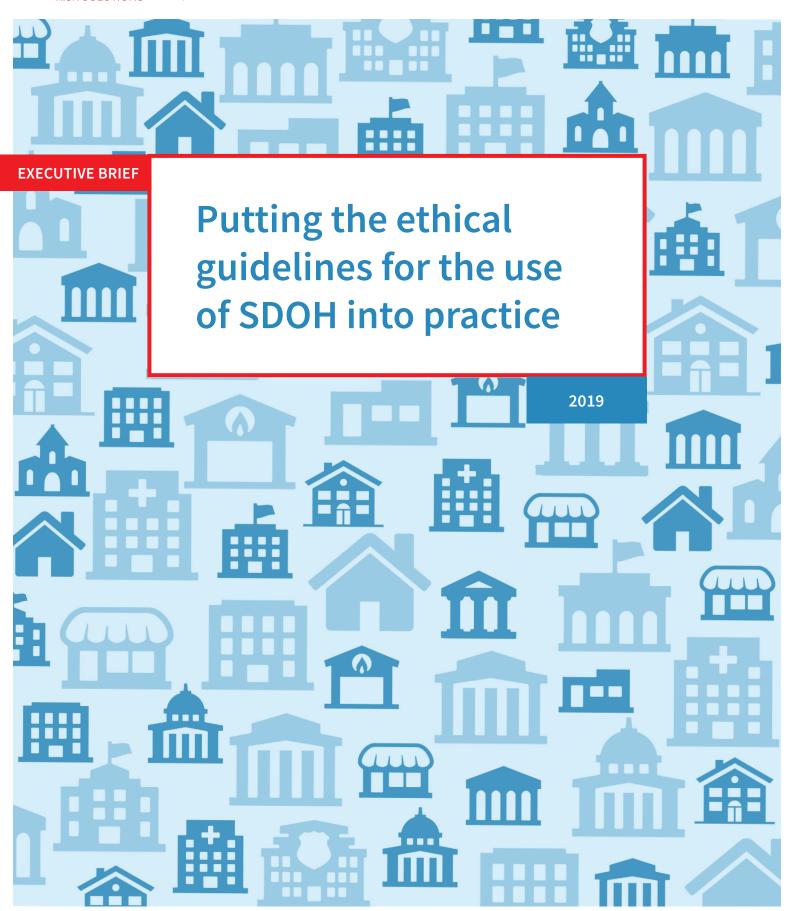




Health Care



Over the last several years we've heard increased discussion and recognition on how factors like education, economic status, social networks, food insecurity, as well as where we live and work influence health outcomes. A framework for understanding Social Determinants of Health (SDOH) can be grouped into six categories:

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Healthcare System
Employment Income Expenses Debt Medical Bills Support	Housing Transportation Safety Parks Playgrounds Walkability Zip Code/ Geography	Literacy Language Early CHildhood Education Vocational Training Higher Education	Access to Healthy Options	Social Integration Support Systems Community Engagement Discrimination Stress	Health Coverage Provider Availability Provider Linguistic and Cultural Competency Quality of Care

Source: Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity. Kaiser Family Foundation, Issue Brief, May 2018. http://files.kff.org/attachment/issue-brief-beyond-health-care

LexisNexis Risk Solutions collaborated with the eHI Initiative to convene executives from across the spectrum of healthcare to develop Guiding Principles for the Ethical Use of Social Determinants of Health.

Jennifer Covich Bordenick, CEO, eHealth Initiative (eHI) shares that while social determinants of health have always been important factors in health outcomes, using SDOH as a key variable in healthcare is not something we've looked at in terms of pulling data, doing target analysis and actual clinical outcomes. One of the things that people haven't really been talking about is "What is really the best way to use this data in healthcare, when is it appropriate, and what's the right way to use it?"

"What is really the best way to use this data in healthcare, when is it appropriate, and what's the right way to use it?"

Some examples of how SDOH are impacting our priorities and decision making in healthcare:



Like 17% of the nation, Sally is unable to visit her doctor because she doesn't have reliable transportation



Like 21% of the nation, Joe must prioritize rent and groceries over doctors' visits and prescriptions



Like 13% of the nation, Charlie has no one to turn to when he is sick



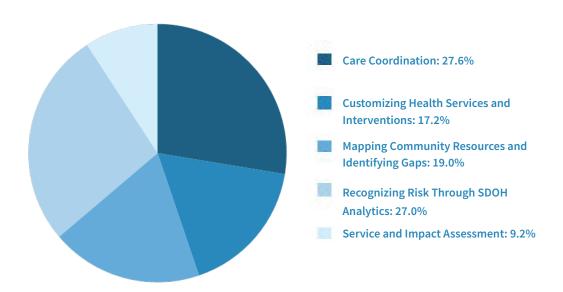
Like 9% of the nation, Beth is unable to see her doctor because she doesn't have a stable home

The purpose of the collaborative was three-fold:

- 1. Guide the healthcare industry, in improving care management, with clear articulation of the ethical use of SDOH data
- 2. Assist the healthcare industry as it transitions to value-based care with tools to improve care management
- 3. Encourage the development of robust policies and procedures related to the collection, accountability, and evaluation of SDOH programs including, but not limited to:
 - Standards for collecting and protecting data through proper data governance measures, with a focus on accuracy, clinical relevance, and bias
 - Standards for accountability when accessing, storing, and tracking SDOH data
 - Standards to evaluate the effectiveness of SDOH programs

"The ethical use of SDOH data is predicated on improving the health of individuals and providing the right interventions and services at the right time." During a recent webinar hosted by LexisNexis Risk Solutions, attendees representing health plans, provider organizations and other industry stakeholders were asked questions about their consideration of SDOH. Here is a summary of some of those questions and audiences responses.

