CareSignal™
formerly Epharmix

BECKER'S
HOSPITAL REVIEW

COVID-19: The Hidden Wave of Poor Chronic Condition Management

June 2nd, 2020

Blake Marggraff | CEO, CareSignal | blake@caresignal.health

Today's Speakers

Erin Stamm
Esse Health

Carla Beckerle, DNP, APRN-BC
Esse Health

Chris Schlanger, MD
Mercy

Rob Jennetten
OSF Healthcare

Blake Marggraff
CEO, CareSignal

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Agenda & Best Outcomes

- Learning From History: Perception, Finance, & Outcomes in Past Pandemics
- Evidence-based Remote Patient Engagement
- Common Threads in Successful Approaches
  - Mercy: Scaling Virtual Care Delivery Across Risk Strata
  - Esse: Delivering Care and Relationships to Medicare Advantage
  - OSF Healthcare: Serving the Community with Validated Innovations
- Moving Forward: Challenges & Opportunities

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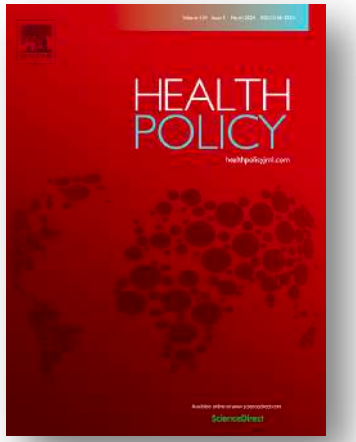
Pt. 1: Learning From the Past

Historical Precedent: SARS (c. 2003)

Common conclusion: patients with chronic conditions *perceive their care to be less necessary*, driving down utilization and revenue while worsening outcomes.



"[T]he continuity of regular medications or **treatments for chronic diseases were interrupted** during the SARS epidemics because the **patients were fearful of going to hospitals**."
(T.-H. Lu et al., 2007)

"[M]ortality caused by diabetes mellitus and cerebrovascular diseases significantly increased during the SARS epidemic by 8.4% and 6.2%, respectively.
(S.-Y. Wang et al., 2012)

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Pt. 1: Learning From the Past

Utilization Trends for Chronic ACSCs

Key learning: populations with chronic ACSCs, and their providers, stand only to lose, with **no opportunity for "catch-up care" "rebound revenue" after COVID-19.**

"Significant reductions in ambulatory care (23.9%) [and] inpatient care (35.2%) were observed. Adverse health outcomes resulting from accessibility barriers posed by the fear of SARS should not be overlooked."
(H.J. Chang, et al., 2004)

"[Despite reductions in outpatient utilization during the pandemic], **the admission rates for most ACSCs did not change in the post-SARS period**."
(Y.T. Huang, et al., 2009)

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Pt. 1: Learning From the Past

Utilization & Financials *After* Pandemics

Key learning: **telemedicine and digital engagement** have the potential to bolster otherwise vanishing revenues and increase market share, if leaders act quickly.

"Average monthly service volume for the base year… and the following two years were 55%, 82% and 84%"
"[D]ue to SARS or a similar disease**, the impact is longer than previously reported**."
(D. Chu et al., 2008)

"One by-product of the COVID-19 pandemic: 67 percent [decline in utilization] in the week of April 12th [2020], is unparalleled… fear of contagion is driving these effects." Telemedicine, however, holds promise.
(P. Chatterji et al., 2020)

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NBER
NATIONAL BUREAU OF ECONOMIC RESEARCH

Summary: A Window of Opportunity Exists

1. Patients, and particularly those with chronic and sensitive conditions, will continue using fewer healthcare services, and their outcomes will suffer.

2. Providers who wait for volume to return stand only to lose.

3. **Sustained digital engagement has the potential to bolster relationships, revenues, and outcomes, if it is implemented at-scale for populations with chronic ACSCs.**

Pt. 2: Evidence-based Remote Patient Engagement Technology

Philosophy: Evidence First, Always

10 Positive-Outcome Publications
in Peer-Reviewed Medical Journals

62% decrease
in hospitalizations
for patients with COPD

28% drop in PHQ-9
for patients with
depression

1.15% drop in HbA1c
over 4 months

>2.1x increase in
follow-up appointment
adherence

50% improvement in blood pressure control over 12 weeks

58% decrease in CHF
ED visits

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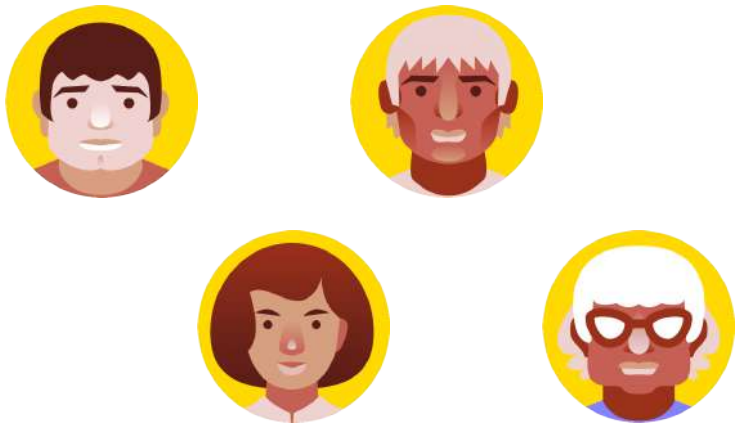
Learn more: try.caresignal.health

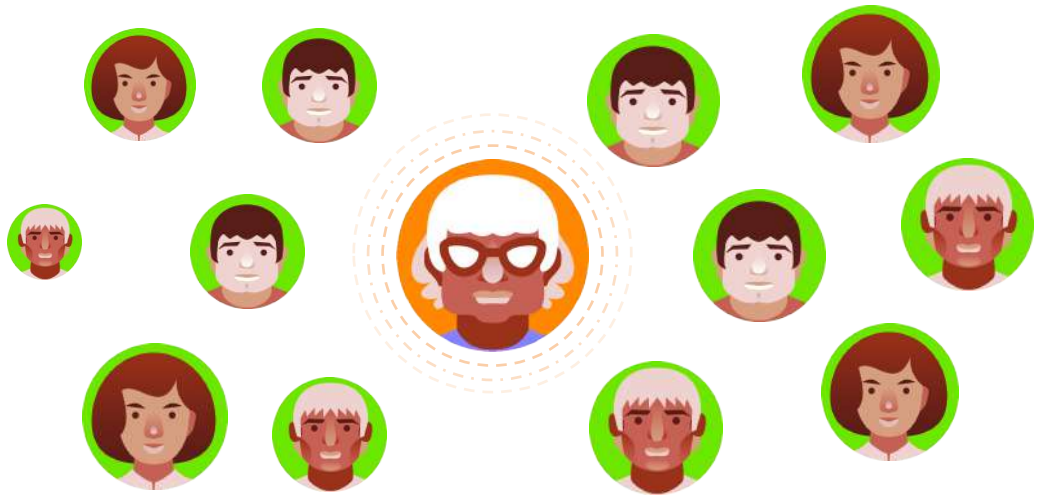
Pt. 2: Evidence-based Remote Patient Engagement Technology

Opportunity: Real-time Remote Interventions

Stratification before CareSignal:
All patients with CHF at-risk of ED visit



Stratification after CareSignal:
Patient Sharon reported 5 lb. weight gain



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Pt. 2: Evidence-based Remote Patient Engagement Technology

