2017 COMMUNITY HEALTH NEEDS ASSESSMENT and 2017-2019 IMPLEMENTATION STRATEGY

CAMC General Hospital

CAMC Memorial Hospital

CAMC Women and Children's Hospital

Approved by the CAMC Board of Trustees, November 15, 2017

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

2017 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

2017 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 2017-2019 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.

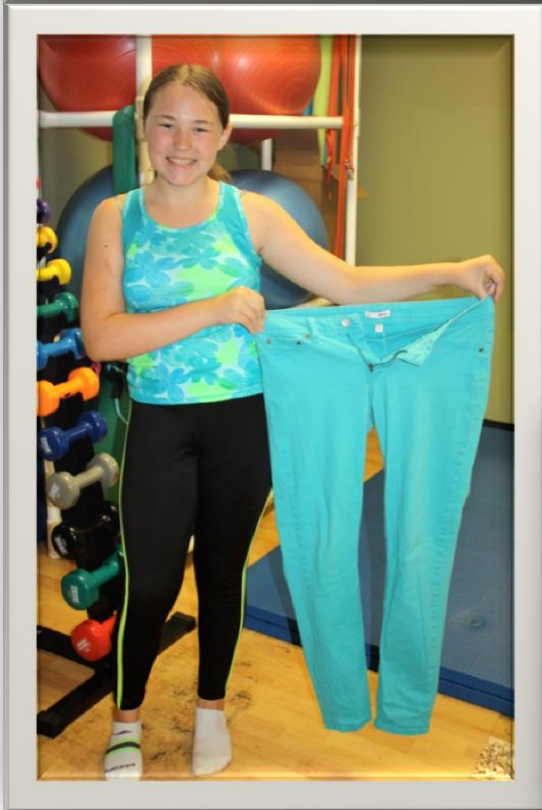
Charleston Area Medical Center is a not-for-profit four-hospital system comprised of CAMC Memorial Hospital, CAMC General Hospital, CAMC Women and Children's Hospital and CAMC Teays Valley Hospital. Our hospitals operate under one administrative structure and participate in joint strategic planning and 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 internal medicine, internal medicine/pediatrics, internal medicine/psychiatry, family medicine, pediatrics, surgery, psychiatry, obstetrics and gynecology, emergency medicine, urological surgery, osteopathic internship, internal medicine geriatric fellowship, vascular surgery fellowship, oral and maxillofacial surgery fellowship 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

2017 COMMUNITY HEALTH NEEDS ASSESSMENT



2017 COMMUNITY HEALTH NEEDS ASSESSMENT

Charleston Area Medical Center conducted its seventh triennial community health needs assessment through the Kanawha Coalition for Community Health Improvement in the first quarter of 2017. 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 Community Health Needs Assessment is conducted through the Kanawha Coalition for Community Health Improvement which was founded in 1994 by Kanawha County hospitals working in partnership with other local organizations. 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.*** Since the last needs assessment, the Kanawha Coalition for Community Health Improvement was selected to participate as a Population Health Framework Field Test Group by the National Quality Forum and as a Community Health Improvement Learning Collaborative member by the CDC in recognition of its long term success in needs assessment process and improvement of community health.

Steering Committee Members include:
John Ballengee, President, United Way of Central West Virginia
Michael Brumage, M.D., Executive Director and Health Officer, Kanawha-Charleston Health Department
Martha Cook Carter, CEO, FamilyCare Health Center
Alaina Crislip, Corporate Compliance Officer, Thomas Health System, Inc.
David Ferretti, Partner, Spilman Thomas & Battle, PLLC

Chris Ferro, Vice-President of Economic Development, Charleston Area Alliance
Brenda Grant, Chief Strategy Officer, Charleston Area Medical Center
Rahul Gupta, Health Commissioner, WV Bureau for Public Health
Brenda Isaac, Lead School Nurse, Kanawha County Schools
Dan Lauffer, CEO, Thomas Health System, Inc.
Reverend James Patterson, Director, Partnership of African American Churches
Cynthia Persily, Administrator, Highland Hospital
Jessica Wright, Director, Division of Health Promotion and Chronic Disease, WV Bureau for Public Health
Judy Crabtree, Executive Director, Kanawha Coalition for Community Health Improvement

The Kanawha Coalition for Community Health Improvement's goals for the Community Health Needs Assessment process include:

1. Assess the health needs of the citizens of Kanawha County.
2. Inventory available resources.
3. Determine unmet needs.
4. Evaluate and prioritize needs.
5. Involve affected organizations and constituencies in developing possible solutions.
6. Develop consensus.
7. Facilitate implementation.
8. Measure and evaluate outcomes.

The Coalition's 2017 Community Needs Assessment covers a wide variety of health care topics and was designed to determine perception of health care needs and health-related behaviors. The survey also addresses a number of social and economic concerns.

The assessment process encompasses the following:

- The collection, compilation and analysis of existing secondary county health data.
- Key informant interviews to gain input from professionals representative of key sectors of the community.
- A randomized household telephone survey to gain community input.
- Focus groups among residents of rural communities in Kanawha County.
- A health issues forum to set priorities for the Coalition's 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 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 and Kanawha Coalition websites and is used extensively by the community for community need, statistical and grant writing purposes.

Members of the Kanawha Coalition Steering Committee actively participate in the survey planning process to provide public health insight and ensure data integrity. Additionally, epidemiologists from the West Virginia Department of Health and Human Services work with the Coalition for question design for consistency with other surveys to allow benchmarks and comparisons. In addition, Key Informant Interviews provide in-depth information on the community.

The processes for obtaining input from persons who represent the community follows and include descriptions for the Household Telephone Survey, Focus Groups and Key Informant Interviews.

HOUSEHOLD TELEPHONE SURVEY

The following summarizes the data derived from the randomized household telephone survey completed by 291 households from February 13 through March 9, 2017.

Method:

The household surveys were conducted using appropriate quality controls which included involving research experts in the design of the survey instrument, thorough and consistent training of interviewers, and the use of reputable survey-analysis software. The principal investigator provided oversight to the survey process including data collection and entry. Data was collected and entered using a web-based survey. The report was compiled and verified for accuracy by members of the Kanawha Coalition for Community Health Improvement. The survey sample size results in a statistically significant 95% confidence interval with an error of margin of plus or minus 5.73%. Not all respondents answered every question; therefore the margin of error was adjusted and reported for each question based on the number of respondents. Numbers too small to be statistically significant are noted as such.

An independent sampling company randomly selected landline telephone numbers for Kanawha County households. The random landline sample consisted of 8,600 numbers which was screened for disconnects and businesses, resulting in a list of 4,568 numbers. A total of twenty-six nursing students from The University of Charleston received training and administered the phone survey.

Early release of estimates from the National Health Interview Survey, January – June 2015, National Center for Health Statistics, December 2015 (http://www.cdc.gov/nchs/nhis.htm), indicate that the number of American homes with only wireless telephones continues to grow. Nearly one-half of American homes (47.4%) had only wireless telephones during the first half of 2015 — an increase of 3.4 percentage points since the first half of 2014. More than two-thirds of all adults aged 25-34 and of adults renting their homes were living in wireless-only households. Furthermore, the report indicated that adults living in poverty (59.3%) and near poverty (54.4%) were more likely than higher income adults (45.7%) to be living in households with only wireless telephones. Based on this information, the Kanawha Coalition attempted to increase the number of responses among younger residents and lower income residents by doubling its acquired address-based sample of

households with only wireless telephones. This randomly selected sample of 5,600 households received postcards in the mail directing them to the online survey or to call the Kanawha Coalition to arrange a convenient time to take the survey by telephone.

As with any telephone survey, there are certain limitations. The results of the survey depend on the accuracy of the responses given by the persons interviewed. Self-reported behavior must be interpreted with caution. To assure proper sampling distribution, the demographics of the survey respondents were compared to county demographics based on the U.S. Census QuickFacts five year estimates 2010-2015. This comparison reveals an over-representation of respondents who were female, over age 55, widowed, those without children in the home and Caucasian. There was an under-representation of African Americans, people with lower-educational attainment (high school or less), households with children in the home, and those who had never been married.

FOCUS GROUPS

To understand community needs, focus groups were held throughout Kanawha County in November 2016. As one component of the Coalition's five-part assessment, focus groups offer insight into the needs, concerns and experiences of people whose voice is not often heard. Typically, focus groups are comprised of a small group of individuals, usually a vulnerable or target population. In this case focus groups were organized in communities located in different geographical locations in the county. It is important to note that the results reflect the perceptions of some community members, but may not necessarily represent all community members in Kanawha County.

Method:

A series of six focus groups were convened. Participants received an incentive for their completion of the focus group. The purpose of the discussion was to obtain input on issues that could impact the health of the residents of their communities. A total of 51 community members participated in focus groups in the following communities:

- Cross Lanes
- Elkview
- Kanawha City
- Marmet
- Miami
- London

The Kanawha Coalition for Community Health Improvement provided training to fourth year nursing students from the University of Charleston - School of Health Sciences to enable them to facilitate the groups. The students also compiled the results and prepared reports of the findings for the Kanawha Coalition.

