

COMMUNITY HEALTH NEEDS ASSESSMENT

REYNOLDS MEMORIAL HOSPITAL, INC.

SEPTEMBER, 2014



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SUMMARY

The Patient Protection and Affordable Care Act (PPACA) is a landmark federal law enacted in 2010. PPACA overhauls much of the healthcare delivery system in the United States. Its goal is to provide health insurance to about 30 million Americans who currently do not have coverage.

Among the many regulations under PPACA is a new requirement for tax exempt hospitals. Specifically, hospitals exempt from taxation under IRS Code section 501©3 must conduct a Community Health Needs Assessment (CHNA) every three years.

This CHNA must define the community to be served, assess the needs of that community, prioritize its findings, and adopt a strategy to implement its findings. The hospital must also make the results of the assessment available to the general public. Hospitals are also encouraged to include the implementation of the CHNA in their budgeting process.

Hospitals that fail to perform a CHNA every three years may be fined by the IRS, and they may also face possible revocation of their tax exempt status.

This CHNA was prepared by Reynolds Memorial Hospital, Inc., and it focuses on its primary service area, Marshall County, WV. It also describes its secondary service area in the adjacent counties of northern WV and south central Ohio. The study also includes a description of health services available in the region, population trends, and the socio-economics of the community. Information for this CHNA was obtained from several authoritative sources, as well as interviews with community leaders, and a broad survey of the community.

This CHNA is divided into specific sections:

- 1) Service Area Description
- 2) Health Status Indicators
- 3) Available Resources
- 4) Community Participation Survey
- 5) Summary of Findings

The goal of the CHNA is to align the services available in the community and at this hospital with the actual health needs of the community. Aside from the community survey and population trends, the CHNA also looks at risk factors, health status indicators, and historical service utilization.

SERVICE AREA DESCRIPTION

Reynolds Memorial Hospital is located in Marshall County, WV, which is about one hour southwest of Pittsburgh Pennsylvania. Its primary service area is Marshall County, where about 70% of its patients reside. The secondary service areas of the hospital are the adjacent counties (Wetzel, WV, Ohio, WV, and Belmont, OH).

The 2013 county population estimate of Marshall County is about 32,500, per the US Census Bureau. Marshall County is part of the Wheeling, WV-OH metropolitan statistical area, which also includes Ohio County (WV) and Belmont County (OH). Wetzel County (WV) is a rural county outside of the metropolitan statistical area, but its statistics area is included here because it is a secondary service area of the hospital.

The population in this area has been declining for some time, due primarily to a loss of employment in the industrial sector of the economy. The area's economy has historically been built on heavy industry, such as coal, steel, chemical and petrochemicals. As employment in these industries has declined, so has the population. The employment rate is as follows:

| | 2013 Estimate | 2010 Census | 2000 Census | Change |
|---------------------|--------------------------|------------------------|------------------------|----------------|
| Marshall County, WV | 32,459 | 33,107 | 35,519 | (8.6) % |
| Ohio County, WV | 43,727 | 44,443 | 47,427 | (7.8) % |
| Belmont, OH | 69,571 | 70,400 | 70,226 | (1.0) % |
| Wetzel, WV | 16,204 | 16,583 | 17,693 | (8.4) % |
| Total | 161,961 | 164,533 | 170,865 | (5.2) % |

(See Appendix #1)

Additionally, the population of hospital's service area has a higher percentage of individuals over age 65, which significantly influences the type and quantity of health care services needed by the population.

% over age 65

| | |
|---------------------|--------|
| Marshall County, WV | 19.1 % |
| Ohio County, WV | 19.2 % |
| Belmont, OH | 18.5 % |
| Wetzel, WV | 21.3 % |
| West Virginia | 17.3 % |
| United States | 14.1% |

From a socio-economic status, the four county area is somewhat economically depressed. The US Census reports that 2013 median household income ranges from \$37,897 in Wetzel County to \$41,676 in Belmont County. This compares to \$40,400 for the State of West Virginia as a whole and \$53,046 for the United States.

Additionally, with the expansion of the Medicaid program under the Patient Protection and Affordable Care Act, one in four West Virginians health care is now sponsored by Medicaid.

From an economic standpoint, the future of the immediate area appears much brighter than the present or the past three decades. Recent developments in mineral extraction technology now allow companies to recover natural gas and oil reserves that were once thought unreachable. Marshall County sits on top of the Marcellus Shale formation, one of the largest oil and gas reserves on earth. In the last seven years, large international companies have invested over

\$2 billion in the county for land acquisition, gas drilling pads, and methane fracking (separation). As natural gas is extracted and separated locally, it will create several new downstream chemical and petrochemical uses. Many new companies will locate close to the source of these elements. Therefore, the local area potentially sits on the threshold of an industrial economic expansion on a scale that has never been experienced before.

The characteristics of the population – size, demographics, and socioeconomics – have great influence over the type of healthcare services needed in a particular area. This area is characterized by an elderly, shrinking, economically depressed population. However, the potential for re-industrialization of the area could re-vitalize its economy and its demographics quickly.

While population and demographics are important, another salient factor in determining the need for health care is the health status of the population. (See appendix #3)

HEALTH STATUS INDICATORS

Personal health habits and practices are one of the greatest predictors of the need for healthcare. A chronic smoker can expect respiratory problems, and the need for a pulmonary medicine. An obese person will be more predisposed to cardiac health issues, diabetes, and hypertension. A sedentary lifestyle will also lead to several of the same health issues.

The West Virginia Department of Health publishes a comprehensive assessment of health, by county, every ten years. The latest version is attached as Appendix #4. The State's epidemiological profile of Marshall County shows the following:

- 1) Alcohol consumption in Marshall County is a considerable problem. Binge drinking (defined as 5 or more drinks on the same occasion) is 25% greater in the county than for the state as a whole. The county ranks 7th (out of 55 counties) in this statistic. Interestingly, the mortality rate for alcohol-related consequences is below the state average.
- 2) Tobacco consumption in Marshall County is below the state average, but still is quite high. About 1 in 4 individuals in the county routinely smoke or use smokeless tobacco. This rate ranks Marshall County 37th in WV. Mortality from cigarette smoking also ranks lower than the state average at 70.7 deaths per 100,000 individuals, ranking it 43rd.
- 3) The reported use of illegal drugs is also a significant problem in the state and in the county. The attendant health consequences of drug use show up indirectly as other health problems in the population.
- 4) The State also monitors suicide ideation, homelessness, and domestic violence. These conditions contribute greatly to health care costs in Marshall County as well as everywhere else. However, the actual numbers of people affected are small, because of their incidence.

In addition, the 2012 WV State Health Profile published by the Department of Health and Human Services reveals some startling demographic information. Each leading cause of death

in West Virginia is significantly higher in West Virginia when compared to the United States as a whole. These include:

| | WV | US | Variance |
|---|-------|-------|----------|
| Death Rate per 100,000 population (Appendix 5) | | | |
| 1) Diseases of the Heart | 280.1 | 195.0 | 44% |
| 2) Cancer | 263.3 | 185.2 | 42% |
| 3) Chronic Respiratory Disease | 83.5 | 44.7 | 87% |
| 4) Accidents | 63.2 | 38.2 | 65% |
| 5) Stroke | 60.1 | 41.9 | 43% |
| 6) Diabetes | 41.6 | 22.3 | 87% |
| 7) Alzheimer's Disease | 30.7 | 25.7 | 19% |
| 8) Nephritis, Nephrosis | 26.2 | 15.9 | 65% |
| 9) Influenza and Pneumonia | 22.0 | 17.5 | 26% |
| 10) Septicemia | 19.3 | 11.6 | 66% |

Most of the leading causes of death are the consequence of the poor lifestyle choices mentioned above. However, information on mortality is important towards defining the healthcare services needed in a particular community. Deaths from heart disease, cancer, respiratory conditions and stroke comprise 60% of the lives lost in West Virginia. Therefore, a healthcare organization should respond by offering services for diagnosis, treatment and patient education in cardiology, oncology, pulmonary medicine and neurology.

AVAILABLE RESOURCES

Reynolds Memorial Hospital is a short-term acute care hospital located in the northern panhandle of West Virginia. Since its inception in 1899, the hospital has continuously provided health care services in this community.

The orientation of the hospital is primary acute care. In the past 15 years, the hospital has expanded its service complement to include skilled nursing care, home health services and advanced diagnostic cardiac care. However, the hospital has not expanded its services into tertiary areas such as open-heart surgery, radiation oncology or neurosurgery because the population base served by the hospital cannot support high cost, lower volume services.

The majority of the hospital's services are provided to patients emanating from the immediate county in which the hospital resides, Marshall County. Secondary markets for the hospital include the three counties contiguous to Marshall County: Ohio County, WV, Wetzel County, WV, and Belmont County, OH.

The hospital resides in an area with a significant oversupply of hospitals and beds; consequently, it is highly competitive for hospital care. According to American Hospital Association statistics, there are 7 hospitals operating 641 acute and 186 non-acute (skilled nursing, Long Term Acute Care, and psychiatric) beds. Based on a 2013 estimated population of 162,000 people, this is over 5.1 beds per 100,000 of population, which is twice the national rate.

| Hospital | Staffed Beds | Non- Acute | Census |
|----------------------------|-------------------------|-----------------------|---------------|
| Barnesville Hospital | 25 | 0 | 12 |
| Belmont Community | 66 | 32 | Non-Reporting |
| East Ohio Regional | 161 | 50 | 73 |
| Ohio Valley Medical Center | 185 | 60 | 91 |
| Reynolds Memorial Hospital | 90 | 20 | 41 |
| Wetzel County Hospital | 44 | 0 | 15 |
| Wheeling Hospital | 247 | 24 | 132 |
| Total | 827 | 186 | 364 |

The excess hospital bed capacity (see Appendix 6) in this area has led to the duplication of services, the proliferation of managed care organizations, and poor financial performance for the hospitals in the area as a group. The overcapacity, coupled with federal payment reform efforts and the explosion of information in the hands of consumers, will eventually lead to shrinkage and consolidation in the local healthcare market.

Mindful of these factors, the hospital must be able to provide services that are:

- a) targeted to the demographic makeup of Marshall County, its primary service area, and
- b) provided as efficiently as possible, recognizing resource limitations as well as the potential for redundancy in an overcrowded market, and
- c) meet or exceed patient expectations; if they cannot, they should not be provided.

Additionally, the PPACA promotes the concept of population health management through accountable care organizations (ACO). Under this concept, a group of related or aligned health providers and insurers (the ACO) takes the entire risk and responsibility for all health care needs of a population segment – a city, county, or other group. The ACO would have to coordinate preventative and primary care, acute inpatient care, post-acute care, pharmaceuticals, long-term care, etc.

This will make it extremely difficult for small, stand-alone hospitals to survive in the future. Therefore, the hospital must give serious consideration to alignment with a larger organization.

No discussion of healthcare resources is complete without an evaluation of the complement of physicians in the area. Doctors are the patient's first contact with, and the focal point of the healthcare system. Almost all healthcare services provided begin with an order from a physician.

Hospitals have historically been the main group to recruit physicians to a given community. However, large physician practice groups have formed in the past two decades, and they have also been instrumental in bringing physicians to a given community.

