ROI and HI PAA

Planning for and evaluating the financial results of investment

Rick Taylor
Agenda

- The outstanding opportunity: using IT to create value
- The problems of proving ROI
- The way to measure AND realize the returns
- The HIPAA gold mine
The demand for improvement

Situation: the demand for healthcare is accelerating

Americans now invest annually $1.1 trillion, or 13.5% of the nation’s gross domestic product (GDP) in the health care sector. This figure will grow to more than $2 trillion, or 16% of GDP by 2007.

Problem: the quality of healthcare still leaves room for improvement

“A highly fragmented delivery system that largely lacks even rudimentary clinical information capabilities, results in poorly designed care processes characterized by unnecessary duplication of services and long waiting times and delays”.
The opportunity to create value using IT

“In the past, value in the healthcare sector was created through investment in physical assets that led to the expansion of hospitals, … in the future, value will be created through greater investment in intangible assets. This will require a redeployment of assets from bricks and mortar to investment in human capital and information technology (knowledge capital)”.


…… few have taken it

“What is perhaps most disturbing is the absence of real progress towards …. applying advances in information technology to improve administrative and clinical processes”.

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• **The problems of proving ROI**

• The way to measure AND realize the returns

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Borrowing power is limited

The last 20-30 years, may have been the “Golden Age of Capital” for US healthcare, when we have used close to 100% of debt capacity. Systems are at maximum/approaching maximum debt capacity for current/desired rating.

A large percentage of future growth will need to be equity funded, with reduced prospects of significant equity growth.

“Future access to capital will be very limited from traditional sources; Access to capital will determine future winners/losers”.

[Image of financial documents and calculators]
Increasing demand for proof of return

I.T. has been demanding further investment for years saying “We need to keep up with the competition & improve quality.”

- Y2K fears
- Enterprise Resource Planning (ERP) solutions
- Web-based solutions
- Customer Relationship Management
- Supply Chain Management

CEO’s and CFO’s need evidence of real returns if they are to authorize further investment

‘By 1999, hospitals that delay significant CIS investment because of ROI uncertainty will face competitive disadvantages. This will render them unable to compete. However, through 2000 to 2002 most IT shops will be required to conduct CIS ROI cost/benefit studies’.

*New tools for quantifying CIS ROI. Meta Group Report 12/18/98*
Exaggerated claims = lost credibility

Time saved on Clinical Documentation need not be used to generate cash

It can be used to spend more time on direct patient care, to reduce overtime, to increase throughput or to re-allocate duties amongst staff on Units

“The safest vehicle on the market”

Alerts on ordering meds. do NOT necessarily equal lives saved

A comprehensive Cultural Change and Process Improvement program is needed to persuade physicians of the benefits of Physician Order Entry
ROI is difficult to prove

- System Implementation
- Cash Savings Quality Benefits
- Processes around the system
- People and policies

These problems are common to all industries
The estimated ROI is difficult to realize

- Fractional FTEs
- Tough management decisions
- Further investment needed
- Resistance to change

80-90% of major change projects fail to achieve their human and technical objectives on time and within budget

90% of project failures are due to neglecting the human factors of the project
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A common starting point

“Our approach is based on the fundamental belief—shared by me and senior executives, including the president—that a company should first decide:

1) **What it is going to do** (its revenue goals, profit goals, strategies, for instance) and then

2) **what business processes it will use to achieve those objectives** (such as how it will interact with its customers)

The IT systems should then flow from these two steps and enable and support the business processes”

ROI is measured by process using KPI’S

**PROCESSES**
- Information Technology
  - Revenue Cycle, Med. Recs. (HIM)
  - Retrospective Decision Support

**Core processes**
- ADT
- Ordering (+ POE)
- Clinical Documentation + Ambulatory

**Support Depts. & Processes**
- Central Scheduling & admitting etc.
- Labs.
- Pharm.
- Rad.
- Assess Chart etc.
- Precert.
- Rx pad etc.

