Community Health Needs Assessment

Prepared for

VALLEY HEALTH SYSTEM

Page Memorial Hospital

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

ValleyHealth

Healthier, together.

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EXECUTIVE SUMMARY

Introduction

This community health needs assessment (CHNA) was conducted by Page Memorial Hospital (PMH 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 was analyzed, including comparisons to benchmarks where possible. The principal findings of recent health assessments conducted by other organizations were reviewed, as well.

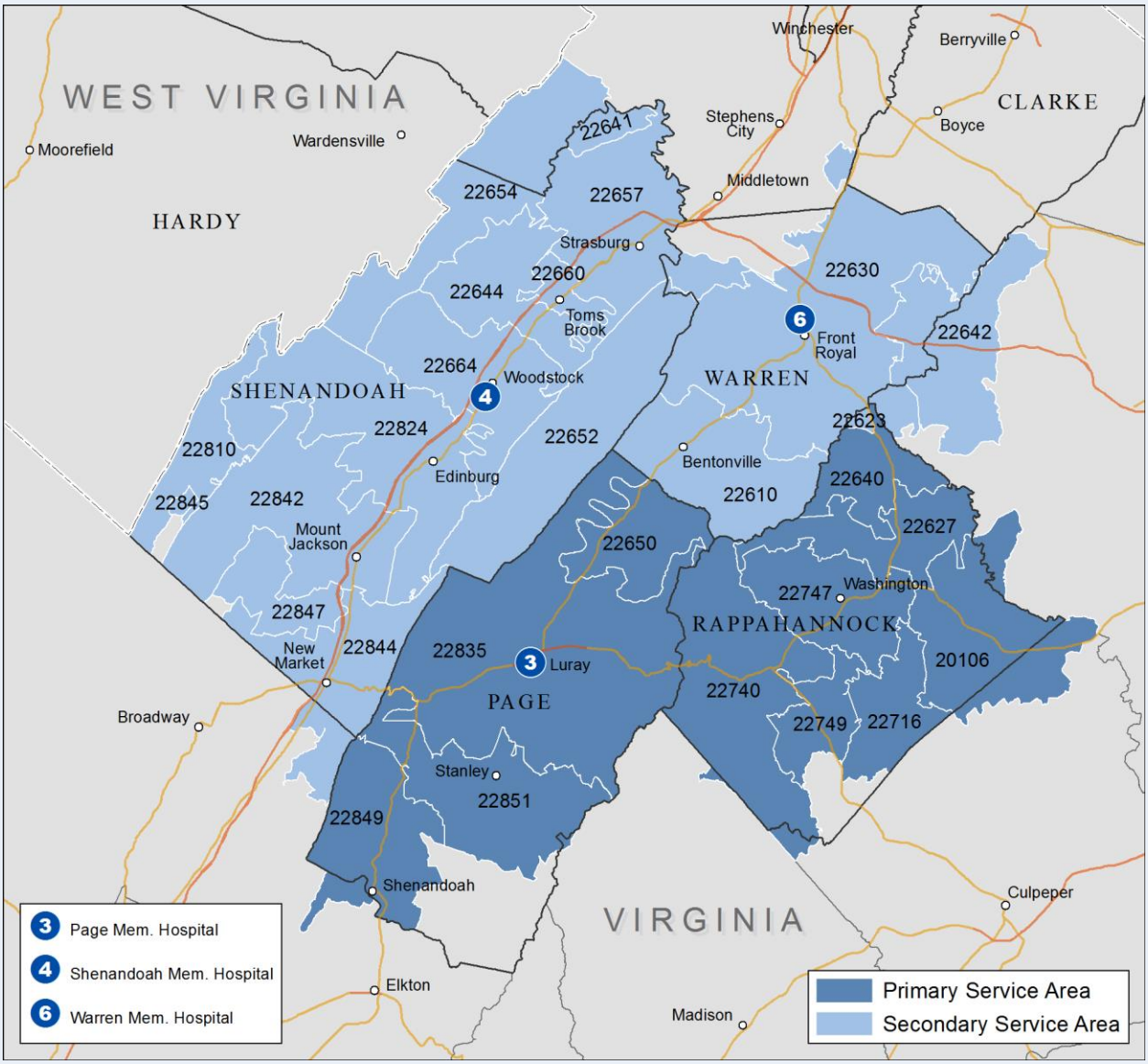
Input from persons representing the broad interests of the community, including individuals with special knowledge of, or expertise in, public health, were taken into account via interviews and, community response sessions for Valley Health's southern service region. Valley Health System conducted 19 group interviews based upon sectors to include representatives from PMH's community, and a community health survey with 739 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.

PMH collaborated with the other Valley Health hospitals for this assessment: Hampshire Memorial Hospital, Shenandoah Memorial Hospital, War Memorial Hospital, Warren Memorial Hospital, and Winchester Medical Center.

Definition of the Community



Page Memorial Hospital Community by the Numbers

- **Community includes 4 counties in Virginia: Page, Rappahannock, Shenandoah, and Warren**
- **Total population in 2015: 112,084**
- **Projected population change between 2015 and 2020: 7.4%**
- **94.8% of inpatient discharges and 90.3% of emergency department visits originated from the community**
- **2.8% of inpatient discharges were from outside of the community**
- **Demographics:**
  - **7.8% of population are 65+**
  - **93.5% White in 2014**

Prioritized Description of Community Health Needs

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

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

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

A lack of physical activity and poor nutrition are contributing factors to being overweight and obesity, and to a wide range of health problems and chronic diseases among all age groups; the co-occurring health problems/disease include high cholesterol, hypertension, diabetes, heart disease, stroke, some cancers, and more. Nationally, the increase in both the prevalence of overweight and 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

- PMH's community contains 4 census tracts identified as food deserts. There are three census tracts designated as food deserts in Warren County and one designation in Shenandoah County. Food deserts are 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.
- Twenty-eight schools in PMH community were eligible for Title 1 funds, 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 children and youth within the community was reported to be a concerrn.

- Page, and Warren Counties showed a higher rate of not having access to exercise opportunities as reported by *County Health Rankings*.

- A concern for the management and prevention of chronic illnesses (diabetes, hypertension, obesity, cholesterol) was mentioned frequently in key informant interview.

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

2. 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 to the health of the community's residents. 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, understanding where to find services when needed, and reliable personal or public transportation.

Key Findings

- The PMH community is experiencing lower ratio rates when it comes to the number of primary care physicians per 100,000 populations in Page County, and the number of dentists available within the region for Page, Shenandoah and Warren Counties; in addition, there is a great need for, mental health providers. The PMH community is below the Virginia ratio for these types of providers, according to the County Health Rankings report.
- The counties in the PMH community ranked in the bottom half of all counties in Virginia 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 the ratio of population to mental health providers.
- Rappahannock and Warren Counties have higher percentages of uninsured residents than Virginia overall, according to the U.S. Census. Page County has a higher percentage (15.3 percent) of uninsured residents than the U.S. average of 14.2 percent.
- 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.

Comparison to August 2013 CHNA: Access to affordable health care was one of the top priority issues identified in PMH's August 2013 CHNA, for reasons including: a lack of providers

relative to the population; affordability and uninsurance; and lack of accessible or reliable transportation to health care and lack of providers who accept Medicaid and Medicare patients.

3. 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 and are less able 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

- Page and Shenandoah Counties had a higher percent of households with incomes under $25,000 in 2014 than the Virginia state average of 18.2 percent.
- In the PMH community in 2014, 2 of the 4 counties were above the state average for percent of households that had incomes below $25,000, an approximation of the federal poverty level (FPL) for a family of four.
- Within the PMH Community, unemployment rates have increased in Warren and Page Counties since 2013. The Page County unemployment rate is the highest among the counties represented at 11.0 percent, higher than the state and national averages. Unemployment in Page County increased by 1.7 percent from previous year.
- Interview respondents indicated that low income, substandard housing, and poverty were the top issues believed to be contributing to poor health status and to access to care difficulties. Other income-related factors noted include difficulty 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 one of the top health priority areas identified in PMH's August 2013 CHNA. Low income and poverty were the second most noted issues contributing to poor health status. Other income-related factors noted that contribute to poor health include difficulty with transportation access, food insecurity, hunger, and homelessness.

4. Mental and Behavioral Health

Mental and behavioral health includes both mental health conditions (e.g., depression, autism, bi-polar) 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 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

- PMH community contains two Medically Underserved Area and/or Medically Underserved Population designations. Page and Shenandoah Counties reported shortages in mental health services.
- Two of the 4 counties within the PMH 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 PMH community has limited resources for this type of community need.
- Another concern mentioned by key informants was connecting patients with services needed. Wait times are very long for patients to see a clinician for services and medication.

Comparison to August 2013 CHNA: Mental health care was one of the priority issues identified in PMH's August 2013 CHNA. for reasons including: the presence of mental Health Professional Shortage Area (HPSA); bullying among youth; autism spectrum symptoms and diagnosis; depression among senior citizens; adult and family stress and difficulties coping with unemployment/under-employment, unfavorable suicide rates compared to the Commonwealth's average; and identification of substance abuse and mental health as the second highest ranking health priority in community response sessions.

5. 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 substance abusers, but those around them; negatively impacting health, safety and risky behaviors, including violence and crime, adult productivity, students' 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 Rappahannock County in the second quartile of all Virginia counties, according to *County Health Rankings* report.
- Smoking across the PMH community averaged 17.5 percent, which is under the Virginia average of 20 percent. Interviewees have mentioned that there has been no improvement in the rate of cigarette smoking for Warren County.
- Substance abuse was a major concern and mentioned frequently by key informant interview participants. It was portrayed as both a growing and serious issue.
- Key informant interview participants noted that substance abusers are often classified as offenders, and have limited options for seeking treatment. Interviewees mentioned that Page County had a concern for the increase in heroin and methamphetamine use.
- Key informant interview participants mentioned the need to expand services to treat substance abuse and decrease the wait time for accessing treatment.

Comparison to August 2013 CHNA: Substance abuse was one of the priority issues identified in PMH's August 2013 CHNA, for reasons including: alcohol use as reported by *County Health Rankings* and being frequently mentioned as a serious issue by interview participants. Tobacco and substance abuse were two of the five most frequently mentioned "top health-related issues" in the community by the survey participants.

6. 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 and 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 Page, Shenandoah and Warren Counties were higher than the Virginia state average of 27 percent.
- Key informant interviews mentioned that there is a need to promote health screenings among women aged 40-50 years old.
- Limited access to prenatal care was mentioned in key informant interviews.

Comparison to August 2013 CHNA: Concerns were raised about perceptions of rising teen pregnancy, including a lowering of the ages at which some girls are becoming pregnant and lack of adequate support systems for these young women. Teen birth rates in Page, Rappahannock, and Warren Counties exceeded that of Virginia as a whole in 2013.

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 PMH 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 in March 2016; a community health survey with 1,990 respondents; and four "community response sessions" with 39 additional community stakeholders in May 2016 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 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, 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

PMH collaborated with the other Valley Health hospitals for this assessment: Hampshire Memorial Hospital, Shenandoah Memorial Hospital, War Memorial Hospital, Warren Memorial Hospital, and Winchester Medical Center.

Valley Health System's internal project team included Mark H. Merrill, president and CEO, Valley Health System; N. Travis Clark, president of Page Memorial Hospital and Shenandoah Memorial Hospital; 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

PMH collaborated with a variety of individuals through its workgroups that focus 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 61** through **64** of the report.

DEFINITION OF COMMUNITY ASSESSED

PMH community is comprised of four counties in Virginia. The hospital's primary service area (PSA) includes Page, and Rappahannock Counties. The secondary service area (SSA) is composed of Shenandoah and Warren Counties (**Exhibit 1)**. The hospital is located in Luray, Virginia.

In 2015, the PMH community was estimated to have a population of 112,084 persons. Approximately 27.7 percent of the population resided in the primary service area (Exhibit 1).

Exhibit 1: Community Population by County, 2015

County	Total Population	Percent of Total Population
PSA	**31,027.00**	**27.7%**
Page County, VA	23,719.00	21.2%
Rappahannock County, VA	7,308.00	6.5%
SSA	**81,057.00**	**72.3%**
Shenandoah, VA	42,228.00	37.7%
Warren County, VA	38,829.00	34.6%
Total	**112,084.00**	**100.0%**

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

This community definition was validated with data on the geographic origins of PMH inpatients and emergency department encounters (**Exhibit 2**).

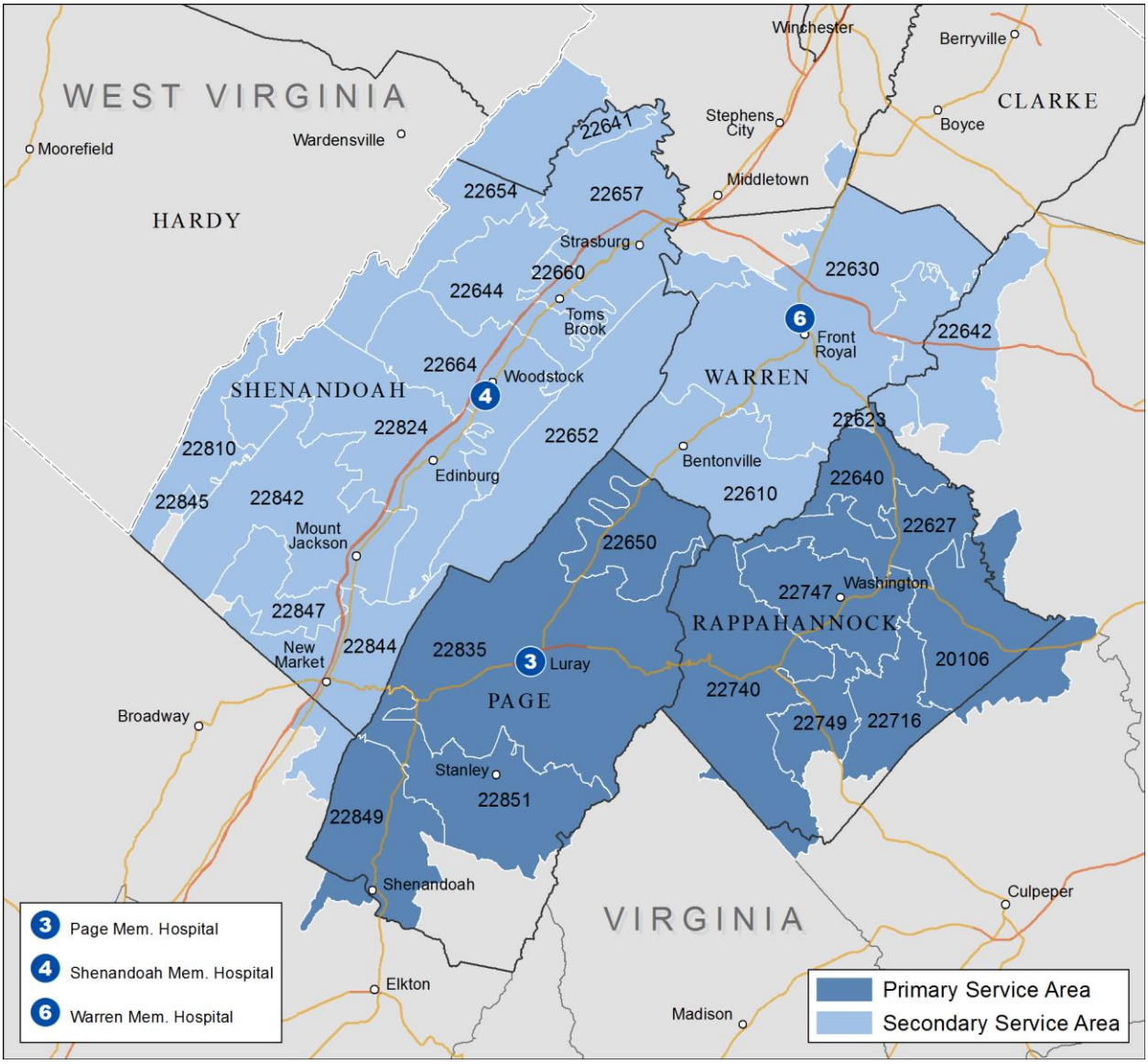
Exhibit 2: PMH Inpatient and Emergency Department Discharges, 2015

