HIMSS7-IMPACT ON THE HIM WORLD

Presenters:
Karen Tinney, RHIA
Michelle Charette, RHIA
Brett Miller, RHIA
WellSpan Health System

Working as one to improve health through exceptional care for all, lifelong wellness and healthy communities.
Overview of WellSpan Health
Working As One

- Integrated health system that serves the communities of central Pennsylvania and northern Maryland.

- Comprised of a multispecialty medical group
  - 850 physicians and advanced practice clinicians
  - A home care organization
  - Five respected hospitals
  - More than 12,500 employees
  - More than 120 patient care locations

- Recognized by:
  - IMS Health as one of the Top 100 Integrated Health Networks in the United States
  - Health Imaging and IT as one of the nation’s “Top 25 Connected Healthcare Facilities.”
## EMR Adoption Model

<table>
<thead>
<tr>
<th>STAGE</th>
<th>CUMULATIVE CAPABILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 7</td>
<td>Complete EMR; CCD transactions to share data; Data warehousing; Data continuity with ED and ambulatory</td>
</tr>
<tr>
<td>Stage 6</td>
<td>Physician documentation (structured templates), full CDSS (variance&amp; compliance), full R-PACS</td>
</tr>
<tr>
<td>Stage 5</td>
<td>Closed loop medication administration</td>
</tr>
<tr>
<td>Stage 4</td>
<td>CPOE, CDSS (clinical protocols)</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology</td>
</tr>
<tr>
<td>Stage 2</td>
<td>CDR, Controlled Medical Vocabulary, CDS, may have Document Imaging, HIE capable</td>
</tr>
<tr>
<td>Stage 1</td>
<td>Ancillaries – lab, radiology, pharmacy - all installed</td>
</tr>
<tr>
<td>Stage 0</td>
<td>All three ancillaries not installed</td>
</tr>
</tbody>
</table>
## HIMSS Stages - Where is WellSpan?

<table>
<thead>
<tr>
<th>Stage</th>
<th>Most Recent HIMSS data</th>
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<tbody>
<tr>
<td>Stage 7</td>
<td>Complete EMR; Data warehousing; Data continuity throughout system; CCD’s</td>
</tr>
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<td>Physician documentation with structured templates, full CDSS, full R-PACS</td>
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<td>Stage 5</td>
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<td>Stage 4</td>
<td>CPOE, Clinical Decision Support (clinical protocols)</td>
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</tr>
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<td>Stage 0</td>
<td>No Ancillaries installed</td>
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WHAT TO EXPECT DURING A HIMSS 7 SURVEY
System Overview Presentation

- Main Clinical vendor
- Clinical Modules utilizing other vendors
- Clinical interfaces
- System implementation timeline and sequence of modules
- Statistics that hit target over a period of time
  - For example: Percentage of orders utilizing CPOE
  - Percentage of inpatient medications & blood products delivered via closed loop medication administration
- Legal medical record-comprehensiveness of electronic documentation
What Have We Been Up To?

Cerner Code 2012.01.24+

1996-2006
Profile/Provision Scanning
Road Notes/
Cerner Extended Care
Provision
CareDocs Nsg Assessment
PACS URL
First Net

2006—2008
Surginet
PharmNet/EasyScript
Message Center & E Sig
Care Admin/Care Mobile
Power form/View/MAR
Care Aware Device Integration

2009-2012
CPOE
iAware
Pathnet
Infusion Management
Anesthesia Module
Depart/Med Rec
WSRH Opened
PowerNote
Case Management

2012-2015
Breast Milk Scanning
BCMA
Specimen Collection
Transfusion Scanning
CAM – Surgical/ED
Moderate Sedation

April 23, 2012
Governance

• Are clinicians involved in decision making?

• Present an Organization chart showing committees involving clinicians and their roles.
Clinical and Business Intelligence

- Synonyms: Clinical Data Warehousing, Clinical Analytics, Quality & Deficiency Analysis
- List primary clinical vendors, analytical tools and source of data
- Process involved to scrub the data:
  - ETL-Extract, Transform, and Load (merging & standardizing the data)
  - Transforming to a common language
    ICD10, SNOMED, LOINC, etc.
- Show how leaders use the information on a regular basis to monitor and improve operations
Clinical and Business Intelligence

• Show how analytics drives changes and decisions.

• Show graphs of how quality has improved over past the 12 months.
  – Medicare
  – TJC Core Measures (pneumonia, HF, AMI, surgical care improvements).

