

MILLIMAN REPORT

Senate Bill 419 Actuarial Analysis

State of West Virginia, Department of Health and Human Resources,
Bureau for Medical Services

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Annie P Hallum, FSA, MAAA
Ryan J Melson, JD, MS
Lu Miao, ASA, MAAA

Justin C Birrell, FSA, MAAA
Dan Gerber, ASA, MAAA



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Introduction

West Virginia Senate Bill (SB) 419¹ instructs the West Virginia Department of Health and Human Resources (DHHR) to enter into contracts with Medicaid managed care organizations (MCOs) that include performance-based payments for substance use disorder (SUD) residential treatment services. SB 419 was passed on March 7, 2022 and went into effect 90 days from the bill being passed.

DHHR, through the Bureau for Medical Services (BMS), was also tasked in SB 419 to conduct an actuarial analysis of the pilot program on an annual basis and submit this report along with a separate detailed report of the overall performance of the pilot program.² This report is intended to address the actuarial analysis requirement of SB 419 and is to be used in conjunction with the separate detailed report of the overall performance of the pilot program. Milliman has been retained by Myers and Stauffer LC (MSLC), under its engagement with BMS to provide actuarial and managed care consulting services, to draft the actuarial analysis required under SB 419.

Senate Bill 419 Overview

SB 419 sets forth several mandates for the DHHR,³ including but not limited to:

1. Enter into contracts with managed care organizations that require payments to facilities providing SUD treatment services based on performance metrics;
2. Evaluate the impact that post-discharge planning and the provision of wraparound services have on the outcomes of SUD in three years post-substance use disorder residential treatment;
3. Seek an amendment of existing waivers from the Centers for Medicare and Medicaid Services (CMS);
4. Create an advisory committee;
5. Set terms of the performance-based contract; and
6. Require reporting on the SUD pilot program.

SB 419 further directs BMS to seek an amendment to the existing waiver with CMS to support this pilot program.⁴ More specifically, the legislation directs BMS to enter into contracts with the MCOs wherein, at a minimum, 15 percent of SUD residential treatment contracts for facilities providing SUD treatment services are paid based upon performance-based measures. The bill does not require SUD residential treatment facilities to participate in the pilot program.

SUD residential treatment facilities that opt for performance-based contracting shall comply with the following:⁵

1. Programs must be evidence-based and research-based. There also must be promising practices in providing services to the patient population that include fidelity and quality assurance provisions.
2. The SUD residential treatment facility shall develop a robust post-treatment planning program, which includes:
 - a. Connecting the patient population to community-based supports, also known as wraparound services, to include designation of a patient navigator to assist each discharged patient with linkage to medical, substance use, and psychological treatment services;
 - b. Assistance with job placement;
 - c. Weekly communication regarding status for up to three years; and

¹ "Senate Bill 419," West Virginia Legislature, 2022 Regular Session, Passed March 7, 2022, Retrieved from: [SB419 SUB1 ENR.pdf \(wvlegislature.gov\)](#).

² Ibid.

³ Ibid.

⁴ Ibid.

⁵ Ibid.

d. Assistance with housing and transportation.

The advisory committee shall create performance-based metrics on which payment is based that includes, but are not limited to the following:⁶

1. Whether patient is drug free, 30 days post-discharge, six months post-discharge, one year post-discharge, two years post-discharge, and three years post-discharge.
2. Whether patient is employed, 30 days post-discharge, six months post-discharge, one year post-discharge, two years post-discharge, and three years post-discharge.
3. Whether patient has housing, 30 days post-discharge, six months post-discharge, and one year post-discharge.
4. Whether SUD residential treatment facility has arranged medical, substance use, psychological services, or other community-based supports for the patient and whether the patient attended, 30 days post-discharge, six months post-discharge, one year post-discharge, two years post-discharge, and three years post-discharge.
5. Whether the patient has transportation 30 days post-discharge; and
6. Whether a patient has relapsed and needed any additional SUD treatment, 30 days post-discharge, six months post-discharge, one year post-discharge, two years post-discharge, and three years post-discharge.

The MCO may transfer risk for the provision of services to the SUD residential treatment facility during this pilot program, only to the limited extent of implementing a performance-based payment methodology.⁷ The MCO may also develop a shared saving methodology, under which the SUD residential treatment facility shall receive a defined share of any savings that result from improved performance.

The advisory committee will evaluate this pilot program annually for effectiveness, adjust metrics as indicated to improve quality outcomes, and assess the pilot for continuation.⁸

The pilot program shall terminate in three years unless it is recommended for further evaluation.⁹

Actuarial Analysis of SUD Treatment Utilization in West Virginia Medicaid

As of this report date, the pilot program has not been officially launched. To meet the reporting requirements in SB 419, we have performed an actuarial analysis of SUD treatment utilization in West Virginia's Medicaid managed care programs. To better understand the total cost of care and the potential for benefit to the individual and to the state of a focused investment in individuals with SUD treatment needs, we are sharing both SUD and non-SUD per member per month (PMPM) service costs for members enrolled in Medicaid managed care in West Virginia as well as other related statistics.¹⁰

MANAGED CARE BACKGROUND

West Virginia operates its Medicaid programs for most non-elderly adults and children through two managed care programs. Since 1996, Mountain Health Trust (MHT) provides managed care services to approximately 87% of the state's Medicaid membership, including most non-elderly adults and children.¹¹ Mountain Health Promise (MHP) began in March 2020 as a specialized managed care program designed to assist children in foster care, kinship care, and adoptive care.

⁶ Ibid.

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.

¹⁰ SUD services are defined based on Milliman's *Health Cost Guidelines* using revenue codes, CPTs, and Diagnosis Related Groups for institutional and professional claims. All point-of-sale pharmacy claims are excluded from this analysis.

