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# Realize the full value of your EHR data by appending SDOH

How healthcare provider organizations are using SDOH and AI-powered analytics to grow patient relationships and improve outcomes.



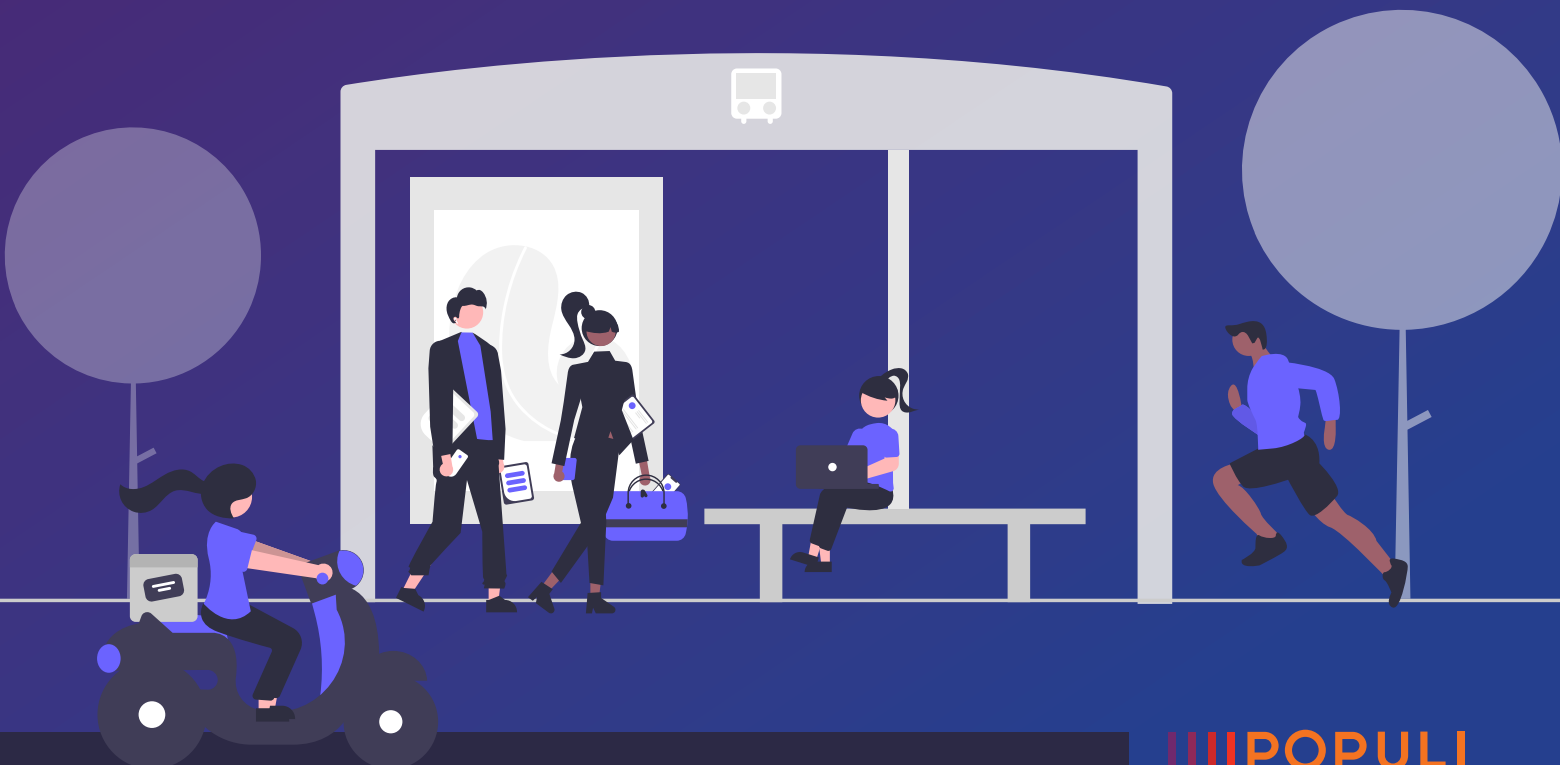
## Introduction

As a first step in digital transformation, electronic health records (EHRs) have helped health care providers close gaps in care, improve patient safety and increase profitability. But an EHR is just that—a record of the past, a medical history. To make effective, efficient business decisions, your organization needs forward-looking information. You need more data points, and you need data points with higher predictive value.