County	Number of Inpatient Discharges	Percent of total Inpatient Discharges	Number of ED Discharges	Percent of ED discharges
PSA	**712**	**94.8%**	**10,662**	**90.3%**
Page	707	94.1%	10,621	90.0%
Rappahannock	5	0.7%	41	0.3%
SSA	**18**	**2.4%**	**203**	**1.7%**
Shenandoah	10	1.3%	112	0.9%
Warren	8	1.1%	91	0.8%
PSA and SSA Total	**730**	**97.2%**	**10,865**	**92.0%**
Other areas	**21**	**2.8%**	**939**	**8.0%**
Total Discharges	**751**	**100.0%**	**11,804**	**100.0%**

Source: Valley Health, 2015

In 2015, the PMH Community collectively accounted for 97.2 percent of the hospital's inpatients and 92.0 percent of emergency department discharges. The majority (94.8 percent) of the hospital's inpatients originated from the primary service area. Ninety percent of emergency department visits originated from Page County (**Exhibit 2**).

Exhibit 3: Page Memorial Hospital Community: Four counties comprise PMH's primary and secondary service areas.



Source: Northern Shenandoah Valley Regional Commission

SECONDARY DATA ASSESSMENT

This section presents secondary data regarding health needs in PMH'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, 2015-2020

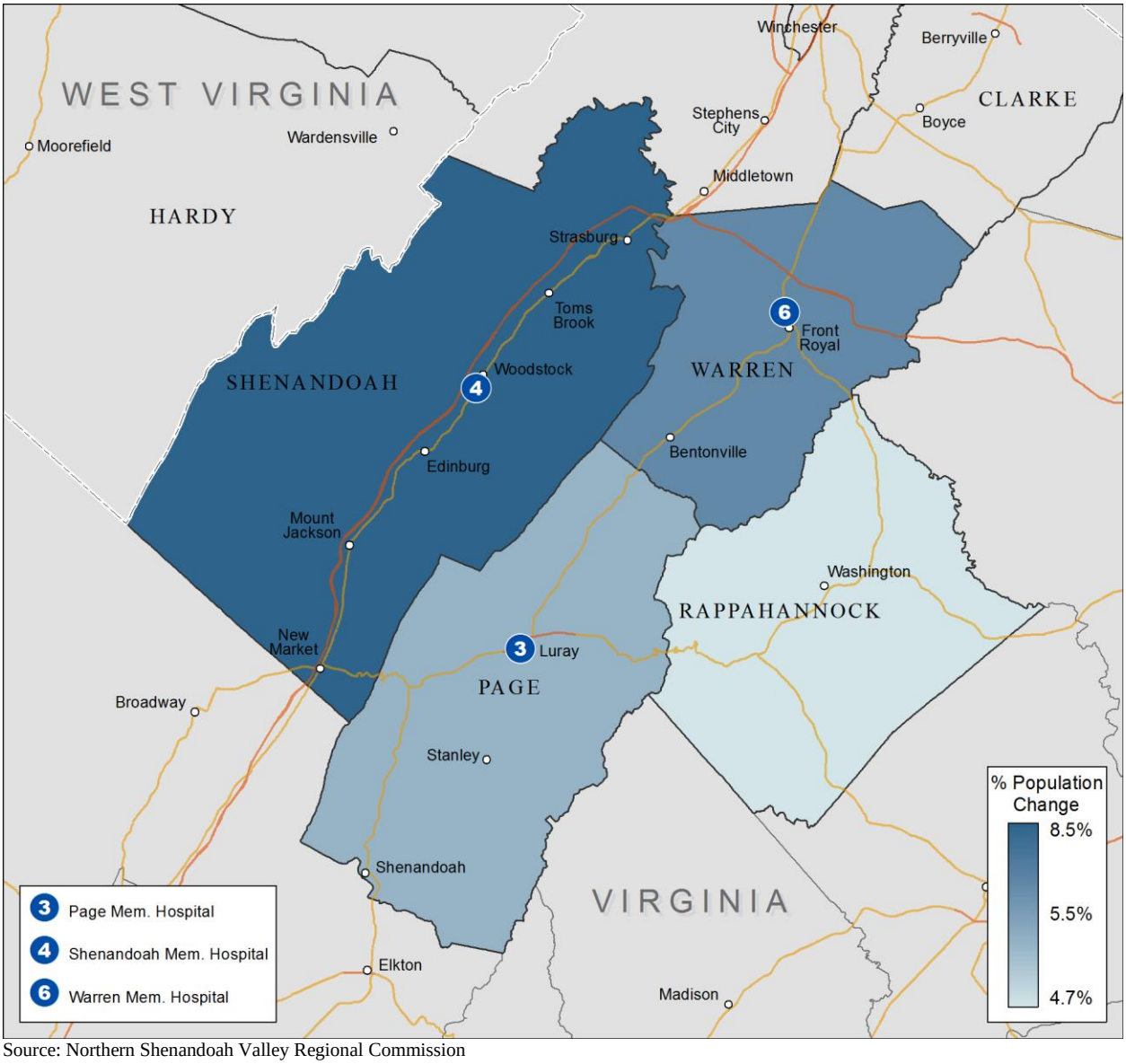
2015	County	Total Population 2015 (Actual)	Total Population estimates 2020 (Estimated)	Percent Change in Population 2015-2020
PSA		**31,027.00**	**32,642.00**	**5.2%**
	Page County, VA	23,719.00	24,994.00	5.4%
	Rappahannock County, VA	7,308.00	7,648.00	4.7%
SSA		**81,057.00**	**87,685.00**	**8.2%**
	Shenandoah, VA	42,228.00	45,829.00	8.5%
	Warren County, VA	38,829.00	41,856.00	7.8%
Total		**112,084.00**	**120,327.00**	**7.4%**

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

Overall, the population in the PMH community is expected to increase by 7.4 percent between 2015 and 2020 (**Exhibit 4**). The Commonwealth of Virginia is expected to increase by 8.5 percent[2] 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 and ZIP Code, 2015-2020



Source: Northern Shenandoah Valley Regional Commission

Shenandoah and Warren Counties are expected to grow faster than the PMH community as a whole (approximately 8.5 and 7.8 percent respectively), while Page and Rappahannock Counties are projected to grow at 5.4 and 4.7 percent by 2020 (**Exhibits 4** and **5).**

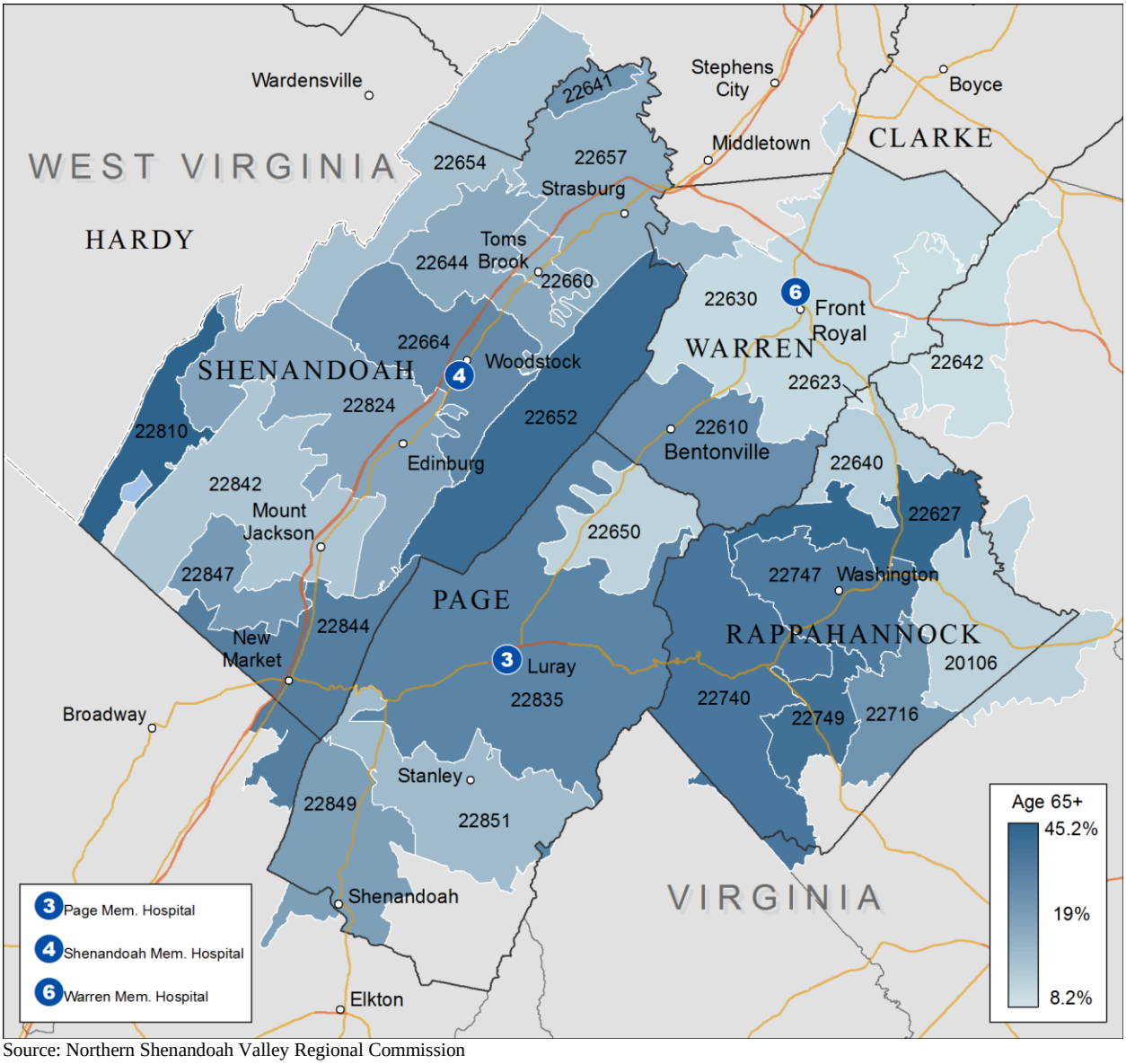
Exhibit 6: Percent Change in Population by Age/Sex Cohort, 2013-2014

Age/Sex Total Population	Population 2013	Population 2014	% Change	% of 2014 Total Population
Female 0-19	13,514	13,472	-0.3%	12.0%
Male 0-19	13,567	13,442	-0.9%	12.0%
Female 20-44	16,144	16,103	-0.3%	14.4%
Male 20-44	16,314	16,335	0.1%	14.6%
Female 45-64	16,950	16,607	-2.0%	14.8%
Male 45-64	16,881	16,493	-2.3%	14.7%
Female 65+	11,086	10,802	-2.6%	9.6%
Male 65+	8,963	8,784	-2.0%	7.8%
Total	**113,419**	**112,038**	**-1.2%**	**100.0%**

Source: US Census Data 2014

The largest decline in population within the PMH community is among those aged 45 and over.

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



Source: Northern Shenandoah Valley Regional Commission

At 12.3 percent, Shenandoah County had 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 (**Exhibit 7**). Page County had the lowest percentage of people aged 65 and over at 6.3 percent.

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

Race	Page, VA	Rappahannock, VA	Shenandoah, VA	Warren, VA	Total Population (Actual)	Percent from Total	Percent Change in Population 2014-2019	Total Population 2019 (Estimated)	% of Population 2019
American Indian and Alaska Native	36	2	40	72	150	0.13%	0.1%	150	0.1%
Asian	121	53	225	377	776	0.69%	0.9%	783	0.4%
Black or African American	389	284	921	1,446	3,040	2.71%	4.8%	3,185	1.6%
Native Hawaiian/Pacific Islander	0	0	0	23	23	0.02%	0.0%	23	0.0%
Some other Race	40	19	505	106	670	0.60%	3.4%	693	0.3%
Two or more Races	403	231	800	1,251	2,685	2.40%	~	2,685	3.4%
White	22,916	6,857	40,054	34,867	104,694	93.45%	90.8%	199,740	97.6%
Total	**23,905**	**7,446**	**42,545**	**38,142**	**112,038**	**100.00%**	**100.0%**	**204,574**	**100.0%**

Source: US Census Data 2014
Source: Crimson – Percent change in population 2014-2019

About 93.5 percent of the PMH community's population is White. The Black or African American population is expected to grow 4.8 percent from 2014 to 2019 (**Exhibit 8**).

