



Lightbeam
Health Solutions

Your Roadmap to Building a Robust Health Equity Plan to Succeed in ACO REACH

Kent Locklear, MD, MBA, Chief Medical Officer, Lightbeam Health Solutions
Joe McDonald, MBA, Co-founder, President, CareSignal, a Lightbeam company

Learning Objectives

- Describe the technology and staffing considerations of a **successful and scalable** health equity plan
- Evaluate key data sources for identifying patients **at significant risk for social vulnerability**
- Identify methods for engaging vulnerable populations to proactively monitor and intervene on relevant **chronic conditions and social determinants of health**.



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Chief Medical Officer
Lightbeam Health Solutions



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President & Co-Founder
CareSignal, a Lightbeam company

Focus on Health Inequities

New changes that keep the focus on beneficiaries in underserved communities to help increase opportunity to optimal care

- **Health Equity Plans:** New requirement for REACH ACOs to develop and submit a formalized Health Equity plan
- **Benchmark Adjustments:** Application of health equity benchmark adjustment for ACOs serving patients in underserved communities to better support care delivery and coordination
- **Required Demographic Data Collection:** New requirement to capture and report demographic and social needs data (ties to social determinants)
- **Beneficiary Engagement Incentives and Beneficiary Enhancements:** Higher quality of care and support with engagement incentives, encouraging better management of chronic conditions and reduced readmissions

Focus on Reduction in Utilization

- No Clinical Measures
- 4 Claims Measures
 - All cause readmissions
 - Unplanned admissions for patients with multiple chronic conditions
 - Timely follow-up
 - Days at home (specific to High-Needs DCEs only)
- 9 CAHPS Measures



Five Pitfalls



Pitfall #1: Broad Risk Identification



Challenge

- Identify which patients are most likely to readmit to the hospital
- Identify which social factors are most likely to be affecting each patient
- Identify which health social factors to address to have the greatest impact

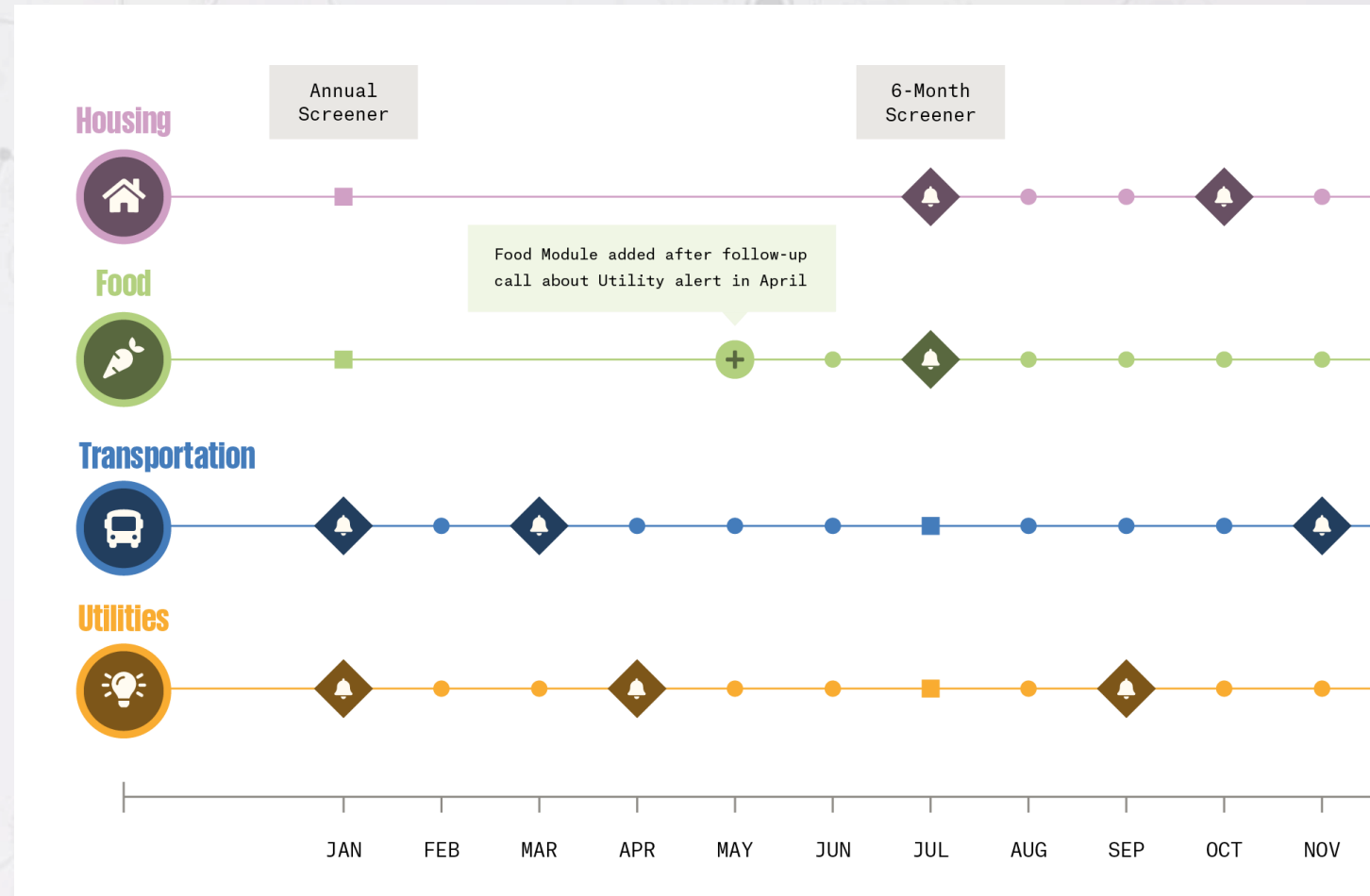
Social and Economic Factors Drive Health Outcomes					
Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Racism and Discrimination					
Employment	Housing	Literacy	Food security	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Stress	Quality of care
Medical bills	Playgrounds	Higher education		Exposure to violence/trauma	
Support	Walkability				
	Zip code / geography				
Health Outcomes: Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations					

Pitfall #2: Disconnected SDOH Strategy



Challenge

- Identify the social determinant factors most likely to be affecting each patient
- Manual SDOH data collection
 - One-time, outdated
 - Reactive
 - Traditionally long surveys place response burden on patient, white-coat effect – less accurate answers
 - PCP's traditionally clinically focused, limited LCSW's
- Connect patients to social services without switching platforms



Pitfall #3 Not Reaching the Most Vulnerable



Challenge:

- Relying only on face-to-face visits is an incomplete strategy
- Most technology solutions (apps, portals, telehealth) don't reach vulnerable populations
- One-way only communication



Telehealth use grew most in wealthy and metro areas, exacerbating disparities in access to care

