Payor Intelligence & Insights Documentation and Data Dictionary

Introduction

The Payor Intelligence & Insights (PI^2) tool was developed using the raw data submitted by insurance companies subject to Medical Loss Ratio reporting requirements for years 2017, 2018 and 2019 published on the Centers for Medicare and Medicaid Services (CMS) website[1]. The tool relies upon the accuracy and the consistency of the reported items by the insurance companies[2]. The tool aggregates relevant data items and estimates useful outputs to help the user better understand the information present in the data and quickly gain insights. In cases where we had to make interpretations of the data in developing a formula for an output, we have labeled the item with the word "Estimated" proceeding the output. Otherwise, the data items consist of aggregations of similar types of revenues and expenses. This document provides the data dictionary of fields used and formulas calculated to develop each output item in the tool. For the purpose of the document we will use the term "MLR Template" to refer to the items contained in the raw data files used to develop the tool.

Data Dictionary

Three tables are provided at the end of this document which show the data fields from the MLR template that were used and how the PI^2 metrics were calculated. PI^2 metrics represent the general data outputs present in the tool. Any interpretation of the data outputs in the tool should be preceded by a review of Appendix A, B and C and any questions should be directed to the tool's support contact related to the data output items. Below are descriptions of each Appendix table.

Appendix A: MLR Template Fields Used. This table shows the name of the MLR template field used with the column that was pulled from the raw data source. The columns are relevant for the commercial market outputs while the Medicare data has one column source.

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[1] Includes the template instructions and raw data. https://www.cms.gov/CCIIO/Resources/Data-Resources/mlr
[2] Every effort has been made to ensure the accuracy and completeness of the information that is displayed, however the developers of this product makes no warranties, expressed or implied, regarding errors or omissions and assumes no legal liability or responsibility for loss or damage resulting from the use of information contained within.

Appendix B: PI^2 Metrics. This table shows the general names of the tool's output items, the formulas used to calculate them, the MLR Template fields used and any additional notes. Appendix B should be read in conjunction with Appendix A to understand where the MLR template fields come from.

Appendix C: List of Filter Items. This table gives a list of the items used in the filters throughout the tool along with information on where they come from in the MLR Template.

General Notes

Throughout the tool abbreviations are used for the lines of business filters. "Ind" is equal to the individual market subject to MLR reporting requirements, "Smg" is equal to the small group market subject to MLR reporting requirements and "Lg" is equal to the large group market subject to MLR reporting requirements. Positive numbers are shown in black and negative numbers are shown in parenthesis and colored red.

Medicare data is shown in a separate view due to differing reporting methods chosen by carriers. Some carriers split data by the state where the product is sold others aggregate the data at the domicile state level. Medicare data is therefore split from commercial data in the tool. Medicare represents both Medicare Advantage and Medicare Part D standalone products subject to MLR reporting requirements. Because of this, comparisons between carriers or states will represent different mixtures of the two products and can't be directly compared to each other.

Some reported items, such as private reinsurance amounts, were excluded from the tool due to anomalies in reporting methods used by carriers. In general, the reported earned premiums and incurred claims used by CMS for the MLR rebate calculation performed in the MLR templates were used in developing the metrics in this tool. It was our determination that this reflected the most accurate and comparable data between carriers to use for premiums and claims. Some items, such as reinsurance, are reported on separate columns and were not on the same basis as the earned premiums and incurred claims reported for MLR purposes. Therefore, they were excluded from the tool so that anomalies between carriers were minimized.

Additional data items are labeled as "informational only" items within the MLR template. The information provides insights but may not be consistent between carriers. These items include the prescription drug[3] and pharmaceutical rebate fields in the MLR template. We have included

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[3] PRESCRIPTION_DRUGS field in the MLR template was assumed to be before the application of PHARMACEUTICAL_REBATES.

these and labeled them as "reported". They are further used for estimating metrics such as "Estimated Medical Claims" and "Estimated Net Prescription Drugs". The outputs in the tool reflect our interpretation of the MLR template instructions and will accurately reflect carrier reported data to the degree our interpretation is in line with the carrier's interpretation of the same instructions. The same formulas are applied to every carrier and so a comparison of both the reported and estimated values will show accurate comparisons along with potential deviations that can likely be attributed to differing interpretations by different carriers for the same reported items.

