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**INTEGRATED FUNDING
ANALYSIS OF MENTAL HEALTH
AND SUBSTANCE USE IN WEST
VIRGINIA**

PRESENTED TO:

STATE OF WEST VIRGINIA
DEPARTMENT OF HEALTH AND HUMAN RESOURCES
BUREAU FOR BEHAVIORAL HEALTH AND
HEALTH FACILITIES

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I. EXECUTIVE SUMMARY

The economic impact of mental health and substance use within the State of West Virginia can be felt broadly across all parts of West Virginia's agencies, businesses, and in the lives of people. This report reviews over 25 areas spanning health care, criminal justice, federal costs, and other social costs to capture the major direct and economic costs attributable to mental illness and alcohol and other substance use. As this report unfortunately shows, the lethal combination of mental illness and substance use generate broad and deep costs to the state of West Virginia. Our findings estimate the total fiscal year 2006 impact to be about \$3.6 billion. The combined direct and indirect fiscal impact represents approximately 6.7% of the gross domestic product for the state of West Virginia.¹

In preparing these estimates, PCG called and e-mailed all states to identify state-level studies on the impact of mental health and substance use. The studies are listed in the references and serve as a basis for this report. Multiple studies were used, but specifically, PCG followed examples set by the Oklahoma Governor's and Attorney General's Blue Ribbon Task Force in their Cost of Mental Health, Substance Abuse, and Domestic Violence report.

The focus of this report is on costs to the state as a whole. However, included in the appendix of this report is a section that estimates costs incurred by state agencies and the methodologies used to make those estimates. As in the other studies, no single methodology is used. Oklahoma methodologies were applied to West Virginia data when similar data was available. As these other state studies did, PCG also relied on national surveys and statistics to allocate costs between mental health and substance use.

The methods used to arrive at the estimates depend on the specific costs and the availability of expenditure and utilization data. PCG used exact figures when available and in other instances selected a methodology that is reproducible for future years. For purposes of uniformity in reporting, PCG has standardized all expenses to FY 2006 using National Health Expenditure inflation projections of 7.2% per year² for direct costs. This study made every effort to obtain the most current data available for every category. When expenditure data was not available, budgeted or appropriated amounts were used in the estimate.

There is significant prevalence of mental health illnesses and substance use in West Virginia. The Substance Abuse and Mental Health Services Administration (SAMHSA) estimates 8.84% of the state's population in 2004 was dependent on a drug or alcohol and 12.73% of its adults had a Serious Psychological Distress (SPD) in 2004 which ranks as the highest percentage in the nation. Out of about 1.4 million adults, West Virginia has an estimated 152,000 persons over the age of eighteen with a substance use problem and 182,000 persons with a mental illness.

Mental health costs are broadly incurred across health care services, in the state's Departments of Education and Health and Human Resources, through Federal SSI and SSDI payments made to persons in the state, and in other social costs. For example, the years of productive life lost

¹ The 2005 Gross Domestic Product for WV, \$53.050 billion dollars, was extracted from Bureau of Economic Analysis website on April 12, 2007. This was trended forward to 2006 using the average annual growth rate for WV extracted from the same website.

http://www.bea.gov/newsreleases/regional/gdp_state/gsp_newsrelease.htm

² <http://www.cms.hhs.gov/NationalHealthExpendData/downloads/proj2005.pdf>

because of suicides. Substance use impacts are largely felt within the criminal justice area and other social areas. There is a reported impact at \$865 million across the state associated with approximately 3,451 motor vehicle accidents where alcohol use was proven or suspected.

It should be noted that for purposes of this report, the impact related to Mental Retardation and Developmental Disabilities (MR/DD) has not been included. Like Mental Health and Substance Use, MR/DD's impact on WV is substantial and affects many industries throughout the state. The West Virginia, Bureau of Medical Services (Medicaid) alone accounts for \$184 million in annually payments to providers for MR/DD services covered under the Section 1915(c) Home and Community Based Wavier program. In addition, MR/DD costs are widely intertwined with Mental Health and Substance Use costs and in many instances, the distinction between the two was very difficult to make. Although MR/DD was not included here, it very well could be the subject of future reports.

This report can educate persons about the depth and breadth of the impact of mental health and substance use on West Virginia and provide justification for actions to reduce this impact. The following tables provide a summary of costs and source data.

**Table 1: Estimated FY 2006 Direct and Indirect Cost of
Mental Health and Substance Use in West Virginia**

	Mental Health	Alcohol	Alcohol and Other Drugs	Substance Use	Total	Page Number in Report
WEST VIRGINIA						
INSTITUTIONAL AND OTHER RELATED COSTS OF MENTAL HEALTH AND SUBSTANCE USE						
1 Hospitals					\$ 942,805,593	
Inpatient - Primary Diagnosis	\$ 51,272,799	\$ -	\$ -	\$ 9,760,112	\$ 61,032,912	pg. 10-11
Inpatient - Secondary Diagnosis	\$ 14,364,344	\$ -	\$ -	\$ 17,609,165	\$ 31,973,509	pg. 11-12
Hospital Outpatient	\$ 68,732,146	\$ -	\$ -	\$ -	\$ 68,732,146	pg. 12
Hospital Emergency Room	\$ 4,739,089	\$ -	\$ -	\$ 2,356,815	\$ 7,095,904	pg. 12-13
2 Psychiatric Hospitals	\$ 72,063,668	\$ -	\$ -	\$ 15,560,463	\$ 87,624,131	pg. 13
3 Nursing Homes	\$ 106,743,326	\$ -	\$ -	\$ -	\$ 106,743,326	pg. 13-14
4 Prescription Drugs	\$ 142,576,000	\$ -	\$ -	\$ 23,584,000	\$ 166,160,000	pg. 14
5 Physicians	\$ 162,034,944	\$ -	\$ -	\$ -	\$ 162,034,944	pg. 14-15
6 Substance Abuse Treatment Centers	\$ -	\$ -	\$ -	\$ 11,218,076	\$ 11,218,076	pg. 15
7 Comprehensive Mental Health Centers	\$ 60,902,704	\$ -	\$ -	\$ 14,361,545	\$ 75,264,249	pg. 15-16
8 Other Behavioral Health Providers	\$ 143,046,633	\$ -	\$ -	\$ 3,099,782	\$ 146,146,416	pg. 16-17
9 Federally Qualified Health Centers	\$ 5,826,821	\$ -	\$ -	\$ 1,279,057	\$ 7,105,878	pg. 17-18
10 Department of Education (WVDE)	\$ 8,662,654	\$ -	\$ -	\$ 3,011,449	\$ 11,674,103	pg. 18
CRIMINAL JUSTICE RELATED COSTS OF MENTAL HEALTH AND SUBSTANCE USE					\$ 253,941,894	
11 Law Enforcement						
State Police	\$ -	\$ 26,637,548	\$ -	\$ 11,366,258	\$ 38,003,806	pg. 21-22
Sheriffs	\$ -	\$ 16,402,225	\$ -	\$ 6,998,839	\$ 23,401,064	pg. 21-22
Municipal Police	\$ -	\$ 35,408,583	\$ -	\$ 15,108,864	\$ 50,517,447	pg. 21-22
12 Prosecuting Attorneys Institute	\$ -	\$ 339,000	\$ -	\$ 144,800	\$ 483,800	pg. 22
13 Public Defenders	\$ -	\$ 10,510,000	\$ -	\$ 4,485,000	\$ 14,995,000	pg. 23
14 West Virginia Courts						
Circuit Courts	\$ 2,906,685	\$ -	\$ 1,649,688	\$ -	\$ 4,556,373	pg. 23-24
Magistrate Courts	\$ -	\$ -	\$ 2,951,892	\$ -	\$ 2,951,892	pg. 23-24
Mental Hygiene Commissioners	\$ 1,551,959	\$ -	\$ -	\$ -	\$ 1,551,959	pg. 23-24
Probation Office	\$ -	\$ -	\$ 6,808,939	\$ -	\$ 6,808,939	pg. 23-24
15 Regional Jail Authority	\$ -	\$ 27,353,000	\$ -	\$ 11,676,000	\$ 39,029,000	pg. 24
16 Division of Corrections	\$ -	\$ 18,775,990	\$ -	\$ 26,227,628	\$ 45,003,618	pg. 24-27
17 Division of Juvenile Services	\$ -	\$ -	\$ -	\$ 26,291,000	\$ 26,291,000	pg. 27
18 Parole Board	\$ -	\$ 119,104	\$ -	\$ 228,893	\$ 347,997	pg. 28
FEDERAL FUNDING					\$ 140,024,782	
19 Federal Grants	\$ 5,109,162	\$ -	\$ 31,767,722	\$ -	\$ 36,876,884	pg. 29-30
20 Department of Veteran's Affairs	\$ 16,590,740	\$ -	\$ -	\$ 2,030,078	\$ 18,620,818	pg. 31
21 Drug Traffic Control Costs	\$ -	\$ -	\$ -	\$ 84,527,080	\$ 84,527,080	pg. 32
TOTAL DIRECT COSTS	\$ 867,123,673	\$ 135,545,450	\$ 43,178,241	\$ 290,924,904	\$ 1,336,772,269	
INDIRECT SOCIAL COSTS						
22 Federal SSDI Payments	\$ 212,284,164	\$ -	\$ -	\$ -	\$ 212,284,164	pg. 33
23 Federal SSI Payments	\$ 115,630,894	\$ -	\$ -	\$ -	\$ 115,630,894	pg. 33
24 Division of Highways	\$ -	\$ 865,101,600	\$ -	\$ -	\$ 865,101,600	pg. 33-34
25 Productivity Losses Due to Prison Incarceration	\$ -	\$ 21,985,075	\$ -	\$ 30,666,682	\$ 52,651,757	pg. 34
26 Productivity Losses Due to Jail Incarceration	\$ -	\$ 37,841,765	\$ -	\$ 16,152,898	\$ 53,994,662	pg. 34
27 Crime Victims Compensation Fund	\$ 22,274	\$ -	\$ 125,734	\$ -	\$ 148,008	pg. 34
28 Economic loss in Lost Wages due to Crime	\$ -	\$ 6,645,000	\$ -	\$ 2,835,000	\$ 9,480,000	pg. 34-35
29 Economic loss due to hospitalization	\$ 65,574,361	\$ -	\$ -	\$ 2,297,377	\$ 67,871,738	pg. 35-36
30 Underage Drinking	\$ -	\$ 245,100,000	\$ -	\$ -	\$ 245,100,000	pg. 36
31 Years of Potential Life Lost	\$ 411,492,965	\$ -	\$ 161,865,636	\$ -	\$ 573,358,601	pg. 36-39
32 Higher Education	\$ 52,860,761	\$ -	\$ -	\$ -	\$ 52,860,761	pg. 39-40
33 Transitional Housing and Shelters	\$ 5,691,520	\$ -	\$ -	\$ -	\$ 5,691,520	pg. 40
TOTAL INDIRECT COSTS	\$ 863,556,939	\$ 1,176,673,440	\$ 161,991,370	\$ 51,951,956	\$ 2,254,173,705	
TOTAL OF ALL	\$ 1,730,680,612	\$ 1,312,218,890	\$ 205,169,611	\$ 342,876,860	\$ 3,590,945,974	

*Data provided above reflect estimates based on "best practice" methodologies

Table 2: Crosswalk Table to Sources for Direct and Indirect Cost Centers of Mental Health and Substance Use

WEST VIRGINIA		Expenditures Source	Fiscal Year Expenditures	Allocation Statistic
INSTITUTIONAL AND OTHER RELATED COSTS				
1 Hospitals				
Inpatient - Primary Diagnosis	West Virginia Health Care Authority (WVHCA) Inpatient Discharge Database	2004		
Inpatient - Secondary Diagnosis	WVHCA Inpatient Discharge Database	2004		Oklahoma Health Care Report on Costs of Mental Health, Substance abuse, and Domestic Violence
Hospital Outpatient	Outpatient costs from Medicare Cost Reports and Visit Count from WVHCA Annual Report	2004		CDC's National Hospital Ambulatory Medical Care Summary
Hospital Emergency Room	ER Department costs from Medicare Cost Reports and Visit Count from WVHCA Annual Report	2004		CDC's National Hospital Ambulatory Medical Care Survey: 2004 Emergency Department Summary
2 Psychiatric Hospitals	WVHCA Annual Report	2004		% Inpatient Days of Mental Health compared to Substance Use from WVHCA
3 Nursing Homes	WVHCA Annual Report	2004		National Nursing Home Survey: 1999 Summary
4 Prescription Drugs	Kaiser Family Foundation StateHealthFacts.org	2005		% if Inpatient Days related to Mental Health or Substance Use from WVHCA
5 Physicians	Kaiser Family Foundation StateHealthFacts.org	2005		National Ambulatory Medical Care Survey 2004 Summary
6 Substance Abuse Treatment Centers	WVHCA Annual Report	2004		
7 Comprehensive Mental Health Centers	WV BHHF Accounting Records and WV BMS CMS-64	2005		
8 Other Behavioral Health Providers	WVHCA Annual Report	2004		
9 Federally Qualified Health Centers	National Association of Community Health Centers, Inc. West Virginia Health Center Fact Sheet	2004		% Inpatient Days of Mental Health compared to Substance Use from WVHCA
10 Department of Education	West Virginia Education Information System	2004		
CRIMINAL JUSTICE				
11 Law Enforcement				
State Police	West Virginia State Auditor's Office	2006		2005 FBI Arrest records and National Institute of Drug Abuse
Sheriffs				
Municipal Police				
12 Prosecuting Attorneys Institute	West Virginia State Auditor's Office	2006		2005 FBI Arrest records and National Institute of Drug Abuse
13 Public Defenders	WV Executive Budget, Public Defender Service	2006		2005 FBI Arrest records and National Institute of Drug Abuse
14 West Virginia Courts	WV Supreme Court Budget	2005		West Virginia Supreme Court of Appeals 2006
Circuit Courts				
Magistrate Courts				
Mental Hygiene Commissioners				
Probation Office				
15 Regional Jail Authority	WV Executive Budget, Regional Jail Authority	2006		2005 FBI Arrest records and National Institute of Drug Abuse
16 Division of Corrections	WV Executive Budget, DOC	2006		Office of National Drug Control Policy (2004)
17 Division of Juvenile Services	WV Executive Budget, DJS	2006		Information provided by DJS staff.
18 Parole Board	WV Executive Budget, Parole Board	2006		Office of Research & Planning
FEDERAL FUNDING				
19 Federal Grants	Consolidated Federal Funds Report, U.S. Census website	2004		2005 FBI Arrest records and National Institute of Drug Abuse
20 Department of Veteran's Affairs	Cost Distribution Report	2003		Veteran's Population 2004 Version 1.0
21 Drug Traffic Control Costs	US Bureau of Justice Statistics	2005		
INDIRECT SOCIAL COSTS				
22 Federal SSDI Payments	Consolidated Federal Funds Report	2004		US Office of Policy Analysis
23 Federal SSI Payments	SSI Annual Report	2004		
24 Division of Highways	Traffic Engineering Division	2005		Traffic Engineering Division
25 Productivity Losses Due to Prison Incarceration	Bureau of Labor Statistics	2006		Office of National Drug Control Policy (2004)
26 Productivity Losses Due to Jail Incarceration	Bureau of Labor Statistics	2006		2005 FBI Arrest records and National Institute of Drug Abuse
27 Crime Victims Compensation Fund	Staff interviews at WV Courts	2006		Staff interviews at WV Courts
28 Economic loss in Lost Wages due to Crime	Bureau of Labor Statistics, NIDA	2006		2005 FBI Arrest records and National Institute of Drug Abuse
29 Economic loss due to hospitalization	Bureau of Labor Statistics	2004		WVHCA Annual Report, National Nursing Home Survey: 1999 Summary
30 Underage Drinking	Pacific Institute for Research and Evaluation (PIRE)			
31 Years of Potential Life Lost	Bureau of Labor Statistics	2006		WV Bureau of Public Health Vital Statistics
32 Higher Education	WV Higher Education Fund Combined Financial Statements	2004		Report from Staff at WV Higher Education
33 Transitional Housing and Shelters	Consolidated Federal Funds Report and PATH Grant Application	2004		HUD Consolidated Development Plan 2005-2009

II. NATIONAL AND WEST VIRGINIA STATISTICS

There has been a considerable federal effort in recent years to change state mental health and substance use treatment programs.³ In July 2003, the President's New Freedom Commission on Mental Health released its final report, *Achieving the Promise: Transforming Mental Health Care in America*.⁴ The report concluded that "to improve access to quality care and services, the Commission recommends fundamentally transforming how mental health care is delivered in America." The Substance Abuse and Mental Health Services Administration responded to the report by creating a national action agenda,⁵ which it published in July 2005, and in September 2005 it awarded five-year Mental Health Transformation State Incentive Grants (MHT-SIGs) to seven states. This federal effort has been accompanied by influential non-profit organizations and state efforts.