Which of the ethical uses are most critical to your organization?



Karin VanZant, Vice President Integrated Community Partnerships, with CareSource, joined the panel of presenters to illustrate examples of how CareSource is utilizing social determinants of health data within their plans and markets. CareSource looked at the role community-based organizations play in the members lives, from a Medicaid perspective and what kind of information CareSource was receiving from state, health or community partners around socio economic indicators in their members lives to help them move to wellness. They established a unique pilot program, JobConnect, integrating socio economic factors for their members, alongside their clinical and health data, that had a focus on education and employment. They worked with local community colleges, community action agencies and other groups involved with employment and education type services. CareSource took the added step of making sure their members were enrolled in these support programs, knew how to get there, and leveraged the role of community-based resources for their members.

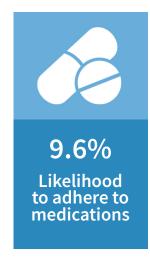
Karin VanZant tells us that "this successful program provides individualized risk assessment, case management and coaching assistance to stabilize members by addressing their member-specific health and social obstacles before attaining (and retaining) long-term employment and self-sufficiency."

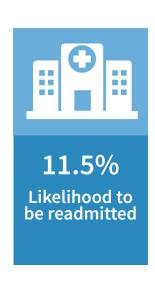
To support this program, CareSource worked with LexisNexis Risk Solutions, Health Care for deeper insights on how social determinants of health data can be used in improving patient care. LexisNexis identified five proposed use cases to identify members in need of intervention, which CareSource adopted.

✓	Motivation/Engagement	Identification of members who are motivated to self-manage healthcare
6	Medication Adherence	Percent adherence calculated in compliance with industry algorithm
	30-Day Readmissions Risk	Likelihood to be readmitted to the hospital within 30 days of discharge
©	ER Overutilization	Future ER visits (count of visits) over next 12 months
\$	Total Cost Risk Stratification	Future forecasted total healthcare cost over the next 12 months

When asked, "Which of the following would you be most interested in knowing about a patient?" almost half of the audience responded: Motivation to care for one's own health!

Which of the following would you be most interested in knowing about a patient?









Erin Benson, Director Market Planning, LexisNexis Risk Solutions, Health Care offered insights on three key steps for using social determinants to predict barriers to optimal health outcomes and proactively improve care management:

1

SDOH-based predictive model

Identification
of members
who face health
barriers to
improving/
maintaining
their health

2

Risk stratification at the member level including on SDOH

Highly accurate representation of which members are at-risk and the severity of that risk 3

Cross-walk the two and present to Care Management

A prioritized list of members who are at risk and face certain health barriers to successful outcomes

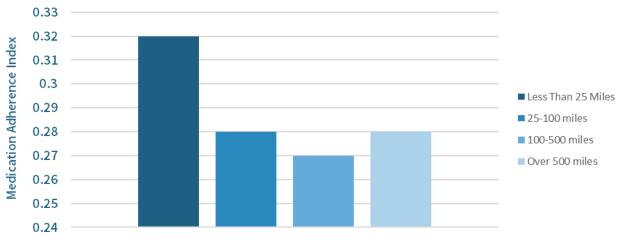
- First, SDOH predictive models can be used to identify members and patients who face health barriers to improving/maintaining their health
- Second, those factors can be turned into scores that can be used to understand the severity of that risk for each member and prioritize outreach.
- Third, Care Management teams can be provided with insights about how to approach individuals based on those individuals' social determinants needs and their relative risk.

Tailored, prioritized outreach efforts based on individual need that address the whole person and not just their medical condition are how health outcomes can improve, which can help to manage organizational costs.

Erin shared that a team of LexisNexis data scientists had clinically-validated social determinants by identifying correlations between key health outcomes (e.g., readmission rates, medication adherence, ER utilization, etc.) and social determinants. In one example, she shared a correlation between social isolation and medication adherence.

Specifically, the data scientists found that members who have relatives or associates that live less than 25 miles away are more likely to adhere to their medications than those whose relatives live farther away.

Given the impact of social isolation on health, actions could be taken to get those individuals into support groups or arrange for more frequent follow up calls as a way of improving their overall health.



Distance Between Member and Closest Relative or Associate

An overwhelming majority of the audience was actively undertaking SDOH initiatives within their organization. When asked, has your organization committed resources to investigating and or implementing the integration of SDOH into your existing operations, 68% said yes, 11% said in the near future, 14% were undetermined and just 7% were not planning to allocate resources accordingly.

To watch the full one hour webinar, visit: https://www.youtube.com/watch?v=7pjh99-n3fM

For more information, call 866.396.7703 or visit risk.lexisnexis.com/healthcare



About LexisNexis Risk Solutions

LexisNexis Risk Solutions harnesses the power of data and advanced analytics to provide insights that help businesses and governmental entities reduce risk and improve decisions to benefit people around the globe. We provide data and technology solutions for a wide range of industries including insurance, financial services, healthcare and government. Headquartered in metro Atlanta, Georgia, we have offices throughout the world and are part of RELX Group (LSE: REL/NYSE: RELX), a global provider of information and analytics for professional and business customers across industries. RELX is a FTSE 100 company and is based in London. For more information, please visit www.risk. lexisnexis.com, and www.relx.com.

Our healthcare solutions combine proprietary analytics, science and technology with the industry's leading sources of provider, member, claims and public records information to improve cost savings, health outcomes, data quality, compliance and exposure to fraud, waste and abuse.

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