Solution: Condition-specific, Accessible, & Long-term

- Asthma
- CHF
- COPD
- Depression
- Diabetes
- Hypertension
- 20+ conditions

Patient Engagement

1 in 2

Patients stay engaged 12 months or longer

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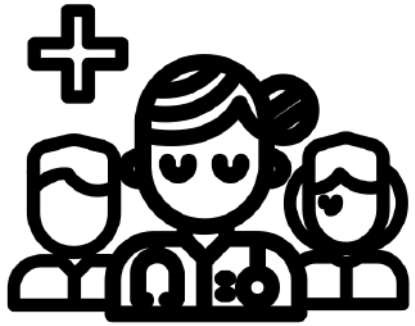
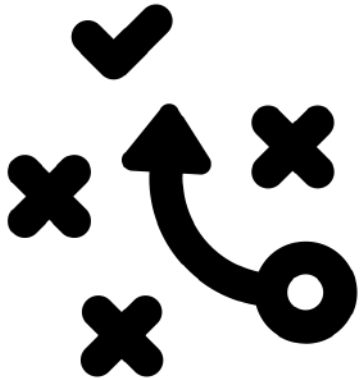
Pt. 3: Common Threads in Successful Approaches

Mercy: Scaling Virtual Care Delivery Across Risk Strata

Cost-effective top-of-license virtual care model





Strategically designed to accommodate value-based care and FFS

Curated technology & solutions stack

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Pt. 3: Common Threads in Successful Approaches

Esse: Delivering Care *and* Relationships to Medicare Advantage

High-touch, high-scale care model, even during stay-at-home

Accessible technology & care for all patient types

Robust focus on claims-based ROI analyses

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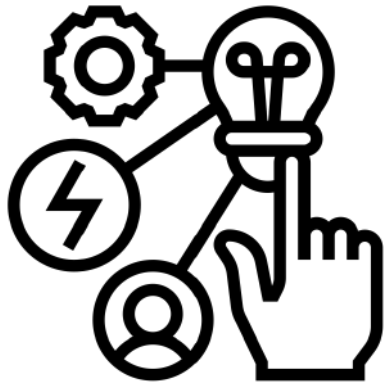
Pt. 3: Common Threads in Successful Approaches

OSF: Serving the Community with Validated Innovations

Centralized innovation model breaks down silos



“Evidence-first, scale-second” approach with partners

Collaborative mindset benefits providers & community

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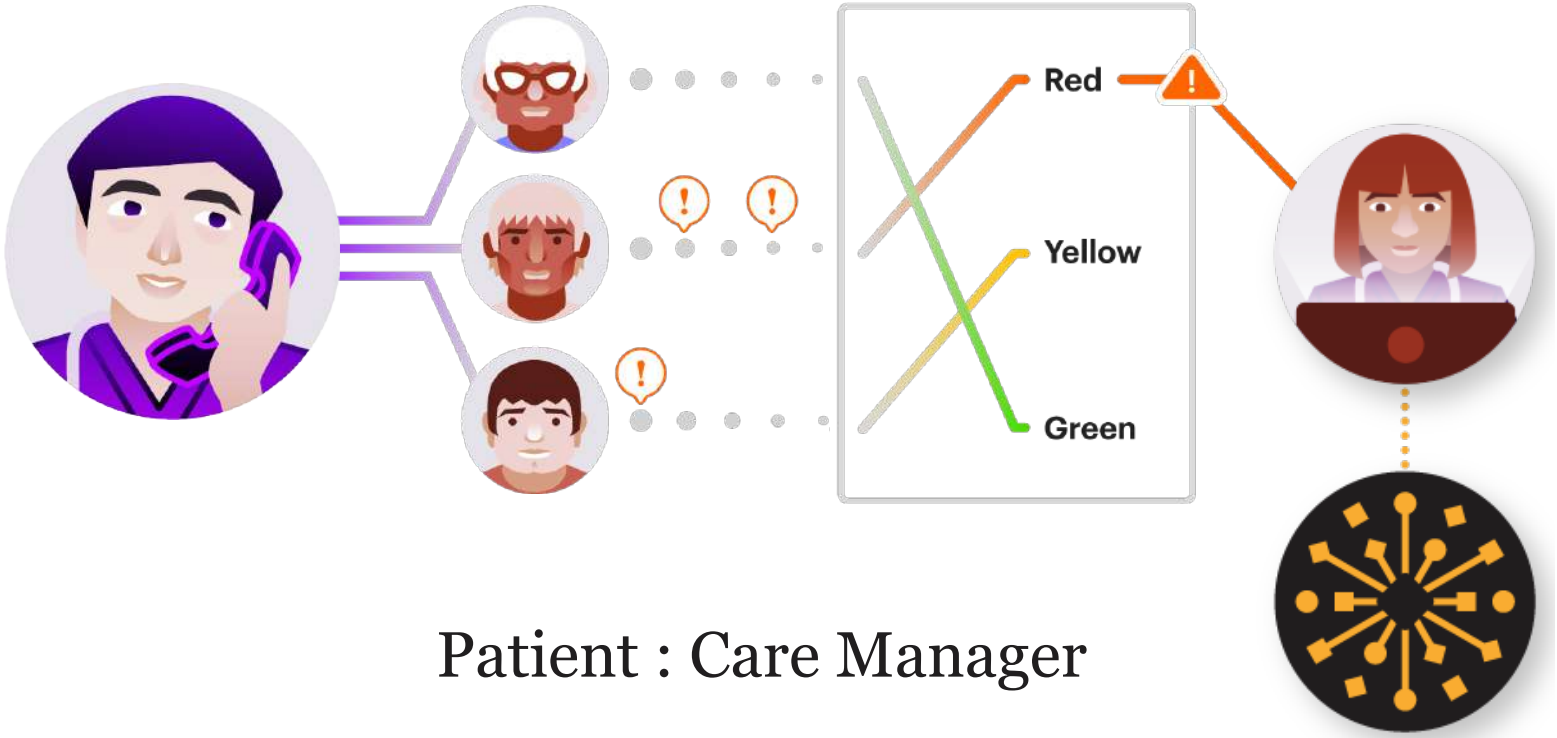
Pt. 4: Moving Forward: Challenges & Opportunities

Technology Adoption: Enrollment & Scalability



Patient : Care Manager

1:300 – 1:1,500

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Pt. 4: Moving Forward: Challenges & Opportunities

Optimize for Relationships: *Augment, Don't Replace*

"When you respond that you are having issues, they call you and find out the kind of issues and contact your doctor's office."

"It keeps office up to date on how I'm doing with my medications"

"Felt it kept me in contact with my Moms doctor in an easy manner"

"Felt it kept me in contact with my doctor"

"Makes me feel like my dr is always in touch with me"

"Good way to communicate with md if they review and provide feedback or suggestions to improve blood sugar"

"Feel you are caring for my health"

"Keeps Dr informed"

"I don't feel alone I know someone is checking on me"

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Pt. 4: Moving Forward: Challenges & Opportunities

Building Engagement With a Strong Solution Stack

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Accessible Remote Patient Monitoring