Exhibit 9: Distribution of the Population by Ethnicity, 2014

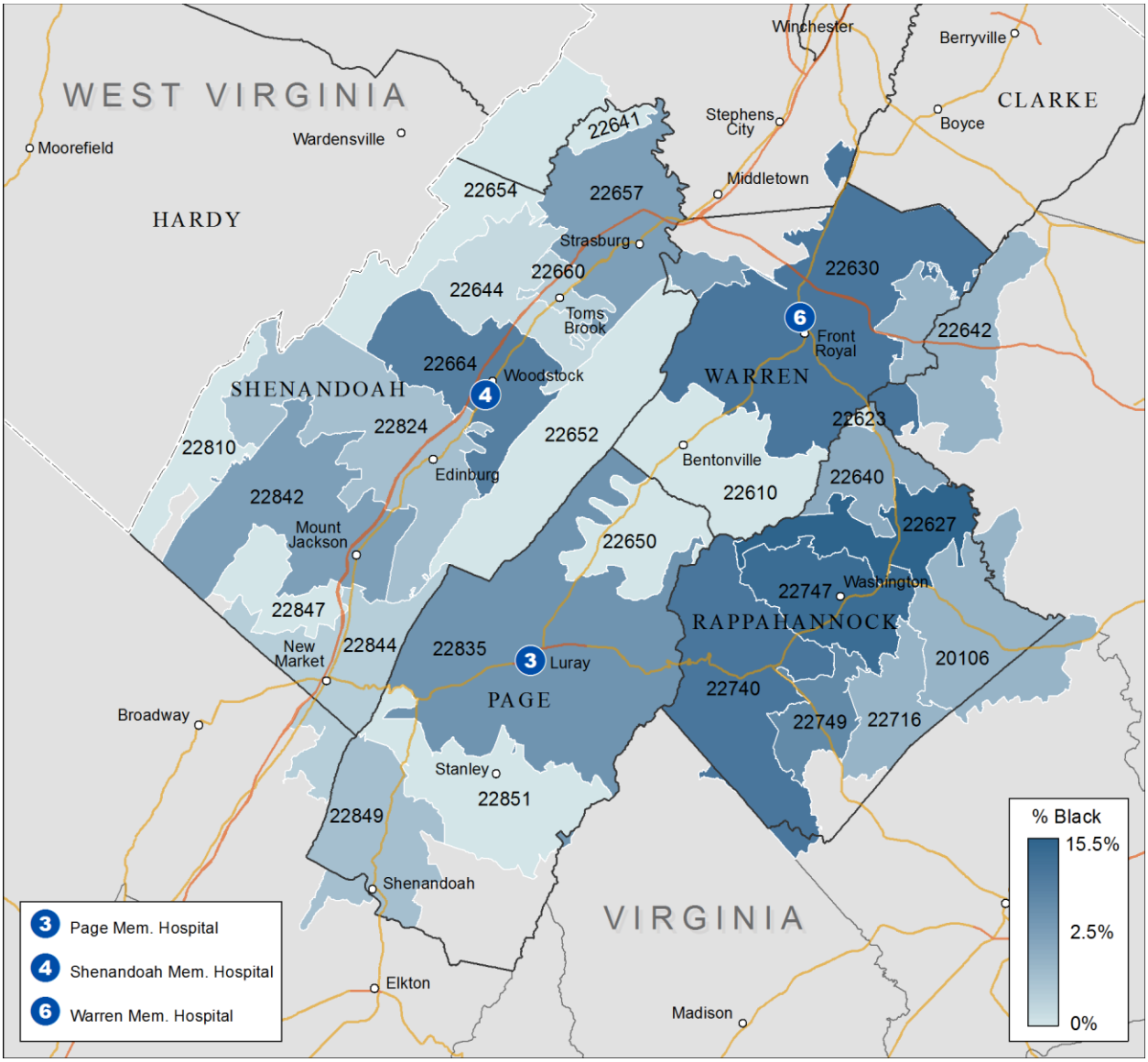
Ethnicity	Page	Rappahannock	Shenandoah	Warren	Total Population (Actual)	% of Total Population 2014
Hispanic or Latino	413	243	2,768	1,437	4,861	4.34%
Not Hispanic or Latino	23,492	7,203	39,777	36,705	107,177	95.66%
Total	**23,905**	**7,446**	**42,545**	**38,142**	**112,038**	**100.00%**

Source: US Census Data 2014

According to the U.S. Census Data, the Hispanic or Latino population was 4.34% of the PMH community in 2014 (**Exhibit 9**).

Exhibits 10 and **11** illustrate the locations in the community where the percentage of the population that is Black, and Hispanic or Latino is highest. The percentage of Black residents is highest in ZIP code 22627 (Flint Hill) in Rappahannock County. The percentage of Hispanic or Latino residents is highest in ZIP code 22842 (Mount Jackson) in Shenandoah County.

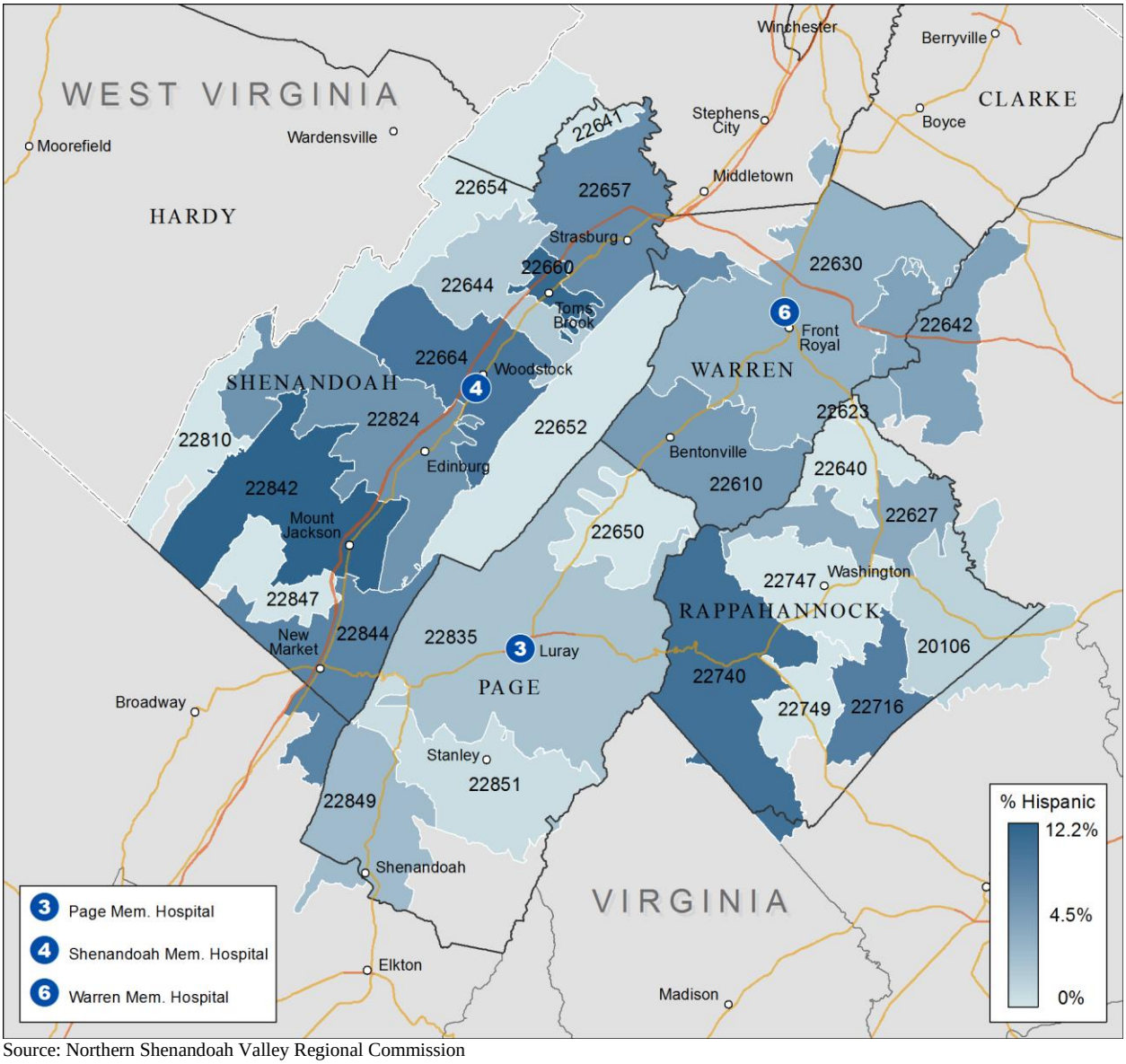
Exhibit 10: Percent of Population – Black, 2014



Source: Northern Shenandoah Valley Regional Commission

Rappahannock and surrounding areas, parts of Shenandoah, and Warren Counties are areas with the highest percentages of Black residents

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



Source: Northern Shenandoah Valley Regional Commission

Rappahannock, and, Shenandoah Counties, have the highest number of Hispanic or Latino residents.

Exhibit 12: Other Demographic Indicators, 2014

County	Population age 25 + without a high school diploma, 2014	Population % + who are linguistically isolated , 2014
PSA		
Page, VA	24.5%	0.6%
Rappahannock, VA	16.0%	3.6%
SSA		
Shenandoah, VA	16.0%	3.1%
Warren, VA	14.3%	1.7%
Virginia	**12.1%**	**5.60%**
West Virginia	**15.5%**	**0.80%**
US	**13.6%**	**8.60%**

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

Key findings include:

- All counties in the PMH community had higher percentages than the state and U.S. averages of residents aged 25 and older who did not graduate high school. At 24.5 percent, Page County has the highest percent of non-graduates.
- Few community residents were linguistically isolated. 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." Rappahannock and Shenandoah Counties had the highest rates of those who were considered linguistically isolated.

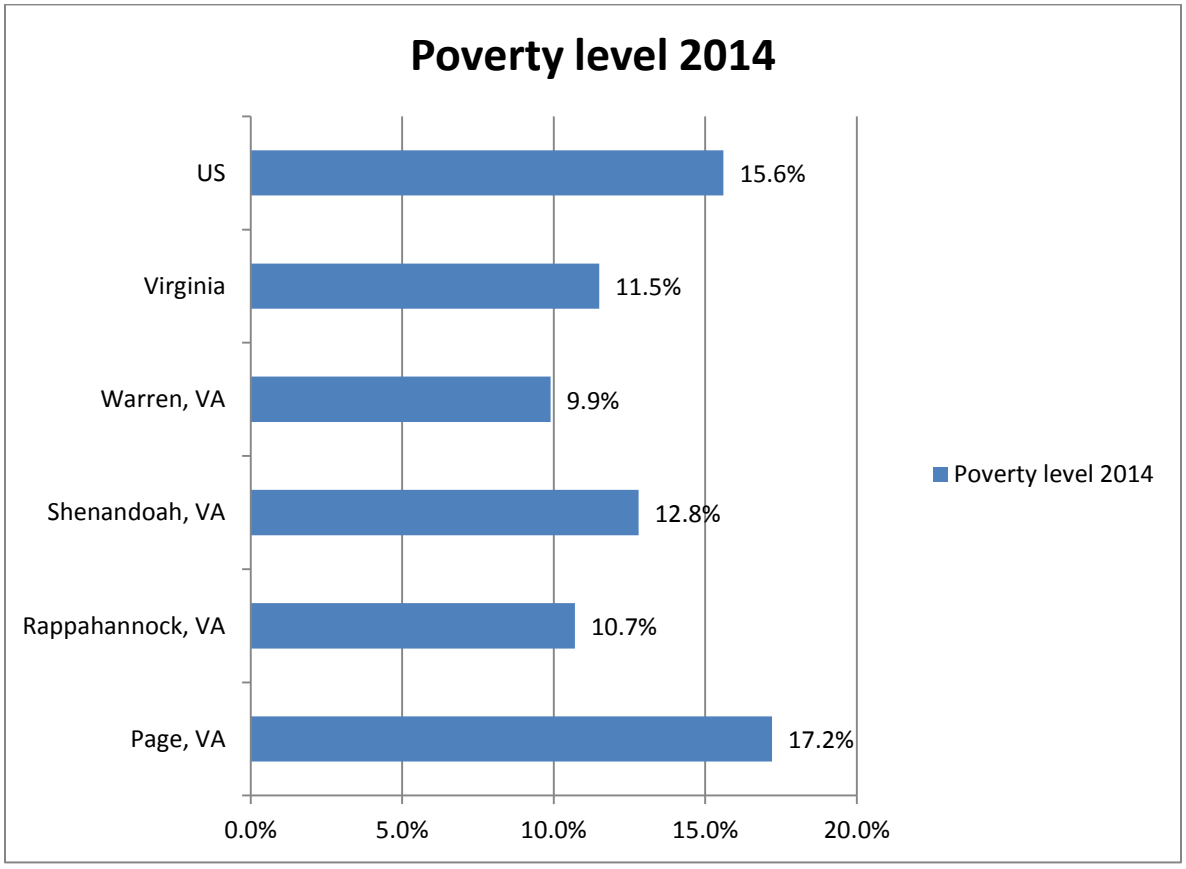
Economic Indicators

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) 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., 11.5 percent of people in Virginia lived in poverty (**Exhibit 13**).

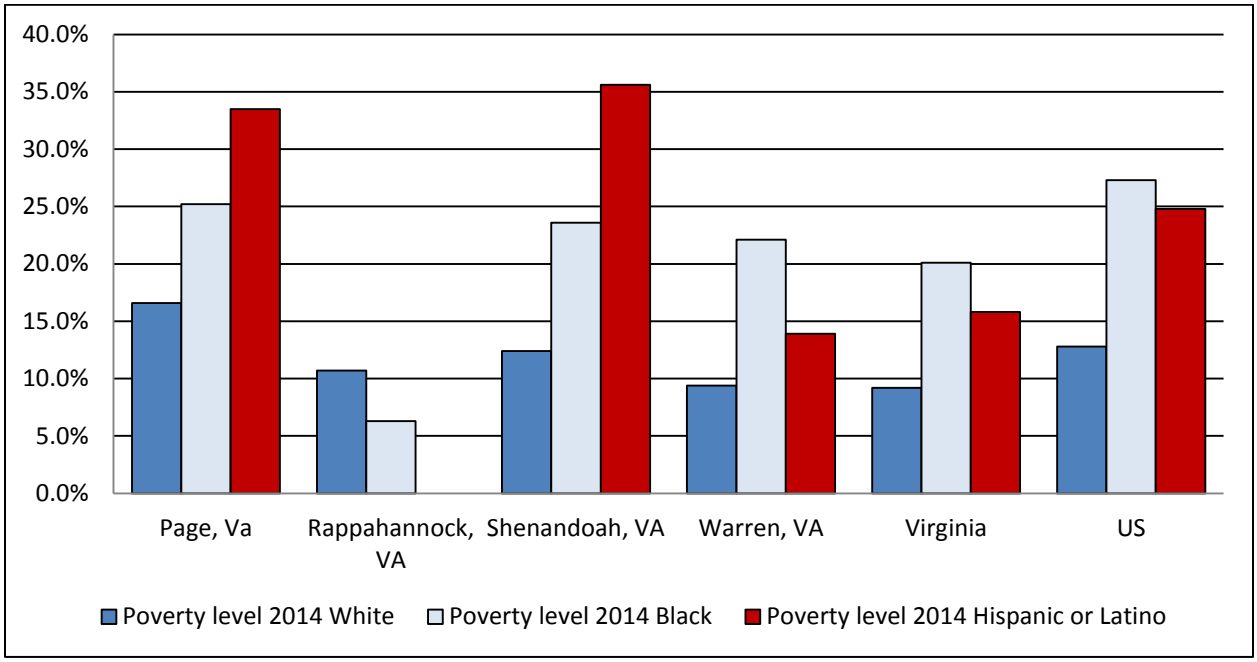
Exhibit 13: Percent of People in Poverty, 2014



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 reported poverty rates higher than the Virginia average (**Exhibit 13**).