Report of Findings:

Participants were provided with a map of a sample community along with a table that outlined the various social determinants of health (see below). The group facilitator asked participants to imagine walking through their own communities and to consider the various determinants. Topics discussed included economic stability, physical environment, education, food, social support and the health care system.

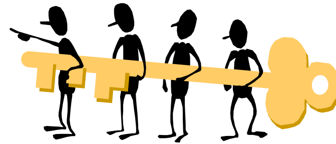
Social Determinants of Health

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Discrimination	Quality of care
Medical bills	Playgrounds	Higher education			
Support	Walkability				

Health Outcomes

Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

Key Informants by Sector



Area of Expertise	Response Percent	Response Count
Nonprofit Services/Organization	16.1%	14
Health Care Organization	11.5%	10
Government	8.0%	7
Public Health	8.0%	7
Business	6.9%	6
Health Care Provider	6.9%	6
Mental/Behavioral Health	5.7%	5
Academia	4.6%	4
Advocacy	1.1%	1
Education	4.6%	4
Faith-Based Organization	4.6%	4
First Response	4.6%	4
Funder	4.6%	4
Human Services and/or Charity	3.4%	3
Legal	2.3%	2
Youth Development	2.3%	2
Economic/Philanthropic	1.1%	1
Law Enforcement	1.1%	1
Pharmacy	1.1%	1
Veterans' Services	1.1%	1
Media	0.0%	0
Disability Services	0.0%	0
Recreation & Arts	0.0%	0
	answered question	87
	skipped question	0

KEY INFORMANT INTERVIEWS

The following summarizes the qualitative data derived from the key informant surveys conducted with 87 key informants in Kanawha County during April 2016.

Method: Key informants were identified by the Kanawha Coalition's Steering Committee. Of those identified, 87 completed the online survey. The survey included both standardized questions and open ended questions, to elicit a full range of responses.

Reporting of Findings: Key informants were asked to identify what they believe are the top three populations in Kanawha County with unmet needs. They also were asked to share what they thought were the biggest concerns in Kanawha County regarding health risk behaviors, clinical care, social and economic factors and the physical environment. They were asked to share what challenges and barriers they believe exist, along with their thoughts on what needs to happen to overcome these challenges and barriers. Finally, key informants were asked what they thought were the "top three" issues overall in Kanawha County and to name what they believed to be the top three health-related "assets and strengths" for the county.

KEY INFORMANTS

Pamela L. Alderman	University of Charleston
Alex Alston	Roark Sullivan Life Center
Jennifer Bailey	Kanawha County Circuit Court / Kanawha County Adult Drug Court
John Ballengee	United Way of Central West Virginia
Vicki Ballengee	Community Development Outreach Ministries
Marie Beaver	Rea of Hope, Inc.
Darick Biondi	Mount Juliet United Methodist Church
Elliott Birckhead	WV DHHR-BBHHF
Gary Bledsoe	Town of Clendenin
Michele Bowles	Regional Family Resource Network
Michael Brumage, MD	Kanawha Charleston Health Department
Steve Burton	First Choice
Dick Callaway	City of St. Albans
Samuel Carroll, MD	Veterans Administration
Martha Carter	FamilyCare Health Centers
Mary Caldwell	Valley Health WIC Program
Kelli Caseman	West Virginia School Based Health Assembly
Kristin Chandler	Behavioral Health, Charleston Area Medical Center
Mark Chandler	Triana Energy
Christine Compton	American Heart Association
Patty Deutsch	PSIMED / Private Practice
Stephanie DeWees	Kanawha Charleston Health Department
Steve Dexter	Thomas Health System
Dr. Michelle R. Easton	University of Charleston School of Pharmacy
Loren Farmer	Bob Burdette Center, Inc.

Karmin Ford	Alzheimer's Association
Dan Foster, MD	Charleston Area Medical Center
Dr. Michelle Foster	The Greater Kanawha Valley Foundation
Lynne Fruth	Fruth Pharmacy
Justin Gaull	Charleston Area Alliance
Ed Gaunch	WV State Senate
Bradley Henry, MD	Drs. Henry, Kinder and Associates
Steve Hewitt	United Way of Central WV
Paige Hill	Big Brothers Big Sisters
David Hodges	Charleston Fire Dept.
Brenda C. Isaac	Kanawha Charleston Health Department
Jamie Jeffrey, MD	KEYS4HealthyKids; HealthyKids Clinic at CAMC
Kim Johnson	Kanawha County Emergency Ambulance Authority
Michael Jones	The Kanawha Institute for Social Research & Action
Kristi Justice	Kanawha Communities That Care
Paulette Justice	Kanawha Valley Senior Services, Inc.
Sky Kershner	KPCC Counseling
Tricia Kingery	Kingery & Company
Major Darrell Kingsbury	The Salvation Army
JF Lacaria	WV Conference / The United Methodist Church
John D. Law	Kanawha-Charleston Health Department
Barbara Mallory	United Way of Central WV
Brienne Marco	Spilman Thomas & Battle
Jeri Matheney	Appalachian Power
Stanley Mills	Kanawha-Charleston Health Department
Lillian Morris	Charleston Area Medical Center
Bobbi Steele Muto	Marshall University School of Medicine
Chad Napier	Appalachia High Intensity Drug Trafficking Area
Duane F. Napier	University of Charleston
Anna Nicoloudakis	West Virginia University
Cynthia Persily	Highland
Gail Pitchford	Charleston Area Medical Center Foundation
Vicki Pleasant	Daymark
Renate Pore	West Virginians for Affordable Health Care
Amelia J. Potesta, DDS	Kanawha County Dental Health Council
Robin Rector	Charleston Area Medical Center
Louise Reese	West Virginia Primary Care Association
Larry E. Robertson	Kanawha Hospice Care, Inc.
Jason Roush	WVDHHR
Susie Salisbury	Charleston Area Alliance
Dr. Elizabeth J. Scharman	WV Poison Center and WVU School of Pharmacy
Sue Sergi	Charles and Mary Fayne Glotfelty Foundation

Angie Settle	West Virginia Health Right, Inc.
C.W. Sigman	Kanawha Emergency Management
Robin L. Tabor	WV State University
Kim Tieman	Benedum Foundation
Tom Tinder	WV Bar Foundation
Steve Tuck	Children's Home Society of West Virginia
Daniel Walker	Highland Hospital
Chris Walters	WV Senate
T. Welch	Charleston Job Corps Center
Barbara Wessels	UniCare Health Plan
Bill White	Rand Volunteer Fire Department
Taya R. Williams	West Virginia Department for Health and Human Resources
Adrienne Worthy	Legal Aid of WV
Karen Yost	Prestera Center
Kim Zwier	United Way/Fifth Third

The assessment process findings (County Health Data, Randomized Household Telephone Survey, Focus Groups and Key Informant Interviews) were systematically analyzed to develop a list of the top community health issues for Kanawha County. These included:

Cancer
Diabetes
Drugs (All types, does not include alcohol)
Heart Disease / Hypertension / Heart Attack / Stroke
Lack of Access to Mental Health and Addiction Services (Includes poor mental health days)
Limited Access to Healthy Foods
Obesity (Includes physical inactivity and lack of access to physical activity opportunities)
Tobacco Use

These issues were then prioritized through a county-wide Community Forum to establish the top three health issues the community will address over the next three-year time frame.

The Health Issues Forum was held on March 28, 2017. Over 100 community members were in attendance to prioritize the top issues on which the Kanawha Coalition for Community Health Improvement would focus its efforts over the next three years.

DASH BOARD FACT SHEETS for each top issue were provided at the community forum to assist attendees in prioritization of these eight issues.

The following ranking tool was used by the attendees at the forum to identify the top three priorities for Kanawha County:

Participant # ______ **Table #** __________

Scale: 1=Completely Disagree 2=Strongly Disagree 3=Disagree 4=Neither Agree nor Disagree 5=Agree 6=Strongly Agree 7=Completely Agree	**Problem is greater in Kanawha County compared to state or region**	**We can create a major improvement in the quality of life by addressing this problem**	**We can make progress on this problem in the short-term (3 years)**	**The progress we make over the 3 years can be sustained long-term**	**We can do something about this problem with existing leadership and resources**	**We can reduce long-term cost to the community by addressing this problem**	**TOTAL**
Cancer							
Diabetes							
Drugs *(All types, does not include alcohol)*							
Heart Disease / Hypertension / Heart Attack/ Stroke							
Lack of Access to Mental Health & Addiction Services *(Includes poor mental health days)*							
Limited Access to Healthy Foods							
Obesity *(Includes physical inactivity and lack of access to physical activity opportunities)*							
Tobacco Use							

The ranking of results follow:

	Issue	Score
1	Drugs (All types, does not include alcohol)	33.957
2	Diabetes	32.884
3	Obesity (Includes physical inactivity and lack of access to physical activity opportunities	32.826
4	Heart Disease / Hypertension / Heart Attack / Stroke	32.406
5	Limited Access to Healthy Foods	31.696
6	Tobacco Use	31.522
7	Lack of Access to Mental Health & Addiction Services (Includes poor mental health days)	31.275
8	Cancer	29.478

The top three prioritized issues are:

1) **Drugs (All types, does not include alcohol)**

2) **Diabetes**

3) **Obesity (Includes physical inactivity and lack of physical activity opportunities)**

The following fact sheet DASH BOARDS supported the selection of the top three issues:

DRUGS (ALL, EXCEPT ALCOHOL)

Overdose Death, Age-Adjusted Death Rate (Per 100,000 Pop.)