For example, in November 2005, the Institute of Medicine (IOM) released its report, *Improving the Quality of Health Care for Mental and Substance-Use Conditions*.⁶ This influential report offered nine recommendations confirming the findings of the President's Commission and echoed its call for substantial redesign of how mental health and substance conditions are dealt with.

In the context of these sobering national assessments, West Virginia has undertaken a redesign of its behavioral health programs. This report focuses on the cost of mental illness, alcohol, and substance use to West Virginia state agencies and the West Virginia public. Other states have undertaken similar studies: Alaska, California, Maine, Massachusetts, Oklahoma, Texas and Washington. The report demonstrates the broad and deep impact of behavioral health problems and substantiates the concern to develop programs that are both effective in solving behavioral health problems and efficient in their costs and practices.

Substance Use Prevalence in West Virginia

As a starting place for understanding the impact of alcohol and substance use and mental illness it is useful to look at the numbers of estimated persons in West Virginia that are impacted by these issues. From its 2003-2004 sampling, SAMHSA reported on percentages of persons who were dependent on or who were users of illicit drugs or alcohol.⁷ At 8.84%, West Virginia compares favorably with the national average of 9.22%. Thirty seven states had a higher percentage of persons who were dependent on or who were users of illicit drugs or alcohol. In 2005, the number of West Virginia persons over the age of five was estimated to be 1,715,112, and 8.84% of this equals about 152,000. Another measure of substance use prevalence is shown in the following table.

³ This report tends to use the terminology "substance use" instead of "substance abuse", because "abuse" is diagnostically imprecise in the context of this report. This report also tends to avoid use of the word "disorders". Although some persons regard them as pejorative terms, the words "abuse" and "disorders" will appear in this report since they are so widely used.

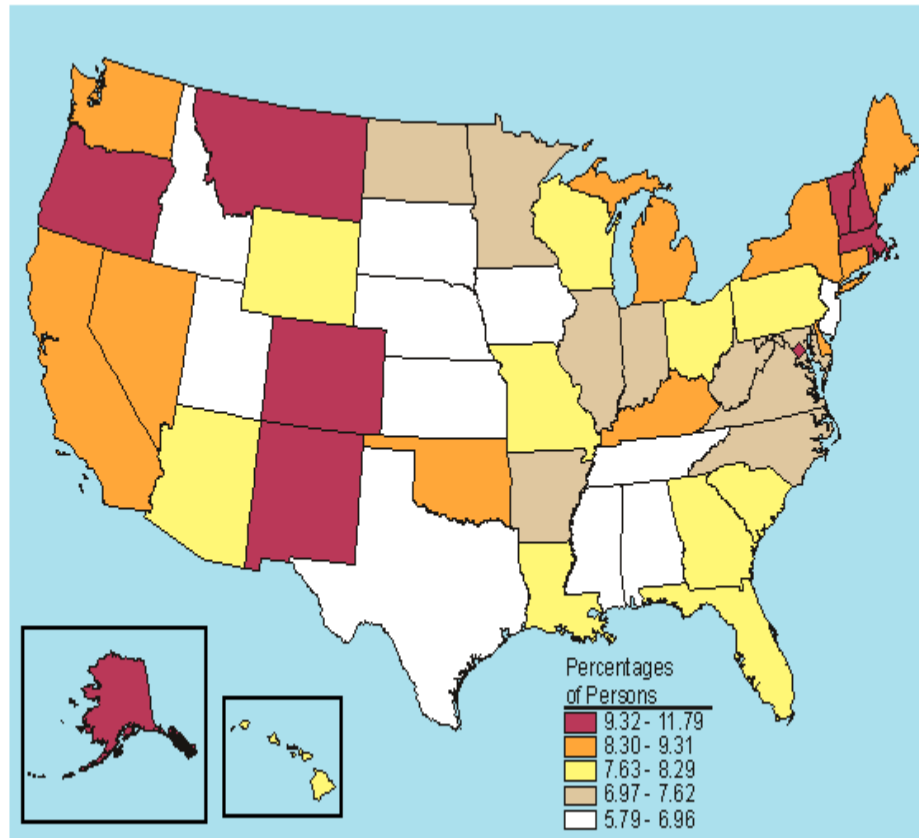
⁴ New Freedom Commission on Mental Health. (2003, July).

⁵ Substance Abuse and Mental Health Services Administration. (2005 July).

⁶ Institute of Medicine. (2006). See also the Commonwealth Fund. (2006).

⁷ Substance Abuse & Mental Health Services Administration. (2004). Table B.20

Table 3: Any Illicit Drug Use in Past Month among Persons Aged 12 or Older, by State: Percentages, Annual Averages Based on 2003 and 2004 NSDUHs⁸



This measurement, based on counts of persons aged 12 or older and their current usage also shows West Virginia to have lower rates of illicit drug use than the national average. In general, out of about 1.4 million adults, West Virginia has an estimated 152,000 persons with a substance use problem.⁹

Mental Health Prevalence in West Virginia

In general, out of about 1.4 million adults, West Virginia has an estimated 182,000 with a mental illness. A federal agency, the Substance Abuse & Mental Health Services Administration (SAMHSA) collects information about mental illness and substance use from random samples of

⁸ Substance Abuse & Mental Health Services Administration. (2004). Figure 2.1

⁹ Results from the SAMHSA's 2005 National Survey on Drug Use and Health are currently available but only at the national level. One state staff person commenting on Table 2 said " It seems like the recent meth increase across the state and especially heroin increases on college campuses including the West Virginia panhandle might not be reflected in Table #2's map...the newer statistics for meth use and meth labs puts West Virginia right up there with the other states."

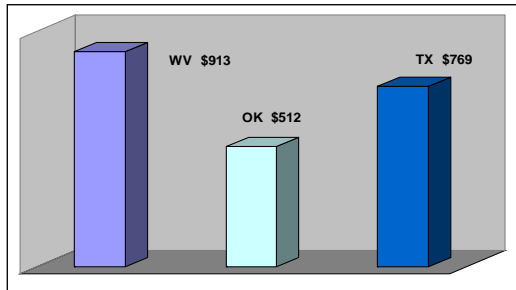
households nationally. State web sites and other studies of the cost of mental illness and substance use typically rely on SAMHSA information¹⁰.

From its 2003-2004 sampling, SAMHSA reported that West Virginia had the highest percentage in the country of adults with Serious Psychological Distress (SPD) in the past year.¹¹ West Virginia's percentage was 12.73% versus a national average of 9.63%. Given an estimated 2005 population of 1,431,683 persons 18 years of age and older, the 12.73% equals about 182,000 West Virginia adults¹².

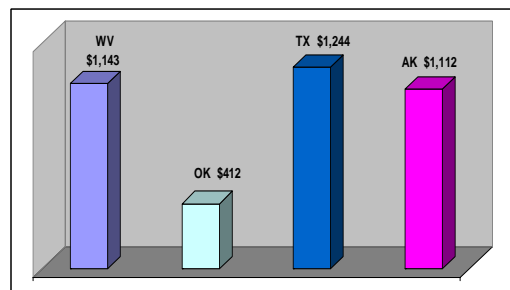
Other SAMHSA national data show the national relationships between mental illness and substance use. Mental illness is accompanied by greater substance use. In 2005, about 20.0% of the persons who had a Major Depressive Episode (MDE) had been dependent on or used either drugs or alcohol.¹³ Nationally, only 7.3 percent of persons aged 18 or older had at least one MDE in the past year. West Virginia is required to estimate and report the numbers of persons who have both mental illness and a substance use problem. In 2005, the state estimated that 13% of the 45,000 persons who had been provided treatment for mental health also had a substance use problem.¹⁴

In comparing per capita fiscal impact to other states, PCG found that mental health issues cost West Virginia \$913 per person as compared to \$512 and \$769 for Oklahoma and Texas, respectively. Similarly, substance use impacts West Virginia on a per capita basis at an annual rate of \$1,143 which compares to \$412 in Oklahoma, \$1,244 in Texas, and \$1,112 in Alaska.

Per Capita Spending on Mental Health



Per Capita Spending on Substance Use



¹⁰Office of Applied Statistics. (2004).

¹¹ Serious Psychological Distress (SPD) was referred to as Serious Mental Illness (SMI) in prior SAMHSA National Survey on Drug Use and Health (NSDUH) reports.

¹² Retrieved 11-5-06 from <http://quickfacts.census.gov/qfd/states/54000.html> This is a U.S. Census site.

¹³ Substance Abuse and Mental Health Services Administration. (2006). Table G.44

¹⁴ Department of Health and Human Resources. (2005, August).

III. INSTITUTIONAL AND OTHER RELATED COSTS OF MENTAL HEALTH AND SUBSTANCE USE

The Office of Health Facility Licensure and Certification (OHFLAC) in West Virginia lists on their website that there are 66 licensed hospitals including 35 general acute care facilities, 19 critical access hospitals, 5 rehabilitation hospitals, 4 psychiatric hospitals, and 2 long-term acute care hospitals.¹⁵ Within these hospitals, there are 11 Psychiatric/Chemical Dependency Units and 28 Skilled Nursing Units among the various specialty services offered.¹⁶

Table 4: OHFLAC West Virginia Hospital Listing

TYPE OF HOSPITAL	NAME OF HOSPITAL	CITY	TYPE OF HOSPITAL	NAME OF HOSPITAL	CITY
General Acute Care	Beckley Appalachian Regional	Beckley	Critical Access Hospitals	Boone Memorial Hospital	Madison
	Bluefield Regional Medical Center	Bluefield		Braxton County Memorial Hospital	Gassaway
	Cabell-Huntington Hospital	Huntington		Broadus Hospital Association	Philippi
	Camden-Clark Memorial Hospital	Parkersburg		Grafton City Hospital	Grafton
	Charleston Area Medical Center	Charleston		Guyan Valley Hospital	Logan
	Charleston Surgical Center	Charleston		Hampshire Memorial Hospital	Romney
	City Hospital	Martinsburg		Jefferson Memorial Hospital	Ranson
	Davis Memorial Hospital	Elkins		Minnie Hamilton	Grantsville
	Fairmont General Hospital	Fairmont		Montgomery General Hospital	Montgomery
	Grant Memorial Hospital	Petersburg		Morgan County War Memorial Hospital	Berkeley Springs
	Greenbriar Valley Medical Center	Ronceverte		Plateau Medical Center	Oak Hill
	Jackson General Hospital	Ripley		Pocahontas Memorial Hospital	Buckeye
	Logan Regional Medical Center	Logan		Potomac Valley Hospital	Keyser
	Monongalia General Hospital	Morgantown		Preston Memorial Hospital	Kingwood
	Ohio Valley Medical Center	Wheeling		Richwood Area Community Hospital	Richwood
	Pleasant Valley Hospital	Point Pleasant		Roanne General Hospital	Spencer
	Princeton Community Hospital	Princeton		Sistersville General Hospital	Sistersville
	Putnam General Hospital	Hurricane		Summers County ARH Hospital	Hinton
	Raleigh General Hospital	Beckley		Webster County Memorial Hospital	Webster Springs
	Reynolds Memorial Hospital	Glendale	Rehabilitation Hospitals	Southern Hills Regional Rehab	Princeton
	St. Francis Hospital	Charleston		Mountainview Regional Rehab	Morgantown
	St. Joseph's Hospital of Buckhannon	Buckhannon		Huntington Regional Rehab	Huntington
	St. Joseph's Hospital of Parkersburg	Parkersburg		Western Hills Regional Rehab	Parkersburg
	St. Luke's Hospital	Bluefield		Peterson Rehab and Geriatric Center	Wheeling
	St. Mary's Medical Center	Huntington	Psychiatric Hospitals	Highland Center	Charleston
	Stonewall Jackson Memorial Hospital	Weston		Mildred Mitchell-Bateman Hospital	Huntington
	Summersville Memorial Hospital	Summersville		River Park Hospital	Huntington
	Thomas Memorial Hospital	South Charleston		Sharpe Hospital	Weston
	United Hospital Center	Clarksburg	Long-term Acute Care Hospitals	Cornerstone	Huntington
	Weirton Medical Center	Weirton		Select Specialty Hospitals	Charleston
	Welch Community Hospital	Welch			
	West Virginia University Hospital	Morgantown			
	Wetzel County Hospital	New Martinsville			
	Wheeling Hospital	Wheeling			
	Williamson Memorial Hospital	Williams			

Source: OHFLAC website

In Fiscal Year 2004, West Virginia hospitals had total operating expenditures of \$3.7 billion dollars¹⁷ of which an estimated \$223 million was attributable to mental health and substance use related services. These services include general inpatient services, specialized psychiatric inpatient services, hospital outpatient care, and hospital emergency room services.

¹⁵ Office of Health Facility Licensure and Certification website, Retrieved on 01-22-07 from <http://www.wvdhhr.org/ohflac/FacilityLookup/Default.asp>.

¹⁶ West Virginia Hospital Association Data Center, Retrieved on 11-06-06 from <http://www.wvha.com/datacenter/index.htm>.

¹⁷ West Virginia Health Care Authority. (2006, January 9).

Table 5: FY 2004 Impact of Substance Use and Mental Health on West Virginia Hospitals

HOSPITAL SERVICE AREA	MENTAL HEALTH	SUBSTANCE USE	TOTAL FY 2004
Inpatient - Primary Diagnosis	\$44,616,701	\$8,493,080	\$53,109,782
Inpatient - Secondary Diagnosis	\$12,499,603	\$15,323,190	\$27,822,793
Hospital Outpatient	\$59,809,522	\$0	\$59,809,522
Hospital Emergency Room	\$4,123,873	\$2,050,860	\$6,174,733
Psychiatric Hospitals	\$62,708,555	\$13,540,445	\$76,249,000
Total	\$183,758,255	\$39,407,575	\$223,165,831

Inpatient - Primary Diagnosis

Inpatient charges were collected using discharge data for fiscal year 2004 from all licensed hospitals in the state of West Virginia. The data is maintained by the West Virginia Health Care Authority (WVHCA). Using the Major Diagnostic Category (MDC), total charges were determined for mental health by using MDC 19-Mental Diseases and Disorders. Similarly, substance use charges were determined by using the MDC 20-Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders.

A cost-to-charge ratio was then applied to the total charges to determine the total inpatient costs. The cost-to-charge ratio was calculated from West Virginia hospitals using costs and charges from the 2004 Medicare Cost Report on Worksheet C Part 1. The cost-to-charge ratio was calculated at 52.95%. Inpatient charges related to the four psychiatric hospitals were removed to prevent double counting since their impact is captured in a section below.

Table 6: Cost of Inpatient Services of Mental Health and Substance Use

HCFA - MDC	DISCHARGES	CHARGES	COST TO CHARGE RATIO	COSTS
19-mental diseases and disorders	10,849	\$84,261,948	52.95%	\$44,616,701
20-alcohol/drug use and alcohol/drug induced organic mental disorders	2,362	\$16,039,812	52.95%	\$8,493,080
Total	13,211	\$100,301,760		\$53,109,782

The Inpatient-Primary Diagnosis cost associated with Mental Health and Substance Abuse (trended forward) to FY 2006 is estimated at \$51,272,799 and \$9,760,112 (respectively).

Inpatient – Secondary Diagnosis

Using the same discharge data from the WVHCA, there were 44,785 patient discharges with a secondary diagnosis related to mental health and substance use. The total charges for these patients were over \$525 million¹⁸ and using a similar approach as the Oklahoma Health Care Report on Costs of Mental Health, Substance abuse, and Domestic Violence¹⁹, that estimated "...mental health conditions and co-occurring substance abuse problems add one-half day to hospital discharges." West Virginia hospitals had an average length of stay (ALOS) of 5.1 days²⁰ therefore one-half day would represent a 10% increase in ALOS. Using the cost-to-charge ratio described above and the 10% increase in ALOS, \$12.5 million can be attributable to mental

¹⁸ West Virginia Health Care Authority. (2006), ICD-9-CM codes 290-319.

¹⁹ Oklahoma Governor's and Attorney General's Blue Ribbon Task Force. (2005, February).

²⁰ West Virginia Health Care Authority. (2006, January 9). Table 17

health secondary diagnosis and \$15.3 million to substances use. The Inpatient-Secondary Diagnosis cost associated with Mental Health and Substance Abuse (trended forward) to FY 2006 is estimated at \$14,364,344 and \$17,609,165 (respectively).

