



Conditions to Consider

MedInsight Machine Learning

Conditions to Consider™ is an exciting new product from the Milliman MedInsight® suite of machine learning analytics. It identifies and leverages similarities between patients within a population to ensure appropriate patient morbidity in risk-based contracts and assists in medical case finding initiatives. Similarity is defined based on a patient's demographic information, medical conditions, and prescription histories. It uses collaborative filtering analytics, a common approach among online retailers that leverages elements like purchase history to identify similar shoppers.

Collaborative Filtering

Using the powerful analytics of collaborative filters, Conditions to Consider focuses on identifying which users within a group are similar to each other. Understanding similarities between users can help identify products or services that a user may find helpful, based on the behavior of similar users.

Conditions to Consider takes this approach and applies it to healthcare. Instead of using purchase or viewing history like a retailer would, Conditions to Consider uses a patient's clinical, prescription, and demographic data to identify similar patients. It offers an advantage over traditional methods of grouping patients based on their current conditions or prescription history alone. By blending multiple data sources to create a complete profile, Conditions to Consider can determine similarities based on that profile. These similarities can then be leveraged in applications such as ensuring medical record completeness.

Risk Score Accuracy

Complete medical records are important for accurate administration of risk-based contracts and physician performance evaluation. Conditions to Consider helps ensure accurate measurement of the morbidity burden of a provider's attributed patients. As a baseline, chronic conditions that were only coded in prior plan years are identified as potential gaps in the medical record.

Conditions to Consider then goes further by identifying conditions that have not been coded on the patient of interest, but have been coded on clinically and demographically similar patients. This

extension helps capture cases where conditions may have been overlooked or miscoded resulting in an inaccurate medical record and risk score for the patient. Probabilities and reasons are provided for each condition to consider to allow users to easily identify the highest impact patients to evaluate for incomplete medical records.

Case Finding

Case finding is a strategy for targeting resources at individuals or groups who are suspected to be at risk for a particular disease. For many diseases, clinical data sources are the best indicators of risk, but clinical data sources are not always available at the population level. Conditions to Consider can be useful to loosely identify groups of patients at the early risk stages of various diseases, based on demographics and common comorbidities. Interventions that target early preventative measures can be developed and deployed. Users can dig further into pertinent patients' history, as well as schedule further screenings as appropriate.

Conditions to Consider gives users the ability to leverage powerful machine learning analytics in new ways from determining risk score accuracy to identifying patients for early interventions. The results can lead organizations to a healthier population and overall better patient care.

To learn more about our new product, please contact milliman.medinsight@milliman.com.