

The logo for HIMSS (Healthcare Information Management Systems Society) is displayed in white text on a blue background. The letters are in a bold, sans-serif font, with a small dot above the 'i' in 'HIMSS'.

Central & Southern Ohio *Chapter*

A horizontal banner image with a blue background. On the left, a cyclist in a blue and yellow jersey is riding a road bike. In the center, a bridge is illuminated at night. On the right, a classical building with a dome and columns is shown. The text 'transforming healthcare through IT™' is written in white at the bottom right of the banner.

transforming healthcare through IT™

“Nursing Glue” is the “Magic” to Make Things Work

Daniela Mahoney, RN

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*Improving workflow and patient outcomes through
customized EHR consulting.*

Objectives

- Status of CPOE deployments
- Factors that influence deployment success or failure
 - Organizational
 - External
- Nursing role in CPOE implementation from planning to deployment and beyond
- Nursing benefits
- Nursing challenges
- Lessons learned
- Nursing functions included in CPOE design (system screens)

What is CPOE?

■ Definition in literature ...

- “Computer-based Provider Order Entry -- CPOE is the portion of a **clinical information system** that enables a patient’s care provider to enter an order for a medication, clinical laboratory or radiology test, or procedure directly into **the computer**. **The system** then transmits the order to the appropriate department, or individuals, so it can be carried out. The most advanced implementations of such **systems** also provide real-time clinical **decision support** such as dosage and alternative medication suggestions, duplicate therapy warnings, and drug-drug and drug-allergy interaction checking.” (Osheroff, 2005)

What is CPOE?

■ ...in reality?

- Information access
- Interdisciplinary communication
- Interdisciplinary relationships
- Practice effectiveness and efficiency
- Workflow reengineering
- Cultural changes
- Patient focused care
- Differentiating factor between ordinary and extraordinary patient care

TRANSFORMATION

Patient care is a holistic process



- To make the best treatment decisions, nurses, physicians and other caregivers must have access to the most updated patient information at the point of care, as well as any other supporting clinical data and pertinent information
- Clinical decision support combined with system-generated reminders and alerts contribute to the delivery of safer, higher quality patient care
- Information technology that uses standards to support data interchange formats, medical terminologies and knowledge transfer must be considered to enhance clinician's workflow

CPOE continued progress

- “Electronic health record implementation is risky. Up to 30 percent fail.”

technology

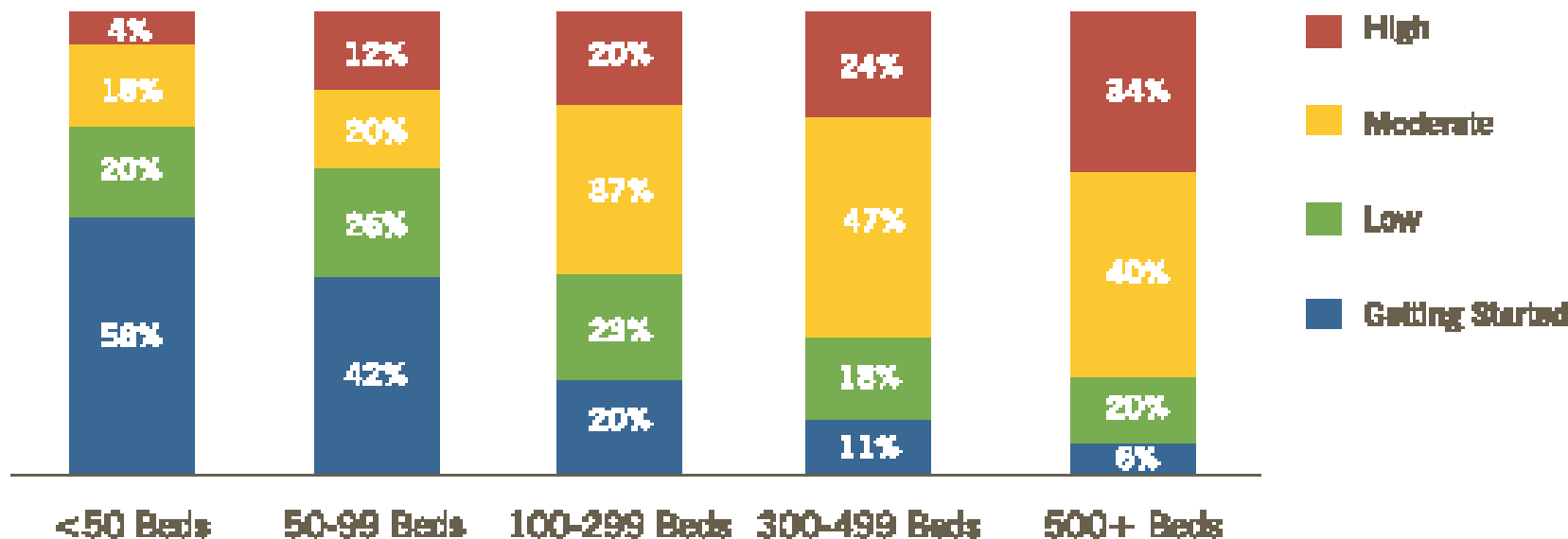
David J. Brailer, national coordinator for health information

