

reify
HEALTH

The lab bench for mobile health

Overview

Outline:

- Objectives
- Team, Background
- Problem
- Reify's Solution
- Demo
- Use cases
- Progress to date
- What we've learned
- Roadmap
- Relevance to ICTR
- Questions for discussion

Objectives

1. Identify pain points our technology can currently address for ICTR members
2. Identify pain points we could address with additional development work for ICTR members
3. Identify opportunities to work together

Team



Ralph Passarella
External Operations

- MD/PhD at JHU
- Cancer Biologist from Vanderbilt



Michael Lin
Internal Operations

- MD at JHU
- Bioengineer from UC Berkeley



Henry Li, MS
Front-end Developer

- MD at JHU
- Biomedical engineer from Georgia Tech

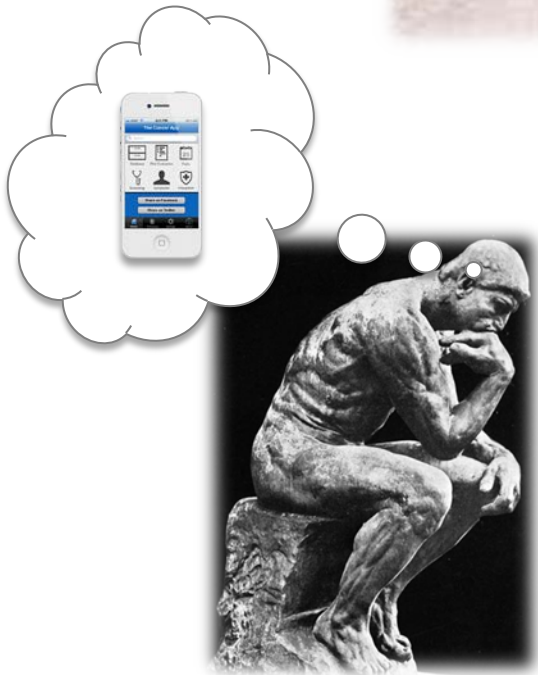


Joe Abrahamson
Back-end Developer

- PhD at JHU
- Biomedical engineer from Georgia Tech



The potential of mobile health



The potential of mobile health

Mobile has potential to deliver low-cost engagement

1¢ for a text message 99¢ for a smartphone app

85% of adults own smartphones

Mobile has potential to deliver improved outcomes

1.9% reduction in HbA1c by mobile health therapy compared to 0.7% reduction from standard of care

The unfulfilled potential of mobile health

Rapid proliferation of mobile health technologies



Little solutions have evidence to support effectiveness

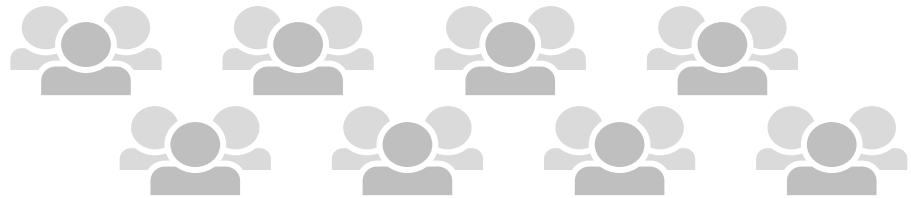


Mobile health R&D is hard

Research requires upfront capital

Mobile health proof-of-concept can cost up to **\$3 million**

Research requires access to patients

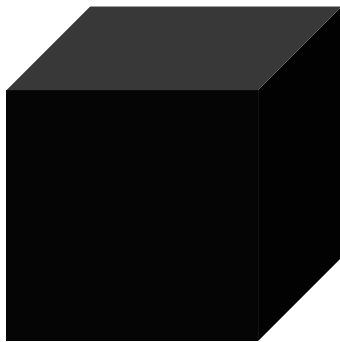


Research requires access to scientists



Mobile health R&D tools are primitive

Black box



The lab bench for mobile health

EXPERTS



MOBILE HEALTH
INTERVENTION



REIFY HEALTH
LAB BENCH

Demo!

reity
HEALTH

Use cases

TRIMM – a weight loss intervention

Six-month text message-based weight loss intervention tested in RCT with 120 patients.

