MARSHALL COUNTY

COMMUNITY NEEDS ASSESSMENT

2011

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Health promotion has evolved over time from focusing solely on the health environment to focusing on health education and health behavior adaptation. In order to assist in formulating strategies for addressing various health concerns, a community health needs assessment was conducted for Marshall County to identify the leading health concerns.

This needs assessment was designed to assist in the implementation of the Healthy People 2010 and 2020 objectives. The results were compiled and analyzed to determine the target issues of health concern and to identify the behavioral risk factors which can be addressed to positively affect the health risk concerns of Marshall County.

The Healthy People 2010 objectives were designed to improve the health status of the general population. Healthy People 2020 continues in this tradition with its ambitious yet achievable 10 year agenda for improving the Nation's health. The objectives focus on various risk factors and increase public and professional awareness of these factors. The goals of Healthy People 2020 can be reached in the local setting of Marshall County.

Demographics

Marshall County is a largely rural county in the Northern Panhandle of West Virginia consisting of 312 square miles. The land area of Marshall County is three hundred and seven (307) square miles; the water area is 5.2 square miles. Marshall County is home to the largest conical burial mound in North America, at Moundsville. The population density is an average of 108 people per square mile, down from 116 in 2000. Marshall County is situated twelve (12) miles south of Wheeling, WV, sixty-nine (69) miles southwest of Pittsburgh, PA and one hundred and fourteen (114) miles east of Columbus, Ohio. Its county seat is Moundsville, and its southern border is the Mason Dixon line. (www.city-data.com)

Marshall County has one hospital, Reynolds Memorial Hospital, located in Glen Dale, WV. Located in Wheeling, WV are two hospital facilities offering more extensive healthcare services. There are twelve (12) licensed day care centers; three (3) libraries; one (1) public and one (1) private golf course; numerous public hiking/walking trails (Grand Vue Park encompasses six and one half miles of trails) and five (5) public fishing and boating areas.

There are four (4) West Virginia colleges in close proximity to Marshall County; Wheeling Jesuit University; WV Northern Community College, Bethany College and West Liberty University. Even though they are geographically close to Marshall County, the lack of public transportation renders it difficult for individuals without access to reliable public transportation to attend these colleges. There are eight (8) public elementary schools; four (4) parochial elementary schools; two (2) middle schools, two (2) high schools and one alternative school.

As of July 2008, there were 1,228 current college students. Residents 25 years of age or older with a high school degree or higher were at 79.7 percent and residents 25 years of age or older with a bachelor's degree or higher represented 10.7 percent of the population. (County Health Rankings/Snapshot 2010: Marshall.)

Private vs. public school enrollment:
Students in private schools in grades 1 to 8 (elementary and middle school): 249
Here: 6.2%
West Virginia: 5.5%

Students in private schools in grades 9 to 12 (high school): 112
Here: 5.8%
West Virginia: 4.8%

Students in private undergraduate colleges: 153

Here: 14.5%
West Virginia: 15.4%

Marshall County population in July 2008: 32,766 (50% urban, 50% rural), while population in Moundsville as of July 2008 was 9,109; a population change of -8.9 percent. Of particular note is that there has been a steady decline in population as follows: (www.city-data.com/county/Marshall)

Total Population	Marshall County, West Virginia
June 2010	33,107
July 1, 2008	32,766
July 1, 2007	33,112
July 1, 2006	33,481
July 1, 2005	33,883
July 1, 2004	34,341
July 1, 2003	34,609
July 1, 2002	34,827
July 1, 2001	35,161
July 1, 2000	35,395
April 2000 (Census)	35,519

The population was spread out with 20.2 percent under the age of 18; 7.30 percent from 18-24; 27.10 percent from 25-44; 28.60 percent from 45-64 and 16.80 percent who were 65 years of age or older.

Males: (48.7%)
Females: (51.3%)

Median resident age: 40.4 years
West Virginia median age: 38.9 years

Median resident age for females in Marshall County was ranked fourth highest in the state with a median age of 44.8 years old, compared to 38.9 years old in the state of West Virginia.

Industries providing employment:

- Educational, health and social services (21.4%),
- Manufacturing (13.9%),
- Retail trade (12.4%).

Type of workers:

- Private wage or salary: 82%
- Government: 13%
- Self-employed, not incorporated: 4%
- Unpaid family work: 0%

Unemployment rate in Marshall County in 2004: 6.0%
Unemployment rate in Marshall County in 2010: 12.2%
Unemployment rate in 2010 in WV: 8.8%
Unemployment nationally as of 04/2011: 9.0%

Average household size:
Marshall County: 2.4 people
West Virginia: 2.0 people

*This remains unchanged from 2006.

Households in Marshall County:

- Housing Units in 2009: 16,108
- Home Ownership Rate: 77.6%
- Median value of owner-occupied housing units: $62,600

Estimated median household income in 2009: $39,064 ($37,689 in 2008 and $30,989 in 1999)
This county: $39,064
West Virginia: $37,435

Estimated per capita personal income in 2009: $17,153; this is down from the 2003 income of $23,006.

Residents with income below the poverty level in 2009:
This county: 16.6%
Whole state: 17.9%

*This is an increase of 5.80 percent compared to Census 2000

Residents with income below 50% of the poverty level in 2009:
This county: 7.4%
Whole state: 7.6%

In October of 2009, people in group quarters in Marshall County, West Virginia:

- 355 people in state prisons
- 214 people in nursing homes
- 192 people in religious group quarters
- 45 people in other non-institutional group quarters
- 30 people in homes for the mentally retarded
- 12 people in homes for abused, dependent, and neglected children
- 8 people in homes for the mentally ill

Persons enrolled in hospital insurance and/or supplemental medical insurance (Medicare) in July 1, 2003: 5,966 (5,092 aged, 874 disabled).
Population without health insurance coverage in 2000 was 13 percent increasing to 14.6 percent in 2009 and children under 18 without health insurance coverage in 2000 was 9 percent.

