It’s Coming

What is?

Small Rural Hospitals
EMC: A Small Rural Hospital’s Journey to an EMR

Evergreen Medical Center
Evergreen, Alabama
Keys to Successful Implementation

- Administrative Support
- Have a strategic plan.
- Communication! Communication! Communication!
- Clinical Buy-In
- Be Flexible
- Teamwork
- Gather ideas from other facilities.
- CEO/Administrator
- CNO/DON
- CFO
- Chief of Staff
- Lab Director
- OR Manager
- Radiology Director
- HIM Director
- UR Director
- Education Director
- Pharmacy Director
- Business Office Director
- Collections Specialist
- Network Specialist
- Materials /IT Director

**Evergreen Medical Center’s IT Steering Committee**
IT Steering Committee Meeting

- Held at least once a quarter and not more than once a month. Depends on the projects.
- Pre-defined agenda – Solicited topics from all members
- 1 hour meeting completion is the goal
- Published task lists for all projects. Committee determines task assignment.
- Published project costs
- Minutes are distributed to all members after meeting and directors at Monthly Director’s Meeting.

Continue
<table>
<thead>
<tr>
<th>Task List</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Done?</strong></td>
</tr>
<tr>
<td>✓</td>
</tr>
<tr>
<td>✓</td>
</tr>
<tr>
<td>✓</td>
</tr>
<tr>
<td>✓</td>
</tr>
<tr>
<td>✓</td>
</tr>
<tr>
<td>✓</td>
</tr>
<tr>
<td>✓</td>
</tr>
<tr>
<td>✓</td>
</tr>
<tr>
<td>✓</td>
</tr>
<tr>
<td>✓</td>
</tr>
<tr>
<td>✓</td>
</tr>
</tbody>
</table>
Agenda
I.T. Steering Committee
July 7, 2009
2:00 P.M. EMC Classroom

Present: Angie Hendrix, Bill King, Randy Seale, Shawn Hoomes, Helen Andrews, Tommy Shehan, Mary Black, Sharon Jones, Ann Nobles, Sandra Williams, Julie Miller, Bob Humphrey

- Task List Review
  - Domain Conversion from Workgroup
  - ChartLink - Update
  - CPOE – August 2009
    - Trial Hardware – Tangent VITA Pro
    - CPSI Task List Update
    - Doctor’s Training/2 hr. commitment August 11, 12, or 13
  - Quality Module
  - Imaging Center Wiring and Network Conversion
    - Project Status
Agenda
I.T. Steering Committee
February 8, 2010
2:00 P.M. EMC Classroom

Present: Tommy Shehan, Mary Black, Shawn Hoomes, Bob Humphrey, Melissa Dunn, Sandra Williams, Helen Andrews, Bill King, Alice Anderson, Jenny Stanford, Angie Hendrix

• For Review
  ❖ ChartLink Licensing Status – Current Licenses, Needed Licenses, Cost
    ➢ Currently 6 Licenses – Barnes, Yearwood, Cumagun, Roberts, West, and Farmer
    ➢ Need 6 Licenses– Brown, Ledoux, Lovelady, Boshell, Peterson, Myrick (New Tri-County Physician)
    ➢ Current cost with site visit discount - $1200.00
  ❖ MPI Update Status and Conversion to Person Profile
    ➢ Tommy will run Person Profile Edit (2 pages run Tuesday, 21 in December)
    ➢ Tommy will run MPI Edit Report (830 pages run Tuesday, 2944 in December)
    ➢ A decision about additional personnel will be made after discussion of reports.
  ❖ Clientware Version 17
    ➢ Upgrade tentatively scheduled for Tuesday, March 16, 10:00 A.M. – Expect up to an hour of downtime on the system.
Don't let your worries get the best of you; Remember, Moses started out as a basket case.
One Road to EMR

- CPOE
- ImageLink, ChartLink, Physician Inpatient Doc., Ambulatory Clinical Doc.
- Laboratory Information System, Pathology, Radiology, Rehab, Pharmacy, Point of Care, Electronic Forms, E-sign
- Registration/ADT, Document Scanning, Digital Signature Capture, Health Information Management
## New HIMSS Adoption Model

