



The promises and challenges of eHealth

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What is eHealth?

eHealth definition

eHealth includes all forms of **innovation** in the **health care** model using **information and communication technology**

Three critical technologies driving eHealth

New channels



New Data



New devices



eHealth growth is accelerating (again)

“First diagnostic radiology application for mobile devices cleared”

 **FDA** U.S. Food and Drug Administration

“EHR enables HC access to 19 Mio Indians”

THE HINDU
Business Line

“VA and Kaiser launch pilot to share electronic health records”

Healthcare IT News

“Ford develops heart-monitoring car seat”

**USA TODAY**

“GE and Intel’s ‘Care Innovations’ joint venture goes live”

WALL STREET JOURNAL

“IBM’s Watson may herald the birth of truly usable AI for clinical decision-making”

**The Health Care Blog**

Growth of eHealth raises a number of questions

- 1** How important is eHealth, is the opportunity really mature?
- 2** Is eHealth's emergence disruptive to traditional players, or merely an evolution?
- 3** What are the successful eHealth business models and approaches?
- 4** What will it take for companies to win in the eHealth market?

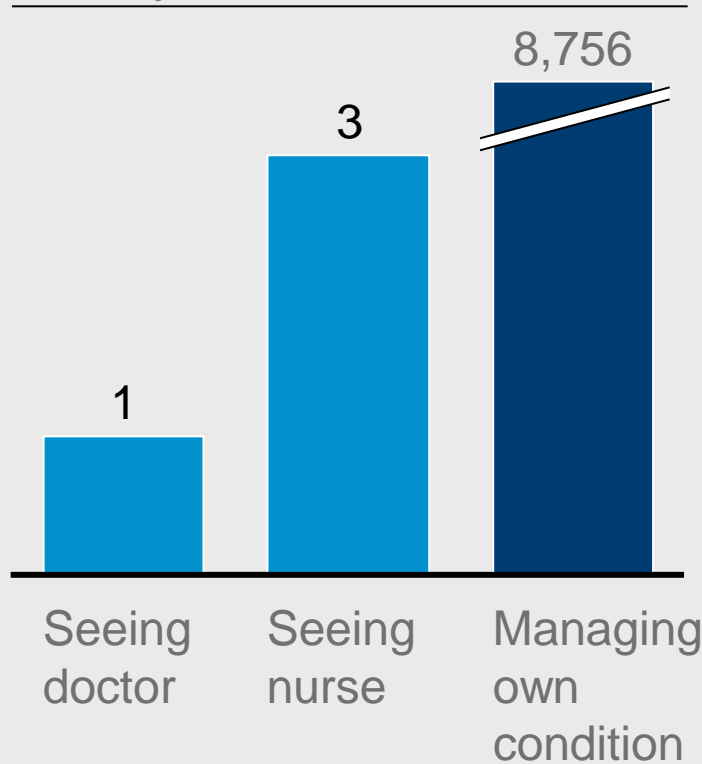


1. How important is eHealth?

Could eHealth address structural HC issues?

Time spent by typical diabetes patient

Hours/year



- HC Value added = clinician in front of patient = >97% of global \$5 trillion HC spend
- Driving 2-3% improvement in self care (via eHealth) has higher impact than 20-30% improvement in time spent with clinician

eHealth is already creating substantial value

Success cases



Disease mgt and remote care

- **Remote care management:** monitoring with video, messaging devices and cameras
- **Telemedicine:** Remote intensivist coverage in ICU allowed non-intensivist doctors and nurses to treat critical patients



Health outcomes

- **Payor Health intelligence:** Prioritized order of patient referrals to specialists according to risk stratification level improved outcomes
- **Provider clinical decision support:** Use of algorithms to compare patient data against evidence-based clinical protocols

Impact

Reduced cost of care

- 20% reduction in hospital admissions
- 88% reduction compared to the cost of home-based primary care services

Reduction in mortality rate

- 31% reduction in ICU mortality rate

Critical patients get treated first

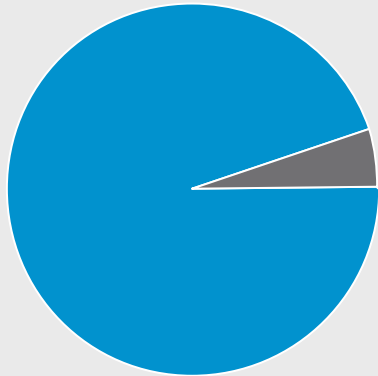
- Proportion of patients who started treatment as outpatients increased 35% to 56%

High return on investment

- \$8 return for every dollar invested in clinical alerts system
- 46 medical errors identified per 1,000 patients

Can eHealth increase customer relevance?

