

Can Mobile Applications Improve Health Outcomes?

April 21, 2016 3:00 pm Eastern

Nick Cain, Google.org

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Google.org



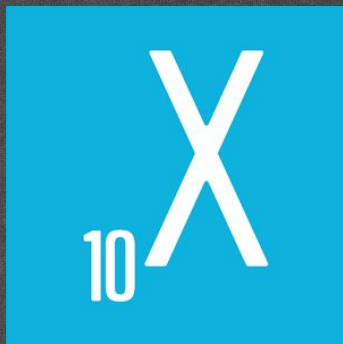
What We Do

Support technologically innovative approaches to the world's most pressing challenges with the goal of creating lasting global impact.

Investing in Technology



Bet on Strong Teams



Innovation + Path to
Scale



Flexibility to Launch,
Iterate, and Pivot

CareMessage

The Opportunity

- **Strong early traction**
 - Product / market fit with clear social impact
 - M+E culture
-

The Grant (2014 Global Impact Award)

- **\$2.33M** over two years
- Milestones related to **product development, user research and testing, and hiring.**

The logo for caremessage™ is centered in a white diamond shape. The background of the slide features a large white diamond with a drop shadow, set against a background of teal, light blue, and dark blue geometric shapes. The text 'caremessage™' is written in a black, lowercase, sans-serif font.

caremessage™

Grantmakers in Health Webinar
April 2016

TRANSFORMING HEALTHCARE FOR THE UNDERSERVED

Chronic disease prevention and management is one of the biggest opportunities in healthcare that is ripe for disruption. This is particularly true for patients that are low income and underserved.

CareMessage is a high-growth nonprofit startup using our mobile SaaS platform to improve the health and wellness of tens of millions of underserved patients.

Our mission is to empower healthcare organizations with mobile technologies to improve health outcomes and reduce cost of care.

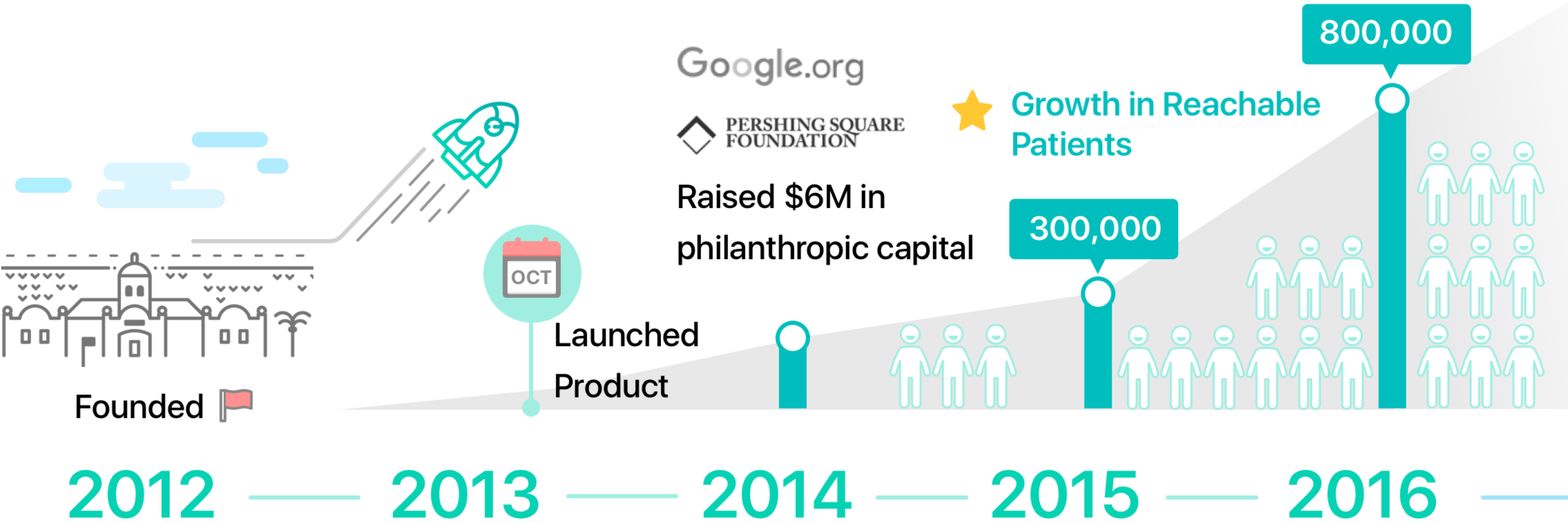
“Sometimes it only takes one word if you're down to elevate yourself.”

TOMASA C.

Hotel Worker, Married with two kids

• ON RECEIVING CAREMESSAGE
TEXT MESSAGES •

Massive Market + Uniquely Effective Product = Explosive Growth



Pedro has been a patient at St. Anthony's Medical Clinic in San Francisco since 2005



Evicted due to rising price of housing

1 of 12,000 families and individuals that live in rooms
without a kitchen in San Francisco*