- Hospitals continue to accelerate their IT adoption
- 68% report fully or partially implemented EHR in 2006
- Computerized physician order-entry (CPOE) is gaining traction. In 10 percent of hospitals, physicians routinely ordered medications electronically at least half of the time in 2006
- For laboratory and other tests, physicians routinely placed orders electronically at least half of the time in 16 percent of hospitals

(Continued Progress Hospital Use of Information Technology, AHA 2007)

Status of CPOE

Chart 4: Level of Health IT Use* by Hospital Size, 2006



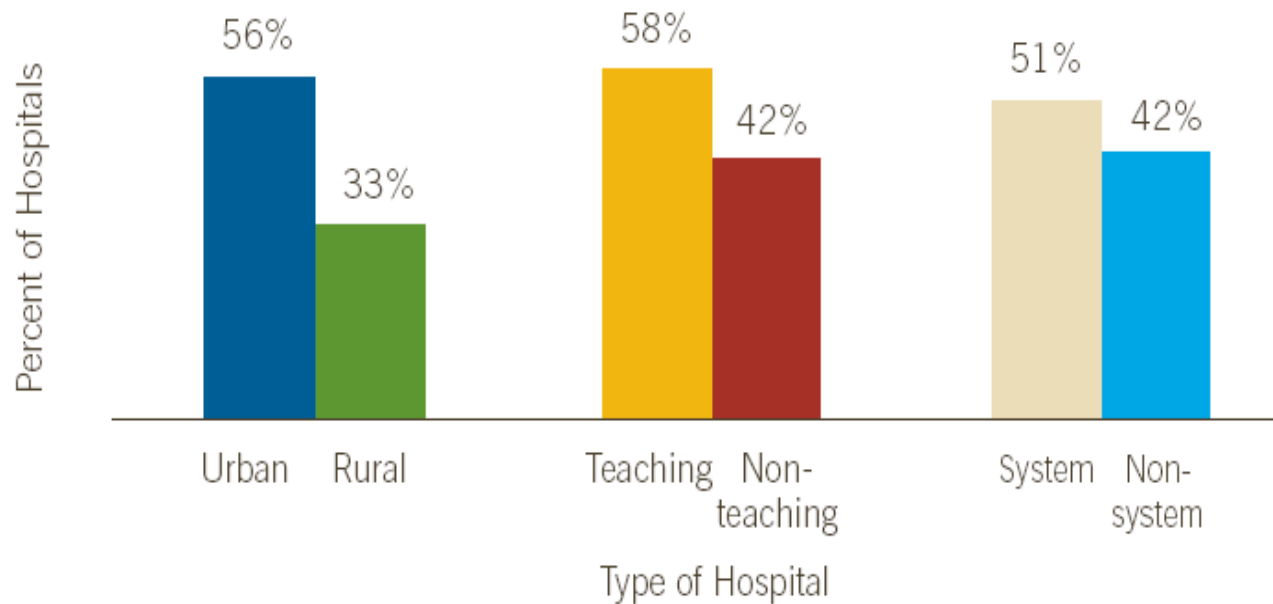
*Level of health IT use is defined as number of fully implemented functions (e.g., drug interaction alerts, order-entry). High is defined as 12-15 health IT functions, moderate is defined as 8-11 functions, low is defined as 4-7, and getting started is defined as 0-3.

Source: American Hospital Association. (2007). *Continued Progress: Hospital Use of Information Technology 2007*. Washington, D.C.

Trends in IT usage in hospitals

Hospitals' use of health IT varies ...

