MILLIMAN REPORT

CY 2021 Milliman Benchmark and Maryland All-Payer Claims Database Cost and Utilization Exhibits

Commercial and individual population, under age 65

Commissioned by the Maryland Health Services Cost Review Commission

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Table of Contents

Background

The Maryland Health Services Cost Review Commission (HSCRC) has developed methods to benchmark the cost and utilization of medical services in Maryland against other metropolitan statistical areas (MSAs) of the United States with similar population characteristics. The HSCRC engaged Abt Associates (Abt) and Milliman to assist in this benchmarking process. Under the Total Cost of Care (TCOC) Model,[1] the HSCRC has expanded its evaluation of medical cost from hospital costs only to all non-pharmacy components of medical cost, which includes hospital and other facility, professional, and ancillary costs. Prescription drug costs are excluded from this analysis.

To assist HSCRC in their benchmarking, we have prepared calendar year (CY) 2021 cost and utilization summaries of members under age 65 with commercial and individual health insurance, based on the Maryland All-Payer Claims Database (APCD) data and Milliman's commercial Consolidated Health Cost Guidelines Sources Database (referred to as the CHSD) data. These comparisons are contained in the exhibits and attachments to this document. The selection of benchmark MSAs for comparison to the Maryland results was performed in collaboration with Abt and the HSCRC.

Abt uses the results described in this document and contained in the associated exhibits to create comparisons between the cost and utilization from the Maryland APCD data and Milliman's experience-based benchmarks derived from the CHSD data. These results and other processes performed by Abt referenced in this report are documented separately in the Abt report, "Healthcare Cost Benchmarking for Commercial Programs: Documentation, CY2021 Data."

In general, the results presented in this report were produced using a similar methodology as our reports summarizing the CY 2017, CY 2018, and CY 2019 cost and utilization results. We updated the underlying data sources to CY 2021 for this report. More information on methodological changes may be found in the "Data sources and data processing" section of this document.

Summary

The HSCRC defined a set of five broad geographic Maryland regions (referred to as "MD regions"). These regions are Western, Capital, Southern, Central, and Eastern Shore.[2] Additionally, the HSCRC defined a set of Maryland hospital service areas; each is called a Provider Service Area Plus (PSAP).

Each PSAP is defined by the HSCRC using hospital utilization rates by Maryland ZIP Code. Each ZIP Code is allocated proportionally among Maryland hospitals based on residents' utilization patterns and drive times. Utilization patterns are based on the HSCRC's study of Maryland hospitals' fiscal year 2014 and 2015 inpatient and outpatient utilization.[3]

Milliman summarized Maryland's CY 2021 medical cost and utilization from the Maryland APCD data by ZIP Code and aggregated the results to the county and to the PSAP level using the mapping and weightings defined by the HSCRC. In parallel, for each of the five MD regions, Abt matched multiple benchmark non-Maryland MSAs based on population, morbidity (risk score), socioeconomic, demographic, and payer mix variables. To perform the matching, Abt collected the population, socioeconomic and demographic information. To facilitate this, Milliman prepared the risk score and payer mix information.

Figure 1 below shows the risk and benefit adjusted per member per month (PMPM) medical cost and utilization for each Maryland PSAP based on the CY 2021 Maryland APCD data. Costs are risk adjusted using the U.S. Department of Health and Human Services Hierarchical Condition Categories (HHS-HCC) 2017 platinum risk

[1] See *Maryland's Total Cost of Care Model: Background and Summary* available at: https://hscrc.maryland.gov/Documents/Modernization/Total%20Cost%20of%20Care%20Model%20-%20Background%20and%20Summary_7_26_17.pdf

[2] Please see the "Healthcare Cost Benchmarking for Commercial Programs: Documentation, CY 2021 Data" report published by Abt for a map defining the five MD regions.

[3] Based on documentation of PSAP assignment provided by the HSCRC. The assignments reflect use in the HSCRC's FY2014 and FY 2015 inpatient and outpatient hospital experience data as of July 2017.

adjustment model and benefit adjusted using the methodology described below in the *Data sources and data processing* section. The benefit adjustment adjusts for the estimated service utilization impact of variation in member cost sharing levels by area (also known as an induced utilization adjustment). Utilization is measured using relative value units (RVUs), a case-mix and severity adjusted utilization measure that is comparable across service types. Attachment A describes the RVU measure in more detail.

FIGURE 1: CY 2021 SUMMARY OF MARYLAND APCD DATA ALLOWED COSTS AND UTILIZTION (RVUS) BY MARYLAND PSAP – COMMERCIAL AND INDIVIDUAL POPULATION, LIMITED TO UNDER AGE 65

PSAP		MEMBER MONTHS	ALLOWED PMPM[A]	BENEFIT & RISK ADJ. ALLOWED PMPM[A,B]	RVU PMPM	BENEFIT & RISK ADJ. RVU PMPM[B]
1.	ANNE ARUNDEL	1,060,239	$364.89	$370.99	7.22	7.40
2.	SHADY GROVE	957,180	$366.49	$383.96	7.12	7.53
3.	FREDERICK MEMORIAL	945,803	$361.49	$383.14	7.10	7.60
4.	HOWARD COUNTY	915,814	$347.79	$371.99	7.16	7.73
5.	BALTIMORE WASHINGTON	746,868	$377.71	$348.14	7.44	6.93
6.	SUBURBAN	738,676	$373.48	$440.60	7.08	8.40
7.	UPPER CHESAPEAKE HEALTH	707,209	$360.78	$366.14	6.98	7.15
8.	HOLY CROSS	696,327	$357.92	$372.77	6.90	7.25
9.	CARROLL COUNTY	658,525	$368.52	$368.39	7.13	7.19
10.	UM ST. JOSEPH	509,258	$376.54	$371.53	7.20	7.16
11.	WASHINGTON ADVENTIST	474,525	$370.54	$355.56	6.90	6.69
12.	SINAI	430,111	$468.42	$399.98	8.24	7.11
13.	G.B.M.C.	414,008	$361.20	$370.80	7.00	7.25
14.	PENINSULA REGIONAL	396,355	$383.42	$340.50	7.48	6.70
15.	DOCTORS COMMUNITY	395,791	$370.07	$335.93	6.91	6.34
16.	MERITUS	394,477	$390.10	$357.47	7.03	6.50
17.	SOUTHERN MARYLAND	382,965	$403.72	$348.19	6.96	6.07
18.	CHARLES REGIONAL	381,331	$404.08	$367.33	7.18	6.59
19.	ST. AGNES	366,175	$375.84	$354.91	7.16	6.83
20.	FRANKLIN SQUARE	336,594	$429.55	$359.41	7.66	6.47
	APCD TOTAL[C]	**15,524,694**	**$382.49**	**$367.54**	**7.21**	**6.99**

Data Source: Maryland All Payer Claims Database

(A) Allowed amount is the total amount of fee-for-service payments for covered medical services including the amount that the plan pays, the patient pays, and any other payer pays for covered services. Provider bonus, capitation, and risk sharing payments are not included. Prescription drug cost and utilization are also not included.

(B) Risk adjusted with the 2017 HHS-HCC model platinum risk scores and normalized to the statewide average risk. Benefit adjusted using the methodology described below in the *Data sources and data processing* section. Benefit adjusted values are normalized to a national benefit profile.

(C) APCD TOTAL includes PSAPs not displayed in Figure 1. Please see exhibits 2a and 2b for more information.

Milliman summarized cost and utilization data for the Abt-matched non-Maryland MSAs to create an aggregated experience-based benchmark for each of the five MD regions.

Figure 2 below shows Milliman's experience-based benchmark for each MD region. In additional to member months, allowed PMPM and RVUs PMPM, the risk and benefit adjusted PMPM medical cost and RVUs are shown. As in Figure 1, costs are risk adjusted using the HHS-HCC 2017 platinum risk adjustment model. The benefit adjustment adjusts for the estimated impact on utilization of member cost sharing levels by area (also known as an induced utilization adjustment). Utilization is measured using RVUs.

FIGURE 2: EXPERIENCE-BASED BENCHMARK SUMMARY OF ALLOWED COSTS AND UTILIZATION (RVUS) BY MD REGION – COMMERCIAL AND INDIVIDUAL POPULATION, LIMITED TO UNDER AGE 65

MARYLAND REGION		MEMBER MONTHS[A]	ALLOWED PMPM[B]	BENEFIT & RISK ADJ. ALLOWED PMPM[C]	RVU PMPM	BENEFIT & RISK ADJ. RVU PMPM[C]
MD1	SOUTHERN MD	60,340,175	$448.71	$434.64	6.20	5.97
MD2	WESTERN MD	7,107,997	$431.62	$396.51	6.22	5.68
MD3	EASTERN SHORE	7,722,622	$445.00	$401.50	6.37	5.72
MD4	NORTHERN DC SUBURBS	52,025,580	$455.39	$459.69	5.88	5.86
MD5	BALTIMORE AREA	82,135,977	$450.79	$422.85	6.37	5.95
	BENCHMARK TOTAL[D]	**122,794,612**	**$449.75**	**$431.42**	**6.26**	**5.94**

Data Source: Milliman Consolidated Health Sources Database

(A) Member months reported are the sum of all member months included in each region. The Benchmark Total member months is less than the sum of the five regions as some MSAs were identified as part of the benchmark basis for multiple MD regions (i.e., the sum of the member months above would result in double-counting).

(B) Allowed amount is the total amount of fee-for-service payments for covered medical services including the amount that the plan pays, the patient pays, and any other payer pays for covered services. Provider bonus, capitation, and risk sharing payments are not included. Prescription drug cost and utilization is also not included.

(C) Risk adjusted with the 2017 HHS-HCC model platinum risk scores and normalized to the APCD data statewide average risk. Benefit adjusted using the methodology described below in the *Data sources and data processing* section.

(D) MD region benchmarks are based on a simple average of the MSAs included in each region. The Benchmark Total is based on a member-weighted average across all the MSAs included in the MD region benchmarks.

Abt's report uses the cost and utilization results in figures 1 and 2. In addition to the risk and benefit adjustment performed by Milliman and reported above, Abt normalizes benchmark cost and utilization results for differences in median income and deep poverty percentage. The impacts of these adjustments are not included in Figure 2. The final benchmark metrics appearing in Abt's report are calculated as an average of the normalized metrics for each of the selected benchmark MSAs. As noted in the Background section of this report, please see the "Healthcare Cost Benchmarking for Commercial Programs: Documentation, CY2021 Data" report from Abt for a complete discussion of the benchmark MSA selection and normalization methodology that occurs outside of the results presented here.

Summary exhibits

Milliman prepared a set of summary exhibits for each Maryland county and PSAP. Additionally, Milliman prepared summary exhibits of the experience-based benchmark for each Maryland region. All exhibits reflect CY 2021 fee-for-service (FFS) experience, adjusted for estimated incurred but not reported (IBNR) claims, for the commercial and individual population under age 65. Outlined below is a brief description of each exhibit.

1. Maryland summary by county:
    a. Exhibit 1a summarizes the CY 2021 Maryland APCD costs and utilization (RVUs) for medical services by county. The following information is included: member months, allowed, and allowed PMPM, RVUs PMPM, and allowed per RVU. Costs and RVUs are shown for all medical services and by major service category (inpatient facility, outpatient facility, professional/other). Risk score and benefit adjusted costs and RVUs are shown in total[4].
    b. Exhibit 1b summarizes the same information on a PMPM basis and illustrates risk and benefit normalization by service category and in total.
2. Maryland summary by PSAP:

[4] By normalizing RVUs by risk score, we assume that the risk score relationships capture case-mix and utilization differences, but not differences in case-mix adjusted unit price.

a. Exhibit 2a summarizes the CY 2021 Maryland APCD costs and utilization (RVUs) for medical services by PSAP. Each PSAP includes the membership, cost, and utilization for each ZIP Code within the PSAP. Some ZIP Codes are split between multiple PSAPs using the weighting provided by the HSCRC.

b. Exhibit 2b summarizes the same information on a PMPM basis and illustrates risk and benefit normalization by service category and in total.

3. Benchmark summary by MD regions and MSA: Exhibits 3a and 3b mirror exhibits 1a through 2b but show the overall benchmark totals and each MD region's benchmark. Each MD region's benchmark is an aggregate of the adjusted MSAs as selected by the HSCRC and Abt. Results reflect the normalized CY 2021 utilization and costs for medical services from Milliman's benchmark data sources.

   a. The State of Maryland benchmark is the overall member-weighted average of all the normalized benchmark MSAs selected for inclusion in any of the five MD regions' benchmarks.

   b. The five MD region's benchmarks are simple averages of the selected and normalized MSAs selected for the MD region.

Data sources and data processing

SUMMARY OF CHANGES FROM PRIOR REPORTING

For the reader's convenience, this section summarizes methodological changes since the 2017, 2018, and 2019 reports were published in 2020 and 2022. Unless otherwise noted, changes occurring in prior versions are carried forward indefinitely. These changes are discussed in more detail in the following subsections.

1. Changes between the 2019 and 2021 processing:

   a. We made annual updates to the risk normalization factor, completion factors, and teaching cost estimates.

   b. Because 2021 MarketScan data was not available at the time of the benchmark data processing to support these analyses, the MarketScan data was excluded from the 2021 benchmark results. One consequence of this exclusion is a decline in the member months reported in the benchmark exhibits. In light of this data source change, Milliman confirmed the 2021 benchmark results were reasonable and consistent with prior results. No adjustment was made to the benchmarks to account for the change in the available benchmark data sources.

   c. Milliman is now including individual market data in the benchmarks.

   d. Like the 2019 processing, the HSCRC provided supplemental files in addition to the claims data extracts which contained corrected and additional APR DRG information. The first of these supplemental files was provided as a SAS dataset, "ip_claims_drg_review_hscrcfinal.sas7bdat," on March 22, 2023. A second file, "hscrc_aprdrg_xwalk_2021_oct23.sas7bdat," which was used to improve the APR DRG assignment rates for the subset of inpatient claims that did not have DRGs reported in the first supplemental file, was provided on November 11, 2023. After both files' DRGs were applied, DRG availability by broad service categories appeared comparable to prior years' analyses.

   e. In prior years, Milliman attempted to account for apparently unreported newborns in the enrollment dataset. This year, Milliman has not made such an adjustment. (This is discussed in more detail below.)

   f. Because of observed inconsistencies between reported allowed and the sum of paid, coordination of benefit (COB), and patient paid dollars and at the direction of the HSCRC, the patient paid amount reported in the exhibits is calculated as allowed minus paid and minus COB. In prior years, the exhibits reflected the patient paid amount reported in the claims data provided by the HSCRC.

g. For the APCD processing, and consistent with prior years, secondary ICD-10-CM codes (diagnosis codes) from the professional service claim dataset are excluded from the APCD risk adjustment process. Results including all diagnosis codes from the professional service claims dataset are included in the appendices.[5]

h. Other minor processing changes including changes to the data mapping and cleaning process.

2. Changes between 2018 and 2019 processing:

a. We made annual updates to the risk normalization factor, completion factors, and teaching cost estimates.

b. Federal Employees Health Benefits Program (FEHBP) data is now excluded from all APCD carriers' results. In prior reports, this data was excluded for only Aetna Health Inc. Starting in 2019, FEHBP no longer submits claims to the APCD for any carriers and is therefore no longer available for inclusion.

c. We relied on APR DRGs contained in the APCD data provided by the HSCRC, as well as a supplemental file containing corrected DRGs for some claims, provided by the HSCRC on January 26, 2022. For prior reports, Milliman reassigned APR DRGs as part of our processing. The supplemental file used more detailed information contained in the HSCRC's case-mix hospital discharge dataset to re-assign DRGs where the HSCRC believes limitations on data contained in APCD resulted in suboptimal mapping.

d. The 2019 Maryland benchmarks were built on the "unversioned" APCD data. This is a change from 2018 which was built on the "versioned" data. The difference is in how a small percentage of overlapping claims are treated. The process of reconciliation with a major carrier conducted as part of the 2019 benchmarking showed that the "unversioned" data was a better match for the correct total received from the carrier.

e. Other minor processing changes including slight changes to the area information used to identify Maryland claims, changes to the data cleaning process, etc.

3. Changes between 2018 and 2017 processing:

a. We made annual updates to the risk normalization factor, completion factors, and teaching cost estimates.

b. For the purposes of risk score development, the member identifier MUID was used. For the 2017 report, PIDBDGP was used for the development of risk scores.

MARYLAND APCD DATA

Maryland's 2021 APCD data is used to calculate the 2021 Maryland commercial and individual medical cost and utilization. As noted above, 2017 HHS-HCC risk score assignment using the APCD data suppresses secondary diagnoses from the professional claims dataset. Diagnosis codes from the claims data are mapped using the 2020 hierarchical condition category (HCC) ICD-10-CM mappings, which include ICD-10-CM codes through federal government fiscal year 2021 (i.e., through September 30, 2021). The results of this mapping are then employed in the 2017 risk adjuster. Milliman otherwise processed the APCD eligibility and detailed claims information and calculated metrics consistent with the 2021 Milliman Benchmark Database. The data used in this analysis are limited to commercial and individual members under age 65. Milliman worked with the HSCRC to perform the following steps:

1. **Import APCD data:** Import APCD data and process the eligibility and detailed claims data. We utilized the data dictionaries, guidance, and other information about the Maryland APCD data provided by the HSCRC.

[5] Please see Appendix E for summary results which include secondary diagnoses from the professional service claims dataset. Results in Appendix E are otherwise processed in the same manner as results in Appendix C and as set out in this document.

2. **Limit the APCD data to commercial and individual experience:** Limit the APCD data to commercial and individual experience using the "market_segment" field. Specifically, we limit the APCD data to the subset listed below:

FIGURE 3: MEMBER MONTHS INCLUDED BY "MARKET_SEGMENT"

MARKET_SEGMENT	DESCRIPTION	INCLUDED MEMBER MONTHS BY MARKET_SEGMENT
3	Individual Market (not sold on MHBE)	817,780
5	Private Employer Sponsored or Other Group	4,378,345
7	Public Employee – Other	6,474,070
8	Small Business Health Options Program (SHOP) not sold on MHBE	2,445,262
A	Student Health Plan	151,907
B	Individual Market (sold on MHBE)	1,240,053
C	Small Business Health Options Program (SHOP) sold on MHBE	1,956
Missing	Other enrollment months for members identified for inclusion	16,013
Total Included		15,525,386

Individual and ASO experience are excluded for the purpose of reconciliation to financial statements (see below). Non-commercial and non-individual benefit plans are excluded: Medicaid, Medicare Advantage, and Medicare Supplement. Additionally, we understand that some self-funded employers do not submit experience data to the Maryland APCD, and therefore are not included in our APCD summaries.

Due to inconsistent reporting of FEHBP data by the APCD contributors, we also excluded FEHBP claims and membership (market_segment = "6"). In our prior reports for CY 2017 and CY 2018, FEHBP claims and membership were excluded for Aetna Health, Inc. and Aetna Life Insurance Co. because Aetna stopped reporting FEHBP data to the APCD from October 2017 onward, and therefore the available Aetna FEHBP experience was incomplete. The primary remaining contributors of this data, CareFirst Blue Choice, Inc., CareFirst of Maryland, Inc., and Group Hospitalization and Medical Services, Inc. did not report FEHBP experience in CY 2019 or CY 2021.

3. **Reconcile and validate the APCD data:** Review the APCD data for reasonableness and compare the medical code values with current coding standards for validity and consistency. We did not audit the APCD data. To reconcile the APCD data, we compared the commercial enrollment and paid claim cost amounts for each APCD contributor to readily available carrier financial statement reports for the State of Maryland. We worked with the HSCRC to exclude payers with incomplete or invalid APCD data submissions.

4. **Complete the APCD data for IBNR:** Calculate and apply completion factors for IBNR amounts. The CY 2021 APCD data has three months of runout, so we reviewed the completion patterns for the 2017, 2018, 2019, and 2021 APCD data sets and developed an overall CY 2021 completion factor of 0.9834 (i.e., we estimate that the data is 98.34% complete). We applied the completion factors to the allowed, utilization, and RVU amounts.

5. **Assign metrics**: Process the Maryland APCD data and assign analytic measures using:

    a. The Milliman Health Cost Guidelines™ (HCG) Grouper™ to assign service category and standard utilization counts,

    b. The Milliman GlobalRVUs™ to assign RVUs to all medical services, and

    c. The 2017 HHS-HCC platinum risk score model to assign risk score.

    Additionally, benefit adjustment factors were assigned based on the observed average member cost sharing levels to adjust for the estimated impact of benefit levels on member utilization.

6. **Remove estimated teaching costs:** Remove teaching costs from the detailed APCD data using the hospital identifier in the APCD data and the HSCRC's estimate of hospital teaching costs per bed day. The HSCRC provided the estimated teaching costs per inpatient bed day for each Maryland hospital. These teaching costs were assigned for all inpatient bed days except residential treatment, normal newborn, and skilled nursing days.
7. **Develop cost summaries:** Tabulate results by area and service category. The area-level results include county- and PSAP-level summaries. Cost and utilization are reported by service category. Risk and benefit adjusted costs and RVUs are calculated overall for each area.

Outlined below are the defects we found with the APCD data, and how they were resolved:

1. **Incomplete data for some contributors:** As discussed above, we compared the commercial membership and costs for each contributor to readily available financial reports. We worked with the HSCRC to review inconsistencies and the HSCRC determined the final set of payers' APCD experience to include. Kaiser Permanente was not part of the 2018 Maryland APCD data set we received, was excluded from the 2019 analyses, and continues to be excluded from the 2021 analyses.
2. **Comparison to NAIC statements:** Milliman compared APCD data to National Association of Insurance Commissioners (NAIC) Annual Statements for the Year 2021 and NAIC 2021 Supplemental Health Care Exhibit Reports. The results of these comparisons are included in Attachment B-1. The primary purpose of these comparisons is to understand the completeness of carriers' APCD data submission and to help inform the HSCRC in their discussions with carriers. As a result of the lack of agreement between these data sources, additional information was used to reconcile the APCD data used in our processes. See (3), below, for more information.
3. **CareFirst reconciliation:** Related to (2), CareFirst's APCD experience (including the data for CareFirst BlueChoice, Inc., CareFirst of Maryland, Inc., and Group Hospitalization & Medical Services, Inc.) does not reconcile to their NAIC Annual Statement for the Year 2021 or their NAIC 2021 Supplemental Health Care Exhibit Report. For these largest contributors to the APCD, the total paid dollars reported in the APCD data is approximately 8% higher than the paid amounts in the NAIC Annual Statement after accounting for prescription drug rebates. In contrast, reported member months in the APCD data are 14% higher than the member months reported in the NAIC statement. The CareFirst organizations represent approximately half of the total paid dollars included in the APCD data and the results in this report are sensitive to errors contained in this data.
    a. In the past, the HSCRC worked directly with CareFirst to reconcile the APCD data to CareFirst's internal reporting, and the findings of this reconciliation process were implemented into the processing of the APCD data for this report.
    b. For this processing cycle, the HSCRC provided Milliman with summary reports of CareFirst's 2021 allowed dollars which Milliman reconciled to while developing this report's APCD results.
4. **Incomplete ICD-10-PCS (procedure code) data:** The APCD contained only procedure codes in the first position and did not contain any secondary procedure code information. This defect resulted in Milliman being unable to reliably assign APR DRG groupings and, instead, relying on the APR DRGs provided by the HSCRC with limited review. It is our understanding that the APR DRGs supplied by the HSCRC were assigned based on claims data which included secondary procedure codes. This understanding is supported by our review of the supplied data and the observed distribution of APR DRGs. See item 2-c in the above Section, Data sources and data processing.
5. **Missing Subscriber IDs, maternity claims, and newborn claims and enrollment:** In prior years, where a maternity claim indicated a newborn and a subscriber ID did not include an associated newborn, Milliman added a newborn eligibility record to the enrollment dataset. Additionally, where no newborn claim was found, the maternity claim was assumed to be a combined mother and baby claim, and RVUs were added to the maternity claim to account for the utilization associated with the newborn.

For the 2021 reporting results, it was not possible to link newborns' enrollment or claims to the mother's maternity claim using a Subscriber ID. This difference may result in too many newborn-associated RVUs being added to the maternity claims. Moreover, because newborn enrollment records were still present in the data, but we were unable to link them with maternity or newborn claims, we did not add any newborn enrollment to the enrollment dataset. The following table summarizes our adjustments to the maternity claims. Note that the summary is based on claims before the application of the exclusions documented in Attachment B.

FIGURE 4: COUNT OF NEWBORN AND MATERNITY CLAIMS

CLAIM OR ENROLLMENT CATEGORY	COUNT OF CLAIMS
Maternity claims	18,816
Newborn and neonate claims in data	5,075
Newborns added (i.e., maternity claims with added RVUs)	19,011
Newborns and Neonates per Maternity Claim	1.28

Based on a benchmark rate of 1.03 babies per mother from the Health Cost Guidelines, this may represent an overstatement of newborns of approximately 24 percent. However, because of the low average service intensity of newborn claims, we estimate that this amounts to an overstatement of less than 0.01 total RVUs PMPM, or a potential RVU overstatement of 0.8 percent for inpatient services.

Attachment B-1 shows our comparison of the Maryland APCD data with CY 2021 financial statement data. Attachment B-2 details the exclusions applied to the APCD data.

Figure 5 below shows the starting allowed amounts and the allowed amounts added for the IBNR amounts.

FIGURE 5: SUMMARY OF 2021 MARYLAND APCD DATA ADJUSTMENTS

ADJUSTMENT	ALLOWED	PERCENT OF TOTAL
Total CY 2021 medical claims	$ 17,168,935,169	100.0%
Payer, line of business, and data quality exclusions	11,264,193,235	65.6%
Commercial and Individual Subtotal	$ 5,904,741,934	34.4%
+ Estimated IBNR	99,771,096	0.6%
- Estimated Teaching Costs	66,328,153	0.4%
= Amounts in Summaries	$ 5,938,184,877	34.6%

COMMERCIAL EXPERIENCE-BASED BENCHMARK DATABASE

We developed the benchmark cost and utilization metrics from the 2021 Milliman CHSD. The CHSD contains enrollment and claims cost experience for multiple contributors including insurance companies, third party administrators (TPAs), and large employers across the United States. For CY 2021, the experience for approximately 57 million commercial insured individuals is available nationwide. We processed the CHSD eligibility and detailed claims information, and using a process consistent with the process applied to the Maryland APCD data we used:

1. The Milliman HCG Grouper to assign service category and standard utilization counts,
2. The Milliman GlobalRVUs to assign RVUs to all medical services, and
3. The 2017 HHS-HCC platinum risk score model[6] to assign risk scores.

[6] Because the 2018 and newer HHS-HCC models require prescription drug data and Milliman has not processed or validated that data for the Maryland APCD, the 2017 HHS-HCC model was used for 2021 medical claim data risk adjustment. The 2017 HHS-HCC model requires only member demographic and diagnostic information.

Additionally, benefit adjustment factors and teaching cost adjustment were applied to the CHSD using a process consistent with the Maryland APCD data. Teaching costs were assigned based on MSA-level per day averages developed by the HSCRC, rather than by hospital, because hospital-specific identifiers were not readily available in the CHSD.

The enrollment, risk score, cost, and utilization metrics were summarized by the MSA of the individual's residence. For this analysis, the benchmark data is limited to commercially insured individuals under age 65. The reported allowed amounts reflect CY 2021 dates of service and are adjusted for the estimated IBNR claims costs, based on claims completion patterns in the data.

DEFINITION OF COST

For the purposes of this analysis, cost refers to the allowed FFS payments to providers including primary insurer payments, member payments, and payments from secondary sources of coverage. Payments outside of the administrative claims data are not included. Specifically, capitation, bonus or provider risk sharing settlement payments and refunds are not included.

SERVICE CATEGORY ASSIGNMENT

Service category was assigned using the Milliman HCG Grouper software. The HCG Grouper assigns each claim service line to a Health Cost Guidelines (HCG) service cost category based on the medical coding on the claim. In general, the following claims elements are used to assign service categories:

1. **Inpatient:** Inpatient facility claims are identified based on the presence of room and board revenue codes and are categorized based on the diagnosis related group (DRG) present on the claim. When DRGs are unavailable, ICD diagnosis codes, ICD procedure codes (where available, see discussion above), and revenue code information is used instead.
2. **Outpatient:** Outpatient facility claims are identified based on the presence of revenue codes on the claim or based on the provider type (e.g., ambulatory surgical center). Outpatient claims are categorized primarily based on the revenue codes and Healthcare Common Procedure Coding System (HCPCS) or Common Procedure Terminology (CPT) codes on the claim.
3. **Professional/other:** Professional/other claims are identified based on the lack of revenue codes or based on the provider type. Physician revenue code line items billed as part of a facility claim are categorized as professional/other. Professional/other claims are categorized primarily based on the HCPCS/CPT code, place of service, and provider type (e.g., home health provider) information.

RISK SCORE NORMALIZATION

Risk scores were assigned using the 2017 HHS-HCC platinum risk score model. We understand that the HSCRC selected the HHS platinum risk score model for the following reasons:

1. The model is publicly available,
2. The model is intended to be used on individual and small group populations,
3. The model is concurrent (i.e., it predicts costs for the same time period as the diagnosis collection period),
4. The model is diagnosis-based (i.e., does not require prescription drug data), and
5. The model reflects an average member cost sharing of approximately 90%, which is similar to being calibrated on allowed cost and is generally consistent with the relatively rich benefit levels found in employer sponsored health plans.

The HHS platinum risk scores predict aggregate costs for all services, not costs by service category. However, we use the risk scores to normalize allowed cost and utilization (RVUs) for each major service category (inpatient,

outpatient, and professional/other). Caution should be used when interpreting these results because costs by service category may not vary linearly with risk score.

UNIT PRICE NORMALIZATION

Case mix was measured using the Milliman *GlobalRVUs*™ and Milliman *Resource Based Relative Value Scale for Hospitals*™ (*RBRVS for Hospitals*™*)* to assign RVUs to inpatient, outpatient, and professional/ancillary services. RVUs represent the relative amount of work required for each service. Dividing allowed charges by RVUs yields a conversion factor that measures the relative case mix and severity adjusted reimbursement. An area with a higher conversion factor has higher reimbursement per unit of work than an area with a lower conversion factor.