¹¹ <https://dhr.wv.gov/bms/Members/Managed%20Care/Pages/default.aspx>

MHT provides most services, excluding opioid treatment prevention (OTP) services and point-of-sale pharmacy, through three MCOs (Aetna Better Health of West Virginia, Health Plan of the Upper Ohio Valley, and UniCare). MHP provides most medical services (excluding OTP and point-of-sale pharmacy) and home- and community-based services for children with serious emotional disorder through one MCO (Aetna Better Health of West Virginia). The State continues to pay carved out services (such as OTP and point-of-sale pharmacy) through the fee-for-service (FFS) program for MHT and MHP members and all services for non-managed care members.

Given the focus of SB 419 on value-based purchasing for substance use disorder treatment services for managed care organizations, this analysis is limited to managed care members in the MHT and MHP programs. Encounter data is limited to those services paid by the MCOs and OTP services paid by the FFS program.

DATA OVERVIEW

To complete the analysis, we relied on eligibility, managed care encounters, and FFS claims data received December 8, 2022, with enrollment and paid claims through October 2022. The following adjustments were made to the data:

- The data was limited to members enrolled in the MHT and MHP managed care programs from July 2020 through June 2022 as this is the most recently available data for both the MHT and MHP programs.
- Enrollment missing key demographic fields used in assigning rate cells, such as a region, age, or gender, were excluded.
- Managed care encounters and FFS claims that do not have an associated managed care enrollment record for the member and month of service were removed.
- Costs for value-added benefits (managed care services that are not covered by the Medicaid State Plan and that are not approved as in-lieu of services) were excluded. In this reporting period, the only such service included in the encounter data is HCPCS code E0603 for electric breast pumps.
- For managed care encounters incurred from February 2021 through June 2022, we received a detailed claims-level reconciliation file that has the final adjudicated paid amounts as determined by MSLC's review of each plan's claims and financials. We used this file to adjust the final paid amount and utilization metrics as necessary.¹²
- We summarized total managed care encounter spending and OTP claims paid FFS. We did not include any point-of-sale pharmacy or other FFS claims in our final summaries.
- The MCO encounters include most services paid through subcapitated arrangements. However, there are limited instances when the MCOs do not provide reliable encounters for costs incurred through subcapitated arrangements. Therefore, we may be missing a small amount of subcapitated costs from our analysis.
- We have not adjusted for incurred but not paid amounts (IBNP). We have included claims paid through October 2022 which includes at least four months of run-out for the incurred period. While additional IBNP is expected, based on historical claim run-out patterns we do not believe the IBNP materially impacts the results of this analysis. Additionally, there are known issues with the run-out for managed care encounters incurred from July 2020 through January 2021 due to changes in data warehouses. As such, state fiscal year (SFY) 2021 incurred managed care encounter data and summaries are assumed to be incomplete. The materiality of missing encounters (including IBNP) varies widely by MCO and member category of aid (e.g., pregnant women, children in foster care, etc.). We estimate that we are missing between two and nine percent of managed care encounters costs in SFY 2021 depending on the MCO and category of aid. While incomplete, we believe the general findings of the analysis are still valid.

METHODOLOGY

We summarized FFS OTP claim costs and managed care encounter costs for members enrolled in managed care for state fiscal year (SFY) 2021 (July 2020 through June 2021) and SFY 2022 (July 2021 through June 2022). We identified SUD treatment services in the managed care encounter data based on Milliman's *Health Cost Guidelines* and actuarial judgment using revenue codes, CPT codes, and Diagnosis Related Groups for institutional and professional claims. We also quantified the percent of members using SUD treatment services and stratified

¹² For claims incurred from July 2020 through January 2021, no such reconciliation is available.

members using SUD treatment services into high-utilizers (more than \$1,500 paid for SUD treatment services in the fiscal year) versus low-utilizers (\$1 to \$1,500 paid for SUD treatment services in the fiscal year). We then classified members by regions and type and into one of three populations: expansion adults (formerly known as West Virginia Health Bridge), other adults, and children. For simplicity, we stratified adults and children based loosely on the rate cells used for managed care rate development. The following groups are considered children for this analysis (while all other groups are considered adults):

- Children with Special Health Care Needs (CSHCN);
- MHP members who are age 17 and younger and not enrolled in the Children with Serious Emotional Disorder (CSED) waiver;
- Temporary Aid for Needy Families (TANF) members age 19 and younger; and
- Social Security Income (SSI) members age 20 and younger.

KEY METRICS

Key spending metrics for SUD treatment services statewide are shown in Tables 1 and 2 below for SFY 2021 and SFY 2022, respectively. Each table includes the percentage of members receiving at least one SUD treatment service in the year, along with the total costs for SUD treatment services in millions of dollars (paid FFS or by the MCOs) and PMPM costs for members utilizing SUD treatment services. We also included a comparison of PMPM non-SUD costs for both SUD treatment utilizers and non-SUD treatment utilizers (referred to as SUD utilizers and non-SUD utilizers, respectively).