Between 1999 and 2007, the percentage of people under 65 years with private health insurance declined, while enrollment in public coverage programs expanded. Uninsured people are more likely to forego needed health care because they cannot afford it. In 2007, cost was cited by more than one half of uninsured people as the reason for their lack of coverage. Other reasons given were having lost a job or a change in employment (25%), Medicaid benefits stopped (11%) and ineligibility for family insurance coverage due to age or leaving school (8%).

Races in Marshall County, West Virginia: (This remains virtually unchanged from 2006.) (US Census Bureau and city-data.com)

- White Non-Hispanic (97.9%)
- Two or more races (0.7%)
- Hispanic (0.6%)
- Black (0.7%)

97.6% of residents of Marshall County speak English at home.
1.2% of residents speak Spanish at home (65% speak English very well, 23% speak English well, 11% speak English not well).
1.0% of residents speak other Indo-European language at home (72% speak English very well, 14% speak English well, 14% speak English not well, <1% don't speak English at all).

Following is a list of state rankings for population (WV is ranked 37th) according to the 2010 US Census:

State rankings:

Rank	State	Population as of 2000 Census	Population as of 2010 Census[43]	Numerical change	Percent change
1	California	33,871,648	37,253,956	3,382,308	10.0%
2	Texas	20,851,820	25,145,561	4,293,741	20.6%
3	New York	18,976,457	19,378,102	401,645	2.1%
4	Florida	15,982,378	18,801,310	2,818,932	16.6%
5	Illinois	12,419,293	12,830,632	411,339	3.3%
6	Pennsylvania	12,281,054	12,702,379	421,325	3.4%
7	Ohio	11,353,140	11,536,504	183,364	1.6%
8	Michigan	9,938,444	9,883,640	▼54,804	–0.6%
9	Georgia	8,186,453	9,687,653	1,501,200	18.3%
10	North Carolina	8,049,313	9,535,483	1,486,170	18.5%
11	New Jersey	8,414,350	8,791,894	377,544	4.5%
12	Virginia	7,078,515	8,001,024	922,509	13.0%
13	Washington	5,894,121	6,724,540	830,419	14.1%
14	Massachusetts	6,349,097	6,547,629	198,532	3.1%
15	Indiana	6,080,485	6,483,802	403,317	6.6%
16	Arizona	5,130,632	6,392,017	1,261,385	24.6%
17	Tennessee	5,689,283	6,346,105	656,822	11.5%
18	Missouri	5,595,211	5,988,927	393,716	7.0%
19	Maryland	5,296,486	5,773,552	477,066	9.0%

20	Wisconsin	5,363,675	5,686,986	323,311	6.0%
21	Minnesota	4,919,479	5,303,925	384,446	7.8%
22	Colorado	4,301,261	5,029,196	727,935	16.9%
23	Alabama	4,447,100	4,779,736	332,636	7.5%
24	South Carolina	4,012,012	4,625,364	613,352	15.3%
25	Louisiana	4,468,976	4,533,372	64,396	1.4%
26	Kentucky	4,041,769	4,339,367	297,598	7.4%
27	Oregon	3,421,399	3,831,074	409,675	12.0%
28	Oklahoma	3,450,654	3,751,351	300,697	8.7%
29	Connecticut	3,405,565	3,574,097	168,532	4.9%
30	Iowa	2,926,324	3,046,355	120,031	4.1%
31	Mississippi	2,844,658	2,967,297	122,639	4.3%
32	Arkansas	2,673,400	2,915,918	242,518	9.1%
33	Kansas	2,688,418	2,853,118	164,700	6.1%
34	Utah	2,233,169	2,763,885	530,716	23.8%
35	Nevada	1,998,257	2,700,551	702,294	35.1%
36	New Mexico	1,819,046	2,059,179	240,133	13.2%
37	West Virginia	1,808,344	1,852,994	44,650	2.5%
38	Nebraska	1,711,263	1,826,341	115,078	6.7%
39	Idaho	1,293,953	1,567,582	273,629	21.1%
40	Hawaii	1,211,537	1,360,301	148,764	12.3%
41	Maine	1,274,923	1,328,361	53,438	4.2%
42	New Hampshire	1,235,786	1,316,470	80,684	6.5%

43	Rhode Island	1,048,319	1,052,567	4,248	0.4%
44	Montana	902,195	989,415	87,220	9.7%
45	Delaware	783,600	897,934	114,334	14.6%
46	South Dakota	754,844	814,180	59,336	7.9%
47	Alaska	626,932	710,231	83,299	13.3%
48	North Dakota	642,200	672,591	30,391	4.7%
49	Vermont	608,827	625,741	16,914	2.8%
50	District of Columbia	572,059	601,723	29,664	5.2%
51	Wyoming	493,782	563,626	69,844	14.1

OVERALL HEALTH PROBLEMS
United States and West Virginia

The United States and West Virginia are similar in the area of health concern for its residents. When looking at the overall health of West Virginia in comparison to the United States, West Virginia falls into a very serious category as one of the least healthy states.

In an effort to promote better health, the Center for Disease Control and Prevention has set a national prevention agenda known as Healthy People 2020. This initiative defines the state's health agenda and guides policy. In it are over 300 specific objectives that will be monitored over a ten year period ending in 2020.

According to the United Health Group State Health ranking Report 2009, West Virginia achieved an overall ranking of 42 as opposed to 41 in 2005. Some strengths indicated in America's Health Ranking for 2009 include a low violent crime rate at 273.8 offenses per 100,000 population; a low incidence of infectious disease at 9.5 cases per 100,000 population; high immunization coverage with 78 percent of children ages 19 to 35 months receiving complete immunizations, and ready access to adequate prenatal care with 80.1 percent of pregnant women receiving adequate prenatal care.

