

allCine™



***Health on Your Hip:
Leveraging the Power of the Wireless World***

Agenda

- The Questions
- The Move to Mobile
- The Wireless Revolution
- Examples of Success
- Some of the problems
- The Future



Some Questions to Answer

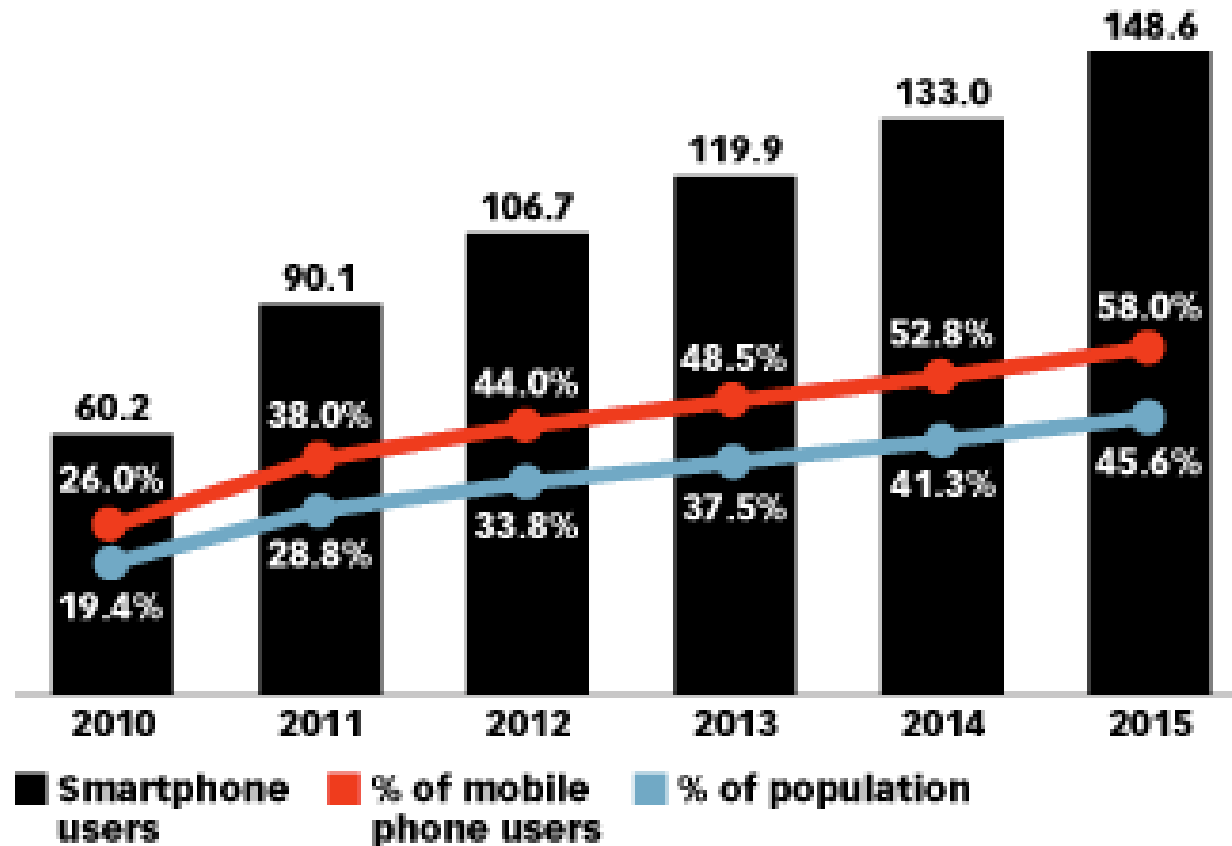
- What is the penetration of smart phones
- Are phones used by the consumer
- Are their viable products in the health world
- Can they change behavior