The inpatient RVUs are assigned based on the All-Patient Refined (APR) DRG and length of stay of each admission. The outpatient RVUs are assigned based on the HCPCS/CPT code, modifier, and unit coding for each service line. The professional RVUs are assigned based on the HCPCS/CPT code, modifier, unit coding, and place of service for each service line.

Because the CHSD is comprised of multiple contributors, we reviewed the data quality for each contributor. Some contributors are excluded based on this review. For example, we excluded contributors when the International Classification of Diseases (ICD) coding was not complete enough for DRG assignment. Additionally, we reviewed the data quality for specific service categories and if insufficient information was available to assign RVUs accurately, we imputed RVUs based on the provider type and payment information for these services. For example, we imputed RVUs when specific outpatient service categories had HCPCS/CPT codes and modifiers that were not reliably populated.

Assignment of RVUs for home health services was based on high-level assumptions because detailed coding was not consistently available in the Maryland APCD data and the CHSD. This limits the accuracy of the RVUs and unit price results for this service category. Skilled nursing facility (SNF) RVUs were assigned based on length of stay.

PLAN BENEFIT NORMALIZATION[7]

We have developed plan benefit normalization factors to account for allowed cost and utilization differences caused by plan design. The allowed PMPM cost factors normalize both utilization and unit price. The RVU PMPM factors normalize utilization and service intensity, but not unit price. The plan benefit factors were developed as follows:

1. We calculated average coinsurance at the employer group and product level using the 2017 CHSD benchmark data.[8] This process effectively assumes that all members with the same product and employer have the same benefit levels, which is a simplification.
2. The plan benefit factors are calculated as the ratio of the risk adjusted allowed amount for each coinsurance level to the total risk adjusted amount. These factors are calculated for both allowed dollars and RVUs and by inpatient, outpatient, and professional service categories separately.
3. We reviewed the results with the HSCRC and made one smoothing adjustment: the coinsurance 95% plan benefit factor for professional services was increased by refining the data contributors included in the calculation.

[7] Benefit normalization factors presented in this report may show slight differences from those published by Abt due to the order in which results were summarized for the PSAP exhibit. Milliman's benefit normalization factor is calculated based on the average paid to allowed ratio for each PSAP whereas Abt's benefit normalization factor is calculated for each ZIP Code and aggregated to the PSAP level.

[8] We have revisited but not adjusted these factors in the interest of preserving the ability to compare risk and benefit adjusted results across time (i.e., comparing results in the 2019 report to those in this 2021 report).

Figure 6 below shows the plan benefit factors based on the 2017 CHSD benchmark data.

FIGURE 6: BENCHMARK PLAN BENEFIT FACTORS - INPATIENT, OUTPATIENT, AND PROFESSIONAL COINSURANCE RANGE COMMERCIAL POPULATION, ALL MSAS, LIMITED TO UNDER AGE 65

2017 MILLIMAN BENCHMARK (NATIONWIDE) PLAN COINSURANCE RANGE	PLAN BENEFIT FACTORS					
	RVUS			ALLOWED		
	IP	OP	PROF	IP	OP	PROF
95%+	1.142	1.061	1.070	1.216	1.063	1.050
85%-95%	1.043	1.039	1.032	1.054	1.037	1.046
75%-85%	0.992	0.987	0.989	0.973	0.995	0.986
65%-75%	0.850	0.910	0.942	0.821	0.895	0.934

To apply the normalization factors, we calculated the average overall coinsurance by area and interpolated between the plan benefit factors. For example, (values are illustrative):

1. For an MSA, suppose the average overall coinsurance is 84% and the risk adjusted inpatient (IP) allowed PMPM is $100.00
2. We interpolate from midpoint to midpoint:
    a. Midpoint of range [85% - 95%] = 90% (high bound),
    b. Midpoint of range [75% - 85%] = 80% (low bound),
    c. The weight given to the factors in the [85% – 95%] range is (4 ÷ 10) which is calculated as (84% - 80%) ÷ (90% - 80%) = [(actual overall coinsurance) - (low bound)] ÷ [(high bound) - (low bound)], and
    d. The weight given to the factors in the [75% – 85%] range is (6 ÷ 10) which is calculated as 1 - (4 ÷ 10).
3. The plan benefit factor is [(4 ÷ 10) x (1.054)] + [(6 ÷ 10) x (0.973)] = 1.0054.
4. The plan benefit adjusted IP allowed is calculated as (risk adjusted IP allowed PMPM) ÷ (interpolated plan benefit factor) = $100 ÷ 1.0054 = $99.46.

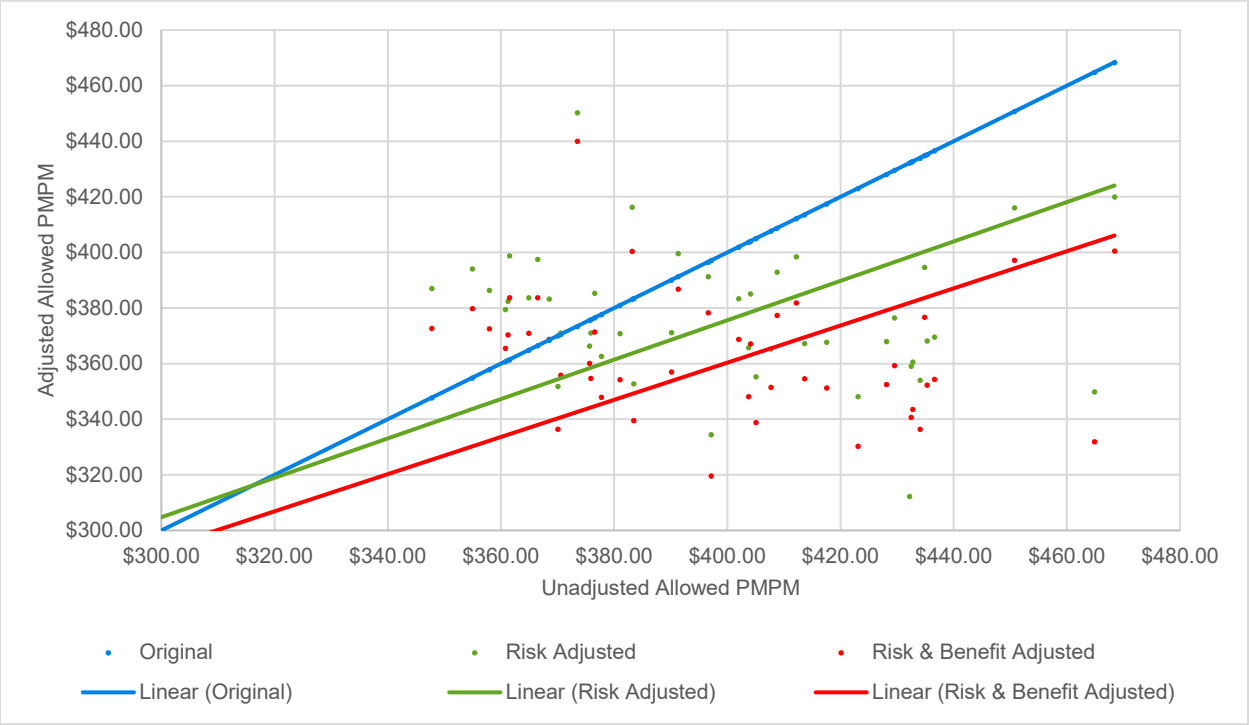
Using the benefit factors developed from the CHSD, we have calculated the benefit normalization factors by area for both the CHSD benchmark results and the Maryland APCD data.

Figure 7 below shows the impact of risk and plan benefit adjusting the allowed PMPMs on the 2021 CHSD benchmark MSAs:

1. The blue line is the original allowed PMPM,
2. The green line is the risk adjusted allowed PMPM, which has a flatter slope than the original unadjusted allowed PMPM line, and
3. The red line is the risk and plan benefit adjusted allowed PMPM.

The horizontal axis is the unadjusted allowed PMPM and the vertical axis is the adjusted allowed PMPM (i.e., risk adjusted for the green series and line or risk and benefit adjusted for the red series and line). For the original series (in blue), as no adjustment is applied to allowed dollars, the unadjusted and adjusted amounts are always equal.

FIGURE 7: SCATTERPLOT OF APCD DATA ALLOWED PMPM FOR EACH PSAP, RISK ADJUSTED ALLOWED PMPM, AND RISK & PLAN BENEFIT ADJUSTED ALLOWED PMPM, FROM 2021 BENCHMARK EXHIBIT 2



This figure shows that after normalizing for risk score, the allowed PMPM moves towards the average allowed PMPM across all areas with limited exceptions – resulting in a more horizontal linear fit line. The results are similar for RVUs PMPM, but the benefit normalization has a less significant effect in that case.

Data reliance and limitations

The 2021 benchmark and Maryland APCD data processed and summarized data have been prepared for the internal use of the Maryland HSCRC and Abt Associates. This information is intended solely for educational purposes and presents information of a general nature. It is not intended to guide or determine any specific individual situation and persons should consult qualified professionals before taking specific actions. Milliman does not intend to benefit or create a legal duty to any third-party recipient of its work.

In preparation of our analysis, we relied upon the accuracy of data and information gathered from or provided to us by the Centers for Medicare and Medicaid Services (CMS), HHS, and our data partners. We have not audited this information, although we have reviewed it for reasonableness. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

We have also relied on the data and other information provided by the HSCRC for this analysis. We have performed a limited review of this data and other information and checked for reasonableness and consistency. We have not found material defects in the data or information used other than those described in this report, which also describes how those defects were addressed to enable this analysis to be reliably performed. If there are other material defects in the data or other information, 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 this assignment.

Guidelines issued by the American Academy of Actuaries require actuaries to include their professional qualifications in all actuarial communications. Peter Hallum, Mark Franklin, Lu Miao, and Charlie Mills are members of the American Academy of Actuaries and meet the qualification standards for performing the analyses in this report.

List of attachments

Exhibits 1 - 3: APCD and Benchmark Experience Summaries

Attachment A: Milliman Whitepaper: Milliman GlobalRVUs

Attachment B: APCD Data RECONCILIATION AND EXCLUSIONS

Attachment C: Exhibits 1 – 3, APCD and Benchmark Experience Summaries (Inclusive of SECONDARY PROFESSIONAL CLaims diagnoses)

Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in life insurance and financial services, property & casualty insurance, healthcare, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

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Glossary of terms

TERMS AND DESCRIPTIONS

Annual Admits per 1,000 – Calculated as (annual admit counts) ÷ (annual member months) x 12,000.

Average Length of Stay – Calculated as (annual day counts) ÷ (annual admit counts).

Annual Utilization per 1,000 – Calculated as (annual utilization counts) ÷ (annual member months) x 12,000. The utilization measure varies by service type (e.g., days, visits, procedures).

Average Allowed per Service – Calculated as (annual allowed total) ÷ (annual utilization counts). The utilization measure varies by service type (e.g., days, visits, procedures).

Allowed PMPM – This is calculated as (annual allowed total) ÷ (annual member months).

RVU – Relative Value Unit is a measure for the care severity and is comparable across all service categories.

RVU PMPM – This is calculated as (annual RVU total) ÷ (annual member months).

Unit Price – This is calculated as (annual allowed total) ÷ (annual RVU total).

Patient Pay Utilization per 1,000 – Calculated as (annual utilization counts where patient paid) ÷ (annual member months) x 12,000. The utilization measure varies by service type (e.g., days, visits, procedures).

Average Patient Pay – Calculated as (annual patient paid total) ÷ (annual utilization counts). The utilization measure varies by service type (i.e., days, visits, procedures).

Patient Pay PMPM – Calculated as (annual patient paid total) ÷ (annual member months).

Paid PMPM – Calculated as (annual paid total) ÷ (annual member months).

COB PMPM – Coordination of benefit claims allowed dollars and it is calculated as (annual allowed totals for COB claim type) ÷ (annual member months).

Risk Score – 2017 model HHS-HCC Platinum risk score (calculated based on 2021 diagnosis and membership information).

Benefit Normalization Factor – Benefit richness factor based on member coinsurance. A higher factor indicates richer benefits and higher expected utilization.

APCD – Maryland's All Payer Claims Database.

CHSD – Milliman's Consolidated Health Cost Guidelines (HCGs) Sources Database (CHSD): A comprehensive, longitudinal, health care experience data containing detailed enrollment and medical claims data.

PSAP – Provider Service Area Plus: each PSAP is a hospital service area made up by a group of ZIP Codes. If two or more hospitals shares a ZIP Code, the experience for the ZIP Code is allocated between the hospitals.

Exhibit 1a
CY 2021 Milliman Benchmark and Maryland All-Payer Claims Database Cost and Utilization Exhibits
Maryland APCD: Incurred 1/2021 through 12/2021, Paid through 3/2022 (Adjusted to Estimated Ultimate Incurred)
Summary of Experience by Maryland Region, County, and MSA
Commercial and Individual LOBs, Limited to Members Under Age 65 (Excludes Prescription Drugs)

(1) Risk Score is calculated based on Medical eligibility with valid risk scores, i.e., the risk score shown equals total risk score over total Medical.
(2) Completion factor used: 0.9834. Risk adjusted allowed dollars are risk normalized to the statewide Maryland risk score of 1.4033.
(3) The plan benefit factors for the total amounts are calculated based on the combined coinsurance level.
(4) Teaching hospital amounts are removed from Inpatient allowed and paid amounts (except SNF, newborn, and residential treatments) based on the FY2017 per diem rates (trended to FY2021 with an annual rate 2.25% based on the file "IME for ICC.xlsx") at the provider level from file we received from Maryland HSCRC on 12/11/2019 named "Hospital file for commercial removal of GME 12-09.xlsx". For benchmark results, this adjustment was made at the MSA level.

		Member Months and Risk		Total Allowed (2)						Allowed PMPM (2)						RVUs PMPM (2)						Allowed Per RVU			
Region or County Name and County FIPS ID		Medical MMs	2017 HHS Model Platinum Risk Score (1)	Inpatient	Teaching Adjustment (4)	Inpatient w/ Teaching Adjustment	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Total - Risk Adjusted	Total - Risk & Benefit Adjusted (3)	Inpatient	Outpatient	Prof / Other	Total	Total - Risk Adjusted	Total - Risk & Benefit Adjusted (3)	Inpatient	Outpatient	Prof / Other	Total
Total - All Counties		15,525,386	1.403	$1,249,434,285	$66,328,153	$1,183,106,133	$1,477,332,959	$3,277,745,786	$5,938,184,877	$76.20	$95.16	$211.12	$382.48	$382.48	$367.53	0.87	1.31	5.02	7.21	7.21	6.99	$87.46	$72.59	$42.03	$53.08
MD1	MD1 (Southern MD)	2,653,324	1.482	$228,627,538	$10,221,233	$218,406,305	$255,874,369	$549,681,151	$1,023,961,825	$82.31	$96.44	$207.17	$385.92	$365.32	$349.24	0.90	1.23	4.81	6.93	6.56	6.34	$91.95	$78.49	$43.09	$55.67
MD2	MD2 (Western MD)	614,558	1.546	$57,629,514	$1,639,458	$55,990,056	$72,102,959	$118,535,852	$246,628,867	$91.11	$117.32	$192.88	$401.31	$364.22	$348.78	0.99	1.62	4.46	7.08	6.42	6.21	$91.61	$72.29	$43.25	$56.71
MD3	MD3 (Eastern Shore)	994,372	1.479	$88,194,435	$3,796,867	$84,397,569	$107,924,389	$201,452,972	$393,774,930	$84.88	$108.54	$202.59	$396.00	$375.73	$361.66	0.96	1.50	5.02	7.49	7.10	6.90	$88.26	$72.22	$40.33	$52.88
MD4	MD4 (Northern DC Suburbs)	3,712,601	1.259	$243,178,302	$10,292,694	$232,885,608	$288,178,564	$839,672,174	$1,360,736,346	$62.73	$77.62	$226.17	$366.52	$408.43	$394.83	0.69	1.10	5.30	7.09	7.90	7.70	$90.48	$70.83	$42.69	$51.72
MD5	MD5 (Baltimore Area)	7,550,531	1.425	$631,804,496	$40,377,901	$591,426,595	$753,252,678	$1,568,403,637	$2,913,082,910	$78.33	$99.76	$207.72	$385.81	$380.02	$364.87	0.93	1.40	5.01	7.33	7.22	7.00	$84.37	$71.51	$41.46	$52.61
24001	Allegany	165,840	1.689	$16,557,467	$323,575	$16,233,892	$23,847,837	$29,163,803	$69,245,532	$97.89	$143.80	$175.86	$417.54	$346.92	$329.30	1.10	1.83	4.42	7.35	6.11	5.86	$88.72	$78.46	$39.80	$56.78
24003	Anne Arundel	1,619,970	1.386	$125,258,930	$6,428,790	$118,830,140	$135,745,937	$344,877,938	$599,454,015	$73.35	$83.80	$212.89	$370.04	$374.71	$361.16	0.87	1.24	5.21	7.32	7.41	7.21	$83.94	$67.64	$40.88	$50.55
24005	Baltimore	2,182,215	1.463	$195,896,310	$13,460,172	$182,436,137	$230,175,687	$464,155,189	$876,767,014	$83.60	$105.48	$212.70	$401.78	$385.49	$369.64	1.01	1.49	5.01	7.51	7.20	6.97	$82.84	$71.02	$42.44	$53.52
24009	Calvert	295,694	1.444	$22,154,983	$952,747	$21,202,236	$28,856,463	$62,439,856	$112,498,555	$71.70	$97.59	$211.16	$380.46	$369.61	$353.08	0.77	1.24	4.84	6.86	6.66	6.43	$93.25	$78.47	$43.60	$55.49
24011	Caroline	95,424	1.510	$9,424,684	$519,304	$8,905,380	$11,788,588	$19,599,891	$40,293,859	$93.32	$123.54	$205.40	$422.26	$392.38	$374.65	0.97	1.68	4.92	7.58	7.04	6.79	$95.90	$73.48	$41.73	$55.73
24013	Carroll	611,249	1.354	$43,755,867	$2,330,896	$41,424,971	$58,204,286	$124,596,877	$224,226,134	$67.77	$95.22	$203.84	$366.83	$380.27	$365.90	0.78	1.50	4.83	7.11	7.37	7.15	$87.40	$63.47	$42.17	$51.59
24015	Cecil	211,959	1.432	$21,964,071	$712,629	$21,251,443	$27,560,371	$35,245,461	$84,057,275	$100.26	$130.03	$166.28	$396.57	$388.70	$375.72	0.96	1.52	4.09	6.58	6.45	6.28	$104.10	$85.55	$40.62	$60.30
24017	Charles	382,006	1.473	$35,784,460	$1,568,460	$34,216,000	$38,299,029	$81,997,522	$154,512,551	$89.57	$100.26	$214.65	$404.48	$385.43	$367.42	0.96	1.31	4.92	7.18	6.85	6.59	$92.98	$76.80	$43.66	$56.30
24019	Dorchester	72,343	1.598	$5,790,088	$203,731	$5,586,358	$9,572,663	$14,792,859	$29,951,880	$77.22	$132.32	$204.48	$414.03	$363.63	$348.74	0.90	1.93	4.97	7.79	6.84	6.62	$86.15	$68.68	$41.14	$53.13
24021	Frederick	950,476	1.275	$68,736,313	$2,561,943	$66,174,370	$68,232,708	$209,370,924	$343,778,002	$69.62	$71.79	$220.28	$361.69	$397.99	$382.88	0.78	1.05	5.27	7.10	7.81	7.59	$89.39	$68.59	$41.76	$50.94
24023	Garrett	58,912	1.638	$5,736,735	$48,659	$5,688,076	$11,071,036	$8,619,176	$25,378,288	$96.55	$187.92	$146.31	$430.78	$368.98	$354.63	0.77	2.18	3.57	6.52	5.58	5.40	$125.46	$86.33	$40.97	$66.10
24025	Harford	797,254	1.344	$60,472,251	$3,140,118	$57,332,133	$74,194,095	$160,616,759	$292,142,987	$71.91	$93.06	$201.46	$366.44	$382.64	$368.36	0.85	1.33	4.89	7.06	7.37	7.16	$84.82	$70.09	$41.23	$51.89
24027	Howard	1,006,125	1.247	$64,489,442	$4,350,018	$60,139,423	$76,921,693	$209,590,875	$346,651,991	$59.77	$76.45	$208.31	$344.54	$387.73	$373.63	0.72	1.15	5.24	7.11	8.00	7.78	$83.17	$66.65	$39.72	$48.46
24029	Kent	64,158	1.503	$7,928,408	$446,517	$7,481,890	$7,848,004	$12,408,182	$27,738,075	$116.62	$122.32	$193.40	$432.34	$403.72	$386.85	1.16	1.34	4.45	6.96	6.50	6.29	$100.11	$90.95	$43.44	$62.10
24031	Montgomery	2,762,125	1.254	$174,441,989	$7,730,751	$166,711,238	$219,945,856	$630,301,250	$1,016,958,344	$80.36	$79.63	$228.19	$368.18	$412.08	$399.00	0.66	1.11	5.31	7.08	7.93	7.74	$90.92	$71.56	$43.01	$51.99
24033	Prince Georges	1,719,228	1.508	$148,532,190	$6,469,033	$142,063,156	$162,822,697	$351,730,290	$656,616,143	$82.63	$94.71	$204.59	$381.92	$355.44	$339.59	0.90	1.20	4.82	6.91	6.43	6.21	$92.12	$79.23	$42.45	$55.26
24035	Queen Anne's	177,907	1.335	$14,910,568	$546,340	$14,364,228	$16,489,028	$37,187,931	$68,041,187	$80.74	$92.68	$209.03	$382.45	$402.03	$386.14	0.95	1.38	5.04	7.37	7.74	7.51	$85.02	$67.34	$41.47	$51.92
24037	Saint Mary's	256,396	1.370	$22,155,906	$1,230,993	$20,924,913	$25,896,180	$53,513,483	$100,334,576	$81.61	$101.00	$208.71	$391.33	$400.83	$388.00	0.93	1.32	4.53	6.78	6.95	6.77	$87.95	$76.54	$46.04	$57.71
24039	Somerset	45,984	1.765	$5,322,607	$196,926	$5,125,681	$5,551,310	$9,234,839	$19,911,830	$111.47	$120.72	$200.83	$433.02	$344.30	$326.19	1.40	1.68	5.02	8.10	6.44	6.17	$79.73	$71.73	$40.01	$53.45
24041	Talbot	111,100	1.451	$9,510,275	$522,653	$8,987,622	$12,655,838	$24,850,451	$46,493,910	$80.90	$113.91	$223.68	$418.49	$404.72	$391.74	0.83	1.65	5.43	7.91	7.65	7.46	$97.62	$69.11	$41.19	$52.92
24043	Washington	389,806	1.472	$35,335,312	$1,267,224	$34,068,089	$37,184,087	$80,752,872	$152,005,047	$87.40	$95.39	$207.16	$389.95	$371.88	$357.69	0.98	1.45	4.61	7.04	6.72	6.52	$88.99	$65.79	$44.93	$55.37
24045	Wicomico	253,609	1.482	$20,852,907	$921,559	$19,931,348	$26,083,936	$50,124,321	$96,139,605	$78.59	$102.85	$197.64	$379.09	$358.84	$345.42	0.96	1.42	5.08	7.45	7.06	6.85	$81.97	$72.54	$38.92	$50.86
24047	Worcester	173,847	1.488	$14,454,899	$439,837	$14,015,062	$17,935,023	$33,254,498	$65,204,583	$80.62	$103.17	$191.29	$375.07	$353.61	$344.79	0.89	1.40	4.96	7.25	6.84	6.71	$90.25	$73.72	$38.58	$51.72
24510	Baltimore City	1,121,759	1.661	$119,967,625	$9,955,278	$110,012,347	$150,450,609	$229,320,538	$489,783,494	$98.07	$134.12	$204.43	$436.62	$368.81	$351.55	1.17	1.63	4.87	7.68	6.49	6.24	$83.64	$82.07	$41.97	$56.87

Maryland APCD (Maryland MSAs)

		Member Months and Risk		Total Allowed (2)						Allowed PMPM (2)						RVUs PMPM (2)						Allowed Per RVU			
MSA	MSA Name	Medical MMs	2017 HHS Model Platinum Risk Score	Inpatient	Teaching Adjustment (4)	Inpatient w/ Teaching Adjustment	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Total - Risk Adjusted	Total - Risk & Benefit Adjusted (3)	Inpatient	Outpatient	Prof / Other	Total	Total - Risk Adjusted	Total - Risk & Benefit Adjusted (3)	Inpatient	Outpatient	Prof / Other	Total
12580	Baltimore-Columbia-Towson, MD	7,516,479	1.422	$624,750,993	$40,211,613	$584,539,380	$742,181,335	$1,570,346,107	$2,897,066,822	$77.77	$98.74	$208.92	$385.43	$380.26	$365.03	0.93	1.39	5.04	7.36	7.26	7.03	$83.80	$70.98	$41.48	$52.40
15680	California-Lexington Park, MD	256,396	1.370	$22,155,906	$1,230,993	$20,924,913	$25,896,180	$53,513,483	$100,334,576	$81.61	$101.00	$208.71	$391.33	$400.83	$388.00	0.93	1.32	4.53	6.78	6.95	6.77	$87.95	$76.54	$46.04	$57.71
19060	Cumberland, MD	165,840	1.689	$16,557,467	$323,575	$16,233,892	$23,847,837	$29,163,803	$69,245,532	$97.89	$143.80	$175.86	$417.54	$346.92	$329.30	1.10	1.83	4.42	7.35	6.11	5.86	$88.72	$78.46	$39.80	$56.78
24999	Non-MSA Area, MD	401,937	1.527	$38,390,189	$1,740,864	$36,649,325	$52,936,128	$80,270,559	$169,856,012	$91.18	$131.70	$199.71	$422.59	$388.31	$372.95	0.92	1.74	4.80	7.45	6.85	6.64	$99.09	$75.90	$41.62	$56.70
25180	Hagerstown-Martinsburg, MD	389,806	1.472	$35,335,312	$1,267,224	$34,068,089	$37,184,087	$80,752,872	$152,005,047	$87.40	$95.39	$207.16	$389.95	$371.88	$357.69	0.98	1.45	4.61	7.04	6.72	6.52	$88.99	$65.79	$44.93	$55.37
41540	Salisbury, MD	473,440	1.512	$40,630,413	$1,558,321	$39,072,091	$49,570,269	$92,613,658	$181,256,018	$82.53	$104.70	$195.62	$382.85	$355.30	$342.91	0.98	1.44	5.03	7.44	6.91	6.72	$84.44	$72.87	$38.90	$51.44
23224	Silver Spring-Frederick-Rockville, MD	3,712,601	1.259	$243,178,302	$10,292,694	$232,885,608	$288,178,564	$839,672,174	$1,360,736,346	$62.73	$77.62	$226.17	$366.52	$408.43	$394.83	0.69	1.10	5.30	7.09	7.90	7.70	$90.48	$70.83	$42.69	$51.72
47894	Washington-Arlington-Alexandria, MD	2,396,928	1.494	$206,471,632	$8,990,240	$197,481,392	$229,978,189	$496,167,668	$923,627,249	$82.39	$95.95	$207.00	$385.34	$361.84	$345.57	0.89	1.22	4.84	6.95	6.52	6.30	$92.39	$78.72	$42.79	$55.46
48864	Wilmington, MD	211,959	1.432	$21,964,071	$712,629	$21,251,443	$27,560,371	$35,245,461	$84,057,275	$100.26	$130.03	$166.28	$396.57	$388.70	$375.72	0.96	1.52	4.09	6.58	6.45	6.28	$104.10	$85.55	$40.62	$60.30

Exhibit 1b
CY 2021 Milliman Benchmark and Maryland All-Payer Claims Database Cost and Utilization Exhibits
Maryland APCD: Incurred 1/2021 through 12/2021, Paid through 3/2022 (Adjusted to Estimated Ultimate Incurred)
Plan Benefit Normalization Factors by Maryland Region, County, and MSA
Commercial and Individual LOBs, Limited to Members Under Age 65 (Excludes Prescription Drugs)

(1) Linearly interpolated between coinsurance ranges.
(2) Risk adjusted amounts are normalized to all of Maryland, which has a 2017 HHS Platinum risk score of 1.4033.
(3) Risk adjusted and benefit adjusted amounts are calculated as (risk adjusted amount) / (benefit normalization factor).
(4) Teaching hospital amounts are removed from Inpatient allowed and paid amounts (except SNF, newborn, and residential treatments) based on the FY2017 per diem rates (trended to FY2021 with an annual rate 2.25% based on the file "IME for ICC.xlsx") at the provider level from file received from Maryland HSCRC on 12/11/2019 named "Hospital file for commercial removal of GME 12-09.xlsx". For benchmark results, this adjustment was made at the MSA level.