Also of particular interest were some significant changes in the past three years, with the percentage of children in poverty decreasing from 26.7 percent to 21.8

percent of persons under age 18. Immunization coverage decreased from 86.6 percent to 78 percent of children ages 19 to 35 months receiving complete immunizations. Since 1990, the number of limited activity days per month decreased from 7.9 to 3.2 days (60 percent) and further, since 1990, the prevalence of obesity increased from 15.0 percent to 31.9 percent of the population.

STATE HEALTH RANKINGS

West Virginia was ranked 43rd in 2004; 41st in 2005; 43rd in 2008, and 42nd in 2009 in overall quality of health. The state faces challenges in many areas as it continues with a high prevalence of smoking at 26.5 percent of the population; a high prevalence of obesity at 31.9 percent of the population; many poor mental (4.5) and physical (5.5) health days per month; high levels of air pollution at 13.6 micrograms of fine particulate per cubic meter and a high rate of preventable hospitalizations with 109.3 discharges per 1,000 Medicare enrollees. (healthyamericans.org and 2009 America's Health Rankings)

WV ranks among the bottom five states in areas such as: high mortality rates; high prevalence of smoking (26.5% of population); high rate of cancer deaths at 220.6 deaths per 100,000 population (down from 228.1 in 2004); high prevalence of cardiovascular deaths at 338.6 deaths per 100,000 population; a high prevalence of obesity at 31.9 percent of the population; high percentage of children in poverty with 24 percent under 18 years of age; and a high number of preventable hospitalizations; poor physical and mental health days. Additionally, behaviors such as recent dental visits and physical activity are poor. (healthyamericans.org and 2009 America's Health Rankings.)

According to the 2009 America's Health Rankings, WV is the state ranked 46th in occupational fatalities and air pollution. Health studies have shown a significant association between exposure to fine particles and premature death from heart or lung disease. Fine particles can aggravate heart and lung diseases and have been linked to effects such as cardiovascular symptoms; cardiac arrhythmias; heart attacks; respiratory symptoms; asthma attacks and bronchitis. Additionally, West Virginia was ranked 48th in reported hypertension and obesity, and 50th in smoking, high cholesterol, heart attack; cardiac heart disease and diabetes. Additionally, West Virginia had the highest rate of reported diabetes at 11.0 percent of adult population.

According to tobaccofreekids.org, West Virginia has a 27 percent adult smoking rate; a 26.2 percent pregnant women smoking rate; and a 27.6 percent youth smoking rate (2,400 new youth smokers per year), ranking them 51st in the country. In West Virginia, smoking is more prevalent among non-Hispanic blacks at 28.3 percent than non-Hispanic whites at 26.4 percent.

Mortality rates vary considerably by race and ethnicity in West Virginia. The West Virginia Bureau for Public Health Statistics Center (HSC) June 2009 report indicates that in the year 2007, the number of West Virginia resident deaths increased by 418. The state's crude death rate rose from 2006 at 11.4 per 1,000 population to 11.6 in 2007. The average age at death for West Virginians was 72.0 (68.4 for men and 75.6 for women) slightly lower than the 2006 average of 72.1. One hundred twenty-three West Virginia residents who died in 2007 were age 100 or older, with the oldest woman being 108 years and the oldest man, 106.

Heart disease, cancer and chronic lower respiratory diseases, the three leading causes of death, accounted for 53.5 percent of West Virginia resident deaths in 2007 compared with 2006, the number of state deaths due to heart disease decreased 1.1 percent while cancer deaths increased 1.6 percent. Chronic lower respiratory disease, which was the third leading cause for the seventh time in the past eight years, increased 7.1 percent; while stroke mortality increased by seven deaths (0.6%). Diabetes mellitus deaths increased 7.4 percent, making West Virginia ranked highest nationally in 2006 for the prevalence of diabetes (more than one in ten of the state's adults were identified as having diabetes), while the number of reported deaths due to pneumonia and influenza decreased 6.3 percent. Dementia, now the seventh leading cause of death in the Mountain State, increased 10.2 percent while Alzheimer's disease increased 3.7 percent. Accidental deaths were the fourth leading cause of death. The number of accidental deaths rose by 37 (3.1%) from 1,205 in 2006 to 1,232 in 2007. Motor vehicle accident deaths only increased by three from 422 in 2006 to 425 in 2007. Accidental poisoning deaths were on the rise in West Virginia the previous five years, but the number was unchanged from 2006 to 2007 at 407. The vast majority of deaths were due to both legal and illicit ingestion of prescription pharmaceuticals. This information was obtained from healthyamericans.org.

West Virginia is the second most rural state in the nation, with 64 percent of its population living in communities of fewer than 2,500. Forty-five of West Virginia's counties are designated as rural, that is, "non-metropolitan". Almost 16 percent of West Virginia's population is aged 65 or older, rendering West Virginia the oldest population in the nation. If, as anticipated, the trend of an aging population continues, West Virginia can look forward to an older population presenting a growing demand on the state's health care system. This is an even greater burden in a state where transportation (access) problems continue to exist. Statistics show that Appalachian residents were found to be at significantly higher risk of injury and illness from seatbelt nonuse, obesity, overweight and current smoking.

Since 1998, malignant neoplasms were the second leading cause of death on both a national and state level according to Healthy People 2010, surpassed only by coronary heart disease, which accounts for nearly half a million deaths annually. (West Virginia consistently ranks 50th in the nation for the highest risk

for heart disease, which is 34 percent above the national level.) In 2002 and 2003 (WV Bureau for Public Health, 2005), nearly one out of every five deaths (22.3%) was due to cancer (lung, the leading cause of cancer deaths in men and women; breast; prostate and colorectal). This does not include basal cell and squamous cell carcinomas of the skin, which are not captured in the state cancer registry. West Virginia's high smoking rates, high rates of occupational lung disease, exposure to environmental lung carcinogens, and insufficient intake of dietary antioxidants such as fruits and vegetables, make lung cancer prevention a particularly important target.

