Walrus Co

SDOH Report (Demo)

Jan 2019 - Aug 2023

artemis®
By Nomi Health

Contents

Overview

- Introduction
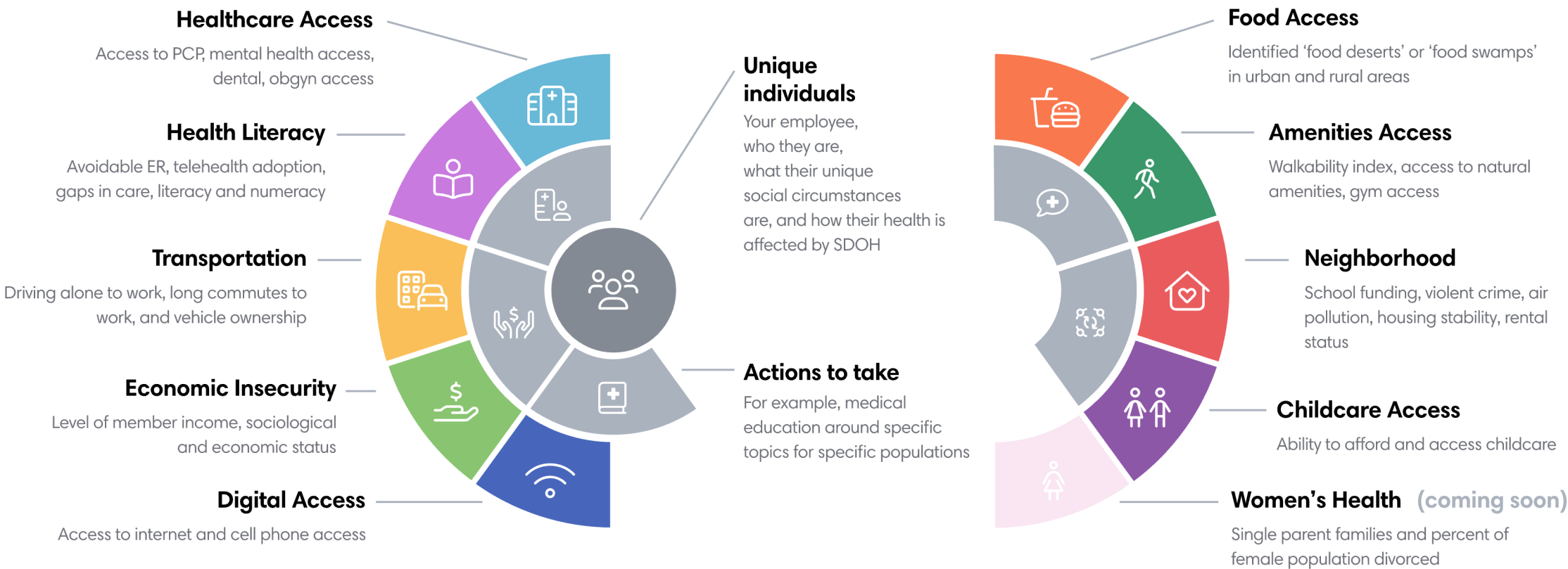- Overall Organization, Member, and Pharmacy Scores

What are Social Determinants of Health?

SDoH are environmental conditions where people are born, live, learn, work, play, worship, and age that affect a wide range of health, quality-of-life outcomes, and risks. - Healthy People 2030, US HHS

Artemis uniquely defines SDOH across several domains

THE ANATOMY OF THE ARTEMIS DOMAIN WHEEL

Healthcare Access
Access to PCP, mental health access, dental, obgyn access

Health Literacy
Avoidable ER, telehealth adoption, gaps in care, literacy and numeracy

Transportation
Driving alone to work, long commutes to work, and vehicle ownership

Economic Insecurity
Level of member income, sociological and economic status

Digital Access
Access to internet and cell phone access

Unique individuals
Your employee, who they are, what their unique social circumstances are, and how their health is affected by SDOH

Actions to take
For example, medical education around specific topics for specific populations

Food Access
Identified 'food deserts' or 'food swamps' in urban and rural areas

Amenities Access
Walkability index, access to natural amenities, gym access

Neighborhood
School funding, violent crime, air pollution, housing stability, rental status

Childcare Access
Ability to afford and access childcare

Women's Health (coming soon)
Single parent families and percent of female population divorced

How are SDOH Measured?

The Artemis SDoH Index is designed to closely capture how social factors impact your employee health outcomes.
Our index is composed of your members demographics, claims data, and public data that is weighted and ranked to expose social disparities with a score.
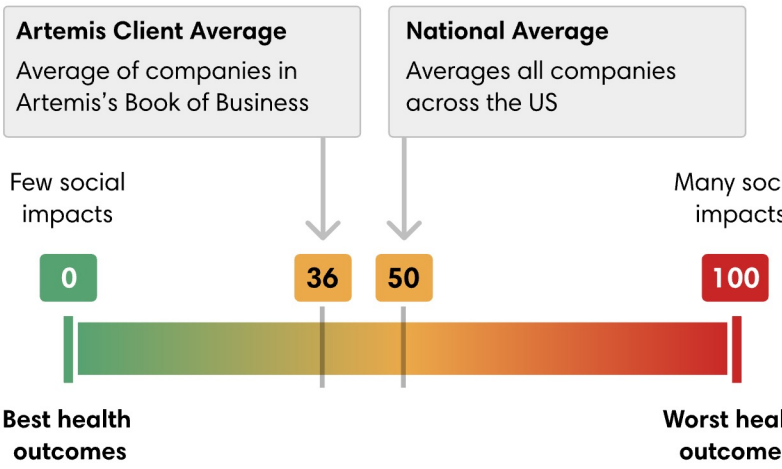
The Index scores 31 factors across our domains of health

SDoH Insights analyzes your member population using 31 social factors across our domains of health equity to assess member health. These insights will uncover demographic & geographic disparity populations with a focus on cost, utilization, management of care.

Composite Organizational SDOH Score

Healthcare Access	Health Literacy	Transportation	Economic Insecurity	Digital Access
Primary Care	Avoidable ER	Driving Alone to Work	Low Income Members	Internet Access
Mental Health Care	Telehealth Adoption	Long Commute Driving Alone	Unemployment	Cell Phone Access
Dental Access	Gaps-in-Care: Wellness	Area Vehicle Ownership	High School Diploma	
OB/GYN Access	Gaps-in-Care: Cancer			Neighborhood
	Literacy	Childcare Access	Womens' Health	School Funding Adequacy
Amenitites Access	Numeracy	Childcare Provider Access	Coming soon	Air Pollution
Gym Access		Childcare Cost Burden	–	Violent Crime
Walkability Index	Food Access		–	Renter Occupied Housing
Natural Amenities	Food Deserts			Vacant Housing
	Fast Food Swamps			Drinking Water Violations

Member Data   + age   + race/ethnicity   + geography   + gender

What the scores mean

Higher scores reflect more social factors, correlating to worse health outcomes.

Low Score: 17 EXAMPLE

17   0 – 100

- **Few** social impacts
- **Better** health outcomes

High Score: 82 EXAMPLE

82   0 – 100

- **Many** social impacts
- **Worse** health outcomes

Artemis Client Average
Average of companies in Artemis's Book of Business

National Average
Averages all companies across the US

Few social impacts

Many social impacts

0   36   50   100

Best health outcomes

Worst health outcomes

Overall SDOH health

The SDoH index is designed to closely predict how social factors impact your employee health outcomes, for example, the correlation of economic insecurity with life expectancy and preventable hospital stays.

Total enrolled members

20,491

Across 12 states

All members who are medically enrolled in your benefits plans are accounted for in your SDOH scores.

Your organizational score

44

National Avg	Artemis Avg
50	36

Members w/ scores 45 - 100

1,291 (6.3%)

Medium Impact

Low Impact — High Impact

44

SDOH Index Score

The higher the SDOH index score, the more social factors are affecting member health outcomes.

All indexes are ranked against National Data, Artemis BoB members and companies.
Percentile value categories:

- 🟢 **0 - 18** : Low
- 🟡 **18 - 45** : Medium
- 🔴 **45 - 100** : High

How are the scores created?

Each individual member is scored for every social factor and domain score. Organizational scores are then weighted using every member score and where they live.

