Mobile Health

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Healthcare Challenges: Affordability

Bad “Moore’s” law

Healthcare Challenges: Accessibility

Access to healthcare named as “most urgent healthcare problem” facing the US for third straight year (Gallup, Nov 2009)
Healthcare Challenges: Quality

US lagging behind several other industrialized countries in several basic health measures, including life expectancy, Chronic diseases such as obesity, and diabetes
Obesity rates in selected countries
2009*, % of adults with BMI† of 30 or over

Source: OECD

* Or latest year available
† Body mass index
Mobile Health

Has Potential To Improve:
- Affordability
- Accessibility
- Quality
Mobile Health

...and increases individual responsibility
Mobile Health?
Mobile Health?

mHealth is a term used for the practice of medical and public health, supported by mobile devices.
Mobile Health:

Utilizing mobile and wireless capabilities in meeting healthcare and wellness needs
Breaking Time & Space Barriers
Mobile & Wireless Innovations

User

Harmonized Services

Device

Network

Content
mHealth: Pre-Historic Days
mHealth: Early Days
Wellness For Consumers
Wellness Apps

[Image of health and fitness apps]

- GoLearn Cycling: $9.99
- GoLearn Fitness: Gym: $9.99
- GoLearn Fitness: Home: $9.99
- GoLearn Fitness: Pilates: $19.99
- GoLearn Hiking: $9.99
- GoLearn Running: $9.99

[Images of other apps such as Calorie Counter, CardioTrainer, JogTracker, etc.]
Demo
Adherence to Medication

- One third to one half of all US patients do not take their medications properly
- Non-adherence costs $290B each year

Data: New England Healthcare Institute, Aug 2009
Text4Baby

How It Works

Outreach & Promotion
Register
Registration Survey
Starter-Pack of Key Messages
Free Tips 3x Week
Evaluation
Total support of exercise and diet through handsets

1. Exercise Support
   - Daily Pedometer
     - Check daily pedometers by simply having a handset
     - First step of awareness of healthcare
   - Walking & Jogging
     - Notify pace, course and map during work-out
     - Manage work-out by saving lap time and course result
   - Physical Check
     - Physical power check with handset
     - Operate in a friendly manner by image and sound

2. Dietary Management
   - Food Note
     - Check daily nutrition balance and calories taken by entering food record easily
     - Receive recommending menus from nutrition balance

3. Continue with Joy
   - Game
     - Reflect daily exercise and food record to the game
   - Medal (as prize)
     - Can obtain digital content by medal accumulated via daily exercise and food entry
   - Ranking
     - Check pedometer and running distance by ranking

Source: DOCOMO
Chronic Disease Management

WaveSense for diabetes management

Source: WaveSense website
Chronic Disease Management

Diabetes type 2 Management
Electronic Medical Records

Digital data travels
Remote Patient Monitoring

Airstrip OB
- Labor & Delivery

Airstrip Cardiology
- ECG 12 Lead

Airstrip Enterprise
- ICU, OR, Telemetry, ED, etc...

Source: AirStrip Technologies
Remote Patient Monitoring

NUVANT Mobile Cardiac Telemetry System:

- Continuous monitoring of heart activity
- 24/7 ECG review at the Corventis Monitoring Center
- Complete Daily, Event and End of Use Reports available to physicians

Source: Corventis
Aging Independently

- GE & Intel QuietCare

Source: QuietCare web site
mHealth: Jetsons Era

Mobilizing Current Systems

Designing Mobile Systems
mHealth: Intelligent Medicine

Source: Proteus BioMed
Wireless Natives

Wireless knee brace: Telefonica with Barcelona’s Hospital de la Esperanza
People Willing to Pay for It

- Consumer market for remote/mobile remote monitoring devices is $7.7B to $43B annually (PWC, 2010)
- Global mHealth opportunity could reach $50-60B driven by consumer demand (McKinsey, 2009)
Challenges

Business Models

Use & Daily Practice

Support Concerns

Privacy & Security

Liability & Regulatory

Interop HW & SW

Challenges
Key Challenges

- Compensation
- Regulatory Issues
- Integrating mHealth into provider & patient practices
- Funding innovative start-up’s
2.5 Billion People Aren’t Waiting for US

“This is Asia’s chance to leapfrog the West,”

“In emerging markets the highest growth in service spending will be in healthcare. Healthcare products and service suppliers, however, are almost entirely Western. This is an opportunity. What if instead of replicating Western healthcare systems, emerging markets create their own tailored systems. The current healthcare systems have been shaped by the needs of the populations of the 500 million to 700 million predominantly Western people in the world. What impact will 2.5 billion Chinese, Indian and other Asian populations have on healthcare in the next 20 years?”

James Nakagawa, Mobile Healthcare Inc.
mHealth Summit, Dubai, Sep 2010

Source: MobiHealthNews
Arvani Group

- **Focus:** Mobile & Wireless Business Consulting
- **Clients:** Multinationals to start-ups, and investors
- **Challenges We support clients with:**
  - Growth strategies based on emerging technologies
  - Mobilizing current products and services
  - Business development and partnerships
  - US expansion
  - Expanding company’s wireless knowledge
  - Investor & partner due diligence
- **Publish Arvani Report** with potent insights and analysis covering major wireless show
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