

Community Health Needs Assessment

Prepared for
VALLEY HEALTH SYSTEM
Winchester Medical Center

(In collaboration with Virginia
Department of Health Lord Fairfax
Health District)

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EXECUTIVE SUMMARY

Introduction

This community health needs assessment (CHNA) was conducted by Winchester Medical Center (WMC or the hospital) to identify community health needs and to inform the subsequent development of an implementation strategy to address identified priority needs. The hospital's assessment of community health needs also responds to community benefit regulatory requirements.

Federal regulations require that tax-exempt hospital facilities conduct a CHNA every three years and develop an implementation strategy that addresses priority community health needs. Tax-exempt hospitals also are required to report information about community benefits they provide on IRS Form 990, Schedule H. As specified in the instructions to IRS Form 990, Schedule H, community benefits are programs or activities that provide treatment and/or promote health and healing as a response to identified community needs.

Community benefit activities and programs seek to achieve several objectives, including:

- improving access to health services,
- enhancing public health,
- advancing increased general knowledge, and
- relief of a government burden to improve health.¹

To be reported, community need for the activity or program must be established. Needs can be established by conducting a community health needs assessment.

The 2010 Patient Protection and Affordable Care Act (PPACA) requires each tax-exempt hospital to “conduct a [CHNA] every three years and adopt an implementation strategy to meet the community health needs identified through such assessment.”

CHNAs seek to identify priority health status and access issues for particular geographic areas and populations by focusing on the following questions:

- **Who** in the community is most vulnerable in terms of health status or access to care?
- **What** are the unique health status and/or access needs for these populations?
- **Where** do these people live in the community?
- **Why** are these problems present?

The question of how the organization can best use its limited charitable resources to address priority needs will be the subject of the hospital's separate implementation strategy.

¹ Instructions for IRS form 990 Schedule H, 2015.

Methodological Summary

Community health needs were identified by collecting and analyzing data and information from multiple sources. Statistics for numerous health status, health care access, and related indicators were analyzed, including comparisons to benchmarks where possible. The principal findings of recent health assessments conducted by other organizations were reviewed, as well.

Input from persons representing the broad interests of the community, including individuals with special knowledge of, or expertise in, public health, were taken into account via interviews and, community response sessions to include 19 group interviews based upon sectors, and a community health survey with 1,990 respondents.

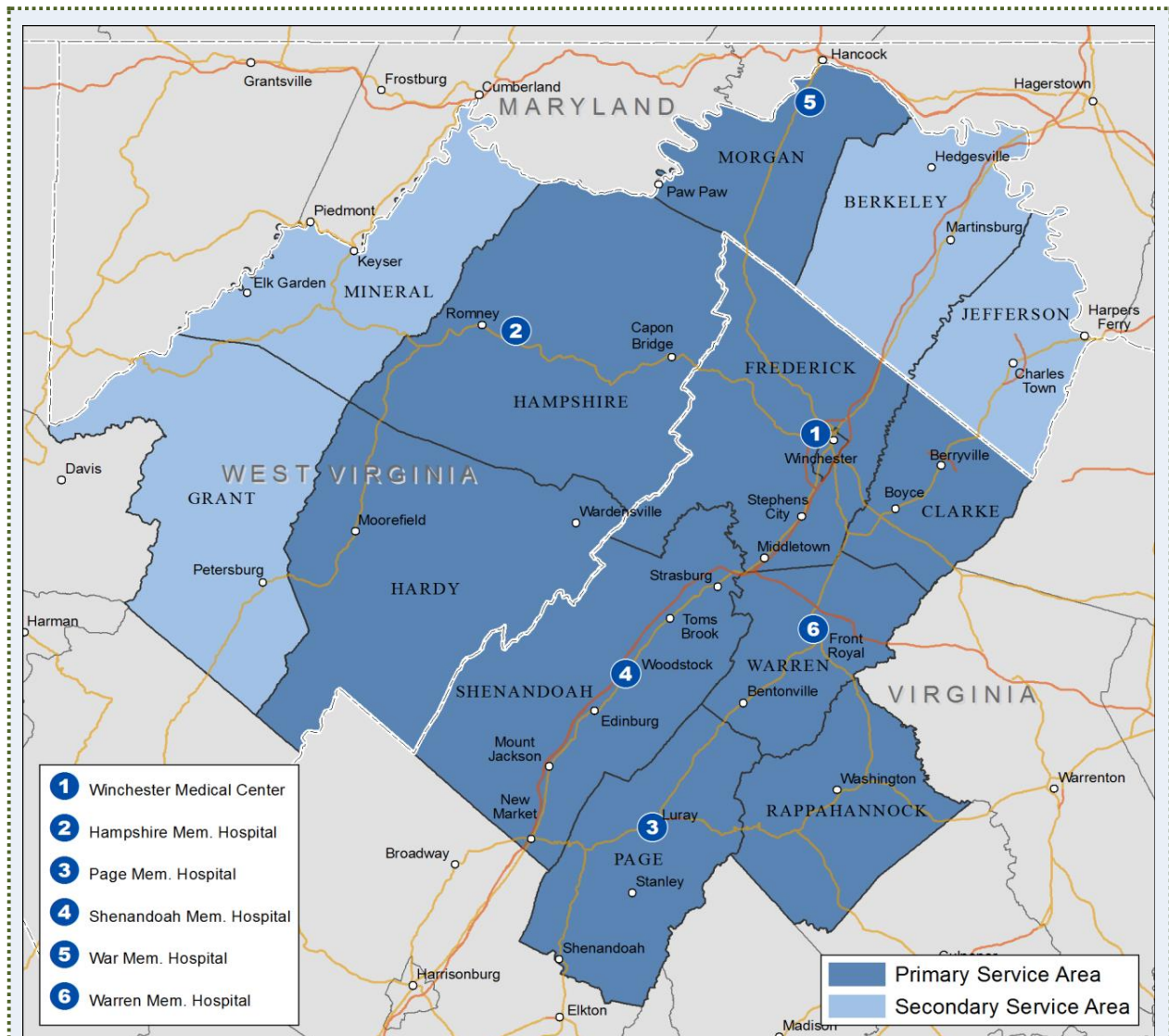
Valley Health System applied a ranking methodology to help prioritize the community

health needs identified, incorporating both quantitative and qualitative data throughout. Scores for the severity and scope of identified health needs were assigned and calculated using weighted averages taking into account multiple data sources. Major themes discussed in the community response sessions were compared to the scored health issues to aid in identifying the prioritized list of health needs.

No information gaps have affected the hospital's ability to reach reasonable conclusions regarding priority community health needs.

WMC collaborated with the other Valley Health hospitals for this assessment: Hampshire Memorial Hospital, Page Memorial Hospital, Shenandoah Memorial Hospital, War Memorial Hospital, and Warren Memorial Hospital.

Definition of the Community



Winchester Medical Center Community by the Numbers

- Community includes 13 counties in Virginia and West Virginia, plus Winchester City in Virginia
- Total population in 2015: 500,119
- Projected population change between 2015 and 2020: 6.8%
 - Population declines expected in three West Virginia counties (Grant, Hampshire, and Mineral)
- 94.5% of inpatient discharges and 94.4% of emergency department visits originated from the community
- Demographics:
 - 7% of population are 65+
 - 90.9% White in 2014, with projected growth in non-White populations
 - 4.8% Hispanic or Latino

Prioritized Description of Community Health Needs

The CHNA identified and prioritized several community health needs using the data sources, analytic methods, and prioritization process and criteria described in the Methodology section. These needs are listed below in priority order and described on the following pages, with examples of the data supporting the determination of each health need as a priority. Further detail regarding supporting data, including sources, can be found in the CHNA Data and Analysis section of this report.

Prioritized Health Needs

1. Access to Primary and Preventive Care
2. Mental and Behavioral Health
3. Physical Activity, Nutrition, and Obesity-related Chronic Diseases
4. Substance Abuse and Tobacco Smoking
5. Maternal and Child Health
6. Financial Hardship and Basic Needs Insecurity

To provide insight into trends, a comparison to findings from WMC's August 2013 CHNA is included below the description and key findings of each priority need, and outlined *below*.

1. Access to Primary and Preventive Care

Access to primary and preventive health care services through a doctor's office, clinic or other appropriate provider is an important element of a community's health care system, and is vital for helping the community's residents to be healthy. The ability to access care is influenced by many factors, including insurance coverage and the ability to afford services, the availability and location of health care providers, an understanding of where to find services when needed, and reliable personal or public transportation.

Key Findings

- The Winchester community is experiencing lower ratio rates when it comes to the number of primary care physicians per 100,000 populations, number of dentists available within the region: in addition, there is a great need for mental health providers. The Winchester community is below the Virginia ratio in several counties for these types of providers, according to the County Health Ranking report. In West Virginia, ratio rates for mental health providers are lower in all areas except Berkeley County. Six of WMC's 13 service area counties are Medically Underserved Areas, two are Health Professional Shortage Areas for primary care, and Winchester City has Medically Underserved Populations.

- Four of six Virginia counties and two of seven West Virginia counties in the service area ranked in the bottom half of all counties in their respective states on “access to care” in the *County Health Rankings*. The 2016 *County Health Rankings* measures have changed slightly for the Access to Care indicator to include ratio of population to mental health providers.
- Six of the nine counties in WMC’s primary service area – plus Winchester City – have higher percentages of uninsured residents than their respective states, according to the U.S. Census. Seven counties overall have higher percentages of uninsured residents than their respective states. Nine of the 13 counties have higher percentages of uninsured residents than the U.S.
- Concerns about access to care were the most frequently mentioned factor contributing to poor health in key informant interviews.
- Lack of accessible or reliable transportation to health care and a lack of providers who accept new Medicaid and even Medicare patients were the most frequently mentioned specific access to care issues in interviews, especially for low-income individuals and senior citizens.
- Thirty-two percent of survey respondents reported not being able to always get needed basic primary care due to no insurance and 14.4 percent reported that they could not afford the medical care.

Comparison to August 2013 CHNA: Access to affordable health care was one of the priority issues identified in WMC’s August 2013 CHNA, for reasons including: a lack of providers relative to the population; affordability and uninsurance; and the challenges of unemployment and low income.

2. Mental and Behavioral Health

Mental and behavioral health includes both mental health conditions (e.g., depression, autism, bipolar) and behavioral problems (e.g., bullying, suicidal behavior). Poor mental and behavioral health causes suffering for both those afflicted and the people around them. It can negatively impact children’s ability to learn in school, and adults’ ability to be productive in the workplace and the ability to provide a stable and nurturing environment for their families. Poor mental or behavioral health frequently contributes to or exacerbates problems with physical health and illness.

Key Findings

- Winchester Medical Center community contains eight Medically Underserved and two Medically Underserved Population designations. Page, Mineral, and Morgan Counties reported shortages in all three categories for dental, mental, and primary care.
- Ten of the 13 counties within the Winchester Community have been designated as medically underserved areas.

- Mental and behavioral health was the second most frequently mentioned health status issue by key informants. Interviewees generally reported that the community’s mental health needs have grown, while the mental health service capacity has not.
- The major concern mentioned by key informants was the need for more providers to care for children with mental and behavioral health issues. The Winchester Community has limited resources for this type of community need.
- The main concern mentioned by key informants was connecting patients with services needed. Wait times are very long for patients to see a clinician.

Comparison to August 2013 CHNA: Mental health care was one of the priority issues identified in WMC’s August 2013 CHNA, for reasons including: the presence of mental health HPSAs; unfavorable suicide rates compared to the Commonwealth’s average; both mental health needs and a lack of treatment options were frequently mentioned by interviewees; and the identification of substance abuse and mental health ranked as the second highest health priority in community response sessions.

3. Physical Activity, Nutrition, and Obesity-related Chronic Diseases

A lack of physical activity and poor nutrition contribute to higher instances of obesity. Obesity can also lead to a wide range of health problems and chronic diseases including high cholesterol, hypertension, diabetes, heart disease, stroke and some cancers. Nationally, the increase in both the prevalence of obesity and associated chronic diseases is well-documented, and has negative consequences for individuals and society. Low-income and poverty often contributes to poor nutrition and hunger.

Key Findings

- WMC’s community contains 13 census tracts identified as food deserts. These are located in and around Berkeley, Hampshire, Hardy, and Jefferson Counties in West Virginia, and Frederick, Shenandoah, and Warren Counties and the City of Winchester, Virginia. There are three census tracts designated as food deserts with the City of Winchester.
- Food deserts – low-income areas more than one mile from a supermarket or large grocery store in urban areas and more than 10 miles from a supermarket or large grocery store in rural areas – exist in six of the nine counties plus Winchester city in WMC’s primary service area. In the secondary service area, food deserts exist in two of four counties.
- Ninety-eight schools in the WMC community, located in every county except Clarke, had 40 percent or more of their students eligible for free and reduced-price lunches, indicating risks of poor nutrition and hunger.
- Commenting on the contributing factors to poor health status, interview participants mentioned nutrition and diet, low physical activity and exercise, and food insecurity. Many commented on both the lack of affordable, healthy food choices in some parts of the community. Obesity was reported to be a concern among children and youth within the community.

- Page, Morgan, and Warren Counties, and Winchester City showed a higher rate of limited access to exercise opportunities, than the other ten counties that represent the Winchester community as reported by *County Health Rankings*.
- Physical inactivity was more prominent in the West Virginia counties as compared to the Virginia counties. Grant, Hampshire, Hardy, and Morgan Counties showed rates higher than the state averages.

Comparison to August 2013 CHNA: Physical activity, nutrition, and obesity-related chronic diseases were one of the top health priority areas identified in WMC’s August 2013 CHNA. Participants in key informant interviews in 2013 reported obesity prevalence as bad or worse than two to three years ago.

4. Substance Abuse and Tobacco Smoking

Substance abuse includes the use of: illicit substances (e.g., cocaine, heroin, methamphetamine, and marijuana); misuse of legal over-the-counter and prescription medications; and abuse of alcohol. Substance abuse affects not only the individual substance user, but those around them; negatively impacting health, safety and risky behaviors, including violence and crime, adult productivity, student ability to learn, and families’ ability to function. Tobacco smoking is well-documented to be a risk factor for various forms of cancer, heart disease and other ailments, and to pose health risks for those exposed to secondhand smoke.

Key Findings

- A measure of alcohol used based on binge and excessive drinking placed Clarke, Frederick, and Rappahannock counties in the second quartile of all Virginia Counties, according to *County Health Rankings* report.
- Rates of adult tobacco use in all of the seven counties in West Virginia were in the top 49% of counties in the state. Smoking across the community averaged 24 percent.
- Substance abuse was a major concern and mentioned frequently by key informant interview participants. It was portrayed as a growing and serious issue.
- Substance abusers are often classified as offenders, and have limited options for seeking treatment.

Comparison to August 2013 CHNA: Substance abuse was one of the priority issues identified in WMC’s August 2013 CHNA. It was frequently mentioned as a serious issue by interview participants. Focus groups identified substance abuse and mental health as the second highest health priority.

5. Maternal and Child Health

Maternal and child health indicators, including teen pregnancy and infant mortality, should be considered when evaluating the health of a community. The rate of teen pregnancy is an important health statistic in any community for reasons that include: concerns for the health of the mother and child, the financial and emotional ability of the mother to care for the child, and the ability of the mother to complete her secondary education and earn a living. Teen pregnancy also stresses the educational system and the families of teen mothers. Infant mortality can be a sign of deficits in access to care, health education, personal resources, and the physical environment.

Key Findings

- The teen birth rates in Winchester City and two of the seven counties in West Virginia were higher than the state and U.S. averages.
- Low birth rates were higher in Grant and Morgan Counties than other counties within the WMC community.
- Infant mortality rates were higher in Winchester City than the other counties within the region.

Comparison to August 2013 CHNA: Maternal and child health indicators, including teen pregnancy and infant mortality, were not identified as top health priorities in Winchester Medical Center's August 2013 CHNA.

6. Financial Hardship and Basic Needs Insecurity

Income levels, employment and economic self-sufficiency correlate with the prevalence of a range of health problems and factors contributing to poor health. People with lower income or who are unemployed/underemployed are less likely to have health insurance or the ability to afford out of pocket health care expenses. Lower income is associated with increased difficulties securing reliable transportation, which impacts access to medical care, and the ability to purchase an adequate quantity of healthy food on a regular basis. For these and other reasons, the assessment identified financial hardship and basic needs insecurity as a priority health need in the community.

Key Findings

- The highest portion of households with income under \$25,000 in 2014 were located in Hampshire, Hardy, and Mineral Counties of West Virginia.
- Within the WMC community, unemployment rates have increased in every county except Shenandoah, Rappahannock, and Grant Counties for 2014.
- Participants in interviews believe that low income housing, and poverty were the top issues contributing to poor health status and limited care. Other income-related factors noted include difficulty with securing transportation to medical appointments and homelessness.

- In the survey, low income and financial challenges were reported. For survey respondents who reported not being able to always get the care they needed, affordability and lack of insurance coverage were the reasons most frequently mentioned.

Comparison to August 2013 CHNA: Financial hardship and basic needs insecurity was not one of the top health priority areas identified in WMC's August 2013 CHNA, but that assessment did note several financial hardship measures relevant to health. The study reported that the community experienced a 19 percent increase in the percentage of households (incomes under \$25,000) since 2009.

CHNA DATA AND ANALYSIS

METHODOLOGY

Data Sources and Analytic Methods

Community health needs were identified by collecting and analyzing data and information from multiple quantitative and qualitative sources. Considering information from a variety of sources is important when assessing community health needs, to ensure the assessment captures a wide range of facts and perspectives and assists in identifying the highest-priority health needs.

Statistics for health status, health care access, and related indicators were analyzed and included data from local, state, and federal public agencies, community service organizations in the WMC community, and Valley Health. Comparisons to benchmarks were made where possible. Details from these quantitative data are presented in the report's body, followed by a review of the principal findings of health assessments conducted by other organizations in the community in recent years.

Input from persons representing the broad interests of the community was collected through: 18 group interviews with 80 key informants (March 2016); a community health survey with 1,990 respondents; and four "community response sessions (May 2016)" comprised of 39 additional community stakeholders where preliminary findings were discussed. Interviews and community response sessions included: individuals with special knowledge of, or expertise in, public health; local and state health, agencies with current data or information about the health needs of the community; and leaders, representing the medically underserved, low-income, and minority populations, and populations with chronic disease needs. Feedback from community response session participants helped validate findings and prioritize identified health needs.

Prioritization Process and Criteria

Valley Health System applied a ranking methodology to prioritize the community health needs identified by the assessment, incorporating both quantitative and qualitative data throughout. Scores were calculated for each data category (secondary data, previous assessments, survey, and interviews) based on the number of sources measuring each health issue and the severity of the issue as measured by the data and as indicated by community input. Scores were averaged and assigned a weight for each data category: 40 percent, 10 percent, 10 percent, and 40 percent, respectively. All identified health issues were assigned scores for severity and scope. Major themes discussed by participants in the community response sessions were compared to the scored health issues.

Information Gaps

No information gaps have affected the hospital's ability to reach reasonable conclusions regarding priority community health needs.

Collaborating Organizations

WMC collaborated with the other Valley Health hospitals for this assessment: Hampshire Memorial Hospital, Page Memorial Hospital, Shenandoah Memorial Hospital, War Memorial Hospital, and Warren Memorial Hospital.

Valley Health System's internal project team included Mark H. Merrill, president and CEO, Valley Health System; Grady (Skip) Philips, president of Winchester Medical Center; Carol Koenecke-Grant, vice president of Strategic Services; Chris Rucker, vice president of Community Health and Wellness and president of Valley Regional Enterprises; Kathleen Devlin Culver, manager, Corporate Communications; Michael Wade, program manager; and Mary Zufall, coordinator, Community Health.

The Valley Health System Community Health Needs Assessment (CHNA) Steering Committee was developed to provide insight regarding the needs of the communities participating in the 2016 CHNA. The Steering Committee guides the process to ensure alignment with organizational mission and vision and support of legislative mandates regarding CHNA reporting. Members of the committee make sure those components of the CHNA are being adequately compiled and addressed and that the project is completed with prioritized health needs.

Valley Health System's Community Health Needs Assessment steering committee included:

- David Cooper, GIS manager, Northern Shenandoah Valley Regional Commission
- Charles Devine, M.D., health director, Winchester Health Department
- Sharen Gromling, executive director, Our Health, Inc.
- Stefan Lawson, executive director, Free Medical Clinic of the Northern Shenandoah Valley
- Mark Y. Lineburg, Ed.D. superintendent, Winchester Public Schools
- Tracey Mitchell, manager, Wellness Services, Valley Health Wellness Center
- Nadine Pottinga, president/CEO, United Way of Northern Shenandoah Valley
- Faith Power, member, Valley Health System Board of Trustees
- Kevin Sanzenbacher, chief of Police, City of Winchester
- Karen Schultz, Ph.D., director & professor, Center for Public Service and Scholarship, Shenandoah University
- David T. Sovine, Ed.D. superintendent, Frederick County Public Schools
- Frank Subasic, member, Valley Health System Board of Trustees
- Shannon Urum, prevention specialist, Northwestern Community Services Board

WMC collaborated with a variety of individuals through workgroups that focused on access to primary care; health, outreach, and prevention; mental health and substance abuse; family developmental and social health; and the local environment and social work.

Additionally, lists of the interviewees and community response session participants are provided in **Exhibits 67** through **69** of this report.

DEFINITION OF COMMUNITY ASSESSED

WMC's community is comprised of 13 counties in Virginia and West Virginia and the City of Winchester in Virginia (114 ZIP codes). The hospital's primary service area (PSA) includes Clarke, Frederick, Page, Rappahannock, Shenandoah, and Warren Counties and the City of Winchester in Virginia, and Hampshire, Hardy, and Morgan Counties in West Virginia. The secondary service area (SSA) is composed of Berkeley, Grant, Jefferson, and Mineral Counties in West Virginia (**Exhibit 1**). The hospital is located in Winchester, Virginia.

In 2015, the WMC community was estimated to have a population of 500,119 persons. Approximately 58 percent of the population resided in the primary service area (Exhibit 1).

Exhibit 1: Community Population, 2015

County/City	Total Population	Total Population estimates 2020	Percent Change in Population 2015-2020
PSA	291,413	314,866	8.0%
Clarke County, VA	14,206	15,024	5.8%
Frederick County, VA	82,623	97,191	17.6%
Hampshire County, WV	23,313	22,615	-3.0%
Hardy County, WV	14,093	14,131	0.3%
Morgan County, WV	17,579	17,611	0.2%
Page County, VA	23,719	24,994	5.4%
Rappahannock County, VA	7,308	7,648	4.7%
Shenandoah County, VA	42,228	45,829	8.5%
Warren County, VA	38,829	41,856	7.8%
Winchester city, VA	27,515	27,967	1.6%
SSA	208,706	219,360	5.1%
Berkeley County, WV	112,289	120,240	7.1%
Grant County, WV	11,918	11,881	-0.3%
Jefferson County, WV	56,568	59,552	5.3%
Mineral County, WV	27,931	27,687	-0.9%
Total	500,119	534,226	6.8%

Sources: Projections: Weldon Cooper for Public Service, VA; Projections: WVU Bureau of Business and Economic Research

This community definition was validated by the geographic origins of WMC inpatients and emergency department encounters (**Exhibit 2**).

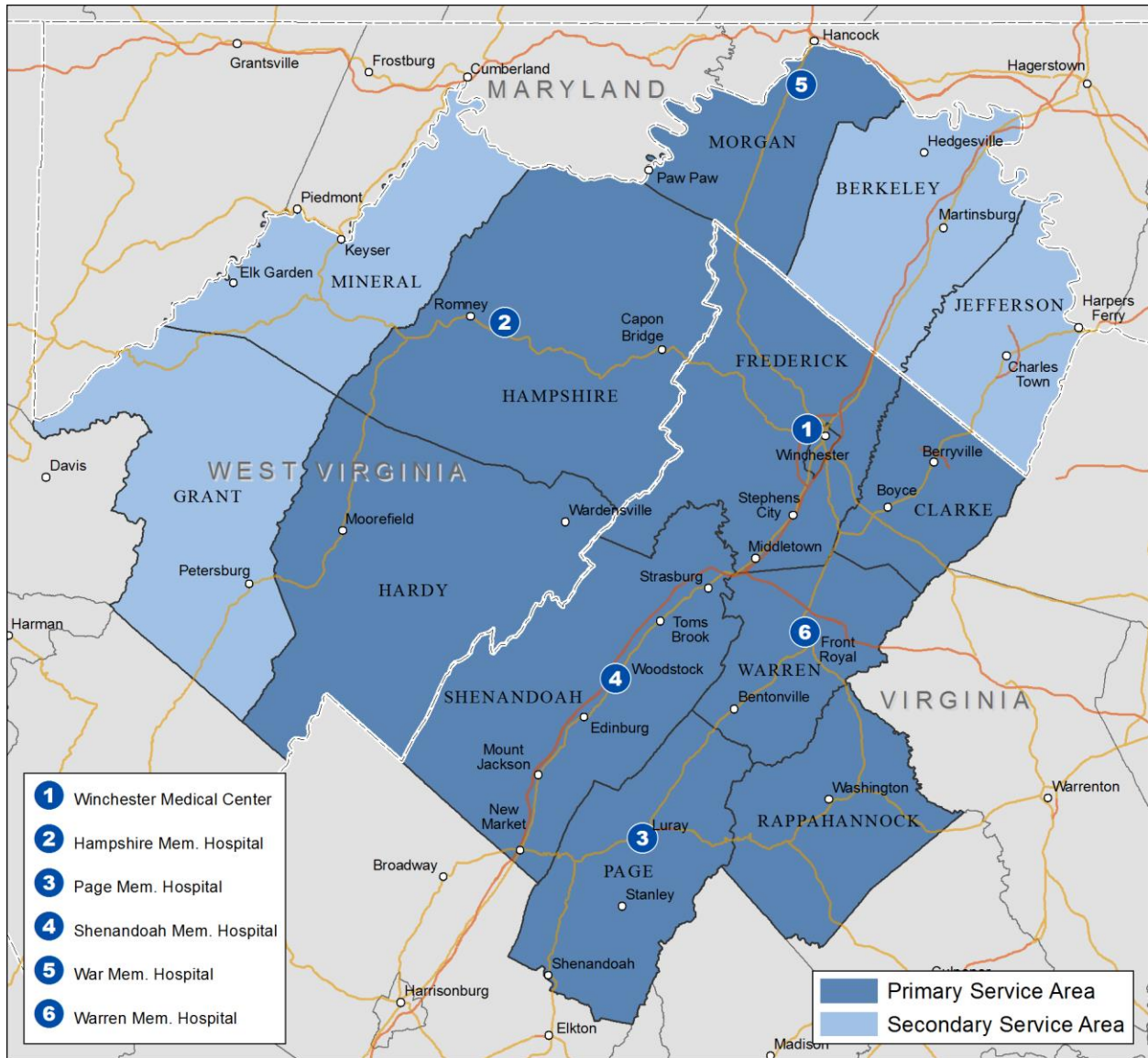
Exhibit 2: WMC Inpatient and Emergency Department Discharges, 2015

County/City	Number of Inpatient Discharges	Percent of Patient Discharges	Number of ED Discharges	Percent of ED Discharges
PSA	18,955	77.5%	62,088	81.1%
Clarke County, VA	1,093	4.5%	4,056	5.3%
Frederick County, VA	7,067	28.9%	27,904	36.4%
Hampshire County, WV	1,579	6.5%	4,023	5.3%
Hardy County, WV	625	2.6%	1,630	2.1%
Morgan County, WV	1,010	4.1%	1,959	2.6%
Page County, VA	583	2.4%	447	0.6%
Rappahannock County, VA	75	0.3%	129	0.2%
Shenandoah County, VA	2,121	8.7%	4,460	5.8%
Warren County, VA	1,693	6.9%	2,855	3.7%
Winchester city, VA	3,109	12.7%	14,625	19.1%
SSA	4,149	17.0%	10,195	13.3%
Berkeley County, WV	2,358	9.6%	7,039	9.2%
Grant County, WV	289	1.2%	298	0.4%
Jefferson County, WV	1,247	5.1%	2,538	3.3%
Mineral County, WV	255	1.0%	320	0.4%
PSA and SSA Total	23,104	94.5%	72,283	94.4%
Other areas	1,355	5.5%	4,301	5.6%
Total Discharges	24,459	100.0%	76,584	100.0%

Source: Valley Health, 2015

In 2015, the community accounted for 94.4 percent of the hospital's inpatients and emergency department discharges. The majority (77 percent) of the hospital's inpatients originated from the primary service area. Approximately 56 percent of emergency department visits originated from Winchester City and Frederick County (**Exhibit 2**).

Exhibit 3: Winchester Medical Center Community: 13 counties plus City of Winchester that comprise WMC’s primary and secondary service areas.



Source: Northern Shenandoah Valley Regional Commission

SECONDARY DATA ASSESSMENT

This section presents secondary data regarding health needs in WMC's community.

Demographics

Population characteristics and changes play a role in influencing the health issues of and services needed by communities (**Exhibit 4**).