### US EMR Adoption Model

<table>
<thead>
<tr>
<th>Stage</th>
<th>Cumulative Capabilities</th>
<th>2009 Q2</th>
<th>2009 Q3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 7</td>
<td>Complete EMR; CCD transactions to share data; Data warehousing; Data continuity with ED, Ambulatory, OP</td>
<td>0.3%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Stage 6</td>
<td>Physician Documentation (structured templates), full CDSS (variance &amp; compliance), full R-PACS</td>
<td>1.0%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Stage 5</td>
<td>Closed loop medication administration</td>
<td>4.5%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Stage 4</td>
<td>CPOE, Clinical Decision Support (clinical protocols)</td>
<td>3.6%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside radiology</td>
<td>38.4%</td>
<td>40.4%</td>
</tr>
<tr>
<td>Stage 2</td>
<td>CDR, Controlled medical Vocabulary, CDS, may have document imaging; HIE capable</td>
<td>31.6%</td>
<td>29.8%</td>
</tr>
<tr>
<td>Stage 1</td>
<td>Ancillaries – Lab, Radiology, Pharmacy – all installed</td>
<td>7.2%</td>
<td>7.1%</td>
</tr>
<tr>
<td>Stage 0</td>
<td>All Three Ancillaries NOT installed</td>
<td>13.4%</td>
<td>12.1%</td>
</tr>
<tr>
<td></td>
<td><strong>Total Hospitals</strong></td>
<td>n=5167</td>
<td>n=5172</td>
</tr>
</tbody>
</table>
Our Road to EMR

1991
- BO = Registration, Acct. Payable, Acct. Receivable, General Ledger, Medical Records, Payroll, Materials Management, Executive Information, Ad Hoc

1994
- Pharmacy, Time and Attendance, Home Health Administration

2003
- Laboratory—full package;
- Order Entry for nursing to ancillary departments
- POC w/ Med Verify
- CP/Radiology/Dietary/PT
- Human Resources
- Digital Signature
- Document Scanning

2004
- Radiology installs PACS system (not CPSI)

2005
- Re-install Med Verify

2006
- Electronic Forms
- Flow Charts
- ED and OR go computerized

2008
- CPSI PACS and RIS
- Quality Improvement
- ODBC Data Base

2009
- ChartLink and CPOE

2010
Garbage In, Garbage Out

"I tried to warn him - garbage in, garbage out."

No matter how expensive the computer or powerful the software!
The Very Beginning
FINANCIAL PACKAGE:

- Registration/ADT
- Business Office
  - Acct. Receivable
  - Acct. Payable
- General Ledger
- Payroll
- Materials Management
- Executive Information
- Ad Hoc

LESSONS LEARNED:
- Registration data runs the whole system
  - Registration personnel are not required to have specific education, they get yelled at by patients, families, staff, etc, and are very low paid.
  - Can have ↑ turnover rate
- MPI (Master Patient Index)
- Use system to fullest capacity—keep abreast of changes
- AR–no real training manual: area is constantly changing w/outside influences (CMS, Insurance, etc)
- Ad Hoc–able to run reports easily by pulling info from system
PHARMACY

LESSONS LEARNED:

- Use the system to the fullest from the start
- Keep NDC numbers current in system
- Pre-define as much as possible prior to POC and CPOE
- Need Unit Dose for scanning
- May have to package your own for unit dose

- Therapeutic Substitutions
  - Problems crossing to Pyxis
  - Non-pharmacy putting in the wrong meds
  - Lots of teaching for staff
- NDC need to be updated by both CPSI and drug source so you have most current numbers in system to match drugs
- Pay attention to computer for CLORD
LESSONS LEARNED:

- ✓ bundling/unbundling while interfacing w/machines
- Define all tests and procedures before going live
- Prioritize in order of frequency performed
- Program at least the first 150 test first, and work down list
- Make sure all formatting is correct for interfacing between lab machines and CPSI system.
- We were 80% define/programmed prior to installation but we are still programming in new tests
- Make sure you have enough printers—will print more paper than ever before at first
- Be patient with yourself and pray that everyone has patience with you as you work through the first week or two!
Order Entry

LESSED LEARNED:

- Define all tests and have them in your system prior to install
- Some programs were purchased in their totality, some were not
- Educate, educate, educate
- Radiology program basically ‘dead-ended’. B/C we were looking at a PACS system that was not our current vendor, and didn’t want to pay thousands for the interface, that is what we had
- Generic Orders: ‘Respiratory Order’ ‘Diet Order’
- Try to anticipate the long term consequences of decisions
The Big Jump...getting the nurses involved!

