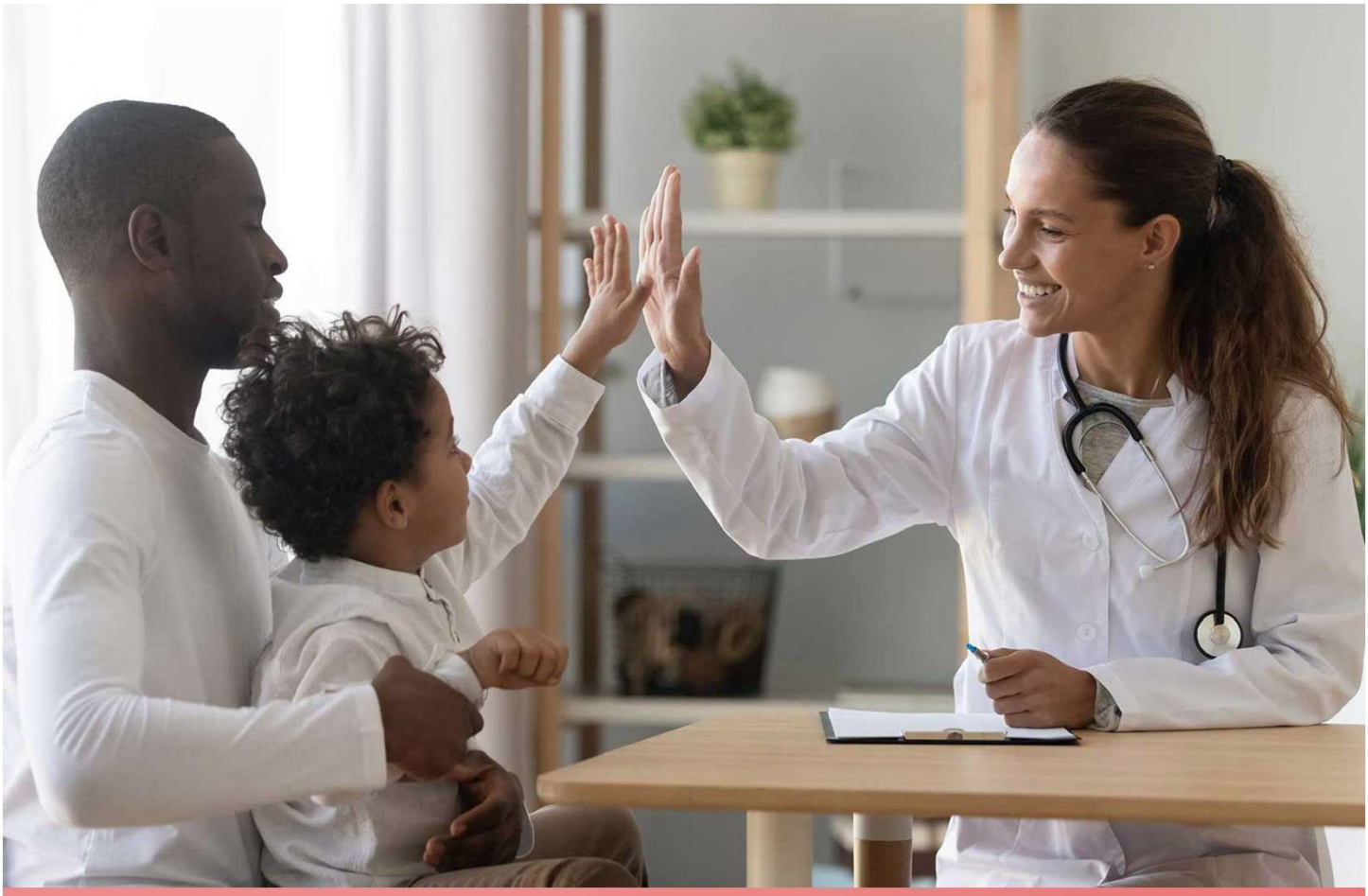

Raise: Transforming population health and advancing health equity using data and AI