		Member Months. Risk. and Plan Coinsurance			RVU Plan Benefit Normalization Factors (1)			Allowed Plan Benefit Normalization Factors (1)			Allowed PMPM				Risk Adjusted Allowed PMPM (2)				Risk Adjusted and Benefit Adjusted Allowed PMPM (2) (3)				RVU PMPM				Risk Adj RVU PMPM (2)				Risk Adjusted and Benefit Adj RVU PMPM (2) (3)			
Region or County Name and County FIPS ID		Medical MMs	2017 HHS Model Platinum Risk Score	Plan Coinsurance Range	Inpatient	Outpatient	Prof / Other	Inpatient	Outpatient	Prof / Other	Inpatient (4)	Outpatient	Prof / Other	Total	Inpatient (4)	Outpatient	Prof / Other	Total	Inpatient (4)	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total
Total - All Counties		15,525,386	1.403	85%-95%	1.039	1.035	1.029	1.047	1.034	1.041	$76.20	$95.16	$211.12	$382.48	$76.20	$95.16	$211.12	$382.48	$72.75	$92.06	$202.72	$367.53	0.87	1.31	5.02	7.21	0.87	1.31	5.02	7.21	0.84	1.27	4.88	6.99
MD1	MD1 (Southern MD)	2,653,324	1.482	85%-95%	1.045	1.040	1.032	1.056	1.037	1.046	$82.31	$96.44	$207.17	$385.92	$77.92	$91.29	$196.11	$365.32	$73.78	$88.01	$187.45	$349.24	0.90	1.23	4.81	6.93	0.85	1.16	4.55	6.56	0.81	1.12	4.41	6.34
MD2	MD2 (Western MD)	614,558	1.546	85%-95%	1.042	1.039	1.031	1.053	1.036	1.045	$91.11	$117.32	$192.88	$401.31	$82.69	$106.48	$175.06	$364.22	$78.56	$102.76	$167.47	$348.78	0.99	1.62	4.46	7.08	0.90	1.47	4.05	6.42	0.87	1.42	3.92	6.21
MD3	MD3 (Eastern Shore)	994,372	1.479	85%-95%	1.038	1.034	1.027	1.045	1.032	1.040	$84.88	$108.54	$202.59	$396.00	$80.53	$102.98	$192.22	$375.73	$77.04	$99.74	$184.87	$361.66	0.96	1.50	5.02	7.49	0.91	1.43	4.77	7.10	0.88	1.38	4.64	6.90
MD4	MD4 (Northern DC Suburbs)	3,712,601	1.259	85%-95%	1.034	1.030	1.024	1.039	1.029	1.035	$62.73	$77.62	$226.17	$366.52	$69.90	$86.50	$252.03	$408.43	$67.28	$84.04	$243.50	$394.83	0.69	1.10	5.30	7.09	0.77	1.22	5.90	7.90	0.75	1.19	5.77	7.70
MD5	MD5 (Baltimore Area)	7,550,531	1.425	85%-95%	1.040	1.036	1.029	1.049	1.034	1.042	$78.33	$99.76	$207.72	$385.81	$77.15	$98.26	$204.60	$380.02	$73.57	$95.01	$196.29	$364.87	0.93	1.40	5.01	7.33	0.91	1.37	4.94	7.22	0.88	1.33	4.80	7.00
24001	Allegany	165,840	1.689	85%-95%	1.061	1.043	1.039	1.084	1.042	1.047	$97.89	$143.80	$175.86	$417.54	$81.33	$119.48	$146.11	$346.92	$75.04	$114.69	$139.58	$329.30	1.10	1.83	4.42	7.35	0.92	1.52	3.67	6.11	0.86	1.46	3.53	5.86
24003	Anne Arundel	1,619,970	1.386	85%-95%	1.036	1.032	1.026	1.043	1.031	1.038	$73.35	$83.80	$212.89	$370.04	$74.28	$84.85	$215.58	$374.71	$71.21	$82.28	$207.67	$361.16	0.87	1.24	5.21	7.32	0.88	1.25	5.27	7.41	0.85	1.21	5.14	7.21
24005	Baltimore	2,182,215	1.463	85%-95%	1.041	1.037	1.030	1.051	1.035	1.044	$83.60	$105.48	$212.70	$401.78	$80.21	$101.20	$204.08	$385.49	$76.35	$97.76	$195.52	$369.64	1.01	1.49	5.01	7.51	0.97	1.43	4.81	7.20	0.93	1.37	4.67	6.97
24009	Calvert	295,694	1.444	85%-95%	1.047	1.040	1.034	1.061	1.038	1.046	$71.70	$97.59	$211.16	$380.46	$69.66	$94.81	$205.14	$369.61	$65.68	$91.34	$196.06	$353.08	0.77	1.24	4.84	6.86	0.75	1.21	4.71	6.66	0.71	1.16	4.55	6.43
24011	Caroline	95,424	1.510	85%-95%	1.048	1.041	1.034	1.062	1.038	1.046	$93.32	$123.54	$205.40	$422.26	$86.72	$114.80	$190.86	$392.38	$81.66	$110.57	$182.41	$374.65	0.97	1.68	4.92	7.58	0.90	1.56	4.57	7.04	0.86	1.50	4.42	6.79
24013	Carroll	611,249	1.354	85%-95%	1.038	1.034	1.028	1.046	1.033	1.040	$87.77	$95.22	$203.84	$386.83	$70.25	$88.71	$211.31	$380.27	$67.17	$85.58	$203.14	$365.90	0.78	1.50	4.83	7.11	0.80	1.56	5.01	7.37	0.77	1.50	4.86	7.15
24015	Cecil	211,959	1.432	85%-95%	1.034	1.030	1.024	1.040	1.030	1.035	$100.26	$130.03	$166.28	$396.57	$98.27	$127.44	$162.98	$388.70	$94.53	$123.79	$157.40	$375.72	0.96	1.52	4.09	6.58	0.94	1.49	4.01	6.45	0.91	1.45	3.92	6.28
24017	Charles	382,006	1.473	85%-95%	1.051	1.041	1.035	1.067	1.039	1.046	$89.57	$100.26	$214.65	$404.48	$85.35	$95.54	$204.54	$385.43	$80.01	$91.95	$195.46	$367.42	0.96	1.31	4.92	7.18	0.92	1.24	4.68	6.85	0.87	1.19	4.53	6.59
24019	Dorchester	72,343	1.598	85%-95%	1.041	1.038	1.031	1.051	1.036	1.044	$77.22	$132.32	$204.48	$414.03	$67.82	$116.22	$179.59	$363.63	$64.52	$112.23	$171.99	$348.74	0.90	1.93	4.97	7.79	0.79	1.69	4.37	6.84	0.76	1.63	4.24	6.62
24021	Frederick	950,476	1.275	85%-95%	1.038	1.034	1.027	1.045	1.033	1.040	$69.62	$71.79	$220.28	$361.69	$76.61	$78.99	$242.39	$397.99	$73.28	$76.50	$233.09	$382.88	0.78	1.05	5.27	7.10	0.86	1.15	5.80	7.81	0.83	1.11	5.65	7.59
24023	Garrett	58,912	1.638	85%-95%	1.040	1.036	1.029	1.049	1.034	1.043	$96.55	$187.92	$146.31	$430.78	$82.70	$160.96	$125.32	$368.98	$78.83	$155.61	$120.19	$354.63	0.77	2.18	3.57	6.52	0.66	1.86	3.06	5.58	0.63	1.80	2.97	5.40
24025	Harford	797,254	1.344	85%-95%	1.037	1.034	1.027	1.045	1.032	1.040	$71.91	$93.06	$201.46	$366.44	$75.09	$97.18	$210.37	$382.64	$71.86	$94.13	$202.36	$368.36	0.85	1.33	4.89	7.06	0.89	1.39	5.10	7.37	0.85	1.34	4.97	7.16
24027	Howard	1,006,125	1.247	85%-95%	1.036	1.033	1.026	1.043	1.032	1.038	$59.77	$76.45	$208.31	$344.54	$67.27	$86.04	$234.42	$387.73	$64.47	$83.41	$225.76	$373.63	0.72	1.15	5.24	7.11	0.81	1.29	5.90	8.00	0.78	1.25	5.75	7.78
24029	Kent	64,158	1.503	85%-95%	1.041	1.038	1.031	1.051	1.036	1.044	$116.62	$122.32	$193.40	$432.34	$108.90	$114.23	$180.60	$403.72	$103.59	$110.31	$172.95	$386.85	1.16	1.34	4.45	6.96	1.09	1.26	4.16	6.50	1.04	1.21	4.03	6.29
24031	Montgomery	2,762,125	1.254	85%-95%	1.032	1.028	1.023	1.037	1.028	1.033	$80.36	$79.63	$228.19	$388.18	$67.55	$66.12	$255.40	$412.08	$65.16	$66.69	$247.16	$399.00	0.66	1.11	5.31	7.08	0.74	1.25	5.94	7.93	0.72	1.21	5.81	7.74
24033	Prince Georges	1,719,228	1.508	85%-95%	1.046	1.040	1.033	1.058	1.038	1.046	$82.63	$94.71	$204.99	$381.92	$76.90	$88.14	$190.40	$355.44	$72.67	$84.95	$181.98	$339.59	0.90	1.20	4.82	6.91	0.83	1.11	4.48	6.43	0.80	1.07	4.34	6.21
24035	Queen Anne's	177,907	1.335	85%-95%	1.039	1.036	1.029	1.048	1.034	1.042	$80.74	$92.68	$209.03	$382.45	$84.87	$97.43	$219.73	$402.03	$80.99	$94.24	$210.92	$386.14	0.95	1.38	5.04	7.37	1.00	1.45	5.30	7.74	0.96	1.40	5.15	7.51
24037	Saint Mary's	256,386	1.370	85%-95%	1.033	1.029	1.023	1.037	1.028	1.034	$81.61	$101.00	$208.71	$391.33	$83.59	$103.45	$213.78	$400.83	$80.59	$100.60	$206.80	$388.00	0.93	1.32	4.53	6.78	0.95	1.35	4.64	6.95	0.92	1.31	4.54	6.77
24039	Somerset	45,984	1.765	85%-95%	1.063	1.044	1.040	1.087	1.042	1.047	$111.47	$120.72	$200.83	$433.02	$88.63	$95.99	$159.68	$344.30	$81.56	$92.10	$152.53	$326.19	1.40	1.68	5.02	8.10	1.11	1.34	3.99	6.44	1.05	1.28	3.84	6.17
24041	Talbot	111,100	1.451	85%-95%	1.033	1.029	1.023	1.038	1.028	1.034	$80.90	$113.91	$223.68	$418.49	$78.24	$110.17	$216.32	$404.72	$75.41	$107.12	$209.22	$391.74	0.83	1.65	5.43	7.91	0.80	1.59	5.26	7.65	0.78	1.55	5.13	7.46
24043	Washington	389,806	1.472	85%-95%	1.038	1.034	1.028	1.046	1.033	1.040	$87.40	$95.39	$207.16	$389.95	$83.35	$90.97	$197.56	$371.88	$79.69	$88.08	$189.92	$357.69	0.98	1.45	4.61	7.04	0.94	1.38	4.40	6.72	0.90	1.34	4.28	6.52
24045	Wicomico	253,609	1.482	85%-95%	1.038	1.034	1.027	1.045	1.032	1.040	$78.59	$102.85	$197.64	$379.09	$74.39	$97.36	$187.09	$358.84	$71.18	$94.30	$179.94	$345.42	0.96	1.42	5.08	7.45	0.91	1.34	4.81	7.06	0.87	1.30	4.68	6.85
24047	Worcester	173,847	1.488	85%-95%	1.026	1.022	1.018	1.027	1.023	1.026	$80.62	$103.17	$191.29	$375.07	$76.01	$97.26	$180.34	$353.61	$73.99	$95.06	$175.74	$344.79	0.89	1.40	4.96	7.25	0.84	1.32	4.68	6.84	0.82	1.29	4.59	6.71
24510	Baltimore City	1,121,759	1.661	85%-95%	1.052	1.041	1.035	1.068	1.039	1.046	$98.07	$134.12	$204.43	$436.62	$82.84	$113.29	$172.68	$368.81	$77.53	$109.01	$165.01	$351.55	1.17	1.63	4.87	7.68	0.99	1.38	4.11	6.49	0.94	1.33	3.97	6.24

Maryland APCD (Maryland MSAs)

		Member Months. Risk. and Plan Coinsurance			RVU Plan Benefit Normalization Factors (1)			Allowed Plan Benefit Normalization Factors (1)			Allowed PMPM				Risk Adj Allowed PMPM (2)				Risk Adjusted and Benefit Adjusted Allowed PMPM (2) (3)				RVU PMPM				Risk Adj RVU PMPM (2)				Risk Adjusted and Benefit Adj RVU PMPM (2) (3)			
MSA Name and ID		Medical MMs	2017 HHS Model Platinum Risk Score	Plan Coinsurance Range	Inpatient	Outpatient	Prof / Other	Inpatient	Outpatient	Prof / Other	Inpatient	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total
12580	Baltimore-Columbia-Towson, MD	7,516,479	1.422	85%-95%	1.040	1.036	1.029	1.049	1.034	1.043	$77.77	$98.74	$208.92	$385.43	$76.72	$97.42	$206.12	$380.26	$73.14	$94.18	$197.71	$365.03	0.93	1.39	5.04	7.36	0.92	1.37	4.97	7.26	0.88	1.32	4.83	7.03
15680	California-Lexington Park, MD	256,396	1.370	85%-95%	1.033	1.029	1.023	1.037	1.028	1.034	$81.61	$101.00	$208.71	$391.33	$83.59	$103.45	$213.78	$400.83	$80.59	$100.60	$206.80	$388.00	0.93	1.32	4.53	6.78	0.95	1.35	4.64	6.95	0.92	1.31	4.54	6.77
19060	Cumberland, MD	165,840	1.689	85%-95%	1.061	1.043	1.039	1.084	1.042	1.047	$97.89	$143.80	$175.86	$417.54	$81.33	$119.48	$146.11	$346.92	$75.04	$114.69	$139.58	$329.30	1.10	1.83	4.42	7.35	0.92	1.52	3.67	6.11	0.86	1.46	3.53	5.86
24999	Non-MSA Area, MD	401,937	1.527	85%-95%	1.040	1.036	1.029	1.049	1.034	1.042	$91.18	$131.70	$199.71	$422.59	$83.78	$121.02	$183.51	$388.31	$79.89	$117.01	$176.05	$372.95	0.92	1.74	4.80	7.45	0.85	1.59	4.41	6.85	0.81	1.54	4.28	6.64
25180	Hagerstown-Martinsburg, MD	389,806	1.472	85%-95%	1.038	1.034	1.028	1.046	1.033	1.040	$87.40	$95.39	$207.16	$389.95	$83.35	$90.97	$197.56	$371.88	$79.69	$88.08	$189.92	$357.69	0.98	1.45	4.61	7.04	0.94	1.38	4.40	6.72	0.90	1.34	4.28	6.52
41540	Salisbury, MD	473,440	1.512	85%-95%	1.035	1.031	1.025	1.041	1.030	1.037	$82.53	$104.70	$195.62	$382.85	$76.59	$97.17	$181.54	$355.30	$73.54	$94.29	$175.08	$342.91	0.98	1.44	5.03	7.44	0.91	1.33	4.67	6.91	0.88	1.29	4.55	6.72
23224	Silver Spring-Frederick-Rockville, MD	3,712,601	1.259	85%-95%	1.034	1.030	1.024	1.039	1.029	1.035	$62.73	$77.62	$226.17	$366.52	$69.90	$86.50	$252.03	$408.43	$67.28	$84.04	$243.50	$394.83	0.69	1.10	5.30	7.09	0.77	1.22	5.90	7.90	0.75	1.19	5.77	7.70
47894	Washington-Arlington-Alexandria, MD	2,396,928	1.494	85%-95%	1.047	1.040	1.033	1.060	1.038	1.046	$82.39	$95.95	$207.00	$385.34	$77.36	$90.10	$194.38	$361.84	$72.99	$86.81	$185.78	$345.57	0.89	1.22	4.84	6.95	0.84	1.14	4.54	6.52	0.80	1.10	4.40	6.30
48864	Wilmington, MD	211,959	1.432	85%-95%	1.034	1.030	1.024	1.040	1.030	1.035	$100.26	$130.03	$166.28	$396.57	$98.27	$127.44	$162.98	$388.70	$94.53	$123.79	$157.40	$375.72	0.96	1.52	4.09	6.58	0.94	1.49	4.01	6.45	0.91	1.45	3.92	6.28

Exhibit 2a
CY 2021 Milliman Benchmark and Maryland All-Payer Claims Database Cost and Utilization Exhibits
Maryland APCD: Incurred 1/2021 through 12/2021, Paid through 3/2022 (Adjusted to Estimated Ultimate Incurred)
Summary of Experience by PSAP
Commercial and Individual LOBs, Limited to Members Under Age 65 (Excludes Prescription Drugs)

(1) Risk Score is calculated based on Medical eligibility with valid risk scores, i.e., the risk score shown equals total risk score over total Medical.
(2) Completion factor used: 0.9834. Risk adjusted allowed dollars are risk normalized to the statewide Maryland risk score of 1.4033.
(3) The plan benefit factors for the total amounts are calculated based on the combined coinsurance level.
(4) Teaching hospital amounts are removed from Inpatient allowed and paid amounts (except SNF, newborn, and residential treatments) based on the FY2017 per diem rates (trended to FY2021 with an annual rate 2.25% based on the file "IME for ICC.xlsx") at the provider level from file we received from Maryland HSCRC on 12/11/2019 named "Hospital file for commercial removal of GME 12-09.xlsx". For benchmark results, this adjustment was made at the MSA level.
(5) Cost and utilization data are aggregated for each hospital's Primary Service Area Plus (PSAP). The hospital PSAP is based on the ZIP Code and hospital share mapping provided by HSCRC from file named "All payer and Medicare PSAP 4.2.2019.xlsx." For each hospital's PSAP, the cost and utilization values are calculated as the sum of the PSAP ZIP Codes of (cost or utilization value at the ZIP Code) x (hospital percent share at the ZIP Code).

		Member Months and Risk		Total Allowed (2)						Allowed PMPM (2)						RVUs PMPM (2)						Allowed Per RVU			
Hospital Name and Medicare ID (5)		Medical MMs	2017 HHS Model Platinum Risk Score (1)	Inpatient	Teaching Adjustment (4)	Inpatient w/ Teaching Adjustment	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Total - Risk Adjusted	Total - Risk & Benefit Adjusted (3)	Inpatient	Outpatient	Prof / Other	Total	Total - Risk Adjusted	Total - Risk & Benefit Adjusted (3)	Inpatient	Outpatient	Prof / Other	Total
Total - All PSAPs		15,524,694	1.403	$1,249,390,401	$66,326,120	$1,183,064,281	$1,477,300,380	$3,277,621,307	$5,937,985,969	$76.21	$95.16	$211.12	$382.49	$382.49	$367.54	0.87	1.31	5.02	7.21	7.21	6.99	$87.47	$72.59	$42.03	$53.08
210023	ANNE ARUNDEL	1,060,239	1.334	$74,529,738	$3,298,751	71,230,988	$88,017,187	$227,622,756	$386,870,931	$67.18	$83.02	$214.69	$364.89	$383.86	$370.99	0.77	1.25	5.20	7.22	7.60	7.40	$87.57	$66.46	$41.25	$50.54
210061	ATLANTIC GENERAL	71,404	1.437	$6,427,895	$186,827	6,241,068	$7,593,580	$12,986,686	$26,821,334	$87.41	$106.35	$181.88	$375.63	$366.89	$360.61	0.93	1.47	4.76	7.16	7.00	6.91	$94.32	$72.18	$38.17	$52.43
210043	BALTIMORE WASHINGTON	746,868	1.460	$62,998,509	$3,652,348	59,346,161	$64,660,508	$158,091,757	$282,098,427	$79.46	$86.58	$211.67	$377.71	$362.93	$348.14	0.99	1.26	5.19	7.44	7.15	6.93	$80.16	$68.65	$40.78	$50.74
210013	BON SECOURS	23,678	1.860	$2,998,581	$279,616	2,718,965	$3,718,527	$4,569,741	$11,007,234	$114.83	$157.05	$193.00	$464.87	$350.80	$332.86	1.57	1.83	4.64	8.04	6.06	5.81	$73.15	$85.90	$41.61	$57.85
210039	CALVERT	296,369	1.446	$22,316,073	$953,442	21,362,632	$28,950,202	$62,610,130	$112,922,963	$72.08	$97.68	$211.26	$381.02	$369.78	$353.25	0.77	1.24	4.85	6.86	6.66	6.43	$93.14	$78.46	$43.60	$55.51
210033	CARROLL COUNTY	658,525	1.350	$49,951,946	$3,515,916	46,436,030	$62,437,595	$133,807,553	$242,681,178	$70.52	$94.81	$203.19	$368.52	$382.94	$368.39	0.81	1.49	4.82	7.13	7.40	7.19	$86.66	$63.61	$42.15	$51.72
210035	CHARLES REGIONAL	381,331	1.472	$35,623,370	$1,567,765	34,055,604	$38,205,290	$81,827,248	$154,088,142	$89.31	$100.19	$214.58	$404.08	$385.33	$367.33	0.96	1.30	4.91	7.18	6.85	6.59	$93.04	$76.81	$43.66	$56.29
210030	CHESTERTOWN	85,473	1.447	$9,743,610	$495,076	9,248,534	$10,273,104	$15,707,324	$35,228,962	$108.20	$120.19	$183.77	$412.16	$399.77	$383.15	1.08	1.33	4.28	6.70	6.49	6.28	$100.53	$90.08	$42.89	$61.56
210051	DOCTORS COMMUNITY	395,791	1.478	$30,713,851	$1,514,262	29,199,589	$35,792,647	$81,477,364	$146,469,600	$73.78	$90.43	$205.86	$370.07	$351.34	$335.93	0.81	1.17	4.93	6.91	6.56	6.34	$91.52	$77.23	$41.74	$53.56
210037	EASTON	322,635	1.460	$27,655,923	$1,362,153	26,293,770	$37,337,287	$68,257,883	$131,888,940	$81.50	$115.73	$211.56	$408.79	$392.85	$377.26	0.87	1.66	5.10	7.63	7.33	7.11	$93.25	$69.81	$41.48	$53.57
210015	FRANKLIN SQUARE	336,594	1.601	$28,732,672	$1,470,389	27,262,282	$37,484,890	$79,835,843	$144,583,015	$80.99	$111.37	$237.19	$429.55	$376.53	$359.41	1.03	1.63	5.00	7.66	6.71	6.47	$78.30	$68.45	$47.45	$56.07
210005	FREDERICK MEMORIAL	945,803	1.274	$68,162,608	$2,553,827	65,608,782	$67,720,532	$208,569,513	$341,898,826	$69.37	$71.60	$220.52	$361.49	$398.25	$383.14	0.78	1.04	5.28	7.10	7.83	7.60	$89.09	$68.62	$41.75	$50.89
210060	FT. WASHINGTON	87,788	1.653	$9,536,506	$257,707	9,278,799	$10,809,668	$18,123,821	$38,212,289	$105.70	$123.13	$206.45	$435.28	$369.59	$353.54	1.07	1.35	4.74	7.17	6.08	5.88	$98.74	$91.03	$43.53	$60.74
210044	G.B.M.C.	414,008	1.324	$30,327,448	$1,985,144	28,342,303	$38,386,678	$82,811,358	$149,540,339	$68.46	$92.72	$200.02	$361.20	$382.96	$370.80	0.81	1.36	4.83	7.00	7.43	7.25	$84.49	$67.98	$41.41	$51.57
210017	GARRETT COUNTY	48,677	1.576	$4,099,681	$26,940	4,072,742	$9,119,148	$6,942,197	$20,134,086	$83.67	$187.34	$142.62	$413.63	$368.35	$355.64	0.68	2.18	3.49	6.35	5.65	5.49	$123.17	$85.94	$40.88	$65.16
210056	GOOD SAMARITAN	183,047	1.721	$17,046,122	$1,217,554	15,828,568	$23,437,497	$40,180,143	$79,446,208	$86.47	$128.04	$219.51	$434.02	$353.88	$336.24	1.13	1.63	5.35	8.11	6.62	6.34	$76.44	$78.54	$41.01	$53.49
210034	HARBOR	86,265	1.654	$9,498,821	$689,057	8,809,764	$10,897,246	$17,952,899	$37,659,909	$102.12	$126.32	$208.11	$436.56	$370.43	$355.26	1.31	1.63	5.06	8.00	6.79	6.57	$77.93	$77.40	$41.17	$54.58
210006	HARFORD	94,712	1.467	$8,536,437	$392,316	8,144,121	$10,785,573	$19,143,230	$38,072,924	$85.99	$113.88	$202.12	$401.99	$384.50	$369.83	0.98	1.48	4.98	7.44	7.11	6.90	$88.01	$77.10	$40.58	$54.07
210065	HC-GERMANTOWN	137,825	1.265	$9,143,035	$400,867	8,742,168	$10,034,793	$30,140,211	$48,917,172	$63.43	$72.81	$218.69	$354.92	$393.61	$379.36	0.66	1.05	5.18	6.90	7.65	7.44	$95.77	$69.08	$42.18	$51.43
210004	HOLY CROSS	696,327	1.299	$47,198,582	$1,977,126	45,221,457	$52,508,877	$151,497,041	$249,227,375	$64.94	$75.41	$217.57	$357.92	$386.52	$372.77	0.72	1.02	5.15	6.90	7.45	7.25	$90.00	$73.74	$42.21	$51.88
210029	HOPKINS BAYVIEW MED CTR	140,591	1.633	$15,931,072	$1,210,220	14,720,852	$17,291,914	$28,177,467	$60,190,233	$104.71	$122.99	$200.42	$428.12	$367.98	$352.54	1.32	1.62	4.64	7.57	6.51	6.29	$79.59	$76.00	$43.21	$56.54
210048	HOWARD COUNTY	915,814	1.263	$59,722,982	$3,928,371	55,794,610	$70,146,649	$192,567,222	$318,508,481	$60.92	$76.59	$210.27	$347.79	$386.35	$371.99	0.73	1.14	5.29	7.16	7.95	7.73	$83.37	$67.20	$39.78	$48.60
210009	JOHNS HOPKINS	160,005	1.565	$15,029,834	$1,254,446	13,775,388	$20,297,985	$31,163,356	$65,236,730	$86.09	$126.86	$194.77	$407.72	$365.61	$351.85	1.07	1.59	4.61	7.27	6.52	6.33	$80.35	$79.99	$42.22	$56.08
210055	LAUREL REGIONAL	0	0.000	$0	$0	0	$0	$0	$0	$0.00	$0.00	$0.00	$0.00	n/a	$0.00	0.00	0.00	0.00	0.00	n/a	0.00	$0.00	$0.00	$0.00	$0.00
210064	LEVINDALE	83	1.522	$9,781	$591	9,190	$9,774	$18,405	$37,369	$110.85	$117.89	$222.00	$450.74	$415.55	$396.75	1.22	1.54	5.30	8.07	7.44	7.17	$90.85	$76.42	$41.85	$55.87
210045	MCCREADY	8,403	1.939	$834,877	$30,821	804,056	$1,127,819	$1,699,821	$3,631,696	$95.69	$134.22	$202.29	$432.19	$312.71	$296.83	1.18	1.89	5.02	8.10	5.86	5.61	$80.76	$71.04	$40.27	$53.37
210008	MERCY	177,050	1.684	$18,653,181	$1,533,267	17,119,914	$23,633,029	$35,868,350	$76,621,294	$96.70	$133.48	$202.59	$432.77	$360.58	$343.56	1.18	1.63	4.85	7.67	6.39	6.14	$81.70	$81.77	$41.76	$56.44
210001	MERITUS	394,477	1.473	$35,909,017	$1,275,340	34,633,677	$37,696,263	$81,554,083	$153,884,023	$87.80	$95.56	$206.74	$390.10	$371.67	$357.47	0.98	1.45	4.60	7.03	6.70	6.50	$89.57	$65.78	$44.92	$55.45
210018	MONTGOMERY GENERAL	251,180	1.288	$15,287,832	$614,885	14,672,947	$23,350,491	$58,220,855	$96,244,293	$58.42	$92.96	$231.79	$383.17	$417.46	$401.58	0.69	1.21	5.42	7.32	7.98	7.75	$84.36	$77.12	$42.73	$52.32
210040	NORTHWEST	235,621	1.549	$25,095,775	$1,724,953	23,370,822	$27,917,481	$51,172,460	$102,460,742	$99.19	$118.48	$217.18	$434.85	$394.05	$376.05	1.18	1.56	5.20	7.93	7.19	6.93	$84.29	$76.13	$41.79	$54.84
210019	PENINSULA REGIONAL	396,355	1.521	$33,595,099	$1,343,103	32,251,996	$41,280,347	$78,436,684	$151,969,027	$81.37	$104.15	$197.89	$383.42	$353.79	$340.50	0.98	1.43	5.07	7.48	6.90	6.70	$82.88	$73.04	$39.00	$51.25
210003	PRINCE GEORGE	233,152	1.671	$21,354,559	$857,357	20,497,202	$25,419,656	$46,675,784	$92,592,642	$87.91	$109.03	$200.19	$397.13	$333.52	$318.72	1.01	1.35	4.68	7.05	5.92	5.71	$86.74	$80.54	$42.77	$56.34
210057	SHADY GROVE	957,180	1.293	$63,674,506	$3,033,307	60,641,199	$73,953,164	$216,199,166	$350,793,529	$63.35	$77.26	$225.87	$366.49	$397.81	$383.96	0.69	1.12	5.32	7.12	7.73	7.53	$91.92	$69.28	$42.49	$51.47
210012	SINAI	430,111	1.567	$54,484,509	$3,173,449	51,311,060	$53,178,471	$96,981,389	$201,470,920	$119.30	$123.64	$225.48	$468.42	$419.47	$399.98	1.28	1.59	5.37	8.24	7.38	7.11	$93.19	$77.62	$41.97	$56.81
210062	SOUTHERN MARYLAND	382,965	1.549	$38,283,352	$1,474,890	36,808,462	$39,244,936	$78,558,879	$154,612,277	$96.11	$102.48	$205.13	$403.72	$365.83	$348.19	1.01	1.26	4.70	6.96	6.31	6.07	$95.12	$81.62	$43.69	$58.00
210011	ST. AGNES	366,175	1.420	$29,888,988	$2,799,759	27,089,228	$38,642,704	$71,890,799	$137,622,731	$73.98	$105.53	$196.33	$375.84	$371.31	$354.91	0.90	1.42	4.84	7.16	7.07	6.83	$82.36	$74.27	$40.56	$52.49
210028	ST. MARY	256,396	1.370	$22,155,906	$1,230,993	20,924,913	$25,896,180	$53,513,483	$100,334,576	$81.61	$101.00	$208.71	$391.33	$400.83	$388.00	0.93	1.32	4.53	6.78	6.95	6.77	$87.95	$76.54	$46.04	$57.71
210022	SUBURBAN	738,676	1.162	$41,715,232	$1,832,850	39,882,382	$61,023,544	$174,974,289	$275,880,214	$53.99	$82.61	$236.88	$373.48	$450.87	$440.60	0.58	1.15	5.34	7.08	8.54	8.40	$92.35	$71.62	$44.36	$52.76
210063	UM ST. JOSEPH	509,258	1.371	$40,088,996	$2,680,175	37,408,822	$50,099,690	$104,249,321	$191,757,832	$73.46	$98.38	$204.71	$376.54	$385.52	$371.53	0.88	1.41	4.91	7.20	7.37	7.16	$83.65	$69.71	$41.73	$52.33
210038	UMMC MIDTOWN	47,404	1.689	$5,470,419	$464,732	5,005,687	$6,350,719	$9,143,716	$20,500,122	$105.60	$133.97	$192.89	$432.45	$359.40	$340.95	1.27	1.57	4.61	7.45	6.19	5.93	$83.23	$85.17	$41.87	$58.06
210032	UNION HOSPITAL OF CECIL	192,592	1.421	$20,018,418	$642,405	19,376,013	$25,177,565	$31,828,329	$76,381,907	$100.61	$130.73	$165.26	$396.60	$391.54	$378.47	0.96	1.53	4.06	6.54	6.46	6.29	$105.02	$85.62	$40.71	$60.60
210024	UNION MEMORIAL	199,074	1.594	$17,746,959	$1,516,763	16,230,195	$24,097,841	$42,795,013	$83,123,050	$81.53	$121.05	$214.97	$417.55	$367.48	$351.04	0.97	1.51	5.18	7.66	6.74	6.50	$84.24	$80.08	$41.51	$54.52
210002	UNIVERSITY OF MARYLAND	100,964	1.598	$10,275,890	$983,539	9,292,350	$13,060,049	$18,541,317	$40,893,715	$92.04	$129.35	$183.64	$405.03	$355.58	$339.16	1.19	1.54	4.42	7.15	6.27	6.04	$77.39	$84.21	$41.55	$56.69
210049	UPPER CHESAPEAKE HEALTH	707,209	1.332	$52,191,206	$2,729,183	49,462,023	$64,244,137	$141,443,416	$255,149,576	$69.94	$90.84	$200.00	$360.78	$380.11	$366.14	0.83	1.31	4.84	6.98	7.36	7.15	$84.02	$69.22	$41.33	$51.66
210016	WASHINGTON ADVENTIST	474,525	1.403	$38,536,082	$1,848,343	36,687,739	$40,189,438	$98,952,224	$175,829,401	$77.31	$84.69	$208.53	$370.54	$370.69	$355.56	0.84	1.10	4.96	6.90	6.90	6.69	$92.16	$77.05	$42.01	$53.69
210027	WESTERN MARYLAND	176,075	1.703	$18,194,520	$345,294	17,849,226	$25,799,724	$30,840,783	$74,489,733	$101.37	$146.53	$175.16	$423.06	$348.54	$330.72	1.11	1.85	4.39	7.35	6.06	5.80	$91.41	$79.13	$39.88	$57.54