Heart disease, cancer, chronic lower respiratory disease, stroke and diabetes mellitus were the five leading causes of death, accountable for over 62 percent of all deaths in West Virginia. Many behavior risk factors contribute to these diseases: tobacco use; dietary patterns; alcohol and increased physical inactivity.

The leading causes of death have similar behavioral risk factors. To combat these behavioral risk factors, Healthy People 2020 has chosen 8 leading health indicators. "These were selected on the basis of their ability to motivate action, the availability of data to measure progress, and their importance as public health issues". (Healthy People 2020.)

LEADING CAUSE OF DEATH	US	WV	MARSHALL CO.
Heart Disease	1	1	1
Cancer	2	2	2
Stroke (Cerebro-Vascular Disease)	3	4	4
Chronic Lower Resp. Diseases	4	3	5
Unintentional Injuries	5	5	6
Alzheimer's disease	6	6	7
Diabetes	7	7	3
Respiratory Inf. Pneumonia and Influenza	8	8	8

(Healthy People 2020; Healthy Americans.org; County Health rankings.org)

LOCAL VITAL STATISTICS

Statistical data on Marshall County is consistent with the state and nation with cardiovascular disease and malignant neoplasms (cancer) as being the two leading causes of death. Marshall County follows with diabetes third; stroke

(cerebro-vascular disease) fourth (same as WV); chronic lower respiratory diseases fifth; unintentional injuries sixth; Alzheimer's disease seventh, and again the same as for WV, respiratory infection due to pneumonia and influenza eighth.

In 2006, the age adjusted death rate for heart disease – the leading cause of death – was 66 percent lower than the rate in 1950. The age-adjusted rate for stroke (cerebrovascular disease), the third leading cause of death, had declined 76 percent since 1950. Heart disease and stroke mortality are associated with risk factors such as diabetes, high cholesterol, high blood pressure, smoking and dietary factors. Other important factors include socioeconomic status, obesity and physical inactivity. Factors contributing to the decline in heart disease and stroke mortality include better control of risk factors, improved access to screening, increased early detection and better treatment and care, including new drugs and expanded uses for existing drugs.

Overall age-adjusted death rates for cancer, the second leading cause of death, rose between 1960 and 1990 and then declined. Between 1990 and 2006, overall death rates for cancer declined 16 percent. The trend in the overall cancer death rate reflects in part the trend in the death rate for lung cancer. Since 1970, the death rate for lung cancer for the total population has been higher than the death rate for any other cancer site.

Chronic lower respiratory diseases (CLRD) were the fourth leading cause of death in 2010. CLRD included deaths from bronchitis, emphysema and asthma. The age-adjusted death rate for CLRD in 2006 was 43 percent higher than the rate in 1980.

The fifth leading cause of death in 2010 was unintentional injuries. Since 1992, the unintentional injury mortality rate has gradually increased. Despite recent increases, the death rate for unintentional injuries in 2006 was 49 percent lower than in 1950.

The sixth leading cause of death in 2010 was Alzheimer's disease. Alzheimer's is the sixth leading cause of death among adults 18 and older. Up to 5.1 million Americans aged 65 and older have Alzheimer's and numbers are predicted to more than double by 2050. People living with dementia including Alzheimer's are at greater risk for general disability and experience frequent injury from falls. Older adults are three times more likely to have preventable hospitalizations. As dementia worsens, people need more heath services.

The seventh leading cause of death was diabetes. Following a period of decline in the 1970's and some fluctuation in the early 1980s, the age-adjusted death rate for diabetes increased 48 percent between 1986 and 2002. As the prevalence of diabetes increases, there have been efforts to improve reporting of diabetes on death certificates, and changes in death rates for diabetes over time

may reflect those efforts. The rate in 2006 was 8 percent lower than the rate in 2002. The rate of adult diabetes in 2010 was 11.1% in Marshall County and 12.2% in WV.

The West Virginia Healthy People 2010 and 2020 objectives focus on improving the health of West Virginians. This, along with the Bureau for Public Health, numerous voluntary organizations across the state, the medical community, the education community and professional organizations are working toward helping to improve the health status of West Virginians. Their goals are to meet the challenges of decreasing death, disease, injury and disability in our state.

Healthy People 2020 Ten Leading Health Indicators

1. Physical Activity
2. Overweight and Obesity
3 Tobacco Use
4. Substance Abuse
5. Responsible Sexual Behavior
6. Mental Health
7. Injury and Violence
8. Environmental Quality
9. Immunization
10. Access to Health Care

The data from the Health Statistics Center of West Virginia shows that Marshall County contributes to several of the leading risk factors. Marshall County ranks significantly higher than the US rate in areas such as fair or poor health at 17.0 percent, with a ranking of 20th; and at 27 percent, with a ranking of 11th for cigarette smoking. Lack of diabetes awareness is also a leading contributor of risk factors, followed by obesity at 31% and no leisure exercise. (County Health Rankings.org)

Health outcomes represent how healthy a county is while health factors are what influences the health of the county. Marshall County ranks 9th overall in health outcomes and 24th in health factors. (County Health Rankings.org)

Health outcomes are based on measures of mortality and morbidity. The mortality rank, represents length of life, and is based on a measure of premature death: the years of potential life lost prior to age 75. According to data retrieved from county health rankings.org, Marshall County is ranked 8th in mortality.

The morbidity rank is based on measures that represent health-related quality of life and birth outcomes. Four morbidity measures: self-reported fair or poor health, poor physical health days, poor mental health days and the percent of

births with low birth weight represent this rank. Again, according to County Health Rankings.org, Marshall County is ranked 10th in morbidity.

