Enabling the Future for Care Delivery: The Importance of Innovation

HIC08: The Person In the Centre
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“We have reached the limits of what it is possible to achieve with computer technology”
AGENDA

• Innovation in Healthcare

• Innovation + HIT: A Paradigm Shift

• Creation of a Healthcare Innovation Program

• Conclusion
Need for Change in Healthcare

Our present efforts resemble a team of engineers trying to break the sound barrier by tinkering with a Model T Ford.

- IOM Report: Crossing the Chasm (2001)
Why Innovation?

Sometimes, the same old stuff just won’t work.

You cannot solve a problem using the thinking that got you there.

- Albert Einstein
What is Innovation?

• Definition
  • A significant change in thinking, things, processes or services
  • The act of using an invention in a new way

• Goal
  • To create positive change
  • To make someone or something better

Converting knowledge into something valuable
Who should be involved?

Innovation has never come through bureaucracy and hierarchy. It’s always come from individuals.

- John Scully (Past Chairman, Apple Computers)

The best innovators aren’t lone geniuses. They’re people who can take an idea that’s obvious in one context and apply it in not-so-obvious ways to a different context.

- Harvard Business Review

Innovation is a systemic process that draws insights and ideas from inter-disciplinary groups... in a conscious, purposeful search for innovation opportunities.

- Peter Drucker
When to start?

The oldest habit in the world for resisting change is to complain that unless the remedy to the disease should be universally applied, it should not be applied at all.

But you must start somewhere.

-Winston Churchill
Healthcare Innovation in The United States
Innovation Organizations Across the US

- Kaiser Permanente
- UPMC
- Johns Hopkins
- Massachusetts General Hospital
- Virginia Mason
- Group Health
- Partners HealthCare
- California Healthcare Foundation
- Geisinger Ventures
- Vanderbilt Center for Better Health
- ASU College of Nursing & Healthcare Innovation
Lessons Learned

• **Similarities**
  • Start small
  • Methodology: Plan, Do, Study, Act (PDSA)
  • Tools: Process > People > Technology
  • Model: Create, Validate, Spread
  • Adoption and Spread are the hardest part

• **Differences**
  • Funding sources
  • Research involvement
  • Individual vs. Population focus
  • Software development ability
Innovation + HIT

Time for a Paradigm Shift
Current Paradigm
Slow evolution of EMR Systems

IT Intensity

Impact on Health

Low Impact, High Intensity
High Impact, High Intensity
Low Impact, Low Intensity
High Impact, Low Intensity

Gap

Ideal EMR
Paradigm Shift
Focused Innovation: Niche Solutions for High Impact Situations

- Low impact, High Intensity
- High Impact, High Intensity

IT Intensity

Impact on Health

Most EMRs

Ideal EMR

Focused Innovation

Gap
Creation of a Healthcare Innovation Program

www.TheSHIPHome.org
SHIP Description

• **Mission**
  • Use creative thinking and diverse technologies to produce a better healthcare experience for patients, physicians and others associated with their care.

• **Vision**
  • Develop, test, and use innovative solutions within the real world of Northwestern Memorial's Healthcare System, and then spread these ideas and solutions outside our organization.
Where is the Opportunity?

Solution Themes

Information Visualization

Information Communication

Areas of Interest

Complex Patients

Inflection Points

Outpatient Care
SHIP Project #1
“ExpectED”
SHIP Project #2

“Inflection Navigator”: The Need

Support Needs

Inflection Point

No Disease

Stable Disease

2-6 weeks

Time
SHIP Project #2

“Inflection Navigator”: The Strategy

Diagram:
- Navigator
- PCP
- Patient
- Testing
- Specialists
- Inflection Point
SHIP Project #2

“Inflection Navigator”: The Tool

• Web based Registry

• Inflection level protocols
  • New diagnosis (e.g. Cancer, Afib…)
  • Worsening of Disease (e.g. DM, CHF…)
  • Overall Worsening in a complex patient