Social Determinants of Health (SDOH) are a constellation of patient attributes that can give you a window into the future. As the basis of propensity models, SDOH can tell you who will get sick and who will seek care. This holistic view of the patient adds the dimension of time with future-dated, relevant and actionable insights.

SDOH include a wide range of socioeconomic, environmental and behavioral factors, which can have a major impact on people's health, well-being and quality of life. SDOH contribute to disparities and inequities in health and life expectancy. Examples of SDOH include:

- Safe housing, transportation and neighborhoods
- Education, job opportunities and income
- Access to nutritious food and opportunities for physical activity<sup>1</sup>





## Impact on **Patient**

The richest 1% of Americans can expect to live as many as 14 years longer than the poorest 1% of Americans<sup>3</sup>

50% of all deaths in the U.S. involve behavioral causes<sup>2</sup> such as tobacco use, poor diet and lack of exercise<sup>4</sup>

1.5x higher risk of psychiatric symptoms in children who have experienced trauma<sup>5</sup>

## Impact on **System**

\$111 billion over ten years – the estimated cost to the U.S. healthcare system of housing instability<sup>6</sup>

60% higher risk of ED utilization for patients requiring language services<sup>7</sup>

\$53 billion in annual cost to the U.S. health system due to food insecurity<sup>8</sup>



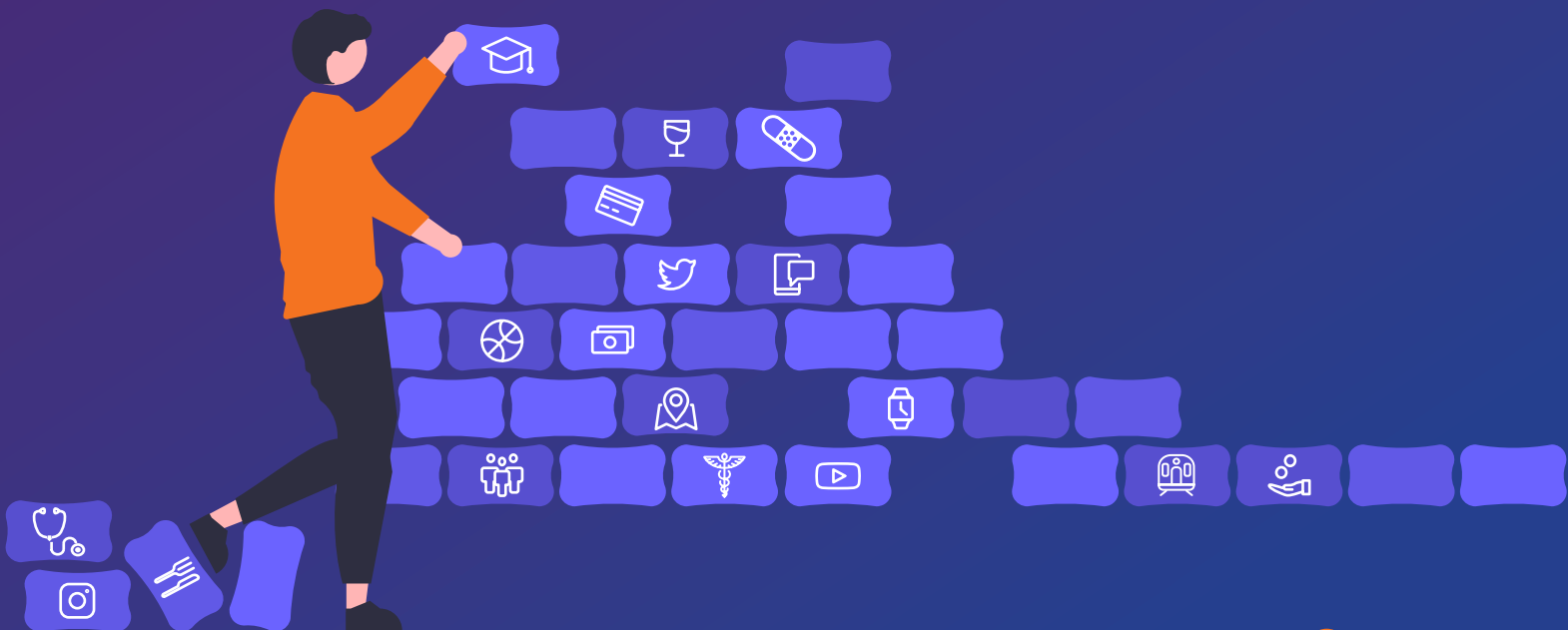
## SDOH are the heavyweights of health outcomes.