Exhibit 4: Percent Change in Population by County/City, 2015-2020

2015 County/City	Total Population 2015 (Actual)	Total Population 2020 (Estimated)	Estimated Percent Change in Population 2015-2020
PSA	291,413.00	314,866.00	8.0%
Clarke County, VA	14,206.00	15,024.00	5.8%
Frederick County, VA	82,623.00	97,191.00	17.6%
Hampshire County, WV	23,313.00	22,615.00	-3.0%
Hardy County, WV	14,093.00	14,131.00	0.3%
Morgan County, WV	17,579.00	17,611.00	0.2%
Page County, VA	23,719.00	24,994.00	5.4%
Rappahannock County, VA	7,308.00	7,648.00	4.7%
Shenandoah County, VA	42,228.00	45,829.00	8.5%
Warren County, VA	38,829.00	41,856.00	7.8%
Winchester city, VA	27,515.00	27,967.00	1.6%
SSA	208,706.00	219,360.00	5.1%
Berkeley County, WV	112,289.00	120,240.00	7.1%
Grant County, WV	11,918.00	11,881.00	-0.3%
Jefferson County, WV	56,568.00	59,552.00	5.3%
Mineral County, WV	27,931.00	27,687.00	-0.9%
Total	500,119.00	534,226.00	6.8%

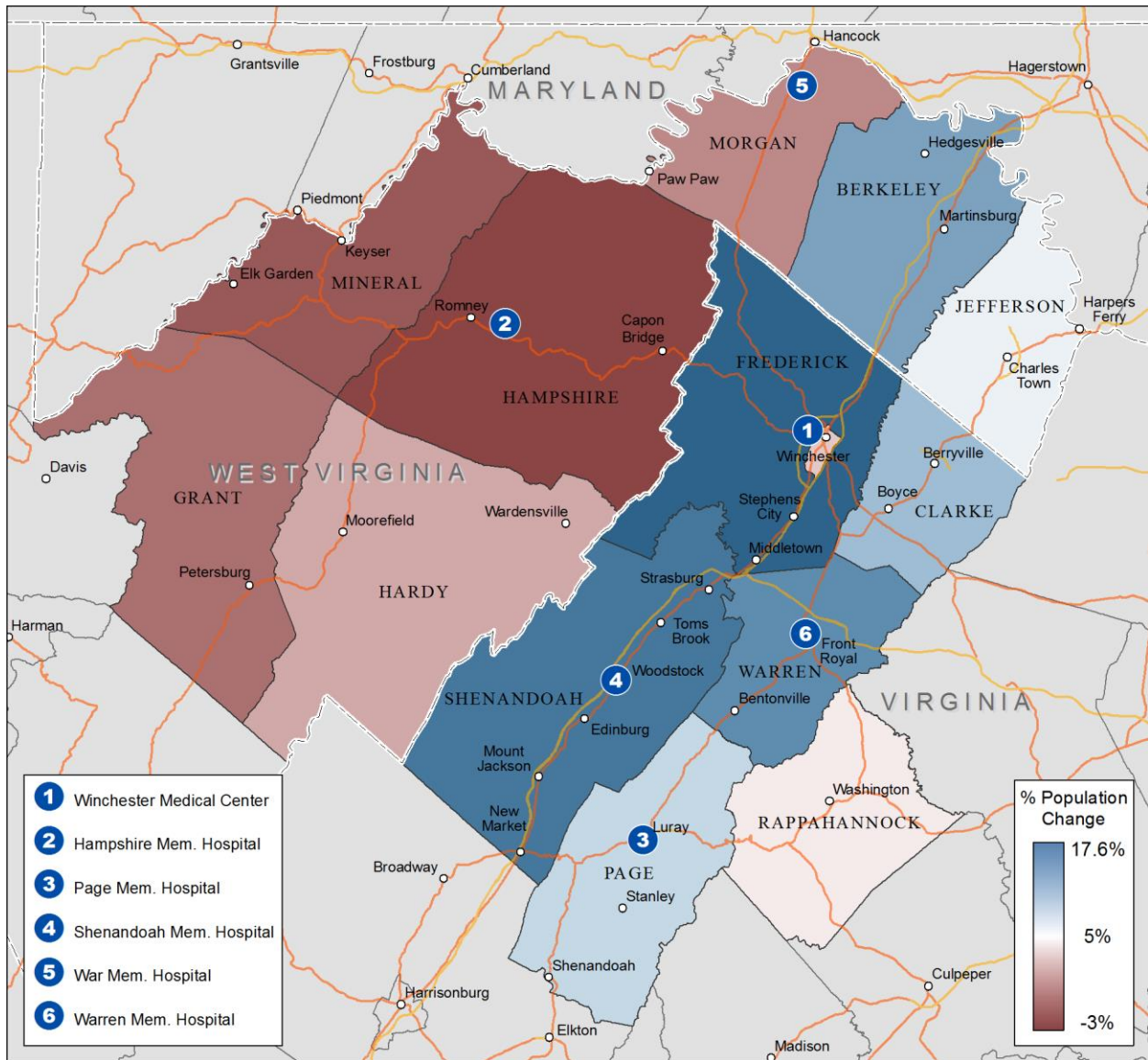
Source: Projections: Weldon Cooper for Public Service, VA; Projections: WVU Bureau of Business and Economic Research

Overall, the population in the WMC community is expected to increase by 6.8 percent between 2015 and 2020 (**Exhibit 4**). The Commonwealth of Virginia is expected to increase by 8.5 percent² and West Virginia to decline by -0.9 percent between 2015 and 2020.³

² The Weldon Cooper Center for Public Service, University of Virginia. (2015). Retrieved from: www.coopercenter.org/demographics

³ The Weldon Cooper Center for Public Service, University of Virginia. (2015). Retrieved from: www.coopercenter.org/demographics

Exhibit 5: Population Change by County/City and ZIP Code, 2015-2020



Source: Northern Shenandoah Valley Regional Commission

Frederick County and Shenandoah Counties in Virginia are expected to grow faster than the community as a whole (approximately 5.5 -and 5.0 percent respectively), while Hampshire and Mineral Counties in West Virginia are projected to experience the steepest population declines (**Exhibits 4 and 5**).

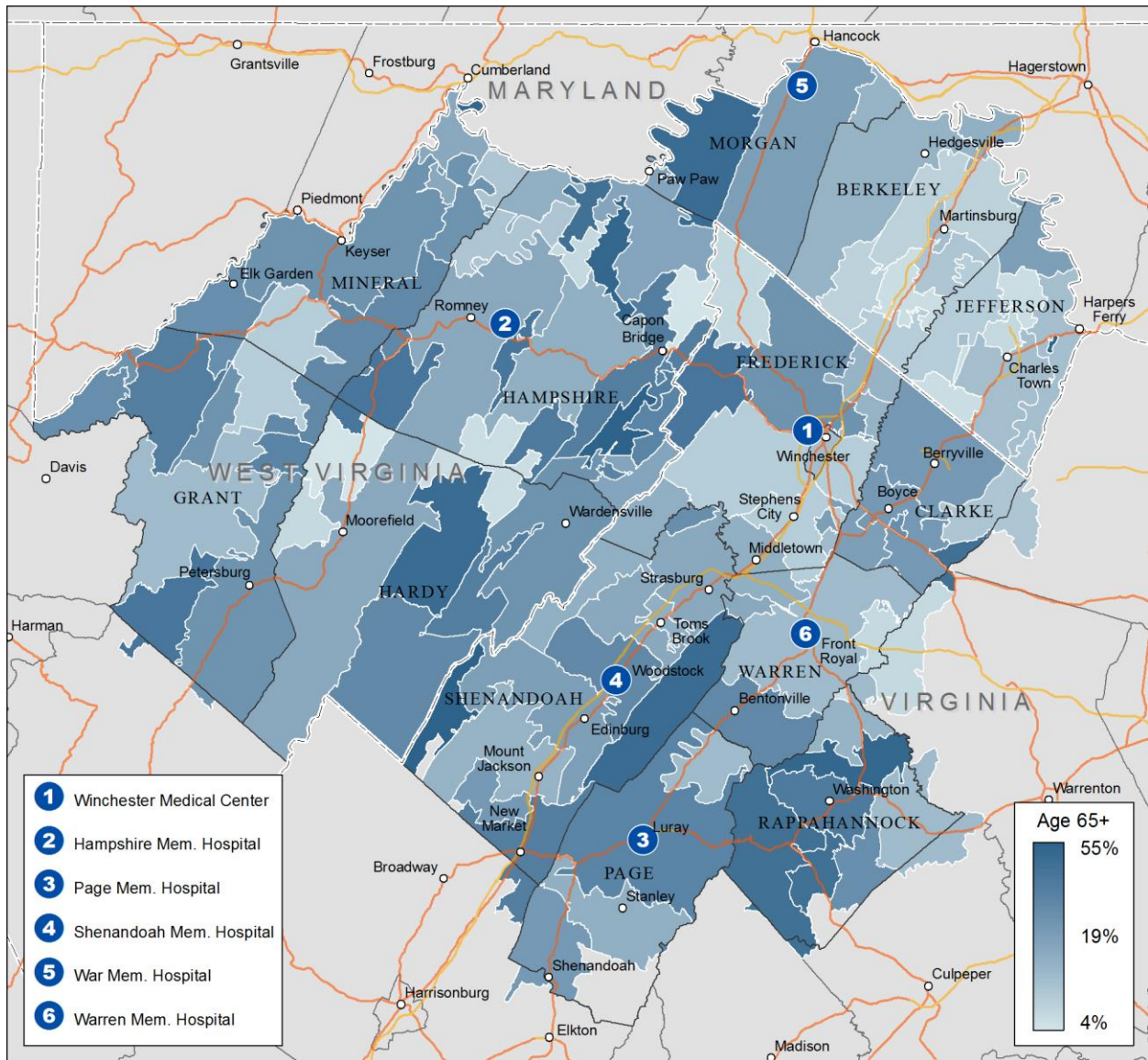
Exhibit 6: Percent Change in Population by Age/Sex Cohort, 2013-2014

Age/Sex Total Population	Population 2013 (Actual)	Population 2014 (Estimated)	% Change	% of 2014 Total Population
Female 0-19	60,180	60,758	1.0%	12.4%
Male 0-19	62,788	63,007	0.3%	12.8%
Female 20-44	75,090	75,735	0.9%	15.4%
Male 20-44	74,763	74,895	0.2%	15.3%
Female 45-64	74,545	70,845	-5.2%	14.4%
Male 45-64	70,990	70,304	-1.0%	14.3%
Female 65+	41,681	40,623	-2.6%	8.3%
Male 65+	34,985	34,346	-1.9%	7.0%
Total	495,022	490,513	-8.3%	100.0%

Source: US Census Data 2014

The number of residents aged 44 years and younger has increased by 2.4 percent since 2013, while the 45 and older age cohort, in total, has experienced a decline of 10.7 percent. The 65+ age cohort experienced a -4.5 percent decrease.

Exhibit 7: Percent of Population Aged 65+ by County/City and ZIP Code, 2014



Source: Northern Shenandoah Valley Regional Commission

At 16.0 percent, Berkeley and Frederick Counties have the highest percentage of people aged 65 and over. The ZIP codes with the highest percentage of people aged 65 and over are 22630 (Front Royal) in Warren County and 22601 (Winchester) in the City of Winchester (**Exhibit 7**). Grant, Hardy, and Rappahannock have the lowest percentage of people aged 65 and over.

Exhibit 8: Distribution of Population by Race, 2014-2019

Race	Total Population 2014 (Actual)	% of Population 2014	Total Population 2019 (Estimated)	% of Population 2019	Percent Change in Population 2014-2019
American Indian and Alaska Native	567	0.1%	599	0.1%	5.65%
Asian	4,663	1.0%	4,546	0.9%	-2.50%
Black or African American	23,460	4.8%	23,542	4.8%	0.35%
Native Hawaiian/Pacific Islander	103	0.0%	106	0.0%	3.11%
Other	15,702	3.2%	16,698	3.4%	6.34%
White	446,018	90.9%	448,159	90.8%	0.48%
Total	490,513	100.0%	493,650	100.0%	

Source: US Census Data 2014

Source: Crimson – Percent change in population 2014-2019

About 91 percent of the community's population is White. Non-White populations are expected to grow from 9.1 percent to 9.2 percent of the total population from 2014 to 2019 (**Exhibit 8**).

Exhibit 9: Distribution of the Population by Ethnicity, 2014

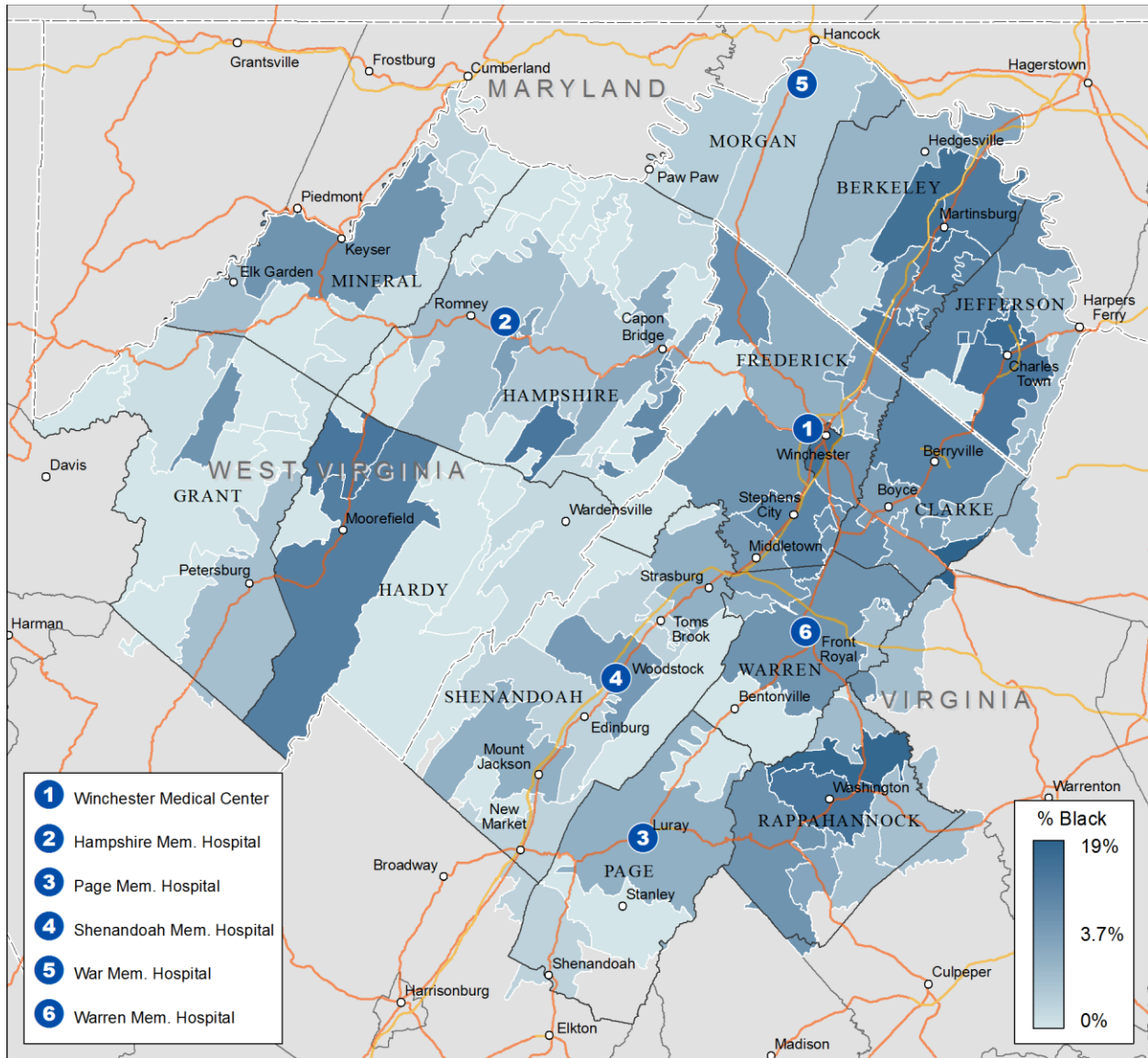
Ethnicity	Total Population 2013 (Actual)	% of Total Population 2013	Total Population 2014 (Actual)	% of Total Population 2014
Hispanic or Latino	25,788	5.2%	23,544	4.8%
Not Hispanic or Latino	469,593	94.8%	466,969	95.2%
Total	495,381		490,573	

Source: US Census Data 2014

According to the U.S. Census Data, the Hispanic or Latino population decreased slightly between 2013 and 2014 (**Exhibit 9**).

Exhibits 10 and 11 illustrate the locations in the community where the percentage of the population that is Black, Hispanic or Latino is highest. The percentage of Black residents is highest in ZIP code 26750 (Piedmont) in Mineral County. The percentage of Hispanic or Latino residents is highest in ZIP code 22623 (Chester Gap) in Clarke County.

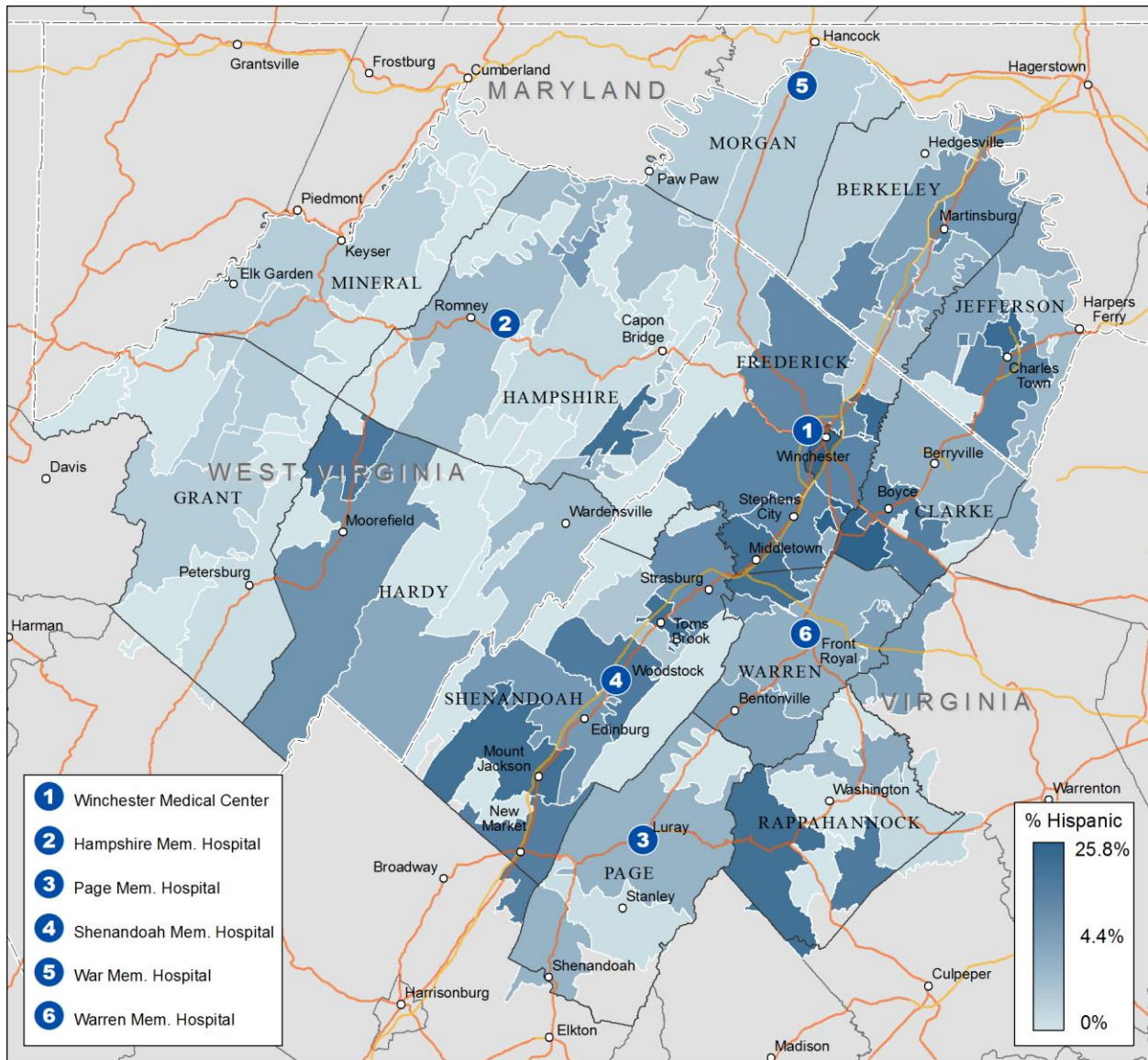
Exhibit 10: Percent of Population – Black, 2014



Source: Northern Shenandoah Valley Regional Commission

Martinsburg and surrounding areas, parts of Hardy, Jefferson, Rappahannock Counties, and Winchester City are the areas with the highest percentages of Black residents

Exhibit 11: Percent of Population – Hispanic or Latino, 2014



Source: Northern Shenandoah Valley Regional Commission

Clarke, Frederick, Jefferson, Shenandoah Counties, and Winchester City have the highest number of Hispanic or Latino residents.

Exhibit 12: Other Demographic Indicators, 2014

County/City	Population age 25 + without a high school diploma, 2014	Population % + who are linguistically isolated , 2014
PSA		
Clarke, VA	10.4%	0.9%
Frederick, VA	13.6%	3.4%
Hampshire, WV	23.8%	0.4%
Hardy, WV	19.7%	3.1%
Morgan, WV	18.0%	2.6%
Page, VA	24.5%	0.6%
Rappahannock, VA	16.0%	3.6%
Shenandoah, VA	16.0%	3.1%
Warren, VA	14.3%	1.7%
Winchester, VA	16.8%	9.6%
SSA		
Berkley, WV	13.6%	1.8%
Grant, WV	18.4%	1.1%
Jefferson, WV	11.9%	2.1%
Mineral, WV	13.5%	0.2%
Virginia	12.1%	5.6%
West Virginia	15.5%	5.5%
US	13.6%	8.6%

Source: U.S. Census Bureau, ACS 5 year estimates, 2014.

Key findings include:

- All Virginia counties in the community, with the exception of Clarke, had a higher percentage than the state average of residents aged 25 and older who did not graduate high school. At nearly 25 percent, Page County had the highest percentage of non-graduates. Grant, Hampshire, Hardy, and Morgan Counties in West Virginia had higher percentages of non-graduates than the state average of 15.5 percent.
- In Winchester City, the percentage of residents aged five and older who were linguistically isolated was nearly double the Commonwealth average, at 9.6 percent. Linguistic isolation is defined as the population aged five and older who speak a language other than English and speak English less than “very well.”

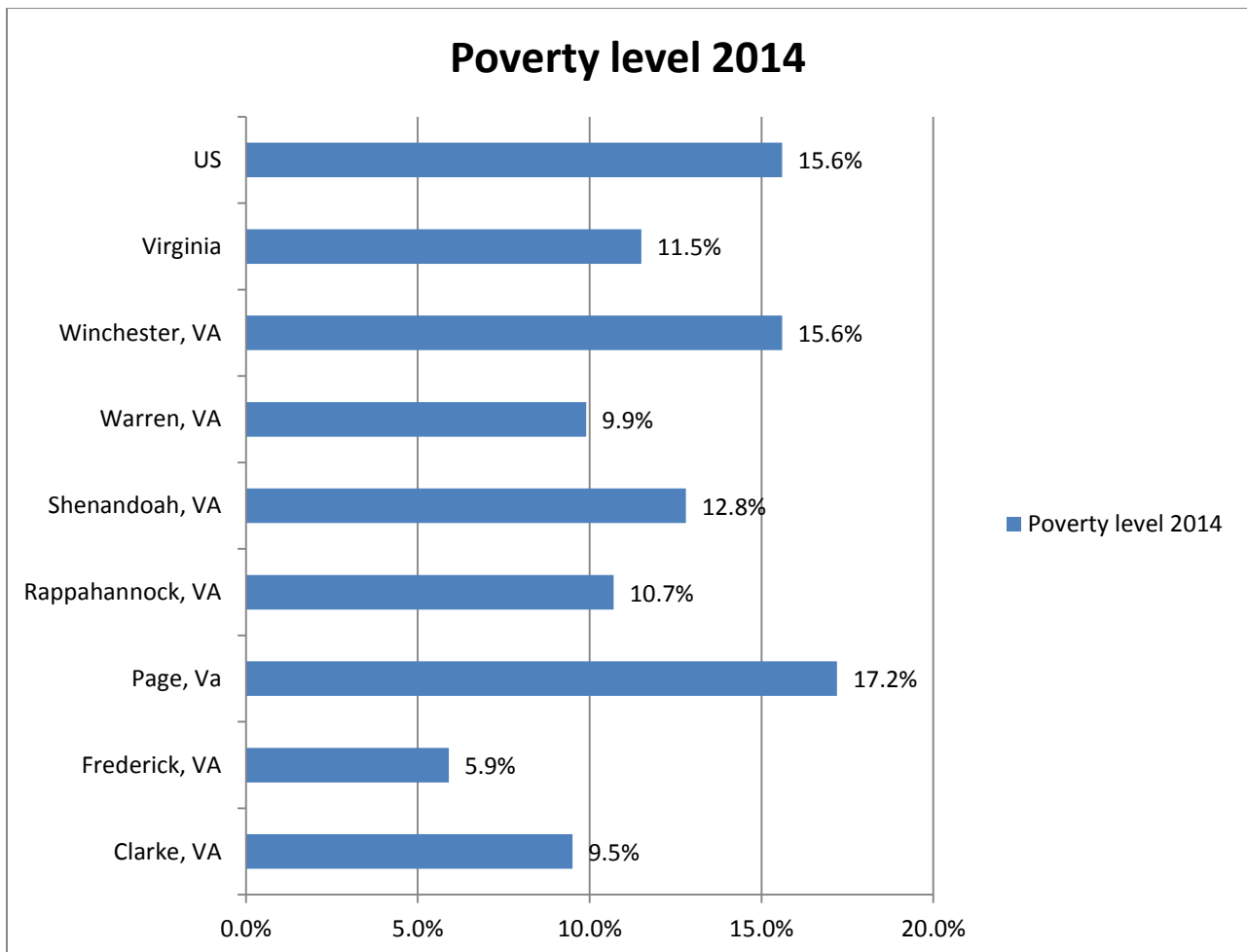
Economic Indicators

The following types of economic indicators with implications for health were assessed: (1) people in poverty; (2) household income; (3) unemployment rate; (4) crime; (5) utilization of government assistance programs; (6) insurance status; and (7) Virginia, West Virginia, and local budget adjustments.

1. People in Poverty

Many health needs are associated with poverty. In 2014 approximately 15.6 percent of people in the U.S., 11 percent of people in Virginia, and 18 percent of people in West Virginia lived in poverty (**Exhibit 13**).

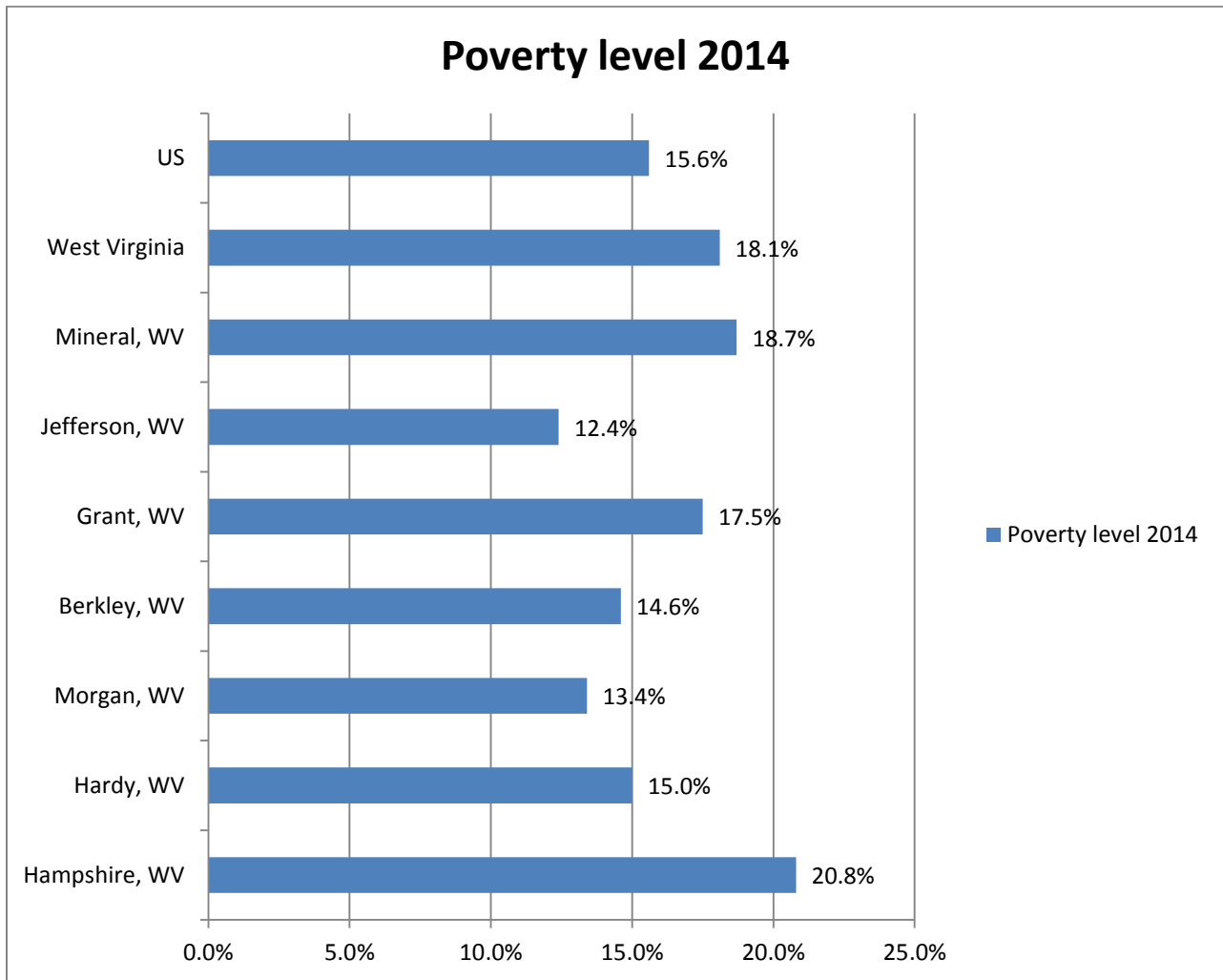
Exhibit 13A: Percent of People in Poverty, Virginia Counties, 2014



Source: U.S. Census Bureau, ACS estimates, 2014. Retrieved from: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_5YR_DP03&prodType=table
The vertical line signifies the poverty rate in Virginia.