Health factors ranking is based on four factors: health behaviors, clinical care, social and economic and physical environment factors. In turn, each of these factors is based on several measures. Health behaviors include measures of smoking, diet and exercise, alcohol use and risky sex behavior. Clinical care includes measures of access to care and quality of care. Social and economic factors include measures of education, employment, income, family and social support and community safety. The physical environment includes measures of environmental quality and the built environment. According to County Health Rankings.org, Marshall County ranks 17th in health behaviors (tobacco, obesity, diet and exercise, alcohol use, teen birth rate and high risk sexual behavior); 50th in clinical care (access to and quality of care), 13th in social and economic factors (education, employment, income, family and social support and community safety) and 52nd in physical environment (air quality and built environment).

According to the West Virginia County Profiles – Marshall County Overview, in comparison to the US, Marshall County is better in areas of prostate cancer, unintentional injuries, motor vehicle accidents, teen fertility rate and late (3rd Trimester)/No prenatal care. Marshall County is similar to the US statistics in areas of colon cancer, breast cancer, cerebrovascular disease, pneumonia and influenza, non-motor vehicle accidents, homicide, low-birth weight births, births to unwed mothers, infant deaths, fetal deaths, physical inactivity, obesity, hypertension, diabetes awareness, smokeless tobacco use, binge drinking, no health insurance ages 18-64 and difficulty seeing doctor because of cost. Marshall County is worse when compared against the US statistics in areas of diseases of the heart, lung cancer, diabetes, chronic obstructive pulmonary disease, intentional injuries and cigarette smoking.

BEHAVIOR RISKS

According to the West Virginia DHHR, Bureau for Public Health, Vital Statistics 2007, the number of deaths rose by 418 in 2007. Heart disease, cancer, chronic lower respiratory disease, and stroke were the four leading causes of death, accountable for over 63 percent of all deaths in West Virginia. Many behavior risk factors contribute to these diseases: tobacco use; dietary patterns (few fruits and vegetables); alcohol; diabetes; high blood pressure and increased physical inactivity.

These types of behavior risks cause the most serious problems that afflict the United States. These behaviors usually start during youth; persist into adulthood; are interrelated; and are preventable. According to the Behavioral Risk Factor Surveillance System, in addition to causing health problems, these behaviors simultaneously cause many of the educational and social problems that confront the nation, including failure to complete high school, unemployment and crime.

The County Health Rankings Snapshot 2011 ranked Marshall County 17th in health behaviors which include tobacco – smoking (27%); diet and exercise – obesity (31%); binge drinking (15%); motor vehicle death rates (13 per 1000 population); high risk sexual behavior (110 per 1000); teen births (39 per 1000 population) and Chlamydia (124 per 1000 population).

Marshall County was ranked 13th in socio-economic factors due to lack of education, unemployment rate (9.0%), income inequality and children in poverty. The overall percentage of children in poverty in West Virginia was 24 percent. Poverty can result in negative health consequences, such as increased risk of mortality, increased prevalence of medical conditions and disease incidence, depression, intimate partner violence, and poor health behaviors. While negative health effects resulting from poverty are present at all ages, children in poverty yield greater morbidity and mortality due to an increased risk of accidental injury and lack of health care access. Children's risk of poor health and premature mortality may also be increased due to the poor educational achievement associated with poverty. Additionally, social emotional support, single parent households and violent crime are considered important factors in this ranking.

Clinical care - access to care for uninsured adults and access to primary care providers as well as quality of care, including preventable hospital stays, diabetic screening and hospice use, ranks Marshall County 50th in the state for clinical care with an insured rate of 18 percent of the population. The overall West Virginia rate is 20 percent. Lack of health insurance is a significant barrier to accessing needed health care.

Physical environment relating to unhealthy air due to ozone days; pollution particulate matter days; access to recreational facilities and no access to healthy food as well as an abundance of liquor stores ranked Marshall County 52nd in the state.

Physical Inactivity

According to data provided by the West Virginia Bureau for Public Health (WVBPH), the prevalence of physical inactivity in Marshall County is higher than the national average (28.3% compared to 24.6%). Physical inactivity and poor diet account for an estimated 300,000 deaths per year, second only to tobacco use among preventable causes of death. Physical activity reduces the risk of premature mortality in general, and of coronary heart disease, hypertension, colon cancer and diabetes mellitus in particular (Behavioral Risk Factor Surveillance System). Regular physical activity in childhood and adolescence improves strength and endurance, helps build healthy bones and muscles, helps control weight, reduces anxiety and stress, increases self-esteem, any may improve blood pressure and cholesterol levels. (American Heart Association, 1998.)

Positive experiences with physical activity at a young age help lay the basis for being regularly active throughout life. Nearly half of all young people aged 18-24 years of age do not regularly engage in vigorous physical activity, and participation in physical activity declines strikingly as children age. (American Heart Association, 1998.)

Low levels of physical activity among young people may be one factor responsible for the steep increase in childhood obesity seen in recent years. The percentage of young people who are overweight has more than doubled in the past 30 years (Centers for Disease Control).

Obesity

The WVBPH reports that Marshall County tied with Brooke, Jefferson, Kanawha, Lewis, Morgan, Pleasants, Ritchie and Taylor Counties, at 30.0 percent in prevalence of obesity. (This tied with the overall state of West Virginia who was ranked third highest in the nation in prevalence of obesity at 30.0 percent.)

The adult measure represents the percent of the adult population (age 20 and older) that has a body mass index (BMI) greater than or equal to 30 kg/m2. Marshall County ranks in the 30th percentile in adult obesity.

Obesity is often the end result of an overall energy imbalance due to poor diet and limited physical activity. Obesity increases the risk for health conditions such as coronary heart disease, type 2 diabetes, cancer, hypertension, dyslipidemia, stroke, liver and gallbladder disease, sleep apnea and respiratory problems and osteoarthritis. Healthy eating in childhood and adolescence is important for proper growth, development and can prevent health problems such as obesity, dental caries, and iron deficiency anemia. (American Heart Association.)