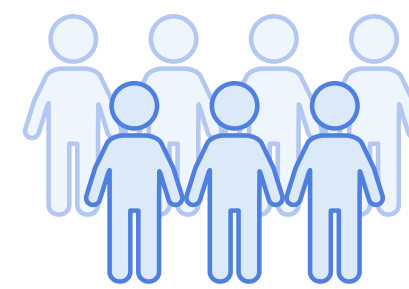
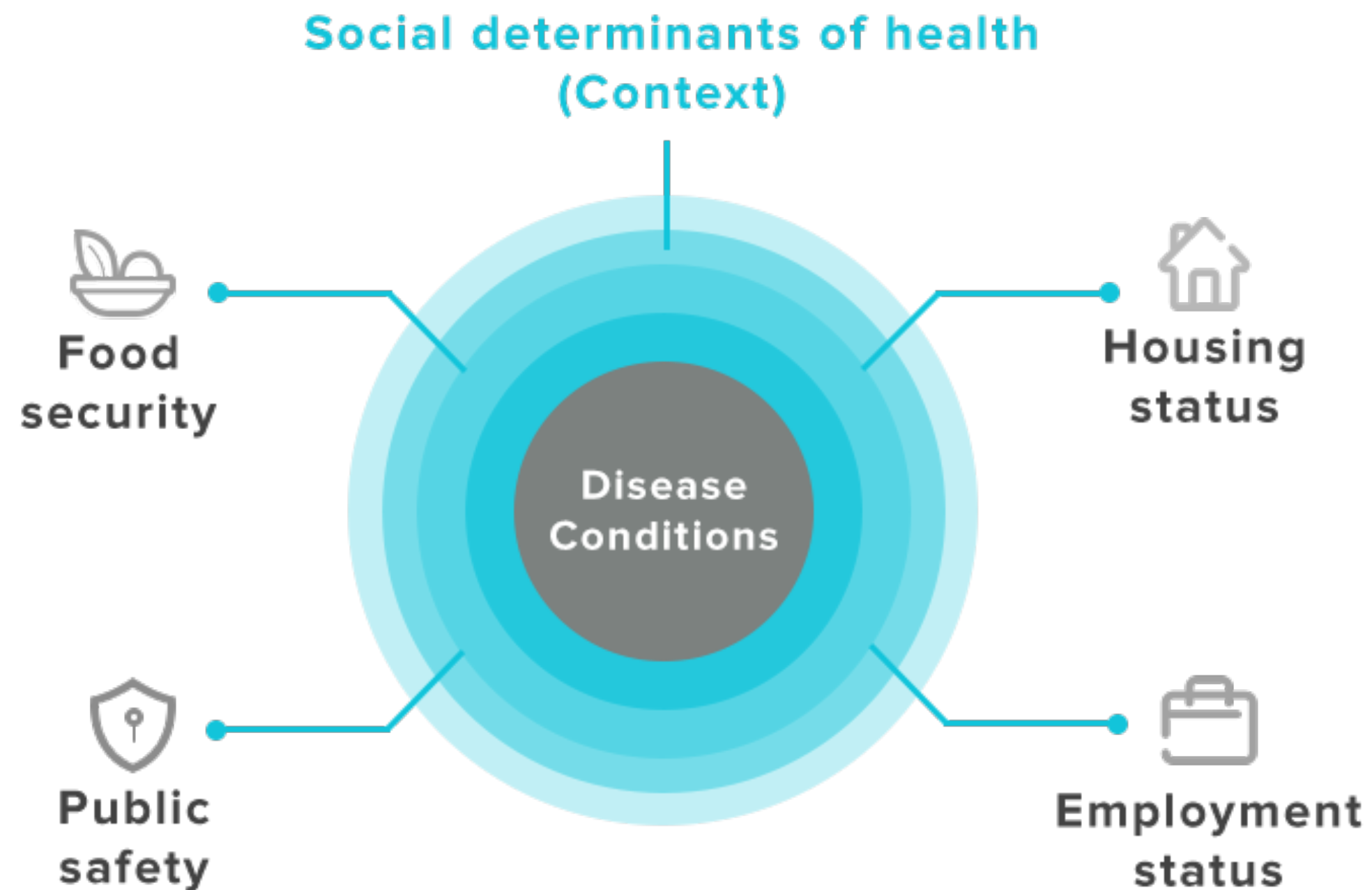
Pedro recently hurt his arm, and with no transportation, he
makes **3** trips to the grocery store to get what he needs

Suffers from multiple chronic conditions including
Asthma and Hypertension

Pedro's **cell phone** is his only
consistent connection to others

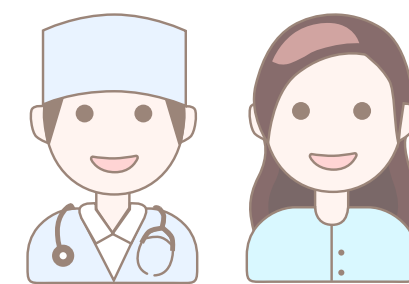
*<https://www.stanthonysf.org/medicalclinic/>

CareMessage targets a patient population with unique challenges that affect their ability to make healthier choices, and healthcare organizations that are not currently equipped to address those challenges at scale.



PATIENTS ARE UNABLE TO:

- Express care needs and preferences
- Receive culturally-appropriate health messages
- Access regular preventive care

