Novel Approaches to Public Health: Tech and Innovation for Supporting Public Health
Raise Hand, Mute and Chat Feature

- Please take note of the **Raise Hand** and **Mute** Buttons
- Please submit questions via the **Chat** Feature
- Please send your questions to **Everyone** or the **Host**
Agenda

• Welcome and Orientation
• Population Health Innovation Lab Update
• Novel Approaches Presentations
  • CareMessage, Vineet Singal
  • Emocha Mobile Health, Katrina Rios
  • Bayes Impact, Mehdi Jamei
• Discussion + Q&A
• Wrap up
Webinar Objectives

• Share emerging trends in technology and other innovations that support improved health
• Highlight three startups; share their solutions to health issues and how they are solving issues at hand
• Stimulate thinking of what is possible to create solutions to issues affecting health
The Population Health Innovation Lab designs, catalyzes and accelerates innovative approaches that advance health outcomes and well-being.
Update

Center to Advance Community Health and Equity
https://www.thecachecenter.org/
https://hospitalcommunitybenefit.org

Local Health Department Transitions from Clinical Service Provisions to Population Health Services
Seeking HDs who have successfully transitioned and or considering transitioning from clinical service provision

CA Accountable Communities for Health (CACHI)
Supporting 9 CA Communities on their journey to become an ACH
https://cachiaccelerator.wordpress.com/
Public Health Institute Webinar
April 4, 2018
The healthcare industry is experiencing a major shift towards value-based care, which is bringing challenges for both patients and providers.
Underserved patients face unique challenges in improving their health.
Healthcare providers and staff

Don’t have a centralized, organized place to communicate with patients at scale

Struggle collecting self-reported data from patients
Text messaging usage is **2–4x higher** in lower income, less-educated populations, and has a **99% open rate**.
Texting as a Solution

85% of patients who responded as “always” or “often” check their messages.

65% of patients report they read text messages in 5 minutes or less after receiving them.

46% of patients who reported text messaging as their phone’s most used feature.

Patients report they read text messages in 5 minutes or less after receiving them.

Patients who reported text messaging as their phone’s most used feature.
Imagine a world where patients are **empowered** to prioritize their health, and providers use their knowledge of patient behavior to provide **better quality of care**.
A Unique Combination

**PEOPLE**
Expert staff that acts as advisors and consultants in content development and delivery

**PRODUCT**
User-friendly interface that allows for easy creation and delivery of messages and campaigns
CareMessage Features

- **Appointment Reminders**: Reduce No-Show Rates
- **Group Outreach**: Fill Gaps in Care
- **Educational Programs**: Help Manage Chronic Diseases
- **Direct Messaging**: Reach Patients Easily
What sets CareMessage apart

Flexible technology & seamless interoperability

Our commitment to research & outcomes

Hyper-focused on the high-need patient
An FQHC in Florida sent an outreach message to over 3,000 female patients who were due for a cervical cancer screening.

Within one month, 846 patients had scheduled a screening.
Community Health Clinic of Brenham, a free clinic located in Texas, reported a 27% decrease in average no-show rate after implementing CareMessage text message reminders.

(before: 15.3%; after 11.1%)
“The texting program became a positive reminder that I was progressing, like a friend cheering me on to help me quit smoking.”

– Patient in the CareMessage Smoking Cessation Program
1100 patients were enrolled into CareMessage’s **Type 2 Diabetes program** at ChapCare, a California FQHC as a part of an RCT.

Preliminary analysis showed high risk diabetics enrolled in the program had a **0.62% lower A1c** compared to the control group.
A free clinic in South Carolina used CareMessage to send self-monitoring support messages to their diabetic patients.