CareSignal works for **ANY** patient

Via smartphone, pay-as-you-go phone, landline, or concerned caregiver's phone

Try it yourself:
try.caresignal.health

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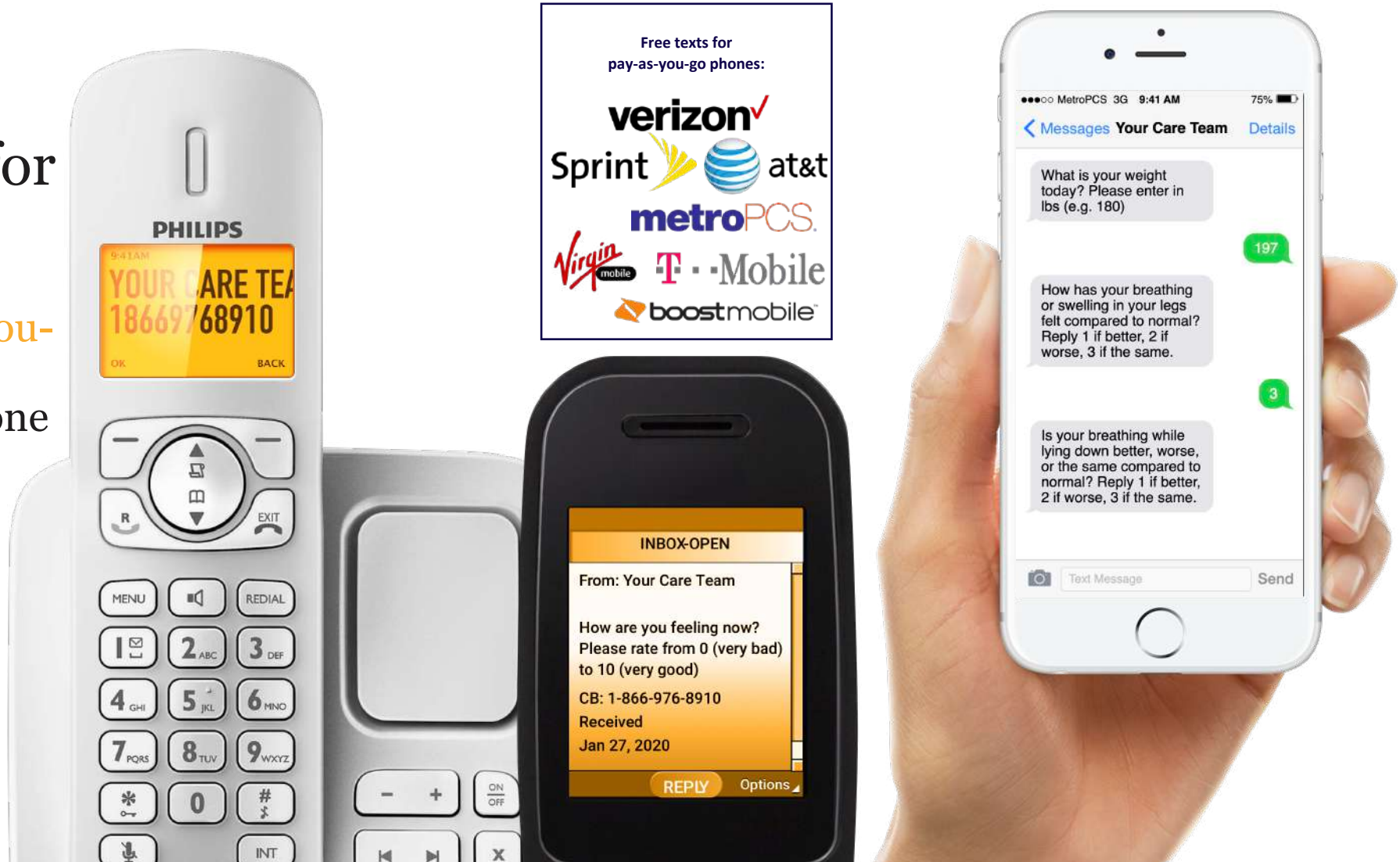

CareSignal Portfolio

Chronic Condition Management

- Diabetes
- Hypertension
- Heart Failure
- COPD
- Asthma
- Dialysis
- Epilepsy

Behavioral Health

- Depression
- Substance Use
- Opioid Management
- Mood
- Caregiver support
- Basic Needs / SDOH

Maternal Health

- Breastfeeding
- Postpartum depression

Discharge Support

- Appointment Reminder
- Post Discharge
- Referral
- Surgery
- Pneumonia
- Vital Signs

Screening Reminders

- Colorectal cancer
- Breast cancer
- Cervical cancer
- Diabetes ophthalmology
- Chlamydia screening
- Lead screening

Complementary Support

- COVID Suite
- Fall Risk
- Wellness
- Medication Tracking
- Medication Adherence

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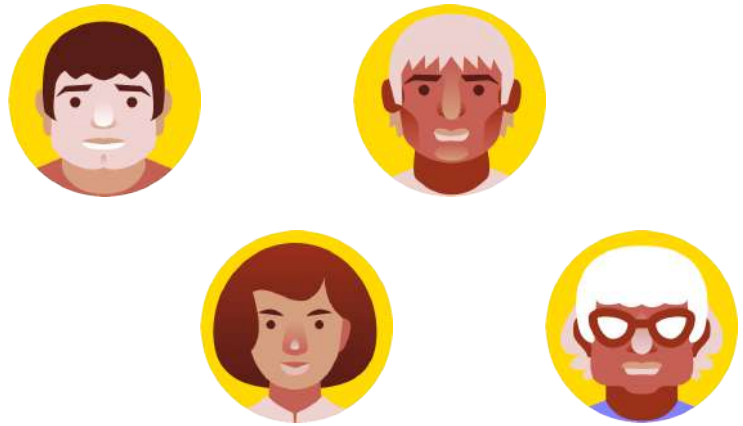
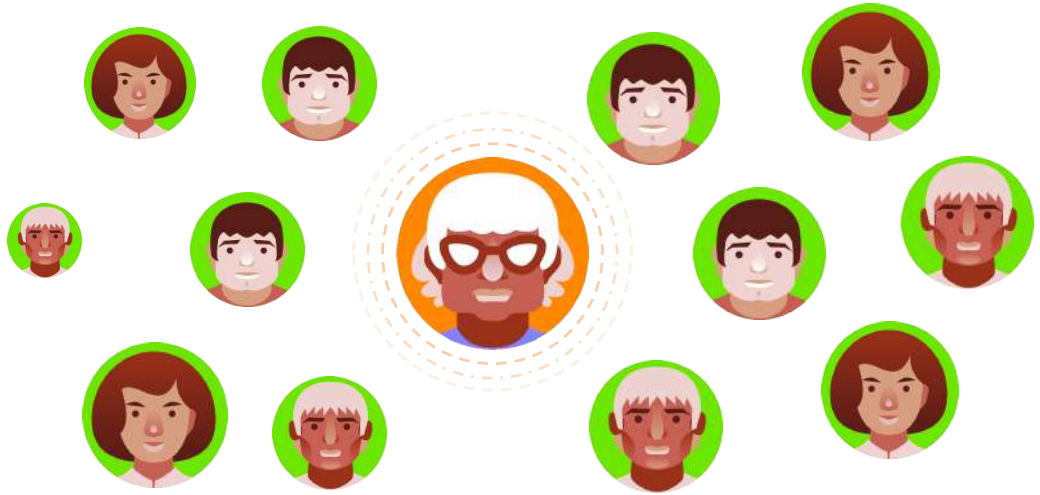
Opportunity: Real-time Risk Identification

Stratification before CareSignal:
All patients with CHF at-risk of ED visit



Retrospective data groups members into broad risk pools requiring **manual outreach** to triage

Stratification after CareSignal:
Patient Sharon reported 5 lb weight gain



Real-time patient-generated **"Rare Data"**, biometric/symptomatic data that provides **actionable** clinical information…**Triggered Alerts** for targeted intervention

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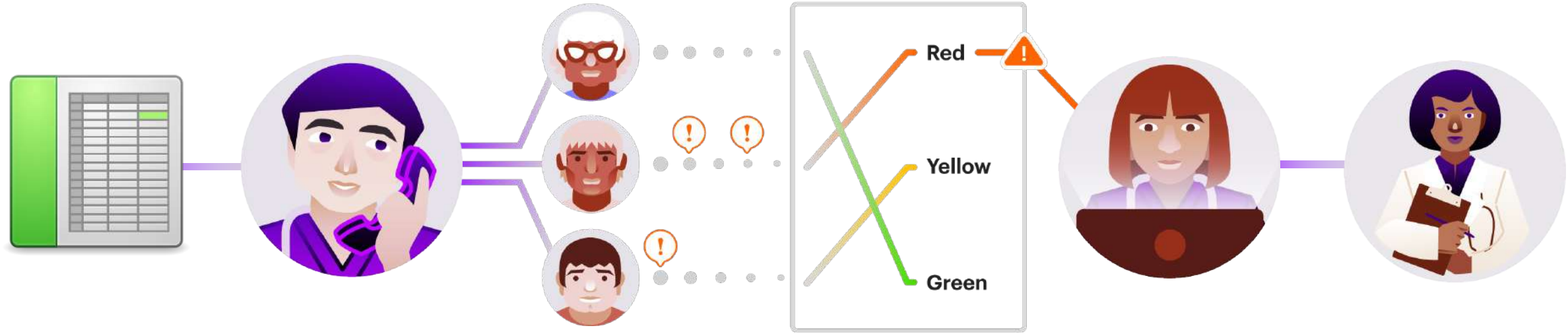
CareSignal Journey



