Conflict of Interest

- Maryann Cone, RN, MS, NEA, BC
- Has no real or apparent conflicts of interest to report.
Who is this man and the importance today?
FEBRUARY

29
Leap Year Day
Agenda

• Sharp Healthcare Organization
• Journey
• Baldrige/Magnet
• Patient Safety, Quality and Efficiency
Learning Objectives

• Discuss the role of nursing in optimizing health IT to achieve organizational transformation (i.e. Magnet, Baldrige Award)

• Describe how health IT optimization is an important tool in the role of the nurse informatics

• Discuss the importance of linking the clinical informatics role to patient safety/quality
REALIZING THE VALUE OF HEALTH IT

Health IT creates five kinds of value of benefit to patients, healthcare providers and communities.
<table>
<thead>
<tr>
<th>Value Category (STEPS™) and Subtypes</th>
<th>Documented Examples</th>
</tr>
</thead>
</table>
| **Satisfaction:** Patient; Provider; Staff; Other | • Improved communication with patients  
• Improved patient satisfaction score  
• Improved internal communication |
| **Treatment / Clinical:** Safety; Quality of Care; Efficiency | • Improved patient safety  
• Reduction in medical errors  
• Reduced readmissions  
• Improved scheduling |
| **Electronic information / Data:** Evidence Based Medicine; Data Sharing and Reporting | • Increased use of evidence-based guidelines  
• Increased population health reporting  
• Improved quality measures reporting |
| **Prevention and Patient Education:** Prevention; Patient Education | • Improved disease surveillance  
• Increased immunizations  
• Longitudinal patient analysis  
• Improved patient compliance |
| **Savings:** Financial / Business; Efficiency Savings; Operational Savings | • Increased volume  
• Reduction in days in accounts receivable  
• Reduced patient wait times |
T = Treatment/Clinical

Safety • Quality of Care • Efficiency

• Clinical Informatics Department oversee the IT design to support evidence based practice and improve ease of use, patient safety, quality of patient care, and support revenue cycle integration and compliance
  – Focus: Improved patient safety; reduction in medical errors
Vision Igniting Possibilities

The greatest danger for most of us is not that our aim is too high and we miss it, but that it is too low and we reach it.

Michelangelo
Sharp Healthcare

- Not for profit integrated health care delivery system
- Largest healthcare system in San Diego
  - 4 Acute Care Hospitals
  - 3 Specialty Hospitals
  - 2 Affiliated Medical Groups
  - Full spectrum of programs and services
  - Health Plan
- Largest private employer in SD
  - >18,000 Employees
  - >2,600 Affiliated Physicians
  - >3,000 Volunteers
- One of the first hospitals in country with EHR
4 Acute Care Hospitals

Sharp Grossmont Hospital

Sharp Memorial Hospital

Sharp Coronado Hospital and Health Center

Sharp Chula Vista Medical Center
3 Specialty Hospitals

- Sharp Mary Birch Hospital for Women
- Sharp Mesa Vista Hospital
- Sharp Vista Pacifica Hospital
Our Journey

• Long Journey and Experience with HIT
• Started in 1985
  – Started with ICU nurses working with San Diego based company
  – Implementation of computerized ICU patient record and order entry system
  – Early adoption—role of Nurse Informatics
  – Continued to expand the installation of computerized EHR
  – Computerized Sharp Mary Birch Hospital for Women and Infants
Journey continues

• Best of breed IT strategy- implemented specific products with bedside nurse and physician involvement (Emergency Departments)

• Bedside nurses and clinicians designed and individualized programs to enhance patient care

• Need to standardize practice and focus our efforts to the eventual move to singular IT system

• Aligning our initiatives to organizational targets
A Journey Good-to-Great

In 2000, Sharp was a **Good** Organization:

- Stable leadership team
- Financially healthy
- Plans to build and expand facilities and services
- Recognized as #1 integrated health care delivery system in California
Learning that Good Can Be the Enemy of Great

Focus Group Results:

- The *Experience* at Sharp was not what it could be
- Health Care experiences in general were not what they could be – no differentiation
- All constituents were excited by the prospect of Sharp transforming the experience
A Vision to Make Health Care Better

Sharp’s vision to transform the healthcare experience to become:

- Best place for employees to work
- Best place for physicians to practice medicine
- Best place for patients to receive care

Goal - to be the best healthcare system in the universe!!
Strategic Objectives

FY 2000-2006- Baldrige and Magnet Journey begins as tactics to hardwire standardized business, quality and nursing structures and processes to produce excellent outcomes.