Exhibit 2b
CY 2021 Milliman Benchmark and Maryland All-Payer Claims Database Cost and Utilization Exhibits
Maryland APCD: Incurred 1/2021 through 12/2021, Paid through 3/2022 (Adjusted to Estimated Ultimate Incurred)
Plan Benefit Normalization Factors by PSAP
Commercial and Individual LOBs, Limited to Members Under Age 65 (Excludes Prescription Drugs)

(1) Linearly interpolated between coinsurance ranges.
(2) Risk adjusted amounts are normalized to all of Maryland, which has a 2017 HHS Platinum risk score of 1.4033.
(3) Risk adjusted and benefit adjusted amounts are calculated as (risk adjusted amount) / (benefit normalization factor).
(4) Teaching hospital amounts are removed from Inpatient allowed and paid amounts (except SNF, newborn, and residential treatments) based on the FY2017 per diem rates (trended to FY2021 with an annual rate 2.25% based on the file "IME for ICC.xlsx") at the provider level from file we received from Maryland HSCRC on 12/11/2019 named "Hospital file for commercial removal of GME 12-09.xlsx". For benchmark results, this adjustment was made at the MSA level.
(5) Cost and utilization data are aggregated for each hospital's Primary Service Area Plus (PSAP). The hospital PSAP is based on the ZIP Code and hospital share mapping provided by HSCRC from file named "All payer and Medicare PSAP 4.2.2019.xlsx." For each hospital's PSAP, the cost and utilization values are calculated as the sum of the PSAP ZIP Codes of (cost or utilization value at the ZIP Code) x (hospital % share at the ZIP Code).

		Member Months, Risk, and Plan Coinsurance				RVU Plan Benefit Normalization Factors (1)			Allowed Plan Benefit Normalization Factors (1)			Allowed PMPM				Risk Adjusted Allowed PMPM (2)				Risk Adjusted and Benefit Adjusted Allowed PMPM (2) (3)				RVU PMPM				Risk Adj RVU PMPM (2)				Risk Adjusted and Benefit Adj RVU PMPM (2) (3)			
Hospital Name and Medicare ID (5)		Medical MMs	2017 HHS Model Platinum Risk Score	Plan Coinsurance	Plan Coinsurance Range	Inpatient	Outpatient	Prof / Other	Inpatient	Outpatient	Prof / Other	Inpatient (4)	Outpatient	Prof / Other	Total	Inpatient (4)	Outpatient	Prof / Other	Total	Inpatient (4)	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total
Total - All PSAPs		15,524,694	1.403	89.2%	85%-95%	1.039	1.035	1.029	1.047	1.034	1.041	$76.21	$95.16	$211.12	$382.49	$76.21	$95.16	$211.12	$382.49	$72.75	$92.07	$202.72	$367.54	0.87	1.31	5.02	7.21	0.84	1.27	4.88	6.99				
210023	ANNE ARUNDEL	1,060,239	1.334	88.2%	85%-95%	1.034	1.030	1.024	1.039	1.029	1.035	$67.18	$83.02	$214.69	$364.89	$70.68	$87.33	$225.85	$383.86	$68.00	$84.84	$218.15	$370.99	0.77	1.25	5.20	7.22	0.81	1.31	5.47	7.60	0.78	1.28	5.35	7.40
210061	ATLANTIC GENERAL	71,404	1.437	85.3%	85%-95%	1.019	1.015	1.012	1.016	1.017	1.018	$87.41	$106.35	$181.88	$375.63	$85.37	$103.87	$177.65	$366.89	$84.00	$102.09	$174.52	$360.61	0.93	1.47	4.76	7.16	0.91	1.44	4.65	7.00	0.89	1.42	4.60	6.91
210043	BALTIMORE WASHINGTON	746,868	1.460	89.5%	85%-95%	1.040	1.037	1.030	1.050	1.035	1.043	$79.46	$86.58	$211.67	$377.71	$76.35	$83.19	$203.39	$362.93	$72.74	$80.40	$195.00	$348.14	0.99	1.26	5.19	7.44	0.95	1.21	4.99	7.15	0.92	1.17	4.84	6.93
210013	BON SECOURS	23,678	1.860	91.8%	85%-95%	1.061	1.043	1.039	1.084	1.042	1.047	$114.83	$157.05	$193.00	$464.87	$86.65	$118.51	$145.64	$350.80	$79.97	$113.76	$139.12	$332.86	1.57	1.83	4.64	8.04	1.18	1.38	3.50	6.06	1.12	1.32	3.37	5.81
210038	CALVERT	296,369	1.446	90.4%	85%-95%	1.047	1.040	1.034	1.061	1.038	1.046	$72.08	$97.68	$211.26	$381.02	$69.05	$94.80	$205.01	$368.74	$65.96	$91.34	$196.85	$353.26	0.77	1.24	4.85	6.86	0.75	1.21	4.70	6.66	0.72	1.16	4.55	6.43
210033	CARROLL COUNTY	658,525	1.350	89.0%	85%-95%	1.038	1.034	1.028	1.046	1.033	1.040	$70.52	$94.81	$203.19	$368.52	$73.27	$98.52	$211.14	$382.94	$70.05	$95.39	$202.95	$368.39	0.81	1.49	4.82	7.13	0.85	1.55	5.01	7.40	0.81	1.50	4.87	7.19
210035	CHARLES REGIONAL	381,331	1.472	90.8%	85%-95%	1.051	1.041	1.035	1.067	1.039	1.046	$89.31	$100.19	$214.58	$404.08	$85.16	$95.54	$204.63	$385.33	$79.83	$91.96	$195.55	$367.33	0.96	1.30	4.91	7.18	0.92	1.24	4.69	6.85	0.87	1.19	4.53	6.59
210030	CHESTERTOWN	85,473	1.447	89.7%	85%-95%	1.041	1.038	1.030	1.051	1.035	1.044	$108.20	$120.19	$183.77	$412.16	$104.95	$116.58	$178.24	$399.77	$99.85	$112.59	$170.71	$383.15	1.08	1.33	4.28	6.70	1.04	1.29	4.16	6.49	1.00	1.25	4.03	6.28
210051	DOCTORS COMMUNITY	395,791	1.478	90.1%	85%-95%	1.044	1.040	1.032	1.056	1.037	1.046	$73.78	$90.43	$205.86	$370.07	$70.04	$85.86	$195.44	$351.34	$66.34	$82.78	$186.81	$335.93	0.81	1.17	4.93	6.91	0.77	1.11	4.68	6.56	0.73	1.07	4.54	6.34
210037	EASTON	322,626	1.460	89.4%	85%-95%	1.040	1.036	1.029	1.049	1.034	1.042	$91.50	$115.73	$211.96	$419.19	$78.32	$111.22	$203.32	$392.86	$74.68	$107.53	$195.05	$377.26	0.87	1.66	5.10	7.63	0.84	1.59	4.89	7.33	0.81	1.54	4.76	7.11
210015	FRANKLIN SQUARE	336,594	1.601	90.6%	85%-95%	1.049	1.041	1.034	1.064	1.039	1.046	$80.99	$111.37	$237.19	$429.55	$71.00	$97.62	$207.91	$376.53	$66.72	$94.00	$198.70	$359.41	1.03	1.63	5.00	7.66	0.91	1.43	4.38	6.71	0.86	1.37	4.24	6.47
210005	FREDERICK MEMORIAL	945,803	1.274	89.0%	85%-95%	1.038	1.034	1.027	1.045	1.032	1.040	$69.37	$71.60	$220.52	$361.49	$76.42	$78.88	$242.95	$398.25	$73.11	$76.40	$233.64	$383.14	0.78	1.04	5.28	7.10	0.86	1.15	5.82	7.83	0.83	1.11	5.66	7.60
210060	FT. WASHINGTON	87,788	1.653	90.0%	85%-95%	1.043	1.039	1.032	1.054	1.037	1.046	$105.70	$123.13	$206.45	$435.28	$89.74	$104.55	$175.29	$369.59	$85.15	$100.83	$167.56	$353.54	1.07	1.35	4.74	7.17	0.91	1.15	4.03	6.08	0.87	1.10	3.90	5.88
210044	G.B.M.C.	414,008	1.324	87.9%	85%-95%	1.032	1.029	1.023	1.037	1.028	1.034	$68.46	$92.72	$200.02	$361.20	$72.58	$98.30	$212.07	$382.96	$69.99	$95.61	$205.19	$370.80	0.81	1.36	4.83	7.00	0.86	1.45	5.12	7.43	0.83	1.41	5.01	7.25
210017	GARRETT COUNTY	89,677	1.376	88.6%	85%-95%	1.036	1.032	1.026	1.047	1.031	1.038	$93.57	$187.24	$142.82	$413.63	$74.51	$106.83	$127.01	$368.35	$71.46	$161.80	$122.36	$355.64	0.69	2.18	3.49	6.36	0.69	1.94	3.11	5.65	0.66	1.86	3.03	5.48
210056	GOOD SAMARITAN	183,047	1.721	91.9%	85%-95%	1.061	1.043	1.039	1.084	1.042	1.047	$86.47	$128.04	$219.51	$434.02	$70.51	$104.40	$178.98	$353.88	$65.06	$100.22	$170.97	$336.24	1.13	1.63	5.35	8.11	0.92	1.33	4.36	6.62	0.87	1.27	4.20	6.34
210034	HARBOR	86,265	1.654	89.6%	85%-95%	1.041	1.037	1.030	1.050	1.035	1.044	$102.12	$126.32	$208.11	$436.56	$86.65	$107.19	$176.59	$370.43	$82.50	$103.55	$169.21	$355.26	1.31	1.63	5.06	8.00	1.11	1.38	4.29	6.79	1.07	1.34	4.16	6.57
210006	HARFORD	94,712	1.467	89.1%	85%-95%	1.038	1.035	1.028	1.046	1.033	1.041	$85.99	$113.88	$202.12	$401.99	$82.25	$108.92	$193.33	$384.50	$78.60	$105.44	$185.78	$369.83	0.98	1.48	4.98	7.44	0.93	1.41	4.76	7.11	0.90	1.37	4.63	6.90
210065	HC-GERMANTOWN	137,825	1.265	88.7%	85%-95%	1.036	1.032	1.026	1.043	1.031	1.038	$63.43	$72.81	$218.69	$354.92	$70.34	$80.75	$242.52	$393.61	$67.44	$78.29	$233.62	$379.36	0.66	1.05	5.18	6.90	0.73	1.17	5.75	7.65	0.71	1.13	5.60	7.44
210004	HOLY CROSS	696,527	1.299	89.6%	85%-95%	1.036	1.032	1.026	1.042	1.031	1.037	$64.94	$73.41	$217.57	$357.92	$70.13	$81.43	$234.95	$386.52	$67.29	$78.09	$226.47	$372.77	0.72	1.02	5.15	6.90	0.78	1.10	5.07	7.45	0.75	1.07	5.43	7.25
210029	HOPKINS BAYVIEW MED CTR	140,591	1.633	89.7%	85%-95%	1.042	1.038	1.031	1.052	1.036	1.045	$104.71	$122.99	$200.42	$428.12	$90.00	$105.72	$172.27	$367.98	$85.57	$102.06	$164.91	$352.54	1.32	1.62	4.64	7.57	1.13	1.39	3.99	6.51	1.09	1.34	3.87	6.29
210048	HOWARD COUNTY	915,814	1.263	88.9%	85%-95%	1.037	1.033	1.027	1.045	1.032	1.039	$60.92	$76.59	$210.27	$347.79	$67.68	$85.09	$233.58	$386.35	$64.79	$82.44	$224.76	$371.99	0.73	1.14	5.29	7.16	0.81	1.27	5.87	7.95	0.78	1.23	5.72	7.73
210009	JOHNS HOPKINS	160,005	1.565	89.0%	85%-95%	1.038	1.034	1.028	1.048	1.033	1.040	$86.09	$126.86	$194.77	$407.72	$77.20	$113.76	$174.65	$365.61	$73.81	$110.15	$167.89	$351.85	1.07	1.59	4.61	7.27	0.96	1.42	4.14	6.52	0.93	1.38	4.03	6.33
210055	LAUREL REGIONAL	0	0.000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	$0.00	$0.00	$0.00	$0.00	n/a	n/a	n/a	$0.00	n/a	n/a	n/a	$0.00	0.00	0.00	0.00	0.00	n/a	n/a	n/a	0.00	n/a	n/a	n/a	0.00
210064	LEVINDALE	83	1.522	90.4%	85%-95%	1.047	1.040	1.033	1.060	1.038	1.046	$110.85	$117.89	$222.00	$450.74	$102.20	$108.69	$204.66	$415.55	$96.42	$104.72	$195.61	$396.75	1.22	1.54	5.30	8.07	1.12	1.42	4.89	7.44	1.07	1.37	4.73	7.17
210045	MCCREADY	8,403	1.939	91.9%	85%-95%	1.062	1.044	1.039	1.085	1.042	1.047	$95.69	$134.22	$202.29	$432.19	$69.23	$97.11	$146.37	$312.71	$63.81	$93.20	$139.82	$296.83	1.18	1.89	5.02	8.10	0.86	1.37	3.63	5.86	0.81	1.31	3.50	5.61
210008	MERCY	177,050	1.684	91.0%	85%-95%	1.053	1.042	1.036	1.070	1.040	1.047	$96.70	$133.48	$202.59	$432.77	$80.57	$111.22	$168.79	$360.58	$75.28	$106.99	$161.29	$343.56	1.18	1.63	4.85	7.67	0.99	1.36	4.04	6.39	0.94	1.31	3.90	6.14
210001	MERITUS	394,477	1.473	89.0%	85%-95%	1.038	1.034	1.028	1.046	1.033	1.040	$87.80	$95.56	$206.74	$390.10	$83.65	$91.05	$196.97	$371.67	$79.97	$88.15	$189.34	$357.47	0.98	1.45	4.60	7.03	0.93	1.38	4.38	6.70	0.90	1.34	4.27	6.50
210018	MONTGOMERY GENERAL	251,180	1.288	89.1%	85%-95%	1.038	1.035	1.028	1.046	1.033	1.041	$58.42	$92.96	$231.79	$383.17	$63.64	$101.28	$252.53	$417.46	$60.83	$98.05	$242.70	$401.58	0.69	1.21	5.42	7.32	0.75	1.31	5.91	7.98	0.73	1.27	5.75	7.75
210040	NORTHWEST	235,621	1.549	90.6%	85%-95%	1.049	1.041	1.034	1.063	1.038	1.046	$99.19	$118.48	$217.18	$434.85	$89.88	$107.37	$196.80	$394.05	$84.56	$103.40	$188.08	$376.05	1.19	1.56	5.20	7.93	1.07	1.41	4.71	7.19	1.02	1.36	4.55	6.93
210019	PENINSULA REGIONAL	396,359	1.521	89.0%	85%-95%	1.038	1.034	1.027	1.045	1.033	1.040	$81.37	$104.15	$197.89	$383.42	$75.08	$96.10	$182.60	$353.79	$71.82	$93.08	$175.60	$340.50	0.98	1.43	5.07	7.48	0.91	1.32	4.68	6.90	0.87	1.27	4.56	6.70
210003	PRINCE GEORGE	233,152	1.671	90.3%	85%-95%	1.046	1.040	1.033	1.058	1.038	1.046	$87.91	$109.03	$200.19	$397.13	$73.83	$91.56	$168.13	$333.52	$69.78	$88.25	$160.69	$318.72	1.01	1.35	4.68	7.05	0.85	1.14	3.93	5.92	0.81	1.09	3.81	5.71
210057	SHADY GROVE	957,180	1.293	88.4%	85%-95%	1.035	1.031	1.025	1.041	1.030	1.037	$63.35	$77.26	$225.87	$366.49	$68.77	$83.87	$245.18	$397.81	$66.05	$81.40	$236.51	$383.96	0.69	1.12	5.32	7.12	0.75	1.21	5.77	7.73	0.72	1.17	5.63	7.53
210012	SINAI	430,111	1.567	90.6%	85%-95%	1.049	1.041	1.034	1.064	1.039	1.046	$119.30	$123.64	$225.48	$468.42	$106.83	$110.72	$201.92	$419.47	$100.40	$106.61	$192.97	$399.98	1.28	1.59	5.37	8.24	1.15	1.43	4.81	7.38	1.09	1.37	4.65	7.11
210062	SOUTHERN MARYLAND	382,965	1.549	91.1%	85%-95%	1.054	1.042	1.036	1.072	1.040	1.047	$96.11	$102.48	$205.13	$403.72	$87.09	$92.86	$185.86	$365.83	$81.27	$89.31	$177.61	$348.19	1.01	1.26	4.70	6.96	0.92	1.14	4.25	6.31	0.87	1.09	4.11	6.07
210011	ST. AGNES	366,175	1.420	90.3%	85%-95%	1.046	1.040	1.033	1.059	1.038	1.046	$73.98	$105.53	$196.33	$375.84	$73.09	$104.26	$193.96	$371.31	$69.04	$100.48	$185.39	$354.91	0.90	1.42	4.84	7.16	0.89	1.40	4.78	7.07	0.85	1.35	4.63	6.83
210028	ST. MARY	256,399	1.370	88.0%	85%-95%	1.033	1.029	1.023	1.037	1.028	1.034	$81.61	$101.00	$208.71	$391.33	$83.59	$103.45	$213.78	$400.83	$80.59	$100.60	$206.80	$388.00	0.93	1.32	4.53	6.78	0.95	1.35	4.64	6.95	0.92	1.31	4.54	6.77
210022	SUBURBAN	738,676	1.162	86.3%	85%-95%	1.024	1.020	1.016	1.024	1.021	1.024	$53.99	$82.61	$236.88	$373.48	$65.18	$99.73	$285.96	$450.87	$63.65	$97.63	$279.32	$440.60	0.58	1.15	5.34	7.08	0.71	1.39	6.45	8.54	0.69	1.37	6.35	8.40
210063	UM ST. JOSEPH	509,258	1.371	88.7%	85%-95%	1.037	1.033	1.026	1.044	1.032	1.038	$73.46	$98.38	$204.71	$376.54	$75.21	$100.72	$209.59	$385.52	$72.07	$97.64	$201.82	$371.53	0.88	1.41	4.91	7.20	0.90	1.44	5.02	7.37	0.87	1.40	4.89	7.16
210036	UMMC MIDTOWN	47,494	1.689	91.0%	85%-95%	1.062	1.044	1.039	1.084	1.042	1.047	$106.80	$133.97	$192.80	$432.45	$87.76	$111.34	$160.30	$359.40	$80.95	$106.87	$153.13	$340.94	1.27	1.67	4.61	7.45	1.06	1.31	3.83	6.19	0.99	1.25	3.68	5.91
210032	UNION HOSPITAL OF CECIL	192,592	1.421	88.2%	85%-95%	1.034	1.030	1.024	1.040	1.029	1.035	$100.61	$130.73	$165.26	$396.60	$99.32	$129.06	$163.15	$391.54	$95.54	$125.36	$157.57	$378.47	0.96	1.53	4.06	6.54	0.95	1.51	4.01	6.46	0.91	1.46	3.91	6.29
210024	UNION MEMORIAL	199,074	1.594	90.5%	85%-95%	1.048	1.040	1.034	1.061	1.038	1.046	$81.53	$121.05	$214.97	$417.55	$71.75	$106.54	$189.19	$367.48	$67.60	$102.63	$180.82	$351.04	0.97	1.51	5.18	7.66	0.85	1.33	4.56	6.74	0.81	1.28	4.41	6.50
210002	UNIVERSITY OF MARYLAND	100,964	1.598	90.8%	85%-95%	1.051	1.041	1.035	1.066	1.039	1.046	$92.04	$129.35	$183.64	$405.03	$80.80	$113.56	$161.22	$355.58	$75.78	$109.31	$154.07	$339.16	1.19	1.54	4.42	7.15	1.04	1.35	3.88	6.27	0.99	1.30	3.75	6.04
210049	UPPER CHESAPEAKE HEALTH	707,209	1.332	88.8%	85%-95%	1.037	1.033	1.027	1.044	1.032	1.039	$69.94	$90.84	$200.00	$360.78	$73.09	$95.71	$210.72	$380.11	$70.57	$92.75	$202.82	$366.14	0.83	1.31	4.84	6.98	0.88	1.38	5.10	7.36	0.85	1.34	4.97	7.15
210016	WASHINGTON ADVENTIST	474,525	1.403	89.5%	85%-95%	1.040	1.037	1.030	1.050	1.035	1.043	$77.31	$84.69	$208.53	$370.54	$77.35	$84.73	$208.61	$370.69	$73.98	$81.88	$199.99	$355.96	0.84	1.10	4.96	6.90	0.84	1.10	4.97	6.90	0.81	1.06	4.82	6.69
210027	WESTERN MARYLAND	176,075	1.703	91.9%	85%-95%	1.062	1.044	1.039	1.085	1.042	1.047	$101.37	$146.53	$175.16	$423.06	$83.52	$120.72	$144.30	$348.54	$77.01	$115.86	$137.85	$330.72	1.11	1.85	4.39	7.35	0.91	1.53	3.62	6.06	0.86	1.46	3.48	5.80

Exhibit 3a
CY 2021 Milliman Benchmark and Maryland All-Payer Claims Database Cost and Utilization Exhibits
CHSD Claims Incurred 1/2021 through 12/2021 (Adjusted to Estimated Ultimate Incurred)
Summary of Experience by Maryland Region and MSA
Commercial and Individual LOBs, Limited to Members Under Age 65 (Excludes Prescription Drugs)

(1) Risk Score is calculated based on Medical eligibility with valid risk scores, i.e. the risk score shown equals total risk score over total Medical.
(2) Maryland regional benchmark totals are based on an average of the benchmark MSA results. The total across all MSAs is a member-weighted average across all MSAs used in the regional benchmarks.
(3) Normalized to 2021 APCD data for all Maryland counties which has a risk score of 1.4033.
(4) Teaching hospital amounts are removed from Inpatient allowed and paid amounts (except SNF, newborn, and residential treatments) based on the FY2017 per diem rates (trended to FY2021 with an annual rate 2.25%) at the provider level from file we received from Maryland HSCRC on 12/11/2019 named "Hospital file for commercial removal of GME 12-09.xlsx." For benchmark results, this adjustment was made at the MSA level.

