mobile health: the opportunity

**transform previously unmeasured behaviors and practices into personalized, evidence-based, and evidence-producing care**

*Photo: Marshall Astor, WWW*

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and Sensemaking is the challenge
mobile health: the opportunity

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Wednesday, October 17, 12
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visualize, summarize, highlight; inform, advise, persuade
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mHealth derived data serves 3 essential workflows

**Participant self-care**
*How is this new medication working for me?*

patient apps: personal-evidence and clinically-informed tools to engage and support healthy behaviors

**Clinical care**
*How is the patient responding to new care plan?*

‘relevant-time’ clinical dashboards: summarizing and correlating symptoms, side effects, meds, and health behaviors

**Research evidence**
*What works best in different contexts?*

mhealth-enabled n-of-1 studies: systematic, individualized studies of treatment alternatives

mHealth evidence-base: which mHealth techniques are effective, and for whom

w/ Ida Sim, Open mHealth
rephrasing ‘does it work?’

(Complexes of) Exposures
sertraline

strength of association?
individual

Outcome
depression

population
rephrasing ‘does it work?’

(Complexes of)
Exposures
sertraline

strength of association?
individual

Outcome
depression

population

‘does it work on average?’ (RCT)

sertraline

Depression (PHQ-9)

venlafaxine

Depression (PHQ-9)

population

100

50

50

Sim, Kravitz
Innovative infrastructure will fuel a learning health system.

Deborah Estrin, Professor, Cornell Tech, New York City, destrin@cs.cornell.edu