State Profile View:

The purpose of this view is to give the user a high-level sense of the statewide market they operate in or are studying. It is designed to compare the statewide metrics to nationwide averages as well as give a state ranking for defined metrics. This view consists of fully insured commercial data.

Instructions:

The user must select one state and one year for this view to properly populate.

Display Notes:

The State Ranking table shows a ranking from 1-51 (includes DC). This ranking is designed to rank the states in terms of the metric output that is more consumer friendly. A ranking of 1 represents the most favorable state for the consumer given the metric used and a ranking of 51 is the least favorable state for the consumer. Green highlights positive states for the state ranking with the darkest green representing the most favorable state for the consumer given the metric used and the darkest red representing the least favorable state for the consumer.

State Dashboard View:

The purpose of this view is to give the user the ability to pull data extracts to analyze the data in an alternative environment. All of the relevant metrics are included in this view and the table is sortable for quick use within the application itself. This view consists of fully insured commercial data.

Instructions:

The user does not have to select any filters for information to properly display. To filter and limit the data pull the user can select one state, one LOB and/or one year.

Display Notes:

The first five columns are frozen which allows the user to scroll to the right and see the metrics for the given state, year, LOB, Company Name/Group Affiliation and Company Name/Subsidiary fields.

Company Profile View:

The purpose of this view is to give the user the ability to analyze a selected company for a specific state and reporting year. Further information is provided for the chosen company that shows high level metrics for every state that company does business in. This view consists of fully insured commercial data.

Instructions:

The user must select one state, one company and one year for this view to properly populate.

Company Comparison View:

The purpose of this view is to give the user maximum flexibility in setting certain filters with easily comparable side by side results of the PI^2 metrics.

Instructions:

The user does not have to select any filters for information to properly display. To filter and limit the data pull the user can select one state, one company, any combination of LOB's and any combination of reporting years.

Display Notes:

If the state is unselected or no state is selected the data will represent nationwide aggregated values and averages. Otherwise one state can be selected to limit the view to a particular state. If the company is unselected or no company is selected the data will represent aggregated values and averages. Otherwise one company can be selected to limit the view to a particular company. The company represents the "holding company" equal to the "Company Name/Group Affiliation" shown in the state dashboard view. We recommend using the two views in conjunction, finding out which company belongs to which holding company in the state dashboard view before selecting a company in the company comparison view.

If you do not select a line of business, the values will represent an aggregation of all commercial lines of business. Multiple lines of business can also be chosen. For instance, a user can select "Smg" and "Lg" to aggregate values for the employer market. The same can be done for the reporting years. If you do not select a year, the values will represent an aggregation of 2017-2019 data. Multiple years can also be chosen. For instance, a user can select "2018" and "2019" to aggregate values for the past two years.

Metric Trends View:

The purpose of this view is to give the user a multi-year view that shows trends over time for the given PI^2 metrics. This allows the user to see three years' worth of metrics in one view to isolate useful trends.

Instructions:

The user must select one state, one line of business and one company for this view to properly populate.

Display Notes:

2018 % change and 2019 % change are equal to the year over year percentage change for the given metric. For instance, if the 2017 value is equal to 100 and the 2018 value is equal to 110, the 2018 % change column will display 10% = (110 – 100) / 100. 2018 % difference and 2019 % difference are equal to the year over year difference for the given metric (used for % metrics). For instance, if the 2017 value is equal to 90% and

the 2018 value is equal to 100%, the 2018 % difference column will display 10% = (100% – 90%). All cells have the same color-coding scheme. Green represents below 0 and Red represent above 0.

Medicare View:

The purpose of this view is to give the user the ability to see Medicare reported data by company. The format is similar to the state dashboard view and functions in the same way.

Instructions:

The user does not have to select any filters for information to properly display. To filter and limit the data pull the user can select one state, one company and/or one year.

Display Notes:

The first four columns are frozen which allows the user to scroll to the right and see the metrics for the given state, year, LOB, Company Name/Group Affiliation and Company Name/Subsidiary fields. As mentioned in this document, the Medicare data is at times reported by carriers at the domicile state level. The market share metric is therefore potentially unreliable depending on the state chosen.