MEMBER-LEVEL SCORES
31 Social factors 0-100
9 Domains 0-100

Healthcare Access | Health Literacy | Transpor-tation | Economic Insecurity | Digital Access | Food Access | Amenitites Access | Neighborhood | Childcare Access

1 weighted individual member score 0-100

Average of all individual scores → **Organization score*** 0-100

*A population weighted score based on where members live

What do the scores mean?

All social factor variables, domain variables, and overall SDoH Index range from 0 to 100. All have a similar "meaning" with 0 representing the lowest and 100 being the highest social determinants affecting health outcomes.

We tested the performance of the SDoH Index by correlating it to existing socioeconomic indexes, health outcomes, and Artemis BoB metrics to confirm it's correlation with member health outcomes

Member SDoH overview

Every member is assigned a unique score for every social factor and based on where they live. Compare key indicators for your populations with high and low social factor scores.

Total enrolled members
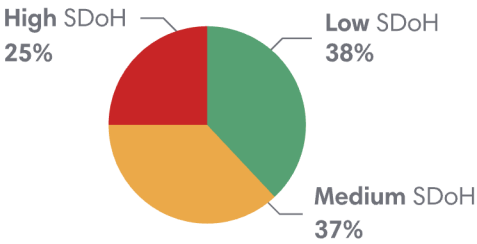
20,491

Across 12 states

Overall Score

44

Org. SDoH Index

% members in each SDOH range

Your population

High SDoH
30%, (6,145)

Low SDoH
30%, (6,147)

Medium SDoH
40%, (8,197)

Artemis BoB

High SDoH
25%
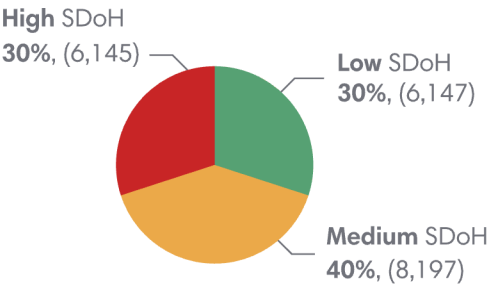
Low SDoH
38%

Medium SDoH
37%

Average employer paid per enrolled member PMPM (Med + Rx)

● **Low SDoH members**

$272

% difference from Medium
-32%

● **Medium SDoH members**

$400

● **High SDoH members**

$430

% difference from Medium
+7.5%

% members in each SDOH range per domain

Compare domains by population sizes of low risk and high risk members

● Low Impact   ● Medium Impact   ● High Impact

Score

Domain	Low Impact	Medium Impact	High Impact	Score
OVERALL	34%	34%	32%	44
Healthcare Access	28%	41%	31%	40
Health Literacy	33%	37%	30%	42
Transportation	23%	39%	38%	81
Economic Insecurity	42%	29%	29%	18
Childcare Access	34%	34%	32%	44
Food Access	30%	30%	40%	72
Digital Access	37%	31%	32%	14
Amenities Access	31%	31%	38%	79
Neighborhood	32%	36%	32%	43

Total % members per range

Member medical overview

Compare top diagnosis and disease prevalence among members with many social factors compared to those with less social factors

Total enrolled members

20,491

Across 12 states

Overall Score

44

Org. SDoH Index

Top diagnosed conditions & cost by SDoH range

Lists the top 3 chronic conditions of members in each SDoH range

● Low SDoH Member Conditions	Members w/ diagnosis	Paid Med (PMPM)
Hypertensive Diseases	866	$690
Metabolic Disorders	532	$698
Anxiety, dissociative, stress	341	$732

● Medium SDoH Member Conditions	Members w/ diagnosis	Paid Med (PMPM)
Hypertensive Diseases	801	$565
Diabetes mellitus	432	$775
Metabolic Disorders	341	$644

● High SDoH Member Conditions	Members w/ diagnosis	Paid Med (PMPM)
Hypertensive Diseases	728	$727
Diabetes mellitus	689	$947
Metabolic Disorders	382	$842

Care Utilization by SDoH range - Visits per 1K

● Low SDoH members ● Medium SDoH members ● High SDoH members

ER Visits
- Low: 153
- Medium: 233
- High: 377

Avoidable ER Visits
- Low: 81
- Medium: 122
- High: 151

Urgent Care Visits
- Low: 80
- Medium: 118
- High: 137

Primary Care Visits
- Low: 160
- Medium: 121
- High: 110

Telemedicine Appointments
- Low: 26
- Medium: 230
- High: 125
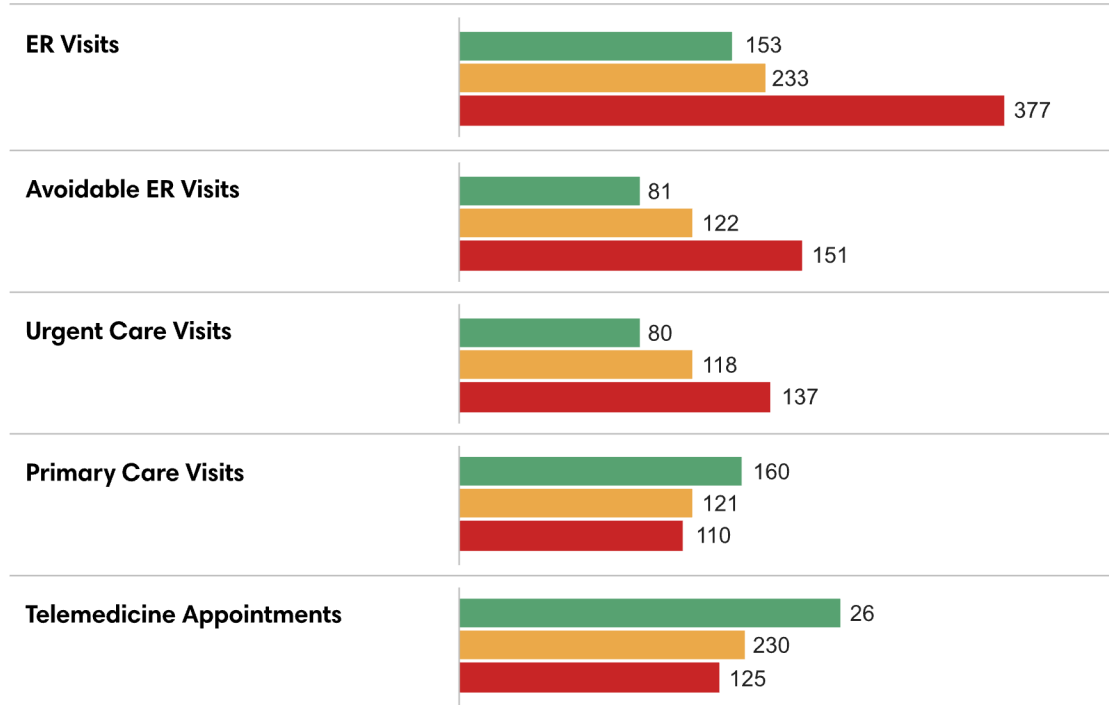
Member pharmacy & care

Compare pharmacy and care utilization as well as preventative screening compliance using SDoH stratification

Total enrolled members

20,491

Across 12 states

Overall Score

44

Org. SDoH Index

Scripts per 1K by drug group utilization and SDoH range

How members of different SDoH statuses are utilizing prescriptions

Non-Specialty Drug group	Low SDoH Rx Count
Antidepressants	2,314
Antihyperlipidemics	1,205
Specialty Drug group	
Antidiabetics	790
Dermatologicals	589

Non-Specialty Drug group	High SDoH Rx Count
Antihypertensives	3,421
Antidiabetics	2,213
Specialty Drug group	
Thyroid agents	1,023
Antidepressants	913

Care visits per 1K by SDoH range

Care Type	Low SDoH	Medium SDoH	High SDoH
PCP Visit	1,023	879	790
Specialist visits	2,213	1,863	1,205
Telemedicine	913	787	589
GiC: Wellness Visit	3,421	2,391	2,314

Preventative screening compliance rates by SDoH range

Screening Type	Low SDoH	Medium SDoH	High SDoH
Breast Cancer	73%	70%	62%
Colon Cancer	44%	42%	36%
Cervical Cancer	72%	72%	75%
Hypertension	98%	97%	95%

Member cost comparison

Compare allowed and paid amounts for medical and pharmacy spend.