Mobile Technology is Changing Everything

US Smartphone Users and Penetration, 2010-2015

millions, % of mobile phone users and % of population



Source: eMarketer, Aug 2011

130909

www.eMarketer.com



Wireless Health Trends

- **Health Improvement versus sick Care**
- **Wireless Health is moving rapidly upstream**
- **Moving from the Hospital to the Home**
- **Silo'd Products versus integrated systems**



More Market Stats

- The Market for Mobile Healthcare Applications in 2011 was estimated at \$718 million.
- Market projected to almost double to \$1.3 billion in 2012
- Sensors are beginning to emerge and play a more prominent role
- 124 million users downloaded mHealth smartphone applications in 2011
- Projected to be 247 million people download at least one mHealth app in 2012



Health Care and Tech Companies are Getting involved

- **Blue Shield of California (BSC) announced this week a five-year contract with HP Enterprise Services to help the insurer to more cost-effectively bring products and services to members quicker,**
 - The health plan is also exploring ways that mobile health apps can help it better engage its members to take greater responsibility for their own health care.
- **Verizon Previews Remote Monitoring, Telehealth Platforms at mHealth Summit**
- **Qualcomm announces the formation of QualcommLife**



Can a Smart Phone be a Behavior Change Agent

**The Average Cell
Phone User looks
at their phone 150
times per day!**



Source: Nokia



Interstitial Time

➤ The old model of health care and particularly DM and Wellness competes with our frantic pace and loses every time until its too late and we have to pay attention

➤ We are all too busy

- Can't take the call now
- Don't have 30 minutes to spend



➤ The Phone and its programs are always there just below the surface, able to be accessed when we are free



SMS Text Messaging



A Simple but Widespread Way to Communicate

- An estimated 98% of cell phones worldwide have text message capabilities.

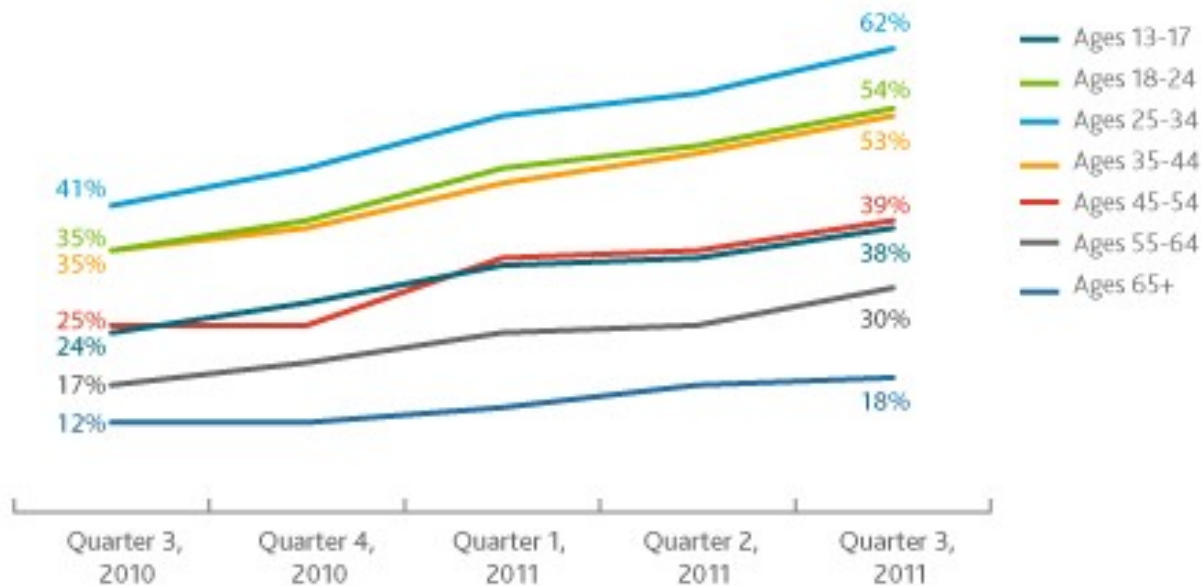


The Average Teen Sends More Than 3,000 Texts per Month

➡ But if you think its just Teens using new technology:

Smartphone Penetration By Age Group

Q3 2010 - Q3 2011, U.S.