**BENEFIT TYPES**
- Operations
  - Cost savings
  - Revenue increase
- Satisfaction
  - Patients, Physicians, Staff
- Quality
  - Process, Structure, and Outcome
- Strategic impact
  - Communications, Compliance

**EXAMPLES OF KEY PERFORMANCE INDICATORS**

**Access and Revenue Cycle:**
No-shows, bed utilization.
AR days, FTEs supporting back-end processes, bad debts.

**Ordering and Pharmacy:**
Adverse drug events, turn-round times;
LOS, lost charges, inventory holding costs, medication usage.

**Health Information Management:**
Paper and storage costs, duplicate records, redeployment of staff handling paper

**Clinical documentation:**
Nursing administration time, staff orient, overtime & agency costs, throughput.

**Information Technology:**
Downtime, response time.
### The challenge for system vendors

<table>
<thead>
<tr>
<th>1. Purchase an integrated system with rich functionality</th>
<th>2. Ensure the software has flexibility of design</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Chose a vendor with knowledge of their own best practice processes</td>
<td>4. Work with your vendor to make radical people changes</td>
</tr>
</tbody>
</table>

ROI is only maximized by a combination of people and process changes using the information systems as the catalyst.

If customers are to realize any significant benefit they must be encouraged to make significant people and process changes.
The challenge for CIO’s

“CIO’s must be recognized by their peers as technology enablers who increase shareholder value by helping to reduce operating costs or increase revenue by examining business processes that can be improved, enhanced or totally reinvented through the application of technology.

Simply installing the latest and greatest enterprise application system is not enough: it requires rethinking the way in which technology can actually change how the enterprise conducts business”.

(Using measurements to demonstrate the business value of IT: Gartner 2000)
A Benefits Realization program

**Timing**
- 3 months pre-implement & up to 90 days after

**Deliverables**
- Process flowcharts
- ROI targets
- Program plan
- KPI’s achieved

**Workplan**
- As-is process mapping & KPI data collection
- Compare to system best-process
- Design to-be process & people changes
- Target KPI’s in BR management plan
- Audit KPI achievement

**Client benefits**
- Agreed ROI targets maximized
- Agreed PI, CM & IMP action plans
- Agreed program management plan
- Success in achieving targeted KPI’s

**Risk/Reward**
BR program deliverables

- ROI target-setting
- The process improvement project
- The cultural change project
- The implementation project
- BR Program management
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Is HIPAA a gold mine?

A $500 million Integrated Delivery System can save $6 million by accelerated reimbursement and eliminating claim write-offs and $4 million by reducing expenses every year.
*KPMG paper 2001*

E-transactions can save $73 billion per annum: one third of all healthcare administration costs
*1994 Workgroup on EDI*

$17.6 to implement $29.9b. benefits over 10 years
*Department of Health & Human Services*

After 2003, Care Delivery Organizations with patient accounting systems that don’t provide direct 837 bill claim transactions to payers will be exposed to gross margin decreases of 10% – 15% a year until this short-coming is resolved.

*Gartner Nov. 2001: HIPAA Impacts on Patient Accounting 837/835 transactions.*
<table>
<thead>
<tr>
<th></th>
<th>Total claims paid</th>
<th>FTE’s</th>
<th>Claims paid in 30 days</th>
<th>Claims paid in 60 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper</td>
<td>60%</td>
<td>27</td>
<td>30%</td>
<td>60%</td>
</tr>
<tr>
<td>Electronic</td>
<td>40%</td>
<td>2</td>
<td>80%</td>
<td>98%</td>
</tr>
</tbody>
</table>

(Privacy rules are NOT considered in this presentation)
Mining the gold

Needs radical process and people changes

To maximize ROI, HIPAA compliance should not be pursued as a totally separate project but should be directly incorporated as part of an HCO’s strategic and tactical business transformation and technology planning.