Table 1: SUD Treatment Spending, Statewide – SFY 2021

Population	% of Members Considered High SUD Utilizers	% of Members Considered Low SUD Utilizers	FFS SUD OTP Costs (\$mil)	MCO SUD Costs (\$mil)	MCO Costs				
					SUD PMPM for High Utilizers	SUD PMPM for Low Utilizers	Non-SUD PMPM for High Utilizers	Non-SUD PMPM for Low Utilizers	Non-SUD PMPM for Non-SUD Utilizers
Expansion	4.8%	5.2%	\$ 8.6	\$ 65.6	\$591	\$34	\$580	\$614	\$235
Other Adults	3.6%	4.9%	\$ 4.4	\$ 15.8	\$383	\$33	\$590	\$724	\$355
All Children	0.0%	0.1%	\$ 0.0	\$ 1.0	\$1,107	\$26	\$1,381	\$603	\$139
Total	2.6%	3.0%	\$ 13.0	\$ 82.4	\$540	\$34	\$588	\$647	\$213

Table 2: SUD Treatment Spending, Statewide – SFY 2022

Population	% of Members Considered High SUD Utilizers	% of Members Considered Low SUD Utilizers	FFS SUD OTP Costs (\$mil)	MCO SUD Costs (\$mil)	MCO Costs				
					SUD PMPM for High Utilizers	SUD PMPM for Low Utilizers	Non-SUD PMPM for High Utilizers	Non-SUD PMPM for Low Utilizers	Non-SUD PMPM for Non-SUD Utilizers
Expansion	5.4%	4.6%	\$ 10.3	\$ 84.6	\$611	\$36	\$555	\$573	\$227
Other Adults	4.0%	4.3%	\$ 4.8	\$ 20.2	\$431	\$34	\$625	\$716	\$348
All Children	0.0%	0.1%	\$ 0.0	\$ 0.7	\$821	\$23	\$1,193	\$1,216	\$158
Total	2.9%	2.7%	\$ 15.2	\$ 105.5	\$568	\$35	\$575	\$622	\$218

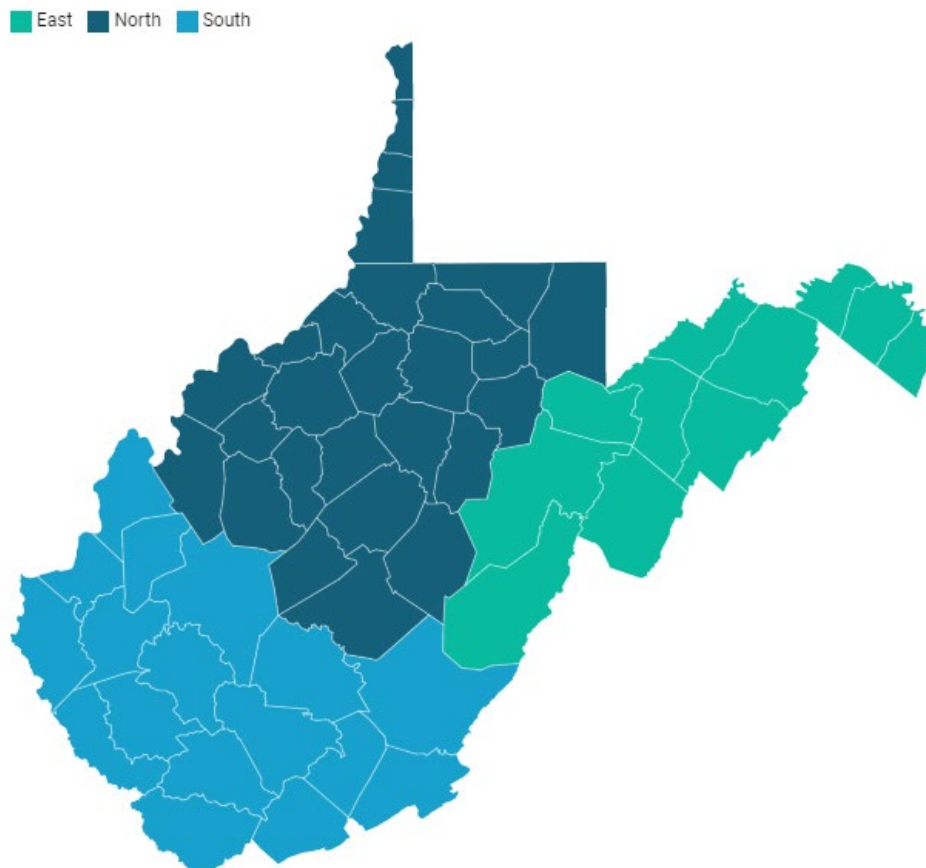
In SFY 2021 and SFY 2022, nearly 10% of managed care adults received at least one SUD treatment service in each year. As Tables 1 and 2 show, the percentage of members by population category using SUD treatment services remained relatively stable. However, SFY 2022 did see an increase in the percentage of members identified as high-SUD utilizers compared to non-SUD utilizers. Additionally, the total MCO SUD treatment costs increased from \$82.4 million in SFY 2021 to \$105.5 million in SFY 2022. This is a 28% increase in MCO spend compared to SFY 2021, driven by a higher percentage of high-SUD utilizers, more Medicaid members overall, and increased SUD treatment cost per member.¹³ FFS OTP costs similarly increased from \$13.0 million to \$15.2 million.

Tables 1 and 2 also illustrate that the non-SUD PMPM for SUD utilizers is significantly higher than for non-SUD utilizers. Appendix A contains cost models based on SFY 2021 and SFY 2022 managed care encounter and membership data, shown separately for high-SUD utilizers, low-SUD utilizers, and SUD non-utilizers. The cost models in Appendix A further illustrate how high-, low-, and non-SUD utilizers compare across all managed care costs and FFS OTP costs. Both high- and low-SUD utilizers have higher inpatient medical (non-behavioral health) costs, psychiatric costs, emergency room costs, and ambulance costs than non-SUD utilizers.

REGIONAL RESULTS

In addition to providing statewide SUD treatment cost metrics, we also included regional summaries consistent with the MHT rating regions. Figure 1 provides a map of the MHT rating regions by county.