Chart 3: Percent of Hospitals with “Moderate” to “High”* Levels of Health IT Use by Hospital Type



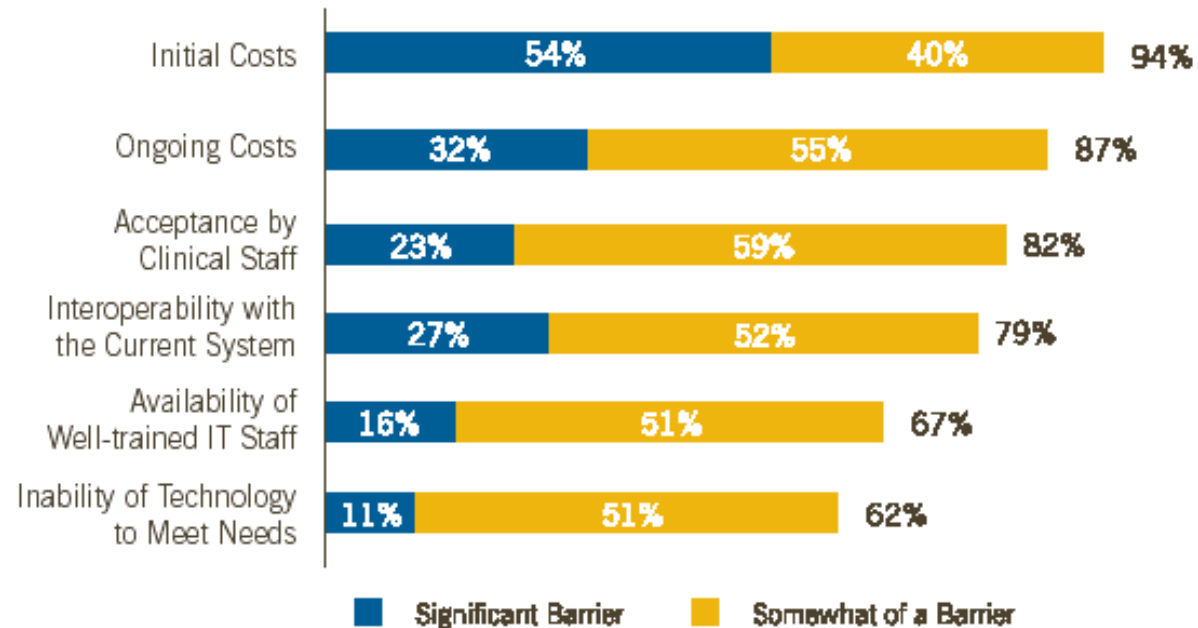
*Level of health IT use is defined as number of fully implemented functions (e.g., drug interaction alerts, order-entry). Moderate is defined as 8-11 functions, while high is defined as 12-15 functions.

Source: American Hospital Association. (2007). *Continued Progress: Hospital Use of Information Technology 2007*. Washington, D.C.

Greatest barriers to CPOE

...while hospitals report cost as the greatest barrier to health IT adoption.

Chart 6: Percent of Hospitals Indicating a Barrier Is a “Significant Barrier” or “Somewhat of a Barrier” to Health IT Adoption, 2006



Source: American Hospital Association. (2007). *Continued Progress: Hospital Use of Information Technology 2007*. Washington, D.C.

Estimated implementation costs

Table 3. Estimated Costs of CPOE Implementation in a Rural State³⁹

| | Median N of Beds | Low Estimate | High Estimate |
|---------------------------------|-------------------------|---------------------|----------------------|
| Urban Hospital | 282 | \$1.9 M | \$4.4 M |
| Rural Referral Hospital | 212 | \$1.9 M | \$3.2 M |
| Rural Hospital | 62 | \$1.3 M | \$2.1 M |
| Critical Access Hospital | 45 | \$1.3 M | \$2.1 M |

Ongoing operating costs range between \$238,000 and \$889,000 annually.

To determine implementation feasibility the authors applied a simulation model to all hospitals in Iowa, admittedly using crude estimates of depreciation, interest rates, and third party payments. They conclude that small patient volumes would not generate reimbursements sufficient to fund increased operating costs resulting from CPOE in small hospitals. However, the authors suggest that for urban hospitals and rural referral hospitals, the substantial cost impact of a CPOE could be offset by patient care cost savings and increased revenues.

n Med Inform Assoc.