Healthcare Provider
Provides list of eligible patients to CareSignal

CareSignal
Patient Engagement Specialists call identified patients, gather consent, and enroll in program

Patients
Answer automated SMS and phone call prompts, sending in clinically-relevant data

CareSignal
Categorizes at-risk patients and triggers alerts in real-time

CareSignal
Virtual Care Navigators respond following *Guides* developed during implementation

Healthcare Providers or Care Managers
receive escalations as defined in *Guides*

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Proven Clinical Outcomes

62% decrease in hospitalizations for patients with COPD

28% drop in PHQ-9 for patients with depression

1.15% drop in HbA1c over 4 months

>2.1x increase in follow-up appointment adherence

50% improvement in blood pressure control over 12 weeks

58% decrease in CHF ED visits

10 Publications
in Peer-Reviewed Medical Journals

- NEJM Catalyst — Substance Use (Case Study)
- nature SCIENTIFIC REPORTS — Dialysis
- SAGE journals — COPD
- JMIR Cardio & Diabetes — Hypertension & Diabetes
- JMIR Research Protocols — Medication Tracking & Depression
- Telemedicine and e-Health — Surgery

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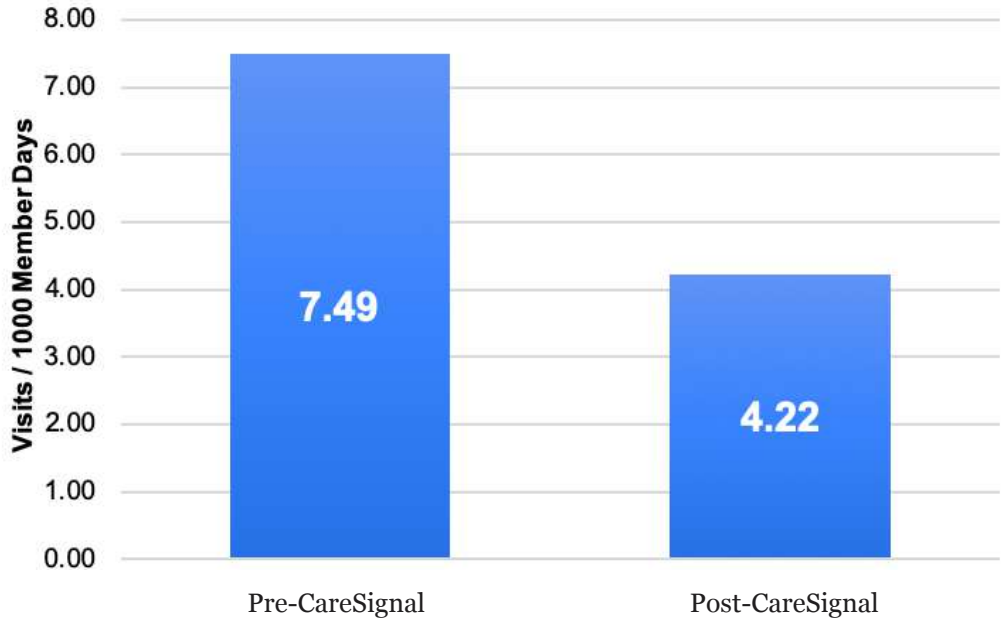
Partner Case Study: Medicare Advantage Rising-risk



- Medicare Advantage patients
- N = 989
- Timeline: 8 months
- 75% patients with CHF
- Managed by one FTE (RN)
- **Cost Savings: $2,300,000**

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Partner Case Study: Commercial Self-insured

$300,000 per-year savings for 1,058 patients

Diabetes ROI[5]

Diabetes Panel

>10.0%	40%
9.0–10.0	33%
8.0–9.0	27%

Annual Medical Cost Savings

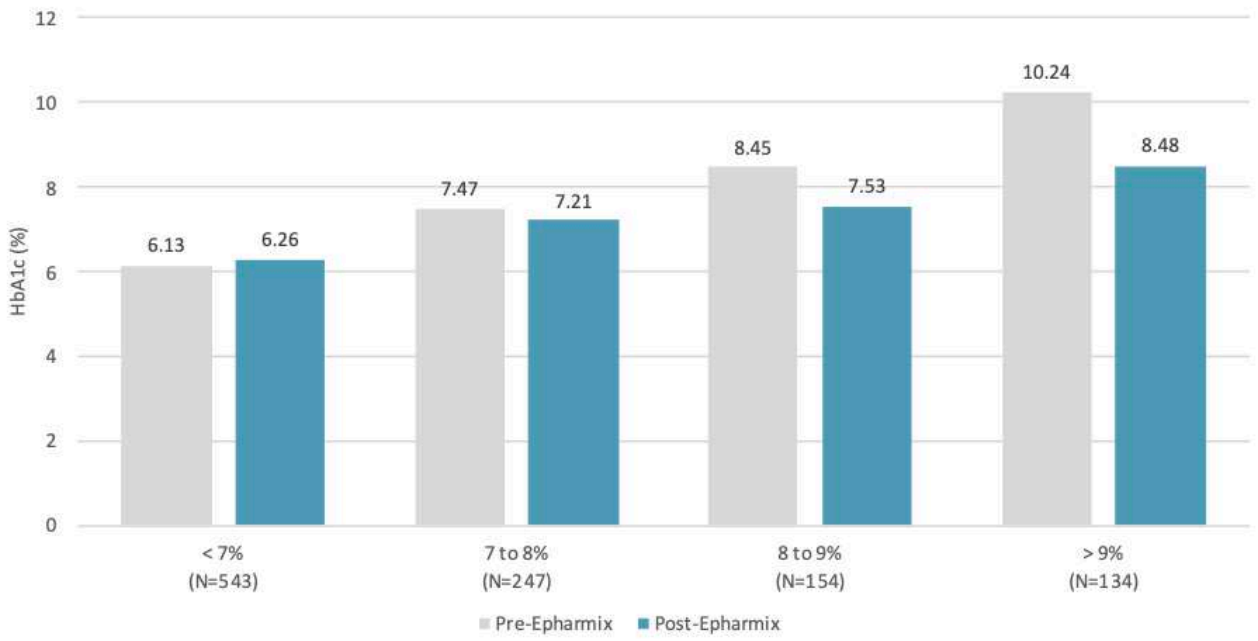
10 to 9%	$1,388
9 to 8%	$834
8 to 7%	$739

