



THE MOOD CHALLENGE

Informational Webinar

April 19, 2016

WELCOME

newventurefund

Robert Wood Johnson Foundation



LUMINARY
LABS

#MoodChallenge

THE MOOD
CHALLENGE

AGENDA

1. Challenge Overview
2. Mood
3. ResearchKit
4. Round 1 Details
5. Q&A

CHALLENGE OVERVIEW

CALL TO ACTION

The Mood Challenge for ResearchKit calls on researchers, technologists, and data scientists to submit proposals for ResearchKit studies that will further our understanding of mood, its correlates, and its relation to social context through the novel interpretation of signals from iPhone, related sensors, and other data sources.

AWARDS

TOTAL AWARDS
\$500,000

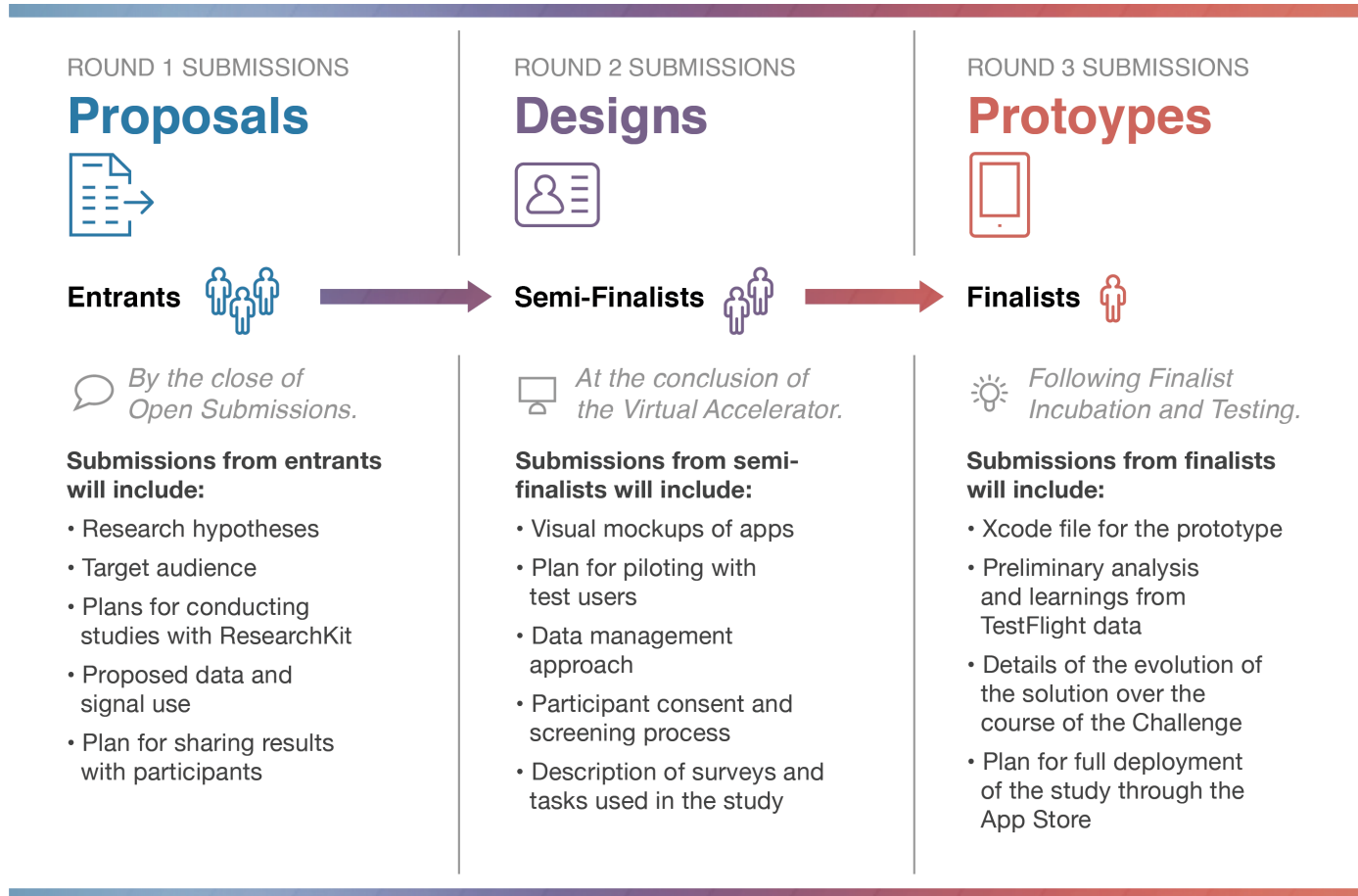
- **5 SEMI-FINALISTS:** **\$20,000** to translate their proposals into designs for ResearchKit studies.
- **2 FINALISTS:** **\$100,000** to develop their designs into prototypes to pilot with users in Apple's TestFlight.
- **1 WINNER:** **\$200,000** and guidance for submission of their ResearchKit study to the App Store.