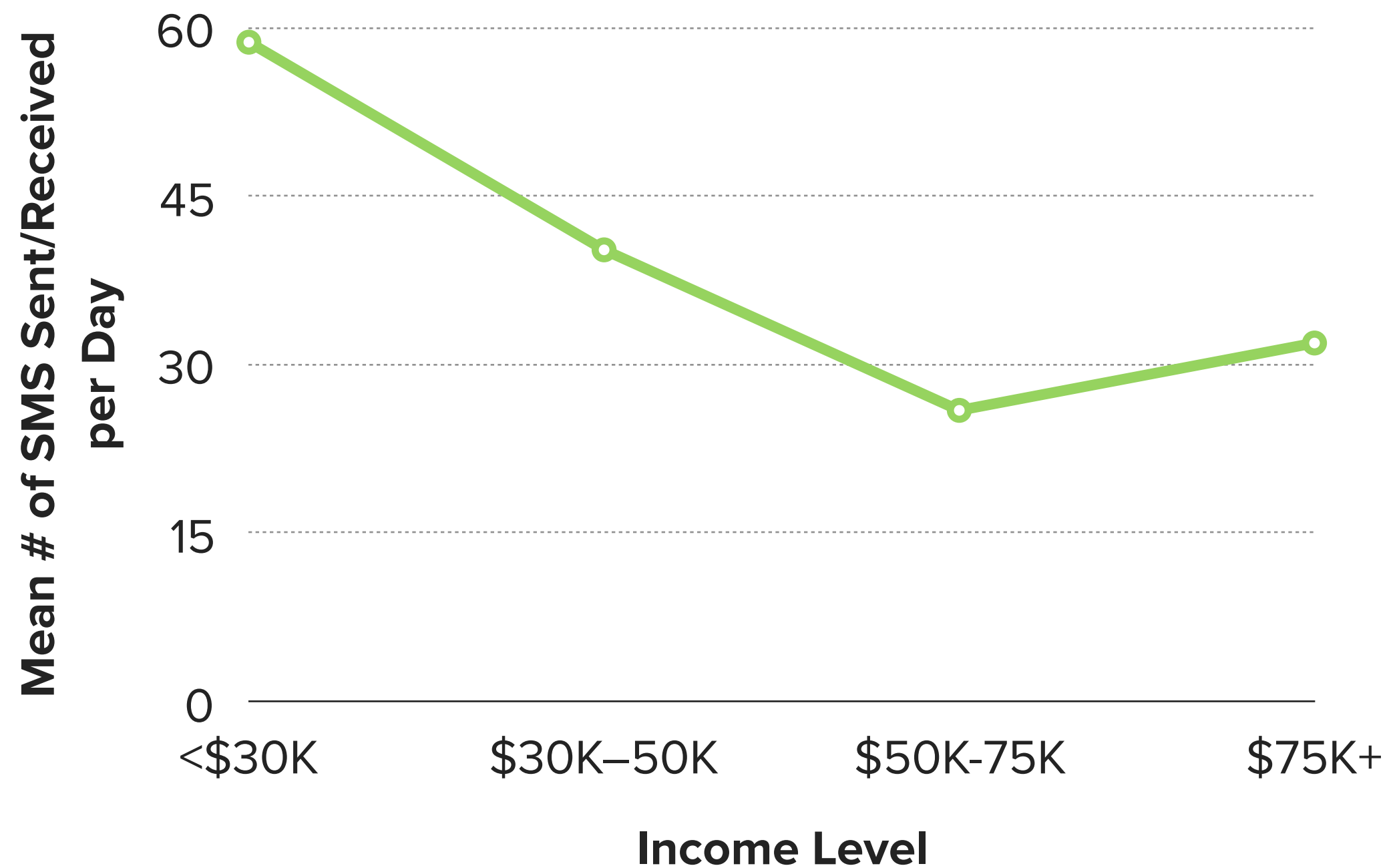


HEALTHCARE PROVIDERS LACK TOOLS TO:

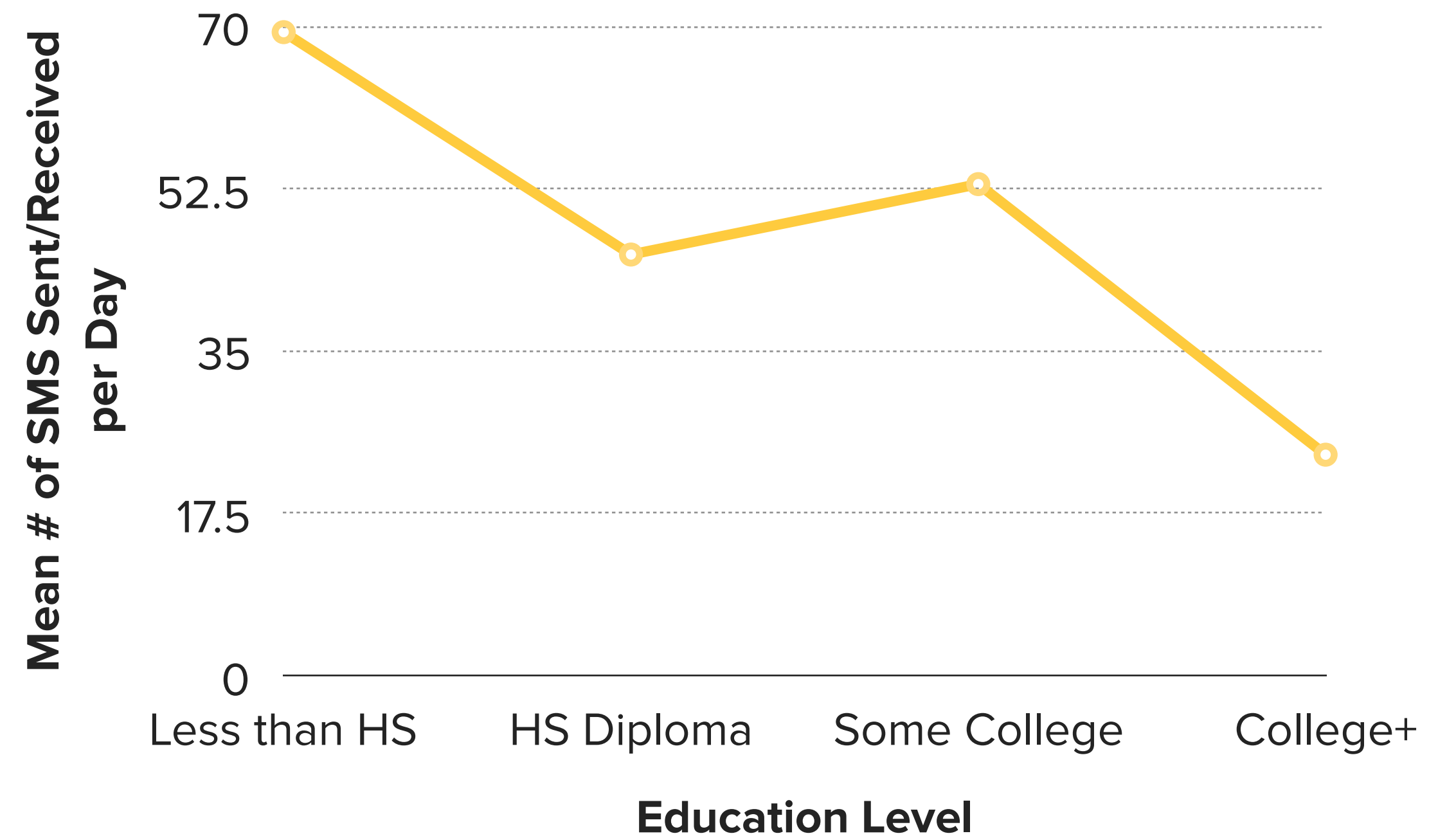
- Collect data on barriers to care
- Analyze disparities at a population health level
- Deliver actionable and personalized information at scale

Text messaging usage is **2-4x** higher in lower income, less educated populations, and has a **99%** open rate.