“Focus on the 5%”

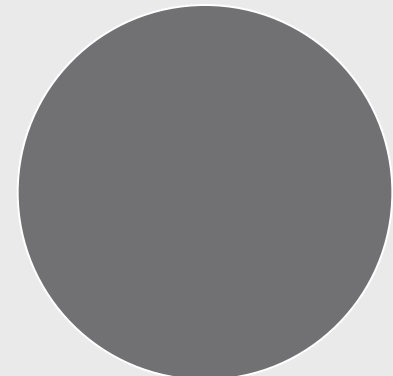


- Med tech = ~5% HC spend
- 20% spend reduction has marginal impact
- MedTech becomes less relevant to its customers

Industry faces a strategic choice



“Transform the whole”



- eHealth part of expanded role
- MedTech can increase value of global 5 trillion HC spend
- Medtech increases its relevance

As disruptive as in other industries?

What we see today....

New skills

- New players bring in analytical skills and resources which are filling a gap in the market

Innovation

- There has been a wave of innovative products which created novel ways to deliver healthcare

Money

- New products can bring additional sources of revenues to traditional players (e.g., providers, payors, pharmacos)

... has happened before in other industries



Transformed digital media



Moved retail online



Moved support to user community



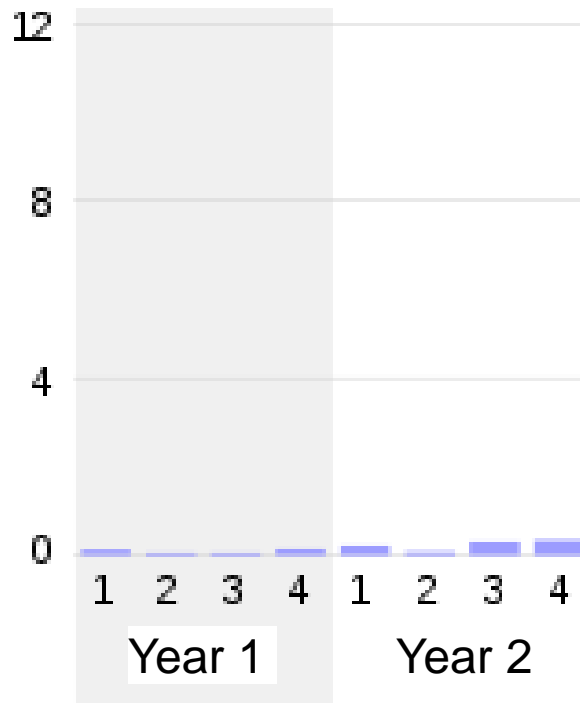
Changed movie rental experience



Developed micro-segmentation for credit cards

Sales of your new product in years 1 and 2

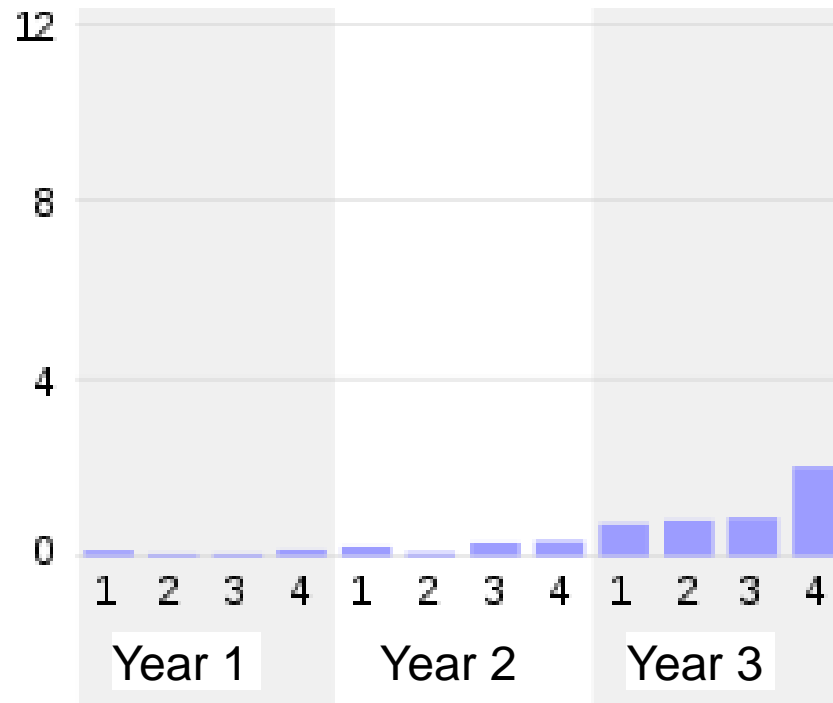
Millions of units sold



What are you likely to do at the end of year 2?