Page and Shenandoah Counties and Winchester City reported poverty rates higher than the Virginia average (**Exhibit 13A**).

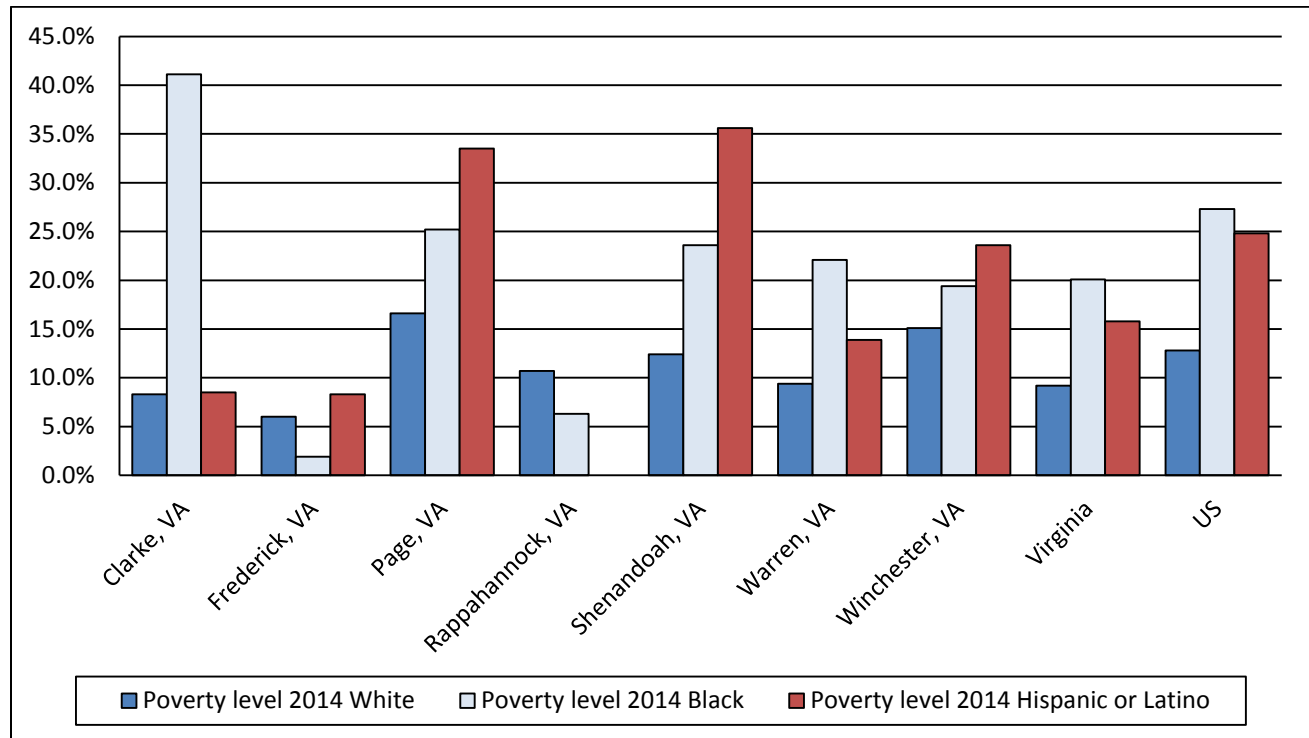
Exhibit 13B: Percent of People in Poverty, West Virginia Counties, 2014



Source: U.S. Census Bureau, ACS estimates, 2014. Retrieved from: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_5YR_DP03&prodType=table
The vertical line signifies the poverty rate in Virginia.

Hampshire and Mineral Counties reported poverty rates higher than West Virginia. The poverty rates for Grant, Hampshire, and Mineral Counties, and for West Virginia as a whole, were higher than the U.S. average (**Exhibit 13B**).

Exhibit 14A: Percent of People in Poverty by Race/Ethnicity, Virginia Counties, 2014

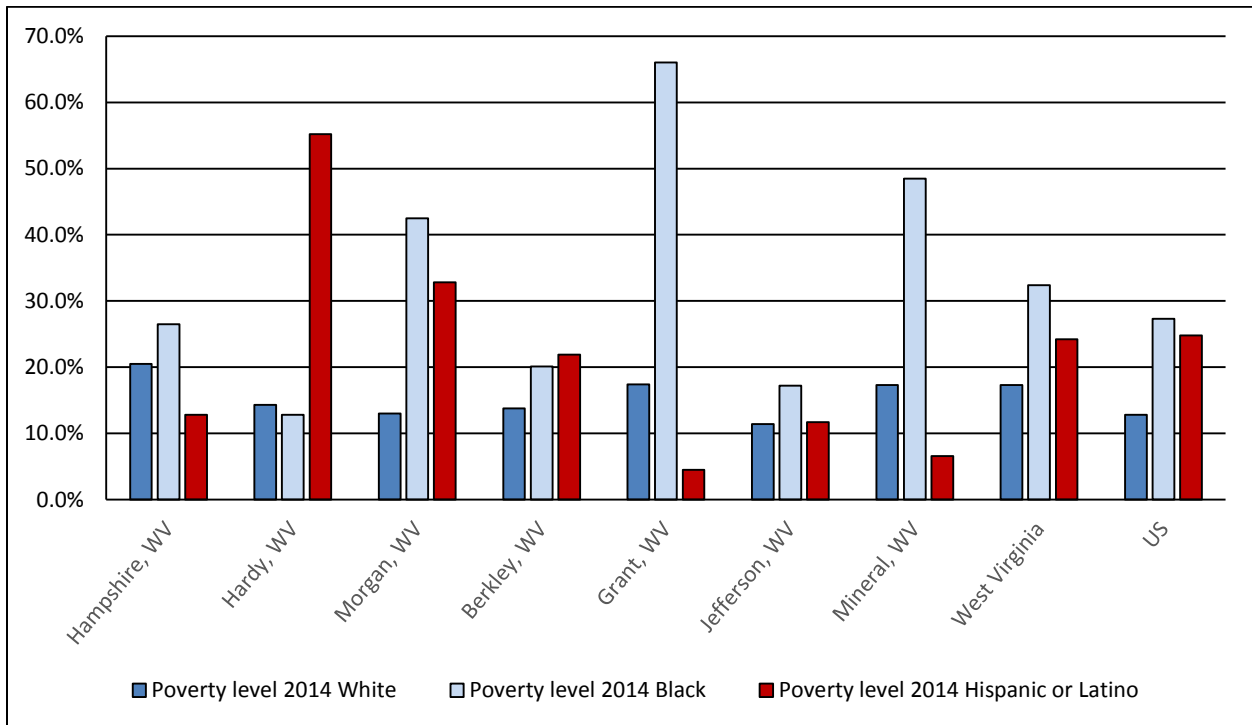


Source: U.S. Census Bureau, ACS estimates, 2014. Retrieved from: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_5YR_DP03&prodType=table
 Data were not available by all races for Rappahannock County.

County/City	Poverty level 2014		
	White	Black	Hispanic or Latino
Clarke, VA	8.3%	41.1%	8.5%
Frederick, VA	6.0%	1.9%	8.3%
Page, VA	16.6%	25.2%	33.5%
Rappahannock, VA	10.7%	6.3%	0.0%
Shenandoah, VA	12.4%	23.6%	35.6%
Warren, VA	9.4%	22.1%	13.9%
Winchester, VA	15.1%	19.4%	23.6%
Virginia	9.2%	20.1%	15.8%
US	12.8%	27.3%	24.8%

Across most Virginia counties, the Black and Hispanic or Latino populations reported higher poverty rates in 2014 than the White population. The poverty rates for the Black and Hispanic or Latino populations were higher than the Virginia average in many counties (**Exhibit 14A**).

Exhibit 14B: Percent of People in Poverty by Race/Ethnicity, West Virginia Counties, 2014



Source: U.S. Census Bureau, ACS estimates, 2014. Retrieved from: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_5YR_DP03&prodType=table
 Data were not available by all races for Grant, Hampshire, and Mineral Counties.

County/City	Poverty level 2014		
	White	Black	Hispanic or Latino
Hampshire, WV	20.5%	26.5%	12.8%
Hardy, WV	14.3%	12.8%	55.2%
Morgan, WV	13.0%	42.5%	32.8%
Berkeley, WV	13.8%	20.1%	21.9%
Grant, WV	17.4%	66.0%	4.5%
Jefferson, WV	11.4%	17.2%	11.7%
Mineral, WV	17.3%	48.5%	6.6%
West Virginia	17.3%	32.4%	24.2%
US	12.8%	27.3%	24.8%

With the exception of Hardy County, the Black population in WMC’s West Virginia counties reported higher poverty rates than the White population. The Asian population in Hardy, Morgan and Jefferson Counties also reported higher poverty rates than the White population, with Hardy and Jefferson Counties exceeding the state average. The Hispanic or Latino populations in Hardy, Morgan, Berkeley and Jefferson Counties reported higher poverty rates than the White population, and Hardy and Jefferson Counties had higher poverty rates than the state average (**Exhibit 14B**).

2. Household Income

The Federal Poverty Level (FPL) is used by many public and private agencies to assess household needs for low-income assistance programs. In the WMC community in 2014, 12 of the 14 counties, including Winchester City, were above the state average for percent of households with incomes below \$25,000, an approximation of the federal poverty level (FPL) for a family of four. **Exhibit 15** indicates the percent of lower-income households in the community.

Exhibit 15: Percent Lower-Income Households by County/City, 2014

County/City	Average Family Income, 2014	Percent of Families ⁴ Less than \$25,000 in 2014	Percent of Households ⁵ Less than \$25,000 in 2014
PSA			
Clarke, VA	\$97,674.00	7.2%	15.1%
Frederick, VA	\$77,492.00	7.6%	13.1%
Hampshire, WV	\$42,977.00	17.9%	46.6%
Hardy, WV	\$45,692.00	22.3%	33.3%
Morgan, WV	\$50,308.00	18.1%	33.0%
Page, VA	\$49,727.00	19.3%	26.8%
Rappahannock, VA	\$72,531.00	11.3%	19.1%
Shenandoah, VA	\$56,330.00	15.1%	23.8%
Warren, VA	\$71,629.00	11.4%	19.3%
Winchester, VA	\$57,300.00	17.9%	26.7%
SSA			
Berkley, WV	\$63,535.00	16.1%	21.1%
Grant, WV	\$49,369.00	18.7%	29.1%
Jefferson, WV	\$77,720.00	12.0%	18.6%
Mineral, WV	\$50,373.00	24.4%	43.2%
Virginia	\$77,939.00	11.9%	18.2%
West Virginia	\$52,875.00	20.3%	31.3%
US	\$65,443.00	15.9%	23.2%

Source: U.S. Census Bureau, ACS estimates, 2014. Retrieved from:

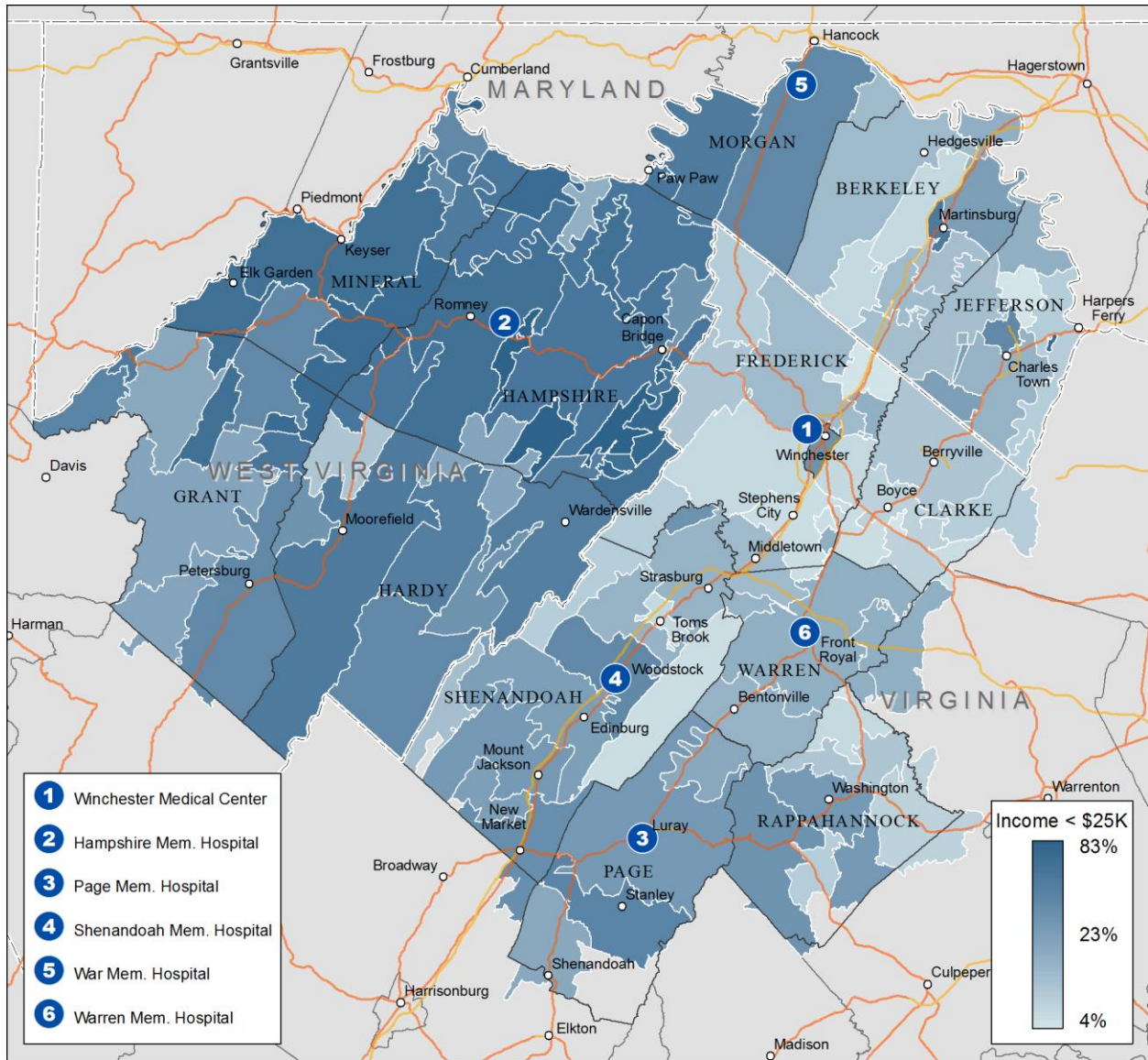
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_5YR_DP03&prodType=table#

In Virginia, four of the seven counties, and Winchester City, reported percentages of households with income less than \$25,000 greater than the Virginia state percentages of 18.2 percent. In West Virginia, four of the seven counties reported percentages greater than the West Virginia state percentage of 31.3% (**Exhibit 15**).

⁴ A family consists of a householder and one or more other people living in the same household who are related to the householder by birth, marriage, or adoption. All people in a household who are related to the householder are regarded as members of his or her family.

⁵ A household includes all the people who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied as separate living quarters. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated people who share living arrangements.

Exhibit 16: Percent of Households with Incomes under \$25,000 by County/City and ZIP Code, 2014

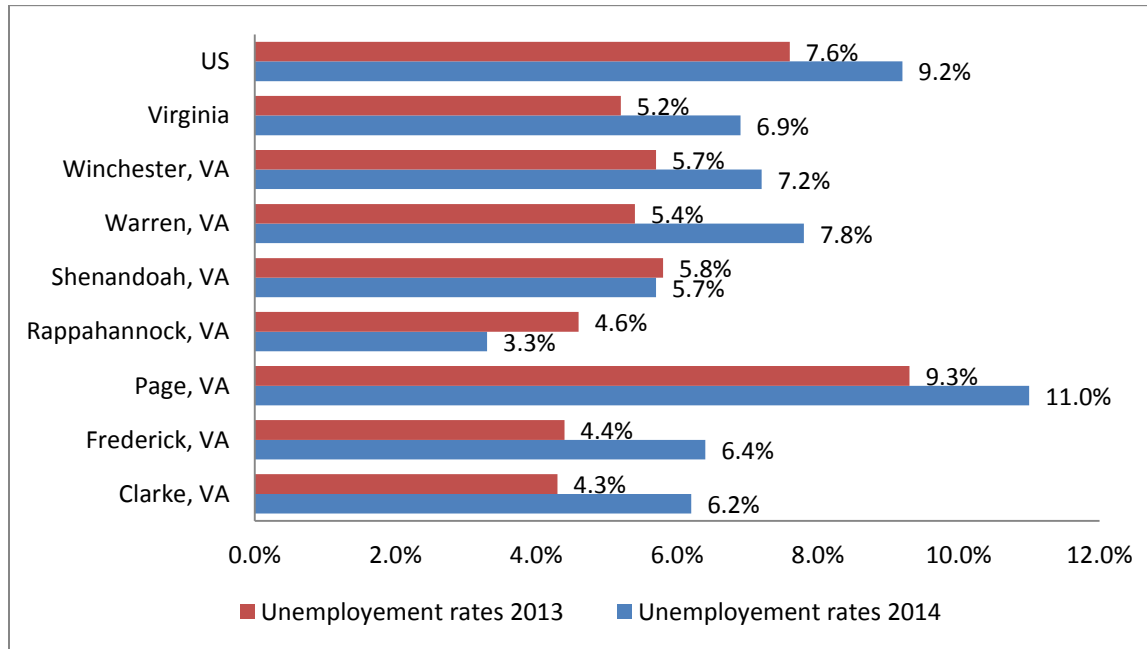


Source: Northern Shenandoah Valley Regional Commission

The highest proportions of households with incomes under \$25,000 in 2014 were located in Hampshire, Hardy and Mineral Counties located in West Virginia (**Exhibit 16**).

3. Unemployment Rates

Exhibit 17A: Unemployment Rates, Virginia Counties/Cities, 2013 (in red) and 2014 (in blue)



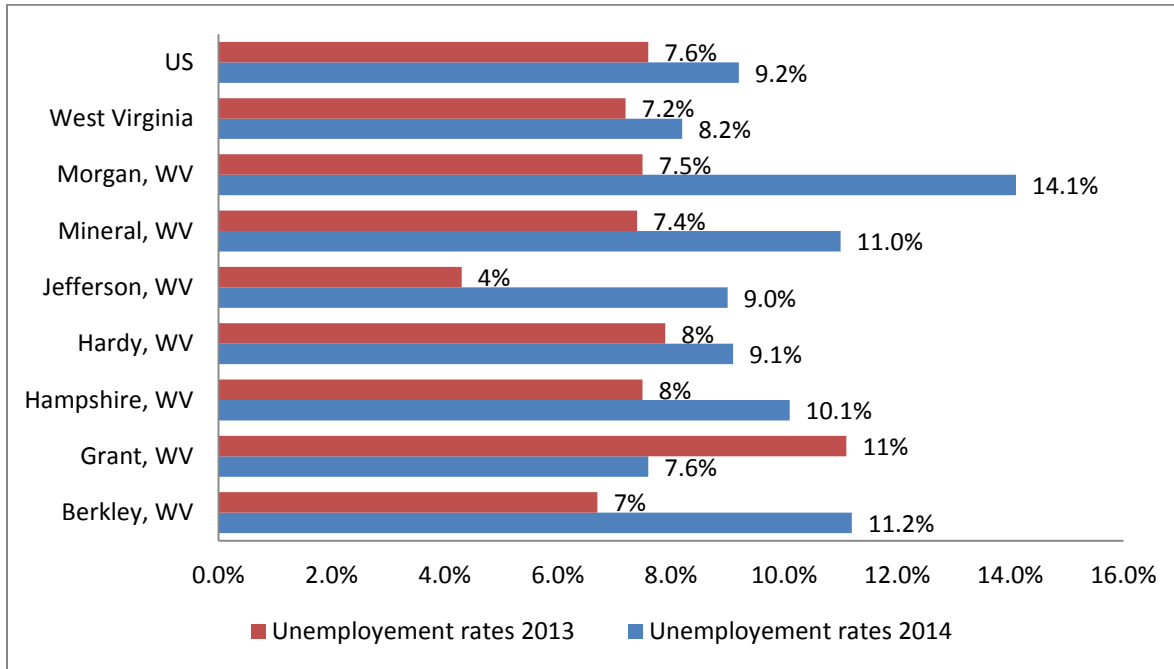
Source: US Census Bureau. Retrieved from:
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_5YR_DP03&prodType=table

County/City	Unemployment rates 2013	Unemployment rates 2014
Clarke, VA	4.3%	6.2%
Frederick, VA	4.4%	6.4%
Page, VA	9.3%	11.0%
Rappahannock, VA	4.6%	3.3%
Shenandoah, VA	5.8%	5.7%
Warren, VA	5.4%	7.8%
Winchester, VA	5.7%	7.2%
Virginia	5.2%	6.9%
US	7.6%	9.2%

Source: US Census Bureau. Retrieved from:
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_5YR_DP03&prodType=table

Page County reported the highest unemployment rate among Virginia counties in the WMC community (**Exhibit 17A**). The unemployment rate for Page County increased by 1.7 percent from previous year, and is higher than Virginia and US averages.

Exhibit 17B: Unemployment Rates, West Virginia Counties, 2013 and 2014



Source: US Census Bureau. Retrieved from:
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_5YR_DP03&prodType=table

County/City	Unemployment rates 2013	Unemployment rates 2014
Berkley, WV	7%	11.2%
Grant, WV	11%	7.6%
Hampshire, WV	8%	10.1%
Hardy, WV	8%	9.1%
Jefferson, WV	4%	9.0%
Mineral, WV	7.4%	11.0%
Morgan, WV	7.5%	14.1%
West Virginia	7.2%	8.2%
US	7.6%	9.2%

Source: US Census Bureau. Retrieved from:
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_5YR_DP03&prodType=table

Morgan County reported the highest unemployment rate of the community’s West Virginia counties (**Exhibit 17B**).

4. Crime

Exhibit 18: Violent and Property Crime Rates per 100,000 Population, 2013

County/City	Population	Violent crime	Murder and nonnegligent manslaughter	Rape (revised definition) ¹	Robbery	Property crime	Burglary	Larceny-theft	Aggravated assault	Motor vehicle theft	Arson
PSA	292,419										
Clarke	14,423	3	0	0	0	112	31	74	3	7	0
Frederick	82,377	89	2	41	20	1,496	277	1,148	26	71	4
Hampshire	23,848	41	0	0	0	68	36	28	41	4	2
Hardy	7,361	10	0	0	0	8	2	6	10	0	2
Morgan	43,021	54	2	2	0	36	14	19	50	3	0
Page	38,987	16	3	4	2	162	40	111	7	11	4
Rappahannock	27,543	1	0	0	0	0	0	0	1	0	0
Shenandoah	23,483	52	1	12	0	236	40	191	39	5	0
Warren	13,923	19	1	9	2	345	112	225	7	8	3
Winchester	17,453	85	0	33	16	1,083	113	937	36	33	2
SSA	205,475										
Berkeley	110,497	79	3	15	13	975	246	700	48	29	5
Grant	11,687	1	0	0	0	8	4	4	1	0	0
Jefferson	55,713	29	0	7	4	315	51	259	18	5	0
Mineral	27,578	32	1	3	0	70	18	44	28	8	1
Virginia Total	8,326,289	196.2	4.1	27.7	51.5	112.9	1,930.3	277.7	1,560.5	92.1	N/A
West Virginia Total	1,850,326	302.0	4.0	27.3	35.2	235.5	2,034.7	484.9	1,447.3	102.5	N/A

Rate per 100,000 inhabitants - Data shows the number of offenses reported within each county.

Sources: Violent crime counts retrieved from the Federal Bureau of Investigation, Uniform Crime Reports, 2013. Population 2014 estimates obtained from the U.S. Census Bureau, ACS 5 year estimates, 2014 -2019. Retrieved from: https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2013/crime-in-the-u.s.-2013/tables/5tabledata/dec/pdf/table_5_crime_in_the_united_states_by_state_2013.xls⁶

*Caution should be used when interpreting these rates; represents fewer than 10 incidents.

**Violent crime includes murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault; property crime includes burglary, larceny-theft, motor vehicle theft, and arson.

Frederick, Berkeley, Warren Counties, and Winchester City had a higher number of offenses for property crimes, including burglary, than their respective states' averages. Offenses reported for larceny also were comparatively high in Frederick, Berkeley Counties, and Winchester City. Frederick County had the highest number of reported offenses of Motor Vehicle Theft (**Exhibit 18**).

⁶

¹ The violent crime figures include the offenses of murder, rape (revised definition), robbery, and aggravated assault.

² The figures shown in the rape (revised definition) column were estimated using the revised Uniform Crime Reporting (UCR) definition of rape. See data declaration for further explanation.

³ The figures shown in the rape (legacy definition) column were estimated using the legacy UCR definition of rape. See data declaration for further explanation.

⁴ This state's agencies submitted rape data according to the revised UCR definition of rape.

⁵ Agencies within this state submitted rape data according to both the revised UCR definition of rape and the legacy UCR definition of rape.

⁶ Includes offenses reported by the Metro Transit Police and the Arson Investigation Unit of the District of Columbia Fire and Emergency Medical Services.

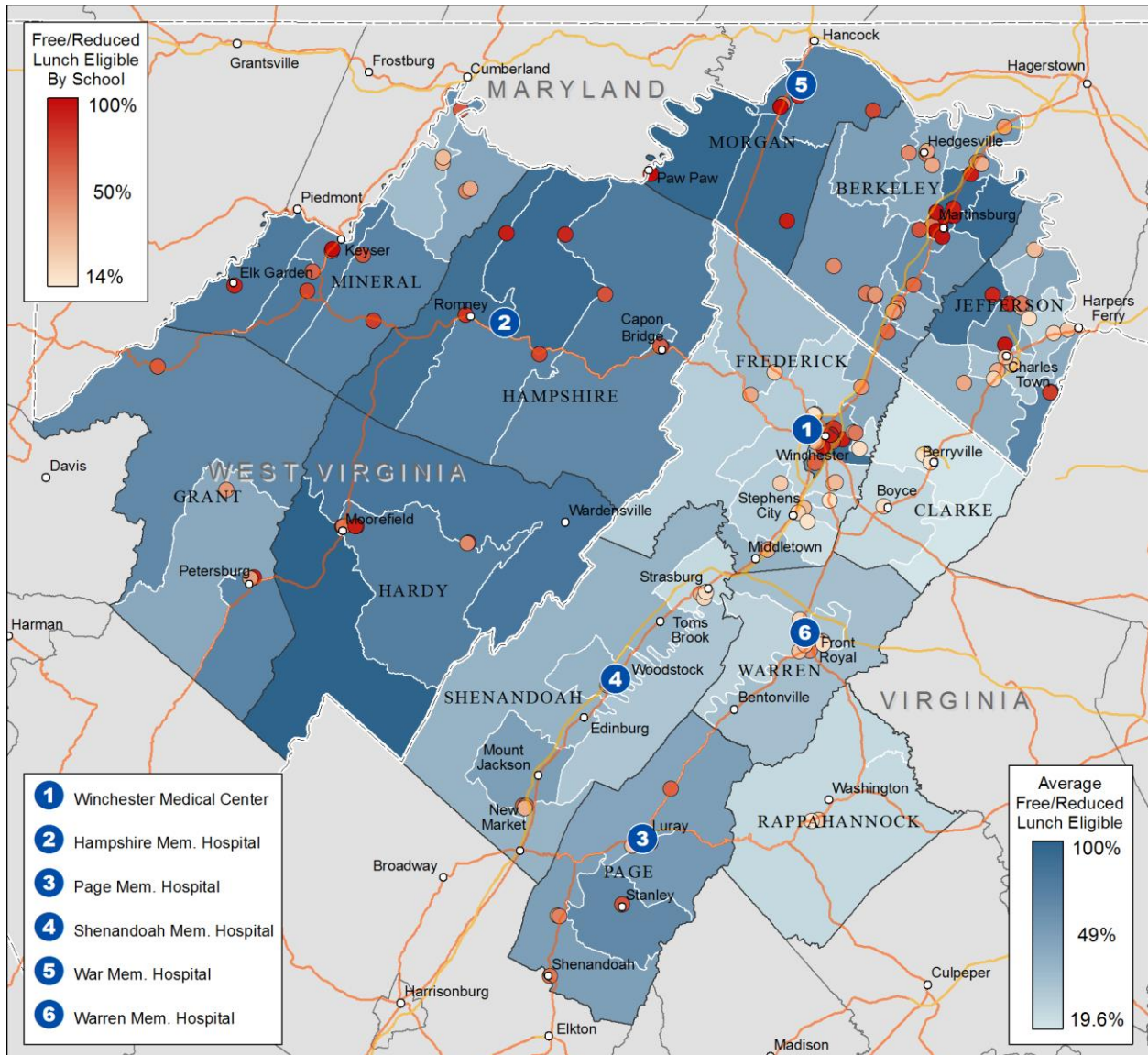
⁷ Because of changes in the state/local agency's reporting practices, figures are not comparable to previous years' data.

NOTE: Although arson data are included in the trend and clearance tables, sufficient data are not available to estimate totals for this offense. Therefore, no arson data are published in this table.