USAGE BY INCOME LEVEL



USAGE BY EDUCATION LEVEL



CareMessage's various products help healthcare organizations transform ongoing patient care and achieve demonstrably better outcomes at a lower cost

REMINDERS



Reduce no-shows through Reminders and RSVPs

OUTREACH



Fill gaps in care through preventive care Outreach

PROGRAMS



Automated disease management for high risk patients

DIRECT MESSAGING

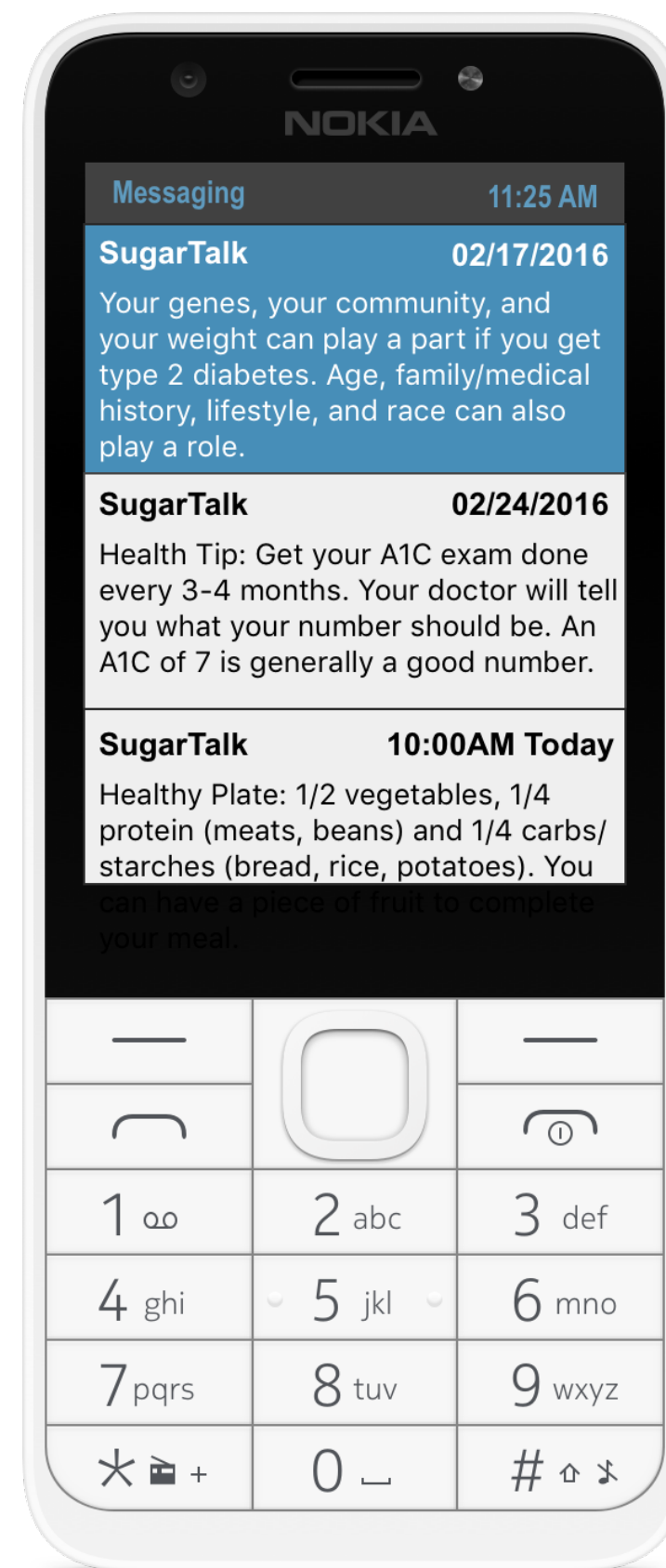


Inbox one-on-one communication with all patients

CareMessage's health education programs enable providers to engage patients in their health.