Kanawha County, WV (35.4)
West Virginia (33)
United States (13.4)

Courtesy: Community Commons,<www.communitycommons.org>, January 26, 2017

KEY INFORMANTS (KCCHI 2016-17 Assessment)

All Responses for Identification of Top Health Risks/Risky Behaviors

Answer Options	Response Percent	Response Count
Drug Use - Illicit drugs	79.3%	69
Drug Use - prescription medications	60.9%	53

HEALTH ISSUES

Answer Options	1	2	3	4	5	Percent Identifying Issue as 4 or 5	Rating Average	Response Count
Addiction	1	0	2	6	76	96.50%	4.84	85
Obesity/Overweight	0	2	5	19	59	91.80%	4.59	85
Diabetes	0	1	9	27	44	87.70%	4.41	81

HOUSEHOLD SURVEY RESPONDENTS (KCCHI 2016-17 Assessment)

What do you believe is the biggest health problem in Kanawha County?

Top Health Problem	2017	2014	2011	2006
Obesity/Overweight	**75**	70	93	77
Drugs (includes RX)	**51**	21	14	19
Pollution (water/air)	**11**	52	11	14
Cancer	**11**	21	20	26
Nutrition / Diet	**10**	4	3	6

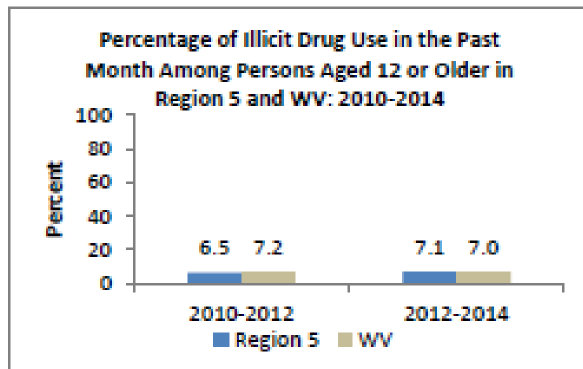
2017: 260 Respondents with margin of error 6.07 (+ or -)

Top Health Problems	Percentage Rankin		
	2017	Percent difference (From 2014)	2014
Obesity	93%	3%	90%
Substance Use Disorder (addiction)	92%	*	*
Cancer	85%	6%	79%
Diabetes	83%	(1%)	84%

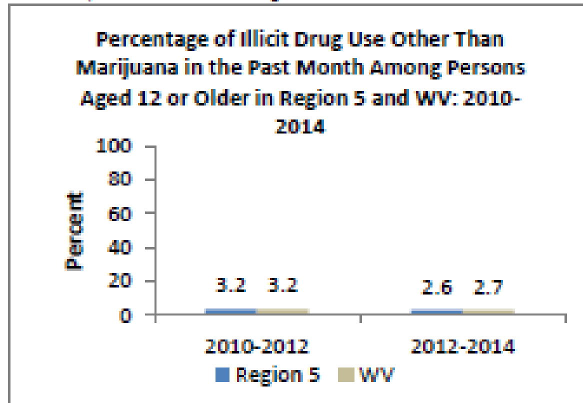
Note: Region 5 is made up of the following counties: Boone, Cabell, Clay, Kanawha, Lincoln, Logan, Mason, Mingo, Putnam, and Wayne.

Drug Consumption

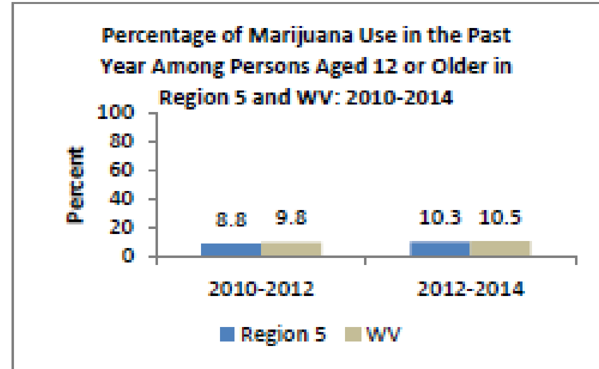
Drug Use Among Persons 12 and Older



Source: NSDUH, 2010-2014 (2010 Data - Revised March 2012)
Note: Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, including data from original methamphetamine questions but not including new methamphetamine items added in 2005 and 2006. See previous definition of Region 5.



Source: NSDUH, 2010-2014 (2010 Data - Revised March 2012)
Note: Illicit Drugs Other Than Marijuana includes cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, including data from original methamphetamine questions but not including new methamphetamine items added in 2005 and 2006. See previous definition of Region 5.



Source: NSDUH, 2010-2014 (2010 Data - Revised March 2012)
Note: See previous definition of Region 5.

Marijuana Use in the Past Month Among Persons Aged 12 or Older in Region 5 and WV: 2010-2014

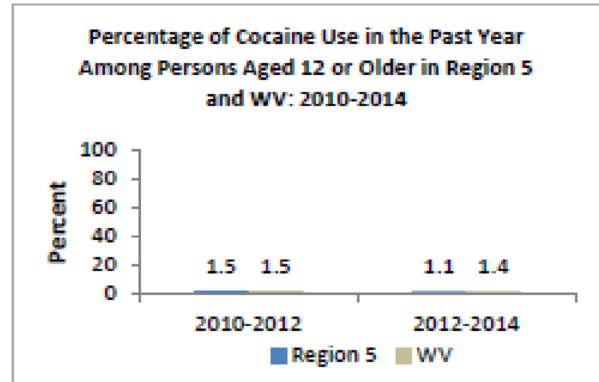
	2010-2012	2012-2014
Region 5	4.9%	5.8%
WV	5.6%	5.8%

Source: NSDUH, 2010-2014 (2010 Data - Revised March 2012)
Note See previous definition of Region 5.

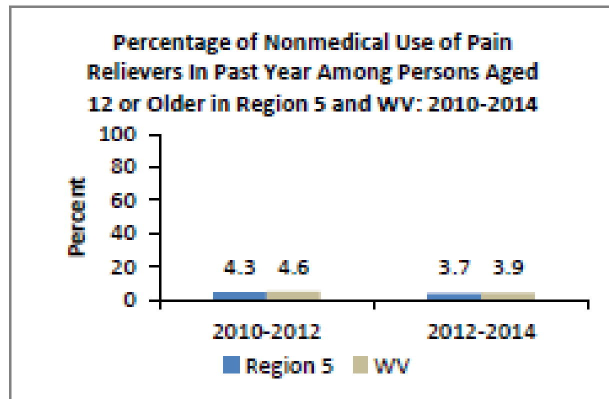
First Use of Marijuana Among Persons Aged 12 or Older in Region 5 and WV: 2010-2014

	2010-2012	2012-2014
Region 5	1.2%	1.3%
WV	1.6%	1.4%

Source: NSDUH, 2010-2014 (2010 Data - Revised March 2012)
Note: Average annual marijuana initiation rate = 100 * {[X1 ÷ (0.5 * X1 + X2)] ÷ 2}, where X1 is the number of marijuana initiates in the past 24 months and X2 is the number of persons who never used marijuana. Both of the computation components, X1 and X2, are based on a survey-weighted hierarchical Bayes estimation approach. The age group is based on a respondent's age at the time of the interview, not his or her age at first use. See previous definition of Region 5.



Source: NSDUH, 2010-2014 (2010 Data - Revised March 2012)
Note: See previous definition of Region 5.



Source: NSDUH, 2010-2014 (2010 Data - Revised March 2012)
Note: See previous definition of Region 5.