Source: Nielsen

nielsen



Text Messaging Improves Patient Medication Adherence

- Center for Connected Health reported that daily text messages (TMs) providing medication reminders and educational information about atopic dermatosis (a type of eczema) improved treatment adherence and self-care behaviors for patients.
- 6-week study
- 76% of patients reported a significant improvement in skin severity
- 98% reported an improvement in at least one self-care behavior due to the TM reminders.
- 88% and 92% of patients found the reminder TMs and educational TMs helpful.
- 25 adolescent and adult patients at Massachusetts General Hospital in Boston

Text Messages as a Reminder Aid and Educational Tool in Adults and Adolescents with Atopic Dermatitis: A Pilot Study, Venessa Pena-Robichaux, Joseph C. Kvedar, and Alice J. Watson. *Dermatology Research and Practice*, Volume 2010 (2010)



Mobile Apps – Computing Power on Your Phone



The Apple App Store

File Edit View Controls Store Advanced Help

iTunes

Music Movies TV Shows App Store Books Podcasts iTunes U Ping Sign In

LIBRARY

- Music
- Movies
- TV Shows
- Radio

STORE

- iTunes Store
- iTunes Match
- Ping

SHARED

- Home Sharing

GENIUS

- Genius

PLAYLISTS

- iTunes DJ
- 90's Music
- Classical Music
- Music Videos
- My Top Rated
- Recently Added
- Recently Played
- Top 25 Most Played

New 1-6 of 20 See All >

Kirstie Alley's Org...
Organic Liaison

Biorhythm and Ho...
HongSoft

MySpine
Hubbard Chiropractic ...

Touch Your Toes in 10 Days
TechMonk

Global Spin Coach
Setona LLC

Take Shape For Li...
Medifast, Inc.

iPhone Health & Fitness

APP STORE QUICK LINKS

Health & Fitness

- Previous Apps of the Week
- Previous Games of the Week
- Essentials
- Great Free Apps
- Apps Starter Kit
- Games Starter Kit
- App Store on Facebook
- App Store on Twitter
- Purchased **NEW**
- Redeem

TOP CHARTS

Paid Apps See All >

- Sleep Cycle alarm clock Health & Fitness
- Fitness Buddy : 1700+ Exercis... Health & Fitness
- Nike+ GPS Health & Fitness
- Calorie Tracker - LIVESTRON... Health & Fitness
- Couch-to-5K Health & Fitness
- P90X Health & Fitness
- Ab Workouts Pro