The listed award amounts assume that a sufficient number of entries satisfying the judging criteria are identified. Please see the Rules, Terms and Conditions for full award details.

CHALLENGE TIMELINE

- **Call for Submissions** April 6 – May 22, 2016
Entrants submit proposals at moodchallenge.com.
- **Round 1: Semi-Finalists Announced** July 2016
- **Virtual Accelerator** July – September 2016
Includes Innovators' Boot Camp and Semi-Finalist Presentations.
- **Round 2: Finalists Announced** October 2016
- **Finalist Incubation and Testing** October 2016 – April 2017
Prototype development and piloting in Apple's TestFlight.
- **Round 3: Winner Announced** May 2017

SUBMISSIONS BY ROUND



MOOD

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THE **MOOD**
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WHY MOOD?



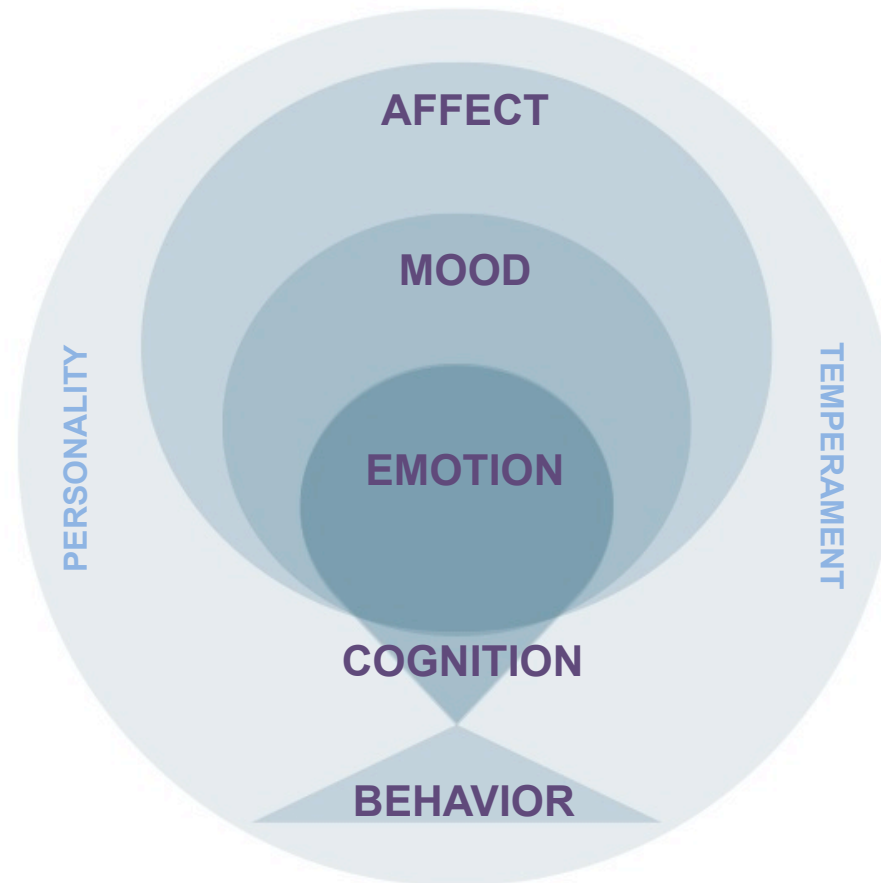
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THE **MOOD**
CHALLENGE 10

MOOD AS A CONSTRUCT

- A non-specific emotional state.
- Not tied to particular stimuli.
- Tend to have positive, neutral, or negative valence.
- Less intense than specific emotions.

