Developing a Business Case for Telehealth

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Agenda

• Intel Digital Health Group
• Business Value of IT Approach
• Telehealth Business Models
Applying Intel Strengths to Healthcare

**Research and Innovation**
- Research to understand users' real needs and how to meet them
- Evidence-based approach to ensure effectiveness in real-life settings

**Technology Leadership**
- Proven track record in using technology to solve problems
- Innovation through extensible platforms to address market needs more quickly and cost effectively

**Ecosystem**
- Leadership to drive collaborative development of standards needed for interoperability and lower costs
The Continuum of Care

Shift Left
Highest Quality of Life
Lowest Cost of Care

Traditional care models are moving to home-based models

Quality of Life

Cost of Care

Health & Wellness
Home Care
Residential Care
Acute Care
Intel’s Digital Health Focus Areas

Chronic Disease Management

Independent Living

Assistive Technologies

Research & Innovation

Policy & Standards

Intel Confidential
Business Value of IT
Healthcare Low IT Adoption Rate

Business value of HIT investments not well understood
Cultural resistance
IT perceived as too expensive and too difficult to implement
IT capital competes with clinical technologies

Source: Lewin Group, Forrester Research, LEK analysis
Defining IT Business Value

- Business Value is the benefit in monetary terms that results from IT products or services
- It is the contribution IT makes to helping an organization achieve their strategic objectives (what matters most)
- There is no such thing as an IT investment, there are only IT enabled “business” investments

Business Value =

- Increased Revenue (Growth)
- Lower Costs/ Better (Efficiency)
- Better Use of Assets (Productivity)
- Risk (Continuity)
- Solve Customer Business Needs
### Applying the Value Dial Concept

#### Industry Concerns

- Medical error prevention
- Clinical outcomes
- Patient access
- Process improvement
- High labor costs, turnover, shortage
- Physician referrals
- Improved revenue from existing operations
- New services or sources of revenue
- Revenue management cycle
- Rising costs of delivery care
- Costs of quality and regulatory reporting

#### Value Dials

- Patient Safety
- Quality of Care
- Patient Satisfaction
- Staff Productivity
- Staff Satisfaction
- Revenue Enhancement
- Cost Optimization

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**Impact of Technology solutions**

- Develop tangible and intangible metrics

**ROI of Healthcare IT**
**Impact of HIT-Enabled Change at Banner Health**

- $1.6M annual savings, including reductions in pharmacy and document storage costs
- Shorter average length of stay
- Better avoidance of adverse drug events
- Fewer LWOT from ED
- Less nursing overtime
- Faster payment
- Improved nurse retention
- Fewer medical insurance claims
- Highest Press-Gainey scores in Banner

*Using the Intel HIT economic model to measure bottom-line impacts*

*Measuring the Benefits of IT-enabled Care Transformation, Hensing et al, Healthcare Financial Management, Feb ‘08*
Telehealth Value Model
Making the Business Case for Telehealth

SCAN Health Plan and HealthCare Partners Explore the Use of Remote Health Management Technology for Frail Seniors

Focusing on member satisfaction and operational practices, a Medicare Advantage HMO and a medical group collaborate to explore next-generation chronic care management technology

Alan Little, Corporate Development Executive
SCAN Health Plan

Brett Meyers, MD, Medical Director, Clinical Informatics
HealthCare Partners Medical Group

Abstract

This paper describes results from an operational pilot aimed at evaluating the acceptance of a remote health management technology and to understand the day-to-day operational requirements associated with implementing a remote health management model of care to seniors in the home. The pilot involved a partnership between SCAN Health Plan (SCAN) and HealthCare Partners Medical Group (HCP).
## ROI for HF Care Coordination/Monitoring