As a result, their FSBG scores decreased by an average of 11.3% over 3 months.
Since launching in late 2013, CareMessage has grown to work with 200+ organizations across 39+ states nationwide, actively reaching 1.5 million patients.
Thank you

For questions and followup, please contact Jessica Day at jday@caremessage.org or at 843-422-0796

Or contact us via our website
Redesigning the way patients take medication
emocha keeps patients in care & verifies every dose of medication

Average adherence: 50%

Average adherence with emocha: 90-95%
Directly Observed Therapy works

- DOT is the gold standard for medication adherence
- Leverages human observation (Hawthorne effect)
- Strengthens the patient-provider relationship
- Emocha allows DOT to become a scalable, tech-enabled service
Asynchronous video directly observed therapy
Asynchronous video directly observed therapy
How it works

Patients open the application
How it works

Select if they experience symptoms or side effects

- Stomach cramps
- Diarrhea
- Restlessness
- Bone or joint pain
- Nausea or vomiting
- Excessive sweating (not from activity)
- Runny nose or tearing eyes (not due to cold)
How it works

Record a video while taking their medications
How it works

Receive encouraging comments
How it works

Follow their progress through an adherence calendar
Created to address high priority health challenges

- HIV/PrEP
- Tuberculosis
- Opioid Addiction
- Hepatitis C
- Heart Failure
- Asthma
- Hypertension
- High Cholesterol
- Diabetes
- Kidney disease
Clinical validation

**Opioid Addiction**
*Take-home treatment*
- 90% Adherence
- 100% Retention in care, preliminary

**Tuberculosis**
*Puerto Rico outbreak*
- 87-92% Adherence
- 100% Treatment completion

**Hepatitis C Virus**
- 100% Cure, preliminary
- 8-city Clinical study

**Tuberculosis**
- 92-95% Adherence
- Up to $8K Saved/patient

**Tuberculosis**
*Hurricane Harvey*
- 100% Adherence among 59/61 patients during hurricane

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**NIDA**
National Institute on Drug Abuse
*Partners: University of Washington, Boston Medical Center*

**CDC**
Morbidity & Mortality Weekly Report
*Partner: Puerto Rico Department of Health*

**pcori**
Patient-Centered Outcomes Research Institute
*Partners: UCSF, UNM, UW, UVV, Johns Hopkins, Montefiore, Harvard, Brown*

**NIH**
National Institutes of Health
*Partners: Johns Hopkins, State of Maryland*

**CDC**
Morbidity & Mortality Weekly Report
*Partners: Texas Department of State Health Services, Harris County Public Health*
National traction & global experience
National traction & global experience
Case Study: Puerto Rico

2010 - 2012

Active Tuberculosis (RIPE)

Latent Tuberculosis (4R)
Case Study: Puerto Rico

2010 - 2012

Active Tuberculosis (RIPE)

Latent Tuberculosis (4R)

2016

Active Tuberculosis (RIP)

Latent Tuberculosis (4R)
Case Study: Puerto Rico

2010 - 2012
Active Tuberculosis (RIPE)
Latent Tuberculosis (4R)

2016
Active Tuberculosis (RIP)
Latent Tuberculosis (4R)

92% Adherence
87% Adherence
Case Study: Puerto Rico

Weight Change in Active TB Patients


Active Tuberculosis (RIP)

Latent Tuberculosis (4R)

2016

92% Adherence
87% Adherence
## Case Study: Puerto Rico

<table>
<thead>
<tr>
<th>% Completion</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>Treatment completion</td>
</tr>
<tr>
<td>10-30%</td>
<td>Weight change</td>
</tr>
<tr>
<td>200+ hrs</td>
<td>Travel time saved</td>
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<tr>
<td>575</td>
<td>Observed doses</td>
</tr>
<tr>
<td>85-96%</td>
<td>Adherence</td>
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</tbody>
</table>
Video DOT optimizes resources

How data can uncover gaps in access to care

Bayes Impact - PHI Webinar - April 4, 2018
Bayes Impact connects communities and policymakers by providing the data solutions needed to build a more equitable future.
Modernization of network adequacy compliance system

- Robust population model
- User-centered design
- Open-source algorithm
Expanding our Impact

Policymakers
Researchers
Advocates
Beyond provider networks: Access to healthy food CA vs. KS

Source: USDA’s National Farmers Market Directory
Our services and solutions

- Custom version of Encompass
- Network and resource planning and compliance
- Regulatory tools and services
- Full host of data collection, analytics, and visualization services
Thank you

Questions and inquiries:  

mehdi@bayesimpact.org  
vivian@bayesimpact.org
Thank You for joining us!

Contact Information

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