Truven

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FLEXIBLE ANALYTICS

Population Classification methodology

Stratify your members by their anticipated care needs quickly and easily

Introduction

Managing your population's health can be a cumbersome challenge. Individuals need different levels of management based on a variety of factors that can change over time. To improve outcomes and make the best use of expensive care management resources, it's important to match the right needs with the right care solutions at the right time.

The Population Classification model from Truven allows you to stratify members for appropriate care and provides insights on entire populations. The model considers current disease conditions, changes in health status, acute situations, engagement with primary care, patient complexity and utilization behaviors – and tracks these factors over time – so you get a timely and accurate picture of each member. The output of the model has been validated on a sample of patients via a clinician review.

From engagement to crisis management and all levels of care in between, Population Classification provides valuable data so you can quickly make insightful decisions.

The Population Classification difference:

- Presents more than statistical identification of "high-risk" or "high-cost" members
- Actionable categories provide insight on the entire member population
- Categories change as member's care management needs change over time
- The category assignment process combines data- and knowledge-driven approach

Deployment method

Population Classification is deployed as a service on Microsoft Azure, as part of our Flexible Analytics offering. Flexible Analytics offers robust, off-the-shelf analytics that can help you meet your business goals, optimize your IT investments and accelerate time to value in your environment.

A strategy that stratifies populations

Applications and insights
Population Classification assigns members to mutually exclusive, time-sensitive clusters based on anticipated care management intervention need. This supports the ability to stratify patients for appropriate care and provide insights on entire populations.

The model considers:
- Characteristics of current disease conditions (Chronicity, level of impairment, onset and progression patterns, propensity to stabilize, risk of mismanagement and treatment intensity)
- Recent significant changes in health status
- Short-term acute care situations (Just discharged, post-surgery and newly diagnosed with condition)
- Lack of engagement with primary care
- High patient complexity (Number of diseases, medications and specialists)
- Patient utilization behaviors (High ER use, high admission rate and opioid utilization)
- Non-compliance with treatment
- Socio-economic factors

How it works

Member classification is not a static exercise. Health condition, lifestyle, socioeconomic conditions and other influencers can change frequently, and cause a member to move in and out of different categories. Because you can access and run the Patient Classification model on an as-needed basis, you can be confident that the results reflect the member's most recent status.

The Population Classification model assigns enrollees to 10 defined categories based upon care management needs.

Care management categories

Care management need	Potential intervention type	Example member description	Member goal
Engagement	Engage patient	35-year-old female without office visits, 1 visit to ER with sprained ankle	Establishing a primary care relationship
Prevention	Wellness care tips/ preventive reminders	25-year-old male without significant chronic conditions with 1 office visit in past year	Staying well
Support	Disease specific advice and information	51-year-old female with well-controlled Type 2 diabetes mellitus	Living with illness
Treatment Navigation	Decision guidance and support	45-year-old female with new diagnosis of lower back pain	Making the best decision
Coordination	Significant care coordination	54-year-old male with COPD, Crohn's disease, arrhythmia, major depression on seven maintenance drugs with visits to multiple specialists	Coordinating care delivery
Monitoring	Disease management	45-year old male with knee pain and 90-day supply of opioid drugs in last 90 days	Managing condition
Recovery Guidance	Temporary assistance in recovery	61-year old male 18 days post anterior fusion of cervical spine	Getting healthy
Rebalancing	Temporary intense care management	42-year old male with newly diagnosed Type 2 diabetes mellitus	Finding new normal
Surveillance	Observe, intervene rarely as needed	52-year-old female currently receiving radiation therapy following mastectomy for breast cancer	Completing treatment
Crisis Management	Disaster control, end of life care	59 -year old female with chronic pulmonary disease, CAD, diabetes, cirrhosis with recent admission for sepsis	Coping with significant disease

Source data and feature variables

The Population Classification model uses data from the previous 3 to 12 months of patient claims history, including prescription drug history (where available) as well as historical inpatient and outpatient service utilization. Additionally, the model uses the Truven Disease Staging patient classification system as a method of identifying disease severity. The model uses a combination of decision tree and expert rules.

Conclusion

In today's overwhelming data environment, it's important to be able to bridge the gap between the data and the insights so you can make swift, confident decisions. By focusing on new and expanded data sources, emphasizing actionability and integrating the advanced technologies of artificial intelligence, Truven predictive models are designed to help healthcare payers make more informed decisions about how to improve patient outcomes and lower the cost of healthcare.

About Merative

Truven by Merative is a portfolio of healthcare data and analytics solutions, backed by 40 years of deep healthcare expertise. We provide trusted insights and proven expertise to help employers, health plans, life sciences organizations, and government agencies drive better health and financial outcomes. With market-leading solutions like Health Insights and MarketScan, Truven serves 7 of the top U.S. health plans, over 40% of the Fortune 500, and the top 20 global pharmaceutical companies.

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About Merative

Merative provides data, analytics, and software for healthcare and government social services. With focused innovation and deep expertise, Merative works with providers, employers, health plans, governments, and life sciences companies to drive real progress. Merative helps clients orient information and insights around the people they serve to improve decision-making and performance.

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Produced in the United States of America
June 2024

MFA-3610696736 Rev 2.0