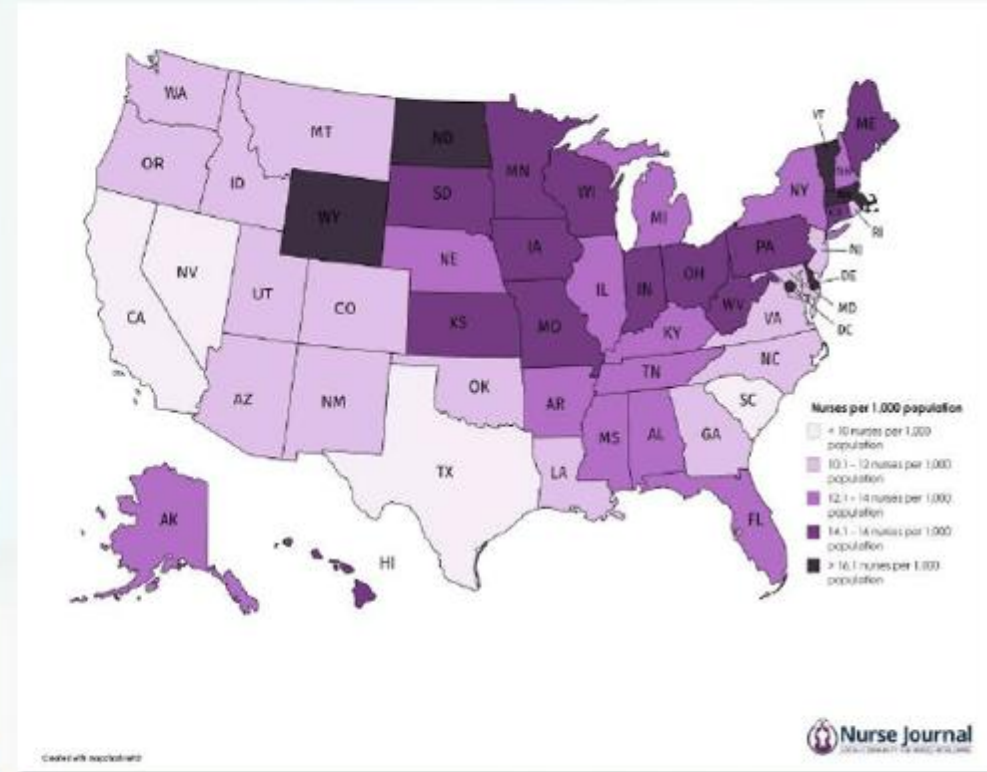


24% of rural residents own a cellphone but not a smartphone



30 million U.S residents lack broadband access

Pitfall #4 Missed Opportunities Due to Staff Capacity



<https://nursejournal.org/articles/the-us-nursing-shortage-state-by-state-breakdown/>

Pitfall #5: Not Balancing Quality, Utilization, & Satisfaction Metrics

Quality Metrics

Quality ID#: 001	Diabetes: Hemoglobin A1c (HbA1c) Poor Control	eCQM/MIPS CQM/CMS Web Interface*	APM Entity/Third Party Intermediary	Mgt. of Chronic Conditions
Quality ID#: 134	Preventive Care and Screening: Screening for Depression and Follow-up Plan	eCQM/MIPS CQM/CMS Web Interface*	APM Entity/Third Party Intermediary	Treatment of Mental Health
Quality ID#: 236	Controlling High Blood Pressure	eCQM/MIPS CQM/CMS Web Interface*	APM Entity/Third Party Intermediary	Mgt. of Chronic Conditions
Quality ID#: 318	Falls: Screening for Future Fall Risk	CMS Web Interface*	APM Entity/Third Party Intermediary	Preventable Healthcare Harm
Quality ID#: 110	Preventive Care and Screening: Influenza Immunization	CMS Web Interface*	APM Entity/Third Party Intermediary	Preventive Care
Quality ID#: 226	Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention	CMS Web Interface*	APM Entity/Third Party Intermediary	Prevention and Treatment of Opioid and Substance Use Disorders
Quality ID#: 113	Colorectal Cancer Screening	CMS Web Interface*	APM Entity/Third Party Intermediary	Preventive Care
Quality ID#: 112	Breast Cancer Screening	CMS Web Interface*	APM Entity/Third Party Intermediary	Preventive Care
Quality ID#: 438	Statin Therapy for the Prevention and Treatment of Cardiovascular Disease	CMS Web Interface*	APM Entity/Third Party Intermediary	Mgt. of Chronic Conditions
Quality ID#: 370	Depression Remission at Twelve Months	CMS Web Interface*	APM Entity/Third Party Intermediary	Treatment of Mental Health

- Average quality score of 94% for all MSSP ACOs in 2019

&

ACO REACH Metrics

- No clinical measures
- 4 Claims Measures:
 - All-Cause Readmissions
 - Unplanned Admissions for Patients with Multiple Chronic Conditions
 - Timely follow-up
 - Days at home (specific to High-Needs DCEs only)
- 9 CAHPS Measures

https://www.naacos.com/assets/docs/pdf/2021/ACO-QualityChanges2021_2022.012521.pdf
<https://www.ajmc.com/view/cms-needs-to-rethink-how-medicare-assesses-quality>



**ASSESS
RISK**

Roadmap to Health Equity

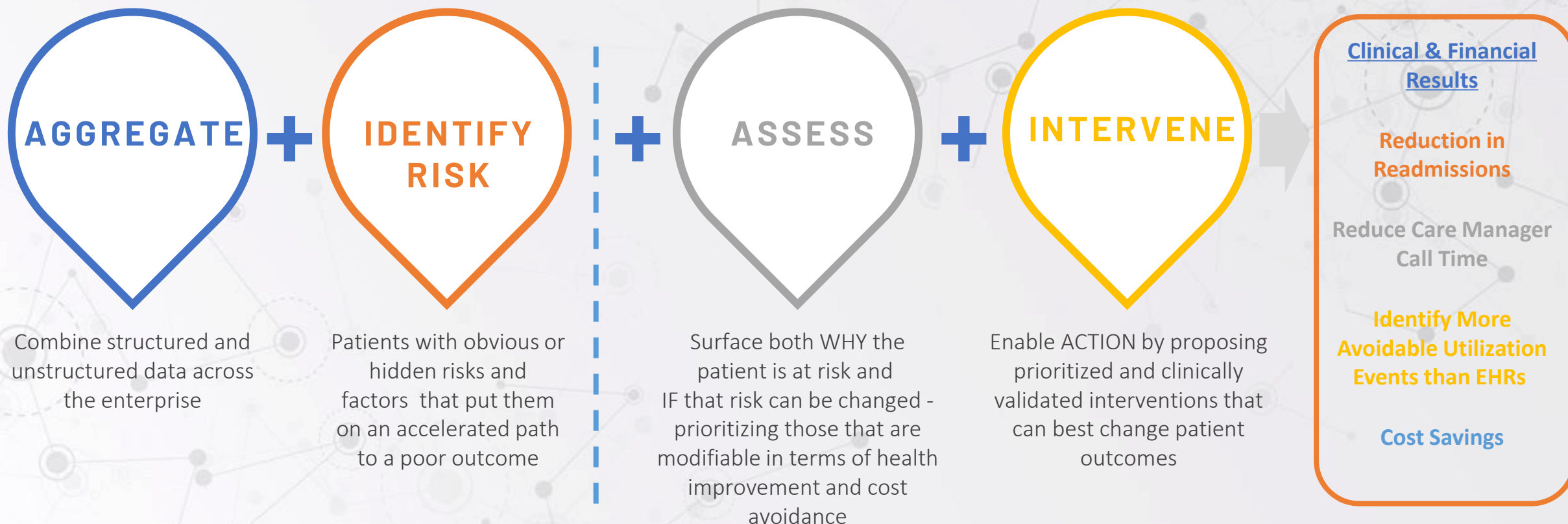
Step 1: Assess Risk

Don't Just Identify Risk, Eliminate It



Jvion Identifies Which Patients are at Risk, Why, and How to Intervene

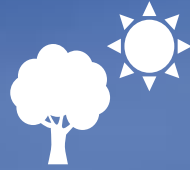
Traditional Predictive
Analytics Stop Here



Identify Patients Most At Risk: Community-level Data



Demographical



Environmental



Transportation



Lifestyle



Behavioral



Access



U.S. Census Bureau

Includes American Community Survey. Last census update 2020.



U.S. Department of Agriculture

Retrospectively updated every 1-3 years. Last update 2019.



U.S. Department of Housing & Urban Development

Updated yearly. Last update 2019.



Environmental Protection Agency

Updated yearly. Last update 2021.



Centers for Disease Control & Prevention

Includes ATSDR Social Vulnerability Index and PLACES data. Last update 2021.



National Provider Identifier

Updated monthly, ingested every 6-months.



Jvion finds meaningful correlations between disparate data sources to help understand disparities, barriers to health & wellness and accelerating risk.

