HDMS^SM Health Data & Management Solutions

SDOH Indices

HDMS offers a proprietary methodology based on publicly available data sources. Users analyze short-term and long-term impact of social determinants and environmental factors on member health and wellbeing.

Social determinants of health (SDoH) – the conditions in which people are born, grow, work, live, and age and their access to power, money, and resources – have important impacts on health differences across a population. Awareness of health inequities associated to social determinants increased as we observed the COVID-19 pandemic.

SDoH analytic investigations allow us to measure how social and environmental factors drive excess cost, relate to care choices, and influence health outcomes. These insights help us design better care for the diverse set of needs within a population.

Use data to understand the impact of SDOH on individuals

The Challenge

The vast majority of health care leaders' attention is rightly focused on the coronavirus pandemic and the ensuing unprecedented demands on the health care system.

However, employers, payors, and provider organizations risk long-term damage to community health if leaders don't also attempt to mitigate the epidemic's impact on the social determinants of health, which are amplified in vulnerable member populations.
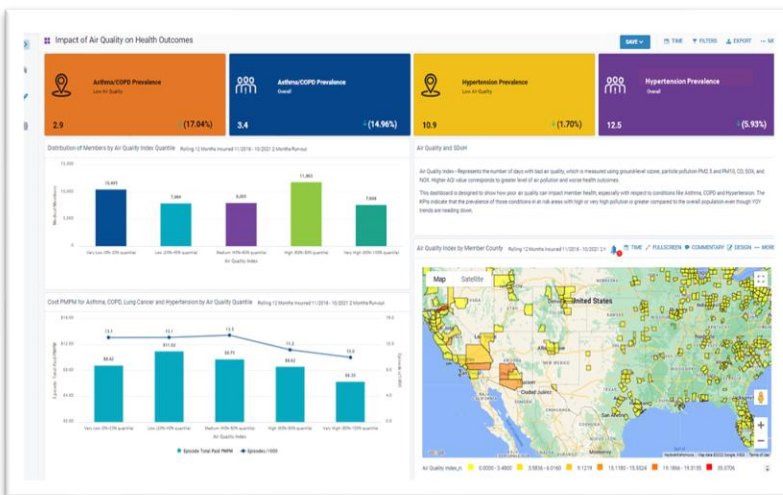
» Our Methodology

HDMS is excited to announce the release of our latest SDOH methodology. We leveraged Enterprise SDOH data derived from the following sources:

- American Community Survey (ACS)
- Centers for Disease Control and Prevention (CDC)
- Centers for Medicare & Medicaid Services (CMS)
- Department of Home-Land Security (DHS) / Federal Emergency Management Agency (FEMA)
- Health Resources and Services Administration (HRSA)
- United States Department of Agriculture (USDA)
- FBI - Unified Crime Reporting
- Housing and Urban Development (HUD)
- Environmental Protection Agency

SDOH, although experienced by individuals, exist at the community level. Organizations that learn about the communities their employees, members, and patients live in can customize recommendations to address their needs and barriers to their wellbeing.

Over 120 SDOH dimensions and measures in the HDMS methodology, that include 23 categorical indexes can be categorized into 12 key areas:

- Social context
- Economic context
- Healthcare context
- Education
- Housing context
- Risk of a Natural Disaster

- Physical infrastructure
- Race and Ethnicity
- Language
- Family structure
- Air and Water Quality
- Crime Prevalence

Modular dashboards, personalized narrative

HDMS offers an out of the box collection of SDoH dashboards. These comprehensive views give immediate insights into common areas of inequity through healthcare metrics such as ER utilization, cost of IP/OP visits and Rx.

Use dashboards as-is or customize. Users have direct access to the extensive suite of over 120 SDOH indices and attributes for self-service investigations. Organizations can use SDoH analytics like all data visualizations and create custom views, pathways, and homepage elements.

Use Social Determinants data for results-driven personalized strategies

Understanding the indices

HDMS SDOH Indexes and attributes are calculated at a *Census Block Group* level. This is highly granular and impressively precise division of a county. There are over 225,000 *Census Block Groups* in the US, as opposed to *Census Tracts*, of which there are over 50,000 nationwide.

Each SDOH Index represents a risk of a certain referenced condition or situation occurring in the Census Block Group where a member lives. Higher values represent higher risk of a given condition occurring and a more disadvantaged situation for a member.

» What can we do with these?

Economic Explorations

- Unemployment Index
- Income Index
- Housing Quality Index
- Housing Desert Index
- Housing Ownership Index

Social Explorations

- Disability Index
- Education Index
- Food Access Index
- Poverty Index
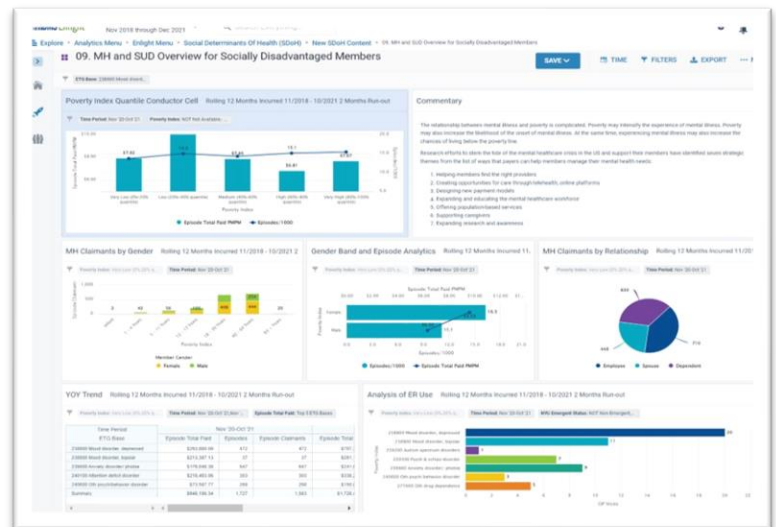- Social Isolation Index
- Diversity Index
- Social Risk Index

Care Culture Explorations

- Health Infrastructure Index
- Health Habits Index
- Health Insurance Access Index
- Use of Preventive Services Index
- Technology Access Index
- Transport Availability Index
- English Language Deficiency Index

Environmental Explorations

- Air Quality Index
- Water Quality Index
- Natural Disaster Index
- Crime Index

» SDoH analytics in action

SDoH insights: A team performed analysis of employees spread across the east coast and Midwest. By looking at ER cost/utilization and Transportation Availability Index data, key insights revealed that ER Visits/1,000 and ER visit paid PMPM was noticeably higher in communities facing transportation issues. This trend was again confirmed while investigating inappropriate ER visits in high index census block groups – ER visits categorized as non-emergent, primary care appropriate or preventable/avoidable.

The team recommended and justified the deployment of mobile units offering Primary Care and offering low/no cost virtual options.

SDoH analytics + Predictive models: Overlay SDoH analytic results with HDMS predictive model outputs like Future ER visits.

From insights, drill to member details. Proactively redirect utilization at a member level. Personalize and target communications to reduce future health costs and create more positive care outcomes.