Overcoming cultural perspectives

Physician quotes:

■ Efficiency

- “I can now write 27 orders for an asthma patient with three clicks”
- “I don’t see any efficiencies”

■ Quality

- “My gut feeling is if the tool helps us standardize a process it will improve quality”
- “I bet this is not a relational data base, so how can you manipulate data to show quality?”

■ Safety

- “I think CPOE is a big safety benefit and will decrease liability”
- “Medication errors have no consequence to patients, so a decrease of errors by 50% would not impact quality at all. Ninety-thousand people don’t die a year. It’s cooked data”
- “In fourteen years I can’t remember a single case of my patients getting a wrong medication”

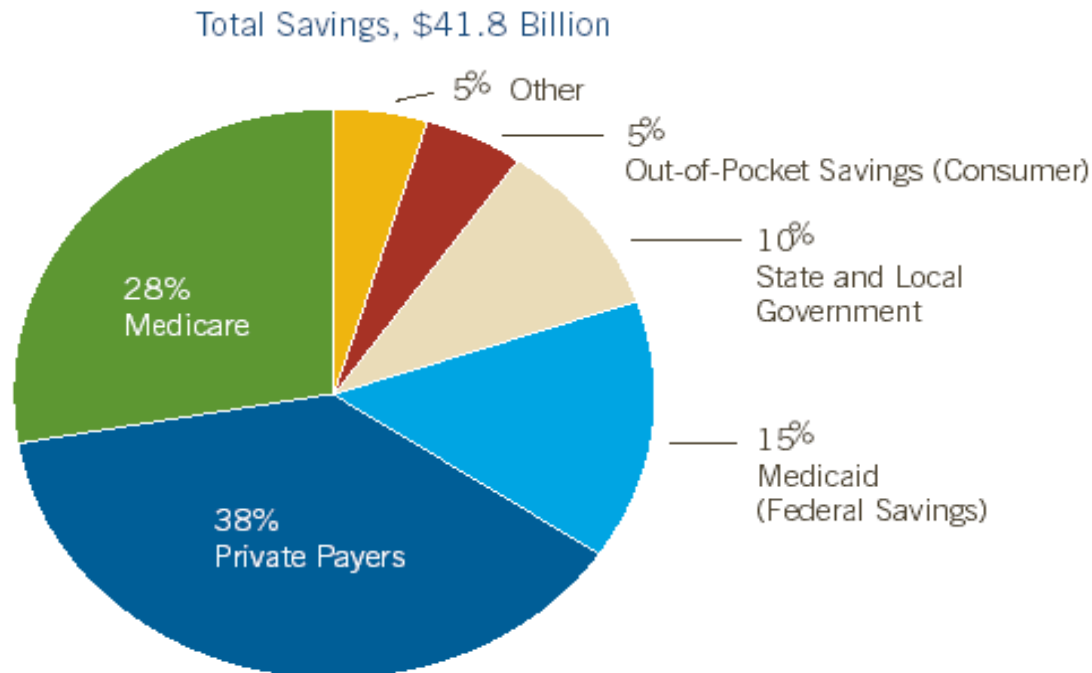
■ P4P

- “I don’t know anything about it, but it sounds great”
- “With CMS regulations it’s coming and it will all be public information, so let’s get ready”

Financial savings, truth or myth?

Widespread use of electronic health record systems can realize significant savings for a variety of stakeholders.

Chart 12: Estimated Average Annual Savings from Widespread Use of Electronic Medical Record Systems* by Recipient of Savings