Total enrolled members

20,491

Across 12 states

Overall Score

44

Org. SDoH Index

Medical spend per SDoH range (PMPM)

Legend: —O— Total Medical Allowed ■ Total Medical Paid

- Low SDOH: $408 (paid), $423 (allowed)
- Medium SDOH: $434 (paid), $450 (allowed)
- High SDOH: $575 (paid), $461 (allowed)

X-axis: Cost ($0, $100, $200, $300, $400, $500, $600)
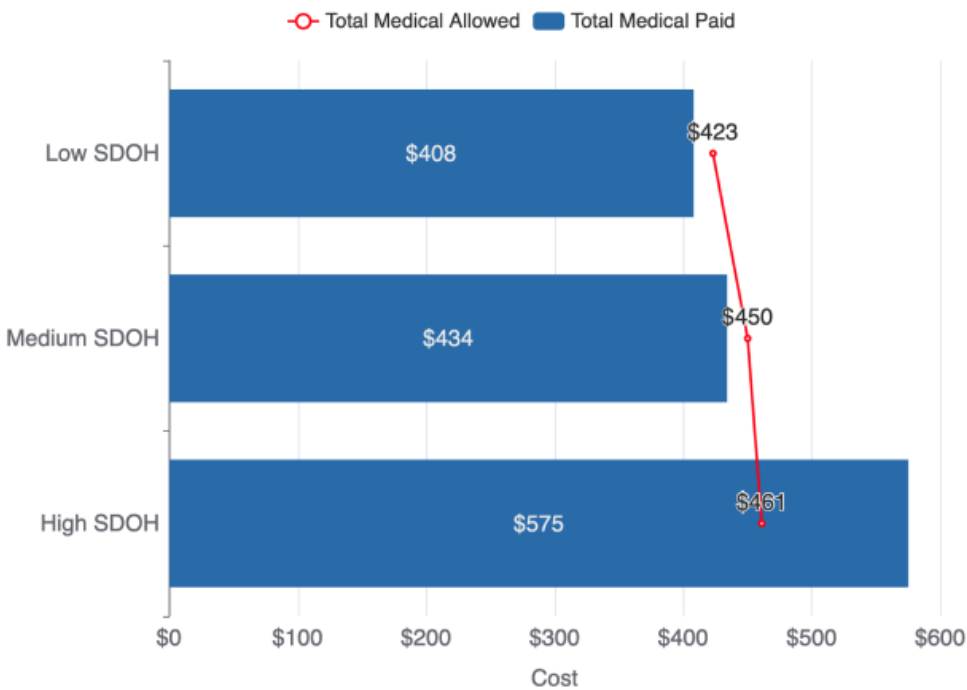
Pharmacy spend per SDoH range (PMPM)

Legend: —O— Rx Allowed ■ Rx Paid

- Low SDOH: $106 (paid), $112 (allowed)
- Medium SDOH: $165 (paid), $145 (allowed)
- High SDOH: $145 (paid), $150 (allowed)

X-axis: Cost ($0, $30, $60, $90, $120, $150, $180)

What do the scores mean?

Medical spend per product range indicates the average monthly medical expenses, detailing both the allowed amount (total medical allowed PMPM) and the actual paid amount (total medical paid PMPM).

Pharmacy spend per product range represents the average monthly prescription costs, showcasing the allowed prescription amount (RX allowed PMPM) and the actual paid prescription amount (RX paid PMPM)

Member risk comparison

Compare prospected and expected costs per member as well as prospective and concurrent risk per member.

Total enrolled members

20,491
Across 12 states

Overall Score

44

Org. SDoH Index

Prospective vs concurrent risk scores

■ Concurrent Risk ■ Prospective Risk

SDOH Level	Concurrent Risk	Prospective Risk
Low SDOH	1.24	1.21
Medium SDOH	1.31	1.29
High SDOH	1.34	1.34

Cost

Prospective vs concurrent costs

■ Concurrent costs ■ Prospective costs

SDOH Level	Concurrent costs	Prospective costs
Low SDOH	$598	$668
Medium SDOH	$612	$696
High SDOH	$624	$720
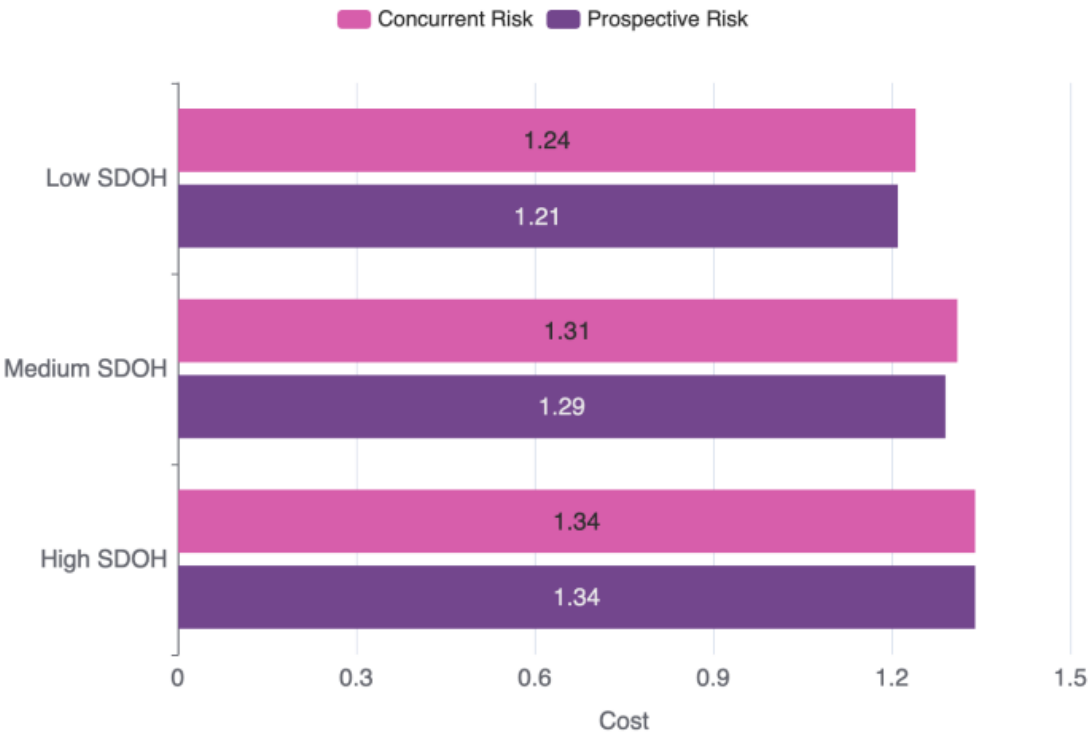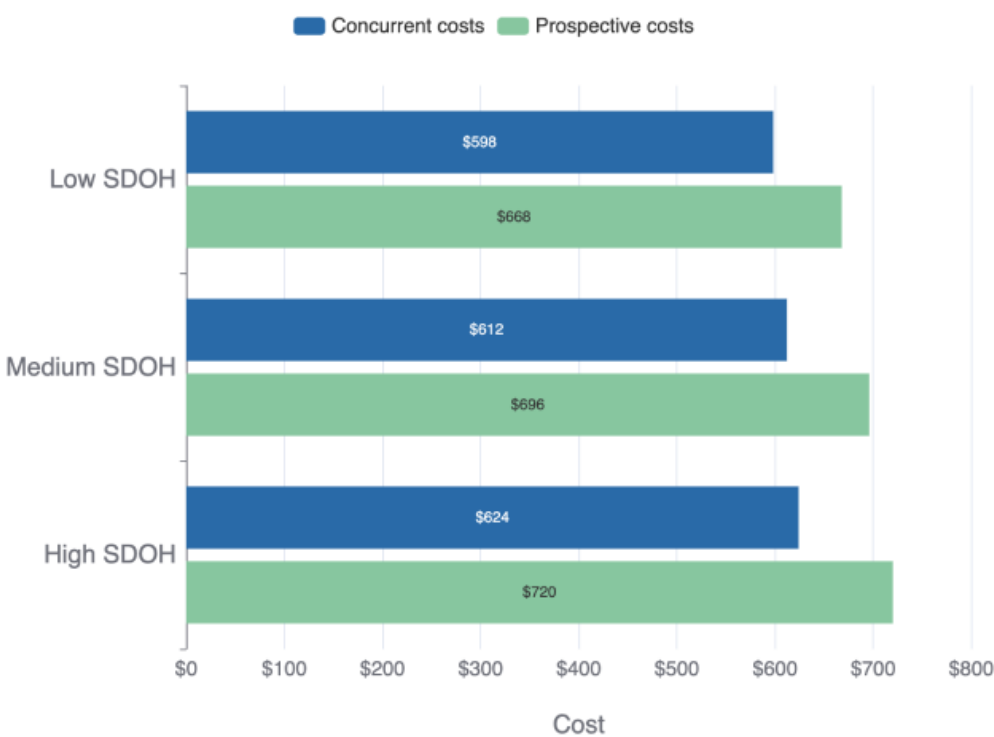
Cost

What do the scores mean?