		Member Months and Risk		Total Allowed						Allowed PMPM					RVUs PMPM					Allowed Per RVU			
MSA	MSA Name (2)	Medical MMs	2017 HHS Model Platinum Risk Score (1)	Inpatient	Teaching Hospital Adjustment	Inpatient w/ Teaching Adjustment (4)	Outpatient	Prof / Other	Total	Inpatient (4)	Outpatient	Prof / Other	Total	Total - Risk Adjusted (3)	Inpatient	Outpatient	Prof / Other	Total	Total - Risk Adjusted (3)	Inpatient	Outpatient	Prof / Other	Total
All	All MSAs in this Exhibit	122,794,612	1.499							$110.51	$148.66	$190.58	$449.75	$420.95	0.98	1.48	3.81	6.26	5.86	$113.13	$100.51	$50.08	$71.83
MD1	MD1 (Southern MD)	60,340,175	1.465							$108.22	$145.74	$194.75	$448.71	$429.84	0.94	1.49	3.78	6.20	5.94	$115.61	$97.85	$51.53	$72.32
MD2	MD2 (Western MD)	7,107,997	1.544							$115.24	$157.63	$158.75	$431.62	$392.38	1.10	1.66	3.46	6.22	5.65	$105.11	$94.92	$45.87	$69.41
MD3	MD3 (Eastern Shore)	7,722,622	1.562							$114.95	$163.94	$166.10	$445.00	$399.89	1.11	1.67	3.59	6.37	5.72	$103.47	$97.92	$46.33	$69.85
MD4	MD4 (Northern DC Suburbs)	52,025,580	1.395							$110.15	$147.94	$197.30	$455.39	$458.05	0.86	1.38	3.64	5.88	5.92	$127.95	$107.11	$54.22	$77.43
MD5	MD5 (Baltimore Area)	82,135,977	1.491							$105.19	$150.23	$195.36	$450.79	$424.19	0.99	1.55	3.83	6.37	5.99	$106.33	$97.08	$51.03	$70.82
10900	Allentown-Bethlehem-Easton, PA-NJ	2,825,123	1.675	$333,966,858	$9,653,371	$324,313,487	$620,843,586	$443,393,876	$1,388,550,949	$114.80	$219.76	$156.95	$491.50	$411.84	1.18	2.09	3.57	6.84	5.73	$97.20	$104.91	$44.01	$71.83
11244	Anaheim-Santa Ana-Irvine, CA	2,306,165	1.280	$226,043,580	$3,128,325	$222,915,255	$248,279,838	$276,254,217	$747,449,310	$96.66	$107.66	$119.79	$324.11	$355.31	0.59	0.85	2.61	4.05	4.44	$164.42	$126.55	$45.82	$79.97
12060	Atlanta-Sandy Springs-Alpharetta, GA	7,944,026	1.465	$1,017,566,311	$10,977,313	$1,006,588,999	$1,357,735,772	$1,487,654,291	$3,851,979,061	$126.71	$170.91	$187.27	$484.89	$464.55	0.89	1.51	3.41	5.81	5.56	$142.10	$113.51	$54.95	$83.52
12260	Augusta-Richmond County, GA-SC	497,893	1.545	$45,653,347	$2,344,783	$43,308,564	$63,733,198	$70,955,475	$177,997,237	$86.98	$128.01	$142.51	$357.50	$324.71	1.05	1.53	3.44	6.03	5.48	$82.63	$83.47	$41.38	$59.29
13140	Beaumont-Port Arthur, TX	336,657	1.768	$37,826,223	$425,939	$37,400,285	$66,543,305	$51,504,366	$155,447,955	$111.09	$197.66	$152.99	$461.74	$366.39	1.35	1.82	3.69	6.85	5.44	$82.56	$108.82	$41.48	$67.40
14010	Bloomington, IL	670,236	1.478	$58,325,428	$484,004	$57,841,425	$111,799,808	$143,008,655	$312,649,888	$86.30	$166.81	$213.37	$466.48	$442.86	0.81	1.64	4.52	6.97	6.62	$106.70	$101.41	$47.20	$66.88
14454	Boston, MA	2,772,650	1.469	$282,081,422	$22,055,336	$260,026,086	$409,899,903	$600,852,091	$1,270,778,081	$93.78	$147.84	$216.71	$458.33	$437.68	1.06	1.66	3.68	6.40	6.11	$88.36	$89.14	$58.96	$71.67
14860	Bridgeport-Stamford-Norwalk, CT	457,162	1.357	$58,971,370	$2,754,851	$56,216,518	$77,212,518	$102,778,592	$236,207,629	$122.97	$168.90	$224.82	$516.68	$534.49	0.92	1.51	4.10	6.53	6.76	$134.39	$111.60	$54.79	$79.10
15764	Cambridge-Newton-Framingham, MA	3,943,987	1.424	$345,398,710	$20,904,384	$324,494,327	$563,416,243	$846,682,641	$1,734,593,211	$82.28	$142.85	$214.68	$439.81	$433.44	0.92	1.68	3.67	6.27	6.18	$89.49	$84.99	$58.55	$70.18
15804	Camden, NJ	1,331,998	1.571	$162,222,531	$5,462,934	$156,759,596	$212,477,430	$266,950,313	$636,187,339	$117.69	$159.52	$200.41	$477.62	$426.61	1.08	1.57	3.94	6.59	5.89	$108.72	$101.54	$50.85	$72.43
16984	Chicago-Naperville-Evanston, IL	2,565,671	1.405	$218,500,355	$13,042,897	$205,457,458	$404,531,584	$487,368,068	$1,097,357,110	$80.08	$157.67	$189.96	$427.71	$427.11	0.91	1.45	4.23	6.59	6.58	$87.98	$108.77	$44.95	$64.94
17660	Coeur d'Alene, ID	580,703	1.354	$49,608,323	$50,421	$49,557,902	$74,194,096	$85,327,454	$209,079,451	$85.34	$127.77	$146.94	$360.05	$373.07	0.83	1.42	2.92	5.17	5.36	$103.02	$90.12	$50.28	$69.66
18880	Crestview-Fort Walton Beach-Destin, FL	124,317	1.729	$17,022,020	$36,159	$16,985,860	$24,748,759	$20,009,671	$61,744,290	$136.63	$199.08	$160.96	$496.67	$403.06	1.28	2.22	3.52	7.03	5.70	$106.34	$89.67	$45.70	$70.68
19124	Dallas-Plano-Irving, TX	17,754,048	1.549	$2,099,708,621	$25,284,549	$2,074,424,072	$2,756,630,209	$3,390,180,047	$8,221,234,328	$116.84	$155.27	$190.95	$463.06	$419.52	1.08	1.37	4.19	6.65	6.02	$107.96	$113.25	$45.54	$69.67
19300	Daphne-Fairhope-Foley, AL	81,779	1.517	$6,126,180	$64,932	$6,061,247	$8,182,143	$13,479,447	$27,722,837	$74.12	$100.05	$164.83	$339.00	$313.65	1.05	1.70	4.12	6.87	6.36	$70.57	$58.85	$39.98	$49.32
19340	Davenport-Moline-Rock Island, IA-IL	1,215,959	1.471	$85,464,624	$2,822,783	$82,641,841	$176,086,423	$210,984,793	$469,713,058	$67.96	$144.81	$173.51	$386.29	$368.46	0.91	1.76	3.38	6.05	5.78	$74.59	$82.29	$51.28	$63.80
21060	Elizabethtown-Fort Knox, KY	60,912	1.602	$6,663,389	$86,017	$6,577,372	$9,495,833	$8,649,036	$24,722,241	$107.98	$155.89	$141.99	$405.87	$355.63	1.28	1.75	3.52	6.55	5.74	$84.38	$88.97	$40.36	$61.96
22744	Fort Lauderdale-Pompano Beach-Sunrise, FL	1,108,095	1.726	$119,016,224	$1,066,230	$117,949,993	$158,431,438	$156,412,739	$432,794,171	$106.44	$142.98	$141.15	$390.58	$317.57	1.30	1.81	3.15	6.26	5.09	$82.16	$78.78	$44.86	$62.42
23104	Fort Worth-Arlington-Grapevine, TX	7,429,739	1.626	$1,014,047,318	$6,964,170	$1,007,083,147	$1,286,011,786	$1,417,100,976	$3,710,195,909	$135.55	$173.09	$190.73	$499.37	$430.90	1.20	1.44	4.13	6.76	5.83	$113.36	$120.50	$46.20	$73.86
25540	Hartford-East Hartford-Middletown, CT	679,254	1.411	$71,678,615	$3,514,921	$68,163,695	$102,251,937	$128,179,200	$298,594,831	$100.35	$150.54	$188.71	$439.59	$437.32	0.90	1.52	3.72	6.14	6.11	$111.01	$98.99	$50.74	$71.55
25940	Hilton Head Island-Bluffton, SC	79,296	1.530	$10,132,050	$289,159	$9,842,891	$14,045,561	$11,589,332	$35,477,784	$124.13	$177.13	$146.15	$447.41	$410.23	1.23	1.74	3.51	6.49	5.95	$100.73	$101.60	$41.61	$68.96
26420	Houston-The Woodlands-Sugar Land, TX	6,083,178	1.551	$714,393,115	$11,683,826	$702,709,289	$878,482,298	$947,316,507	$2,528,508,094	$115.52	$144.41	$155.73	$415.66	$376.15	1.14	1.38	3.66	6.18	5.59	$101.03	$104.97	$42.51	$67.24
27900	Joplin, MO	153,462	1.565	$25,248,243	$130,988	$25,117,255	$29,604,062	$18,580,277	$73,301,594	$163.67	$192.91	$121.07	$477.65	$428.26	1.45	1.95	2.65	6.05	5.43	$112.69	$99.07	$45.65	$78.93
28740	Kingston, NY	55,370	1.521	$9,566,199	$139,173	$9,427,025	$6,907,913	$11,717,264	$28,052,202	$170.26	$124.76	$211.62	$506.63	$467.32	0.99	1.20	3.85	6.04	5.57	$172.01	$104.02	$55.00	$83.92
29180	Lafayette, LA	1,409,654	1.577	$156,973,672	$1,044,939	$155,928,733	$200,525,907	$252,243,916	$608,698,556	$110.61	$142.25	$178.94	$431.81	$384.22	1.21	1.67	4.10	6.98	6.21	$91.60	$85.29	$43.62	$61.89
29404	Lake County-Kenosha County, IL-WI	398,747	1.437	$36,852,623	$1,081,110	$35,771,514	$74,050,491	$84,683,597	$194,505,602	$89.71	$185.71	$212.37	$487.79	$476.44	0.90	1.60	4.20	6.71	6.55	$99.32	$115.81	$50.57	$72.73
30980	Longview, TX	197,739	1.835	$21,078,281	$121,014	$20,957,267	$53,552,786	$34,409,557	$108,919,609	$105.98	$270.83	$174.02	$550.83	$421.25	1.31	2.38	3.76	7.45	5.69	$80.79	$113.96	$46.30	$73.97
31180	Lubbock, TX	113,342	1.521	$10,223,322	$190,559	$10,032,763	$20,146,954	$14,820,469	$45,000,186	$88.52	$177.75	$130.76	$397.03	$366.30	1.06	1.59	3.26	5.90	5.44	$83.78	$112.06	$40.14	$67.29
31340	Lynchburg, VA	100,679	1.529	$10,505,595	$147,654	$10,357,942	$14,695,114	$13,232,636	$38,285,692	$102.88	$145.96	$131.43	$380.27	$349.11	0.82	1.31	3.08	5.21	4.78	$126.09	$111.50	$42.62	$73.01
33460	Minneapolis-St. Paul-Bloomington, MN-WI	8,174,198	1.382	$769,365,116	$14,483,947	$754,881,169	$863,894,738	$1,777,879,123	$3,396,655,030	$92.35	$105.69	$217.50	$415.53	$421.89	0.86	1.34	3.48	5.67	5.76	$107.90	$79.00	$62.56	$73.28
33860	Montgomery, AL	106,327	1.545	$10,173,530	$34,570	$10,138,960	$8,365,438	$16,561,596	$35,065,993	$95.36	$78.68	$155.76	$329.79	$299.47	1.15	1.51	3.97	6.63	6.02	$83.03	$52.05	$39.19	$49.71
33874	Montgomery County-Bucks County-Chester County, PA	6,600,651	1.643	$700,515,002	$28,572,210	$671,942,791	$829,584,830	$1,192,058,654	$2,693,586,276	$101.80	$125.68	$180.60	$408.08	$348.57	1.11	1.66	4.10	6.86	5.86	$91.66	$75.94	$44.09	$59.47
34940	Naples-Marco Island, FL	143,873	1.688	$15,729,931	$202,096	$15,527,835	$25,089,236	$23,156,903	$63,773,975	$107.93	$174.38	$160.95	$443.27	$368.56	1.13	2.30	3.36	6.80	5.65	$95.54	$75.73	$47.85	$65.22
35004	Nassau County-Suffolk County, NY	1,903,919	1.593	$357,198,967	$14,513,050	$342,685,917	$297,634,723	$502,298,813	$1,142,619,454	$179.99	$156.33	$263.82	$600.14	$528.56	1.09	1.36	4.81	7.26	6.40	$164.77	$114.59	$54.90	$82.64
35084	Newark, NJ-PA	1,378,824	1.556	$154,967,057	$4,870,482	$150,096,575	$194,944,306	$326,573,913	$671,614,794	$108.86	$141.38	$236.85	$487.09	$439.18	0.98	1.48	4.42	6.89	6.21	$111.29	$95.31	$53.53	$70.74
35300	New Haven-Milford, CT	302,001	1.492	$41,301,057	$4,012,102	$37,288,956	$57,134,274	$61,094,566	$155,517,795	$123.47	$189.19	$202.30	$514.96	$484.47	1.00	1.79	3.84	6.63	6.23	$123.85	$105.47	$52.73	$77.71
35614	New York-Jersey City-White Plains, NY-NJ	8,999,017	1.497	$1,382,963,971	$99,271,302	$1,283,692,668	$1,364,058,273	$2,144,417,283	$4,792,168,224	$142.65	$151.58	$238.29	$532.52	$499.28	0.97	1.41	4.33	6.71	6.30	$146.42	$107.44	$55.04	$79.31
36084	Oakland-Berkeley-Livermore, CA	1,156,740	1.155	$144,457,681	$1,565,125	$142,892,556	$183,923,070	$210,254,996	$537,070,622	$123.53	$159.00	$181.77	$464.30	$564.09	0.59	0.95	3.07	4.61	5.60	$209.22	$167.81	$59.16	$100.70
37100	Oxnard-Thousand Oaks-Ventura, CA	378,073	1.355	$47,069,860	$343,117	$46,726,744	$45,322,138	$67,686,060	$159,734,941	$123.59	$119.88	$179.03	$422.50	$437.63	0.83	1.02	3.67	5.51	5.71	$149.21	$117.90	$48.79	$76.62
37460	Panama City, FL	62,610	1.752	$8,964,965	$50,735	$8,914,230	$9,475,133	$11,415,087	$27,804,450	$110.43	$151.34	$182.32	$444.09	$355.79	1.31	1.92	4.00	7.24	5.80	$84.29	$78.66	$45.56	$61.37
37900	Peoria, IL	1,446,268	1.492	$154,527,592	$3,723,320	$150,804,273	$320,293,087	$241,825,991	$712,923,350	$104.27	$221.46	$167.21	$492.94	$463.54	0.93	1.67	3.67	6.27	5.89	$112.03	$132.68	$45.59	$78.66
39300	Providence-Warwick, RI-MA	1,959,197	1.611	$195,053,874	$14,421,041	$180,632,833	$259,207,890	$352,187,909	$792,028,632	$92.20	$132.30	$179.76	$404.26	$352.10	1.09	1.83	3.76	6.68	5.82	$84.50	$72.31	$47.79	$60.50
40220	Roanoke, VA	144,397	1.529	$18,782,431	$435,523	$18,346,908	$20,424,102	$20,360,567	$59,131,577	$127.06	$141.44	$141.00	$409.51	$375.89	1.02	1.28	3.17	5.47	5.02	$124.26	$110.39	$44.49	$74.82
41740	San Diego-Chula Vista-Carlsbad, CA	3,535,147	1.219	$339,932,917	$7,194,265	$332,738,652	$375,244,678	$511,788,210	$1,219,771,540	$94.12	$106.15	$144.77	$345.04	$397.08	0.64	0.99	2.86	4.49	5.17	$146.70	$106.97	$50.67	$76.83
41884	San Francisco-San Mateo-Redwood City, CA	680,819	1.164	$87,605,683	$3,394,160	$84,211,523	$148,597,626	$153,617,004	$386,426,153	$123.69	$218.26	$225.64	$567.59	$684.41	0.61	1.17	3.18	4.96	5.99	$203.01	$186.36	$70.87	$114.33
41940	San Jose-Sunnyvale-Santa Clara, CA	1,624,094	1.214	$212,687,527	$3,702,891	$208,984,636	$293,872,447	$258,692,794	$761,549,878	$128.68	$180.95	$159.28	$468.91	$541.85	0.63	1.04	2.38	4.05	4.68	$205.65	$173.61	$66.90	$115.81
42644	Seattle-Bellevue-Kent, WA	10,131,001	1.401	$985,692,296	$20,940,028	$964,752,268	$1,586,952,251	$1,975,067,381	$4,526,771,900	$95.23	$156.64	$194.95	$446.82	$447.51	0.72	1.55	3.85	6.13	6.13	$132.09	$100.81	$50.63	$72.95
44100	Springfield, IL	61,331	1.469	$6,398,420	$220,281	$6,178,139	$12,295,633	$12,614,252	$31,088,023	$100.73	$200.48	$205.67	$506.89	$484.20	1.06	1.54	3.66	6.25	5.97	$95.28	$130.57	$56.25	$81.12
46140	Tulsa, OK	555,042	1.676	$58,920,524	$781,885	$58,138,639	$79,427,005	$79,776,024	$217,341,668	$104.75	$143.10	$143.73	$391.58	$327.85	1.37	1.65	3.50	6.51	5.45	$76.37	$86.88	$41.12	$60.11
46520	Urban Honolulu, HI	1,357,665	1.425	$147,274,242	$179,638	$147,094,604	$126,853,228	$236,090,993	$510,038,824	$108.34	$93.43	$173.89	$375.67	$369.97	0.78	1.17	3.70	5.65	5.56	$139.10	$79.59	$47.04	$66.49
46540	Utica-Rome, NY	58,571	1.442	$3,918,868	$59,691	$3,859,176	$8,525,523	$9,079,763	$21,464,462	$65.89	$145.56	$155.02	$366.47	$356.58	0.77	1.55	3.53	5.85	5.69	$85.96	$93.81	$43.92	$62.67
47664	Warren-Troy-Farmington Hills, MI	4,431,644	1.627	$401,779,716	$28,207,767	$373,571,950	$517,420,113	$776,696,465	$1,667,688,527	$84.30	$116.76	$175.26	$376.31	$324.57	1.00	1.74	3.97	6.71	5.78	$84.69	$67.09	$44.15	$56.12
48424	West Palm Beach-Boca Raton-Boynton Beach, FL	934,268	1.737	$118,793,699	$990,663	$117,803,036	$126,625,745	$161,422,110	$405,850,891	$126.09	$135.53	$172.78	$434.41	$350.96	1.36	1.77	3.87	7.00	5.65	$92.91	$76.68	$44.59	$62.07
48620	Wichita, KS	422,382	1.435	$65,230,311	$1,310,101	$63,920,211	$48,450,481	$67,892,152	$180,262,844	$151.33	$114.71	$160.74	$426.78	$417.43	1.27	1.37	3.26	5.91	5.78	$118.91	$83.72	$49.24	$72.25
49340	Worcester, MA-CT	2,912,485	1.591	$302,869,146	$23,532,716	$279,336,430	$417,027,738	$606,073,546	$1,302,437,714	$95.91	$143.19	$208.10	$447.19	$394.56	1.02	1.69	3.51	6.22	5.49	$94.45	$84.52	$59.29	$71.90
49700	Yuba City, CA	56,227	1.302	$11,733,931	$59,276	$11,674,655	$10,046,295	$9,451,202	$31,172,152	$207.63	$178.67	$168.09	$554.39	$597.64	0.83	1.03	2.59	4.45	4.80	$248.97	$173.42	$64.95	$124.52

Exhibit 3b
CY 2021 Milliman Benchmark and Marvland All-Paver Claims Database Cost and Utilization Exhibits
CHSD Claims Incurred 1/2021 through 12/2021 (Adiusted to Estimated Ultimate Incurred)
Plan Benefit Normalization Factors by Marvland Reaion and MSA
Commercial and Individual LOBs. Limited to Members Under Aae 65 (Excludes Prescriotion Druas)

(1) Marvland reaional benchmark totals are based on an averaae of the benchmark MSA results. The total across all MSAs is a member-weiahted averaae across all MSAs used in the reaional benchmarks.
(2) Linearly interpolated between coinsurance ranges.
(3) Normalized to 2021 APCD data for all Maryland counties which has a risk score of 1.4033.
(4) Risk adjusted and benefit adjusted amounts are calculated as (risk adjusted amount) / (benefit normalization factor).
(5) Teaching hospital amounts are removed from Inpatient allowed and paid amounts (except SNF, newborn, and residential treatments) based on the FY2017 per diem rates (trended to FY2021 with an annual rate 2.25%) at the provider level from file we received from Maryland HSCRC on 12/11/2019 named "Hospital file for commercial removal of GME 12-09.xlsx." For benchmark results, this adjustment was made at the MSA level.

			RVU Plan Benefit Normalization Factors (2)			Allowed Plan Benefit Normalization Factors (2)			Allowed PMPM				Risk Adiusted Allowed PMPM (3)				Risk Adiusted and Benefit Adiusted Allowed PMPM (4)				RVU PMPM				Risk Adi RVU PMPM (3)				Risk Adiusted and Benefit Adiusted RVU PMPM (4)			
MSA	MSA Name (1)	2017 HHS Model Platinum Risk Score	Inpatient	Outpatient	Prof / Other	Inpatient	Outpatient	Prof / Other	Inpatient (5)	Outpatient	Prof / Other	Total	Inpatient (5)	Outpatient	Prof / Other	Total	Inpatient (5)	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total
All	All MSAs in this Exhibit	1.499	0.964	0.987	0.993	0.951	0.985	0.983	$110.51	$148.66	$190.58	$449.75	$103.43	$139.14	$178.38	$420.95	$108.74	$141.24	$181.45	$431.42	0.98	1.48	3.81	6.26	0.91	1.38	3.56	5.86	0.95	1.40	3.59	5.94
MD1	MD1 (Southern MD)	1.465	0.976	1.002	0.999	0.964	0.997	0.997	$108.22	$145.74	$194.75	$448.71	$103.67	$139.61	$186.56	$429.84	$107.50	$139.99	$187.15	$434.64	0.94	1.49	3.78	6.20	0.90	1.43	3.62	5.94	0.92	1.42	3.62	5.97
MD2	MD2 (Western MD)	1.544	0.982	1.001	0.997	0.967	1.001	0.996	$115.24	$157.63	$158.75	$431.62	$104.76	$143.30	$144.32	$392.38	$108.33	$143.22	$144.96	$396.51	1.10	1.66	3.46	6.22	1.00	1.51	3.15	5.65	1.01	1.51	3.16	5.68
MD3	MD3 (Eastern Shore)	1.562	0.991	1.008	1.001	0.975	1.007	1.000	$114.95	$163.94	$166.10	$445.00	$103.30	$147.32	$149.27	$399.89	$105.93	$146.27	$149.30	$401.50	1.11	1.67	3.59	6.37	1.00	1.50	3.22	5.72	1.01	1.49	3.22	5.72
MD4	MD4 (Northern DC Suburbs)	1.395	0.986	1.012	1.014	0.973	0.995	1.011	$110.15	$147.94	$197.30	$455.39	$110.79	$148.80	$198.45	$458.05	$113.85	$149.49	$196.36	$459.69	0.86	1.38	3.64	5.88	0.87	1.39	3.66	5.92	0.88	1.37	3.61	5.86
MD5	MD5 (Baltimore Area)	1.491	1.001	1.010	1.008	0.993	1.007	1.006	$105.19	$150.23	$195.36	$450.79	$98.98	$141.37	$183.83	$424.19	$99.64	$140.41	$182.80	$422.85	0.99	1.55	3.83	6.37	0.93	1.46	3.60	5.99	0.93	1.44	3.57	5.95
10900	Allentown-Bethlehem-Easton, PA-NJ	1.675	1.033	1.029	1.023	1.037	1.028	1.034	$114.80	$219.76	$156.95	$491.50	$96.19	$184.14	$131.51	$411.84	$92.73	$179.07	$127.21	$399.01	1.18	2.09	3.57	6.84	0.99	1.76	2.99	5.73	0.96	1.71	2.92	5.59
11244	Anaheim-Santa Ana-Irvine, CA	1.280	1.020	1.016	1.012	1.018	1.018	1.019	$96.66	$107.66	$119.79	$324.11	$105.96	$118.02	$131.32	$355.31	$104.13	$115.92	$128.88	$348.92	0.59	0.85	2.61	4.05	0.64	0.93	2.87	4.44	0.63	0.92	2.83	4.38
12060	Atlanta-Sandy Springs-Alpharetta, GA	1.465	1.023	1.019	1.015	1.023	1.021	1.023	$126.71	$170.91	$187.27	$484.89	$121.40	$163.75	$179.41	$464.55	$118.69	$160.41	$175.41	$454.51	0.89	1.51	3.41	5.81	0.85	1.44	3.27	5.56	0.83	1.42	3.22	5.47
12260	Augusta-Richmond County, GA-SC	1.545	1.004	1.000	0.999	0.993	1.006	1.001	$86.98	$128.01	$142.51	$357.50	$79.01	$116.26	$129.44	$324.71	$79.53	$115.62	$129.36	$324.51	1.05	1.53	3.44	6.03	0.96	1.39	3.13	5.48	0.95	1.39	3.13	5.47
13140	Beaumont-Port Arthur, TX	1.768	1.008	1.003	1.002	0.999	1.008	1.005	$111.09	$197.66	$152.99	$461.74	$88.15	$156.84	$121.40	$366.39	$88.28	$155.56	$120.85	$364.69	1.35	1.82	3.69	6.85	1.07	1.44	2.93	5.44	1.06	1.44	2.92	5.42
14010	Bloomington, IL	1.478	1.031	1.027	1.022	1.035	1.027	1.032	$86.30	$166.81	$213.37	$466.48	$81.93	$158.36	$202.57	$442.86	$79.19	$154.21	$196.35	$429.75	0.81	1.64	4.52	6.97	0.77	1.56	4.29	6.62	0.74	1.52	4.20	6.47
14454	Boston, MA	1.469	1.060	1.043	1.038	1.081	1.041	1.047	$93.78	$147.84	$216.71	$458.33	$89.56	$141.18	$206.95	$437.68	$82.85	$135.58	$197.70	$416.13	1.06	1.66	3.68	6.40	1.01	1.58	3.51	6.11	0.96	1.52	3.38	5.85
14860	Bridgeport-Stamford-Norwalk, CT	1.357	1.027	1.024	1.019	1.029	1.024	1.028	$122.97	$168.90	$224.82	$516.68	$127.21	$174.72	$232.57	$534.49	$123.58	$170.59	$226.28	$520.45	0.92	1.51	4.10	6.53	0.95	1.57	4.24	6.76	0.92	1.53	4.17	6.62
15764	Cambridge-Newton-Framingham, MA	1.424	1.049	1.041	1.034	1.064	1.038	1.046	$82.28	$142.85	$214.68	$439.81	$81.08	$140.79	$211.57	$433.44	$76.23	$135.57	$202.19	$413.99	0.92	1.68	3.67	6.27	0.91	1.66	3.61	6.18	0.86	1.59	3.49	5.95
15804	Camden, NJ	1.571	1.037	1.033	1.026	1.044	1.032	1.038	$117.69	$159.52	$200.41	$477.62	$105.12	$142.48	$179.01	$426.61	$100.73	$136.12	$172.37	$411.22	1.08	1.57	3.84	6.59	0.97	1.40	3.52	5.89	0.93	1.36	3.43	5.72
16984	Chicago-Naperville-Evanston, IL	1.405	1.017	1.012	1.010	1.012	1.015	1.015	$80.08	$157.67	$189.96	$427.71	$79.97	$157.45	$189.69	$427.11	$79.00	$155.08	$186.82	$421.00	0.91	1.45	4.23	6.59	0.91	1.45	4.22	6.58	0.89	1.43	4.18	6.50
17660	Coeur d'Alene, ID	1.354	0.979	0.980	0.984	0.959	0.986	0.981	$85.34	$127.77	$146.94	$360.05	$88.43	$132.39	$152.26	$373.07	$92.17	$134.26	$155.23	$381.66	0.83	1.42	2.92	5.17	0.86	1.47	3.03	5.36	0.88	1.50	3.08	5.45
18880	Crestview-Fort Walton Beach-Destin, FL	1.729	1.010	1.005	1.004	1.001	1.010	1.007	$136.63	$199.08	$160.96	$496.67	$110.88	$161.56	$130.62	$403.06	$110.74	$160.01	$129.76	$400.51	1.28	2.22	3.52	7.03	1.04	1.80	2.86	5.70	1.03	1.79	2.85	5.67
19124	Dallas-Plano-Irving, TX	1.549	1.024	1.020	1.016	1.024	1.021	1.024	$116.84	$155.27	$190.95	$463.06	$105.86	$140.67	$173.00	$419.52	$103.37	$137.71	$168.99	$410.07	1.08	1.37	4.19	6.65	0.98	1.24	3.80	6.02	0.96	1.22	3.74	5.91
19300	Daytona Beach-Port Orange, FL	1.517	1.008	1.002	1.001	0.996	1.007	1.002	$74.12	$100.05	$164.83	$339.00	$68.58	$92.57	$152.50	$313.65	$68.98	$91.96	$152.16	$313.09	1.05	1.70	4.12	6.87	0.97	1.57	3.81	6.36	0.97	1.57	3.81	6.36
19340	Davenport-Moline-Rock Island, IA-IL	1.471	0.989	0.986	0.988	0.971	0.993	0.985	$67.96	$144.81	$173.51	$386.29	$64.83	$138.13	$165.50	$368.46	$66.78	$138.03	$168.08	$373.89	0.91	1.76	3.38	6.05	0.87	1.68	3.23	5.78	0.88	1.70	3.27	5.85
21060	Elizabethtown-Fort Knox, KY	1.602	1.012	1.008	1.006	1.005	1.012	1.009	$107.98	$155.89	$141.99	$405.87	$94.62	$136.60	$124.42	$355.63	$94.16	$135.04	$123.27	$352.47	1.28	1.75	3.52	6.55	1.12	1.54	3.08	5.74	1.11	1.52	3.07	5.70
22744	Fort Lauderdale-Pompano Beach-Sunrise, FL	1.726	1.017	1.013	1.010	1.014	1.016	1.016	$106.44	$142.98	$141.15	$390.58	$86.55	$116.25	$114.77	$317.57	$85.37	$114.41	$112.96	$312.75	1.30	1.81	3.15	6.26	1.05	1.48	2.56	5.09	1.04	1.46	2.53	5.02
23104	Fort Worth-Arlington-Grapevine, TX	1.626	1.023	1.019	1.015	1.023	1.021	1.023	$135.55	$173.09	$190.73	$499.37	$116.96	$149.36	$164.58	$430.90	$114.32	$146.29	$160.88	$421.49	1.20	1.44	4.13	6.76	1.03	1.24	3.56	5.83	1.01	1.22	3.51	5.73
25540	Hartford-East Hartford-Middletown, CT	1.411	1.027	1.023	1.018	1.029	1.024	1.027	$100.36	$150.54	$188.71	$439.59	$99.83	$149.76	$187.73	$437.32	$97.04	$146.26	$182.73	$426.03	0.90	1.52	3.72	6.14	0.90	1.51	3.70	6.11	0.88	1.48	3.63	5.99
25940	Hilton Head Island-Bluffton, SC	1.530	1.010	1.005	1.004	1.002	1.010	1.007	$124.13	$177.13	$146.15	$447.41	$113.81	$162.41	$134.01	$410.23	$113.84	$160.83	$133.10	$407.57	1.23	1.74	3.51	6.49	1.13	1.60	3.22	5.95	1.12	1.59	3.21	5.92
26420	Houston-The Woodlands-Sugar Land, TX	1.551	1.018	1.014	1.011	1.015	1.017	1.017	$115.52	$144.41	$155.73	$415.66	$104.54	$130.68	$140.92	$376.15	$102.97	$128.52	$138.56	$370.05	1.14	1.38	3.66	6.18	1.03	1.25	3.31	5.59	1.02	1.23	3.28	5.52
27900	Joplin, MO	1.565	0.938	0.958	0.971	0.916	0.958	0.966	$163.67	$192.91	$121.07	$477.65	$146.75	$172.96	$108.55	$428.26	$160.18	$180.62	$112.36	$453.15	1.45	1.95	2.65	6.05	1.30	1.75	2.38	5.43	1.39	1.82	2.45	5.66
28740	Kingston, NY	1.521	1.035	1.031	1.025	1.041	1.030	1.037	$170.26	$124.76	$211.62	$506.63	$157.04	$115.08	$195.20	$467.32	$150.80	$111.68	$188.26	$450.74	0.99	1.20	3.85	6.04	0.91	1.11	3.55	5.57	0.88	1.07	3.46	5.42
29180	Lafayette, LA	1.577	0.817	0.897	0.931	0.795	0.886	0.923	$110.61	$142.25	$178.94	$431.81	$86.42	$126.57	$159.22	$384.22	$123.80	$142.80	$172.49	$439.09	1.21	1.67	4.10	6.98	1.07	1.48	3.65	6.21	1.31	1.65	3.92	6.89
29404	Lake County-Kenosha County, IL-WI	1.437	1.017	1.013	1.010	1.013	1.016	1.016	$89.71	$185.71	$212.37	$487.79	$87.62	$181.39	$207.43	$476.44	$86.46	$178.54	$204.21	$469.21	0.90	1.60	4.20	6.71	0.88	1.57	4.10	6.55	0.87	1.55	4.06	6.47
30980	Longview, TX	1.835	1.004	1.000	0.999	0.993	1.006	1.001	$105.98	$270.83	$174.02	$550.83	$81.05	$207.12	$133.08	$421.25	$81.60	$205.98	$133.01	$420.60	1.31	2.38	3.76	7.45	1.00	1.82	2.87	5.69	1.00	1.82	2.88	5.69
31180	Lubbock, TX	1.521	0.994	0.990	0.991	0.978	0.997	0.989	$88.52	$177.75	$130.76	$397.03	$81.67	$163.99	$120.64	$366.30	$83.53	$164.41	$122.00	$369.94	1.06	1.59	3.26	5.90	0.97	1.46	3.01	5.44	0.98	1.48	3.03	5.49
31340	Lynchburg, VA	1.529	1.010	1.006	1.004	1.002	1.010	1.007	$102.88	$145.96	$131.43	$380.27	$94.45	$134.00	$120.66	$349.11	$94.24	$132.65	$119.79	$346.68	0.82	1.31	3.08	5.21	0.75	1.20	2.83	4.78	0.74	1.19	2.82	4.76
33460	Minneapolis-St. Paul-Bloomington, MN-WI	1.382	0.572	0.728	0.817	0.555	0.690	0.768	$92.35	$105.69	$217.50	$415.53	$93.76	$107.30	$220.83	$421.89	$169.97	$155.62	$287.58	$612.16	0.86	1.34	3.48	5.67	0.87	1.36	3.53	5.76	1.52	1.87	4.32	7.70
33860	Montgomery, AL	1.545	1.009	1.005	1.003	1.000	1.009	1.006	$95.36	$78.68	$155.76	$329.79	$95.59	$71.44	$141.44	$299.47	$86.57	$70.80	$140.63	$297.99	1.15	1.51	3.97	6.63	1.04	1.37	3.61	6.02	1.03	1.37	3.60	6.00
33874	Montgomery County-Bucks County-Chester County, PA	1.643	1.021	1.017	1.013	1.019	1.019	1.020	$101.80	$125.68	$180.60	$408.08	$86.95	$107.35	$154.26	$348.57	$85.37	$105.39	$151.29	$342.05	1.11	1.66	4.10	6.86	0.95	1.41	3.50	5.86	0.93	1.39	3.45	5.77
34940	Naples-Marco Island, FL	1.688	1.016	1.012	1.009	1.011	1.015	1.014	$107.93	$174.38	$160.95	$443.27	$89.74	$144.99	$133.83	$368.56	$88.75	$142.88	$131.97	$363.60	1.13	2.30	3.36	6.80	0.94	1.91	2.80	5.65	0.92	1.89	2.77	5.59
35004	Nassau County-Suffolk County, NY	1.593	1.021	1.017	1.013	1.019	1.019	1.020	$179.99	$156.33	$263.82	$600.14	$158.52	$137.68	$232.36	$528.56	$155.55	$135.13	$227.79	$518.46	1.09	1.36	4.81	7.26	0.96	1.20	4.23	6.40	0.94	1.18	4.18	6.30
35084	Newark, NJ-PA	1.556	1.035	1.031	1.025	1.040	1.030	1.036	$108.86	$141.38	$236.85	$487.09	$98.15	$127.48	$213.55	$439.18	$94.34	$123.77	$206.12	$424.23	0.98	1.48	4.42	6.89	0.88	1.34	3.99	6.21	0.85	1.30	3.89	6.04
35300	New Haven-Milford, CT	1.492	1.035	1.031	1.025	1.041	1.030	1.037	$123.47	$189.19	$202.30	$514.96	$116.16	$177.99	$190.32	$484.47	$111.59	$172.76	$183.61	$467.96	1.00	1.79	3.84	6.63	0.94	1.69	3.61	6.23	0.91	1.64	3.52	6.06
35614	New York-Jersey City-White Plains, NY-NJ	1.497	1.012	1.007	1.005	1.004	1.011	1.009	$142.65	$151.58	$238.29	$532.52	$133.74	$142.12	$223.42	$499.28	$133.16	$140.53	$221.44	$495.14	0.97	1.41	4.33	6.71	0.91	1.32	4.06	6.30	0.90	1.31	4.04	6.25
36084	Oakland-Berkeley-Livermore, CA	1.155	1.036	1.032	1.026	1.043	1.031	1.038	$123.53	$159.00	$181.77	$464.30	$150.08	$193.18	$220.83	$564.09	$143.96	$187.36	$212.81	$544.13	0.59	0.95	3.07	4.61	0.72	1.15	3.73	5.60	0.69	1.12	3.64	5.45
37100	Oxnard-Thousand Oaks-Ventura, CA	1.355	1.025	1.021	1.016	1.025	1.022	1.025	$123.59	$119.88	$179.03	$422.50	$128.02	$124.17	$185.44	$437.63	$124.89	$121.50	$181.00	$427.39	0.83	1.02	3.67	5.51	0.86	1.05	3.80	5.71	0.84	1.03	3.74	5.61
37460	Panama City, FL	1.752	1.001	0.997	0.997	0.988	1.001	0.997	$110.43	$151.34	$182.32	$444.09	$88.46	$121.25	$146.07	$355.79	$89.53	$120.89	$146.55	$356.97	1.31	1.92	4.00	7.24	1.05	1.54	3.21	5.80	1.05	1.55	3.22	5.81
37900	Peoria, IL	1.492	1.044	1.040	1.032	1.056	1.037	1.046	$104.27	$221.46	$167.21	$492.94	$98.05	$208.25	$157.23	$463.54	$92.87	$200.79	$150.29	$443.94	0.93	1.67	3.67	6.27	0.88	1.57	3.45	5.89	0.84	1.51	3.34	5.69
39300	Providence-Warwick, RI-MA	1.611	1.033	1.029	1.023	1.038	1.029	1.034	$92.20	$132.30	$179.76	$404.26	$80.30	$115.23	$156.56	$352.10	$77.39	$112.04	$151.41	$340.84	1.09	1.83	3.76	6.68	0.95	1.59	3.28	5.82	0.92	1.55	3.20	5.67
40220	Roanoke, VA	1.529	1.014	1.010	1.008	1.009	1.014	1.012	$127.06	$141.44	$141.00	$409.51	$116.63	$129.83	$129.43	$375.89	$115.82	$128.10	$127.87	$371.58	1.02	1.28	3.17	5.47	0.94	1.18	2.91	5.02	0.93	1.16	2.89	4.98
41740	San Diego-Chula Vista-Carlsbad, CA	1.219	0.645	0.826	0.875	0.655	0.830	0.861	$94.12	$106.15	$144.77	$345.04	$108.32	$122.16	$166.61	$397.08	$165.28	$147.16	$193.58	$506.01	0.64	0.99	2.86	4.49	0.74	1.14	3.29	5.17	1.14	1.38	3.76	6.28
41884	San Francisco-San Mateo-Redwood City, CA	1.164	1.053	1.042	1.036	1.070	1.040	1.047	$123.69	$218.26	$225.64	$567.59	$149.15	$263.18	$272.07	$684.41	$139.34	$253.17	$259.98	$652.49	0.61	1.17	3.18	4.96	0.73	1.41	3.84	5.98	0.70	1.36	3.71	5.76
41940	San Jose-Sunnyvale-Santa Clara, CA	1.214	1.040	1.037	1.030	1.050	1.035	1.043	$128.68	$180.95	$159.28	$468.91	$148.69	$209.09	$184.06	$541.85	$141.67	$202.09	$176.47	$520.23	0.63	1.04	2.38	4.05	0.72	1.20	2.75	4.68	0.69	1.16	2.67	4.53
42644	Seattle-Bellevue-Kent, WA	1.401	1.014	1.010	1.007	1.008	1.013	1.012	$95.23	$156.64	$194.95	$446.82	$95.37	$156.88	$195.25	$447.51	$94.63	$154.86	$193.03	$442.52	0.72	1.55	3.85	6.13	0.72	1.56	3.86	6.13	0.71	1.54	3.83	6.08
44100	Springfield, IL	1.469	1.008	1.004	1.002	0.999	1.009	1.005	$100.73	$200.48	$205.67	$506.89	$96.23	$191.51	$196.47	$484.20	$96.37	$189.89	$195.50	$481.70	1.08	1.54	3.68	6.25	1.01	1.47	3.49	5.97	1.00	1.46	3.48	5.95
46140	Tulsa, OK	1.676	0.780	0.883	0.920	0.766	0.876	0.911	$104.75	$143.10	$143.73	$391.58	$87.70	$119.81	$120.34	$327.85	$114.54	$136.72	$132.12	$383.38	1.37	1.65	3.50	6.51	1.15	1.38	2.93	5.45	1.47	1.56	3.18	6.22
46520	Urban Honolulu, HI	1.425	1.041	1.037	1.030	1.050	1.035	1.043	$108.34	$93.43	$173.89	$375.67	$106.70	$92.02	$171.26	$369.97	$101.62	$88.92	$164.15	$354.68	0.78	1.17	3.70	5.65	0.77	1.16	3.64	5.56	0.74	1.11	3.54	5.39
46540	Utica-Rome, NY	1.442	1.019	1.015	1.011	1.016	1.017	1.018	$85.89	$145.56	$155.02	$366.47	$84.11	$141.63	$150.84	$356.58	$83.11	$139.24	$148.24	$350.59	0.77	1.55	3.53	5.85	0.75	1.51	3.43	5.69	0.73	1.49	3.40	5.62
47664	Warren-Troy-Farmington Hills, MI	1.627	1.018	1.014	1.011	1.014	1.017	1.017	$84.30	$116.76	$175.26	$376.31	$72.71	$100.70	$151.16	$324.57	$71.67	$99.07	$148.70	$319.44	1.00	1.74	3.97	6.71	0.86	1.50	3.42	5.78	0.84	1.48	3.39	5.71
48424	West Palm Beach-Boca Raton-Boynton Beach, FL	1.737	1.013	1.009	1.007	1.007	1.012	1.011	$126.09	$135.53	$172.78	$434.41	$101.87	$109.50	$139.59	$350.96	$101.20	$108.15	$138.12	$347.47	1.36	1.77	3.87	7.00	1.10	1.43	3.13	5.65	1.08	1.42	3.11	5.61
48620	Wichita, KS	1.435	0.982	0.982	0.985	0.963	0.989	0.982	$151.33	$114.71	$160.74	$426.78	$148.02	$112.20	$157.22	$417.43	$153.68	$113.50	$160.08	$427.25	1.27	1.37	3.26	5.91	1.24	1.34	3.19	5.78	1.27	1.36	3.24	5.87
49340	Worcester, MA-CT	1.581	1.056	1.052	1.047	1.075	1.060	1.067	$86.91	$143.19	$208.19	$447.19	$84.62	$139.33	$203.60	$394.56	$79.68	$121.93	$175.42	$375.53	1.02	1.68	3.51	6.22	0.90	1.49	3.10	5.48	0.85	1.43	2.98	5.27
49700	Yuba City, CA	1.333	1.033	1.029	1.023	1.038	1.029	1.034	$207.63	$178.67	$168.09	$554.39	$223.83	$192.61	$181.20	$597.64	$215.66	$187.25	$175.21	$578.13	0.83	1.03	2.59	4.45	0.90	1.11	2.79	4.80	0.87	1.08	2.73	4.68