5. Eligibility for the National School Lunch Program

Schools participating in the National School Lunch Program are eligible to receive financial assistance from the United States Department of Agriculture (USDA) to provide free or reduced-price meals to low-income students. Schools with 40 percent or more of their student bodies receiving this assistance are eligible for school-wide Title I funding, designed to ensure that students meet grade-level proficiency standards (**Exhibit 20**).

Exhibit 19: Public School Students Eligible for Free or Reduced-Price Lunches, School Year 2014 - 2015



Source: Northern Shenandoah Valley Regional Commission

In the WMC community, there were 57 schools in Virginia and 86 schools in West Virginia eligible for Title 1 funds (**Exhibit 19**).

Exhibit 20A: Virginia Department of Education, Office of School Nutrition Programs (SNP)

School Year 2014-2015

National School Lunch Program (NSLP) Free and Reduced Price Eligibility Report.

County	Number of Students	Free Eligible	Free %	Reduced Lunch Eligible	Reduce Lunch %	Total Free / Reduced	Total % Free / Reduced Lunch
022-Clarke County Public Schools	2,007	332	16.54%	87	4.33%	419	20.88%
034-Frederick County Public Schools	13,104	3,577	27.30%	867	6.62%	4,444	33.91%
069-Page County Public Schools	3,477	1,446	41.59%	334	9.61%	1,780	51.19%
078-Rappahannock County Public Schools	911	240	26.34%	60	6.59%	300	32.93%
085-Shenandoah County Public Schools	6,222	2,252	36.19%	432	6.94%	2,684	43.14%
093-Warren County Public Schools	5,365	1,877	34.99%	332	6.19%	2,209	41.17%
132-Winchester City Public Schools	4,253	2,187	51.42%	337	7.92%	2,524	59.35%

Source: Virginia Department of Education, Office of School of Nutrition Programs (SNP) Retrieved from: <http://doe.virginia.gov/support/nutrition/statistics/index.shtml>⁷

⁷ School Year (SY) 2013 Free and Reduced Price eligibility statistics for the National School Lunch Program (NSLP) are provided in this report for all public schools within the divisions that participate in USDA's National School Lunch Program (NSLP).

All Virginia public elementary and middle school participate in the NSLP, however, some high school do not participate in USDA's NSLP and therefore do not report eligibility data (see School Notes, Note 1).

NSLP School Nutrition Program Membership (SNP Membership) and Free and Reduced Price Eligibility statistics are reported for each school based on data reported by the school divisions to VDOE, Office of School Nutrition Programs as of October 31, 2014.

**Exhibit 20B: West Virginia Department of Education
County Percent Need Data for Claim Date October 1, 2015**

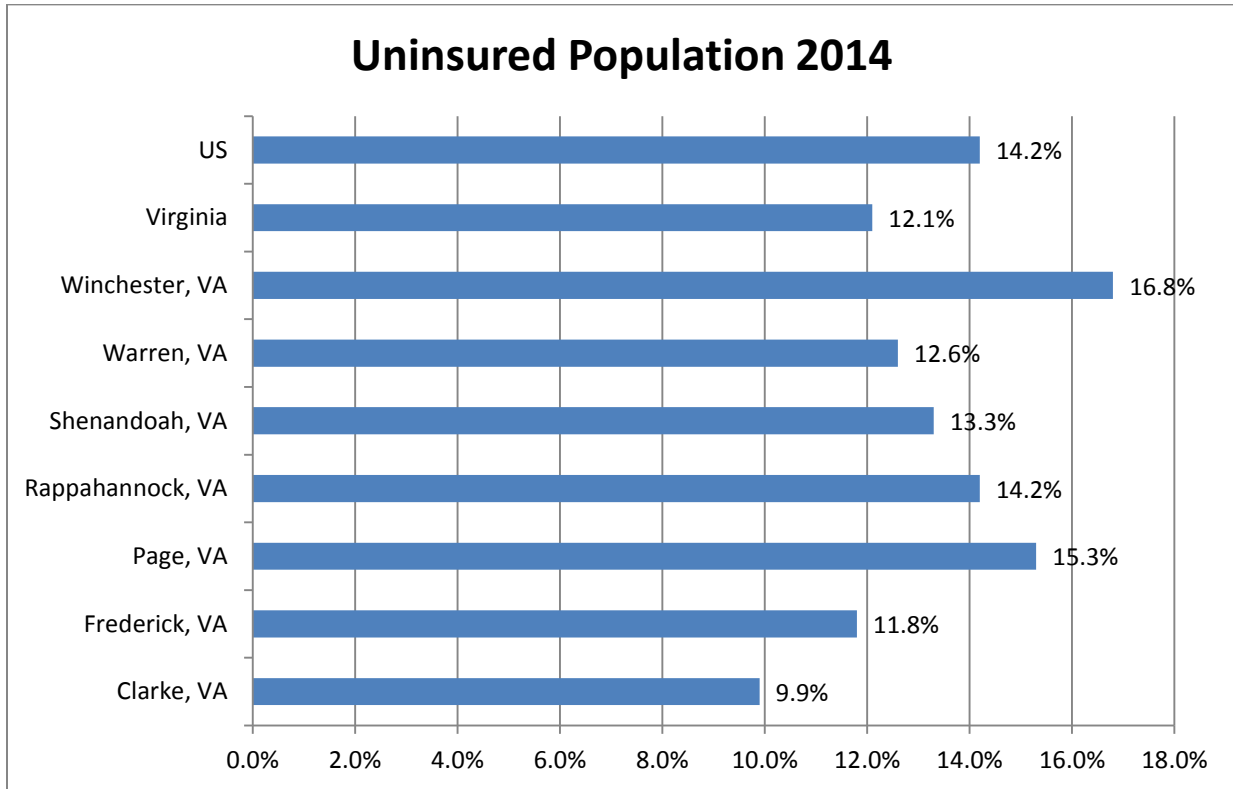
County	Number of Students	Free Eligible	Free %	Reduced Lunch Eligible	Reduced Lunch %	Total Free / Reduced	Total % Free / Reduced Lunch
Berkeley County Public Schools	18,539	8,980	48.44%	1,054	5.69%	10,034	54.12%
Grant County Public Schools	1,842	1,004	54.51%	96	5.21%	1,100	59.72%
Hampshire County Public Schools	3,414	1,888	55.30%	241	7.06%	2,129	62.36%
Hardy County Public Schools	2,491	1,592	63.91%	111	4.46%	1,703	68.38%
Jefferson County Public Schools	9,321	3,914	41.99%	295	3.16%	4,209	45.15%
Mineral County Public Schools	4,439	2,184	49.20%	337	7.59%	2,521	56.80%
Morgan County Public Schools	2,533	1,776	70.11%	0	0.00%	1,776	70.11%

Source: West Virginia Department of Education, Retrieved from: https://wvde.state.wv.us/ocn-download/PlaybookInfo/DataStatistics/Percent_Needy_2016_CEO_Ungrouped.pdf

In the WMC community, there were 57 schools in Virginia and 86 schools in West Virginia that were eligible for Title 1 funds (Exhibits 20A and 20B).

6. Insurance Status

Exhibit 21A: Uninsured Population, Virginia Counties/Cities, 2014

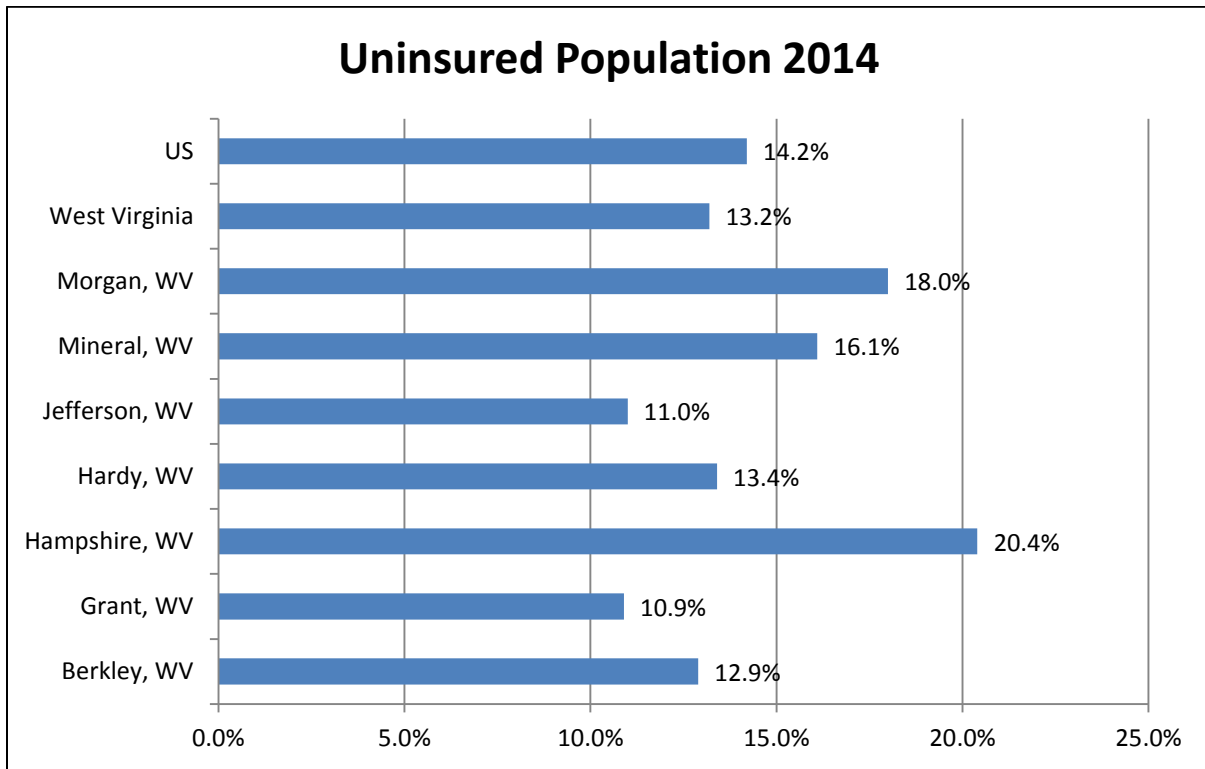


Source: U.S. Census Bureau 2014. Retrieved from:
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_5YR_DP03&prodType=table.

Exhibit 21A demonstrates that Page County, and Winchester City have uninsurance rates higher than both the Virginia and national averages.

County/City	Uninsured Population 2014
Clarke, VA	9.9%
Frederick, VA	11.8%
Page, VA	15.3%
Rappahannock, VA	14.2%
Shenandoah, VA	13.3%
Warren, VA	12.6%
Winchester, VA	16.8%
Virginia	12.1%
US	14.2%

Exhibit 21B: Uninsured Population, West Virginia Counties, 2014



Source: U.S. Census Small Area Health Insurance Estimates (SAIHE), 2010.

Grant, Hampshire, Hardy, and Morgan Counties have uninsurance rates higher than both the West Virginia and national averages (**Exhibit 21B**).

County/City	Uninsured Population 2014
Berkley, WV	12.9%
Grant, WV	10.9%
Hampshire, WV	20.4%
Hardy, WV	13.4%
Jefferson, WV	11.0%
Mineral, WV	16.1%
Morgan, WV	18.0%
West Virginia	13.2%
US	14.2%

7. Changing Health Care

Affordable Care Act

The Patient Protection and Affordable Care Act (Affordable Care Act) was enacted March 23, 2010. The Affordable Care Act actually refers to two separate pieces of legislation — the Patient Protection and Affordable Care Act (P.L. 111-148) and the Health Care and Education Reconciliation Act of 2010 (P.L. 111-152) —that, together expand Medicaid coverage to millions of low-income Americans and makes numerous improvements to both Medicaid and the Children’s Health Insurance Program (CHIP).

After the new law was enacted in March 2010, CMS worked with state partners to identify key implementation priorities and provide the guidance needed to prepare for the significant changes to Medicaid and CHIP that took effect on January 1, 2014. In particular, CMS provided several forms of guidance and federal support for state efforts to develop new or upgrade existing eligibility systems.

In March 2012, CMS released two final rules defining the eligibility and enrollment policies needed to achieve a seamless system of coverage for individuals who became eligible for Medicaid in 2014, as well as eligibility and enrollment for the new Affordable Insurance Exchanges. The final rules establish the framework for States’ implementation of the eligibility expansion going forward.

Medicaid Expansion

Virginia’s Medicaid program provides payment for health care for people in particular categories. Currently, Medicaid in Virginia typically covers: pregnant women with household incomes up to 133% of the Federal Poverty Level (FPL), children (up to age 18) up to 133% of FPL, older adults up to 80% of FPL, some people with disabilities up to 80% of FPL, and parents up to 24% of FPL. The percent of 133% of FPL translates to \$14,856 per year for individuals or \$30,657 per year for families of four.

- In June 2012, the U.S. Supreme Court upheld the constitutionality of all the major provisions of the Patient Protection and Affordable Care Act (ACA), but provided the states the option of whether or not to expand Medicaid eligibility up to 133% (plus a 5% income disregard) of federal poverty. Virginia chose not to participate in the Medicaid expansion.
- Costs of the expansion are 100% federally funded for 2014 through 2016, decreasing incrementally to 90% for 2020 and subsequent years for all newly eligible enrollees. After 2016, the state share increases gradually, and is capped at 10% by 2020.
- The federal match for children/pregnant women would increase from 65% to 87% between 2015 and 2019.
- When the health care law was passed, it required states to provide Medicaid coverage for all adults 18 to 65 with incomes up to 133% (effectively 138%) of the federal poverty level, regardless of their age, family status, or health.

- The law also provides premium tax credits for people with incomes between 100% and 400% of the federal poverty level to buy private insurance plans in the Health Insurance Marketplace.

Local Health Status and Access Indicators

This section examines health status and access to care data for the WMC community from several sources. The sources of the data are: (1) *County Health Rankings*; (2) Virginia Department of Health; (3) West Virginia Department of Health; and (4) Behavioral Risk Factor Surveillance System. Indicators also were compared to Healthy People 2020 goals.

1. County Health Rankings

County Health Rankings, a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, examines a variety of health status indicators and ranks each county/city within each commonwealth or state in terms of “health factors” and “health outcomes.” These health outcomes and factors are composite measures based on several variables grouped into the following categories: health behaviors, clinical care,⁸ social and economic factors, and physical environment.⁹ *County Health Rankings* is updated annually. *County Health Rankings 2013* relies on data from 2004 to 2012, with most data originating in 2007 to 2011.

Exhibit 22 illustrates each county’s or city’s ranking for each composite category in 2013. Rankings indicate how each county/city in Virginia ranked compared to the 134 counties in the Commonwealth, and how each county in West Virginia ranked compared to the 55 counties in West Virginia. A rank of 1 indicates the best county/city in the state. Indicators are shaded based on the county’s percentile for the state or commonwealth ranking. For example, Clarke County compared unfavorably to other Virginia counties for Quality of Care; with a rank of 102 out of 134 counties and placing in the bottom quartile of all Virginia counties.

⁸ A composite measure of Access to Care, which examines the percent of the population without health insurance and ratio of population to primary care physicians, and Quality of Care, which examines the hospitalization rate for ambulatory care sensitive conditions, whether diabetic Medicare patients are receiving HbA1C screening, and percent of chronically ill Medicare enrollees in hospice care in the last 8 months of life.

⁹ A composite measure that examines Environmental Quality, which measures the number of air pollution-particulate matter days and air pollution-ozone days, and Built Environment, which measures access to healthy foods and recreational facilities and the percent of fast food restaurants.

Exhibits 22A and 22B provide data for each underlying indicator of the composite categories in the County Health Rankings.¹⁰ The *County Health Rankings* methodology provides a comparison of counties within a state or commonwealth to one another.

It also is important to analyze how these same indicators compare to the national average; this information is illustrated in Exhibits 23A-E (for Virginia) and Exhibits 24A-E (for West Virginia). For example, Clarke County's physical environment was more than 75 percent worse than the U.S. average, and the cell in the table for the county was shaded to reflect this. Cells in the tables below are shaded if the indicator for a county/city in the WMC community exceeded the national average for that indicator by more than ten percent.

Rappahannock County and Winchester City uninsurance rates were reported at 19 percent above the Virginia average of 14 percent. WMC counties/cities frequently ranked in the bottom half of Virginia and West Virginia counties for access to care,¹¹ quality of care,¹² environmental quality¹³ and physical environment.¹⁴ Seven counties ranked in the 50th percentile and above in the category for physical environment; a variable in this high ranking is the larger number of those who commute over 30 minutes in their cars alone. (**Exhibit 23 and 24E**).

¹⁰ *County Health Rankings* provides details about what each indicator measures, how it is defined, and data sources at http://www.countyhealthrankings.org/sites/default/files/resources/2013Measures_datasources_years.pdf

¹¹ The percent of the population without health insurance and ratio of population to primary care physicians. New measure for 2016 to include ratio of population to mental health providers.

¹² Hospitalization rate for ambulatory care sensitive conditions, whether diabetic Medicare patients are receiving HbA1C screening, and percent of chronically ill Medicare enrollees in hospice care in the last 8 months of life.

¹³ Includes education, employment, income, family and social support, and community safety.

¹⁴ Housing and transit focus areas (driving alone to work, long driving commutes, and severe housing problems)

Exhibit 22A: County Rank among 134 Virginia Counties, 2016

Indicator Category	Clarke	Frederick	Page	Rappahannock	Shenandoah	Warren	Winchester City
Health Outcomes	28	22	66	13	33	37	82
Mortality	39	28	89	15	34	56	90
Morbidity	22	21	45	16	38	26	72
Health Factors	22	35	101	31	44	57	62
Health Behaviors (30%)	20	36	62	21	23	48	75
Clinical Care (20%)	39	81	125	114	120	110	41
Social & Economic Factors (40%)	9	25	95	28	44	48	62
Physical Environment (10%)	128	77	121	20	74	71	85

Source: County Health Rankings, 2016

Key	
Top 25th percentile of VA counties (Better) (Numeric Ranking 1-34)	
Top 25th percentile of VA counties (Better) (Numeric Ranking 35-67)	
25th to 49th percentile of VA counties (Numeric ranking 68-100)	
Bottom 25th percentile of VA counties (Worse Numeric Ranking of 101-134)	

Physical Environment Metrics have changed from 2013 - Built Environment has changed to Housing and Transit; Environmental Quality has changed to Air and Water Quality Ranking.

After we compute composite scores we sort them from lowest to highest within each state. The lowest score (best health) gets a rank of #1 for that state and the highest score (worst health) gets whatever rank corresponds to the number of units we rank in that state. It is important to note that we do not suggest that the rankings themselves represent statistically significant differences from county to county. That is, the top ranked county in a state (#1) is not necessarily significantly healthier than the second ranked county (#2). See the next section about quartiles for more information.

Quartiles -To de-emphasize the differences between individual county ranks, we also group counties into quartiles according to their Health Outcomes and Health Factors ranks separately. For each set of ranks there are four quartiles that divide up all the units within the state into the top 25%, the second from top 25%, the second from bottom 25%, and the bottom 25%. The top 25% are the healthiest counties with the best ranks, the bottom 25% are the least healthy counties with the worst ranks, and the other two quartiles are in between. We provide color-coded maps of the Health Outcomes and Health Factors summary scores by quartile to see the distribution of ranks within each state

Exhibit 22B: County Rank among 55 West Virginia Counties, 2016

Indicator Category	Berkeley	Grant	Hampshire	Hardy	Jefferson	Mineral	Morgan
Health Outcomes	14	11	26	19	1	21	13
Length of Life (Mortality)	22	6	28	15	3	11	14
Quality of Life (Morbidity)	13	27	17	23	2	25	19
Health Factors	20	22	43	40	2	10	5
Health Behaviors (30%)	43	21	36	41	3	17	2
Clinical Care (20%)	8	25	51	35	15	9	36
Social & Economic Factors (40%)	8	24	41	38	1	20	3
Physical Environment (10%)	46	5	15	11	42	4	38

Source: County Health Rankings, 2016

Key	
Top 25th percentile of VA counties (Better) (Numeric Ranking 1-34)	
Top 25th percentile of VA counties (Better) (Numeric Ranking 35-67)	
25th to 49th percentile of VA counties (Numeric ranking 68-100)	
Bottom 25th percentile of VA counties (Worse) Numeric Ranking of 101-134)	

Physical Environment Metrics have changed from 2013 - Built Environment has changed to Housing and Transit; Environmental Quality has changed to Air and Water Quality Ranking.

After we compute composite scores we sort them from lowest to highest within each state. The lowest score (best health) gets a rank of #1 for that state and the highest score (worst health) gets whatever rank corresponds to the number of units we rank in that state. It is important to note that we do not suggest that the rankings themselves represent statistically significant differences from county to county. That is, the top ranked county in a state (#1) is not necessarily significantly healthier than the second ranked county (#2). See the next section about quartiles for more information.

Quartiles -To de-emphasize the differences between individual county ranks, we also group counties into quartiles according to their Health Outcomes and Health Factors ranks separately. For each set of ranks there are four quartiles that divide up all the units within the state into the top 25%, the second from top 25%, the second from bottom 25%, and the bottom 25%. The top 25% are the healthiest counties with the best ranks, the bottom 25% are the least healthy counties with the worst ranks, and the other two quartiles are in between. We provide color-coded maps of the Health Outcomes and Health Factors summary scores by quartile to see the distribution of ranks within each state.

Exhibit 23A: County/City Data Compared to U.S. Average, Virginia Counties, 2016

2016	Clarke	Frederick	Page	Rappahannock	Shenandoah	Warren	Winchester City	US Median	Virginia
Health Outcomes									
Premature Death (Years of Potential Life Lost Rate)	6,345	5,868	8,652	4,898	6,161	7,326	8,668	7,700	6,147
Poor or Fair Health (Percent Fair/Poor)	12%	12%	16%	13%	14%	13%	18%	16%	17%
Poor Physical Health Days (Physically Unhealthy Days)	2.9	3.2	3.6	3.1	3.4	3.2	3.7	3.7	3.5
Poor Mental Health Days (Mentally Unhealthy Days)	3.0	3.0	3.5	3.2	3.2	3.1	3.5	3.7	3.3
Low Birthweight (Percent LBW)	8%	7%	6%	6%	7%	7%	8%	8%	8%

Source: County Health Rankings, 2016

Key	
Unreliable or missing data	~
Ranging from better than U.S. median up to 10% worse than U.S. median	
10%-49% worse than U.S. median	
50-74% worse than U.S. median	
>75% worse than U.S. median	

Exhibit 23B: County/City Data Compared to U.S. Average, Virginia Counties, 2016

2016	Clarke	Frederick	Page	Rappahannock	Shenandoah	Warren	Winchester City	US Median	Virginia
Health Behaviors									
Adult Smoking (Percent Smokers)	16%	15%	19%	16%	17%	18%	20%	18%	20%
Adult Obesity (Percent Obese)	28%	33%	30%	26%	26%	28%	27%	31%	27%
Food Environment Index	9.4	9.0	8.1	7.1	8.6	8.8	7.4	7.2	8.3
Physical Inactivity (Percent Physically Inactive)	23%	24%	25%	25%	21%	20%	24%	28%	22%
Access to Exercise Opportunities (Percent with Access)	62%	64%	81%	36%	62%	82%	93%	62%	81%
Excessive Drinking (Percent)	18%	17%	15%	16%	16%	18%	16%	17%	17%
Alcohol-impaired Driving Deaths (Percent)	44%	34%	21%	40%	29%	29%	N/A	31%	31%
Sexually Transmitted Infections (Chlamydia Rate)	154	212	297	94	146	376	792	288	407
Teen Births	19	31	39	20	38	30	48	40	27

Source: County Health Rankings, 2016.

Key	
Unreliable or missing data	~
Ranging from better than U.S. median up to 10% worse than U.S. median	
10%-49% worse than U.S. median	
50-74% worse than U.S. median	
>75% worse than U.S. median	

Exhibit 23C: County/City Data Compared to U.S. Average, Virginia Counties, 2016

2016	Clarke	Frederick	Page	Rappahannock	Shenandoah	Warren	Winchester City	US Median	Virginia
Clinical Care									
Uninsured (Percent)	12%	14%	17%	19%	17%	19%	19%	17%	14%
Primary Care Physicians (Ratio)	2050:1	2259:1	2166:1	2493:1	2134:1	1759:1	358:1	1,990:1	1329:1
Dentists (Ratio)	2885:1	8238:1	5962:1	3681:1	3309:1	4873:1	586:1	2,590:1	1570:1
Mental Health Providers (Ratio)	1803:1	2423:1	3975:1	1472:1	2049:1	1114:1	204:1	1,060:1	685:1
Preventable Hospital Stays (Rate)	57	71	82	55	75	85	72	60	49
Diabetic Monitoring (% Receiving HbA1c)	91%	88%	88%	90%	85%	90%	88%	85%	87%
Mammography Screening (Percent)	58%	63%	53%	56%	62%	57%	58%	61%	63%

Source: County Health Rankings, 2016.

Key	
Unreliable or missing data	~
Ranging from better than U.S. median up to 10% worse than U.S. median	
10%-49% worse than U.S. median	
50-74% worse than U.S. median	
>75% worse than U.S. median	

Exhibit 23D: County/City Data Compared to U.S. Average, Virginia Counties, 2016

2016	Clarke	Frederick	Page	Rappahannock	Shenandoah	Warren	Winchester City	US Median	Virginia
Social and Economic Factors									
High School Graduation (Graduation Rate)	93%	N/A	95%	88%	91%	88%	86%	89%	85%
Some College (Completion Rate)	71.7%	63.7%	42.3%	67.8%	46.8%	50.2%	56.1%	56%	69%
Unemployment (Rate)	4.3%	4.7%	8.1%	4.7%	5.0%	5.5%	5.0%	6.0%	5.2%
Children in Poverty (Percent in Poverty)	11%	12%	24%	17%	18%	16%	22%	23%	16%
Income Inequality (Ratio)	4.8	3.8	4.4	4.7	4.0	4.4	4.9	4.4	4.8
Children in single-parent households	29%	21%	36%	10%	32%	29%	39%	32%	30%
Social Associations (Association Rate)	18.8	9.8	10.5	12	15.7	15	17.6	13.0	11.3
Violent Crime (Rate)	122	113	103	72	94	102	226	199	200
Injury Deaths (Rate)	62	57	78	73	64	64	74	74	52

Source: County Health Rankings, 2016.

Key	
Unreliable or missing data	~
Ranging from better than U.S. median up to 10% worse than U.S. median	
10%-49% worse than U.S. median	
50-74% worse than U.S. median	
>75% worse than U.S. median	

Exhibit 23E: County/City Data Compared to U.S. Average, Virginia Counties, 2016

2016	Clarke	Frederick	Page	Rappahannock	Shenandoah	Warren	Winchester City	US Median	Virginia
Physical Environment									
Air Pollution - Particulate Matter (Average Daily PM2.5)	12.9	13.0	12.9	12.8	12.9	12.9	12.9	11.9	12.7
Drinking Water Violations (Presence of Violations)	Yes	No	Yes	No	No	No	N/A	N/A	N/A
Severe Housing Problems (Percent)	12%	14%	14%	14%	14%	16%	20%	14%	15%
Driving Alone to Work (Percent Driving Alone)	82%	83%	81%	68%	81%	75%	70%	80%	77%
Long Commute-Driving Alone (Percent)	55%	34%	38%	48%	38%	57%	26%	29%	38%

Source: County Health Rankings, 2016.

Key	
Unreliable or missing data	~
Ranging from better than U.S. median up to 10% worse than U.S. median	
10%-49% worse than U.S. median	
50-74% worse than U.S. median	
>75% worse than U.S. median	

Exhibit 24A: County/City Data Compared to U.S. Average, West Virginia Counties, 2016

2016	Berkeley	Grant	Hampshire	Hardy	Jefferson	Mineral	Morgan	US Median	West Virginia
Health Outcomes	14	11	26	19	1	21	13	~	~
Premature Death (Years of Potential Life Lost Rate)	1,471	164	396	189	632	415	294	7,700	9,731
Poor or Fair Health (Percent Fair/Poor)	21%	21%	23%	22%	18%	22%	21%	16%	24%
Poor Physical Health Days (Physically Unhealthy Days)	4.8	4.7	4.9	4.9	4.2	4.9	4.7	3.7	5.0
Poor Mental Health Days (Mentally Unhealthy Days)	4.6	4.6	4.7	4.7	4.3	4.7	4.5	3.7	4.7
Low Birthweight (Percent LBW)	8%	9%	7%	8%	8%	8%	9%	8%	9%

Source: County Health Rankings, 2016.

Key	
Unreliable or missing data	~
Ranging from better than U.S. median up to 10% worse than U.S. median	
10%-49% worse than U.S. median	
50-74% worse than U.S. median	
>75% worse than U.S. median	

Exhibit 24B: County/City Data Compared to U.S. Average, West Virginia Counties, 2016

2016	Berkeley	Grant	Hampshire	Hardy	Jefferson	Mineral	Morgan	US Median	West Virginia
Health Behaviors	43	21	36	41	3	17	2	N/A	N/A
Adult Smoking (Percent Smokers)	26%	22%	25%	24%	22%	24%	22%	18%	27%
Adult Obesity (Percent Obese)	36%	37%	34%	36%	33%	35%	34%	31%	34%
Food Environment Index	7.5	7.2	6.3	6.5	8.5	7.2	7.4	7.2	7.3
Physical Inactivity (Percent Physically Inactive)	28%	38%	31%	37%	28%	26%	31%	28%	32%
Access to Exercise Opportunities (Percent with Access)	61%	51%	18%	36%	67%	51%	72%	62%	58%
Excessive Drinking (Percent)	12%	11%	11%	11%	12%	11%	11%	17%	10%
Alcohol-impaired Driving Deaths (Percent)	44%	35%	32%	59%	31%	36%	17%	31%	23%
Sexually Transmitted Infections (Chlamydia Rate)	371	169	156	159	231	172	103	288	277
Teen Births	43	50	44	45	30	40	33	40	45

Source: County Health Rankings, 2016.