Prospective costs and risk scores are projected figures based on historical data and predictive models for the upcoming period.

Concurrent costs and risk scores reflect the actual amounts and values recorded in the current period.

Geography

- SDOH at the state and county-level

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Geospatial analysis

It's mostly the *environments* where people are born, live, learn, work, play, worship, and age that determine their health outcomes. Our SDOH Index scores, domains, and social factors have been transformed and normalized to the zip code level.

Weighting measures across geographic area

To show accurate scores at a granularity is meaningful, we tie member statistics to each geographic level we analyze in order to weight scores appropriately

zip code: 75214
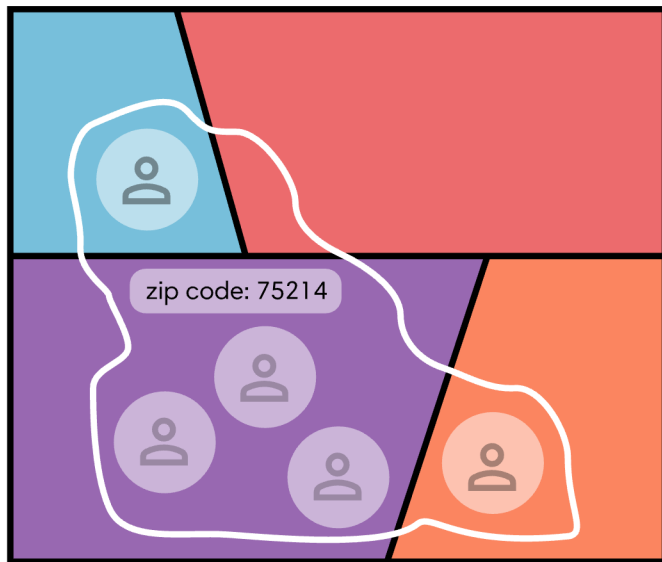
Area granularity and compilation

All layers and data are transformed and combined to provide the highest resolution of your members social factors

- 5-Digit ZIP code
- Census tract
- County
- State
- Block group

Member level scores at desired granularity

Generic geographic zip code scores used for benchmarking

SDoH Index Data
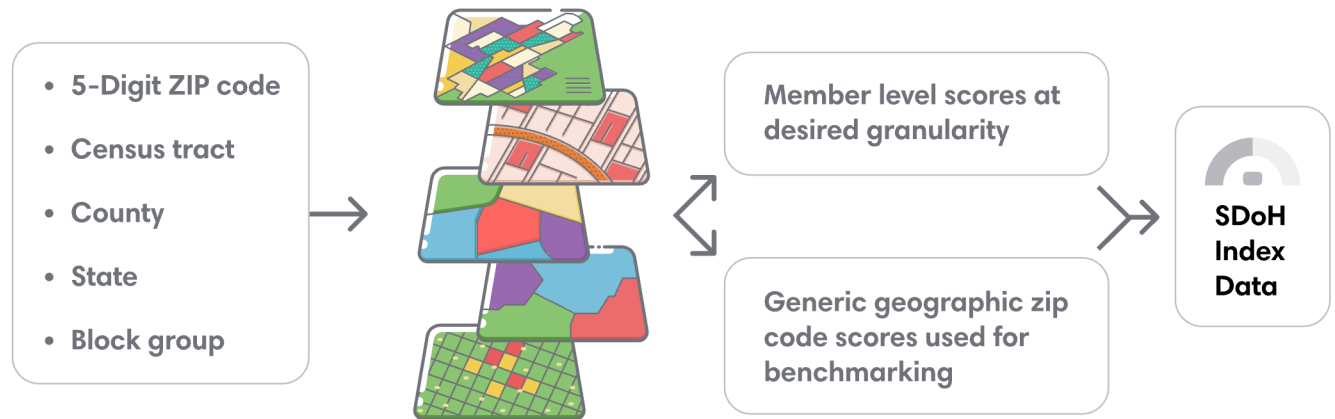
State level scores

Visualize member health outcomes based on location as they relate to SDoH. The Index scores are a weighted average of each member, across all 9 domains and 31 social factors.

Member Count
20,491
in 27 States

Highest Pop.
4,712
Texas

Overall Score
44
Org. SDoH Index

Average SDOH scores by state
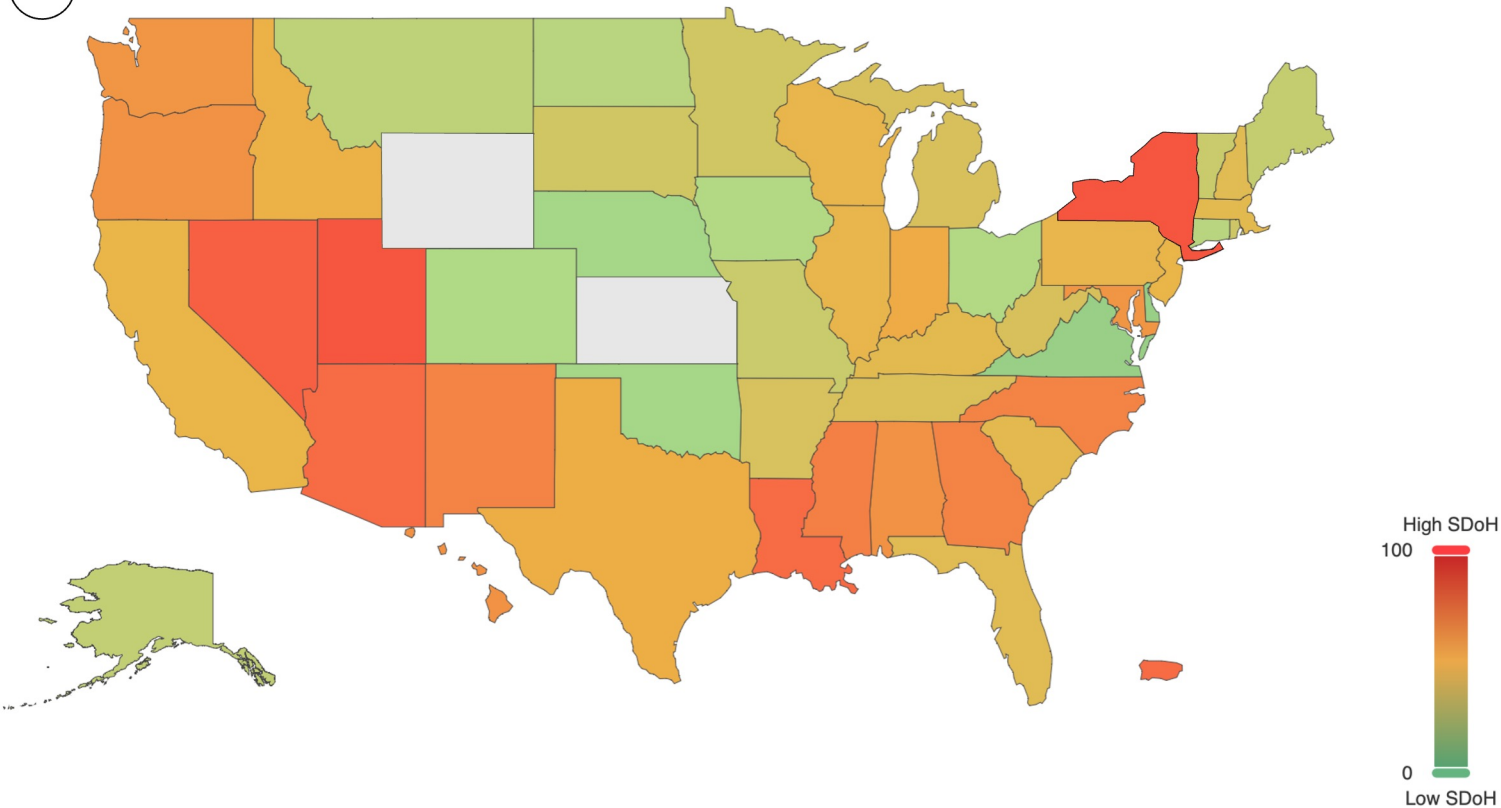
High SDoH
100

0
Low SDoH

States by population

State	Member %	Members	Score
Texas	16.1%	3,402	44 🟠
Nevada	15.5%	3,127	80 🔴
Washington	12.8%	2,591	55 🔴
California	9.0%	1,782	46 🔴
New York	8.2%	1,500	81 🔴
Michigan	7.6%	1,391	48 🟠
Louisiana	3.4%	564	82 🔴
Colorado	3.3%	560	22 🟢

*429 members are missing location data and are not included in this visualization

County level scores

Visualize member health outcomes based on location as they relate to SDoH. The Index scores are a weighted average of each member, across all 9 domains and 31 social factors.

