Library of Models

Commercial and Medicaid populations

Model Type	Model Name	Methodology	Input Required	Concurrent	Prospective	Outcome	Use
Risk Adjuster	RxXPLN	Regularized regression	Demographics Pharmacy	✔	✔	Risk Scores, Drug Classes	When your application needs an early indication of risk. Best for new enrollment, or when medical data is incomplete.
	DxXPLN		Demographics Medical	✔	✔	Risk Scores, Clinical Conditions, Chronic and Complexity Indicators, Condition Risk Drivers	Best when your application needs to avoid influence of drug utilization, such as profiling providers, risk-based payment where pharmacy services are excluded from capitation and risk management outcomes.
	CxXPLN		Demographics Medical Pharmacy	✔	✔	Risk Scores, Clinical Conditions, Chronic and Complexity Indicators, Condition Risk Drivers, Drug Classes	Best performance. Use for most applications when pharmacy data is available. Can be best for care management, pricing and budgeting.
	RxOPTml	Optimized machine learning	Demographics Pharmacy	✔	✔	Risk Scores, Drug Classes	Optimized for best possible predictions. Machine learning models have higher performance. Use when the application does not require transparent explanation.
	DxOPTml		Demographics Medical	✔	✔	Risk Scores, Clinical Conditions, Chronic and Complexity Indicators, Condition Risk Drivers	
	CxOPTml		Demographics Medical Pharmacy	✔	✔	Risk Scores, Clinical Conditions, Chronic and Complexity Indicators, Condition Risk Drivers, Drug Classes	
Segmentation and Prioritization	DxRising	Optimized machine learning	Demographics Medical		✔	Rising Risk Indicators, Rising Risk Score, Probability of PMPM change, Clinical Conditions, Risk Drivers	Used to prioritize individuals based on expected change in costs from year one to year two; care and disease management. All Rising Risk models include chronic and complexity indicators Identify and segment clinically complex cases for coordinating care, and care transition planning.
	CxRising		Demographics Medical Pharmacy		✔	Rising Risk Indicators, Rising Risk Score, Probability of PMPM Change, Clinical Conditions, Risk Drivers, Drug Classes	

Medicare Advantage and MSSP populations

Model Type	Model Name	Methodology	Input Required	Concurrent	Prospective	Outcome	Use
Risk Adjusters	MCRRxCPLN	Regularized regression	Demographics Pharmacy	✔	✔	Risk Scores, Drug Classes	Similar to the commercial versions. Service categories include: Total plus Rx, Part B Rx, IP, OP, ER, PHYS, PCP, Other Med. All MCRDx and MCRCx models include chronic and complexity indicators Identify and segment clinically complex cases for coordinating care, and care transition planning.
	MCRDxXPLN		Demographics Medical	✔	✔	Risk Scores, Clinical Conditions, Chronic and Complexity Indicators, Condition Risk Drivers	
	MCRCxXPLN		Demographics Medical Pharmacy	✔	✔	Risk Scores, Clinical Conditions, Chronic and Complexity Indicators, Condition Risk Drivers, Drug Classes	
	MCRRxOPTml	Optimized machine learning	Demographics Pharmacy	✔	✔	Risk Scores, Drug Classes	
	MCRDxOPTml		Demographics Medical	✔	✔	Risk Scores, Clinical Conditions, Chronic and Complexity Indicators, Condition Risk Drivers	
	MCRCxOPTml		Demographics Medical Pharmacy	✔	✔	Risk Scores, Clinical Conditions, Chronic and Complexity Indicators, Condition Risk Drivers, Drug Classes	
Cohort Assessments, Segmentation and Prioritization	MCRDxRising	Optimized machine learning	Demographics Medical		✔	Rising Risk Indicators, Rising Risk Score, Probability of PMPM Change, Clinical Conditions, Risk Drivers	Used to prioritize individuals based on expected change in costs from year one to year two; care and disease management. Service categories include: Total plus Rx, Part B Rx, IP, OP, ER, PHYS, PCP, Other Med. All Rising Risk models include chronic and complexity indicators Identify and segment clinically complex cases for coordinating care, and care transition planning.
	MCRCxRising		Demographics Medical Pharmacy		✔	Rising Risk Indicators, Rising Risk Score, Probability of PMPM Change, Clinical Conditions, Risk Drivers, Drug Classes	

Individual and Small Group On/Off the Health Exchanges are available in MARA Software

Model Type	Model Name	Methodology	Input Required	Concurrent	Prospective	Outcome	Use
Individual and small group on/off Exchanges - Risk Adjuster	Federal HHS-HCC	HCC	Demographics Medical Pharmacy	✔		Metal Level Total Risk Scores, HCCs, RxHCCs	MARA implementation handles data without pre-processing. Includes current and historical model years.

MyMARA™ Customized models – bring your own data, predict different outcomes

When you want to predict other outcomes, or when your data or population is unique, a custom MyMARA™ model may be the solution. The MyMARA™ Data Science Team can develop a completely new model, or partially recalibrate MARA models on your own data. If you wish to partially recalibrate a MARA model to improve predictions for specific use cases, such as Medicaid capitation payments, a MyMARA model might be the right fit. Outcomes may include risk scores, readmission probabilities, or other outcomes based on need, or to address a program, such as capitation or VBP program that has unique features. If you wish to further enhance the predictive performance of custom MyMARA models, non-standard variables sourced from structured or unstructured data can be added. We can assist with using natural language processing (NLP) to help extract standard and/or non-standard variables from unstructured data like clinical notes and help source non-standard data from third-party sources. Non-standard variables can include things such as unique information about your population, lab values, social determinants of health (SDOH) information, etc.

MyMARA™	Type	Methodology	Input Required	Concurrent	Prospective	Other Outcomes	Use
Model customization service	Based on your use case	Varies, can use XPLN, or OPTml models as foundation for customization	Use our industry research claims data, bring your own data, and/or use data sourced from third party vendors	✔	✔	Outcomes may include risk scores, readmission probabilities, or other outcomes based on need	Specific use cases determined by the client need and available data.

Milliman Advanced Risk Adjusters®