Figure 1: Regions



¹³ Note that BMS' state Medicaid fee schedules for behavioral health and other services changed during SFY 2021 and SFY 2022. There were significant changes to the behavioral health fee schedule from April 2021 through June 2022 due to incentives for enhanced spending on home- and community-based services, including behavioral health, in the American Rescue Plan Act of March 2021. This may be one driver of the increase in SUD cost per member and it may contribute to the increase in high-utilizers compared to low-utilizers. Additionally, SFY 2021 generally has higher missing encounter rates which may contribute to a small share of the increase in paid managed care SUD costs.

Tables 3 through 5 detail key spending metrics for SUD treatment services for the North, East, and South regions, respectively, in SFY 2022. As illustrated in the tables, the Southern Region experiences the highest SUD treatment utilization, where over 11% of adults are receiving SUD treatment services, and non-SUD spend on these individuals is the highest in the state.

Table 3: SUD Treatment Spending, North Region – SFY 2022

Population	% of Members Receiving SUD Services	FFS SUD Costs (\$mil)	MCO SUD Costs (\$mil)	MCO Costs		
				SUD PMPM for SUD utilizers	Non-SUD PMPM for SUD utilizers	Non-SUD PMPM for Non-SUD Utilizers
Expansion	8.2%	\$ 2.5	\$ 27.0	\$376	\$572	\$237
All Other Adults	6.8%	\$ 1.0	\$ 6.4	\$249	\$659	\$352
All Children	0.1%	\$ 0.0	\$ 0.3	\$307	\$1,195	\$162
Total	4.7%	\$ 3.6	\$ 33.7	\$342	\$600	\$225

Table 4: SUD Treatment Spending, East Region – SFY 2022

Population	% of Members Receiving SUD Services	FFS SUD Costs (\$mil)	MCO SUD Costs (\$mil)	MCO Costs		
				SUD PMPM for SUD utilizers	Non-SUD PMPM for SUD utilizers	Non-SUD PMPM for Non-SUD Utilizers
Expansion	7.7%	\$ 1.2	\$ 7.6	\$281	\$532	\$226
All Other Adults	7.3%	\$ 0.7	\$ 2.1	\$194	\$613	\$314
All Children	0.1%	\$ 0.0	\$ 0.2	\$348	\$868	\$143
Total	4.4%	\$ 1.9	\$ 9.8	\$258	\$559	\$201

Table 5: SUD Treatment Spending, South Region – SFY 2022

Population	% of Members Receiving SUD Services	FFS SUD Costs (\$mil)	MCO SUD Costs (\$mil)	MCO Costs		
				SUD PMPM for SUD utilizers	Non-SUD PMPM for SUD utilizers	Non-SUD PMPM for Non-SUD Utilizers
Expansion	11.8%	\$ 6.6	\$ 50.0	\$338	\$565	\$219
All Other Adults	9.7%	\$ 3.1	\$ 11.8	\$216	\$691	\$354
All Children	0.1%	\$ 0.0	\$ 0.2	\$184	\$1,341	\$160
Total	6.8%	\$ 9.7	\$ 62.0	\$304	\$604	\$218

CONCLUSION

Nearly 10% of Medicaid managed care adults statewide are receiving SUD treatment services (5.7% of all managed care members including children). Total spending by the MCOs on SUD treatment services in State Fiscal Year

(SFY) 2022 was \$105.5 million. Additionally, \$15.2 million in Opioid Treatment Services was paid by the State under FFS for managed care members in SFY 2022.

The per member per month (PMPM) SUD treatment costs for those members receiving SUD treatment services are over \$300 PMPM. The non-SUD costs for these members are nearly three times those of members not receiving SUD treatment services, at almost \$600 PMPM. The impact of a successful SUD treatment program may affect the entire scope of services for individuals. Therefore, it is important to understand the current SUD treatment and non-SUD spend for those with SUD treatment needs to better assess the full potential fiscal impact of a value-based approach to SUD treatment payments. Assuming SUD treatment will positively affect comorbidities, there is substantial opportunity for statewide benefits related to non-SUD services for those with SUD treatment needs.¹⁴

Data Reliance and Caveats

The terms of the contract with BMS effective on February 15, 2022 and the MSLC subcontract signed February 10, 2022 apply to this email and attachments and its use.

We relied on certain models in the preparation of these exhibits. We have reviewed the models, including their inputs, calculations, and outputs for consistency, reasonableness, and appropriateness to the intended purpose and in compliance with generally accepted actuarial practice and relevant actuarial standards of practice (ASOPs).

This report is intended for the use of the State of West Virginia, Bureau for Medical Services (BMS) in support of the Medicaid managed care programs. We understand that this information may be shared with third parties. To the extent that the information contained in this report is provided to third parties, the document should be distributed in its entirety.

Milliman makes no representations or warranties regarding the contents of this report to third parties. Similarly, third parties are instructed that they are to place no reliance upon this report prepared for BMS by Milliman that would result in the creation of any duty or liability under any theory of law by Milliman or its employees to third parties.

This analysis has relied extensively on data provided by BMS and its vendors. We have not audited or verified this data and other information. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete. We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found material defects in the data. Identified data deficiencies (such as limited run-out) are noted throughout the report. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

Guidelines issued by the American Academy of Actuaries require actuaries to include their professional qualifications in all actuarial communications. Annie Hallum, Justin Birrell, Daniel Gerber, and Lu Miao are members of the American Academy of Actuaries and meet the qualification standards for performing the analysis presented herein.