• Interactive dashboards-prove that system has combined financial and clinical data to drive efficiencies and quality.
Health Information Exchange (HIE)

- Show participation in a public or private HIE.
- Can you procure a CCR or CCDA document?
Disaster Recovery & Business Continuity

• Overview of the redundancy plan - data supporting hardware and network
• Testing of Plan
• Communication plans
  – Planned downtime
  – Unplanned downtime
Visits

• Non-intensive care units (at least 2)
  – Nursing staff-notes, assessment, vitals, flowsheets, care plans, medication review, EMAR.
  – Ancillary staff—anything charted on paper by any discipline considered part of legal record must be treated as clinically relevant.
  – Closed loop medication administration:
    • demonstrate: order acknowledgement, pulling appropriate med (from an ADM or Med cart), bedside administration, and documentation.
  – Administering blood—Bar coding support for blood products administration must be present in all IP locations where blood products could be administered and ED Bar code verification.
Visits

– Barcoded expressed milk support-live in NICU. Mothers milk is verified to the baby or mother.

– Physicians-CPOE, alerts, alert fatigue, physician documentation with standardized templates generating discrete data to drive a rules engine.

– Improved consistency quality and safety.
Visits

• ICU
  Key element-vital signs obtained directly from intelligent devices and nursing verification.

• ED
  – Physician documentation with structured templates to generate discrete data.
  – CPOE

• Blood Bank
  Bar code enablement of blood products.
Visits

• Medical Imaging
  – Filmless for radiology and cardiology exams
  – Findings documentation process
  – Structured templates
  – ED support
  – Support off hours
  – Voice recognition
  – PACS system
Visits

• Pharmacy
  – Order verification process
  – Communication-pharmacist intervention
  – Alerts management
  – Packaging process
  – Barcoding of compound prep (TPN, chemo)
  – Bar code accuracy of incoming supplies
Visits

• Chart Reviews
  – Random sample of records (6-10 per unit)
  – Look for presence of paper
    Clinically Relevant
    vs
    Clinically Irrelevant
Visits

• Clinically Relevant Paper
  – Should be scanned ASAP-24 hours maximum after paper creation
  – Care documentation or orders which are not natively in the system
  – Documentation of codes, blood transfusion forms, EKG’s, paper cardiac & fetal monitoring strips (alarmed readings), anesthesia intra/peri-op progress notes, complex chemo orders
  – Telemetry strips (if not interfaced)
    • If there is handwriting on the strips
    • If alarm sounds-then previous minutes of telemetry strips
Visits

• Clinically irrelevant paper
  – Scanned within 72 hours
  – Does not have patient clinical documentation or orders
    • Consents
    • Government required forms
  – Patient information is natively in the system
Visits

• **Health Information Management**
  – Review the coding process-is the coder using the EMR primarily?
  – Dictation/Transcription Turnaround Process
  – Use of former file storage space? See any $$$ savings?
  – Percentage of Structured Forms & Structured Forms with Discrete Data
  – Paper Scanning Process-review one day of scanning
    • Assessment forms, flowsheets, order forms, med lists, problem lists, progress notes, ancillary department documentation
    • Verify 24 hours turnaround for clinically relevant forms
    • Verify 72 hours turnaround for clinically irrelevant
  – Policy for outside records-could expect incoming Discharge Summary, labs, and med profile to be scanned
Visits

Health Information Management

BEST PRACTICE:

– Decentralized scanning accomplished in 30-40 minutes

– “Scanners on wheels”-HIM rounds on units 1-2 times per day
# Documentation Percentages

<table>
<thead>
<tr>
<th>Type</th>
<th>Handwritten</th>
<th>Dictation/Transcription</th>
<th>Dictation Voice Recognition (Dragon into a clinical note)</th>
<th>Structured Forms (with/without discrete data)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H&amp;P*</td>
<td>1%</td>
<td>45.3%</td>
<td>0%</td>
<td>9.8%</td>
</tr>
<tr>
<td>Progress Notes</td>
<td>NA</td>
<td>7%</td>
<td>0%</td>
<td>93%</td>
</tr>
<tr>
<td>Consult Notes</td>
<td>%</td>
<td>100%</td>
<td>100 %</td>
<td>0%</td>
</tr>
<tr>
<td>ED Documentation</td>
<td>0%</td>
<td>NA</td>
<td>NA</td>
<td>100%</td>
</tr>
<tr>
<td>Discharge Notes</td>
<td>0%</td>
<td>3%</td>
<td>0%</td>
<td>91%</td>
</tr>
<tr>
<td>Problem List</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Diagnosis List</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
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*Remaining H&Ps interfaced inbound from ambulatory EHR.
Structured Documentation

