

**Remote Healthcare
Delivery in the Future**

The BC Experience

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+ A little about me

- I am a medical specialist in Child and Adolescent Psychiatry
- I worked briefly as a general practitioner
- I am currently involved in more than half a dozen eHealth projects in BC
- I study mobile health products for UBC

- Over 90% of my practice is done online
- My laptop is my office

+ Disclosures

- I am an independent contractor with the Provincial Health Services Authority and UBC eHealth Strategy Office

- I do not have any financial ties to any of the private companies I will talk about today

+ Why I care about this

- A 15 year old girl makes a suicide attempt in a distant town
- The town is only accessible by air and boat during the winter

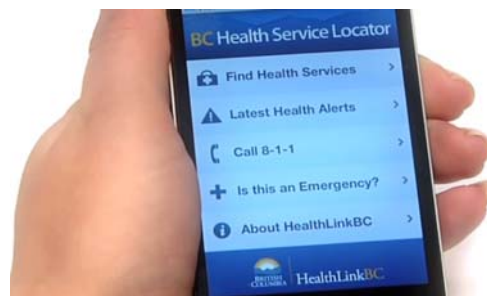
+ Why I care about this

- She is taken to the local jail because no mental health unit is available in her town
- I request an airlift to Children's Hospital
- We wait 3 days for an aircraft because of heavy fog and winter conditions
- She is flown to our hospital and stays 2 weeks
- Her family flies to Vancouver at a cost of more than \$2000 for airfare, \$1500 for accommodations, \$2500 lost wages
- I send her home for follow-up treatment

- Total cost to healthcare system: \$25000+
- Total cost to her family: \$6000+

+ What are we doing in BC?

Telephone Hotline (HealthLinkBC)



+ Why I care about this

- I make a telehealth assessment
- I coordinate followup care and supervision with local community members
- I commence medication treatment through the local Telepharmacy
- The patient emails me to communicate her progress
- She starts a cognitive behavioural therapy program delivered by a smartphone app
- I see her frequently through telehealth

- Total cost to healthcare system: \$2000
- Total cost to her family: \$250

+ What are we doing in BC?

Conventional Telehealth

Waitlists down



+ What are we doing in BC?

Non-conventional Telehealth Reduced barriers to access

Wherever You Are

Access Medeo from your desktop, iOS or Android device.



+ What are we doing in BC?

Quantified Self



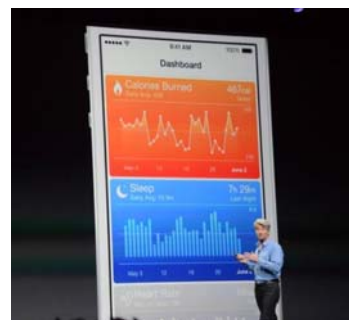
+ What are we doing in BC?

Mobile Apps Most popular free anxiety app in the world



+ What stops us from doing more?

- Time
- Money
- Expectations



+ Time

- Healthcare professionals are busy
- Healthcare system is structured around appointments and procedures
- eHealth and mHealth demands time, all the time, anytime
- Increased burden on primary care providers

+ Expectations

FAST FEED

THIS STATISTIC SHOULD WORRY THE MAKERS OF WEARABLE DEVICES

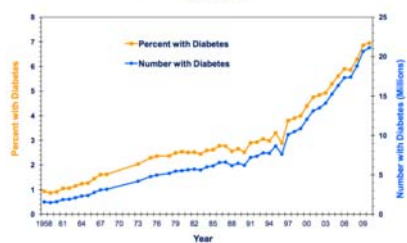
ONE-THIRD OF AMERICANS DITCH THEIR WEARABLE DEVICE WITHIN SIX MONTHS. IS IT THE CURRENT TECHNOLOGY'S LIMITATIONS? OR ARE WEARABLES SIMPLY NOT AS DISRUPTIVE AS WE MIGHT THINK THEM TO BE?

+ Money

- Healthcare payments to providers are "one provider, one patient, one service"
- Compensation scheme falls apart when confronted by mHealth
- Eg. How do you pay a physician who reviews data from a mobile app? How do you document this? How do you audit this?
- mHealth favours quick number-driven interventions

+ Expectations

Number and Percentage of U.S. Population with Diagnosed Diabetes, 1958-2010

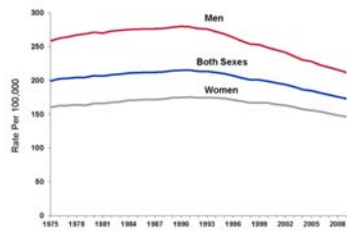


CDC's Division of Diabetes Translation, National Diabetes Surveillance System available at <http://www.cdc.gov/diabetes/statistics>



+ Expectations

Cancer Death Rates* by Sex, US, 1975-2009



*Age-adjusted to the 2000 US standard population.
Source: US Mortality Data 1975-2009, National Center for Health Statistics, Centers for Disease Control and Prevention.

+ Moving Forward

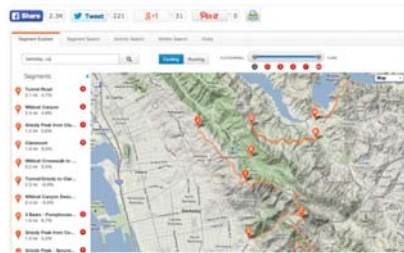
mHealth is the future. Full stop.

- Technology is the easy part
- Structural changes to the healthcare system are needed
 - How we divide labour
 - How we pay providers
 - Assigning "value" to eHealth / mHealth interventions
 - Matching expectations with reality
- Privacy and security: Everyone has "privacy protections" in place
What does that actually mean?

+ Expectations

Family sues Strava over descending death

By Casey Fretz Published Jun. 15, 2012



Family of Kim Flint says Strava is too biased off its segment design.
Two years ago, William "Kim" Flint lost his life descending a hill in Berkeley's Tilden Park, braking suddenly to avoid a car and losing control of his bike. According to his family, Flint was chasing a new fastest time on the popular cycling website Strava, which allows users to compare times over a section of road or trail using GPS units.