In order to best serve the community, there must be the right mix of physicians appropriate to the community's health needs. This means not only the appropriate number of physicians, but also the appropriate mix of physician specialties. If there is a shortage of physicians in a community, residents will undoubtedly seek services elsewhere. If there are too many

physicians in a community, economics will cause discontent that will eventually drive away qualified practitioners.

There are many ways to evaluate medical staff composition. The first recognized evaluation came from the Graduate Medical Education National Advisory Council (GMENAC.) GMENAC developed suggested physician to population ratios around 1985. However, the dynamics of physician supply and demand have changed dramatically since 1985 with the growth of managed care (HMOs, PPOs, point of care plans, etc.). The Dartmouth Atlas of Healthcare began in 1998, and it analyzed variances in physician supply in the US, as well as variances in utilization rates for certain medical and surgical procedures. Several other independent companies also evaluate physician supply. This data should be used as a guideline, not the definitive evaluation of need. Evaluating physician supply also must take into account local resources, historic utilization trends, and special needs groups in the community, and involve discussions with current physicians in the community. Based only on GMENAC, a sample of the current physician supply for Marshall Count appears as follows:

BENCHMARKS FOR PHYSICIAN SUPPLY
Population needed to support a particular specialty
 Source: GMENAC

| Physician Specialty | Rate | Need for Marshall Co. | Supply | Need |
|---------------------|--------|-----------------------|--------|------|
| Anesthesiology | 15,332 | 2.1 | 2 | |
| Cardiology | 31,420 | 1.1 | 2 | |
| Emergency Medicine | 18,000 | 1.8 | 4 | |
| Gastroenterology | 37,000 | .9 | -0- | 1 |
| Neurology | 44,000 | .7 | -0- | 1 |
| Oncology | 27,000 | 1.2 | -0- | 1 |
| Orthopedics | 16,130 | 2.0 | -0- | 2 |
| Primary Care | 3,461 | 9.4 | 11 | |

COMMUNITY PARTICIPATION

In connection with this Community Health Needs Assessment, Reynolds Memorial Hospital conducted an extensive survey of its community in the spring and summer of 2014. Surveys were mailed to 15,000 homes in the local community, and over 1,100 of them were returned. The community was surveyed not only about the hospital's services, but also about their perception of the most important social problems, healthcare issues, and barriers to obtaining health care. The questions were compiled and asked after gaining insight from hospital executives, physicians, members of the Board and Directors and the community. Participants were asked to rank their findings in order of importance to not only themselves, but their family. The results are reported in Appendix 7, and are summarized below:

- 1) Most important social problems in our area:
 - a. Drug abuse
 - b. Lack of Jobs

(Access to medical care and housing were last of 6 choices)

- 2) Major health issues facing community:
 - a. Obesity
 - b. Drug abuse
 - c. Heart Disease
- 3) Who is best able to solve these problems?
 - a. Local physicians
 - b. Local hospitals
 - c. Local Health Department
- 4) Barriers to receiving health care?
 - a. 80% reported none
 - b. 6% lack of transportation
 - c. 5% services not offered
 - d. 4% no medical insurance
- 5) What healthcare services are lacking in our community?
 - a. Assisted Living 45%
 - b. Behavioral Health 37%
 - c. Cancer Care 32%
 - d. Long Term Care 31%
- 6) What physician specialties are needed in the community?
 - a. Primary Care
 - b. Oncology
 - c. Ob/Gyn
 - d. Orthopedics
- 7) For immediate health needs, where do you go?
 - a. Family doctor
 - b. Emergency Room
- 8) How can Reynolds Memorial Hospital help with these issues?
 - a. Partner with another organization
 - b. Offer community programs
 - c. Offer workshops

SUMMARY OF FINDINGS

The results of the hospital's community survey reinforce many of the same findings as those based on the demographic profile of the community. Those include:

- 1) The need for enhanced healthcare services in the specialties of oncology, pulmonary medicine and neurology.

- 2) Partnering with other community organizations, such as law enforcement and the Marshall County Health Department to combat drug abuse.
- 3) Partnering with other health providers to bring some high cost, low volume tertiary care to the community.
- 4) Offering education to the community on health related issues.
- 5) Promoting Cardiology and Primary Care physicians to the community.

This Community Health Needs Assessment has been presented to the hospital's Board of Directors, and its results will be incorporated in future long range plans of the organization.

LONG RANGE PLANNING

The hospital will implement programming and educational sessions with the help of the Marshall County, WV Health Department and the Marshall County, WV Drug Task Force. These programs will be offered as a direct result of the findings in the Community Health Needs Assessment.

Appendix 1:

U.S. Census Bureau



DP-1

Profile of General Population and Housing Characteristics: 2010

2010 Demographic Profile Data

NOTE: For more information on confidentiality protection, nonsampling error, and definitions, see <http://www.census.gov/prod/cen2010/doc/dpsf.pdf>.

Geography: Marshall County, West Virginia

| Subject | Number | Percent |
|------------------------|--------|---------|
| SEX AND AGE | | |
| Total population | 33,107 | 100.0 |
| Under 5 years | 1,742 | 5.3 |
| 5 to 9 years | 1,854 | 5.6 |
| 10 to 14 years | 1,954 | 5.9 |
| 15 to 19 years | 2,088 | 6.3 |
| 20 to 24 years | 1,639 | 5.0 |
| 25 to 29 years | 1,677 | 5.1 |
| 30 to 34 years | 1,811 | 5.5 |
| 35 to 39 years | 1,967 | 5.9 |
| 40 to 44 years | 2,153 | 6.5 |
| 45 to 49 years | 2,340 | 7.1 |
| 50 to 54 years | 2,738 | 8.3 |
| 55 to 59 years | 2,758 | 8.3 |
| 60 to 64 years | 2,572 | 7.8 |
| 65 to 69 years | 1,707 | 5.2 |
| 70 to 74 years | 1,372 | 4.1 |
| 75 to 79 years | 1,039 | 3.1 |
| 80 to 84 years | 957 | 2.9 |
| 85 years and over | 739 | 2.2 |
| Median age (years) | 44.3 | (X) |
| 16 years and over | 27,125 | 81.9 |
| 18 years and over | 26,215 | 79.2 |
| 21 years and over | 25,139 | 75.9 |
| 62 years and over | 7,329 | 22.1 |
| 65 years and over | 5,814 | 17.6 |
| Male population | 16,154 | 48.8 |
| Under 5 years | 862 | 2.6 |
| 5 to 9 years | 934 | 2.8 |
| 10 to 14 years | 966 | 2.9 |
| 15 to 19 years | 1,069 | 3.2 |
| 20 to 24 years | 872 | 2.6 |
| 25 to 29 years | 839 | 2.5 |
| 30 to 34 years | 916 | 2.8 |
| 35 to 39 years | 1,017 | 3.1 |
| 40 to 44 years | 1,080 | 3.3 |
| 45 to 49 years | 1,135 | 3.4 |
| 50 to 54 years | 1,350 | 4.1 |
| 55 to 59 years | 1,364 | 4.1 |
| 60 to 64 years | 1,248 | 3.8 |
| 65 to 69 years | 836 | 2.5 |
| 70 to 74 years | 589 | 1.8 |

U.S. Census Bureau



DP-1

Profile of General Population and Housing Characteristics: 2010

2010 Demographic Profile Data

NOTE: For more information on confidentiality protection, nonsampling error, and definitions, see <http://www.census.gov/prod/cen2010/doc/dpsf.pdf>.

Geography: Ohio County, West Virginia

| Subject | Number | Percent |
|--------------------|--------|---------|
| SEX AND AGE | | |
| Total population | 44,443 | 100.0 |
| Under 5 years | 2,246 | 5.1 |
| 5 to 9 years | 2,238 | 5.0 |
| 10 to 14 years | 2,446 | 5.5 |
| 15 to 19 years | 3,236 | 7.3 |
| 20 to 24 years | 3,206 | 7.2 |
| 25 to 29 years | 2,360 | 5.3 |
| 30 to 34 years | 2,332 | 5.2 |
| 35 to 39 years | 2,397 | 5.4 |
| 40 to 44 years | 2,516 | 5.7 |
| 45 to 49 years | 3,062 | 6.9 |
| 50 to 54 years | 3,614 | 8.1 |
| 55 to 59 years | 3,529 | 7.9 |
| 60 to 64 years | 3,048 | 6.9 |
| 65 to 69 years | 2,102 | 4.7 |
| 70 to 74 years | 1,771 | 4.0 |
| 75 to 79 years | 1,548 | 3.5 |
| 80 to 84 years | 1,427 | 3.2 |
| 85 years and over | 1,365 | 3.1 |
| Median age (years) | 43.5 | (X) |
| 16 years and over | 36,998 | 83.2 |
| 18 years and over | 35,978 | 81.0 |
| 21 years and over | 33,480 | 75.3 |
| 62 years and over | 9,930 | 22.3 |
| 65 years and over | 8,213 | 18.5 |
| Male population | 21,165 | 47.6 |
| Under 5 years | 1,152 | 2.6 |
| 5 to 9 years | 1,123 | 2.5 |
| 10 to 14 years | 1,252 | 2.8 |
| 15 to 19 years | 1,565 | 3.5 |
| 20 to 24 years | 1,568 | 3.5 |
| 25 to 29 years | 1,235 | 2.8 |
| 30 to 34 years | 1,190 | 2.7 |
| 35 to 39 years | 1,157 | 2.6 |
| 40 to 44 years | 1,234 | 2.8 |
| 45 to 49 years | 1,475 | 3.3 |
| 50 to 54 years | 1,763 | 4.0 |
| 55 to 59 years | 1,703 | 3.8 |
| 60 to 64 years | 1,498 | 3.4 |
| 65 to 69 years | 975 | 2.2 |
| 70 to 74 years | 793 | 1.8 |

U.S. Census Bureau



DP-1

Profile of General Population and Housing Characteristics: 2010

2010 Demographic Profile Data

NOTE: For more information on confidentiality protection, nonsampling error, and definitions, see <http://www.census.gov/prod/cen2010/doc/dpsf.pdf>.

Geography: Belmont County, Ohio

| Subject | Number | Percent |
|------------------------|--------|---------|
| SEX AND AGE | | |
| Total population | 70,400 | 100.0 |
| Under 5 years | 3,575 | 5.1 |
| 5 to 9 years | 3,690 | 5.2 |
| 10 to 14 years | 3,916 | 5.6 |
| 15 to 19 years | 4,368 | 6.2 |
| 20 to 24 years | 4,170 | 5.9 |
| 25 to 29 years | 4,225 | 6.0 |
| 30 to 34 years | 3,972 | 5.6 |
| 35 to 39 years | 4,324 | 6.1 |
| 40 to 44 years | 4,414 | 6.3 |
| 45 to 49 years | 5,177 | 7.4 |
| 50 to 54 years | 5,880 | 8.4 |
| 55 to 59 years | 5,519 | 7.8 |
| 60 to 64 years | 4,751 | 6.7 |
| 65 to 69 years | 3,286 | 4.7 |
| 70 to 74 years | 2,882 | 4.1 |
| 75 to 79 years | 2,234 | 3.2 |
| 80 to 84 years | 2,029 | 2.9 |
| 85 years and over | 1,988 | 2.8 |
| Median age (years) | 43.4 | (X) |
| 16 years and over | 58,360 | 82.9 |
| 18 years and over | 56,545 | 80.3 |
| 21 years and over | 54,061 | 76.8 |
| 62 years and over | 15,167 | 21.5 |
| 65 years and over | 12,419 | 17.6 |
| Male population | 35,492 | 50.4 |
| Under 5 years | 1,811 | 2.6 |
| 5 to 9 years | 1,941 | 2.8 |
| 10 to 14 years | 1,993 | 2.8 |
| 15 to 19 years | 2,338 | 3.3 |
| 20 to 24 years | 2,434 | 3.5 |
| 25 to 29 years | 2,399 | 3.4 |
| 30 to 34 years | 2,190 | 3.1 |
| 35 to 39 years | 2,366 | 3.4 |
| 40 to 44 years | 2,290 | 3.3 |
| 45 to 49 years | 2,598 | 3.7 |
| 50 to 54 years | 2,931 | 4.2 |
| 55 to 59 years | 2,735 | 3.9 |
| 60 to 64 years | 2,375 | 3.4 |
| 65 to 69 years | 1,567 | 2.2 |
| 70 to 74 years | 1,246 | 1.8 |

U.S. Census Bureau



DP-1

Profile of General Population and Housing Characteristics: 2010

2010 Demographic Profile Data

NOTE: For more information on confidentiality protection, nonsampling error, and definitions, see <http://www.census.gov/prod/cen2010/doc/dpsf.pdf>.