Hospital Outpatient

In FY 2004, there were roughly 4.2 million outpatient visits in the state's hospitals²¹. Of these visits, approximately 6.7% or 281,028 can be attributed to mental illness.²² This percentage is extracted from the National Hospital Ambulatory Medical Care Summary conducted by the Centers for Disease Control. The report defines an "Outpatient Department" as "a hospital facility where nonurgent ambulatory medical care is provided under the supervision of a physician."²³ The services provided can include general medicine, pediatrics, psychiatry and others. In determining the estimated total cost of mental health services in outpatient departments, an average cost per outpatient visit was calculated to be \$212.82 from a random sample of nine West Virginia hospitals. The average costs were calculated by taking the total outpatient costs from the 2004 Medicare Cost Report on Worksheet C, Part 1 and dividing by the total number of outpatient visits from the 2005 Health Care Authority's Annual Report. The average cost per visit was then multiplied by the number of visits attributed to mental health conditions to equal an estimated \$60 million in total outpatient costs in the state of West Virginia. The Hospital Outpatient expense for Mental Health was then trended forward to FY 2006 and is estimated at \$68,732,146.

Hospital Emergency Room

There were over one million visits to emergency rooms in West Virginia of which a proportion is directly related to mental health and substance use cases.²⁴ Based on an approach from the Oklahoma Health Care Report on Costs of Mental Health, Substance Abuse, and Domestic Violence, an estimated \$6.2 million in emergency room costs can be attributed to services provided for mental health and substance use. This estimate was derived by first calculating an average cost per emergency room visits of \$167.46 by using a random sample of 9 hospitals and dividing their total emergency room costs from the 2004 Medicare Cost Report on Worksheet C, Part 1 by the total number of emergency room visits from the Authority's Annual Report in Table 13. Then the percentage of emergency room visits related to a Mental Disorders (ICD-9-CM 290-319) was determined to be 3.4% based on the CDC's National Hospital Ambulatory Medical Care Survey: 2004 Emergency Department Summary.²⁵

Of the 36,873 emergency room visits related to Mental Disorders, it was determined that 12,247 or 33% were related to substance use. Using a Drug Abuse Warning Network (DAWN) estimate, there were 674 substance use caused emergency room visits per 100,000 people.²⁶ Applying this

²¹ West Virginia Health Care Authority. (2006, January 9). Table 13

²² National Center for Health Statistics. (2006). Table 11. Number and percent distribution of outpatient department visits, United States, 2004.

²³ National Center for Health Statistics. (2006). Introduction page 2

²⁴ West Virginia Health Care Authority. (2006, January 9) Table 13 Selected Outpatient Utilization Data

²⁵ This percentage was taken from the National Hospital Ambulatory Medical Survey: 2004 Emergency Department Summary in Table 9 conducted by the CDC.

²⁶ Drug Abuse Warning Network (DAWN), 2004: National ED Estimates 1,997,993 ER Visits, U.S. Population and WV Population. Retrieved on 11-2-06 from <http://quickfacts.census.gov/qfd/states/00000.html>.

statistic to the total population of West Virginia helped, as shown below, to determine the number of emergency room visits related to substance use.

Table 7: Emergency Room Costs of Mental Health and Substance Use Related Visits

	TOTAL ER VISITS	MENTAL HEALTH DISORDERS	SA RELATED	MH RELATED
WV ER Visits	1,084,297	36,873	12,247	24,626
Average Cost per Visit	\$167	\$167	\$167	\$167
Total	\$181,578,005	\$6,174,733	\$2,050,860	\$4,123,873

The Hospital Emergency Room cost associated with Mental Health and Substance Abuse (trended forward) to FY 2006 is estimated at \$4,739,089 and \$2,356,815 (respectively).

Psychiatric Hospitals

There are four psychiatric hospitals in the state and their total operating expenditures for fiscal year 2004 was over \$76 million.²⁷ Of the four state psychiatric hospitals, Mildred Mitchell-Bateman Hospital and Sharpe Hospital are operated by the Office of Health Facilities under the Bureau for Behavioral Health and Health Facilities. The other two facilities, Highland Hospital and River Park Hospital are private non-state facilities. These expenditures were attributed to mental health and substance use by using the percentage of inpatient discharges in West Virginia where the primary diagnosis fell into either the Major Diagnosis Category 19- Mental Diseases and Disorders or 20 - Alcohol/drug use and Alcohol/drug induced organic mental disorders.²⁸

Table 8: Psychiatric Hospital Costs of Mental Health and Substance Use

FACILITY	TOTAL EXPENDITURES	% MH INPATIENT DISCHARGES	% SU INPATIENT DISCHARGES	MENTAL HEALTH EXPENDITURES	SUBSTANCE USE EXPENDITURES
Highland Hospital	\$9,073,000	82%	18%	\$7,461,799	\$1,611,201
River Park Hospital	\$17,145,000	82%	18%	\$14,100,358	\$3,044,642
Sharpe Hospital	\$27,368,000	82%	18%	\$22,507,938	\$4,860,062
Mildred Mitchell-Bateman Hospital	\$22,663,000	82%	18%	\$18,638,461	\$4,024,539
Totals	\$76,249,000			\$62,708,555	\$13,540,445

The Psychiatric Hospital cost associated with Mental Health and Substance Abuse (trended forward) to FY 2006 is estimated at \$72,063,668 and \$15,560,463 (respectively).

Nursing Homes

Nursing homes in the state of West Virginia had total operating expenditures of over \$552 million during Fiscal Year 2004.²⁹ Based on the National Nursing Home Survey: 1999 Summary, there were 16.8% of nursing home residents with a primary diagnosis related to Mental Disorders (ICD-9-CM) at the time of admission. This percentage is consistent with the experience of West Virginia nursing home ombudsman staff reported in the appendix.

The National Nursing Home Survey is a report that summarizes data collected by the Centers for Disease Control. Nursing homes that are included in the survey have at least three skilled nursing

²⁷ West Virginia Health Care Authority. (2006, January 9)

²⁸ West Virginia Health Care Authority. (2006, January 9)

²⁹ West Virginia Health Care Authority. (2006, January 9) Table 24

beds and are certified by Medicare or Medicaid. Applying this statistic to the total operating expenditures for nursing homes, an estimated \$93 million of costs can be attributed to mental health services for nursing home residents. This estimate would also include substance use related diagnoses.

Table 9: West Virginia Nursing Home Costs related to Mental Health

NURSING HOME COSTS RELATED TO MENTAL HEALTH		
Total NH Operating Expenditures		\$552,894,000
% NH Patients w/ Primary Diag. Mental Illness		16.8%
Total		\$92,886,192

The Nursing Home cost associated with Mental Health (trended forward) to FY 2006 is estimated at \$106,743,332.

Prescription Drugs

In FY 2005, it was estimated that prescription drug costs represent 14.4% of all health care spending in the state of West Virginia or \$1.5 billion.³⁰ Specific data on the amount of psychotropic drugs is not easily accessible however one can assume that there is a correlation between the percentage of total inpatient hospital days to the cost of prescription drugs for mental health illnesses and substance use. This methodology follows the same approach used by the Texas Commission on Alcohol and Drug Abuse in their report titled “Economic Costs of Alcohol and Drug Abuse in Texas - 2000.” This would result in 9.1%³¹ of prescription drug costs being related to mental health or \$133 million. In addition, prescription drugs related to substance use would represent 1.5% of total drug costs or \$22 million.

The Prescription Drug cost associated with Mental Health and Substance Abuse (trended forward) to FY 2006 is estimated at \$142,576,000 and \$23,584,000 (respectively).

Physicians

Physician and other professional services costs account for \$2.7 billion or 26.1% of health care spending in West Virginia.³² Once again relying on the National Ambulatory Medical Care Survey 2004 Summary, nationwide statistics of the physician office visits state that approximately 5.3% of all visits are related to mental disorders. Applying this allocation statistic would estimate the mental health related physician expenditures to be \$141 million. This percentage is also supported by comparing Medicaid expenditures for psychiatric physician

³⁰ Kaiser Family Foundation StateHealthFacts.org, West Virginia: Distribution of Health Care Expenditures by Service. Retrieved on 11-3-06 from <http://www.statehealthfacts.org/cgi-bin/healthfacts.cgi?action=profile&area=West+Virginia&welcome=1&category=Health+Costs+%26+Bud gets>

³¹ West Virginia Health Care Authority. (2006, January 9), Table 20 Major Diagnostic Categories by Inpatient Days 2004

³² Kaiser Family Foundation StateHealthFacts.org, West Virginia: Distribution of Health Care Expenditures by Service. Retrieved on 11-3-06 from <http://www.statehealthfacts.org/cgi-bin/healthfacts.cgi?action=profile&area=West+Virginia&welcome=1&category=Health+Costs+%26+Bud gets>

services to the total physician services. Psychiatric physician services account for \$7 million of the \$116 million annualized physician Medicaid services, or 6%.

The Physician cost associated with Mental Health (trended forward) to FY 2006 is estimated at \$162,034,944.

Substance Abuse Treatment Centers

There are eight methadone treatment centers in the state of West Virginia who serve nearly 5,000 clients.³³ The treatment centers are owned and operated by CRC Health Group based in California who operate similar treatment centers in other states. CRC Health Group reported to the West Virginia Health Care Authority that in fiscal year 2004 the eight Methadone clinics had combined operating expenditures of \$9.8 million. Methadone is a controversial treatment for addictions to such drugs as heroin and OxyContin. Other substance abuse treatment centers in West Virginia's state facilities and other behavioral health providers are not included in this section to prevent double counting.

Table 10: FY 2004 Expense for WV Methadone Centers

SUBSTANCE ABUSE TREATMENT CENTERS	TOTAL EXPENSE
Beckley Treatment Center, Inc.	\$1,500,000
Charleston Treatment Center	\$2,472,000
Clarksburg Treatment Center	\$844,000
Huntington Treatment Center	\$2,160,000
Martinsburg Institute	\$670,775
Parkersburg Treatment Center	\$661,000
Wheeling Treatment Center, Inc.	\$190,000
Williamson Treatment Center	\$1,264,000
Total	\$9,761,775

Source: WV Healthcare Authority Annual Report 2005

The Substance Abuse Treatment Center cost associated with Substance Abuse (trended forward) to FY 2006 is estimated at \$11,218,076.

Comprehensive Mental Health Centers

In West Virginia, there are approximately 82 behavioral health providers including thirteen Comprehensive Community Mental Health Centers (CMHC) that are charged with providing community based services for individuals with mental illness, substance abuse problems, and mental retardation and developmental disability (MR/DD). Many of providers deal mostly with MR/DD services and are not included in this report. BHHF funds community providers through the allocation of grants with the majority of the grants going to the CMHC's. The CMHC's also receive Medicaid reimbursement. This report looks at BHHF funding and Medicaid reimbursement in estimating the cost of providing mental health or substance use services in the community. The table below illustrates for state fiscal year 2005 BHHF funding of community services between the CMHC's and the other community behavioral providers. In the chart, \$11M in discrete MR/DD targeted funding has been excluded.

³³ <http://www.statejournal.com/story.cfm?func=viewstory&storyid=603>

Table 11: SFY 2005 Funding To Comprehensive Community Mental Health Centers by Program Areas and Funding Method

BEHAVIORAL HEALTH PROGRAMS	CMHCs
Adult Mental Health	\$7,626,971
Children's Mental Health	\$3,678,928
Substance Abuse	\$13,396,964
Charity Care (Uncompensated Care)	\$11,815,430
Support and Alternative Services	\$4,725,000
Total Allocation	\$41,243,293

Source: BHHF Accounting Records

The table below shows Medicaid reimbursement to community behavioral health providers during fiscal year 2005. Reimbursement for MR/DD services is not included; however 4 MR/DD centers did receive some Medicaid reimbursement for mental health clinic services.

Table 12: Medicaid Revenue by Provider in SFY 2005

COMPREHENSIVE COMMUNITY MENTAL HEALTH CENTERS	MEDICAID REVENUE	MR/DD CENTERS	MEDICAID REVENUE
Northwood Health Systems	\$9,398,709	Potomac Center	\$444,931
Seneca MH/MR Council	\$1,205,618	Autism Services Center	\$31,427
Prestera Center for Mental Health	\$5,651,108	Green Acres Regional Center	\$567
Westbrook Health Services, Inc.	\$1,575,079	ARC of Three Rivers	\$11,316
Valley Health Care Systems	\$1,099,951	Total	\$488,241
United Summit Center, Inc.	\$1,992,690		
Southern Highlands CMHC	\$1,660,682		
HealthWays, Inc	\$160,508		
Eastern Panhandle Mental Health Center	\$835,553		
FMRS Health Systems	\$2,053,040		
Appalachian Community Health Center	\$1,367,593		
Logan-Mingo Area Mental Health	\$1,032,190		
Potomac Highlands Guild	\$444,931		
Total	\$28,477,653		

Source: WV BMS Medicaid Management Information System

The community behavioral health providers account for roughly \$70 million in costs between BHHF funding and Medicaid reimbursement. Substance Use costs can be discretely broken out from BHHF allocation of grants and represent \$14 million in total costs.

The Community Behavioral Health cost associated with Mental Health and Substance Abuse (trended forward) to FY 2006 is estimated at \$60,902,704 and \$14,361,545 (respectively).

Other Behavioral Health and Substance Use Providers

Within the 82 behavioral health providers that are listed in the WV Health care Authority Annual Report for 2005, there 39 community providers that can be classified as Residential Child Care, Therapeutic Foster Care, Substance Abuse, and other behavioral health providers. With the assistance of personnel at WV BHHF, the providers were identified and their expenditures were included in this report. It should be noted that these providers can offer services that fall outside of the scope of mental health or substance use treatment

Table 13: FY 2004 Expenditures for Other Behavioral Health Providers in WV

TYPE OF PROVIDER	PROVIDER NAME	MENTAL HEALTH	SUBSTANCE USE
Residential Child Care	Burlington United Methodist Family Services	\$8,977,237	
	Charles W. Cammack Children's Center	\$1,783,572	
	Children's Home of Wheeling	\$3,656,450	
	Children's Home Society of West Virginia	\$11,713,321	
	Crittenton Services	\$3,801,774	
	Davis-Stuart	\$4,632,867	
	Elkins Mountain School	\$673,668	
	Evergreen Behavioral Health Center	\$461,136	
	Family Connections	\$688,278	
	Genesis Youth Crisis Center	\$1,930,002	
	Golden Girl	\$1,554,847	
	Monangalia County Youth Services Center	\$658,678	
	New River Ranch	\$798,259	
	Pressley Ridge Schools	\$16,290,676	
	St. John's Home for Children	\$588,353	
	Stepping Stone	\$453,547	
	Stepping Stones	\$1,308,760	
	Stonebrook	\$1,924,469	
	Sugar Creek Children's Center	\$451,955	
	Therapeutic Child Care	Timberline Health Group	\$3,240,835
Youth Academy LLC		\$1,259,382	
Youth Health Service		\$1,878,865	
Bralely & Thompson		\$12,019,099	
Daymark		\$1,483,652	
Other BH Providers	Try-Again Homes	\$2,550,214	
	West Virginia Youth Advocate Program, Inc.	\$3,707,429	
	Youth Services System	\$4,589,174	
	Betsy Broh House	\$42,715	
	Elkins Family Counseling Center	\$5,830,716	
	Family Service of Marion and Harrison Counties	\$1,038,915	
	Family Preservation Services of WV	\$442,750	
	Family Service of Kanawha Valley	\$725,545	
	Family Service - Upper Ohio Valley	\$2,043,690	
	Kanawha Valley Center	\$12,480,769	
Substance Use	Process Strategies	\$5,646,464	
	Sycamore Run	\$189,581	
	Worthington Center, Inc.	\$2,959,057	
	Olympic Center - Preston		\$1,346,987
	So Others Might Eat (Exodus and Mary Anagelou Houses)		\$1,350,390
	Total	\$124,476,701	\$2,697,377

Source: WV Healthcare Authority Annual Report 2005

The Other Behavioral Health providers cost associated with Mental Health and Substance Use trended forward to 2006 is \$143,046,633 and \$3,099,782.

Federal Qualified Health Centers

In West Virginia, Federally Qualified Health Centers (FQHCs) serve over 270,000 individuals from roughly 132 service delivery sites which include school-based health centers.³⁴ FQHC's are local, non-profit health care providers who typically serve low-income and medically underserved communities. These health centers are primary care delivery sites that provide services ranging from general check-ups, minor surgeries, X-ray, health education, dental care, testing, and other clinical services. The services can also include behavioral health and substance use counseling and treatment. FQHC's are required to submit annual health center utilization and financial data to U.S. Bureau of Primary Health Care through the Uniform Data System (UDS).

Based on 2004 UDS data, West Virginia's FQHC's employed a total of 37 full-time equivalents for Mental Health and Substance Abuse Specialists including psychiatrists, psychologists, and

³⁴ National Association of Community Health Centers, Inc. West Virginia Health Center Fact Sheet

licensed behavioral health providers. Mental health treatment and counseling was provided at 85% of health centers while 63% provided substance use services. Patients with a primary diagnosis of mental health or substance abuse accounted for 65,781 patient visits or 6.5% of the over 1 million visits to West Virginia FQHC's in 2004.³⁵ The UDS report calculates an average cost per medical visit at \$94 which can be used to estimate the total costs of related services. Since mental health and substance use costs are intermingled, PCG used the percentage of inpatient discharges related to mental health and substance use to allocation costs.