Poor eating habits among young people may be one factor responsible for the steep increase in childhood obesity seen in recent years; the percentage of young people who are overweight has more than doubled in the past 30 years. (American Heart Association.)

Tobacco Use

Tobacco use in Marshall County continues to be a significant problem. Marshall County is tied with Jackson, Mercer, Morgan and Ohio Counties with 27 percent of their smoking population. The county ranked 11th tied with Jackson, Mercer and Morgan counties in cigarette smoking. The reported use of cigarette smoking in the county is at 27 percent which is significantly higher than the US average of 22.2 percent and matches the West Virginia average. The highest counties of smokers are Wyoming (40%) and McDowell (36%). West Virginia

has the highest smoking rate in the nation at about 27 percent compared to 20 percent nationwide, according to 2008 data from the CDC.

The county ranks 12th in smokeless tobacco (SLT) use in a state in which the SLT use rates are among the highest in the country. Tobacco use, including cigarette smoking, cigar smoking, and smokeless tobacco use, is the single leading preventable cause of death in the United States and West Virginia. Smokeless tobacco has been directly linked to cancer of the mouth, pharynx (throat) and larynx (voice box). It can also cause cancer of the esophagus, gum disease and tooth loss. The use of smokeless tobacco has been increasing, especially among America's young people.

Each year smoking causes more than 400,000 premature deaths and five million years of potential life lost in the United States. (American Heart Association.) Cigarette smoking is identified as a cause in multiple diseases including various cancers, cardiovascular disease, respiratory conditions, low birth weight and other adverse health outcomes. Measuring the prevalence of tobacco use in the population can alert communities to potential adverse health outcomes and can be valuable for assessing the need for cessation programs or the effectiveness of existing programs. The CDC recommends that West Virginia spend about $27 million a year on tobacco-cessation programs, but the state allocates about $6 million. Interestingly, no money from the 55 cent per pack state tax on cigarettes goes toward smoking-cessation programs according to Chuck Hamsher, director of public advocacy for the American Heart Association in West Virginia.

The estimated direct and indirect costs associated with smoking in the United States exceed $68 billion annually. (Smoking costs West Virginia about $690 million a year in medical expenses according to the CDC. Approximately 80 percent of tobacco use occurs for the first time among people less than 18 years of age. In 2002, 33.3 percent of high school students reported current cigarette use and 20.7 percent reported current cigar use. In addition 21.5 percent of high school students reported current smokeless tobacco use. (American Heart Association; WVYTS 2002.)

Fair or Poor Health

With regard to the issue of fair or poor health, Marshall County was tied with Wood, Hampshire, Hancock and Ritchie Counties, ranking 4th at 17.0 percent which is slightly higher than the US national average of 16.2 percent and lower than the overall West Virginia rate of 22 percent. This measure was obtained from the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System (BRFSS) and county health rankings.org. In addition to measuring how long people live, it is important to also include measures of how healthy people are while alive. Fair or poor health was most common among adults without a high school education and those with an annual income less than $15,000. (WVBPH, Behavioral Risk Factor Survey Report.)

Access to Healthy Foods

Access to healthy foods is measured as the percent of zip codes in a county with a health food outlet, defined as a grocery store, or produce stand/farmers' market. The number of zip codes in Marshall County with available healthy foods was three out of eight (38%), tying with Pleasants and Putnam Counties; Hancock was the highest County with 60 percent (3 out of 5). Studies have linked the food environment to consumption of healthy food and overall health outcomes.

Hypertension

The percent of Marshall County residents having been advised by a health care professional that they have hypertension (29.1%) has exceeded the national average (28.8%).

The higher a person's blood pressure, the greater the risk of developing heart disease or stroke. A blood pressure of 140/90 mmHg (millimeters of mercury) or greater is generally classified as high blood pressure. Regular physical activity, even of moderate intensity, can help reduce high blood pressure in some people. This type of activity may also help prevent high blood pressure. Obesity and overweight factors increase high blood pressure in all ethnic groups at all ages. (American Heart Association.)

The risk of developing high blood pressure is two to six times greater in people that are overweight. Modest weight loss may be the key to the control of hypertension in some people. Some persons seem to be "salt sensitive." In these persons, a high sodium diet irritates high blood pressure. The American Heart Association presents evidence that eating a diet low in total fat, saturated fat, and cholesterol and rich in fruits and vegetables effectively lowers blood pressure. (American Heart Association.)

Binge Drinking

The binge drinking measure reflects the percent of the adult population reporting consuming more than four (women) or five (men) alcoholic beverages on a single occasion in the past 30 days. The definition of binge drinking for women changed from five on an occasion to four in 2006.

The percentage of adults reporting binge drinking in Marshall County was 15 percent. Brooke County was the highest with 19 percent and Grant was the lowest with 3 percent.

Binge drinking is a risk factor for a number of adverse health outcomes such as alcohol poisoning, hypertension, acute myocardial infarction, sexually transmitted

infections, unintended pregnancy, fetal alcohol syndrome, sudden infant death syndrome, suicide, interpersonal violence and motor vehicle crashes.

MARSHALL COUNTY COMMUNITY HEALTH NEEDS ASSESSMENT SURVEY RESULTS

The 2006 Marshall County Needs Assessment (319 participants) was compiled in conjunction with Reynolds Memorial Hospital and the Marshall County FRN utilizing data collected from survey participants to identify primary areas of concern in Marshall County.

This 2011 Needs Assessment is an updated compilation collected again in conjunction with Reynolds Memorial Hospital utilizing data collected from survey participants to identify primary areas of concern in Marshall County.

Data assembled from the Community Health Needs Assessment Survey indicate that of the 262 participants in the survey, 43 percent fell in the 25 – 44 years of age range; 59 percent of participants live in an urban area and 25 percent of the participants had a yearly income of less than $10,000. Fifty two percent of the participants were aware of the county's need for volunteers and sixty percent of participants considered Marshall County a "good" place to live; this was down from sixty seven percent in 2006.