Exhibit 14: 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	Poverty level 2014		
	White	Black	Hispanic or Latino
Page	16.6%	25.2%	33.5%
Rappahannock	10.7%	6.3%	0.0%
Shenandoah	12.4%	23.6%	35.6%
Warren	9.4%	22.1%	13.9%
Virginia	**9.2%**	**20.1%**	**15.8%**
US	**12.8%**	**27.3%**	**24.8%**

Except in Rappahannock County, 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 all counties except Rappahannock (**Exhibit 14**).

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 PMH community in 2014, 2 of the 4 counties 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, 2014

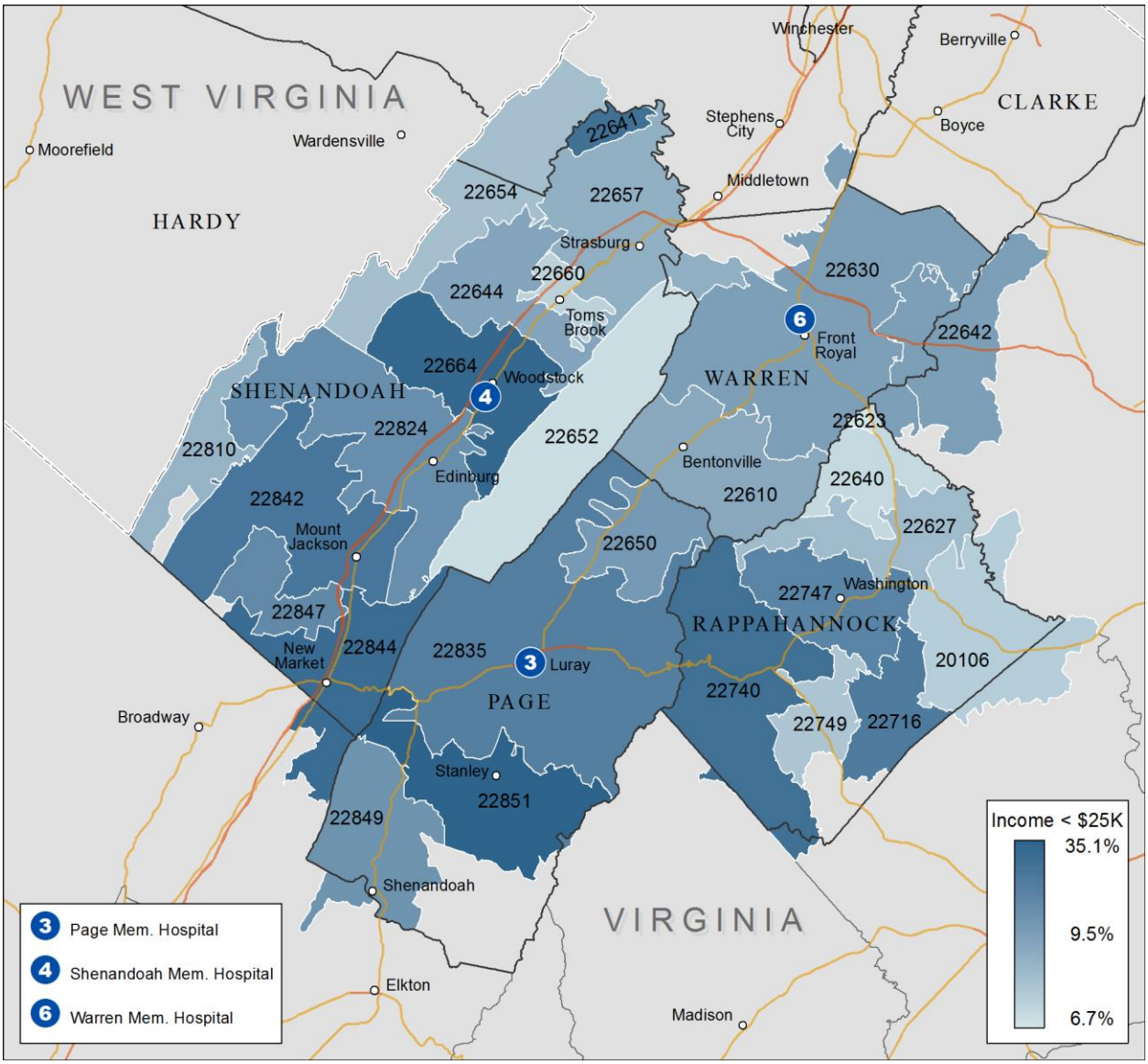
County	Average Family Income, 2014	Percent of Families[4] Less Than $25,000 in 2014	Percent of Households[5] Less than $25,000 in 2014
PSA			
Page, VA	$49,727.00	19.3%	**26.8%**
Rappahannock, VA	$72,531.00	11.3%	**19.1%**
SSA			
Shenandoah, VA	$56,330.00	15.1%	**23.8%**
Warren, VA	$71,629.00	11.4%	**19.3%**
Virginia	**$77,939.00**	**11.9%**	**18.2%**
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#

All of the counties within the PMH community, reported percentages of households with income less than $25,000 greater than the Virginia state percentages of 18.2 percent. At 26.8 percent, Page County had the highest percentage of households with income less than $25,000 (**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 and ZIP Code, 2014

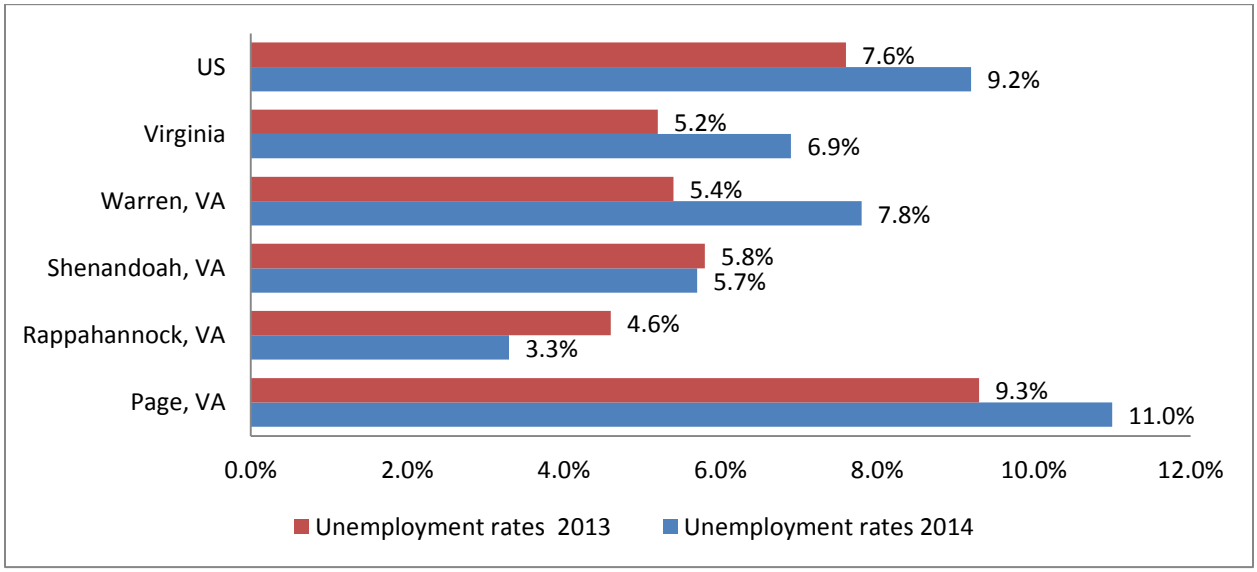


Source: Northern Shenandoah Valley Regional Commission

The highest proportions of households with incomes under $25,000 in 2014 were located in ZIP code 22851 (Stanley) in Page County. (**Exhibit 16**).

3. Unemployment Rates

Exhibit 17: Unemployment Rates, Virginia Counties, 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	Unemployment rates 2013	Unemployment rates 2014
Page, VA	9.3%	11.0%
Rappahannock, VA	4.6%	3.3%
Shenandoah, VA	5.8%	5.7%
Warren, VA	5.4%	7.8%
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

In 2014, Page and Warren Counties reported higher unemployment rates than Virginia (**Exhibit 17**). The unemployment rates for Page and Warren Counties increased between 2013 and 2014.

4. Crime

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

County	Population	Violent crime	Murder and Non negligent manslaughter	Rape (revised definition)[1]	Robbery	Property crime	Burglary	Larceny-theft	Aggravated assault	Motor vehicle theft	Arson
PSA	**13,923**										
Warren	13,923	19	1	9	2	345	112	225	7	8	3
SSA	**90,013**										
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
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**	**~**
Rate per 100,000 inhabitants											

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/5tabledatadecpdf/table_5_crime_in_the_united_states_by_state_2013.xls [6]

*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.

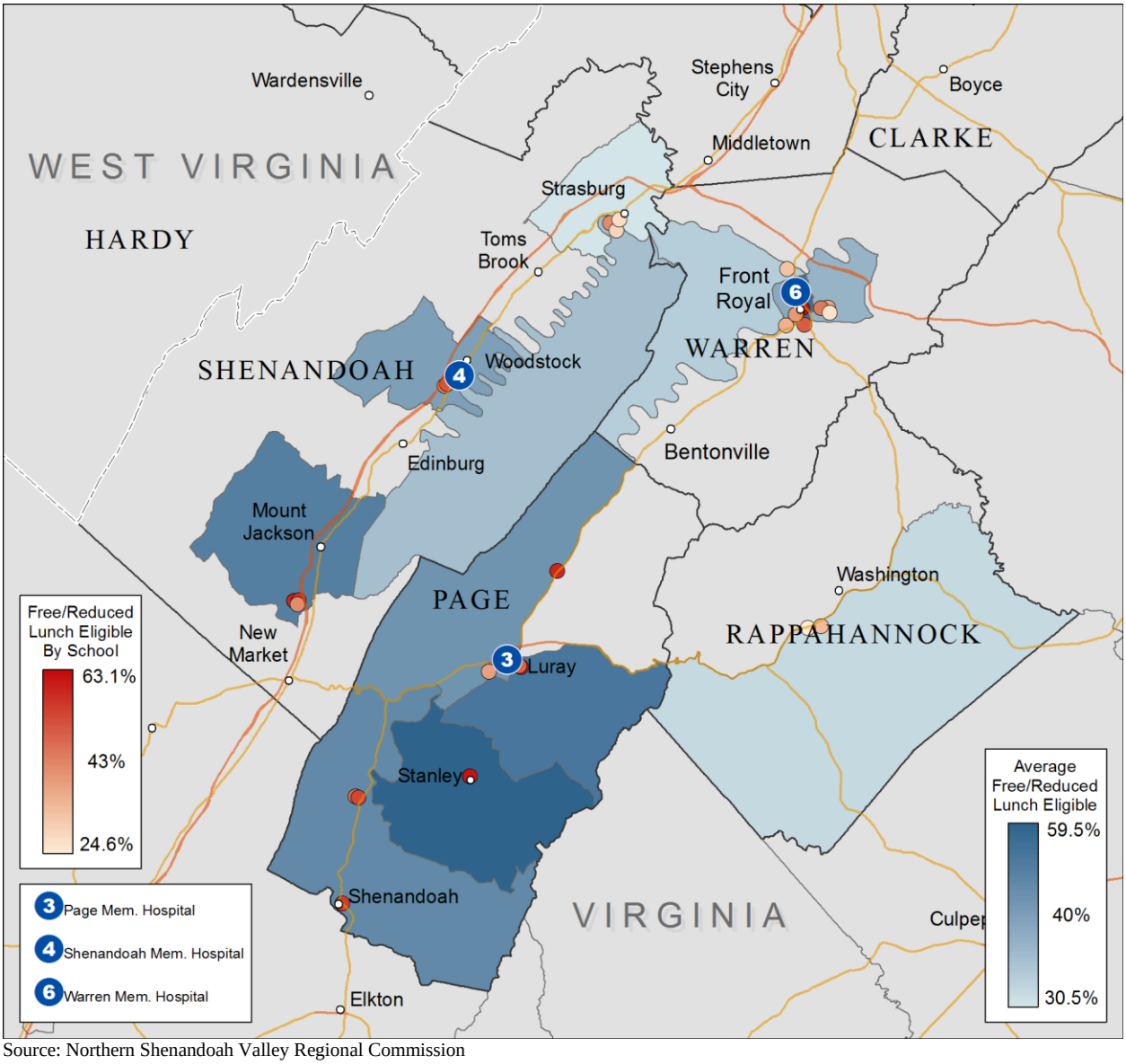
Page, Shenandoah, and Warren Counties had higher number of offenses for property crimes than the Virginia average. Shenandoah and Warren were 75 percent worse than Virginia (**Exhibit 18).**

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 PMH community, there were 28 schools eligible for Title 1 funds (**Exhibit 19**).

Exhibit 20: 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
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%

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

Page County had the highest percentage of students participating in the Free or Reduced Lunch Program (**Exhibit 20**).

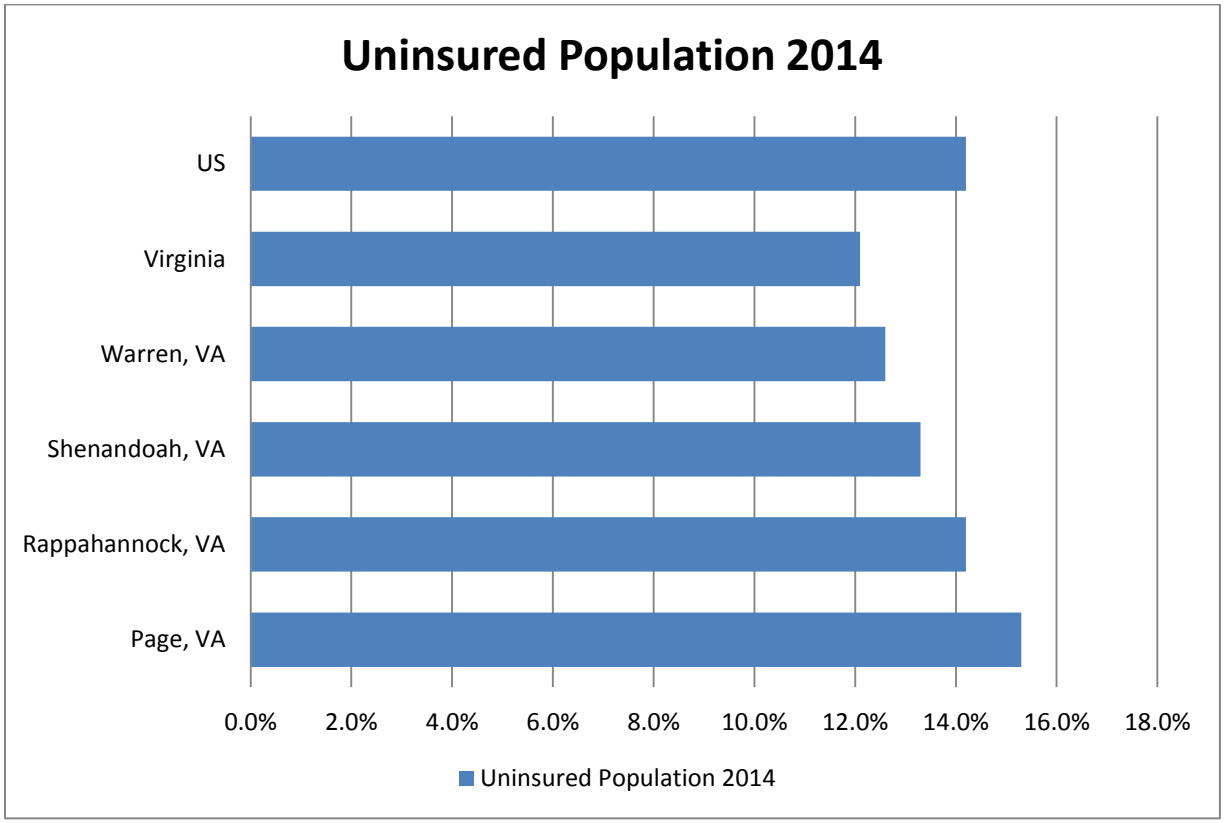
[7] School Year (SY) 2013 Free and Reduced Price eligibility statistics for the National School Lunch Program (NSLP) are provided in this report for all public schools within the divisions that participate in USDA's National School Lunch Program (NSLP).