Key	
Unreliable or missing data	~
Ranging from better than U.S. median up to 10% worse than U.S. median	
10%-49% worse than U.S. median	
50-74% worse than U.S. median	
>75% worse than U.S. median	

Exhibit 24C: County/City Data Compared to U.S. Average, West Virginia Counties, 2016

2016	Berkeley	Grant	Hampshire	Hardy	Jefferson	Mineral	Morgan	US Median	West Virginia
Clinical Care	8	25	51	35	15	9	36	~	~
Uninsured (Percent)	16%	19%	22%	20%	16%	17%	20%	17%	17%
Primary Care Physicians (Ratio)	2265:1	1960:1	4689:1	4640:1	2040:1	3463:1	2187:1	1,990:1	1285:1
Dentists (Ratio)	2085:1	2337:1	3355:1	1989:1	3482:1	3064:1	3491:1	2,590:1	2027:1
Mental Health Providers (Ratio)	654:1	1461:1	1806:1	1740:1	1506:1	1379:1	1745:1	1,060:1	908:1
Preventable Hospital Stays (Rate)	66	67	91	77	55	77	73	60	81
Diabetic Monitoring (% Receiving HbA1c)	84%	79%	88%	85%	81%	88%	86%	85%	84%
Mammography Screening (Percent)	59%	65%	56%	63%	54%	70%	57%	61%	58%

Source: County Health Rankings, 2016.

Key	
Unreliable or missing data	~
Ranging from better than U.S. median up to 10% worse than U.S. median	
11%-49% worse than U.S. median	
50-74% worse than U.S. median	
>75% worse than U.S. median	

Exhibit 24D: County/City Data Compared to U.S. Average, West Virginia Counties, 2016

2016	Berkeley	Grant	Hampshire	Hardy	Jefferson	Mineral	Morgan	US Median	West Virginia
Social and Economic Factors	8	24	41	38	1	20	3	~	~
High School Graduation (Graduation Rate)	84%	88%	81%	83%	89%	94%	92%	89%	82%
Some College (Completion Rate)	53.8%	33.7%	28.2%	36.7%	60.9%	44.3%	46.0%	56%	69%
Unemployment (Rate)	5.3%	7.5%	6.0%	7.9%	4.5%	7.2%	5.7%	6.0%	53%
Children in Poverty (Percent in Poverty)	19.0%	26.0%	30.0%	25.0%	13.0%	22.0%	21.0%	23%	6.50%
Income Inequality (Ratio)	4.2	3.9	4.9	4.3	4.5	5.5	4.7	4.4	25%
Children in single-parent households	38%	28%	32%	37%	27%	35%	19%	32%	4.9
Social Associations (Association Rate)	8.9	15.3	9.0	11.5	8.9	13.4	17.1	13.0	33%
Violent Crime (Rate)	227	193	392	297	130	300	130	199	13.1
Injury Deaths (Rate)	81	77	77	92	65	73	87	74	311

Source: County Health Rankings, 2016.

Key	
Unreliable or missing data	~
Ranging from better than U.S. median up to 10% worse than U.S. median	
10%-49% worse than U.S. median	
50-74% worse than U.S. median	
>75% worse than U.S. median	

Exhibit 24E: County/City Data Compared to U.S. Average, West Virginia Counties, 2016

2016	Berkeley	Grant	Hampshire	Hardy	Jefferson	Mineral	Morgan	US Median	Virginia
Physical Environment	46	5	15	11	42	4	38	~	~
Air Pollution - Particulate Matter (Average Daily PM2.5)	13.0	13.1	13.1	13.0	12.9	13.2	13.0	11.9	12.7
Drinking Water Violations (Presence of Violations)	Yes	No	No	Yes	Yes	No	Yes	N/A	N/A
Severe Housing Problems (Percent)	14%	9%	11%	7%	16%	10%	11%	14%	15%
Driving Alone to Work (Percent Driving Alone)	83%	83%	80%	81%	76%	80%	80%	80%	77%
Long Commute-Driving Alone (Percent)	37%	35%	60%	31%	53%	33%	49%	29%	38%

Source: County Health Rankings, 2016.

Key	
Unreliable or missing data	~
Ranging from better than U.S. median up to 10% worse than U.S. median	
10%-49% worse than U.S. median	
50-74% worse than U.S. median	
>75% worse than U.S. median	

2. Virginia Department of Health

The Virginia Department of Health (VDH) maintains a data warehouse that includes indicators regarding a number of health issues. In **Exhibits 25** through **32**, cells in the tables below are shaded if the mortality rate for a county/city or health district in the WMC community exceeded the Virginia average for that condition by more than ten percent. In some cases, data from VDH is presented by health district.

The Lord Fairfax Health District is composed of Clarke, Frederick, Page, Shenandoah; and Warren Counties, and Winchester City. The Rappahannock / Rapidan Health District includes Rappahannock County from the WMC community, as well as Culpeper, Fauquier, Madison, and Orange Counties. Supplemental cancer incidence data were gathered from the Centers for Disease Control and Prevention.

Exhibit 25: Leading Causes of Death by County/City, 2013

	Clarke	Frederick	Page	Rappahannock	Shenandoah	Warren	Winchester	Virginia	US
Total Deaths All Ages	149	640	273	70	457	330	262	62,309	2,596,993
Total Deaths Rate¹⁵	787.1	718.6	829	622.1	721.2	799.1	812.6	720.1	821.5
Malignant Neoplasms (Cancer) Rate	214.4	193	185	173.9	178.7	190.1	169	161.3	185.0
Diseases of Heart Rate	92.4	123.4	172.7	140.8	135.8	188.7	194.8	155.9	193.3
Cerebrovascular Disease Rate	77.6	30.7	45.5	31	38.9	34.6	38.1	38.5	40.8
Chronic Lower Respiratory Disease Rate	37.6	40.9	42.3	42.1	45.7	50.7	20.4	37.2	47.2
Unintentional Injury Rate	35.9	35.8	55	30.1	42.4	41.6	56.8	33	41.3
Alzheimer's Disease Rate	15.5	22.6	46	19.7	13.2	8	20.5	19.6	26.8
Diabetes Mellitus Rate	17.3	9.9	10.1	9.9	20.7	10.9	19.4	18.3	23.9
Nephritis and Nephrosis Rate	10.8	13	14.4	8.6	14.4	17	23.2	18	14.9
Septicemia Rate	13.9	16	16.8	0	18.7	18.1	7.3	17.7	12.1
Influenza and Pneumonia Rate	20	17.5	31.1	8.6	23.7	12.5	28	16.8	18.0
Suicide Rate	8.3	12.8	16	0	14.2	17.5	18.9	12.2	13.0
Chronic Liver Disease Rate	10.9	11.5	11.8	0	12.5	5.3	19.2	8.9	11.5
Primary Hypertension & Renal Disease Rate	9.7	5.6	10.6	0	6.8	9.2	0	7.2	9.7

Source: Virginia Department of Health, 2013. Retrieved from: <https://www.vdh.virginia.gov/healthstats/stats.htm>. Rates are per 100,000 population.

According to VDH, Page County compared unfavorably to Virginia on seven indicators, with two indicators more than 75 percent worse than the Virginia average. Mortality due to malignant neoplasms and chronic lower respiratory disease was greater than the Commonwealth average for five of the seven

Key	
Rates unreliable due to small sample size	~
Ranging from better than VA up to 10% worse than VA	
10-50% worse than VA	
50-75% worse than VA	
> 75% worse than VA	

¹⁵ The ratio of total deaths to total population in a specified community or area over a specified period of time. The death rate is often expressed as the number of deaths per 1,000 of the population per year.

counties for which there was reliable data (**Exhibit 25**).

Exhibit 26: Selected Causes of Death by Health District and County, 2013

Health District	Death from All Causes	Cancer	All Diseases of the Heart	Cerebro-Vascular	Chronic Lower Respiratory Diseases
Clarke	9.3%	32.9%	-40.7%	101.6%	1.1%
Frederick	-0.2%	19.7%	-20.8%	-20.3%	9.9%
Warren	11.0%	17.9%	21.0%	-10.1%	36.3%
Page	15.1%	14.7%	10.8%	18.2%	13.7%
Shenandoah	0.2%	10.8%	-12.9%	1.0%	22.8%
Rappahannock	-13.6%	7.8%	-9.7%	-19.5%	13.2%
Winchester	12.8%	4.8%	25.0%	-1.0%	-45.2%
Lord Fairfax	5.3%	15.7%	-5.2%	0.5%	9.9%
Rappahannock /Rapidan	2.9%	-7.3%	-7.1%	16.9%	14.5%

Source: Virginia Department of Health, 2011. Rates are per 100,000 population

Key	
Rates unreliable due to small sample size	~
Ranging from better than VA up to 10% worse than VA	
11-49% worse than VA	
50-74% worse than VA	
> 75% worse than VA	

The Lord Fairfax District reported cancer mortality rates more than 15.7 percent worse than Virginia averages. Other populations in the Rappahannock / Rapidan Health District experienced cerebrovascular disease-related mortality rates more than 16.9 percent worse than Commonwealth averages. Clarke County compared unfavorably with Cerebro-Vascular rates in the category of 75% worse than Virginia’s average (**Exhibit 26**).

Exhibit 27: Injury-Related Mortality by Health District and County, 2013

Health District / County	Unintentional Injury	Motor Vehicle Death Rate	Suicide
Clarke	35.9	~	8.3
Frederick	35.8	0.17	12.8
Page	55	0.06	16
Rappahannock	30.1	~	~
Shenandoah	42.4	0.21	14.2
Warren	41.6	0.21	17.5
Winchester	56.8	~	18.9
Lord Fairfax¹⁶	42.7	~	14.8
Rappahannock /Rapidan	45.7	~	14.6
Virginia	33	0.92	12.2

Source: Virginia Department of Health, 2013. Rates are per 100,000 population, are not age-adjusted, and were calculated by VHS.

Key	
Rates unreliable due to small sample size	~
Ranging from better than VA up to 10% worse than VA	
11-49% worse than VA	
50-74% worse than VA	
> 75% worse than VA	

Page County and Winchester City residents in the Lord Fairfax Health District experienced unintentional-injury related mortality at a higher rate than the Virginia average for that cohort. The overall populations of the Lord Fairfax and Rappahannock / Rapidan health districts reported higher rates of mortality related to unintentional injury and suicide than Commonwealth averages (**Exhibit 27**).

¹⁶ Lord Fairfax District (Includes Clarke, Frederick, Page, Rappahannock, Shenandoah, Warren Counties, and Winchester City).

Exhibit 28: Additional Disease-Related Mortality by County, 2013

Health District, 2013	Alzheimer's Disease	Diabetes Mellitus	Influenza and Pneumonia	Chronic Liver Disease
Clarke	15.5	17.3	20	10.9
Frederick	22.6	9.9	17.5	11.5
Page	46	10.1	31.3	11.8
Rappahannock	19.7	9.9	8.6	~
Shenandoah	13.2	20.7	23.7	12.5
Warren	8	10.9	12.5	5.3
Winchester	20.5	19.4	28	19.2
Virginia	19.6	18.3	16.8	8.9

Source: Virginia Department of Health, 2013. Rates are per 100,000 population, are not age-adjusted, and were calculated by VHS.

Key	
Rates unreliable due to small sample size	~
Ranging from better than VA up to 10% worse than VA	
11-49% worse than VA	
50-74% worse than VA	
> 75% worse than VA	

Page County residents experienced additional disease-related mortality at a higher rate for two cohorts, Alzheimer’s disease and influenza and pneumonia than the Virginia average. Winchester City residents and those in five other counties showed mortality rates higher in chronic liver disease cohort than the state average of 8.9 (**Exhibit 28**).

Exhibit 29: Cancer Mortality Rates by Health District and Race, 2013

Health District and Race	All Cancers	Colorectal	Lung and Bronchus	Breast	Cervical	Prostate
Lord Fairfax (Includes Clarke, Frederick, Page, Rappahannock, Shenandoah, Warren counties, Winchester city)						
White	189.8	14.4	57.8	26.2	~	20.4
Black	236.4	~	82.3	~	~	~
Total (All Races)	190.5	14.7	58.3	26.4	~	21.4
Rappahannock /Rapidan (Includes Culpeper, Fauquier, Madison, Orange, Rappahannock)						
White	171.4	15.4	49.8	19.6	~	19.0
Black	223.2	~	49.4	~	~	~
Total (All Races)	176.8	16.0	49.6	20.7	~	19.7
Virginia						
White	168.2	14.0	48.8	21.3	1.7	18.9
Black	203.7	20.8	51.4	31.5	2.9	46.2
Total (All Races)	171.2	14.9	48.2	22.7	1.9	22.4

Source: Virginia Department of Health, 2012. Rates were calculated by VHS, are per 100,000 population, and are age-adjusted¹⁷.

Key	
Rates unreliable due to small sample size	~
Ranging from better than VA up to 10% worse than VA	
11-49% worse than VA	
50-74% worse than VA	
> 75% worse than VA	

Overall, the Lord Fairfax Health District reported mortality rates higher than the Virginia average for lung and bronchus, and breast cancers. Rappahannock / Rapidan Health District reported higher mortality rates than the Virginia average for colorectal and, lung and bronchus cancers (**Exhibit 29**).

¹⁷ Number of cases 5 or less not reported due to confidentiality issues.

Exhibit 30: Cancer Incidence Rates in Virginia by County/City, 2008-2012

Cancer Incidence	Clarke	Frederick	Page	Rappahannock	Shenandoah	Warren	Winchester City	Virginia	US
All Cancers	417.9	456.6	430	401.1	407.6	428.2	401.9	429.1	453.8
Breast (Female)	148.6	145.7	108	137.8	126.4	115.4	130.8	124.6	123
Colorectal	46.9	34.7	34.7	37.1	27.2	41.9	36.1	38.3	41.9
Lung	66	73	67.2	57.8	67.2	76.1	69.5	63.6	63.7
Melanoma	~	20.4	21.4	~	13.1	13.1	18.2	18.3	19.9
Oral	17.2	14.9	11.7	~	11.8	13.5	~	10.4	11.3
Ovarian	~	19.7	~	~	~	14.9	~	11.8	11.8
Prostate	109.9	98.5	78.2	91.9	101.3	86.2	93.6	126.3	131.7

Source: Virginia Department of Health, 2012. Rates were calculated by VHS, are per 100,000 population, and are age-adjusted.

Key	
Rates unreliable due to small sample size	~
Ranging from better than VA up to 10% worse than VA	
11-49% worse than VA	
50-74% worse than VA	
> 75% worse than VA	

Five out of the seven counties had higher incident rates for Breast Cancer (Female) than the Virginia average. Clarke and Frederick Counties had rates of some cancers significantly worse than the Virginia average, and Frederick had an ovarian cancer incidence rate more than 67 percent worse than the Commonwealth average (**Exhibit 30**).

Exhibit 31: Communicable Disease Incidence Rates by Health District, 2014

Health District / County	Chlamydia	Gonorrhea	Lyme Disease
Clarke County	188.2	20.9	76.7
Frederick County	232.4	28.3	40.6
Page County	205.7	~	54.6
Rappahannock County	280.8	26.7	40.1
Shenandoah County	192.1	7.0	21.1
Warren County	323.0	28.4	72.4
Winchester City	584.2	106.6	51.4
Lord Fairfax	276.6	30.3	47.4
Rappahannock/Rapidan	275.3	40.3	24.5
Virginia	432.5	99.2	16.3

Source: Virginia Department of Health, 2014. Rates are per 100,000 population.

Key	
Rates unreliable due to small sample size	~
Ranging from better than VA up to 10% worse than VA	
11-49% worse than VA	
50-74% worse than VA	
> 75% worse than VA	

The Lord Fairfax and Rappahannock / Rapidan health districts reported much lower chlamydia and gonorrhea rates than the Virginia average, but Lyme disease incidence exceeds the Virginia average. Lyme disease rates reported were 75 % higher than the state rate for Frederick, Page, Rappahannock, Warren Counties and Winchester City (**Exhibit 31**).

Exhibit 32: Maternal and Child Health Indicators by County/City and State, 2014

2013	Clarke	Frederick	Page	Rappahannock	Shenandoah	Warren	Winchester	Virginia	West Virginia
Low birth weight infants	7.6	6.8	6.4	10.6	6.8	6.3	9.2	8.0	9.5
Very low birth weight infants	0.8	1.1	~	0.0	1.3	1.3	1.7	1.6	N/A
Teen pregnancy rate 10-19	8.8	9.6	20.5	2.4	18.7	18.2	18.7	14.4	48.8
No prenatal care in first trimester	14.6	13.6	28.4	17.0	16.4	21.4	30.3	17.1	~
Infant mortality rate	6.3	4.3	0	~	4.4	2.1	8.6	6.2	7.6

Sources: Virginia Department of Health, 2014.

*Rates per 1,000 females aged 15-19 were calculated by Verité using U.S. Census, ACS 5-year estimates.

**Rates per 1,000 live births.

Key	
Rates unreliable due to small sample size	~
Ranging from better than VA up to 10% worse than VA	
11-49% worse than VA	
50-74% worse than VA	
> 75% worse than VA	

Page and Winchester City reported rates of no prenatal care in the first trimester more than 50 percent higher than the Virginia average. Shenandoah, Warren Counties and Winchester City reported teen birth rates more than 26-30 percent higher, whereas, Page County reported teen birth rates at 40 percent higher than the Commonwealth average (**Exhibit 32**).

3. West Virginia Department of Health and Human Resources

The Centers for Disease Control and Prevention data includes indicators regarding a number of health issues. In **Exhibits 33** through **37**, cells are shaded if the mortality rate for a county in the WMC community exceeded the West Virginia average by more than ten percent for that condition. Supplemental cancer incidence data also were gathered from the Centers for Disease Control and Prevention.

Exhibit 33: Leading Causes of Death by County, 2013

2013	Berkeley	Grant	Hardy	Hampshire	Jefferson	Mineral	Morgan	West Virginia	US
Total Deaths All Ages	918	131	128	271	395	338	226	21,843	2,596,993
Total Deaths Rate	8.4	11.1	9.2	11.6	7.2	12.2	12.9	1178	821.5
Malignant Neoplasms (Cancer) Rate	197.8	187.1	237.1	273	158	274.3	314.3	254.4	185.0
Diseases of Heart Rate	173.9	357.2	208.3	268.7	165.2	263.5	268.6	251.6	193.3
Cerebrovascular Diseases Rate	26.7	59.5	28.7	38.4	41.2	18	68.6	53	40.8
Chronic Lower Respiratory Diseases Rate	56.7	59.5	71.8	81	39.9	75.8	62.9	85.7	47.2
Unintentional Injury Rate								75.2	41.3
Alzheimer's Disease Rate	21.2	25.5	7.2	42.7	23.6	43.3	45.7	31.8	26.8
Diabetes Mellitus Rate	38.6	34	28.7	17.1	21.8	43.3	51.4	45.4	23.9
Nephritis and Nephrosis Rate	12	25.5	14.4	21.3	5.4	32.5	40	24.3	14.9
Septicemia Rate	12	17	14.4	12.6	10.9	18	28.6	17.9	12.1
Influenza and Pneumonia Rate	15.6	17	21.6	25.6	10.9	39.7	34.3	25.9	18.0
Suicide Rate	15.6	51	21.6	12.8	10.9	10.8	17.1	17.4	13.0
Chronic Liver Disease Rate	11	8.5	0	42.7	14.5	21.7	17.1	15.9	11.5
Primary Hypertension & Renal Disease Rate	10.1	17	14.4	8.5	10.9	14.4	11.4	15.2	9.7

Source: Centers for Disease Control and Prevention 2013. Rates are per 100,000 population.

Key	
Rates unreliable due to small sample size	~
Ranging from better than VA up to 10% worse than WV	
11-49% worse than WV	
50-74% worse than WV	
> 75% worse than WV	

Morgan County reported rates of mortality related to nephritis and nephrosis, and septicemia more than 50 percent worse than the West Virginia averages. Mineral County reported mortality related to influenza and pneumonia more than 50 percent worse than the state average, as did Hampshire County with chronic liver disease and Grant County with suicide (**Exhibit 33**).

Exhibit 34: Cancer Mortality Rates by County, 2012

2012	West Virginia (White)	West Virginia (all races)
All cancers	~	191.1
Colorectal	17.1	17.2
Lung and Bronchus	60.1	59.6
Breast	22	22.3
Cervical	~	3.4
Prostate	15.3	16.0

Source: Centers for Disease Control, 2012. Rates are per 100,000 population.

	Berkeley	Hampshire	Hardy	Grant	Jefferson	Mineral	Morgan
All Cancers	207.8	207.9	159.7	148.6	199.6	195.7	217.9

Source: Centers for Disease Control, 2012. Rates are per 100,000 population.

Berkeley, Hampshire, Jefferson, Mineral, and Morgan Counties reported higher cancer rates than West Virginia average for All Cancers. White populations reported the similar mortality rates as West Virginia for all races (**Exhibit 34**).

Exhibit 35: Cancer Incidence Rates by County, 2008-2012

Cancer Incidence	Berkeley	Grant	Hampshire	Hardy	Jefferson	Mineral	Morgan	West Virginia	US
All Cancers	463.1	356.3	475.1	374.9	423.7	456.6	425.4	472.9	453.8
Breast (Female)	118.2	71.1	115.7	81.3	97.3	108.0	106.2	111.2	123.0
Colorectal	52.3	43.3	53.0	34.9	45.1	53.1	38.2	47.6	41.9
Lung	86.2	51.8	92.5	64.9	72.5	76.7	67.8	82.8	63.7
Melanoma	16.5	22.8	12.4	~	12.9	11.2	17.2	21.1	19.9
Oral	13.1	~	18.0	~	14.1	11.9	~	11.9	11.3
Ovarian	12.2	~	~	~	13.7	~	~	12.9	11.8
Prostate	101.9	78.1	91.3	85.4	110.6	115.5	112.6	114.1	131.7

Source: Centers for Disease Control and Prevention, State Cancer Profiles, 2016. Rates are per 100,000 population and are age-adjusted to the 2000 U.S. standard population.

Key	
Rates unreliable due to small sample size	~
Ranging from better than VA up to 10% worse than WV	
11-49% worse than WV	
50-74% worse than WV	
> 75% worse than WV	

Hampshire County reported an oral cancer incidence rate more than 51.3 percent worse than the West Virginia average. Four out of the seven counties reported lower incidence rates than the state average for colorectal, and five out of seven counties reported lower incidence rates that state average for lung cancers (**Exhibit 35**).

Exhibit 36: Communicable Disease Incidence Rates by County, 2015

Health District / County	Chlamydia	Gonorrhea
Berkeley	298.0	98.0
Grant	18.0	1.0
Hampshire	30.0	3
Hardy	23.0	2.0
Jefferson	138.0	23.0
Mineral	56.0	2.0
Morgan	23.0	2.0
West Virginia	277.0	99.2
United States	456.1	110.7

Source: West Virginia Department of Health and Human Services Bureau for Public Health, 2013. Rates are per 100,000 population.

Key	
Rates unreliable due to small sample size	~
Ranging from better than VA up to 10% worse than WV	
11-49% worse than WV	
50-74% worse than WV	
> 75% worse than WV	

Berkeley County reported chlamydia incidence rates more than the West Virginia average (**Exhibit 36**).

4. Behavioral Risk Factor Surveillance System

Data collected by the Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) are based on a telephone survey that gathers data on various health indicators, risk behaviors, healthcare access, and preventive health measures. Data are collected for the entire U.S. Analysis of BRFSS data can identify localized health issues and trends, and enable county, state (or Commonwealth), or nation-wide comparisons.

Exhibit 37A compares various BRFSS indicators for Frederick, Shenandoah, and Warren Counties, with Virginia and U.S. averages for comparison. Indicators are shaded if an area's value was more than ten percent higher than the Virginia average. Data for Clarke and Page Counties and Winchester City were not included in this analysis due to small sample sizes. Data for Rappahannock County were unavailable. **Exhibit 37B** compares BRFSS indicators to state and U.S. averages for the community's West Virginia counties. Data for Grant County was unavailable.

Exhibit 37A: BRFSS Indicators and Variation from the Commonwealth of Virginia*, 2013

Indicator		Clarke	Frederick	Page	Rappahannock	Shenandoah	Warren	Winchester	VA
Health Behaviors	Binge drinkers**2006-2012	DSU	13.7%	12.4%	DSU	12.6%	12.9%	DSU	14.4%
	Excessive drinkers*** 2006-2012	DSU	14.6%	14.2%	DSU	14.8%	13.6%	DSU	15.9%
	Current smoker 2006-2012		21.7%	2	DSU	20.6%	24.3%	DSU	17.5%
	No physical activity in past 30 days 2006-2012	19.9%	24.7%	28.2%	DSU	25.3%	14.4%	DSU	22.2%
Access	Unable to visit doctor due to cost 2006-2012	DSU	15.1%	DSU	DSU	11.4%	14.3%	DSU	11.5%
	Rate of primary care providers (PCP) per 100,000, 2013 ¹⁸	48.8	44.3	42	40.1	49.2	64.6	316	93.9
	Do not have health care coverage under 65, 2013	12.0%	14.4%	16.9%	19.4	16.7%	15.7%	19.1%	14.0%
Health Conditions	Overweight or obese	28.7%	29.9%	39.2%	DSU	27.4%	35.0%	DSU	27.0%
	Told have diabetes 2006-2012	DSU	9.5%	DSU	DSU	11.4%	11.9%	DSU	8.6%
Mental Health	* Poor mental health > number of days/month	DSU	3.2	3.5	DSU	2.8	4.0	DSU	3.1
Overall Health	** Poor physical health > number of days/month	3.1	2.9	3.9	DSU	3.4	3.5	DSU	3.3
	Social-emotional support lacking: Adults (percent), 2006-2012 ¹⁹	DSU	15.7%	17.3%	DSU	22.6%	21.0%	DSU	18.4%
	Reported poor or fair health 2006-2012	DSU	13.5%	19.5%	DSU	14.0%	14.7%	28.4%	13.8%

Source: CDC BRFSS, 2013.

*Data for Clarke and Page Counties and Winchester City were not included in this analysis due to small sample sizes. Some data indicators for Rappahannock County were unavailable (DSU=Data Statistically Unreliable).

**Adult males having five or more drinks on one occasion; adult females having four or more drinks on one occasion.

***Adult men having more than two drinks per day; adult women having more than one drink per day.

Shenandoah and Warren County compared most unfavorably (eight indicators) worse than the Virginia average. Frederick, Shenandoah, and Warren Counties reported high percentages of residents who don't have health insurance, are overweight or obese, told they have diabetes, and smoke. Page, Shenandoah, and Warren Counties and the City of Winchester reported poor or fair health condition higher than the Virginia average (**Exhibit 38A**).

¹⁸Reporting indicator source has changed than what was previously reported in 2013.

¹⁹Reporting indicator source has changed than what was previously reported in 2013.

Exhibit 37B: BRFSS Indicators and Variation from the State of West Virginia, 2011

Indicator		Berkeley	Hampshire	Hardy	Jefferson	Mineral	Morgan	WV
Health Behaviors	Binge drinkers**2006-2012	12.5%	9.9%	DSU	13.1%	7.2%	10.1%	9.3%
	Excessive drinkers***	13.5%	10.9%	12.0%	14.4%	7.2%	10.8%	10.0%
	Current smoker	26.8%	28.8%	23.70%	25.0%	17.1%	25.2%	26.0%
	No physical activity in past 30 days 2006-2012	27.0%	29.70%	30.0%	26.3%	28.1%	29.9%	31.0%
Access	Unable to visit doctor due to cost 2006-2012	16.3%	20.3%	15.3%	10.8%	13.8%	19.8%	17.4%
	Rate of primary care providers (PCP) per 100,000, 2013 ²⁰	50.6	25.6	21.6	58.1	36.1	34.3	82.6
	Do not have health care coverage under 65, 2013	16.1%	22.4%	20.2%	15.90%	16.8%	20.3%	17.1%
Health Conditions	Overweight or obese	33.7%	31.8%	27.2%	28.9%	32.9%	30.3%	32.5%
	Told have diabetes 2006-2012	9.90%	8.4%	9.8%	10.3%	10.1%	11.6%	12.10%
Mental Health	* Poor mental health > number of days/month	3.8	3.3	3.8	3.2	3.6	3.6	4.3
Overall Health	** Poor physical health > number of days/month	3.9	5.2	4.2	3.7	4.5	4.2	5.2
	Social-emotional support lacking: Adults (percent), 2006-2012 ²¹	20.1%	14.9%	23.8%	16.0%	15.6%	21.2%	19.1%
	Reported poor or fair health	16.9%	21.1%	17.8%	16.8%	17.9%	23.0%	23.6%

Source: CDC BRFSS, 2011.

*Adult males having five or more drinks on one occasion; adult females having four or more drinks on one occasion.

**Adult men having more than two drinks per day; adult women having more than one drink per day.

DSU=Data Statistically Unreliable

In Berkeley, Jefferson, and Morgan Counties, the percentage of people who reported being binge drinkers or heavy drinkers was higher than the West Virginia average. Berkeley, Hampshire, and Morgan Counties had four or more indicators that were worse than the West Virginia average. The obesity indicator was higher in Berkeley and Mineral Counties than the state average (**Exhibit 38B**).

²⁰ Reporting indicator source has changed than what was previously reported in 2013.

²¹ Reporting indicator source has changed than what was previously reported in 2013.