Geography: Wetzel County, West Virginia

| Subject | Number | Percent |
|------------------------|--------|---------|
| SEX AND AGE | | |
| Total population | 16,583 | 100.0 |
| Under 5 years | 848 | 5.1 |
| 5 to 9 years | 913 | 5.5 |
| 10 to 14 years | 1,027 | 6.2 |
| 15 to 19 years | 1,075 | 6.5 |
| 20 to 24 years | 797 | 4.8 |
| 25 to 29 years | 802 | 4.8 |
| 30 to 34 years | 823 | 5.0 |
| 35 to 39 years | 968 | 5.8 |
| 40 to 44 years | 1,095 | 6.6 |
| 45 to 49 years | 1,267 | 7.6 |
| 50 to 54 years | 1,295 | 7.8 |
| 55 to 59 years | 1,263 | 7.6 |
| 60 to 64 years | 1,171 | 7.1 |
| 65 to 69 years | 963 | 5.8 |
| 70 to 74 years | 843 | 5.1 |
| 75 to 79 years | 637 | 3.8 |
| 80 to 84 years | 450 | 2.7 |
| 85 years and over | 346 | 2.1 |
| Median age (years) | 44.8 | (X) |
| 16 years and over | 13,575 | 81.9 |
| 18 years and over | 13,119 | 79.1 |
| 21 years and over | 12,547 | 75.7 |
| 62 years and over | 3,948 | 23.8 |
| 65 years and over | 3,239 | 19.5 |
| Male population | | |
| Under 5 years | 448 | 2.7 |
| 5 to 9 years | 470 | 2.8 |
| 10 to 14 years | 537 | 3.2 |
| 15 to 19 years | 559 | 3.4 |
| 20 to 24 years | 391 | 2.4 |
| 25 to 29 years | 410 | 2.5 |
| 30 to 34 years | 395 | 2.4 |
| 35 to 39 years | 488 | 2.9 |
| 40 to 44 years | 543 | 3.3 |
| 45 to 49 years | 612 | 3.7 |
| 50 to 54 years | 654 | 3.9 |
| 55 to 59 years | 617 | 3.7 |
| 60 to 64 years | 591 | 3.6 |
| 65 to 69 years | 428 | 2.6 |
| 70 to 74 years | 395 | 2.4 |

Appendix 2:

WV Medicaid Beneficiary Populations

As of December 2012

| Medicaid Type | Population | % |
|----------------------|-------------------|-------------|
| SSI | 128,903 | 39% |
| TANF | 193,006 | 58% |
| Foster | 12,260 | 4% |
| Total | 334,169 | 100% |

Estimated July 2014

| Medicaid Type | Population | % |
|----------------------|-------------------|-------------|
| SSI | 130,000 | 28% |
| TANF | 194,000 | 41% |
| Foster | 13,000 | 3% |
| Expanded | 135,000 | 29% |
| Total | 472,000 | 100% |

Appendix 3:

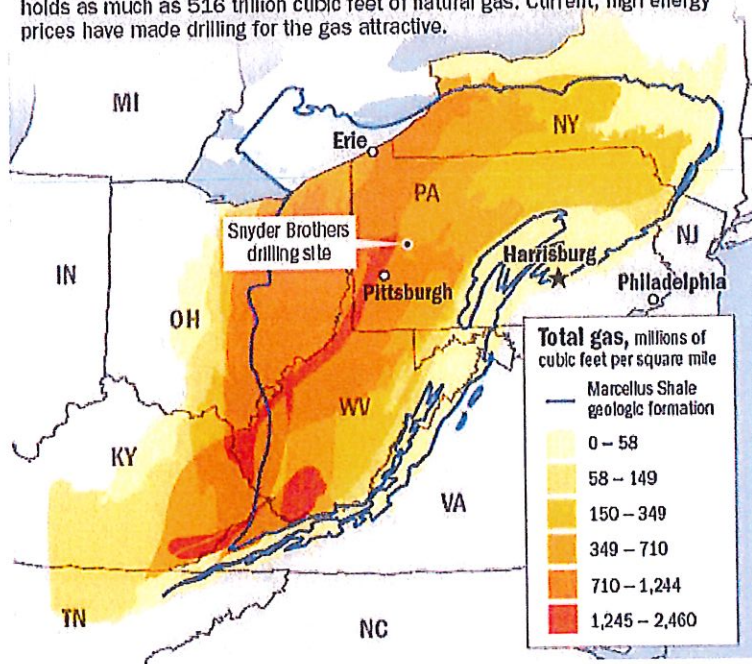
Site Builder

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Untapped riches

The Marcellus Shale formation, which stretches all through the Appalachians, holds as much as 516 trillion cubic feet of natural gas. Current, high energy prices have made drilling for the gas attractive.



Source: U.S. Bureau of Land Management, Geology.com, Catskillmountainkeeper.org

Ed Yozwick, Keith McCafferty/Post-Gazette

Appendix 4:

Prepared by the WV Department of Health and Human Resources
Bureau for Behavioral Health and Health Facilities

February 2014

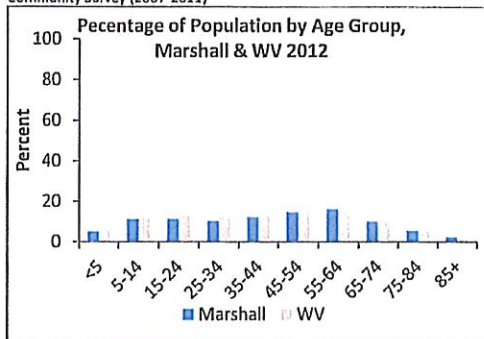
MARSHALL COUNTY



Behavioral Health Epidemiological County Profile Demographic Data

| | Marshall | WV |
|---------------------------------|----------|-----------|
| Population | 32,674 | 1,855,413 |
| Race | White | 97.9% |
| | Black | 0.6% |
| | Other | 1.5% |
| Median age | 44.5 | 41.7 |
| Labor force* | 53.8% | 54.9% |
| Median household income* | \$37,313 | \$39,550 |
| Income below poverty level* | 16.9% | 17.5% |
| High school graduate or higher* | 86.6% | 82.6% |
| Civilian veterans* | 13.2% | 11.4% |

Source: US Census Bureau, 2012 population estimates, *American Community Survey (2007-2011)



Population by Age Group 2012

| Age | Marshall | | WV | |
|-------|----------|-------|---------|-------|
| | # | % | # | % |
| <5 | 1,711 | 5.2% | 103,071 | 5.6% |
| 5-14 | 3,706 | 11.3% | 214,618 | 11.6% |
| 15-24 | 3,724 | 11.4% | 237,491 | 12.8% |
| 25-34 | 3,420 | 10.5% | 220,220 | 11.9% |
| 35-44 | 3,973 | 12.2% | 232,341 | 12.5% |
| 45-54 | 4,797 | 14.7% | 263,998 | 14.2% |
| 55-64 | 5,369 | 16.4% | 271,725 | 14.6% |
| 65-74 | 3,320 | 10.2% | 176,314 | 9.5% |
| 75-84 | 1,846 | 5.6% | 97,902 | 5.3% |
| 85+ | 808 | 2.5% | 37,733 | 2.0% |

Source: US Census Bureau, 2012 population estimates

Marshall County is located in the northern panhandle of West Virginia. According to the U.S. Census (2012) Marshall County residents constitute 1.8% of the population of the state.

Adult Behavioral Health Risk Factors: 2007-2011

| Indicator | Marshall | WV | Rank in WV* |
|---|---------------------|-------|-------------|
| Fair/Poor Health | 19.6% | 23.6% | 43 |
| No Health Insurance (ages 18-64) | 22.3% | 21.7% | 31 |
| No Leisure Time Physical Activity | 31.4% | 32.1% | 31 |
| Obesity | 29.0% | 31.8% | 46 |
| Diabetes | 9.8% | 11.8% | 44 |
| Cardiovascular Disease | 11.9% | 12.6% | 38 |
| Hypertension (2003, 2005, 2007, 2009, 2011) | 32.0% | 34.6% | 44 |
| High Cholesterol (2003, 2005, 2007, 2009, 2011) | 46.6% | 39.9% | 11 |
| Current Asthma | 9.1% | 8.8% | 30 |
| Disability | 20.5% ^{††} | 28.4% | 52 |
| Arthritis (2005, 2007, 2009-2011) | 42.1% [†] | 35.2% | 10 |

Source: WV Health Statistics Center, Behavioral Risk Factor Surveillance System.

*There are 55 counties in West Virginia; 1st highest rate and 55th lowest rate. Significance: † Indicates county was significant higher than state. †† Indicates state was significant higher than county. § Indicates unreliable prevalence estimate - use caution when reporting and interpreting.

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Marshall County Behavioral Health Epidemiological Profile

Alcohol Consumption

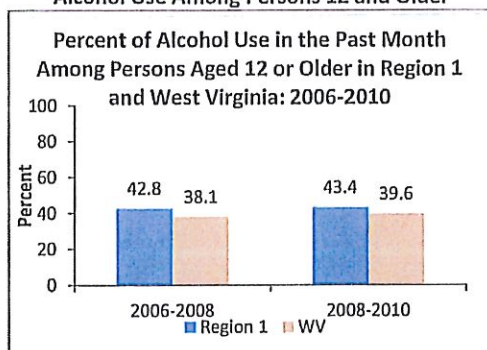
Alcohol Use Among Adults

| Indicator | Marshall | WV | Rank in WV* |
|----------------|----------|------|-------------|
| Binge drinking | 11.6% | 9.4% | 7 |

Source: WV Health Statistics Center, Behavioral Risk Factor Surveillance System.

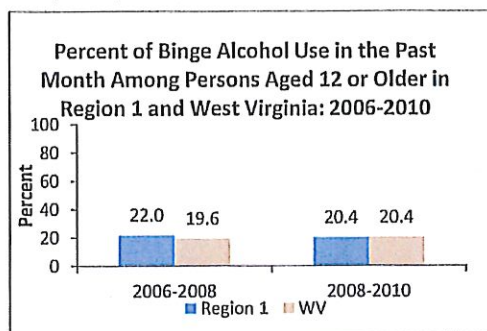
*There are 55 counties in West Virginia; 1st highest rate and 55th lowest rate. Significance: † Indicates county was significant higher than state. †† Indicates state was significant higher than county. § Indicates unreliable prevalence estimate - use caution when reporting and interpreting.