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.

6. Insurance Status

Exhibit 21: 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 21 demonstrates that all counties within the PMH community have uninsurance rates higher than the Virginia and national averages.

County	Uninsured Population 2014
Page, VA	15.3%
Rappahannock, VA	14.2%
Shenandoah, VA	13.3%
Warren, VA	12.6%
Virginia	**12.1%**
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 PMH community from several sources. The sources of the data are: (1) *County Health Rankings*; (2) Virginia Department of Health; and (3) 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 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 county ranking in each composite category in 2013. Rankings indicate how each county in Virginia ranked compared to the 134 counties in the Commonwealth. A rank of 1 indicates the best County in the state. Indicators are shaded based on the county's percentile for the state or commonwealth ranking.

[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.

Exhibit 22: County Rank among 134 Virginia Counties, 2016

Indicator Category	Page	Rappahannock	Shenandoah	Warren
Health Outcomes	66	13	33	37
Mortality	89	15	34	56
Morbidity	45	16	38	26
Health Factors	101	31	44	57
Health Behaviors (30%)	62	21	23	48
Clinical Care (20%)	125	114	120	110
Social & Economic Factors (40%)	95	28	44	48
Physical Environment (10%)	121	20	74	71

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 form 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

Exhibits 22 and 23 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 22A-C. For example, Page 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 in the PMH community exceeded the national average for that indicator by more than ten percent.

Rappahannock County uninsurance rates were reported at 19 percent, above the Virginia average of 14 percent. Counties in the PMH community frequently ranked in the bottom half for access to care,[11] quality of care,[12] environmental quality[13] and physical environment.[14] Rappahannock, Shenandoah, and Warren Counties ranked in the 50th percentile and above in this 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 23C)**.

[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 23A: County Data Compared to U.S. Average, Virginia Counties, 2016

2016	Page	Rappahannock	Shenandoah	Warren	US Median	Virginia
Health Outcomes						
Premature Death (Years of Potential Life Lost Rate)	8652	4898	6161	7326	7,700	6,147
Poor or Fair Health (Percent Fair/Poor)	16%	13%	14%	13%	16%	17%
Poor Physical Health Days (Physically Unhealthy Days)	3.6	3.1	3.4	3.2	3.7	3.5
Poor Mental Health Days (Mentally Unhealthy Days)	3.5	3.2	3.2	3.1	3.7	3.3
Low Birth Weight (Percent LBW)	6%	6%	7%	7%	8%	8%
Health Behaviors						
Adult Smoking (Percent Smokers)	19%	16%	17%	18%	18%	20%
Adult Obesity (Percent Obese)	30%	26%	26%	28%	31%	27%
Food Environment Index	8.1	7.1	8.6	8.8	7.2	8.3
Physical Inactivity (Percent Physically Inactive)	25%	25%	21%	20%	28%	22%
Access to Exercise Opportunities (Percent with Access)	81%	36%	62%	82%	62%	81%
Excessive Drinking (Percent)	15%	16%	16%	18%	17%	17%
Alcohol-impaired Driving Deaths (Percent)	21%	40%	29%	29%	31%	31%
Sexually Transmitted Infections (Chlamydia Rate)	297	94	146	376	288	407
Teen Births	39	20	38	30	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 23B: County Data Compared to U.S. Average, Virginia Counties, 2016

2016	Page	Rappahannock	Shenandoah	Warren	US Median	Virginia
Clinical Care						
Uninsured (Percent)	17%	19%	17%	19%	17%	14%
Primary Care Physicians (Ratio)	2166:1	2493:1	2134:1	1759:1	1,990:1	1329:1
Dentists (Ratio)	5962:1	3681:1	3309:1	4873:1	2,590:1	1570:1
Mental Health Providers (Ratio)	3975:1	1472:1	2049:1	1114:1	1,060:1	685:1
Preventable Hospital Stays (Rate)	82	55	75	85	60	49
Diabetic Monitoring (% Receiving HbA1c)	88%	90%	85%	90%	85%	87%
Mammography Screening (Percent)	53%	56%	62%	57%	61%	63%
Social and Economic Factors						
High School Graduation (Graduation Rate)	95%	88%	91%	88%	89%	85%
Some College (Completion Rate)	42.3%	67.8%	46.8%	50.2%	56%	69%
Unemployment (Rate)	8.1%	4.7%	5.0%	5.5%	6.0%	5.2%
Children in Poverty (Percent in Poverty)	24%	17%	18%	16%	23%	16%
Income Inequality (Ratio)	4.4	4.7	4.0	4.4	4.4	4.8
Children in single-parent households	36%	10%	32%	29%	32%	30%
Social Associations (Association Rate)	10.5	12	15.7	15	13.0	11.3
Violent Crime (Rate)	103	72	94	102	199	200
Injury Deaths (Rate)	78	73	64	64	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 23C: County Data Compared to U.S. Average, Virginia Counties, 2016

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

Page County's population was exposed to water with a safety violation in the past year. Cells in the tables above are shaded if the indicator for the county in the PMH community exceeded the national average for that indicator by more than 10 percent (**Exhibit 23E**).

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 or health district in the PMH 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 PMH 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, 2013

	Page	Rappahannock	Shenandoah	Warren	Virginia	US
Total Deaths All Ages	**273**	**70**	**457**	**330**	**62,309**	**2,596,993**
Total Deaths Rate	**829**	**622.1**	**721.2**	**799.1**	**720.1**	**821.5**
Malignant Neoplasms (Cancer) Rate	185	173.9	178.7	190.1	**161.3**	**185.0**
Diseases of Heart Rate	172.7	140.8	135.8	188.7	**155.9**	**193.3**
Cerebrovascular Disease Rate	45.5	31	38.9	34.6	**38.5**	**40.8**
Chronic Lower Respiratory Disease Rate	42.3	42.1	45.7	50.7	**37.2**	**47.2**
Unintentional Injury Rate	55	30.1	42.4	41.6	**33**	**41.3**
Alzheimer's Disease Rate	46	19.7	13.2	8	**19.6**	**26.8**
Diabetes Mellitus Rate	10.1	9.9	20.7	10.9	**18.3**	**23.9**
Nephritis and Nephrosis Rate	14.4	8.6	14.4	17	**18**	**14.9**
Septicemia Rate	16.8	0	18.7	18.1	**17.7**	**12.1**
Influenza and Pneumonia Rate	31.1	8.6	23.7	12.5	**16.8**	**18.0**
Suicide Rate	16	0	14.2	17.5	**12.2**	**13.0**
Chronic Liver Disease Rate	11.8	0	12.5	5.3	**8.9**	**11.5**
Primary Hypertension & Renal Disease Rate	10.6	0	6.8	9.2	**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.

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

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 influenza and pneumonia was greater than the Commonwealth average for two of the four counties for which there was reliable data. Chronic lower respiratory disease was greater than the Commonwealth average for all for counties. (**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
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%
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. Page County compared unfavorably with cerebro-vascular rates in the category of 25% 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
Page	55	0.06	16
Rappahannock	30.1	~	~
Shenandoah	42.4	0.21	14.2
Warren	41.6	0.21	17.5
Lord Fairfax	**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, Shenandoah, and Warren County 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**).

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

Health District, 2013	Alzheimer's Disease	Diabetes Mellitus	Influenza and Pneumonia	Chronic Liver Disease
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
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. Shenandoah County residents showed mortality rates higher in diabetes mellitus, influenza and pneumonia, and chronic liver disease than Virginia's state average (**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 District (Includes Clarke, Frederick, Page, Rappahannock, Shenandoah, Warren, Winchester city)						
White	189.8	14.4	58	26.2	-	20.4
Black	236.4	-	82	-	-	-
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**	**1.9**	**22.4**
Virginia						
White	168.2	14.0	48.8	21.3	1.7	18.9
Black	203.7	20.8	51	31.5	2.9	46
Total (All Races)	171.2	14.9	48	22.7	1.9	22

Source: Virginia Department of Health, 2012. Rates were calculated by VHS, are per 100,000 population, and are age-adjusted[15].

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. (**Exhibit 29**).

[15] Number of cases 5 or less not reported due to confidentiality issues.

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

Cancer Incidence	Page	Rappahannock	Shenandoah	Warren	Virginia	US
All Cancers	430.1	401.1	407.6	428.2	**429.1**	**453.8**
Breast (Female)	108.2	137.8	126.4	115.4	**124.6**	**123**
Colorectal	34.7	37.1	27.2	41.9	**38.3**	**41.9**
Lung	67.2	57.8	67.2	76.1	**63.6**	**63.7**
Melanoma	21.4	~	13.1	13.1	**18.3**	**19.9**
Oral	11.7	~	11.8	13.5	**10.4**	**11.3**
Ovarian	~	~	~	14.9	**11.8**	**11.8**
Prostate	78.2	91.9	101.3	86.2	**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	

Three of the four counties had higher incident rates for oral cancer than the Virginia average. Page, Rappahannock, and Warren Counties had rates of some cancers significantly worse than the Virginia average. (**Exhibit 30**).

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

Health District / County	Chlamydia	Gonorrhea	Lyme Disease
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
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 exceeded the Virginia average. Lyme disease rates reported for Page, Rappahannock, and Warren Counties were 75 % higher than the state rate (**Exhibit 31**).

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

2014	Page	Rappahannock	Shenandoah	Warren	Virginia	West Virginia
Low birth weight infants	6.4	10.6	6.8	6.3	**8.0**	**9.5**
Very low birth weight infants	~	0.0	1.3	1.3	**1.6**	**N/A**
Teen pregnancy rate 10-19	20.5	2.4	18.7	18.2	**14.4**	**48.8**
No prenatal care in first trimester	28.4	17.0	16.4	21.4	**17.1**	~
Infant mortality rate	0	~	4.4	2.1	**6.2**	**7.6**

Sources: Virginia Department of Health, 2014.
*Rates per 1,000 females aged 15-19 were calculated by Valley Health 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 Warren Counties reported rates of no prenatal care in the first trimester higher than the Virginia average. Shenandoah, and Warren Counties 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. 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 33 compares various BRFSS indicators for Page, 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 Rappahannock County was unavailable due to small sample size.

Exhibit 33: BRFSS Indicators and Variation from the Commonwealth of Virginia*, 2013

Indicator		Page	Rappahannock	Shenandoah	Warren	VA
Health Behaviors	Binge drinkers**2006-2012	12.4%	DSU	12.6%	12.9%	**14.4%**
	Excessive drinkers*** 2006-2012	14.2%	DSU	14.8%	13.6%	**15.9%**
	Current smoker 2006-2012	2	DSU	20.6%	24.3%	**17.5%**
	No physical activity in past 30 days 2006-2012	28.2%	DSU	25.3%	14.4%	**22.2%**
Access	Unable to visit doctor due to cost 2006-2012	DSU	DSU	11.4%	14.3%	**11.5%**
	Rate of primary care providers (PCP) per 100,000, 2013[16]	42	40.1	49.2	64.6	**93.9**
	Do not have health care coverage under 65, 2013	16.9%	19.4	16.7%	15.7%	**14.0%**
Health Conditions	Overweight or obese	39.2%	DSU	27.4%	35.0%	**27.0%**
	Told have diabetes 2006-2012	DSU	DSU	11.4%	11.9%	**8.6%**
Mental Health	* Poor mental health > number of days/month	3.5	DSU	2.8	4.0	**3.1**
Overall Health	** Poor physical health > number of days/month	3.9	DSU	3.4	3.5	**3.3**
	Social-emotional support lacking: Adults (percent), 2006-2012[17]	17.3%	DSU	22.6%	21.0%	**18.4%**
	Reported poor or fair health 2006-2012	19.5%	DSU	14.0%	14.7%	**13.8%**

Source: CDC BRFSS, 2013. *Data for Page and Rappahannock Counties 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 Counties compared most unfavorably (eight indicators) worse than the Virginia average. Shenandoah and Warren Counties reported high percentages of residents who don't have health insurance, are overweight or obese, have been told they

[16]Reporting indicator source has changed than what was previously reported in 2013.
[17]Reporting indicator source has changed than what was previously reported in 2013.

have diabetes, and smoke. Page, Shenandoah and Warren Counties reported poor or fair health condition higher than the Virginia average (**Exhibit 33**).

Ambulatory Care Sensitive Conditions

This section examines the frequency of discharges for Ambulatory Care Sensitive Conditions (ACSC) throughout the counties in PMH'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."[18] 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.

[18] 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-Level Analysis

Exhibit 34: Discharges for ACSC by County and Payer[19], 2015

County	Blue Cross	Medicaid	Medicare	Other	Commercial	Self	Total IP ACSC Discharges	Total ACSC Discharges
PSA	**231**	**144**	**1,003**	**4**	**157**	**166**	**1,705**	**21,737**
Page, VA	29	33	233	1	20	30	346	11,777
Rappahannock, VA	17	5	60	-	8	8	98	815
SSA	**318**	**196**	**1,785**	**3**	**184**	**185**	**2,671**	**34,643**
Shenandoah, VA	272	158	1,492	2	156	147	2,227	22,051
Warren, VA	231	144	1,003	4	157	166	1,705	21,737
Total PSA and SSA	**549**	**340**	**2,788**	**7**	**341**	**351**	**4,376**	**56,380**

Source: Valley Health System, 2015 Inpatient Data.