Drug Risk & Protective Factors

Perceptions of Great Risk of Smoking Marijuana Once a Month Among Persons Aged 12 or Older in Region 5 and WV: 2010-2014		
	2010-2012	2012-2014
Region 5	37.6%	33.8%
WV	37.1%	33.5%

Illicit Drug Dependence or Abuse in the Past Year Among Persons Aged 12 or Older in Region 5 & WV: 2010-2014		
	2010-2012	2012-2014
Region 5	3.0%	3.1%
WV	2.8%	2.8%

Illicit Drug Dependence in the Past Year Among Persons Aged 12 or Older in Region 5 and WV: 2010-2014		
	2010-2012	2012-2014
Region 5	2.2%	2.1%
WV	2.1%	2.0%

Needing But Not Receiving Treatment for Illicit Drug Use in the Past Year Among Persons Aged 12 or Older in Region 5 and WV: 2010-2014		
	2010-2012	2012-2014
Region 5	2.6%	2.8%
WV	2.5%	2.5%

Drug Consequences

2013 Morbidity Rates per 10,000 Discharges			
	Kanawha	WV	Rank in WV*
Drug Related Diagnosis	1243.1	441.5	1

Source: WV Health Care Authority
*There are 55 counties in West Virginia; 1st highest rate and 55th lowest rate.

2010-2014 Mortality Rates per 100,000 Population			
	Kanawha	WV	Rank in WV*
Drug Overdose	34.3	32.0	17

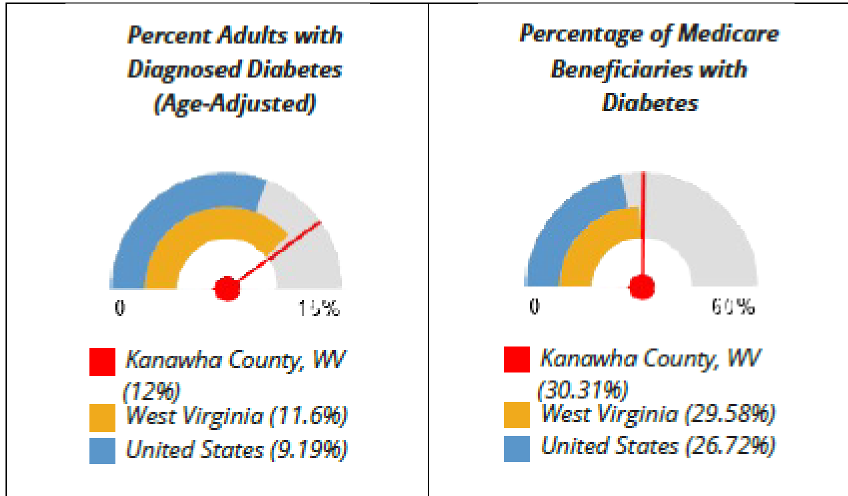
Source: WV Health Statistics Center, Vital Statistics System
*There are 55 counties in West Virginia; 1st highest rate and 55th lowest rate.

Domestic Violence Abusers Served by WVCADV by Behavioral Health Status in Kanawha County in 2012		
Behavioral Health Status	Number	Percent
Substance abuse identified as contributing to abuse	999	29.8%
Referred to a mental health provider	*	*

Source: WV Coalition Against Domestic Violence
Note: All indicators are self-reported from the survivor.
*Values based on 5 or fewer are suppressed to protect the confidentiality of the person.

High School Youth Risk Behavior Survey						
Question	West Virginia 2015	United States 2015	p-value	West Virginia 2015 More Likely Than United States 2015	United States 2015 More Likely Than West Virginia 2015	No Difference
Ever used marijuana (one or more times during their life)	34.7 (30.2–39.4) 1,553	38.6 (35.5–41.8) 15,157	0.15			●
Tried marijuana before age 13 years (for the first time)	8.4 (6.0–11.6) 1,567	7.5 (6.5–8.7) 15,198	0.54			●
Currently used marijuana (one or more times during the 30 days before the survey)	16.5 (13.4–20.3) 1,568	21.7 (19.3–24.2) 15,250	0.02		●	
Ever used synthetic marijuana (also called "K2", "Spice", "fake weed", "King Kong", "Yucatan Fire", "Skunk", or "Moon Rocks", one or more times during their life)	14.6 (12.3–17.3) 1,591	9.2 (7.9–10.8) 15,450	0.00	●		
Ever used cocaine (any form of cocaine, such as powder, crack, or freebase, one or more times during their life)	4.6 (3.0–6.9) 1,594	5.2 (4.3–6.2) 15,432	0.56			●
Ever used ecstasy (also called "MDMA," one or more times during their life)	6.7 (5.0–9.0) 1,595	5.0 (4.3–5.8) 15,397	0.11			●
Ever used heroin (also called "smack," "junk," or "China white," one or more times during their life)	3.5 (2.4–5.1) 1,587	2.1 (1.5–2.8) 15,424	0.05			●
Ever used methamphetamines (also called "speed," "crystal," "crank," or "ice," one or more times during their life)	4.7 (3.1–7.1) 1,595	3.0 (2.4–3.8) 14,889	0.10			●
Ever took steroids without a doctor's prescription (pills or shots, one or more times during their life)	4.6 (3.5–6.2) 1,603	3.5 (2.8–4.3) 15,165	0.12			●
Ever took prescription drugs without a doctor's prescription (such as Oxycontin, Percocet, Vicodin, codeine, Adderall, Ritalin, or Xanax, one or more times during their life)	15.5 (12.4–19.2) 1,592	16.8 (15.4–18.2) 15,367	0.46			●
Ever used inhalants (sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high, one or more times during their life)	9.4 (7.5–11.6) 1,592	7.0 (6.2–8.0) 15,158	0.03	●		
Ever injected any illegal drug (used a needle to inject any illegal drug into their body one or more times during their life)	3.5 (2.4–5.0) 1,586	1.8 (1.3–2.3) 14,786	0.01	●		
Were offered, sold, or given an illegal drug on school property (during the 12 months before the survey)	25.9 (22.9–29.2) 1,591	21.7 (19.4–24.2) 14,796	0.03	●		
Usually used marijuana by smoking it (in a joint, bong, pipe, or blunt during the 30 days before the survey)	–	90.0 (87.5–92.1) 2,650	~			
Ever used hallucinogenic drugs (such as LSD, acid, PCP, angel dust, mescaline, or mushrooms, one or more times during their life)	–	6.4 (5.3–7.7) 11,412	~			

DIABETES



Courtesy: Community Commons, <www.communitycommons.org>, January 26, 2017

HOUSEHOLD SURVEY RESPONDENTS (KCCHI 2016-17 Assessment)

2017: 260 Respondents with margin of error 6.07 (+ or -)

Top Health Problems	Percentage Ranking as "4 or 5" (big problem)							
	2017	Percent difference (From 2014)	2014	2011	2006	2002-03	1998	1995
Obesity	93%	3%	90%	90%	87%	*	*	*
Substance Use Disorder (addiction)	92%	*	*	*	*	*	*	*
Cancer	85%	6%	79%	77%	81%	84%	87%	86%
Diabetes	83%	(1%)	84%	78%	75%	75%	57%	45%

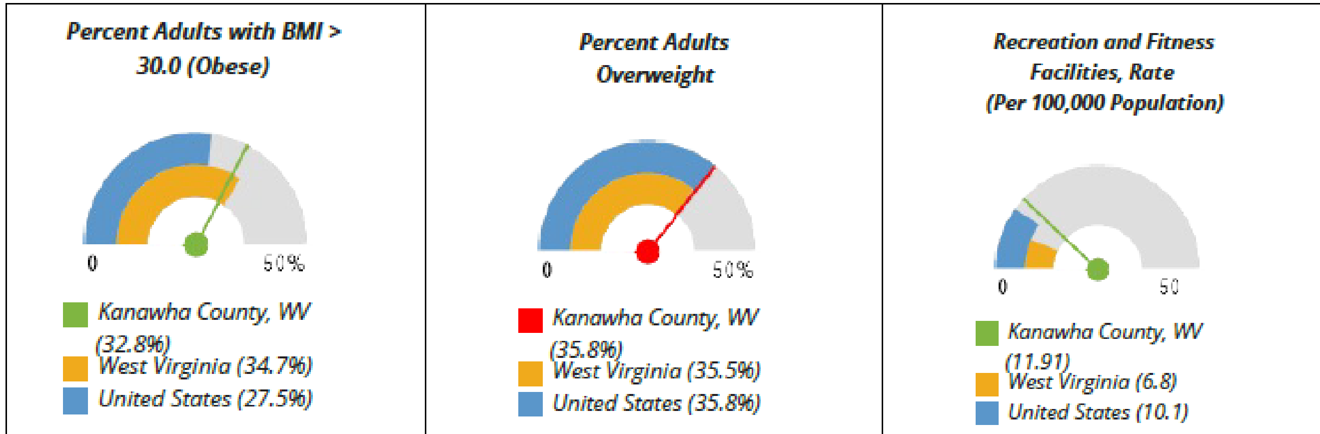
KEY INFORMANTS (KCCHI 2016-17 Assessment)

HEALTH ISSUES

Answer Options	1	2	3	4	5	Percent Identifying Issue as 4 or 5	Rating Average	Response Count
Addiction	1	0	2	6	76	96.50%	4.84	85
Obesity/Overweight	0	2	5	19	59	91.80%	4.59	85
Diabetes	0	1	9	27	44	87.70%	4.41	81