Milliman GlobalRVUs

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Milliman

What are GlobalRVUs?[1]

GlobalRVUs are a relative value unit system covering the entire range of services, from hospital to physician, durable medical equipment (DME) to lab, even pharmacy. Use of Relative Value Units (RVUs) is a common practice with payment schedules. The RVUs define cost relativities between services enabling entire schedules to be easily compared. The most well-known examples of this are Medicare's physician RBRVS and Medicare's inpatient diagnosis-related group (DRG) weights. These RVU systems are limited since they focus on a particular type of provider, such as physician or inpatient hospital, and do not relate services across provider types. GlobalRVUs solve this disconnect by providing an RVU system that covers all healthcare services.

GlobalRVUs permit different services to be combined for analysis and have a wide variety of applications, including:

- **Analyzing claims experience.** GlobalRVUs allow you to separate unit cost versus utilization efficiency.
- **Evaluating provider contracts.** GlobalRVUs allow for unit cost aggregation of hospital and physician services.
- **Developing episodes of care and bundled payments.** GlobalRVUs allow the user to understand and remove the unit cost biases in the experience data.
- **Setting and analyzing global risk targets,** particularly across multiple provider organizations with differing contract structures, such as accountable care organizations. GlobalRVUs can be used to analyze opportunities for improvement—for example, identifying high-cost specialists or hospitals in the experience data.

Allowed dollar claims data can be normalized with GlobalRVUs to put the services on a common basis permitting this range of analyses. If charges are not available, GlobalRVUs can still be used as a proxy for charge levels, allowing for different types of utilization efficiency analyses (e.g., episodes and PMPM) and case mix studies.

An added advantage of GlobalRVUs in utilization analyses is that, since potentially confidential average charges are not being used, results can be released externally without breaching confidentiality provisions. The RVUs have taken the place of the allowed charges, thus removing the limitations that might be placed on distributing the analysis.

About GlobalRVUs

GlobalRVUs consist of three separate components:

- **Medicare physician RVUs.** Physician claims are assigned GlobalRVUs based on Medicare's fee schedules, including DME, lab, ambulance and anesthesia. For services paid using Medicare's RBRVS RVUs for physicians, the GlobalRVUs are equal to Medicare's RVUs. The RVU adjudication process reflects Medicare's claim adjudication rules to adjust the assigned RVUs for modifiers, multiple procedure discounting, and bundling.
- **RBRVS for Hospitals™.** RBRVS for Hospitals is a proprietary Milliman product that contains a RVU schedule for hospitals that is consistent with Medicare's physician RVU schedule. A more detailed description of RBRVS for Hospitals is available on the Milliman website.[2]
- **Prescription drug RVUs.** Prescription drug RVUs are developed based upon average wholesale price (AWP) information. AWP is assigned to each claim by National Drug Code (NDC), adjusted for discounts, dispensing fees and anticipated rebates, then converted to an RVU that is consistent with Medicare's physician RVUs and the RBRVS for Hospitals RVUs.

1 Milliman solutions: GlobalRVUs. http://milliman.com/GlobalRVUs

2 Milliman RBRVS for Hospitals. http://www.milliman.com/expertise/healthcare/products-tools/rbrvs/pdfs/milliman-rbrvs-for-hospitals.pdf

Using GlobalRVUs

TABLE A: CALCULATING A CONVERSION FACTOR

Once RVUs are assigned to services, conversion factors are calculated by dividing total dollars by the RVUs. This can be done by individual procedure or aggregated at any level, even in total across all services.

TABLE A: CALCULATING A CONVERSION FACTOR

	ALLOWED CHARGES	GLOBAL RVUS
INPATIENT SERVICES		
APR 047-1	$8,000	131.583
OUTPATIENT SERVICES		
82441	$20	.0241
74150	$425	3.600
PROFESSIONAL SERVICES		
99284	$122	3.370
PRESCRIPTION DRUGS		
00037580030	$62	1.477
TOTAL	**$8,629**	**140.271**
CONVERSION FACTOR (ALLOWED CHARGES/RVUS)		$61.52

Once conversion factors are calculated, they can be compared and analyzed. Due to the multiple applications of GlobalRVUs, a variety of analyses may be performed. Two examples are provided below.

TABLE B: BENCHMAKING PROVIDER CONTRACTS BY CARRIER

For this example, different types of provider contracts are evaluated for multiple carriers and benchmarked to a base contract. Using GlobalRVUs, average conversion factors are calculated for inpatient, outpatient, and physician services, and can be combined for an overall comparison between carriers. The GlobalRVUs provide case-mix adjustment across contracts with different service mixes without requiring claims under one contract to be repriced under a different contract.

TABLE C: COMPARISON OF DELIVERY SYSTEMS

For this example, the claims experience for six provider groups is normalized with the GlobalRVUs to isolate unit cost and utilization differences. Conversion factors are calculated as the average allowed charge per RVU. These conversion factors are then benchmarked relative to the area average, thus showing the unit price difference between groups. When this relativity is divided out of the starting allowed PMPM, the adjusted allowed

TABLE B: BENCHMARKING PROVIDER CONTRACTS BY CARRIER

	BASE	CARRIER 1		CARRIER 2	
TYPE OF SERVICE	CONVERSION FACTOR	CONVERSION FACTOR	RELATIVE TO BASE	CONVERSION FACTOR	RELATIVE TO BASE
FACILITY INPATIENT	$62.40	$65.58	1.05	$66.58	1.07
FACIILITY OUTPATIENT	$64.09	$64.23	1.00	$68.23	1.06
PROFESSIONAL	$55.98	$57.25	1.02	$62.07	1.11
TOTAL	$60.09	$61.52	1.02	$65.10	1.08

TABLE C: COMPARISION OF DELIVERY SYSTEMS

PRIMARY CARE GROUP	RISK-ADJUSTED PMPM ALLOWED	RELATIVE COST	PMPM RVUS	UTILIZATION EFFICIENCY	CONVERSION FACTOR	RELATIVE UNIT PRICE
AREA AVERAGE	$373.70	1.000	6.175	1.000	$60.52	1.000
GROUP A	$344.38	0.922	6.196	1.004	$55.58	0.918
GROUP B	$421.67	1.128	6.447	1.044	$65.41	1.081
GROUP C	$344.95	0.923	5.902	0.956	$58.45	0.966
GROUP D	$371.92	0.995	6.042	0.979	$61.56	1.017
GROUP E	$366.31	0.980	5.908	0.957	$62.00	1.024
GROUP F	$393.11	1.052	6.439	1.043	$61.05	1.009

PMPM between groups represents differences in resource utilization. This is shown in the last column benchmarked relative to the area average. Note that the utilization efficiency can also be derived directly from the PMPM RVUs if no allowed charge information is available.

Implementing GlobalRVUs

The GlobalRVUs can be easily attached to any data set using Milliman software. In addition to an interface to run the RVU assignment software, we provide a series of reports, available through Microsoft Excel, that allow you to review the quality of the data input, ensure that the RVUs have been properly assigned, and review the results of the RVU assignments.

Milliman

Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in life insurance and financial services, property & casualty insurance, healthcare, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

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Attachment B-1
CY 2021 Milliman Benchmark and Maryland All-Payer Claims Database Cost and Utilization Exhibits
2021 Maryland APCD - Data Validation
Summary of Membership, Medical Paid, and Medical Paid PMPM
Comparison of Maryland APCD and NAIC Annual Statement
Limited to Commercial Line of Business (1)

	P020	P030		P820	P870	P500	P520		P130	P131	P132		P160	P180	P320	
	Aetna Life Insurance Co.	Aetna Health, Inc.	Aetna Subtotal	UnitedHealthcare Insurance Co.	United Healthcare of the Mid-Atlantic, Inc. HBX	MAMSI Life and Health Ins. Co.	MD-Individual Practice Association, Inc.	United Subtotal	CareFirst BlueChoice, Inc.	CareFirst of Maryland, Inc.	Group Hospitalization & Medical Services, Inc. (GHMSI)	CareFirst Subtotal	Cigna Health & Life Insurance Co., Inc.	Connecticut General Life Ins. Co.	Golden Rule Insurance Co.	Total
Member Months																
APCD	425,133	240,797	665,930	1,706,185	112,761	169,651	0	1,988,597	3,727,384	132,067	400,403	4,259,854	1,192,134	421,909	0	8,528,424
NAIC Annual Statement (2)	n/a	143,492	143,492	n/a	93,585	168,881	n/a	262,466	3,288,983	136,360	299,700	3,725,043	n/a	n/a	n/a	4,131,001
Difference	n/a	97,305	522,438	n/a	19,176	770	n/a	1,726,131	438,401	-4,293	100,703	534,811	n/a	n/a	n/a	4,397,423
% Difference	n/a	67.8%	364.1%	n/a	20.5%	0.5%	n/a	657.7%	13.3%	-3.1%	33.6%	14.4%	n/a	n/a	n/a	106.4%
Total Paid Medical and Rx - Exclusions																
APCD - Medical and Rx	$998,350,698	$118,235,222	$1,116,585,920	$1,556,007,491	$39,399,037	$76,844,019	$0	$1,672,250,547	$2,113,897,036	$2,800,503,198	$1,246,971,146	$6,161,371,380	$1,140,362,522	$187,351,891	$7,305,577	$10,285,227,837
Excluded - MA, Med Sup, Unknown	$452,682,988	$3,282,365	$455,965,353	$7,733,306	$0	$0	$0	$7,733,306	$60,815	$77,132,407	$8,271,376	$85,464,598	$0	$0	$123,619	$549,286,876
Excluded - ASO, FEB	$340,334,986	$2,810,931	$343,145,917	$751,876,767	$0	$0	$0	$751,876,767	$15,840	$2,067,486,701	$603,204,457	$2,670,706,998	$601,598,975	$10,716,580	$0	$4,378,045,237
Excluded - No Membership	$26,029,699	$5,393,524	$31,423,223	$71,536,475	$2,610,325	$4,475,798	$0	$78,622,598	$121,034,470	$107,696,861	$49,301,776	$278,033,107	$34,860,565	$8,925,054	$0	$431,864,547
Excluded - IND	$6,049,439	$0	$6,049,439	$0	$0	$0	$0	$0	$925,474,281	$218,206,259	$134,932,192	$1,278,612,732	$0	$0	$7,181,958	$1,291,844,129
Paid Medical and Rx and NAIC Annual Statement																
APCD - Medical (2)	$130,922,320	$83,485,379	$214,407,699	$535,793,587	$26,422,188	$53,470,909	$0	$615,686,684	$830,865,061	$206,463,564	$299,479,105	$1,336,807,730	$337,838,302	$105,127,188	$0	$2,609,867,602
APCD - Rx	$42,331,266	$23,263,023	$65,594,289	$189,067,356	$10,366,524	$18,897,312	$0	$218,331,192	$236,446,569	$123,517,406	$151,782,240	$511,746,215	$166,064,680	$62,583,070	$0	$1,024,319,446
Rx Rebate Estimate (3)	27%	28%	27%	n/a	39%	35%	n/a	5%	30%	26%	26%	28%	28%	n/a	n/a	
APCD - Total (Net of Rx Rebates)	$161,971,325	$100,137,806	$262,109,131	$724,860,943	$32,785,467	$65,660,941	$0	$823,307,351	$996,841,381	$297,391,295	$411,443,057	$1,705,675,733	$456,809,369	$167,710,258	$0	$3,415,611,842
NAIC Annual Statement (4)	$174,999,153	$60,984,355	$235,983,508	$0	$28,298,318	$66,223,249	$0	$94,521,567	$1,295,180,441	$55,148,440	$132,828,360	$1,483,157,241	$487,924,324	$175,628	$0	$2,301,762,268
Difference	($13,027,828)	$39,153,451	$26,125,623	$724,860,943	$4,487,149	($562,308)	$0	$728,785,784	($298,339,060)	$242,242,855	$278,614,697	$222,518,492	($31,114,955)	$167,534,630	$0	$1,113,849,574
% Difference	-7.4%	64.2%	11.1%	n/a	15.9%	-0.8%	n/a	771.0%	-23.0%	439.3%	209.8%	15.0%	-6.4%	95391.8%	n/a	48.4%
Paid Medical and Rx PMPM																
APCD (3)	$380.99	$415.86	$393.60	$424.84	$290.75	$387.04	n/a	$414.01	$267.44	$2,251.82	$1,027.57	$400.41	$383.19	$397.50	n/a	$400.50
NAIC Annual Statement (4)	n/a	$425.00	n/a	n/a	$302.38	$392.13	n/a	$360.13	$393.79	$404.43	$443.20	$398.16	n/a	n/a	n/a	$396.67
Difference	n/a	($9.14)	n/a	n/a	($11.63)	($5.09)	n/a	$53.89	($126.36)	$1,847.39	$584.37	$2.25	n/a	n/a	n/a	$3.82
% Difference	n/a	-2.2%	n/a	n/a	-3.8%	-1.3%	n/a	15.0%	-32.1%	456.8%	131.9%	0.6%	n/a	n/a	n/a	1.0%

Notes:

1) For the APCD, commercial claims are identified by the market_segment data field. The following types are considered commercial:

market_segment	Description
5	Private Employer Sponsored or Other Group
7	Public Employee - Other
8	Small Business Options Program (SHOP) not sold on MHBE
C	Small Business Options Program (SHOP) sold on MHBE

2) Incurred in CY 2021, paid through March 2022. From the 2021 annual data file received on 12/04/2022. Excludes claim records with no corresponding membership.
3) Rx rebate estimated from the supplemental healthcare exhibit part 1 from lines 2.2 and 2.3 for the small and large group lines of business.
4) Estimated incurred (i.e. paid plus change in reserve). For the following carriers, we used APCD member months because NAIC member month values are unavailable: Aetna Life Insurance Co., UnitedHealthcare Insurance Co., and Cigna Health.

Attachment B-2
CY 2021 Milliman Benchmark and Maryland All-Payer Claims Database Cost and Utilization Exhibits
2021 Maryland APCD - Data Validation
Summary of Data Exclusions
Paid Amounts By Payers

	Paid Amounts Payers Included in Attachment B-1												Paid Amounts Payers Excluded from Attachment B-1								
Pnum	P020	P030	P820	P870	P500	P130	P131	P132	P160	P180	P320	P520	P824	P760	T031	T050	T060	T090	T140	T820	
Payer Name	Aetna Life Insurance Co.	Aetna Health, Inc.	UnitedHealthcare Insurance Co.	United Healthcare of the Mid-Atlantic, Inc. HBX	MAMSI Life and Health Ins. Co.	CareFirst BlueChoice, Inc.	CareFirst of Maryland, Inc.	Group Hospitalization & Medical Services, Inc. (GHMSI)	Cigna Health & Life Insurance Co., Inc.	Connecticut General Life Ins. Co.	Golden Rule Insurance Co.	MD-Individual Practice Association, Inc.	United Healthcare - Student Health	State Farm Mutual Automobile Ins. Co.	CFA, LLC/CareFirst Administrators	Group Benefit Services, Inc.	Harrington Health and Health Plan Services	The Loomis Company	HealthSCOPE Benefits, Inc.	UMR, Inc.	All
Reported Raw Total (Medical + Rx)	$1,215,668,005	$147,800,141	$1,984,840,216	$49,714,789	$97,760,405	$2,520,610,516	$3,497,034,612	$1,535,918,047	$1,416,734,325	$230,114,473	$9,264,612	$0	$9,499,364	$5,085,195	$29,909,314	$0	$3,676,850	$14,631,119	$0	$25,025,433	$12,793,287,416
Medical	$1,015,558,458	$118,809,867	$1,631,740,523	$36,738,100	$74,387,776	$1,883,202,253	$2,918,534,183	$1,281,438,397	$1,035,316,911	$153,712,775	$8,472,541	$0	$7,518,810	$5,085,195	$29,909,314	$0	$1,913,930	$14,631,119	$0	$24,948,863	$10,241,919,015
Inst	$528,424,841	$58,123,635	$973,940,392	$21,179,051	$45,098,818	$984,257,648	$1,527,156,668	$602,109,795	$493,248,681	$61,195,750	$4,435,857	$0	$2,913,632	$2,701,224	$15,667,382	$0	$531,383	$7,675,994	$0	$14,934,713	$5,343,595,464
Prof	$487,133,617	$60,686,232	$657,800,131	$15,559,049	$29,288,958	$898,944,605	$1,391,377,515	$679,328,602	$542,068,230	$92,517,025	$4,036,684	$0	$4,605,178	$2,383,971	$14,241,932	$0	$1,382,547	$6,955,125	$0	$10,014,150	$4,898,323,551
Rx	$200,109,547	$28,990,274	$353,099,693	$12,976,689	$23,372,629	$637,408,263	$578,500,429	$254,479,650	$381,417,414	$76,401,698	$792,071	$0	$1,980,554	$0	$0	$0	$1,762,920	$0	$0	$76,570	$2,551,368,401
Medical Only	$1,015,558,458	$118,809,867	$1,631,740,523	$36,738,100	$74,387,776	$1,883,202,253	$2,918,534,183	$1,281,438,397	$1,035,316,911	$153,712,775	$8,472,541	$0	$7,518,810	$5,085,195	$29,909,314	$0	$1,913,930	$14,631,119	$0	$24,948,863	$10,241,919,015
Exclude Service Dates not in CY 2021	$185,754,174	$23,785,947	$342,783,693	$8,637,204	$16,634,172	$373,653,732	$574,526,854	$249,814,068	$238,324,688	$36,263,689	$1,742,029	$0	$1,852,293	$1,101,280	$6,997,215	$0	$447,708	$2,876,646	$0	$4,620,098	$2,069,815,490
Subtotal (Starting Point)	$829,804,284	$95,023,920	$1,288,956,830	$28,100,896	$57,753,604	$1,509,548,521	$2,344,007,329	$1,031,624,329	$796,992,223	$117,449,086	$6,730,512	$0	$5,666,517	$3,983,915	$22,912,099	$0	$1,466,222	$11,754,473	$0	$20,328,765	$8,172,103,525
Claim Detail Exclusions																					
Institutional Data BillType Exclusions	$22,163,949	$2,851,029	$74,369,142	$1,397,575	$4,156,771	$17,774,902	$97,311,731	$30,086,619	$2,031,750	$3,479,808	$33,836	$0	$396,087	$70,068	$544,072	$0	$519	$360,309	$0	$171,454	$257,199,621
Professional Non-OP claims	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Routine Dental and Orthodontic	$147,025	$14,106	$42,776	$44	$75	$3,479,474	$1,861,396	$1,996,981	$8,976	$6,356	$0	$0	$57,039	$0	$0	$0	$0	$4,313	$0	$18,753	$7,637,314
Capitated Claims	$40,516	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$40,516
After Claim Detail Exclusions	$807,452,794	$92,158,785	$1,214,544,912	$26,703,277	$53,596,758	$1,488,294,145	$2,244,834,202	$999,540,729	$794,951,497	$113,962,922	$6,696,676	$0	$5,213,391	$3,913,847	$22,368,027	$0	$1,465,703	$11,389,851	$0	$20,138,558	$7,907,226,074
Orphan Claims	$9,203,298	$2,775,885	$11,642,987	$281,089	$125,838	$10,600,744	$12,296,297	$6,614,277	$26,683,634	$1,615,756	$18,246	$0	$216,836	$17,452	$418,963	$0	$626,537	$89,760	$0	$241,286	$83,468,885
After Orphan Claim Exclusions	$798,249,496	$89,382,900	$1,202,901,925	$26,422,188	$53,470,920	$1,477,693,401	$2,232,537,905	$992,926,452	$768,267,863	$112,347,166	$6,678,430	$0	$4,996,555	$3,896,395	$21,949,064	$0	$839,166	$11,300,091	$0	$19,897,272	$7,823,757,189
Initial LOB exclusions																					
Medicare Advantage	$366,756,649	$3,003,707	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$369,760,356
Medicare Supplement	$0	$0	$0	$0	$0	$18,950	$77,113,803	$8,256,577	$0	$0	$123,619	$0	$0	$1,207,891	$0	$0	$0	$0	$0	$0	$86,720,840
After Medicare Exclusions	$431,492,847	$86,379,193	$1,202,901,925	$26,422,188	$53,470,920	$1,477,674,451	$2,155,424,102	$984,669,875	$768,267,863	$112,347,166	$6,554,811	$0	$4,996,555	$2,688,504	$21,949,064	$0	$839,166	$11,300,091	$0	$19,897,272	$7,367,275,993
Non-Maryland Residents	$11,746,995	$3,915,004	$557,852,452	$5,081,867	$16,564,416	$146,147,287	$234,964,665	$154,253,175	$205,017,614	$36,838,708	$1,152,056	$0	$9,971	$0	$4,054,565	$0	$0	$17,881	$0	$1,157,428	$1,378,774,084
After Non-Maryland Exclusions	$419,745,852	$82,464,189	$645,049,473	$21,340,321	$36,906,504	$1,331,527,164	$1,920,459,437	$830,416,700	$563,250,249	$75,508,458	$5,402,755	$0	$4,986,584	$2,688,504	$17,894,499	$0	$839,166	$11,282,210	$0	$18,739,844	$5,988,501,909
LOB Exclusions																					
FEHB (1)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,631,359	$8,631,359
After FEHB Exclusions	$419,745,852	$82,464,189	$645,049,473	$21,340,321	$36,906,504	$1,331,527,164	$1,920,459,437	$830,416,700	$563,250,249	$75,508,458	$5,402,755	$0	$4,986,584	$2,688,504	$17,894,499	$0	$839,166	$11,282,210	$0	$10,108,485	$5,979,870,550
Exclude 65 and Over Members	$39,893,040	$7,777,627	$78,095,749	$2,108,317	$1,809,768	$75,309,734	$250,753,210	$99,061,104	$74,744,293	$5,555,655	$42,073	$0	$312	$1,014,345	$2,457,169	$0	$36,122	$1,556,550	$0	$1,435,314	$641,650,382
After 65 and Over Exclusions	$379,852,812	$74,686,562	$566,953,724	$19,232,004	$35,096,736	$1,256,217,430	$1,669,706,227	$731,355,596	$488,505,956	$69,952,803	$5,360,682	$0	$4,986,272	$1,674,159	$15,437,330	$0	$803,044	$9,725,660	$0	$8,673,171	$5,338,220,169
Other Party Liability	$959,090	$251,594	$17,284,683	$508,754	$1,905,524	$1,917,149	$9,397,815	$2,596,033	$5,278,329	$210,234	$1,828	$0	$139,379	$0	$405,385	$0	$14,965	$9,725,660	$0	$39,712	$50,636,134
Invalid Data																					
Zero Allowed	$0	$3	$0	$0	$0	$0	$60	$0	$0	$674	($1,413)	$0	($1,218)	$0	$4,962	$0	$0	$0	$0	$0	$3,068
Missing Membership	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Additional Non-Maryland Residents	($8,938)	$137,103	$16,013	$35	$11	$7,513,196	$8,388,639	$3,163,977	$182,845	($3,113)	$1,027	$0	$0	$0	$0	$0	$0	$0	$0	$21	$19,390,816
Total Exclusions	$836,765,345	$73,502,279	$1,435,187,188	$30,991,574	$64,569,204	$1,273,823,431	$1,845,114,899	$810,322,461	$933,689,543	$160,369,464	$3,905,372	$0	$4,651,253	$3,411,036	$14,882,331	$0	$2,888,771	$14,631,119	$0	$16,391,995	$7,525,097,265
Final Included (2)	**$378,902,660**	**$74,297,862**	**$549,653,028**	**$18,723,215**	**$33,191,201**	**$1,246,787,085**	**$1,651,919,713**	**$725,595,586**	**$483,044,782**	**$69,745,009**	**$5,359,240**	**$0**	**$4,848,111**	**$1,674,159**	**$15,026,983**	**$0**	**$788,079**	**$0**	**$0**	**$8,633,438**	**$5,268,190,151**
Final Included - Individual Only	$6,026,759	$0	$0	$0	$0	$613,332,542	$155,425,715	$84,022,176	$0	$0	$5,359,240	$0	$4,848,111	$0	$0	$0	$0	$0	$0	$0	$869,014,543
Final Included - Commercial and ASO Only	$372,875,901	$74,297,862	$545,791,443	$18,723,215	$33,191,201	$633,454,543	$1,496,493,998	$641,573,410	$483,044,782	$69,745,009	$0	$0	$0	$1,674,159	$15,026,983	$0	$788,079	$0	$0	$8,633,438	$4,395,314,023
Unknown LOB	$0	$0	$3,861,585	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,861,585
% Included of 2021 Total Medical	**45.7%**	**78.2%**	**42.6%**	**66.6%**	**57.5%**	**82.6%**	**70.5%**	**70.3%**	**60.6%**	**59.4%**	**79.6%**	**0.0%**	**85.6%**	**42.0%**	**65.6%**	**0.0%**	**53.7%**	**0.0%**	**0.0%**	**42.5%**	**64.5%**
Included Member Months	1,229,826	226,693	1,761,713	93,767	118,502	4,632,141	3,748,095	1,547,754	1,658,960	305,592	23,603	0	57,538	7,684	47,905	0	5,933	35,148	0	24,532	15,525,386
Included PMPM	**$308.09**	**$327.75**	**$312.00**	**$199.68**	**$280.09**	**$269.16**	**$440.74**	**$468.81**	**$291.17**	**$228.23**	**$227.06**	**$0.00**	**$84.26**	**$217.88**	**$313.68**	**$0.00**	**$132.83**	**$0.00**	**$0.00**	**$351.93**	**$339.33**