If you gave it a third year and it looked like this?

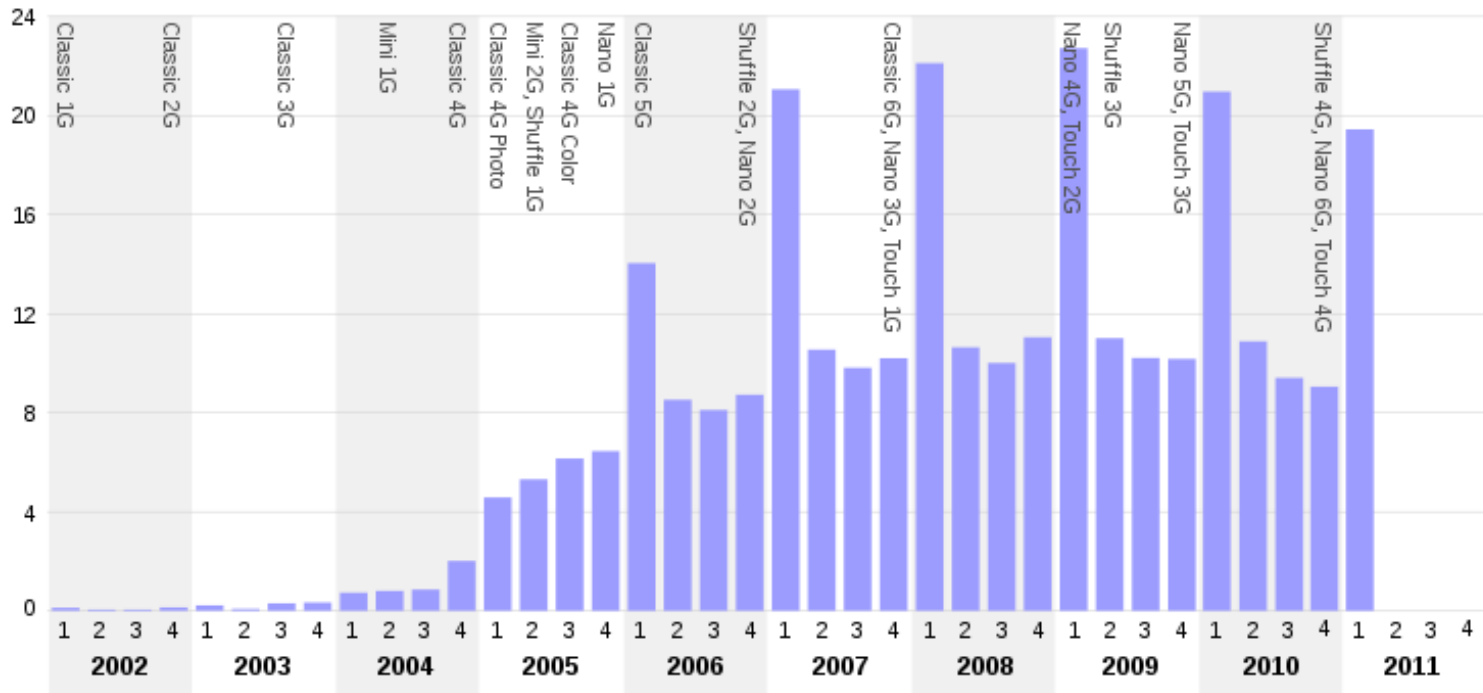
Millions of units sold



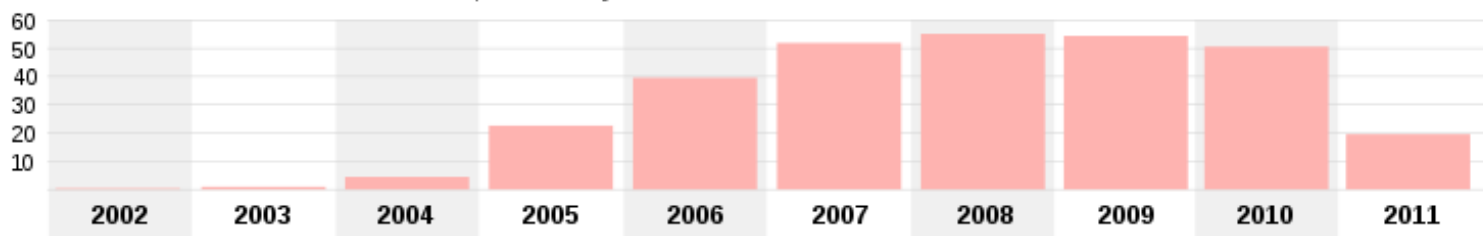


iPod sales chart

Units sold worldwide in Millions, per fiscal quarter



Units sold worldwide in Millions, per fiscal year



Source Apple Inc

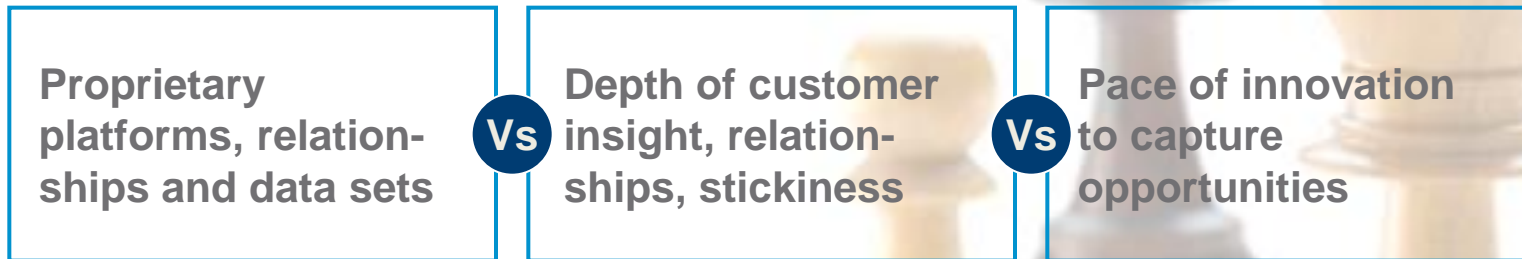
Created using Gnumeric and Inkscape

Three major eHealth business model choices

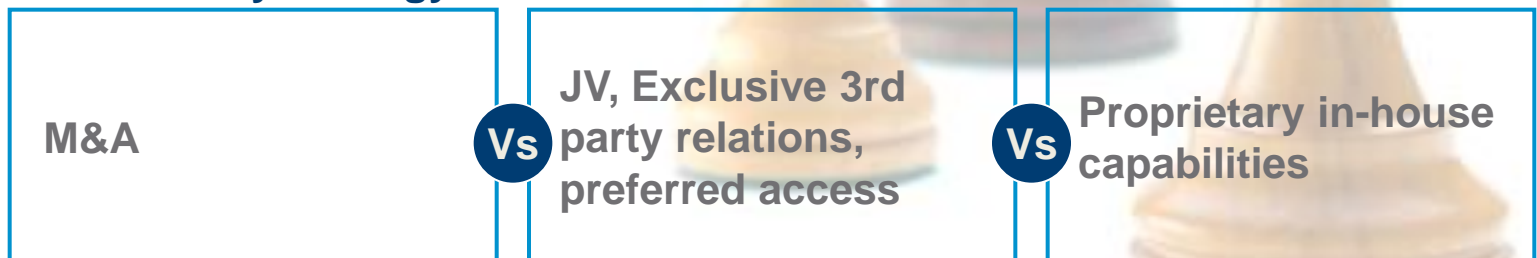
Breadth of focus



Basis for sustainable differentiation



Build vs. buy strategy



Four challenges to eHealth business models

A race to the bottom

- Lots of companies are giving away their products for free in this market
- Technology bought/developed, then goes searching for a problem to solve

Uncertain access

- There are probably different regulatory barriers when you throw a device over the wall than when you integrate it in a new healthcare model

Uncertain reimbursement

- See it as “throwing devices over the wall” rather than integrated solutions
- No evidence available to support reimbursement, e.g., real-world evidence

Adoption incentives are not yet aligned

- Unclear who will drive adoption (payors, providers, physicians, patients?)
- No model for sharing benefits or creating incentives across stakeholders

Winners will need a mix of capabilities



Identify and bring in new technologies to market to meet demand, both organically and via acquisitions/licensing



Orchestrate players in the value chain to turn the technology into an actual eHealth solution, including an extensive range of partnering with the right players



Build the case for adoption by generating evidence that demonstrates the value of the eHealth innovation to different stakeholders and secures reimbursement



Drive the solution in innovative ways and challenge traditional assumptions in healthcare delivery, by leveraging R&D, regulatory, manufacturing, and commercial insight

Thank you