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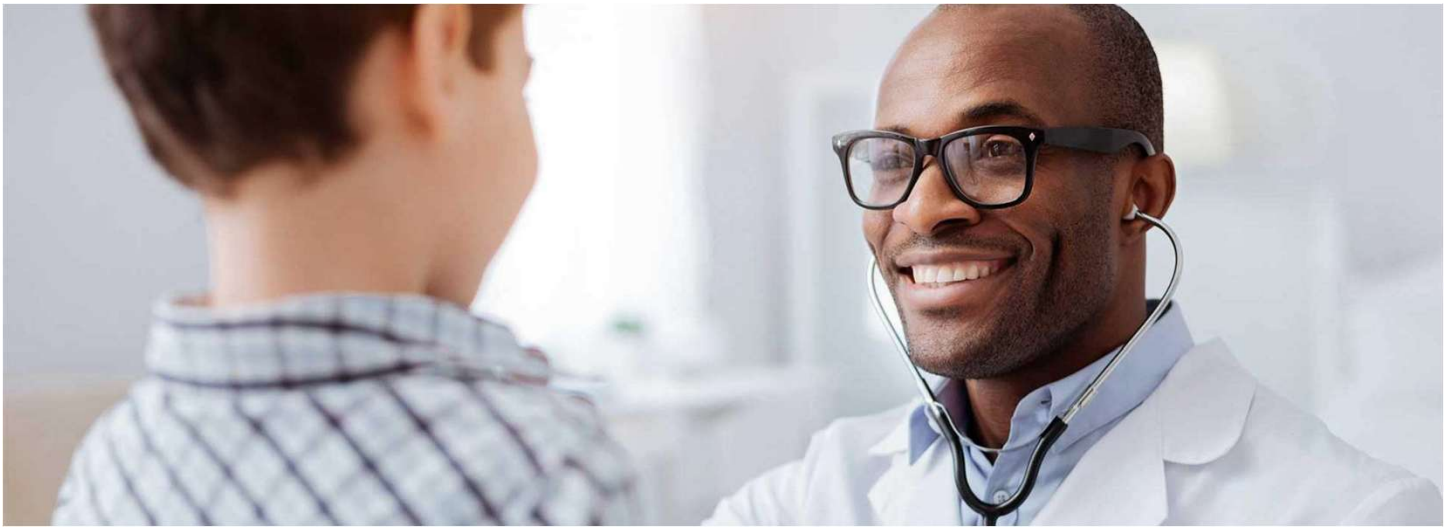
RAISE

Advancing Health Equity & Population Health



It is widely accepted that about 70% of health outcomes are defined by social determinants of health (SDOH) – conditions in the places we live, learn, work and play.

SDOH are measured by social needs such as food insecurity, loneliness, economic instability, transportation, healthcare access and safe housing. Members experiencing these SDOH incur higher medical costs, have lower healthcare engagement and are more at risk from suffering multiple chronic conditions.

These statistics also reveal some worrying facts about the current state of conditions:

35M Americans (11%) experience hunger in the United States[1]

60M Americans (22%) report being lonely[2]

30M American households have serious health and safety hazards[3]

SDOH are also significantly greater in Black, Indigenous and People Of Color (BIPOC) groups, contributing to health inequities and health disparities.

Health equity is defined as the fair and just opportunity for every individual to achieve their full potential in all aspects of health and well-being, and inequities are measured by disparities in health outcomes across different population groups.

About 23% of Black and non-Hispanic households are food insecure compared to 9% of White households[4].

African American adults are 60% more likely than non-Hispanic white adults to be diagnosed with diabetes[4].

Non-Hispanic black/African American infants are 4X more likely to die from complications related to low birthweight compared to non-Hispanic white infants[4].

Addressing social determinants of health needs and disparities in healthcare has the potential to have an impact on not only health outcomes but also on financial outcomes.

Strong social relationships improve survival by 90% compared with those experiencing the most isolation[5].

Poverty is associated with a 50% - 100% increase in mortality risk[5].

Resolving healthcare disparities represents a potential economic gain of $135 billion per year in the US[6].

The key to addressing these issues, is to identify the high-risk segments of the population with adverse health outcomes, high medical costs and high utilization. To achieve this, healthcare organizations need to have a multi-dimensional view of a member to understand the individual's needs.

To begin solving these problems, payers and providers need a differentiated strategy and a robust framework that is focused on member health.

Challenges

Payer and provider organizations face multiple challenges as they look to build the digital systems that are needed to develop population health management (PHM) and health equity strategies. Organizations need to integrate various internal and third-party datasets, and then use analytics and AI tools to help with measuring and understanding the impact of social needs on members' health and well-being, beyond just clinical care interventions and outcomes.

The primary challenges include:

Identifying high-risk populations and hot-spot geographical areas.

The need to comb through EMRs, claims and clinical records to predict disease progression and social needs.

The need for large number of external datasets that are not readily available at organizations.

Integrating large number of organizations' internal datasets with external datasets to derive actionable insights.

Developing a cognitive BI solution that is intuitive and helps users make decisions and craft right interventions.