Granular Community-level Data



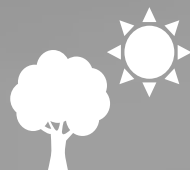
900+ Characteristics Included

- Care Access (over 100 facility and provider types)
- Block group risk
 - Relative to state and county
- Block group demographics
 - Age: 17 year or younger, 65 and older
 - Percent uninsured
 - Diversity: White, Black, Asian/Pacific Islander, Hispanic, Native American, Other
 - Disability
 - Employment
 - Household income
 - Poverty rate
 - Percent of individuals that speak English less than well
 - Languages
 - Internet Access
 - Education
- Environmental Conditions
 - Environmental health hazard
 - Water Quality
 - Water Pollution
 - Air Quality
 - Air Pollution
- Health Outcomes
 - Cancer
 - Cardiovascular
- Land Use
 - Industry
 - Agriculture
- Transportation & Activity
 - Commute time
 - Public transportation modes
 - Neighborhood walkability
- Neighborhood Access
 - Business
 - Schools
 - Civic organizations
- Food security
 - Food access
 - Vehicle Access
 - Healthy/Unhealthy food access
- Health Behaviors
 - Preventative Screen
 - Physical activity
 - Smoking
 - Binge drinking

Identify Patients Most At Risk: Individual-level Data



Household



Media



Occupation



Product use



Life Stages



Interest



Product Propensity

Purchasing history and likelihood to use certain products. Includes elements derived from actual purchases and self-reported survey.



Rx Propensity

Filled location and propensity to prefer to fill. Also defines likelihood to inquire about prescription medication.



Occupational Detail

Details of the individual's occupation, aggregate of the overall.



Family Ties

Household characteristics about the individuals in the household including life associated milestones.



Digital Fluency & Relationship

Indicates the use of computers or software in the household, data about the household's phone behaviors and internet connection.



Health Interest

Derived from purchases and self-reported sourced. Includes common health-related household data such as allergies, diabetic focus, and arthritis needs.



Purchasing Propensity & Interest

Interest elements are derived from actual purchases and self-reported surveys (not time sensitive).



Vehicle Detail

Vehicle purchase and ownership data from dealer services and self-reported sources.



Homeowner Detail

Includes home-related events such as a recent home purchase or refinance. Data is from self-reported sources and public records.



Media Usage Propensity

Predictive models that indicate consumer's preference for various media channels, as well as health-related search engine propensity.



Stages of Life Characteristics

Identifies life-stage based on household level segmentation based on specific consumer behavior and demographic characteristics.



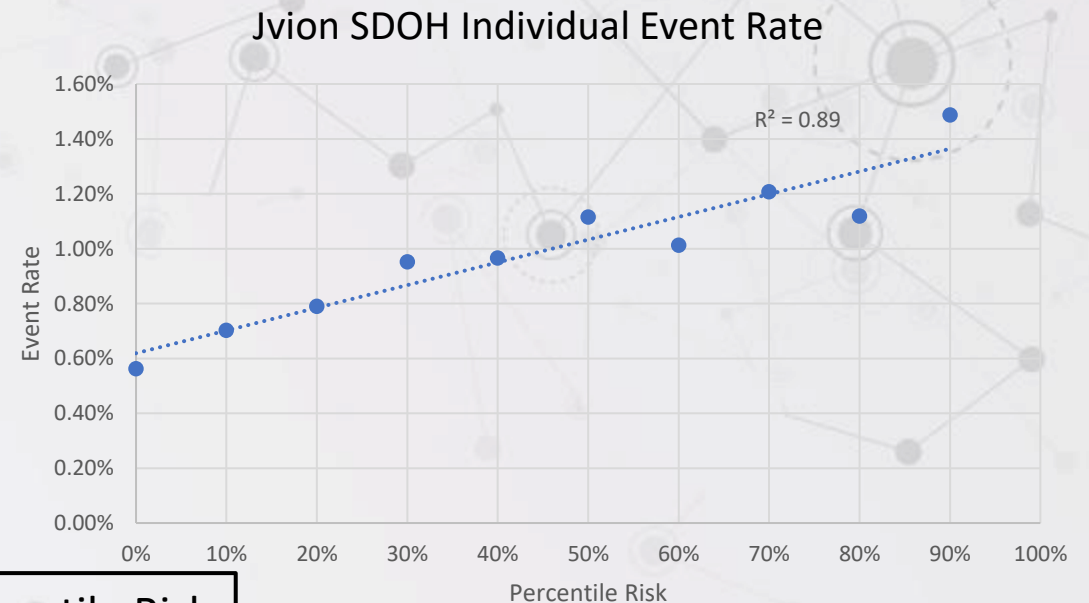
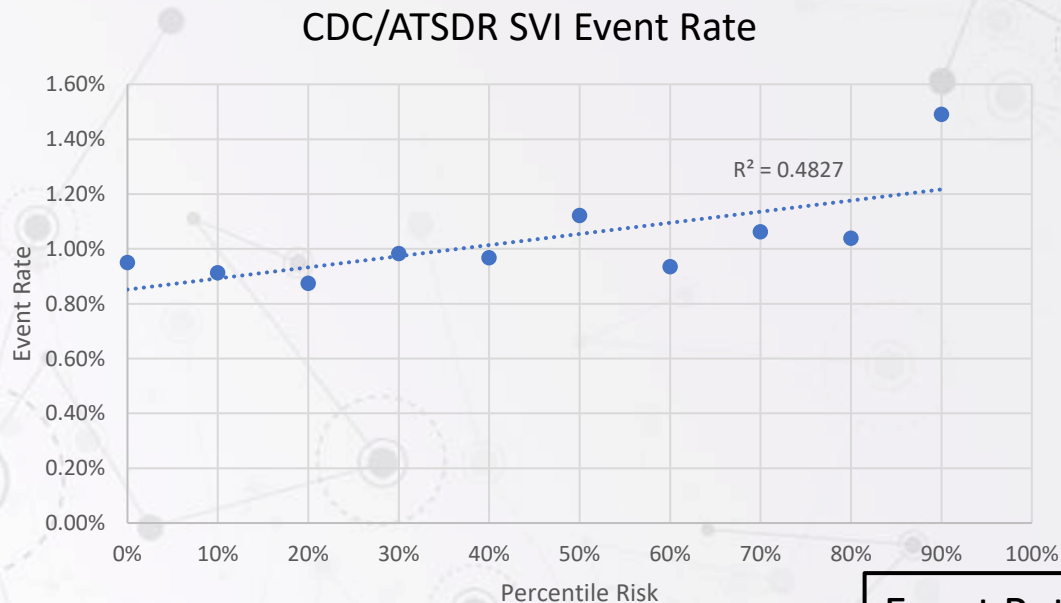
Household characteristics

Includes demographical information about the individual and household.

CDC SVI Comparison Against Jvion's SDOH Individual



Jvion's models outperform existing models because they incorporate complex interactions among risk factors



Event Rate vs Percentile Risk

- $R^2 > 0.5$ for correlation
- SVI has a $R^2 < 0.5$
- Jvion $R^2 = 0.89$

All-Cause Readmission Prediction Performance



>40%
more accurate
than LACE

63%
reduction in unnecessary
clinician outreach

> 50%
reduction in variation
of outcomes

10%
reduction in
readmissions

Actionable Insights with Risk Stratification



- Calculate each patient's risk acuity based on a combination of algorithms, protocols, and guidelines
- Predictive modeling algorithms highlight patients with preventable high-cost events
- Easily stratify quality and financial data by race/ethnicity using EMR and/or demographic data available through assignment lists
- Surface AI-driven socioeconomic, behavioral, and environmental data to find social factors affecting a patient's trajectory