Alcohol Use Among Persons 12 and Older



Source: National Survey on Drug Use and Health (NSDUH)

Note: Any use of alcohol in the past month. 2006-2008 & 2008-2011 data was revised March 2012. Region 1 is made up of the following counties: Brooke, Hancock, Marshall, Ohio, and Wetzel.



Source: NSDUH

Note: Binge Alcohol Use is defined as drinking five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days. 2006-2008 & 2008-2011 data was revised March 2012. See previous definition of Region 1.

Underage Drinking (Those Aged 12-20)

Alcohol Use in the Past Month Among Persons Aged 12 to 20 in Region 1 and WV: 2006-2010

| | 2006-2008 | 2008-2010 |
|---------------|-----------|-----------|
| Region 1 | 26.3% | 24.0% |
| West Virginia | 25.3% | 23.4% |

Binge Alcohol Use in the Past Month Among Persons Aged 12 to 20 in Region 1 and WV: 2006-2010

| | 2006-2008 | 2008-2010 |
|---------------|-----------|-----------|
| Region 1 | 20.1% | 16.8% |
| West Virginia | 17.8% | 15.9% |

Source: NSDUH

Note: See previous definitions for alcohol use and binge drinking among persons 12 and older. See previous definition of Region 1.

Alcohol Risk & Protective Factors

Perceptions of Great Risk of Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week Among Persons Aged 12 or Older in Region 1 and WV: 2006-2010

| | 2006-2008 | 2008-2010 |
|---------------|-----------|-----------|
| Region 1 | 41.4% | 42.1% |
| West Virginia | 42.0% | 43.3% |

Alcohol Dependence or Abuse in the Past Year Among Persons Aged 12 or Older in Region 1 and WV: 2006-2010

| | 2006-2008 | 2008-2010 |
|---------------|-----------|-----------|
| Region 1 | 7.0% | 6.1% |
| West Virginia | 6.4% | 6.1% |

Alcohol Dependence in the Past Year Among Persons Aged 12 or Older in Region 1 and WV: 2006-2010

| | 2006-2008 | 2008-2010 |
|---------------|-----------|-----------|
| Region 1 | 3.5% | 3.3% |
| West Virginia | 3.2% | 3.2% |

Needing But Not Receiving Treatment for Alcohol Use in the Past Year Among Persons Aged 12 or Older in Region 1 and WV: 2006-2010

| | 2006-2008 | 2008-2010 |
|---------------|-----------|-----------|
| Region 1 | 6.6% | 5.6% |
| West Virginia | 6.0% | 5.6% |

Source: NSDUH

Note: Dependence or abuse is based on definitions found in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). Needing But Not Receiving Treatment refers to respondents classified as needing treatment for alcohol, but not receiving treatment for an alcohol problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], and mental health centers). 2006-2008 & 2008-2011 data was revised March 2012. See previous definition of Region 1.

Marshall County Behavioral Health Epidemiological Profile

Alcohol Related Consequences

| 2011 Morbidity Rates per 10,000 Discharges | | | |
|--|----------|-------|-------------|
| | Marshall | WV | Rank in WV* |
| Alcohol Related Diagnosis | 362.8 | 407.9 | 21 |
| Alcohol Dependence Diagnosis | 188.3 | 236.6 | 27 |

Source: WV Health Care Authority

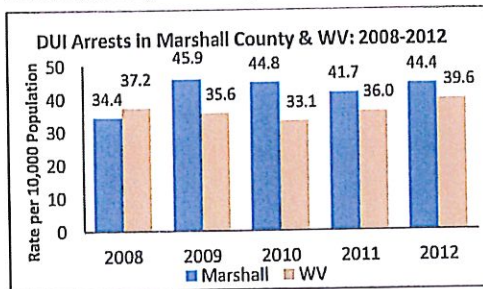
*There are 55 counties in West Virginia; 1st highest rate and 55th lowest rate.

| 2006-2010 Mortality Rates per 100,000 population | | | |
|--|----------|------|-------------|
| | Marshall | WV | Rank in WV* |
| Chronic Liver-Cirrhosis | 12.0 | 13.4 | 31 |

Source: WV Health Statistics Center, Vital Statistics System

*There are 55 counties in West Virginia; 1st highest rate and 55th lowest rate.

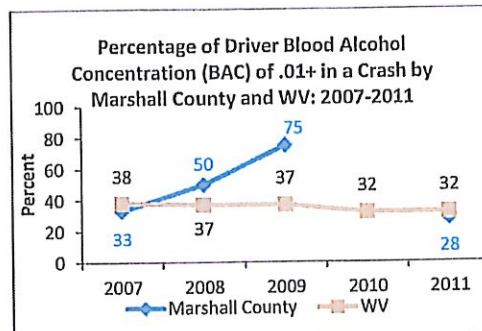
Significance: † Indicates county was significant higher than state. †† Indicates state was significant higher than county.



| DUI Arrests in Marshall County and WV: 2008-2012 | | | | | |
|--|-------|-------|-------|-------|-------|
| | 2008 | 2009 | 2010 | 2011 | 2012 |
| Marshall | | | | | |
| Number of DUI arrests | 114 | 152 | 148 | 137 | 145 |
| DUI rate per 10,000 population | 34.4 | 45.9 | 44.8 | 41.7 | 44.4 |
| WV | | | | | |
| Number of DUI arrests | 6,842 | 6,587 | 6,134 | 6,680 | 7,355 |
| DUI rate per 10,000 population | 37.2 | 35.6 | 33.1 | 36.0 | 39.6 |

Source: WV State Police CIB Section

Note: The DUI arrest data should be interpreted with caution due to the fact that not all law enforcement agencies have reported their DUI arrests (approximately 200 agencies are missing from this dataset).



Source: National Highway Traffic Safety Administration (NHTSA), Fatality Analysis Reporting System (FARS)

Note: NHTSA estimates alcohol involvement when alcohol test results are unknown. No fatal crashes were reported in 2010 in Marshall County.

Tobacco Consumption

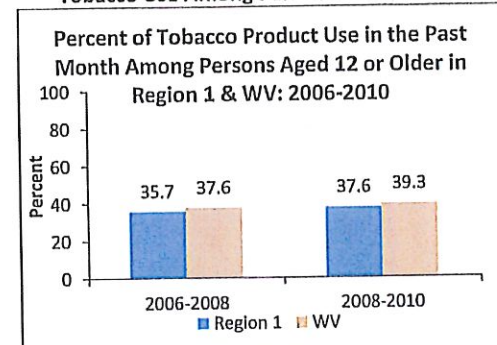
Tobacco Use Among Adults

| Indicator | Marshall | WV | Rank in WV* |
|-------------------|----------|-------|-------------|
| Cigarette smoking | 24.1% | 26.9% | 37 |

Source: WV Health Statistics Center, Behavioral Risk Factor Surveillance System.

*There are 55 counties in West Virginia; 1st highest rate and 55th lowest rate. Significance: † Indicates county was significant higher than state. †† Indicates state was significant higher than county.

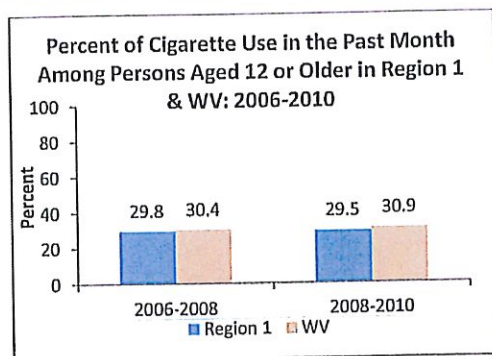
Tobacco Use Among Persons 12 and Older



Source: NSDUH

Note: Tobacco products include cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco. 2006-2008 & 2008-2010 data was revised March 2012. See previous definition of Region 1.

Marshall County Behavioral Health Epidemiological Profile



Source: NSDUH

Note: Any use of cigarettes in the past month. 2006-2008 & 2008-2011 data was revised March 2012. See previous definition of Region 1.

Tobacco Risk & Protective Factors

Perceptions of Great Risk of Smoking One or More Packs of Cigarettes Per Day Among Persons Aged 12 or Older in Region 1 & WV: 2006-2010

| | 2006-2008 | 2008-2010 |
|---------------|-----------|-----------|
| Region 1 | 67.6% | 66.4% |
| West Virginia | 68.1% | 66.0% |

Source: NSDUH

Note: 2006-2008 & 2008-2011 data was revised March 2012. See previous definition of Region 1.

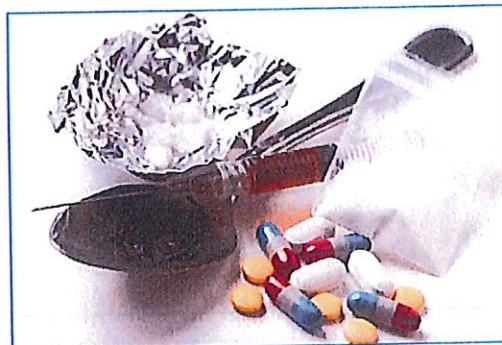


Tobacco Consequences

| 2006-2010 Mortality Rates per 100,000 population | | | |
|--|--------------------|-------|-------------|
| | Marshall | WV | Rank in WV* |
| Lung/Bronchus/Trachea Cancer | 70.7 | 83.7 | 43 |
| Chronic Obstructive Pulmonary Disease | 85.1 | 76.7 | 20 |
| Cardiovascular Disease | 429.7 [†] | 367.3 | 11 |

Source: WV Health Statistics Center, Vital Statistics System

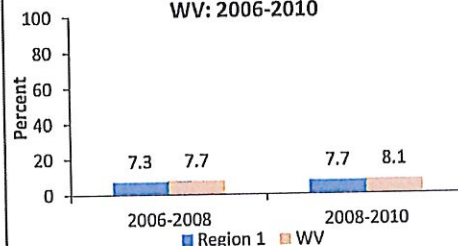
*There are 55 counties in West Virginia; 1st highest rate and 55th lowest rate. Significance: † Indicates county was significant higher than state. †† Indicates state was significant higher than county.



Drug Consumption

Drug Use Among Persons 12 and Older

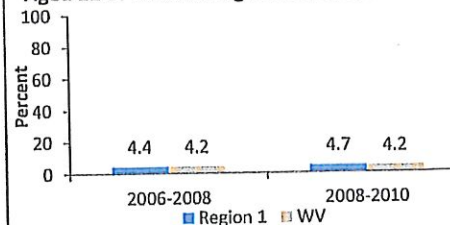
Percent of Illicit Drug Use in the Past Month Among Persons Aged 12 or Older in Region 1 & WV: 2006-2010



Source: NSDUH

Note: Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, including data from original methamphetamine questions but not including new methamphetamine items added in 2005 and 2006. The 2006-2008 & 2008-2011 data was revised March 2012. See previous definition of Region 1.