Our remedy

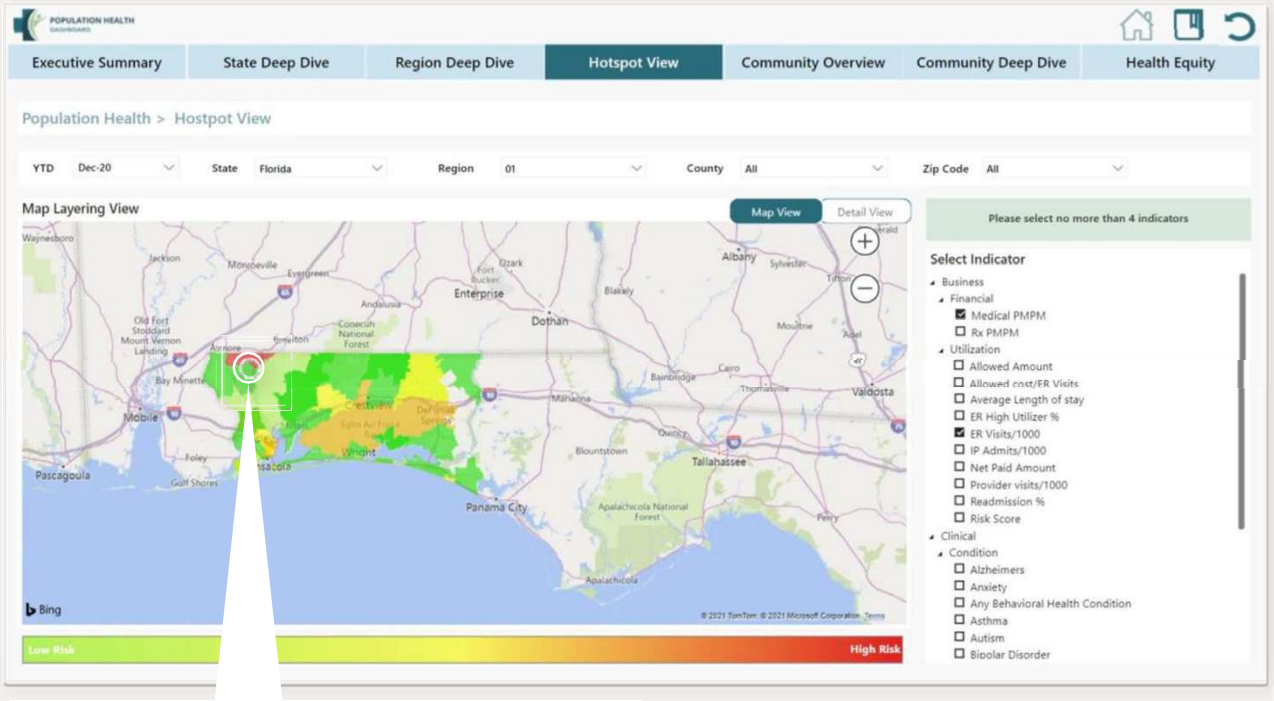
Fractal's RAISE solution is an AI powered digital experience that will help address the above challenges and beyond. RAISE visualizes the intelligence around members and the community where they live, tying that back to their clinical and social needs to give organizations a holistic view of the members they serve.

Our solution will help healthcare organizations in various ways:

Geographical hotspots

Organizations will be able to identify geographical hotspots, and high and emerging risk populations by layering in multiple internal (Spend & Service utilization, conditions, social needs) and external indicators (Disease Management Association of America (DMAA), AHRQ, CDC, Census.gov etc.) on an interactive map and immersive visualization.

How the hotspot view looks



State	Florida	**County**	Escambia
Zip	32535	**Membership**	5470

Indicator name	**Indicator value**
ER visits/1000	650.36
Medical PMPM	643.64

For example zip code 32535 in Escambia County, is a hot-spot geography with high Medical PMPM, and a high number of ER visits per 1000.

Member list

Our solution ensures the most critical information is accessible and easily exportable. Members lists can be easily exported from our tools to allow for analysis and targeted interventions.