MONITOR

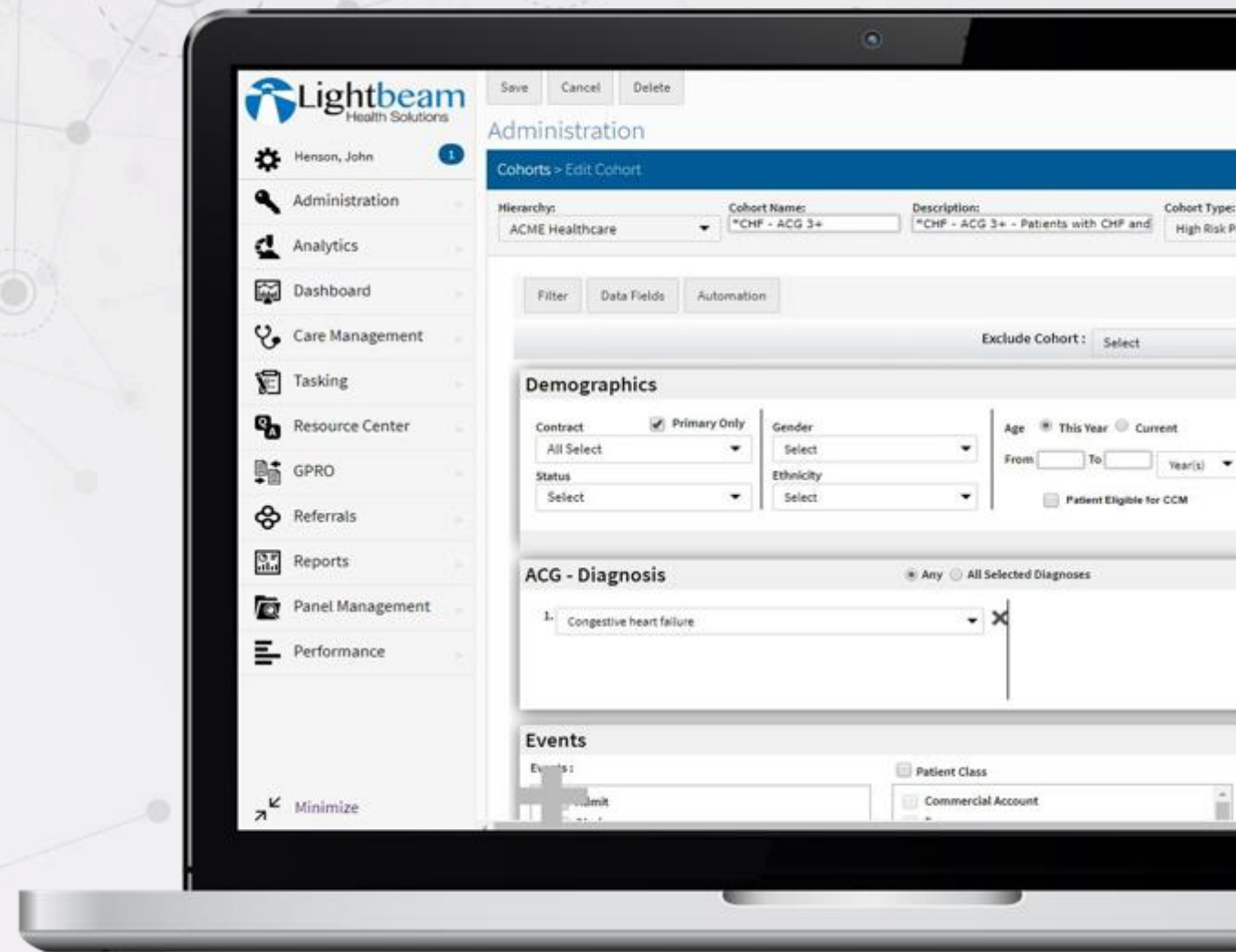
Roadmap to Health Equity

Step 2: Monitor

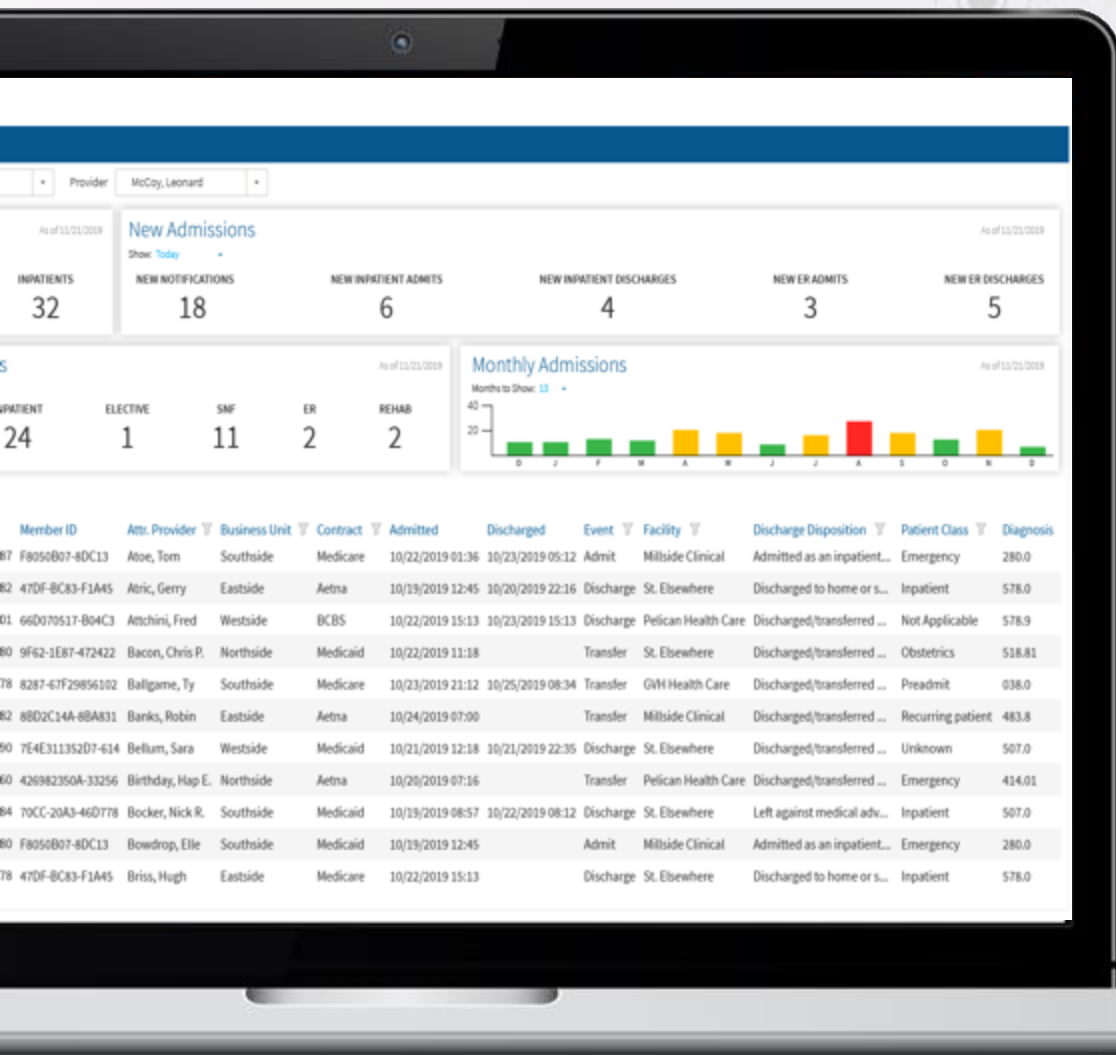
Cohort-Driven Engagement



- Automates clinical workflows by serving as the conduit between the EDW, care management, and patient engagement.
- Automatically identifies patients for intervention, coaching, or care management
- Automatically assign patients to resources
- Automatically reach out to patients w/ Patient Engagement
- Patient Data Export used to transport data for 3rd party integration



ADT Insights for Real-time Intervention



ADT / ED Insights provides near real-time notifications of admission, discharge, and transfer events in a centralized view as patients present, enabling providers and care managers to quickly engage patients for transitions of care.