Appendix A: MLR Template Fields Used

MLR Template Fields	Column Used	Assumptions/Notes
TOTAL_DIRECT_PREMIUM_EARNED	Business as of 3/31 of subsequent MLR reporting year	Assumed that health plans have included risk adjustment payments in this number.
FEDERAL_HIGH_RISK_POOLS	Business as of 3/31 of subsequent MLR reporting year	
STATE_HIGH_RISK_POOLS	Business as of 3/31 of subsequent MLR reporting year	
NET_ASSUMED_CEDED_REINS_PREM	Business as of 12/31 of the MLR reporting year	Variance in health plan reporting, therefore, did not incorporate into tool.
OTH_ADJ_MLR_CALC_PREMIUM	Business as of 12/31 of the MLR reporting year	Variance in health plan reporting, therefore, did not incorporate into tool.
RISK_REVENUE	Business as of 12/31 of the MLR reporting year	
EXP_RATING_REFUNDS_PAID_REP_YR	Business as of 12/31 of the MLR reporting year	
PRE_RES_EXP_RAT_REF_CURR_YR	Business as of 12/31 of the MLR reporting year	
FED_REINS_PAYMENTS	Business as of 3/31 of subsequent MLR reporting year	
FED_RISK_ADJ_NET_PAYMENTS	Business as of 3/31 of subsequent MLR reporting year	
FED_RISK_CORR_NET_PAYMENTS	Business as of 3/31 of subsequent MLR reporting year	
APTC	Business as of 3/31 of subsequent MLR reporting year	
TOTAL_INCURRED_CLAIMS_PT1	Business as of 3/31 of subsequent MLR reporting year	
NET_ASSUMED_LESS_CEDED_CLM_INC	Business as of 12/31 of the MLR reporting year	Variance in health plan reporting, therefore, did not incorporate into tool.
OTH_ADJ_DUE_TO_MLR_CALC_CLM_INC	Business as of 12/31 of the MLR reporting year	Variance in health plan reporting, therefore, did not incorporate into tool.

REBATES_PAID	Business as of 12/31 of the MLR reporting year	MLR Rebates Incurred is calculated as a paid plus change in liability calculation.
EST_REB_UNPAID_CURR_MLR_REP_YR	Business as of 12/31 of the MLR reporting year	MLR Rebates Incurred is calculated as a paid plus change in liability calculation.
EST_REB_UNPAID_PRIOR_MLR_REP_YR	Business as of 12/31 of the MLR reporting year	MLR Rebates Incurred is calculated as a paid plus change in liability calculation.
FEE_FOR_SERVICE_AND_CO_PAY_REV	Business as of 12/31 of the MLR reporting year	
ALLOWABLE_FRAUD_REDUCTION_EX_PT1	Business as of 3/31 of subsequent MLR reporting year	
PRESCRIPTION_DRUGS	Business as of 3/31 of subsequent MLR reporting year	Assumed that health plans report this amount before pharmacy rebates (gross costs).
PHARMACEUTICAL_REBATES	Business as of 3/31 of subsequent MLR reporting year	
STATE_STOP_LOSS_MARKET	Business as of 3/31 of subsequent MLR reporting year	
EXP_RAT_REFUNDS_INC_DATE_REP_YR	Business as of 12/31 of the MLR reporting year	
RES_EXP_RAT_REFUNDS_CURR_YR	Business as of 12/31 of the MLR reporting year	
FED_INCOME_TAX_DEDUCTIBLE_PREM	Business as of 3/31 of subsequent MLR reporting year	
PCORI_FEE	Business as of 3/31 of subsequent MLR reporting year	
ACA_9010_FEE	Business as of 3/31 of subsequent MLR reporting year	
OTHER_FED_TAXES_AND_ASSESSMENTS	Business as of 3/31 of subsequent MLR reporting year	
STATE_INCOME_EXCISE_BUSINES_OTH	Business as of 3/31 of subsequent MLR reporting year	
STATE_PREMIUM_TAXES	Business as of 3/31 of subsequent MLR reporting year	
COMMUNITY_BENEFIT_EXPENDITURES	Business as of 3/31 of subsequent MLR reporting year	

