Transforming Healthcare Delivery through IT in the Age of Cost Containment

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Agenda

1. Meeting the Challenge of Increasing IT Investment Needs in an Era of Tightening Budgets

2. Understanding the IT-Enabled, Healthcare Value Proposition
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IT Demand vs. Financial Resources

Demand
Funds
Time
Online Practice Model: Development Timeline

- Inpatient CPOE Documentation Alerts
- Ambulatory CPOE Documentation Alerts
- Online Registration Scheduling
- Results Reporting

Timeline:
- 1997-1999: Inpatient CPOE Documentation
- 1999-2001: Ambulatory CPOE Documentation
- 2001-2003: Online Registration
- 2004-2006: Scheduling
- 2006-2009: Results Reporting

Cleveland Clinic

Health System

MyPractice Inpatient

MyPractice Ambulatory

MyPractice Administrative

Lastword
My Practice: Electronic Medical Record System

Research: Standardization: Real Data; Real Results

MyPractice • Community

Dr. Connect: Improved Communication; Improved Care

MyChart: Your Personal Health Connection

Virtual Visit: Patient/Physician Interaction Globally

MyConsult: Your First Choice for a Second Opinion

My Monitoring: Ongoing Condition Reporting from Home

Global Healthcare Challenge

Healthcare Costs % of GDP

GDP Growth


5.8% 10.3%

16% Healthcare Quality Proposition
Healthcare Value Opportunity

\[
\text{Value} = \frac{\text{Outcomes} \times \text{Service}}{\text{Cost}}
\]

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Cleveland Clinic Care Pathways

Patient Care and Outcomes Need to be Measured over Venues and over Time

<table>
<thead>
<tr>
<th>Care Path</th>
<th>Hyper-Acute</th>
<th>Hospital Course</th>
<th>Discharge Planning</th>
<th>Post-Acute</th>
<th>Outpatient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Symptomatic</td>
<td>ED RNF OR ICU</td>
<td></td>
<td>Rehab HC Home</td>
<td>Wellness Chronic Ds</td>
</tr>
</tbody>
</table>
Step One: Disease-Based Multidisciplinary Institutes

- Neurological Institute
  - Cerebrovascular Center
    - Neurology
    - Neurosurgery
    - Behavioral Health
    - Physical Medicine and Rehabilitation
      - PT / OT / Speech
      - Acute Rehabilitation
      - Skilled Nursing
      - Home Care
    - IT Analyst
Step Two: Validated Health Status Measures

- Developed by Disease Based Centers to Track Objective Outcomes
  - Generic
    - EQ5D and PHQ9
  - Cerebrovascular Disease Specific
    - NIHSS and Rankin

Step Three: Standardized Care Paths

- Developed by multidisciplinary disease-based centers including IT professionals
  - Reduce care variability
  - Allow more meaningful and comparable outcome measures
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Step Four: Extension of Care Paths from Institutes to Enterprise (and beyond)

- Education of practitioners and extension of care paths and outcome measures to Enterprise facilities
  - Emergency Rooms
  - Hospitals
- Outcomes and Care Paths across venues and time
**Step Five:**
Enable Process Rollout Across Episode of Care with Technology

- Connect Venues (Hospital–post acute–home)
  - Employ Technology to improve system level of care and resource rationalization
  - Aggregate and Interrogate Data

**IT-Enabled Healthcare Value Opportunity**

IT-enabled care pathways development aligns technology investment and patient outcomes, demonstrating the value of:

- Technology professionals
- Technology systems
- True, multi-disciplinary collaboration
Every life deserves world class care.