the printed highlight reports. Volunteer Table Facilitators asked the groups to discuss if any listed challenges could be merged (addressed at the same time), required more clarification, or if there were any challenges that needed to be added to the list prior to the ranking process.

Attendees were provided with ranking sheets and asked to select up to five challenges, on a scale of 1-5, with 5 being the highest priority and 1 being the lowest.

Experts in attendance ranked the following issues to move forward for the Top Challenge Ranking (Step 3):

LIVE: Health and Social

- Access to Substance Use Disorder Treatment
- Access to Health Promotion and Chronic Disease Prevention Education (including Dental)
- Access to Recovery Services

LIVE: Safety and Infrastructure

- Safe Air and Water
- Safe Roads
- Homelessness-Treatment, Recovery and Housing

LEARN

- Lack of Education Programs to Meet Workforce Demand
- Lack of Affordable Childcare Options
- Lack of Resources for Non-Traditional Families

WORK

- Barriers to Employment
- Workforce Readiness, Inability to Obtain and Keep Jobs
- Shortage of Skilled Workforce Due to Inadequate Education/Training - Along with Lack of Job Education and Training Opportunities

PLAY

- Lack of Access and Affordability and Funding for all of the Arts, Cultural and Entertainment Opportunities
- Lack of/Decline in Shopping Opportunities and Lack of Support in Small Businesses
- Lack of Safe and Adequate Recreational Spaces in Neighborhoods

TOP CHALLENGE RANKING RESULTS

Experts were invited to participate in the final online Top Challenge Ranking process to rank challenges under LIVE, LEARN, WORK and PLAY which were identified through the initial Expert Opinion Survey and refined through our Conversation with Experts meeting. Below are the final ranking scores. Only the top scored challenges under each Challenge area will move forward to Step 4 for Community Input.

LIVE: Health and Social Top Challenge	Total Weight
Access to Health Promotion and Chronic Disease Prevention Education (including Dental)	**36.00**
Access to Recovery Services	35.18
Access to Substance Use Disorder Treatment	34.89

LIVE: Safety and Infrastructure Top Challenge	Total Weight
Safe Roads	**35.81**
Safe Air and Water	35.68
Homelessness-Treatment, Recovery and Housing	35.61

LEARN Top Challenge	Total Weight
Lack of Affordable Childcare Options	**36.15**
Lack of Education Programs to Meet Workforce Demand	35.66
Lack of Resources for Non-Traditional Families	33.35

WORK Top Challenge	Total Weight
Barriers to Employment	**36.57**
Shortage of Skilled Workforce Due to Inadequate Education/Training – Along with Lack of Job Education and Training Opportunities	35.54
Workforce Readiness, Inability to Obtain and Keep Jobs	35.35

PLAY Top Challenge	Total Weight
Lack of Safe and Adequate Recreational Spaces in Neighborhoods	**37.07**
Lack of/Decline in Shopping Opportunities and Lack of Support in Small Businesses	35.78
Lack of Access and Affordability and Funding for all of the Arts, Cultural and Entertainment Opportunities	35.10

COMMUNITY INPUT ON TOP PRIORITIES

OVERALL RESPONDENT DEMOGRAPHICS:

(Assessment includes statistically significant data, more than 5 percentage point difference)

The paper survey reached more individuals between 18-34 years old and less individuals 45-54 years old, as compared to older individuals who had a better overall response rate via online survey.

Age Range	Online Survey Averages	Paper Survey Averages
18-24	4.18%	6.20%
25-34	13.60%	21.71%
35-44	25.30%	20.16%
45-54	26.07%	21.71%
55-64	24.57%	25.58%
65-74	4.75%	3.10%
75+	4.21%	0.00%
No answer	2.68%	1.55%

The online survey was completed by far more Caucasian individuals, 94.16% compared to 69.77%. The paper survey was far more successful in reaching minority populations and people of color, indicating the importance and significance of conducting surveys at the community level.

Race/Ethnicity	Online Survey Averages	Paper Survey Averages
Caucasian	94.16%	69.77%
African American	2.07%	20.16%
Asian American	0.72%	0.78%
Hispanic/Latino	0.58%	3.10%
American Indian	0.40%	0%
Arab American	0.46%	1.55%
Pacific Islander	0.43%	0%
No Answer	10.2%	1.55%

The paper survey was more successful in reaching individuals with lower educational attainment. Of those who responded to the paper survey, 41.08% had attained a high school diploma or less education, compared to only 4.66% among those who responded to the online survey.

Education	Online Survey Averages	Paper Survey Averages
k-8	0%	3.10%
Some High School	0.43%	6.2%
Diploma/GED	4.7%	31.78%
Vocational/Trade	4.7%	6.2%
Some College	14.53%	24.03%
Associate Degree	17.52%	7.75%
Bachelor's Degree	33.33%	11.63%
Master's Degree	18.80%	9.30%
Doctorate Degree	5.98%	0%

Priority: Wellness promotion and chronic disease prevention education

Comparing the paper survey to the online survey, there is little difference in responses for *moderate* access and *a great deal* of access to chronic health and disease education and awareness information, but surprisingly the number of responses from our online survey for *none at all* nearly doubled compared to the paper survey. Paper survey responses indicated a 7.97% of people feel they have no access to health education and awareness, while online survey responses indicated 12.50% of people feel they have no access to this information.

The chronic health problems or chronic diseases included in this survey are Diabetes, Obesity, Heart Disease, Hepatitis A/B/C, COPD, and HIV/AIDS. These diseases were chosen as they were identified as the top causes of death among Americans by the Centers for Disease Control (Centers for Disease Control, 2017).

The top responses between both surveys were Diabetes, Obesity, and Heart Disease, having similar rates of response between both survey types. There were significant statistical differences in responses collected via paper survey, with this population knowing significantly more about Hepatitis A/B/C (52.59% paper survey compared to 38.91% internet survey), and HIV/AIDS (42.22% paper survey compared to 25.53% internet survey). This could be because the majority of paper surveys were collected at community health clinics and drop-in centers, shelters, and largely focused on surveying minority and at-risk populations. These populations may have increased access to information, testing, and resources due to socioeconomic factors, lifestyle factors, and risky behaviors.

We were able to collect more information via online survey, and made the following findings:

68% of respondents identified that they hear about health information, news, and resources via social media, and 54% identified TV as their source of this information. Only 12.54% identified that they heard about health from their doctors or healthcare providers, the health department, or that they themselves work in the medical field. Through the online survey we were able to survey employees through two major hospitals in the area, as well as the county health department and local health clinics in Kanawha County.

It is significant that nearly 70% of people learn about chronic health conditions through social media or other media sources, and that 12.5% identified their health care providers as sources of this information. This could indicate that our healthcare providers need more support in relaying this information to patients, and that patients need increased information from their providers to be able to make informed decisions.

Summary

Potential Gaps and Other Considerations:

Gaps illustrated by the Live: Health and Social study include a need for increasing access to health education and awareness across all populations, potentially working with medical/community health professionals to increase information provided at doctor's visits, and increasing advertising as well as exploring new methods of advertising and communication about health issues. Vulnerable populations

such as individuals and families with low income, senior citizens, and single parents need more support and resources to access health information to support positive health choices.

Priority: Safe Roads and Transportation

Comparing the Safety and Infrastructure survey responses, there is little difference in responses to questions about how safe the roads are in Kanawha County, with both online and paper survey participants reporting the following: about 69% believe the roads to be Moderately Safe, about 26% believe the roads are Not Safe at All.

In surveying participants about the problems that they encounter specific to safe travel, there were significant differences between the opinions of online and paper survey participants. Overall, the online survey participants believed that roads were unsafe due to physical issues with the roads (89% compared to 68% of paper survey participants) and due to pedestrians (25% compared to 8% of paper survey participants). Both participant groups felt that it was difficult to walk safely to the places they needed to go, with 30% of online survey participants reporting this compared to 23% of paper survey participants. This could be related to the method of travel used, such as private vehicle or public transportation, and also the distance that one has to travel to get where they need to go.

Other concerns that all survey participants brought up included:

- Issues with road infrastructure failing, lack of inspection, narrow roads, and paint lines being insufficient on existing roads and after construction takes place, slippage
- Semi-truck drivers are unsafe
- Sidewalks are in disrepair, it is not safe to walk, Lack of lighting on sidewalks
- Panhandling, homelessness
- Drivers using cell phones, distracted drivers
- Speeding

Transportation issues can affect a person's access to health care services. These issues may result in missed or delayed health care appointments, increased health expenditures and overall poorer health outcomes. Transportation also can be a vehicle for wellness (AHA, 2017). Transportation is a critical economic and social factor that impacts the ability to be healthy for both individuals and communities.

Summary

Potential Gaps and Other Considerations:

In the Live: Safety and Infrastructure study, the most common concerns among community members included the physical safety and structure of the roads, and the use of public transportation. Individuals surveyed that have their own transportation were more concerned about the road construction issues, and individuals dependent on public transportation indicated concerns about the availability and accessibility of public transportation to meet their everyday needs. There are potential areas to explore in policy, systems, and environment concerning both of these issues, such as working with local government and infrastructure systems to support growth and change to meet the needs of the community.

Priority: Access to affordable and adequate child care options

Access to early childhood education, including daycare and preschool programs, is an integral part of a young child's development and sets the stage for developing healthy behaviors, as well as healthy mental and physical development (ODPHP). In considering education as a social determinant of health, our assessment included questions about families' access to adequate and affordable early childhood education opportunities.

When asked about the problems that families with young children face, we found that both online and paper survey participants ranked the problems listed in the survey in the same order. The top problem was that childcare was not affordable. The next top concern for both groups was that childcare centers are not open during the hours that parents need care. The third most important concern was that there were not enough providers or facilities. Next, participants felt concern with the care and/or education provided. Last, and most notably, participants showed a significant difference in opinions about location of providers, with only 6% of online participants choosing location as a problem, and 27% of paper survey participants. This could be due in part to the segment of the population that the paper survey was able to reach and their lack of access to resources such as transportation.