What's Hot 1-12 of 120 See All >

Sort By: **Featured**

Endomondo Sports Tracker
Updated Feb 02, 2012
FREE

101 Power Thoughts - Louis...
Updated Feb 11, 2012
\$5.99 **BUY**

C25K™ - 5K Trainer **FREE**
Updated Feb 11, 2012
FREE

Nexercise - a fun fitness ex...
Updated Feb 01, 2012
FREE

Pregnancy • Sprout • Lite
Updated Dec 08, 2011
FREE

Monitor Your Weight
Updated Feb 03, 2012
FREE

iCross WoD Free
Updated Dec 22, 2011
FREE

iSmoothRun
Updated Jan 13, 2012
\$4.99 **BUY**

WOD — Workout Logger for Cro...
Updated Jan 28, 2012
\$3.99 **BUY**

Better Health Insurance Finder
Updated Feb 10, 2012
FREE

Pushups Coach
Updated Jan 24, 2012
\$1.99 **BUY**

Sound Sleep™
Updated Jan 09, 2012
FREE

9:07 AM 2/15/2012

Whatever You Want – There's an App for That

All Healthcare & Fitness iPhone Apps

Paid

Free

1-24 of 7480 See All >

Sort By: Release Date



Symptomia
Released Feb 15, 2012
\$1.99 BUY



Здоровое питание ...
Released Feb 15, 2012
\$2.99 BUY



Bipolar Diet Daily
Released Feb 14, 2012
\$0.99 BUY



Confidence Hypnosis
Released Feb 14, 2012
\$3.99 BUY



17 Day Diet.
Released Feb 14, 2012
\$1.99 BUY



Innovatives Autoge...
Released Feb 14, 2012
\$2.99 BUY



iShouldMove
Released Feb 14, 2012
\$0.99 BUY



MRSA-Risk Calculator
Released Feb 14, 2012
\$1.99 BUY



Muscle Max
Released Feb 14, 2012
\$0.99 BUY



One Minute Mindful...
Released Feb 14, 2012
\$0.99 BUY



Pool Pal
Released Feb 14, 2012
\$1.99 BUY



Runner's Log
Released Feb 14, 2012
\$0.99 BUY



Self Esteem Hypnosis
Released Feb 14, 2012
\$3.99 BUY



Shoulder Injuries
Released Feb 14, 2012
\$1.99 BUY



РелаксТренинг
Released Feb 14, 2012
\$3.99 BUY



שמות לתיקנות
Released Feb 14, 2012
\$0.99 BUY



EmbraceTiger (for i...
Released Feb 13, 2012
\$4.99 BUY



中医名 词辞典
Released Feb 13, 2012
\$0.99 BUY



Five Tibetan Rites
Released Feb 12, 2012
\$1.99 BUY



MySpine
Released Feb 12, 2012
\$0.99 BUY



Meditations for Rela...
Released Feb 11, 2012



Mocktails
Released Feb 11, 2012



メディボケ [MediPock...
Released Feb 11, 2012



AlliedPeds
Released Feb 10, 2012

6. P90X
Health & Fitness
7. Ab Workouts Pro
Health & Fitness
8. Sleep Machine
Health & Fitness
9. White Noise
Health & Fitness
10. Instant Heart Rate by Azumio
Health & Fitness

Free Apps

See All >



1. Calorie Counter & Diet Tracker by ...
Health & Fitness
2. iTriage
Health & Fitness
3. Weight Watchers Mobile
Health & Fitness
4. WebMD
Health & Fitness
5. Lose It!
Health & Fitness
6. Weight Watchers Barcode Scanne...
Health & Fitness
7. Period Diary (Period, Fertile & Ovul...
Health & Fitness
8. Health & Fitness Magazine
Health & Fitness
9. Ab Workouts Free
Health & Fitness
10. iMapMyRUN - Running, Run, Joggin...
Health & Fitness



The Android Market

+You Search Images Videos Maps News Shopping Gmail More +

Sign in

Android Market

Apps

Music

Books

Movies

My Library



Health & Fitness

CATEGORIES

TOP PAID

TOP FREE

Games

Arcade & Action

Brain & Puzzle

Cards & Casino

Casual

Live Wallpaper

Racing

Sports Games

Widgets

Applications

Books & Reference

Business

Comics

Communication

Education

Entertainment

Finance

Health & Fitness

Libraries & Demo

Lifestyle

Live Wallpaper

Media & Video

Medical

Music & Audio



Endomondo Sports T...

ENDOMONDO

★ ★ ★ ★ ★ (2,667)

\$3.99 BUY



Instant Heart Rate - Pro

AZUMIO INC.

★ ★ ★ ★ ★ (2,667)

\$0.99 BUY



WW Points Plus Diar...

FRIPPIWARE

★ ★ ★ ★ ★ (3,181)

\$1.49 BUY



Ultimate Weight Wato...

FENLANDER SOFTWARE...

★ ★ ★ ★ ★ (2,822)

\$3.95 BUY



White Noise

TMSOFT

★ ★ ★ ★ ★ (2,248)

\$1.99 BUY



JEFIT Pro - Workout...

JEFIT INC.

★ ★ ★ ★ ★ (2,095)

\$4.99 BUY



Pink Pad Pro (Period...

