

Home Care Technology: Changes at Hyper-speed and a Snails Pace

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Not all problems have a
technological answer, but when
they do, that is the more lasting
solution.

-Andy Grove



Disclaimer

- I speak as an observer of the industry, not as a state spokesperson
- I have no financial relationship with any product or vendor

Imagine

- Louise
- Stephanie
- Cathy
- Jeff





- Trends of doom
- It's an unusual industry
- You, me and everybody else

Why the Snail's Pace?

No bricks and mortar

Follow the \$

Focus on Electronic Medical Record

Resistant customers

Skeptical providers

Murky data

Low margins in Homecare, in general

In 2013:

304,350 Agencies

\$74.5bn Revenue

\$3.1bn Profit

Annual Growth 2009 – 2014 **3.6%**

Expected Annual Growth 2014 – 2019 **-0.2%**

I'm comfortable, are you comfortable?

- WATCH 4 minute SUN CITY VIDEO - at home vitals monitoring coupled with telemedicine and care coordination



RPM

Remote Patient Monitoring

- Philips
- Cardiacom
- Honeywell

- Blood Pressure
- Weight
- Pulse Oximeter
- Blood Glucose

Who sets parameters
Who monitors
Who responds

- ROI Calculator

The Biggest Problems

Falls

+

Medication Compliance =

ACTIVITY MONITORING

Medication Management

- Reminders from beeps, calls, accelerating intervention
- Blue tooth to a hub
- 30 second video



Activity Monitoring

- Cameras
- Motion sensors
- Contact sensors
- Pressure pads
- Liquid Detection
- Accelerometers



AFrame



Activity Monitoring 2015

- Data over-load. We're still on the learning curve
- Management by exception
- Roll-up, enterprise level reporting
- Used in care planning and proving acuity levels

Healthsense

- Northfield Retirement Community
 - Ebenezer Society
- Lutheran Home Association

Be Close

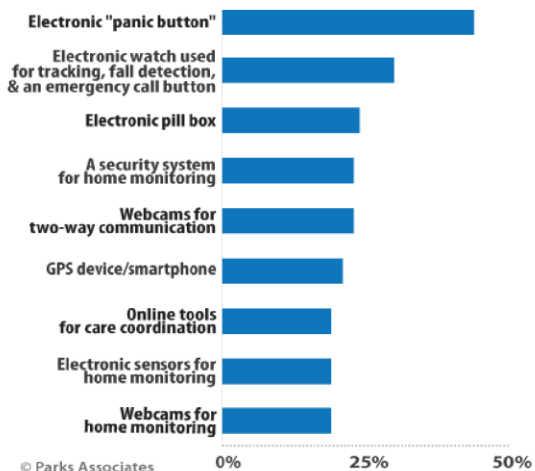


The internet and a hub

- Knute Nelson & GrandCare
- Healthcare
 - Medication Management
 - Blue tooth: scale, bp, pulse ox, glucose
- Activity monitoring
- Communication
 - Care team
 - Clinical team
- Social
 - Games, music
 - Skype
 - Facebook
 - Letters

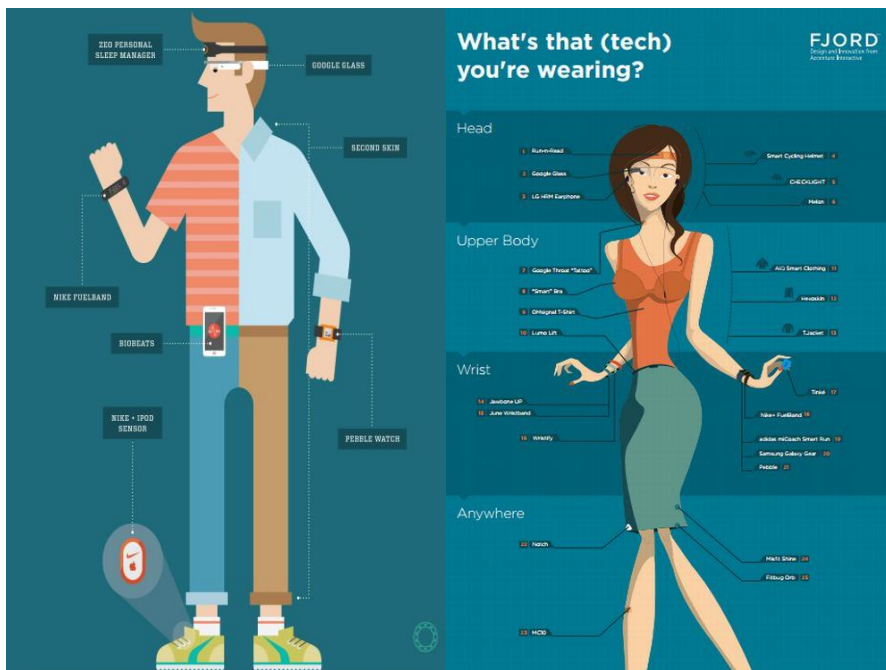
Appeal of Technology Use As Caregiving Aid

Current and Future Caregivers in U.S. Broadband Households



Questions?