- Reduce hospital admissions
- Reduce readmissions



ENABLE

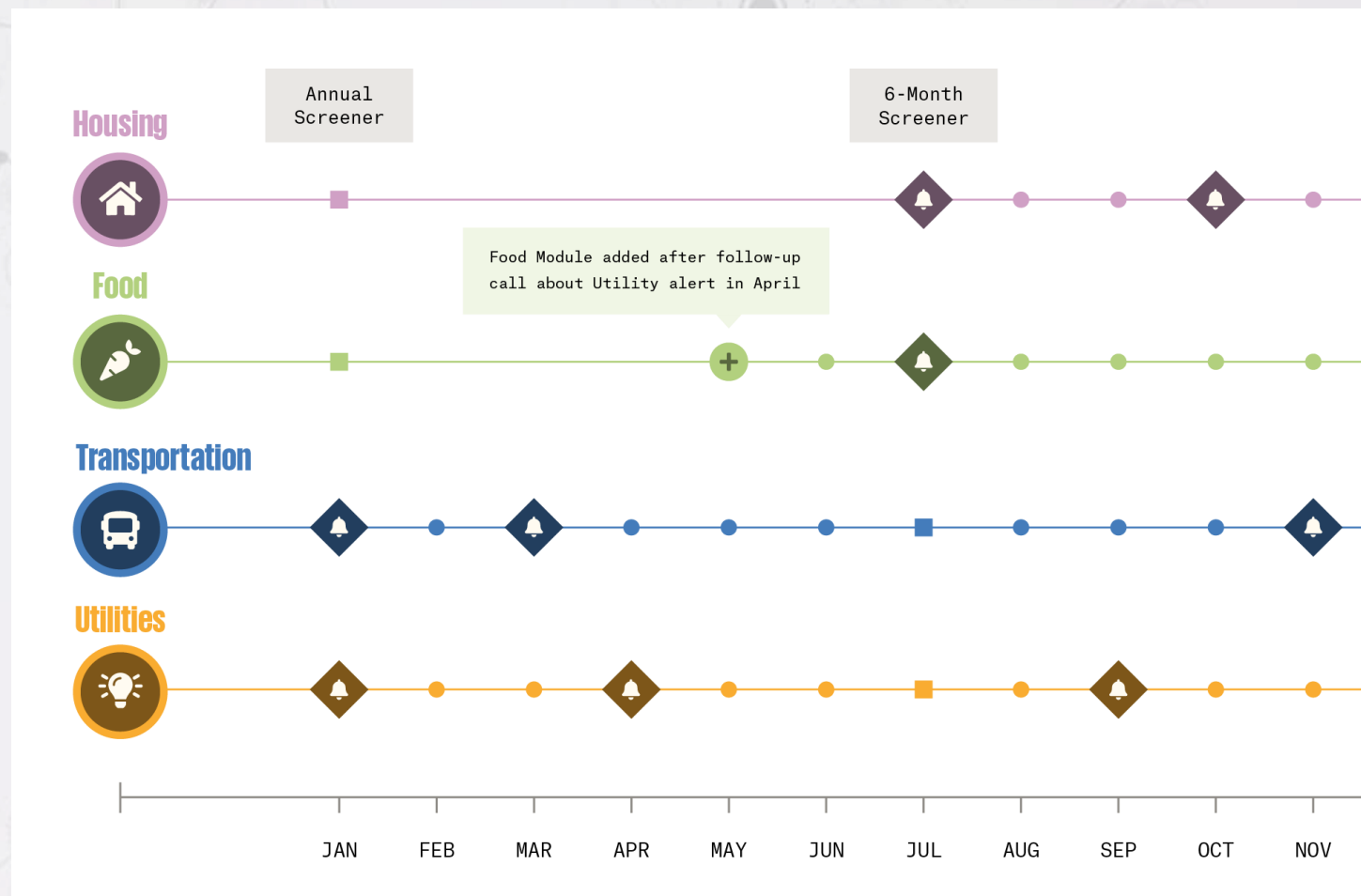
Roadmap to Health Equity

Step 3: Enable

Create a Robust SDOH Strategy



- Identify which social determinants are most likely to be affecting each patient
- Automate collecting SDOH data
 - Staff Resources (2% alert rate)
 - Longitudinal
 - Proactive
 - Real-time
 - Ask only relevant questions to reduce patient response burden
- Address acute patient needs and with seamless connection to NowPow, UniteUs for resources



Connect Patients to Community Resources



Care Management

My Roster

Megan

Patient Roster

☐ Name

☒ ABBOT, BAILEY

Showing all 1 rows

Primary Provider

Total Cases

2

Overdue Activities

7

Due Today

0

Your Activities

10

Total Activities

10

Start Timer

Time Spent

0 Min

My Activities Only

All Activities

High Priority

Due Today

Overdue

Show Closed

Show Deleted

Social Services

Client

Client Environments

System Settings

Client:

Lightbeam Health Solutions, Inc

Environment:

QA - <https://integrationnext.lightbeamhealth.com>

Add Setting

Setting Type	Display Value	Set Value
SocialServices	Social Services	https://www.findhelp.org/

Engage Patients with Deviceless Remote Patient Monitoring



Affordable | Accessible | Scalable

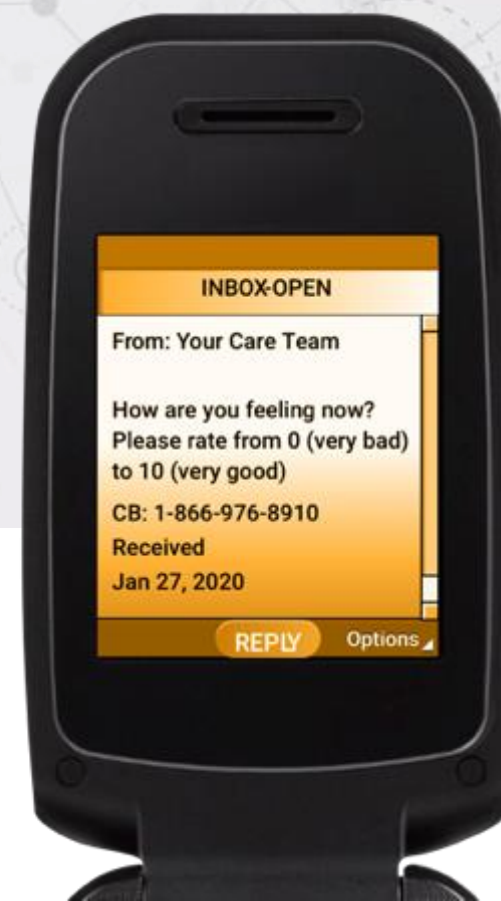
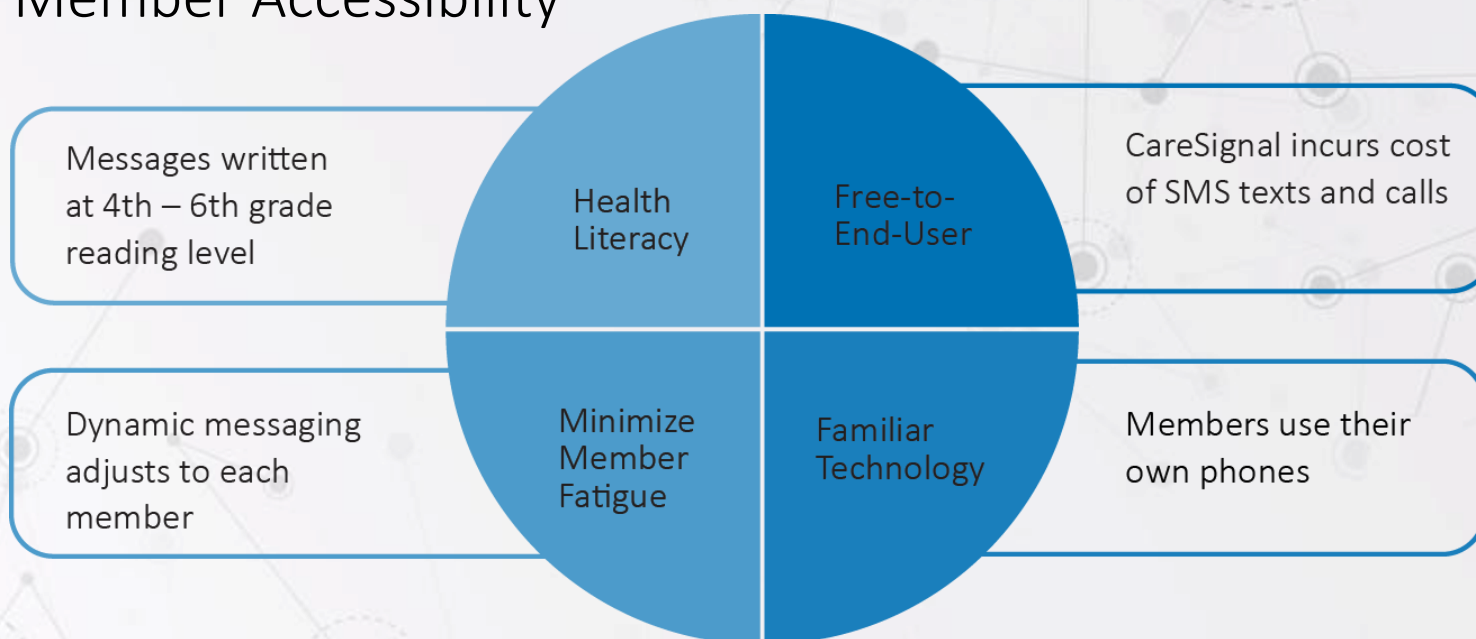
- ✓ **No new devices required**
No apps, downloads, or passwords
- ✓ **Accessible for all patients**
Promote & elevate health equity
- ✓ **Clinically validated**
13+ Peer reviewed publications
- ✓ **30 Programs | One Portfolio**
Pre-built & evidence-based
- ✓ **Engagement powered by AI**
Predict & prevent drop-off
- ✓ **White-labeled for patient/member**
High-quality, credible experience



