mHealth: Navigating the Patient Generated Health Data Deluge

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AMAZING THINGS ARE HAPPENING HERE

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Rise of the Mobile Culture
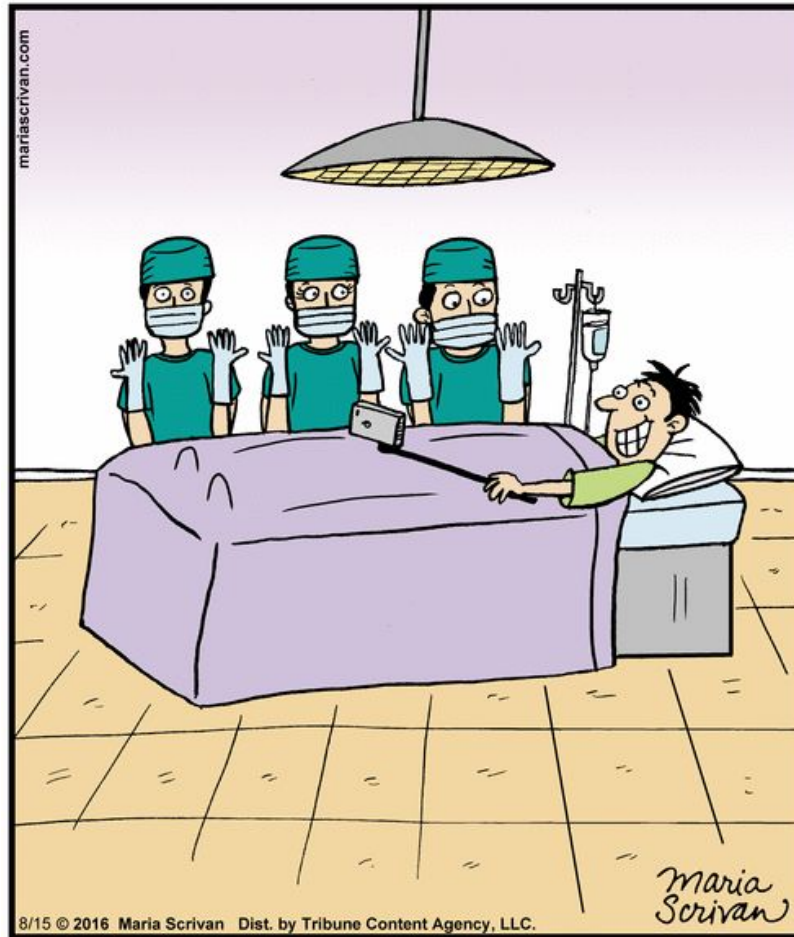
Mobile Healthcare

Modified from: https://www.learningresources.com

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What is mHealth?

- Set of apps, devices and connections that allow the user to be mobile.

- World Health Organization

  – use of mobile and wireless technologies to support the achievement of health objectives.

- National Institutes of Health

  – to improve health outcomes, health care services, and health research.

- Mobile 'self-care' using mobile communication devices, such as mobile phones, tablet computers and wearable devices.

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Why do we care about mHealth data?