OBESITY

(INCLUDES PHYSICAL INACTIVITY and LACK OF ACCESS TO PHYSICAL ACTIVITY OPPORTUNITIES)



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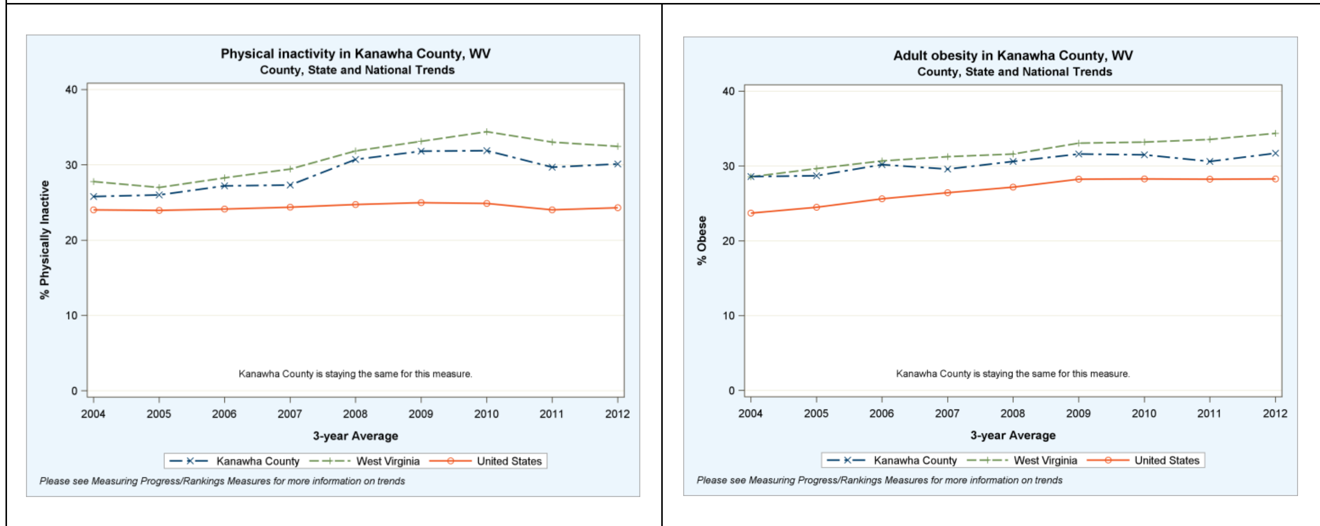


HOUSEHOLD SURVEY RESPONDENTS (KCCHI 2016-17 Assessment)

2017: 259 Respondents with margin of error 6.08 (+ or -)

Risky Behavior		Percentage Ranking as " 4 or 5" (big problem)						
	2017	Percent difference from 2014	2014	2011	2006	2002-03	1998	1995
Being Overweight	95%	4%	91%	90%	92%	92%	86%	80%
Lack of exercise	88%	3%	85%	86%	84%	84%	79%	77%

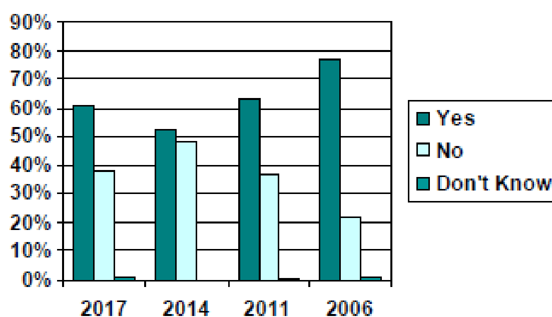
On an average day, how many hours do you watch television or play video games?

2017: 251 Respondents with margin of error 6.18 (+ or -)

Reason	2017		2014		2011	
	% responses	% responses	% responses	# respondents	% responses	# respondents
More than 6 hours a day	24%	60	16%	46	8%	20
4-6 hours a day	30%	75	24%	68	22%	55
1-3 hours a day	**40%**	**101**	47%	131	57%	139
Less than 1 hour a day	6%	14	9%	24	9%	21
Never	0%	0	3%	9	4%	9
Don't know	0.40%	1	1%	3	1%	2

2017: 251 Respondents with margin of error 6.18 (+ or -)

Vigorous activity during past month	2017	2014	2011	2006
Yes	33%	27%	37%	39%
No	**66%**	72%	63%	60%
Don't know	1%	0%	0%	0%



State Ranking
Source: 2017 F as in Fat Report
1=Highest Rate 51=Lowest Rate

Obesity rate among:	Rate	Rank
Adults	35.6%	2
High Schoolers	17.9%	N/A
10-17 year olds	18.5%	13
Low Income Age 2-4s	16.4%	9

KEY INFORMANTS (KCCHI 2016-17 Assessment)

HEALTH ISSUES

Answer Options	1	2	3	4	5	Percent Identifying Issue as 4 or 5	Rating Average	Response Count
Addiction	1	0	2	6	76	96.50%	4.84	85
Obesity/Overweight	0	2	5	19	59	91.80%	4.59	85

All Responses for Identification of Top Health Risks/Risky Behaviors

Answer Options	Response Percent	Response Count
Drug Use - Illicit drugs	79.3%	69
Drug Use - prescription medications	60.9%	53
Obesity	39.1%	34
Tobacco Use - smoking	34.5%	30
Child abuse/neglect	23.0%	20
Alcohol abuse	18.4%	16
Sedentary lifestyle	16.1%	14

High School Youth Risk Behavior Survey						
Question	West Virginia 2015	United States 2015	p-value	West Virginia 2015 More Likely Than United States 2015	United States 2015 More Likely Than West Virginia 2015	No Difference
Physical Activity						
Did not participate in at least 60 minutes of physical activity on at least 1 day (doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)	17.2 (14.8–19.8) 1,575	14.3 (12.9–15.8) 15,245	0.04	●		
Were not physically active at least 60 minutes per day on 5 or more days (doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)	55.1 (51.7–58.5) 1,575	51.4 (48.8–54.0) 15,245	0.07			●
Were not physically active at least 60 minutes per day on all 7 days (doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)	74.2 (71.5–76.8) 1,575	72.9 (71.2–74.6) 15,245	0.40			●
Played video or computer games or used a computer 3 or more hours per day (for something that was not school work on an average school day)	43.4 (39.3–47.5) 1,529	41.7 (39.3–44.2) 15,178	0.48			●
Watched 3 or more hours per day of television (on an average school day)	26.8 (23.6–30.2) 1,562	24.7 (22.7–26.9) 15,124	0.30			●
Did not attend physical education classes on 1 or more days (in an average week when they were in school)	63.2 (55.7–70.2) 1,562	48.4 (42.6–54.1) 15,172	0.00	●		
Did not attend physical education classes on all 5 days (in an average week when they were in school)	74.8 (67.4–81.0) 1,562	70.2 (63.8–76.0) 15,172	0.31			●
Did not play on at least one sports team (run by their school or community groups during the 12 months before the survey)	48.3 (44.5–52.0) 1,555	42.4 (38.8–46.0) 13,122	0.02	●		
Did not participate in muscle strengthening activities on 3 or more days (such as, push-ups, sit-ups, or weight lifting, during the 7 days before the survey)	–	46.6 (44.4–48.9) 11,320	~			
Obesity, Overweight, and Weight Control						
Had obesity (>= 95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts)	17.9 (15.1–21.2) 1,541	13.9 (12.5–15.5) 14,358	0.02	●		
Were overweight (>= 85th percentile but <95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts)	17.0 (15.0–19.1) 1,541	16.0 (15.2–16.9) 14,358	0.38			●
Described themselves as slightly or very overweight	32.7 (30.4–35.0) 1,583	31.5 (30.2–32.9) 15,320	0.37			●
Were not trying to lose weight	50.5 (48.1–52.9) 1,578	54.4 (52.7–56.0) 13,844	0.01		●	

STAKEHOLDER GROUP PROCESS

The Kanawha Coalition for Community Health Improvement uses the following process to address the identified top three issues from the community forum.

STEP ONE: Problem Identification (Health Issues Forum)

STEP TWO: Problem Analysis

- Collect information about priority issues
- Analyze the current situation around each issue
- Map resources
- Identify root causes
- Identify linkages and interdependencies among issues
- Make a statement about where the community is with regard to the problem/identify strengths, weaknesses, opportunities, threats (Current State)
- Identify desired state

STEP THREE: Develop Solutions

- Research interventions that have proven successful in other communities
- Prepare a Community Health Improvement Plan (CHIP) and strategies, including short-term and long-term strategies (Logic Model)
- Identify resource needs/potential and committed resources
- Identify, define and develop in-process and outcome measures

STEP FOUR: Measure Outcomes

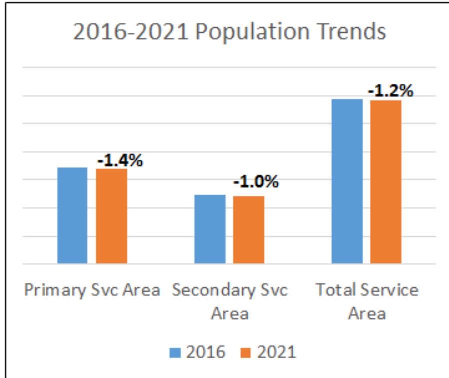
- Implement Community Health Improvement Plan (CHIP)
- Monitor and measure outcomes
- Revise CHIP as needed based on results
- Report progress

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, Thomas Memorial Hospital, St. Francis Hospital and Highland Hospital.