Ambulatory Care Sensitive Conditions

This section examines the frequency of discharges for Ambulatory Care Sensitive Conditions (ACSC) throughout the counties in WMC's community and at the hospital.

ACSC are sixteen health “conditions for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease.”²² As such, rates of hospitalization for these conditions can “provide insight into the quality of the health care system outside of the hospital,” including the accessibility and utilization of primary care, preventive care and health education. Among these conditions are: diabetes, perforated appendixes, chronic obstructive pulmonary disease (COPD), hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, and asthma.

Disproportionately high rates of discharges for ACSC indicate potential problems with the availability or accessibility of ambulatory care and preventive services and can suggest areas for improvement in the health care system and ways to improve outcomes.

²² Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators, accessed online at <http://archive.ahrq.gov/data/hcup/factbk5/factbk5d.htm> on June 28, 2013.

1. County/City-Level Analysis

Exhibit 38: Discharges for ACSC by County/City and Payer²³, 2015

County/Service Area	Blue Cross	Medicaid	Medicare	Other	Commercial	Self	Total IP ACSC Discharges
PSA	12.4%	10.9%	60.2%	0.2%	9.5%	7.4%	11.2%
Clarke, VA	13.7%	5.1%	64.1%	0.1%	9.1%	7.9%	18.3%
Frederick, VA	14.7%	9.2%	56.6%	0.3%	11.7%	7.5%	15.8%
Hampshire, WV	8.4%	17.9%	60.7%	0.2%	10.5%	2.2%	10.0%
Hardy, WV	13.4%	19.5%	56.5%	0.8%	7.5%	2.2%	17.0%
Morgan, WV	7.2%	16.3%	65.9%	0.0%	7.7%	2.9%	7.9%
Page, VA	8.4%	9.5%	67.3%	0.3%	5.8%	8.7%	2.9%
Rappahannock, VA	17.3%	5.1%	61.2%	0.0%	8.2%	8.2%	12.0%
Shenandoah, VA	12.2%	7.1%	67.0%	7.0%	6.6%	6.6%	10.1%
Warren, VA	13.5%	8.4%	58.8%	9.2%	9.7%	9.7%	7.8%
Winchester, VA	10.1%	15.9%	55.4%	7.9%	10.6%	10.6%	14.2%
SSA	16.0%	15.0%	50.9%	0.5%	16.3%	2.4%	17.0%
Berkley, WV	18.4%	16.5%	44.8%	0.4%	17.1%	2.9%	15.3%
Grant, WV	7.1%	22.6%	53.6%	0.0%	14.3%	2.4%	24.0%
Jefferson, WV	13.5%	10.9%	56.7%	0.7%	16.6%	1.6%	21.4%
Mineral, WV	7.0%	12.2%	74.8%	0.9%	5.2%	0.0%	14.8%
Total PSA and SSA	12.8%	11.3%	58.6%	0.2%	10.2%	6.8%	11.6%
Other Counties	10.5%	8.9%	53.5%	0.8%	16.5%	9.8%	7.8%
Total	12.7%	11.2%	58.4%	0.3%	10.5%	6.9%	11.4%

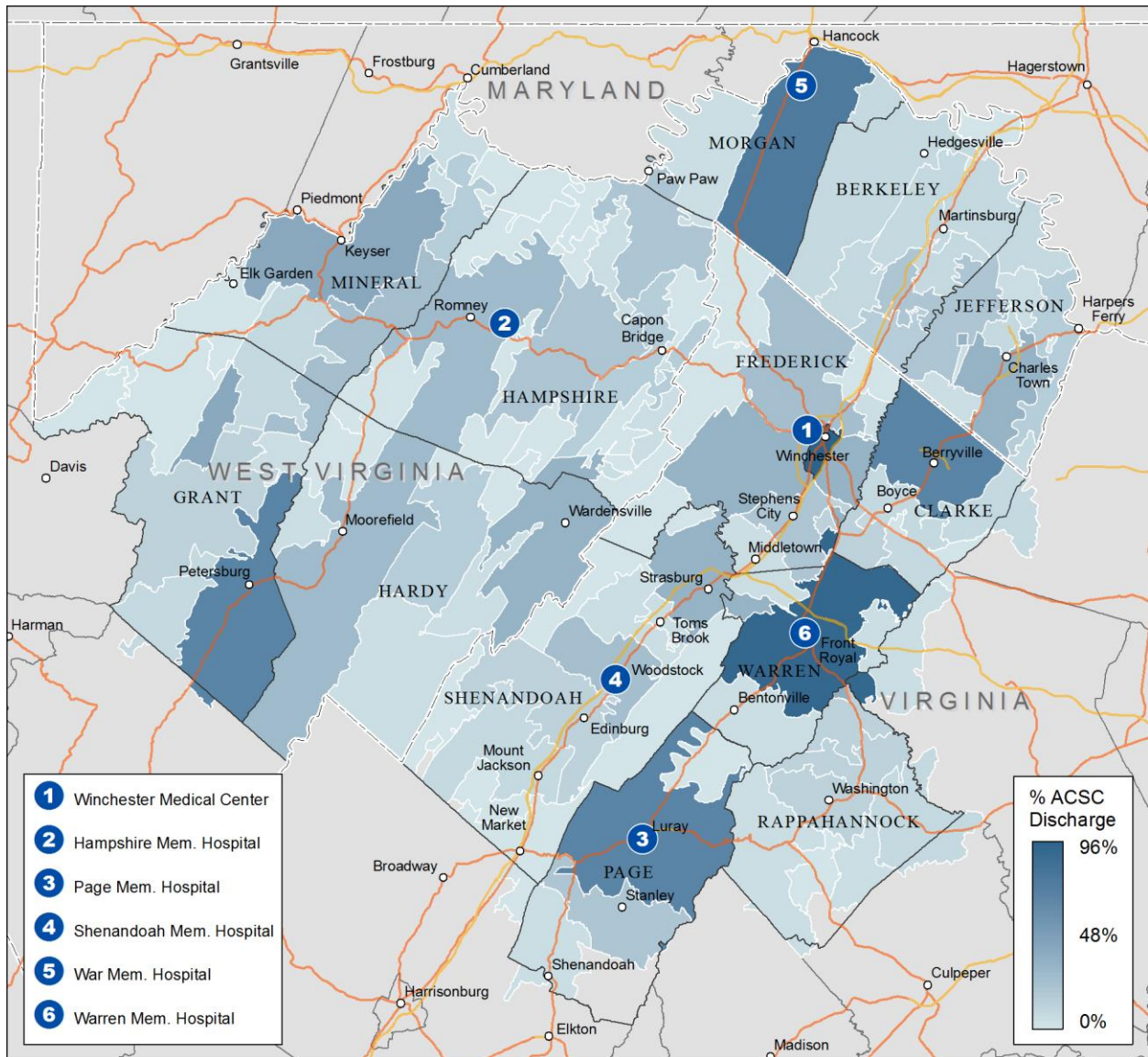
Source: Valley Health System, 2015 Inpatient Data.

The table indicates that 11.4 percent of Valley Health’s discharges were for ACSCs in 2015. Medicare patients had the highest proportion of discharges for ACSCs. Self-pay patient (typically uninsured individuals) had shown a decrease from 15.3 percent in 2013 to 6.9 percent for ACSC. Clarke County in Virginia, and Grant and Jefferson Counties in West Virginia, had the highest percentage of discharges for ACSCs (**Exhibit 38**).

²³ Discharges from all Valley Health System hospitals.

2. ZIP Code-Level Analysis

Exhibit 39: Discharges²⁴ for ACSC by County/City and ZIP Code, 2015*



Source: Northern Shenandoah Valley Regional Commission, Analysis of data from Valley Health System, 2015.

The percentage of discharges that were for ACSC was highest in the following ZIP codes: 26704 in Hampshire County (Augusta, 23.7%), 26836 in Hardy County (Moorefield, 31.5%), and 22602 in Frederick County (Winchester, 31.4%) (**Exhibit 39**).

²⁴ Discharges are from all Valley Health hospitals.

3. Hospital-Level Analysis

Exhibit 40: ACSC Inpatient (IP) Discharges by Hospital, 2015

Entity Name	Total IP ACSC Discharges	Total IP Discharges	Percent of IP ACSC Discharges from Total IP Discharges
Hampshire Memorial Hospital	285	464	61.4%
Page Memorial Hospital	177	751	23.6%
Shenandoah Memorial Hospital	1,210	1,555	77.8%
War Memorial Hospital	121	336	36.0%
Warren Memorial Hospital	1,316	2,217	59.4%
Winchester Medical Center	13,817	24,451	56.5%
Total	16,926	29,774	56.8%

Source: Valley Health System, 2015 Inpatient Data.

Page Memorial Hospital had the lowest percent of ACSC discharges of all hospitals in the Valley Health System. Shenandoah Memorial Hospital had the highest percent of ACSC discharges for 2015 (**Exhibit 40**).

Exhibit 41: Discharges for ACSC by Condition and Age, Winchester Medical Center, 2015

WMC Condition	0 to 17 years old	18 to 39 years old	40 to 64 years old	65 + years and older	Total
*Heart failure	~	1	28	131	160
**Pneumonia	15	32	107	381	535
***Asthma	7	6	22	20	55
Urinary tract infection	1	2	18	77	98
****Diabetes	~	34	38	22	94
Dehydration	16	0	9	28	53
*****Hypertension	~	2	10	19	31
Angina	~	1	~	3	4
Appendix	5	3	~	8	16
Total	44	81	232	689	1,046
Percent Total	4.21%	7.7%	22.2%	65.9%	100.0%

Source: Valley Health System, 2015 Inpatient Data²⁵.

The top four ACSC conditions at WMC were: congestive heart disease, bacterial pneumonia, and urinary tract infections in older adults and bacterial pneumonia in patients' ages ranging from 40 to 64 years old. Patients aged 65 years and over had the highest percentage of discharges for ACSC conditions (**Exhibit 41**).

²⁵ Discharges from all Valley Health System hospitals. *Heart failure codes (428.1, I11.0, I50.21, I50.23, I50.31, I50.33, I50.9), **Pneumonia codes (J15.9, 482.9, J18.9, J13, J18.9, J11.00, J15.6, 480.9, 481, 482, 482.1, 486, 487, J10.00, J15.7, P23.6, A40.3, J12.9), ***Asthma codes (J45.901, J45.42, 493.92, 493.01, 493.02, 493.21, J45.902, J45.41, J45.909, J45.42, 493.92), ****Diabetes codes (648.01, E10.10, O24.410, O24.419, O24.420, O24.429, E10.11, E10.621, E10.69, E11.21, E11.43, E11.52, E11.621, E10.69, E11.21, E11.43, E11.52, E11.621, E11.628, E11.649, E11.65, E11.69, E09.65, E10.649, E11.40, E11.51)

Community Need Index™ and Food Deserts

1. Dignity Health Community Need Index

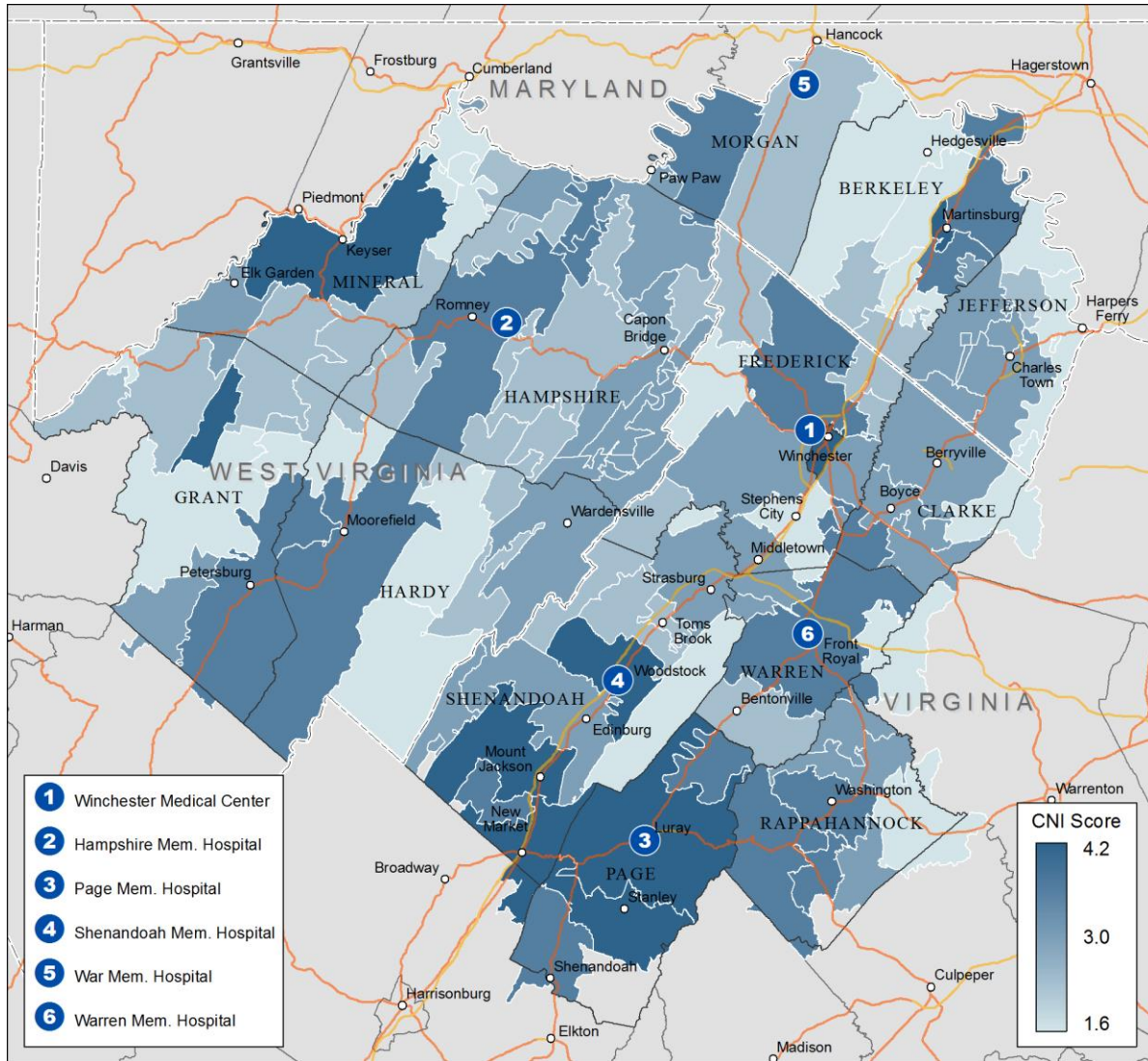
Dignity Health, a California-based hospital system, developed and has made widely available for public use a *Community Need Index*™ that measures barriers to health care access by county/city and ZIP code.²⁶ The index is based on five social and economic indicators:

- The percentage of elders, children, and single parents living in poverty;
- The percentage of adults over the age of 25 with limited English proficiency, and the percentage of the population that is non-White;
- The percentage of the population without a high school diploma;
- The percentage of uninsured and unemployed residents; and
- The percentage of the population renting houses.

The *Community Need Index*™ calculates a score for each ZIP code based on these indicators. Scores range from “Lowest Need” (1.0-1.7) to “Highest Need” (4.2-5.0).

²⁶ Accessed online at <http://cni.chw-interactive.org/> on June 28, 2013.

Exhibit 42: Community Need Index™ Score by County and ZIP Code



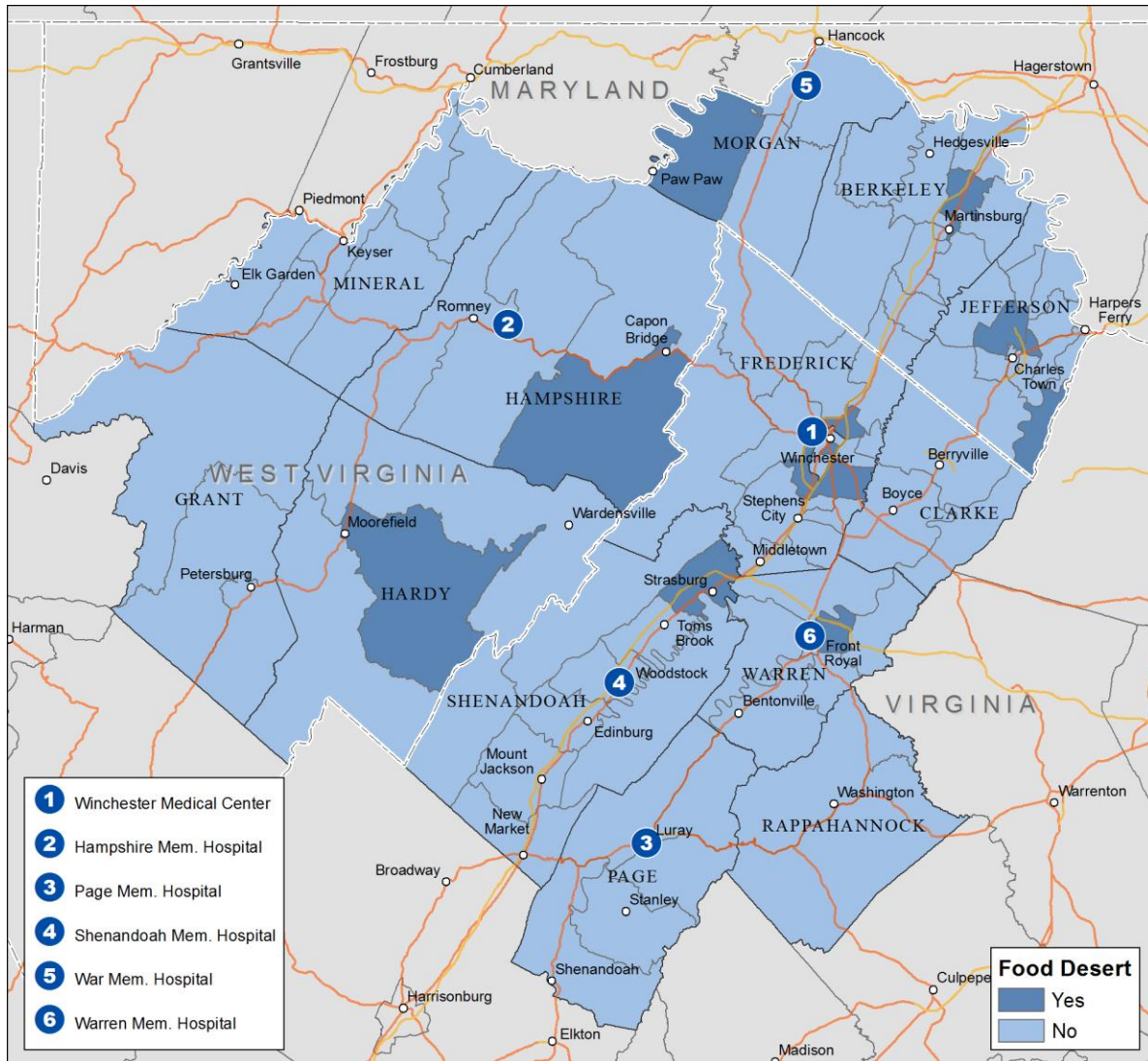
Source: Northern Shenandoah Valley Regional Commission

ZIP codes 25401, (Martinsburg, Berkeley County), and 22601 (Winchester City) scored in the “Highest Need” category (ranges from 4.2 – 5.0) (**Exhibit 42**). Areas of middle to high need are located in substantial parts of Hampshire, Hardy, Mineral, Shenandoah, Page and Rappahannock Counties, smaller parts of Grant and Warren Counties.

2. Food Deserts (Lack of Access to Nutritious and Affordable Food)

The U.S. Department of Agriculture’s Economic Research Service estimates the number of people in each census tract that live in a “food desert,” defined as low-income areas more than one mile from a supermarket or large grocery store in urban areas and more than 10 miles from a supermarket or large grocery store in rural areas. Many government-led initiatives aim to increase the availability of nutritious and affordable foods to people living in these food deserts. **Exhibit 43** illustrates the location of food deserts in the WMC community.

Exhibit 43: Food Deserts by Census Tract



Sources: Northern Shenandoah Valley Regional Commission and the Economic Research Services, U.S. Department of Agriculture, 2015.

WMC’s community contains 13 census tracts identified as food deserts. These are located in and around Berkeley, Hampshire, Hardy, Jefferson Counties in West Virginia, and Frederick, Shenandoah, Warren Counties and the City of Winchester, Virginia. There are three census tracts designated as food deserts within the City of Winchester, VA (**Exhibit 43**).

Overview of the Health and Social Services Landscape

This section identifies geographic areas and populations in the community that may face barriers accessing care due to medical underservice or a shortage of health professionals.

The section then summarizes various assets and resources available to improve and maintain the health of the community.

1. Medically Underserved Areas and Populations

The Health Resources and Services Administration (HRSA) calculates an Index of Medical Underservice (IMU) score for communities across the U.S. The IMU calculation is a composite of the ratio of primary medical care physicians per 1,000 persons, the infant mortality rate, the percentage of the population with incomes below the poverty level, and the percentage of the population greater than age 64. IMU scores range from zero to 100, where 100 represents the least underserved and zero represents the most underserved.²⁷

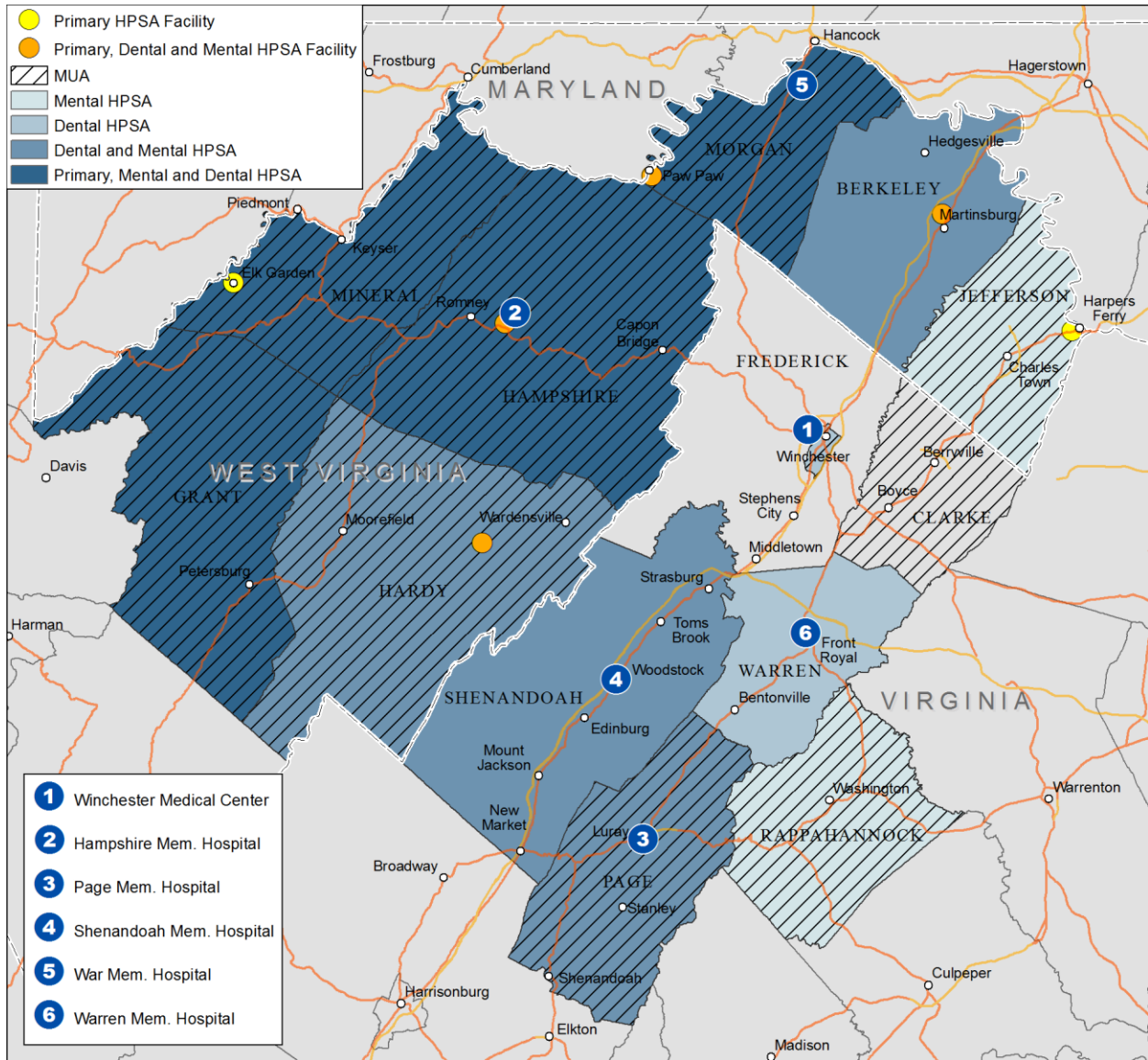
Any area or population receiving an IMU score of 62.0 or less qualifies for Medically Underserved Area (MUA) or Medically Underserved Population (MUP) designation. Federally Qualified Health Centers (FQHCs) may be established to serve MUAs and MUPs. Populations receiving MUP designation include groups within a geographic area with economic barriers or cultural and/or linguistic access barriers to receiving primary care. When a population group does not qualify for MUP status based on the IMU score, Public Law 99-280 allows MUP designation if “unusual local conditions which are a barrier to access to or the availability of personal health services exist and are documented, and if such a designation is recommended by the chief executive officer and local officials of the state where the requested population resides.”²⁸

Exhibit 44 shows areas designated by HRSA as medically underserved. The WMC community contains eight MUAs and three MUPs.

²⁷ U.S. Health Resources and Services Administration. (n.d.) *Guidelines for Medically Underserved Area and Population Designation*. Retrieved 2012, from <http://bhpr.hrsa.gov/shortage/maups/index.html>.

²⁸ *Ibid.*

Exhibit 44A: Medically Underserved Areas and Populations and Health Professional Shortage Areas (HPSA), 2016



Source: Northern Shenandoah Valley Regional Commission, and Health and Human Services Administration, 2016.

Exhibit 44B: Medically Underserved Areas and Populations and Health Professional Shortage Areas, 2016

Name	HPSA Dental	HPSA Mental	HPSA Primary	MUA or MUP
Clarke	No	No	No	Yes
Frederick	No	No	No	No
Page	Yes	Yes	No	Yes
Rappahannock	No	Yes	No	Yes
Shenandoah	Yes	Yes	No	No
Warren	Yes	No	No	No
Winchester	Yes	No	No	Part
Berkeley	Yes	Yes	No	No
Grant	Yes	Yes	Part	Part
Hampshire	Part	Yes	Yes	Yes
Hardy	Part	Yes	No	Yes
Jefferson	No	Yes	No	Yes
Mineral	Yes	Yes	Yes	Yes
Morgan	Yes	Yes	Yes	Yes

Source: Northern Shenandoah Valley Regional Commission, and Health and Human Services Administration, 2016.

The Winchester Medical Center community contains eight MUAs and two MUPs. Mineral and Morgan Counties reported shortages in all three categories for dental, mental, and primary care physicians and have been designated as Medically Underserved Area and a Medically Underserved Population (**Exhibit 44B**).

2. Health Professional Shortage Areas

A geographic area can receive a federal Health Professional Shortage Area (HPSA) designation if a shortage of primary medical care, dental care, or mental health care professionals is found to be present.

In addition to areas and populations that can be designated as HPSAs, a health care facility can receive federal HPSA designation and an additional Medicare payment if it provides primary medical care services to an area or population group identified as having inadequate access to primary care, dental, or mental health services.

HPSAs can be: “(1) An urban or rural area (which need not conform to the geographic boundaries of a political subdivision and which is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility.”²⁹

Areas and populations in the WMC community are designated as HPSAs (**Exhibit 44B**). Page, Mineral, and Morgan Counties are designated as primary medical care, dental, and mental health HPSAs, while Berkeley, Grant and Shenandoah Counties are designated as mental health and dental HPSAs. Hardy, Hampshire, Jefferson, and Rappahannock Counties are designated as mental health HPSAs and Winchester City and Warren County are designated as dental HPSAs. Parts of Hampshire and Hardy Counties also are considered dental HPSAs.

²⁹ U.S. Health Resources and Services Administration, Bureau of Health Professionals. (n.d.). *Health Professional Shortage Area Designation Criteria*. Retrieved 2015, from <http://bhpr.hrsa.gov/shortage/hpsas/designationcriteria/index.html>

3. Description of Other Facilities and Resources within the Community

The WMC community contains a variety of resources that are available to meet the health needs identified in this CHNA. These resources include facilities designated as HPSAs, hospitals, Federally Qualified Health Centers (FQHC), health professionals, and other agencies and organizations.

Exhibit 45: Information on HPSA Facilities in the WMC Community

County	Name	Type of HPSA
PSA		
Hampshire, WV	Hampshire Memorial Hospital	Primary Medical Care, Mental Health, Dental Health
Hardy, WV	E.A. Hawse Health Center - 2 Locations	Primary Medical Care, Mental Health, Dental Health
Morgan, WV	Mountaineer Community Health Center, Inc.	Primary Medical Care, Mental Health, Dental Health
SSA		
Berkeley, WV	Shenandoah Valley Medical Center	Primary Medical, Mental Health, Dental Health
Jefferson, WV	Harpers Ferry Family Medicine	Primary Medical
Mineral, WV	Elk Garden Clinic	Primary Medical Care

Source: Northern Shenandoah Valley Regional Commission, and Health and Human Services Administration, 2016.

There are seven health care facilities in the WMC community, all in West Virginia, that are designated as HPSA facilities (**Exhibit 45**).