Percent of Illicit Drug Use Other Than Marijuana in the Past Month Among Persons Aged 12 or Older in Region 1 & WV: 2006-2010

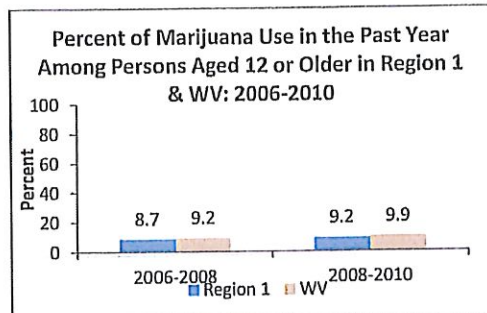


Source: NSDUH

Note: Illicit Drugs Other Than Marijuana includes cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, including data from original methamphetamine questions but not including new methamphetamine items added in 2005 and 2006.

Marshall County Behavioral Health Epidemiological Profile

2006. The 2006-2008 & 2008-2011 data was revised March 2012. See previous definition of Region 1.



Source: NSDUH

Note: 2006-2008 & 2008-2011 data was revised March 2012. See previous definition of Region 1.

| | 2006-2008 | 2008-2010 |
|---------------|-----------|-----------|
| Region 1 | 5.1% | 5.1% |
| West Virginia | 5.4% | 5.8% |

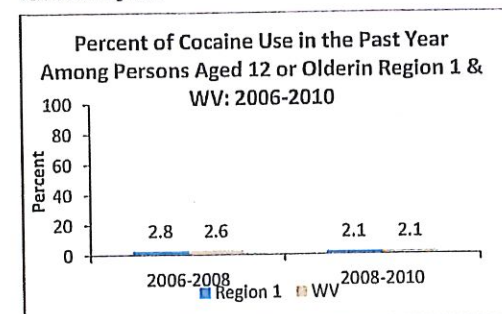
Source: NSDUH

Note: 2006-2008 & 2008-2011 data was revised March 2012. See previous definition of Region 1.

| | 2006-2008 | 2008-2010 |
|---------------|-----------|-----------|
| Region 1 | 1.3% | 1.3% |
| West Virginia | 1.2% | 1.3% |

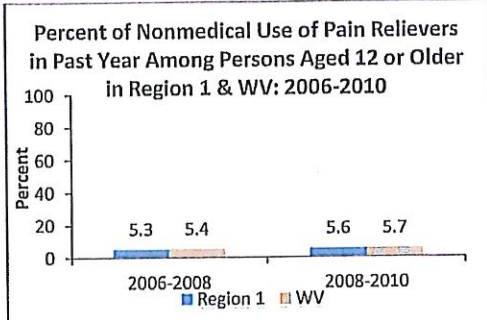
Source: NSDUH

Note: Average annual marijuana initiation rate = $100 * [(X1 + (0.5 * X1 + X2)) / 2]$, where X1 is the number of marijuana initiates in the past 24 months and X2 is the number of persons who never used marijuana. Both of the computation components, X1 and X2, are based on a survey-weighted hierarchical Bayes estimation approach. The age group is based on a respondent's age at the time of the interview, not his or her age at first use. 2006-2008 & 2008-2011 data was revised March 2012. See previous definition of Region 1.



Source: NSDUH

Note: 2006-2008 & 2008-2011 data was revised March 2012. See previous definition of Region 1.



Source: NSDUH

Note: 2006-2008 & 2008-2011 data was revised March 2012. See previous definition of Region 1.

Drug Risk & Protective Factors

Perceptions of Great Risk of Smoking Marijuana Once a Month Among Persons Aged 12 or Older in Region 1 & WV: 2006-2010

| | 2006-2008 | 2008-2010 |
|---------------|-----------|-----------|
| Region 1 | 45.0% | 41.6% |
| West Virginia | 44.3% | 42.0% |

Illicit Drug Dependence or Abuse in the Past Year Among Persons Aged 12 or Older in Region 1 & WV: 2006-2010

| | 2006-2008 | 2008-2010 |
|---------------|-----------|-----------|
| Region 1 | 3.2% | 2.9% |
| West Virginia | 2.9% | 2.9% |

Illicit Drug Dependence in the Past Year Among Persons Aged 12 or Older in Region 1 & WV: 2006-2010

| | 2006-2008 | 2008-2010 |
|---------------|-----------|-----------|
| Region 1 | 2.4% | 2.3% |
| West Virginia | 2.1% | 2.3% |

Needing But Not Receiving Treatment for Illicit Drug Use in the Past Year Among Persons Aged 12 or Older in Region 1 & WV: 2006-2010

| | 2006-2008 | 2008-2010 |
|---------------|-----------|-----------|
| Region 1 | 2.8% | 2.5% |
| West Virginia | 2.6% | 2.6% |

Source: NSDUH

Note: Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, including data from original methamphetamine questions but not including new methamphetamine items added in 2005 and 2006. Dependence or abuse is based on definitions found in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). Needing But Not Receiving Treatment refers to respondents classified as needing treatment for illicit drugs, but not receiving treatment for an illicit drug problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], and mental health centers). 2006-2008 & 2008-2011 data was revised March 2012. See previous definition of Region 1.

Demographics

Geography & Population

West Virginia's population is increasing and growing older, a combination that holds important implications for healthcare and public health infrastructure. The entire population increased to 1,855,364 as of July 2011 [1], a 3 percent increase from 2000 [2]. The population increase varied by county, however, with counties such as Berkeley seeing a steady population growth (78 percent from 1990 to 2011 due to its proximity to Washington, D.C.), and other counties such as McDowell experiencing a population decrease (31 percent from 1990 to 2011). Table 1 provides population change data from 1990 to 2011 for each county in West Virginia [3, 4].

The largest cities in West Virginia are Charleston (population 51,177), Huntington (population 49,253) and Parkersburg (population 31,557).

Rural West Virginia

The majority of West Virginia's population remains rural with a

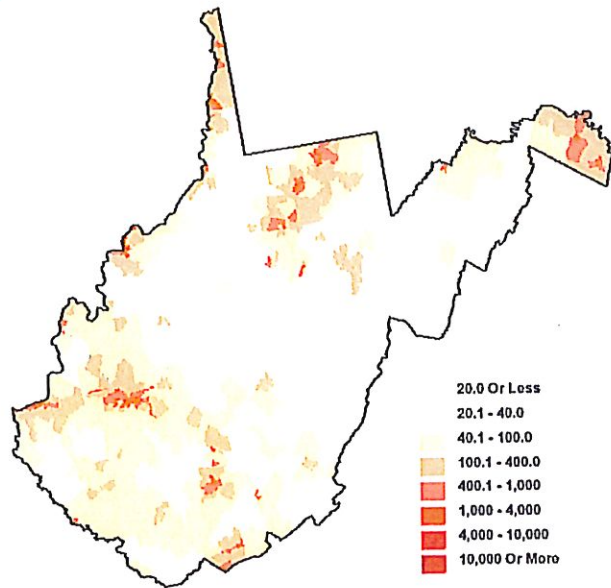


Figure 1. Population density per square mile
Source: U.S. Census 2010 data, Communitycommons.org

population density of less than 100 persons per square mile (see Figure 1) and an average of 77.1 persons per square mile throughout the state's 24,038 square miles [1]. Rural residents of West Virginia face unique challenges to health and wellness, such as greater distances between people and resources, lack of access to healthcare facilities and infrastructures that

support healthy behaviors.

Aging Population

West Virginia's population is among the oldest in the country and the median age of West Virginia residents is rising, increasing from 38.9 in 2000 [2] to 41.3 in 2010 [5]. According to the 2010 U.S. Census, West Virginia was one of only seven states with a median age above 40 and was surpassed only by

Demographics

Maine and Vermont with median ages of 42.7 and 41.5, respectively [5]. Such an aging population requires greater emphasis on providing services and resources for

elderly residents.

Age Distribution

West Virginia's population is changing (Figure 2). From 2000 to 2010 the state's

percentage of youth aged 0 to 14 decreased by four percent, while the population ages 35 to 44 fell 13 percent [2, 5]. At the same time, the population ages 45 and

| Geographic Area | 1990 Census | July 1, 2011 Estimate | Percent Change | Geographic Area | 1990 Census | July 1, 2011 Estimate | Percent Change |
|-----------------|-------------|-----------------------|----------------|-----------------|-------------|-----------------------|----------------|
| West Virginia | 1,793,477 | 1,855,364 | 3% | Mercer | 64,980 | 62,465 | -4% |
| Barbour | 15,699 | 16,520 | 5% | Mineral | 26,697 | 28,192 | 6% |
| Berkeley | 59,253 | 105,750 | 78% | Mingo | 33,739 | 26,563 | -21% |
| Boone | 25,870 | 24,444 | -6% | Monongalia | 75,509 | 98,528 | 30% |
| Braxton | 12,998 | 14,485 | 11% | Monroe | 12,406 | 13,534 | 9% |
| Brooke | 26,992 | 23,844 | -12% | Morgan | 12,128 | 17,535 | 45% |
| Cabell | 96,827 | 96,653 | 0% | Nicholas | 26,775 | 26,268 | -2% |
| Calhoun | 7,885 | 7,652 | -3% | Ohio | 50,871 | 44,246 | -13% |
| Clay | 9,983 | 9,357 | -6% | Pendleton | 8,054 | 7,673 | -5% |
| Doddridge | 6,994 | 8,171 | 17% | Pleasants | 7,546 | 7,611 | 1% |
| Fayette | 47,952 | 45,699 | -5% | Pocahontas | 9,008 | 8,786 | -2% |
| Gilmer | 7,669 | 8,705 | 14% | Preston | 29,037 | 33,723 | 16% |
| Grant | 10,428 | 11,891 | 14% | Putnam | 42,835 | 56,008 | 31% |
| Greenbrier | 34,693 | 35,800 | 3% | Raleigh | 76,819 | 79,127 | 3% |
| Hampshire | 16,498 | 23,812 | 44% | Randolph | 27,803 | 29,465 | 6% |
| Hancock | 35,233 | 30,571 | -13% | Ritchie | 10,233 | 10,295 | 1% |
| Hardy | 10,977 | 13,912 | 27% | Roane | 15,120 | 14,858 | -2% |
| Harrison | 69,371 | 69,436 | 0% | Summers | 14,204 | 13,867 | -2% |
| Jackson | 25,938 | 29,241 | 13% | Taylor | 15,144 | 16,916 | 12% |
| Jefferson | 35,926 | 54,225 | 51% | Tucker | 7,728 | 7,021 | -9% |
| Kanawha | 20,7619 | 192,315 | -7% | Tyler | 9,796 | 9,121 | -7% |
| Lewis | 17,223 | 16,416 | -5% | Upshur | 22,867 | 24,322 | 6% |
| Lincoln | 21,382 | 21,550 | 1% | Wayne | 41,636 | 42,126 | 1% |
| Logan | 43,032 | 36,457 | -15% | Webster | 10,729 | 9,143 | -15% |
| McDowell | 35,233 | 21,729 | -38% | Wetzel | 19,258 | 16,351 | -15% |
| Marion | 57,249 | 56,586 | -1% | Wirt | 5,192 | 5,762 | 11% |
| Marshall | 37,356 | 32,800 | -12% | Wood | 86,915 | 87,025 | 0% |
| Mason | 25,178 | 27,298 | 8% | Wyoming | 28,990 | 23,738 | -18% |

Table 1. West Virginia population by county
Source: U.S. Census data, 1990 and 2011

Demographics

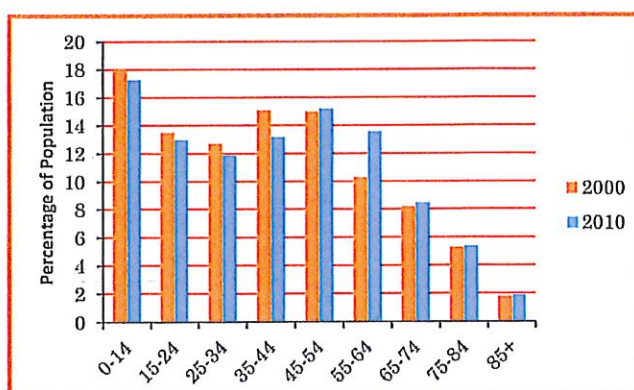


Figure 2. Age distribution of West Virginia population
Source: U.S. Census data, 2000 and 2010

older has risen, with the most dramatic increase in the 55-64 age group (32 percent).

