Perspectives on Improving Outcomes and Driving Down Cost in Hospital IT

August 2013

500 Year Old Quote on the Acceptance of Change

And one should bear in mind that there is nothing more difficult to execute, nor more dubious of success, nor more dangerous to administer than to introduce a new order to things; for he who introduces it has all those who profit from the old order as his enemies; and he has only lukewarm allies in all those who might profit from the new.”

The Prince, Niccolò Machiavelli, 1513
Overview

• Introduction to LHP
• Requirement to improve clinical outcomes
  – The reporting required to show improved outcomes
• Balancing the higher cost of IT with leverage and aggregation
  – More applications add to maintenance fees, infrastructure and staff
  – Shared or outsourced data centers as well as common application deployment can help offset increased cost
• Added digital clinical documentation is creating a virtual mountain of data, “Big Data”, how do we focus our resources to provide the “Information” our end users need in the here and now

LHP Hospital Group’s Mission and Vision Statements

Mission Statement
• To continuously improve the quality of healthcare services provided to our hospitals’ patients by creating a collaborative hospital environment that focuses on improving the health of our patients
• To involve local leaders in the governance of each facility
• To foster physician participation and involvement in hospital management and decision-making
• To recognize the value and contributions of our employees

Vision Statement
• To create a collaborative environment in our hospitals that is focused on improving the quality of healthcare, we must recognize that there are four stakeholders who must be served. The appropriate amount of resources and attention should be given to:
  • Patients - who are the recipients of our caregivers’ efforts
  • Physicians - who admit patients and direct our patients’ care
  • Employees - who provide service and care to our patients and their families
  • Payors - who reimburse the services rendered to our patients
LHP

- For profit based in Plano, Texas
- 6 hospitals
  - 2 in Texas
  - 2 in New Jersey
  - 1 in Idaho
  - 1 in Florida
- 50,000+ admissions
- 1,300+ beds
- 2,000+ on medical staff
- 200,000+ ED visits

LHP

- 4 hospitals on the same applications and infrastructure
- 2 hospitals converting to the common infrastructure in 2014
- All eligible facilities have achieved Stage I MU and are on target to achieve Stage II
Audience Question

How many of you still utilize checks?

1 - Yes
2 - No

Banks Went Through this in the 1980’s

• 1980
  – Wrote checks for everything
  – Kept track of your bank balance in your check register
  – Went to the bank to make a deposit
• 2013
  – Use a debit card instead of a check
  – Can withdrawal, check you balance, deposit checks and transfer money at an ATM or from your smart phone
• What changed?
  – The federal government required interstate banking and standard message formats across all banking in order for a bank to continue to be a participant in the federal reserve system
  – The federal government legislated change in a fragmented industry
    • Sound familiar
Audience Question

Do you believe hospital deployment of technology has impacted workflow and caregiver time with Patients negatively?

1 – Yes
2 – No

Hospital Technology in 2003

Registration/Admitting

Pharmacy

Lab

Billing/Collections

Supplies/Materials

Scanned copy of Legal Medical Record Available On-Line

General Financials

Physician Credentialing

Reporting from primarily manual input
Hospital Technology in 2013
(actual production environment)

Audience Question

Do your cost containment strategies include reducing clinical staff at the bedside or other clinical areas?

1 – Yes
2 – No
Improving Outcomes

• Keep the focus on the patients, their families and the employees (look for cost reductions and savings outside these areas)

• Work to minimize the interruption in workflows caused by computer applications
  – Physician
  – Nursing
  – ED (front door the hospital)
  – Lab/Pharmacy
  – Operating rooms and associated areas

Improving Outcomes

• Ways to minimize technology intrusion
  • Single sign on applications
  • Tap and go badge access
  • Bed side terminals with bar code scanners
    – WOWs where bed side terminals are not feasible
  • Web based registration or kiosk
  • Mobile applications for physicians

• All of these improve acceptance, reduce time waiting on a computer to start up, allow patients of family to enter information for the hospital, allowing for more time with the patient and time management
Improving Outcomes

- Engage the end users to enhance adoption and lower implementation cost
- Leading drivers of forced change in the hospital today include
  - Meaningful Use/ARRA
  - Value based purchasing
  - Readmission penalties
  - Core measure reporting
  - ICD-10 preparation
  - Payor contract stipulations for higher reimbursement
- Areas where IT can engage its users to allow them to have meaningful input into the change
  - Physicians
    - CPOE order sets
    - Online physician documentation
    - Medication reconciliation
    - e-Prescription writing
  - Nursing
    - Assessments
    - Care plans
    - Bar code medication delivery

Surviving Financially

- Driving down reimbursement
  - Fiscal Cliff
  - Sequestration
  - Readmission penalties
  - Value based purchasing
  - Outcome penalties are starting to creep into contracts
- Increases in cost
  - Labor
  - Supplies/equipment
  - Higher levels of automation
  - Requirement to perform more task electronically
  - More workflow interruptions
  - Aging population with higher acuity, longer more complex stays for same reimbursement
Surviving Financially

• How to address lower reimbursement and rising cost
  – Engage as a team, include all your resources and challenge them to reduce cost without reducing care at the bedside
  – Look to increased revenue opportunities
    • Volume increases
    • Additional service lines
    • Higher reimbursement for better outcomes
  – Lower cost outside the bedside setting (all these require data and analysis)
    • Analyze and manage labor appropriately
    • Standardize and optimize supply cost
    • Appropriately manage length of stay
    • Analyze treatment histories to help care givers understand the appropriate use of test and medications
    • Analyze and use the appropriate level of care giver for the situation
    • Standardize technology, look for technology that will save labor time