- Contributor to PGHD

- Creates efficiencies in the health care system

- Promotes prevention

- Improves availability, access

- Contributes to a learning health care system

- Helps make better decisions

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Case Study

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5 Navigating Insights

1. Problem of Plenty

2. Fall in love with the problem, not the solution

3. Make it mainstream

4. Discern signal from noise
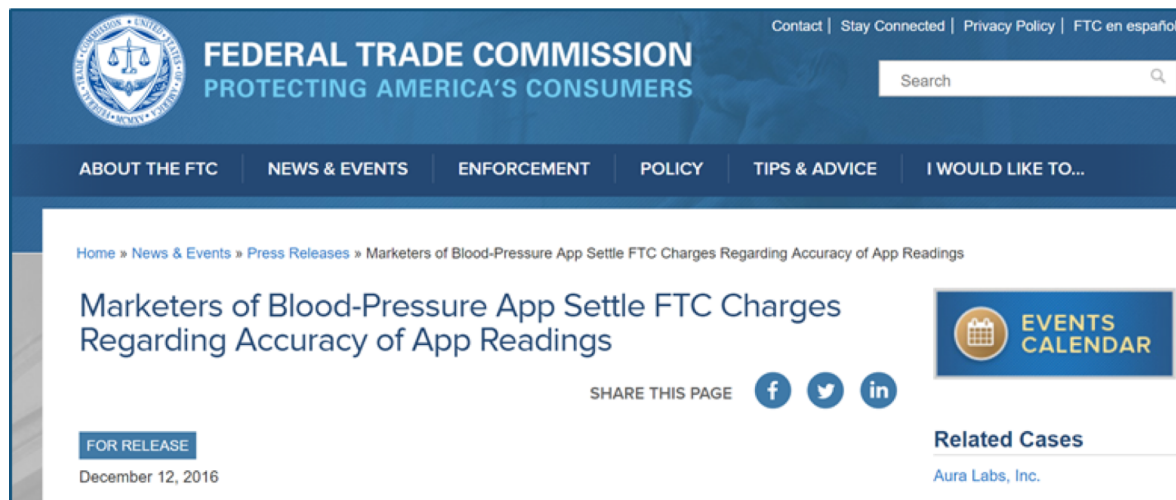
5. Engage with empathy

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Insight #1

Problem of plenty

- Over 320K health apps

- ~ 200 added per week

- 340 wearables on the market

- Environmental sensors

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No official certification process

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Concerns with distribution and dissemination

Digital evidence is lacking but starting to mount

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Summary of Insight #1

- Continued growth of mobile applications

- Measure, appraise, build up the evidence

- Understand the quality of the data

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Insight #2

Fall in love with the problem, not the solution

- 2% of patients using healthcare apps

- Most desired functions

  – Access data

  – Change/Cancel appointments

  – Prescription data

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Noom Health Pilot

- National Diabetes Prevention Program

- Includes health coaching

	Participants	Gender	Avg. Age	Language	Device OS
Cohort 1	8	87.5% Female	40.5	100% English	75% Android
Cohort 2	22	95.5% Female	38.8	68% Spanish	55% iPhone