ALT12 APPS, LLC

★ ★ ★ ★ ★ (1,206)

\$2.99 BUY



Calorie Counter PRO...

MYNETDIARY.COM

★ ★ ★ ★ ★ (3,226)

\$3.99 BUY



Restaurant Weight W...

ELLISAPPS.COM

★ ★ ★ ★ ★ (152)

\$3.91 BUY



Restaurants & Weigh...

POST799

★ ★ ★ ★ ★ (294)

\$3.89 BUY



BabyBump Pregnanc...

ALT12 APPS, LLC

★ ★ ★ ★ ★ (1,120)

\$2.99 BUY



Daily Ab Workout

DANIEL MILLER

★ ★ ★ ★ ★ (555)

\$0.99 BUY



C25K Pro

GUY HOFFMAN

★ ★ ★ ★ ★ (654)

\$1.99 BUY



WomanLog Pro Cale...

PRO ACTIVE APP

★ ★ ★ ★ ★ (756)

\$2.99 BUY



90Droid ExtremeFitne...

UNIFYLOG LLC

★ ★ ★ ★ ★ (694)

\$3.49 BUY



Weight Watcher Point...

ELLISAPPS.COM

★ ★ ★ ★ ★ (184)

\$1.96 BUY



CardioTrainer Pro



Ease into 5K



Fitness Buddy : 1700...



Lightning Bug - Beac...



Top 10 iPhone Apps: Apple App Store Rewind 2011

- iMuscle
- Nike Training Club
- The Eatery
- Fooducate
- P90X
- Fitness Class
- MyFitnessPal Calorie Counter
- Sprout
- Gorilla Workout
- Airstrip Cardiology

<http://www.hindustantimes.com/technology/Application-Reviews/Top-ten-iTunes-health-apps-of-2011/SP-Article1-786237.aspx>