MOOD-RELATED CONSTRUCTS



CHALLENGE FOCUS AREAS

- 1. Detection of emotional signals.** What we call discrete “emotions” are actually a suite of neurophysiologic processes based on temperament, personality, attitude, and core and attributed affect.
- 2. Measurement of mood.** “Mood” is a construct made up of many emotional parts. It is a clinical and empirical research target in diverse fields, resulting in a wide range of ways to measure mood.
- 3. Contextual factors and social determinants.** Many signals (such as weather, pollution, access to food, sleep, and social connectedness, etc.) have been correlated to mood and studied to varying degrees using analog measurement tools.

MOOD, CONTEXTUAL FACTORS, AND SOCIAL DETERMINANTS

Can the Bacteria in Your Gut Explain Your Mood?

The rich array of microbiota in our intestines can tell us more than you might think.

By PETER ANDREY SMITH JUNE 23, 2015 -*The New York Times*

Environmental Stress: Effects of Air Pollution on Mood, Neuropsychological Function and Physical State

-*Psychobiology of Stress*

The Surprising And Powerful Links Between Posture and Mood

-*Fast Company*

In a bad mood? Your social networks might be to blame

-*The Guardian*

Is There a Relationship Between Mood and Economic Status?

-*Pacific University*

Up All Night: The Effects of Sleep Loss on Mood

Research shows just one bad night of sleep can put a damper on your mood

 Like 22

-*Psychology Today*

Posted Aug 15, 2013

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RESEARCHKIT

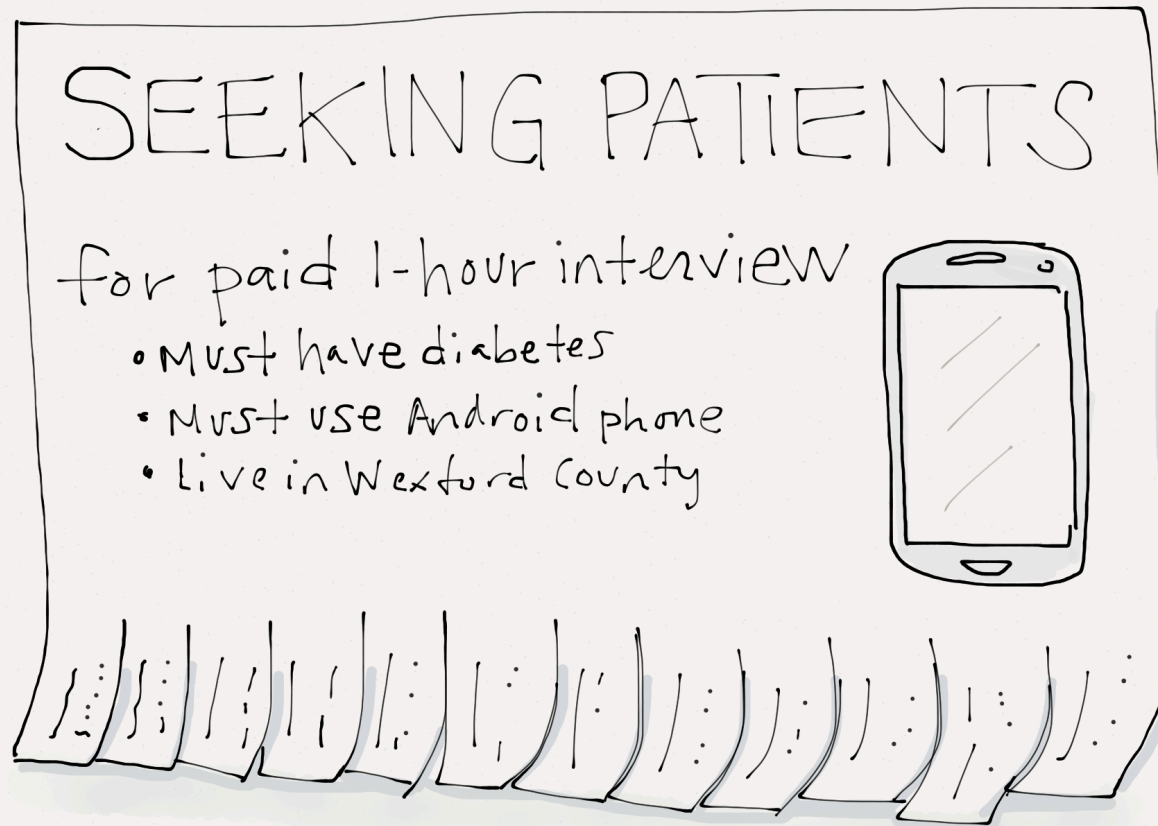


Photo: Sensical.wordpress.com



ResearchKit

An open source software framework designed for medical and health research, helping doctors and scientists gather data more frequently and more accurately from participants using iPhone apps.



ResearchKit