FED_REINS_CONTRIBUTIONS	Business as of 3/31 of subsequent MLR reporting year	
REG_AUTHORITY_LICENSES_AND_FEES	Business as of 3/31 of subsequent MLR reporting year	
TOTAL_ALLOWABLE_QIA_EXPENSES	Business as of 3/31 of subsequent MLR reporting year	
IMPROVE_HEALTH_OUTCOMES	Business as of 3/31 of subsequent MLR reporting year	
ACTIVITES_TO_PREVENT_HOSP_READM	Business as of 3/31 of subsequent MLR reporting year	
IMP_PAT_SAFETY_REDUCE_MED_ERRS	Business as of 3/31 of subsequent MLR reporting year	
WELLNESS_AND_HEALTH_PROM_ACTS	Business as of 3/31 of subsequent MLR reporting year	
HITER_TO_HEALTH_IMPROVEMENT	Business as of 3/31 of subsequent MLR reporting year	
COST_CONTAINMENT_EXP_NOT_INCL	Business as of 3/31 of subsequent MLR reporting year	
ALL_OTHER_CLAIMS_ADJ_EXPENSES	Business as of 3/31 of subsequent MLR reporting year	
DIR_SALES_SALARIES_AND_BENEFITS	Business as of 3/31 of subsequent MLR reporting year	
AGNTS_AND_BROKERS_FEES_COMMS	Business as of 3/31 of subsequent MLR reporting year	
STATE_TAXES_ASSMTS_NOT_EXC_PREM	Business as of 3/31 of subsequent MLR reporting year	
FINES_PENLTS_OF_REG_AUTHORITIES	Business as of 3/31 of subsequent MLR reporting year	
EMPLOYMENT_TAXES_ASSMTS	Business as of 3/31 of subsequent MLR reporting year	
OTHER_GENERAL_AND_ADM_EXPENSES	Business as of 3/31 of subsequent MLR reporting year	
COMMUNITY_BENEFIT_EXP	Business as of 3/31 of subsequent MLR reporting year	

INC_FROM_FEES_OF_UNINS_PLANS	Business as of 3/31 of subsequent MLR reporting year	
NUMBER_OF_POLICIES_CERTIFICATES	Business as of 3/31 of subsequent MLR reporting year	
NUMBER_OF_COVERED_LIVES	Business as of 3/31 of subsequent MLR reporting year	
NUMBER_OF_GROUPS	Business as of 3/31 of subsequent MLR reporting year	
MEMBER_MONTHS	Business as of 3/31 of subsequent MLR reporting year	
NUMBER_OF_LIFE_YEARS	Business as of 3/31 of subsequent MLR reporting year	

Appendix B: PI^2 Metrics

Payor Intelligence and Insights Metric Items	Formula	Notes
Earned Premium	= TOTAL_DIRECT_PREMIUM_EARNED.MLR_Template + FEDERAL_HIGH_RISK_POOLS.MLR_Template + STATE_HIGH_RISK_POOLS.MLR_Template	
Earned Premium without Risk Adjustment	= Earned Premium - FED_REINS_PAYMENTS.MLR_Template - FED_RISK_ADJ_NET_PAYMENTS.MLR_Template - FED_RISK_CORR_NET_PAYMENTS.MLR_Template	
Incurred Claims	= TOTAL_INCURRED_CLAIMS_PT1.MLR_Template	
Incurred Claims Net of Risk Adjustment	= Incurred Claims - FED_REINS_PAYMENTS.MLR_Template - FED_RISK_ADJ_NET_PAYMENTS.MLR_Template - FED_RISK_CORR_NET_PAYMENTS.MLR_Template	
Estimated MLR Rebates Incurred	= REBATES_PAID.MLR_Template + EST_REB_UNPAID_CURR_MLR_REP_YR.MLR_Template - EST_REB_UNPAID_PRIOR_MLR_REP_YR.MLR_Template	
Federal and State Taxes	= FED_INCOME_TAX_DEDUCTIBLE_PREM.MLR_Template + PCORI_FEE.MLR_Template + ACA_9010_FEE.MLR_Template + OTHER_FED_TAXES_AND_ASSESSMENTS.MLR_Template + STATE_INCOME_EXCISE_BUSINES_OTH.MLR_Template + STATE_PREMIUM_TAXES.MLR_Template + COMMUNITY_BENEFIT_EXPENDITURES.MLR_Template	
Health Care Quality Expenses	= TOTAL_ALLOWABLE_QIA_EXPENSES.MLR_Template	
Non-Claim Expenses	= COST_CONTAINMENT_EXP_NOT_INCL.MLR_Template + ALL_OTHER_CLAIMS_ADJ_EXPENSES.MLR_Template + DIR_SALES_SALARIES_AND_BENEFITS.MLR_Template + AGNTS_AND_BROKERS_FEES_COMMS.MLR_Template + STATE_TAXES_ASSMTS_NOT_EXC_PREM.MLR_Template +	