Member Count
20,491
in 1,310 counties

Highest Pop.
704
Dallas County

Overall Score
44
Org. SDoH Index

SDoH scores by US counties

Fort Worth · Dallas · Shreveport

Austin

Houston

San Antonio

Corpus Christi

High SDoH
100

0
Low SDoH
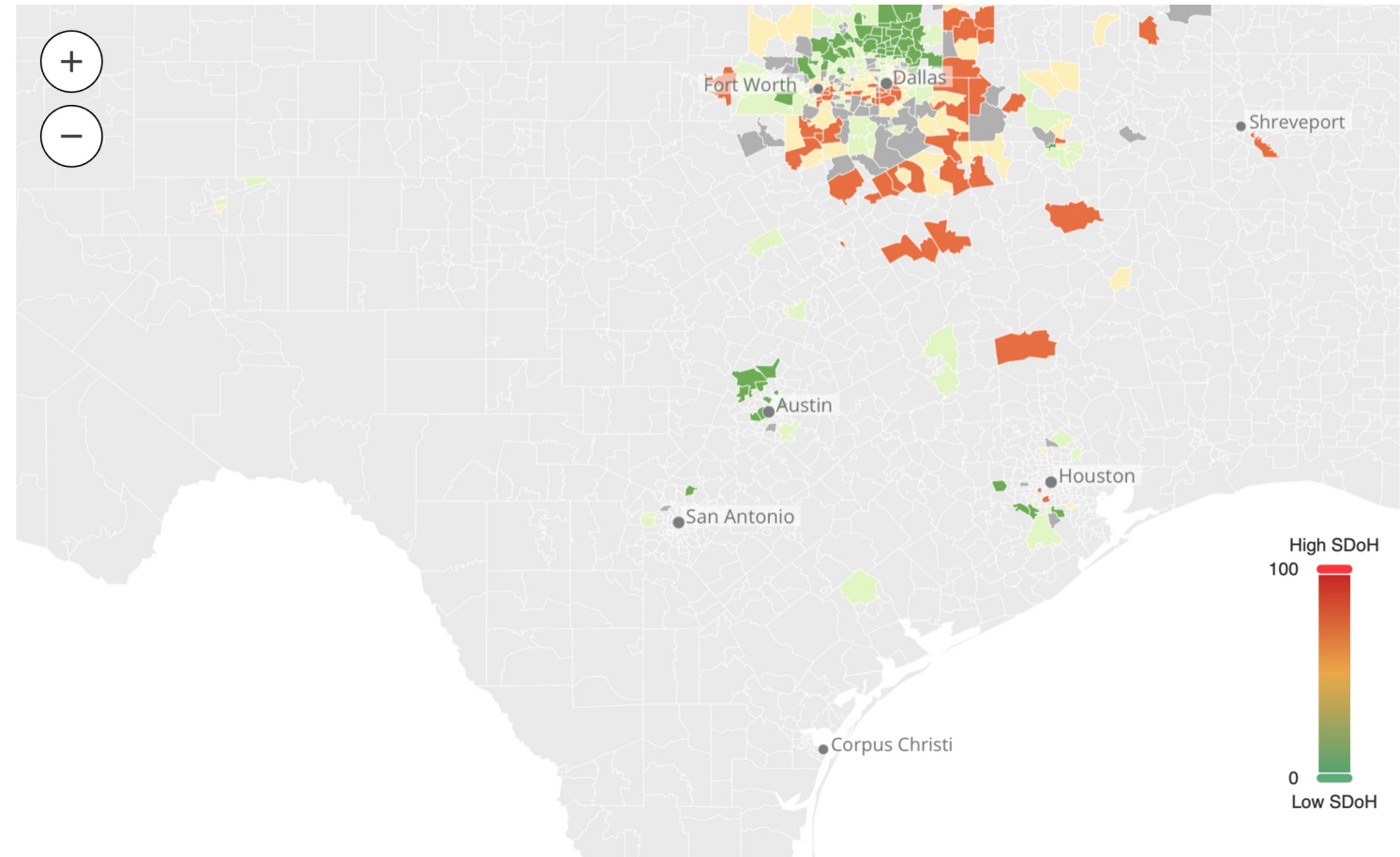
*429 members are missing location data and are not included in this visualization

Counties by population

State	County	Member %	Members	Score	
TX	**Dallas Co...**	20.7%	704	63	🟡
TX	**Harris Co..**	18.4%	641	40	🟢
TX	**Tarrant Co..**	13.2%	480	42	🟢
TX	**Bexar Co..**	10.1%	372	64	🟡
TX	**Davis Co..**	8.9%	301	81	🔴
TX	**Collin Co...**	6.7%	201	55	🟡
TX	**Denton co..**	3.2%	124	82	🔴
TX	**Shrevepo...**	2.8%	89	44	🟢

15

Domains

Dive into 10 domains affecting member health

About the domains

Quickly gauge the overall health across the domains. Each domain consists of it's corresponding social factors.

Dive into a domain to explore the factors contributing to the overall domain score.

Example domain breakdown

Drill into any domain to get details of the underlying issues causing the respective score. An example domain breakdown is provided below

Domains

Neighborhood
(Domain)

Breakdown each domain →
(Social factors)

Domain detail

EXAMPLE

Neighborhood
An overview of members' localized living situation; environmental and housing-wise

Avg Score
57

Contributing social factors

EXAMPLE

Violent Crime	81
Renter occupied housing	68
Air pollution	66
Vacant housing	44
School funding adequacy	32
Drinking water violations	31

Domain health overview

Quickly gauge the overall health across the 10 domains. Dive into a domain to explore the factors contributing to the overall domain score

Overall Score

44

Healthcare Access

44

0   100
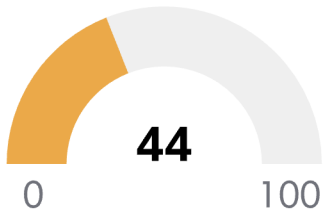
Access to PCP, urgent care, dental, maternity services

View Details

Health Literacy

42

0   100
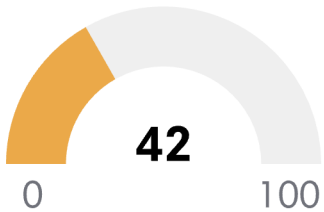
Avoidable ER, Telehealth adoption, access to internet, cell phones, etc

View Details

Transportation

81

0   100
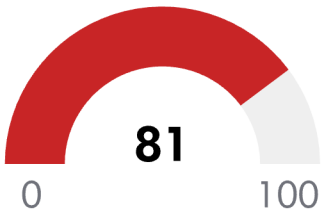
Proximity to transit stops, time in a vehicle, transit options, etc

View Details

Economic Insecurity

18

0   100
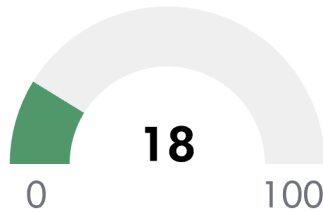
Level of member income, sociological and economic status

View Details

Childcare Access

44

0   100
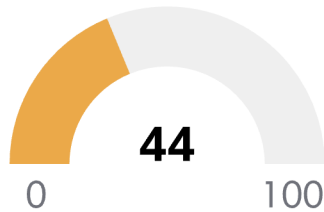
Ability to afford and access childcare