¹⁴ <https://www.ncbi.nlm.nih.gov/books/NBK424848/#:~:text=Because%20substance%20use%20complicates%20many,and%20reduce%20health%20care%20costs.>



Milliman is an independent consulting, benefits and technology firm. Our expert guidance and advanced analytical solutions empower leading insurers, healthcare companies and employers to protect the health and financial well-being of people everywhere. Every day, in countries across the globe, we collaborate with clients to improve healthcare systems, manage risk, and advance financial security, so millions of people can live for today and plan for tomorrow with greater confidence.

milliman.com

CONTACT

Annie Hallum
annie.hallum@milliman.com

Justin Birrell
justin.birrell@milliman.com

Ryan Melson
ryan.melson@milliman.com

Dan Gerber
daniel.gerber@milliman.com

Lu Miao
lu.miao@milliman.com

Appendix A-1
West Virginia Bureau for Medical Services
SB419 Actuarial Report
Cost Model for SUD High Utilizers

SFY 2021 MMs: 142,440

SFY 2022 MMs: 175,674

Service Category	SFY 2021 Data					SFY 2022 Data				
	Admits Per 1,000	Avg Length of Stay	Utilization Per 1,000	Cost Per Service	PMPM	Admits Per 1,000	Avg Length of Stay	Utilization Per 1,000	Cost Per Service	PMPM
Hospital Inpatient										
IP Medical	106.1	4.8	505.6	\$ 1,299.89	\$ 54.77	93.7	6.3	588.7	\$ 1,139.66	\$ 55.91
IP Surgical	31.3	8.5	266.7	1,930.31	42.90	27.4	12.7	346.5	1,603.03	46.29
IP Psych Hospital	79.2	7.7	611.1	785.74	40.02	61.4	8.7	535.2	756.80	33.75
IP Psych Residential	199.3	1.4	274.8	206.95	4.74	153.8	1.0	160.0	118.92	1.59
IP SUD Hospital	152.6	5.8	888.1	1,003.23	74.25	102.3	6.6	675.1	880.18	49.52
IP SUD Residential	11,892.4	1.1	12,816.7	236.94	253.06	13,447.5	1.0	13,733.9	236.05	270.16
IP Normal Delivery	13.6	2.0	27.4	1,435.69	3.28	12.1	2.5	30.6	1,135.66	2.90
IP C-Section Delivery	9.5	3.0	28.8	1,378.77	3.31	6.4	3.9	24.7	1,170.77	2.41
IP Well Newborn	-	-	-	-	-	-	-	-	-	-
IP Other Newborn	-	-	-	-	-	-	-	-	-	-
IP SNF	2.6	0.9	2.3	7,964.44	1.51	0.3	19.5	5.3	460.72	0.20
Subtotal	12,486.5	1.2	15,421.6	\$ 371.82	\$ 477.84	13,904.8	1.2	16,100.1	\$ 344.89	\$ 462.73
Hospital Outpatient										
OP Observation			127.4	\$ 1,246.41	\$ 13.23			105.9	\$ 1,194.79	\$ 10.54
OP Emergency Department			1,836.3	352.76	53.98			1,777.6	343.89	50.94
OP Surgery			132.4	884.49	9.76			135.9	930.45	10.54
OP Radiology			374.5	93.61	2.92			377.2	89.39	2.81
OP Lab/Pathology			2,141.4	66.01	11.78			3,020.8	54.53	13.73
OP Pharmacy			223.7	504.19	9.40			214.7	317.27	5.68
OP Chemotherapy			7.4	3,671.26	2.27			8.9	2,010.37	1.50
OP Cardiovascular			219.4	31.41	0.57			218.0	28.10	0.51
OP PT/OT/ST			63.7	75.87	0.40			66.5	68.56	0.38