Goal- Top decile performance
Magnet Recognition

The Program was founded to facilitate work environments that attract and retain well-qualified nurses who promote quality patient care.
Baldrige Criteria

National Quality Award - helps organizations evaluate business performance, assess where improvements are needed or innovations are most needed.

• Leadership
• Strategic Planning
• Focus on Patients, Customers, Markets
• Measurement, Analysis, Knowledge Mgt
• Workforce Focus
• Process Management
• Results
Sharp Grossmont Hospital Collaborative Leadership Structure

**EXECUTIVE TEAM**
CEO, COO, CFO, CMO, CNO
VPs - Foundation, Hospice

**Patient Care Operations Council**
COO, CNO, VPs of Clinical Services, Directors of Nursing, Directors of Lab, Imaging, Pharmacy, Ambulatory, Cardiology, Quality

**Nursing Leadership Council**
CNO, Nursing Directors/Managers, CNSs, Nursing Specialist, Clinical Informatics, Chair - HWPC

**Interdisciplinary Practice Committee**
Directors/Managers representatives from all clinical departments

**Hospital-wide Clinical Practice Council**
(Nursing, Lab, Imaging, Pharmacy, RT, Therapies), Chair of UPC/Department Practice Councils

**Unit/Department Practice Councils**
Advanced Clinicians, Unit/Department staff
Governance Structure

Sharp Informatics reports to EHR Steering Committee

- EHR Operations
- Evidence Based Medicine (EBM) Council
- Physician Advisory Council
- CNO Council
- Clinical Informatics Team
- Pharmacy Informatics Council
- System Safety Committee
- System User Groups
Patient Safety/Quality

Goal: To be High Reliability Organization

• Develop a *Culture of Safety*
• Use *Technology* to Improve Safety
• Address *Human Factors*: Teamwork and Communication
• *Redesign the Processes*
High Reliability Organization

- Is preoccupied with failure
- Resists the temptation to simplify observations and experiences of the environment
- Is sensitive to operations
- Is committed to resilience
- Defers to expertise
Patient Safety and Quality

*Design the Process Utilizing IT*

- Simplify and standardize
- Build in redundancy
- Reduce reliance on memory & vigilance
- Use checklists and forcing functions
- Use structured data to drive improvements
- Provide clinical decision support
Design Change
Changing the Process Challenges Us To:

- Think Differently
- Work Differently
- Ask Questions And Challenge The Status Quo
- Make Decisions With Facts And Data
- Use New Principles, Tools And Methodologies
Technology to Improve Safety

• Advance Clinical Alerts/ Harm Triggers
• Bar Code of medications, blood and IV pumps
• Medical device integration- IV Pumps, VS machines, ventilators, patient education / documentation
• Use data from Help desk to identify opportunities
• Bed Alarms to reduce patient falls
Advance Harm Triggers

- Specific events that prompt investigation
  - Reversal agents
  - Critical lab values
  - Sequential events/trends
  - Linked events such as medication and labs
- Derived from research literature, clinical expertise
- Designed to identify events where harm has the potential to occur in real time or has occurred
- Effective in targeting education to staff
Concurrent **Triggers**

- Intubation, re-intubation
- Pneumonia onset in unit
- Readmission to ICU
- New onset dialysis
- Over-sedation, lethargy, hypotension
- Radiologic test for clot or emboli
- Positive blood culture
- PTT >100
- INR >6
- Creatinine 2x baseline
- Diphenhydramine
- Flumazenil (Romazicon)
- Platelets < 50k
- Naloxone
- Glucose < 50
- Kayexelate
Rapid Response Team

In-House Rapid Response Calls After Admission From ED

<table>
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<tr>
<th>Quarter</th>
<th>Pre-Implementation</th>
<th>Implementation</th>
<th>Post-Implementation</th>
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<td>Q3, 2013</td>
<td>9%</td>
<td>6%</td>
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<td>Q4, 2013</td>
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<td>2%</td>
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<tr>
<td>Q2, 2014</td>
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<td>6%</td>
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<tr>
<td>Q4, 2014</td>
<td>5%</td>
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Target:
- Q3, 2013: 5%
- Q4, 2013: 5%
- Q1, 2014: 5%
- Q2, 2014: 5%
- Q3, 2014: 5%
- Q4, 2014: 5%
Reducing Patient Falls