Table 14: FQHC's Related Costs

	TOTAL VISITS	SUBSTANCE USE RELATED	MENTAL HEALTH RELATED
MH and SA Related Visits	65,781	11,841	53,940
Average Cost per Visit	\$94	\$94	\$94
Total Cost	\$6,183,414	\$1,113,015	\$5,070,399

The Federal Qualified Health Center cost associated with Mental Health and Substance Abuse (trended forward) to FY 2006 is estimated at \$5,826,821 and \$1,279,059 (respectively).

Department of Education (WVDE)

WVDE offers Psychology treatment services and Substance Use prevention programs to the 281,000 students enrolled in the school system. Revenue and expenditures are reported by the county board of educations through the West Virginia Educational Information System (WVEIS). When posting expenditures to WVEIS, the county treasurers assigned items to various program codes and also project codes. In FY 2004, the amount of expenditures coded to Psychology was \$7.5 million. Of this, \$1.6 million was funded by Federal grants and revenue. Salaries and fringe benefits of the 84 school psychologists represent 89% of the expenditures coded to psychology. Other costs would be related to office supplies, travel expenses, and equipment.

To determine the amount of substance use related costs, the project code which identifies the funding source was used to determine the related expenditures. Project Code 48XXX was used to identify the Drug Free Schools program expenditures of \$2,192,462 and Project Code 27XXX is used for Tobacco Prevention Education with expenditures totaling \$428,043. No costs that were included in the mental health related costs appear in the substance use related costs.

WVDE related expenditures trended forward to 2006 are \$8,662,654 for Mental Health and \$3,011,449 for Substance Use.

³⁵ NACHC, 2005, Based on Bureau of Primary Health Care, HRSA, DHHS, 2004 Uniform Data System.

IV. CRIMINAL JUSTICE RELATED COSTS OF MENTAL HEALTH AND SUBSTANCE USE

Every five or six years the federal Department of Justice undertakes a survey of drug use by state and federal inmates. This survey is the best national representation of the relationships between criminal activity and drugs. The latest survey is called The 2004 Survey of Inmates in State and Federal Correctional Facilities and it collected data on prisoners' prior use, dependence, and abuse of illegal drugs. The table below compares the 2004 results with the results reported in the previous national survey which was conducted in 1997.³⁶

Table 15: National Data from 2004 and 1997 Surveys on Drugs and Prisoners

DRUG USE	PERCENT OF PRISONERS	
	2004	1997
In the month before the offense		
State	56%	57%
Federal	50%	45%
At the time of the offense		
State	32%	33%
Federal	26%	22%
Any dependence or abuse		
State	53%	--
Federal	45%	--

As the table shows, almost half the inmates were using drugs prior to their offense and one-fourth to one-third were on drugs at the time of their offense. The national survey also found that 17% of State and 18% of Federal prisoners committed their crime to obtain money for drugs. These are high rates and indicate that crime and drug use are pervasively interlinked and that drug use has a high cost on criminal justice agencies and West Virginians.

Persons who use drugs while committing a crime also commit more crimes. The national survey found State drug offenders also reported serious criminal records:

- 50% were on probation, parole, or escape at the time of their arrest;
- 78% had a prior sentence to incarceration or probation; 46% had three or more prior sentences;
- 22% had a prior violent offense; 16% reported that all prior sentences were for drug offenses.

The 2004 Survey of Inmates in State and Federal Correctional Facilities also collected information on the prevalence of mental health problems among prisoners.³⁷ Overall, nationally, the survey estimated that 56% of state prisoners and 45% of federal prisoners had a mental illness problem. As the table below shows, these mentally ill prisoners had worse arrest records and higher rates of substance use.

³⁶ This excellent survey is found at Bureau of Justice Statistics. (2006, October).

³⁷ Bureau of Justice Statistics. (2006, September).

Table 16: Compares State and Federal Prisoners with and Without Mental Illness

Percent of inmates in — Selected characteristics	State Prison		Local	Jail
	With	Without	With	Without
	mental problem		mental problem	
Current or past violent offense	61%	56%	44%	36%
3 or more prior incarcerations	25%	19%	26%	20%
Substance dependence or abuse	74%	56%	76%	53%
Drug use in month before arrest	63%	49%	62%	42%
Family background				
Homelessness in year before arrest	13%	6%	17%	9%
Past physical or sexual abuse	27%	10%	24%	80%
Parents abused alcohol or drugs	39%	25%	37%	19%
Charged with violating facility rules	58%	43%	19%	9%
Physical or verbal assault	24%	14%	8%	20%
Injured in a fight in the prison	20%	10%	9%	3%

Given these sobering statistics³⁸ and interlinked problems, below we consider the impact of mental illness and alcohol and drug use on criminal justice related agencies and the state. This analysis covers the agencies involved in the arrests, trials, incarceration, and parole of offenders.

³⁸ State studies corroborate these national studies. For example, Massachusetts, Substance Abuse Strategic Plan. (2005, May). p. 64. found 70 to 90 percent of those incarcerated have extensive histories of alcohol and substance use problems.

Fiscal estimates are made by agency as to the impact of the lethal combination of alcohol, drugs, and mental illness.

Law Enforcement

This estimate covers three parts of the state's law enforcement: the state police, county sheriffs, and municipal police. The total of the 2006 budgeted amount for the state police³⁹, estimated 2006 expenditures for county sheriffs based on a sample of 58% of county law enforcement budgets⁴⁰, and 2006 expenditures for municipal law enforcement is \$224,568,886⁴¹.

The Federal Bureau of Investigation reports uniform crime statistics for each state for each year. These arrests can be used to count how many are related to drug or alcohol. In 2005 in West Virginia, there were 52,854 arrests of which about 5,700, or 10.79%, were for a drug offense and about 14,000 or 26.58% were for an alcohol offense.⁴²

However, alcohol and drugs play a factor in the commission of other offenses. In 1992 the National Institute of Drug Abuse (NIDA) estimated, for selected crimes, how many other crimes are committed where drugs or alcohol played a part.⁴³ NIDA published "attribution factors" for crimes believed to be most closely linked to substance use and these factors are used in the table below. These national attribution percentages were developed in the early 1990's and have not been updated since. However, they are reused in current federal publications⁴⁴ and by other states in studies on the effect of drug and alcohol use on state criminal justice activities.⁴⁵ The table below shows these attribution factors. For example, NIDA estimated that 15.80% of all homicides are related to drug use.

The Table below estimates that the percentage of all arrests that are due either directly or indirectly to alcohol is about 34.93%⁴⁶, and the percentage of all arrests that are due either directly or indirectly to drugs is about 14.91%.

³⁹ State of West Virginia. (2006). p. 508, Charleston, WV: This amount includes about \$1.1 million in federal funds.

⁴⁰ Estimate of expenditures based on survey done by the West Virginia Sheriff's Association.

⁴¹ Expenditure data for 2006 on municipal law enforcement was obtained from the West Virginia State Auditor's Office.

⁴² Alaska's study reported 31% of arrests were due to drug and alcohol. See the McDowell Group. (2005, December).

⁴³ National Institute on Drug Abuse and National Institute on Alcohol Abuse and Alcoholism. (1998). Table C.1.

⁴⁴ Office of National Drug Control Policy. (2004).

⁴⁵ The McDowell Group. (2005, December). Division of Data and Research. (2004 July).

⁴⁶ Institute for the Study of Social Change. (2004, March) found that 43% of California's arrests were alcohol-related.

Table 17: Percentage of 2005 West Virginia arrests due to Alcohol or Drugs

OFFENSES	2005 ARRESTS	ATTRIBUTION FACTORS			
		FOR DRUGS	FOR ALCHOL	TO ALCOHOL	TO DRUGS
Homicide	54	15.80%	30.00%	16	9
Aggravated Assault	10,534	5.10%	30.00%	3,160	537
Forcible Rape	55	2.40%	22.50%	12	1
Robbery	206	27.20%	3.40%	7	56
Burglary	850	30.00%	3.60%	31	255
Larceny-Theft	4,243	29.60%	28.00%	1,188	1,256
Stolen Property	406	15.10%		-	61
Drugs	5,703	100.00%		-	5,703
Alcohol	14,049	0.00%	100.00%	14,049	-
TOTAL	52,854			18,463	7,878
% OF TOTAL				34.93%	14.91%

Source: Data from 2005 FBI Arrest records and attribution percentages from NIDA study.

These percentages are used below to estimate what percent of law enforcement expenditures are related to drug and alcohol use. To derive cost estimates it was necessary to convert the number of arrests into dollar equivalents. This conversion was done using the same procedure as NIDA which assumed that costs were proportional to the numbers of arrests. For example, the total cost of law enforcement associated with drugs was calculated by taking the total cost of law enforcement and multiplying it by the percentage of arrests assumed to be drug related.

Different levels of law enforcement have different arrest profiles and combining their total budgets and adding all arrests statewide controls for these differences. The table below shows the budgets or expenditures of major law enforcement agencies and, using the 34.93% estimate for alcohol and the 14.91% for drugs, estimates that about half of their estimated 2006 spending, \$111,922,000, is related to alcohol or drugs.

Table 18: Amount of Drug and Alcohol Expenses in 2006 Law Enforcement Budgets

LAW ENFORCEMENT AGENCY	FY 2006	DRUG RELATED	ALCOHOL RELATED	BOTH
State Police	\$76,253,535	\$11,366,258	\$26,637,548	\$38,003,806
County Sheriffs	\$46,953,559	\$6,998,839	\$16,402,225	\$23,401,065
Municipal Police	\$101,361,792	\$15,108,864	\$35,408,583	\$50,517,446
Total	\$224,568,886	\$33,473,961	\$78,448,356	\$111,922,317

The finding of a 50% impact is consistent with other state studies. Both Oklahoma and Texas reports on the impact of alcohol and drug use found an approximate 50% overall impact on their states' criminal justice systems.⁴⁷

Prosecuting Attorneys Institute

The Institute supports local prosecutors by providing information and training. The 2006 budgeted amount is \$971,196. In 2005, there were 52,854 arrests including of which about 34.93% were alcohol related and 14.91% were drug related. Taking these percentages times the 2006 budgeted amount results in an estimate of \$339,000 for alcohol use and \$144,800 for drug use.

⁴⁷ Oklahoma Governor's and Attorney General's Blue Ribbon Task Force. (2005, February). Criminal Justice Report, p. 7. Liu, L. (2000, December). p. 39.

Public Defender Services

Staffs at Public Defender Services report their budget for 2006 is about \$30,085,000 and estimate about 85% of the persons they represent have a history of mental illness or substance use. When questioned about this high estimate, staff said the following, “Alcohol, drugs or mental illness are involved in almost all their cases. The defendant may not have the problem, but someone in the family or friends will. These factors are almost always present in some form.”

PCG used the FBI arrest records for West Virginia to estimate the impact of these factors on the Public Defender Services. Given that 34.93% of arrests were alcohol related, costs to the Public Defender Services for alcohol use would be about \$10,510,000. Given that 14.91% of the 2005 arrests were drug related, costs to Public Defender Service due to drug use would be about \$4,485,000.

West Virginia Courts

The total cost expended for FY 2005 to operate the Supreme Court of Appeals, Circuit Courts, Family Courts, Magistrate Courts, Probation Offices, Board of Law Examiners, Mental Hygiene, and the Judicial Investigation Commission was \$80,134,457.⁴⁸

The fiscal impact on the courts appears to occur in four of its components: Circuit Courts, Magistrate Courts, the Probation Office, and Mental Hygiene Commissioners. The total of the fiscal impact of mental health and substance use across all four components is estimated to be \$14,803,323.

The circuit courts are West Virginia’s only trial courts of record. They have jurisdiction over all civil cases in which more than \$300 is at issue; all cases on equity; proceedings in *habeas corpus*, *mandamus*, *quo warranto*, prohibition and *certiorari*; and all felonies and misdemeanors. In 2005, a total of 48,535 cases were filed in West Virginia’s circuit courts. Of that, 32,754 filings were in civil cases including 7,587 mental health cases and 8,612 were criminal cases.⁴⁹ A fiscal impact of \$4,250,348 was estimated by calculating the percentage of cases due to mental health and the percentage of criminal cases. Half the cost of the criminal cases was attributed to substance use. The Circuit Court figures trended forward to 2006 result in \$2,906,685 in Mental Health expense and \$1,649,688 in Alcohol and Other Drug expense.

There are 158 magistrates statewide, with at least two in every county and ten in the largest county. Magistrates issue arrest and search warrants, hear misdemeanor cases, conduct preliminary examinations in felony cases, and hear civil cases with \$5,000 or less in dispute. Magistrates also issue emergency domestic violence protective orders. In 2005, the court expended \$18,601,046 and there were 321,921 total cases. Of these 23,272 were felony cases and 72,040 were non-motor vehicle misdemeanors.⁵⁰ Half the cost of these cases was attributed to alcohol and substance use for an estimated impact of \$2,753,630. The Magistrate Court figures trended forward to 2006 result in \$2,951,924 in Alcohol and Other Drug expense.

⁴⁸State of West Virginia. (2006). p. 50 Detailed information on components of the Court’s budget was obtained from Supreme Court staff, November 2006.

⁴⁹ West Virginia Supreme Court of Appeals. (2006). p. 16.

⁵⁰ West Virginia Supreme Court of Appeals. (2006). p. 16.

For fiscal year 2005, the court paid \$1,447,723 on mental hygiene commissioner proceedings. The Mental Hygiene Commissioner figures trended forward to 2006 result in \$1,551,959 in Mental Health expense.

Half of the \$12,703,243 expended in SFY 2005 to operate the Probation Office was assumed to be alcohol or substance use related, for an estimated impact of \$6,351,622. The Probation Office figures trended forward to 2006 result in \$6,808,939 in Alcohol and Other Drug expense.

Regional Jail Authority

The West Virginia Regional Jail and Correctional Facility Authority operate ten regional jails. In 2006, there were 45,247 incarcerations and 3,113 or 6.88% were directly related to controlled substances and 4,845 or 10.71% were directly related to alcohol.⁵¹ Twenty-six percent of the Authority's inmates are currently taking psychotropic medication. Although there are more than 45,000 incarcerations, many of these are for short periods. The Authority currently has over 5,000 inmates and a bed capacity of about 3,900 beds. Offenders who have received a sentence of less than a year, in most cases a misdemeanor, are typically committed to the Authority while offenders receiving sentences of more than a year, usually a felony, are committed to the Division of Corrections. Offenders committed to Corrections are typically housed in regional jails until bed space is opened for them and there are approximately 1,000 such prisoners in the regional jails.

The Authority had a budget for 2006 of \$73,308,774. Applying the same percentages developed to capture the direct and indirect impact of drugs and alcohol on arrests would result in an estimate that 34.93% of the Authority's budget, or \$27,353,000, would be alcohol related and 14.91% of the Authority's budget, or \$11,676,000, would be drug related. A separate estimate is not made for mental health since staff report that mental health problems are almost always found associated with alcohol or drug use and would be double counted if a mental health estimate was also prepared based on the 26% taking psychotropic medications. The Authority does not conduct drug screening at time of admission.

Division of Corrections

The Division of Corrections operates twelve adult correctional centers and facilities with a capacity of about 3,900 inmates. In the course of a year the Division will work with about 5,300 inmates, 1,800 parolees, and 1,700 employees.⁵²

Offense profiles for persons in prisons are different from the distribution of offenses for which persons are arrested and are different from regional jail offense profiles. As with law enforcement and the regional jail operations, alcohol and drug use have both direct and indirect effects. For example, many persons are incarcerated for robbery where drugs were a factor in the history of the offense. The results of using the same attribution factors as used above, but applying them to prison offenses instead of arrests, is shown below.

The following table estimates the impact of drug use by first listing, for the crimes that NIDA reported on, the attribution factors for drug use, then showing the percentage of inmates

⁵¹ Information supplied by staff of the Regional Jail Authority. October, 2006.

⁵² State of West Virginia. (2006). p. 453

incarcerated for the listed offense,⁵³ and then making an estimate of those inmates that might have had offenses related to drugs. The total amounts to an additional 11.72%.

Table 19: Percent of Other Offenses Attributable to Drugs 2005

INMATE OFFENSES	% ATTRIBUTABLE TO DRUGS	% OF OFFENSES IN WV	% OF TOTAL OFFENSES
Homicide	15.80%	18.22%	2.88%
Aggravated Assault	5.10%	5.48%	0.28%
Forcible Rape	2.40%	5.90%	0.14%
Robbery	27.20%	9.84%	2.68%
Burglary	30.00%	13.71%	4.11%
Larceny-Theft	29.60%	5.14%	1.52%
Stolen Property	15.10%	0.73%	0.11%
Total			11.72%

Source: Office of National Drug Control Policy (2004). Table B-14.