"Other" responses included: concerns for single parents; the need for night-time care or babysitters for parents working evening or overnight shifts; preschool hours being inconsistent with school hours; lack of after-school care; and finding care for children with special needs.

Summary

Potential Gaps and Other Considerations:

The Learn study indicates that more effort should be made in future assessments to include parents of young children to gain a better understanding of the issues in our community, and that additional work needs to be done between daycare providers and families utilizing the services to understand the needs and challenges. Affordability and hours of service are the top issue that families are concerned about, so there are potential opportunities here for policy, systems, and environmental changes to explore to increase the usefulness and affordability for families and profitability for providers.

Priority: Barriers to Work

When asked about the problems surrounding employment, we found that both online and paper survey participants ranked the problems somewhat differently, and that many participants selected more than one issue, so this needs to be taken into consideration as there are multiple issues affecting employment. 71% of online survey participants and 69% of paper survey participants believe that low wages and minimum wage jobs are a top concern. 54% of online survey participants and 42% of paper survey participants believe that there is a lack of job opportunities. Online participants listed not enough job diversity/types of work available as the next problem, then lack of education or skills to support job growth and development. Paper survey participants listed lack of education or skills training as the next barrier, then transportation barriers, and finally a lack of job diversity.

Summary

Potential Gaps and Other Considerations:

The gaps identified by the Work study include needing more in-depth survey and research to understand the problems encountered by individuals experiencing the problems with employment, to better understand the underlying issues. Another gap identified was with retired and disabled citizens, and our older populations, to support all types of employment needs and understand more of the problem. An area to explore may be supported employment options for people, training or mentoring programs for individuals re-entering the work force, and supporting employers willing to provide extra training and support for individuals with poor work histories to support job growth and development.

Priority: Access to Safe and Adequate Recreation, Exercise and Play Opportunities

In our Play study, we asked about accessibility to safe space for recreation in the community, what types of recreation space is available to survey respondents, and possible issues that are present with outdoor recreation.

Survey respondents indicated that 67% (paper surveys) and 74% (online surveys) felt that they did have access to safe recreation in their community. Paper survey respondents indicated that they had access to Recreation or Community Center (61%), public playground (58%), public parks (56%), school-based playground (47%), walking or hiking trails (46%), and river access (46%). Online survey respondents indicated that they had access to public parks (67%), public playground (64%), walking or hiking trails (61%), recreation or community center (60%), river access (58%), and school-based playground (57%).

When asked why they would choose NOT to use available recreation spaces, online survey respondents indicated safety issues (62%) and accessibility issues (21%) as well as travel and lack of time, syringe litter, lack of security cameras or security guards, inability to carry a firearm for self-protection, lack of cleanliness, and drug users. Paper survey respondents indicated safety issues (74%) and accessibility issues (33%) as well as gun violence, vandalism, syringe litter, blight, homeless and drug users as reasons they would not choose to use public recreation spaces available to them.

Summary

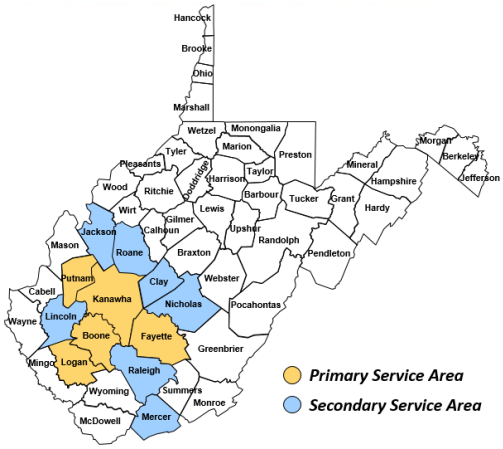
Potential Gaps and Other Considerations:

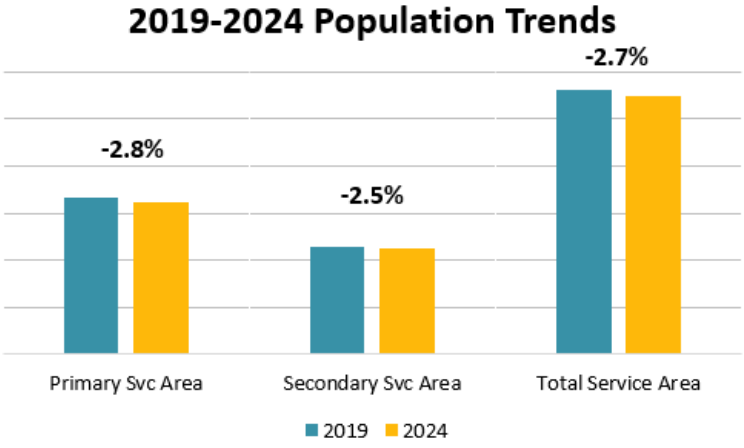
In the Play study, the issues most commonly identified concerning utilizing existing recreational spaces centered on safety. Cities such as Charleston do not seem to lack recreation space, but the safety of the spaces available is an obvious concern. One gap in our study that needs attention is more attention to surveying individuals in other parts of Kanawha County that cannot access Charleston or other larger towns for recreation opportunities, to better understand the needs of the greater Kanawha County. Of the existing recreational spaces, programs and plans to clean up or monitor the spaces to increase a feeling of safety is an area to explore, and possibly finding funding to support this work.

OBJECTIVE DATA – SECONDARY COUNTY HEALTH DATA

A comprehensive database of health related data and statistics is compiled/updated by CAMC staff from numerous sources regarding the health of the citizens of Kanawha County, as well as the other counties in our Primary and Secondary Service Area, and is incorporated into the document entitled *Health Indicator Data Sheet*. The findings are sorted into categories for ease of reference and provide the following for each indicator: name, data link, County results, West Virginia results, United States results, West Virginia county rank and United States state rank. The trend is then established for each indicator, as well as comparison to West Virginia and the nation. These trends and comparisons are color coded to identify improvement in trend, and if comparisons are favorable or unfavorable. The *Health Indicator Data Sheet* is available on the CAMC website and is used extensively for community need, statistical and grant writing purposes.

CAMC NEEDS ASSESSMENT FOR OTHER PRIMARY AND SECONDARY SERVICE AREA COUNTIES





Primary Service Area

- Boone County
- Fayette County
- Kanawha County
- Logan County
- Putnam County

Secondary Service Area

- Clay County
- Jackson County
- Lincoln County
- Mercer County
- Nicholas County
- Raleigh County
- Roane County

County	2019 Population	2024 Projected Population	2019-2024 Change	2019-2024 % Change
Boone County	21,739	20,593	-1,146	-5.3%
Fayette County	42,786	41,423	-1,363	-3.2%
Kanawha County	180,258	174,756	-5,502	-3.1%
Logan County	31,903	29,991	-1,912	-6.0%
Putnam County	56,939	57,616	677	1.2%
Primary Svc Area	**333,625**	**324,379**	**-9,246**	**-2.8%**
Clay County	8,647	8,398	-249	-2.9%
Jackson County	28,860	28,741	-119	-0.4%
Lincoln County	20,547	20,044	-503	-2.4%
Mercer County	58,924	57,456	-1,468	-2.5%
Nicholas County	24,720	24,106	-614	-2.5%
Raleigh County	73,645	71,236	-2,409	-3.3%
Roane County	13,840	13,436	-404	-2.9%
Secondary Svc Area	**229,183**	**223,417**	**-5,766**	**-2.5%**
Total Service Area	**562,808**	**547,796**	**-15,012**	**-2.7%**

Variable	CAMC 12 County Service Area 2019	2024	Change	%Change
DEMOGRAPHIC CHARACTERISTICS				
Total Population	562,032	546,887	-15,145	-2.7%
Total Male Population	275,788	268,582	-7,206	-2.6%
Total Female Population	286,244	278,305	-7,939	-2.8%
Females, Child Bearing Age (15-44)	96,175	91,427	-4,748	-4.9%
Average Household Income	$61,312			
POPULATION DISTRIBUTION				
Age Distribution				
0-14	96,139	91,017	-5,122	-5.3%
15-17	20,066	20,002	-64	-0.3%
18-24	44,270	45,391	1,121	2.5%
25-34	63,717	59,372	-4,345	-6.8%
35-54	139,333	129,096	-10,237	-7.3%
55-64	82,973	76,815	-6,158	-7.4%
65+	115,534	125,194	9,660	7.7%
HOUSEHOLD INCOME DISTRIBUTION				
Total Households	236,691	231,314	-5,377	-2.3%
2019 Household Income Distribution	HH Count	% of Total		
<$15K	37,068	15.7%		
$15-25K	31,773	13.4%		
$25-50K	61,444	26.0%		
$50-75K	41,862	17.7%		
$75-100K	25,968	11.0%		
Over $100K	38,576	16.3%		
EDUCATION LEVEL				
Population Age 25+	401,557			
2019 Adult Education Level Distribution	25+ Pop	% of Total		
Less than High School	19,541	4.9%		
Some High School	39,662	9.9%		
High School Degree	160,863	40.1%		
Some College/Assoc. Degree	103,146	25.7%		
Bachelor's Degree or Greater	78,345	19.5%		
RACE/ETHNICITY				
Population	562,032			
2019 Race/Ethnicity Distribution	Pop	% of Total		
White Non-Hispanic	512,459	91.2%		
Black Non-Hispanic	26,694	4.7%		
Hispanic	7,058	1.3%		
Asian & Pacific Is. Non-Hispanic	4,355	0.8%		
All Others	11,466	2.0%		