View Details

Food Access

72

0   100
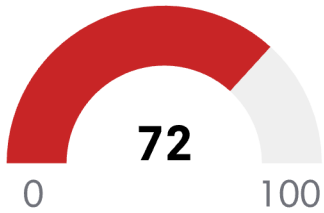
Identified 'food deserts' or 'food swamps' in urban and rural areas

View Details

Digital Access

14

0   100
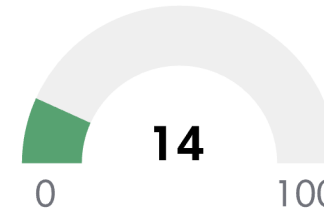
Access to mobile devices, computers, internet, and other technology

View Details

Amenities Access

79

0   100
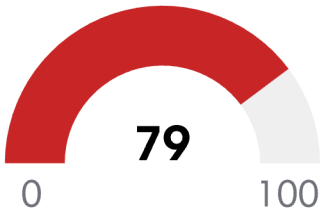
Walkability index, access to natural amenities, gym access

View Details

Neighborhood

43

0   100
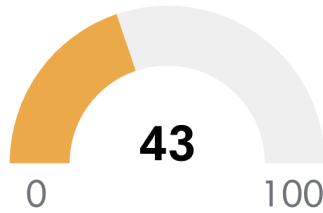
School funding, violent crime, air pollution, housing stability, rental status

View Details

Women's Health

50

0   100
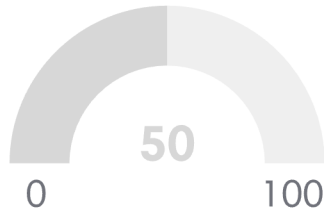
Maternal outcomes, fertility, breast cancer screenings

COMING SOON

Domains by demographics

See which domains are contributing the most to poor health outcomes amongst your population, broken down across different demographics.

By Age Band
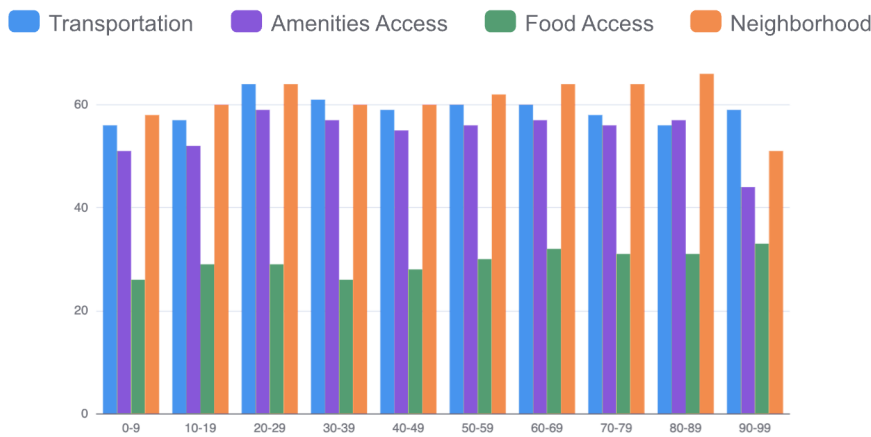
By Gender
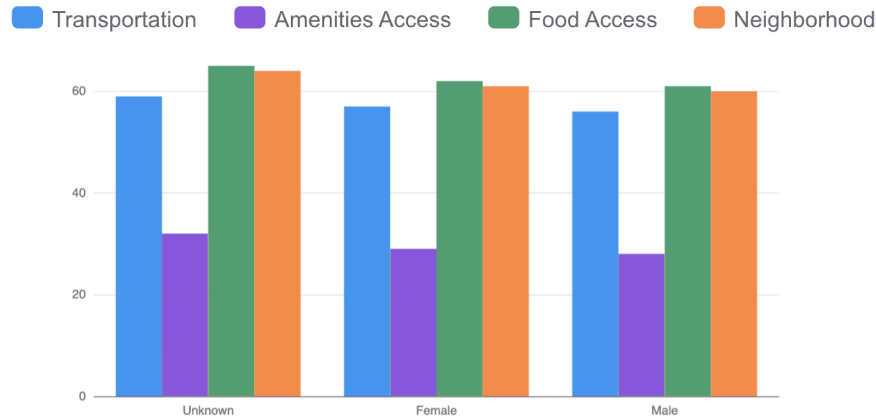
By Ethnicity
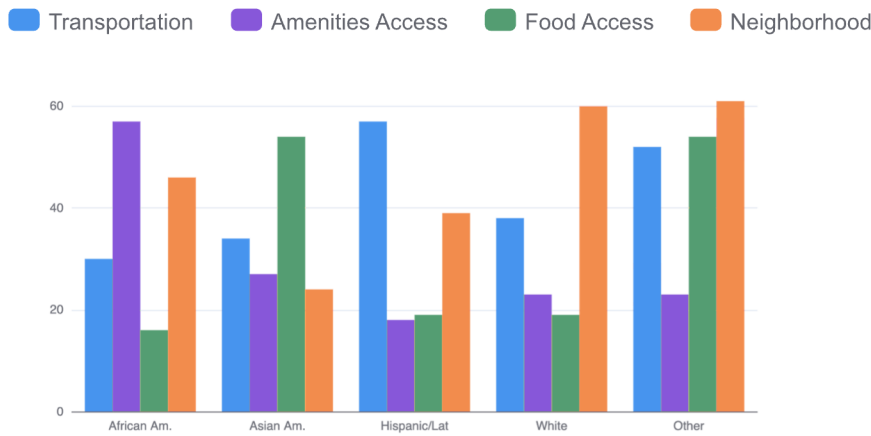
By Normalized Salary
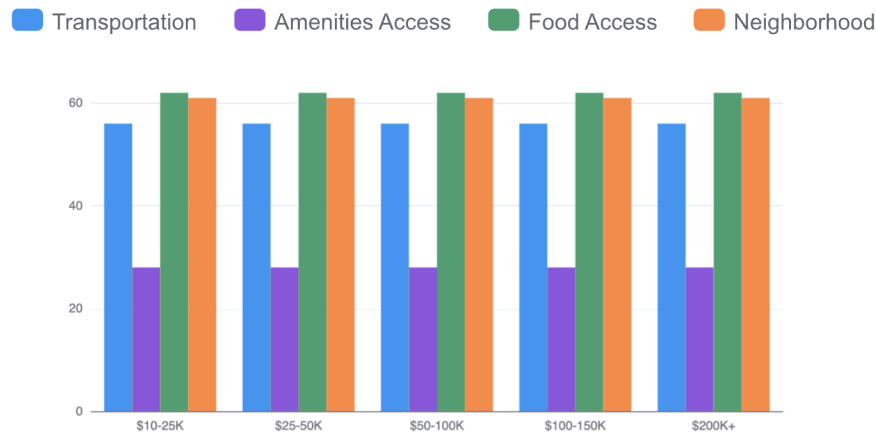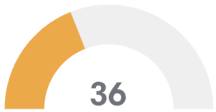
Healthcare Access overview

This domain measures the ability of members to obtain healthcare services for prevention, diagnosis, treatment, and management of diseases, illnesses, disorders, and other health-impacting conditions.
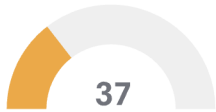
Domain Score
44
from 4 factors

Social factors contributing to this domain

36	66	37	45
Primary Care Access	Mental Health Access	Dental Access	OBGYN Access
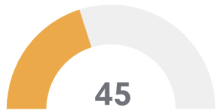
% enrolled members w/ score 45+

5.4%

PMPM for members w/ score 45+ (Med + Rx)

$681 +15% from avg

Prospective risk score for members w/ score 45+

1.34

Healthcare Access scores by county

State	County	Member %	Members	Score
TX	Dallas County	20.7%	704	63 🟠
TX	Harris County	18.4%	641	40 🟢
TX	Tarrant County	13.2%	480	42 🟢
TX	Bexar County	10.1%	372	64 🟠
TX	Davis County	8.9%	301	81 🔴
TX	Collin County	6.7%	201	55 ⚫
TX	Denton County	3.2%	124	82 🔴
TX	Fort Bend County	2.8%	89	44 🟢

(Slide repeats for all 10 domains)