ResearchKit is an open source software framework that makes it easy to create apps for medical research or for other research projects.

Repositories

People 19

Filters

Find a repository...

ResearchKit

Objective-C ★ 4,286 🍴 652

ResearchKit is an open source software framework that makes it easy to create apps for medical research or for other research projects.

Updated 21 hours ago

ShareTheJourney

Objective-C ★ 63 🍴 39

ResearchKit app studying Breast Cancer, developed by Sage Bionetworks.

Updated 27 days ago

MyHeartCounts

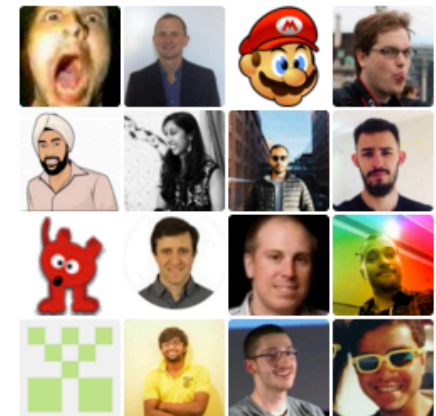
Objective-C ★ 16 🍴 14

MyHeart Counts is a ResearchKit app developed by Stanford.

Updated on Oct 27, 2015

People

19 >



MAJOR RESEARCHKIT ELEMENTS

1. Informed Consent
2. Surveys
3. Active Tasks

1. INFORMED CONSENT

< Eligibility Next

Are you over 18 years of age?

Yes No


Have you been diagnosed with pre-diabetes or type 2 diabetes?

Yes No

Can you read and understand English in order to provide informed consent and follow the instructions?

Yes No

< Consent Cancel



Data Gathering

This study will gather location and sensor data from your phone and personal fitness devices (such as Apple Watch) with your permission. You can choose not to do this and still participate in the study.


[Learn more about how data is gathered](#)

Next

< Consent Cancel

Signature

Please sign using your finger on the line below.



Clear

Done

2. SURVEYS

Carrier 3:10 PM

< Step 4 of 10 Cancel

How long did you do the activity?

57
58
59

0 1 hour 0 min

2 1
3 2
4 3

Next

Skip this question

Carrier 3:10 PM

< Step 2 of 7 Cancel

Do you take medications to treat the following risk factors (indicate all that apply)

To treat and lower cholesterol ✓

To treat hypertension and lower blood pressure ✓

To treat diabetes/pre-diabetes and lower blood sugar

None of the above

Next

Carrier 3:10 PM

< Step 2 of 7 Cancel

Today, my thinking is:

😊 😊 😞 😞 😞

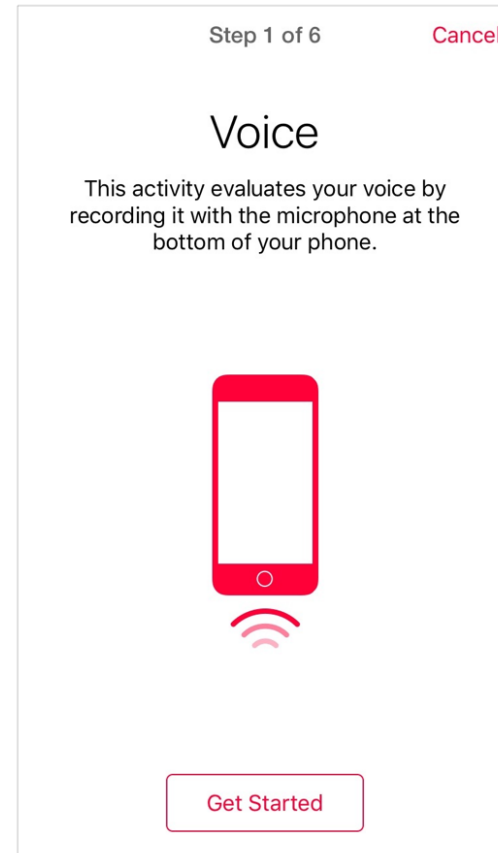
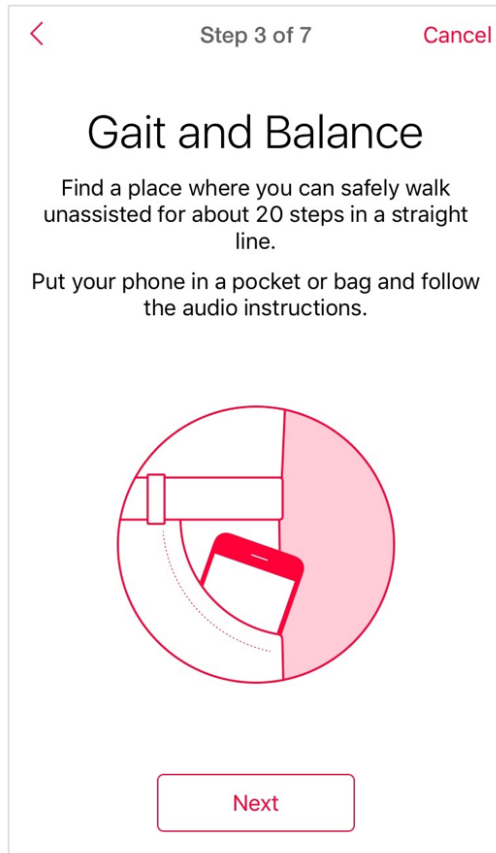
crisp

Next

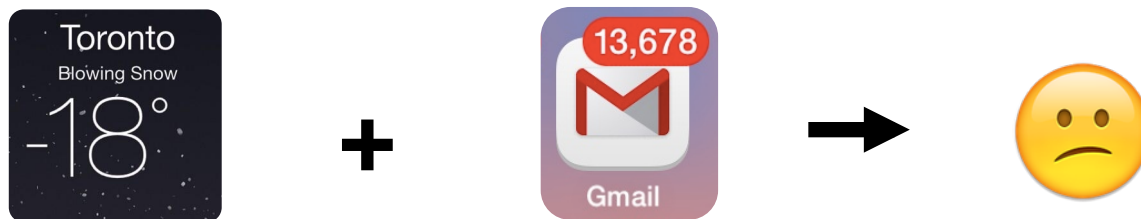
Skip this question

Photo: MyHeartCounts and Share The Journey
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3. ACTIVE TASKS



WHY RESEARCHKIT?



GET TO KNOW RESEARCHKIT



Breast Cancer



Diabetes



Parkinson's
Disease



Cardiovascular
Disease



Asthma

Photo: Apple

[#MoodChallenge](#)

ROUND 1 DETAILS

ROUND 1 CRITERIA

- **Innovation.** Novelty of the hypotheses and correlations proposed in the entrant's submission. Degree to which the submission considers the unique opportunities of mobile device-based research.
- **Scientific Plausibility.** Extent to which interpretations and correlations of signals to mood are grounded in reasonable scientific theory.
- **Feasibility.** Likelihood that the proposal can be translated into a ResearchKit study design within the Challenge timeline, particularly around the development of testable ResearchKit tasks as described in the submission.
- **Impact.** Extent to which the submission could contribute to ResearchKit's open source community and to our current understanding of mood and the ways in which it is measured.
- **Entrant Potential.** Ability of entrant to translate the proposal into a ResearchKit study design and develop it over the course of the Challenge.