The next table estimates the impact of alcohol use by first listing, for the crimes that NIDA reported on, the attribution factors for alcohol use, then listing the percentage of inmates incarcerated for the given offense, and then an estimate is made of those inmates that might have had offenses related to alcohol. The total amounts to an additional 10.70%.

Table 20: Percent of Other Offenses Attributable to Alcohol

INMATE OFFENSES	% ATTRIBUTABLE TO ALCOHOL	% OF OFFENSES IN WV	% OF TOTAL
Homicide	30.00%	18.22%	5.47%
Aggravated Assault	30.00%	5.48%	1.64%
Forcible Rape	22.50%	5.90%	1.33%
Robbery	3.40%	9.84%	0.33%
Burglary	3.60%	13.71%	0.49%
Larceny-Theft	28.00%	5.14%	1.44%
Stolen Property	-	0.73%	0.00%
Total			10.70%

These attribution factors are conservative where Oklahoma used attribution rates that were much higher, 50% or more, in its study of criminal justice impacts.⁵⁴

To derive cost estimates it was necessary to convert the number of offenses into dollar equivalents. This conversion was done using the same procedure as NIDA which assumed that costs were proportional to the numbers of persons incarcerated for specific offenses. For example, the total cost of the Division of Corrections associated with drugs was calculated by taking the total cost of the Division and multiplying it by the percentage of incarcerations assumed to be drug related. The next table summarizes the direct and indirect costs of alcohol and drugs to the Division.

⁵³ The percentages of inmates by offense are shown in Office of Research & Planning. (2005). pp. 116-118.

⁵⁴ Oklahoma Governor's and Attorney General's Blue Ribbon Task Force. (2005, February). Criminal Justice Report. p. 7

Table 21: Division of Correction Estimated Costs due to Drugs and Alcohol

	SFY 2006 DOC Budget	% of Total Offenses	Amount
Drug Offenses	\$ 133,541,892	7.92%	\$ 10,576,518
Other Offenses affected by Drugs	\$ 133,541,892	11.72%	\$ 15,651,110
	<i>SUBSTANCE USE SUBTOTAL</i>		\$ 26,227,628
Alcohol Offenses	\$ 133,541,892	3.36%	\$ 4,487,008
Other Offenses affected by Alcohol	\$ 133,541,892	10.70%	\$ 14,288,982
	<i>ALCOHOL SUBTOTAL</i>		\$ 18,775,990
	GRAND TOTAL		\$ 45,003,617

A snap shot of inmates on June 30 2005, showed that 302 or 7.92% had been incarcerated for drug-related offenses, and 128 or 3.36% were incarcerated for alcohol-related offenses.⁵⁵ The Division had a budgeted amount of \$133,541,892 for SFY 2006 to run its operations. There are very few federal funds in its operations, only about one half of one percent. The budget is funded by state general and special funds. This methodology estimates the direct cost of drug-related offenses at 7.92% of \$133,541,892, or about \$10,577,000. This same estimation methodology would put the estimate of direct alcohol related offenses at 3.36% of \$133,541,892, or about \$4,487,000.

The amount of attribution to drugs can be estimated by taking the 2006 budgeted amount of \$133,541,892 and multiplying it by the attribution percentage of 11.72% to arrive at a drug-related impact on the commission of other crimes at \$15,651,110. The amount of attribution to alcohol can be estimated by taking the 2006 budgeted amount of \$133,541,892 and multiplying it by the attribution percentage of 10.70% to arrive at an alcohol-related impact on the commission of other crimes of about \$14,289,000. The combination of direct and indirect effects equals about \$45 million.

The state reviews the medical records of everyone in their custody and anyone who has a medical history of receiving psychotropic medication is referred for a mental health screening and treatment plan. During incarceration, the state monitors the ongoing medication that inmates receive. In the first half of calendar year 2006, an average of 24.55% of the inmates were receiving a psychotropic medication.⁵⁶

Urine Analyses tests are not routinely done when new inmates arrive at the prison. The inmates have had none to little access to substances in the jails they are coming from like the Regional Jail

⁵⁵ Office of Research & Planning. (2005). see Tables 79 and 81 on p. 118. See also, Massachusetts's calculation that "Eighty percent of those arrested and/or incarcerated in the Commonwealth had used illegal drugs, abused alcohol, were arrested for driving under the influence, or were under the influence at the time of their crime or committed a crime to support their addiction." Substance Abuse Strategic Plan. (2005, May). p. 65.

⁵⁶ Mental Health Coalition. (2005, Summer). concluded that 26% of prisoners in Idaho jails have a mental illness. On the low end of estimates is the Ohio Department of Rehabilitation and Correction estimate that 12 percent of inmates are diagnosed as "seriously mentally ill." See Ohio Department of Mental Health. (2005, August 3). p. 11

Authority. An inmate could have been in another jail for three to six months before coming to prison. New inmates that come to the prison have been locked away from drugs or alcohol and bring a history of use but not a current addiction.

The impact of mental illness on the Division's budget can be estimated by taking the \$133 million SFY 2006 budgeted amount times the proportion of inmates using psychotropic prescriptions. The impact to the state of mental health-related costs is estimated at about \$32,770,000. When interviewed, staffs who provide mental health services to West Virginia inmates report that the large majority, 85% to 90%, of the mentally ill have a co-occurring substance use history. National data from The 2004 Survey of Inmates in State and Federal Correctional Facilities found that an estimated 42% of inmates in State prisons and 49% in local jails were found to have both a mental health problem and substance dependence or use.⁵⁷

A conservative cost estimate recognizes it is difficult to disentangle the effects of mental illness from substance use in this incarcerated population. The estimated costs of drug and alcohol and mental illness will not be added together because of the confounding effects of co-occurrence.⁵⁸ However, an estimate of the impact of mental illness on the Division of Corrections could be obtained by taking the percentage of prisoners with psychotropic prescription and multiplying that percentage by the Division's budget as shown above.

Division of Juvenile Services

Created in 1997, the West Virginia Division of Juvenile Services is responsible for juvenile offenders and operates ten small pre-dispositional detention centers and two larger juvenile correctional facilities. When juveniles are admitted to one of the pre-dispositional centers an assessment is made of their substance use status. They are tested for drugs, their medical records are reviewed, their family is talked with, and they are asked about their substance use history. On the basis of these multiple sources of information, October 2006 data show that approximately 79% are found to be substance users.⁵⁹ Marijuana and alcohol are used by more than 75% of the juveniles, but 51% used depressants, and 28% have used cocaine. Staffs who work with treatment services reported a substantial increase in the number of dual-diagnosed juveniles admitted to its facilities. Past traumatic brain injuries and developmental issues, such as fetal alcohol syndrome (FAS) and fetal alcohol affected (FAE), require greater behavioral programming demands.

One Juvenile Services staff person commenting on a draft of this report felt that the 79% figure was too low, and moreover, that very high percentages of juveniles are addicted to multiple drugs. The comments of this person are consistent with the personal observations of other staffs interviewed. For purposes of calculating the fiscal impact below this report will use the Division's 79% finding.

⁵⁷ Bureau of Justice Statistics. (2006, September). p. 5.

⁵⁸ This methodology differs from some other national studies that calculate both the mental health impact and a drug and alcohol impact and assume they are additive e.g. Oklahoma Governor's and Attorney General's Blue Ribbon Task Force. (2005, February). *Task Force Recommendations Mental Health, Substance Abuse and Domestic Violence in Oklahoma*. Oklahoma City, OK:

⁵⁹ Oklahoma reported that 67% of arrested adults had at least one drug in their system at time of arrest. Oklahoma Governor's and Attorney General's Blue Ribbon Task Force. (2005, February) Criminal Justice Report, p. 7.

The estimated impact of drug use to the Division of Juvenile Services is based on the percentage of juveniles identified as having a substance use problem. The budgeted 2006 amount for Juvenile Services is \$33,733,791⁶⁰ and the amount impacted by substance use is approximately \$26,650,000.

Parole Board

The budgeted 2006 appropriations for the Parole Board were \$690,663.⁶¹ Of the 1,095 persons on parole on June 30, 2005, 21.42% had been incarcerated for a drug-related offense, and 6.54% had been arrested for an alcohol related offenses.⁶² Adding the drug attribution factor of 11.72% to the direct arrest percent of 21.42% for drug related offenses, results in an estimate that 33.14% of parolees had a drug-related offense for a cost to the Parole Board of \$228,893. Adding the alcohol attribution percent of 10.70% to the direct arrest percent of 6.54%, results in an estimate that 17.24% of parolees had an alcohol-related offense for a cost to the Parole Board of \$119,104.

⁶⁰ State of West Virginia. (2006). p.486

⁶¹ State of West Virginia. (2006). *Executive Budget 2007*, p. 505 Charleston, WV:

⁶² Office of Research & Planning. (2005). see Tables 100 and 101 on p. 123.

V. FEDERAL ASSISTANCE TO WEST VIRGINIA

Federal Grants

In Federal Fiscal Year (FFY) 2004, the latest year for which information is available, West Virginia received about \$18.0 billion in federal direct expenditures, loans, and insurance.⁶³ A PCG review of the titles of the 455 Federal grants found 42 law enforcement, substance use and mental health-related grants that provided West Virginia with approximately \$55,445,451 in federal assistance. The 42 grants are shown in Appendix A. Of the \$55,445,451, approximately \$18,450,107 is indirectly related to alcohol or drugs, \$13,318,000 is directly associated with alcohol and drugs, and \$5,109,162 is directly related to mental health (see table 18 below).



The \$18,450,107 was obtained using the same estimates of alcohol and drug related percentages, 34.93% for alcohol and 14.91% for drugs, which were used in the law enforcement estimate above. As shown in the Appendix, these percentages were multiplied by the amount of federal funds in the 26 law enforcement grants that did not have the words, "drug" or "alcohol" in their program titles.

⁶³ Federal payments to states are available through the Consolidated Federal Funds Report on the U.S. Census website. See <http://www.census.gov/govs/www/cffr04.html> and select the on-line query.

Table 22: Federal Grants Related to Mental Health and Substance Use

Federal Program Number	Name of Program	Amount of Federal Dollars
16.523	JUVENILE ACCOUNTABILITY INCENTIVE BLOCK GRANTS	\$442,300
16.524	LEGAL ASSISTANCE FOR VICTIMS	\$849,716
16.54	JUVENILE JUSTICE AND DELINQUENCY PREVENTION ALLOCATION TO STATES	\$743,939
16.542	NATIONAL INSTITUTE FOR JUVENILE JUSTICE AND DELINQUENCY PREVENTION	\$75,000
16.543	MISSING CHILDREN'S ASSISTANCE	\$100,000
16.544	GANG-FREE SCHOOLS AND COMMUNITIES-COMMUNITY BASED GANG INTERVENTION	\$21,123
16.548	TITLE V-DELINQUENCY PREVENTION PROGRAM	\$79,847
16.55	STATE JUSTICE STATISTICS PROGRAM FOR STATISTICAL ANALYSIS CENTERS	\$98,341
16.554	NATIONAL CRIMINAL HISTORY IMPROVEMENT PROGRAM (NCHIPS)	-\$174,373
16.56	NATIONAL INSTITUTE OF JUSTICE RESEARCH, EVALUAT. & DEVEL. PROJECT GRANTS	\$16,427,524
16.575	CRIME VICTIM ASSISTANCE	\$2,522,504
16.576	CRIME VICTIM COMPENSATION	\$646,000
16.579	BYRNE FORMULA GRANT PROGRAM	\$3,636,784
16.58	BYRNE MEMORIAL STATE AND LOCAL LAW ENFORCE. ASSIST. DISCRETIONARY GRANT	\$4,832,372
16.585	DRUG COURT DISCRETIONARY GRANT PROGRAM	\$450,000
16.586	VIOLENT OFFENDER INCARCERATION & TRUTH IN SENTENCING INCENTIVE GRANTS	\$333,929
16.588	VIOLENCE AGAINST WOMEN FORMULA GRANTS	\$1,287,192
16.589	RURAL DOMESTIC VIOLENCE & CHILD VICTIMIZATION ENFORCEMENT GRANT PROG	\$552,334
16.592	LOCAL LAW ENFORCEMENT BLOCK GRANTS PROGRAM	\$1,552,698
16.597	MOTOR VEHICLE THEFT PROTECTION ACT PROGRAM	-\$57,910
16.606	STATE CRIMINAL ALIEN ASSISTANCE PROGRAM	\$5,853
16.607	BULLETPROOF VEST PARTNERSHIP PROGRAM	\$114,098
16.609	COMMUNITY PROSECUTION AND PROJECT SAFE NEIGHBORHOODS	\$464,394
16.71	PUBLIC SAFETY PARTNERSHIP AND COMMUNITY POLICING GRANTS	\$1,914,500
16.737	GANG RESISTANCE EDUCATION AND TRAINING	\$21,123
84.331	GRANTS TO STATES FOR INCARCERATED YOUTH OFFENDERS	\$79,386
	Total Law Enforcement Grants	\$37,018,674
	Assume 34.93% related to alcohol and 14.91% to drugs	49.84%
	Amount related to alcohol or drugs	\$18,450,107
	Drug and Alcohol Related Grants	
14.854	PUBLIC HOUSING DRUG ELIMINATION PROGRAM	\$70,144
16.593	RESIDENTIAL SUBSTANCE ABUSE TREATMENT FOR STATE PRISONERS	-\$46,649
16.727	ENFORCING UNDERAGE DRINKING LAWS PROGRAM	\$264,775
16.729	DRUG-FREE COMMUNITIES SUPPORT PROGRAM GRANTS	\$174,996
84.184	SAFE AND DRUG-FREE SCHOOLS AND COMMUNITIES-NATIONAL PROGRAMS	\$601,024
84.186	SAFE AND DRUG-FREE SCHOOLS AND COMMUNITIES-STATE GRANTS	\$3,130,775
93.273	ALCOHOL RESEARCH PROGRAMS	\$136,875
93.276	DRUG-FREE COMMUNITIES SUPPORT PROGRAM GRANTS	\$200,000
93.959	BLOCK GRANTS FOR PREVENTION AND TREATMENT OF SUBSTANCE ABUSE	\$8,785,675
	Total of Alcohol and Drug Related	\$13,317,615
	Mental Health Related Grants	
14.231	EMERGENCY SHELTER GRANTS PROGRAM	\$2,665,396
14.238	SHELTER PLUS CARE	\$387,766
93.104	COMP. COMM. MENTAL HEALTH SERV. FOR CHILDREN WITH SERIOUS EMOT. DIST.	\$1,500,000
93.138	PROTECTION AND ADVOCACY FOR INDIVIDUALS WITH MENTAL ILLNESS	\$410,000
93.242	MENTAL HEALTH RESEARCH GRANTS	\$146,000
	Total of Mental Health Related	\$5,109,162

The state of West Virginia ranks fourth among states in the Southeast region in terms of accessing SAMHSA grants. Based on grant information obtained from the SAMHSA website and state population data from the U.S. Census bureau website, West Virginia generates \$9.53 per capita in Mental Health and Substance block grants revenue, Projects for Assistance in Transition for Homelessness (PATH) grant revenue, and other discretionary funding. The table below compares West Virginia to other states in the Southeast Region:

Table 23: Per Capita Funding from SAMHSA grants for States in Southeast Region

State	Per Capita Funding
Louisiana	\$ 11.01
Florida	\$ 10.37
Kentucky	\$ 9.71
West Virginia	\$ 9.53
Tennessee	\$ 9.43
Virginia	\$ 9.37
Alabama	\$ 8.92
Georgia	\$ 8.90
Arkansas	\$ 8.65
South Carolina	\$ 8.31
Mississippi	\$ 7.35
North Carolina	\$ 7.05

U.S. Department of Veteran’s Affairs

There are approximately 185,000⁶⁴ veterans living in the state of West Virginia of which some receive medical care at the medical centers and clinics operated through the Department of Veteran’s Affairs (VA). Currently, there are five VA Medical Centers and seven VA Clinics in the state of WV which offer an array of services including treatment for mental illness, post-traumatic stress disorder, and substance use problems. For purposes of estimating the costs associated with these services, two reports were utilized from the VA’s website. The Cost Distribution Report⁶⁵ (CDR) is a summary of expenditures related to each patient care and support departments nationwide for federal fiscal year 2003. The CDR handbook was researched to include the appropriate account codes. Account codes related to contracted services were excluded to prevent double counting expenditures reported in Section III of this report. West Virginia specific expenditures were estimated based on applying the percentage of veterans living in the state during federal fiscal year 2003 which was collected from the Veteran Population 2004 Version 1.0 report.