OP Psych PHP & IOP			31.4	45.45	0.12			47.1	37.70	0.15
OP SUD PHP & IOP			105.7	92.31	0.81			66.5	89.67	0.50
OP Preventive			551.6	58.35	2.68			850.4	45.64	3.23
OP Other			3,121.4	44.68	11.62			3,053.9	44.51	11.33
OP Clinic			5,775.3	93.45	44.97			6,396.4	92.78	49.46
OP Dialysis			9.7	542.72	0.44			18.6	188.33	0.29
Subtotal			14,721.2	\$ 134.47	\$ 164.97			16,358.5	\$ 118.53	\$ 161.58
Physician										
PROF IP Surgery			226.5	\$ 207.62	\$ 3.92			205.3	\$ 209.37	\$ 3.58
PROF OP Surgery			489.0	127.14	5.18			458.8	125.74	4.81
PROF Maternity - Normal Deliveries			14.6	849.46	1.03			11.3	765.79	0.72
PROF Maternity - Cesarean Deliveries			9.1	949.61	0.72			7.4	786.70	0.48
PROF Maternity - Other			36.6	75.20	0.23			28.1	75.74	0.18
PROF Maternity - Anesthesia			26.2	203.66	0.44			20.4	211.43	0.36
PROF IP Medical			1,616.6	75.30	10.14			1,498.2	69.74	8.71
PROF IP Psych/SUD			1,282.9	59.91	6.40			1,355.2	51.53	5.82
PROF PCP			1,970.8	60.18	9.88			2,025.3	70.64	11.92
PROF Specialist			6,412.3	60.67	32.42			6,263.1	70.67	36.88
PROF Pharmacy			264.4	45.66	1.01			228.0	129.35	2.46
PROF Chemotherapy			1.5	122.17	0.02			2.7	74.85	0.02
PROF Dialysis			3.7	86.30	0.03			4.9	97.73	0.04
PROF Immunizations			59.3	32.04	0.16			49.0	48.90	0.20
PROF Well Baby Exams			0.1	77.56	0.00			0.2	77.76	0.00
PROF Preventive Exams			913.8	35.69	2.72			619.3	32.86	1.70
PROF Vision Exams			25.6	85.72	0.18			19.1	86.13	0.14
PROF Other			6,711.6	55.33	30.94			5,900.3	70.09	34.46
PROF PT			334.5	30.55	0.85			412.0	26.50	0.91
PROF Radiology			2,696.8	27.37	6.15			2,487.0	24.41	5.06
PROF Pathology/Lab			15,022.2	44.14	55.26			12,400.2	43.87	45.33
PROF OP Psych			4,296.7	171.14	61.28			3,166.6	237.00	62.54
PROF OP SUD			26,483.2	94.43	208.40			24,051.1	121.82	244.16
PROF Case Management			198.7	34.41	0.57			121.6	40.05	0.41
Subtotal			69,096.9	\$ 76.06	\$ 437.94			61,335.1	\$ 92.12	\$ 470.87
Ancillary										
OTH Home Health			25.2	\$ 136.12	\$ 0.29			39.5	\$ 137.08	\$ 0.45
OTH Hospice			13.6	146.39	0.17			14.5	185.84	0.23
OTH Ambulance			1,323.7	208.28	22.97			1,112.3	204.65	18.97
OTH DME/Prosthetics			526.5	114.00	5.00			552.0	130.15	5.99
OTH Glasses/Contacts			10.6	43.42	0.04			3.7	44.44	0.01
OTH Other Services			130.5	112.86	1.23			71.7	116.49	0.70
OTH Dental			1,435.6	90.19	10.79			1,704.4	103.00	14.63
COVID Testing			1,302.4	63.62	6.90			1,304.1	61.50	6.68
COVID Vaccines			24.3	31.60	0.06			31.7	37.66	0.10
Subtotal			4,792.4	\$ 118.82	\$ 47.45			4,834.0	\$ 118.55	\$ 47.76
MCO Medical Encounter Subtotal			104,032.1	\$ 130.14	\$ 1,128.20			98,627.7	\$ 139.06	\$ 1,142.94
FFS OTP Subtotal			10,296.2	\$ 102.96	\$ 88.34			9,707.1	\$ 103.71	\$ 83.89