Factors

Dive into the individual factors contributing
to each domain score

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Individual social factors

A 'social factor' is an element that affects an individuals' lifestyle, such as their education level, and ultimately has an effect on their access and utilization of healthcare services, as well as their overall wellbeing.
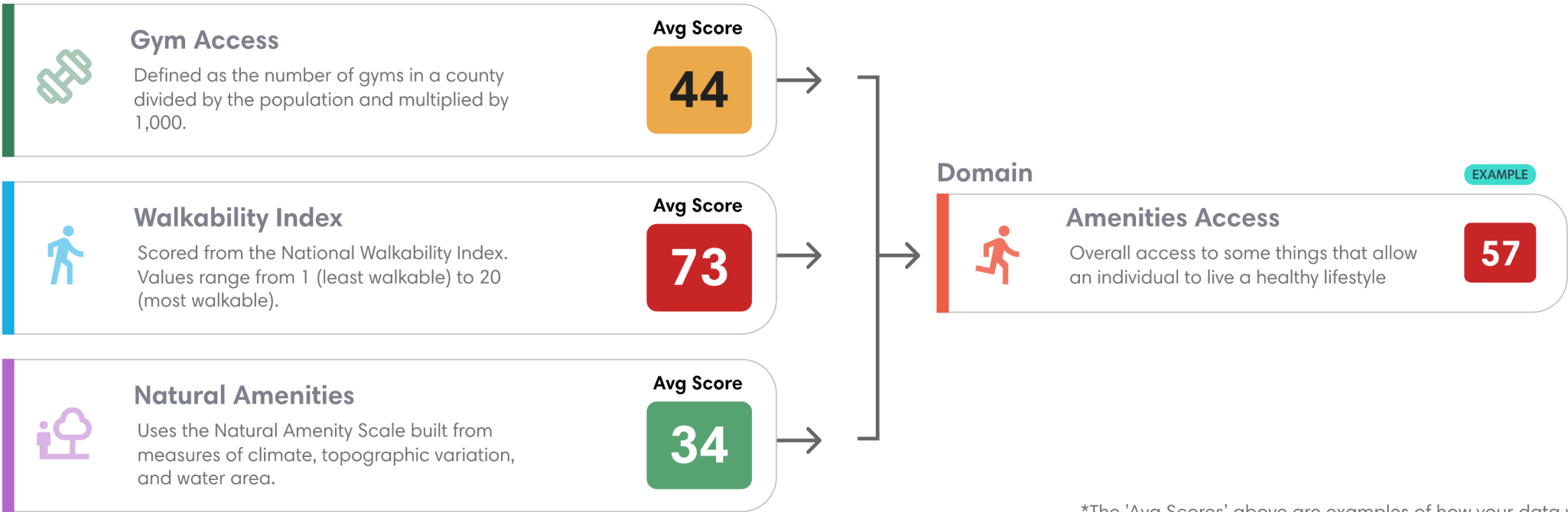
Factors as part of domains

Several social factors will combine into a domain. In this example 3 factors, such as 'Gym Access', contribute to an overall 'Amenities Access Score'

EXAMPLE

3 factors making up the Amenities Access Domain   EXAMPLE

Gym Access
Defined as the number of gyms in a county divided by the population and multiplied by 1,000.

Avg Score
44

Walkability Index
Scored from the National Walkability Index. Values range from 1 (least walkable) to 20 (most walkable).

Avg Score
73

Natural Amenities
Uses the Natural Amenity Scale built from measures of climate, topographic variation, and water area.

Avg Score
34

Domain   EXAMPLE

Amenities Access
Overall access to some things that allow an individual to live a healthy lifestyle

57

*The 'Avg Scores' above are examples of how your data will show as a score.
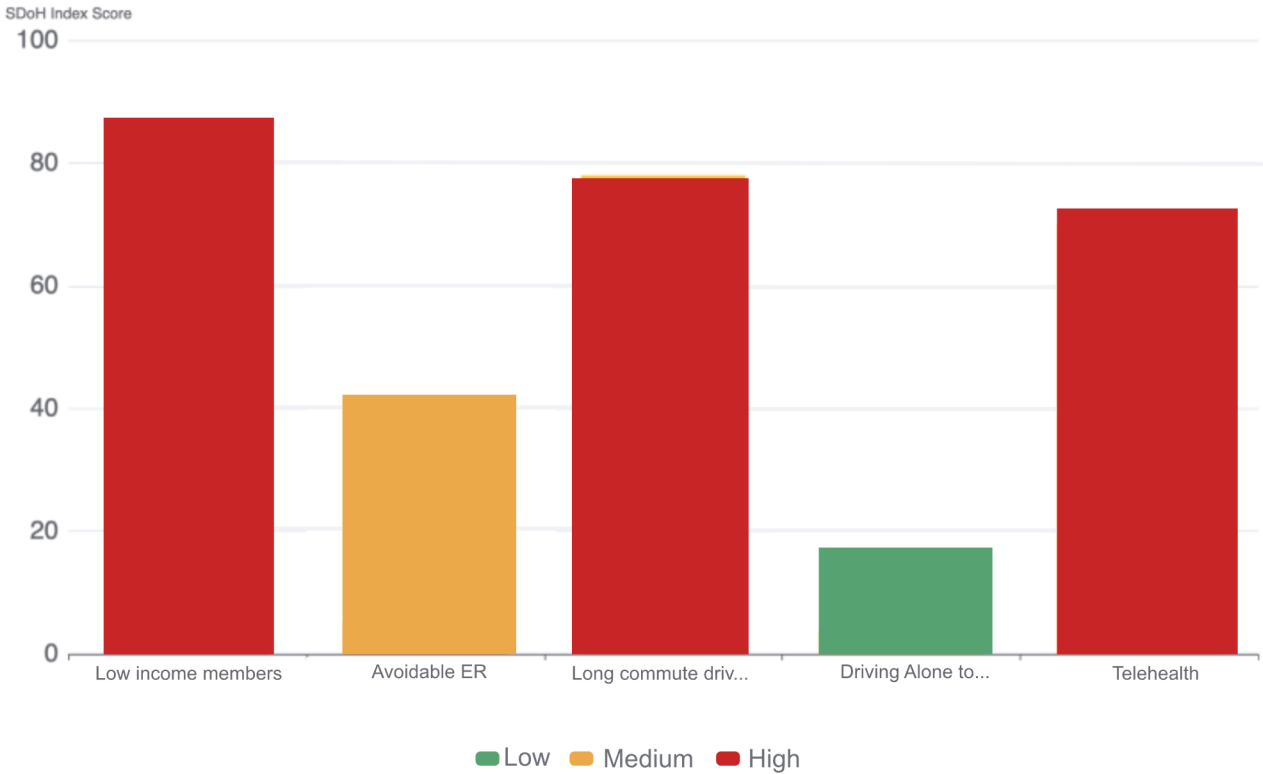
22

Leading social factors

Social factors impact your employee health outcomes, for example, preventable hospital stays are correlated with higher economic insecurity scores.
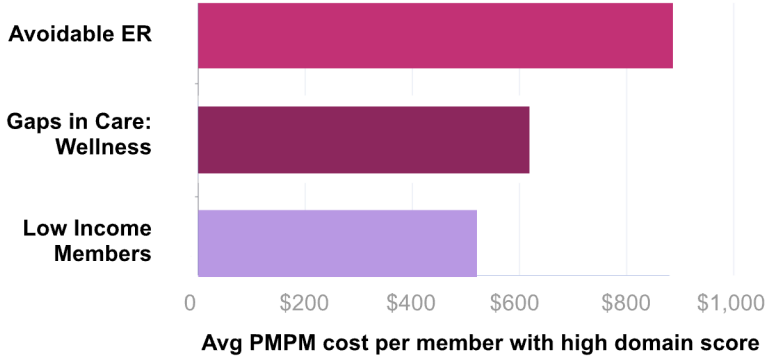
31 Social factors | **9** Domains
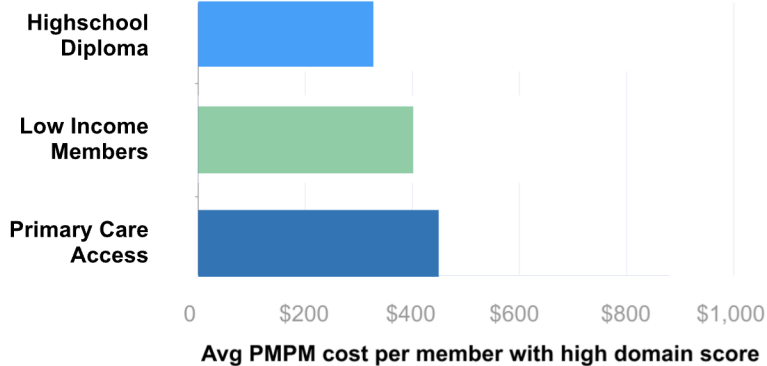
Top 5 Factors Across Artemis BoB