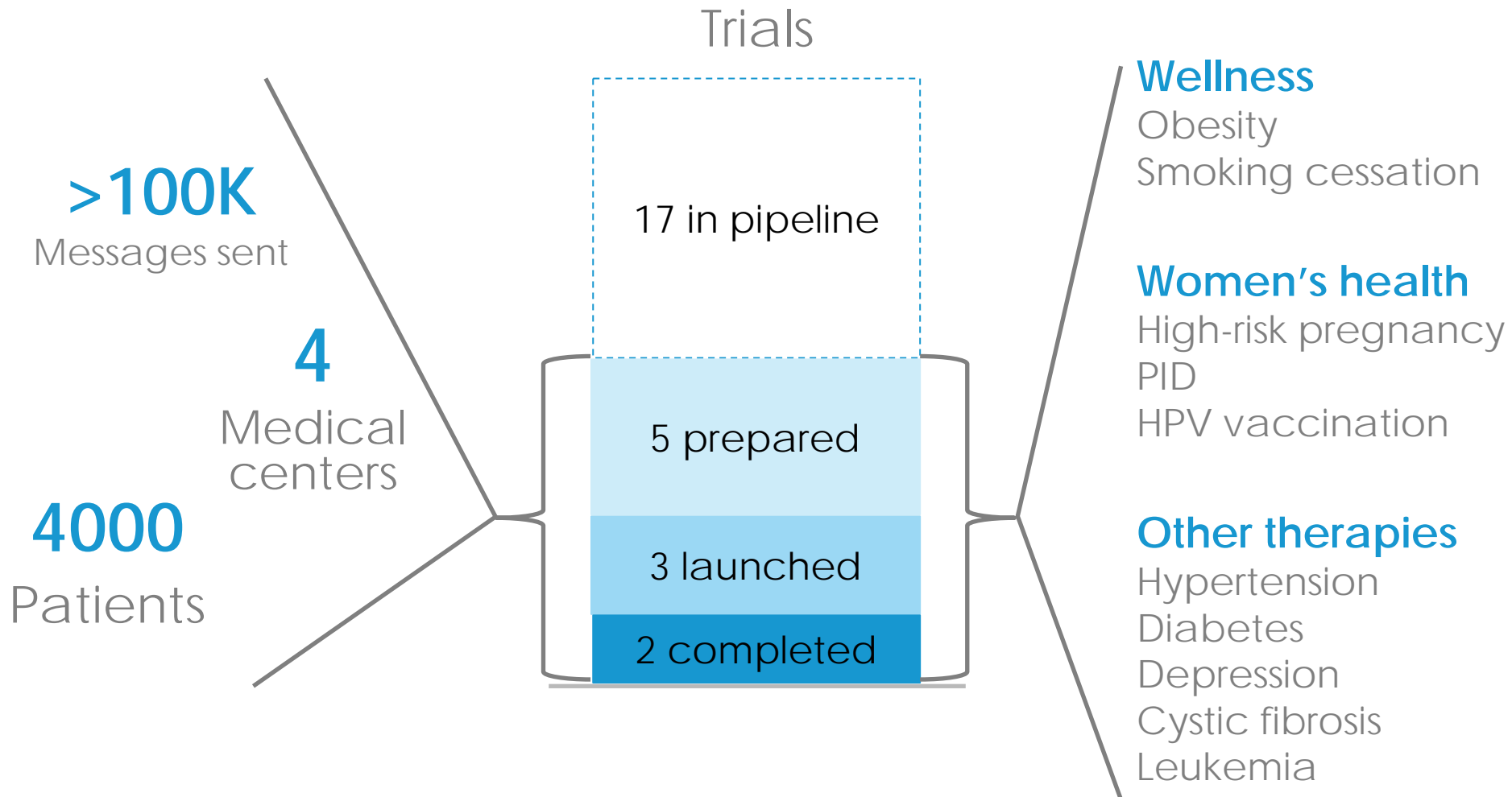
Project SCOPE – increasing college matriculation

Intervention to increase graduating high school students' matriculation. RCT among >3000 students in two languages.

Post-operative prostatectomy management

Mobile intervention to improve management of prostatectomy symptoms. Reuse of content and algorithms for TRIMM.