- Diagnosis
- Problem list
- Risk scores
  - Morse fall risk
  - Pressure ulcer risk
  - Neonatal abstinence score
  - NuDESC, CAM-ICU
- Readmission scores
- Medication history
- Allergies
WellSpan Surgery and Rehabilitation Hospital
WellSpan Surgery and Rehabilitation Hospital

73 Bed Specialty Hospital

– 48 rehabilitation beds
  including 8 bed secure brain injury unit
– 25 post-surgical inpatient beds
– 3 Observation beds

4 Operating Room Suites

– Orthopedic and Neurosurgery
WSRH STATUS BEFORE HIMSS 7

• May 2012 – facility opened with an electronic chart
  – goal of no paper
  – scanning process in place

• Medical Records office open Monday-Friday 8:30 a.m. to 5:00 p.m.
  – staffed with 1.3 FTEs

• Two document pick-up trips made daily
  – A.M.
  – mid afternoon
WSRH STATUS BEFORE HIMSS 7

• Documents stored on nursing units in locked filing cabinets. Hanging folder for each room on the unit.
• Documents transported back to Medical Records in secure file to be batch scanned
HIMSS 7 GAP ANALYSIS

• Assessed documents for approximately one month that were created during weekend hours that would meet criteria for clinically relevant.

• Identified categories of documents that would need to be scanned.
HIMSS 7 GAP ANALYSIS

• Brainstormed solutions with operational owners (i.e. Director of Operations and Director of Nursing).

  Possible options:
  • Adjust WSRH staffing to cover limited weekend hours
  • Have YH staff stop at WSRH at the beginning or end of their shift to scan
  • Utilize staff on the floor to capture images and have YH staff process remotely
HIMSS7 GAP ANALYSIS

• Assessed resource needs (people and hardware) resulting from proposed solutions.

• Investigated solutions/options with IT department.
HIMSS 7 PREPARATION

• File share option selected as the preferred solution

• Multi-function devices programmed on each unit with a hot key. Documents placed in device, scanned and stored in designated folder on network drive
HIMSS 7 PREPARATION

• Scanning via multi-function device is completed by unit staff on Saturday and Sunday

• Medical Records staff at York Hospital (staffed 24/7) import documents from file share to PowerChart on Saturday and Sunday
HIMSS 7 SURVEY

• Favorable survey

• Key HIM discussions:
  – Document in folder on Nursing Unit that was not intended to be a part of the medical record
  – Handwritten consult identified in Medical Records while reviewing previously scanned documents
WellSpan Gettysburg Hospital
Gettysburg Hospital
Migration to Concurrent Scanning

• 76 bed Community Hospital
• Gettysburg shares an EMR with York Hospital and the WellSpan Surgery and Rehab Hospital
  • Shared informatics team
  • Shared IT infrastructure
  • Similar EMR processes
• Paper light organization
Gap Analysis

- Thoroughly integrated electronic documentation through all phases of care with a mix of structured forms with discrete data and dictation/voice recognition.
- Heavy use of informatics to drive the delivery of care
  - Multi-faceted decision support
  - Data analytics (i.e., stroke, sepsis)
- Electronic record review for coding
- Concurrent Scanning
  - Barriers: Chart binders, weekends/holidays, small number of staff, big change for nursing and medical staff
Selling the change

• Senior Leader and MEC support
• Nursing Practice Council
• Medical Staff Department Leaders
Nursing Practice Council

What to do with the charts?

• No change, keep all records in binders
• Switch to hanging folders in cabinets
• Eliminate folders and have nursing scan documents to a file share
Nursing Practice Council

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Nursing Practice Council

• How to file documents
  • Expand the number of unique document types from 8 to 27 to mimic the chart binder dividers
  • IT analysts had to build out the new folders and review print rules to make sure all scanned documents would continue to print as needed for ROI
  • Resource page added to Intranet to educate end users on how to find documents
Medical Record Staff Impacts

• Cross Training
• Schedule adjustments
• Significant Process change
What to do with Saturday/Holiday

• Nursing and York Hospital support the scanning process
  • YH and GH have many identical forms and similar chart order
  • YH has dedicated weekend staff on evening shift to reduce the number of potential staff to train

• Technology deployment required on some units
• Fileshare
Phased In Weekend Support

• Week 1 full on site MRD support
• Week 2 on site MRD support with one nursing unit pilot for self scanning
• Week 3 on site MRD support with multiple nursing unit pilot for self scanning and remote image processing at York Hospital
• Week 4 full remote image processing at York Hospital with Gettysburg staff available for support
Leadership Debrief

• Unit secretaries have competing priorities
• Technology challenges
• Document identification
• Impact on YH staff
Lessons Learned

• Clinically Relevant
• Document types – fewer is better?
• Automation
• Thorough testing