	FINES_PENLTS_OF_REG_AUTHORITIES.MLR_Template + EMPLOYMENT_TAXES_ASSMTS.MLR_Template	
Self Insured Income From Fees	= INC_FROM_FEES_OF_UNINS_PLANS.MLR_Template	
Number of Covered Lives	= NUMBER_OF_COVERED_LIVES.MLR_Template	
Member Months	= MEMBER_MONTHS.MLR_Template	
Estimated Gross Gain/Loss (Before MLR Rebates)	= Earned Premium without Risk Adjustment - Incurred Claims Net of Risk Adjustment - Federal and State Taxes - Health Care Quality Expenses - Non-Claim Expenses	Estimated margin built into rates. This calculation is not a direct reporting of profit but rather is a metric of profit to compare to relative companies.
Estimated Net Gain/Loss (After MLR Rebates)	= Earned Premium without Risk Adjustment - Incurred Claims Net of Risk Adjustment - Federal and State Taxes - Health Care Quality Expenses - Non-Claim Expenses - MLR Rebates Incurred	Estimated margin built into rates after MLR Rebates incurred. This calculation is not a direct reporting of profit but rather is a metric of profit to compare to relative companies.
Federal Risk Adjustment	= FED_REINS_PAYMENTS.MLR_Template + FED_RISK_ADJ_NET_PAYMENTS.MLR_Template + FED_RISK_CORR_NET_PAYMENTS.MLR_Template	
Estimated Medical Claims	= Incurred Claims - PRESCRIPTION_DRUGS.MLR_Template + PHARMACEUTICAL_REBATES.MLR_Template	
Estimated Net Prescription Drugs	= PRESCRIPTION_DRUGS.MLR_Template - PHARMACEUTICAL_REBATES.MLR_Template	
Gross Prescription Drugs Reported	= PRESCRIPTION_DRUGS.MLR_Template	
Prescription Drug Rebates Reported	= PHARMACEUTICAL_REBATES.MLR_Template	
Market Share	= Number of Covered Lives of X / Total Number of Covered Lives	

Market Concentration Index	= (Market Share of Company 1 x 100)^2 + (Market Share of Company 2 x 100)^2 +…..(Market Share of Company Z x 100)^2	
HHI Index Category	A market with an HHI of less than 1,500 is considered to be a competitive marketplace, an HHI of 1,500 to 2,500 to be a moderately concentrated marketplace, and an HHI of 2,500 or greater to be a highly concentrated marketplace.	https://www.investopedia.com/terms/h/hhi.asp#:~:text=A%20market%20with%20an%20HHI,be%20a%20highly%20concentrated%20marketplace.
Percent of Earned Premium Calculations	= Metric / Earned Premium without Risk Adjustment	
Percent of Incurred Claims Calculations	= Metric / Incurred Claims	
PMPM Calculations	= Metric / Member Months	
Market Concentration Index State Ranking	= Ranking of Market Concentration Index metric	
Covered Lives State Ranking	= Ranking of Covered Lives metric	
Earned Premiums PMPM State Ranking	= Ranking of Earned Premiums PMPM metric	
Medical Loss Ratio State Ranking	= Ranking of Medical Loss Ratio metric	
Profit Margin State Ranking	= Ranking of Net Gain/Loss (After MLr Rebates) - % of Premium metric	
Number of Carriers State Ranking	= Unique number of companies with more than 0 covered lives in the state.	Uses Company Name/Group Affiliation for the counts which is the holding company name.

Appendix C: List of Filter Items

Filters	MLR Template Field	Notes
State	BUSINESS_STATE	
Year	Pulls data from MLR year filed.	
LOB - Ind	CMM_Individual	
LOB - Smg	CMM_Small_Group	
LOB - Lg	CMM_Large_Group	
LOB - Medicare	MDCR_MLR_BUSNS	Medicare Advantage and Medicare Part D data subject to minimum loss ratio standards.
Company Name/Subsidiary	COMPANY_NAME	Based on MR_SUBMISSION_TEMPLATE_ID
Company Name/Group Affiliation	GROUP_AFFILIATION	Group affiliation used to connect carriers. If this field is blank, COMPANY_NAME is used.