Progress to date

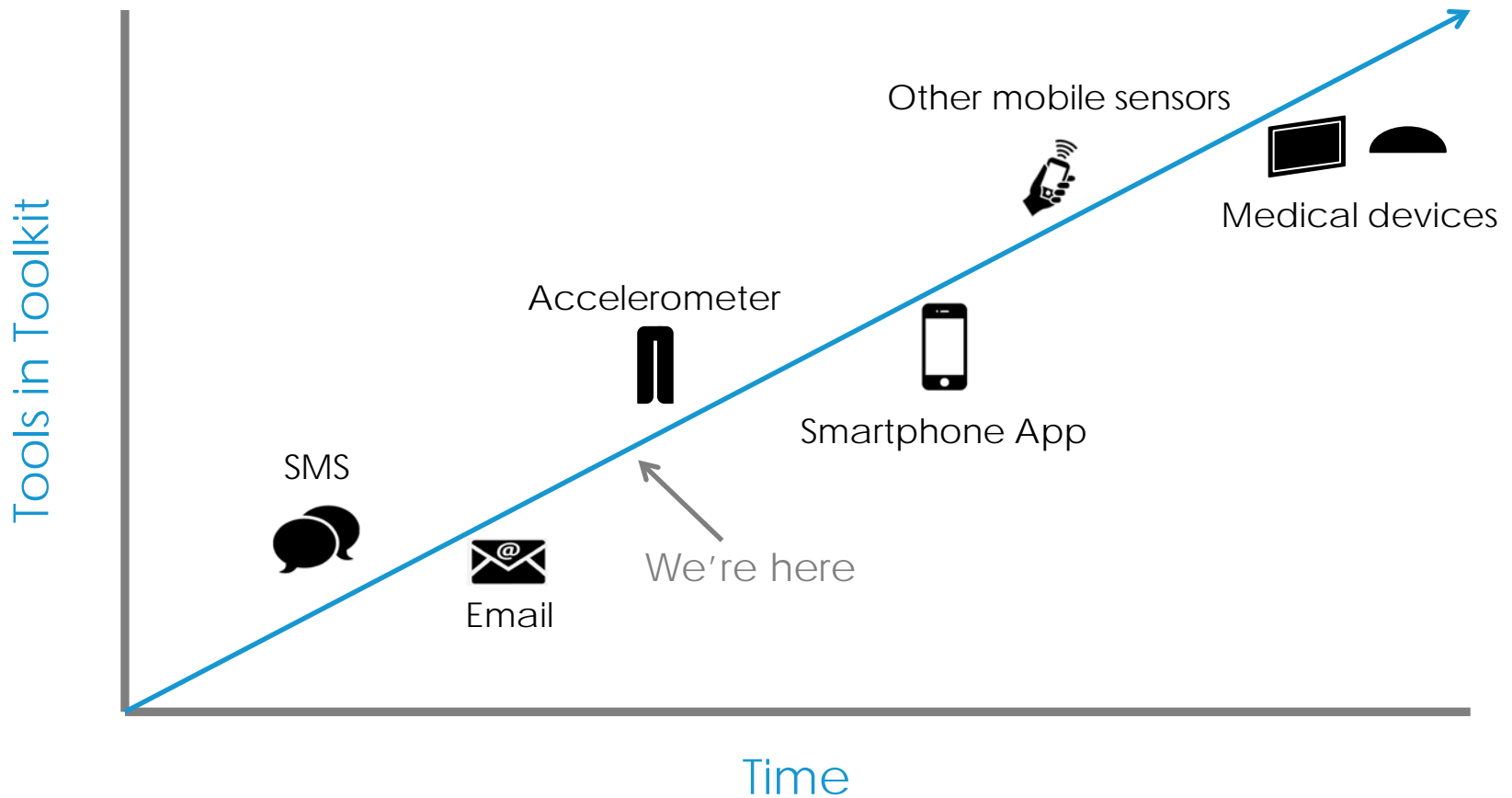


What have we learned?

1. More “communication science” than “mobile health”
2. Twilio’s marketing is misleading
3. Building R&D tools requires building specifically for R&D
4. Old people like using mobile technology too
5. Teenagers will pour out their life stories into an SMS

Tool roadmap

Tools accessible from web app



Potential value for the ICTR

We provide accessible, low-cost tools that allow researchers to collect data and deliver behavioral interventions repeatably and reliably

Example job

Patient data collection

Deliver behavioral intervention

Patient retention

Authentication

Passive data collection

Use case

Create form to query patients automatically about mood

Deliver targeted, personalized messages to individual patients

Send patients reminders to return for follow up visits in clinical trials

Use text messaging for two-factor authentication in trials

Allow trial patients to engage the system by initiating conversations

Questions for ICTR Data Managers

We want your feedback to help shape this technology

1. What components of our technology do you find most useful today?
2. Are there unmet needs we could help you address with additional development work?
3. Are there technologies we could/should consider integrating into our platform?
4. How can we effectively feed data back to researchers using our platform?
5. Do you know researchers at Hopkins who could use our platform?



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