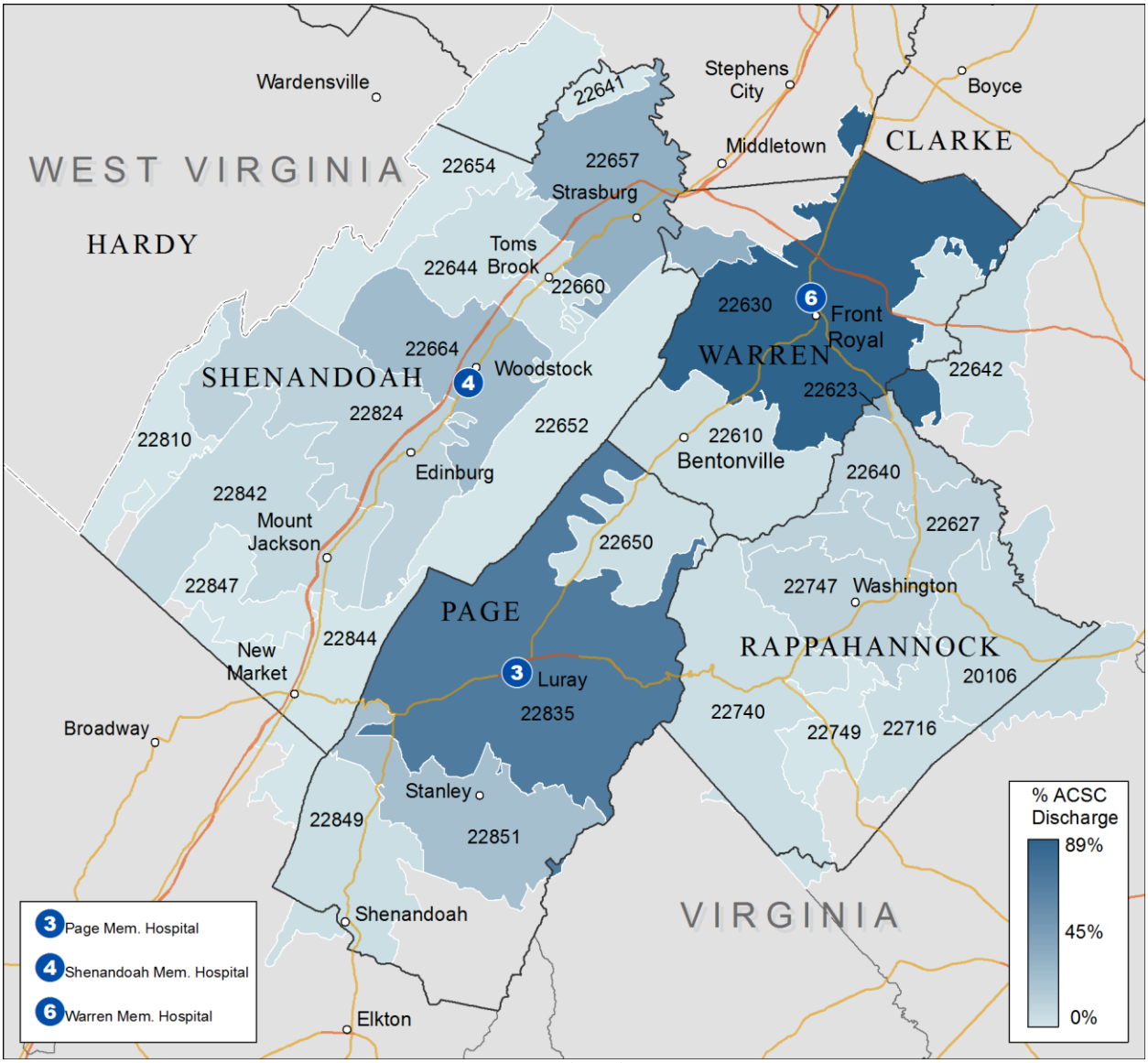
	Blue Cross	Medicaid	Medicare	Other	Commercial	Self	Total IP ACSC Discharges
PSA	**10.4%**	**8.6%**	**66.0%**	**0.2%**	**6.3%**	**8.6%**	**3.5%**
Page, VA	8.4%	9.5%	67.3%	0.3%	5.8%	8.7%	2.9%
Rappahannock, VA	17.3%	5.1%	61.2%	0.0%	8.2%	8.2%	12.0%
SSA	**12.8%**	**7.7%**	**63.5%**	**0.2%**	**8.0%**	**8.0%**	**9.0%**
Shenandoah, VA	12.2%	7.1%	67.0%	0.1%	7.0%	6.6%	10.1%
Warren, VA	13.5%	8.4%	58.8%	0.2%	9.2%	9.7%	7.8%
Total	**12.5%**	**7.8%**	**63.7%**	**0.2%**	**7.8%**	**8.0%**	**7.8%**

The table indicates that 7.8 percent of the PMH community'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 16.7 percent in 2013 to 8.0 percent for ACSCs (**Exhibit 34**).

[19] Discharges from all Valley Health System hospitals.

2. ZIP Code-Level Analysis

Exhibit 35: Inpatient Discharges[20] for ACSC by County 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 ACSCs was highest in the following ZIP codes: 22630 in Warren County (Front Royal, 90.1%), 22835 in Page County (Luray, 64.29%) (**Exhibit 35**).

[20] Discharges are from all Valley Health hospitals.

3. Hospital-Level Analysis

Exhibit 36: 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 36**).

Exhibit 37: Discharges for ACSC by Condition and Age, Page Memorial Hospital, 2015

Condition	18 to 39	40 to 64	65 +	Total
*Heart failure	0	0	3	3
**Pneumonia	0	4	12	16
***Asthma	0	3	1	4
Urinary tract infection	0	1	2	3
****Diabetes	1	0	3	4
Dehydration	0	1	3	4
*****Hypertension	0	0	0	0
Angina	0	0	0	0
Appendix	0	0	0	0
Total	**1**	**9**	**24**	**34**
Percentage Total	**2.9%**	**26.5%**	**70.6%**	**100.0%**

Source: Valley Health System, 2015 Inpatient Data[21].

The top four ACSC conditions at PMH were: bacterial pneumonia, asthma, diabetes, and dehydration. Bacterial pneumonia in older adults and 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 37**).

[21] 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

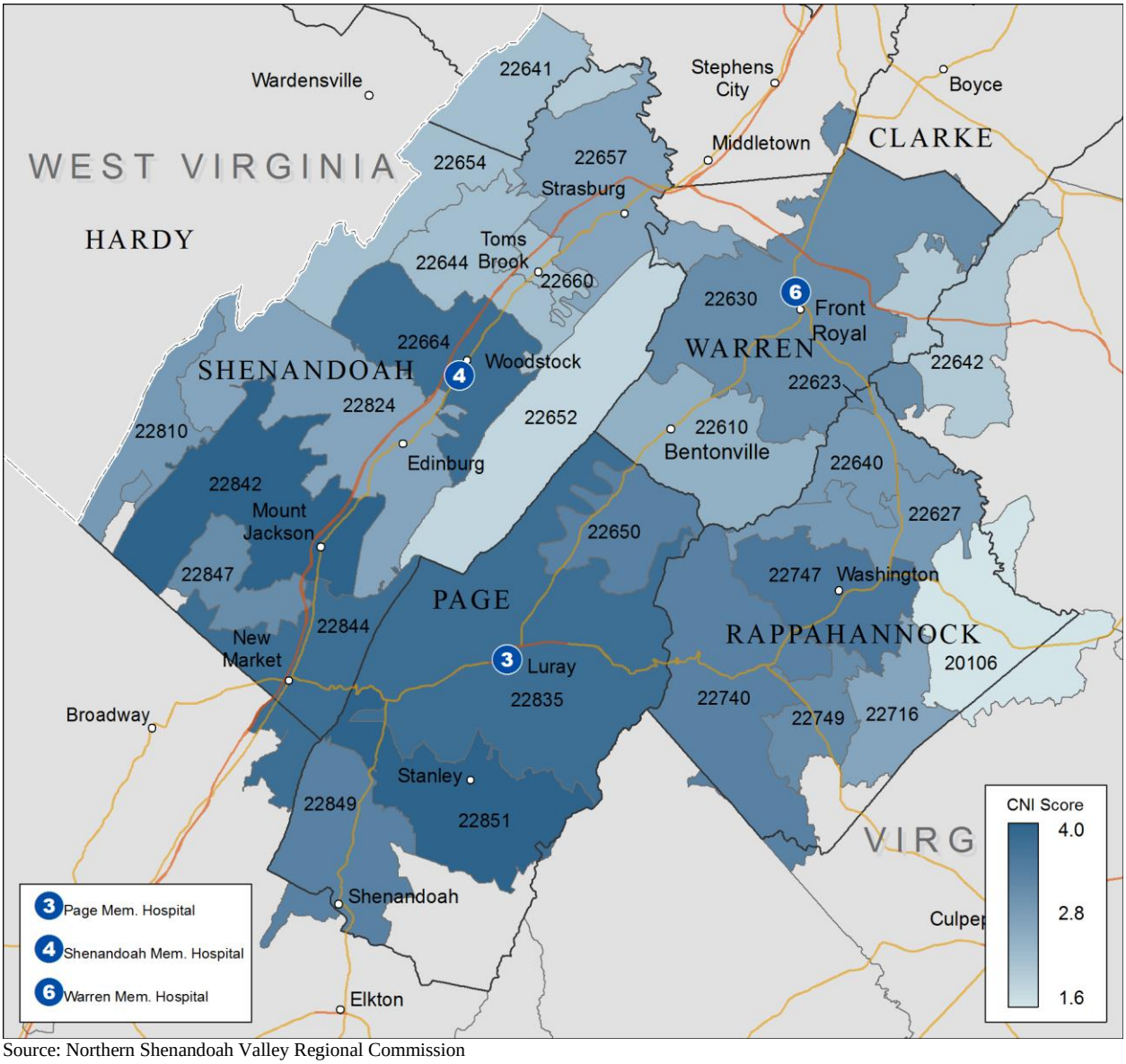
Dignity Health, a California-based hospital system, developed and has made widely available for public use a *Community Need Index*™ that measures barriers to health care access by County and ZIP code.[22] The index is based on five social and economic indicators:

- 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 housing.

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).

[22] Accessed online at http://cni.chw-interactive.org/ on June 28, 2013.

Exhibit 38: Community Need Index™ Score by County and ZIP Code



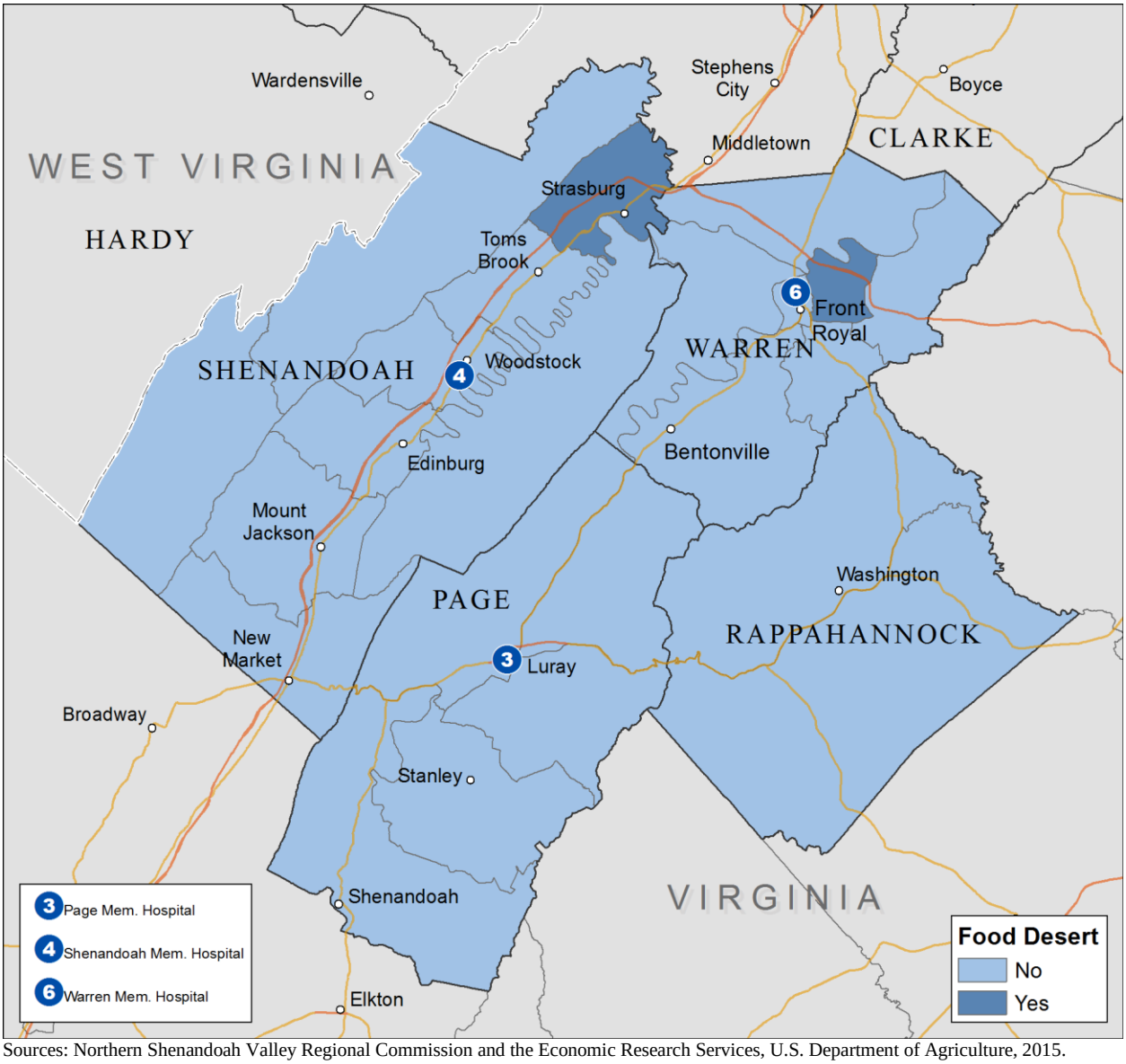
Source: Northern Shenandoah Valley Regional Commission

ZIP codes 22851, (Stanley, Page County), and 22842 (Mount Jackson, Shenandoah County) scored just under the "Highest Need" category (ranges from 4.2 – 5.0) (**Exhibit 38**). Areas of middle to high need are located in substantial parts of Page, Rappahannock, Shenandoah, 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 39** illustrates the location of food deserts in the PMH community.

Exhibit 39: Food Deserts by Census Tract



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

PMH's community contains 4 census tracts identified as food deserts. There are three census tracts designated as food deserts for Warren County, and one designation for Shenandoah, County (**Exhibit 39**).