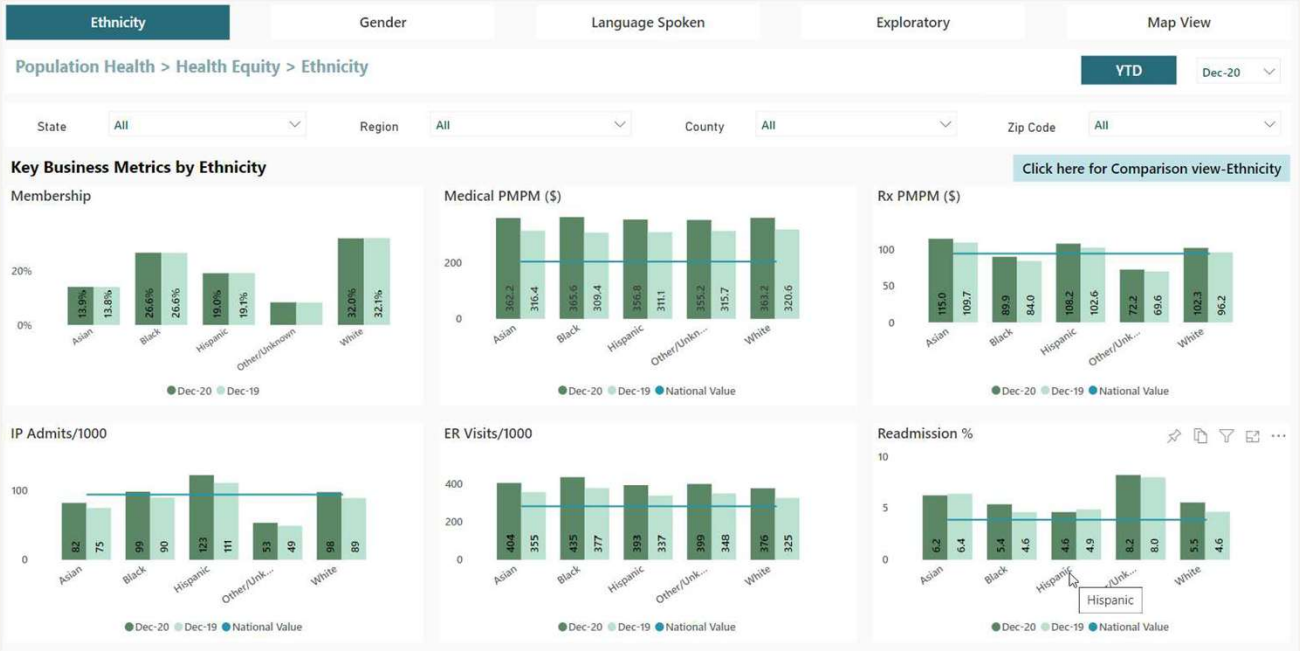
Risk score	Member ID	Zip code	State	PMPM	Chronic condition 1	Chronic condition 2	SDOH 1	SDOH 2	SDOH 3
5	111111	32162	FL	$80,646.4	Diabetes - Type 2	Hypertension	Housing Insecurity	Financial Strain	Transportation
5	222222	32162	FL	$30,346.7	COPD	Lung Cancer	Food Insecurity	Housing Insecurity	Financial Strain
4	333333	32181	FL	$20,179.5	Hyperlipidemia	Diabetes - Type 2	Social Support	Neighborhood Safety	Food Insecurity
4	444444	32181	FL	$15,022.2	Hypertension	Hyperlipidemia	Food Insecurity	Housing Insecurity	Financial Strain
4	555555	32726	FL	$15,012.8	Diabetes - Type 2	Coronary Artery Disease	Housing Insecurity	Financial Strain	Transportation

While creating the member 360, we identify the top influencers of the risk scores from clinical, SDOH perspectives.

Health equity lens

A dedicated health equity section enables organizations to view key performance indicators through a **health equity lens** (race, ethnicity, language spoken, disability, geographic location and more), bringing awareness and understanding of how vulnerable populations are performing.

Dedicated views showing key cost and utilization KPIs by race.



A greater awareness of race, ethnicity, language spoken, disability and geographic location leads to better understanding of how vulnerable populations are performing.