The HPAA payoff – a tangible ROI. Gartner research note 3/15/01

HIPAA is NOT a compliance issue. Use it as an opportunity to:

- Reduce or eliminate on-going clearing house costs
- Eliminate expense and inefficiency of data translation between 3rd party products, clearing houses and your care application
- Reduce AR days
The current chaotic process

Registration
- Eligibility
- Payer ID

ABN rules
- MPI

Patient Accounting

Claims Clearing House
- UB92
- 1500
- 835

Payer
- Transformed & edit-checked claims data

Financial Decision Support system
- Manual updates to charge master

Contract Management
- Variance & performance data

Costing/Budgets
- Payment variance report

Variance & performance data
- Phone & fax communications to resolve variance

Revenue cycle management ---- 2005 scenario © Gartner research 2002
Current systems require difficult to support interfaces especially with the clinical systems

Healthcare entities can institute same day or 24 hour turnaround service for most of their transactions


Currently rules are needed in the system to determine eligibility, co-pays and ABN’s are usually provided through third party systems then sent to claims speaking houses to:

- ‘Scrub’ for appropriate coding
- Transform – change data into payer’s format
- Aggregate and electronic transport of claims to payers
## The current chaotic process

Even the best performers are under-performing

<table>
<thead>
<tr>
<th>Gross days revenue outstanding</th>
<th>Year-to-date bad debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 40</td>
<td>Under 1%</td>
</tr>
<tr>
<td></td>
<td>14%</td>
</tr>
<tr>
<td>40 to 50</td>
<td>1% - 2%</td>
</tr>
<tr>
<td>50 to 55</td>
<td>2% - 3%</td>
</tr>
<tr>
<td>Average is</td>
<td>3% - 4%</td>
</tr>
<tr>
<td></td>
<td>Average is</td>
</tr>
<tr>
<td></td>
<td>44%</td>
</tr>
</tbody>
</table>

Zimmerman & Associates best performers survey 2001

No one else even measures gross revenue!
The building blocks for the revolution

Low volume transactions will still go through clearing houses. “Consolidation of 30 – 40% of current clearing houses by 2005 (.8 probability)

“By 2005 we expect computer-based patient record applications will have matured to the point where they generate highly-accurate encoded data from clinical documentation and order-entry applications that will be used to produce a patient bill which has been compliance checked at registration, during service delivery and just before the direct 837 is compiled”.

CPR’s produce data for claims attachments for supporting pre-authorization of clinical services

All from Gartner Revenue Cycle Management 2005 scenario. Feb. 2002
Improve the process: the way to go

- Check eligibility etc
  - Patient make an appointment on the Web, provider electronically checks insurance cover (270,271), & tells patient how much they will have to pay
  - Provider checks coverage and obtain authorizations (278)
- Pre-reg. Pre-admission tests; treat
  - Collect all demographic data before arrival
  - Collect cash at point of service (Enterprise-wide MPI ensures correct identification of payers, patients and employer)
- Drop & code charges
  - Charges drop automatically from the clinical system
  - Physician tools to collect appropriate ICD9 and CPT4 codes etc.
  - Billed on day of departure (simplified bill for patient: AHA & HFMA project): bill does not need to be held for accuracy or late charges
- Clean and submit claims
  - Claims cleaned in-house using small number of edits (rules minimized) & submitted electronically (837)
  - Claims attachments automatically extracted from clinical systems and attached electronically (837)
Improve the process: the way to go

- Patient and provider access updates on claims status electronically (276,277)
- Cash received electronically (835) and banked
- Automatic submission of bill to secondary payers (835)
- Collection by phone: or through the Internet
- Virtually no use of collection agencies
- Contract management system automatically checks payments and submits additional claims
- Rate negotiations based on meeting Leapfrog standards (link to clinical system for POE volumes)
- Detailed contract history used to minimize on-going contracted rates
- All Access and Revenue staff report to the same highly-paid VP
- Individual collector performance-related pay
A 350 bed hospital has 4 to 6 FTE’s. Calls average 10 minutes, electronic averages 2 minutes: saving of 1.25 FTE’s