When asked whether the following are problems in Marshall County, participants responded as follows:

	YES	NO
Crime	70%	30%
Illiteracy	58%	42%
Poverty	80%	20%
Shortage of Affordable Housing	67%	33%
Services for those w/Disabilities	56%	44%
High School Drop-Out Rates	65%	35%
Juvenile Delinquency	76%	24%
Racial or Ethnic Discrimination	42%	58%

When asked if Marshall County was prepared to handle the following, participants responded:

	YES	NO
Terrorist actions such as bomb threats	39%	61%
Smallpox	54%	46%
Disease outbreaks such as flu	79%	21%
Floods	74%	26%

Participants were asked to rate the following from one to five (with five being a big problem).

	1	2	3	4	5
Alcohol abuse/binge drinking	5%	7%	19%	27%	42%
Driving under the influence	4%	7%	21%	29%	39%
Bullying/violence in school	8%	8%	27%	25%	32%
Lack of exercise	6%	6%	28%	29%	32%
Misuse of prescription drugs	5%	5%	16%	26%	49%
Poor eating habits	5%	8%	25%	29%	33%
Seatbelt usage	11%	19%	31%	21%	18%
Smokeless tobacco usage	8%	8%	20%	31%	33%
Smoking/second-hand smoke	6%	6%	18%	29%	39%
Youth lifestyles	8%	12%	33%	23%	24%
Unprotected sex	4%	8%	27%	24%	37%
Use of illegal drugs	5%	4%	14%	27%	49%

When asked if participants exercised at least 30 minutes per day, 48 percent responded **yes** and 54 percent responded **no**.

Participants were also asked if they ate at least five servings of fruits and vegetables per day with the response being 35 percent **yes** and 65 percent **no**.

When asked to rate the following problems between one through five, (with five being a big problem), response was as follows:

	1	2	3	4	5
Adolescent and adult vaccinations	40%	24%	21%	10%	5%
Aging	30%	19%	29%	14%	7%
Arthritis	20%	19%	30%	21%	10%
ATV accidents	9%	10%	27%	26%	28%
Cancer	9%	8%	24%	26%	33%
Child abuse or neglect	11%	6%	26%	28%	28%
Childhood vaccinations	36%	20%	25%	13%	5%
Dental care	19%	16%	31%	18%	16%
Diabetes	17%	11%	33%	23%	16%
Drinking water safety	24%	23%	29%	15%	9%
Food safety	28%	28%	28%	10%	5%
Heart disease/stroke	16%	14%	33%	21%	17%
High blood pressure	13%	16%	35%	19%	16%
High cholesterol	13%	16%	36%	19%	16%
Infant death	30%	26%	27%	10%	8%
Infectious disease	20%	25%	32%	14%	8%
Nutritious food availability	26%	20%	31%	12%	10%
Obesity	10%	8%	20%	32%	31%
Prenatal care	27%	17%	35%	13%	8%
Respiratory/lung disease	16%	15%	35%	21%	13%
STD's/AIDS	13%	18%	37%	18%	14%
Teenage pregnancy	8%	8%	26%	23%	34%

When asked to rate the following services in Marshall County from very poor to very good, participants responded as follows: Hospital, 31% fair, 35% good; Health Department, 8% fair, 47% good; Children's Health Care, 14% fair, 43% good; Adult Health Care, 20% fair, 42% good; Elderly Health Care, 24% fair, 31% good; School System, 28% fair, 36% good; Personal Safety, 21% fair, 43% good; and Recreational Facilities, 32% fair, 28% good.

Overall, participants of this survey considered poverty, juvenile delinquency and crime to be a problem. Other problem areas were use of illegal drugs, misuse of prescription drugs, alcohol abuse and driving under the influence. On the clinical care side, teen pregnancy, cancer, obesity, child abuse and ATV accidents were deemed to be most problematic.

CONCLUSIONS

Information assimilated identified factors such as smoking/tobacco usage/second-hand smoke, obesity (nutrition and weight status), physical inactivity, and binge drinking as the primary health behaviors in Marshall County.

On the clinical care side, uninsured adults, primary care provider rate, and diabetic screening were factors identified. Social and economic factors including level of education, unemployment, children in poverty, income inequality, and inadequate social support were identified.

Regarding the physical environment, air pollution-particulate matter days, air pollution-ozone days, access to healthy foods and liquor store density were considered important factors.

Strengths:

- Health outcomes (length of life/mortality rate) have improved with a decrease in the age adjusted death rate.
- Motor vehicle accidents; unintentional injuries and teen fertility rates have decreased.
- The MCHD offers many direct services to residents of Marshall County.
- Marshall County residents have an extensive community social service network through the local hospital, support in the health field and with the use of the internet this is more easily obtained.
- Marshall County provides services in areas such as: Parks, playgrounds, ball fields, tennis courts, golf, walking trails, fitness centers, swimming pools, weight loss programs and smoking cessation programs.

Weaknesses:

- High prevalence of obesity (adult and child)
- High prevalence of tobacco (including smokeless tobacco)
- High levels of air pollution/poor air quality
- Increase in diabetes
- Poor eating habits and poor access to healthy foods
- Poor mental and physical health days

LOCAL HEALTH RELATED PROGRAMS/ACTIVITIES

West Virginia has many programs developed to promote a healthy lifestyle, many of which target the Healthy People 2020 objectives. The Marshall County Health Department offers many direct services to the residents of Marshall County. The WV Governor's Cabinet on Children and Families offers extensive activities throughout the state, primarily through the Family Resource Networks. Information and referral is a needed form of support in the health field, and with the use of the internet, this is more easily obtainable. Marshall County residents also have an extensive community social service network through the local hospital, support in the health field, and with the use of the internet, this is more easily obtained as well. There is also an extensive community social service network via the churches and non-profit organizations. Following is a list of some of the services available in Marshall County and the State of West Virginia.

