Best Practices for Realizing EMR Business Value
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Best Practices for Realizing EMR Business Value
The Imperative for HIT Benefits and ROI

Common HIT Benefits and Why Many Hospitals Don’t Achieve Them

The Benefits-Driven Implementation Method
The Case for HIT Benefits: A Hidden Revolution

Pioneers Showed the Way to Individual EMR Benefits, but Increasing Numbers of Hospitals Claim Global Benefits of EMRs

**Pioneers with Self-Developed EMRs**

- Brigham & Womens Hospital
  - Drug Decision Support

- Intermountain Health Care
  - Infection Surveillance

- The Regenstrief Institute
  - Drug Utilization

- Vanderbilt University Medical Center
  - Unnecessary Testing

**Users of Integrated Commercial Systems**

- Sentara Healthcare
- Texas Health Resources
- Maimonides Medical Center
- Hennepin County Hospital
- Allina Hospitals and Clinics

Source: The Advisory Board research and analysis.
Many Hospitals Are Missing Out on HIT Benefits

Recent Studies Show Little Overall Impact on Costs and Quality

“By itself, the adoption of more health IT is generally not sufficient to produce significant cost savings.”

$Congressional\,Budget\,Office^1$: Evidence on the Costs and Benefits of Health Information Technology (2008)

“We examined electronic health record adoption in U.S. hospitals and the relationship to quality and efficiency. Across a large number of metrics examined, the relationships were modest at best and generally lacked statistical or clinical significance.”


“Physicians who have computerized access to patients’ test results are more likely to order additional lab and imaging tests. The study’s findings point to a 40% to 70% increase in testing among doctors with computerized access to test results.”

$Health\,Affairs^3$: Giving Office-Based Physicians Electronic Access …Did Not Deter Ordering of Tests (2012)

“Hospitals that adopted EMR between 1996 and 2009 did not experience a …significant decrease in costs on average. In fact, [in many cases] costs rose after EMR adoption, particularly for …advanced EMRs.”

$NBER^4$: The Trillion Dollar Conundrum: Complementarities and Health Information Technology (2012)

1) http://www.cbo.gov/ftpdocs/91xx/doc9168/maintext.3.1.shtml
2) Health Aff (Millwood) 2010 Apr;29(4):639-46.
3) http://content.healthaffairs.org/content/31/3/488.abstract
4) http://www.nber.org/papers/w18281

Source: The Advisory Board research and analysis.
Realizing HIT Benefits Is Essential

Failed HIT Investments Can Cripple a Hospital Financially and Operationally

Return on HIT Investment Can Be “Make or Break” Factor

- Positive Possibilities
  - Improved quality and efficiency; sustainable financial advantage

- Negative Consequences
  - Reduced capital resources and higher costs; financial disadvantage

Source: The Advisory Board research and analysis.

Capital Costs
Human Resources
Professional Services

HIT

OR
Road Map

1. The Imperative for HIT Benefits and ROI

2. Common HIT Benefits and Why Many Hospitals Don’t Achieve Them

3. The Benefits-Driven Implementation Method
## Non-Clinical Benefits Get Less Attention

Academic Researchers More Likely to Study Clinical Benefits

### EMR Benefits Most Commonly Described in the Literature

<table>
<thead>
<tr>
<th>Clinical Benefits</th>
<th>Moderate Quantitative Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Reduced ADE incidence</td>
</tr>
<tr>
<td></td>
<td>• Reduced medication error</td>
</tr>
<tr>
<td></td>
<td>• Reduced order turnaround time</td>
</tr>
<tr>
<td></td>
<td>• Increased use of preventive care</td>
</tr>
<tr>
<td></td>
<td>• Reduced redundant testing</td>
</tr>
<tr>
<td></td>
<td>• Reduced drug use and costs</td>
</tr>
<tr>
<td></td>
<td>• Reduced lengths of stay</td>
</tr>
<tr>
<td></td>
<td>• Nursing staff time savings</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Administrative Benefits</th>
<th>Greatest Quantitative Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Improved documentation quality</td>
</tr>
<tr>
<td></td>
<td>• HIM workload, staff reductions</td>
</tr>
<tr>
<td></td>
<td>• Pharmacist time savings</td>
</tr>
<tr>
<td></td>
<td>• Decreased cost of paper forms</td>
</tr>
<tr>
<td></td>
<td>• Decreased transcription costs</td>
</tr>
<tr>
<td></td>
<td>• Reduced payment denials</td>
</tr>
<tr>
<td></td>
<td>• Improved quality of coding</td>
</tr>
<tr>
<td></td>
<td>• Improved charge capture</td>
</tr>
</tbody>
</table>