Median Age and Income

County	2019 Median Age	2024 Median Age	2019 Total Households	2024 Total Households	2019 Median Household Income	2024 Median Household Income
Boone	43.9	45.4	8,763	8,302	$37,781	$36,743
Clay	44.3	45.0	3,477	3,390	$36,091	$36,947
Fayette	44.0	44.6	17,697	17,203	$39,998	$40,887
Jackson	43.9	44.8	11,986	12,006	$42,451	$42,500
Kanawha	43.3	44.1	79,079	76,811	$46,865	$48,164
Lincoln	43.5	44.3	8,465	8,317	$38,279	$39,187
Logan	44.1	45.4	13,079	12,349	$37,867	$37,732
Mercer	43.2	43.7	25,392	24,841	$39,588	$40,833
Nicholas	45.4	46.2	10,497	10,302	$41,091	$40,920
Putnam	42.6	43.7	22,796	23,158	$59,732	$61,249
Raleigh	42.2	42.9	29,844	28,901	$45,397	$47,038
Roane	45.8	46.7	5,864	5,734	$36,577	$37,925
Total	43.4	44.2	236,939	231,314	$44,594	$45,680

Labor Force Characteristics

County	State	2019 Total Population 16+ Count	%Down	Total Labor Force Count	%Across	Employed in Civilian Labor Force Count	%Across	Employed in Armed Forces Count	%Across	Unemployed in Labor Force Count	%Across	Females in Labor Force Count	%Across
Kanawha	WV	148,141	32.2%	83,088	56.1%	77,621	52.4%	126	0.1%	5,341	3.6%	41,298	53.4%
Raleigh	WV	59,974	13.0%	30,628	51.1%	28,235	47.1%	16	0.0%	2,377	4.0%	14,619	48.9%
Mercer	WV	48,053	10.5%	23,572	49.1%	22,103	46.0%	0	0.0%	1,469	3.1%	11,587	45.6%
Putnam	WV	45,971	10.0%	26,609	57.9%	25,673	55.8%	103	0.2%	833	1.8%	12,406	52.4%
Fayette	WV	34,990	7.6%	16,715	47.8%	15,272	43.6%	10	0.0%	1,433	4.1%	7,531	43.3%
Logan	WV	26,249	5.7%	11,607	44.2%	10,165	38.7%	0	0.0%	1,442	5.5%	5,120	38.1%
Jackson	WV	23,541	5.1%	11,592	49.2%	10,957	46.5%	0	0.0%	635	2.7%	5,094	42.4%
Nicholas	WV	20,305	4.4%	10,125	49.9%	9,338	46.0%	0	0.0%	787	3.9%	4,453	43.0%
Boone	WV	17,742	3.9%	7,256	40.9%	6,549	36.9%	1	0.0%	706	4.0%	3,198	35.4%
Lincoln	WV	16,539	3.6%	7,634	46.2%	7,098	42.9%	0	0.0%	536	3.2%	3,529	42.2%
Roane	WV	11,330	2.5%	4,881	43.1%	4,362	38.5%	0	0.0%	519	4.6%	2,211	38.6%
Clay	WV	6,964	1.5%	2,879	41.3%	2,560	36.8%	0	0.0%	319	4.6%	1,194	34.3%
Total		459,799	100.0%	236,586	51.5%	219,933	47.8%	256	0.1%	16,397	3.6%	112,240	47.5%

To ensure needs are identified for CAMC's other service area counties beyond Kanawha County, County Indicator Data Reports were prepared for Putnam, Boone, Fayette and Logan Counties (Primary Service Area Counties) and for Clay, Jackson, Lincoln, Mercer, Nicholas, Raleigh and Roane Counties (Secondary Service Area Counties). These County Indicator Data Reports are available on the CAMC website at www.camc.org.

Service Area Health Priorities by County
2020 Community Benefit Planning
2020

Health Indicator	PRIMARY SERVICE AREA					SECONDARY SERVICE AREA							Number Red Trends	Number Yellow Trends	Total Red & Yellow Trends
	Kanawha	Putnam	Boone	Fayette	Logan	Clay	Jackson	Lincoln	Mercer	Nicholas	Raleigh	Roane			
Poor Mental Health Days													12	0	12
Children Eligible for Free Lunch													11	1	12
Cardiovascular Diseases Death Rate													10	2	12
Alzheimer's Death Rate													10	2	12
Preventable Hospitalizations													10	1	11
Social Associations													9	2	11
Drug Overdose Death Rate													9	1	10
Stroke Death Rate													8	4	12
Diabetes age 18+ (2)													8	3	11
Percent low income & >1 mile to store													8	2	10
Child Abuse/Neglect													8	1	9
CHIP Enrollment													7	5	12
Premature Death Years of Potential Life Lost before 75													7	4	11
Gonorrhea													7	3	10
Overdose Counts for All Drugs													7	3	10
Children in Single Parent Households													7	2	9
Oral Cancer Incidence Rate													7	0	7
Motor Vehicle Crash Death Rate (2)													6	6	12
Melanoma Incidence Rate													6	4	10
Death Rate due to Intentional Self Harm													6	4	10
Mean Travel Time to Work													6	4	10
Families Living Below Poverty Rate													6	2	8
Breast Cancer Incidence Rate													6	1	7
Breast Cancer Death Rate													5	6	11
Flu/Pneumonia Death Rate													5	6	11
Poor or Fair Health													5	6	11
Homeownership Rate													5	5	10
Primary Care Physician Ratio													5	4	9
Bladder Cancer Incidence Rate													5	4	9
People Over 65 Living Below Poverty Rate													5	4	9
Access to Exercise Opportunities													5	3	8
Lung and Bronchus Cancer Death Rate													5	2	7
Percent households no car & >1 mile to store													5	1	6
Children who are Overweight													4	6	10
Children Living in Poverty (2)													4	6	10
People Below Poverty Rate													4	6	10
Colorectal Cancer Incidence Rate													4	5	9
Non-Hodgkin Lymphoma Incidence Rate													4	4	8
Occupied Housing Units with no Vehicles available													4	4	8
Brain Cancer Incidence Rate													4	3	7
Pancreatic Cancer Incidence Rate													4	2	6
Lung Cancer Incidence Rate													4	2	6
Infant Mortality													4	1	5
Poor Physical Health Days													3	9	12
Colorectal Cancer Death Rate													3	7	10
Prostate Cancer Death Rate													3	6	9
Alcohol Impaired Driving													3	5	8
Mammogram Screening (2)													3	3	6
Child Death Rate													3	2	5
Children who are Obese													2	7	9
Adult Smoking (2)													2	5	7
Education - Some College/BA or higher (2)													2	4	6
Ovarian Cancer Incidence Rate													2	2	4
Early syphilis													2	2	4
Fast-Food Restaurants Density													2	2	4
Men aged 40+ who have had a PSA Test													2	0	2
Stroke													2	0	2
Hypertension													2	0	2
Asthma													2	0	2
Influenza Vaccination Rate 65+													2	0	2
Adults who are Obese													2	0	2
Adults who Visited a Dentist													2	0	2
Smokeless Tobacco Use													2	0	2
E-Cigarette User Status													2	0	2
Disability Status: Serious Difficulty Walking or Climbing Stairs													2	0	2
Disability Status: Serious Difficulty Concentrating, Remembering or Making Decisions													2	0	2
Low Birthweight													1	7	8
Homicide Death Rate													1	6	7
Cervical Cancer Incidence Rate													1	1	2
Physical Inactivity (5)													1	0	1

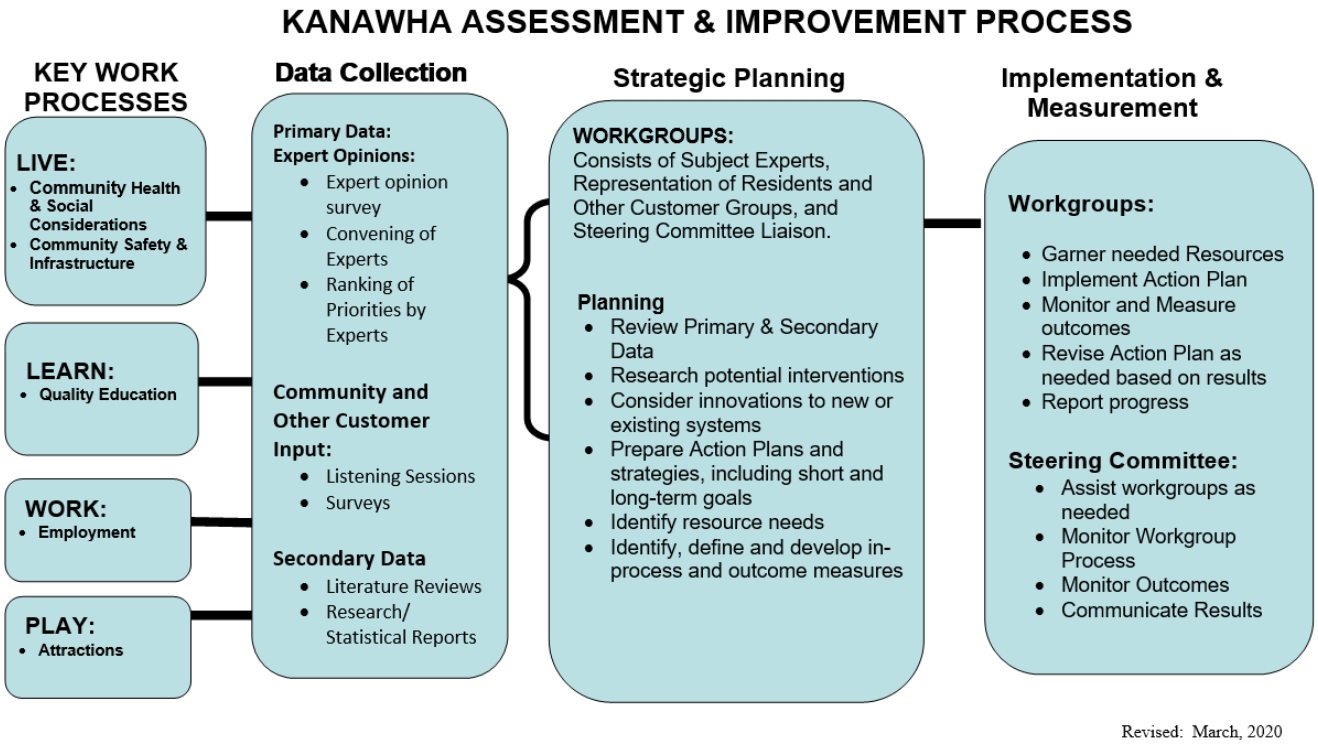
The analysis from the County Health Indicator Reports for our 12 county service area support the findings from the Kanawha Coalition Community Needs Assessment.