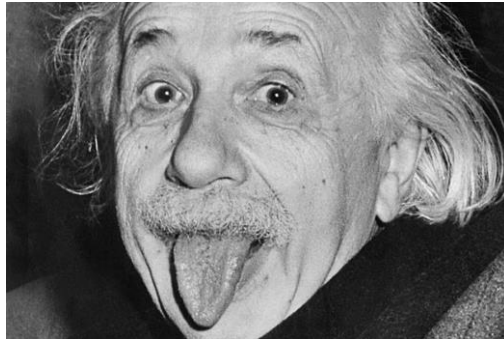


More changes...

- Broadband availability
- Business Developers are acknowledging the demographics
- Changes in primary care delivery
- Reimbursement
 - Care systems
 - bundled payment
- **BIG DATA**

Basic desires as we age

- I want to be healthy. I want more health, less healthcare.
- do things for myself
- feel safe
- NOT be lonely
- Keep my marbles



Health and Wellness

- HEALTH
 - Coordinated Care, Vitals, Biosensors, Telemedicine, Medication Management, Chronic Disease Management, Dr. Google
- WELLNESS
 - WiiFit, Microsoft Kinect, Never2Late
 - FitnessPal ,Spark People
 - Fitness tracking, coaching, motivating
 - Care Innovations, Ideal Life
 - remotely monitoring chronic diseases like diabetes or COPD

Assistive Technologies

- AARP Slide Show
- Leading Age examples
 - Sem glove, fork, robotic suit
- Minnesota STAR Program
- Live Life Therapy Solutions



Communication

- EHR, Patient, Family and Care providers
- Sensor driven interventions
- More video and conferencing in
- Virtual Communities
 - BeBloomn
 - Disease or Caregiver Related groups
 - Virtual Retirement Communities
 - GrandCare
- Aarp RealPad, GrandPad
- Smart phone Jitterbug Touch, GreatCall

Safety and Security

- Sensor based information hubs
 - Security systems, lighting, temperature control
 - Webcam, Alarms, escalation
 - Onkol, Sen.se
- Mobile PERS
 - with GPS GreatCall
 - passive fall detection Lifeline AutoAlert
 - Specialized call centers

Who pays?

- Grants
- Investors
- Medicare
- Medicaid & State Programs
- Insurance Companies
- Providers
- Consumers

Report to Congress: Aging Services Technology Study
June 2012
U.S. Department of Health and Human Services

- Like the care issues they address, ASTs are numerous and varied
- Fast rate of improvement and new entries make studies difficult

“There is substantial heterogeneity in the amount and quality of the available evidence supporting the efficacy and cost-effectiveness of ASTs.”

- Falls
 - The evidence continues to grow on fall prevention and response, but there are few large scale studies.
- Telehealth and Remote Patient Monitoring
 - May reduce hospital utilization and improve clinical outcomes, but small sample sizes, lack of randomization and absence of long term studies. About half of the review studies suggesting benefits and the other half showing no effect.

Innovators in Home care tech in MN

- Knute Nelson
 - GrandCare hub
- Be Bloomn’
 - Virtual Community in Red Wing
- U of M Center for Aging
 - conference
 - Dr. Gaugler studying Healthsense in Homes
- STAR, Independent Living Centers
 - Regional lending office
- Live Life Therapy Solutions
 - Assessments, match technology to goals www.technologyforhome.org
- VA Medical Center
 - Prescribing technology
- Telemedicine: gpTRAC Great Plains Telehealth Resource Center
 - Zipnosis, Virtuwell, Bluestone Physicians

Where to look nationally and internationally

- ATA American Telemedicine Association
- Leading Age CAST
 - Center For Aging Services Technology
- AARP
- Center for Technology and Aging (UC Berkely)
- European Union Technology Consortia; Canada, Australia
- Aging Technology Watch blog

What's the Future?

- More awareness. Boomers are demanding consumers.
- Big Data driving care coordination, guideline based care and virtual meetings.
- Repurposing existing technology
- New Entrants
- Home as site of care
- Virtual Communities
- Robotics

Where will it come from?

- The Web
- Infomercials
- Prescriptions while on bundled payment
- State aging in place initiatives
- Younger, more techie family members
- You?