The Wireless Options – Leveraging the Power of Wireless



On Your
Phone



With Your
Phone



On Your
Body



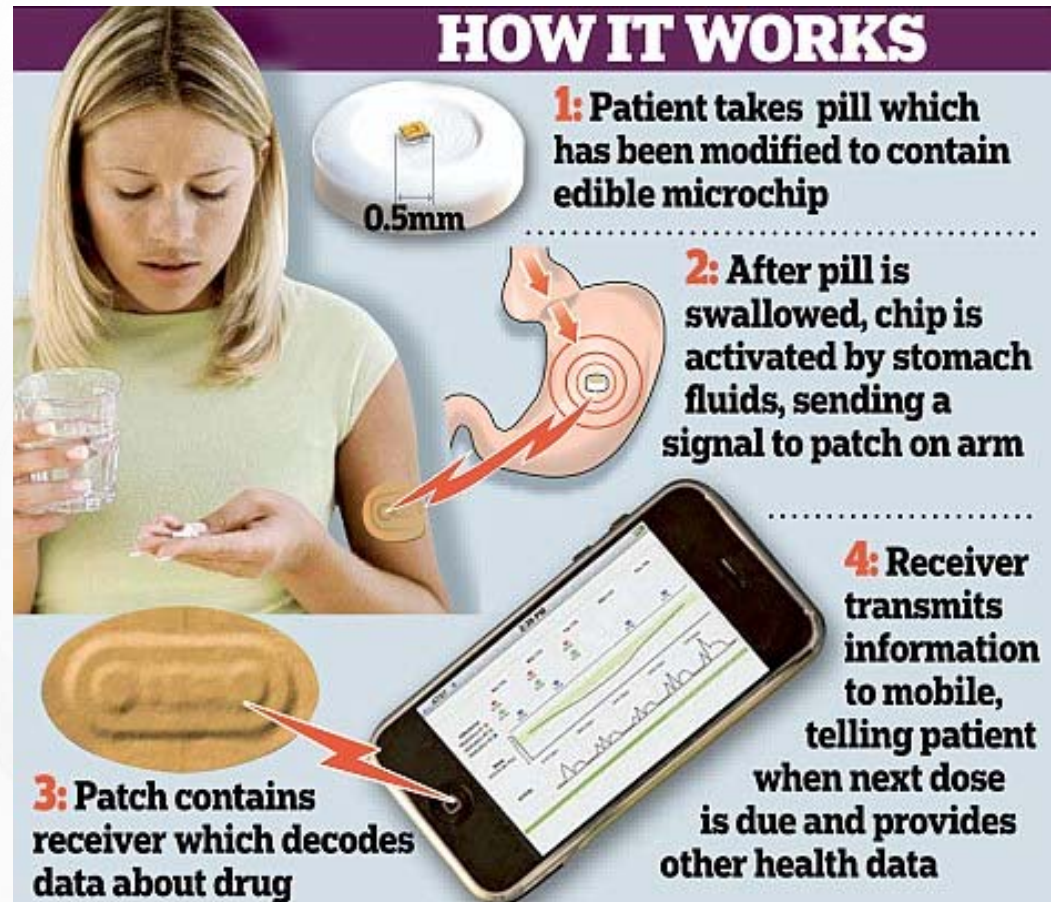
With Phone
Inside



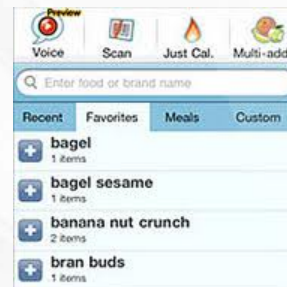
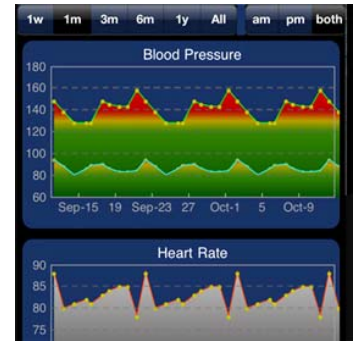
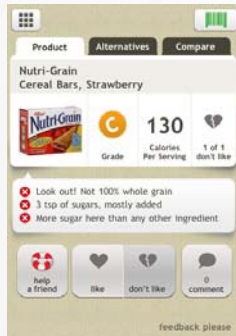
In Your
Body



Lloyds Pharmacy and Proteus Biomedical have launched 'Helius', a mhealth app system that monitors and manages patients' medication intake.



So I can Track All My Data – So What?



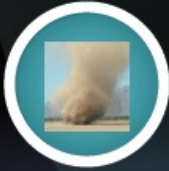
Integration of the Mobile/Wireless World

MULTI-VARIABLE ANALYTICS

THE INDUSTRY NEEDS
SEAMLESS CONNECTIVITY, APP DEVELOPERS TO HAVE EASY ACCESS TO DEVICE DATA,
ABILITY TO MASH UP DATA ACROSS DEVICES AND DATA SOURCES