Potential HIT Benefits Are Real

Annual Benefits of a Successful EMR Implementation Add Up

Potential to Save $4 M - $10 M Annually

Based on 300-Bed US Hospital

- Save 28-36 minutes of time per nurse, per shift
- Reduce lab test use & drug costs by 15%
- Reduce average lengths of stay by 5% to 10%
- Prevent 344 to 481 ADEs annually
- Reduce order turnaround time by at least one hour
- Ensure 99% compliance with vaccinations

Potential HIT Benefits Are Real

Annual Benefits of a Successful EMR Implementation Add Up

**Potential to Save $4M - $10M Annually**

*Based on 300-Bed US Hospital*

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- Reduce average lengths of stay by 5% to 10%
- Prevent 344 to 481 ADEs annually
- Reduce order turnaround time by at least one hour
- Ensure 99% compliance with vaccinations

**Literature-Based**

**Stage 6-7 Survey**

- Reduction in paper forms costs (67% reporting)
- Improvement in charge capture (64% reporting)
- Reduction in the costs of transcription (61% reporting)


Source 2: HIMSS Analytics and Advisory Board Company survey of EMRAM Stage 6 and 7 hospitals, 2011.
Why Hospitals Don’t Achieve HIT Benefits

Traditional HIT Implementation and Optimization Approaches Won’t Produce Desired Benefits

**Old-School**
Technically-driven implementation/optimization

*Goals: On-time, under budget, system up time, all users trained*

**State-of-the-Industry**
Process-driven implementation/optimization

*Goals: Change workflows to take advantage of system capabilities*

Source: The Advisory Board research and analysis.
Case Example: St. Elegius* Healthcare

A Very Successful HIT Implementation

EMR Financial Impact by Year
10 Hospitals, 2,400 Beds

<table>
<thead>
<tr>
<th>Year</th>
<th>Budgeted Financial Impact</th>
<th>Actual Financial Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>$(20mm)</td>
<td>$(20mm)</td>
</tr>
<tr>
<td>2007</td>
<td>$(40mm)</td>
<td>$(40mm)</td>
</tr>
<tr>
<td>2008</td>
<td>Actual cash flow neutral</td>
<td>Actual cash flow neutral</td>
</tr>
<tr>
<td>2009</td>
<td>Actual cash flow neutral</td>
<td>Actual cash flow neutral</td>
</tr>
<tr>
<td>2010</td>
<td>Budgeted cash flow neutral</td>
<td>Actual Financial Impact</td>
</tr>
<tr>
<td>2011</td>
<td>Budgeted Financial Impact</td>
<td>Actual Financial Impact</td>
</tr>
<tr>
<td>2012</td>
<td>Budgeted Financial Impact</td>
<td>Actual Financial Impact</td>
</tr>
</tbody>
</table>

Financial Impact of St. Elegius’ EMR Implementation
- Cash flow neutral in 2009, a year earlier than budgeted
- Overall breakeven expected in 2011, two years earlier than budgeted