Weekly Engagement

Most Valuable Features
n=19

- 16% Meal Logging
- 21% Articles
- 26% Exercise
- 37% Coach Calls

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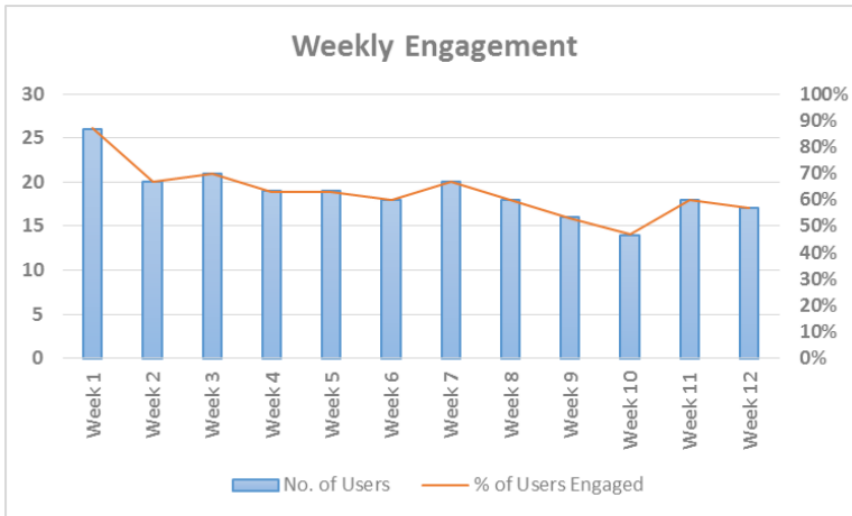
First ask the right question
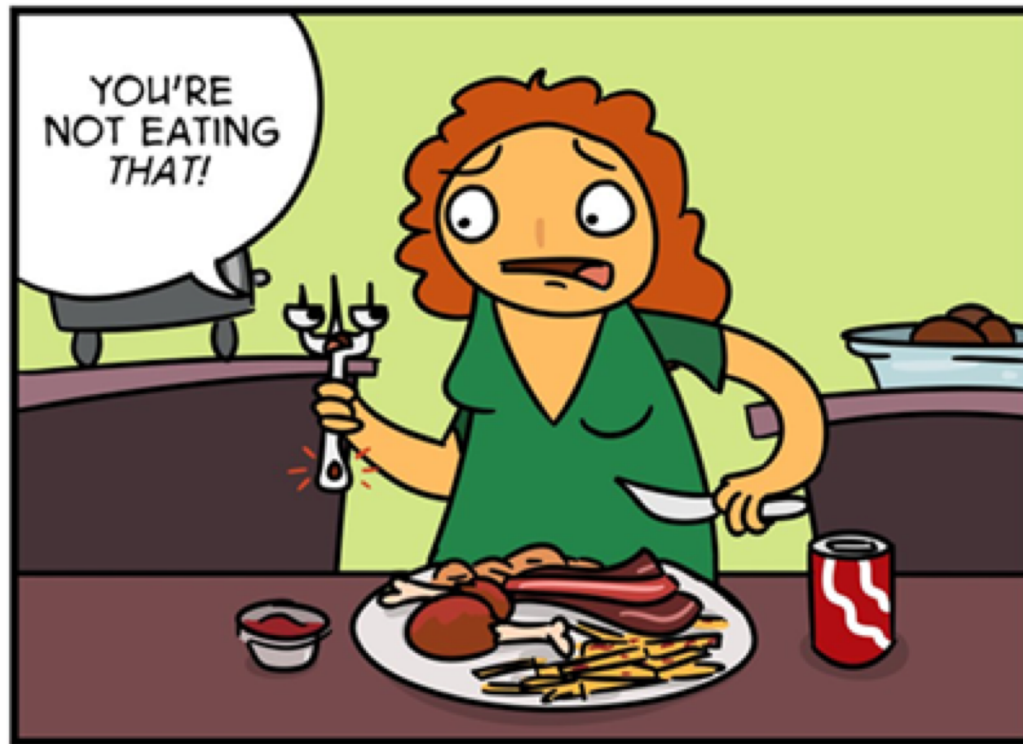
DIGITAL 'HEALTHY FORK'

Summary of Insight #2

- Understand what patients want

- Collect most relevant data

- Consider the outcomes

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Insight #3

Make it mainstream

- Deploy in a lastable way – similar to EHR

- Examine workflows and practices

- Fit to existing architecture

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Clinician Preparedness

– Identify data needs

– Training and support

– Critique the data

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Study on Nurses' Perceptions

- Created and validated a 10 question app based survey tool

- Measure nurses' perceptions of the use of HIT tools for patient and family engagement in their nursing practice

- Findings

  - Understanding of the goals for using HIT tools

  - Possible lack of confidence in answering questions

I am confident that I can answer patient and family questions regarding the use of specific health IT tools such as PHRs. *2.57(1.28)*

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Summary of Insight #3

- Utilize implementation science

- Identify valuable use cases

- Engage nurses with developers and manufacturers

- Incorporating into training and foster confidence

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Insight #4

Discern signal from noise

- Allow for visualization and manipulation

- Summarize and identify patterns

- Incorporate contextual awareness

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UC Davis Health
"Patient-Generated Data Gets Real"

- Better Blood Pressure initiative

- Incorporate patient-reported blood pressure readings via connected devices into the EHR (not a separate care management portal)

- Collaborate with patients using real-time personalized data points

- 300 patients in 3 clinics over 6 months

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Summary of Insight #4

- Need for technological innovations

- Think about tradeoffs

- Focus on data that matter

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Insight #5

Engage with Empathy

- Empower patients to proactively manage

  - self-management of chronic disease

  - lifestyle adjustment

  - health promotion

- Support active participation

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CONGRATS, NURSES!