• Local level knowledge
  • Back lines, Assistant names…
# SHIP Project #2

**“Inflection Navigator”: The Tool**

<table>
<thead>
<tr>
<th>Status</th>
<th>Patient Name</th>
<th>Category</th>
<th>Protocol Due</th>
<th>Overdue</th>
<th>Primary Navigator</th>
</tr>
</thead>
<tbody>
<tr>
<td>OverDue</td>
<td>Smith, John (5/3/44)</td>
<td>Cancer</td>
<td>2 (of 5)</td>
<td>2 (of 2)</td>
<td>Betty Price</td>
</tr>
<tr>
<td>OverDue</td>
<td>Jones, Mary (3/3/44)</td>
<td>DM</td>
<td>2 (of 5)</td>
<td>1 (of 2)</td>
<td>James Sweeney</td>
</tr>
<tr>
<td>OverDue</td>
<td>Cramer, Bob (2/3/44)</td>
<td>Cancer</td>
<td>2 (of 3)</td>
<td>1 (of 2)</td>
<td>Betty Price</td>
</tr>
<tr>
<td>Due</td>
<td>Smith, Jane (2/3/54)</td>
<td>Afib</td>
<td>2 (of 4)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Due</td>
<td>Cramer, Bill (2/3/24)</td>
<td>DM</td>
<td>1 (of 3)</td>
<td>0</td>
<td></td>
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<tr>
<td>Due</td>
<td>Smith, Judy (2/3/64)</td>
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<td>1 (of 2)</td>
<td>0</td>
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<tr>
<td>Complete</td>
<td>Smith, William (2/13/47)</td>
<td>Cancer</td>
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<td></td>
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<tr>
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<td>Jones, Tony (12/3/45)</td>
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<tr>
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<td>Cramer, Josh (8/3/49)</td>
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<td>0 (of 3)</td>
<td>0</td>
<td></td>
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</tbody>
</table>

### Protocols for “Cancer”

<table>
<thead>
<tr>
<th>Checklist</th>
<th>Start Date</th>
<th>Expected End Date</th>
<th>Completed Date</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirm Dx</td>
<td>4/5/08</td>
<td>4/17/08</td>
<td>4/16/08</td>
<td></td>
<td>Pancreatic...</td>
</tr>
<tr>
<td>See Oncologist</td>
<td>4/5/08</td>
<td>4/21/08</td>
<td>4/20/08</td>
<td></td>
<td>Dr. Lopez</td>
</tr>
<tr>
<td>Get a treatment plan</td>
<td>4/5/08</td>
<td>4/24/08</td>
<td><strong>overdue</strong></td>
<td>[click here]</td>
<td></td>
</tr>
<tr>
<td>Notify other related doctors</td>
<td>4/5/08</td>
<td>4/21/08</td>
<td>4/22/08</td>
<td></td>
<td>done</td>
</tr>
<tr>
<td>Help with second opinion</td>
<td>4/5/08</td>
<td>4/30/08</td>
<td><strong>due</strong></td>
<td>[click here]</td>
<td>?Sloan</td>
</tr>
<tr>
<td>Educate pt about other resource</td>
<td>4/5/08</td>
<td>4/6/08</td>
<td>4/6/08</td>
<td></td>
<td>NMW cent...</td>
</tr>
</tbody>
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SHIP Project #4

“EMR of the Future”
Resources

• Innovation Learning Network
  • http://iln-public.pbwiki.com

• AHRQ Health Care Innovations Exchange
  • http://www.innovations.ahrq.gov

• Innovation-Driven Health Care: 34 Key Concepts for Transformation
  • By Richard L. Reece, MD

• Innovation in Action (Guide for HC Professionals)
  • By Scott Endsley, MD (sendsleymd@aol.com)

• Centre for Health Innovation (Alfred Hospital, Melbourne)
  • http://www.healthinnovation.com.au
Conclusion

You see things and you say, "Why?" But I dream things that never were and say, "Why not?"

- George Bernard Shaw

I am always doing things I can't do, that's how I get to do them.

- Pablo Picasso

Never believe that a few caring people can't change the world. For, indeed, that's all who ever have.

-Margaret Mead
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