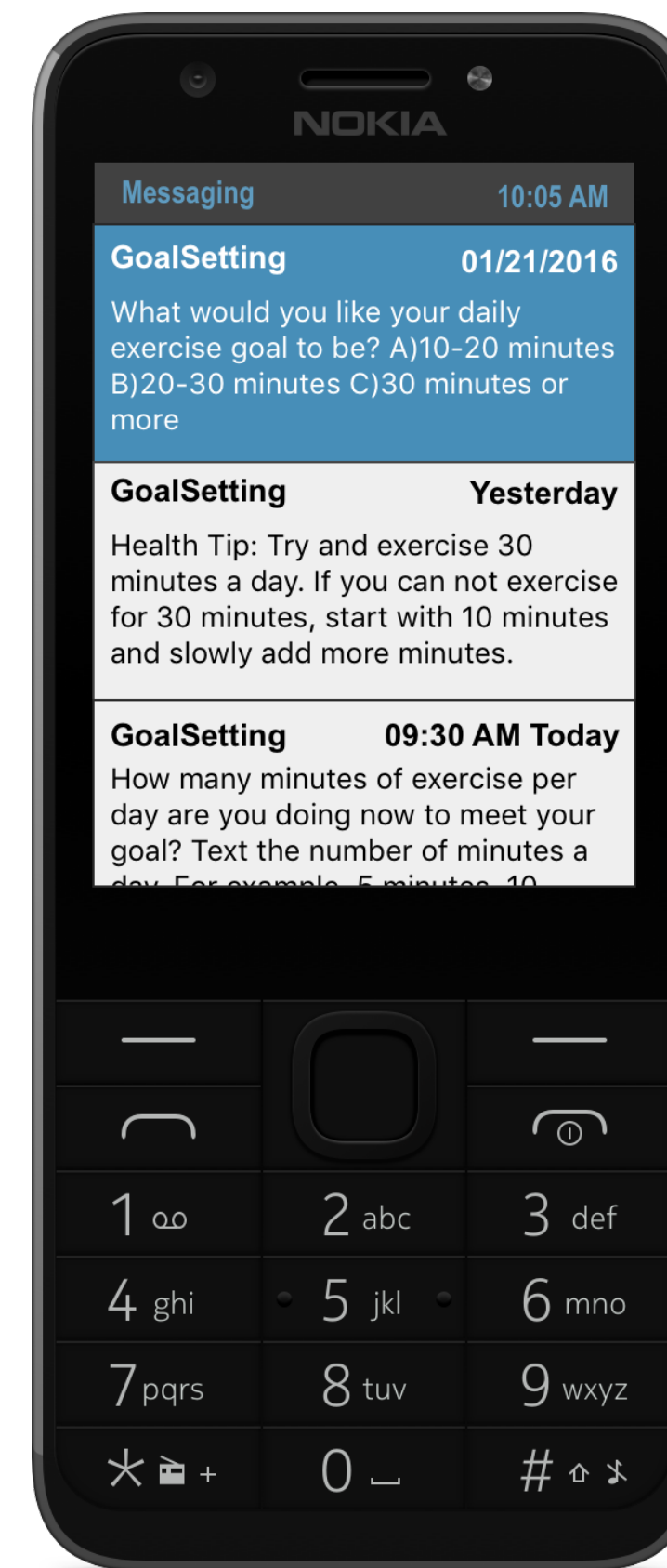
FOR PATIENTS

- Designed for underserved populations with a low literacy level
- Targets low-literacy patients with content in English and Spanish, and support for 30+ languages
- Covers a holistic educational model that incorporates actionable steps to overcoming barriers



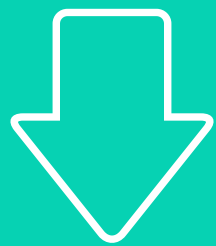
FOR PROVIDERS

- Delivers personalized content at scale using branching technology
- Triggers notifications to the care team based on key patient responses
- Turns individual and population data into actionable insights





Community Health Clinic in Brenham, TX



20%



Reduced no-shows by 20% (relative to baseline) after implementing CareMessage



I like to be able to make a quick personal contact with a patient about an issue or information. I like that they can reply to text and they feel like they have had a personal time with you in only a few seconds.

- Deborah, Nurse Practitioner



Stanford-led and NIH-funded pilot study

94%

of sedentary patients increased their physical activity over the study period (based on accelerometer data) using CareMessage



This pilot demonstrates feasibility of text messaging with our target population, the acceptability of the format, the technological capability of our partner, and the value of refining content to facilitate use by the target population.

Citation: King, A et al. Innovative Physical Activity Interventions for Overweight Latinos. Stanford University. Grant #: 1R01DK10201601A1



FQHC in Los Angeles

51,784

Appointment recalls have been sent via text message to people that were overdue for a visit



leading to 11,943

patients called and scheduled an appointment as a result of the outreach (23%).

“

I am getting a lot less panic phone calls because people are calling to reorder [medications] when they get the reminder text.

-- Prescription Assistance Staffer, Community Health Clinic (Brenham, TX)

“

First, let me say how much we like the product. CareMessage is easy to use, efficient and well received by the patient..we remain excited about the opportunities that CareMessage affords us for collecting data, conducting surveys and, best of all, communicating directly with our patients.

-- Susan White Wood, Program Director, Ventura County Ambulatory Care (Ventura, CA)