Annual Cost Savings per 1.0 HbA1c Decrease

$1,184.65

Pre - Post EpxDiabetes HbA1c Change

Epharmix eAG Data



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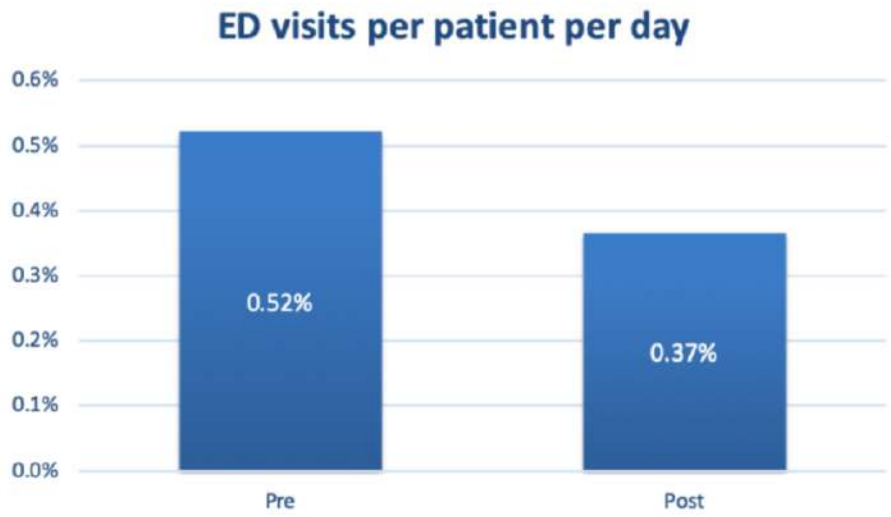
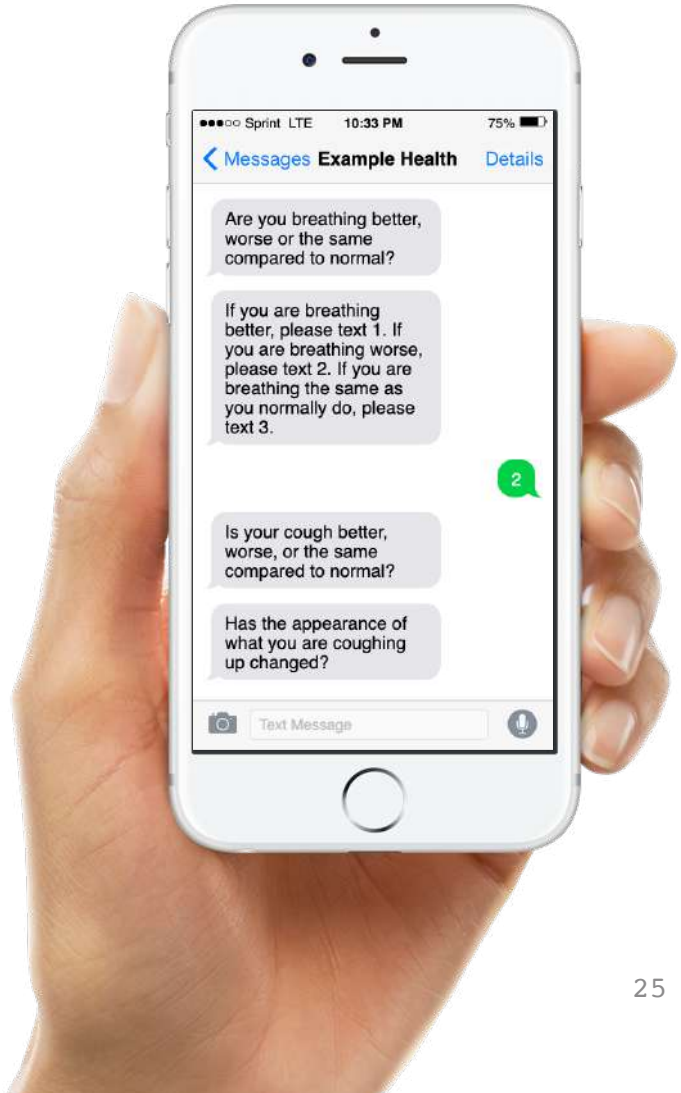
Publication & Commercial Outcomes: COPD

Peer reviewed publication: 62% decrease in hospitalizations

RCT Summary

- >61% hospitalization reduction
- N = 168 patients
- Duration: 6 months
- Placebo controlled for Hawthorne effect





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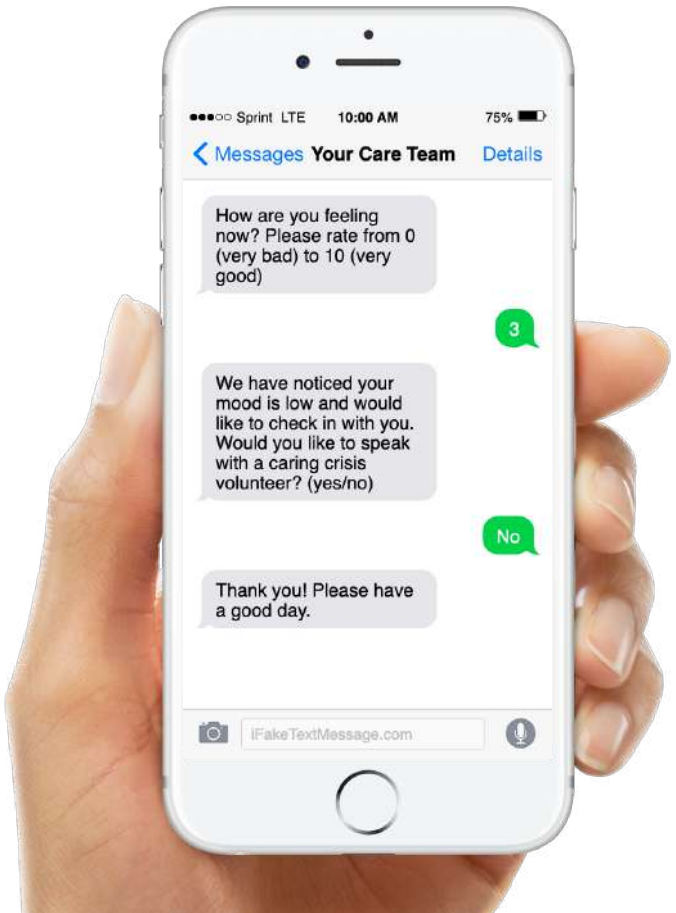
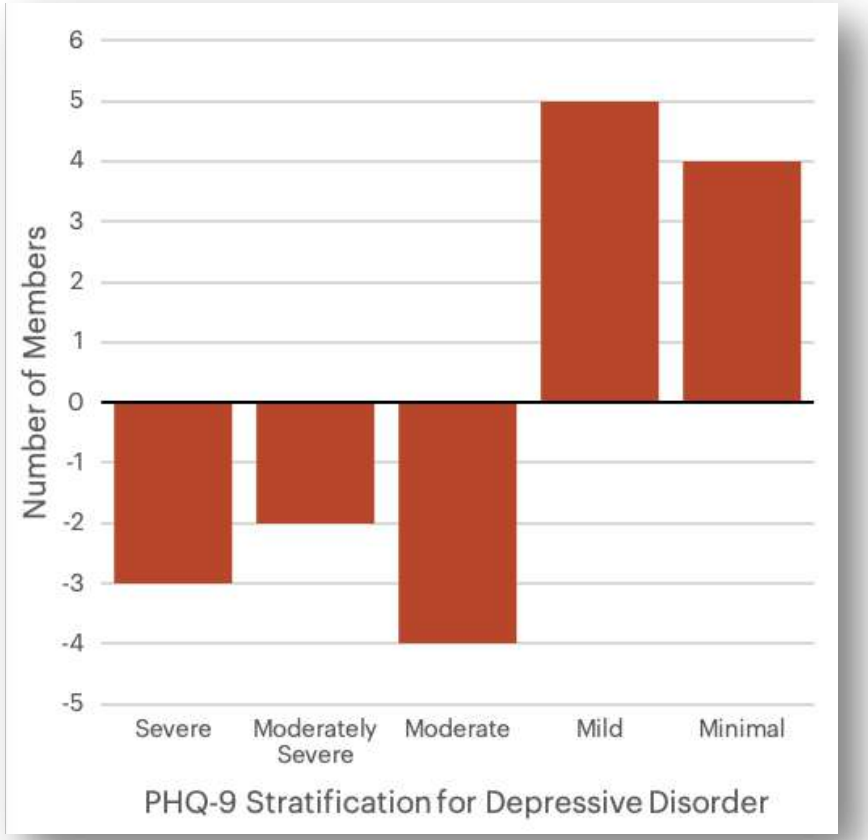
Behavioral Health