⁶⁴ Veteran Population 2004 Version 1.0 retrieved from the Department of Veteran’s Affairs website on 2/15/2007, <http://www1.va.gov/vetdata/page.cfm?pg=2>.

⁶⁵ Health Economics Research Center’s Cost Distribution Report and Handbook retrieved from website on 2/15/2007, <http://www.herc.research.va.gov/data/cdr.asp>.

Table 24: Mental Health and Substance Cost related to VA Medical Centers and Clinics

CDR ACCOUNT CODES	DESCRIPTION	MENTAL HEALTH	SUBSTANCE USE
1300's	Psychiatric Inpatient	1,142,225,977	56,725,023
1700's	Psychiatric Residential Treatment Program	86,566,127	3,177,090
2300's	Psychiatry and Substance Use Treatment Outpatient	525,485,054	157,561,808
5117	Intensive Psychiatric Community Care	22,938,623	
	Total	1,777,215,781	217,463,921
	% of Vets in WV	0.76%	0.76%
	WV VA Costs	13,467,327	1,647,891

Source: *Cost Distribution Report and Veteran's Population 2004 Version 1.0*

The cost associated with VA medical center and clinics trended forward to 2006 are \$16,590,740 for Mental Health and \$2,030,078 for Substance Use.

Drug Traffic Control Costs

Direct Federal agency expenditures for alcohol, drug and mental health services are not available. The U.S. Department of Justice spent \$12.6 billion in fiscal year 2005 for drug traffic control.⁶⁶ However, specific information on West Virginia's portion of this budget is not available. Some portion of this money was spent in West Virginia for drug interdiction, three Drug Enforcement Agency offices in Charleston, Clarksburg, and Wheeling, plus FBI costs associated with drug enforcement. West Virginia is regarded as one of the Marijuana Seven (M7) in 2005 and the Office shifted their funding strategy at the start of the 2005 to focus on these seven states.⁶⁷

In 2004 West Virginia had .006% of the country's population.⁶⁸ Six tenths of one percent times the national federal spending on drug traffic control would entail about \$73,554,000 in federal costs in West Virginia for drug traffic control. The Drug Traffic Control Costs figures trended forward to 2006 result in \$ 84,527,079 in Substance Use expense.

⁶⁶ Bureau of Justice Statistics. <http://www.ojp.usdoj.gov/bjs/dcf/dcb.htm>.

⁶⁷ The White House (2006) p. 37 From <http://www.whitehousedrugpolicy.gov/publications/policy/ndcs06/ndcs06.pdf>

⁶⁸ U.S. Census, (2006) Quickfacts. Retrieved on 11-15-06 from <http://quickfacts.census.gov/qfd/states/54000.html>

VI. OTHER SOCIAL COSTS

Federal Assistance Payments -- SSDI and SSI

The Consolidated Federal Funds Report indicates that the federal government spent about \$1,058,845,843 in Social Security Disability Insurance (SSDI) payments in West Virginia during FFY 2005. Mental illness is a disability basis under federal law. In December of 2004 there were 89,720 beneficiaries of Social Security Disability Insurance in West Virginia of which 17,394, or 19.4%, were receiving SSDI payments because of a mental disorder other than mental retardation.⁶⁹ The SSDI Annual Report for 2004 shows that in December 2004 approximately \$78,350,000 was spent on SSDI payments in West Virginia. The amount for December 2004 when multiplied by the percent of persons with a mental health disability, 19.4%, time 12 results in an estimated yearly cost to the Federal SSDI fund for mental health in West Virginia of approximately \$184,726,000. The Federal Assistance Payments -- SSDI figures trended forward to 2006 result in \$209,609,782 in Mental Health expense.

The federal Social Security Administration also makes Supplemental Security Income (SSI) payments to individuals who are blind, disabled, or aged. Applicants can qualify for SSI based on having a mental disability, but are not eligible if the basis of the disability is related to alcohol or drug addiction.⁷⁰

In December 2004 there were 63,567 West Virginia persons on SSI who were younger than 65.⁷¹ Approximately 29.3%, or 18,625 persons, had a mental disorder other than mental retardation. These 18,625 persons received an average monthly payment of \$450.20. Converted to a yearly estimate, this payment amount and beneficiary level would result in an estimate that the federal SSI payments to mentally ill disabled persons in West Virginia in SFY 2005 were approximately \$100,620,000. The Federal Assistance Payments – SSI figures trended forward to 2006 result in \$ 115,630,894 in Mental Health expense.

Division of Highways

The Division publishes yearly crash statistics and makes estimates of the state's economic loss due to accidents where alcohol was known or suspected.⁷² The economic loss is arrived at by taking Federal Highway Administration estimates of an economic loss of \$3,400,000 for a fatality, \$236,000 for an incapacitating injury, \$48,000 for a non incapacitating injury, \$25,000 for a non-evident injury, and \$2,600 for a property damage-only crash.

Using these federal estimates and applying them to the approximately 3,451 alcohol related accidents, for 2003, the Division estimated the economic loss to the state to be \$865,101,600.

Based on the 2003 crash statistics, there were 176 crashes reported involving All-Terrain Vehicles (ATV). Of these crashes, driving under the influence contributed to 8.74% or

⁶⁹Office of Policy Analysis. (2006, March). Table 10.

⁷⁰ Office of Policy Analysis. (2006, June). Table 3 From http://www.ssa.gov/policy/docs/statcomps/ssi_sc/2005/wv.html

⁷¹ Office of Policy Analysis. (2005, September). Tables 28 and 29. From http://www.ssa.gov/policy/docs/statcomps/ssi_ast/2004/

⁷² Traffic Engineering Division, *2003 Crash Data* pp. 194-195. (2005).

approximately 15 crashes. Of the total 3,451 accidents involving alcohol, ATV related crashes would account for less than 1% and approximately \$3.4 million in economic loss.

Productivity Losses Due to Incarceration

Inmates of the Regional Jail Authority and the state correctional centers and local jails are unable to participate in the economy as workers. This results in a substantial economic cost to society in the form of lost productivity. The cost estimates for the Department of Corrections (DOC) institutions are based on the monthly average number of inmates. In SFY 2005 the monthly average number of inmates in DOC institutions was 5,109.⁷³ The loss of productivity is estimated by taking the average number of inmates times the average annual wage for West Virginia for 2005, \$30,560.⁷⁴ The loss in productivity due to incarceration in DOC institutions is estimated at \$156,144,000. Table 17 (above) indicates that 19.64% of DOC incarcerations are a result of Drug Use and 14.08% of DOC incarcerations are a result of Substance Use. As such, the estimated annual loss of productivity due to incarceration as a result of Drug Use and Substance Use is \$30,666,682 and \$21,985,075 (respectively).

The monthly average number of inmates in the Regional Jails Authority in SFY 2004 was 3,545 excluding DOC inmates. The loss of productivity to West Virginia is estimated at \$108,336,000 and is calculated by taking the monthly average number of inmates and multiplying by the average wage in West Virginia in 2005, \$30,560.⁷⁵ Table 13 (above) indicates that 34.93% of arrests are a result of Alcohol Use and 14.91% of arrests are a result of Drug Use. As such, the estimated annual loss of productivity due to arrests as a result of Alcohol Use and Drug Use is \$37,841,765 and \$16,152,898 (respectively).

Crime Victims Compensation Fund

The West Virginia Crime Victim's Compensation Fund is administered by the Court of Claims which is part of the legislature. The three judges hear cases with claims against the state since ordinarily, under West Virginia law, no one can sue the state. In 2006, the Court issued 1,036 orders: 227 were denied or dismissed and 805 had an award. Total awards were \$2,196,685. Taking the number of alcohol and drug related claims,⁷⁶ the average payout per claim, and factoring in administrative costs, it is estimated that approximately \$314,386 involved alcohol or drugs and the state share of this is \$125,734 and the federal share is \$188,632. Mental health-related payouts are estimated at \$55,686 with the state share at \$22,274 and the federal share at \$33,412.

Economic loss in Lost Wages due to Crime

Victims are injured by crimes and one way this happens is need for time to cope with the after effects of the crime.⁷⁷ In 1998 the National Institute for Drug Abuse (NIDA) published 1992 estimates for selected crimes of how many days it takes a victim to cope with the immediate after

⁷³ Office of Research & Planning. (2005). Table 60

⁷⁴ Bureau of Labor Statistics. (2006, May).

⁷⁵ ⁷⁵ Bureau of Labor Statistics. (2006, May).

⁷⁶ Information obtained from interview with Court staffs, October 2006.

⁷⁷ National Institute on Drug Abuse and National Institute on Alcohol Abuse and Alcoholism. (2001, September).

effects of selected crimes. These calculations for 2005 assume that the same amount of productive activity was lost by type of crime as is shown in the estimates from NIDA's original work in 1992; on average, four days for violent crime and two days for property crimes. The number of arrests for these crimes in West Virginia was multiplied by the estimated number of days lost, and the daily mean average hourly wage, \$14.69, for all West Virginia occupations.⁷⁸ The value of each day lost was estimated to be \$117.52 or eight hours times \$14.69.

Table 25: Productivity Loss as measured by Lost Wages to Victims - 2005

CRIME	AVERAGE WORK DAYS LOST	2005 # OF ARRESTS	NUMBER OF DAYS LOST	MAY 2005 MEAN HOURLY WV WAGE = 14.69
Rape	4.6	55	253	\$29,733
Assault	3.7	10,534	38,976	\$4,580,436
Robbery	4.4	206	906	\$106,520
Burglary	1.7	850	1,445	\$169,816
Larceny	1.7	4,243	7,213	\$847,684
Auto Theft	2.7	359	969	\$113,912
Total of Above		16,247	49,763	\$5,848,101
Other arrests		36,607		\$13,176,674
Total Productivity Loss				\$19,024,775

The 16,247 arrests in these selected crimes compromise about 31% of all 52,900 arrests made in 2005 in West Virginia. Extrapolated to all 52,900 arrests, implies a total economic cost of about \$19,025,000. This analysis leads to the conclusion that 34.93% or \$6,645,000 of the immediate loss is related to alcohol, and 14.90%, or \$2,835,000 is related to drugs. This methodology and its reliance on the 1992 NIDA data have been used in other recent state studies.⁷⁹ These estimates should be regarded as minimal estimates. Victims suffer other losses such as property damage and medical expenses that are not here estimated.

Economic loss in Lost Wages due to Mental Health and Substance Use

West Virginia incurs an economic loss when citizens are afflicted by mental health and substance use problems and are required to spend time in an inpatient hospital setting or nursing home. The Healthcare Authority reported in fiscal year 2004 there were approximately 141,000 patient days where the primary diagnosis was related to a mental health disorders and 24,000 days related to substance abuse⁸⁰. In addition, there were over 3.2 million patient days reported for nursing homes across the state⁸¹. As described above, a National Nursing Home Survey by the CDC estimates that 16.8% of nursing homes admissions had a primary diagnosis related to a mental health disorder. Therefore, approximately 527,000 nursing home days can be attributable to patients with mental health disorders. Applying the average daily wage of \$82.73⁸² for West Virginia allows us to calculate the estimated economic impact of hospitalization for patients with mental health or substance use problems.

⁷⁸ Bureau of Labor Statistics. (2006, May).

⁷⁹ The McDowell Group. (2005, December). Division of Data and Research. (2004, July).

⁸⁰ Healthcare Authority 2004 Annual Report, Table 20 Inpatient Discharges by Major Diagnostic Category (January 9, 2006).

⁸¹ Healthcare Authority 2004 Annual Report, Table 25 Nursing Home Patient Days by Facility (January 9, 2006).

⁸² Bureau of Labor Statistics (2006, May).

Table 26: Economic Impact of Inpatient Hospital and Nursing Home Days in FY 2004

	2004 INPATIENT DAYS	2004 NURSING HOME DAYS	TOTAL DAYS	AVERAGE DAILY WAGE	2004 ECONOMIC IMPACT
Mental Health	141,378	540,118	681,496	\$83.73	\$57,061,673
Substance Use	23,876		23,876	\$83.73	\$1,999,137
				Total	\$59,060,810

The economic impact of inpatient hospital and nursing home days trended forward to FY 2006 is \$65,574,361 and \$2,297,377 for mental health and substance use, respectively.

Underage Drinking

The Pacific Institute for Research and Evaluation (PIRE) publishes data on teenage drinking. They report that based on self reporting, “Underage drinking is widespread in West Virginia. Approximately 85,000 underage youth in West Virginia drink each year.”⁸³ PIRE estimates that in 2001, underage drinkers consumed 25% of all alcohol sold in West Virginia, totaling \$125 million in sales and presented the following estimate of the costs of underage drinking in West Virginia.

Table 27: Costs of Underage Drinking to West Virginia, 2001

TYPE OF COST	AMOUNT IN MILLIONS
Youth Violence	\$163.40
High-Risk Sex, Ages 14-20	\$29.90
Youth Property Crime	\$12.50
Youth Injury	\$16.80
Poisonings and Psychoses	\$5.20
FAS Among Mothers Age 15-20	\$5.70
Youth Alcohol Treatment	\$11.60
Total	\$245.10

Years of Potential Life Lost

The economic impact of premature death due to substance use and mental illness is estimated by calculating the lost earnings that persons would have received if they had not died prematurely. Prematurely is usually defined as before the age of 75. This method is sometimes called “the human capital approach” and examples of its use can be found in the references.

The Oklahoma study succinctly describes five steps to estimate the value of the earnings foregone due to premature death:⁸⁴

1. Determine the number of deaths attributable to substance abuse, domestic violence and mental illness, by age and sex,
2. Determine the potential years of life lost (PYLL) to age 75,
3. Determine the annual earnings that would have been realized each year to age 75,

⁸³Pacific Institute for Research and Evaluation (PIRE). (2004, March).

⁸⁴ Oklahoma Governor’s and Attorney General’s Blue Ribbon Task Force. (2005, February). Economic Impact Report, Unpublished. File name = tab-8-econ-impact.doc. Available from the Oklahoma Department of Mental Health and Substance Abuse Services, 1200 NE 13th Street. Oklahoma City, OK 73152.

4. Discount the annual earnings, using an appropriate discount rate, and
5. Sum the annual earnings to determine the present value of lifetime earnings foregone.

This section uses West Virginia vital statistics data to look at the potential years of life lost due to mental illness, alcohol and drugs directly, and alcohol and drugs indirectly. Where “indirectly” means it was a factor in the death, but the death has been coded in a diagnosis that does not refer to drugs, or alcohol, or mental illness.

The West Virginia Bureau for Public Health publishes vital statistics each year that are relevant to mental illness.⁸⁵ Its 2004 listing of causes of death shows that there were 281 suicides with an estimated 8,515 years of potential life lost. The average age of death for a suicide victim in 2004 was 45.2 years and they had an average 30 years of lost earnings. The average yearly wage in West Virginia in May of 2005 was \$30,560.⁸⁶ Using a 3% earnings inflator, produces an estimate that the mid point of the earnings range from 2005 to 2035 is approximately \$48,326 at the end of the year 2020. The number of years of potential life lost, 8,515, times the \$48,326 equals \$411,492,965

Other studies have estimated the impact of substance use on deaths. On the one hand, many states have a cause of death directly identifying substance use. In West Virginia in 2004 there were 35 deaths for which the cause of death was “Alcohol or Drug Psychoses, Dependence or Abuse”. Their average age was 52.6 years. The Bureau uses a measure of mortality called Years of Potential Life Lost (YPLL), calculated as the difference between age 75 (an average life span) and the age at death. For 2004, The Bureau estimated that these 35 persons lost 785 years of potential life before the age of 75.

Using a 3% earnings inflator, produces an estimate that the mid point of the earnings range from 2005 to 2026, when their average age becomes 75, is approximately \$43,302 at the end of the year 2016. The number of years of potential life lost to drugs or alcohol, 785, times the \$43,302, equals \$33,992,070.

However, there are also other causes of death such as cirrhosis of the liver that are identified with alcohol or substance use. How many other deaths are linked to alcohol or substance use?

Harwood’s work also estimated the percentage of deaths from other causes where alcohol or substance played a role. These estimates have been used in other state studies such as California. Applying Harwood’s attribution %s to West Virginia’s causes of death for 2004, results in the following table. An additional 480 persons are assumed to have died where alcohol or substance use was a factor in the death.