Exhibit 46: List of Hospitals in the WMC Community

County/City	Hospital Name
PSA	
Hampshire, WV	Hampshire Memorial Hospital
Morgan, WV	War Memorial Hospital
Page, VA	Page Memorial Hospital
Shenandoah, VA	Shenandoah Memorial Hospital
Warren, VA	Warren Memorial Hospital
Winchester, VA	Winchester Medical Center
SSA	
Berkeley, WV	Berkeley Medical Center
	Martinsburg VA Medical Center
Grant, WV	Grant Memorial Hospital
Jefferson, WV	Jefferson Medical Center
Mineral, WV	Potomac Valley Hospital

Source: Centers for Medicare & Medicaid Services, 2016.

The community contains four acute care hospitals and seven critical access hospital facilities (**Exhibit 46**).

Federally Qualified Health Centers (FQHCs) were created by Congress to promote access to ambulatory care in areas designated as “medically underserved.” These clinics receive cost-based reimbursement for Medicare and many also receive grant funding under Section 330 of the Public Health Service Act. FQHCs also receive a prospective payment rate for Medicaid services based on reasonable costs.

Exhibit 47: Information on Federally Qualified Health Centers in the WMC Community

County/City	FQHC Name	Ownership
PSA		
Winchester City, VA	Winchester Family Health Center	Shenandoah Valley Medical System, Inc.
Hardy, WV	E. A. Hawse Health Center, Inc.	E. A. Hawse Health Center, Inc.
	Potomac Valley Family Medicine	E. A. Hawse Health Center, Inc.
Morgan, WV	Mountaineer Community Health Center, Inc.	Independent
	Tri-State Community Health Center - Berkeley Springs	Tri-State Community Health Center - Berkeley Springs
SSA		
Berkeley, WV	Shenandoah Community Health Center -Women's Health Services -Internal Medicine, Family Practice, Pediatric Services -Behavioral Health Services	Shenandoah Valley Medical System, Inc.
	Healthy Smiles Community Oral Health Center	Shenandoah Valley Medical System, Inc.
Grant, WV	Grant Pediatrics and Internal Medicine	E. A. Hawse Health Center, Inc.
	Mt. Storm Health Center	Independent
Jefferson, WV	Shenandoah Community Health Center - Charles Town/Ranson, WV	Shenandoah Valley Medical System, Inc.
Other Resources		
A department of Shenandoah Valley Medical System, Inc., and not its own FQHC.	Starting Points Family Resource Center -Morgan County, WV	Shenandoah Valley Medical System, Inc.
A department of Shenandoah Valley Medical System, Inc., and not its own FQHC.	WIC Nutrition Services -Martinsburg, WV -Charles Town, WV -Berkeley Springs, WV -Romney, WV -Keyser, WV	Shenandoah Valley Medical System, Inc.

Source: Health Resources and Services Administration, 2016.

Although there are several FQHCs location within the WMC community, they are managed by five primary systems: Shenandoah Valley Medical System, Healthy Smiles Community Oral Health Center, E.A. Hawse Health Center, Inc., Mt. Storm Health Center, and Mountaineer Community Health Center (**Exhibit 47**).

Exhibit 48: Health Professionals Rates per 100,000 Population by County/City

Winchester Medical Center County	Primary Care Physicians		Dentists		Mental Health Providers	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
PSA	191	65.5	153	52.5	275	94.4
Clarke	7	48.8	5	34.7	8	55.0
Frederick	36	44.3	10	12.1	34	41.0
Hampshire	5	21.0	7	30.0	13	55.0
Hardy	3	22.0	7	50.0	8	57.0
Morgan	8	46.0	5	29.0	10	57.0
Page	11	46.2	4	16.8	6	25.0
Rappahannock	3	40.1	31	59.5	5	68.0
Shenandoah	20	46.9	1	44.5	21	49.0
Warren	22	56.8	7	19.4	35	90.0
Winchester	76	279.2	76	104.7	135	10.2
SSA	89	42.6	83	39.8	234	112.1
Berkeley	48	44.0	53	48.0	169	153.0
Grant	6	51.0	5	43.0	8	68.0
Jefferson	27	49.0	16	29.0	37	66.0
Mineral	8	29.0	9	33.0	20	73.0
Virginia	6216	75.3	5303	63.7	12162	146.1
West Virginia	1443	77.8	913	49.3	2037	110.1

Source: Data provided by County Health Rankings, 2016.

Primary care physician availability is below the Virginia and West Virginia averages in all areas except Winchester City. In Virginia, mental health provider availability is below the Commonwealth average in all areas; dental provider availability is below average in all areas except Winchester City. In West Virginia, mental health provider availability is below average in all areas except Berkeley County; dental provider availability is below average in all areas except Hardy County (**Exhibit 48**).

A number of other agencies and organizations are available in each county/city in the WMC community to assist in meeting health needs. In addition to the organizations listed below, see **Exhibits 66** through **69** for a listing of community organizations represented by individuals participating in key informant interviews and community response sessions.

- Community organizations that provide services to residents with disabilities:
 - Access Independence
 - ARC of Northern Shenandoah Valley
 - Blue Ridge Center for Therapeutic Horsemanship (Clarke County)
 - Blue Ridge Opportunities (Warren County)

- Deaf and Hard of Hearing Services Center, Inc.
- Disability Law Center of Virginia
- Goodwill Resource Center
- Grafton Integrated Health Network
- The Hampshire County Special Services Center, Inc.
- Northwestern Regional Educational Programs (N.R.E.P.)
- NW Works, Inc.
- SHEN-PACO Industries, Inc.
- Virginia Department for Aging and Rehabilitative Services
- Community organizations that provide services for disease prevention / treatment:
 - AIDS Response Effort
 - Diabetes Management Program – Valley Health System
- Community organizations that provide services relating to domestic violence:
 - Choices, Council on Domestic Violence for Page County, Inc.
 - Department of Social Services (Clarke, Frederick, Shenandoah Counties and Winchester City)
 - The Laurel Center Intervention for Domestic & Sexual Violence
 - People Incorporated of Virginia
 - Response, Inc. (Woodstock, VA)
 - Shenandoah Women’s Center (Berkeley, Jefferson and Morgan Counties)
- Community organizations that provide free or reduced cost health care:
 - Concern Hotline
 - Crossroads Counseling Center
 - EastRidge Health Systems
 - Free Medical Clinic of Northern Shenandoah Valley
 - Good Samaritan Free Clinic
 - Healthy Smiles Community Oral Health Center
 - Potomac Highland Mental Health Guild
 - Shenandoah Community Health Clinic / Shenandoah Community Dental Clinic
 - St. Luke Community Clinic
- Community organizations that provide housing support or shelter for homeless residents:
 - Bethany House (Martinsburg, WV)
 - House of Hope (Front Royal, VA)

- Keyser Housing Authority
- Martinsburg Housing Authority
- Martinsburg Union Rescue Mission
- Mission Serve Group
- Piedmont Housing Authority
- Winchester Union Rescue Mission
- Community organizations that provide hunger reduction services:
 - Berkeley County Meals on Wheels
 - C-CAP Front Royal, VA
 - C-CAP Winchester, VA
 - Community Food Pantry in Great Cacapon
 - Compassion Cupboard
 - Fish of Clarke County
 - Highland Food Pantry
 - Loaves and Fishes Food Pantry (Warren County)
 - Lord Fairfax Area Food Bank
 - MCIEC Food Pantry (Morgan County)
 - Starting Points of Morgan County – Meal Time Community Kitchen
 - Morgan County Interfaith Emergency Care
 - Open Door Food Pantry (Mount Jackson, VA)
 - Phazz One Ministries, Inc. (Winchester, VA)
 - The Salvation Army
 - Front Royal/Warren County
 - Winchester City
 - Winchester Rescue Mission
- Community organizations that provide family planning and maternal / child health services:
 - Abba Care
 - Care Pregnancy Center of the Eastern Panhandle
 - Shenandoah County Pregnancy Center
- Community organizations that provide services for at-risk children / families:
 - Freemont St. Nursery
 - Healthy Families

- Northern Shenandoah Valley
 - Shenandoah County
- Community organizations that provide veterans services:
 - Patriot's Path
- Local chapters of national organizations, such as the Alzheimer's Association, American Cancer Association, American Heart Association, American Red Cross, Habitat for Humanity, YMCA, and YWCA
- Local places of worship that provide food or housing assistance:
 - Columbia Furnace Church of the Brethren (Shenandoah County)
 - Rock Worship Center, Compassion House
 - St. Stephens CME (Winchester City)
- Local FQHCs and HPSA facilities (**Exhibit 47** and **48**)
- Local first responders, including fire departments, police departments, and Emergency Medical Services (EMS)
- Local government agencies, Chambers of Commerce, and City Councils
- Local and district public health departments
- Local schools, colleges, and universities

Findings of Other Recent Community Health Needs Assessments

Valley Health System also considered the findings of other needs assessments published since 2009. Fourteen such assessments conducted in the WMC area are referenced here, with highlights and summary points below.

1. Coors Healthcare Solutions, 2016

Coors Healthcare Solutions produced a “Physician Strategy Assessment”³⁰ on the patient market, medical staff, and physician market to help Valley Health evaluate and plan for the community’s medical staffing needs. Primary data included physician interviews and medical staff interviews, while secondary data was from the U.S. Census and Medical Group Management Association (MGMA).

Key findings relevant to this CHNA include:

- Morgan, Hampshire and Page Counties are federally designated as underserved areas.
- Physician specialty shortages exist in pediatrics, internal medicine, otolaryngology, general surgery, ophthalmology, urology, obstetrics/gynecology, gastroenterology, hematology/oncology, and allergy/immunology; these specialties were the top 10 noted in the Assessment.

2. Homelessness and Medical Vulnerability - Point in Time Survey – 2016 (data from 2015)

The statewide 1,000 homes for 1,000 Virginians initiative is led by the Virginia Coalition to End Homelessness, to survey/assess the 1,000 most vulnerable Virginians experiencing homelessness who cycle between streets, emergency shelters, hospital emergency rooms, jails, and prisons. There are eight campaigns representing thirteen counties and over 30 jurisdictions across the Commonwealth. The initiative conducts a Point-in-Time survey that is administered on one night to count the unsheltered homeless persons within the community. The survey is conducted during the last ten days in January. Winchester City and Frederick County is included within the Harrisonburg data collection campaign.

Of the thirteen communities across the Commonwealth participating in the 1,000 Homes for 1,000 Virginians initiative, twelve have conducted Registry Weeks to collect information on vulnerability. A Vulnerability Index is used to calculate the survey results.

Key findings relevant to this CHNA include:

- 1,406 individuals experiencing homelessness were identified and surveyed; 45.5 percent (640) of those surveyed were identified as medically vulnerable.

³⁰ Coors Consulting. (2016). *Physician Needs Assessment*. Retrieved 2016, from Valley Health System.

- Average age for the total population surveyed was 44 years old. Twenty percent (333) of the respondents are over 55 years old, 2 percent (39) are over 65 years old, and 1 percent (15) is over 70 years old. The oldest respondent surveyed was 85 years old.
- Respondents reported a total of 2,011 ER visits in the last 3 months, for an estimated cost of \$10,658,300, assuming an average of \$1,325 per ER visit.
- Respondents reported a total of 1,135 inpatient hospitalizations in the past year, at an estimated annual cost of \$23,835,000. This assumes an average of \$21,000 per admission for a 3-day medical stay.
- Data collected from the surveys reported 22 percent of those surveyed had a heart condition, 21 percent had asthma, 17 percent had diabetes, and 13 percent shown signs of frostbite. Other health issues reported included emphysema, liver disease, hepatitis C, cancer, kidney disease, HIV/AIDS, and tuberculosis.

3. United Way of the Northern Shenandoah Valley, Community Needs Update 2014-2017

The United Way completed a community health needs assessment in April 2014. The assessment includes demographic and social trends in order to update priorities and target contributed funds to the needs that matter the most to the people within the community. Community Impact priorities are used as a tool for planning and as a guide for fund distribution. The United Way has worked with many community partners to focus on mental health issues, update population data and assess their progress, as an organization, in dealing with education, income and health conditions.

Key findings relevant to this CHNA for education include:

- Increased on-time high school graduation rates. The percentage of students in a cohort who earned a Board of Education approved diploma within four years of entering high school went from 87 percent in 2009 to 93 percent in 2012.
- Decrease in the need for kindergarten remediation. The PALS-K is used to identify kindergarten students who are behind in their acquisition of fundamental literacy skills. Between the 2008-2009 and 2013-2014, the need for remedial assistance decreased from 37 percent to 31 percent for Winchester City, 16 percent to 14 percent for Shenandoah County, 15 percent to 13 percent for Warren County, and 12 percent to 10 percent for Clarke County. Frederick and Page Counties remained constant at 17 percent and 18 percent respectively, when compared to from the previous reporting period,
- Increase in college participation. The Virginia Department of Education assisted with the creation of the Virginia Longitudinal Data System. This system tracks student success from K-12 through college. From 2009 to 2012 reporting period, Frederick County college participation rates increased from 64 percent to 65 percent.

4. United Way of the Northern Shenandoah Valley, Mental Health Report 2014

As recommended by the task force led by Vice President Biden regarding the tragic shootings at Sandy Hook Elementary, the United Way of the Shenandoah Valley held a planning meeting to organize Community Dialogue and to partner with community leaders. The purpose of the Community Dialogue was to bring community residents together to discuss ways to strengthen local mental health support and services; build community plans for improving mental health systems; identify three measurable/achievable action steps and report the results.

Key findings relevant to this CHNA include:

- Mental illness is a medical condition that disrupts a person’s ability to relate to others and their daily routine, and often results in a diminished capacity for coping with ordinary demands of life.
- The stigma of mental health impacts those with mental health diagnoses. The Center for Disease Control and Prevention defines stigma as an attribute that is deeply discrediting. It sets the bearer apart from the rest of society by making them feel ashamed and isolated.
- Mental illness can affect people of any age, race, religion or income. Mental illness is not the result of personal weakness, lack of character or poor upbringing.
- Those with mental illness may show signs of anger, violence, depression and/or anxiety. People with mental illness may exhibit violent behavior also in the presence of other risk factors. Those risk factors may include psychosis, substance abuse or dependence; a history of violence, juvenile detention, or physical abuse; and/or resentment stressors, such as being a crime victim, getting divorced, or losing a job.

5. Page Alliance for Community Action, 2015-2016

The Page Alliance for Community Action conducted a survey, the “Page County Student Pride Survey,”³¹ of the county’s high school students which was compared to the Monitoring the Future national survey.

Key findings relevant to this CHNA include:

- Page County high school students had higher rates of tobacco use by 9th and 10th graders, compared to the national average.
- Page County 8th, 9th, and 10th graders had lower alcohol use than the national average.
- Page County 8th and 9th graders had lower marijuana usage rates than the national average, and 9th and 11th graders had lower rates for prescription drug use.

³¹ Page Alliance for Community Action. (2015-2016). Page County Student Pride Survey Results.

- Page County 8th, 9th, and 10th graders had a lower rate of inhalant and hallucinogen usage than the national average.
- Page County 8th, 9th, and 10th graders had a lower rate of ecstasy, meth, and over the counter (OTC) drugs abuse than the national averages; except 8th graders for OTC drugs.

6. Shenandoah County Coalition, 2013-2014

The Shenandoah Coalition conducted a survey, the “Shenandoah County Student Pride Survey,”³² of the county’s high school students which was compared to the Monitoring the Future national survey.

Key findings relevant to this CHNA include:

- Shenandoah County high school students had higher rates of tobacco usage by 8th and 10th graders, compared to the national average.
- Shenandoah County 8th graders had higher alcohol usage rates than the national average.
- Shenandoah County 8th, and 10th graders had a higher rate of prescription drug abuse than the national average.
- Shenandoah County 8th, 10th, and 12th graders had a higher rate of prescription drug use than the national averages.

7. Morgan County Public Schools, 2013-2014

Morgan County Schools conducted a survey, the “2013-2014 Morgan County Schools Pride Survey,”³³ of the county’s high school students which was compared to the “Monitoring the Future” national survey.

Key findings relevant to this CHNA include:

- Morgan County high school students had lower rates of tobacco usage by 7th, and 10th graders, compared to the national average.
- Morgan County 7th and 9th graders had lower alcohol usage rates than the national average.
- Morgan County 6th and 8th graders had higher rates of marijuana usage than the national average.
- Morgan County 7th, 8th, and 10th had higher rates of prescription drug abuse than the national averages.

³² Shenandoah Coalition. (2013-2014). Shenandoah County Student Pride Survey Results.

³³ Morgan County Schools. (2013-2014). Morgan County Student Pride Survey Results.

8. Warren Coalition, 2014-2015

The Warren Coalition conducted a survey, the “Warren County Student Pride Survey,”³⁴ of the county’s high school students which was compared to the “Monitoring the Future” national survey.

Key findings relevant to this CHNA include:

- Warren County high school students had lower rates of tobacco use by 8th, 10th, and 12th graders, compared to the national average.
- Warren County 8th, 10th, and 12th graders had lower alcohol and prescription drug abuse rates than the national average.
- Warren County 8th, 10th, and 12th graders had lower rates of inhalant and hallucinogen use than the national average.
- Warren County 8th, 10th, and 12th had lower rates of ecstasy, meth, and OTC drug abuse than the national averages.

9. Winchester Department of Social Services, 2015

The Winchester Department of Social Services completed their “Winchester Department of Social Services FY15 Annual Report”³⁵ to discuss the community’s priorities and performance. The department uses its own secondary data as well as other publicly available data, including the U.S. Census.

Key findings relevant to this CHNA include:

- The number of applications for the Supplemental Nutrition Assistance Program (SNAP) and The Temporary Assistance for Needy Families (TANF) program increased from 2014 to 2015.
- Applications for energy assistance, including fuel assistance, crisis assistance, and cooling assistance, increased from 2014 to 2015.

10. Lord Fairfax Health District, 2014

The Lord Fairfax Health District completed a “2014 Language Needs Assessment”³⁶ that analyzed the limited English proficiency of the counties in the Lord Fairfax Health District, which include: Frederick, Clarke, Page, Shenandoah, Warren, and Winchester City. The primary data in the report include data from the Virginia Department of Health and U.S. Census.

³⁴ Warren Coalition. (2014-2015). Warren County Student Pride Survey Results.

³⁵ Winchester Department of Social Services. (2015). Winchester Department of Social Services FY 2015 Annual Report. Retrieved 2016, from <http://www.co.frederick.va.us/Home/ShowDocument?id=9328>

³⁶ Lord Fairfax Health District. (2014). *2014 Language Needs Assessment*. Retrieved 2013, from: http://www.vdh.virginia.gov/CLAS_Act/researchresources/documents/languageprofiles/LordFairfax.pdf

Key findings relevant to this CHNA include:

- Winchester City had the highest number of limited English proficient persons within the district, with 2,427 individuals, followed by Frederick County with 2,537 individuals, and Shenandoah County with 1,265. Page County had the fewest individuals with 123 individuals with limited English proficiency (LEP).
- The primary language spoken by 81 percent of LEP individuals was Spanish.
- There has been a 61 percent increase in the use of educational services for LEP students, with the highest usage of services in Frederick County (over 500 students).
- About 6.2 percent of all patients receiving services in the Lord Fairfax Health District were classified as LEP students, and about five percent of all patient encounters are with LEP patients.

11. West Virginia Statewide Housing Needs Assessment, 2014

The West Virginia Housing Development Fund engaged Vogt Santer Insights to conduct a statewide housing needs assessment.³⁷ The assessment provides a comprehensive housing assessment that focuses on the current and anticipated housing need in each of the 55 counties. A detailed analysis of each county has been conducted to include demographic trends, economic and housing market performance, household income projections and anticipated market demand with the focus on affordable housing.

Because it presents some of the same housing concerns as this CHNA, many of its findings are comparable. Items of particular note include:

- Within the state, Jefferson County was one of the five mentioned counties to have the lowest unemployment rate of 4.8 percent as of December 2013.
- Jefferson County has one of the highest projected growth rates among rental household families under age 55, and showed a high growth rate among seniors (age 55 and older).
- Berkeley, Grant, Jefferson, and Hampshire Counties had the highest projected growth among senior (age 55 and older) renter households with incomes between 41 percent and 60 percent over Area Median Household Income (AMHI) in the next five years. Hampshire County also showed the lowest projected growth among families under age 55 for rental households.

³⁷ West Virginia Community Action Partnership. (2012). *Believe in West Virginia: Assessment of Needs Report*. Retrieved, 2013 from: <http://www.wvcommunityactionpartnership.org/pdfs/2012needsassessment.pdf>

PRIMARY DATA ASSESSMENT

Community Survey Findings

WMC's survey of community health consisted of questions about a range of health status and access issues, as well as respondent demographic characteristics. The survey was made available from January – March 2016 on Valley Health's web site and was widely publicized at the Community Wellness Festival, Lord Fairfax Community College, and the Mexican Consulate event on the Our Health, Inc. campus, and via e-mail distribution lists, computer kiosks throughout the region, partner organizations, mass mailing, newsletters, social media, and websites. The questionnaire was available in English and Spanish, and paper copies were available on request.

1. Respondent Characteristics

The survey questionnaire was completed by 1,990 residents from the WMC community. Survey responses were received from residents of 76 of the WMC community's 114 ZIP codes.

Almost 79 percent of respondents were female, and 73 percent were between the ages of 35 and 64. Ninety-one percent were White, and three percent identified as Hispanic or Latino. The majority of respondents reported being in good, very good or excellent overall health (91 percent), married (74 percent), employed full time (66 percent), privately insured (76 percent), and having an undergraduate degree or higher (60 percent). The majority (96 percent) of respondents speak English in the home. Two percent of respondents reported that they spoke multiple languages at home, and two percent reported speaking only Spanish at home.

Exhibit 49: Survey Respondents by County/City, 2016

County/City	Number of Respondents	Percent of Respondents	Percent of Total Population by County
PSA	1686	84.7%	58.3%
Clarke, VA	41	2.1%	2.8%
Frederick, VA	136	6.8%	16.5%
Hampshire, WV	136	6.8%	4.7%
Hardy, WV	28	1.4%	2.8%
Morgan, WV	46	2.3%	3.5%
Page, VA	244	12.3%	4.7%
Rappahannock, VA	29	1.5%	1.5%
Shenandoah, VA	390	19.6%	8.4%
Warren, VA	85	4.3%	7.8%
Winchester City, VA	551	27.7%	5.5%
SSA	171	8.6%	41.7%
Berkeley, WV	78	3.9%	22.5%
Grant, WV	20	1.0%	2.4%
Jefferson, WV	32	1.6%	11.3%
Mineral, WV	41	2.1%	5.6%
Totals:	1857	93.3%	
Outside of Market Region	133	6.7%	
Grand Total	1990	100.0%	500,119

Source: Valley Health Community Survey, 2016.

Winchester City had the highest percentage of respondents. Residents from the PSA accounted for 84.8 percent of respondents. The total number of Spanish surveys received was 167 (**Exhibit 49**).

Exhibit 50: Survey Respondents by Age, 2016

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
15 – 24	5.50	97	19.4%	32
25 – 34	10.2%	180	29.1%	48
35 – 44	12.7%	223	30.9%	51
45 – 54	19.3%	340	8.5%	14
55 – 64	19.3%	339	7.3%	12
65 – 74	16.0%	282	3.0%	5
75+	17.0%	299	1.8%	3
Answered Questions		1760		165
Skipped Questions		63		2

Source: Valley Health Community Survey, 2016.

The highest percentage of English-speaking respondents were aged 45-55 and 55-64. The highest percentage of Spanish-speaking 35-44 years of age. Approximately 19.0 percent of total respondents were 75+ years old (**Exhibit 50**).

Exhibit 51: Survey Respondents by Sex, 2016

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Female	75.1%	1322	44.2%	73
Male	24.9%	438	55.8%	92
Answered Questions		1760		165
Skipped Questions		63		2

Source: Valley Health Community Survey, 2016.

The highest percent of English surveys received were from female population at 75.1 percent; however, a higher percentage of males at 55.8 percent completed Spanish surveys (**Exhibit 51**).

Exhibit 52: Survey Respondents by Ethnicity, 2016

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
White	89.1%	1568	4.8%	8
Black or African American	2.4%	42	0.0%	0
Hispanic or Latino	3.1%	54	89.1%	147
American Indian and Alaska Native	0.3%	5	1.8%	3
Asian	1.4%	24	0.6%	1
Hawaiian Native and other Pacific Islander	0.1%	2	0.0%	0
Some other race	0.2%	3	3.6%	6
Two or more races	1.9%	33	N/A	N/A
Other (please specify)	1.6%	29	N/A	N/A
Answered Questions		1760		165
Skipped Questions		63		2

Source: Valley Health Community Survey, 2016.

The White population was the largest group to respond to the English survey at 89.1 percent (**Exhibit 52**).

Exhibit 53: Survey Respondents by Marital Status, 2016

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Married/co-habiting	56.5%	995	58.2%	96
Not married/single	17.2%	303	35.2%	58
Divorced	11.9%	209	4.8%	8
Widowed	14.4%	253	1.8%	3
Answered Questions		1760		165
Skipped Questions		63		2

Source: Valley Health Community Survey, 2016.

A majority of the surveys received were from married or co-habiting individuals (**Exhibit 53**).

Exhibit 54: Survey Respondents by Education Attainment, 2016

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Did not complete high school	9.5%	168	47.9%	79
High school diploma or GED	26.2%	461	26.7%	44
Some college	19.2%	338	10.3%	17
College degree or higher	42.3%	745	7.3%	12
Other (please specify)	2.7%	48	7.9%	13
Answered Questions		1760		165
Skipped Questions		63		2

Source: Valley Health Community Survey, 2016.

Most of the English surveys received were from individuals who have earned a college degree or a high school diploma. Among the Spanish survey respondents 47.9 percent had not completed high school and 26.7 percent had earned a high school diploma or GED (**Exhibit 55**).

Exhibit 55: Survey Respondents by Income, 2016

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Less than \$15,000	16.9%	298	36.4%	60
\$15,000 - \$24,999	17.2%	302	18.8%	31
\$25,000 - \$34,999	10.5%	185	26.1%	43
\$35,000 - \$49,000	11.4%	201	9.7%	16
\$50,000 - \$74,999	17.9%	315	4.8%	8
\$75,000 - \$99,999	12.1%	213	1.2%	2
Over \$100,000	14.0%	246	3.0%	5
Answered Questions		1760		165
Skipped Questions		63		2

Source: Valley Health Community Survey, 2016.

Individuals from all income levels were represented among the survey results. Although somewhat evenly distributed, the highest percentage of English survey respondents indicated income between \$50,000 – \$74,999 (17.9%), followed by those with income of 15,000 – \$25,000 (17.2%). The highest number of respondents to the Spanish surveys indicated income levels of less than \$15,000 (36.4%) (**Exhibit 55**).

Exhibit 56: Survey Respondents by Employment Status, 2016

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Full time	44.4%	781	58.2%	96
Part time (one job)	7.8%	138	13.9%	23
Part time (more than one job)	2.2%	39	0.6%	1
Retired	30.70%	541	3.6%	6
Student	2.6%	45	7.3%	12
Unemployed	5.5%	97	13.3%	22
Other (please specify)	6.8%	119	3.6%	6
Answered Questions		1760		165
Skipped Questions		63		2

Source: Valley Health Community Survey, 2016.

Of the English survey respondents, 44.4 percent reported that they had a full-time job. Over 58 percent of the Spanish survey respondents reported had a full-time job (**Exhibit 56**).

Exhibit 57: Language Spoken in Home, 2016

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
English	95.5%	1680	9.7%	16
Spanish	2.2%	38	87.9%	145
German	0.2%	3	0.6%	1
French	0.1%	1	0.0%	0
Chinese	0.4%	7	0.0%	0
Vietnamese	0.1%	2	0.6%	1
Other (please specify)	1.6%	29	1.2%	2
Answered Questions		1760		165
Skipped Questions		63		2

Source: Valley Health Community Survey, 2016.

English and Spanish are most frequently spoken in the homes of the respective survey respondents (**Exhibit 57**).

Exhibit 58: Where and How Did You Receive Survey? 2016

Answer Options	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Church	0.30%	6	9.1%	15
Community Event or Meeting	14.40%	253	11.5%	19
Grocery store or Shopping mall	0.70%	13	0.0%	0
Mail	31.00%	545	0.6%	1
Newspaper	0.40%	7	0.6%	1
Personal Contact	4.10%	72	13.9%	23
Social Media (Facebook)	3.40%	60	0.6%	1
Workplace	19.50%	343	0.6%	1
Other (please specify)	26.20%	461	63.0%	104
Answered Questions		1760		165
Skipped Questions		63		2

Source: Valley Health Community Survey, 2016.

Community responses were collected from various venues throughout the region. The greatest number of Spanish surveys were collected from Lord Fairfax Community College (63.0%) and the highest percent of English surveys were in response to direct mail campaign. (**Exhibit 58**).

2. Access Issues

Exhibit 59: Locations Where Respondents Received Routine Healthcare

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Free or low-cost clinic or health center	8.8%	156	44.9%	75
Urgent care facility or store-based walk-in clinic	14.7%	261	6.0%	10
Hospital Emergency Room	13.6%	241	7.8%	13
Provider of alternative medicine	7.4%	132	2.4%	4
Private medical professional (MD, APN, PA)	79.1%	1402	22.8%	38
No routine medical care received	4.1%	73	13.8%	23
Other (please specify)	3.3%	58	2.4%	4
Answered Questions		1773		167
Skipped Questions		50		0

Source: Valley Health Community Survey, 2016.