- *Partner Case Study: 28% reduction in PHQ-9*

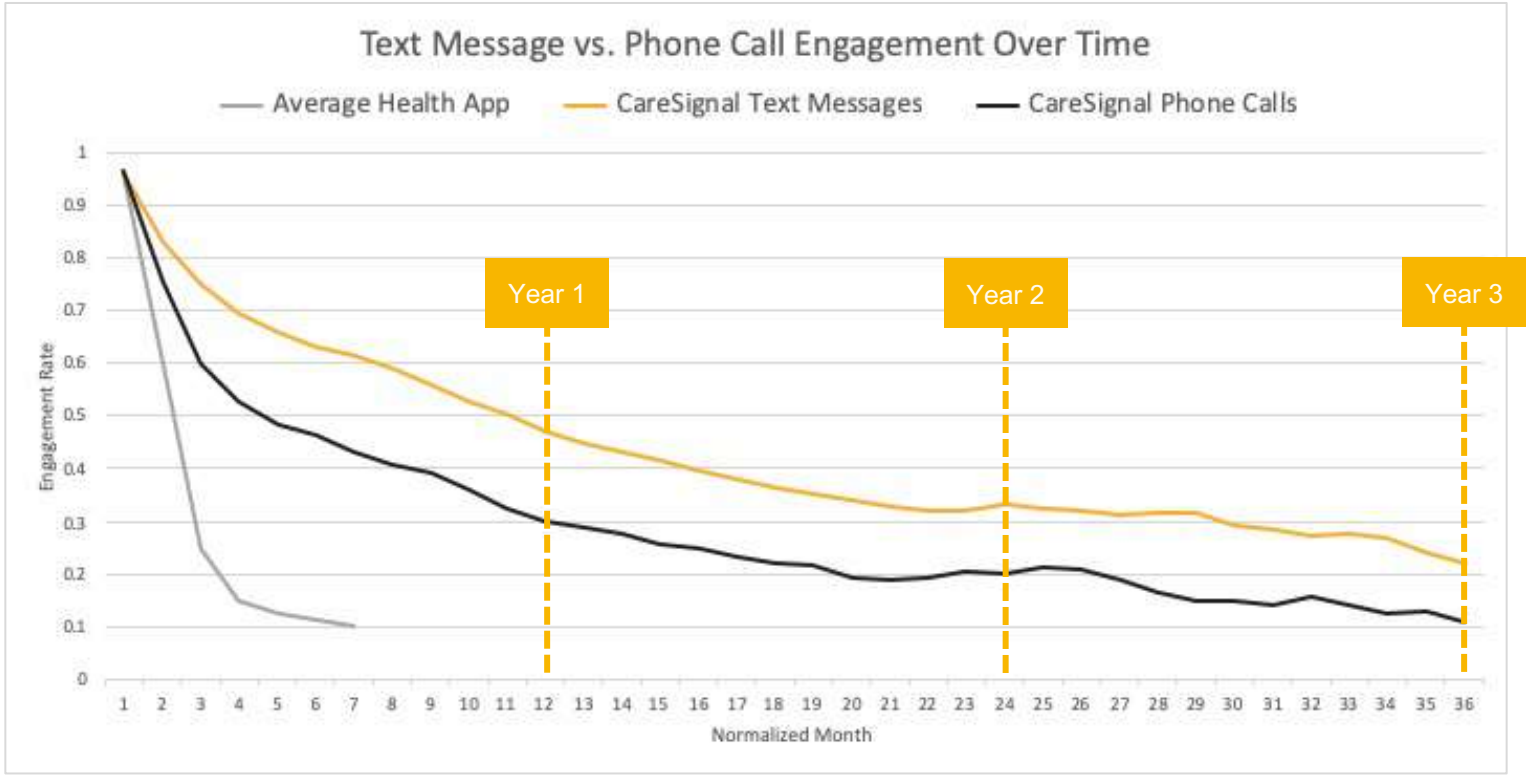
Patient Generated Health Data



- **Depression**
  - Mood & PHQ-9
- **Substance use**
  - Tracking uses & triggers to use
- **SDOH**
  - Housing, food, employment, insurance, interpersonal violence
- **Anxiety**
  - GAD-7



CareSignal: 6x More Engaging than Apps



Patient Engagement

1 in 2

Patients stay engaged 12 months or longer

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COVID Suite

For Patients and Communities

Share up-to-date CDC tips and local public health contact information at scale. Any patient or community member, regardless of infection status or provider affiliation, can use COVID Companion immediately.

For Patients Under Home-Quarantine

Help patients in home quarantine self-monitor their key signs and symptoms, and enable automatic connection to your organization's existing COVID-19 hotline if any signs or symptoms worsen. Patients feel supported and informed, and you know they can reach out through the appropriate channel if necessary.

For Frontline or Clinical Staff

Provide proactive support for frontline and clinical teammates This program sends simple daily health check-ins to monitor for any COVID-19 symptoms, and includes optional modules to track employee stress and any issues accessing PPE.

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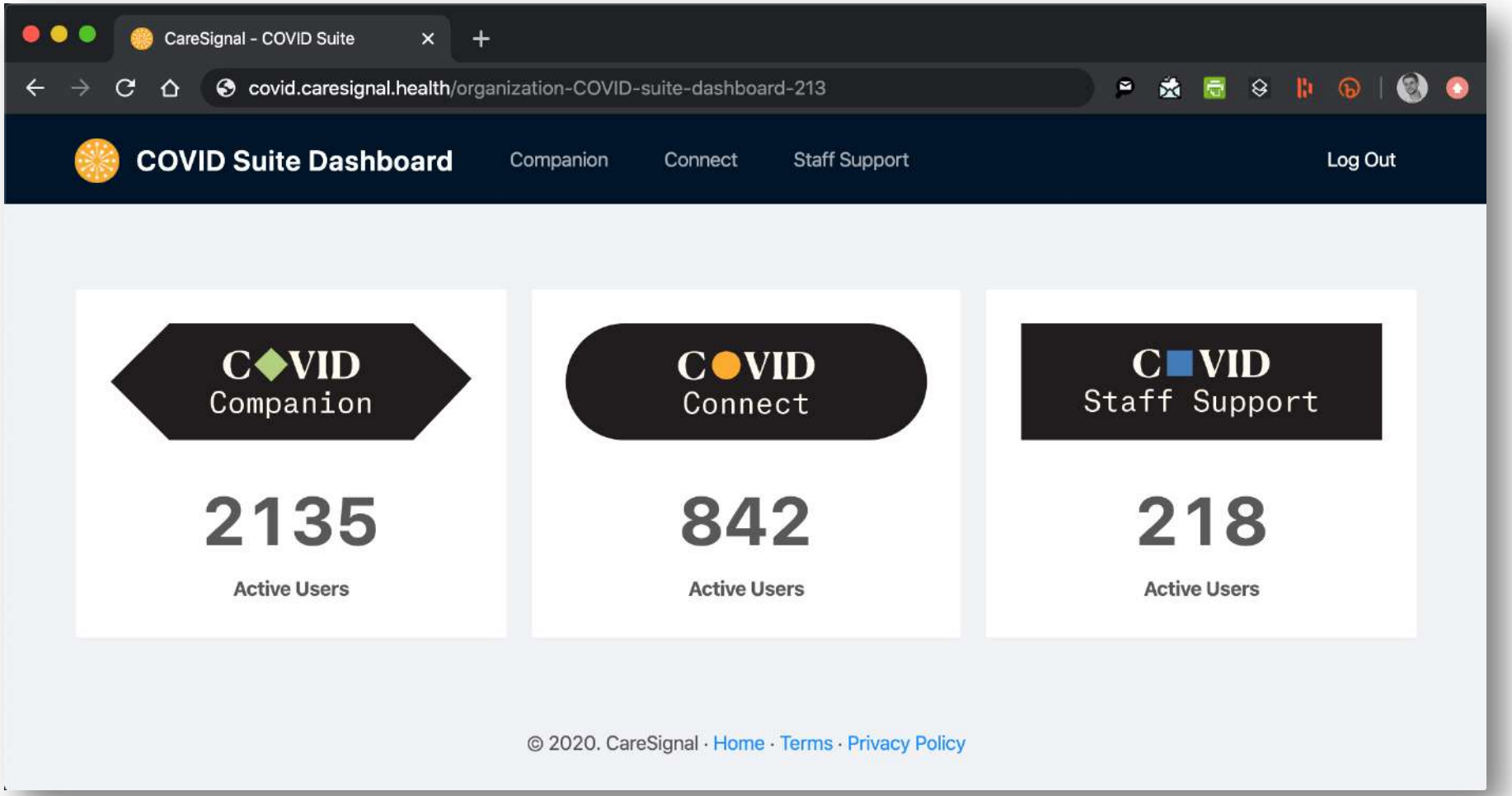
COVID Dashboard