The Kanawha Coalition Assessment Process findings (County Health Data, Expert Opinion Survey, Convening of Experts, Listening sessions, and a paper and online survey) and the County Health Indicator Reports were systematically analyzed to develop a list of the top community health issues for our 12 county service area. These include:

LIVE: Health and Social
Wellness promotion and chronic disease prevention education • Diabetes, Obesity, Heart Disease, COPD, Substance Use Disorder, HIV/AIDS, Hepatitis A/B/C, Mental Health
LIVE: Safety and Infrastructure
Safe roads & transportation • Homelessness, Safe/Distracted Driving, Access to Transportation
LEARN
Access to affordable and adequate early childhood education • Access and Availability of Early Childhood Education
WORK
Barriers to Work • Low Wages, Lack of Job Opportunities/Education or Skills Training
PLAY
Access to safe and Adequate recreation, exercise and play opportunities • Safety and Accessibility of Recreation Areas

ASSESSMENT and IMPROVEMENT PROCESS

The Kanawha Coalition for Community Health Improvement uses the following process to assess, implement and measure the identified top issues under each priority area.



The Kanawha Coalition for Community Health Improvement's process serves as CAMC's needs assessment and was conducted in conjunction with CAMC General Hospital, CAMC Memorial Hospital, CAMC Women and Children's Hospital, and Thomas Health Systems.

The CAMC Needs Assessment is made widely available to the public via the CAMC Health System website at www.camc.org and is available upon request from any CAMC hospital. The Kanawha Coalition for Community Health Improvement's Needs Assessment is available on the Kanawha Coalition for Community Health Improvement's website at www.healthykanawha.org and is available upon request as well.

CHARLESTON AREA MEDICAL CENTER COMMUNITY NEEDS PLANNING

Charleston Area Medical Center is licensed for 956 beds on four campuses: General Hospital (268 beds), Memorial Hospital (472 beds), Women and Children's Hospital (146 beds) and CAMC Teays Valley Hospital (70 beds). CAMC General, Memorial and Women and Children's hospitals are all located in the city limits of Charleston in Kanawha County. General Hospital focuses primarily on the neurological, orthopedic, trauma and rehabilitation service lines. Memorial Hospital supports the cardiac, peripheral vascular and oncology services lines and Women and Children's Hospital focuses on mother, baby, pediatric and gynecology service lines. Medicine and general surgery cross both Memorial and General Hospitals. Community benefit services are aligned by service versus hospital, thus at times are clearly aligned by hospital, but not in the case of many of the activities that span all hospitals. Additionally, many of our reports that are used for benchmarking and comparisons are for CAMC versus the individual hospitals.

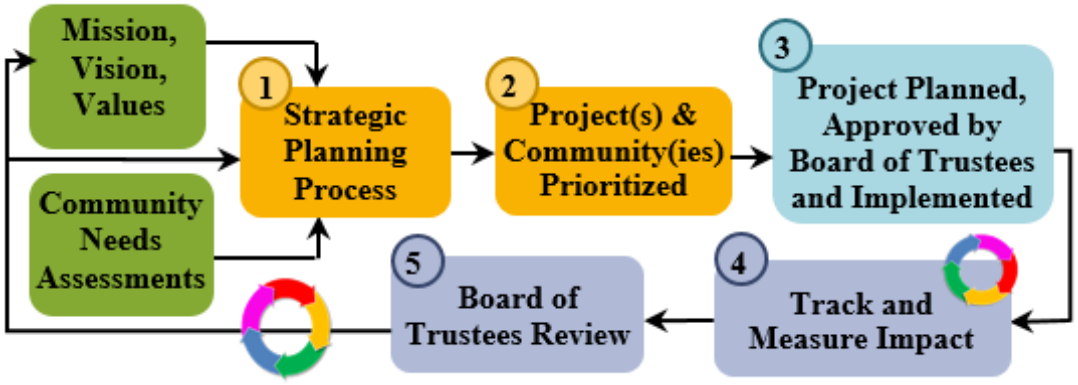
Although all CAMC hospitals are licensed separately, the Kanawha County Charleston hospitals jointly plan, implement goals and report into one governance structure. Because CAMC Teays Valley Hospital is located in Putnam County and serves as a community hospital, it completes its own community needs assessment and implementation strategies.

The CAMC Board of Trustees governs all CAMC hospitals and approves the Community Health Needs Assessments, Implementation Strategies and annual community benefit reports.

Community benefit is defined as a program or activity that responds to a demonstrated health/related community need and seeks to achieve at least one community benefit objective:

- Improve access to health services
- Enhance public health
- Advance generalizable knowledge
- Relieve a government burden to improve health (CHA, Vizient, Verite Healthcare Consulting, Feb. 2017)

The following outlines CAMC's community support process:



Annually during the strategic planning process[1] we review the community health needs assessment findings, community priorities and our service area. In alignment with our mission, vision and values, we identify community health projects and their associated communities[1] for our community plan. These projects are[3] planned, implemented, and posted to our CAMC website. We[4] track and measure progress and use the DMAIC process for improvement. The CAMC Board of Trustees approves the plan and[5] reviews plan progress annually. Because of the size and scope of our services, the approach we use to identify our key communities[2] is based on the project, key stakeholder needs, and our capacity. Our community for the KCCHI work groups is Kanawha County as determined by the KCCHI mission. For our CAMC strategy, community is based on the need identified through needs assessments for each of our service area counties and the population to be addressed. For example, our work to build a sustainable Research Infrastructure covers all of West Virginia and our HIV program serves our entire service area. Each strategy is deployed through a planning process that addresses key stakeholder needs and is evaluated based on predetermined criteria for outcomes expected. Cycles of learning have resulted in alignment of Civic Affairs Council monetary contributions to community needs, and to improvements in including social determinants of health in the KCCHI Needs Assessment process. In addition, CAMC staff serve on the community workgroups of the Kanawha Coalition for Community Health Improvement and they, along with Steering Committee members, are involved in development of a community-wide community benefit plan addressing the top issues identified during the KCCHI Community Needs Assessment Process. They also support plan implementation and outcome measurement. The Steering Committee provides ongoing oversight to the work groups' plans. Once the KCCHI plans are developed, as part of the strategic planning process, CAMC determines if there are additional areas of support that can be provided by CAMC to address the identified issues. The following table lists programs provided by CAMC that address these community priorities, and are identified and funded as part of operational planning by the CAMC Board of Trustees.

ADDRESSED BY CAMC	CAMC General	CAMC Memorial	CAMC WCH	How Addressed by CAMC (Implementation strategies and ongoing work) (I) = Implementation Strategy
LIVE: Health and Social Wellness promotion and chronic disease prevention education				
Diabetes			X	• **Keys 4 HealthyKids - Reduce Childhood Obesity, Prevent Diabetes (I)** • **Gestational Diabetes Class at FRC**
Obesity	X	X	X	• **Keys 4 HealthyKids – Improve Access and Consumption of Local Produce (I)** • **Get Physical** • **Mall Walkers** • **Healthy Wage Challenges (Weight Loss/Healthy Steps)** • **Play Patch at Charleston Town Center Mall**
Limited Access to Food	X	X	X	• **Build the Base of Local Growers and Artisans (I)**
Heart Disease		X		• **Advanced Life Support Training** • **Heart Failure Readmission** • **CMS Indicator Compliance** • **American Heart Association Sponsorship** • **Women Heart Support Group** • **Charleston WV Heart Walk**

COPD	X	X	X	• CMS Indicator Compliance • COPD Readmission • Tobacco Free Day • Smoke Free Campuses
Cancer		X	X	• Relay for Life • Cancer Center Fashion Show • Cancer Center Support Group • Breast Cancer Awareness Activities • Breast Cancer Survivorship Group • Run for Your Life • American Lung Association Bike Trek • Great American Smokeout • Healthy Steps Exercise Program • Mental Health Services for Children with Cancer (I) • CAMC Foundation Grant–CAMC Breast Center free mammograms to uninsured/underinsured women; CAMC Cancer Center for assistance with meds, chemo, supplies, etc.
Substance Use Disorder, HIV/AIDS, Hepatitis A/B/C	X	X	X	• Ryan White Program (I) • WECARE (I) • Baby First Program Addiction Services Peer Recovery Support Specialists • REA of Hope Fellowship Home – Civic Affairs
Mental Health	X	X	X	• Outpatient Mental Health Services for Uninsured and Underinsured • Treatment of Dementia (I) • Mental Health Services for Children with Cancer (I)
Wellness Promotion	X	X	X	• Health Information Center • Discounted Lab Work • Flu Vaccine with Health Department • COVID-19 Vaccine with Health Department
LIVE: Safety and Infrastructure Safe roads & transportation				
Homelessness	X	X	X	• WV Health Right–Access to Care, Pharmacy Services – Civic Affairs • Covenant House – Civic Affairs
Safe/Distracted Driving	X			• Distracted Driving/Driving Safety for Teens - Doug Douglas • Project Graduation Dollars – Civic Affairs
Access to Transportation	X	X	X	• Transportation resources for adults with cancer • CAMC Uber • Faith in Action of the Kanawha Valley (Civic Affairs)
LEARN Access to affordable and adequate early childhood education				
Access and Availability of Early Childhood Education			X	• Teddy Bear Fair • Grandfamilies Program–teach computer skills (Civic Affairs) • Childhood Language Center & Children's Therapy Clinic (Civic Affairs) • Improve Access and Consumption of Local Produce (I)
WORK Barriers to work				
Low Wages	X	X	X	• Medical Explorers • Healthcare Career Showcase • CAMC Career Road Map • Workforce Innovation and Opportunities Act
Lack of Job Opportunities,	X	X	X	• Build the Base of Local Growers and Artisans (I) • Imagine U • Junior Nurse Academy

Education, Skills Training				• **CAMC Foundation Grant – Tuition Assistance** • **Teaching Institution**
PLAY **Access to safe and adequate recreation, exercise and play opportunities**				
Safety and Accessibility of Recreation Areas	**X**	**X**	**X**	• **Play Patch at Charleston Town Center Mall** • **United Way Day of Caring** • **Think First for Kids**

ALTHOUGH NOT COUNTED AS CAMC COMMUNITY BENEFIT, CAMC HEALTH SYSTEM COMPANIES PLAY A SIGNIFICANT ROLE IN COMMUNITY HEALTH IMPROVEMENT:

CAMC Health Education and Research Institute serves as the education and research arm of the CAMC Health System. The Institute promotes the health of the community by:

- Sponsoring health professional training programs training the region's health professionals.
- Providing continuing education to health professionals in the community, region and state.
- Sponsoring management and leadership development programs.
- Sponsoring community health education and prevention education programs for the community.
- Conducting clinical and health services research targeted to improve health and health services delivery of our patients and community.
- Pursuing special program funding and grants to support education and research programs.
- Sponsoring simulation training experiences for regional education affiliates.
- Promoting and sustaining networks and partnerships that improve access to clinical trials and research funding opportunities.