Deviceless Remote Patient Monitoring



Member Accessibility



verizon

T-Mobile

Sprint

AT&T

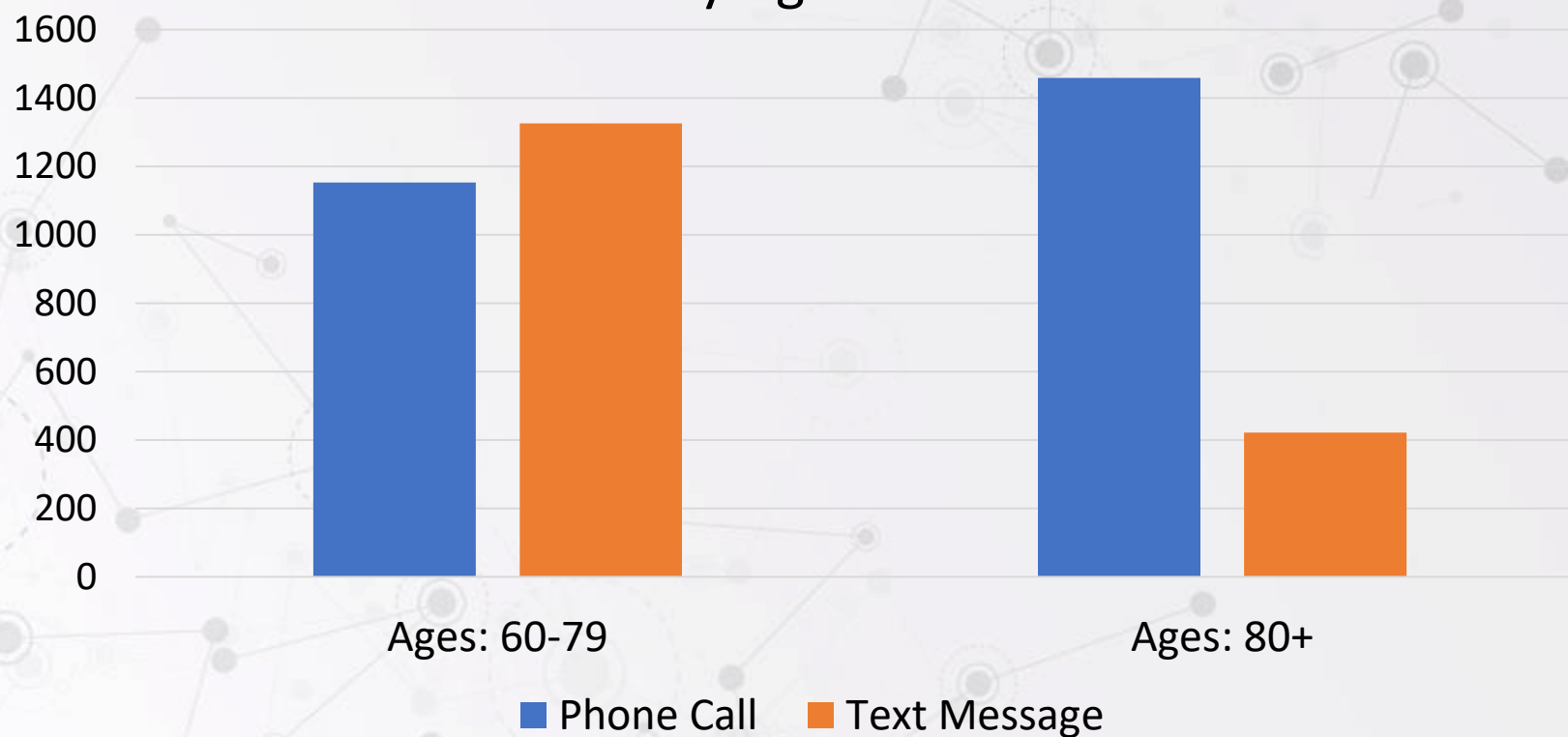
boost
mobile

metro
by T-Mobile

Improve Access with the Right Technology



Medicare Patient Communication Preference by Age



Familiar technology builds trust; patients continue to engage with systems they trust and can access

Support Whole-patient Health: Chronic Conditions & SDOH



30+ Evidence-based Programs | One Portfolio

Chronic Conditions

- [Heart Failure](#)
- [COPD](#)
- [Diabetes](#)
- [Hypertension](#)
- [Asthma](#)

Behavioral Health

- [Depression](#)
- [Anxiety](#)
- [Substance Use](#)
- [Opioid Management](#)
- [Caregiver Support](#)

Specialty Support

- [SDoH](#)
- [Maternal Health](#)
- [Dialysis](#)
- [Surgery](#)
- [HIV/AIDS](#)

Post Discharge

- [Post Discharge](#)
- [General Medical](#)
- [Vital Signs](#)
- [Pneumonia](#)

Care Coordination

- [Screening Reminders](#)
- [Appointment Reminders](#)
- [Referral](#)

General Programs

- [COVID Suite](#)
- [Influenza](#)
- [Fall Risk](#)
- [Wellness](#)
- [Medication Adherence](#)