* Not their actual name

Source: The Advisory Board research and analysis.
## 2010 EMR Financial Benefits

<table>
<thead>
<tr>
<th>eCare Benefit Category</th>
<th>Benefit ($mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase unit efficiency, RN retention</td>
<td>$9.0</td>
</tr>
<tr>
<td><strong>Reduce length of stay, ADEs</strong></td>
<td>$8.7</td>
</tr>
<tr>
<td>Increase outpatient procedures</td>
<td>$5.7</td>
</tr>
<tr>
<td>Reduce other costs</td>
<td>$5.3</td>
</tr>
<tr>
<td><strong>Reduce transcription expense</strong></td>
<td>$2.7</td>
</tr>
<tr>
<td>Reduce health plan costs</td>
<td>$2.0</td>
</tr>
<tr>
<td><strong>Reduce administrative positions</strong></td>
<td>$2.0</td>
</tr>
<tr>
<td><strong>Improve charge capture</strong></td>
<td>$1.9</td>
</tr>
<tr>
<td>Reduce medical records supply costs</td>
<td>$1.8</td>
</tr>
<tr>
<td>Reduce medical records positions</td>
<td>$1.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$40.9</td>
</tr>
</tbody>
</table>

Source: The Advisory Board research and analysis.
Beyond Financial Benefits

Significant Quality and Efficiency Improvements Seen Across St. Elegius

Early EMR Benefits Realized

% Reduction in Patient Flow Time 2008 vs. 2009

<table>
<thead>
<tr>
<th>Cycle</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admit request to bed assignment</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>ED boarder cycle</td>
<td>40%</td>
<td>30%</td>
</tr>
<tr>
<td>IP transfer cycle</td>
<td>20%</td>
<td>10%</td>
</tr>
</tbody>
</table>

CMS Quality Measures Red vs. Green

2004 2005 2006 2007 2008 2009 2010

Medication Management Improvements

<table>
<thead>
<tr>
<th></th>
<th>Pre-EMR</th>
<th>Post-EMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order time</td>
<td>59.0 min</td>
<td>4.5 min</td>
</tr>
<tr>
<td>Med admin</td>
<td>132.0 min</td>
<td>38.4 min</td>
</tr>
</tbody>
</table>

1. Red are worse than expected, green are adequate or better than expected; Includes cardiac, pneumonia, surgical care, infections patient safety.
2. Per 12 hour shift...
3. Average time from order written to order available to act on.
4. Average time from order written to med administration (NOW orders).

Source: The Advisory Board research and analysis.
The Secret to St. Elegius’ Success

A Benefits-Driven HIT Implementation Method

**Old-School**
Technically-driven implementation/optimization

**Goals:** *On-time, under budget, system up time, all users trained*

---

**State-of-the-Industry**
Process-driven implementation/optimization

**Goals:** *Change workflows to take advantage of system capabilities*

---

**State-of-the-Art**
Benefits-driven implementation/optimization

**Goals:** *Achieve business value as defined by the strategic goals of the hospital*

Source: The Advisory Board research and analysis.
Road Map

1. The Imperative for HIT Benefits and ROI

2. Common HIT Benefits and Why Many Hospitals Don’t Achieve Them

3. The Benefits-Driven Implementation Method
Benefits-Driven Implementation & Optimization Method

Six Best Practices for Realizing HIT Benefits

Elements of the Benefits-Driven Implementation & Optimization Method

1. **Benefits Framework** – Agreeing on Objectives
2. **Benefit Sentences** – Aligning Expectations
3. **Benefits Modeling** – Clarifying How Things Work
4. **Benefit Requirements** – Specifying the Change
5. **Organizing for Benefits** – Defining Roles and Responsibilities
6. **Benefit Measurement** – Tracking and Managing to Benefit

The Benefits-Driven Implementation and Optimization Method is based on lessons learned from our work with over 200 hospitals, plus a thorough review of the literature, and our current collaboration with HIMSS Analytics.

Source: The Advisory Board research and analysis.
Benefits-Driven Implementation

Key BDI Elements “Ride Lightly” on Traditional HIT Implementation

Incorporating BDI into Typical Implementation Activities
Staff Hours by Implementation Phase

Benefits Framework
Benefit Sentences
Benefits Modeling

I. Define
II. Design
III. Develop
IV. Deploy
V. Operate

Benefit Measurement Organizing for Benefits
Benefit Measurement

BDI does not replace technical and process-focused implementation approaches; instead, it “rides lightly” on top of those approaches.