Notes:
1) We are excluding FEHB members which are members with market segment = 6.
2) These are the data that Milliman will be using for commercial benchmarking. We are only processing medical claims.

Appendix C - Exhibit 1a
CY 2021 Milliman Benchmark and Maryland All-Payer Claims Database Cost and Utilization Exhibits
Maryland APCD: Incurred 1/2021 through 12/2021, Paid through 3/2022 (Adjusted to Estimated Ultimate Incurred)
Summary of Experience by Maryland Region
Commercial and Individual LOBs, Limited to Members Under Age 65 (Excludes Prescription Drugs)

(1) Risk Score is calculated based on Medical eligibility with valid risk scores, i.e. the risk score shown equals total risk score over total Medical.
(2) Completion factor used: 0.9834. Risk adjusted allowed dollars are risk normalized to the statewide Maryland risk score of 1.673522.
(3) The plan benefit factors for the total amounts are calculated based on the combined coinsurance level.
(4) Teaching hospital amounts are removed from Inpatient allowed and paid amounts (except SNF, newborn, and residential treatments) based on the FY2017 per diem rates (trended to FY2021 with an annual rate 2.25% based on the file "IME for ICC.xlsx") at the provider level from file we received from Maryland HSCRC on 12/11/2019 named "Hospital file for commercial removal of GME 12-09.xlsx". For benchmark results, this adjustment was made at the MSA level.

		Member Months and Risk		Total Allowed (2)						Allowed PMPM (2)						RVUs PMPM (2)						Allowed Per RVU			
Region Name		Medical MMs	2017 HHS Model Platinum Risk Score (1)	Inpatient	Teaching Adjustment (4)	Inpatient w/ Teaching Adjustment	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Total - Risk Adjusted	Total - Risk & Benefit Adjusted (3)	Inpatient	Outpatient	Prof / Other	Total	Total - Risk Adjusted	Total - Risk & Benefit Adjusted (3)	Inpatient	Outpatient	Prof / Other	Total
Total - All Regions		15,525,386	1.674	$1,249,434,285	$66,328,153	$1,183,106,133	$1,477,332,959	$3,277,745,786	$5,938,184,877	$76.20	$95.16	$211.12	$382.48	$382.48	$367.53	0.87	1.31	5.02	7.21	7.21	6.99	$87.46	$72.59	$42.03	$53.08
MD1	MD1 (Southern MD)	2,653,324	1.767	$228,627,538	$10,221,233	$218,406,305	$255,874,369	$549,681,151	$1,023,961,825	$82.31	$96.44	$207.17	$385.92	$365.47	$349.38	0.90	1.23	4.81	6.93	6.56	6.34	$91.95	$78.49	$43.09	$55.67
MD2	MD2 (Western MD)	614,558	1.895	$57,629,514	$1,639,458	$55,990,056	$72,102,959	$118,535,852	$246,628,867	$91.11	$117.32	$192.88	$401.31	$354.39	$339.37	0.99	1.62	4.46	7.08	6.25	6.04	$91.61	$72.29	$43.25	$56.71
MD3	MD3 (Eastern Shore)	994,372	1.782	$88,194,435	$3,796,867	$84,397,569	$107,924,389	$201,452,972	$393,774,930	$84.88	$108.54	$202.59	$396.00	$371.81	$357.89	0.96	1.50	5.02	7.49	7.03	6.83	$88.26	$72.22	$40.33	$52.88
MD4	MD4 (Northern DC Suburbs)	3,712,601	1.507	$243,178,302	$10,292,694	$232,885,608	$288,178,564	$839,672,174	$1,360,736,346	$62.73	$77.62	$226.17	$366.52	$406.92	$393.37	0.69	1.10	5.30	7.09	7.87	7.67	$90.48	$70.83	$42.69	$51.72
MD5	MD5 (Baltimore Area)	7,550,531	1.690	$631,804,496	$40,377,901	$591,426,595	$753,252,678	$1,568,403,637	$2,913,082,910	$78.33	$99.76	$207.72	$385.81	$382.06	$366.83	0.93	1.40	5.01	7.33	7.26	7.04	$84.37	$71.51	$41.46	$52.61

Appendix C - Exhibit 1b
CY 2021 Milliman Benchmark and Maryland All-Payer Claims Database Cost and Utilization Exhibits
Maryland APCD: Incurred 1/2021 through 12/2021, Paid through 3/2022 (Adjusted to Estimated Ultimate Incurred)
Plan Benefit Normalization Factors by Maryland Region
Commercial and Individual LOBs, Limited to Members Under Age 65 (Excludes Prescription Drugs)

(1) Linearly interpolated between coinsurance ranges.
(2) Risk adjusted amounts are normalized to all of Maryland, which has a 2017 HHS Platinum risk score of 1.673522.
(3) Risk adjusted and benefit adjusted amounts are calculated as (risk adjusted amount) / (benefit normalization factor).
(4) Teaching hospital amounts are removed from Inpatient allowed and paid amounts (except SNF, newborn, and residential treatments) based on the FY2017 per diem rates (trended to FY2021 with an annual rate 2.25% based on the file "IME for ICC.xlsx") at the provider level from file received from Maryland HSCRC on 12/11/2019 named "Hospital file for commercial removal of GME 12-09.xlsx". For benchmark results, this adjustment was made at the MSA level.

		Member Months, Risk, and Plan Coinsurance			RVU Plan Benefit Normalization Factors (1)			Allowed Plan Benefit Normalization Factors (1)			Allowed PMPM				Risk Adjusted Allowed PMPM (2)				Risk Adjusted and Benefit Adjusted Allowed PMPM (2) (3)				RVU PMPM				Risk Adj RVU PMPM (2)				Risk Adjusted and Benefit Adj RVU PMPM (2) (3)			
Region	Name	Medical MMs	2017 HHS Model Platinum Risk Score	Plan Coinsurance Range	Inpatient	Outpatient	Prof / Other	Inpatient	Outpatient	Prof / Other	Inpatient (4)	Outpatient	Prof / Other	Total	Inpatient (4)	Outpatient	Prof / Other	Total	Inpatient (4)	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total
Total - All Regions		15,525,386	1.674	85%-95%	1.039	1.035	1.029	1.047	1.034	1.041	$76.20	$95.16	$211.12	$382.48	$76.20	$95.16	$211.12	$382.48	$72.75	$92.06	$202.72	$367.53	0.87	1.31	5.02	7.21	0.87	1.31	5.02	7.21	0.84	1.27	4.88	6.99
MD1	MD1 (Southern MD)	2,653,324	1.767	85%-95%	1.045	1.040	1.032	1.056	1.037	1.046	$82.31	$96.44	$207.17	$385.92	$77.95	$91.33	$196.19	$365.47	$73.81	$88.05	$187.53	$349.38	0.90	1.23	4.81	6.93	0.85	1.16	4.55	6.56	0.81	1.12	4.41	6.34
MD2	MD2 (Western MD)	614,558	1.895	85%-95%	1.042	1.039	1.031	1.053	1.036	1.045	$91.11	$117.32	$192.88	$401.31	$80.45	$103.61	$170.33	$354.39	$76.43	$99.98	$162.95	$339.37	0.99	1.62	4.46	7.08	0.88	1.43	3.94	6.25	0.84	1.38	3.82	6.04
MD3	MD3 (Eastern Shore)	994,372	1.782	85%-95%	1.038	1.034	1.027	1.045	1.032	1.040	$84.88	$108.54	$202.59	$396.00	$79.69	$101.90	$190.22	$371.81	$76.24	$98.70	$182.94	$357.89	0.96	1.50	5.02	7.49	0.90	1.41	4.72	7.03	0.87	1.36	4.59	6.83
MD4	MD4 (Northern DC Suburbs)	3,712,601	1.507	85%-95%	1.034	1.030	1.024	1.039	1.029	1.035	$62.73	$77.62	$226.17	$366.52	$69.64	$86.18	$251.10	$406.92	$67.03	$83.73	$242.60	$393.37	0.69	1.10	5.30	7.09	0.77	1.22	5.88	7.87	0.74	1.18	5.74	7.67
MD5	MD5 (Baltimore Area)	7,550,531	1.690	85%-95%	1.040	1.036	1.029	1.049	1.034	1.042	$78.33	$99.76	$207.72	$385.81	$77.57	$98.79	$205.70	$382.06	$73.97	$95.52	$197.34	$366.83	0.93	1.40	5.01	7.33	0.92	1.38	4.96	7.26	0.88	1.33	4.82	7.04

Appendix C - Exhibit 2a
CY 2021 Milliman Benchmark and Maryland All-Payer Claims Database Cost and Utilization Exhibits
Maryland APCD: Incurred 1/2021 through 12/2021, Paid through 3/2022 (Adjusted to Estimated Ultimate Incurred)
Summary of Experience by PSAP
Commercial and Individual LOBs, Limited to Members Under Age 65 (Excludes Prescription Drugs)

(1) Risk Score is calculated based on Medical eligibility with valid risk scores, i.e., the risk score shown equals total risk score over total Medical.
(2) Completion factor used: 0.9834. Risk adjusted allowed dollars are risk normalized to the statewide Maryland risk score of 1.673522.
(3) The plan benefit factors for the total amounts are calculated based on the combined coinsurance level.
(4) Teaching hospital amounts are removed from Inpatient allowed and paid amounts (except SNF, newborn, and residential treatments) based on the FY2017 per diem rates (trended to FY2021 with an annual rate 2.25% based on the file "IME for ICC.xlsx") at the provider level from file we received from Maryland HSCRC on 12/11/2019 named "Hospital file for commercial removal of GME 12-09.xlsx". For benchmark results, this adjustment was made at the MSA level.
(5) Cost and utilization data are aggregated for each hospital's Primary Service Area Plus (PSAP). The hospital PSAP is based on the ZIP Code and hospital share mapping provided by HSCRC from file named "All payer and Medicare PSAP 4.2.2019.xlsx." For each hospital's PSAP, the cost and utilization values are calculated as the sum of the PSAP ZIP Codes of (cost or utilization value at the ZIP Code) x (hospital percent share at the ZIP Code).

		Member Months and Risk		Total Allowed (2)						Allowed PMPM (2)						RVUs PMPM (2)						Allowed Per RVU			
Hospital Name and Medicare ID (5)		Medical MMs	2017 HHS Model Platinum Risk Score (1)	Inpatient	Teaching Adjustment (4)	Inpatient w/ Teaching Adjustment	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Total - Risk Adjusted	Total - Risk & Benefit Adjusted (3)	Inpatient	Outpatient	Prof / Other	Total	Total - Risk Adjusted	Total - Risk & Benefit Adjusted (3)	Inpatient	Outpatient	Prof / Other	Total
Total - All PSAPs		15,524,694	1.674	$1,249,390,401	$66,326,120	$1,183,064,281	$1,477,300,380	$3,277,621,307	$5,937,985,969	$76.21	$95.16	$211.12	$382.49	$382.49	$367.54	0.87	1.31	5.02	7.21	7.21	6.99	$87.47	$72.59	$42.03	$53.08
210023	ANNE ARUNDEL	1,060,239	1.592	$74,529,738	$3,298,751	71,230,988	$88,017,187	$227,622,756	$386,870,931	$67.18	$83.02	$214.69	$364.89	$383.64	$370.78	0.77	1.25	5.20	7.22	7.59	7.40	$87.57	$66.46	$41.25	$50.54
210061	ATLANTIC GENERAL	71,404	1.720	$6,427,895	$186,827	6,241,068	$7,593,580	$12,986,686	$26,821,334	$87.41	$106.35	$181.88	$375.63	$365.39	$359.13	0.93	1.47	4.76	7.16	6.97	6.88	$94.32	$72.18	$38.17	$52.43
210043	BALTIMORE WASHINGTON	746,868	1.755	$62,998,509	$3,652,348	59,346,161	$64,660,508	$158,091,757	$282,098,427	$79.46	$86.58	$211.67	$377.71	$360.09	$345.42	0.99	1.26	5.19	7.44	7.10	6.87	$80.16	$68.65	$40.78	$50.74
210013	BON SECOURS	23,678	2.184	$2,998,581	$279,616	2,718,965	$3,718,527	$4,569,741	$11,007,234	$114.83	$157.05	$193.00	$464.87	$356.25	$338.04	1.57	1.83	4.64	8.04	6.16	5.90	$73.15	$85.90	$41.61	$57.85
210039	CALVERT	296,369	1.735	$22,316,073	$953,442	21,362,632	$28,950,202	$62,610,130	$112,922,963	$72.08	$97.68	$211.26	$381.02	$367.59	$351.16	0.77	1.24	4.85	6.86	6.62	6.39	$93.14	$78.46	$43.60	$55.51
210033	CARROLL COUNTY	658,525	1.607	$49,951,946	$3,515,916	46,436,030	$62,437,595	$133,807,553	$242,681,178	$70.52	$94.81	$203.19	$368.52	$383.70	$369.12	0.81	1.49	4.82	7.13	7.42	7.20	$86.66	$63.61	$42.15	$51.72
210035	CHARLES REGIONAL	381,331	1.766	$35,623,370	$1,567,765	34,055,604	$38,205,290	$81,827,248	$154,088,142	$89.31	$100.19	$214.58	$404.08	$382.90	$365.01	0.96	1.30	4.91	7.18	6.80	6.55	$93.04	$76.81	$43.66	$56.29
210030	CHESTERTOWN	85,473	1.719	$9,743,610	$495,076	9,248,534	$10,273,104	$15,707,324	$35,228,962	$108.20	$120.19	$183.77	$412.16	$401.26	$384.59	1.08	1.33	4.28	6.70	6.52	6.31	$100.53	$90.08	$42.89	$61.56
210051	DOCTORS COMMUNITY	395,791	1.769	$30,713,851	$1,514,262	29,199,589	$35,792,647	$81,477,364	$146,469,600	$73.78	$90.43	$205.86	$370.07	$350.05	$334.70	0.81	1.17	4.93	6.91	6.54	6.31	$91.52	$77.23	$41.74	$53.56
210037	EASTON	322,635	1.744	$27,655,923	$1,362,153	26,293,770	$37,337,287	$68,257,883	$131,888,940	$81.50	$115.73	$211.56	$408.79	$392.19	$376.62	0.87	1.66	5.10	7.63	7.32	7.09	$93.25	$69.81	$41.48	$53.57
210015	FRANKLIN SQUARE	336,594	1.913	$28,732,672	$1,470,389	27,262,282	$37,484,890	$79,835,843	$144,583,015	$80.99	$111.37	$237.19	$429.55	$375.71	$358.63	1.03	1.63	5.00	7.66	6.70	6.46	$78.30	$68.45	$47.45	$56.07
210005	FREDERICK MEMORIAL	945,803	1.555	$68,162,608	$2,553,827	65,608,782	$67,720,532	$208,569,513	$341,898,826	$69.37	$71.60	$220.52	$361.49	$389.02	$374.27	0.78	1.04	5.28	7.10	7.64	7.43	$89.09	$68.62	$41.75	$50.89
210060	FT. WASHINGTON	87,788	1.959	$9,536,506	$257,707	9,278,799	$10,809,668	$18,123,821	$38,212,289	$105.70	$123.13	$206.45	$435.28	$371.89	$355.74	1.07	1.35	4.74	7.17	6.12	5.92	$98.74	$91.03	$43.53	$60.74
210044	G.B.M.C.	414,008	1.567	$30,327,448	$1,985,144	28,342,303	$38,386,678	$82,811,358	$149,540,339	$68.46	$92.72	$200.02	$361.20	$385.67	$373.43	0.81	1.36	4.83	7.00	7.48	7.30	$84.49	$67.98	$41.41	$51.57
210017	GARRETT COUNTY	48,677	1.802	$4,099,681	$26,940	4,072,742	$9,119,148	$6,942,197	$20,134,086	$83.67	$187.34	$142.62	$413.63	$384.07	$370.82	0.68	2.18	3.49	6.35	5.89	5.73	$123.17	$85.94	$40.88	$65.16
210056	GOOD SAMARITAN	183,047	2.033	$17,046,122	$1,217,554	15,828,568	$23,437,497	$40,180,143	$79,446,208	$86.47	$128.04	$219.51	$434.02	$357.36	$339.55	1.13	1.63	5.35	8.11	6.68	6.41	$76.44	$78.54	$41.01	$53.49
210034	HARBOR	86,265	1.922	$9,498,821	$689,057	8,809,764	$10,897,246	$17,952,899	$37,659,909	$102.12	$126.32	$208.11	$436.56	$380.07	$364.50	1.31	1.63	5.06	8.00	6.96	6.74	$77.93	$77.40	$41.17	$54.58
210006	HARFORD	94,712	1.741	$8,536,437	$392,316	8,144,121	$10,785,573	$19,143,230	$38,072,924	$85.99	$113.88	$202.12	$401.99	$386.33	$371.58	0.98	1.48	4.98	7.44	7.15	6.93	$88.01	$77.10	$40.58	$54.07
210065	HC-GERMANTOWN	137,825	1.522	$9,143,035	$400,867	8,742,168	$10,034,793	$30,140,211	$48,917,172	$63.43	$72.81	$218.69	$354.92	$390.36	$376.22	0.66	1.05	5.18	6.90	7.59	7.38	$95.77	$69.08	$42.18	$51.43
210004	HOLY CROSS	696,327	1.526	$47,198,582	$1,977,126	45,221,457	$52,508,877	$151,497,041	$249,227,375	$64.94	$75.41	$217.57	$357.92	$392.58	$378.62	0.72	1.02	5.15	6.90	7.57	7.36	$90.00	$73.74	$42.21	$51.88
210029	HOPKINS BAYVIEW MED CTR	140,591	1.927	$15,931,072	$1,210,220	14,720,852	$17,291,914	$28,177,467	$60,190,233	$104.71	$122.99	$200.42	$428.12	$371.83	$356.23	1.32	1.62	4.64	7.57	6.58	6.36	$79.59	$76.00	$43.21	$56.54
210048	HOWARD COUNTY	915,814	1.502	$59,722,982	$3,928,371	55,794,610	$70,146,649	$192,567,222	$318,508,481	$60.92	$76.59	$210.27	$347.79	$387.40	$373.00	0.73	1.14	5.29	7.16	7.97	7.75	$83.37	$67.20	$39.78	$48.60
210009	JOHNS HOPKINS	160,005	1.829	$15,029,834	$1,254,446	13,775,388	$20,297,985	$31,163,356	$65,236,730	$86.09	$126.86	$194.77	$407.72	$373.08	$359.04	1.07	1.59	4.61	7.27	6.65	6.46	$80.35	$79.99	$42.22	$56.08
210055	LAUREL REGIONAL	0	0.000	$0	$0	0	$0	$0	$0	$0.00	$0.00	$0.00	$0.00	n/a	$0.00	0.00	0.00	0.00	0.00	n/a	0.00	$0.00	$0.00	$0.00	$0.00
210064	LEVINDALE	83	1.810	$9,781	$591	9,190	$9,774	$18,405	$37,369	$110.85	$117.89	$222.00	$450.74	$416.79	$397.93	1.22	1.54	5.30	8.07	7.46	7.20	$90.85	$76.42	$41.85	$55.87
210045	MCCREADY	8,403	2.319	$834,877	$30,821	804,056	$1,127,819	$1,699,821	$3,631,696	$95.69	$134.22	$202.29	$432.19	$311.95	$296.10	1.18	1.89	5.02	8.10	5.84	5.60	$80.76	$71.04	$40.27	$53.37
210008	MERCY	177,050	1.971	$18,653,181	$1,533,267	17,119,914	$23,633,029	$35,868,350	$76,621,294	$96.70	$133.48	$202.59	$432.77	$367.36	$350.02	1.18	1.63	4.85	7.67	6.51	6.26	$81.70	$81.77	$41.76	$56.44
210001	MERITUS	394,477	1.828	$35,909,017	$1,275,340	34,633,677	$37,696,263	$81,554,083	$153,884,023	$87.80	$95.56	$206.74	$390.10	$357.11	$343.46	0.98	1.45	4.60	7.03	6.44	6.25	$89.57	$65.78	$44.92	$55.45
210018	MONTGOMERY GENERAL	251,180	1.542	$15,287,832	$614,885	14,672,947	$23,350,491	$58,220,855	$96,244,293	$58.42	$92.96	$231.79	$383.17	$415.92	$400.10	0.69	1.21	5.42	7.32	7.95	7.72	$84.36	$77.12	$42.73	$52.32
210040	NORTHWEST	235,621	1.849	$25,095,775	$1,724,953	23,370,822	$27,917,461	$51,172,460	$102,460,742	$99.19	$118.48	$217.18	$434.85	$393.49	$375.51	1.18	1.56	5.20	7.93	7.18	6.92	$84.29	$76.13	$41.79	$54.84
210019	PENINSULA REGIONAL	396,355	1.853	$33,595,099	$1,343,103	32,251,996	$41,280,347	$78,436,684	$151,969,027	$81.37	$104.15	$197.89	$383.42	$346.32	$333.32	0.98	1.43	5.07	7.48	6.76	6.56	$82.88	$73.04	$39.00	$51.25
210003	PRINCE GEORGE	233,152	1.969	$21,354,559	$857,357	20,497,202	$25,419,656	$46,675,784	$92,592,642	$87.91	$109.03	$200.19	$397.13	$337.54	$322.56	1.01	1.35	4.68	7.05	5.99	5.78	$86.74	$80.54	$42.77	$56.34
210057	SHADY GROVE	957,180	1.540	$63,674,506	$3,033,307	60,641,199	$73,953,164	$216,199,166	$350,793,529	$63.35	$77.26	$225.87	$366.49	$398.18	$384.31	0.69	1.12	5.32	7.12	7.74	7.53	$91.92	$69.28	$42.49	$51.47
210012	SINAI	430,111	1.860	$54,484,509	$3,173,449	51,311,060	$53,178,471	$96,981,389	$201,470,920	$119.30	$123.64	$225.48	$468.42	$421.44	$401.87	1.28	1.59	5.37	8.24	7.42	7.15	$93.19	$77.62	$41.97	$56.81
210062	SOUTHERN MARYLAND	382,965	1.850	$38,283,352	$1,474,890	36,808,462	$39,244,936	$78,558,879	$154,612,277	$96.11	$102.48	$205.13	$403.72	$365.19	$347.58	1.01	1.26	4.70	6.96	6.30	6.06	$95.12	$81.62	$43.69	$58.00
210011	ST. AGNES	366,175	1.674	$29,888,988	$2,799,759	27,089,228	$38,642,704	$71,890,799	$137,622,731	$73.98	$105.53	$196.33	$375.84	$375.62	$359.03	0.90	1.42	4.84	7.16	7.16	6.91	$82.36	$74.27	$40.56	$52.49
210028	ST. MARY	256,396	1.650	$22,155,906	$1,230,993	20,924,913	$25,896,180	$53,513,483	$100,334,576	$81.61	$101.00	$208.71	$391.33	$396.86	$384.15	0.93	1.32	4.53	6.78	6.88	6.71	$87.95	$76.54	$46.04	$57.71
210022	SUBURBAN	738,676	1.389	$41,715,232	$1,832,850	39,882,382	$61,023,544	$174,974,289	$275,880,214	$53.99	$82.61	$236.88	$373.48	$449.99	$439.74	0.58	1.15	5.34	7.08	8.53	8.38	$92.35	$71.62	$44.36	$52.76
210063	UM ST. JOSEPH	509,258	1.626	$40,088,996	$2,680,175	37,408,822	$50,099,690	$104,249,321	$191,757,832	$73.46	$98.38	$204.71	$376.54	$387.45	$373.40	0.88	1.41	4.91	7.20	7.40	7.20	$83.65	$69.71	$41.73	$52.33
210038	UMMC MIDTOWN	47,404	1.974	$5,470,419	$464,732	5,005,687	$6,350,719	$9,143,716	$20,500,122	$105.60	$133.97	$192.89	$432.45	$366.60	$347.79	1.27	1.57	4.61	7.45	6.31	6.05	$83.23	$85.17	$41.87	$58.06
210032	UNION HOSPITAL OF CECIL	192,592	1.696	$20,018,418	$642,405	19,376,013	$25,177,565	$31,828,329	$76,381,907	$100.61	$130.73	$165.26	$396.60	$391.37	$378.31	0.96	1.53	4.06	6.54	6.46	6.29	$105.02	$85.62	$40.71	$60.60
210024	UNION MEMORIAL	199,074	1.849	$17,746,959	$1,516,763	16,230,195	$24,097,841	$42,795,013	$83,123,050	$81.53	$121.05	$214.97	$417.55	$378.00	$361.09	0.97	1.51	5.18	7.66	6.93	6.69	$84.24	$80.08	$41.51	$54.52
210002	UNIVERSITY OF MARYLAND	100,964	1.864	$10,275,890	$983,539	9,292,350	$13,060,049	$18,541,317	$40,893,715	$92.04	$129.35	$183.64	$405.03	$363.56	$346.77	1.19	1.54	4.42	7.15	6.41	6.17	$77.39	$84.21	$41.55	$56.69
210049	UPPER CHESAPEAKE HEALTH	707,209	1.573	$52,191,206	$2,729,183	49,462,023	$64,244,137	$141,443,416	$255,149,576	$69.94	$90.84	$200.00	$360.78	$383.76	$369.66	0.83	1.31	4.84	6.98	7.43	7.22	$84.02	$69.22	$41.33	$51.66
210016	WASHINGTON ADVENTIST	474,525	1.645	$38,536,082	$1,848,343	36,687,739	$40,189,438	$98,952,224	$175,829,401	$77.31	$84.69	$208.53	$370.54	$377.03	$361.65	0.84	1.10	4.96	6.90	7.02	6.80	$92.16	$77.05	$42.01	$53.69
210027	WESTERN MARYLAND	176,075	2.071	$18,194,520	$345,294	17,849,226	$25,799,724	$30,840,783	$74,489,733	$101.37	$146.53	$175.16	$423.06	$341.92	$324.44	1.11	1.85	4.39	7.35	5.94	5.69	$91.41	$79.13	$39.88	$57.54

Appendix C - Exhibit 2b
CY 2021 Milliman Benchmark and Maryland All-Payer Claims Database Cost and Utilization Exhibits
Maryland APCD: Incurred 1/2021 through 12/2021, Paid through 3/2022 (Adjusted to Estimated Ultimate Incurred)
Plan Benefit Normalization Factors by PSAP
Commercial and Individual LOBs, Limited to Members Under Age 65 (Excludes Prescription Drugs)

(1) Linearly interpolated between coinsurance ranges.
(2) Risk adjusted amounts are normalized to all of Maryland, which has a 2017 HHS Platinum risk score of 1.673522.
(3) Risk adjusted and benefit adjusted amounts are calculated as (risk adjusted amount) / (benefit normalization factor).
(4) Teaching hospital amounts are removed from Inpatient allowed and paid amounts (except SNF, newborn, and residential treatments) based on the FY2017 per diem rates (trended to FY2021 with an annual rate 2.25% based on the file "IME for ICC.xlsx") at the provider level from file we received from Marvland HSCRC on 12/11/2019 named "Hospital file for commercial removal of GME 12-09.xlsx". For benchmark results. this adjustment was made at the MSA level.
(5) Cost and utilization data are aggregated for each hospital's Primary Service Area Plus (PSAP). The hospital PSAP is based on the ZIP Code and hospital share mapping provided by HSCRC from file named "All payer and Medicare PSAP 4.2.2019.xlsx."
For each hospital's PSAP, the cost and utilization values are calculated as the sum of the PSAP ZIP Codes of (cost or utilization value at the ZIP Code) x (hospital % share at the ZIP Code).