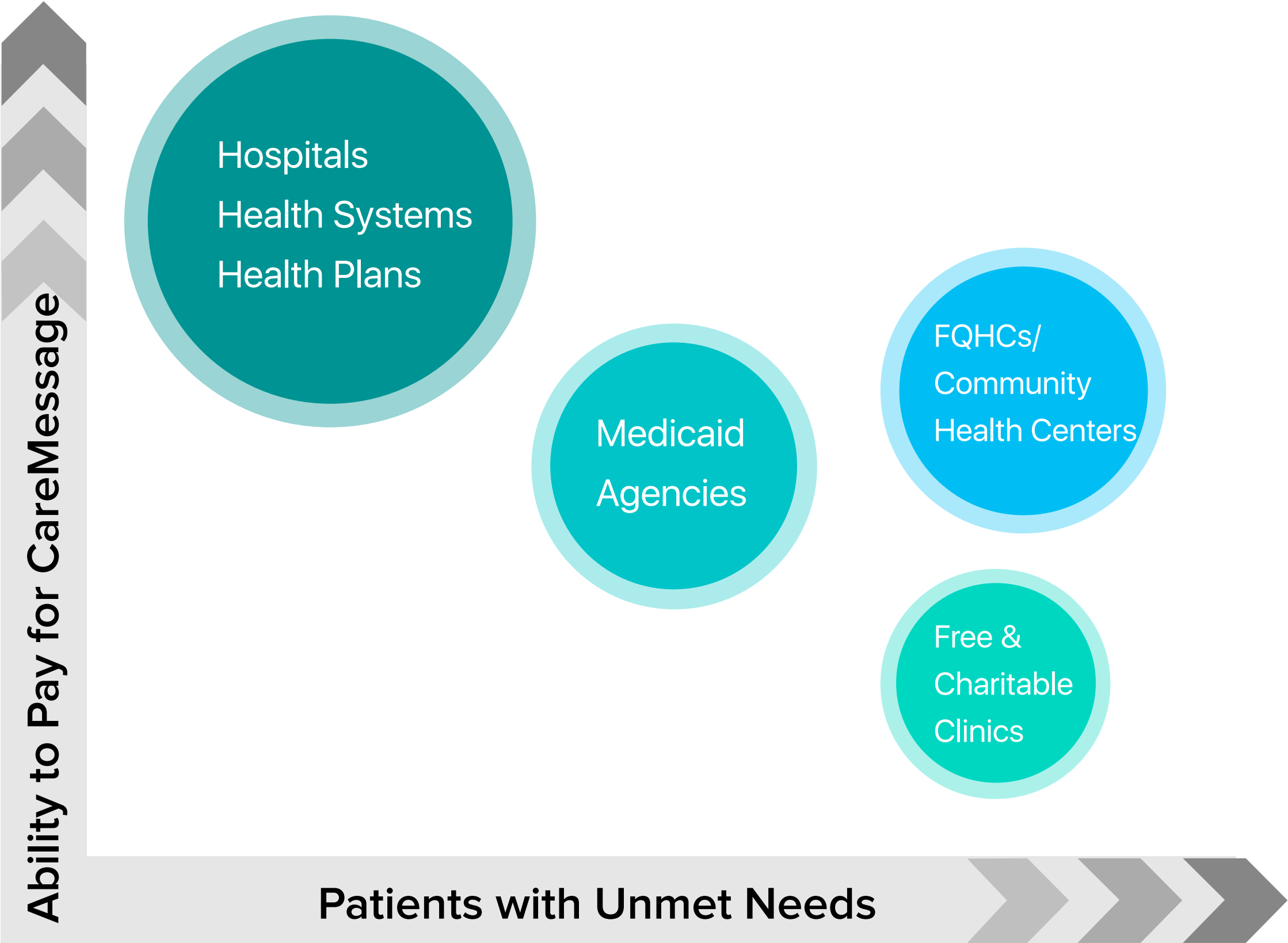
“

A diabetic patient new to insulin regimen was struggling to remember to check blood sugar and use his insulin on a consistent basis. I offered to set up the text to send him messages three times a day for two weeks, to see if we could get a routine established. He agreed. Today I called him to see how that was going.

He said "I have not missed one time with your texts. I even hurried up to get it done last night so I could beat the text. Thanks for helping me with this, I feel better and my sugar is better"

-- Community Health Clinic (Brenham, TX)

CareMessage operates on a software as a service (SaaS) revenue model. Larger customers pay a small fee to pilot the system and then convert to signing multi-year recurring revenue contracts.



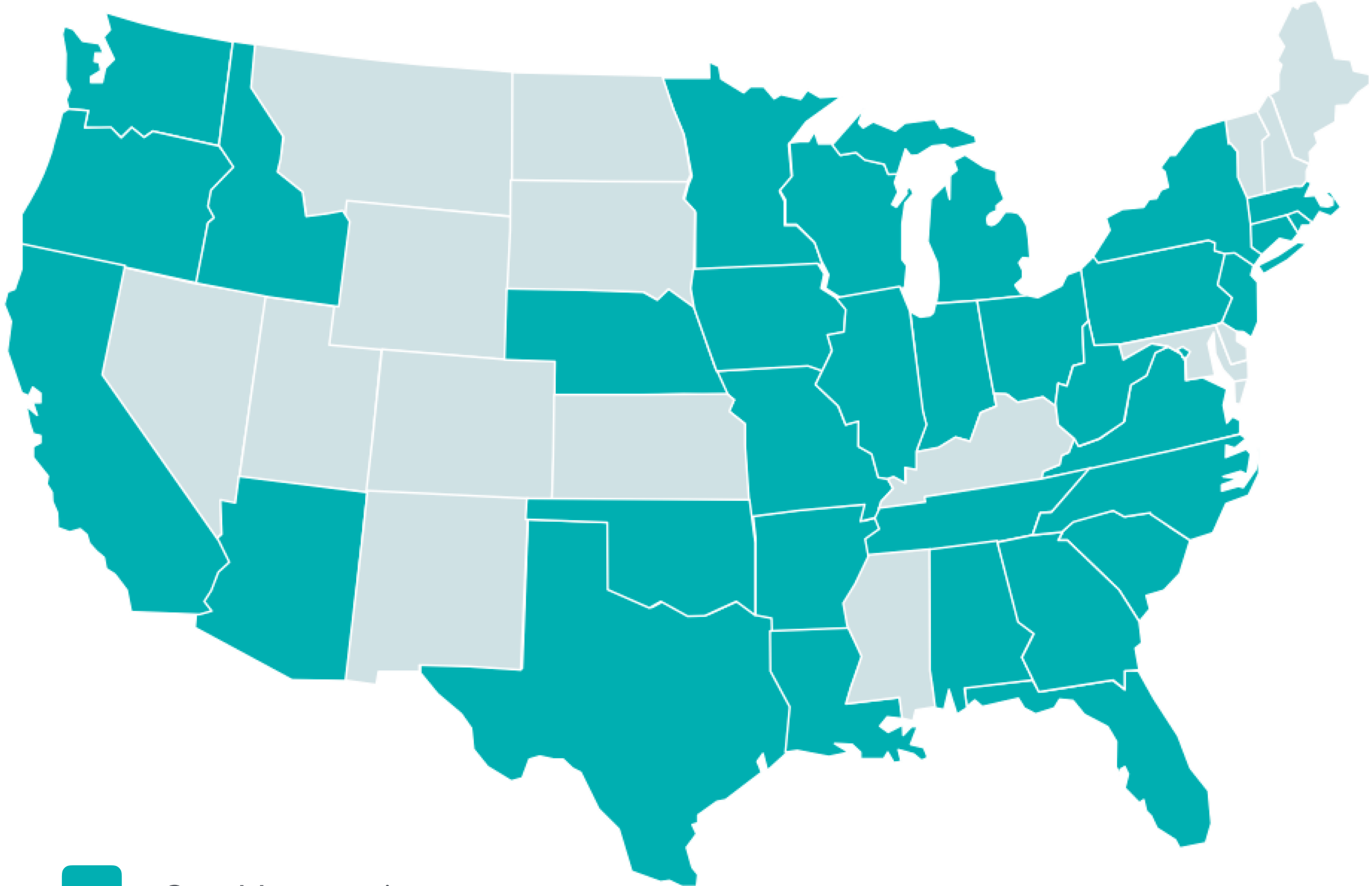
MARKET OPPORTUNITY

- mHealth is one of the fastest growing markets - expected to grow to \$49 billion by 2020 globally
- 1,287 FQHCs serving 22+ million patients (175% ↑)
- 1,200+ Free & Charitable clinics serving 1.8+million patients

TRENDS

- Patient centered care
- Burden of chronic diseases
- Focus on prevention

CareMessage grew from working with 3 customers at the end of 2013 to working with 171 customers across 33 states nationwide by early 2016