Exhibit 59 shows that 79.1 percent of English survey respondents receive routine (non-emergency, non-specialty) healthcare services from a private doctor's office and 14.7 percent receive routine care from an urgent care facility or store-based walk in clinic. Approximately 13 percent receive services from a hospital emergency room, while 8.8 percent receive care from a free or low-cost clinic or health center. The Spanish survey showed that 44.9 percent of respondents use a free or low-cost clinic or health center for routine care and 7.8 percent use the emergency room.

Exhibit 60: How do you pay for Healthcare?

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Cash (no insurance)	12.6%	223	64.1%	107
Private health insurance (for example: Anthem, Blue Cross, HMO)	70.2%	1244	26.3%	44
Medicare	33.6%	596	7.8%	13
Medicaid	9.3%	165	6.0%	10
Veterans' Administration	2.8%	49	1.2%	2
Other (please specify)	7.6%	134	4.8%	8
Answered Questions		1773		167
Skipped Questions		50		0

Source: Valley Health Community Survey, 2016.

Exhibit 60 shows that 70.2 percent of English survey respondents have private health insurance coverage and 33.6 percent have Medicare coverage. Those without health insurance were much more likely to use free or low-cost clinics and health centers or hospital emergency rooms for routine healthcare. The Spanish surveys indicated that 64.1 percent of that respondent population paid cash for their healthcare, that only 26.3 percent had private insurance.

Exhibit 61A: Respondent Ability to Receive Needed Care, by Type of Care (English)

Response	Always	Sometimes	Rarely	Never	N/A	Response Count
Basic medical care	1479	197	48	19	17	1760
Dental care	1214	223	141	88	49	1715
Mental health care	717	176	104	120	546	1663
Medical specialty care	1032	272	107	62	202	1675
Medicine and medical supplies	1309	217	67	32	83	1708
Routine screenings (mammograms, laboratory testing, age/gender appropriate screenings)	1322	193	89	56	51	1711

Source: Valley Health Community Survey, 2016.

Response	Always	Sometimes	Rarely	Never	N/A
Basic medical care	84.0%	11.2%	2.7%	1.1%	1.0%
Dental care	69.0%	12.7%	8.0%	5.0%	2.8%
Mental health care	40.7%	10.0%	5.9%	6.8%	31.0%
Medical specialty care	58.6%	15.5%	6.1%	3.5%	11.5%
Medicine and medical supplies	74.4%	12.3%	3.8%	1.8%	4.7%
Routine screenings (mammograms, laboratory testing, age/gender appropriate screenings)	75.1%	11.0%	5.1%	3.2%	2.9%

Source: Valley Health Community Survey, 2016.

Exhibit 61A suggests that most English survey respondents indicated that they “always” had the ability to access needed care.” Of the community surveyed, 75.1 percent reported that they have gender- and age-appropriate routine screenings.

Exhibit 61B: Respondent Ability to Receive Needed Care, by Type of Care (Spanish)

Response	Always	Sometimes	Rarely	Never	N/A	Response Count
Basic medical care	53	53	26	23	3	158
Dental care	41	46	29	31	3	150
Mental health care	17	9	25	54	26	131
Medical specialty care	20	16	26	51	15	128
Medicine and medical supplies	28	26	31	34	11	130
Routine screenings (mammograms, laboratory testing, age/gender appropriate screenings)	45	28	28	35	7	143

Source: Valley Health Community Survey, 2016.

Response	Always	Sometimes	Rarely	Never	N/A
Basic medical care	31.7%	31.7%	15.6%	13.8%	1.8%
Dental care	24.6%	27.5%	17.4%	18.6%	1.8%
Mental health care	10.2%	5.4%	15.0%	32.3%	15.6%
Medical specialty care	12.0%	9.6%	15.6%	30.5%	9.0%
Medicine and medical supplies	16.8%	15.6%	18.6%	20.4%	6.6%
Routine screenings (mammograms, laboratory testing, age/gender appropriate screenings)	26.9%	16.8%	16.8%	21.0%	4.2%

Source: Valley Health Community Survey, 2016.

Exhibit 61B suggests that there is a discrepancy between the English and Spanish survey respondent groups in ability to receive needed care. Most respondents in the Spanish community felt that they did not “always” receive basic medical care, dental care, needed mental health care or medical specialty care. Only 31.7 percent of Spanish survey residents responded that they always receive basic medical care, 26.9 percent reported that they have had their routine screenings.

Exhibit 62A: Barriers to Receiving Needed Care (English)

Response	No Insurance	Can't Get Appointment	Can't Afford it/Too Expensive	Inconvenient Hours	Lack of Transportation	Lack of Trust	Language Barrier	Other
Basic medical care	12.3%	6.1%	12.7%	3.6%	3.4%	1.4%	0.8%	5.1%
Dental care	22.4%	2.3%	25.6%	2.4%	1.5%	1.6%	0.1%	3.6%
Mental health care	11.1%	4.9%	14.3%	2.9%	1.1%	4.1%	0.2%	9.5%
Medical specialty care	10.3%	6.3%	17.4%	3.6%	1.9%	1.8%	0.3%	7.5%
Medicine and medical supplies	11.6%	1.9%	15.6%	1.5%	1.4%	0.7%	0.6%	4.3%
Routine screenings (mammograms, laboratory testing, age/gender appropriate screenings)	12.6%	2.5%	14.4%	2.8%	1.6%	1.9%	0.7%	4.5%

Source: Valley Health Community Survey, 2016.

Key	
Top two barriers by care type	

Cost and lack of insurance were the most frequently reported barriers to care. Among those choosing “other,” most responses cited either cost or a lack of need for services as the reason they did not access care (**Exhibit 62A**).

Exhibit 62B: Barriers to Receiving Needed Care (Spanish)

Response	No Insurance	Can't Get Appointment	Can't Afford it/Too Expensive	Inconvenient Hours	Lack of Transportation	Lack of Trust	Language Barrier	Other
Basic medical care	32.3%	1.2%	14.4%	2.4%	0.6%	2.4%	3.0%	0.0%
Dental care	22.8%	2.4%	21.0%	0.6%	1.2%	2.4%	1.2%	1.2%
Mental health care	18.0%	0.6%	10.2%	1.2%	0.6%	0.6%	1.8%	0.0%
Medical specialty care	21.6%	0.6%	11.4%	1.2%	0.6%	0.6%	3.6%	0.6%
Medicine and medical supplies	20.4%	1.8%	10.8%	1.8%	1.2%	0.6%	3.0%	0.6%
Routine screenings (mammograms, laboratory testing, age/gender appropriate screenings)	25.7%	0.0%	12.6%	1.2%	0.6%	1.2%	3.0%	1.2%

Source: Valley Health Community Survey, 2016.

Key	
Top two barriers by care type	

Like English survey respondents, cost and lack of insurance were the most frequently reported barriers to care. Among those choosing “other,” most responses cited either cost or a lack of need for services as the reason they did not access care (**Exhibit 62B**).

3. Health Issues

Exhibit 63A: Most Important Health Issues Identified (English)

Response	Response Percent	Response Count
Access to healthy food is limited	12.1%	221
Asthma	2.5%	46
Alzheimer's or dementia	8.3%	152
Affordable housing	9.4%	172
Cancer	32.8%	598
Chronic Obstructive Pulmonary Disease (COPD)	4.1%	74
Dental Health	6.5%	119
Diabetes	20.1%	366
Domestic Violence	6.1%	111
Heart disease and stroke	19.9%	362
Homelessness	7.6%	138
High blood pressure	10.4%	189
Low income/financial challenges	31.3%	570
Mental health (such as depression, bipolar, autism)	23.9%	435
Motor vehicle crash injuries	1.8%	32
Not enough exercise	15.3%	279
Poor air quality	1.8%	33
Poor dietary choices	16.6%	303
Respiratory/lung disease	3.1%	56
Sexually Transmitted Diseases (STDs)	2.6%	48
Stroke	2.4%	43
Substance abuse	40.1%	731
Suicide	2.1%	38
Teenage pregnancy	5.3%	96
Tobacco use	10.9%	198
Other (please specify)	4.3%	78

Source: Valley Health Community Survey, 2016.

Key	
Top five most important health issues identified	

When asked to identify the top health issues in the community, English survey respondents most often chose substance abuse, cancer, low income or financial challenges, diabetes, and mental health. Although not in the top five health issues identified, heart disease, poor dietary choices, not enough exercise and access to healthy food were also frequently cited health concerns (**Exhibit 63A**).

Exhibit 63B: Most Important Health Issues Identified (Spanish)

Response	Response Percent	Response Count
Access to healthy food is limited	10%	17
Asthma	8%	14
Alzheimer's or dementia	6%	10
Affordable housing	5%	8
Cancer	40%	67
Chronic Obstructive Pulmonary Disease (COPD)	2%	3
Dental Health	17%	28
Diabetes	35%	58
Domestic Violence	9%	15
Heart disease and stroke	17%	28
Homelessness	3%	5
High blood pressure	14%	24
Low income/financial challenges	26%	43
Mental health (such as depression, bipolar, autism)	17%	29
Motor vehicle crash injuries	5%	8
Not enough exercise	11%	19
Poor air quality	4%	7
Poor dietary choices	7%	11
Respiratory/lung disease	5%	8
Sexually Transmitted Diseases (STDs)	11%	19
Stroke	4%	7
Substance abuse	16%	27
Suicide	2%	3
Teenage pregnancy	12%	20
Tobacco use	12%	20
Other (please specify)	0%	0

Source: Valley Health Community Survey, 2016.

Key	
Top five most important health issues identified	

When asked to identify the top health issues in the community, respondents most often chose cancer, diabetes, low income or financial challenges, heart disease and stroke, and mental health. Although many were not in the top 5 health issues identified, dental health, substance abuse, high blood pressure, tobacco use, and teen pregnancy were also concerns identified by the Spanish surveys (**Exhibit 63B**).

4. Health Behaviors

Exhibit 64: Most Important Risky Health Behaviors Identified (English)

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Alcohol abuse	45.6%	832	51.5%	86
Being overweight	44.0%	802	24.0%	40
Dropping out of school	9.9%	181	17.4%	29
Drug abuse	71.5%	1304	56.3%	94
Lack of exercise	21.7%	396	16.2%	27
Poor eating habits	35.5%	648	32.9%	55
Not getting shots to prevent disease	6.9%	125	18.0%	30
Racism or other form of bigotry	8.1%	147	18.0%	30
Tobacco use	24.3%	443	20.4%	34
Not using birth control	8.5%	155	3.6%	6
Not using seat belts/child safety seats	6.6%	121	16.8%	28
Unsafe sex	11.6%	212	16.2%	27
Other (please specify)	2.7%	49	1.8%	3

Source: Valley Health Community Survey, 2016.

Key	
Top five risky health issues identified	

When asked to identify the top risky health behaviors in the community, English survey respondents most often indicted drug abuse, alcohol, being overweight, poor eating habits, and tobacco use, followed by heart disease, poor dietary choices, not enough exercise and access to healthy food.

The top risky health behaviors in the Spanish community indicated by the survey respondents are: drug abuse, alcohol abuse, poor eating habits, being overweight, and tobacco use, followed by not getting shots to prevent disease, racism or other form of bigotry, dropping out of school, not using seat belts/child safety seats, and not enough exercise (**Exhibit 64**).

Exhibit 65: Access to Fresh Fruits and Vegetables per Week

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
One time	4.10%	73	6.6%	11
Two times	7.30%	130	10.2%	17
Three times	12.10%	214	19.2%	32
Four times	9.90%	175	17.4%	29
Five or more times during the week (5+)	62.00%	1100	15.6%	26
I do not have regular access to fresh fruits and vegetables	4.60%	81	29.9%	50

Source: Valley Health Community Survey, 2016.

A majority of respondents to both surveys reported that they were eating, or have access to, fresh fruits and vegetables at least three or more times per week. Only 4.6 percent of the respondents reported that they do not have access to fresh fruits and vegetables. However, 29.9 percent of the Spanish survey respondents reported no regular access to fresh fruits and vegetables (**Exhibit 65**).

Summary of Interview Findings, 2016

Valley Health System and Our Health, Inc. conducted both face-to-face informant interviews and telephone interviews in March 2016. The interviews were designed to obtain input on health needs from persons who represent the broad interests of the community served by WMC, including those with special knowledge of or expertise in public health.

Nineteen group interviews were conducted with 80 individuals, including: persons with special knowledge of or expertise in public health; health and other public departments or agencies with data or information relevant to the health needs of the community; and leaders, representatives and members of medically underserved, low-income, and minority populations, and of populations with chronic disease needs; and representatives of the education and business communities. An annotated list of individuals providing community input is included the following section of this report.

Interviews were conducted using a structured questionnaire. Informants were asked to discuss community health issues and encouraged to think broadly about the social, behavioral and other determinants of health. Interviewees were asked about issues related to health status, health care access and services, chronic health conditions, populations with special needs, and health disparities.

The frequency with which specific issues were mentioned and interviewees' perceptions of the severity (how serious or significant) and scope (how widespread) of each concern were assessed. The following health status issues and contributing factors were reported to be of greatest concern. The items in each list are presented in order of stated importance, although the differences in some cases are relatively minor.

Health Status Issues

- 1. Drug and substance abuse:** Substance abuse was mentioned most frequently health status issue, and was portrayed as both growing and serious throughout the region. Heroin was mentioned most often; however, alcohol, marijuana, and methamphetamine use were also mentioned. Interviewees reported that women who use illicit drugs and compromise the health of babies is of significant importance.
- 2. Mental and behavioral health:** Mental and behavioral health was the second frequently-mentioned health issue in the community. Interviewees reported that the community's mental health needs have risen, while mental health service capacity has not. They described a wide range of mental health issues, including bullying among youth, autism spectrum symptoms and diagnoses, depression among senior citizens, adult and family stress and coping difficulties, lack of affordable outpatient mental health professionals, and a lack of local inpatient treatment facilities. Interviewees also noted frequent dual diagnoses of mental health problems and substance abuse.
- 3. Chronic Illness (i.e. Cholesterol, Diabetes, and Hypertension):** Diabetes was the most frequently mentioned chronic disease in the interviews, and was often paired with discussion about obesity and overweight. This was true for all ages, but these health issues were noted to be rising among children and youth. Commenting on related

contributing factors, interview participants mentioned nutrition and diet, low physical activity and exercise levels, and food insecurity and hunger. Access to healthy foods was mentioned as a barrier, including that some do not have money to purchase fresh produce. There was widespread recognition of the toll a chronic illness has on health, its impact on the health care system, and the importance of not only treatment but also behavioral change in addressing the chronic disease.

4. **Cancer:** Cancer was mentioned frequently during the interview process. Some believe this is due to increased awareness of cancer services because of the Winchester Medical Center Foundation's Cancer Center Campaign promotion in the past year, and others mentioned that it may be the result of preventative screenings.
5. **Smoking and tobacco:** Smoking and tobacco use was frequently mentioned in the context of concerns about drug and substance abuse. Smoking was viewed as a significant, long-lasting health issue that is has not become notably worse since the launch of electronic cigarettes (e-cigarettes).

Factors Contributing to Health Status and Access to Care

In addition to discussing health status issues and health conditions in the community, interview participants addressed the factors or conditions they believe most contribute to poor health status. Responses were similar to the 2013 Community Health Needs Assessment reports. A rank-ordered list of the major contributing factors raised, some of them inter-related, is below:

1. **Access to health care (physicians/specialists):** Interview participants cited a wide range of difficulties regarding access to care, including availability of providers (physicians/specialists), cost and affordability of care, significant transportation barriers for low-income and elderly populations, and language or cultural barriers for some members of the community. Some interviewees mentioned that there are community residents that do not seek medical care due to their immigration status in the country.
2. **Financial insecurities and poverty:** It was frequently stated that issues related to income and financial resources limit access to care, contribute to poor diet and nutrition, and create stresses that negatively impact health.
3. **Education/Awareness:** Several interviewees mentioned that education and awareness about services were barriers to care. Factors linked generally to educational attainment and specifically to health education were noted by interview participants as impeding both the ability to effectively seek and manage health care, and to adopt and practice healthy behaviors. Many noted that the community is not aware of services available to them, and that finding services is not easily managed. It was also mentioned that those coming out of prison have limited access to resources.
4. **Poor nutrition and diet:** Among healthy behaviors, dietary habits and nutrition were mentioned most frequently as major factors in obesity, diabetes, heart disease and related conditions, and chronic diseases. Interview participants mentioned this is due to a lack of access to affordable healthy foods for lower income families.

- 5. Lack of physical activity and exercise:** Among health behaviors that contribute to or inhibit good health, a lack of physical activity and exercise was mentioned as a concern for all age groups. Interview participants recognized that reasons for limited activity and strategies to increase activity differ across the life span.
- 6. Affordable Housing/Assisted Living:** Interview participants frequently mentioned the need for affordable housing and assisted home care for senior citizens. Some interview participants highlighted the particular health risks experienced by older residents in the community. Seniors have lower incomes, transportation barriers, advanced chronic diseases, and social isolation that can negatively impact health status.
- 7. Homelessness:** Homelessness is a risk factor for poor health, and creates stress and challenges to maintaining one's health and seeking or obtaining needed health care.

Individuals Providing Community Input

The CHNA took into account input from many people who represent the broad interests of the community served by the hospital. This was done via interviews with 80 individuals and four “community response sessions” that included 39 participants. These 119 stakeholders included public health experts; individuals from health or other departments and agencies; leaders or representatives of medically underserved, low-income, and minority populations; and other individuals representing the broad interests of the community (**Exhibits 66-69**).

1. Public Health Experts

Individuals interviewed with special knowledge of, or expertise in, public health, some of whom also participated in a community response session, include those in **Exhibit 68**:

Exhibit 66: Public Health Experts

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Response Session
Rhona Collins	HIV/STD Counselor	Virginia Department of Health Lord Fairfax Health District	Public health expertise related to HIV/STD prevention.	Interview
Victoria Crone	Public Health Nutritionist Supervisor	Virginia Department of Health Lord Fairfax Health District	Public health expertise related to encouraging proper nutrition in WIC participants.	Interview
Meredith Davis	Epidemiologist	Virginia Department of Health Lord Fairfax Health District	Expertise in the public health needs of patients in Lord Fairfax Health District.	Interview
Charles Devine, III, MD	District Director	Virginia Department of Health Lord Fairfax Health District	Expertise in the public health needs of Lord Fairfax Health district residents.	Both
Ann Judge	Disease Prevention Grant Coordinator	Virginia Department of Health Lord Fairfax Health District	Expertise in public health needs of Lord Fairfax Health District residents as it relates to disease prevention.	Both
Mary Orndorff	Disease Prevention Health Coordinator	Virginia Department of Health Lord Fairfax Health District	Public health expertise related to health prevention.	Interview

Exhibit 66: Public Health Experts (continued)

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Response Session
Leea Shirley	Public Health Nurse Supervisor	Virginia Department of Health Lord Fairfax Health District	Expertise in the public health needs of Lord Fairfax Health district residents.	Interview
Stephanie Shoemaker	Health Administrator	Hampshire County Health Department	Expertise in public health needs of Hampshire County residents	Response Session

2. Health or Other Departments or Agencies

Several interviewees were from departments or agencies with current data or other information relevant to the health needs of the community (**Exhibit 69**). This list excludes the public health experts identified in **Exhibit 66**, who also meet this criterion.

Exhibit 67: Individuals from Health or Other Departments or Agencies

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Response Session
Cosby Porter-David	Executive Director	Good Samaritan Free Clinic	Special knowledge regarding health needs of the indigent populations in the community for Berkeley County.	Interview
David Switzer, MD	Physician	Page Free Clinic	Special knowledge regarding health needs of the indigent populations in the Page County community.	Interview
Gerald Bechamps, MD	Vice President of Medical Affairs	Hampshire Memorial Hospital and War Memorial Hospital	Special knowledge regarding health needs of the indigent populations in Hampshire and Morgan County communities.	Response Session
Glenn Burdick, Ed.D., RN	Executive Director	St. Luke Community Clinic	Special knowledge regarding health needs of the indigent populations in the Warren County community.	Interview
Karen Sorensson	Primary Care Nurse Coordinator	Free Medical Clinic of Northern Shenandoah Valley	Special knowledge regarding health needs of the indigent populations in the community.	Interview
Pam Murphy	Executive Director	Shenandoah County Free Clinic	Special knowledge regarding health needs of the indigent populations in the Shenandoah County community.	Interview
Stefan Lawson	Director	Free Medical Clinic of Northern Shenandoah Valley	Special knowledge regarding health needs of the indigent populations in the community.	Interview

3. Community Leaders and Representatives

The following individuals were interviewed because they are leaders or representatives of medically underserved, low-income, and/or minority populations (**Exhibit 68**). This list excludes the public health experts identified in **Exhibits 66 and 67**.

Exhibit 68: Community Leaders and Representatives

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Response Session
Amy Wiley	Patient Access Manager	War Memorial Hospital	Morgan County	Response Session
Carol Koenecke-Grant	VP Strategic Services	Valley Health System	Special knowledge regarding marketing, communications and business development of VHS service region.	Response Session
Cathy Weaver	Member, Page Memorial Hospital Board of Trustees	Community	Community	Response Session
Chris Rucker	VP Community Health and Wellness, President, Valley Regional Enterprises	Valley Health System	Special knowledge regarding health needs and transportation services.	Response Session
David Cooper	GIS Manager	Northern Shenandoah Valley Regional Commission	GIS Mapping	Interview
David Crittenden	Director of Rehab	War Memorial Hospital	Morgan County	Response Session
Diane Kerns	Member, Winchester Medical Center Board of Trustees	Community	Community	Response Session
Eden E. Freeman	City Manager	City of Winchester	City Government	Response Session
Ethel Showman	Member, Shenandoah Memorial Hospital Board of Trustees	Community	Community	Response Session
Faith Power	Member, Valley Health Board of Trustees	Community	Community	Response Session
Floyd Heater	VP, Valley Health Southern Region, President, Warren Memorial Hospital	Valley Health System	Special knowledge regarding health needs of indigent populations in the communities of Page, Shenandoah, and Warren Counties.	Response Session
Frank Subasic	Member, War Memorial Hospital Board of Trustees	Community	Community	Response Session

Exhibit 68: Community Leaders and Representatives (continued)

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Response Session
Grady (Skip) Philips	President, Winchester Medical Center	Valley Health System	Special knowledge regarding health needs of indigent populations in the community.	Response Session
Janice Boserman	PI/Quality	War Memorial Hospital	Morgan County	Response Session
Jessica Watson	Director CDRC	Chronic Disease Resource Center	Special knowledge regarding health needs of indigent patients	Response Session
Jill Williams	Program Supervisor	Healthy Families Northern Shenandoah Valley	Experience providing parenting support to at-risk families in the community.	Interview
Julie Horak	Pharmacy Manager	War Memorial Hospital	Morgan County	Response Session
Karen Schultz, PhD	Director & Professor, Center for Public Service and Scholarship	Shenandoah University	Special knowledge regarding health needs of the indigent populations in the community.	Response Session
Katy Pitcock	Co-Chair and Coordinator Community Prenatal and Language Access	Virginia Medical Interpreting Collaborative	Special knowledge of health needs of populations that have limited in English proficiency.	Community Health Survey
Kevin Sanzenbacher	Chief of Police	Winchester Police Department	Public safety	Response Session
Kevin Tephabock	State Vice President	American Cancer Society (ACS)	Special knowledge of cancer-related health needs in the community.	Response Session
Kimberly Streett	Transition Coach	Care Management	Special knowledge regarding health needs of indigent populations in the communities of Page, Shenandoah, and Warren Counties.	Response Session
Sara Schoonover-Martin	Executive Director	Healthy Families Northern Shenandoah Valley	Experience providing parenting support to at-risk families in the community.	Interview

Exhibit 68: Community Leaders and Representatives (continued)

Name	Title	Affiliation or Organization	Special Knowledge/Expertise or Nature of Leadership Role	Interview or Response Session
Shannon Urum	Prevention Specialist	Northwestern Community Services	Special knowledge of substance abuse prevention and treatment in vulnerable populations.	Response Session
Sharen Gromling	Executive Director	Our Health, Inc.	Special knowledge regarding health needs of the indigent populations in the community.	Both
Travis Clark	VP, Operations, Valley Health Southern Region President, Shenandoah Memorial Hospital and Page Memorial Hospital	Valley Health System	Special knowledge regarding health needs of indigent populations in the community for Page, Shenandoah, and Warren Counties.	Response Session

4. Persons Representing the Broad Interests of the Community

Exhibit 69: Other Interviewees Representing the Broad Interests of the Community

Name	Title	Affiliation or Organization	Interview or Response Session
Barry Presgraves	County Administrator	Local Government- Page County	Interview
Benjamin Dolewski	Fitness Center Manager	Page Memorial Hospital Wellness & Fitness	Interview
Brittney Jones	Quality & Case Manager	AIDS Response Effort, Inc.	Response Session
Bryan Rosati	Operations Manager - Winchester	Valley Regional Enterprise	Interview
Carolyn Knowles	Dispatch Manager	Valley Medical Transport	Interview
Carolyn Wilson	Oncology Nursing Project Specialist	Winchester Medical Center	Interview
David Cunsolo	Lead Pastor	Victory Church	Interview
Deborah Inaba	Exercise Physiologist	Shenandoah Memorial Hospital Wellness & Fitness	Interview
Deena Lanham	Executive Director, Oncology, Women & Children Services	Winchester Medical Center	Interview
Diane Ricci	Coordinator	Behavioral Health- Senior Outpatient Program	Response Session
Doug Pixler	Director	Eastern Panhandle Transit Authority	Interview
Doug Stanley	County Administrator	Local Government- Warren County	Interview
David Sovine, EdD	Superintendent	Frederick County Public Schools	Both
Mark Lineburg, EdD	Superintendent	Winchester City Schools	Interview
Eileen Johnston	Director	Hampshire County Rural Development	Interview
Elaine Bartoldson	Deputy Director Marketing	Eastern Panhandle Transit Authority	Interview
Elise Stine-Dolinar	Marketing & Development Manager	United Way	Response Session
Ernie Carnevale	CEO	Blue Ridge Hospice	Interview
Jane Bauknecht	Director	Adult Care Center	Response Session
Jeannie Coffman	Faith Community Nurse	Parish Nursing	Response Session
Jeff Jeran	Director	Valley Health System Wellness & Fitness	Interview

**Exhibit 69: Other Interviewees Representing the Broad Interests of the Community
(continued)**

Name	Title	Affiliation or Organization	Interview or Response Session
John Nagley	Executive Director	AIDS Response Effort, Inc.	Response Session
Joyce Dunlap	Breast Health Navigator	Winchester Medical Center	Interview
Judy McKiernan	Lead Student Support Specialist	Frederick County Public Schools	Response Session
Judy Melton	Registered Nurse II	Winchester Medical Center	Response Session
Juli Ferrell	Executive Director	Big Brothers Big Sisters	Response Session
Karen Shipp	Board Chair	Faith in Action	Response Session
Kelly Miller	Coordinator of Volunteer Services	Blue Ridge Hospice	Interview
Kim Herstritt	Executive Director	Literacy Volunteers	Interview
Leslie Stewart	Executive Director	CLEAN, Inc.	Interview
Lisa Zerull, PhD	Academic Liaison & Program Manager Faith-Based Services	Winchester Medical Center	Interview
Mallie Combs	Director	Hardy County Rural Development	Interview
Maricela Messner	Coach	Maxwell Team	Response Session
Mark Grim	Staff	AIDS Response Effort, Inc.	Response Session
Mary Beth Pirolozzi	Executive Director	County United Way - Hampshire County	Interview
Mike Mitchell	Sports Fitness Instructor	Warren Memorial Hospital Wellness & Fitness	Interview
Nadine Pottinga	President/CPO	United Way of Northern Shenandoah Valley	Response Session
Pastor Mary Louise Brown	Pastor	Faith Community	Response Session
Paula Siburt	Director of Resource Development	United Way of Northern Shenandoah Valley	Response Session
Rebekah Schennum	Chair	Family Youth Initiative	Response Session
Reen Markland	Clinical Coordinator, Parish Nursing	Winchester Medical Center	Response Session
Roberta Lauder	Director of Resource Development	Shenandoah Area Agency on Aging	Response Session

Exhibit 69: Other Interviewees Representing the Broad Interests of the Community

Name	Title	Affiliation or Organization	Interview or Response Session
Rusty Holland	Executive Director	Concern Hotline	Response Session
Stephanie Grubb	Coordinator	Behavioral Health-Senior Outpatient Program	Response Session
Tracy Mitchell	Wellness Services Manager	Wellness Services	Response Session
Trina Cox	Fitness Services Director	Hampshire Memorial Hospital Wellness & Fitness	Interview
Name	Affiliation or Organization	Interview or Response Session	
Cheryl Green	Salvation Army	Response Session	
Matt Peterson	Habitat for Humanity	Response Session	
Jane Barvir	Girl Scouts	Response Session	
John Conrad	WATTS	Response Session	
Diane King	Shenandoah County Health Clinic	Response Session	
Cyndy Walsh	Shenandoah Education Foundation	Response Session	
Becky Rollins	Highland Food Pantry	Response Session	
Jenny Callis	Highland Food Pantry	Response Session	
Rena Patrick	Blue Ridge Legal Services	Response Session	
Jennifer Douglas	Heritage Child Development Center	Response Session	
Charly Franks	Faith in Action	Response Session	
Robert Boulter	Faithworks	Response Session	
Pam Hayes	Dental Clinic of Northern Shenandoah Valley	Response Session	
Lisa Gesler	Winchester Day Preschool	Response Session	
Richard Kennedy	Apple Country Head Start	Response Session	
Kaye Harris	The Laurel Center	Response Session	
Jennifer Morrison	Response	Response Session	
Bill Brent	American Red Cross	Response Session	

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