How Amazon in Healthcare Will Change your Organization
John M. Harris, Director
Veralon
HFMA New Jersey FACT committee
November 13, 2018

Agenda

- Competitive Environment
- Future State of Healthcare
- Current and Emerging Disruptors
- Preparing for Disruption

"We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten. Don’t let yourself be lulled into inaction."
- Bill Gates
Healthcare disruptive innovations

"...a process by which a product or service takes root initially in simple applications at the bottom of a market, and then relentlessly moves up market, eventually displacing established competitors."

– Clayton Christensen

Notable Disruptive Innovations

- Ambulatory Surgery Centers
- Urgent Care Centers
- Retail Clinics
- Telehealth

Disruptive innovations are often focused on convenience and initially dismissed by incumbents as poor quality.

Opportunities that New Entrants See in Healthcare

- Poor Communication
- High Prices
- Misaligned Incentives
- Lack of Coordination
- Patient non-compliance
- Unmanaged Chronic Illness
- Rising Pharmaceutical Costs

An Intensifying Competitive Map

Degree of Disruption

Provider Competition

- MEGA SYSTEMS
- PHYSICIAN PLAYS
- NICHES PLAYS

New Competition

- INSURER/PROVIDER
- DIGITAL DISRUPTORS

- Infrastructure
- Scope of services
- Established reputation

- Innovation
- Consumer expertise
- Tech-based/data savvy
- Resources
Past Performance is not a Guarantee of Future Results

Imagining the Future State of Healthcare

Health Systems - Past and Present

- Reputations
- Sophisticated Facilities
- Super Star Physicians
- Own It All
- Fee for Service Payments
- Secures market share
- Employed and Aligned Primary Care Physicians
An Integrated Future – 10+ years

- Convenient Access
- Efficient Facilities
- Customized Care Across the Continuum
- Artificial Intelligence-enabled Clinicians
- Partnerships
- Population-based or Episode-based Payments
- Integrated Clinical Record/Engagement Platform

Current and Emerging Disruptors

The digital consumerization of healthcare

Tech giants' apps, devices, and big data are poised to disrupt healthcare

- Attack weaknesses of traditional health systems: convenience, cost, communication, and price opacity
- Focus on the ends of the value chain – creators and consumers
- Value proposition:
  - Easy access, helpful info
  - Encourage healthy behavior
  - New front door, then steer referrals for value
  - Responsive to consumer

Disruptors in Healthcare

- Google health
- Amazon

Also keep an eye on: Facebook, cable providers
Delivery System Disruptors

New care delivery models are disrupting healthcare.

**Disruptors in Healthcare**

- Hospital is the enemy
- Focus on the ends of the value chain – creators and consumers
- Value proposition:
  - Avoid higher cost provider types
  - Optimize risk scores
  - Manage complex patients
  - Steer referrals for value
  - Responsive to consumer

---

Apple

Testing new products and services that redefine the care delivery model

- EHR Data
- Wellness
- Chronic Care Management
- Mobile Devices
- Clinics for Employees
- Medical Research

1Pilot Sites


---

Google

Strategy involves data generation/analytics, disease detection, and consumer empowerment/lifestyle management

**Technology and Big Data**

- Machine learning
- Artificial intelligence
- Analytics
- The healthcare cloud
- Predicting adverse events
- Integrating remote monitoring data

**Products**

- Google Glass
- Google Contact Lens
- Google Home
- Google Daydream View

**Alphabet Subsidiaries**

- Verily
- Deep Mind
- Calico
- Cityblock

Amazon

Using scale, understanding of customer experience, and consumer loyalty to disintermediate the current delivery system

1. Interactive Technology Platform
   - Natural language interaction with AI
   - Potential for telemedicine and remote monitoring
   - Wellness coaching and chronic illness management

2. Care Delivery by Humans
   - Telemedicine and in-person clinics at Whole Foods and employers

3. Pharmaceuticals
   - Acquisition of PillPack

4. Supply Chain Improvements

5. Cloud Services
   - Storage solutions for payers and providers

Innovators’ Points of Engagement

These points of engagement precede traditional primary care visits

<table>
<thead>
<tr>
<th>Wearable</th>
<th>Smart Phone</th>
<th>Smart Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>iWatch</td>
<td>iPhone</td>
</tr>
<tr>
<td>Google</td>
<td>Google Assistant on Samsung watches</td>
<td>Android</td>
</tr>
<tr>
<td>Amazon</td>
<td>N/A</td>
<td>Either</td>
</tr>
</tbody>
</table>
Meet your New Digital Provider...

Babylon is the UK’s leading digital health provider.
The app has been available on Google Play or App Store.

How Babylon Works

Artificial Intelligence Potential
AI has high potential because of its convenience and 24/7 accessibility
Status of AI for Pre-Primary Care

- Diagnostic Logic
- Natural Language Interface
- Integration of Data Streams
- User Comfort with AI Advice
- Navigating Malpractice Liability

Primary care continuum of the future

AI | Virtual | In Person

Implications

- Different competitive landscape, new players
- Traditional providers losing direct access to patients, especially if can’t prove value
- Large players have an advantage – analytic insight, ability to invest in data analytics, distribution has high fixed and low marginal cost
- Consumer empowerment may improve healthy living and chronic illness management
- Remote monitoring and telehealth shift care from hospital locations
- Traditional providers must choose the right partnerships to succeed
- Broader societal and technological changes likely to affect healthcare innovation as much as (or more than) clinical innovations
Preparing for Disruption

Many are Moving Forward with “Partnerships”

Preparing for Disruption

Providers and payers can position themselves for success within this competitive landscape

- Strategy must include innovation
- Incorporate into ambulatory care planning
- Be proactive, selective, and willing to pilot
- Customize by segment