Digital Health Innovations: Engaging the Patient and Transforming Health Care Delivery

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The Not-So-Distant Future?
Consumer Adoption of Digital Health

• Health/fitness apps:
  o 46 million U.S. users in January 2014 (one-year 18% increase).

• Wearables:
  o ~10% of Americans use wearable technology.
  o Fitness bands, smart watches the most popular.
  o 75% of consumers believe wearables improve wellness.

• Biosensors:
  o Patches and tattoos, ingestibles, and smart implants.
  o The future?

Source: Nielsen; ON World; Rock Health.
Venture Funding of Digital Health Jumps in 2014

Source: Rock Health.
Global mHealth Revenue Projected to Grow Rapidly

Billions US$

Global mHealth Market Opportunity by Service Category, 2017

- Monitoring, 65%
- Diagnosis, 15%
- Treatment, 10%
- Prevention, 1%
- Wellness, 3%
- Administration, 1%
- Clinician support, 5%

The Holy Grail: Managing High-Need, High-Cost Patients
Health Care Costs Concentrated in Sick Few—Sickest 10 Percent Account for 65 Percent of Expenses

Distribution of health expenditures for the U.S. population, by magnitude of expenditure, 2009

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Annual Mean Expenditure Per Person</th>
<th>Total Spend</th>
</tr>
</thead>
<tbody>
<tr>
<td>1%</td>
<td>$7,978</td>
<td>$7,978</td>
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<tr>
<td>5%</td>
<td>$40,682</td>
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<tr>
<td>97%</td>
<td>$275,000</td>
<td>$275,000</td>
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</tbody>
</table>

Source: Agency for Healthcare Research and Quality analysis of 2009 Medical Expenditure Panel Survey.
Using mHealth to Manage HCHN Patients: Current Examples

• VA national telehealth program.
  – Remote monitoring and videoconferencing.
  – $2,000 annual savings per patient.
• Remote monitoring for patients with CHF.
  – Pilot program reduced readmissions 44%.
• Smart pill bottles to track Rx adherence.
• Mobile mental health: CBT through cell phones.

Current Challenges for Digital Health

- Incorporating mobile data into EHRs.
- Privacy and security.
- Need for evidence of efficacy of applications.
- Big Data analytics.
- The overwhelmed clinician.
Breakthrough Opportunities: Health IT to Support Patient Engagement

Join the discussion with leading experts and over 13,500 health care professionals from around the world: http://ghdonline.org/breakthrough-health-it

How can we radically leverage technology to increase patient engagement in care, dramatically improving outcomes reducing costs?

• Participants are encouraged to submit innovative ideas as well as challenges they’d like to see addressed.

• Selected ideas will be shared with GHDonline's community of over 13,500 health care professionals. Ideas will be reviewed by our Expert Advisors and those with the greatest potential will be featured in a joint report from GHDonline and the Commonwealth Fund.

Video Keynotes from Experts in the Field: December 8th-12th

Julia Adler-Milstein  John Halamka, MD, MS  Ashish Jha, MD, MPH
Nina Kjellson  Bob Kocher, MD  Lygeia Ricciardi  David Rose