Table 28: Attribution Percents for Other

⁸⁵ West Virginia Bureau for Public Health. (2006, May 5). *Causes of Resident Deaths: Number and Rate West Virginia, 2004*, Table 42 Charleston, WV: Retrieved November 20, 2006 from <http://www.wv.gov/Offsite.aspx?u=http://www.wvdhhr.org/bph>

⁸⁶ Bureau of Labor Statistics. (2006, May)

ATTRIBUTION %	ICD-9 CODES	DIAGNOSIS	N	%*N
25%	A15-A19	--Tuberculosis	4	1.00
5%	E10	----Insulin-Dependent Diabetes Mellitus	83	4.15
5%	E11	----Non-Insulin-Dependent Diabetes Mellitus	256	12.80
5%	E14	----Unspecified Diabetes Mellitus	511	25.55
7%	G45	----Transient Cerebral Ischemic Attacks and Related Syndromes	2	0.14
7%	I60	----Subarachnoid Hemorrhage	57	3.99
7%	I61	----Intracerebral Hemorrhage	135	9.45
7%	I62	----Other Nontraumatic Intracranial Hemorrhage	82	5.74
7%	I63	----Cerebral Infarction	72	5.04
7%	I64	----Stroke, Not Specified as Hemorrhage or Infarction	682	47.74
7%	I67	----Other Cerebrovascular Diseases	109	7.63
7%	I69	----Sequelae of Cerebrovascular Disease	60	4.20
5%	J10-J18	--Influenza and Pneumonia	416	20.80
10%	K20	----Esophagitis	1	0.10
10%	K21	----Gastro-esophageal Reflux Disease	8	0.80
10%	K22	----Other Diseases of Esophagus	5	0.50
10%	K25	----Gastric Ulcer	9	0.90
10%	K26	----Duodenal Ulcer	9	0.90
10%	K27	----Peptic Ulcer, Site Unspecified	9	0.90
10%	K28	----Gastrojejunal Ulcer	1	0.10
10%	K29	----Gastritis and Duodenitis	2	0.20
50%	K70-K77	--Diseases of Liver	337	168.50
50%	K70	----Alcoholic Liver Disease	87	43.50
50%	K76	----Other Diseases of Liver	21	10.50
42%	K85	----Acute Pancreatitis	21	8.82
35%	W00-W19	--Falls	160	56.00
38%	W66	----Drowning and Submersion Following Fall in Bath Tub	1	0.38
38%	W67	----Drowning and Submersion while in Swimming Pool	4	1.52
38%	W69	----Drowning and Submersion while in Natural Water	10	3.80
38%	W74	----Unspecified Drowning and Submersion	2	0.76
38%	W75-W84	--Other Accidental Threats to Breathing	57	21.66
45%	X00	----Exposure to Uncontrolled Fire in Building or Structure	3	1.35
45%	X03	----Exposure to Controlled Fire, Not in Building or Structure	2	0.90
45%	X04	----Exposure to Ignition of Highly Flammable Material	2	0.90
45%	X08	----Exposure to Other Specified Smoke, Fire and Flames	19	8.55
Total	14.81%		3,239	480

These 480 persons span a broad range of diagnoses. In 2004, the number of death in West Virginia was 20,776 and the total potential years of life lost was 160,916, or an average of 7.75 years of life lost. This implies the average age at death was around 67.25 years. The 480 persons lost an average of 7.75 years a person or 3,718 years as a group.

Using a 3% earnings inflator, produces an estimate that the mid point of the earnings range from 2005 to 2012, when their average age becomes 75, is approximately \$34,396 in the year 2009. The number of years of potential life lost to drugs or alcohol through these other diagnoses, 3,718, times the \$34,396, equals \$127,873,566 in lost earnings. This amount plus the direct deaths associated with Alcohol and Other Drug Use result in overall cost of \$161,865,636 (\$127,873,566 + \$33,992,070).

Higher Education Costs

There are 11 colleges and universities that offer coursework to prepare students for careers in the area of mental health and substance use counseling and treatment. Of the approximately 70,000 students enrolled in the higher education system in West Virginia, roughly 4,500 students elected to major in mental health and substance use counseling. In estimating the annual cost of these students, an average cost per student was calculated from taking total educational and general expenditures of \$800 million and dividing by total enrollment of 70,609 in 2004.⁸⁷ This gives an approximate average annual cost per student of \$11,325 for education and general expenses. Applying the average figure to total enrollment data provided by the West Virginia Higher Education Policy Commission for related majors, the estimated fiscal impact of preparing students to work in the mental health and substance use areas is \$51 million in annual cost. There are nuances of using this approach to estimate cost that should be noted. The calculation does not consider the fact that part-time students combining to make up a single FTE could inherently have more or less fixed costs than a full-time student. Also, the total cost used averages all program areas and does not adjust for higher cost programs such as medicine or technology. Program specific cost data was not readily available.

Table 29: Total Higher Education Costs

MAJOR	TE's ENROLLE	ANNUAL COST
COMMUNITY BEHAVIORAL HEALTH TECHNOLOGY	85	\$ 962,659.00
PSYCHOLOGY	3,189	\$ 36,118,625.92
PSYCHOLOGY (W/WVU)	13	\$ 148,702.50
BEHAVIORAL SCIENCE (EFF 8/94)	376	\$ 4,260,615.48
INTELLIGENCE, RESEARCH, AND ANALYSIS	22	\$ 250,631.10
COUNSELING	563	\$ 6,373,368.85
PSYCHOLOGY	179	\$ 2,027,246.60
COUNSELING PSYCHOLOGY	46	\$ 515,305.70
Total	4,473	\$ 50,657,155.15

Additionally within higher education costs related to Mental Health and Substance Use, there is an economic impact related to the cost of graduate medical education related to Psychiatrists. Within the state of West Virginia, there are two accredited residency programs both affiliated with West Virginia University Hospital however Charleston Area Medical Center serves as a co-

⁸⁷ Total expenditures per WV Higher Education Fund Combined Financial Statements 2004, WV Higher Education Policy Commission. Total Enrollment per the 2004 Fall Enrollment Report, WVHEPC.

sponsor for one of the programs. There are a combined 30 positions that are currently filled by residents with an approved capacity of 48 positions.⁸⁸ Based on 2004 Medicare Cost Report for West Virginia University, the annual average cost per resident is \$63,918. Therefore the estimated total cost per year for residents in Psychiatric programs is \$1,917,540. The cost trended forward to fiscal year 2006 is \$2,203,606.

Transitional Housing Assistance

The effectiveness of mental health problems and substance use issues can also impact the amount of people in need of housing assistance and shelters. The West Virginia Development Office, WV Housing Development Fund, WV Office of Economic Opportunity, and the WV Human Rights Commission prepared a HUD Consolidated Development Plan for 2005-2009. Within this report, the Office of Economic Opportunity identified 1,361 homeless individuals and families of which 612 or 45% were seriously mentally ill and 465 or 34% had chronic substance abuse.⁸⁹

West Virginia expends considerable amount of funds to help consumers with mental health and substance use clients find transitional housing. These funds come in the form of Federal grant dollars and matching organization and state funds. In fiscal year 2004, these funds accounted for approximately \$5 million dollars and a detail chart can be found below. Additional costs for shelters and temporary housing are captured in the section for Other Community Behavioral Health providers. Trended forward this cost for fiscal year 2006 is \$5,691, 520.

Table 30: Federal and WV Funding for Emergency Shelters and PATH Grants

Federal Program Number	Grant Name	2004 Funding Amount
14.231	Emergency Shelters Grant Program	\$ 2,665,396
14.238	Shelter Plus Care	\$ 387,766
93.15	Projects for Assistance in Transition from Homelessness (PATH)	\$ 300,000
WV Funding		
	Office of Economic Opportunity Emergency Shelters Grants	\$1,500,000
	Matching Funds for PATH Grants	\$ 99,500.00
	Total	\$ 4,952,662

⁸⁸ Based on a search done at the ACGME website: <http://www.acgme.org/adspublic/> on 4/12/07. Search criteria included Psychiatry and West Virginia.

⁸⁹ Table 1 Homeless and Special Needs Population, *HUD Consolidated Development Plan State Program Years 2005-2009*, February 28, 2005.

CONCLUSIONS

West Virginia spends considerable resources on the treatment of mental health and substance use for its citizens. The issues raised in this report highlight that many other state agencies and public/private organizations spend substantial money and expend significant effort to identify and treat West Virginians afflicted with mental health and substance abuse diagnoses. Like many states, West Virginia's system is fragmented and results in gaps in services and an irrational approach to funding these critical services across the state. There is also an absence of effective prevention/intervention efforts which exacerbates the problem.

The majority of funding rests within the control of two important agencies, the Bureau of Behavioral Health and Health Facilities (BHBF) and the state Medicaid Agency (Bureau of Medical Services). However, many other organizations treat adults and children suffering from mental health and substance abuse issues in a multitude of settings. These include law enforcement, corrections, the courts, child welfare providers and schools, among many others. It is clear that these organizations should work more closely to develop effective treatment strategies for specialized populations and to develop blended funding approaches that maximize state/local investment and recover as much of those costs from federal sources where possible.

With focused and effective support from the Executive and Legislative branches of state government, these efforts can be strengthened and expanded. The following list highlights key findings of this report.

- **West Virginia's public mental health system requires more state/local resources.** In fiscal year 2006, West Virginia spent \$48.74 per capita on mental health services, placing the state 45th in the nation⁹⁰. It should be noted that per capita estimate might not reflect all dollars related to mental health in West Virginia. Researchers concluded that West Virginia's system has been historically under funded. We believe that opportunities exist to maximize federal Medicaid and other funds for the state but that additional state general fund investment is still required to reform the system of care and meet the needs of consumers.
- **Medicaid reform efforts will require much collaboration between all stakeholders.** Proposed Medicaid reforms will provide some new flexibility in the mental health system but will require a significant cultural change among providers and consumers. BMS reform efforts include implementing programs such as "disease management", "pay for performance", "personal health spending accounts", and "consumer driven care" concepts⁹¹. These changes provide opportunities to improve mental health and substance abuse programs and produce needed cost savings for the state. To be successful, these initiatives will also require a change in behaviors of consumers and a new perspective on service delivery by providers.
- **Under-funding of West Virginia's mental health system shifts the burden to law enforcement, courts, corrections, regional jail authorities, child welfare agencies, other juvenile services and local school districts.** Under funding mental health and

⁹⁰ NAMI "Grading the States" report (2006)

⁹¹ West Virginia Comprehensive Medicaid Redesign Proposal, May 2005

substance use services shifts treatment costs including counseling and other services to other areas of government.

West Virginia's correctional system is often the most affected due to the lack of effective mental health and SA assessment and ongoing treatment services. We applaud the state's efforts on new initiatives addressing these concerns. Jail diversion programs that divert offenders from incarceration and into needed treatment and residential facilities is a step in the right direction. Unfortunately, these offenders are currently treated in an expensive hospital setting due to the lack of less costly community-based alternatives. West Virginia should address the issue of developing more community alternatives for this specialty population in the coming year.

West Virginia's local school districts also bear a burden to provide mental health counseling and other treatment services. Today, local school districts either directly employ or contract for psychological services at great expense to their communities. When services are provided for a Medicaid eligible child the schools are allowed to bill and receive reimbursement for these costs. The current rates paid to schools, however, are well below their actual costs. We recommend that West Virginia enhance its current rates for school-based psychological services. This effort will be budget neutral to the State as the matching funds are supplied by the local school districts.

- **West Virginia should develop a more rational funding approach.** PCG's efforts have identified the cost of providing various mental health and substance use services in over 25 areas spanning health care, criminal justice, federal expenditures, and other social costs in West Virginia. Consumers access the system every day in hospitals, physician offices, outpatient treatment centers, juvenile justice facilities, and jails, among many other locations. Expenditures for mental health and substance abuse are not always discretely identified among the various agencies and providers. We recommend that the State take action in order to better coordinate public and private spending on these services. Implementing a more coordinated funding approach where the various programs and the related dollars link up with each other is a worthy effort. Simply adding more State dollars without developing a more rational approach to funding that promotes accountability and good outcomes is not effective. Future program expansions need to be thoughtfully organized across all agencies to understand the potential for impacts on other areas of government.
- **The State should enhance its data collection and reporting capabilities across agencies.** In preparing the spending projections contained in this report, it became clear that West Virginia does not collect the right information across systems to supply important data for policy makers and program managers. For example, it is difficult to distinguish costs associated with children's versus adult mental health services and difficult to distinguish mental illness from the effects of substance use.

The FY 2005 WV Health care Authority Annual Report identifies 82 separate "Behavioral Health" providers. These providers can be classified as ICF/MR, Residential Child Care, Comprehensive Community Mental Health Center, Therapeutic Foster Care, Substance Abuse, Methadone Clinics, and other behavioral health providers. WV should work with the WV Health Care Authority to differentiate between the individual sub-groups and discretely report expenses. For future studies and reporting, this would

provide a more accurate cost determination for the different populations these providers serve.

West Virginia's nursing homes also do not track mental health and substance abuse services separate from other services making it difficult to isolate these costs and related outcomes. MDS questionnaires for nursing home patients identify behavioral health functioning on a "Mood and Behavior Pattern" scale. This scale does not provide sufficient data on mental health services in the mental health setting. West Virginia should consider implementing additional reporting requirements to more accurately report the prevalence of mental health in nursing facilities.

Lastly, few of the state agencies that provide mental health services as an adjunct to their primary missions track their expenditures in this area at a detailed level. Without a comprehensive accounting of all mental health expenditures, West Virginia is missing opportunities to make the system more efficient and leverage existing dollars in an effective way. Although these agencies may be limited in their ability to track important mental health and substance abuse statistics, additional funding for increased data reporting can improve these capabilities. A new reporting system for behavioral health services in West Virginia would allow the state to benchmark and track progress while providing important data for estimating future spending and developing more effective treatment models.

- **West Virginia should also redefine services and establish consistent terminology across agencies and providers.** West Virginia state agencies outside of BBHFF and BMS had difficulty providing data to support mental health and substance abuse services and related costs. A major factor in the inability to produce this data was related to the inconsistent terminology and service definitions used. We recommend that BBHFF take the lead in ensuring that necessary changes are implemented to ensure consistent service definitions and terminology is used across the state. This will yield more transparency in the system and lead to improved collaboration amongst agencies and less confusion concerning the types of services provided in the state.
- **The State should study alternatives for improving access to services in rural areas.** West Virginia has large, underserved rural areas that limit consumer ability to access the system for certain services. Of the state's 66 licensed acute care hospitals, 19 are licensed as critical access facilities. We recommend that the state create a task force to identify and address the many issues facing rural areas in the state. A key focus should be on developing community-based alternatives and identifying opportunities to leverage state and local investments to support improved access to services.
- **The State should also conduct an inpatient bed demand study.** The jail diversion program has been working in West Virginia, resulting in increased demand of inpatient beds. Currently, the two state psychiatric facilities experience 100% daily occupancy. An additional 90 psychiatric beds may be necessary in the system to deal with these diversions. West Virginia should conduct an inpatient bed demand and community needs study in order to "right size" the present complement of inpatient beds.

West Virginia is making positive progress to improve the delivery of mental health and substance abuse services including developing more prevention and treatment programs. PCG's recent

strategic assessment of West Virginia's system highlights many of the programmatic, clinical, financial, legal, and regulatory challenges that lay ahead. West Virginia must stay committed to the process of mental health and substance abuse reform to truly improve the lives of persons in West Virginia afflicted by these diseases.

APPENDIX

Appendix A. ESTIMATED IMPACT OF MENTAL HEALTH AND SUBSTANCE USE ON WEST VIRGINIA STATE AGENCIES

Bureau for Behavioral Health and Health Facilities (BHFF)

Agency Contact: Becky Wolfe, Acting Chief Financial Officer

Phone Number: 304-558-0298

BHFF is responsible for policy oversight, provider monitoring, and financial management related to state mental health hospitals and grant allocation to the West Virginia behavioral health system which is comprised of state facilities and community-based service providers. The system is funded through a mix of federal dollars (which includes Medicaid, Medicare, third party billings and tobacco settlement funds) and state general revenue. The operating budget for state facilities represents roughly 60% (\$96 million of \$161 million) of overall BHFF resources in fiscal year 2005.

Table A-1: Budgets for State Hospitals and Nursing Homes SFY 2004, SFY 2005

FACILITY FUNDING SOURCE	FY04	FY05
Hopemont Hospital	\$7,941,038	\$8,071,088
Lakin Hospital	\$7,770,412	\$7,677,160
Manchin Health Care Center	\$3,326,422	\$3,352,146
Pinecrest Hospital	\$10,416,928	\$9,882,936
Welch Community Hospital	\$20,626,044	\$20,688,797
Sharpe Hospital	\$24,131,978	\$26,347,962
Bateman Hospital	\$19,663,578	\$19,943,815
Grand Total - All Funding	\$93,876,400	\$95,963,904

Source: BHFF Accounting Records.

It should be noted that only Sharpe Hospital and Bateman Hospital are entirely dedicated to mental health and/or substance abuse treatment (i.e. psychiatric facilities). The remaining state owned and operated providers are long term facilities (Hopemont, Lakin, Manchin, and Pinecrest) and acute care hospitals (Welch).