Overview of the Health and Social Services Landscape

This section identifies geographic areas and populations in the PMH 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.

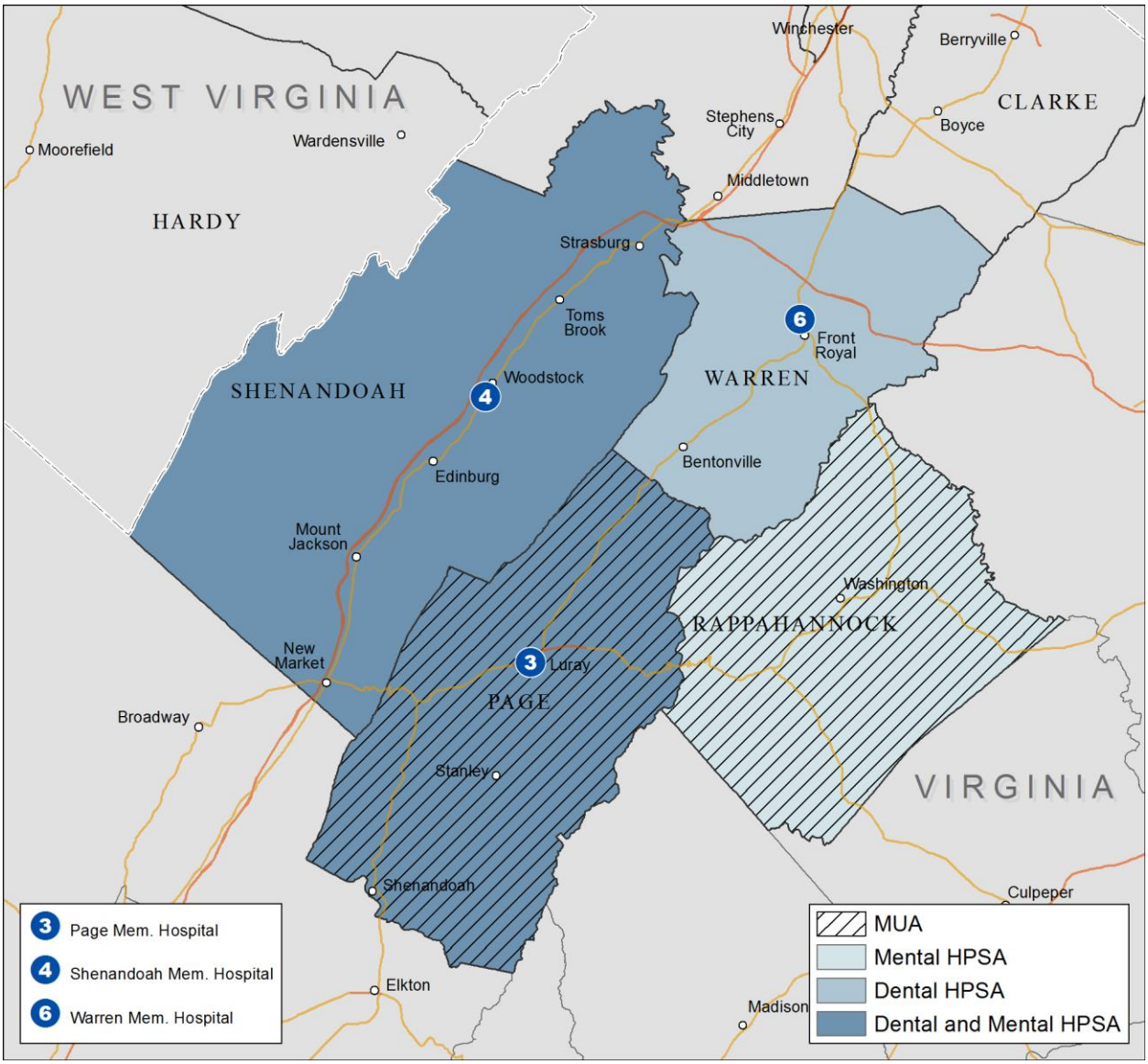
1. Medically Underserved Areas and Populations

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.[23]

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."[24]

[23] 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/muaps/index.html.
[24] *Ibid*.

Exhibit 40: Medically Underserved Areas and Populations and Health Professional Shortage Areas, 2016



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

Exhibit 40 shows areas designated by HRSA as medically underserved for mental and dental professionals.

Exhibit 41: Medically Underserved Areas and Populations and Health Professional Shortage Areas, 2016

Name	HPSA Dental	HPSA Mental	HPSA Primary	MUA or MUP
Page	Yes	Yes	No	Yes
Rappahannock	No	Yes	No	Yes
Shenandoah	Yes	Yes	No	No
Warren	Yes	No	No	No

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

The PMH Community contains two MUAs located in Rappahannock and Page Counties (**Exhibit 41**).

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 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."[25]

Areas and populations in the PMH community are designated as HPSAs (**Exhibit 40)**. Page County reported shortages in two categories (dental services and mental health services), and have been designated as Medically Underserved Area and a Medically Underserved Population (**Exhibit 41**). Shenandoah County reported shortages for dental services, and mental health services, whereas, Warren County reported shortages in dental services only. Rappahannock reported shortages for mental health services.

[25] 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

Exhibit 42: List of Hospitals in the PMH Community

County	Hospital Name
PSA	
Warren, VA	Warren Memorial Hospital
SSA	
Page, VA	Page Memorial Hospital
Shenandoah, VA	Shenandoah Memorial Hospital

Source: Centers for Medicare & Medicaid Services, 2016.

The PMH community contains one acute care hospital and two critical care access hospital facilities (**Exhibit 42**).

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 43: Health Professionals Rates per 100,000 Population by County

Page Memorial Hospital County	Primary Care Physicians		Dentists		Mental Health Providers	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
PSA	**14**	**45.1**	**6**	**19.3**	**11**	**35.5**
Page	11	46.2	4	16.8	6	25.0
Rappahannock	3	40.1	2	27.2	5	68.0
SSA	**42**	**51.8**	**21**	**25.9**	**56**	**69.1**
Shenandoah	20	46.9	13	30.2	21	49.0
Warren	22	56.8	8	20.5	35	90.0
Virginia	**6,216**	**75.3**	**5,303**	**63.7**	**12,162**	**146.1**

Source: Data provided by County Health Rankings, 2016.

Primary care physician availability is below the Virginia average in all areas. (**Exhibit 43**).

A number of other agencies and organizations are available in each county in the PMH community to assist in meeting health needs. In addition to the organizations listed below, see **Exhibits 61** through **64** 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
  - Blue Ridge Opportunities
  - Deaf and Hard of Hearing Services Center, Inc.
  - Disability Law Center of Virginia
  - Goodwill Resource Center
  - Grafton Integrated Health Network
  - 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 (Page, Rappahannock, Shenandoah, and Warren Counties)
    - The Laurel Center Intervention for Domestic & Sexual Violence
    - People Incorporated of Virginia (Woodstock, VA)
    - Response, Inc. (Woodstock, VA)
- Community organizations that provide free or reduced cost health care:
    - Concern Hotline
    - Shenandoah Community Health Clinic / Shenandoah Community Dental Clinic
    - St. Luke Community Clinic
- Community organizations that provide housing support or shelter for homeless residents:
    - House of Hope (Front Royal, VA)
    - Warren Union Rescue Mission
- Community organizations that provide hunger reduction services:
    - C-CAP Front Royal, VA
    - Compassion Cupboard
    - Highland Food Pantry
    - Loaves and Fishes Food Pantry (Warren County)
    - Lord Fairfax Area Food Bank
    - Open Door Food Pantry (Mount Jackson, VA)
    - The Salvation Army
        - Front Royal/Warren County
    - Warren Rescue Mission
- Community organizations that provide family planning and maternal / child health services:
    - Abba Care
    - Shenandoah County Pregnancy Center
- Community organizations that provide services for at-risk children / families:
    - 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 (Warren County)
- Local HPSA facilities (**Exhibit 41**)
- 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 PMH area are referenced here, with highlights and summary points below.

1. Coors Healthcare Solutions, 2016

Coors Healthcare Solutions produced a "Physician Strategy Assessment"[26] 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 from the U.S. Census and Medical Group Management Association (MGMA) was used.

Key findings relevant to this CHNA include:

- Page County is federally designated as an underserved area.
- 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.

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.

[26] 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 2 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 16 percent to 14 percent for Shenandoah County, and 15 percent to 13 percent for Warren County. Page Countys remained constant at 18 percent when compared to 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.

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 maintain 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,"[27] 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 abuse.

[27] 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,"[28] 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, 10th, and 12th graders had a higher rate of prescription drug abuse than the national averages.

7. Warren Coalition, 2014-2015

The Warren Coalition conducted a survey, the "Warren County Student Pride Survey,"[29] 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 usage than the national average.
- Warren County 8th, 10th, and 12th had lower rates of ecstasy, meth, and OTC drug abuse than the national averages.

8. Lord Fairfax Health District, 2014

The Lord Fairfax Health District completed a "2014 Language Needs Assessment"[30] that analyzed the limited English proficiency of the counties in the Lord Fairfax Health District,

[28] Shenandoah Coalition. (2013-2014). Shenandoah County Student Pride Survey Results.
[29] Warren Coalition. (2014-2015). Warren County Student Pride Survey Results.
[30] Lord Fairfax Health District. (2014). *2014 Language Needs Assessment.* Retrieved 2013, from: http://www.vdh.virginia.gov/CLAS_Act/researchresources/documents/languageprofiles/LordFairfax.pdf

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.

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 81percent of LEP individuals was Spanish.
- There has been a 61 percent increase in the use of educational services for LEP 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.

PRIMARY DATA ASSESSMENT

Community Survey Findings

PMH'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 739 residents from the PMH community. Survey responses were received from residents of 26 of the PMH community's 31 ZIP codes.

From the PMH community, 79.7 percent of the English respondents were female, and 59.0 percent of the English respondents were between the ages of 35 and 64. Ninety-three percent were white, and 6.7 percent identified as Hispanic or Latino. The majority of respondents reported being in good or very good overall health, married (63.3 percent), employed full time (55.8 percent), privately insured (63.8 percent), and having an undergraduate degree or higher (48.6 percent). The majority (97.7 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 44: Survey Respondents by County, 2016

County	Number of Respondents	Percent of Respondents	Percent of Total Population by County
PSA	**273**	**36.5%**	**27.7%**
Page, VA	244	32.6%	21.2%
Rappahannock, VA	29	3.9%	6.5%
SSA	**475**	**63.5%**	**72.3%**
Shenandoah, VA	390	52.1%	37.7%
Warren, VA	85	11.4%	34.6%
Totals:	**748**	**100.0%**	**100.0%**

Source: Valley Health Community Survey, 2016.

From the PMH community, Shenandoah County had the highest percentage of respondents. Residents from the Secondary Service Areas (SSA) accounted for 63.5 percent of the total surveys collected. (**Exhibit 44**).

Exhibit 45: Survey Respondents by Age, 2016

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
15 – 24	2.8%	21	20.0%	3
25 – 34	12.4%	92	46.7%	7
35 – 44	16.8%	124	26.7%	4
45 – 54	22.3%	165	6.7%	1
55 – 64	19.9%	147	0.0%	0
65 – 74	12.3%	91	0.0%	0
75+	13.4%	99	0.0%	0
Answered Questions		**739**	**100**	**15**

Source: Valley Health Community Survey, 2016.

The highest percentage of English survey respondents were aged 45-55 and 55-64. The highest percentage of Spanish survey respondents were 35-44 years of age. Approximately 13.4 percent of total respondents were 75+ years old (**Exhibit 45**).

Exhibit 46: Survey Respondents by Sex, 2016

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Female	79.7%	589	33.3%	5
Male	20.3%	150	66.7%	10
Answered Questions		**739**	**100.00**	**15**

Source: Valley Health Community Survey, 2016.

The highest percent of English surveys received were from female population at 79.7 percent. The highest percent (66.7) of completed Spanish surveys was from the male population (**Exhibit 46**).

Exhibit 47: Survey Respondents by Ethnicity, 2016

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
White	93.9%	694	6.7%	1
Black or African American	1.1%	8	0.0%	0
Hispanic or Latino	1,1%	8	86.7%	13
American Indian and Alaska Native	0.1%	1	0.0%	0
Asian	0.4%	3	0.0%	0
Hawaiian Native and other Pacific Islander	-	-	0.0%	0
Some other race	0.1%	1	0.0%	0
Two or more races	1.9%	14	0.0%	0
Other (please specify)	1.4%	10	6.7%	1
Answered Questions		**739**	**100.0%**	**15**

Source: Valley Health Community Survey, 2016.

The highest percent of English surveys received were from the White population at 93.9 percent (**Exhibit 47**).

Exhibit 48: Survey Respondents by Marital Status, 2016

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Married/co-habiting	63.3%	468	66.7%	10
Not married/single	12.2%	90	33.3%	5
Divorced	13.5%	100	0.0%	0
Widowed	7.4%%	55	0.0%	0
Answered Questions		**739**	**100.0%**	**15**

Source: Valley Health Community Survey, 2016.

A majority of the surveys received were from married or co-habiting families (**Exhibit 48**).

Exhibit 49: Survey Respondents by Education Attainment, 2016

Answer Options	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Did not complete high school	8.1%	60	53.3%	8
High school diploma or GED	21.0%	155	26.7%	4
Some college	19.7%	148	13.3%	2
College degree or higher	48.6%	359	0.0%	0
Other (please specify)	2.3%	17	6.7%	1
Answered Questions		**739**	**100.0%**	**15**

Source: Valley Health Community Survey, 2016.

Most of the English surveys received were from individuals with a college degree or high school diploma. The Spanish surveys reported 53.3 percent of the respondents did not complete high school and 26.7 percent of respondents had a high school diploma or GED (**Exhibit 49**).

Exhibit 50: Survey Respondents by Income, 2016

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Less than $15,000	10.4%	77	46.7%	7
$15,000 - $24,999	13.3%	98	20.0%	3
$25,000 - $34,999	10.6%	78	26.7%	4
$35,000 - $49,000	13.7%	101	6.7%	1
$50,000 - $74,999	21.4%	158	0.0%	0
$75,000 - $99,999	16.0%	118	0.0%	0
Over $100,000	14.7%	109	0.0%	0
Answered Questions		**739**	**100.0%**	**15**

Source: Valley Health Community Survey, 2016.

Individuals from all income levels were represented in the survey results. The highest percentage of English survey respondents indicated an income between $50,000 – $74,999 at 21.4 percent. Spanish survey respondents showed that 46.7 percent had income levels were less than $15,000 (**Exhibit 50**).