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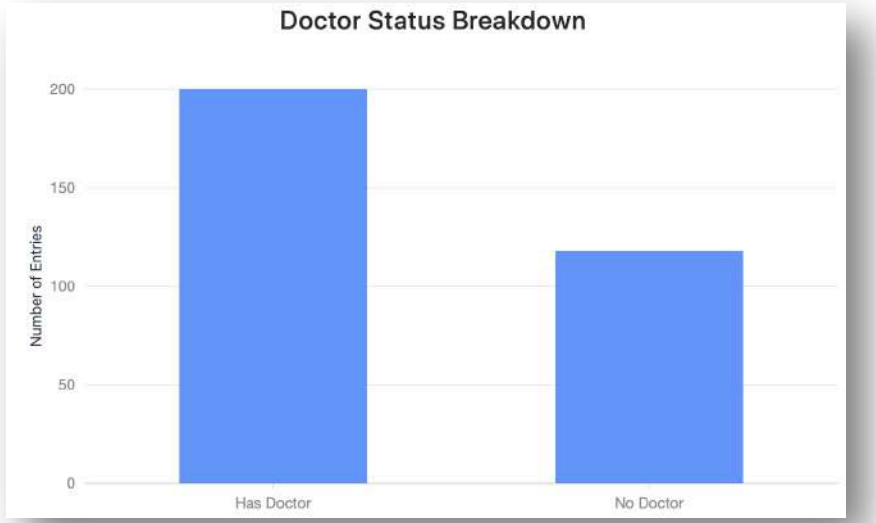
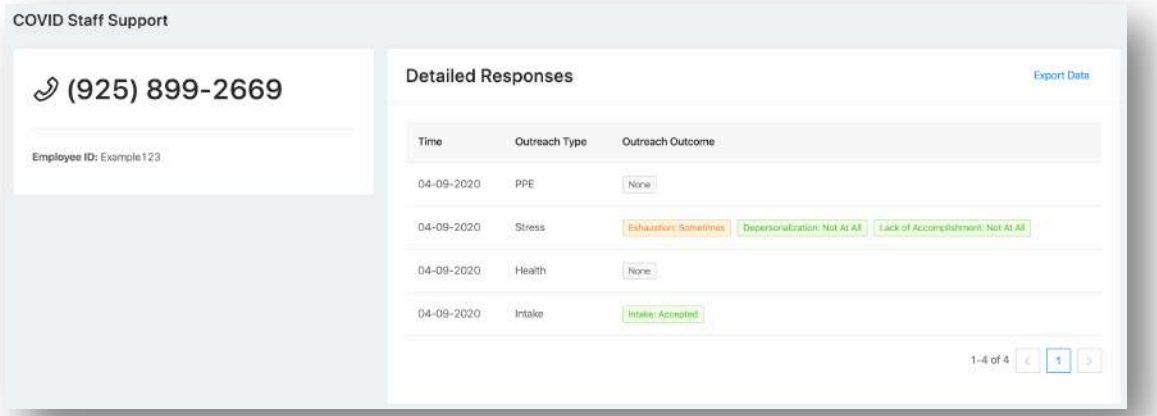
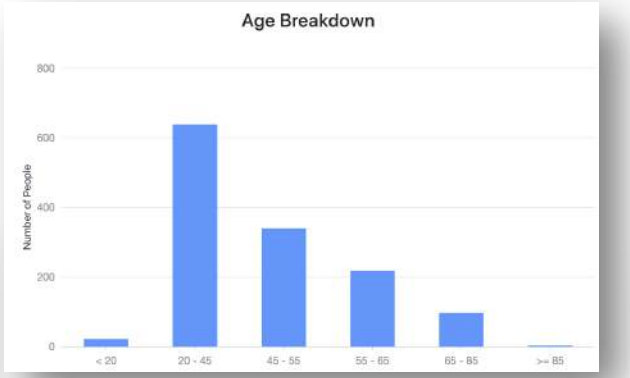
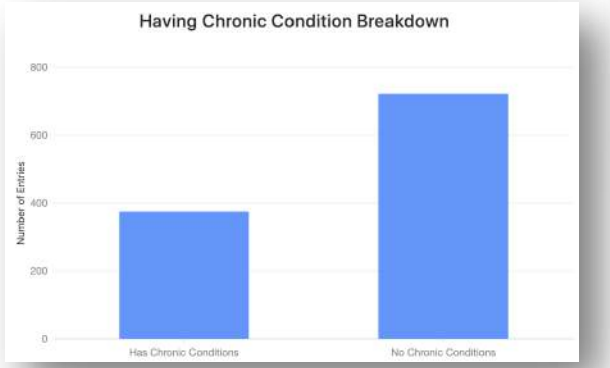
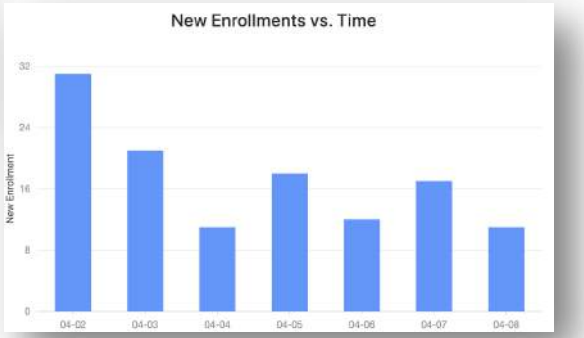
COVID Dashboard