Services review involves clinical, registration, financial counseling plus a nurse to get clinical data. 20 to 30 minutes per call. Saving of 2 FTE’s from telephone calls only (ignores automated clinical information collection)

Hospitals submit 65% of claims electronically currently. Paper bill takes 5 to 6 minutes to review, sign and put in envelope. 30% to 35% edit rate on initial bills is typical: the billing system insurance profiles are outdated). 1 FTE saving for 350 bed hospitals

Currently all inquiries are by phone. 40% to 50% of billing office staff work in this area. With only 25% of transactions automated, save .5 FTE for Medicare, Blue Cross and Medicaid, 2 FTE for commercial payers and 3 FTE’s who work on follow-up

25% to 30% are still manual. Save 1 FTE
Staff savings summary

Martin Brutscher: realizing savings from HIPAA transaction standards. For HFMA 2001

Total of 10.25 FTE savings potential in 350 bed hospitals
But 5.25 FTE’s are assumed to be re-allocated to other processes:
virtually NO Process Improvement or greater use of technology assumed!! Therefore staff savings estimated at $187,500 per annum.

Another gross under-estimate?

“20% to 30% of Health Information Management staff used for coding and data abstraction can be released.”

Revenue Cycle Management: 2005 scenario: Gartner
Revenue cycle days savings

For Electronic Claims:

- Patient Scheduling, Registration, Pre-Admission
- Patient Admission
- Provide Services
- Patient Discharge
- Produce Final Bill
- Payor Processing & Collections
- Payment Processing
- Intercept Analysis and Re-bill
- Zero Balance
- Bad Debt Write-Off

For Paper Claims:

- Patient Scheduling, Registration, Pre-Admission
- Patient Admission
- Provide Services
- Patient Discharge
- Produce Final Bill
- Payor Processing & Collections
- Payment Processing
- Intercept Analysis and Re-bill
- Zero Balance
- Bad Debt Write-Off

Total days = 24

Total days = 53

AR days saving

For Electronic Claims:

- 3 days
- 0 days
- (-20 days)
- 1 day

Total days = 24

For Paper Claims:

- 3 days
- 4 days
- (-45 days)
- 1 day

Total days = 53

Bill hold 9 days Medicare*
8 days Other*

Total days = 64*

3rd quarter 2001 Average HARA*

Zimmerman & Associates 2001

Best hospital total days = 32**
## Revenue cycle dollar savings

<table>
<thead>
<tr>
<th></th>
<th>350 beds</th>
<th>500 beds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual revenue</strong></td>
<td>$250 million</td>
<td>$350 million</td>
</tr>
<tr>
<td><strong>One day in AR</strong></td>
<td>$685,000</td>
<td>$1 million</td>
</tr>
<tr>
<td><strong>Twenty-nine days in AR</strong></td>
<td>$20 million</td>
<td>$28 million</td>
</tr>
<tr>
<td><strong>Invested at 5% per annum</strong></td>
<td>$1 million</td>
<td>$1.4 million</td>
</tr>
</tbody>
</table>
Bad debts, denials and paper savings

1. 25% of bad debts result from poor pre-registration data. If the current bad debt % is 3%, it can be reduced by .75% (based on revenue of $250 million for a 350 bed hospital).

2. Average 350 bed hospital writes off $1m to $1.5m or .006% of its revenue due to authorization and timely filing issues. Can be reduced by 50% or a .003% reduction.

3. Includes paper bills and mailing of statements to patients.

Ignores significant savings from clearing house costs, fewer out-of-network referrals + all patient satisfaction benefits including improved access, less re-scheduling etc.

These figures are very conservative: for example

Rejected claims will be reduced from 11% to 5% with a saving of $15 million in annual cash flow for a 350 bed hospital.

The HPAA payoff – a tangible ROI. Gartner research note 3/15/01
Conclusion: target three KPI’s.....
…and mine the gold

TECHNOLOGY
Invest in new generation integrated systems

PROCESSSES
Radically improve processes

PEOPLE
Leadership ability to take staff along