Exhibit 51: Survey Respondents by Employment Status, 2016

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Full time	55.8%	412	80.0%	12
Part time (one job)	6.5%	48	0.0%	0
Part time (more than one job)	1.8%	13	0.0%	0
Retired	23.0%	170	0.0%	0
Student	1.2%	9	0.0%	0
Unemployed	4.7%	35	20.0%	3
Other (please specify)	7.0%	52	0.0%	0
Answered Questions		**739**	**100.0%**	**15**

Source: Valley Health Community Survey, 2016.

Of the English survey respondents, 55.8 percent reported that they had a full-time job, whereas, 80 percent of Spanish survey respondents reported having a full-time job (**Exhibit 51**).

Exhibit 52: Language Spoken in Home, 2016

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
English	97.7%	722	0.0%	0
Spanish	0.8%	6	100.0%	15
German	0	0	0.0%	0
French	0.1%	1	0.0%	0
Chinese	0.3%	2	0.0%	0
Vietnamese	0.1%	1	0.0%	0
Other (please specify)	0.9%%	7	0.0%	0
Answered Questions		**739**	**100.0%**	**15**

Source: Valley Health Community Survey, 2016.

English and Spanish are the languages most frequently spoken in home (**Exhibit 52**).

Exhibit 53: Where and How Did You Receive Survey? 2016

Answer Options	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Church	0.3%	2	13.3%	2
Community Event or Meeting	4.1%	30	6.7%	1
Grocery store or Shopping mall	0.4%	3	0.0%	0
Mail	20.4%	151	0.0%	0
Newspaper	0.1%	1	0.0%	0
Personal Contact	5.1%	38	0.0%	0
Social Media (Facebook)	3.1%	23	0.0%	0
Workplace	32.9%	243	0.0%	0
Other (please specify)	33.6%	248	80.0%	12
Answered Questions		**739**	**100.0%**	**15**

Source: Valley Health Community Survey, 2016.

Community responses were collected from various venues throughout the region. The direct mail campaign response rate for respondents was 20.4 percent. The greatest number of Spanish surveys came from Lord Fairfax Community College at 63.0 percent while the highest percent of English surveys came from the direct mail campaign. (**Exhibit 53**).

2. Access Issues

The majority of survey respondents reported visiting a primary care provider regularly. Seventeen percent reported they only seek medical care when they or a family member is ill, injured, sick, or not feeling well. Eight percent of respondents reported not having a primary care provider.

Exhibit 54: 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	4.2%	41	46.7%	7
Urgent care facility or store-based walk-in clinic	10.8%	106	6.7%	1
Hospital Emergency Room	11.2%	110	6.7%	1
Provider of alternative medicine	6.0%	59	6.7%	1
Private medical professional (MD, APN, PA)	63.8%	627	26.7%	4
No routine medical care received	2.3%	23	6.7%	1
Other (please specify)	1.7%	17	0.0%	0
Answered Questions		**983**	**100.0%**	**15**

Source: Valley Health Community Survey, 2016.

Exhibit 54 shows that 63.8 percent of families received routine (non-emergency, non-specialty) healthcare services from a private doctor's office and 10.8 percent received routine care from an urgent care facility or store-based walk in clinic. Approximately 11.2 percent received services from a hospital emergency room, while 4.2 percent receive care from a free or low-cost clinic or health center. The Spanish survey showed 46.7 percent of respondents use a free or low-cost clinic or health center for routine care while 6.7 percent use the emergency room for routine healthcare.

Exhibit 55: How do you pay for Healthcare?

Response	Response Percent	Response Count	Response Percent	Response Count
Cash (no insurance)	8.2%	80	27.8%	5
Private health insurance (for example: Anthem, Blue Cross, HMO)	59.9%	585	50.0%	9
Medicare	20.1%	196	11.1%	2
Medicaid	5.2%	51	11.1%	2
Veterans' Administration	1.3%	13	0.0%	0
Other (please specify)		52	0.0%	0
Answered Questions		**977**	**100.0%**	**18**

Source: Valley Health Community Survey, 2016.

Exhibit 55 shows that 59.9 percent of people surveyed have private health insurance coverage and 20.1 percent have Medicare coverage. The Spanish survey showed 27.8 percent of the population paid cash for their healthcare while 50.0 percent had private insurance.

Exhibit 56A: Respondent Ability to Receive Needed Care, by Type of Care (English)

Response	Always	Sometimes	Rarely	Never	N/A	Response Count
Basic medical care	637	77	15	3	4	736
Dental care	523	97	60	24	16	720
Mental health care	307	75	37	47	238	704
Medical specialty care	448	121	40	21	78	708
Medicine and medical supplies	565	86	21	10	34	716
Routine screenings (mammograms, laboratory testing, age/gender appropriate screenings)	572	85	30	21	14	722

Source: Valley Health Community Survey, 2016.

Response	Always	Sometimes	Rarely	Never	N/A
Basic medical care	86.5%	10.5%	2.0%	0.4%	0.5%
Dental care	72.6%	13.5%	8.3%	3.3%	2.2%
Mental health care	43.6%	10.7%	5.3%	6.7%	33.8%
Medical specialty care	63.3%	17.1%	5.6%	3.0%	11.0%
Medicine and medical supplies	78.9%	12.0%	2.9%	1.4%	4.7%
Routine screenings (mammograms, laboratory testing, age/gender appropriate screenings)	79.2%	11.8%	4.2%	2.9%	1.9%

Source: Valley Health Community Survey, 2016.

Exhibit 56A suggests that most English survey respondents in the PMH community felt that they did not "always" receive needed mental health care. The majority of respondents indicated that they always received primary care, dental care, medical specialty care, medicine and medical supplies, and routine screenings. Of the community surveyed, 79.2 percent reported that they have had their routine screenings.

Exhibit 56B: Respondent Ability to Receive Needed Care, by Type of Care (Spanish)

Response	Always	Sometimes	Rarely	Never	N/A	Response Count
Basic medical care	6	5	1	1	6	13
Dental care	6	4	2	1	6	13
Mental health care	2	1	3	4	2	10
Medical specialty care	2	0	3	5	2	10
Medicine and medical supplies	3	4	3	1	3	11
Routine screenings (mammograms, laboratory testing, age/gender appropriate screenings)	4	5	3	1	4	13

Source: Valley Health Community Survey, 2016.

Response	Always	Sometimes	Rarely	Never	N/A
Basic medical care	46.2%	38.5%	7.7%	7.7%	46.2%
Dental care	46.2%	30.8%	15.4%	7.7%	46.2%
Mental health care	20.0%	10.0%	30.0%	40.0%	20.0%
Medical specialty care	20.0%	0.0%	30.0%	50.0%	20.0%
Medicine and medical supplies	27.3%	36.4%	27.3%	9.1%	27.3%
Routine screenings (mammograms, laboratory testing, age/gender appropriate screenings)	30.8%	38.5%	23.1%	7.7%	30.8%

Source: Valley Health Community Survey, 2016.

Exhibit 56B suggests that most Spanish survey respondents in the PMH community felt that they did not "always" receive basic medical care, dental care, needed mental health care or medical specialty care. Only 46.2 percent of Spanish survey respondents indicated that they always receive basic medical care. Of the community surveyed, 30.8 percent reported that they have had their routine screenings.

Exhibit 57A: 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	35	24	44	15	7	4	0	18
Dental care	69	9	95	12	7	6	0	16
Mental health care	27	25	95	12	4	21	0	31
Medical specialty care	30	28	66	14	6	8	0	28
Medicine and medical supplies	33	5	58	5	4	2	1	18
Routine screenings (mammograms, laboratory testing, age/gender appropriate screenings)	38	12	54	5	5	6	2	18

Source: Valley Health Community Survey, 2016.

Key	
Top two barriers by care type	

Cost and lack of insurance were barriers to care most frequently reported by English survey respondents. 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 57A**).

Exhibit 57B: 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	0	0	4	0	0	0	0	0
Dental care	0	0	0	0	0	0	0	0
Mental health care	0	0	6	0	0	0	0	0
Medical specialty care	1	0	0	0	0	0	0	1
Medicine and medical supplies	7	0	1	0	0	0	0	7
Routine screenings (mammograms, laboratory testing, age/gender appropriate screenings)	3	0	3	0	0	0	0	3

Source: Valley Health Community Survey, 2016.

Key	
Top two barriers by care type	

Cost and lack of insurance were reported barriers to care most frequently reported by Spanish survey respondents. 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 57B**).

3. Health Issues

Exhibit 58A: Most Important Health Issues Identified (English)

Response	Response Percent	Response Count
Access to healthy food is limited	4.4%	98
Asthma	0.8%	17
Alzheimer's or dementia	2.3%	52
Affordable housing	3.0%	68
Cancer	11.1%	248
Chronic Obstructive Pulmonary Disease (COPD)	0.9%	21
Dental Health	2.2%	49
Diabetes	5.8%	129
Domestic Violence	2.4%	46
Heart disease and stroke	5.6%	124
Homelessness	1.4%	32
High blood pressure	3.0%	66
Low income/financial challenges	13.2%	294
Mental health (such as depression, bipolar, autism)	8.8%	196
Motor vehicle crash injuries	0.4%	9
Not enough exercise	5.6%	125
Poor air quality	0.5%	12
Poor dietary choices	7.1%	158
Respiratory/lung disease	0.9%	20
Sexually Transmitted Diseases (STDs)	0.7%	15
Stroke	0.4%	9
Substance abuse	12.7%	284
Suicide	0.5%	11
Teenage pregnancy	1.5%	34
Tobacco use	3.5%	78
Other (please specify)	1.7%	38

Source: Valley Health Community Survey, 2016.

Key	
Top five most important health issues identified	

When asked to identify the top health issues in the PMH community, English survey respondents most often chose substance abuse, cancer, low income or financial challenges, poor dietary choices, and mental health. Although not in the top 5 health issues identified, heart disease, diabetes, not enough exercise and access to healthy food were also frequently cited health concerns (**Exhibit 58A**).

Exhibit 58B: Most Important Health Issues Identified (Spanish)

Response	Response Percent	Response Count
Access to healthy food is limited	2.6%	1
Asthma	7.1%	3
Alzheimer's or dementia	0.0%	0
Affordable housing	2.6%	1
Cancer	23.1%	9
Chronic Obstructive Pulmonary Disease (COPD)	0.0%	0
Dental Health	5.1%	2
Diabetes	12.8%	5
Domestic Violence	2.6%	1
Heart disease and stroke	10.3%	4
Homelessness	2.6%	1
High blood pressure	2.6%	1
Low income/financial challenges	5.1%	2
Mental health (such as depression, bipolar, autism)	5.1%	2
Motor vehicle crash injuries	0.0%	0
Not enough exercise	0.0%	0
Poor air quality	0.0%	0
Poor dietary choices	0.0%	0
Respiratory/lung disease	0.0%	0
Sexually Transmitted Diseases (STDs)	2.6%	1
Stroke	0.0%	0
Substance abuse	2.6%	1
Suicide	2.4%	1
Teenage pregnancy	5.1%	2
Tobacco use	4.8%	2
Other (please specify)	0.0%	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 PMH community, Spanish survey respondents most often indicated cancer, diabetes, low income or financial challenges, heart disease and stroke, and asthma. Dental health, substance abuse, high blood pressure, tobacco use, and teen pregnancy were also concerns frequently identified by the Spanish survey respondents (**Exhibit 58B**).

4. Health Behaviors

Exhibit 59: Most Important Risky Health Behaviors Identified

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
Alcohol abuse	15.5%	343	20.5%	9
Being overweight	14.8%	328	9.1%	4
Dropping out of school	2.7%	60	4.5%	2
Drug abuse	23.0%	509	25.0%	11
Lack of exercise	8.2%	181	2.3%	1
Poor eating habits	13.2%	292	9.1%	4
Not getting shots to prevent disease	2.0%	45	0.0%	0
Racism or other form of bigotry	2.0%	44	2.3%	1
Tobacco use	9.0%	198	11.4%	5
Not using birth control	2.9%	64	2.3%	1
Not using seat belts/child safety seats	2.1%	47	6.8%	3
Unsafe sex	2.9%	64	4.5%	2
Other (please specify)	0.8%	18	2.3%	1
Answered Questions		**725**	**100.0%**	**44**

Source: Valley Health Community Survey, 2016.

Key	
Top five risky health issues identified	

When asked to identify the top risky health behaviors in the PMH community, respondents most often chose drug abuse, alcohol, being overweight, poor eating habits, and tobacco use. Heart disease, poor dietary choices, not enough exercise and access to healthy food were also frequently identified risky health behaviors.

Spanish survey respondents most often identified drug abuse, alcohol abuse, poor eating habits, being overweight, and tobacco use as the top risky health behaviors. Other risky behaviors identified: 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 59**).

Exhibit 60: Access to Fresh Fruits and Vegetables per Week

Response	Response Percent	Response Count	Spanish Survey Percent	Spanish Survey Response Count
One time	2.8%	20	13.3%	2
Two times	6.9%	50	0.0%	0
Three times	11.3%	82	26.7%	4
Four times	7.9%	57	6.7%	1
Five or more times during the week (5+)	67.7%	491	33.3%	5
I do not have regular access to fresh fruits and vegetables	3.4%	25	20.0%	3
Answered Questions		**725**	**100.0%**	**15**

Source: Valley Health Community Survey, 2016.

A large percentage of respondents reported that they were eating the recommended amount of vegetables or have access to fresh fruits and vegetables at least three or more times per week. However, 3.4 percent of English survey respondents and 20.0 percent of Spanish survey respondents reported that they do not have access to fresh fruits and vegetables (**Exhibit 60**).

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 PMH, 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 educational and business communities. An annotated list of individuals providing community input is included in 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 the most frequently mentioned 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 most frequently mentioned health issue in the PMH 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, a 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 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 with 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 U.S. residency status.
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**: 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, and these factors can negatively impact health status.
7. **Homelessness:** Homelessness is a risk factor for poor health, and creates stresses 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 61-64**).

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 61**:

Exhibit 61: 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 61: 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

Those interviewed included individuals from departments or agencies with current data or other information relevant to the health needs of the community (**Exhibit 62**). This list excludes the public health experts identified in **Exhibit 61**, who also meet this criterion.

Exhibit 62: 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 63**). This list excludes the public health experts identified in **Exhibits 61**.

Exhibit 63: 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, strategy and business development of the 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 of the health needs of indigent populations in Page, Shenandoah, and Warren Counties.	Response Session
Frank Subasic	Member, War Memorial Hospital Board of Trustees	Community	Community	Response Session

Exhibit 63: 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 of the health needs of indigent populations in the PMH community.	Response Session
Janice Boserman	PI/Quality	War Memorial Hospital	Morgan County	Response Session
Jessica Watson	Director CDRC	Chronic Disease Resource Center	Special knowledge of the 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 of the health needs of indigent populations for 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 63: 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 64: 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 64: 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 NSV	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 64: 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
Renae 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 NSV	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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