The Needs Assessment is made widely available to the public via the CAMC Health System website at www.camc.org, is available upon request from any CAMC hospital and is available on the Kanawha Coalition for Community Health Improvement's website at www.healthykanawha.org In addition, it is provided to all attendees at the community forum, to each workgroup member and to the CAMC Board of Trustees.

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	2016 Population	2021 Projected Population	2016-2021 Change	2016-2021 % Change
Boone County	22,560	21,713	-847	-3.8%
Fayette County	42,682	41,801	-881	-2.1%
Kanawha County	190,389	187,883	-2,506	-1.3%
Logan County	36,071	34,615	-1,456	-4.0%
Putnam County	52,780	53,733	953	1.8%
Primary Svc Area	**344,482**	**339,745**	**-4,737**	**-1.4%**
Clay County	9,188	8,729	-459	-5.0%
Jackson County	30,040	29,962	-78	-0.3%
Lincoln County	23,454	23,432	-22	-0.1%
Mercer County	61,608	61,153	-455	-0.7%
Nicholas County	25,488	25,086	-402	-1.6%
Raleigh County	81,009	80,116	-893	-1.1%
Roane County	13,445	13,344	-101	-0.8%
Secondary Svc Area	**244,232**	**241,822**	**-2,410**	**-1.0%**
Grand Total	**588,714**	**581,567**	**-7,147**	**-1.2%**

Variable	CAMC 12 County Service Area 2016	2021	Change	%Change
DEMOGRAPHIC CHARACTERISTICS				
Total Population	588,714	581,567	-7,147	-1.2%
Total Male Population	288,565	285,280	-3,285	-1.1%
Total Female Population	300,149	296,287	-3,862	-1.3%
Females, Child Bearing Age (15-44)	102,505	98,588	-3,917	-3.8%
Average Household Income	$59,548			
POPULATION DISTRIBUTION				
Age Distribution				
0-14	102,089	98,440	-3,649	-3.6%
15-17	21,093	21,384	291	1.4%
18-24	47,288	48,317	1,029	2.2%
25-34	66,453	63,499	-2,954	-4.4%
35-54	150,946	140,344	-10,602	-7.0%
55-64	90,228	86,473	-3,755	-4.2%
65+	110,617	123,110	12,493	11.3%
HOUSEHOLD INCOME DISTRIBUTION				
Total Households	247,358	245,264	-2,094	-0.8%
2016 Household Income				
<$15K	39,556	16.0%		
$15-25K	33,011	13.3%		
$25-50K	66,164	26.7%		
$50-75K	43,689	17.7%		
$75-100K	27,660	11.2%		
Over $100K	37,278	15.1%		
EDUCATION LEVEL				
Pop Age 25+	418,244			
2016 Adult Education Level Distribution		%		
Less than High School	25,975	6.2%		
Some High School	41,952	10.0%		
High School Degree	165,212	39.5%		
Some College/Assoc. Degree	106,529	25.5%		
Bachelor's Degree or Greater	78,576	18.8%		
RACE/ETHNICITY	418,244			
2016 Race/Ethnicity Distribution		%		
White Non-Hispanic	537,998	91.4%		
Black Non-Hispanic	28,281	4.8%		
Hispanic	6,842	1.2%		
Asian & Pacific Is. Non-Hispanic	4,454	0.8%		
All Others	11,139	1.9%		

Median Age and Income

County	2016 Median Age	2021 Median Age	2016 Total Households	2021 Total Households	2016 Median Household Income	2021 Median Household Income
Boone	42.3	43.4	9,382	9,025	$41,963	$42,437
Clay	43.2	43.6	3,480	3,302	$33,860	$36,105
Fayette	43.5	44.1	18,393	18,088	$35,759	$38,025
Jackson	43.6	44.5	11,993	12,025	$43,045	$45,857
Kanawha	43.0	43.9	82,764	81,890	$47,946	$51,598
Lincoln	42.7	43.8	8,821	8,865	$38,988	$42,190
Logan	43.2	44.5	14,109	13,611	$37,055	$38,993
Mercer	43.0	43.4	26,463	26,367	$37,370	$40,081
Nicholas	44.3	45.2	10,809	10,707	$41,498	$44,305
Putnam	42.0	43.3	22,761	23,259	$55,855	$57,829
Raleigh	41.8	42.4	31,582	31,375	$41,706	$44,226
Roane	44.9	45.9	6,162	6,163	$31,907	$35,833
Total	42.9	43.7	246,719	244,677	$43,543	$46,413

Labor Force Characteristics

		2016 Total Population 16+		Total Labor Force		Employed in Civilia Labor Force		Employed in Armed Forces		Unemployed in Labor Force		Females in Labor Force	
County	State	Count	%Down	Count	%Across	Count	%Across	Count	%Across	Count	%Across	Count	%Across
Kanawha	WV	155,155	32.4%	92,071	59.3%	85,380	55.0%	77	0.0%	6,614	4.3%	44,491	54.7%
Raleigh	WV	63,010	13.2%	30,999	49.2%	28,961	46.0%	43	0.1%	1,995	3.2%	14,854	46.9%
Mercer	WV	50,139	10.5%	24,369	48.6%	22,794	45.5%	3	0.0%	1,572	3.1%	11,615	43.9%
Putnam	WV	45,803	9.6%	27,043	59.0%	25,627	56.0%	50	0.1%	1,366	3.0%	11,934	50.8%
Fayette	WV	36,415	7.6%	16,961	46.6%	15,165	41.6%	7	0.0%	1,789	4.9%	7,651	42.2%
Logan	WV	28,511	6.0%	12,430	43.6%	11,029	38.7%	0	0.0%	1,401	4.9%	5,210	36.1%
Jackson	WV	23,689	5.0%	12,084	51.0%	11,122	47.0%	12	0.1%	950	4.0%	5,311	43.7%
Nicholas	WV	20,905	4.4%	10,449	50.0%	9,475	45.3%	22	0.1%	952	4.6%	4,766	44.5%
Boone	WV	18,669	3.9%	8,544	45.8%	7,610	40.8%	3	0.0%	931	5.0%	3,588	37.6%
Lincoln	WV	17,365	3.6%	8,103	46.7%	7,358	42.4%	1	0.0%	744	4.3%	3,684	41.7%
Roane	WV	11,926	2.5%	5,371	45.0%	4,803	40.3%	0	0.0%	568	4.8%	2,297	37.9%
Clay	WV	6,939	1.5%	3,264	47.0%	2,970	42.8%	0	0.0%	294	4.2%	1,438	41.4%
Total		478,526	100.0%	251,688	52.6%	232,294	48.5%	218	0.0%	19,176	4.0%	116,839	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, Fayette, Boone and Logan Counties (Primary Service Area Counties) and for Jackson, Roane, Clay, Nicholas, Lincoln, Raleigh and Mercer 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
2017 Community Benefit Planning
June 2017

Health Indicator	PRIMARY SERVICE AREA					SECONDARY SERVICE AREA						
	Kanawha	Putnam	Fayette	Boone	Logan	Jackson	Roane	Clay	Mercer	Nicholas	Lincoln	Raleigh
Prostate Cancer Death Rate												
Access to Food/Food Security												
Poor Physical Health Days												
PCP Ratio												
Breast Cancer Death Rate												
Flu Death Rate												
Homicide Death Rate												
Physical Inactivity												
Poor Mental Health Days												
Teen Birth Rate												
Alcohol Impaired Driving												
Alzheimers Death Rate												
Child Death Rate												
Children Living in Poverty												
Non-Hodgkin Lymphoma Incidence Rate												
People Below Poverty Rate												
Poor or Fair Health												
Brain Cancer Incidence Rate												
Child Abuse/Neglect												
Diabetes age 18+												
Heart Attack, CV Disease, Coronary Heart Disease												
Locations for Physical Activity												
Lung and Broncus Cancer Death Rate												
Mammogram Screening												
Melanoma Incidence Rate												
Oral Cancer Incidence Rate												
Ovarian Cancer Incidence Rate												
Stroke Death Rate												
Bladder Cancer Incidence Rate												
Childhood Obesity and Overweight												
Death Rate due to Intentional Self Harm												
Drug Overdose Death Rate												
Education Levels (High School/College)												
Motor Vehicle Crash Death Rate												
People Greater than 65 Poverty												
Adult Obesity												
Colorectal Cancer Death Rate												
Colorectal Cancer Incidence Rate												
Low Birthweight												
Lung Cancer Incidence Rate												
Preventable Hospitalizations												

From these reports, the following health issues were identified:

PRIMARY SERVICE AREA
1. Flu Death Rate 2. Physical Inactivity/Obesity 3. Melanoma Incidence Rate
SECONDARY SERVICE AREA
1. Prostate Cancer Death Rate 2. Access to Food/Food Insecurity 3. Poor Physical Health Days 4. Teen Birth Rate

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.