<table>
<thead>
<tr>
<th>Measure</th>
<th>Results¹</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction of Inpatient Re-Admissions</td>
<td>50%</td>
<td>Through a daily monitoring and care management regime CHF related inpatient hospital readmission can reasonably be reduced by up to 50%.</td>
</tr>
<tr>
<td>Reduction of BDOC for Inpatient Admissions</td>
<td>25%</td>
<td>Through a daily monitoring and care management regime inpatient hospital admission bed days of care for reasonably be reduced by up to 25%.</td>
</tr>
<tr>
<td>Reduction of ER visits</td>
<td>40%</td>
<td>Through a daily monitoring and care management regime emergency rooms visits can reasonably be reduced by up to 40%.</td>
</tr>
<tr>
<td>Reduction in Hospitalizations</td>
<td>20%</td>
<td>Through a daily monitoring and care management regime hospital admissions can reasonably be reduced by up to 20%.</td>
</tr>
<tr>
<td>Increase Rx Compliance</td>
<td>30%</td>
<td>Through a daily monitoring and care management regime prescription drug program adherence for diabetics with complications can reasonably be reduced by up to 30%.</td>
</tr>
<tr>
<td>Increase clinical Productivity</td>
<td>40%</td>
<td>Through a daily monitoring and care management regime employee productivity can reasonably increase by 40% via fewer in home visits.</td>
</tr>
<tr>
<td>Quality of Life</td>
<td>Indirect</td>
<td>Through a daily monitoring and care management regime for diabetics with complications can improve the self-assessed quality of life.</td>
</tr>
</tbody>
</table>

¹ TELEMEDICINE and e-HEALTH. DEC 2008; VOL.14(10)
Payer Financial Model based on New England Healthcare Institute NEHI

**Key Findings:**
NEHI is a nonprofit research and health policy organization dedicated to transforming health care. In ‘09 NEHI updated RPM research report presenting new evidence for RPM cost effectiveness by comparing RPM to DM and standard care.

- 60% reduction in hospital readmissions compared to standard care.
- RPM has the potential to prevent 460-627K CHF readmission / year.
- NEHI estimates an annual national cost savings $4.7 to $6.4 billions.

<table>
<thead>
<tr>
<th>Per Patient Per Year</th>
<th>Standard Care</th>
<th>Disease Management</th>
<th>RPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-Admissions Per Year</td>
<td>1.32</td>
<td>1.116</td>
<td>0.552</td>
</tr>
<tr>
<td>Readmission Assumptions</td>
<td>baseline</td>
<td>-15%</td>
<td>-58%</td>
</tr>
<tr>
<td>Avg cost or CHF re-admission</td>
<td>$10,203</td>
<td>$10,203</td>
<td>$10,203</td>
</tr>
<tr>
<td>Cost of Re-admissions</td>
<td>$13,468</td>
<td>$11,387</td>
<td>$5,632</td>
</tr>
</tbody>
</table>

**Stand Care vs. RPM Savings**
(Per Patient Per Year)

<table>
<thead>
<tr>
<th></th>
<th>Gross Savings</th>
<th>Incremental Investment</th>
<th>Net Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stand Care</td>
<td>$7,836</td>
<td>$2,802</td>
<td>$5,034</td>
</tr>
<tr>
<td>RPM</td>
<td>$5,755</td>
<td>$2,052</td>
<td>$3,703</td>
</tr>
</tbody>
</table>

Assumptions:
- Average cost of a CHF hospitalization was $10,203.
- Average monthly technology cost estimate of $171 results in $2,052 yearly cost.
- Including the average disease management cost per year of $750 results in a $2,802 yearly cost (RPM technology and the disease management component).
VA Case Study* Summary

Care Coordination/Home Health: The Systematic Implementation of Health Informatics, Home Telehealth, and DM to Support the Care of Veteran Patients w Chronic Conditions


Results:
- 25% reduction in bed days of care
- 19% reduction in hospital admissions
- 86% patient satisfaction score

Conclusion: an enterprise-wide home telehealth implementation is an appropriate & cost-effective way of managing chronic care patients in both urban & rural settings.

The Intel Health Guide was not used in this study

*Darkins, et al, VHA Study, TELEMEDICINE and e-HEALTH DECEMBER 2008
The Intel Health Guide was not used in these studies and upon request, Intel will provide the full text of any studies cited in this presentation.
Tools: Telehealth ROI Estimator

Data from the use of The Intel Health Guide was not used to develop this analysis
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