MEDICAL SURGICAL NURSES
POINT OF CARE MODULE

LESSONS LEARNED:

• Hardware:
  - Get their input
  - Make sure it fits in rooms
  - Make sure it can hold all their stuff...because they will make it fit, somehow

• Battery Life
• Touch screen
• Number of licenses
  - Who decides
  - How many are enough?
  - Cost—a deciding factor

• Choices:
  - Traditional vs. flow charts
  - Flow charts vs. E–forms

• Normal statements
  - Try to make it as easy as possible
  - Easy sometimes can be misused

• Too many clicks
  - In and out of sections
  - Must be able to self populate other sections
  - Don’t duplicate work

• Revolt IS possible
Training

MORE TRAINING

“I was wrong...you can teach an old dog new tricks.”
Lessons learned:
• Don’t ever tell the nurses you know better when selecting hardware for them to use. (It is a no win situation).
• Get buy in from the nursing administration and the staff nurses! (Probably most important is input and buy-in from the front line nurses.)

This was try #2. Notice the large box area, complete with locking device, for medication storage. To make it durable, it was constructed out of Complaints: too large, hurt knees, heavy to push, we don’t need that much space for meds.

Our first computer It ran the chart carts

We scored points for adding handheld scanners!
We initially tried to install this with POC. Big mistake, pharmacy was not ready on their end and it created so much havoc that we ended it about 3 days into the install.

Four years later, pharmacy was installing a new Pyxis® Profile, so we decided to roll out Med Verify again. This time our preparation for the event far exceed our other efforts and it was successful.

LESSONS LEARNED:
• Get input of a dream computer
• Narrow it down by price, options, and necessity
• Give the nurses the final say of what you have narrow it down to.
• Give equal consideration to the mobile cart!
• Walk a mile in their shoes—go with them to see what they use the computer for and how it could be made better for them.
• Always try one out first!
We tried many things...

- Notes of thanks
- Cute sayings on candy or nuts
- Keeping track of stats
- Initiation into Club Med….jacket and theme party every quarter!

Our first inductees into Club Med, had to have at least 93%. 
LESSONS LEARNED:

- **Doc scanning:**
  - Define responsibility
  - Equipment
    - Not fancy for POC areas

- **Dig Sig:**
  - Allowed CMS and consent forms to be digitalized
  - Doesn’t allow for 2nd signature; E-forms do
  - Can be used w/E-forms
  - Potential for paperless admit except for labels/bracelets
**Electronic Forms and Flow Charts**

**Lessons Learned:**

**E-Forms:**
- Can copy existing forms so the staff is familiar with the flow of documentation
- Increased functionality over traditional charting
- Able to reflex-orders, charges, etc
- Colorful 😊
- Check boxes, drop down boxes, fill in the blank, or narrative areas available
- Staff love them, I love them!
- Even some doctors use them in the OR

**Flow Charts:**
- Can see previous data when charting
- Looks good when charting but prints in chronological order in paragraphs
- Functionality better than traditional about the same as e-forms
- Flows from question to question
- Flow keeps going without exiting but tends to get long when doing systems review
- To edit/amend, is box by box
Paper versus E-Form
LESSONS LEARNED:

- Must define all tests
- If using CPT codes, add alternate names the nurses and doctors will know
- Allow time and monies for conversion of previous PACS system exams to be moved to new system.
- Lots of training!
- Cannot do test w/o account number from registration—made trauma cases difficult at first
- Viewing for physicians available in office, on CPOE/ChartLink or a secure connection on our website
- Nurses are able to order test w/comments and see if they are schedule or done already (b/c we have RIS)
PACS Accessibility
What you spend
Years building,
Someone may try
To destroy overnight

Build anyway.
Our next Challenge...
THE DOCTORS!
ChartLink™

CHARTLINK™:

- Installed in every physician office (w/training)
- Able to look up everything they called HIM for previously
- Easily accessible at home, office, hospital or anywhere via the internet
- Set up like our paper chart–tab colors, info under each, etc.
- Able to print face sheets, get MR reports, etc.
- Can be used with IP or OP
Preparation is key:

- Learn as much as possible about the physician habits and needs
- Learn as much as possible about the program and its capabilities
- Make sure you have all the time in the world for the pre-install visit
- Keep in constant communication with the hardware personnel and work cooperatively with them to figure out problem areas

- Complete the prep work...and I mean it is a lot of work.
- Be a cheerleading...prepare for the coming of CPOE
- Pick your super-users
- Schedule your training sessions
- Hope you have a wonderful rep like we had for the go live!
Hardware:
- Think of what would be the closest set-up to ‘the paper chart’
- Big screens
- 2 screens—one is touch screen computer
- Place to set things
- Mouse and comfortable keyboard
- Adjustable height
CPOE—Installation

LESSONS LEARNED:

- Stick to your go live date!
- If the doctors don’t come for training, go to them!
- Have adequate people trained to assist the doctors—day or night!
- BE PATIENT
- Don’t kill any doctors! ☺

- Make sure that a vendor rep is there with you when you go live
- Make sure there is a direct line to the vendor for unusual questions
- Have IT Steering Committee and meet if needed
- Don’t let any docs get to you; they will blow off but don’t take it personal!
This is yet to come. Hoping to have input into it!

Mary’s Wish list:
- Similar to E-Forms
- Very simple
- Very few clicks
- Customizable
- Able to expand for narrative if needed
- SPELL CHECK!!!
When discharging from Inpatient or Outpatient units, the ability to have any prescription given in the system without first copying the paper script, then scanning that in to the computer would be welcome. They use this in the office and like it.
A Global Overview

Golden Rules to EMR

• Get to know the interconnectivity of the system. Everything affects something else
• Know as much of the system as possible so you can anticipate problems and offer solutions
• There will be times you know more than the vendor reps—their seems to be turnover and promotions
• Get people involved in the system who actually like and embrace technology
• It’s not just the youngsters who like could be your champion!
• Expect the unexpected…all the time
More Golden Rules

- Take advantage of the vendor services:
  - Follow up sooner than later and why not both
  - System utilization reviews—are you getting as much out of the system as possible
- Make your system fit your hospital and not the other way around. (Yes, it can be done!)
- Plan on extra monies being needed somewhere
- Interfaces are always ‘not included’ and you will need many if you go electronic. Like: telemetry monitor, EKG machine, VS monitors and perhaps even SMART Beds®
Some Life Lessons

#22 Over prepare, then go with the flow

# 31 No matter how good or bad a situation is, it will change

#33 Believe in miracles

#42 The BEST is yet to come!

Of course, my favorite:

#10 When it comes to chocolate, resistance is futile.
I Have A Question

QUESTIONS?
YOU, make it a great day!

Lord, please keep Your arm around my shoulders and Your hand over my mouth. Amen
<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; <strong>Data continuity with ED, Ambulatory, OP</strong></td>
</tr>
<tr>
<td>Stage 6</td>
<td>Physician Documentation (structured templates), full CDSS (variance &amp; compliance), <strong>full R-PACS</strong></td>
</tr>
<tr>
<td>Stage 5</td>
<td><strong>Closed loop medication administration</strong></td>
</tr>
<tr>
<td>Stage 4</td>
<td><strong>CPOE, Clinical Decision Support (clinical protocols)</strong></td>
</tr>
<tr>
<td>Stage 3</td>
<td><strong>Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside radiology</strong></td>
</tr>
<tr>
<td>Stage 2</td>
<td><strong>CDR, Controlled medical Vocabulary, CDS, may have document imaging; HIE capable</strong></td>
</tr>
<tr>
<td>Stage 1</td>
<td><strong>Ancillaries–Lab, Radiology, Pharmacy—all installed</strong></td>
</tr>
<tr>
<td>Stage 0</td>
<td><strong>All Three Ancillaries NOT installed</strong></td>
</tr>
</tbody>
</table>