Race/Ethnicity

West Virginia's population has become slightly more diverse; as illustrated in Table 2, 95.3 percent of the

population is white, a slight decrease from 95.9 percent in 2000. The black or African American population, however, has increased by 20 percent and now makes up 4.2 percent of the state's population. The state's Hispanic or

Latino population has also experienced substantial growth since 2000, increasing by 71 percent to make up 1.2 percent of the population.

In 2011, 1.3 percent of the population was foreign born, and 2.3 percent of the population did not speak English at home [1]. This diversity brings new challenges for public health, including language barrier issues. As more residents are non-native English speakers, it becomes necessary to have materials and staff to communicate in languages other than English.

| Race alone or in combination with one or more races* | 2000 | | 2010 | |
|--|------------|------------|------------|------------|
| | Population | Percentage | Population | Percentage |
| White | 1,733,390 | 95.9 | 1,765,642 | 95.3 |
| Black or African American | 62,817 | 3.5 | 76,945 | 4.2 |
| American Indian and Alaska Native | 10,644 | 0.6 | 13,314 | 0.7 |
| Asian | 11,873 | 0.7 | 16,465 | 0.9 |
| Native Hawaiian and Other Pacific Islander | 887 | 0.0 | 1,254 | 0.1 |
| Other Race | 5,579 | 0.3 | 8,164 | 0.4 |
| Hispanic Origin | | | | |
| Hispanic or Latino | 12,279 | 0.7 | 22,268 | 1.2 |
| Not Hispanic or Latino | 1,796,065 | 99.3 | 1,830,726 | 98.8 |

Table 2. West Virginia Population by Race/Ethnicity Source: U.S. Census data, 2000 and 2010

*The six numbers may add to more than the total population, and the six percentages may add to more than 100 percent because individuals may report more than one race.

Demographics

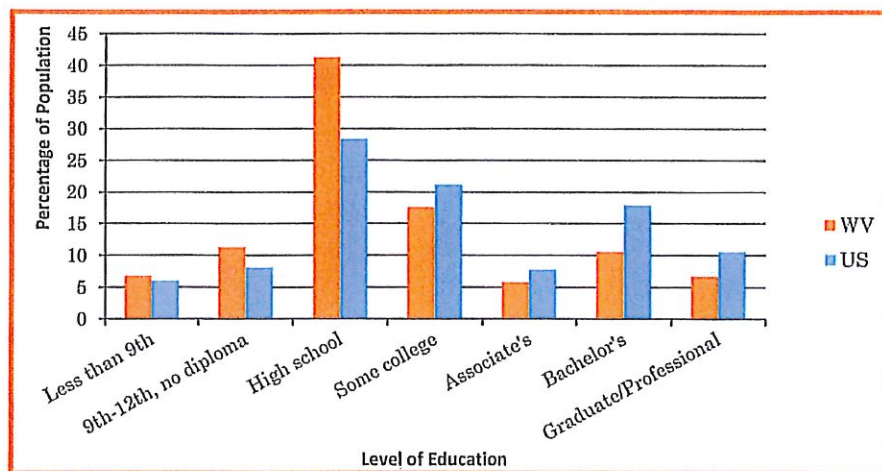


Figure 3. Highest level of education attained by West Virginia population
Source: U.S. Census data, 2010

Education

Education is an important factor for

gauging health behaviors, as persons with less education are

more likely to smoke and to be diagnosed with a chronic condition such as diabetes. Adults who attained education beyond a high school degree were much less likely to be smokers [6].

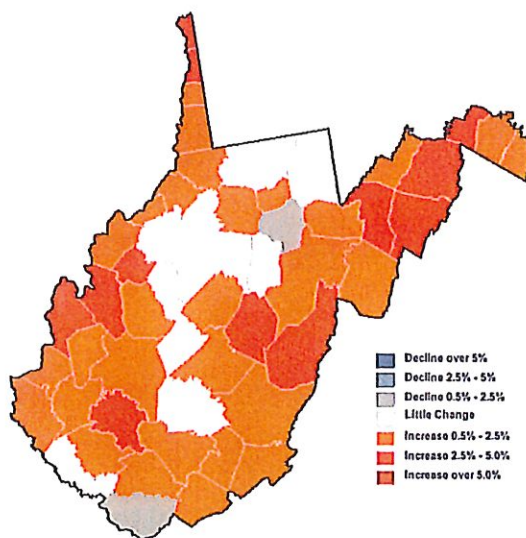


Figure 4. Unemployment change from 2000 to 2010
Source: U.S. Census data, Communitycommons.org

West Virginia's population has a large disparity in level of education. As shown in Figure 3, the highest education level achieved by the majority of the population is a high school diploma (41.3 percent). Compared to this, a significantly small percentage of the population has completed either an associate's degree (5.8 percent) or a

Demographics

bachelor's degree (10.6 percent). These numbers

are especially low when compared to the United

States population, of which 28.4 percent have

| County | Percentage in Poverty | | Median Household Income 2010 | County | Median Household Income 2010 | Percentage in Poverty | |
|------------|-----------------------|------|------------------------------|------------|------------------------------|-----------------------|------|
| | 2000 | 2010 | | | | 2000 | 2010 |
| Barbour | 19.4 | 18.2 | \$31,634 | Mineral | \$38,279 | 13.8 | 16.7 |
| Berkeley | 10.4 | 12.7 | \$50,923 | Mingo | \$31,915 | 24.4 | 23.7 |
| Boone | 18.4 | 18.9 | \$38,126 | Monongalia | \$42,247 | 14.2 | 22.2 |
| Braxton | 20.4 | 23.6 | \$32,606 | Monroe | \$34,637 | 16.3 | 17.9 |
| Brooke | 10.4 | 14.7 | \$38,197 | Morgan | \$40,636 | 10.8 | 13.5 |
| Cabell | 15.4 | 23.3 | \$36,274 | Nicholas | \$35,945 | 18.7 | 18.6 |
| Calhoun | 21.2 | 24.2 | \$29,084 | Ohio | \$38,997 | 13.2 | 16.6 |
| Clay | 24.2 | 26 | \$31,232 | Pendleton | \$36,997 | 12.2 | 15.3 |
| Doddridge | 16.6 | 20.6 | \$34,444 | Plasants | \$40,416 | 12 | 15.1 |
| Fayette | 20.6 | 22.6 | \$30,856 | Pocahontas | \$31,289 | 16.5 | 19.9 |
| Gilmer | 22.2 | 29.1 | \$31,558 | Preston | \$42,629 | 15.2 | 15.8 |
| Grant | 13.3 | 17.6 | \$36,487 | Putnam | \$52,912 | 8.6 | 10.4 |
| Greenbrier | 15.9 | 20.8 | \$35,456 | Raleigh | \$37,915 | 17.2 | 18 |
| Hampshire | 13.8 | 18.4 | \$33,991 | Randolph | \$35,176 | 16.7 | 18.7 |
| Hancock | 9.7 | 13.6 | \$38,501 | Ritchie | \$35,170 | 16.3 | 19.9 |
| Hardy | 12.1 | 16.3 | \$37,002 | Ronne | \$31,362 | 19.5 | 23.2 |
| Harrison | 15.3 | 17.3 | \$40,441 | Summers | \$29,261 | 22.3 | 23 |
| Jackson | 14.1 | 20.2 | \$38,600 | Taylor | \$36,846 | 17.8 | 20.3 |
| Jefferson | 8.8 | 11.1 | \$63,156 | Tucker | \$33,916 | 14.3 | 19.2 |
| Kanawha | 13 | 14.8 | \$43,110 | Tyler | \$36,122 | 15 | 16.2 |
| Lewis | 17.2 | 19.2 | \$34,734 | Upshur | \$35,893 | 18.9 | 21.9 |
| Lincoln | 22.2 | 24.2 | \$31,119 | Wayne | \$36,360 | 16.9 | 20.2 |
| Logan | 21.8 | 22.3 | \$33,202 | Webster | \$29,083 | 26.7 | 26.5 |
| McDowell | 32.1 | 33.6 | \$21,133 | Wetzel | \$36,390 | 15.9 | 18.3 |
| Marion | 14.4 | 16.8 | \$38,856 | Wirt | \$36,037 | 17.6 | 22.1 |
| Marshall | 13.4 | 17 | \$37,206 | Wood | \$39,456 | 13.2 | 15.5 |
| Mason | 16.3 | 18.4 | \$36,279 | Wyoming | \$35,872 | 22.2 | 20 |
| Mercer | 17.8 | 21.6 | \$32,366 | | | | |

Table 3. West Virginia percent in poverty by county Source: U.S. Census data, 2000 and 2010

Demographics

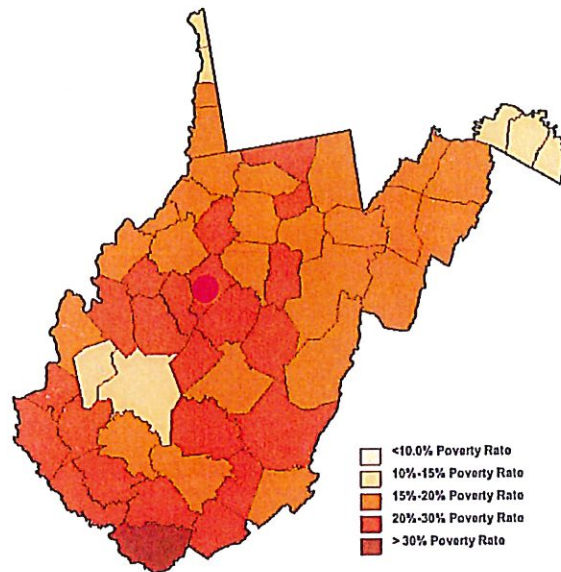


Figure 5. Percent living in poverty
Source: SAIP Poverty Estimates, 2010, Communitycommons.org

earned a high school diploma; 7.8 percent and 17.9 percent have an associate's degree and a bachelor's degree respectively.

Income

Income is another factor that directly relates to the health of West Virginia residents, as persons with lower income often have less access to necessary healthcare. In addition, persons with lower income are more likely to engage in negative health behaviors. For example,

the highest smoking prevalence in West Virginia is among those earning less than \$15,000 per year, while the lowest prevalence is among those earning \$75,000 or more per year. [6]

During 2006-2010, the median household income for West Virginia's 740,874 households was \$38,380 and the per capita income was \$21,232. The percentage of the population living below the poverty line was 17.4 percent [1].