CAMC Foundation, Inc. is the fund-raising organization for Charleston Area Medical Center (CAMC). The foundation works with donors to secure current and future support for CAMC programs and services to improve the health of the people in West Virginia. Looking to the future of health care in southern West Virginia, the CAMC Foundation serves as the conduit for charitable care; to help CAMC deliver high-level clinical health care, to provide educational opportunities for practitioners to become healers, and to fund social medical services for those in need. The foundation's mission is to support and promote Charleston Area Medical Center's delivery of excellent and compassionate health services and its contributions to the quality of life and economic vitality of the region.

The CAMC Foundation is guided by a volunteer board of directors representing many facets of our community, as well as a staff of individuals with many years' experience and strong community ties and loyalty.

CAMC Teays Valley Hospital, a 70 bed rural hospital in Putnam County, WV, provides acute and emergency services to its community as well as community benefit to the residents of its county.

CAMC Teays completes its own Community Health Needs Assessment and Community Benefit Report.

INPUT RECEIVED ON PRIOR COMMUNITY HEALTH NEEDS ASSESSMENT AND IMPLEMENTATION STRATEGY FROM THE PUBLIC

CAMC's 2017 Community Health Needs Assessment and Implementation Strategy was made widely available on CAMC's website and the Needs Assessment was also published on the Kanawha Coalition for Community Health Improvement website. Annually, CAMC reports on the Implementation Strategies and these are posted to the CAMC website. CAMC did not receive any input from the public through the comment section with the postings or from any other source.

INPUT OF ACTIONS TAKEN TO ADDRESS THE SIGNIFICANT HEALTH NEEDS IDENTIFIED IN CAMC'S PRIOR COMMUNITY HEALTH NEEDS ASSESSMENT

Progress toward achievement of implementation strategies identified in CAMC's 2017 Community Health Needs Assessment and report on the Implementation Strategies in 2017, 2018 and 2019 were considered in the following ways:

a. Progress toward achievement of each implementation strategy was reviewed and assessed to determine if further action could bring additional improvement.

b. The results of each of the Kanawha Coalition's Workgroups was also reviewed and assessed to determine level of effectiveness in improving the identified area.

c. Once the 2020 CHNA top issues were identified from the community health needs assessment and analysis of CAMC's primary and secondary service areas, the issues were compared to the prior implementation strategy to determine if continued focus was warranted for any of the issues or if new strategies needed to be developed.

For example, Limited Access to Food was identified as a top issue in the 2017 CHNA, but not in the 2020 CHNA. CAMC made significant progress over the 2014–2019 time period. CAMC will continue to address this issue because access to healthy food is linked to Diabetes, Obesity, and Heart Disease which have been noted as priority issues within our community in 2020.

2020 - 2022 CAMC Community Benefit Plan Implementation Strategy

JOINT IMPLEMENTATION STRATEGIES: The following community benefit implementation strategies are inclusive of CAMC General, CAMC Memorial and CAMC Women and Children's hospitals. Due to our corporate structure, corporate support for planning, quality, safety, finance and other functions, we address these issues for all hospitals from a system perspective as Charleston Area Medical Center.

1. **Accountable Health Communities Program**
2. **Build the Base of Local Growers Providing Fresh Vegetables to CAMC**
3. **Provide HIV Primary Care and Decrease New HIV Infections**
4. **Build a Sustainable Research Infrastructure that Substantively Contributes to Improving WV Health Outcomes**
5. **Improve Access and Consumption of Local Produce**

#1	**Charleston Area Medical Center – General Hospital, Memorial Hospital and Women and Children's Hospital**
COMMUNITY HEALTH NEED	Diabetes, Obesity, Substance Use Disorder, Heart Disease, COPD, Limited Access to Food, Mental Health, Cancer
IDENTIFIED HEALTH ISSUE	Improve the health of Medicare and Medicaid beneficiaries with health-related social needs.
COMMUNITY SERVED	Medicaid, Medicare, and CHIP beneficiaries
PROGRAM DESCRIPTION AND RATIONALE	Accountable Health Communities Program - The AHC program will systematically identify the health-related social needs of community-dwelling Medicare and Medicaid beneficiaries, including those who are dually eligible, and address their identified needs. Socioeconomic factors affect health across the life span either by providing, or limiting, access to adequate housing, nutrition, transportation, education, a safe physical environment, and a voice in policy. A large body of scientific evidence supports a fundamental relationship between income inequality and negative health outcomes and that reducing poverty would improve population health. Furthermore, increasing access to affordable services related to nutrition, education, housing and safety (both physical and psychological) could also improve population health by partially mitigating the impact of poverty on overall health and well-being. The U.S. Census Bureau estimates that 18.3% of West Virginia (WV) residents are currently living in poverty. Child poverty continues to increase with almost 12% living in deep poverty, meaning these children survive on family incomes that are 50% below the poverty line. WV currently ranks 47th out of 50 states in overall health when considering community and environmental factors (secure housing, food security, availability of violence-free places), access to quality, affordable clinical care, public health programs and influence on policy, and individual health behaviors such as physical inactivity, poor diet, and substance use. WV also ranks 49th out of 50 states

	in negative health behaviors including excessive drinking, smoking, obesity, physical inactivity, as well as low high school graduation rate and is ranked 48th and 50th in poor mental health and poor physical health days, respectively and 49th in both premature death and preventable hospitalizations. Poor overall health is a major public health and financial concern in WV. According to the National Health Expenditure Data: Health Expenditures by State of Residence Report, it costs approximately $13,964 in total health spending including all privately and publically funded personal health care services to treat a patient. As of November 2015, WV had net expenditures, including CMS-64 adjustments, of more than $1.5 billion in health care with a projected cost of more than $2.5 billion by June 30, 2016. As of March 2016, 988,031 out of 1,844,128 West Virginians were enrolled in Medicare, Medicaid, and the Children's Health Insurance related programs. Approximately 54% of WV residents are community-dwelling beneficiaries and represent a significant proportion of state health care expenditures. Despite these alarming health care issues and costs, WV residents have shown both a desire and a readiness for a healthy change in at least two ways: health care providers are incorporating patient navigation services for traditionally non-clinical needs that affect health and a statewide grassroots movement "Try This West Virginia" is helping inspire citizens within communities to collaborate on promotion of healthy behaviors. In response to the need for an accountable healthy community model, we have established a partnership consortium composed of 48 clinical sites within nine health systems that collectively serve all 55 counties of WV. We believe this consortium offers the most competitive approach for addressing the social service needs in the state because of the sustained expertise, innovative clinical practices and designs, and established coordination of social services of partners involved. The proposed consortium had 296,208 encounters (128,734 unique beneficiary encounters) with community-dwelling beneficiaries in the past twelve months and is confident in meeting the requirement to present opportunities to screen at least 75,000 beneficiaries per year for Year 2 through Year 4 as well as 18,750 during Year 1 and 37,500 during Year 5.
STRATEGIC OBJECTIVE	**IMPLEMENT THE ACCOUNTABLE HEALTH COMMUNITIES GRANT TO IMPROVE OVERALL PATIENT WELL-BEING, INCREASE HEALTH EQUITY, AND REDUCE THE COST OF HEALTH CARE FOR THOSE PARTICIPATING.**
GOALS TO ADDRESS THE HEALTH NEED	1. Increase community-dwelling beneficiaries' awareness of community resources that might be available to address their unmet health-related social needs. 2. Increase the connection of high-risk community-dwelling beneficiaries with certain unmet health-related social needs to community resources through navigation services. 3. Optimize community capacity to address health-related social needs through quality improvement, data-driven decision making, and coordination and alignment of community-based resources.