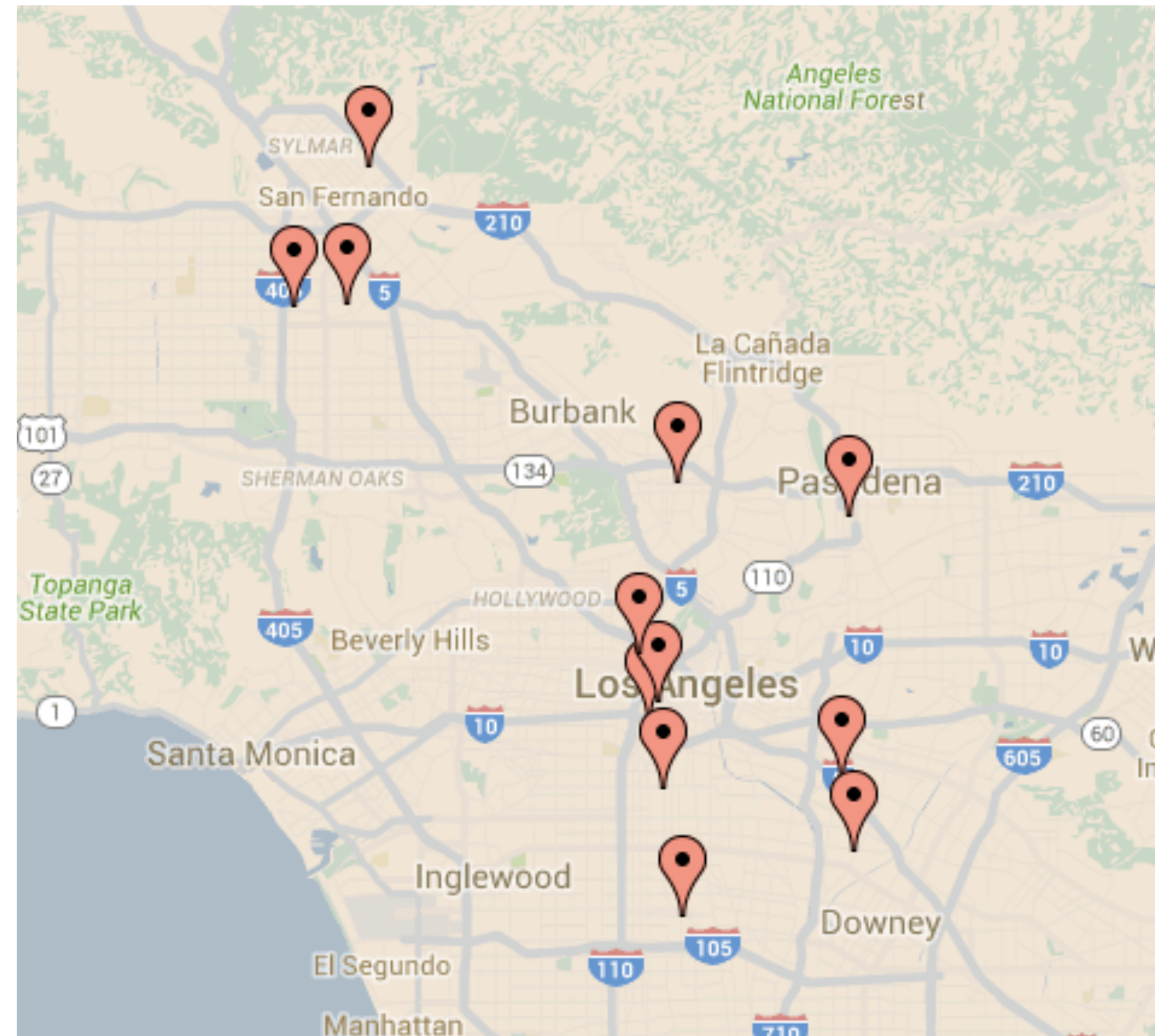
CareMessage's customers

Key Customers and Partners

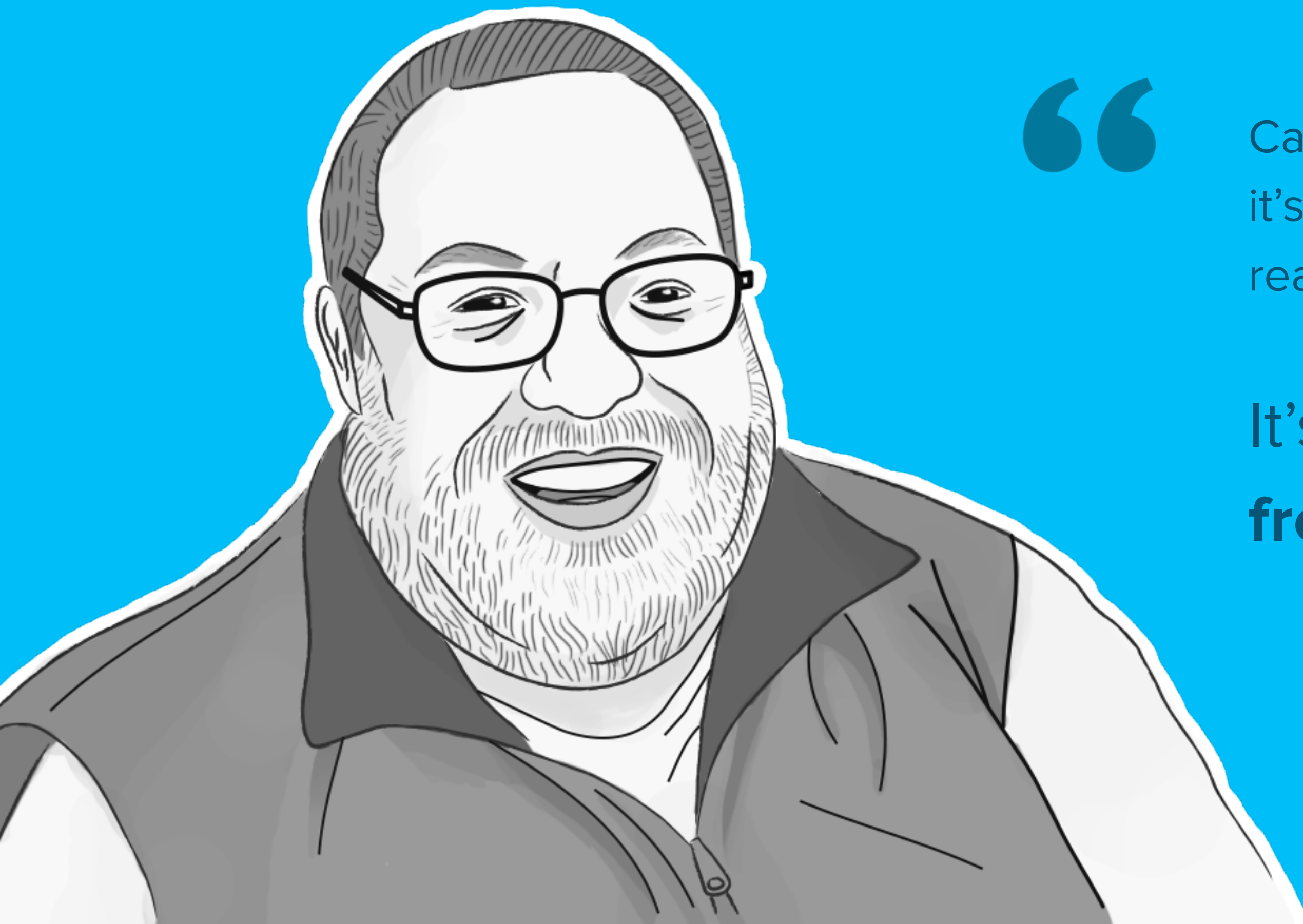


Grants from three leading LA-based foundations accelerated CareMessage's growth. CareMessage currently works with 1/3 of the FQHCs in LA-county, with several customers signing multi-year contracts.

The Ralph M. Parsons Foundation



CareMessage helped Pedro better manage his Asthma and Hypertension.
Join us in our journey to transform healthcare for Pedro and millions of underserved patients



“

CareMessage doesn't need anyone to be [tech savvy] it's a very simple system. The messages were easy to read, easy to understand and they were informative.

It's **informative**, it's **educational**, and it's **free of charge**, what better can they have?

Patient-Centered mHealth Research

Penny Mohr, MA

Senior Program Officer, Improving Healthcare Systems, Patient-Centered Outcomes Research Institute

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PATIENT-CENTERED OUTCOMES RESEARCH INSTITUTE

Our Mission and Strategic Goals

PCORI helps people make informed healthcare decisions, and improves healthcare delivery and outcomes, by producing and promoting high-integrity, evidence-based information that comes from **research guided by patients, caregivers, and the broader healthcare community.**

Our Strategic Goals:



Increase quantity, quality, and timeliness of useful, trustworthy research information available to support health decisions



Speed the implementation and use of patient-centered outcomes research evidence



Influence research funded by others to be more patient-centered



How is Our Work Different?

PCOR is a relatively new form of CER that....

- Considers patients' needs and preferences, and the outcomes most important to them
- Investigates what works, for whom, under what circumstances
- Helps patients and other healthcare stakeholders make better-informed decisions about health and healthcare options



A Focus on Patients



"Nobody ever asks 'How's Waldo'?"



A Focus on Patients

What we mean by...

“Patient-centeredness”

- The project aims to answer questions or examine outcomes that matter to patients within the context of patient preferences
- Research questions and outcomes should reflect what is important to patients and caregivers



"Nobody ever asks 'How's Waldo?' "

“Patient and stakeholder engagement”

- Patients are partners in research, not just “subjects”
- Active and meaningful engagement between scientists, patients, and other stakeholders
- Community, patient, and caregiver involvement already in existence or a well-thought-out plan



Aspects of PCORI-funded research that complement other investors/funders