- Standardized Fall Risk Assessment tools are enhanced to address specific patient populations
- Fall Safety Program- utilize red socks on high risk patients, assessment of each fall
- Patient call systems integrated with patient beds to increase awareness of patients attempting to get out of beds
Total Falls per 1000 Patient Days

![Chart showing total falls per 1000 patient days with data points for Q1 CY12, Q2 CY12, Q3 CY12, Q4 CY12, Q1 CY13, Q2 CY13, Q3 CY13, Q4 CY13, Q1 CY14, Q2 CY14, Q3 CY14, Q4 CY14, and Q1 CY15. The chart indicates a downward trend from Pre-Implementation to Post Implementation, with a note on 'Workouts Started' indicating a change in trend.]
Increasing Breastfeeding after Vaginal Delivery

- Baby Friendly Hospital Initiative - commitment by nursing staff to increase breastfeeding for all mothers
- Scientific evidence indicates that breastfeeding is the optimal method of infant feeding to reduce the risk of common causes of infant morbidity
- Tracking data for improvement
L&D Skin to Skin within 5 minutes after Vaginal Delivery

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<td>83%</td>
<td>77%</td>
<td>93%</td>
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<td>BFHI Standard</td>
<td>80%</td>
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</table>
Reducing Medication Errors

• Year-long Failure Mode Effects Analysis to identify risk issues and need for change before implementing barcoding

• IT team introduced Barcoding Medication Administration to reduce medication errors related to administration

• Use of ongoing compliance monitoring reports to increase awareness and overall compliance with use of Barcoding
Medication Administration Errors

# of Self Reported Medication Errors

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<td>15</td>
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<td>15</td>
<td>21</td>
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Pre-Implementation

Implementation

Oct 2013
BCMA Go

Post-Implementation

Better

Worse

©HIMSS 2016
Reducing Blood Transfusions

- Evoke: Sign order
  - Transfuse Red Blood Cells (PRBC)
- Logic:
  - True
    - Hgb greater than 6.9 g/dL
    - Hct greater than 20.9%
    - 1+ years of age
  - False
    - No H&H result within 24 hrs
    - Surgery within 48 hrs
    - Trauma, Hemorrhage, GI Bleed patient
- Action:
  - REMOVE Transfusion Order
  - KEEP Transfusion Red Blood Cells
Clinician Response to Blood Alternatives

- 5,831 total blood transfusions avoided in 24 months
Sharp Grossmont Hospital
January 2012 - December 2014

Rolling 12-month average of serious safety events per 10,000 adjusted patient days

Serious Safety Event Rate (SSER)

Serious Safety Event Rate (SSER)
Adult Assessment Optimization Project

• Adult Assessment flowsheet needed change
• Nurses report documenting patient assessments is time consuming and inefficient due to:
  – Length of the form
  – Duplication in documentation
  – Unnecessary documentation choices
• Assessments forms are not aligned
Benefits of the Change

• Adult Assessment form is created or modified approximately 1300 times per day across the healthcare system
  – Upon admission, start of each shift, and when patient conditions change

• Proposed revisions will reduce the time for nurses to complete the documentation. Additionally, the changes will eliminate redundancy and inconsistent information.
How Changes were Decided?

• A small group was formed:
  – The system group consisted of nurses, a Clinical Nurse Specialist, and Clinical Informatics Specialists. The group was sponsored by the Chief Nursing Officers.

• Evaluate and redesign:
  – The documentation and information flow within adult patient assessments to ensure that staff can easily find needed information.
New Assessment Form

- Single click to document systems review
  - All systems are now aligned to lend to more thorough documentation with far less clicks
  - Redundant fields removed
New I-View

- Streamlined – displays mostly what has been documented in new form
  - Significantly less scrolling
  - Discourages redundant charting
Summary of Benefits for the Value of Health IT

T= Treatment/Clinical - Patient Safety/Quality

• Reduction of patient harm with alarm triggers
• Reduction in patient falls
• Improvement in Breastfeeding
• Increase in utilization of barcoding/ reduction in medication administration errors
• Reduction in blood transfusions
Challenge

• Purposeful and meaningful work
• Passion
• Possibilities

• Sustainability
Questions?

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