Source: The Advisory Board research and analysis.
Benefits-Driven Optimization

A Two-Step Approach to Remediating and Optimizing an Existing EMR

**EMR Remediation (6-12 months post-implementation)**

**Technical**: Improve screen design, interfaces, reporting capabilities, functionality to meet requirements, etc.

**Process**: Identify better ways to use system capabilities, change and/or standardize workflows, address cultural issues, etc.

**EMR Optimization (6-12 months post-implementation or after remediation is complete)**

**Benefits**: Clarify business goals that can be supported by the EMR and begin actively pursuing them.

Source: The Advisory Board research and analysis.
The Benefits Framework: Agreeing on Objectives

The First Step – Agree on a Short List of Expected Benefits

How to Do It

Reaching Consensus on Benefits

Interview senior executive management, key “benefit owners,” physicians, IT leaders, and other experts (10-20 people). Ask what benefits they expect or hope for, and record their answers. Eliminate duplicates and create a “long list” of unique answers.

Work with key stakeholders (interviewed above) to prioritize potential benefits using the following criteria: Magnitude, Strategic Importance, Measurability, Achievability, and Direct Relationship to EMR Technology.

Reach agreement on a “short list” of unique EMR benefits that will receive focused management attention during EMR implementation and early use.

Source: The Advisory Board research and analysis.
The Benefit Sentence: Aligning Expectations

Sample Benefit Sentence, Version One

“The EMR will help improve medication safety.”

Sample Benefit Sentence, Version Two

“The EMR’s drug ordering alerts will prevent prescribing errors, CPOE and the electronic medication administration record will prevent transcription errors, and bar coding will prevent administration errors.”

Sample Benefit Sentence, Version Three

“The EMR’s drug ordering alerts, CPOE, electronic MAR, and bar coded medication administration will reduce prescribing, transcription, and administration errors, and prevent over 2,500 ADEs annually within a year of implementation.”

Source: The Advisory Board research and analysis.
A Rube Goldberg Machine is fantastic, but it is easy to understand how it works. Benefits Modeling helps clarify exactly how an EMR produces each of the benefits in the Benefits Framework. This insight is essential to designing and building an EMR capable of producing expected benefits.
## Benefits Modeling Example

### Analyzing the EMR Impact on Each HIM Department Function

#### Summary of Actual Hospital Medical Records Staffing Model

<table>
<thead>
<tr>
<th>Function/Position</th>
<th>Cost Savings Low Estimate</th>
<th>FTE Reduction Low Estimate</th>
<th>Cost Savings High Estimate</th>
<th>FTE Reduction High Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scanning</td>
<td>$111,013</td>
<td>3.5</td>
<td>$166,519</td>
<td>5.3</td>
</tr>
<tr>
<td>Indexing/QA</td>
<td>$72,900</td>
<td>2</td>
<td>$145,800</td>
<td>4</td>
</tr>
<tr>
<td>Filing</td>
<td>$70,563</td>
<td>2</td>
<td>$141,126</td>
<td>4</td>
</tr>
<tr>
<td>Release of Information</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>System Administrators</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Medical Records Analysts</td>
<td>$87,670</td>
<td>2.3</td>
<td>$175,341</td>
<td>4.5</td>
</tr>
<tr>
<td>Managers</td>
<td>$94,640</td>
<td>2</td>
<td>$94,640</td>
<td>2</td>
</tr>
<tr>
<td>Supervisors</td>
<td>$77,230</td>
<td>1</td>
<td>$77,230</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>$514,017</td>
<td>12.8</td>
<td>$850,635</td>
<td>20.8</td>
</tr>
<tr>
<td>Reduction as % of Current Staffing</td>
<td>14%</td>
<td></td>
<td></td>
<td>23%</td>
</tr>
</tbody>
</table>

1) FTE: full time equivalent.