Social determinants account for roughly 80% of modifiable factors in health outcomes,<sup>2</sup> which means that healthcare delivery represents only about 20% of the modifiable factors. As value-based programs and pay-for-performance models continue to gain momentum, addressing SDOH can help providers impact health outcomes and keep pace with expectations.

In today's digital economy, healthcare provider organizations now have vast amounts of SDOH data available, but they need to know how to use it. Analytics powered by artificial intelligence (AI) can crunch that data in a privacy-compliant way to yield high-performing propensity models.

## Build a solid foundation for population analysis and modeling with SDOH.

First-party data from the EHR gives you only a fraction of the attributes that make up a patient. Appending your patient database with SDOH attributes can help fill in your analytical gaps and help you build more statistically relevant propensity models. By combining clinical and consumer data in a compliant way, your organization can move to the next level of segmentation and uncover your most relevant audiences.



# How SDOH can inform decisions across the organization.

Incorporating SDOH data into your business intelligence practice can boost performance in these four key areas:

# 1

## Enhance targeting and acquisition strategies

- Understand populations that inform market share
- Build target segments using inclusion and exclusion criteria
- Identify and forecast your target patients' needs
- Predict opportunities such as likelihood to utilize services and payer composition across service lines

# 2

## Optimize your technology investment

- Increase operational efficiency
- Yield higher ROI on EHR investment
- Realize the full value of the applications you already own and use

# 3

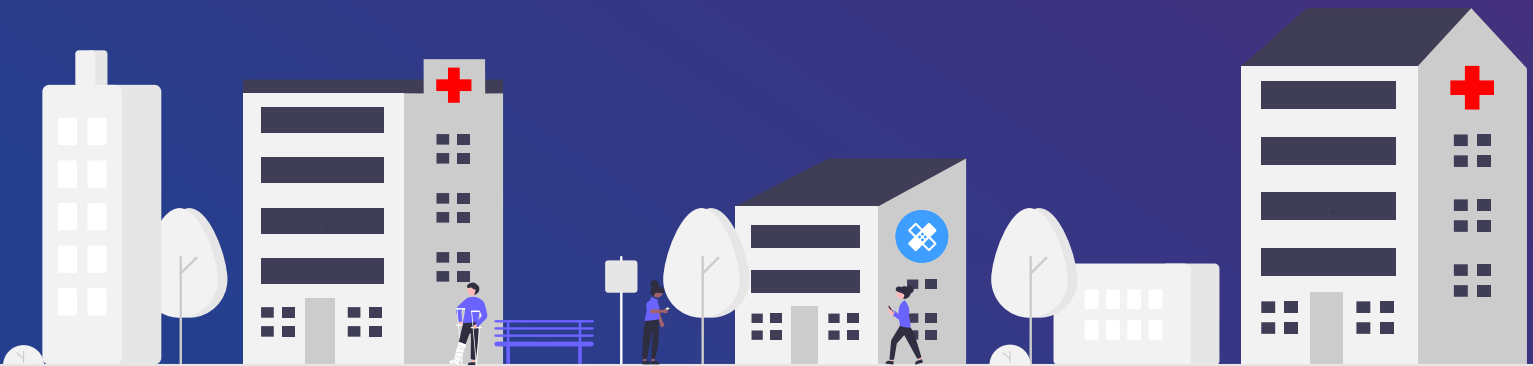
## Evaluate and improve quality

- Identify quality issues in and out of network
- See how treatment and outcomes vary based on location and involved providers

# 4

## Move the needle on population health

- Increase patient engagement, adherence and compliance
- Improve access and close gaps in care
- Improve outcomes and chronic condition management



## SDOH Analytics in Action



### ER Utilization

By identifying risk factors and enabling preventive care, trips to the ER can be reduced.



### Building a Business Case

Visualizing operations and outcomes makes it easier to secure funding.



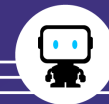
### Personalized Care

Reach the right patients at the right time with the right information.



### Diversity, Equity and Inclusion Initiatives

SDOH data can help organizations evaluate progress.



## Why Populi?

Populi is an Analytics-as-a-Service company that makes access to healthcare analytics easy. We enable healthcare organizations to market and sell to patients, consumers, and healthcare providers by delivering the analytics they need in the platforms they work in every day. As part of Populi's Population Intelligence suite, our proprietary database provides monthly updates of the entire US population over the age of 17 for patient appends and consumer targeting.

Populi's self-reported and modeled SDOH attributes give insight into your target audience's behavior, both directly and indirectly related to their engagement with health and healthcare.