HEALTH & MEDICAL
SENSORS

ENVIRONMENTAL
SENSORS



YOUR
HEALTH
SCORE
320



Action Items



Feedback



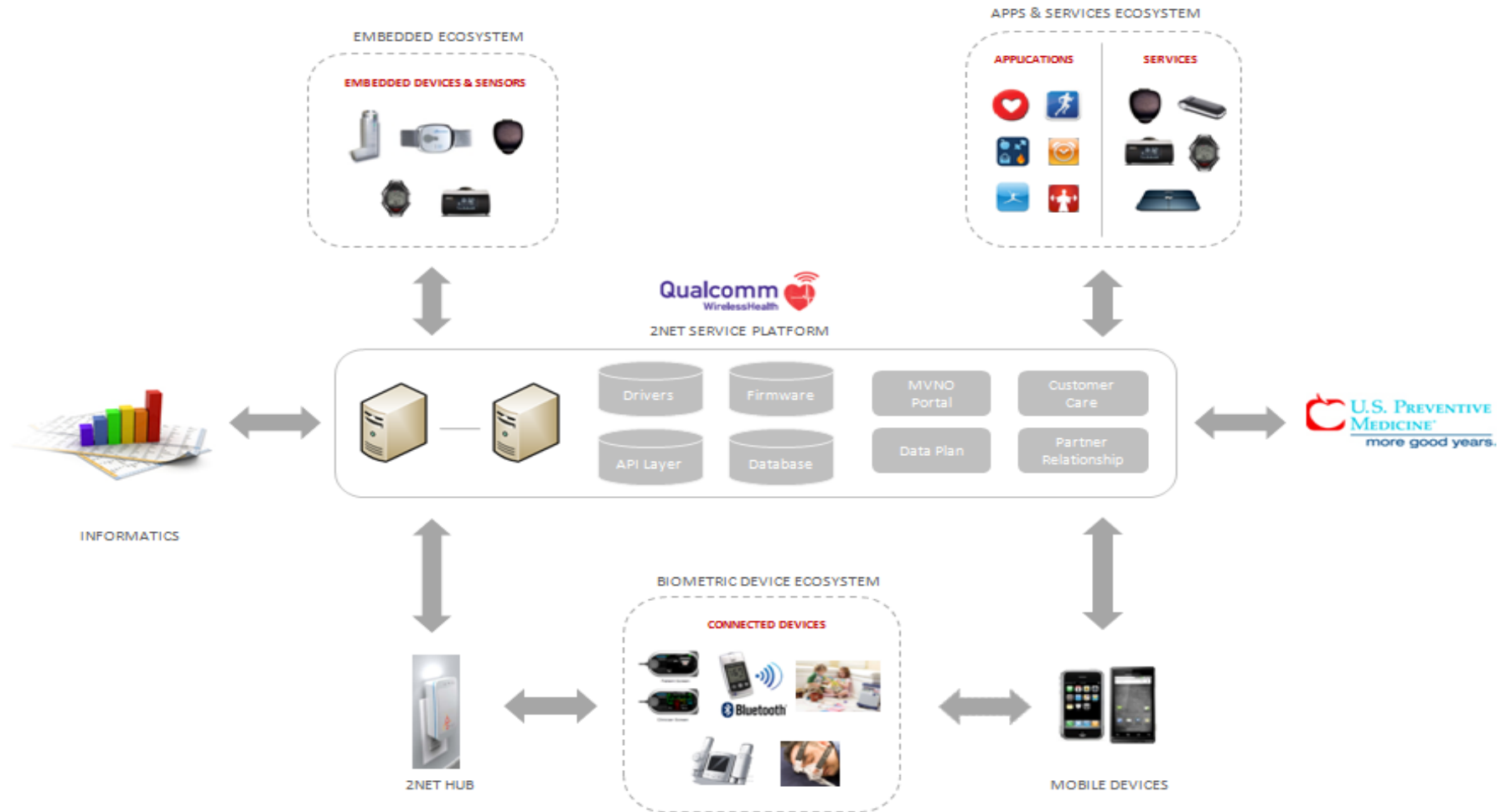
What to I need to do
to improve my score?