Source: The Advisory Board research and analysis.
Benefit Requirements: Specifying the Change

Only a Few of the Thousands of Requirements and Processes Associated with an EMR Are Essential to Producing Each Benefit

**EMR Technical Requirements Documentation**

**EMR Benefit Requirements**

**Benefit #1:**
“The EMR’s drug ordering alerts, CPOE, electronic MAR, and bar coded medication administration will reduce prescribing, transcription and administration errors, and prevent over 2,500 ADEs annually within a year of implementation.”

- Benefit Requirement #1
- Benefit Requirement #2
- Benefit Requirement #3
- Benefit Requirement #4
- Benefit Requirement #5
- Benefit Requirement #6

Identifying benefit requirements ensures that they will be prioritized in the design and build, and defines the rationale for satisfying each requirement in vendor and team discussions.

Source: The Advisory Board research and analysis.
Organizing for Benefits: Defining Roles, Responsibilities

The Fifth Step: Establish Structures Required to Manage to Benefits

Sample Organizational Structure

Large-Scale BDI Effort (EMR)

- Steering Committee
  - COO, CIO, CMO

- Benefits Committee (15-20 individuals)
  - Functional Leaders (HIM, Pharmacy, Nursing)
  - Clinical Leaders
  - Administrators
  - Data/Support Leaders (Decision Support)
  - IT Leaders (EHR Project Lead)

The essential new staff requirement

Benefits Team
- Team Leader
- Clinical Analyst
- Operations Analyst
- Financial Analyst

Source: The Advisory Board research and analysis
Benefit Measurement: Tracking and Managing to Benefit

The Sixth Step: Implement and Use Benefits Tracking System

Sample “Monthly Operating Report” for Benefits Tracking

<table>
<thead>
<tr>
<th>Benefit Category</th>
<th>Base</th>
<th>Target</th>
<th>Jan 09</th>
<th>Feb 09</th>
<th>Mar 09</th>
<th>Apr 09</th>
<th>May 09</th>
<th>Jun 09</th>
</tr>
</thead>
<tbody>
<tr>
<td>% fall interventions charted</td>
<td>76.5</td>
<td>95%</td>
<td>79</td>
<td>81</td>
<td>80</td>
<td>84</td>
<td>87</td>
<td>85</td>
</tr>
<tr>
<td>Pt falls per 1000 pt days</td>
<td>3.6</td>
<td>2.0</td>
<td>3.5</td>
<td>3.5</td>
<td>3.1</td>
<td>2.9</td>
<td>2.7</td>
<td>2.9</td>
</tr>
<tr>
<td>ADE incidence rate (%)</td>
<td>26.5</td>
<td>20.0</td>
<td>27</td>
<td>25</td>
<td>29</td>
<td>23</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td># of top 10 OS implemented</td>
<td>5</td>
<td>10</td>
<td>8</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>% top 10 order sets used</td>
<td>35.9</td>
<td>75.0</td>
<td>37</td>
<td>43</td>
<td>50</td>
<td>56</td>
<td>60</td>
<td>65</td>
</tr>
<tr>
<td>Cost/case, top 10 DRGs</td>
<td>$4,500</td>
<td>$3,700</td>
<td>$4,460</td>
<td>$4,250</td>
<td>$4,100</td>
<td>$4,043</td>
<td>$3,987</td>
<td>$3,924</td>
</tr>
</tbody>
</table>

Order Set Use and Costs

*Top 10 US DRGs*

- **Top 10 eOS Implemented**
- **Cost per case**
- **% OS used**

Source: The Advisory Board research and analysis.
## Case Study: New River Healthcare

