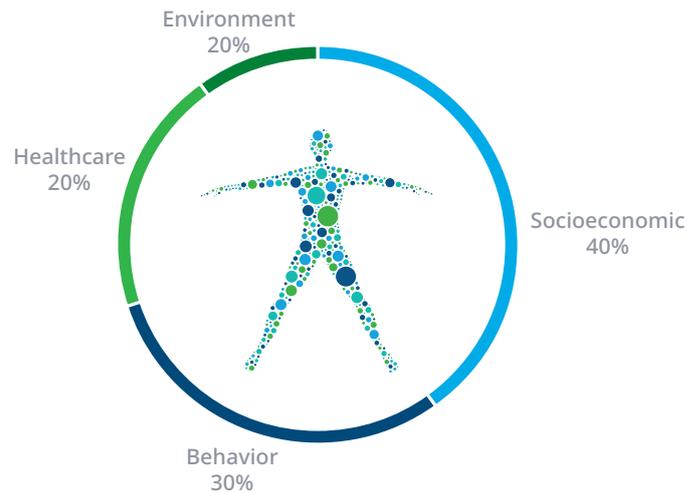


# Unlock Patient-Level Social Determinants Of Health With IQVIA NLP

*Drive population health analytics and health equity*

## Why address social determinants of health?

To understand the real cost of food insecurity, a validated micro-simulation model — the cardiovascular disease (CVD) policy model for risk, events, detection, interventions, costs and trends (PREDICT) — was initiated to project the health and cost outcomes, at both an individual and population level, relating to risk factors and/or treatment status for CVD. This model found that increasing intake of healthy fruits and vegetables by 30% was estimated to prevent 1.93 million CVD events, gain 4.64 million quality-adjusted life years and save \$39.7 billion in formal healthcare costs.<sup>1</sup>



Source: University of Wisconsin, Population Health Institute

Social isolation comes at a hefty cost to individuals and society in general. Social isolation is connected to roughly \$6.7 billion in additional healthcare costs annually among Medicare beneficiaries and contributes to poor health outcomes, including a 50% increased risk of early mortality.<sup>2</sup>

## Surfacing SDOH data at the individual patient level

There is an increased focus on the social determinants of health (SDOH) that has led to organizations trying to better understand how these impact patient outcomes. These complex and nuanced features are poorly defined and rarely included in structured data. There is effort directed at better capture of this information within structured data within the electronic medical record (EMR) — but asking clinicians, who are already fighting burnout, to fill in another form has not yielded an uptick in SDOH screening data.

### CORE DETERMINANTS OF HEALTH

- Living conditions
- Limited English
- Social isolation
- Stress
- Substance abuse
- Transportation issues
- Victim of crime and violence
- Weight range category
- Physical activity
- Depression
- Employment status
- Financial issues
- Ambulatory issues
- Food insecurity

Many organizations assume this data does not exist within their own systems and are instead buying aggregate zip code or census data to infer insights about those most at risk. However, this data is not patient-specific and may not include key data related to SDOH measures such as:

- Does the patient have access to transportation?
- Does the patient live alone?
- Can the patient ambulate?

But SDOH data does exist in the medical record. It is captured every day by trained medical professionals, taking detailed clinical histories from their patients, just as they were trained to do at medical school and have always done. The data are in admission notes, care management systems, and discharge summary and nursing notes. The problem is surfacing this information in a repeatable and reliable way. Fortunately, with artificial intelligence (AI) technologies such as IQVIA NLP (natural language processing), data can be found and normalized for use in health equity initiatives.

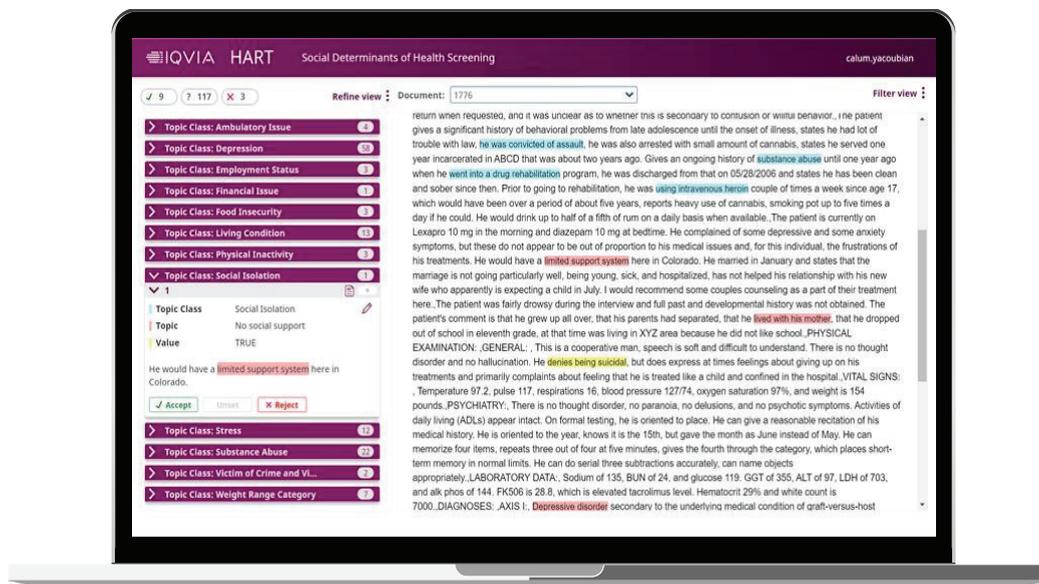
## SDOH information extracted and ready to analyze

With IQVIA NLP, SDOH information is normalized to 14 topics, with different numbers of classes per topic. The IQVIA NLP engine identifies misspellings, synonyms, context, negations, etc to ensure that information in the medical record is extracted as it was meant by the clinician who entered it.

In addition, the output includes suggested SNOMED and ICD-10 codes along with their descriptions for each topic.

Tailored and accurate NLP algorithms are available out-of-the-box to get you to the SDOH information quickly. Alternatively, they can be modified to capture more information of interest.

Contact IQVIA at the address below for more information about how your organization can repeatably harness NLP to extract SDOH information and drive health equity.



### FLEXIBLE DEPLOYMENT OPTIONS



On premise



Cloud



API Call

### References:

- [1 Cost-effectiveness of financial incentives for improving diet and health through Medicare and Medicaid: A microsimulation study](#)
- [2 Addressing Social Isolation and Loneliness: Lessons from Around the World](#)

### CONTACT US

+44 (0)1223 651 910 (U.K.) | +1 617 674 3256 (U.S.)

nlp@iqvia.com

iqvia.com/nlp