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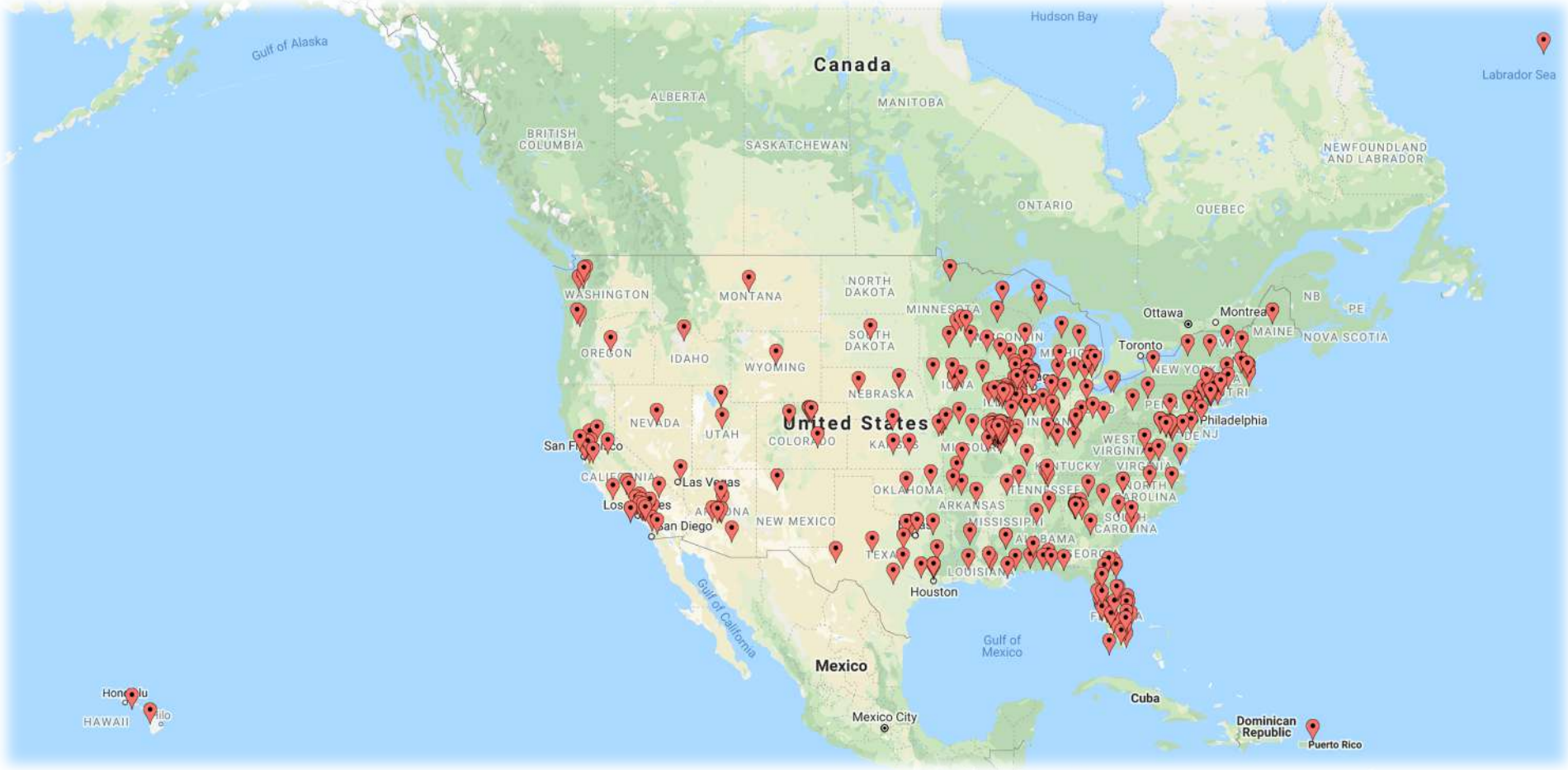
Adoption by ~10K patients, dozens of systems & payers, in first week



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Techniques for Promotion and Adoption

	Flyer	Web/Social	Clinician	Direct/Blast
COVID Companion				
COVID Connect				
COVID Staff Support				

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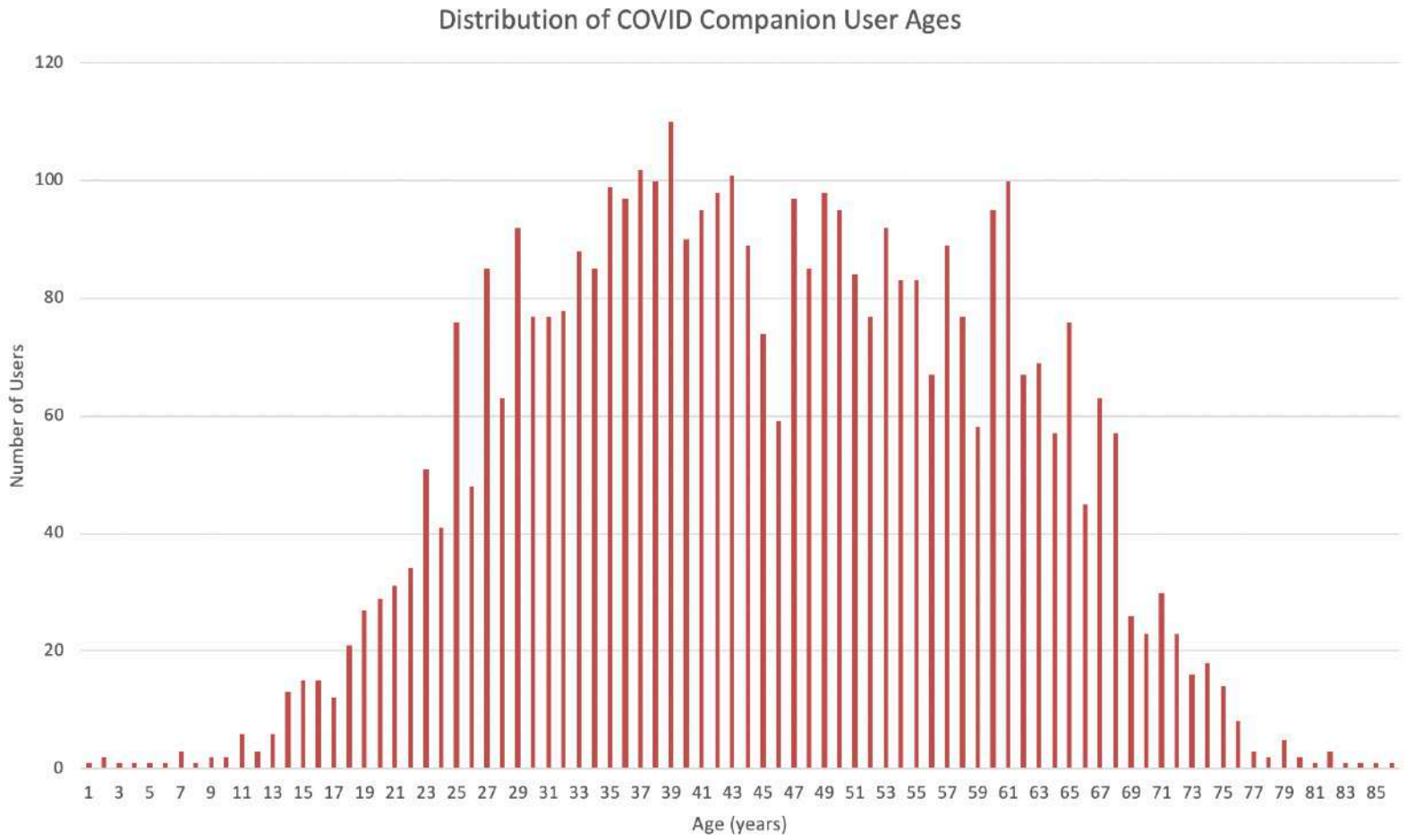
In Active Use by Patients up to 100 Years Old



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Annual Medical Cost Savings and Clinical Outcomes per 10K Medicare Patients

Based on national averages and CareSignal data

COPD
Medical Cost Savings

$225K

COPD
Hospitalizations Avoided

30

Heart Failure
Medical Cost Savings

$1.55M

Heart Failure
ED Visits Avoided

81

Diabetes
Medical Cost Savings

$378K

Diabetes
Average HbA1C Improvement

1.15

Hypertension
Medical Cost Savings

$68.8K

Hypertension
Uncontrolled Patients brought to control

47%

Depression
Medical Cost Savings

$150K

Depression
Improved Mental Health

65%

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Why CareSignal?

Accessible
engagement

Evidence-based
results

Scalable
for rising-risk

Consultative
partnership

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