Benefits Framework Reflected New River’s Strategic Business Goals

### Expected EMR Benefits and Amounts

<table>
<thead>
<tr>
<th>eCare Benefit Category</th>
<th>Expected Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promote evidence-based care (KPIs, P4P, Costs)</td>
<td>High impact on KPIs/P4P, save $50 mm annually</td>
</tr>
<tr>
<td>Increase medication safety</td>
<td>Prevent 2,500 – 5,000 ADEs annually</td>
</tr>
<tr>
<td>Reduce complications</td>
<td>Major reductions in falls, pressure ulcers</td>
</tr>
<tr>
<td>Reduce order turnaround time</td>
<td>Orders received 1 – 1.5 hours faster</td>
</tr>
<tr>
<td><strong>Increase staff efficiency</strong></td>
<td><strong>Large impact on nursing, unit clerks, HIM</strong></td>
</tr>
<tr>
<td>Increase patient throughput</td>
<td>Significant impact in some EDs</td>
</tr>
<tr>
<td>Reduce use of paper forms</td>
<td>Save $600,000 to $1 million annually</td>
</tr>
<tr>
<td>Increase data collection efficiency</td>
<td>Save half of chart abstraction time</td>
</tr>
<tr>
<td>Reduce IT support workload</td>
<td>Some impact on lab support staffing</td>
</tr>
<tr>
<td>Optimize medication use</td>
<td>Significant impact on cost of specific drug categories</td>
</tr>
<tr>
<td>Improve charge capture</td>
<td>Significant impact where manual processes exist</td>
</tr>
</tbody>
</table>

Source: The Advisory Board research and analysis.
Case Study: New River Healthcare

Results: Organized Approach Yielded Dramatic KPI Improvements

Change in New River KPI Compliance, 2007 - 2011

Source: The Advisory Board research and analysis.
Case Study: New River Healthcare

Results: Both Trigger Tool and Self-Reporting Showed ADE Reductions

**Adverse Drug Event Incidence by Hospital**
Measured Using the IHI ADE Trigger Tool

- **Hospital 1**: 63%
- **Hospital 2**: 60%
- **Hospital 3**: 71%
- **Hospital 4**: 7%

Baseline
Target (50% reduction)
One Year Post

Source: The Advisory Board research and analysis.
## Case Study: New River Healthcare

### Results: Nursing Time Impact Was Dramatic

#### Nursing Time Impact Per Nurse, Per Shift

<table>
<thead>
<tr>
<th>Nursing Activity</th>
<th>Med/Surg Unit change per RN per 12-hr. shift (minutes)</th>
<th>Intensive Care Unit change per RN per 12-hr. shift (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hospital 1</td>
<td>Hospital 2</td>
</tr>
<tr>
<td>Shift change/nursing report</td>
<td>+0.7</td>
<td>-7.7</td>
</tr>
<tr>
<td>Patient assignment</td>
<td>-35.0</td>
<td>+11.6</td>
</tr>
<tr>
<td>Updating and reconciling MAR</td>
<td>-38.5</td>
<td>-56.3</td>
</tr>
<tr>
<td>Charting (assessments, flows)</td>
<td>+22.4</td>
<td>+21.3</td>
</tr>
<tr>
<td>Order processing follow-up</td>
<td>-5.7</td>
<td>-1.2</td>
</tr>
<tr>
<td>Order clarification</td>
<td>-15.6</td>
<td>-10.9</td>
</tr>
<tr>
<td>Locating, waiting for charts</td>
<td>-2.3</td>
<td>-1.0</td>
</tr>
<tr>
<td>Finding patient information</td>
<td>+1.3</td>
<td>-6.1</td>
</tr>
<tr>
<td>Total/sum</td>
<td>-72.7</td>
<td>-50.3</td>
</tr>
</tbody>
</table>

Note: Separate from nursing time impacts, New River saved $3 million annually in unit clerk labor. There were many time savings in the unit clerk job. Many hospitals got rid of their night clerks; in the day shifts they were assigned other patient-related duties (PCT duties). Some transitioned to registration functions.

1. Understand and educate your organization on the benefits-driven implementation method.

2. Realistically estimate and accurately measure EMR benefits.

3. Take the time to understand and reach agreement among key stakeholders on expected benefits.

4. Build your business case on large magnitude, measurable benefits that have been achieved by others.

5. Establish executive sponsorship, benefit ownership, and support for measurement, process design, technology requirements definition, and change management.

6. Use existing, industry standard metrics where possible, but develop new metrics as needed; using the wrong metrics is a waste of time, effort and money.

7. Track and manage benefits on a continuous basis following technology implementation.

8. Use all six best practices to gain maximum value from the benefits-driven approach.

Source: The Advisory Board research and analysis.