See which factors are contributing most to poor health outcomes

SDoH Index Score

Categories: Low income members, Avoidable ER, Long commute driv..., Driving Alone to..., Telehealth

Legend: ● Low ● Medium ● High

Factors associated with <u>highest</u> PMPM Costs

- Avoidable ER
- Gaps in Care: Wellness
- Low Income Members

Avg PMPM cost per member with high domain score

Factors associated with <u>lowest</u> PMPM Costs

- Highschool Diploma
- Low Income Members
- Primary Care Access

Avg PMPM cost per member with high domain score
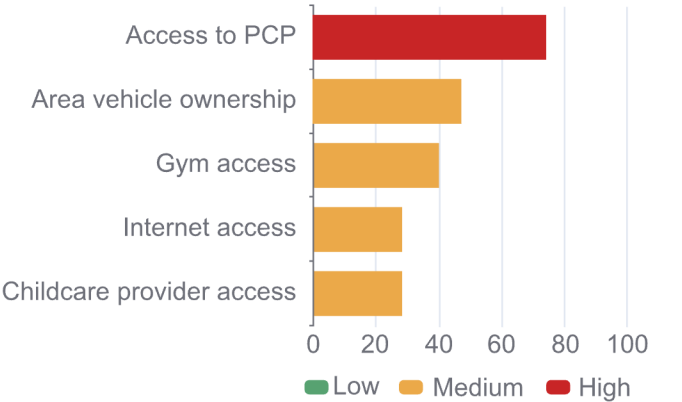
Factor combinations

Overall SDoH Risk Score for High Risk SDOH members grouped by topic.

These groups include members with a risk score greater than 46

Member access

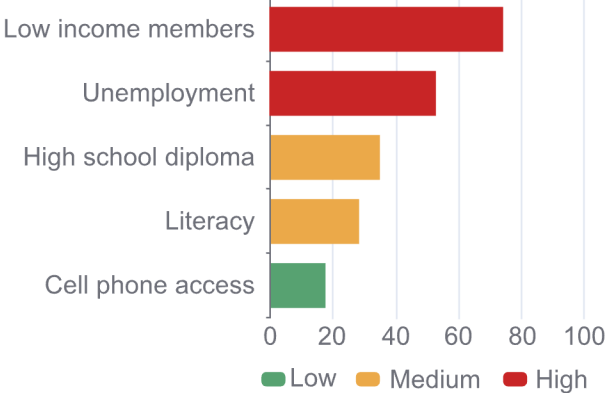|	
Access to PCP	(High)
Area vehicle ownership	(Medium)
Gym access	(Medium)
Internet access	(Medium)
Childcare provider access	(Medium)

■ Low ■ Medium ■ High

Combined Score 55

Member Count 2.5K

Est. PMPM Cost $767

Member income

Low income members	(High)
Unemployment	(High)
High school diploma	(Medium)
Literacy	(Medium)
Cell phone access	(Low)

■ Low ■ Medium ■ High

Combined Score 59

Member Count 1.5K

Est. PMPM Cost $703

Sedentary lifestyles

Driving alone to work	(High)
Long commute driving alone	(High)
Natural amenities	(Medium)
Gym access	(Medium)
Walkability index	(Medium)

■ Low ■ Medium ■ High
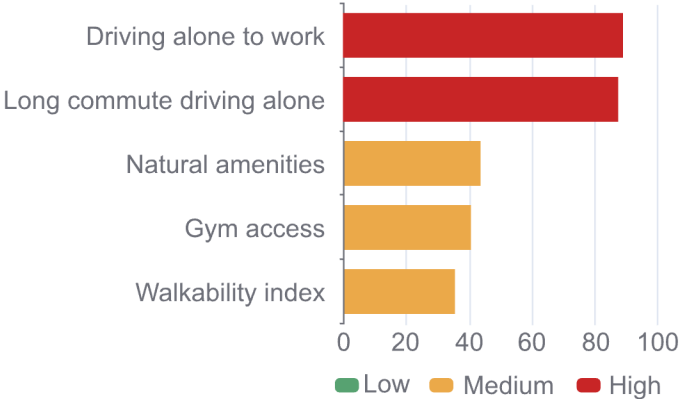
Combined Score 61

Member Count 5.1K

Est. PMPM Cost $684

Digital health adoption

Telehealth adoption	(High)
Avoidable ER	(High)
Area vehicle ownership	(Medium)
Internet access	(Medium)
Cell phone access	(Low)

■ Low ■ Medium ■ High
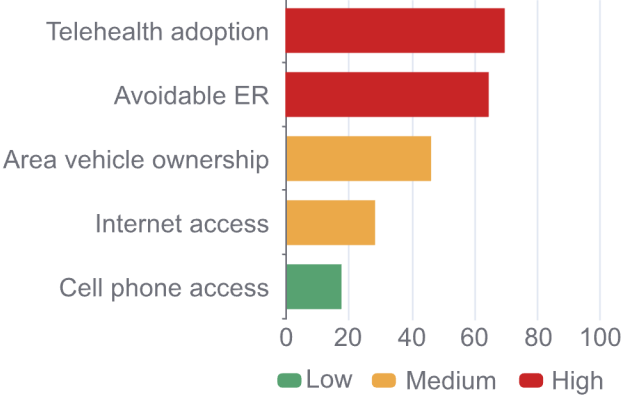
Combined Score 60

Member Count 5.5K

Est. PMPM Cost $690

Factor details

Learn about each social factor individually

Primary Care
**65**

0 — 100
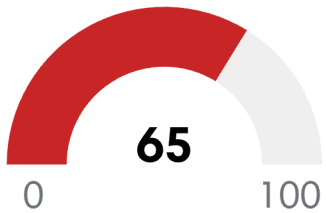
Primary Care
HEALTHCARE ACCESS

A primary care provider is usually an internist, family physician, pediatrician, or non-physician provider (e.g., family nurse practitioner, physician assistant). Research shows that access to primary care is associated with positive health outcomes.

SCORE DEFINITION

The total number of non-federal primary care physicians per 1,000 population.

DATA SOURCE: AHRQ County File


44

0 — 100
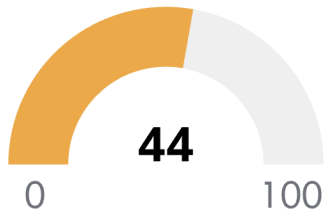
Mental Health
HEALTHCARE ACCESS

Improving mental health access can reduce the risk of mental illnesses and substance use disorders. It's important to social norms so that the health of all members of society is a priority.

SCORE DEFINITION

The total number of facilities that provide mental health services per 100,000 population.

DATA SOURCE: AHRQ County File


44

0 — 100
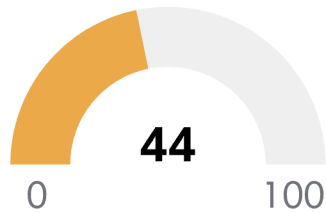
Dental Access
HEALTHCARE ACCESS

A primary oral care provider is typically a general dentist, family dentist, pediatric dentist, or non-dentist provider (e.g., dental hygienist, dental therapist). Studies indicate that access to primary oral care is linked with improved dental health outcomes.

SCORE DEFINITION

The total number of dentists per 1,000 population.

DATA SOURCE: AHRQ County File

61

0 — 100
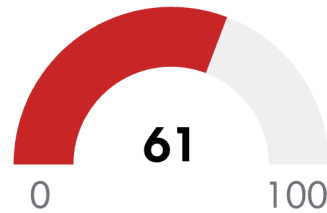
OB/GYN Access
HEALTHCARE ACCESS

Improved access to obstetric and gynecological services ensures that women receive proper prenatal care, reducing the risk of complications during pregnancy and childbirth. This promotes maternal and infant health, leading to healthier families and communities.

SCORE DEFINITION

The total number of non-federal primary care physicians per 1,000 population.

DATA SOURCE: AHRQ County File

(Slide repeats for all 31 factors)