

WHITE PAPER:

Unlocking the value of **social determinant insight**

Predictive analytics technology, sociodemographic insight and improved patient outcomes

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UNLOCKING THE VALUE OF SOCIAL DETERMINANT INSIGHT

Payers and providers are increasingly aligned in the journey to improve clinical outcomes at lower total cost of care. While there are numerous strategies to achieve this goal, they all come down to improving the allocation of resources: the right treatments, in the right setting and the right support to the right patients at the right time. Effectively, our societal challenge is not to spend more but to spend it smarter

Interestingly, the key to changing the value equation looks to not be in clinical domains but in social ones. Studies from the CDC, Robert Wood Johnson Foundation and the Kaiser Family Foundation among others, all show that the biggest influence on an individual's health status is not the clinical care they receive, but the social, behavioral, economic and environmental conditions in which that person lives - the social determinants of health (SDOH).

“Efforts to improve health in the U.S. have traditionally looked to the health care system as the key driver of health and health outcomes. However, there has been increased recognition that improving health and achieving health equity will require broader approaches that address social, economic, and environmental factors that influence health.”

Kaiser Family Foundation, Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity, May 10, 2018

Despite the knowledge that social factors are disproportionately important, the vast majority of technology and data investments—EMRs, population health systems, claim data, diagnostic tools, etc.—are focused on clinical elements. Yet, the diagnoses, clinical conditions and laboratory results of a patient represent a fraction of the information needed to develop a successful treatment plan.

The key to success and the piece that is often missing, are social determinants of health. When a whole-patient view is available to providers early in their engagement with the patient and their support network, it enables more complete understanding of the challenges ahead and thus more efficient targeting of interventions, services and programs to achieve and sustain wellness. In a recent Forbes



FIGURE 1

Sociodemographic insight can dramatically improve both quality of care and patient outcomes. When a whole patient view is available to providers it enables more efficient targeting of health maintenance interventions to optimize discharge planning, reduce readmissions and promote wellness

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article, Dr. Roy Beveridge, Humana's Chief Medical Officer, highlights the increased health burden that results from various social determinant factors such as food insecurity and social isolation, particularly among the elderly. He notes that those with food insecurity are likely to have twice as many "unhealthy days" as those who are not food insecure and that socially isolated individuals have a 59% greater risk of mental and physical decline than those who do not experience social isolation.

In an ideal world, providers would have unlimited time to spend with each patient and no clinical, social, economic or behavioral element would be missed. Every detail would be captured and entered into the patient's medical record (See Figure 1). Every member of the care team in all settings would be aware of this information and incorporate it into their patient communications and care plans for maximum effectiveness.

However, the current realities of healthcare delivery preclude providers from gathering and synthesizing a comprehensive patient view. Productivity expectations lead to a clinician's day being a long list of very short patient interactions. Electronic Health Records (EHRs) excel at capturing clinical insight and integrating them into care pathways and treatment flags, but they are short on socio-demographic and behavioral elements that critically modulate treatments and follow-ups for maximum impact.

With hospitals, ambulatory services and physicians increasingly inter-connected under local networks and operating within newly designed value-based reimbursement models, the financial risk is clearly rising and success requires greater sophistication. This leads to a series of critical challenges going forward.

- How do we augment the data currently available to the growing network of providers in a way that presents a more complete and common view for all?
- How do we gather social determinant insight about the patient early in the health relationship without interviewing every patient one by one? The challenge is more complex as many patients bounce between insurance plans over time, so risk holders may not have history with many patients.
- How do we prioritize patients for various programs and consistently gather feedback on their impact relative to clinical and sociodemographic challenges for better targeting over time? Resources and programs are available in our medical neighborhoods but they have finite capacity.

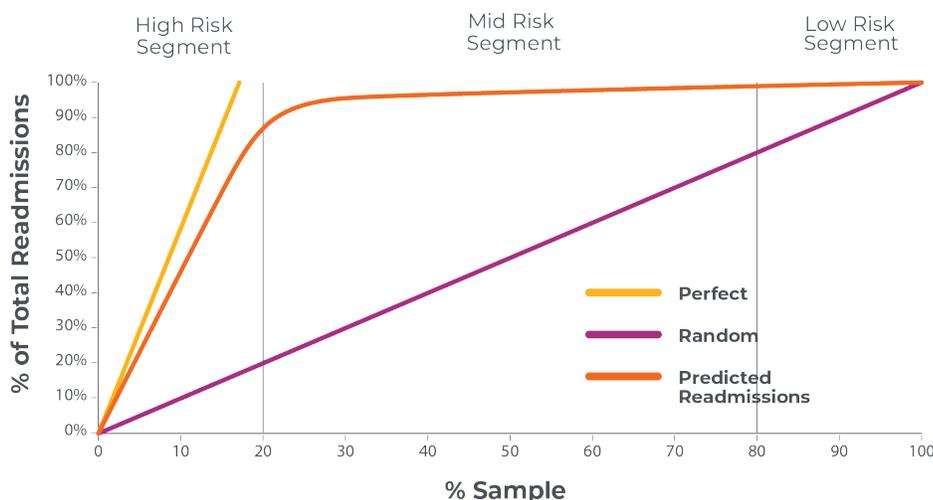


FIGURE 2

Within a national sample of more than 200,000 Medicare patients in CMS penalty categories, the Waystar model identified the 20% of the sample that produced more than 80% of readmissions that occurred within 30-days of discharge.

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What if you could gather a social determinant risk profile of a patient without the detailed interview? What if you could get a good grasp of their challenges simply off a name and address? What if you could identify the 10 to 15% of patients with complex social context amidst thousands of attributed lives? Welcome to Waystar Value-Based Risk technology.

Waystar has built a solution that uses predictive analytic technology to gather the missing sociodemographic data and process the information to deliver an SDOH risk profile specific to the individual patient. These risk measures augment existing clinical insight and protocols to optimize care management programs for the whole patient. All of this is done in the background so that the clinical teams are presented only the aggregate risk measures, the individual SDOH factors and specific recommended workflow implications. The technology does not lead to data inundation, but rather insight and integration across clinical teams over time.

Waystar's Value-based Risk Analytics solution has consistently demonstrated higher predictive accuracy than models that use only clinical data in variety of applications including readmission risk and appointment no-shows, among others (See Figure 2). By design, Waystar's solution is built to augment clinical measures and systems, allowing care teams to separate the risk drivers and thereby intervention approaches. For example, in readmission situations, care teams can identify the hidden risk pool of seemingly low-risk clinical patients with high risk social determinant contexts. To build a highly effective predictive model, Waystar compiled a diverse patient data set, one that spans geography, patients and conditions. Within this diversity is the potential to unlock multi-factorial relationships. Waystar then accessed third-party data about the patient, household, neighborhood and environment while also understanding and accounting for the limitations of any such external data. Finally, Waystar's data science team converted the experiential information into stable and calibrated predictive models.

And while the efficacy and accuracy of the model are part of delivering Whole-Patient Insight[®], it is the ability to use this insight to change the patient experience for better outcomes that creates the value.

ABOUT WAYSTAR

Waystar simplifies and unifies the healthcare revenue cycle with innovative, cloud-based technology. Together, our technology, data and client support streamline workflows and improve financials for our clients, so they can focus on their patients.

ABOUT THE AUTHOR

Ryan Bengtson earned his MHA from the University of Michigan and currently serves as Senior Vice President of Clinical Innovation at Waystar. He has spent over 20 years working with leading health systems to improve healthcare quality and affordability by leveraging strategy, process improvement and technology solutions.