ANA
AMERICAN NURSES ASSOCIATION

#1 MOST HONEST AND ETHICAL PROFESSION

16 years straight at the top of Gallup's poll of America's Ratings of Honesty and Ethical Standards in Professions.

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Is it all Hype?

- Not intended to replace human interaction
- Nurses can keep at forefront of conversation

The Hype of Virtual Medicine
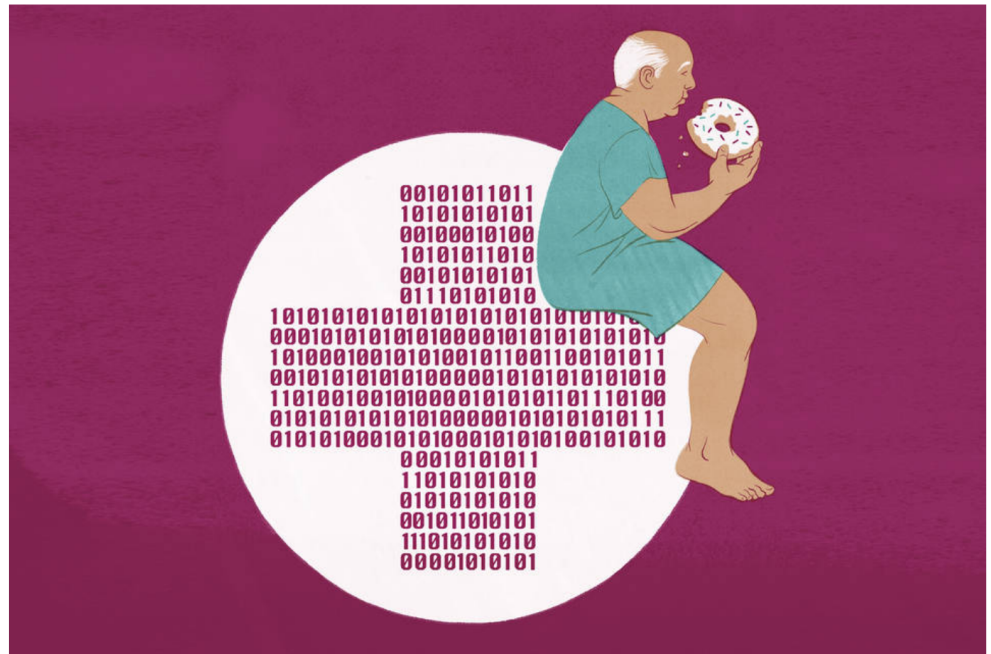High-tech health care hasn't proved effective at changing patients' bad habits

ILLUSTRATION: ALEX NABAUM

By Ezekiel J. Emanuel
Nov. 10, 2017 10:54 a.m. ET

💬 44 COMMENTS

Modified from: https://www.wsj.com/articles/the-hype-of-virtual-medicine

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Summary of Insight #5

- Opportunity to empower, engage in new ways

- Participatory role of nursing

- Increase awareness and usability of mHealth

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Future of mHealth

- Gamification

- Social Networks

- Biometrics

- Environmental Sens

Modified from: https://www.omron.com/

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Summary Points

- Abundance of mHealth

- Need a systemic, scientific base

- Understand the problem

- Data, data, data

- Value of nursing

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Short Term Takeaways

1. Start conversations with staff, with patients

2. Know your policies and procedures

3. Get involved with pilots

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"85% of a population's well-being, its quality of life, is due to factors other than medical care"

Dr. David Nash, Dean of the College of Population Health

Thomas Jefferson University

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Thank You!

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