Notes:

- 1) Base costs are derived from Blue Box data incurred through January 2021 and EDI data beginning February 1, 2021 with data submitted through October 2022.
- 2) Limited to members with high SUD utilization, defined as greater than \$1,500 in paid SUD services in the fiscal year.
- 3) FFS OTP claims identified using HCPCS code H0020. No other FFS claims are included.

Appendix A-2
West Virginia Bureau for Medical Services
SB419 Actuarial Report
Cost Model for SUD Low Utilizers

SFY 2021 MMs: 165,468

SFY 2022 MMs: 164,793

Service Category	SFY 2021 Data					SFY 2022 Data				
	Admits Per 1,000	Avg Length of Stay	Utilization Per 1,000	Cost Per Service	PMPM	Admits Per 1,000	Avg Length of Stay	Utilization Per 1,000	Cost Per Service	PMPM
Hospital Inpatient										
IP Medical	141.7	5.2	737.7	\$ 1,381.68	\$ 84.94	131.1	7.3	954.9	\$ 1,102.56	\$ 87.74
IP Surgical	51.3	10.2	521.4	2,087.72	90.70	46.5	14.0	653.5	1,601.63	87.23
IP Psych Hospital	39.2	9.7	380.7	676.64	21.47	41.9	9.9	413.3	729.18	25.12
IP Psych Residential	78.5	1.5	114.8	113.22	1.08	108.3	1.3	135.5	325.09	3.67
IP SUD Hospital	1.8	2.0	3.7	436.03	0.13	2.4	3.0	7.3	299.94	0.18
IP SUD Residential	68.8	1.2	80.6	253.50	1.70	91.1	1.1	96.0	280.47	2.24
IP Normal Delivery	17.9	1.8	32.9	1,471.65	4.03	15.0	2.7	39.8	1,142.17	3.78
IP C-Section Delivery	11.4	2.7	30.8	1,571.36	4.04	7.3	3.1	22.4	1,477.87	2.76
IP Well Newborn	-	-	-	-	-	0.1	1.0	0.1	785.41	0.00
IP Other Newborn	-	-	-	-	-	0.1	27.0	2.0	604.93	0.10
IP SNF	1.5	6.6	10.0	1,061.55	0.89	0.3	19.0	5.5	592.49	0.27
Subtotal	412.1	4.6	1,912.6	\$ 1,311.18	\$ 208.98	444.0	5.2	2,330.3	\$ 1,097.37	\$ 213.10
Hospital Outpatient										
OP Observation			91.8	\$ 1,342.31	\$ 10.27			83.7	\$ 1,288.13	\$ 8.99
OP Emergency Department			1,188.2	383.54	37.98			1,246.6	386.63	40.16
OP Surgery			158.5	881.08	11.64			148.9	843.27	10.46
OP Radiology			399.7	101.62	3.39			401.2	104.65	3.50
OP Lab/Pathology			1,879.5	82.80	12.97			1,928.4	81.38	13.08
OP Pharmacy			169.6	223.23	3.16			221.3	230.15	4.24
OP Chemotherapy			9.9	3,501.54	2.90			14.9	2,684.97	3.32
OP Cardiovascular			195.9	37.99	0.62			193.6	40.51	0.65
OP PT/OT/ST			65.8	90.58	0.50			86.9	83.44	0.60
OP Psych PHP & IOP			91.3	26.36	0.20			95.4	17.74	0.14
OP SUD PHP & IOP			142.0	44.10	0.52			74.9	27.52	0.17
OP Preventive			408.2	72.05	2.45			399.9	68.50	2.28
OP Other			2,208.4	54.08	9.95			1,615.9	64.37	8.67
OP Clinic			7,433.1	131.49	81.45			5,921.0	130.39	64.34
OP Dialysis			37.0	379.61	1.17			72.6	219.20	1.33
Subtotal			14,479.2	\$ 148.48	\$ 179.16			12,505.3	\$ 155.40	\$ 161.95
Physician										
PROF IP Surgery			430.3	\$ 224.48	\$ 8.05			360.3	\$ 210.43	\$ 6.32
PROF OP Surgery			507.6	129.89	5.49			482.0	127.31	5.11
PROF Maternity - Normal Deliveries			18.6	851.05	1.32			14.6	763.23	0.93
PROF Maternity - Cesarean Deliveries			12.4	886.93	0.92			8.6	834.81	0.60
PROF Maternity - Other			46.6	66.38	0.26			34.3	71.86	0.21
PROF Maternity - Anesthesia			31.4	205.99	0.54			24.1	215.96	0.43
PROF IP Medical			2,497.7	74.82	15.57			2,382.3	68.71	13.64
PROF IP Psych/SUD			500.6	60.07	2.51			566.8	53.70	2.54
PROF PCP			3,424.9	58.97	16.83			3,307.8	61.79	17.03
PROF Specialist			7,969.0	60.90	40.44			7,233.6	67.06	40.42
PROF Pharmacy			259.8	33.02	0.71			228.1	41.10	0.78
PROF Chemotherapy			9.4	371.13	0.29			10.0	62.58	0.05
PROF Dialysis			26.8	77.56	0.17			20.2	88.12	0.15
PROF Immunizations			62.2	34.41	0.18			48.7	43.87	0.18
PROF Well Baby Exams			0.4	50.88	0.00			0.8	72.05	0.00
PROF Preventive Exams			1,453.5	34.40	4.17			404.3	39.36	1.33
PROF Vision Exams			21.2	83.09	0.15			18.6	84.65	0.13
PROF Other			5,551.9	51.76	23.95			4,604.8	63.46	24.35
PROF PT			416.9	29.06	1.01			474.1	26.92	1.06
PROF Radiology			2,891.5	27.64	6.66			2,746.1	25.80	5.90
PROF Pathology/Lab			14,928.6	43.22	53.77			11,964.0	41.65	41.53
PROF OP Psych			5,031.7	96.58	40.50			5,274.8	105.16	46.22
PROF OP SUD			8,095.4	44.48	30.00			7,399.0	51.64	31.84
PROF Case Management			205.3	25.93	0.44			118.0	40.59	0.40
Subtotal			54,393.8	\$ 56.02	\$ 253.93			47,725.8	\$ 60.64	\$ 241.17
Ancillary										
OTH Home Health			65.4	\$ 161.59	\$ 0.88			78.9	\$ 137.44	\$ 0.90
OTH Hospice			30.2	295.27	0.74			83.0	218.90	1.51
OTH Ambulance			834.4	245.13	17.05			794.5	231.85	15.35
OTH DME/Prosthetics			677.7	114.64	6.47			708.8	121.86	7.20
OTH Glasses/Contacts			7.5	44.00	0.03			9.2	43.95	0.03
OTH Other Services			174.1	108.61	1.58			134.0	118.83	1.33
OTH Dental			992.9	89.69	7.42			1,230.7	101.30	10.39
COVID Testing			798.0	66.16	4.40			908.5	59.77	4.52
COVID Vaccines			24.7	32.43	0.07			27.2	37.02	0.08
Subtotal			3,604.8	\$ 128.60	\$ 38.63			3,974.7	\$ 124.76	\$ 41.32
MCO Medical Encounter Subtotal			74,390.4	\$ 109.81	\$ 680.71			66,536.1	\$ 118.59	\$ 657.54
FFS OTP Subtotal			314.3	\$ 91.83	\$ 2.41			329.1	\$ 93.57	\$ 2.57

Notes:

- 1) Base costs are derived from Blue Box data incurred through January 2021 and EDI data beginning February 1, 2021 with data submitted through October 2022.
- 2) Limited to members with low SUD utilization, defined as between \$1 and \$1,500 in paid SUD services in the fiscal year.
- 3) FFS OTP claims identified using HCPCS code H0020. No other FFS claims are included.

Appendix A-3
West Virginia Bureau for Medical Services
SB419 Actuarial Report
Cost Model for SUD Non-Utilizers