Disability

In 2011, 18.9 percent of West Virginia's population reported some type of disability, compared to 12.1 percent of the United States population. Among West Virginia's population aged 18-64, 17.3 percent reported a disability, while 43.5 percent of the population over 65 reported some type of disability. Nationally, 10.2 percent of the population aged 18-64 reported a disability, and

| Subject | West Virginia | | |
|--|---------------|-------------------|---------------------------|
| | Total | With a disability | Percent with a disability |
| Total civilian noninstitutionalized population | 1,826,485 | 345,931 | 18.90% |
| Under 5 years | 103,978 | 941 | 0.90% |
| 5 to 17 years | 281,324 | 19,086 | 6.80% |
| 18 to 64 years | 1,148,554 | 198,721 | 17.30% |
| 65 years and over | 292,629 | 127,183 | 43.50% |

Table 4. West Virginia residents with disabilities by age
Source: American Community Survey, 2011

Demographics

| West Virginia Population with a Disability | Percentage | Total |
|--|------------|-----------|
| Total: | 100% | 1,148,554 |
| In the labor force: | 67% | 774,380 |
| Employed: | 61% | 705,626 |
| With a disability | 4% | 48,218 |
| With a hearing difficulty | 1% | 15,745 |
| With a vision difficulty | 0% | 5,611 |
| With a cognitive difficulty | 1% | 11,370 |
| With an ambulatory difficulty | 2% | 21,333 |
| With a self-care difficulty | 0.003% | 3,594 |
| With an independent living difficulty | 1% | 7,140 |
| No disability | 57% | 657,408 |
| Unemployed: | 6% | 68,754 |
| With a disability | 1% | 8,841 |
| With a hearing difficulty | 0.002% | 2,279 |
| With a vision difficulty | 0.002% | 1,923 |
| With a cognitive difficulty | 0.004% | 4,475 |
| With an ambulatory difficulty | 0.002% | 2,712 |
| With a self-care difficulty | 0.0005% | 546 |
| With an independent living difficulty | 0.002% | 2,507 |
| No disability | 5% | 59,913 |
| Not in labor force: | 33% | 374,174 |
| With a disability | 12% | 141,662 |
| With a hearing difficulty | 2% | 26,870 |
| With a vision difficulty | 2% | 27,109 |
| With a cognitive difficulty | 6% | 66,440 |
| With an ambulatory difficulty | 8% | 93,368 |
| With a self-care difficulty | 3% | 30,899 |
| With an independent living difficulty | 6% | 64,239 |
| No disability | 20% | 232,512 |

Table 5. West Virginia residents with disabilities by employment status
Source: American Community Survey, 2011

that number increased to 36.6 percent for the population over 65.

Individuals with disabilities make up 12 percent of West Virginia's population that is unemployed and not actively seeking a job (compared to 6 percent nationally). An additional one percent of those temporarily unemployed reported a disability (similar to the national rate of 1 percent) and 4 percent of the working population reported some type of disability (compared to 3 percent nationally) [7].

These percentages of individuals with disabilities bring additional challenges for healthcare. Those with disabilities are more likely to have poor health overall, to be physically inactive and to smoke [8]. They may also have less access to healthcare or health insurance and may not be able to afford the care they need.

In addition, those with disabilities may suffer from multiple secondary conditions that decrease

Demographics

| Health Risk Factors (percent of population) | Non- Hispanic White | Non- Hispanic Black | Hispanic |
|--|---------------------------|---------------------------|----------|
| Diagnosed high blood pressure (2007-2009) | 32.4 | 44.7 | 33.7 |
| Obesity age 20 & over (2008-2010) | 32.7 | 46.3 | 29.6 |
| No leisure-time physical activity (2008-2010) | 31.6 | 36.4 | 31 |
| Smoking currently (2008-2010) | 27.4 | 28.8 | 26.5 |
| Eats 5+ fruits and vegetables a day (2007-2009) | 17.3 | 18.5 | 21.8 |
| Preventive Care (percent of population) | | | |
| Cholesterol screening in past 5 yrs. (2007-2009) | 76.7 | 74 | 77.5 |
| Routine check-up in past 2 yrs. (2008-2010) | 83 | 94.7 | 86.6 |
| Dental visit within the past year (2008-2010) | 60 | 62.5 | 52.7 |
| Health Insurance Coverage (percent of population) | | | |
| Health insurance coverage ages 18-64 (2008-2010) | 78.9 | 78.5 | 80.8 |

Table 6. West Virginia health disparities profile
Source: U.S. Department of Health and Human Services, 2011

their quality of life and require additional medical treatment [8].

Health Disparities

West Virginia has one of the highest death rates in the United States and consistently ranks among the bottom tier of states in all major causes of death except for deaths due to influenza and pneumonia [9].

Additionally, West Virginia's population also ranks among the bottom tier of states in health risk factor categories such as the state's obesity rate, which exceeds 30 percent and is among the highest in the nation. These numbers are even higher among West Virginia's minority population, as the state's black population has significantly higher rates

of obesity (39.5 percent compared to 32.1 percent among whites and 29.7 percent among Hispanics in 2011) and high blood pressure (44.7 percent compared to 32.4 percent of whites and 33.7 percent of Hispanics in 2009). [9,10].

Additionally, diabetes rates also vary by race and ethnicity, as 15.2 percent of the non-Hispanic black population is diabetic, compared to 11.8 percent of the white population and 11.7 percent of the Hispanic population [10].

Disparities exist in other chronic disease rates as well, including cardiovascular disease (5.9 percent of the white population reported having had a heart attack, compared to 7.2 percent of the black population) [11].

Leading Causes of Death

West Virginia's rates for all leading causes of death are significantly higher than those of the United States as a whole (Figure 6). The leading cause of death is heart

Demographics

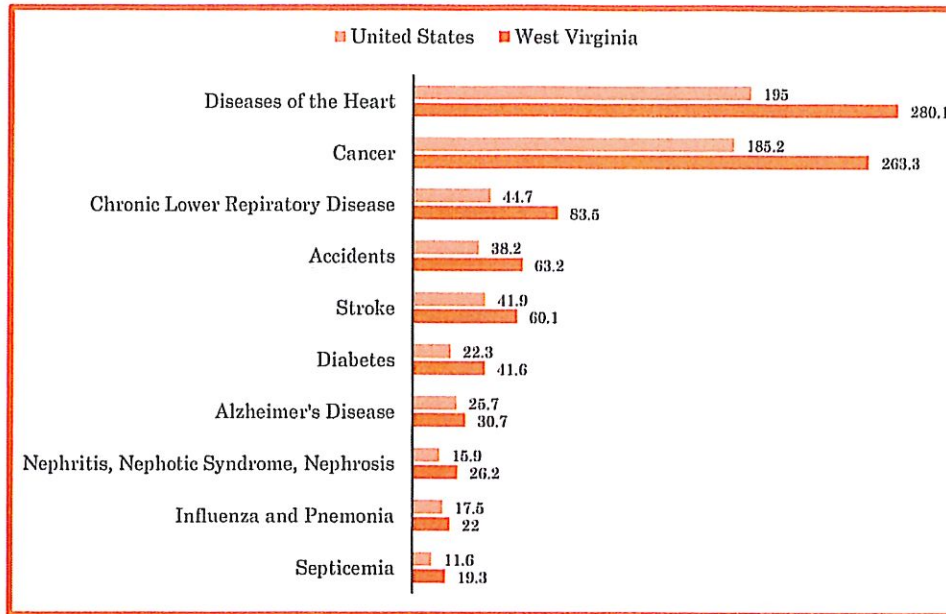


Figure 6. West Virginia leading causes of death (rate per 100,000 population)
Source: West Virginia Bureau for Public Health, Health Statistics Center (2012) WV Vital Statistics, 2009

disease, followed closely by cancer. Each of these claim more than 250 out of every 100,000 lives in West Virginia, compared to the national rates, which are both under 200 per 100,000. The next highest causes of death in West Virginia are chronic lower respiratory disease, accidents and stroke, with rates of 60 to 84 residents per 100,000 [12].

Life Expectancy & Years of Life Lost
Years of potential life lost

(YPLL) is an estimate of the average years a person would have lived if he or she had not died prematurely. In the West Virginia Vital Statistics, 2009, YPLL was calculated as the difference between age 75 (an average life span) and the age at death [12]. Calculating years of potential life lost highlights causes of mortality during childhood and can be used to identify important causes of

premature death. This calculation gives more weight to deaths occurring among younger people.

The four greatest causes of potential life lost in both West Virginia and the United States are cancer, heart disease, unintentional injury and suicide. West Virginia's percentage of YPLL for chronic lower respiratory disease and diabetes are well above the national rates (4 percent and 3.2 percent compared to 2.7

Demographics

| Cause of Death | Years of Potential Life Lost Before Age 75 | | Years of Potential Life Lost Before Age 75 | | West Virginia Actual Deaths | |
|---|--|---------|--|---------|-----------------------------|---------|
| | West Virginia 2009 | | United States 2009 | | 2009 | |
| | Number | Percent | Number | Percent | Number | Percent |
| All causes | 174,632 | 100% | 20,261,405 | 100% | 21,385 | 100% |
| Cancer | 37,441 | 21.4% | 4,397,332 | 21.7% | 4,792 | 22.4% |
| Heart disease | 24,859 | 14.2% | 3,038,728 | 15% | 5,097 | 23.8% |
| Unintentional injury | 34,238 | 19.6% | 2,928,868 | 14.5% | 1,284 | 6% |
| Suicide | 8,286 | 4.7% | 1,063,300 | 5.2% | 288 | 1.3% |
| Chronic lower respiratory diseases | 6,987 | 4% | 543,247 | 2.7% | 1,519 | 7.1% |
| Diabetes | 5,659 | 3.2% | 494,484 | 2.4% | 757 | 3.5% |
| Stroke | 4,238 | 2.4% | 518,952 | 2.6% | 1,093 | 5.1% |
| Infectious and parasitic diseases | 3,773 | 2.2% | NA | NA | 553 | 2.6% |
| Chronic liver disease and cirrhosis | 3,733 | 2.1% | NA | NA | 246 | 1.2% |
| Congenital malformations | 3,549 | 2% | 548,362 | 2.7% | 66 | 0.3% |
| Homicide | 3,445 | 2% | 702,725 | 3.5% | 99 | 0.5% |
| Sudden infant death syndrome | 2,384 | 1.4% | NA | NA | 32 | 0.1% |
| Nephritis, Nephrotic Syndrome, Nephrosis | 2,328 | 1.3% | NA | NA | 476 | 2.2% |
| Disorders relating to short gestation and low birthweight | 2,161 | 1.2% | NA | NA | 29 | 0.1% |
| Influenza and pneumonia | 2,116 | 1.2% | NA | NA | 401 | 1.9% |
| Obesity | 1,272 | 0.7% | NA | NA | 62 | 0.3% |
| Alcohol or drug psychoses, dependence or abuse | 1,256 | 0.7% | NA | NA | 57 | 0.3% |
| Other newborn respiratory conditions | 1,043 | 0.6% | NA | NA | 57 | 0.3% |
| All other causes (residual) | 25,868 | 14.8% | 5,043,144 | 24.9% | 4,520 | 21.1% |

Table 7. West Virginia, U.S. years of potential life lost, 2009

Source: West Virginia Bureau for Public Health, Health Statistics Center, 2012

Centers for Disease Control & Prevention, WISQARS Years of Potential Life Lost Report 1999-2010

percent and 2.4 percent respectively).