Leveraging your IT Investment

• Leverage Microsoft tools and products whenever possible, especially databases
• Virtualize everything you can
• Centralize everything you can
  – 3 to 1 reduction in hardware
  – 2 to 1 reduction in operating system
• Analyze and choose a terminal direction, do not let the market drive you
• Leverage common applications across as many settings as possible
  – Common platforms allow for reduced IT staff
• Implement automation to reduce staff
  – Tools to configure and manage standardized PC’s
  – Software and websites to allow users to reset their own passwords
  – More and more applications use terminal servers or virtual desktops, allow users to reset their own session
**Data Versus Information**

- Data is nice to have but information is a must have
- Hospitals have a lot of data and are collecting more at an accelerated level due to the expansion of applications within the hospital
- Additional sources of data are linked or interfaced instruments that add their collective data to patient and hospital data stores
- Personal Health Records and Health Information Exchanges will continue to add data to our hospital records
- Data loses its value if it is not transformed to actionable information. If the potential is not realized then the massive stores of data are fruitless

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**Data Versus Information**

- Many hospitals are doubling their retained information every 2 to 3 years
- In the 1980's only data processing companies stored Terabytes of data, today large hospitals create a Terabyte of data each month

- 1 Bit = Binary Digit
- 8 Bits = 1 Byte
- 1000 Bytes = 1 Kilobyte
- 1000 Kilobytes = 1 Megabyte
- 1000 Megabytes = 1 Gigabyte
- 1000 Gigabytes = 1 Terabyte
- 1000 Terabytes = 1 Petabyte
- 1000 Petabytes = 1 Exabyte
- 1000 Exabytes = 1 Zettabyte
- 1000 Zettabytes = 1 Yottabyte
- 1000 Yottabytes = 1 Brontobyte
- 1000 Brontobytes = 1 Geopbyte
Data Versus Information

Audience Question

Does your facility count “observations” in your inpatient census?

1. Yes
2. No
3. Unsure
To transform data to information, first it has to be accurately defined

- Creation of your data dictionary, standard definition across your departments, facilities and system
- Tie these definitions to the national standards for comparability
- Examples include but are not limited to
  - Inpatient (excluding observations and well babies)
  - Emergency Department visits (excluding admitted patients)
  - What is a productive unit of measure for labor and productivity
  - What cost will be counted and excluded in “cost accounting”

The immediate goal is not to manage populations and outcomes, we have not developed the models to accurately do this, they are in development, but today rely primarily on billing data

- The immediate goal is to provide actionable information
- We are moving from static printed and emailed reports to interactive web reports that allow the user to drill down through the data and redefine the report on the fly
  - Allowing our end users to reach decisions
### Quality Scorecard

<table>
<thead>
<tr>
<th>Goal</th>
<th>LHP 2012 Actual</th>
<th>YTD Jan 2013</th>
<th>YTD Feb 2013</th>
<th>YTD Mar 2013</th>
<th>YTD April 2013</th>
<th>YTD May 2013</th>
<th>LHP 2013 Goal</th>
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<tbody>
<tr>
<td>Core Measures</td>
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<td>HAIs</td>
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<td>Readmissions for Heart Failure</td>
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<td>Deploy Electronic Health Record</td>
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<td>Reduce Consolidated Operations</td>
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<td>Aggregate Contract Compliance</td>
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<td>Implement Automated CDM - Hospitals</td>
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<td>Initial Case Manager Discharge Plan (24hrs of patient admission)</td>
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### Service Scorecard

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<td>ED Satisfaction Top Box Overall rating</td>
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<td>Inpt Satisfaction Top Box Overall rating</td>
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<td>ED LOS</td>
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<td>ED Discharge LOS</td>
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<td>ED LWBS</td>
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<td>ED Door To doc (minutes)</td>
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<td>Deploy Patient Satisfaction Tool</td>
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<td>Reduce CDM Expenses</td>
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<td>CAR request response time of 48 hours</td>
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<td>Facility Contract Team Meetings Expectations</td>
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<td>Outpatient Surgery Discharge Time (hours)</td>
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Closing Thoughts

- Through incentives and penalties hospitals are being forced into a clinical transformation.
- This transformation is intrusive to our caregivers and will only increase.
- Minimizing the workflow and technology intrusions is a priority so we can focus our collective resources on the best possible patient outcomes.
- The cost of technology and IT for hospitals is at an all time high and will not slow down.
  - Mobil platforms and BYOD will be the next frontier.
- Engaging our users in selecting and configuring their information technology workplace will lessen the impact and promote acceptance.

Closing Thoughts

- There are opportunities to control cost and they need to be exploited.
- The information we can create will be the best tool to control cost.
- We need to focus on providing actionable information to our end users.
- Within the next few years each of us will have the ability and the responsibility to be the owner and manager of our personal health information and data, how will we transform our own individual health and treatment.
  - We do this today for our finances.
Perspective

As requested by the user

Perspective

As specified by the project manager
Perspective

As designed by (insert favor vendor here)

Perspective

As programmed
Perspective

As installed by the user

Perspective

What the user really wanted