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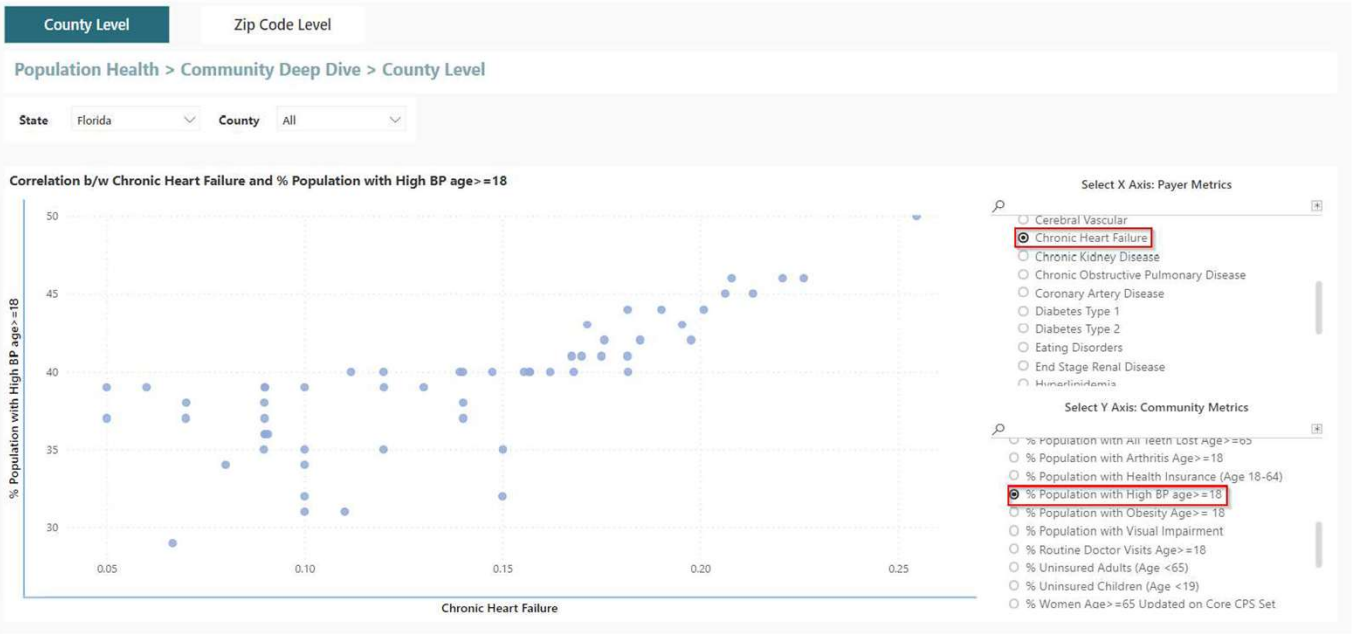
Correlation analysis

Correlation analysis between community metrics and the organization's metrics



Organizations will be able to identify whether the cost, utilization, clinical and SDOH seen in their membership is driven by any of the external community indicators, through a correlation analysis. This correlation chart will also help to identify which zip codes/counties organizations should deploy resources (financial/staff) in order to achieve better outcomes.

Addressing social determinants of health needs and disparities in healthcare has a potential to have an impact on both health and finances.

The solution is powered by a unified data product and a cloud platform that is flexible, cost effective and scalable. This data product will provide a holistic view of the member, driving many other business analytics and AI/ML use cases along with serving population health needs.

With interventions in the right places, there is potential for:

Savings of ~3-5% in total cost of care

Lift in PCP visits

Improved member experience (~7-10%)

Optimized chronic care management

1. https://www.feedingamerica.org/hunger-in-america#:~:text=According%20to%20the%20USDA's%20latest,likely%20to%20experience%20food%20insecurity
2. https://www.vox.com/2020/5/11/21245087/america-loneliness-epidemic-coronavirus-pandemic-together
3. https://www.americanprogress.org/issues/poverty/reports/2016/07/20/141324/creating-safe-and-healthy-living-environments-for-low-income-families/
4. https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=23
5. PDF) Social Relationships and Mortality Risk: A Meta-analytic Review (researchgate.net)
6. WKKellogg_Business-Case-Racial-Equity_National-Report_2018.pdf (altarum.org)

Enable better decisions with Fractal

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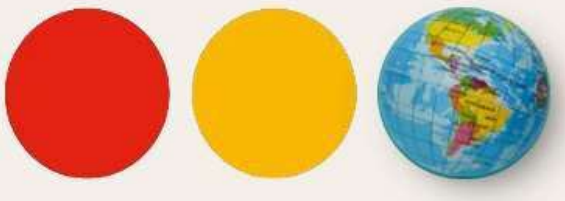
Fractal product companies include Qure.ai, Crux Intelligence, Senseforth.ai, Theremin.ai, Eugenie.ai & Samya.ai.

Fractal has more than 2,300 employees across 16 global locations, including United States, UK, Ukraine, India, and Australia. Fractal has consistently been rated as India's best company to work for by The Great Place to Work® Institute, named a 'Leader' by Forrester Research in its Wave™ on Specialized Insights Services, Computer Vision & Customer Analytics, and recommended in Gartner's hype cycle for Enterprise AI strategy for US healthcare payers.



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