MARSHALL COUNTY HEALTH DEPARTMENT

Services Provided: Dental, Breast and Cervical Cancer Screening, STD/HIV/AIDS, Tuberculosis, Family Planning, Right From the Start, Immunizations, Threat Preparedness, Community Health Promotion and Disease Prevention, and Environmental Health.

COMMUNITY ORGANIZATIONS/PROGRAMS:

Family Resource Network (FRN): Located in Moundsville, WV. Local community based organizations charged with developing a "Local Community Plan" which addresses coordination of local services, strategies for systemic improvements and evaluation of results.

Starting Points Center – Centers developed throughout the state to bring together services for young children and their families at a single location. Core services provided are:

- Family Resource Coordination
- Family Intake and Assessment
- Health and Nutrition Services
- Developmental Screening and Referral
- Parent and Preschool Education
- Home Based Services and Outreach
- Referral and Follow Up Services

The mission of the Marshall County Starting Points Center is to connect young families with the resources, information and services needed to

enhance their ability to protect, nurture, educate and support the development of their young children.

West Virginia Children's Health Insurance Program (CHIP) – This is a free or low cost health insurance plan for children from birth through 18. Covered services include preventative care, such as well-child visits and immunizations, prescriptions, hospital visits, dental, vision and mental health services.

Women, Infants and Children Program (WIC) – Located in Moundsville, WV. A program designed to focus on the link between parents and children and insuring a healthy foundation for their children.

Head Start – The Northern Panhandle Head Start Program encompasses seven (7) centers (no home base in Marshall County) involving 136 children. There are three (3) Pre-K Collaborative sites for ages three (3) to five (5) and an Early Head Start site for pre-natal to three (3) years of age serving 20 families. Head Start provides comprehensive services while collaborating with other agencies to provide health, dental and mental care, as well as family support.

Senior Citizen's Center – The Marshall County Senior Citizen's Center provides the following programs for their adult population: Home Health Care; Adult Day Care for Alzheimer's Patients and SHIP (Senior Health Insurance Program).

WV HEALTHY PEOPLE 2020 OBJECTIVES

West Virginia Healthy People provides science-based, 10 year national objectives for improving the health of all Americans. For three decades, Healthy People has established benchmarks and monitored progress over time in order to: Encourage collaborations across sectors; guide individuals toward making informed health decisions and measure the impact of prevention activities.

Healthy People 2020 strives to provide measurable objectives and goals that are applicable at the national, State and local levels with the overarching goals being: Attain high-quality, longer lives free of preventable disease, disability, injury and premature death; achieve health equity, eliminate disparities, and improve the health of all groups; create social and physical environments that promote good health for all; and promote quality of life, healthy development, and healthy behaviors across all life stages.
The following objectives address the three proprietary areas identified as needing to be addressed in Marshall County.

Physical Objectives:

1. **PA-1**: Reduce the proportion of people aged 18 and older who engage in no leisure time physical activity.

2. **PA-2**: Increase the proportion of adults who meet current Federal physical activity guidelines for aerobic physical activity and for muscle-strengthening activity.

> **PA-2.1:** Increase the proportion of adults who engage in aerobic physical activity of at least moderate intensity for at least 150 minutes/week, or 75 minutes/week of vigorous intensity, or an equivalent combination.

3. **PA-3**: Increase the proportion of adolescents who meet current Federal physical activity guidelines for aerobic physical activity and for muscle-strengthening activity.

Nutrition and Weight Status:

1. **NWS-8**: Increase the proportion of adults who are at a healthy weight

2. **NWS-10:** Reduce the proportion of children and adolescents who are considered obese

3. **NWS-11**: (Developmental) Prevent inappropriate weight gain in youth and adults.

4. **NWS-14**: Increase the contribution of fruits to the diets of the population aged 2 years and older.

5. **NWS-15**: Increase the contribution of vegetables to the diets of the population aged 2 years and older.

6. **NWS-16**: Increase the contribution of whole grains to the diets of the population aged 2 years and older. Target: 0.6 ounce equivalents per 1,000 calories. Baseline: 0.3 ounce equivalents of whole grains per 1,000 calories

7. **NWS-17**: Reduce consumption of calories from solid fats and added sugars in the population aged 2 years and older. Target: 16.7%. Baseline: 18.9%.

8. **NWS-18:** Reduce consumption of saturated fat in the population aged two years and older.

Tobacco Usage Objectives:

1. **TU-1**: Reduce tobacco use by adults.

2. **TU-2:** Reduce tobacco use by adolescents.

3. **TU-3**: Reduce initiation of tobacco use among children, adolescents and young adults.

4, **TU-6:** Increase smoking cessation during pregnancy.

5. **TU-11:** Reduce the proportion of non-smokers exposed to environmental tobacco smoke.

6. **TU-12**: Increase the proportion of persons covered by indoor worksite policies that prohibit smoking.

RESOURCE LIST

American Cancer Society

American Cancer Society Committee on Diet, Nutrition and Cancer Prevention

American Heart Association

Behavioral Risk Factor Surveillance System

Bureau of Labor Statistics

Bureau for Public Health

Centers for Disease Control and Prevention

Community Health Status Indicators, US Dept. of Health & Human Services

County Health Rankings of West Virginia

Governor's Cabinet on Children and Families

Healthy People 2010, 2020

Health Statistics Center of West Virginia

Marshall County Profile

National Center for Health Statistics (NCHS)

National Center for Injury Prevention and Control

Office of Epidemiology and Health Promotion

US Census Bureau

View 2010 Census Data – American Fact Finder

West Virginia Bureau for Public Health

West Virginia Healthy People 2010 Objectives

West Virginia Vital Statistics

West Virginia Department of Health and Human Resources