TO DELIVER
BETTER DEVICES, BETTER SOFTWARE,
BETTER EXPERIENCES, BETTER HEALTH
OUTCOMES

Example of an Emerging Integrated System -Qualcomm's 2Net Platform

WIRELESS HEALTH ECOSYSTEM



Issues to Consider in the Move to Wireless



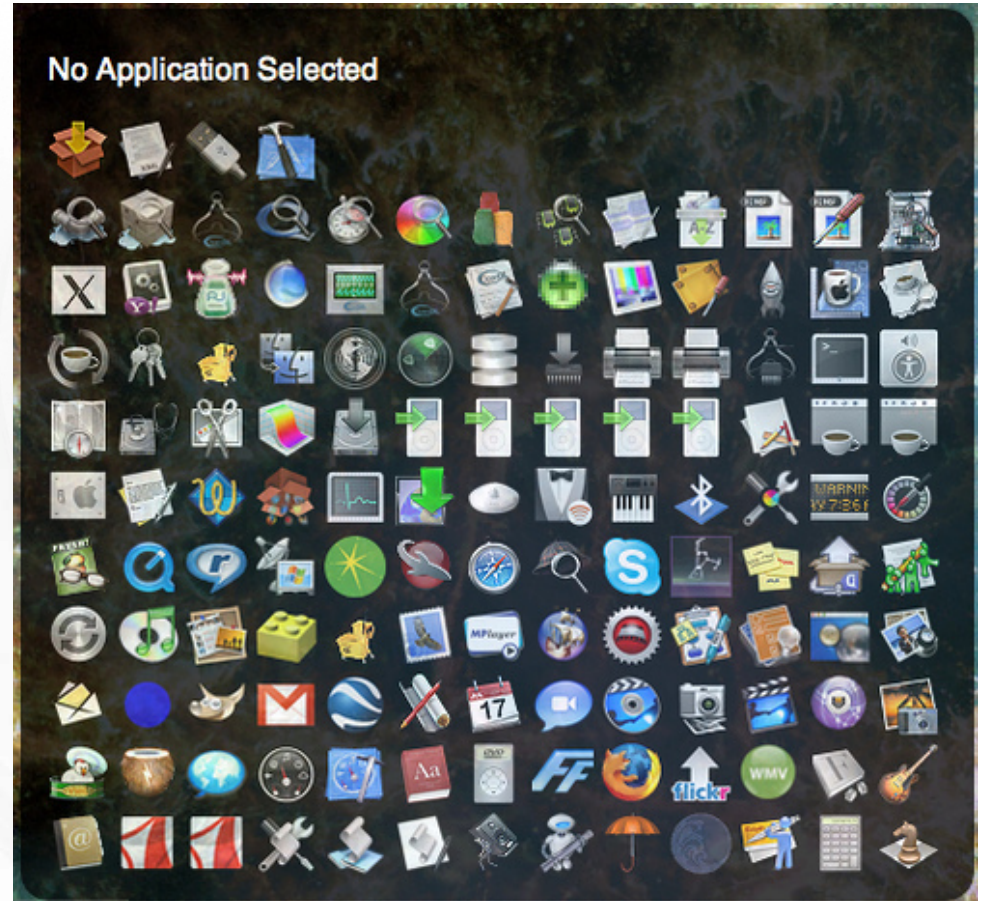
We are Very Early in this Development

- The technology is outpacing policy and the industry
- Tech developed versus Health Care developed
- Too many apps
- Fragmented/Single verticals
- Revenue generation
- FDA
- Quality



Too Many Apps

➡ 9,000 health apps in the Apple App store, expected to grow to 13,000 in 2012



Quality of Health Apps – Are they Evidence Based?

- Reviewed 47 antismoking apps on the iPhone
- Rarely adhere to established guidelines
- Low level of recommendations to proven treatment
- Abrams et al, AJPM March 2011



Who Reviews Certifies Apps



➤ Happtique

➤ NCQA, URAC????



What is Medical App per FDA?

- “... an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar or related article, including any component, part, or accessory, which is ... [either] intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease, in man or other animals ... [or] intended to affect the structure or any function of the body of man...”



The FDA and Mobile Devices and Apps

- In July 2010, the FDA allowed the WellDoc DiabetesManager System to be marketed as a medical device.
- DiabetesManager came under FDA scrutiny because it differs from earlier apps in one important respect: **it not only collects and analyzes data, but also offers users medical advice and coaching based on the results.**



Pushing the Envelope





- the device will be a tool capable of capturing key health metrics and diagnosing a set of 15 diseases
- \$10 Million Dollars
- The Robert Wood Johnson Foundation (RWJF) has launched a \$100,000 app challenge on Health 2.0 to incentivize developers to create easy-to-use online tools that help consumers find information on the quality of their local physicians and hospitals.



Will mHealth Continue to Fragment or ?

*"One Ring to rule them all,
One Ring to find them,
One Ring to bring them
all,
And in the darkness bind
them."*