	4. Reduce inpatient and outpatient health care utilization and the total costs of health care by addressing unmet health-related social needs through referral and connection to community services.
MEASURE TO EVALUATE THE IMPACT	• Increase preventive health screenings • Decrease ED visits • Decrease readmissions • Decrease healthcare costs • Increase appropriate utilization of outpatient services
TIMELINE	Five year project beginning 4/1/2017 through 3/31/2022
RESOURCES	Partners in Health Network (PIHN), the West Virginia Bureau for Medical Services (WVBMS), the West Virginia Center for Excellence in Disabilities (WVCED), the West Virginia Alliance of Family Resource Networks (WVAFRN), the West Virginia Medical Institute (WVMI), the West Virginia Healthy Kids and Family Coalition otherwise known as "Try This West Virginia", and the West Virginia University Institute for Community and Rural Health (WVUICRH).
PARTNERS/ COLLABORATORS	CAMC Labor and Delivery Department, Emergency Department, Behavioral Medicine Department, Family Medicine Center 48 clinical sites within nine health systems that collectively serve all 55 counties of WV

#2	**Charleston Area Medical Center – General Hospital, Memorial Hospital and Women and Children's Hospital**
COMMUNITY HEALTH NEED	The wealth creation approach intends to improve the livelihoods of people by creating wealth that is owned, controlled, and reinvested in places, so that they become valued partners. By creating local wealth based on identified needs, we can increase local growers to provide healthy food to our community and to address Limited Access to Food
IDENTIFIED HEALTH ISSUE	Diabetes, Obesity, Limited Access to Food, Lack of Job Opportunities
COMMUNITY SERVED	Growers and Artisans in West Virginia

PROGRAM DESCRIPTION AND RATIONALE	CAMC is working with The Greater Kanawha Valley Foundation to create and sustain a wealth creation value chain. This approach bridges conventional approaches to community and economic development by using a systems framework, working with wealth creation value chains. CAMC's 5 county primary service area is comprised of 356,000 people with small increases in the size of the working population since 1990. 18% of people and 25% of children live in poverty with little improvement over of the past 10 years. The health connection is that improvements in health care are associated with higher productivity in the workforce and for the economy overall. The value chain premises are that we need to be intentionally inclusive of local people and places as economic contributors to have a positive impact on wealth in our communities. This program's focus is on working with local growers and artisans to develop their capability to sell their produce and products to CAMC at a guaranteed quantity and price and once the process is established to roll it out to other "buyers."
STRATEGIC OBJECTIVE	**BUILD THE BASE OF LOCAL GROWERS AND ARTISANS SELLING FRESH VEGETABLES AND CRAFTED PRODUCTS TO CAMC**
GOALS TO ADDRESS THE HEALTH NEED	1. Support and encourage local growers to become GAP certified. 2. Provide guaranteed quantity and price to decrease risk to growers. 3. Support and encourage local artisans to submit product for review and selection for sale in CAMC gift shops.
MEASURE TO EVALUATE THE IMPACT	• Number of growers GAP certified • Number of growers providing fresh food to CAMC • Amount of produce purchased by CAMC • Amount of dollars going into our local grower community vs. out-of-state purchases. • Amount of crafted products purchased by CAMC
TIMELINE	2017 - 2022
RESOURCES	Greater Kanawha Valley Foundation for program support CAMC budget for food and craft purchases
PARTNERS/ COLLABORATORS	Greater Kanawha Valley Foundation Morrison's Food Services Corey Brothers WV Department of Agriculture Local Growers Local Artisans

#3	**Charleston Area Medical Center – General Hospital, Memorial Hospital and Women and Children's Hospital**
COMMUNITY HEALTH NEED	Substance Use Disorder, Hepatitis A/B/C, Mental Health
IDENTIFIED HEALTH ISSUE	HIV in West Virginia
COMMUNITY SERVED	Part C 19 county service area in southern West Virginia

PROGRAM DESCRIPTION AND RATIONALE	The CAMC/WVU Charleston Division Ryan White (RW) Program's mission is to increase access to services for individuals at-risk for, or infected with HIV disease and to provide culturally sensitive, quality, comprehensive HIV-related primary care, regardless of a patient's ability to pay. The program is currently the only fully funded Part C site in southern West Virginia and provides HIV primary care to approximately 375 individuals. 40 new patients were served in 2019. Services include primary, pregnancy/pediatric care and HIV specialty care; mental health; case management and social services; pharmacist counseling; linkage and retention and dental care. The program serves primarily the rural, underserved and impoverished counties of this area. As of December 31, 2018, a total of 1,891 were living with HIV/AIDS in West Virginia.
STRATEGIC OBJECTIVE	**PROVIDE HIV PRIMARY CARE AND DECREASE NEW HIV INFECTIONS**
GOALS TO ADDRESS THE HEALTH NEED	Quality Initiatives: 1. Client Linkage and Retention Program 2. Framingham Heart Study QI Project 3. Viral Load Suppression/HAART Project 4. Partnership for Health 5. Oral Care Program 6. Social Media Peer Support Initiative/rural outreach 7. Telemedicine Clinic 8. HIV/HEP C Harm Reduction Initiative Outreach: • Free rapid HIV testing distributed in clinics, home visits, presentations, colleges, and other HIV venues such as WV Pride Week activities • Linkage Coordinator client home visits and ongoing contact • Staff travel to Beckley for a monthly clinic • Telemedicine clinic • Collaboration with Prestera and WV Covenant House • Travel exhibits • Newsletters and educational brochures distribution • Facebook, newspaper outreach • UC and WV State University student programs • Emergency fund for immediate life-saving needs such as lack of utilities and temporary stable environment for homeless/unstably-housed HIV-positive clients, in or out of care. • Social Media client support Prevention: • Condom distribution • HIV Test kit education and distribution • Education Presentations and lectures • Partner PrEP education and treatment • Vaccines

MEASURE TO EVALUATE THE IMPACT	• Viral load suppression % • Number of new clients • Number of out-of-care clients returned to care • Number of clients on PrEP • Number of HIV test kits distributed/number of positives recorded • Client surveys • Number and cost of clients receiving oral care • Lipid screening/smoking/Framingham Heart Study scores • Social Media development stages • Number of presentations and audience • Number of clients receiving emergency funding
TIMELINE	2017-2022
RESOURCES	CAMC Charity Care CAMC Outpatient Care Center CHERI WVU - non-HIV specific outpatient clinics HRSA CDC Presidential AIDS Initiative Supplemental Grant Program Income Elton John AIDS Foundation First Presbyterian Church of Charleston
PARTNERS/ COLLABORATORS	CAMC Health Education and Research Institute, WVU School of Medicine/Charleston Division Elton John AIDS Foundation First Presbyterian Church of Charleston WV Covenant House Prestera Center Partnership For Health Ryan White Part B Program CAMC Foundation Beckley/Raleigh Health Department Physicians Dentists in Beckley CAMC Dental Clinic MidAtlantic AIDS Education and Training Center WV

#4	**Charleston Area Medical Center – General Hospital, Memorial Hospital and Women and Children's Hospital**
COMMUNITY HEALTH NEED	Substance Use Disorder, Cancer, Heart Disease, COPD
IDENTIFIED HEALTH ISSUE	Poor Health Outcomes in West Virginia
COMMUNITY SERVED	State-wide

<table>
<tr><td>PROGRAM DESCRIPTION AND RATIONALE</td><td>The WV Clinical and Translational Science Institute (WVCTSI) was created in 2012 through the initial Clinical and Translational Research award and has subsequently formed a well-connected, statewide health research network, creating the infrastructure to address the substantial health issues of WV. Since 2012, WVCTSI has been a transformative force, implementing investigator mentoring services, establishing pilot project funding, forming a practice-based research network, creating an integrated data repository of 2 million unique electronic medical records, developing a culture of research integrity, and working with our partners to establish trust and collaboration. Productivity has exponentially increased: publications tripled in Year 4 compared to Year 2, external funding applications more than doubled from Year 3 to 4, and external funding increased 80% over the past year. Funding is now directed to addiction and resultant emerging epidemics (hepatitis C), cancer, cardiovascular disease, and chronic lung disease.
Major Health Concerns: Poverty is pervasive in Appalachia with counties of “high poverty” (presence of poverty rates > 1.5 the U.S. average) located mainly in WV and Eastern Kentucky. Appalachian mortality rates have increased with most counties of eastern Kentucky and southern WV having mortality rates well in excess of the US average. WV ranks 47th among the 50 states in the 2015 America’s Health Rankings and at or near the bottom for a number of chronic diseases including cancer and cardiovascular disease. Moreover, WV has the highest prevalence of smoking. Drug addiction is highly prevalent; over the past 2 years, drug overdose deaths in WV increased 47% to 32.4 per 100,000 population, the highest per capita death rate in the United States. As a result of the increased prevalence of intravenous drug use, hepatitis B and C incidence have sky rocketed resulting in the highest and second highest rates, respectively, in the nation. Though there are a plethora of areas to potentially target, the impact will be greatest by focusing on the following health priorities: addiction and resultant emerging epidemics (hepatitis C), cancer, cardiovascular disease, and chronic lung disease.</td></tr>
<tr><td>STRATEGIC OBJECTIVE</td><td>BUILD A SUSTAINABLE RESEARCH INFRASTRUCTURE THAT SUBSTANTIVELY CONTRIBUTES TO IMPROVING WV HEALTH OUTCOMES BY 2022</td></tr>
<tr><td>GOALS TO ADDRESS THE HEALTH NEED</td><td>1. Recruit, train, and position for success the next generation of clinician scientists and translational researchers that excel in team science, positively impacting health in West Virginia.
2. Actively engage with multiple stakeholders, including communities, medical providers, and policy makers to drive research that improves health of West Virginians.</td></tr>
<tr><td>MEASURE TO EVALUATE THE IMPACT</td><td>Administrative Compact Logic Model
<table>
<tr><th>Activities</th><th>Outputs</th><th colspan="2">July 2017 – June 2019</th><th>July 2019 – June 2021</th><th>July 2021 – June 2022</th></tr>
<tr><td>Aim 1</td><td>Implement an effective operational structure that facilitates attainment of all proposed WVCTSI Specific Aims & projects.</td><td>Linked publications; Submitted grant proposals; Funded grants; Clinical trial enrollment; Health outcomes.</td><td>Increase in linked publications of 25% over 2016; Increase in submitted grant proposals of 10% over 2016.</td><td>Increase in funded proposals of 15% & trial enrollment 25% over 2016; 50% attainment of WVCTSI Sp. Aims.</td><td>Decrease drug overdose & CVD deaths; Increase earlier cancer diagnoses; 100% Aims attainment.</td></tr>
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	Aim 2	**Create policies & procedures to drive performance, comm. & collaboration among multiple, diverse stakeholders.**	WVCTSI membership; Collaborative projects; Funded investigators; Implemented policy and practice changes; Health outcomes.	Increase in WVCTSI membership of 20% over 2016; Increase in collaborative projects of 20% over 2016.	Increase in externally funded investigators of 10% over 2016; > 2 policy/practice changes per year.	Decrease trend in drug overdose and CVD deaths; Increase earlier stage cancer diagnosis.
	Aim 3	**Provide fiscal and resource management, ensuring cores resourcing and sustainability.**	Submitted grant proposals; Funded grants; External funding of core services; Health outcomes.	Increase in submitted grant proposals of 10% over 2016.	Increase in funded proposals of 15% over 2016; External funding of cores increased 15% over 2016.	External funding >50% operational cost of CRDEB, CRRF, & Lab Technologies cores.
	Aim 4	**Recruit talented, committed investigators addressing research questions relevant to the WVCTSI priority health areas.**	Successful investigator hiring in priority areas; Linked publications; Submitted grants; Funded grants; Health outcomes.	100% recruitment targets hired; Increase in linked publications of 25% and submitted grant proposals of 10% over 2016.	Increase in funded proposals of 15% over 2016.	Decrease trend in drug overdose and CVD deaths; Increase earlier stage cancer diagnosis.
TIMELINE	2017 - 2022					
RESOURCES	CTSI Grant CAMC					
PARTNERS/ COLLABORATORS	CAMC/CHERI/WVU/Lewisburg Medical School/Marshall/VA/NIOSH					

