Where Are We On Our Path to Digital Healthcare (And Why Is It So Hard?)

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Author, The Digital Doctor: Hope, Hype & Harm at the Dawn of Medicine’s Computer Age
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Why I Decided to Explore Health IT
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“The Challenge That Will Dominate Your Career...”
EHRs in US Hospitals, 2008-2015

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>2008</td>
<td>9.4%</td>
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<tr>
<td>2009</td>
<td>12.2%</td>
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<tr>
<td>2010</td>
<td>15.6%</td>
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<tr>
<td>2011</td>
<td>27.6%*</td>
</tr>
<tr>
<td>2012</td>
<td>44.4%*</td>
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<tr>
<td>2013</td>
<td>59.4%*</td>
</tr>
<tr>
<td>2014</td>
<td>75.5%*</td>
</tr>
<tr>
<td>2015</td>
<td>83.8%*</td>
</tr>
</tbody>
</table>
EHRs in US Hospitals, 2008-2015

$30 billion in federal incentives under HITECH
The Big Picture:
Two Transformational Trends

Pressure to deliver high-value care

The digitization of the U.S. healthcare system
The Big Picture: Two Transformational Trends

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The Dominant Issue Today
Pressure to deliver high-value care

The digitization of the U.S. healthcare system

The Dominant Issue Today

Prediction: The Dominant Issue in 2025
WHAT COULD
POSSIBLY GO WRONG?
Richard Baron on the Trauma of Computerizing His Philadelphia Office Practice
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“The staff came to work one day and nobody knew how to do their job.”
The Demise of Radiology Rounds
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“The man who ruined radiology”
– Paul Chang’s dad
Digital Radiology as the Canary in the Coal Mine
Digital Radiology as the Canary in the Coal Mine

• The digitization of the thing creates the opportunity for infinite distribution (at no cost)
Digital Radiology as the Canary in the Coal Mine

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- Social relationships and communication patterns that previously depended on gathering around the thing will wither
- Power relationships mediated by who controls the thing will be renegotiated
- What happens when the thing isn’t the film, it’s the medical record...
Residents’ Room Vs. The Ward
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A 7-year-old Girl’s Depiction of her MD Visit

Toll E. The cost of technology. JAMA 2012
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Arizona General Hospital will be coming to The Grand Canyon State later this year!! Located in Laveen, Arizona, Arizona General is a 40,000 square-foot boutique general hospital.

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- NO ELECTRONIC MEDICAL RECORD
What Went Wrong?

- Adaptive vs. technical change
- Connecting the parts
- The digital squeeze on physicians
- The Productivity Paradox
Health IT: The Mother of all Adaptive Problems

“... problems that require people themselves to change. In adaptive problems, the people are the problem and the people are the solution. And leadership then is about mobilizing and engaging the people with the problem rather than trying to anesthetize them so that you can just go off and solve it on your own.”

– Ronald Heifetz, Kennedy School of Government
The Four Stages of Health IT
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1. Digitizing the record
The Four Stages of Health IT

1. Digitizing the record
2. Connecting the parts
   a. Enterprise system to enterprise system
   b. Third-party apps to enterprise systems
   c. Patient-facing systems to enterprise systems, and to one another
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EHRs as unique and powerful enabler of...
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Central/Corporate Control
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*EHRs as unique and powerful enabler of...*

Central/Corporate Control

Democratization, Questioning of Expertise
The Productivity Paradox of Information Technology: Review and Assessment

Erik Brynjolfsson

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Center for Coordination Science
MIT Sloan School of Management
Cambridge, Massachusetts
“You can see the computer age everywhere but in the productivity statistics.”

-- Nobel Prize winning economist Robert Solow, 1986
The Two Keys for Unlocking the Productivity Paradox
The Two Keys for Unlocking the Productivity Paradox

Improvements in the technology
The Two Keys for Unlocking the Productivity Paradox

Improvements in the technology

Reimagining the work itself
What Do Leaders Need to Do?
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- Learn to use our data for improvement, build decision support
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  - As much about teamwork, QI, systems as IT
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  - Need to optimize after initial training/Go Live
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- Retain sense of optimism: it’ll get better
Choluteca Bridge, Honduras
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Hurricane Mitch, 1998
Choluteca Bridge, Honduras

Hurricane Mitch, 1998