West Virginia's community-based service system is comprised of roughly 82 licensed behavioral health providers, inclusive of 13 Comprehensive Community Mental Health Centers and 4 MRDD providers. Most of these providers are identified in table 12 and 13 of the report. Some providers have been left of this list because the West Virginia Health Care Authority did not identify them as behavioral health providers. The Bureau does not provide grants to all 82 community-based providers: of the \$64.8 million in state and federal funds spent in SFY 2005, approximately \$47 million went to the 13 Comprehensive Community Mental Health Centers and four MR/DD programs. The funding pays for those services that BMS does not currently reimburse as a Medicaid State Plan or waiver service. The following chart shows a breakdown of the funds into the non-institutional programs and allocates the non-direct costs centers where the beneficiaries are unclear to the direct costs based on the percentage of the total expenditures.

Table A-2: BHHF Non-Institutional Costs Allocated to Mental Health and Substance Use

BEHAVIORAL HEALTH PROGRAMS	MENTAL HEALTH	SUBSTANCE USE	TOTAL
Adult Mental Health	\$9,703,059		\$9,703,059
Children's Mental Health	\$4,898,508		\$4,898,508
Substance Abuse		\$18,548,293	\$18,548,293
Charity Care (Uncompensated Care)	\$12,341,586		\$12,341,586
Support and Alternative Services	\$4,925,000		\$4,925,000
Total Grant Allocation	\$31,868,153	\$18,548,293	\$50,416,446

Source: BHHF Accounting Records.

Bureau of Medical Services (BMS)

Agency Contact: Tina Bailes, CFO

Phone Number: 304-558-1526

The Bureau of Medical Services (BMS) administers the State's Title XIX Medical Assistance program (Medicaid). BMS provides oversight and guidance for the Medicaid program as well as managing administrative and financial management functions. The Bureau is the main contact with the Centers for Medicare and Medicaid (CMS) and maintains the Medicaid State Plan which describes the scope of services and the reimbursement methodologies covered by Medicaid.

Medicaid is a state administered program funded with West Virginia state general revenue funds and matched with Federal dollars. The Federal Matching Assistance Percentage (FMAP) is calculated each year using per capita income levels in each state and can range from 50% to 77%. West Virginia currently has a FMAP of 72.82%.

There are several areas of services that Medicaid would cover related to mental health and substance use. The analysis is based on twelve months of data from the CMS-64 which is the tool used by state Medicaid agencies to draw down Federal reimbursement for services provided. Based on the analysis, there is \$145M in State and Federal funds expended annually on mental health and substance use services to Medicaid recipients.⁹² Inpatient hospital routine services to Mental Health Facilities and hospitals account for 28% or \$41M of the total expenditures. There is also \$20M in Disproportionate Share Hospital (DSH) payments made to psychiatric facilities. The Medicaid DSH program was established by Congress in 1981 to provide financial support to designated hospitals that provide a large amount of uncompensated care. The other significant area of cost, \$57M or 39% is related to Mental Health rehabilitation for adults and children.

These BMS expenditures are included in the summary of total impact of mental health and substance use, but they have not been discretely reported to prevent double counting. Below is a table that details the main areas of services provided and what BMS paid for these services. The table also breaks out the estimated state and Federal portion of the payments at the Federal fiscal year 2005 FMAP rate of 74.65%.

⁹² WV Bureau for Medical Services CMS-64 reports provided to PCG.

Table A-3: 2005 BMS Payments for Mental Health and Substance Use Services

CATEGORY	SUBCATEGORY	TOTAL MEDICAID AMOUNT	STATE SHARE	FEDERAL SHARE
Inpatient Hospital Services	Adults (Psy) Medicare	\$8,445,283	\$2,140,879	\$6,304,404
Inpatient Hospital Services	Alcohol/Substance Abuse	\$44,662	\$11,322	\$33,340
Mental Health Facilities	Psych <21	\$8,271,565	\$2,096,842	\$6,174,723
Mental Health Facilities	Psych Unit	\$2,603,301	\$659,937	\$1,943,364
Mental Health Facilities	Psych RTF	\$20,715,405	\$5,251,355	\$15,464,050
Mental Health Facilities	Cost Settlement	\$1,147,169	\$290,807	\$856,362
Mental Health Facilities	Other Adjustments	\$8,800	\$2,231	\$6,569
Mental Health Facilities - DSH Payments	DSH to Private Facilities/Psych	\$266,509	\$67,560	\$198,949
Mental Health Facilities - DSH Payments	DSH to State Facilities/Psych	\$20,060,853	\$5,085,426	\$14,975,427
Physicians Services	Psychiatry	\$5,807,840	\$1,472,287	\$4,335,552
Other Practitioners Services	Psychologist	\$4,287,661	\$1,086,922	\$3,200,739
Other Practitioners Services	Psychologist/School Psychologist	\$610,659	\$154,802	\$455,857
Clinic Services	Mental Health Clinic	\$9,427,684	\$2,389,918	\$7,037,766
Targeted Case Management Services	Targeted Case Management	\$128,724	\$32,632	\$96,093
Targeted Case Management Services	Mental Health Rehab/TCM	\$5,909,403	\$1,498,034	\$4,411,369
Other Care Services	Mental Health Rehab	\$35,125,791	\$8,904,388	\$26,221,403
Other Care Services	Child Mental Health Rehab	\$21,914,790	\$5,555,399	\$16,359,391
	Total	\$144,776,098	\$36,700,741	\$108,075,357

Source: BMS 2005 CMS-64 Data.

It should be noted that Medicaid does cover the cost of prescription drugs and especially psychotropic drugs. At the time of this report, the West Virginia Medicaid paid claim data warehouse was not available. Since this specific data was not easily accessible, an allocation method was used to estimate the cost of psychotropic drugs. Based on BMS staff, BMS pays annually a gross amount of \$409 million in prescription drugs.⁹³ One can assume there is a correlation between the percentage of inpatient hospital days to cost of prescription drugs for mental health illnesses and substance use which follows the same approach used by the Texas Commission on Alcohol and Drug Abuse in their report titled “Economic Costs of Alcohol and Drug Abuse in Texas - 2000”. This would result in 9.1%⁹⁴ of prescription drug costs being related to mental health or \$37.2 million and 1.5% related to substance use or \$6.1 million.

Bureau of Children and Families (BCF)

Agency Contact: Doug Robinson, Assistant Commissioner Finance and Administration
 Phone Number: 304-558-2972

Mental health and substance use impact can be measured in two areas in BCF. First, the Bureau will pay for mental health related services for clients when they are not covered by other insurance or assistance program. Based on conversations with staff at BCF, the services can include Counseling, Drug/Alcohol testing, preventative aftercare, psychological evaluations, and treatment services. These expenditures would be provided to both children and adults however the majority would be provided to children in the welfare program. BCF reported that in fiscal year 2004 they expended \$1.3 million for mental health services and \$240,000 for drug and alcohol testing.

The second area of impact can be felt from children who are in foster care or under the care of BCF due to parents that have mental health or substance use problems. Multiple studies throughout the 1990’s documented the relationship between parental use of substances, mental

⁹³ West Virginia BMS email correspondence with staff, January 27, 2007.

⁹⁴ West Virginia Health Care Authority. (2006, January 9), Table 20 Major Diagnostic Categories by Inpatient Days 2004

illness, and child welfare.⁹⁵ Gardner and Young summarized this literature in saying, “In discussions with more than two dozen senior-level officials and line workers in child protective services agencies over the past five years, we have never had anyone disagree with the high end of the 40-80% range, and the most common response is a nod when the figure 80% is mentioned.”⁹⁶ The literature is also clear that few state child welfare agencies have information management systems that track substance use data on the children and families they serve. West Virginia has apparently not conducted any child welfare studies to find out what percent of their reported abuse and neglect cases are due to mental illness and substance abuse.

PCG’s review of state studies provides information on how other states approached this issue. In a study completed by the Alaska Department of Health and Social Services, Division of Alcohol and Drug Abuse, approximately 81 percent of reports of child abuse involved alcohol and drug abuse.⁹⁷ Massachusetts estimated that 40 percent of their youth services expenditures were alcohol or drug related.⁹⁸ Maine’s study reported that “Although there is little documented data on this subject for Maine, a report by the Maine Bureau of Child and Family Services (BCFS) to the Maine Legislature indicates that 50% or more of the Bureau’s clients in State Fiscal Year 2003 needed substance abuse services.”⁹⁹

Montana Child and Family Services staffs estimated that up to 75% of their cases involved a chemical dependency of some kind.¹⁰⁰ Oklahoma’s study concluded that “Even though trained and experienced investigators relayed their belief that the attribution percentage of substance abuse in neglect cases is closer to 70-80%, the research team used the 20.24% factor because it is the product of official DHS records.”¹⁰¹ Oregon study of the prevalence of mental illness found that 40% of the children in protective custody needed mental health treatment.¹⁰² On the other end of estimates is Texas’s which estimated that only 3% of Title IV-B Foster Care funding was related to alcohol and substance abuse.

A recent compilation of studies estimating the impact of substance use on child welfare shows substantial variation in the estimates across studies ranging from 10% to 70% depending on the population studied and statistics tracked.¹⁰³ PCG conservatively estimates the percentage to be at the lower end of published estimates. The federal Administration for Children & Families (ACF) conducted a National Survey of Child and Adolescent Well-Being (NSCAW), 1997-2007.¹⁰⁴ This is recent national random sample of over 5,000 children and it concluded about 8%

⁹⁵ General Accounting Office, (1997, October). Child Welfare League of America, (1997); Child Welfare League of America (Undated); Besinger, B. et al (1999). CWLA staff report their 1997 study has not been updated.

⁹⁶ Gardner, S. & Young, N. (1996, November).

⁹⁷ McDowell Group. (2005, December). p. 25

⁹⁸ Substance Abuse Strategic Plan. (2005, May) p. 22

⁹⁹ Division of Data and Research. (2004, July), p. 53

¹⁰⁰ Newhouse, E. (1999, November 21)

¹⁰¹ Oklahoma Governor’s and Attorney General’s Blue Ribbon Task Force. (2005, February). Social Services Report, p. 10

¹⁰² State of Oregon, (2001, January), p. 7

¹⁰³ Children and Family Futures, Technical Assistance Center, (personal communication, November 13, 2006)

¹⁰⁴ Administration for Children and Families, (2005, April). Tables 4-6 and 4-7.

of caregivers had an alcohol risk, 9% abused other drugs, and 15% had a serious mental health problem. These are reasonable percentages to apply to West Virginia child welfare expenditures.

In 2004, there were 372,632 children in West Virginia of whom, about 95,381 or 25.6% were living in poverty. Approximately 8,446 children were found to have been the victim of either abuse or neglect and there were 4,069 children in foster care. About \$137,724,000 was spent on child welfare in 2004: about 56%, \$60,843,000, were federal expenditures, and 44% or \$76,881,000 were state expenditures.

The percentages above result in the following estimates. The estimates do not attempt to control for co-occurring cases. However, the table shows the independent effects.

Table A-4: Estimate of Child Welfare Expenditures Related to Mental Illness and Substance Use Data from 2000-2004

ESTIMATE OF AMOUNT	FUND SOURCE	RELATED SOURCE
\$4,867,475	GF due to	alcohol
\$5,475,909	GF due to	other drugs
\$9,126,515	GF due to	mental illness
\$19,469,900	GF Total	

Bureau of Public Health (BPH)

Agency Contact: Janet Richards, Fiscal Coordinator

Phone Number: 304-558-0091

The Bureau of Public Health (BPH) contains nine separate offices and five boards to improve the health of West Virginians. BPH is charged with monitoring the health status of the population, promoting a healthy life, protecting against adverse environmental factors, reducing preventable disease, and assuring and certifying an adequate health care delivery system.¹⁰⁵

Through correspondence with BPH faculty, it became apparent that the Bureau does not expend material funds on Mental Health and Substance Use services. The Office of Epidemiology and Health Promotion does spend roughly \$100,000 annually for services related to Substance Abuse within the AIDS and Tuberculosis programs.¹⁰⁶ This money is funded from BHHF and the majority of the funds going to the AIDS Task Force which responsible for the planning, development and delivery of comprehensive outpatient health and support services to individuals with HIV. Since these funds are received from BHHF, they are excluded in the total impact summary to prevent double counting. The expenditures identified here are used for Substance Use services. BPH also reported that readily available data was not available for program expenditures at the local level however they believed that there was not a tremendous amount of money being used for Mental Health or Substance Use services.

¹⁰⁵ FY 2007 WV Executive Budget, DHHR, Bureau for Public Health

¹⁰⁶ Based on communication with Debbie McGinnis at Bureau of Public Health.

Bureau of Senior Services (BSS)

Agency Contact: Ken Webb, Manager Fiscal Operations
Phone Number: 304-558-3317

Staffs interviewed reported that the Bureau had done no studies and did not collect information as to the impact of mental illness or substance use in the Title III programs, or in the ombudsman activities or the adult protective service activities supervised by the Bureau. For example, the ombudsman program works with about 1,100 persons a year but does not collect statistics on the percentage of cases that had alcohol and drug use or mental illness as a factor in the case. Ombudsman staffs estimate that about 20% to 60% of persons in nursing homes are depressed and that this depression is a mental health problem. There are about 12,000 nursing home beds in the state's 133 nursing homes. This estimate of 20% to 60% supports the estimate of mental health costs in nursing homes calculated in Section V below in the discussion of nursing homes.

Division of Rehabilitation Services (DRS)

Agency Contact: Michelle James, Financial Officer
Phone Number: 304-766-4920

The Division of Rehabilitation Services (DRS) provides vocational rehab services to roughly 15,000 individuals in the State of West Virginia. They operate 30 offices across the state and develop an individualized plan of employment for every client. Services they provide include individual assessment, counseling, vocational guidance, vocational and technical training, education, rehabilitation therapies, assistive technology, environmental modifications, and job placement. Although their services are primarily related to clients with mental retardation or developmental disabilities, there were 264 clients receiving services in FY 2005 that had a primary disability of Psychosocial Impairments (interpersonal and behavioral impairments, difficulty coping).¹⁰⁷

Due to a virus within the DRS information system, specific cost data related to providing services such as mental health and substance use counseling and treatment was not available. In lieu of specific data, the estimated cost is calculated by taking total budget expenditures of \$61 million¹⁰⁸ and applying a percentage of 1.8% which represents clients with a primary disability of Psychosocial Impairments. Therefore, DRS approximately expends \$1.1 million annually on clients with Mental Health disorders.

Department of Education (WVDE)

Agency Contact: Joe Panetta, Executive Director, Office of School Finance
Phone Number: 304-558-6300

The West Virginia Department of Education (WVDE) employs over 5,900 full-time equivalent employees in special education, health services, and student aides in the 55 counties. In FY 2004, WVDE reported that 50,772 students were identified as exceptional which represents 18% of the 281,000 students enrolled. Revenue and expenditures are reported by the county board of education through the West Virginia Educational Information System (WVEIS). When posting expenditures to WVEIS, the county treasurers assigned items to various program codes and also project codes. In FY 2004, the amount of expenditures coded to Psychology was \$7.5 million.

¹⁰⁷ WV Division of Rehabilitation Services Annual Report 2005.

¹⁰⁸ WV Executive Budget FY 2007, Division of Rehabilitation Services FY 2005 Actual Expenditures.

Of this, \$1.6 million was funded by Federal grants and revenue. Salaries and fringe benefits of the 84 school psychologists represent 89% of the expenditures coded to psychology. Other costs would be related to office supplies, travel expenses, and equipment. Although only direct psychology service costs were contemplated in this study, there are much more costs associated with providing services and special education instruction for mentally ill students. These costs related to students with mental health or substance use problems cannot be discretely broken out from students with mental retardation.

In the analysis of mental health costs in the state school system, the following program codes were used:

Table A-5: WVDE Mental Health Program Expenditures

Program Code	Program Description	Expenditures
22140	Psychology - General	\$478,743
22141	Psychology - Supervision	\$526,630
22142	Psychology - Testing	\$4,430,959
22143	Psychology - Conseling	\$149,912
22144	Psychology - Therapy	\$181
22149	Psychology - Other	\$293,936
92140	Psychology - General	\$75,996
92141	Psychology - Supervision	\$1,121,068
92142	Psychology - Testing	\$314,998
92143	Psychology - Conseling	\$84,005
92149	Psychology - Other	\$61,662
	Total	\$7,538,091

To determine the amount of substance use related costs, the project code which identifies the funding source was used to determine the related expenditures. Project Code 48XXX was used to identify the Drug Free Schools program expenditures of \$2,192,462 and Project Code 27XXX is used for Tobacco Prevention Education with expenditures totaling \$428,043. No costs that were included in the mental health related costs appear in the substance use related costs.

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