		Member Months, Risk, and Plan Coinsurance				RVU Plan Benefit Normalization Factors (1)			Allowed Plan Benefit Normalization Factors (1)			Allowed PMPM				Risk Adjusted Allowed PMPM (2)				Risk Adjusted and Benefit Adjusted Allowed PMPM (2) (3)				RVU PMPM				Risk Adj RVU PMPM (2)				Risk Adjusted and Benefit Adj RVU PMPM (2) (3)			
Hospital Name and Medicare ID (5)		Medical MMs	2017 HHS Model Platinum Risk Score	Plan Coinsurance	Plan Coinsurance Range	Inpatient	Outpatient	Prof / Other	Inpatient	Outpatient	Prof / Other	Inpatient (4)	Outpatient	Prof / Other	Total	Inpatient (4)	Outpatient	Prof / Other	Total	Inpatient (4)	Outpatient	Prof / Other	Total	Inpatien t	Outpatien t	Prof / Other	Total	Inpatien t	Outpatient	Prof / Other	Total	Inpatien t	Outpatient	Prof / Other	Total
Total - All PSAPs		15,524,694	1.674	89.2%	85%-95%	1.039	1.035	1.029	1.047	1.034	1.041	$76.21	$95.16	$211.12	$382.49	$76.21	$95.16	$211.12	$382.49	$72.75	$92.06	$202.72	$367.54	0.87	1.31	5.02	7.21	0.87	1.31	5.02	7.21	0.84	1.27	4.88	6.99
210023	ANNE ARUNDEL	1,060,239	1.592	88.2%	85%-95%	1.034	1.030	1.024	1.039	1.029	1.035	$67.18	$83.02	$214.69	$364.89	$70.64	$87.28	$225.72	$383.64	$67.96	$84.79	$218.03	$370.78	0.77	1.25	5.20	7.22	0.81	1.31	5.47	7.59	0.78	1.28	5.34	7.40
210061	ATLANTIC GENERAL	71,404	1.720	85.3%	85%-95%	1.019	1.015	1.012	1.016	1.017	1.018	$87.41	$106.35	$181.88	$375.63	$85.02	$103.45	$176.92	$365.39	$83.66	$101.67	$173.80	$359.13	0.93	1.47	4.76	7.16	0.90	1.43	4.64	6.97	0.88	1.41	4.58	6.88
210043	BALTIMORE WASHINGTON	746,868	1.755	89.5%	85%-95%	1.040	1.037	1.030	1.050	1.035	1.043	$79.46	$86.58	$211.67	$377.71	$75.75	$82.54	$201.80	$360.09	$72.17	$79.77	$193.48	$345.42	0.99	1.26	5.19	7.44	0.94	1.20	4.95	7.10	0.91	1.16	4.81	6.87
210013	BON SECOURS	23,678	2.184	91.8%	85%-95%	1.061	1.043	1.039	1.084	1.042	1.047	$114.83	$157.05	$193.00	$464.87	$88.00	$120.35	$147.90	$356.25	$81.22	$115.53	$141.29	$338.04	1.57	1.83	4.64	8.04	1.20	1.40	3.55	6.16	1.13	1.34	3.42	5.90
210039	CALVERT	296,369	1.735	90.4%	85%-95%	1.047	1.040	1.034	1.061	1.038	1.046	$72.08	$97.68	$211.26	$381.02	$68.54	$94.24	$203.81	$367.59	$65.57	$90.79	$194.79	$351.16	0.77	1.24	4.85	6.86	0.75	1.20	4.67	6.62	0.71	1.15	4.52	6.39
210033	CARROLL COUNTY	658,525	1.607	89.0%	85%-95%	1.038	1.034	1.028	1.046	1.033	1.040	$70.52	$94.81	$203.19	$368.52	$73.42	$96.72	$211.56	$383.70	$70.19	$95.58	$203.35	$369.12	0.81	1.49	4.82	7.13	0.85	1.55	5.02	7.42	0.82	1.50	4.88	7.20
210035	CHARLES REGIONAL	381,331	1.766	90.8%	85%-95%	1.051	1.041	1.035	1.067	1.039	1.046	$89.31	$100.19	$214.58	$404.08	$84.63	$94.94	$203.34	$382.90	$79.32	$91.38	$194.31	$365.01	0.96	1.30	4.91	7.18	0.91	1.24	4.66	6.80	0.87	1.19	4.50	6.55
210030	CHESTERTOWN	85,473	1.719	89.7%	85%-95%	1.041	1.038	1.030	1.051	1.035	1.044	$108.20	$120.19	$183.77	$412.16	$105.34	$117.01	$178.91	$401.26	$100.23	$113.01	$171.35	$384.59	1.08	1.33	4.28	6.70	1.05	1.30	4.17	6.52	1.01	1.25	4.05	6.31
210051	DOCTORS COMMUNITY	395,791	1.769	90.1%	85%-95%	1.044	1.040	1.032	1.056	1.037	1.046	$73.78	$90.43	$205.86	$370.07	$69.78	$85.54	$194.72	$350.05	$66.10	$82.48	$186.12	$334.70	0.81	1.17	4.93	6.91	0.76	1.11	4.67	6.54	0.73	1.07	4.52	6.31
210037	EASTON	322,635	1.744	89.4%	85%-95%	1.040	1.036	1.029	1.049	1.034	1.042	$81.50	$115.73	$211.56	$408.79	$78.19	$111.03	$202.97	$392.19	$74.55	$107.35	$194.72	$376.62	0.87	1.66	5.10	7.63	0.84	1.59	4.89	7.32	0.81	1.53	4.75	7.09
210015	FRANKLIN SQUARE	336,594	1.913	90.6%	85%-95%	1.049	1.041	1.034	1.064	1.039	1.046	$80.99	$111.37	$237.19	$429.55	$70.84	$97.41	$207.46	$375.71	$66.57	$93.79	$198.26	$358.63	1.03	1.63	5.00	7.66	0.90	1.42	4.37	6.70	0.86	1.37	4.23	6.46
210005	FREDERICK MEMORIAL	945,803	1.555	89.0%	85%-95%	1.038	1.034	1.027	1.045	1.032	1.040	$69.37	$71.60	$220.52	$361.49	$74.65	$77.05	$237.32	$389.02	$71.41	$74.63	$228.23	$374.27	0.78	1.04	5.28	7.10	0.84	1.12	5.68	7.64	0.81	1.09	5.53	7.43
210060	FT. WASHINGTON	87,788	1.959	90.0%	85%-95%	1.043	1.039	1.032	1.054	1.037	1.046	$105.70	$123.13	$206.45	$435.28	$90.30	$105.20	$176.38	$371.89	$85.68	$101.46	$168.60	$355.74	1.07	1.35	4.74	7.17	0.91	1.16	4.05	6.12	0.88	1.11	3.93	5.92
210044	G.B.M.C.	414,008	1.567	87.9%	85%-95%	1.032	1.029	1.023	1.037	1.028	1.034	$68.46	$92.72	$200.02	$361.20	$73.10	$99.00	$213.58	$385.67	$70.49	$96.29	$206.65	$373.43	0.81	1.36	4.83	7.00	0.87	1.46	5.16	7.48	0.84	1.42	5.04	7.30
210017	GARRETT COUNTY	48,677	1.802	88.6%	85%-95%	1.036	1.032	1.026	1.043	1.031	1.038	$83.67	$187.34	$142.62	$413.63	$77.69	$173.95	$132.43	$384.07	$74.51	$168.71	$127.60	$370.82	0.68	2.18	3.49	6.35	0.63	2.02	3.24	5.89	0.61	1.96	3.16	5.73
210056	GOOD SAMARITAN	183,047	2.033	91.9%	85%-95%	1.061	1.043	1.039	1.084	1.042	1.047	$86.47	$128.04	$219.51	$434.02	$71.20	$105.43	$180.74	$357.36	$65.70	$101.20	$172.65	$339.55	1.13	1.63	5.35	8.11	0.93	1.34	4.41	6.68	0.88	1.29	4.24	6.41
210034	HARBOR	86,265	1.922	89.6%	85%-95%	1.041	1.037	1.030	1.050	1.035	1.044	$102.12	$126.32	$208.11	$436.56	$88.91	$109.98	$181.18	$380.07	$84.65	$106.25	$173.61	$364.50	1.31	1.63	5.06	8.00	1.14	1.42	4.40	6.96	1.10	1.37	4.27	6.74
210006	HARFORD	94,712	1.741	89.1%	85%-95%	1.038	1.035	1.028	1.046	1.033	1.041	$85.99	$113.88	$202.12	$401.99	$82.64	$109.44	$194.25	$386.33	$78.98	$105.94	$186.67	$371.58	0.98	1.48	4.98	7.44	0.94	1.42	4.79	7.15	0.90	1.37	4.66	6.93
210065	HC-GERMANTOWN	137,825	1.522	88.7%	85%-95%	1.036	1.032	1.026	1.043	1.031	1.038	$63.43	$72.81	$218.69	$354.92	$69.76	$80.08	$240.52	$390.36	$66.88	$77.65	$231.69	$376.22	0.66	1.05	5.18	6.90	0.73	1.16	5.70	7.59	0.70	1.12	5.56	7.38
210004	HOLY CROSS	696,327	1.526	88.6%	85%-95%	1.036	1.032	1.026	1.042	1.031	1.037	$64.94	$75.41	$217.57	$357.92	$71.23	$82.71	$238.64	$392.58	$68.35	$80.24	$230.03	$378.62	0.72	1.02	5.15	6.90	0.79	1.12	5.65	7.57	0.76	1.09	5.51	7.36
210029	HOPKINS BAYVIEW MED CTR	140,591	1.927	89.7%	85%-95%	1.042	1.038	1.031	1.052	1.036	1.045	$104.71	$122.99	$200.42	$428.12	$90.94	$106.82	$174.07	$371.83	$86.47	$103.13	$166.63	$356.23	1.32	1.62	4.64	7.57	1.14	1.41	4.03	6.58	1.10	1.35	3.91	6.36
210048	HOWARD COUNTY	915,814	1.502	88.9%	85%-95%	1.037	1.033	1.027	1.045	1.032	1.039	$60.92	$76.59	$210.27	$347.79	$67.86	$85.32	$234.22	$387.40	$64.97	$82.66	$225.37	$373.00	0.73	1.14	5.29	7.16	0.81	1.27	5.89	7.97	0.78	1.23	5.73	7.75
210009	JOHNS HOPKINS	160,005	1.829	89.0%	85%-95%	1.038	1.034	1.028	1.046	1.033	1.040	$86.09	$126.86	$194.77	$407.72	$78.78	$116.08	$178.22	$373.08	$75.32	$112.40	$171.32	$359.04	1.07	1.59	4.61	7.27	0.98	1.45	4.22	6.65	0.94	1.40	4.11	6.46
210055	LAUREL REGIONAL	0	0.000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	$0.00	$0.00	$0.00	$0.00	n/a	n/a	n/a	n/a	$0.00	n/a	n/a	n/a	0.00	0.00	0.00	0.00	n/a	n/a	n/a	0.00	n/a	n/a	n/a	0.00
210064	LEVINDALE	83	1.810	90.4%	85%-95%	1.047	1.040	1.033	1.060	1.038	1.046	$110.85	$117.89	$222.00	$450.74	$102.50	$109.01	$205.27	$416.79	$96.71	$105.04	$196.19	$397.93	1.22	1.54	5.30	8.07	1.13	1.43	4.90	7.46	1.08	1.37	4.75	7.20
210045	MCCREADY	8,403	2.319	91.9%	85%-95%	1.062	1.044	1.039	1.085	1.042	1.047	$95.69	$134.22	$202.29	$432.19	$69.07	$96.88	$146.01	$311.95	$63.65	$92.98	$139.48	$296.10	1.18	1.89	5.02	8.10	0.86	1.36	3.63	5.84	0.81	1.31	3.49	5.60
210008	MERCY	177,050	1.971	91.0%	85%-95%	1.053	1.042	1.036	1.070	1.040	1.047	$96.70	$133.48	$202.59	$432.77	$82.08	$113.31	$171.97	$367.36	$76.70	$109.00	$164.33	$350.02	1.18	1.63	4.85	7.67	1.00	1.39	4.12	6.51	0.95	1.33	3.98	6.26
210001	MERITUS	394,477	1.828	89.0%	85%-95%	1.038	1.034	1.028	1.046	1.033	1.040	$87.80	$95.56	$206.74	$390.10	$80.37	$87.48	$189.26	$357.11	$76.84	$84.70	$181.93	$343.46	0.98	1.45	4.60	7.03	0.90	1.33	4.21	6.44	0.86	1.29	4.10	6.25
210018	MONTGOMERY GENERAL	251,180	1.542	89.1%	85%-95%	1.038	1.035	1.028	1.046	1.033	1.041	$58.42	$92.96	$231.79	$383.17	$63.41	$100.91	$251.60	$415.92	$60.61	$97.69	$241.80	$400.10	0.69	1.21	5.42	7.32	0.75	1.31	5.89	7.95	0.72	1.26	5.73	7.72
210040	NORTHWEST	235,621	1.849	90.6%	85%-95%	1.049	1.041	1.034	1.063	1.038	1.046	$99.19	$118.48	$217.18	$434.85	$89.75	$107.21	$196.52	$393.49	$84.44	$103.26	$187.82	$375.51	1.18	1.56	5.20	7.93	1.06	1.41	4.70	7.18	1.02	1.35	4.55	6.92
210019	PENINSULA REGIONAL	396,355	1.853	89.0%	85%-95%	1.038	1.034	1.027	1.045	1.033	1.040	$81.37	$104.15	$197.89	$383.42	$73.50	$94.07	$178.75	$346.32	$70.31	$91.11	$171.90	$333.32	0.98	1.43	5.07	7.48	0.89	1.29	4.58	6.76	0.85	1.25	4.46	6.56
210003	PRINCE GEORGE	233,152	1.969	90.3%	85%-95%	1.046	1.040	1.033	1.058	1.038	1.046	$87.91	$109.03	$200.19	$397.13	$74.72	$92.67	$170.15	$337.54	$70.62	$89.31	$162.63	$322.56	1.01	1.35	4.68	7.05	0.86	1.15	3.98	5.99	0.82	1.11	3.85	5.78
210057	SHADY GROVE	957,180	1.540	88.4%	85%-95%	1.035	1.031	1.025	1.041	1.030	1.037	$63.35	$77.26	$225.87	$366.49	$68.83	$83.94	$245.40	$398.18	$66.11	$81.47	$236.73	$384.31	0.69	1.12	5.32	7.12	0.75	1.21	5.78	7.74	0.72	1.18	5.63	7.53
210012	SINAI	430,111	1.860	90.6%	85%-95%	1.048	1.041	1.034	1.064	1.039	1.046	$119.30	$123.64	$225.48	$468.42	$107.33	$111.24	$202.87	$421.44	$100.88	$107.11	$193.88	$401.87	1.28	1.59	5.37	8.24	1.15	1.43	4.83	7.42	1.10	1.38	4.67	7.15
210062	SOUTHERN MARYLAND	382,965	1.850	91.1%	85%-95%	1.054	1.042	1.036	1.072	1.040	1.047	$96.11	$102.48	$205.13	$403.72	$86.94	$92.70	$185.56	$365.19	$81.13	$89.15	$177.30	$347.58	1.01	1.26	4.70	6.96	0.91	1.14	4.25	6.30	0.87	1.09	4.10	6.06
210011	ST. AGNES	366,175	1.674	90.3%	85%-95%	1.046	1.040	1.033	1.059	1.038	1.046	$73.98	$105.53	$196.33	$375.84	$73.94	$105.47	$196.22	$375.62	$69.84	$101.65	$187.54	$359.03	0.90	1.42	4.84	7.16	0.90	1.42	4.84	7.16	0.86	1.37	4.68	6.91
210028	ST. MARY	256,396	1.650	88.0%	85%-95%	1.033	1.029	1.023	1.037	1.028	1.034	$81.61	$101.00	$208.71	$391.33	$82.77	$102.43	$211.67	$396.86	$79.79	$99.61	$204.76	$384.15	0.93	1.32	4.53	6.78	0.94	1.34	4.60	6.88	0.91	1.30	4.49	6.71
210022	SUBURBAN	738,676	1.389	86.3%	85%-95%	1.024	1.020	1.016	1.024	1.021	1.024	$53.99	$82.61	$236.88	$373.48	$65.05	$99.54	$285.40	$449.99	$63.52	$97.44	$278.77	$439.74	0.58	1.15	5.34	7.08	0.70	1.39	6.43	8.53	0.69	1.36	6.33	8.38
210063	UM ST. JOSEPH	509,258	1.626	88.7%	85%-95%	1.037	1.033	1.026	1.044	1.032	1.038	$73.46	$98.38	$204.71	$376.54	$75.59	$101.23	$210.64	$387.45	$72.43	$98.13	$202.84	$373.40	0.88	1.41	4.91	7.20	0.90	1.45	5.05	7.40	0.87	1.41	4.92	7.20
210038	UMMC MIDTOWN	47,404	1.974	91.9%	85%-95%	1.062	1.044	1.039	1.084	1.042	1.047	$105.60	$133.97	$192.89	$432.45	$89.52	$113.57	$163.52	$366.60	$82.57	$109.01	$156.20	$347.79	1.27	1.57	4.61	7.45	1.08	1.33	3.91	6.31	1.01	1.28	3.76	6.05
210032	UNION HOSPITAL OF CECIL	192,592	1.696	88.2%	85%-95%	1.034	1.030	1.024	1.040	1.029	1.035	$100.61	$130.73	$165.26	$396.60	$99.28	$129.01	$163.08	$391.37	$95.50	$125.31	$157.50	$378.31	0.96	1.53	4.06	6.54	0.95	1.51	4.01	6.46	0.91	1.46	3.91	6.29
210024	UNION MEMORIAL	199,074	1.849	90.5%	85%-95%	1.048	1.040	1.034	1.061	1.038	1.046	$81.53	$121.05	$214.97	$417.55	$73.81	$109.58	$194.61	$378.00	$69.54	$105.56	$185.99	$361.09	0.97	1.51	5.18	7.66	0.88	1.37	4.69	6.93	0.84	1.32	4.54	6.69
210002	UNIVERSITY OF MARYLAND	100,964	1.864	90.8%	85%-95%	1.051	1.041	1.035	1.066	1.039	1.046	$92.04	$129.35	$183.64	$405.03	$82.61	$116.11	$164.84	$363.56	$77.48	$111.76	$157.53	$346.77	1.19	1.54	4.42	7.15	1.07	1.38	3.97	6.41	1.02	1.32	3.83	6.17
210049	UPPER CHESAPEAKE HEALTH	707,209	1.573	88.8%	85%-95%	1.037	1.033	1.027	1.044	1.032	1.039	$69.94	$90.84	$200.00	$360.78	$74.39	$96.63	$212.74	$383.76	$71.25	$93.64	$204.77	$369.66	0.83	1.31	4.84	6.98	0.89	1.40	5.15	7.43	0.85	1.35	5.01	7.22
210016	WASHINGTON ADVENTIST	474,525	1.645	89.5%	85%-95%	1.040	1.037	1.030	1.050	1.035	1.043	$77.31	$84.69	$206.53	$370.54	$78.67	$86.18	$212.19	$377.03	$74.95	$83.29	$203.42	$361.65	0.84	1.10	4.96	6.90	0.85	1.12	5.05	7.02	0.82	1.08	4.90	6.80
210027	WESTERN MARYLAND	176,075	2.071	91.9%	85%-95%	1.062	1.044	1.039	1.085	1.042	1.047	$101.37	$146.53	$175.16	$423.06	$81.93	$118.43	$141.57	$341.92	$75.54	$113.67	$135.23	$324.44	1.11	1.85	4.39	7.35	0.90	1.50	3.55	5.94	0.84	1.43	3.42	5.69

Appendix C - Exhibit 3a
CY 2021 Milliman Benchmark and Maryland All-Payer Claims Database Cost and Utilization Exhibits
CHSD Claims Incurred 1/2021 through 12/2021 (Adjusted to Estimated Ultimate Incurred)
Summary of Experience by Maryland Region
Commercial and Individual LOBs, Limited to Members Under Age 65 (Excludes Prescription Drugs)

(1) Risk Score is calculated based on Medical eligibility with valid risk scores, i.e. the risk score shown equals total risk score over total Medical.
(2) Maryland regional benchmark totals are based on an average of the benchmark MSA results. The total across all MSAs is a member-weighted average across all MSAs used in the regional benchmarks.
(3) Normalized to 2021 APCD data for all Maryland counties which has a risk score of 1.673522.
(4) Teaching hospital amounts are removed from Inpatient allowed and paid amounts (except SNF, newborn, and residential treatments) based on the FY2017 per diem rates (trended to FY2021 with an annual rate 2.25%) at the provider level from file we received from Maryland HSCRC on 12/11/2019 named "Hospital file for commercial removal of GME 12-09.xlsx." For benchmark results, this adjustment was made at the MSA level.

		Member Months and Risk		Total Allowed						Allowed PMPM					RVUs PMPM					Allowed Per RVU			
MSA	MSA Name (2)	Medical MMs	2017 HHS Model Platinum Risk Score (1)	Inpatient	Teaching Hospital Adjustment	Inpatient w/ Teaching Adjustment (4)	Outpatient	Prof / Other	Total	Inpatient (4)	Outpatient	Prof / Other	Total	Total - Risk Adjusted (3)	Inpatient	Outpatient	Prof / Other	Total	Total - Risk Adjusted (3)	Inpatient	Outpatient	Prof / Other	Total
All	All MSAs in this Exhibit	122,794,612	1.499							$110.51	$148.66	$190.58	$449.75	$502.01	0.98	1.48	3.81	6.26	6.99	$113.13	$100.51	$50.08	$71.83
MD1	MD1 (Southern MD)	60,340,175	1.465							$108.22	$145.74	$194.75	$448.71	$512.61	0.94	1.49	3.78	6.20	7.09	$115.61	$97.85	$51.53	$72.32
MD2	MD2 (Western MD)	7,107,997	1.544							$115.24	$157.63	$158.75	$431.62	$467.94	1.10	1.66	3.46	6.22	6.74	$105.11	$94.92	$45.87	$69.41
MD3	MD3 (Eastern Shore)	7,722,622	1.562							$114.95	$163.94	$166.10	$445.00	$476.89	1.11	1.67	3.59	6.37	6.83	$103.47	$97.92	$46.33	$69.85
MD4	MD4 (Northern DC Suburbs)	52,025,580	1.395							$110.15	$147.94	$197.30	$455.39	$546.26	0.86	1.38	3.64	5.88	7.05	$127.95	$107.11	$54.22	$77.43
MD5	MD5 (Baltimore Area)	82,135,977	1.491							$105.19	$150.23	$195.36	$450.79	$505.87	0.99	1.55	3.83	6.37	7.14	$106.33	$97.08	$51.03	$70.82

Appendix C - Exhibit 3b
CY 2021 Milliman Benchmark and Maryland All-Payer Claims Database Cost and Utilization Exhibits
CHSD Claims Incurred 1/2021 through 12/2021 (Adjusted to Estimated Ultimate Incurred)
Plan Benefit Normalization Factors by Maryland Region
Commercial and Individual LOBs, Limited to Members Under Age 65 (Excludes Prescription Drugs)

(1) Maryland regional benchmark totals are based on an average of the benchmark MSA results. The total across all MSAs is a member-weighted average across all MSAs used in the regional benchmarks.
(2) Linearly interpolated between coinsurance ranges.
(3) Normalized to 2021 APCD data for all Maryland counties which has a risk score of 1.673522.
(4) Risk adjusted and benefit adjusted amounts are calculated as (risk adjusted amount) / (benefit normalization factor).
(5) Teaching hospital amounts are removed from inpatient allowed and paid amounts (except SNF, newborn, and residential treatments) based on the FY2017 per diem rates (trended to FY2021 with an annual rate 2.25%) at the provider level from file we received from Maryland HSCRC on 12/11/2019 named "Hospital file for commercial removal of GME 12-09.xlsx." For benchmark results, this adjustment was made at the MSA level.

			RVU Plan Benefit Normalization Factors (2)			Allowed Plan Benefit Normalization Factors (2)			Allowed PMPM				Risk Adjusted Allowed PMPM (3)				Risk Adjusted and Benefit Adjusted Allowed PMPM (4)				RVU PMPM				Risk Adj RVU PMPM (3)				Risk Adjusted and Benefit Adjusted RVU PMPM (4)			
MSA	MSA Name (1)	2017 HHS Model Platinum Risk Score	Inpatient	Outpatient	Prof / Other	Inpatient	Outpatient	Prof / Other	Inpatient (5)	Outpatient	Prof / Other	Total	Inpatient (5)	Outpatient	Prof / Other	Total	Inpatient (5)	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total	Inpatient	Outpatient	Prof / Other	Total
All	All MSAs in this Exhibit	1.499	0.964	0.987	0.993	0.951	0.985	0.983	$110.51	$148.66	$190.58	$449.75	$123.35	$165.94	$212.72	$502.01	$129.68	$168.43	$216.39	$514.50	0.98	1.48	3.81	6.26	1.09	1.65	4.25	6.99	1.13	1.67	4.28	7.08
MD1	MD1 (Southern MD)	1.465	0.976	1.002	0.999	0.964	0.997	0.997	$108.22	$145.74	$194.75	$448.71	$123.63	$166.49	$222.49	$512.61	$128.20	$166.95	$223.18	$518.33	0.94	1.49	3.78	6.20	1.07	1.70	4.32	7.09	1.10	1.70	4.32	7.12
MD2	MD2 (Western MD)	1.544	0.982	1.001	0.997	0.967	1.001	0.996	115.24	157.63	158.75	431.62	124.93	170.90	172.11	467.94	129.19	170.80	172.87	472.87	1.10	1.66	3.46	6.22	1.19	1.80	3.75	6.74	1.21	1.80	3.76	6.77
MD3	MD3 (Eastern Shore)	1.562	0.991	1.008	1.001	0.975	1.007	1.000	114.95	163.94	166.10	445.00	123.19	175.69	178.01	476.89	126.33	174.44	178.05	478.82	1.11	1.67	3.59	6.37	1.19	1.79	3.84	6.83	1.20	1.78	3.84	6.82
MD4	MD4 (Northern DC Suburbs)	1.395	0.986	1.012	1.014	0.973	0.995	1.011	110.15	147.94	197.30	455.39	132.13	177.46	236.67	546.26	135.77	178.27	234.17	548.21	0.86	1.38	3.64	5.88	1.03	1.66	4.37	7.05	1.05	1.64	4.31	6.99
MD5	MD5 (Baltimore Area)	1.491	1.001	1.010	1.008	0.993	1.007	1.006	105.19	150.23	195.36	450.79	118.04	168.59	219.23	505.87	118.83	167.44	218.01	504.27	0.99	1.55	3.83	6.37	1.11	1.74	4.30	7.14	1.11	1.72	4.26	7.09