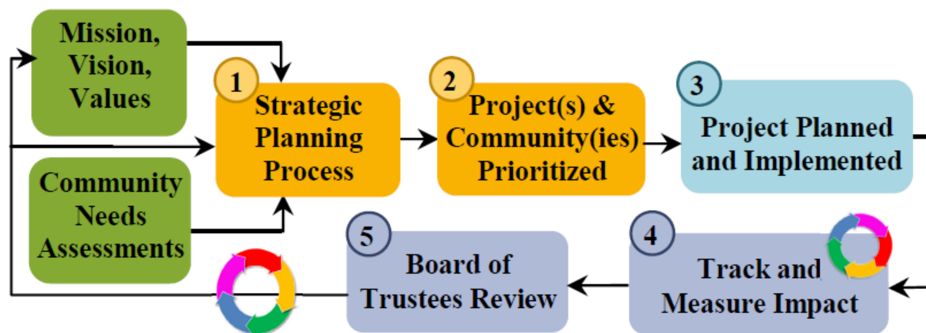
Although all CAMC hospitals are licensed separately, the Kanawha County Charleston hospitals jointly plan, implement goals and report into one governance structure. Because CAMC Teays Valley Hospital is located in Putnam County and serves as a community hospital, it completes its own community needs 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, February 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 Environmental Analysis. 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 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 the random telephone survey 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 three health issues identified during the Community Forum. 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	RANKING SCORE	How Addressed by CAMC (Implementation strategies and ongoing work) (I) = Implementation Strategy
1	**Drugs**	X	X	X	33.957	• Harm Reduction Program Support for Kanawha Charleston Health Department • Ryan White Program (I) • HIV/HVC Testing (I) • WECARE (I) • Drug Affected Incarcerated Pregnant Women (I)
2	**Diabetes**			X	32.884	• Diabetes in Children and Teens (I)
3	**Obesity**			X	32.826	• Keys for Healthy Kids
4	**Heart Disease**		X		32.406	• Basic Life Support Training • Heart Failure Readmission • CMS Indicator Compliance • Walk With a Doc • Decrease Incidence of Endocarditis (I)
5	**Limited Access to Food**	X	X	X	31.696	• Build the Base of Local Growers (I)
6	**Tobacco Use**	X	X	X	31.522	• American Lung Association Bike Trek • Great American Smokeout • Smoking Status of Each Patient and Offer Cessation Support • Smokefree Campuses • Tobacco Cessation – Pregnant Women (I)
7	**Lack of Access to Mental Health**	X	X	X	31.275	• Outpatient Mental Health Services for Uninsured and Underinsured • Treatment of Dementia (I) • Mental Health Services for Children with Cancer (I)

8	**Cancer**		X	X	28.765	• Relay for Life • Prostate Screening • Look Good/Feel Better • Cancer Support Group • Breast Cancer Awareness Activities • Breast Cancer Survivorship Group • Run for Your Life • Healthy Steps Exercise program • Mental Health Services for Children with Cancer (I)

The following community priority need is not addressed by CAMC hospitals in a systematic way and the rationale is provided for each.

	NEED NOT ADDRESSED	RANKING SCORE	REASON NOT ADDRESSED
	Melanoma Incidence Rate	Primary Service Area	Addressed by CAMC Teays Valley Hospital Implementation Strategy
	Teen Birth Rate	Secondary Service Area	Addressed by United Way of Central West Virginia Agencies

ALTHOUGH NOT COUNTED AS CAMC COMMUNITY BENEFIT, CAMC HEALTH SYTEM 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.

The CAMC Foundation's mission is to support and promote CAMC's delivery of excellent and compassionate health services and CAMC's contribution to the quality of life and economic vitality of the region. This is accomplished through support of many services to CAMC patients and employees. Each year, the Foundation provides support, through fundraising, to many programs and services at CAMC Women and Children's Hospital. This support seeks to assist CAMC Women and Children's hospital in its work to reduce medical costs, facilitate all aspects of health care, including support of the medical plan established by the primary care physician, while meeting the special needs of low-income children and families in the home environment. Specifically, the support from fundraising efforts of the CAMC Foundation to CAMC Women and Children's Hospital assists in the promotion of healthy outcomes that will decrease pre-term labor, infant mortality, unplanned C-Section rate, NICU/PICU length of stay and increase infant birth weight while promoting well-child care and immunizations. The Foundation also helps keep physicians and allied health care employees up-to-date by providing funding for many continuing

education programs. In 2016, the Foundation provided a $200,000 grant for continuing education for CAMC employees in support of keeping our employees well trained to better serve our patients. To ensure that our community receives care from well-trained health care professions, the Foundation also provided more than $300,000 for nursing, medical student and allied health educational assistance to individuals pursuing careers in health care.

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 2014 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 2014 Community Health Needs Assessment and report on the Implementation Strategies in 2014, 2015 and 2016 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 2017 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. CAMC made significant progress over the 2014-2016 time period, but because we believe we are nearing the "tipping point", will continue to address this issue through continuing to build our base of local growers.

2017 - 2019 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. **Examine How Brain Imaging Helps Guide Doctors in Treatment of Dementia and to Determine Whether These Changes in Treatment Lead to Better Medical Outcomes**
5. **Build a Sustainable Research Infrastructure that Substantively Contributes to Improving WV Health Outcomes**

#1	**Charleston Area Medical Center - General, Memorial, Women and Children's Hospitals**
COMMUNITY HEALTH NEED	Diabetes, Obesity, Drugs, Heart Disease, Limited Access to Food, Lack of Access to Mental Health Services, Cancer, Flu Death Rate
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, 2016.8 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, Memorial, Women and Children's Hospitals**
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	Limited Access to Food, Diabetes, Obesity
COMMUNITY SERVED	Growers in our Primary and Secondary Service Area
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 to develop their capability to sell their produce 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 SELLING FRESH VEGETABLES 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.
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.
TIMELINE	2017 - 2019
RESOURCES	Greater Kanawha Valley Foundation for program support CAMC budget for food purchases
PARTNERS/ COLLABORATORS	Greater Kanawha Valley Foundation Morrison's Food Services Corey Brothers WV Department of Agriculture Local Growers

#3	**Charleston Area Medical Center – General Hospital, Memorial Hospital and Women and Children's Hospital**
COMMUNITY HEALTH NEED	Drugs, Lack of Mental Health Services
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 350 individuals. 38 new patients were served in 2016. 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, 2016, a total of 1,746 were living with HIV/AIDS with 739 (42%) reported from the program's service area.
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	2017-2019
RESOURCES	CAMC Charity Care - $512,061 CAMC Outpatient Care Center - $14,000 CHERI - $74,900 WVU - $15,000 non-HIV specific outpatient clinics HRSA - $480,272 CDC - $27,500 Presidential AIDS Initiative Supplemental Grant - $40,000 Program Income - $23,420 Elton John AIDS Foundation – $93,000 First Presbyterian Church of Charleston - $3,000

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	Lack of Access to Mental Health
IDENTIFIED HEALTH ISSUE	Dementia
COMMUNITY SERVED	CAMC Service Area
PROGRAM DESCRIPTION AND RATIONALE	The Imaging Dementia—Evidence for Amyloid Scanning (IDEAS) Study will assess the impact of amyloid PET on patient outcomes under Coverage with Evidence in patients meeting Appropriate Use Criteria for amyloid PET.
STRATEGIC OBJECTIVE	**EXAMINE HOW BRAIN IMAGING HELPS GUIDE DOCTORS IN TREATMENT OF DEMENTIA AND TO DETERMINE WHETHER THESE CHANGES IN TREATMENT LEAD TO BETTER MEDICAL OUTCOMES**
GOALS TO ADDRESS THE HEALTH NEED	1. Enroll patients. 2. Estimate how frequently amyloid PET leads to a change in primary suspected etiological diagnosis. 3. Estimate the frequency of reduction in unnecessary diagnostic tests and AD drug therapy.
MEASURE TO EVALUATE THE IMPACT	• Test whether amyloid PET imaging will lead to a ≥ 30% change between *intended* and *actual* patient management within 90 days (75-105 day allowable range) in a composite measure of at least one of the following: a) AD drug therapy; b) Other drug therapy; and c) Counseling about safety and future planning.
TIMELINE	2017-2020
RESOURCES	CAMC Clinical Trials Center
PARTNERS/ COLLABORATORS	CHERI, ACRIN, CMS (Medicare), WVU Department of Internal Medicine and Behavioral Medicine

