HOW PRESCRIPTIVE ANALYTICS CREATE Patient-level Insights for Avoidable Utilization
NEW STRATEGIES FOR

Population Health Management: AI-Enabled Prescriptive Analytics

Where people live, their age, education, workplace, access to transportation and more can quite literally be the difference between life and death. Socioeconomic factors are responsible for 40% of a patient’s health (AHA),¹ and account for a third of all deaths in the U.S. annually (NIH).²

Today’s providers, however, lack the access to the data and insights they need to appropriately deliver care and quality outcomes based on known socioeconomic risk factors. However, emerging artificial intelligence (AI) and machine learning (ML) technologies are providing that access and new insights that allow providers to identify the most impactful interventions for the patients most likely to respond to them and to implement effective population health management strategies in their communities.

² https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3134519/

“Today’s providers lack access to population level data within their EHR on the social determinants of health that could provide valuable insight to drive more effective and equitable care.”

— HIMSS Media Lab
AI-enabled prescriptive analytics represent a new, practical approach to using socioeconomic determinants of health (SDOH) to pinpoint the most impactful interventions—by individual—across large patient cohorts and geographies. When providers have ready access to this information, they save lives, improve quality of life, and immediately impact key quality measures.

**Impact on Key Quality Measures**

- **10.85%** fewer avoidable admissions
- **10.70%** fewer avoidable ED visits

- **$721,779** saved per quarter on admissions
- **$233,677** saved per quarter on ED visits

- **32** admissions avoided each month
- **38** ED visits avoided each month

**Pinpoint the Most Impactful Interventions**

AI-enabled prescriptive analytics represent a new, practical approach to using socioeconomic determinants of health (SDOH) to pinpoint the most impactful interventions—by individual—across large patient cohorts and geographies. When providers have ready access to this information, they save lives, improve quality of life, and immediately impact key quality measures.
Population Health: AI-Enabled Prescriptive Analytics

The emergence of AI and ML tools make it not only possible, but also practical to integrate SDOH into patient and population health management strategies to improve outcomes and reduce utilization and costs.

By integrating clinical data with socio-economic data and leveraging the latest in AI technology, providers can predict utilization independent of the patient’s clinical condition while defining which determinants confer the greatest risk. Armed with this information, providers can proactively address those factors likely to have the greatest impact and develop effective intervention strategies, including connecting patients with hospital and community resources.
AI-Enabled Prescriptive Analytics for Preventable Harm

Working with many prominent providers and hospitals, Jvion has been on a mission to improve the care and cost curves for patients and their care teams. Jvion removes uncertainty and guesswork, replacing it with clarity and action by empowering providers to positively impact health outcomes through proactive, targeted, patient outreach with specific, individualized interventions that address high impact SDOH at both the individual and community levels.

The Jvion Machine is an AI-enabled prescriptive analytics solution that utilizes proprietary machine learning algorithms in conjunction with publicly available and purchasable data to generate a highly accurate model to predict inpatient and emergency department utilization—at the individual level—based on SDOH criteria, including such categories as “air quality,” “income,” “transportation access,” “health literacy,” “population density,” “social support,” “education,” “financial security,” “housing stability,” among others. The solution is able to risk-stratify patients’ likelihood of utilization using the most basic information—age, address, race, and gender.

The Jvion Machine reveals:

- Ranked socioeconomic determinants of health for any individual—not a list of 70, but a ranked list of the top 5-10 factors driving risk for that specific individual
- Block-level heat maps based on rolled-up individual risks (e.g., heavy concentration of diabetic patients—food insecurity may be the biggest issue)
- The biggest factors impacting individual patients, based on 200-300 major socioeconomic determinants of health, so that they can prioritize effectively

Jvion helps providers address holistic patient care without disruption to existing clinical workflows and without limitation due to variations in provider documentation.

Results

1. Reduce CHF Admissions by 10%
2. Identify the top 5 – 10 factors driving individual risk
3. Improve individual outcomes with individualized interventions

Learn more at: jvion.com