- PCORI discourages extensive development/adaptation by the investigator within the context of the study
- mHealth applications evaluated in PCORI contracts need to have demonstrated efficacy or be in widespread use
- In general, PCORI does not pay for the cost of the mHealth intervention
 - Encourage co-funding by health system or payers



Portfolio Summary

Across PCORI, more than a dozen studies incorporate mHealth into their interventions:

Mechanism of communication

- ❖ Through phone calls
- ❖ Use of mobile smartphone or tablet apps
- ❖ Use of text messaging platforms
- ❖ Incorporate Fitbit or other mobile monitoring device

Purpose

- ❖ Remote monitoring
- ❖ Promote self-management
- ❖ Provide consumer or family education
- ❖ Improve access to specialty care



Improving Self-Care Decisions of Medically Underserved African-American Patients with Uncontrolled Diabetes: Effectiveness of Patient-Driven Text Messaging versus Health Coaching

Engagement

- Two patients and another stakeholder will serve as members of the research team. Additionally, three advisory groups representing patients, providers, community leaders and local public and private insurers will be involved throughout the study.

Potential Impact

- Evidence of differential effectiveness between increasingly commonplace interventions will help to more fully understand their effectiveness to support underserved urban and rural patient communities in disease self-management.

Methods

- Three-arm random control trial; sample size 1,000 participants.



This study compares the effectiveness of patient-driven text messaging versus health coaching versus treatment as usual in supporting medically underserved African-American patients with uncontrolled diabetes and multiple chronic conditions in managing their self care.

*James Bailey, MD, MPH
University of Tennessee Health Science
Center
Memphis, TN*

*Improving Healthcare Systems,
Awarded January 2016*



Early lessons



Early lessons

- Lack of access to smart phones poses a barrier to some populations
- Interface with existing research databases (e.g., RedCAP) is needed
- Provision of data may not be enough
- Staff support may provide a synergistic effect to enhance patient outcomes
- Confidentiality of personally-identifiable health information is a concern to patients
- Sustainability and adoption remain an issue



Questions?

Penny Mohr

Senior Program Officer

Improving Healthcare Systems

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PATIENT-CENTERED OUTCOMES RESEARCH INSTITUTE

- More webinars on this topic?
- New topics you want to tackle or learn more about?
- Innovative work that you want to share?
- A question you want to pose to your colleagues?

Contact us at quality@gih.org