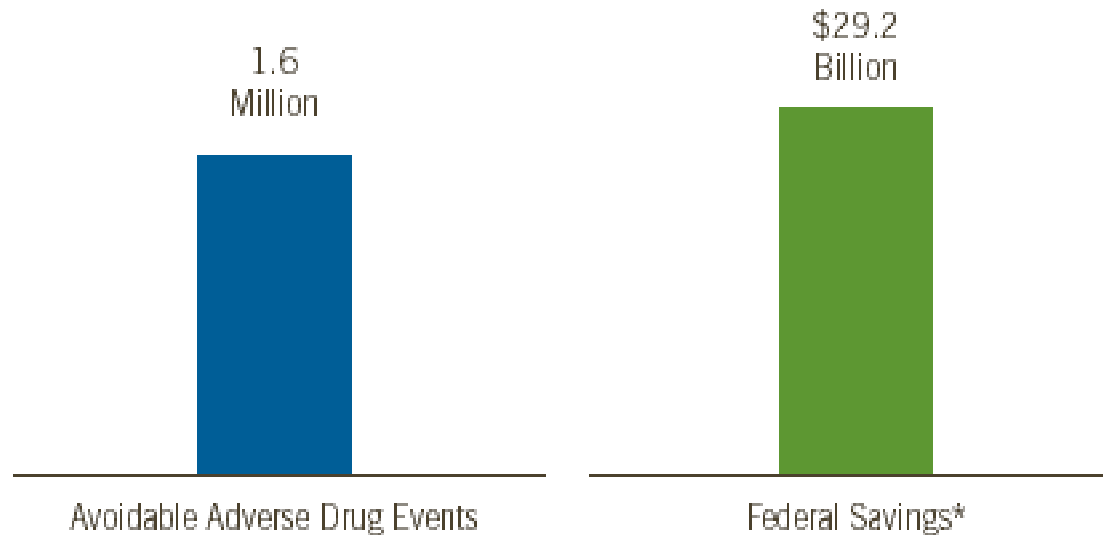
*The authors' analysis focuses on electronic medical record systems, defined to include electronic medical record, clinical decision support, a central data repository, and computerized physician order-entry. Please note this differs from the electronic health record definition in the text, defined by AHA as "systems that integrate electronically originated and maintained patient-level clinical health information, derived from multiple sources into one point of access." Totals do not sum due to rounding.

Source: Girosi, F, et al. (2005). *Extrapolating Evidence of Health Information Technology Savings and Costs*. Santa Monica, CA: RAND Corporation.

Can we afford not to do it?

Health IT has the potential to improve patient safety and lower costs...

Chart 1: Potential Adverse Drug Events Avoided and Associated Federal Cost Savings over a 10-year Period from Electronic Prescribing



*Federal savings due to electronic prescribing for all Medicare Part D prescriptions.

Source: Pharmaceutical Care Management Association. (2007). *Options to Increase E-Prescribing in Medicare: Reducing Medication Errors and Generating Up to \$29 Billion in Savings*. Chicago, IL.

EHR Adoption Model

- HIMSS Analytics 2007 - EMR Adoption Model that measures and tracks the deployment of clinical system applications in healthcare.
 - This model demonstrates that most hospitals have not progressed past infrastructure implementations of clinical applications or EMR components at this time

| FIGURE EMR11 EMR Adoption Model V3 | | |
|--------------------------------------|--|---------------------|
| | Where would nurses NOT be involved? | % of U.S. Hospitals |
| STAGE 7 | Medical record fully electronic; CDO able to contribute to EHR as byproduct of EMR | 0.0% |
| STAGE 6 | Physician documentation (structured templates), full CDSS (variance & compliance), full PACS | 0.1% |
| STAGE 5 | Closed loop medication administration | 0.5% |
| STAGE 4 | CPOE, CDSS (clinical protocols) | 1.9% |
| STAGE 3 | Clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology | 8.1% |
| STAGE 2 | CDR, CMV, CDSS inference engine, may have Document Imaging | 49.7% |
| STAGE 1 | Ancillaries – Lab, Rad, Pharmacy | 20.5% |
| STAGE 0 | All three ancillaries not installed | 19.3% |

2006 Annual Report of the U.S Hospital IT Market (HIMSS Analytics)



- The nursing application environment is a critical foundation for implementing an electronic medical record (EMR)
- Nursing applications are key components to building an infrastructure that can support provider order entry and closed loop medication administration processes
 - **Patients are admitted to hospitals for nursing care – not physician care. Therefore, it is an environment that hospital executives should focus on and evaluate before moving too far forward with any physician applications beyond results reporting**

| TABLE NA9 Nursing System Temporal Contract Signing | | | | | | |
|--|--------|--------------|-------------------------------|--------------------------|-----------------------|----------------------------|
| | EMAR | Nurse Acuity | Nurse Staffing/ Scheduling | Nursing Documentation | Patient Scheduling | RFID - Patient Tracking |
| Prior to 1989 | 1.51% | 7.76% | 18.12% | 3.15% | 3.16% | 0.00% |
| 1990 to 1994 | 2.38% | 5.17% | 21.28% | 7.57% | 12.71% | 12.50% |
| 1995 to 1999 | 9.50% | 31.90% | 29.59% | 33.44% | 41.56% | 25.00% |
| 2000 to 2005 | 86.61% | 55.17% | 31.01% | 55.84% | 42.57% | 62.50% |

