

MedInsight PRM Analytics



PRM Analytics® offers solutions that help provider organizations uniquely identify healthcare expenses, as well as the type of quality of care to optimize healthcare management. PRM was designed from the ground up to be analytical and use data to tell a story about patients and physicians. With PRM's cutting edge technology and machine learning, healthcare providers can identify patients with high actuarial risk and the clinical opportunity that may result from managing these patients.

What is PRM Analytics?

Milliman PRM Analytics is based on a core digital data repository and set of software application modules that are designed to support patient relationship management. The PRM database takes in client claims data, then identifies opportunities for care intervention through innovative predictive machine-learning processes that focus on actuarial risk and clinical opportunity. Additionally, PRM uses estimates of the financial impact of care intervention to stratify the population. PRM can be deployed as stand-alone or integrated with a data warehouse, clinical data repository, care management system, health information exchange, or other platform for access to standard reports and dashboards.

PRM is one of the first predictive tools with the ability to connect the clinical characteristics of the patient with the estimated financial impact from patient management, providing critical business information required for setting care management priorities. PRM is used by care coordinators, medical directors, physicians, and other professionals who are responsible for population health management to assess data at the population level and the individual patient level using predefined filters that map to each user's specific audience.

“By giving us a greater ability to better manage our population health, the PRM tool allows for more efficient risk stratification and management.”

– Peter Waziri, Cascade Health Alliance's
Chief Financial Officer

PRM Market Differentiators: Sophisticated Analytics

Identification of Potentially Avoidable Costs

PRM takes predicting potentially avoidable costs one step further by integrating innovative machine-learning technologies. Inspired by the Prevention Quality Indicators (PQIs) of the Agency for Healthcare Research and Quality (AHRQ), and developed with research from Milliman's own clinicians, PRM's Opportunity Prospective Scores help identify potentially avoidable costs by looking comprehensively at the patient's medical claims history. PRM Analytics builds a predictive model to score potential costs at a member level using machine learning. The Opportunity Prospective Scores are machine-learning models customized to each client's data. This approach allows the Opportunity Prospective Scores to show care management patterns and adapt to changes in care management over time.

Collaborative Filtering for Patient Conditions

Every month PRM leverages machine learning to identify potential gaps in provider coding patterns and relearn new coding patterns to better help organizations ensure patients have reliable, accurate documentation. PRM can identify chronic conditions not recoded each year, as well as link conditions that could be related by similar patient condition histories. Much like the collaborative filtering large tech companies like Amazon and Netflix use to recommend products to customers, PRM algorithms learn from condition coding in order to show users patterns they might be overlooking. For instance, if a client codes diabetes and hypertension, the algorithm would then prompt for a frequently related code, like hyperlipidemia. Additionally, if a client implements a successful population management program, the PRM machine-learning algorithm will automatically stop predicting management opportunities for that population.

Patient-level Evidence-based Measure Management

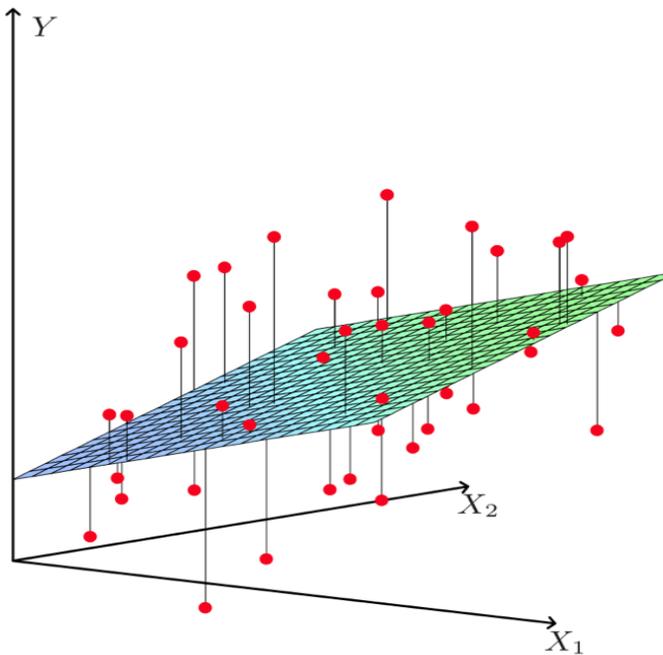
PRM reports on a variety of evidence-based measures. PRM's evidence-based measure reporting emphasizes outcomes of the measure at the patient level. For each patient PRM will indicate what evidence-based measures they qualify for, whether there is still time to act for each measure, and why the patient does or does not qualify for that measure. Present in the Care Coordinator Report, this feature gives specific, patient-level feedback allowing users to quickly identify particular actions to make immediate impacts on evidence-based measure outcomes.

Physician Performance Scores

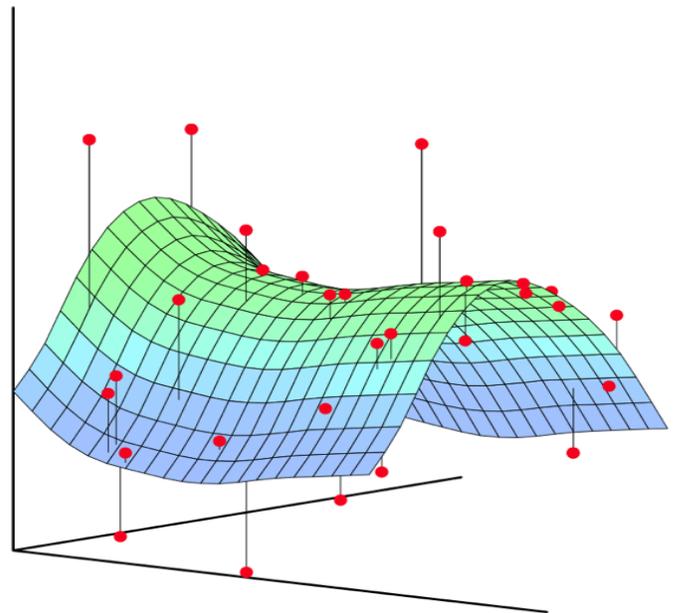
Physician performance measurement should be based on fair and objective metrics. In order to create responsible estimates, PRM's Physician Risk and Credibility Adjusted (PRCA) Analytics account for differences in patient health status and the size of the patient panel. Even with those adjustments there is still significant uncertainty in results, and the machine-learning algorithms used in PRCA are designed to reflect and report on this residual uncertainty as well. These responsible results can be used to develop an equitable and fair distribution of savings throughout an accountable care organization (ACO), enabling recognition of the most efficient providers.

TRADITIONAL STATISTICS*

Linear unless explicitly stated otherwise



MACHINE LEARNING*



* Source: Hastie, Trevor, Robert Tibshirani, and Jerome Friedman. 2009. Elements of Statistical Learning: Data Mining, Inference, and Prediction (2nd Edition). Springer-Verlag. 763 pp.

Machine learning algorithms adapt to nonlinear data sets and patterns, which makes the PRM models able to more deeply learn the underlying data and relationships.