SFY 2021 MMs: 5,205,272

SFY 2022 MMs: 5,735,397

Service Category	SFY 2021 Data					SFY 2022 Data				
	Admits Per 1,000	Avg Length of Stay	Utilization Per 1,000	Cost Per Service	PMPM	Admits Per 1,000	Avg Length of Stay	Utilization Per 1,000	Cost Per Service	PMPM
Hospital Inpatient										
IP Medical	29.6	4.2	125.5	\$ 1,549.99	\$ 16.20	28.4	5.7	162.0	\$ 1,356.61	\$ 18.31
IP Surgical	13.0	5.7	73.6	3,082.30	18.91	10.9	8.1	88.1	2,401.09	17.63
IP Psych Hospital	8.3	9.6	79.9	848.74	5.65	7.4	11.4	83.7	826.50	5.76
IP Psych Residential	289.5	1.5	429.9	200.63	7.19	291.5	1.3	384.8	200.17	6.42
IP SUD Hospital	-	-	-	-	-	-	-	-	-	-
IP SUD Residential	-	-	-	-	-	-	-	-	-	-
IP Normal Delivery	10.9	1.8	20.2	1,414.31	2.38	9.5	2.3	21.9	1,154.57	2.11
IP C-Section Delivery	5.3	2.3	12.1	1,685.31	1.71	4.5	2.9	13.2	1,417.21	1.56
IP Well Newborn	6.0	1.7	10.3	841.78	0.72	5.4	2.0	10.7	557.72	0.50
IP Other Newborn	5.6	5.6	31.1	1,167.80	3.03	4.9	7.1	34.8	1,091.43	3.16
IP SNF	0.0	23.9	0.8	647.84	0.04	0.1	23.5	1.5	582.72	0.07
Subtotal	368.3	2.1	783.4	\$ 855.26	\$ 55.84	362.5	2.2	800.6	\$ 832.20	\$ 55.52
Hospital Outpatient										
OP Observation			35.6	\$ 1,261.10	\$ 3.74			33.3	\$ 1,162.28	\$ 3.23
OP Emergency Department			566.2	336.43	15.87			651.1	323.24	17.54
OP Surgery			134.6	1,058.90	11.87			129.5	1,001.43	10.80
OP Radiology			369.0	115.78	3.56			367.8	111.68	3.42
OP Lab/Pathology			600.6	73.93	3.70			617.3	73.55	3.78
OP Pharmacy			106.8	683.65	6.08			120.2	621.65	6.23
OP Chemotherapy			17.0	3,069.42	4.34			15.7	2,908.51	3.81
OP Cardiovascular			112.7	54.28	0.51			114.7	52.22	0.50
OP PT/OT/ST			120.5	91.13	0.91			129.7	77.52	0.84
OP Psych PHP & IOP			15.6	115.98	0.15			24.1	102.58	0.21
OP SUD PHP & IOP			-	-	-			-	-	-
OP Preventive			208.8	82.72	1.44			219.4	78.64	1.44
OP Other			413.3	72.57	2.50			333.0	72.72	2.02
OP Clinic			1,822.7	124.46	18.90			2,070.5	128.91	22.24
OP Dialysis			20.0	359.11	0.60			21.7	226.41	0.41
Subtotal			4,543.3	\$ 195.96	\$ 74.19			4,848.1	\$ 189.25	\$ 76.46
Physician										
PROF IP Surgery			88.1	\$ 241.81	\$ 1.78			75.8	\$ 223.13	\$ 1.41
PROF OP Surgery			466.6	130.22	5.06			432.6	126.64	4.57
PROF Maternity - Normal Deliveries			10.6	852.13	0.75			9.0	759.61	0.57
PROF Maternity - Cesarean Deliveries			5.5	897.95	0.41			4.8	814.84	0.33
PROF Maternity - Other			30.4	82.40	0.21			26.2	85.35	0.19
PROF Maternity - Anesthesia			17.5	216.11	0.32			15.1	207.32	0.26
PROF IP Medical			437.6	83.60	3.05			429.0	80.46	2.88
PROF IP Psych/SUD			46.8	55.98	0.22			61.4	46.85	0.24
PROF PCP			488.7	64.62	2.63			558.9	69.67	3.24
PROF Specialist			1,493.9	66.46	8.27			1,525.8	72.94	9.27
PROF Pharmacy			161.7	105.10	1.42			154.5	136.49	1.76
PROF Chemotherapy			11.0	630.83	0.58			12.1	594.86	0.60
PROF Dialysis			5.8	103.26	0.05			5.2	110.54	0.05
PROF Immunizations			311.6	18.16	0.47			253.8	18.76	0.40
PROF Well Baby Exams			109.9	71.56	0.66			94.7	67.96	0.54
PROF Preventive Exams			208.8	74.82	1.30			209.7	68.53	1.20
PROF Vision Exams			114.8	83.80	0.80			94.5	83.19	0.66
PROF Other			2,405.9	52.56	10.54			2,423.1	56.73	11.45
PROF PT			803.1	34.57	2.31			854.9	31.38	2.24
PROF Radiology			1,314.9	31.31	3.43			1,318.5	27.69	3.04
PROF Pathology/Lab			2,073.0	18.80	3.25			1,706.9	19.68	2.80
PROF OP Psych			972.1	90.32	7.32			950.1	122.16	9.67
PROF OP SUD			-	-	-			-	-	-
PROF Case Management			59.8	51.48	0.26			66.6	62.22	0.35
Subtotal			11,638.2	\$ 56.79	\$ 55.08			11,283.3	\$ 61.36	\$ 57.70
Ancillary										
OTH Home Health			47.0	\$ 220.61	\$ 0.86			46.4	\$ 231.24	\$ 0.89
OTH Hospice			36.6	199.60	0.61			26.3	202.58	0.44
OTH Ambulance			191.3	242.27	3.86			188.7	230.33	3.62
OTH DME/Prosthetics			616.4	102.08	5.24			604.8	102.43	5.16
OTH Glasses/Contacts			231.6	42.63	0.82			186.0	42.27	0.66
OTH Other Services			82.6	109.79	0.76			64.6	108.37	0.58
OTH Dental			2,338.6	73.66	14.36			2,226.5	75.65	14.04
COVID Testing			592.5	64.97	3.21			729.6	61.52	3.74
COVID Vaccines			22.5	29.46	0.06			23.3	36.65	0.07
Subtotal			4,159.0	\$ 85.91	\$ 29.77			4,096.2	\$ 85.57	\$ 29.21
MCO Medical Encounter Subtotal			21,124.0	\$ 122.07	\$ 214.88			21,028.2	\$ 124.91	\$ 218.88
FFS OTP Subtotal			-	\$ 0.00	\$ 0.00			-	\$ 0.00	\$ 0.00

Notes:

- 1) Base costs are derived from Blue Box data incurred through January 2021 and EDI data beginning February 1, 2021 with data submitted through October 2022.
- 2) Limited to members with no SUD utilization in the fiscal year.
- 3) FFS OTP claims identified using HCPCS code H0020. No other FFS claims are included.