Greatest CPOE barrier in hospitals



■ National nursing shortage crisis

- About 70,000 nurses are graduating each year in America, but even at that rate, the country will need about **1 million more nurses by 2020**, about the time the average reader of this information turns 65

Nursing concerns with CPOE

- No. 1 concern of the nursing staff was timely notification of new or changed orders
- In a University of Pennsylvania study, the use of CPOE resulted in decreased collaboration between nurses and physicians
 - Thew J. 2005 Practice vs. Technology. Nursing Spectrum Online: The New England Edition.
- Communication of orders between unit secretaries and nursing
- Loss of visual clues about new or changed orders

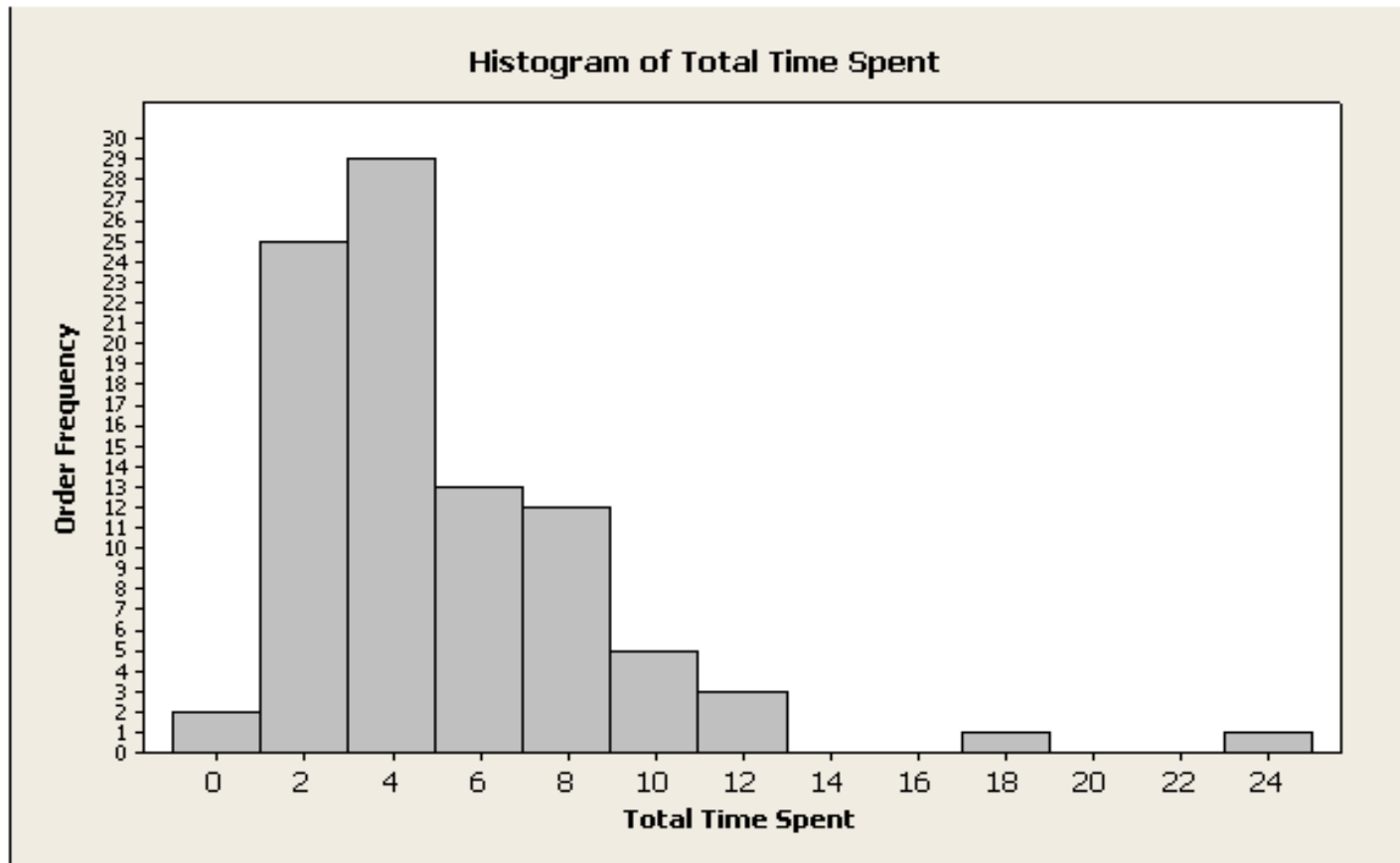
How do we spend nursing time?