13 Publications

in Peer-Reviewed Medical Journals



62% decrease
in hospitalizations
for patients with COPD



46% decrease in CHF ED
visits



1.15% drop in HbA1c
over 4 months



50% improvement in
blood pressure control
over 12 weeks



28% drop in PHQ-9
for patients with
depression

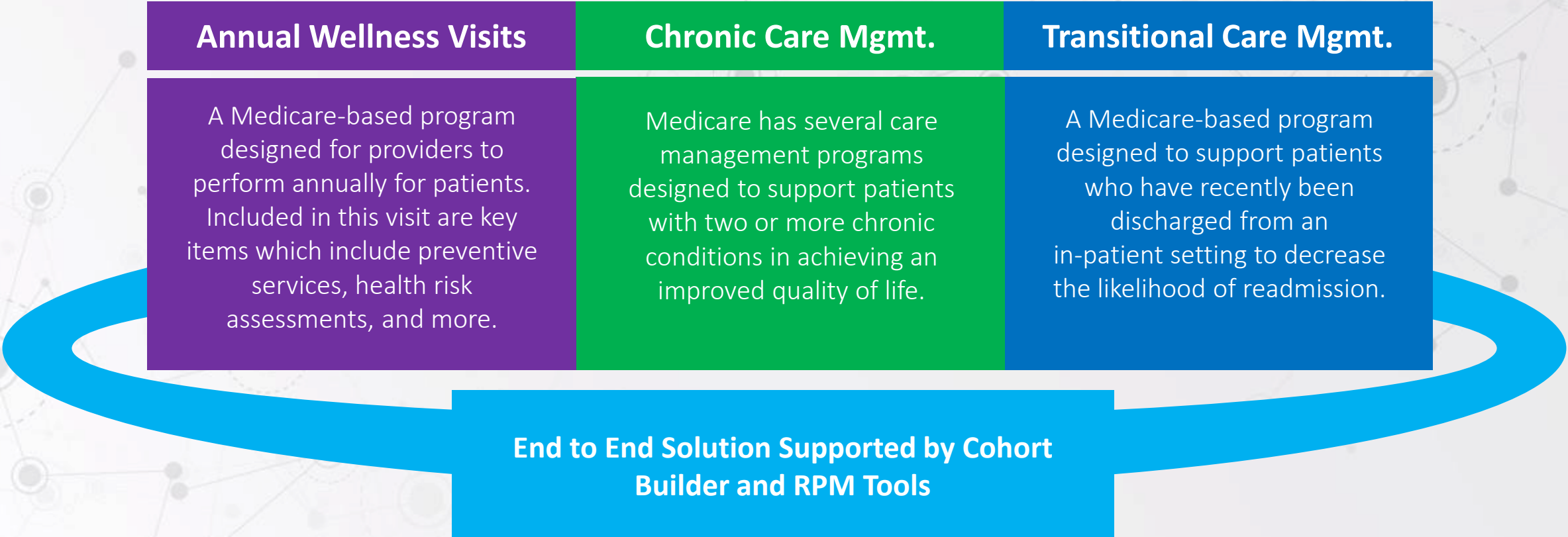


>2.1x increase in follow-up
appointment adherence

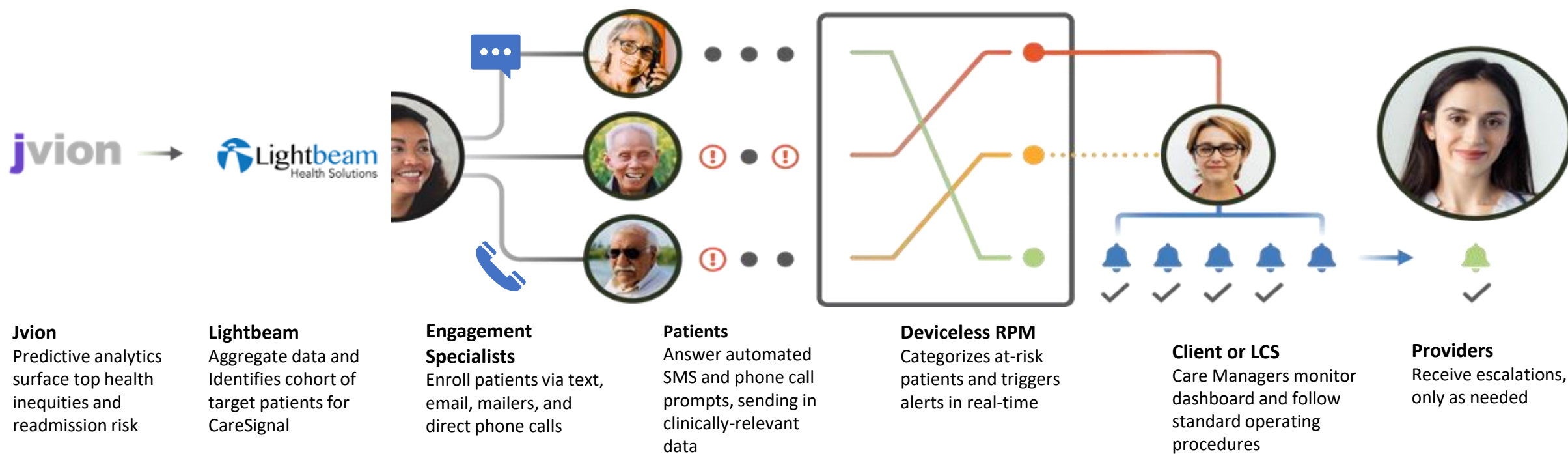


Enhance Your Clinical Staff & Provide Proactive Care Management

Lightbeam Clinical Services offers staffing augmentation and patient engagement programs designed to work under the general supervision of the organization's providers



Workflow: Insights to Outcomes



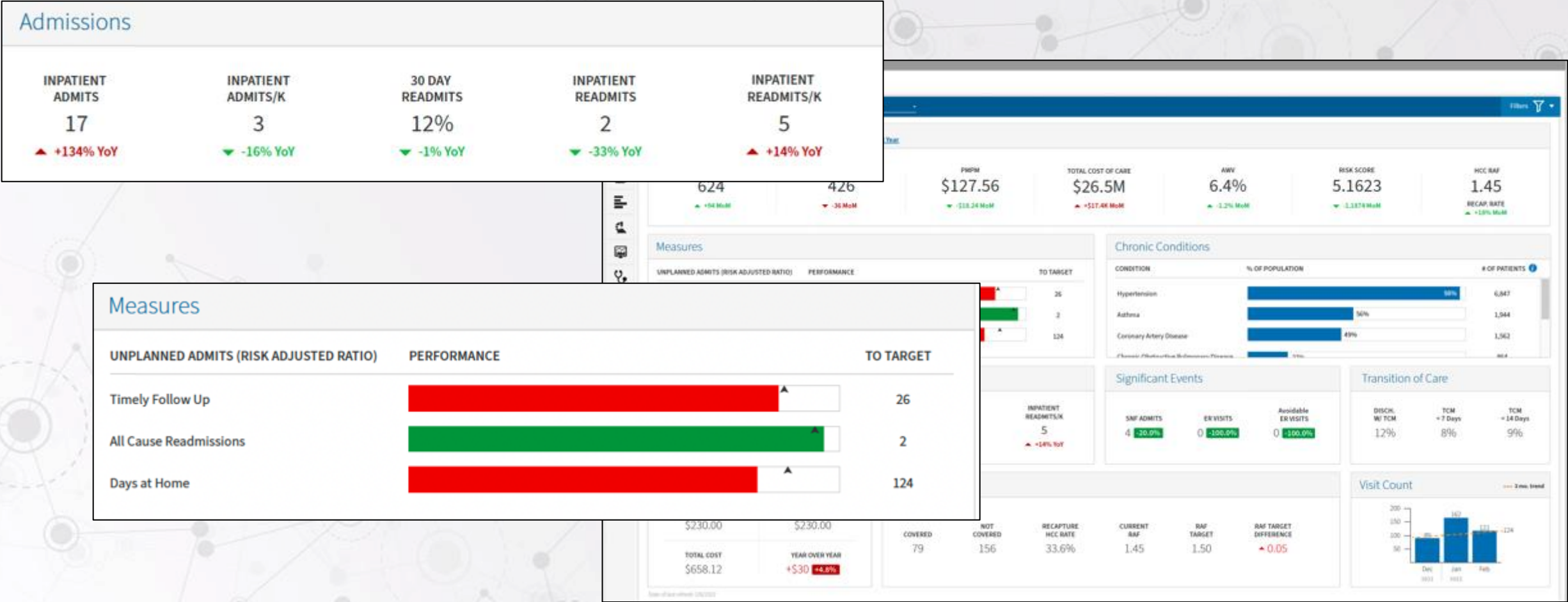


MEASURE

Roadmap to Health Equity

Step 4: Measure

Track Performance with Real-time Dashboards



Achieve Success In ACO REACH



Assess social and physical health risk across your entire ACO population, identify care gaps, enable proactive outreach, and empower care teams to reduce avoidable utilization

ASSESS RISK

Identify Patients Most At Risk With Prescriptive AI-Driven Insights

- Access data 3x more granular than the CDC / ATSDR Social Vulnerability Index
- Analyze and identify which patients are at-risk, why they are, and how to intervene
- Surface top 5 clinical and social risk factors for each patient

MONITOR

Monitor Patient Discharge and Dynamic Risk Level

- Leverage ADT Insights to Identify patient discharges
- Build patient cohort lists according to propensity to readmit to the hospital

ENABLE

Reach Vulnerable Populations With Deviceless RPM® & Clinical Staff Augmentation

- Proactively monitor patient chronic condition symptoms and SDOH challenges within a single solution
- Enable staff to more efficiently provide care and resources to the right patients
- Augment clinical staff with RNs and LCSWs

MEASURE

Track Performance with Real-Time Dashboards Specifically Designed for ACO REACH

- View real-time key metrics like Total Cost of Care and Risk Score within Lightbeam's ACO REACH Dashboard
- Monitor performance vs targets for Quality Measures, Admissions, RAF Score, and more
- Easily access up-to-date counts and percentages of your patient population by Chronic Conditions

Evidence

- Reach Vulnerable Populations
- Improve Care Management Efficiency
- Reduce ED Visits
- Reduce Costs

Patient Success Story

Top Patient Risk Factors

Ms. Johnson

64-year-old female

Clinical Risk Factors:

- T2DM
- HTN
- A-fib
- Obesity

“The patient was telling me that she was compliant with her medications, and that her biggest issue was chronic pain.”