Our consumer data provides more than 800 attributes at the individual level, grouped into a handful of useful categories:

**Economic Indicators**

Includes standard information such as estimated household income and home value, as well as more sophisticated models such as economic stability score (similar to a credit score) and a net worth attribute that estimates the target's total assets minus liability.

**Health Behavior Indicators**

Often the most powerful predictors, this category includes information about the target's smoking and drinking behavior, stress levels, quality of sleep, and other health-related attributes.

**Health Service Usage**

Shows where the target refills prescriptions, how likely they are to discuss an ad or specific medication with a provider, and where they look for healthcare information outside of a provider's office.

**Technology Usage**

Provides insight into the target's sophistication and use of various technologies such as a wearable device or health-specific wearable device and whether they track their fitness and wellbeing using digital tools.

“ Populi gives provider organizations unprecedented access to a trove of SDOH data and propensity models that are more specific and actionable than anything else to date. ”



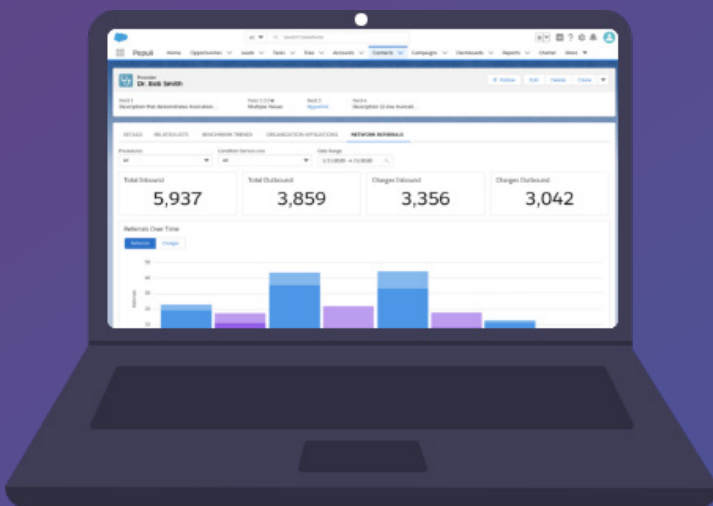
**Bill Moschella**

CEO and Co-Founder of Populi, Inc.

Populi's large sample sizes enable highly robust and performative models. By connecting actual patient-level health data with consumer demographic, psychographic and socioeconomic data, Populi's AI prediction engine will help you identify and forecast your target patients' needs. You can build custom propensity models or select from our existing library of off-the-shelf, high-performing standard models that can be quickly deployed and integrated into your existing marketing platforms.

## Conclusion

Payers, providers and society at large have tremendous financial and ethical incentives to address SDOH. Combined with machine learning, SDOH is a force multiplier in the delivery of quality healthcare. Tapping into more data sources and applying advanced analytics can yield the most impactful interventions and increase profitability for providers. Increasingly, healthcare provider organizations are recognizing the value of SDOH data analytics as the next step in their digital transformation.



## Get a Proof of Concept Demo

To show you just how different Populi is, we're offering a proof of concept demo with your live market data. No strings attached.

[Populi.ai/Request-Demo](https://populi.ai/Request-Demo)



## Footnotes:

1. U.S. Department of Health and Human Services. “Social Determinants of Health.” <https://health.gov/healthypeople/priority-areas/social-determinants-health>. Accessed July 7, 2022.
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3. Chetty R, Stepner M, Abraham S, et al. The Association Between Income and Life Expectancy in the United States, 2001-2014. *JAMA*. 2016;315(16):1750–1766. doi:10.1001/jama.2016.4226
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6. Boston University School of Medicine. “Unstable housing to cost health system estimated \$111 billion over 10 years, study finds.” <https://www.eurekalert.org/news-releases/797348>. Accessed July 8, 2022.
7. Njeru JW, St Sauver JL, Jacobson DJ, Ebbert JO, Takahashi PY, Fan C, Wieland ML. Emergency department and inpatient health care utilization among patients who require interpreter services. *BMC Health Serv Res*. 2015 May 29;15:214. doi: 10.1186/s12913-015-0874-4. PMID: 26022227; PMCID: PMC4448538.
8. Berkowitz SA, Basu S, Gundersen C, Seligman HK. State-Level and County-Level Estimates of Health Care Costs Associated with Food Insecurity. *Prev Chronic Dis* 2019;16:180549. DOI: <http://dx.doi.org/10.5888/pcd16.180549>.