#5	**Charleston Area Medical Center – General Hospital, Memorial Hospital and Women and Children's Hospital**
COMMUNITY HEALTH NEED	Diabetes, Obesity, Limited Access to Food, Access and Availability of Early Childhood Education (LEARN
IDENTIFIED HEALTH ISSUE	Limited access and consumption to local produce
COMMUNITY SERVED	Young children attending childcare centers statewide and HealthyKids patients
PROGRAM DESCRIPTION AND RATIONALE	Farm to Childcare with Pop-Up Kids Markets at Childcare Centers and Fruit & Vegetable Prescriptions (FNV Rx) at HealthyKids The current health of children in WV predicts the future health of the state's population. This is because children who are overweight/obese as preschoolers are five times as likely as normal-weight children to be overweight/obese adults (CDC Vital Signs, August 2013). Over the past 30 years, childhood obesity has more than doubled in children and quadrupled in adolescents (Ogden, 2012). However, more recently childhood obesity rates

	nationwide have stabilized. Unfortunately, this is not the case for our children with West Virginia (WV) being only one of four states that has an increasing rate of obesity in two to four year olds at 16.4% (The State of Obesity, 2014). The preschool years are a critical time; preschool age children are developing their lifelong habits. Intervention efforts must be focused where they can be most impactful. Since over 60% of WV children are in non-parental care, where they spend most of their day and consume 50-100% of their Recommended Dietary Allowances (Ammerman, 2007), the early care and education setting strongly influences fruit and vegetable intake and physical activity. Farm to Childcare is the perfect opportunity to engage children in eating healthy, access local and fresh foods, gardening opportunities, agriculture and food education at an early age. Factors for the increasing rate of obesity in WV likely include the proportion of families living in poverty and experiencing inadequate access to fresh fruits and vegetables. Our state is ranked as the third most impoverished state in the United States (O'Leary, 2014). In 2013, at least 100,000 children in West Virginia lived in poverty. Living in poverty comes with persistent barriers to establishing good, consistent, health habits. These barriers include a "lack of access to healthy, affordable foods" (Food Research and Action Center, 2011) as well as poorer access to fresh foods (Levine, 2011). Fruit and Vegetable Prescription Project (FNV Rx) plan is modeled after two evidence-based interventions (Wholesome Wave and SNAP Stretch) that have proven success for increased fruit and vegetable intake in low-income families. The HealthyKids providers will write prescriptions for fruits and vegetables and patients redeem at local farmers markets or receive a produce box at their appointment.
STRATEGIC OBJECTIVE	**IMPROVE ACCESS AND CONSUMPTION OF LOCAL PRODUCE**
GOALS TO ADDRESS THE HEALTH NEED	Increase access to local produce by: 1. Hosting Pop-up Kids Markets at childcare centers in WV 2. "Prescribing" Fruit and Vegetable Rx to HealthyKids patients.
MEASURE TO EVALUATE THE IMPACT	1. The number of children served at the childcare centers. 2. The number of patients who received a FNV Rx 3. The value of the produce distributed at the childcare centers and with the FNV Rx
TIMELINE	WV Farmer's Market Season (May to September) each year
RESOURCES	Grant funding from: The Claude Worthington Benedum Foundation The Greater Kanawha Valley Foundation WVU Extension SNAP-ED Program
PARTNERS/ COLLABORATORS	KEYS 4 HealthyKids Turnrow Appalachian Farm Collective KISRA and Paradise Farms WVU Extension Family Nutrition Program SNAP-Ed Health Educators KEYS 4 HealthyKids Peer Learning Network DHHR/ECE nurse health consultants

CAMC GENERAL HOSPITAL COMMUNITY BENEFIT PLAN IMPLEMENTATION STRATEGY

CAMC General Hospital (268 beds) focuses primarily on the neurological, orthopedic, trauma and rehabilitation service lines. Medicine and general surgery cross both Memorial and General Hospitals.

CAMC GENERAL HOSPITAL COMMUNITY BENEFIT PLAN IMPLEMENTATION STRATEGY

#6	**CAMC General Hospital**
COMMUNITY HEALTH NEED	Substance Use Disorder, Diabetes, Heart Disease, Obesity, Cancer, COPD
IDENTIFIED HEALTH ISSUE	Access to tertiary care services in the rural and mountainous counties in the region requires a coordinated process and preparation of EMS personnel for the best outcome.
COMMUNITY SERVED	WV Office of EMS Region 3/4 Includes nine counties: Kanawha, Putnam, Boone, Clay, Fayette, Nicholas, Webster, Greenbrier, Pocahontas
PROGRAM DESCRIPTION AND RATIONALE	Charleston MedBase provides medical command to all EMS agencies (air and ground) in this region. Includes all medical oversight for all EMS units providing patient care, medical direction, performance improvement oversight and medical guidance based on State of WV Office of EMS protocols. Provides hospitals in the region with reports of incoming patients and treatments in progress. Provides regional hospitals with trauma, cardiac, stroke, sepsis and respiratory team activations. Provides regional hospitals with EMS liaisons for Red and Yellow Alert status. Also, provides dispatch of closest medical helicopter for all appropriate EMS requests for helicopters in this region and tracks response times.
STRATEGIC OBJECTIVE	**PROVIDE MEDICAL DIRECTION TO EMS AGENCIES**
GOALS TO ADDRESS THE HEALTH NEED	**1.** Ensure patients receive timely and appropriate care at the right location. **2.** Decrease mortality for trauma and patients with other types of alert status.
MEASURE TO EVALUATE THE IMPACT	• Number of calls taken • Types of calls • Communicators • Receiving facilities • Trauma alert activations • Other alerts: Stroke alert activations, sepsis alerts, cardiac alerts and respiratory alerts • Trends of calls by EMS agencies and types of calls
TIMELINE	24 hours a day; 7 days a week
RESOURCES	Charleston MedBase – CAMC General Hospital. Full cost is absorbed by CAMC General Hospital's operational budget with no financial assistance from any outside source. Staffed with Communication Specialist/Paramedics.
PARTNERS/ COLLABORATORS	WV Office of EMS, Bureau of Public Health, DHHR WV Trauma Registry and Trauma Committee WV EMS Regional Office (EMSOR) WV EMS Technical Support Network

CAMC MEMORIAL HOSPITAL COMMUNITY BENEFIT PLAN IMPLEMENTATION STRATEGY

CAMC Memorial Hospital (424 beds) supports the cardiac, peripheral vascular and oncology services lines with admissions and outpatient visits. Medicine and general surgery cross both Memorial and General Hospitals.

CAMC MEMORIAL HOSPITAL COMMUNITY BENEFIT PLAN IMPLEMENTATION STRATEGY

#7	**CAMC Memorial Hospital - CAMC Cancer Center**
COMMUNITY HEALTH NEED	Cancer, Access to Transportation
IDENTIFIED HEALTH ISSUE	Inability to receive cancer treatments due to little/no transportation options.
COMMUNITY SERVED	Primarily CAMC 12 county service area, but includes any patient seeking treatment at CAMC Cancer Center
PROGRAM DESCRIPTION AND RATIONALE	Transportation for services were expressed by those patients in need of assistance. Without transportation assistance patients did not have the ability to receive treatment for their cancer.
STRATEGIC OBJECTIVE	**PROVIDE TRANSPORTATION RESOURCES TO ADULTS WITH CANCER**
GOALS TO ADDRESS THE HEALTH NEED	1. Offer gas cards to those in need with no other transportation services for treatment.
MEASURE TO EVALUATE THE IMPACT	• Number of gas cards given to cancer patients
TIMELINE	2020-2022
RESOURCES	Gas cards purchased from the American Cancer Society & Mountains of Hope
PARTNERS/ COLLABORATORS	Mountains of Hope American Cancer Society

#8	**CAMC Memorial Hospital – CAMC Cancer Center**
COMMUNITY HEALTH NEED	Cancer
IDENTIFIED HEALTH ISSUE	Delay in care due to required dental clearance prior to receiving certain chemotherapy medications.
COMMUNITY SERVED	Primarily CAMC 12 county service area, but includes any patient seeking treatment at CAMC

PROGRAM DESCRIPTION AND RATIONALE	Dental services are not covered in most health insurance plans. Some medications given to treat cancer require a patient to have dental clearance from a dentist. Without insurance patients were delaying care or cancelling treatment appointments. A grant was obtained by the CAMC Foundation for assistance in securing required dental services. A local dental provider agreed to provide services in which grant funds could be used as payment.
STRATEGIC OBJECTIVE	**PROVIDE ACCESS TO DENTAL CARE SERVICES TO ADDRESS THE DELAY IN CARE WITH CANCER PATIENTS**
GOALS TO ADDRESS THE HEALTH NEED	1. Offer dental consultations to adult oncology patients requiring dental clearance.
MEASURE TO EVALUATE THE IMPACT	• Number of dental clearance letters obtained
TIMELINE	2020-2022
RESOURCES	CAMC Foundation Grant
PARTNERS/ COLLABORATORS	Ghareeb Dental Group CAMC Foundation

CAMC WOMEN AND CHILDREN'S HOSPITAL COMMUNITY BENEFIT PLAN IMPLEMENTATION STRATEGY

CAMC Women and Children's Hospital (146 beds) focuses on mother, baby, pediatric and gynecology service lines.