West Virginia is slightly below the national numbers in YPLL for stroke (2.4 percent),

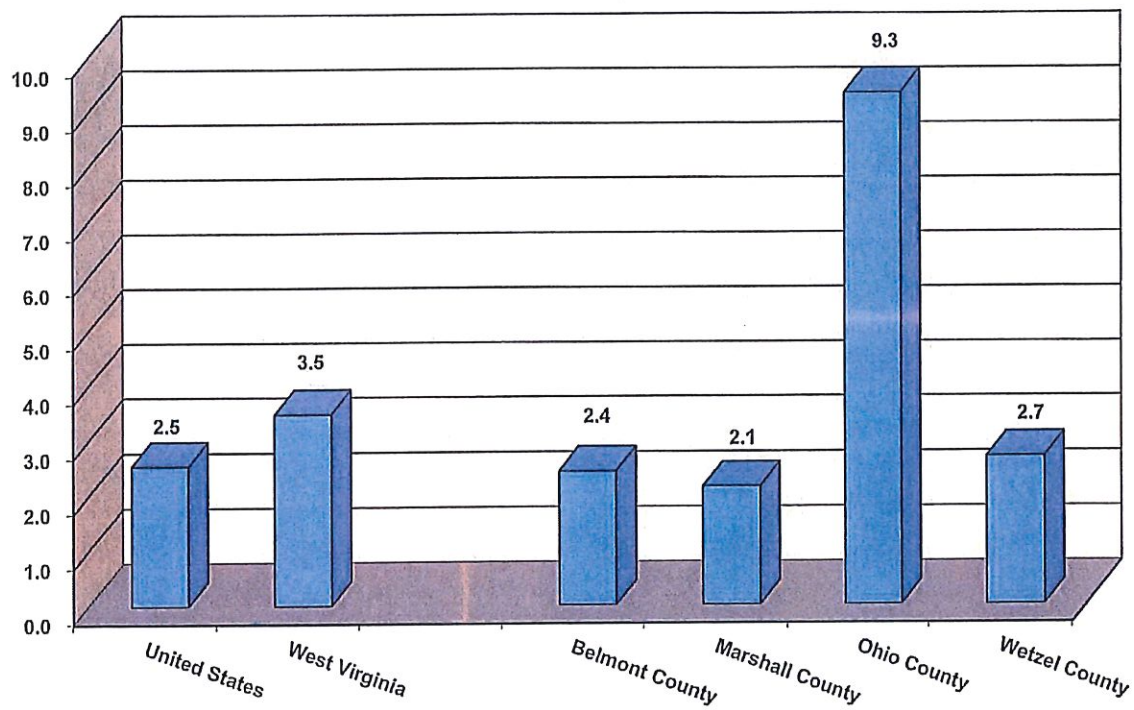
congenital malformations (2 percent) and homicide (2 percent), compared to the national YPLL (2.6 percent, 2.7 percent and 3.5 percent respectively) [12, 13].

YPLL draws attention to areas where West Virginia's public health system can be improved to help residents live longer, healthier lives.

Appendix 6:

Acute Hospital Beds per 1,000 People

source: 2010 US census &
2012 AHA Guide to Hospitals



Appendix7:

08-12-2014

**Reynolds Memorial Hospital Community
1119 Surveys Returned**

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1. Which social problems are the most significant in our area?

| | N/A | | Rank 1 | | Rank 2 | | Rank 3 | | Total | |
|------------------------|-----|-----|--------|-----|--------|-----|--------|-----|-------|-----|
| Drug Abuse | 130 | 12% | 632 | 56% | 228 | 20% | 129 | 12% | 989 | 88% |
| Binge Drinking | 749 | 67% | 47 | 4% | 197 | 18% | 126 | 11% | 370 | 33% |
| Lack of Housing | 905 | 81% | 23 | 2% | 82 | 7% | 109 | 10% | 214 | 19% |
| Lack of Jobs | 338 | 30% | 298 | 27% | 274 | 24% | 209 | 19% | 781 | 70% |
| Access to Medical Care | 849 | 76% | 58 | 5% | 97 | 9% | 115 | 10% | 270 | 24% |
| Crime | 585 | 52% | 43 | 4% | 178 | 16% | 313 | 28% | 534 | 48% |

2. What do you feel are the major health issues facing citizens in our community?

| | N/A | | Rank 1 | | Rank 2 | | Rank 3 | | Total | |
|---------------|------|-----|--------|-----|--------|-----|--------|-----|-------|-----|
| Obesity | 272 | 24% | 389 | 35% | 226 | 20% | 232 | 21% | 847 | 76% |
| Drug Abuse | 338 | 30% | 396 | 35% | 248 | 22% | 137 | 12% | 781 | 70% |
| Drinking | 724 | 65% | 39 | 3% | 173 | 15% | 183 | 16% | 395 | 35% |
| Diabetes | 564 | 50% | 102 | 9% | 251 | 22% | 202 | 18% | 555 | 50% |
| Heart Disease | 550 | 49% | 159 | 14% | 175 | 16% | 235 | 21% | 569 | 51% |
| Other | 1019 | 91% | 25 | 2% | 13 | 1% | 62 | 6% | 100 | 9% |

3. Who is best able to solve these problems?

| | N/A | | Rank 1 | | Rank 2 | | Rank 3 | | Rank 4 | | Total | |
|-------------------|-----|-----|--------|-----|--------|-----|--------|-----|--------|-----|-------|-----|
| State/Federal Gov | 311 | 28% | 383 | 34% | 68 | 6% | 102 | 9% | 255 | 23% | 808 | 72% |
| Local Health Dept | 269 | 24% | 84 | 8% | 257 | 23% | 345 | 31% | 164 | 15% | 850 | 76% |
| Local Hospitals | 224 | 20% | 66 | 6% | 412 | 37% | 302 | 27% | 115 | 10% | 895 | 80% |
| Local Physicians | 190 | 17% | 397 | 35% | 231 | 21% | 172 | 15% | 129 | 12% | 929 | 83% |
| Other | 884 | 79% | 141 | 13% | 29 | 3% | 23 | 2% | 42 | 4% | 235 | 21% |

4. Do you have any barriers to receiving health care?

| | | |
|---|-----|-----|
| Lack of transportation | 62 | 6% |
| No medical insurance | 45 | 4% |
| The service(s) I require are not offered in the community | 54 | 5% |
| Other | 91 | 8% |
| I do not have any barriers to receiving health care | 892 | 80% |

Reynolds Memorial Hospital Community 1119 Surveys Returned

5. What healthcare services, if any, do you believe are lacking in our community?

| | | |
|----------------------------|-----|-----|
| Cancer Care | 359 | 32% |
| Long Term Care | 344 | 31% |
| Women's Health | 192 | 17% |
| Assisted Living Facilities | 505 | 45% |
| Geriatric Services | 259 | 23% |
| Behavioral Services | 419 | 37% |
| Other | 173 | 15% |

6. What physician specialties are needed in our community?

| | N/A | | Rank 1 | | Rank 2 | | Rank 3 | | Total | |
|-----------------|-----|-----|--------|-----|--------|-----|--------|-----|-------|-----|
| Family Medicine | 510 | 46% | 441 | 39% | 92 | 8% | 76 | 7% | 609 | 54% |
| OB / GYN | 712 | 64% | 128 | 11% | 183 | 16% | 96 | 9% | 407 | 36% |
| Oncology | 598 | 53% | 162 | 14% | 193 | 17% | 166 | 15% | 521 | 47% |
| Orthopedics | 734 | 66% | 55 | 5% | 177 | 16% | 153 | 14% | 385 | 34% |
| Urology | 797 | 71% | 64 | 6% | 107 | 10% | 151 | 13% | 322 | 29% |
| Other | 950 | 85% | 80 | 7% | 39 | 3% | 50 | 4% | 169 | 15% |

7. For your immediate healthcare needs, where do you go?

| | N/A | | Rank 1 | | Rank 2 | | Rank 3 | | Total | |
|----------------------|-----|-----|--------|-----|--------|-----|--------|-----|-------|-----|
| Family Doctor | 134 | 12% | 895 | 80% | 60 | 5% | 30 | 3% | 985 | 88% |
| Emergency Department | 399 | 36% | 68 | 6% | 442 | 39% | 210 | 19% | 720 | 64% |
| Urgent Care Center | 507 | 45% | 65 | 6% | 220 | 20% | 327 | 29% | 612 | 55% |

8. How can Reynolds Memorial Hospital help with these issues?

| | N/A | | Rank 1 | | Rank 2 | | Rank 3 | | Rank 4 | | Total | |
|----------------------|------|-----|--------|-----|--------|-----|--------|-----|--------|----|-------|-----|
| Community Programs | 497 | 44% | 210 | 19% | 255 | 23% | 153 | 14% | 4 | 0% | 622 | 56% |
| Offering workshops | 518 | 46% | 139 | 12% | 210 | 19% | 248 | 22% | 4 | 0% | 601 | 54% |
| Partnering with Orgs | 359 | 32% | 472 | 42% | 150 | 13% | 135 | 12% | 3 | 0% | 760 | 68% |
| Other | 1030 | 92% | 62 | 6% | 15 | 1% | 5 | 0% | 7 | 1% | 89 | 8% |

9. In the past twelve months, have you used the services of Reynolds Memorial Hospital?

| | | |
|-----|-----|-----|
| Yes | 671 | 60% |
| No | 364 | 33% |

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**Reynolds Memorial Hospital Community
1119 Surveys Returned**

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10. How would you rate your experience?

| | | |
|-------------------|-----|-----|
| Excellent | 386 | 34% |
| Good | 305 | 27% |
| Needs Improvement | 51 | 5% |
| Poor | 21 | 2% |
| N/A | 355 | 32% |

11. If you did not choose Reynolds Memorial Hospital for your care, why?

| | | |
|---|-----|-----|
| Insurance Reason | 54 | 5% |
| They do not offer the service(s) I need | 72 | 6% |
| The ambulance would not stop at RM | 8 | 1% |
| Other | 297 | 27% |
| N/A | 707 | 63% |

12. Do you, or your family, use the internet at home?

| | | |
|-----|-----|-----|
| Yes | 701 | 63% |
| No | 330 | 29% |
| N/A | 87 | 8% |

13. If you answered yes, would you like to receive notifications from RMH about services and community programming in this manner?

| | | |
|-----|-----|-----|
| Yes | 189 | 17% |
| No | 546 | 49% |
| N/A | 383 | 34% |

14. Gender?

| | | |
|-------|-----|-----|
| Male | 299 | 27% |
| Femal | 723 | 65% |

15. How many years have you lived in the community?

| | | |
|-------------|------|-----|
| 0 - 5 Years | 25 | 2% |
| 5 + Years | 1009 | 90% |

16. Which category best represents the age of the head of the household?

| | | |
|---------------|-----|-----|
| 30 or younger | 21 | 2% |
| 30 - 45 | 115 | 10% |
| 46 - 64 | 381 | 34% |
| 65 + | 524 | 47% |