ROUND 1 SUBMISSION FORM

1. Submission Summary
2. Scientific Grounding
3. ResearchKit Considerations
4. Signals and Data
5. Impact
6. Team
7. Submission Checklist

ELIGIBILITY

The Mood Challenge is open to:

- Individuals aged 18+ who serve as Team Leads and are U.S. citizens or permanent residents of the United States.
- **-OR-**
- An entity incorporated in and maintaining a primary place of business in the United States.

Note: Foreign citizens can be listed as a Team Member by an eligible Team Lead or can enter as employees of an entity that is properly incorporated in the U.S. and maintains a primary place of business in the U.S.

SUBMITTING AN ENTRY

To complete your submission at moodchallenge.com, you will need to do the following by **11:59:59 PM Eastern** on **May 22, 2016**:

1. Identify an eligible Team Lead
2. Create a Luminary Lightbox™ account
3. Complete the submission form
4. Submit your entry

MEET THE JUDGES



LISA FELDMAN BARRETT

Professor of Psychology and Director of IASLab at
Northeastern University



JEFF FRAZIER

CEO and founder of THREAD Research



KEVIN JOHNSON

Professor and Chair of Biomedical
Informatics, Vanderbilt University
Medical Center



KEVIN PATRICK

Professor of Family Medicine and Public Health at
UCSD and Director of the Center for Wireless and
Population Health Systems



INDU SUBAIYA

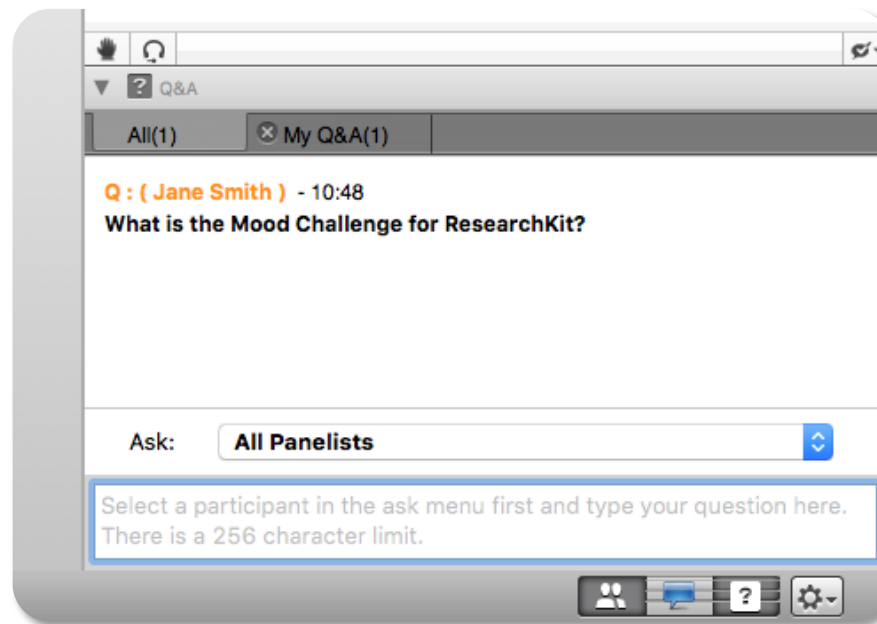
CEO and Co-Chairman of Health 2.0

INTELLECTUAL PROPERTY

- Entrants retain full ownership of their submission.
- Entrants grant NVF, RWJF, and LL a right to reproduce, publicly perform, publicly display, and use their entry to the extent necessary to administer or promote the Challenge.
- Finalist and winning Entrants must make their studies available and open source on ResearchKit's Github page for use in future studies.

Q+A

- Please use “Q&A,” **not** “Chat” in WebEx.
- Send questions to “All Panelists.”



THANK YOU

For help, email hello@moodchallenge.com.

Sign up for the Challenge newsletter for updates about the Challenge.