CAMC WOMEN AND CHILDREN'S HOSPITAL COMMUNITY BENEFIT PLAN IMPLEMENTATION STRATEGY

#9	**CAMC Women and Children's Hospital**
COMMUNITY HEALTH NEED	Substance Use Disorder
IDENTIFIED HEALTH ISSUE	Use of drugs by pregnant women
COMMUNITY SERVED	Primarily 12 County Service Area but includes any patient delivering at CAMC Women and Children's Hospital
PROGRAM DESCRIPTION AND RATIONALE	**WECARE** – West Virginia has an epidemic of drug addiction. WECARE is a comprehensive taskforce at Women and Children's Hospital developed to assist pregnant women and their babies. The taskforce includes staff members from the ER, Social Services, WHAP Program at the OB/GYN Center, NICU, Family Resource Center, Peer Recovery specialist, MB, L&D, and GYN. This multidisciplinary taskforce is a comprehensive way to meet the diverse needs of the patients dealing with SUD at Women and Children's Hospital.
STRATEGIC OBJECTIVE	**DECREASE THE NUMBER OF DRUG AFFECTED MOTHERS AND BABIES**
GOALS TO ADDRESS THE HEALTH NEED	1. Decrease the number of babies with Neonatal Abstinence Syndrome. 2. Prevent relapse of mothers. 3. Increase the use of long-acting reversible contraceptives.
MEASURE TO EVALUATE THE IMPACT	• Number of participants in WECARE • Length of stay for babies in the Neonatal Intensive Care Unit • Number of participants using LARC • Number remaining drug free
TIMELINE	2020-2022
RESOURCES	CAMC Operational Budget Prevention First Grant
PARTNERS/ COLLABORATORS	CAMC OB/GYN Center Neonatal Intensive Care Unit Family Resource Center WCH Social Services Kanawha County Drug Court Right from the Start Primary Care CAMC Women and Children's Hospital Emergency Department

#10	CAMC Women and Children's Hospital
COMMUNITY HEALTH NEED	Cancer, Mental Health
IDENTIFIED HEALTH ISSUE	Mental health services for pediatric oncology services was not available in our service area
COMMUNITY SERVED	Any pediatric inpatient.
PROGRAM DESCRIPTION AND RATIONALE	Mental Health services have not been available to children with cancer. This program provides a multidisciplinary approach with the Children's Infusion Center and the Family Resource Center. When a child is newly diagnosis with cancer, a consultation is sent for the FRC to connect with the child and their care givers. This approach providers the initial contact for mental health services while hospitalized or in the infusion center. New in 2020 is the development of the survivorship clinic. This is where children are seen post treatment and the multidisciplinary approach continues.
STRATEGIC OBJECTIVE	**PROVIDE MENTAL HEALTH SERVICES TO CHILDREN WITH CANCER**
GOALS TO ADDRESS THE HEALTH NEED	1. Offer mental health consultations to the pediatric oncology patients at CAMC Women and Children's Hospital
MEASURE TO EVALUATE THE IMPACT	• Number of children participating • Patient satisfaction
TIMELINE	2020-2022
RESOURCES	Operational Budget Prevention First Grant
PARTNERS/ COLLABORATORS	CAMC Women and Children's Oncology Team Hospice Compassionate Friends

#11	CAMC Women and Children's Hospital
COMMUNITY HEALTH NEED	Diabetes
IDENTIFIED HEALTH ISSUE	Diabetes in pediatric patients
COMMUNITY SERVED	Pediatric patients in CAMC's service area
PROGRAM DESCRIPTION AND RATIONALE	Offering a randomized, double-blind study comparing the effect of once-weekly dulaglutide with a placebo in pediatric patients with type 2 diabetes mellitus. Dulaglutide is like a natural hormone called glucagon-like peptide 1 that your body makes. Dulaglutide usually causes the release of insulin and lowers blood sugar in adults with Type II diabetes.
STRATEGIC OBJECTIVE	**Determine how dulaglutide compares to placebo in children and teens with type 2 diabetes.**

GOALS TO ADDRESS THE HEALTH NEED	The primary objective of this study is to test the hypothesis that dulaglutide given subcutaneously once a week for 26 weeks to children and adolescents with type 2 diabetes mellitus who have inadequate glycemic control, despite diet and exercise, with or without metformin and/or basal insulin, is superior to placebo in the treatment of T2DM, as measured by baseline to Week 26 change in hemoglobin A1c.
MEASURE TO EVALUATE THE IMPACT	• Change in HbA1c between baseline and Week 26 • Change in fasting blood glucose between baseline and Week 26 • Percentage of patients with HbA1c ≤6.5% at Week 26 • Change in body mass index between baseline and Week 26
TIMELINE	January 2017 through June 2022
RESOURCES	CAMC Clinical Trials Center
PARTNERS/ COLLABORATORS	CHERI, Eli Lilly and Company, Inc., WVU Pediatrics faculty

#12	**CAMC Women and Children's Hospital**
COMMUNITY HEALTH NEED	Diabetes, Obesity
IDENTIFIED HEALTH ISSUE	Diabetes in pediatric patients
COMMUNITY SERVED	Pediatric patients and their families in CAMC's service area
PROGRAM DESCRIPTION AND RATIONALE	West Virginia leads the nation in obesity and diabetes. Whereas most other states have improved or at least stabilized both obesity and diabetes rates, WV continues to have escalating rates each year. High school students have reached an overweight and obesity rate of 30.3% from WV CARDIAC data. Younger children age 2-4 years participating in WIC recently showed a statistically significant increase in obesity from 14% up to 16.4%. HealthyKids Wellness and Weight Management Clinic (HealthyKids) provides Stage 3 comprehensive, family-based, multidisciplinary weight management across the lifespan. HealthyKids also offers Stage 4 care which adds medication management and metabolic surgery. **CAMC Weight Loss Clinic and HealthyKids Wellness and Weight Management Clinic**
STRATEGIC OBJECTIVE	**REDUCE CHILDHOOD OBESITY, TREAT CO-MORBIDITIES AND PREVENT DIABETES**
GOALS TO ADDRESS THE HEALTH NEED	1. Increase access to HealthyKids Stage 3 and Stage 4 multi-disciplinary obesity management clinic 2. Increase awareness of Stage 3 and Stage 4 clinics to referring providers in CAMC service area 3. Reverse pre-diabetes in the pediatric patient population

MEASURE TO EVALUATE THE IMPACT	1. Track 3rd appointment out for existing and new patients to measure access 2. Track referrals by provider 3. Track patients HgbA1c over time and classify as normal (<5.7), pre-diabetic (5.7-6.4) or diabetic (>6.5).
TIMELINE	Ongoing
RESOURCES	Internal Funding Diabetes Prevention Grant from BPH Grant funding from Claude Worthington Benedum Foundation
PARTNERS/ COLLABORATORS	KEYS 4 HealthyKids HealthyKids Inc. WVU Extension SNAP-Ed CAMC Institute

#13	**CAMC Women and Children's Hospital**
COMMUNITY HEALTH NEED	Diabetes, Obesity
IDENTIFIED HEALTH ISSUE	Diabetes, Obesity in pediatric patients
COMMUNITY SERVED	Pediatric patients and their families in CAMC's service area
PROGRAM DESCRIPTION AND RATIONALE	West Virginia leads the nation in obesity and diabetes. Whereas most other states have improved or at least stabilized both obesity and diabetes rates, WV continues to have escalating rates each year. High school students have reached an overweight and obesity rate of 30.3% from WV CARDIAC data. Younger children age 2-4 years participating in WIC recently showed a statistically significant increase in obesity from 14% up to 16.4%. Steps 4 Stronger Families is a family-based Stage 2 Structured Weight Management Program for children and parents/guardians. This 12-week program is aimed at creating lifelong lifestyle transformations through healthy eating and regular physical activity. The program is divided into two sessions—a nutrition session and a physical activity session. During the nutrition session, a health educator teaches children and adults about healthy eating, portion control, food label reading, and meal preparation techniques. A different recipe is highlighted and prepared each week. In the exercise session, families are introduced to various physical activity options, such as body weight exercises led by an exercise physiologist. Research shows that a child is more successful in making healthy lifestyle changes when the whole family is involved and committed to adopting healthier habits.
STRATEGIC OBJECTIVE	**REDUCE/PREVENT CHILDHOOD OBESITY, TREAT CO-MORBIDITIES AND PREVENT DIABETES**

GOALS TO ADDRESS THE HEALTH NEED	1. Increase access to Stage 2 Structured Weight Management Programs by offering a virtual option 2. Increase awareness of Stage 2 Structured Weight Management Programs to referring providers in CAMC service area 3. Reverse pre-diabetes in the pediatric patient population 4. Decrease childhood obesity rates in the pediatric patient population
MEASURE TO EVALUATE THE IMPACT	1. Track # of families participating in the program 2. Track # of referrals by provider 3. Track patients HgbA1c over time and classify as normal (<5.7), pre-diabetic (5.7 -6.4) or diabetic (>6.5) 4. Track patient/adults' changes in BMI over time 5. Track patient/adult behavior changes
TIMELINE	Ongoing
RESOURCES	Grant Funding from: The Diabetes Prevention Grant from BPH The Claude Worthington Benedum Foundation
PARTNERS/ COLLABORATORS	KEYS 4 HealthyKids CAMC Weight Loss Clinic HealthyKids Wellness and Weight Management Clinic HealthyKids Inc. WVU Extension SNAP-Ed CAMC Institute