SDOH Risk Factors

- Single. Likely without support from spouse.
- Highly unlikely to be digitally fluent.
- Low individual income.
- Low transportation availability.
- Education likely limited to high school



Top 3 Recommended Interventions



Focus on medication compliance & access

Uncovered issues with medication compliance

- Removing insulin pump
- Not taking medication as prescribed
- *Met with patient and PCP*



Nutrition consult

Helpers prepare inappropriate foods

- *Set up homecare*
- Difficulty with activity
- *Referred for home PT; ~20 lb. weight loss*

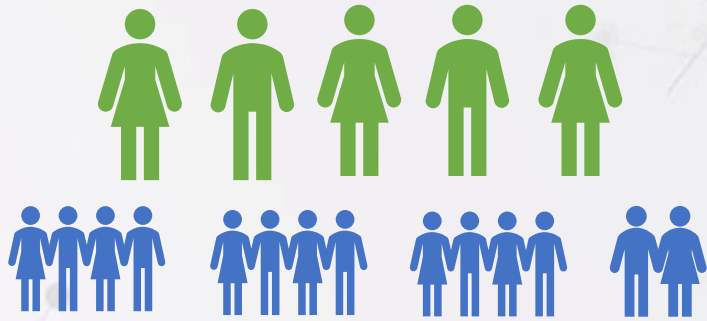


Depression screening

Completed PHQ-9; patient scored high

- *PCP notified*
- Uncovered transportation issues, cancels appts
- *Ride services now provided*

Proven Effective & Efficient Case Management



Case Management Outreach:

Jvion accurately predicts 5 Admissions out of 32 members versus 5 out of 600 members

Jvion insights allow for more effective outreach – 2.7x as many calls/hr – and fewer members to outreach, resulting in a savings of over **\$8,800** to prevent the same 5 admissions

With Jvion

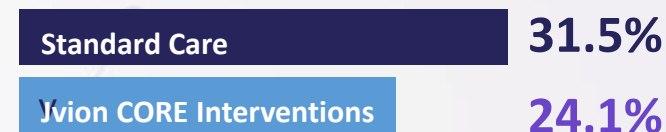


Without Jvion ***One group = 10 patients

Impact Story: Northwell Health Reduced Readmissions by 23.6%

The CORE recommends interventions that reduce readmissions:

Readmission Rates:



The CORE reveals hidden risk factors for readmission:

- Inability to afford medication
- Social isolation
- Poor health literacy
- Lack of access to transportation

By actioning the CORE's recommendations, Northwell saved:

\$459,200
over 4 months

Seeing the Hidden Risk for Readmission

This comprehensive approach reveals hidden risk for readmissions that Transitions of Care Management (TCM) teams would otherwise miss.

Targeting Patient-Centric Outreach

These insights empower the TCM team to more effectively target their patient outreach post-discharge.

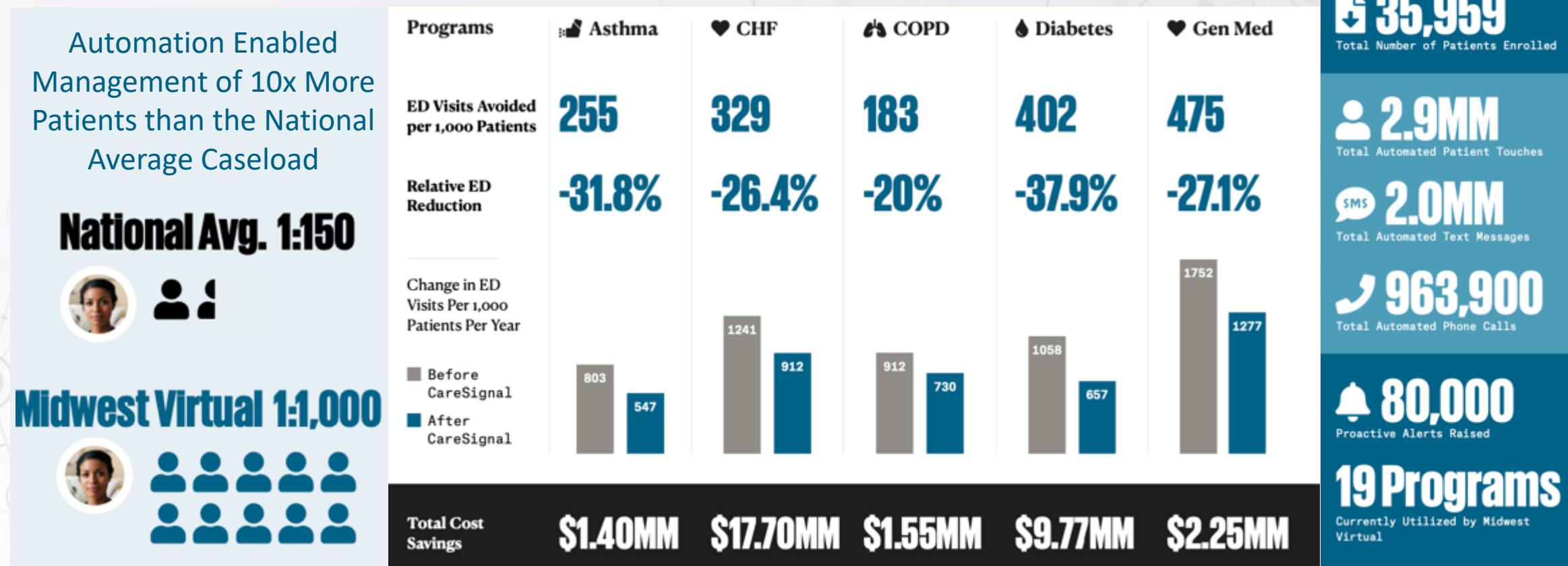
Proven Results and Higher Quality Care

Patients that received interventions recommended by the CORE had 23.6% fewer readmissions than the matched control group.

1. <https://www.hcup-us.ahrq.gov/reports/statbriefs/sb259-Potentially-Preventable-Hospitalizations-2017.pdf> 2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6250243/>

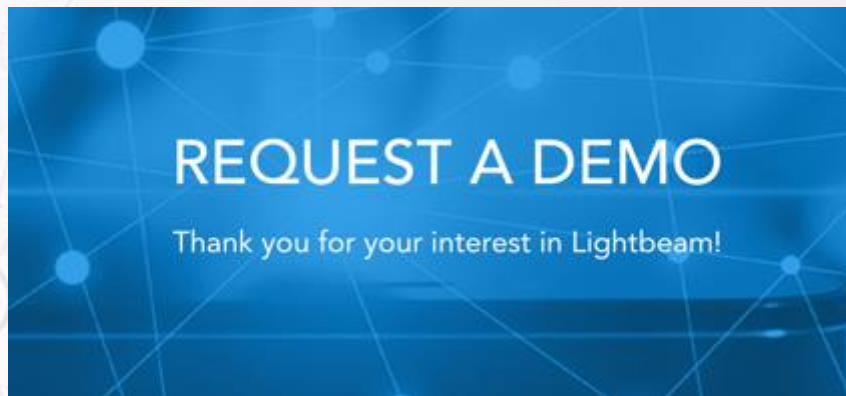
Midwest Virtual Case Study

One of the Largest RPM Implementations in the US:
35,000 Patients & \$32M in Cost Savings



Q&A

- Request a demo with an ACO REACH Expert:
<https://lightbeamhealth.com/request-a-demo/>



- Scan QR Code by opening your phone's native camera app and holding it up to the QR Code



Visit Our VBCExhibitHall.com Virtual Booth



[Visit the CareSignal – a Lightbeam Company exhibit booth](#)





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