#5	**Charleston Area Medical Center – General Hospital, Memorial Hospital and Women and Children's Hospital**
COMMUNITY HEALTH NEED	Drugs, Cancer, Heart Disease
IDENTIFIED HEALTH ISSUE	Poor Health Outcomes in West Virginia
COMMUNITY SERVED	State-wide
PROGRAM DESCRIPTION AND RATIONALE	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.
STRATEGIC OBJECTIVE	**BUILD A SUSTAINABLE RESEARCH INFRASTRUCTURE THAT SUBSTANTIVELY CONTRIBUTES TO IMPROVING WV HEALTH OUTCOMES BY 2022**
GOALS TO ADDRESS THE HEALTH NEED	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.
MEASURE TO EVALUATE THE IMPACT	**Administrative Compact Logic Model** **Activities** **Outputs** **July 2017 – June 2019** **July 2019 – June 2021** **July 2021 – June 2022**

	Aim 1	**Implement an effective operational structure that facilitates attainment of all proposed WVCTSI Specific Aims & projects.**	Linked publications; Submitted grant proposals; Funded grants; Clinical trial enrollment; Health outcomes.	Increase in linked publications of 25% over 2016; Increase in submitted grant proposals of 10% over 2016.	Increase in funded proposals of 15% & trial enrollment 25% over 2016; 50% attainment of WVCTSI Sp. Aims.	Decrease drug overdose & CVD deaths; Increase earlier cancer diagnoses; 100% Aims attainment.
	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 $50 million CAMC $1.5 million over 5 years					
PARTNERS/ COLLABORATORS	CAMC/CHERI/WVU/Lewisburg Medical School/Marshall/VA/NIOSH					

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	Drugs, Diabetes, Heart Disease, Obesity, Cancer
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.

#7	**CAMC Memorial Hospital**
COMMUNITY HEALTH NEED	Drugs, Lack of Access to Mental Health Services
IDENTIFIED HEALTH ISSUE	Substance Abuse/IV Drug Use
COMMUNITY SERVED	Endocarditis patients at CAMC Memorial Hospital from our primary and secondary service area and others seeking service at CAMC.
PROGRAM DESCRIPTION AND RATIONALE	Provide drug counseling and rehab options for patients with endocarditis. Partnered with other organizations for drug rehabilitation either after surgery or while waiting for surgery.
STRATEGIC OBJECTIVE	**PREVENT DRUG RELAPSE AND DECREASE INCIDENCE OF ENDOCARDITIS**
GOALS TO ADDRESS THE HEALTH NEED	1. Reduce the risk of recurrent endocarditis due to persistent IV drug use at discharge following a valve surgery. 2. Make a drug rehab program available with short and long term goals for each individual with substance abuse.
MEASURE TO EVALUATE THE IMPACT	• Number of readmissions for recurrent endocarditis • Number of readmissions for recurrent endocarditis after drug rehab • Number of readmissions for recurrent endocarditis after drug rehab with a positive drug screen
TIMELINE	One year to determine feasibility of the program based on outcomes
RESOURCES	Substance abuse outpatient programs, inpatient drug rehab programs, Social Services and Infectious Disease departments at CAMC
PARTNERS/ COLLABORATORS	CAMC Medical Staff Highland Hospital Social Services Drug Rehab Programs

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.

#8	CAMC Women and Children's Hospital
COMMUNITY HEALTH NEED	Drugs
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 program for pregnant women that offers group and individual counseling at the Family Resource Center on the CAMC Women and Children's Hospital campus to assist mothers to the road of recovery. The program also includes work with Right From the Start for relapse prevention and partners with the Kanawha Charleston Health Department for long-acting reversible contraceptives (LARC -methods of birth control that provide effective contraception for an extended period without requiring user action).
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	2017-2019
RESOURCES	CAMC Operational Budget Prevention First Grant
PARTNERS/ COLLABORATORS	Women's Medicine Center Neonatal Intensive Care Unit Family Resource Center Kanawha Charleston Health Department Kanawha County Drug Court Right from the Start Primary Care CAMC Women and Children's Hospital Emergency Department

#9	CAMC Women and Children's Hospital
COMMUNITY HEALTH NEED	Drugs
IDENTIFIED HEALTH ISSUE	Use of drugs by incarcerated pregnant women
COMMUNITY SERVED	Any incarcerated woman delivering at CAMC Women and Children's Hospital
PROGRAM DESCRIPTION AND RATIONALE	**Telehealth at South Central Regional Jail** - West Virginia has an epidemic of drug addiction with a high rate of addiction for incarcerated women. This comprehensive program will assist patients who are incarcerated obtain therapy services. Telehealth would allow pregnant women who are located at South Central Regional Jail to participate in individual or group therapy via the telehealth system.
STRATEGIC OBJECTIVE	**DECREASE THE NUMBER OF DRUG AFFECTED MOTHERS AND BABIES AMONG INCARCERATED WOMEN**
GOALS TO ADDRESS THE HEALTH NEED	1. Offer a program for pregnant women who are dealing with addiction via telemedicine. 2. Decrease the number of babies with Neonatal Abstinence Syndrome. 3. Prevent relapse of mothers.
MEASURE TO EVALUATE THE IMPACT	• Number of participants • Overall patient satisfaction • Number drug free at delivery • Number remaining drug fee
TIMELINE	2017-2019
RESOURCES	Operational Budget Prevention First Grant
PARTNERS/ COLLABORATORS	Women's Medicine Center Neonatal Intensive Care Unit Kanawha Charleston Health Department Kanawha County Drug Court/Jail system Right from the Start Primary Care CAMC Women and Children's Hospital Emergency Department

#10	CAMC Women and Children's Hospital
COMMUNITY HEALTH NEED	Tobacco Use
IDENTIFIED HEALTH ISSUE	Tobacco use among pregnant women resulting in low birth weight babies.
COMMUNITY SERVED	Any patient delivering at Women and Children's Hospital. Any pregnant woman interested in attending a cessation class at the Family Resource Center
PROGRAM DESCRIPTION AND RATIONALE	Offer a tobacco cessation class at the Family Resource Center and ongoing weekly one-on-one smoking cessation consultations at the Women's Medicine Center

STRATEGIC OBJECTIVE	**DECREASE THE NUMBER OF PREGNANT WOMEN USING TOBACCO PRODUCTS**
GOALS TO ADDRESS THE HEALTH NEED	1. Offer smoking cessation classes at the CAMC Family Resource Center on the Women and Children's Hospital campus on a quarterly basis. 2. Offer weekly one-on-one smoking cessation consultation to patients in the Women's Medicine Center.
MEASURE TO EVALUATE THE IMPACT	• Number of participants in the Tobacco Cessation Classes • Number of participants who participate in the weekly cessation consultation sessions • Number who quit tobacco use
TIMELINE	2017-2019
RESOURCES	Operational Budget Grant from the state of West Virginia
PARTNERS/ COLLABORATORS	Women's Medicine Center

#11	**CAMC Women and Children's Hospital**
COMMUNITY HEALTH NEED	Tobacco Use
IDENTIFIED HEALTH ISSUE	Smoking/Vaping and Tobacco use in Pregnant Women
COMMUNITY SERVED	CAMC Service Area
PROGRAM DESCRIPTION AND RATIONALE	Tobacco Free for Baby & Me is an evidence based program for pregnant mothers and their households to assist them in quitting tobacco
STRATEGIC OBJECTIVE	**TOBACCO CESSATION IN THE PREGNANT POPULATION AND THEIR HOUSEHOLDS**
GOALS TO ADDRESS THE HEALTH NEED	1. Provide tools/ education for pregnant women to stop tobacco use. 2. Eliminate exposure to secondhand smoke. 3. Promote quitting among adults and youth in the household. 4. Support the effort to remain quit post-partum.
MEASURE TO EVALUATE THE IMPACT	• Number participating • Number quitting tobacco use • Number who remain tobacco free post-partum
TIMELINE	2017-2019
RESOURCES	WV Quitline WV Dept. of Tobacco Prevention The WV Coalition for a Smoke Free Environment Centers for Disease Control Kanawha Charleston Health Department CAMC Institute

PARTNERS/ COLLABORATORS	WV Department of Tobacco Prevention CAMC Foundation Women's Medicine Center/WCH

#12	**CAMC Women and Children's Hospital**
COMMUNITY HEALTH NEED	Cancer, Lack of Access to Mental Health Services
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 cancers. This program will provide consultations supporting the goal of a providing multidisciplinary approach to care for children with cancer. This program provides an initial contact for mental health services while hospitalized and, if needed, post- discharge or at any point during treatment or recovery.
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	2017-2019
RESOURCES	Operational Budget Prevention First Grant
PARTNERS/ COLLABORATORS	CAMC Women and Children's Oncology Team Hospice Compassionate Friends

#13	**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