- Evaluated the time spent by staff caused by "questionable" orders requiring further clarification either with a peer, receiving department or ordering physician at **St. Vincent Mercy Medical Center**, Toledo, Ohio
 - Time and motion study
 - Total number of questionable orders: 91 (from 02/10/05 to 05/24/05)
- Each questionable order was recorded and derived together with various aspects, which included:
 - Order type
 - Total time spent
 - Start and end time
 - Time spent in carrying out the questionable orders

Time not well spent – ambiguous orders

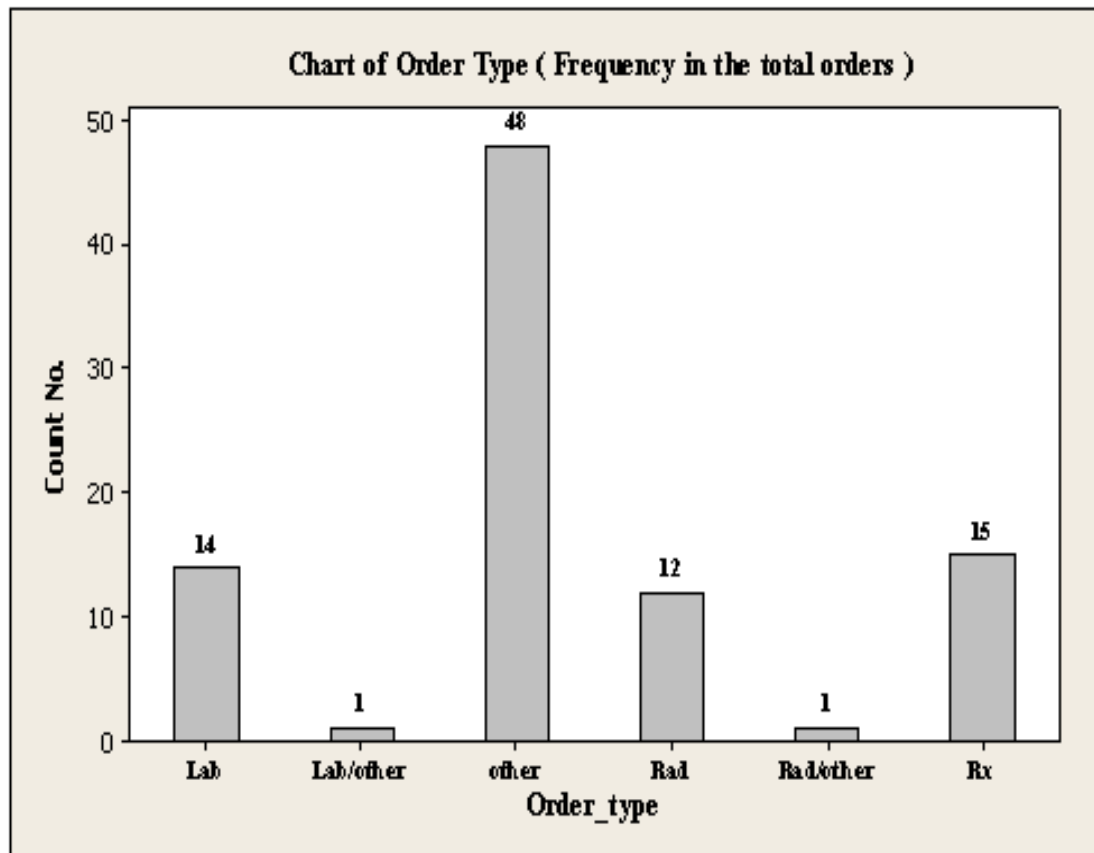
4) Histogram of Total Time Spent (minutes)

Most questionable records can be fixed with a time range from seconds to 6 minutes. 43 questionable orders can be clarified within 4 minutes. Obviously, the distribution is positively skewed; several orders (outliers) need more time to be carried out by RNs.



Time not well spent – ambiguous orders

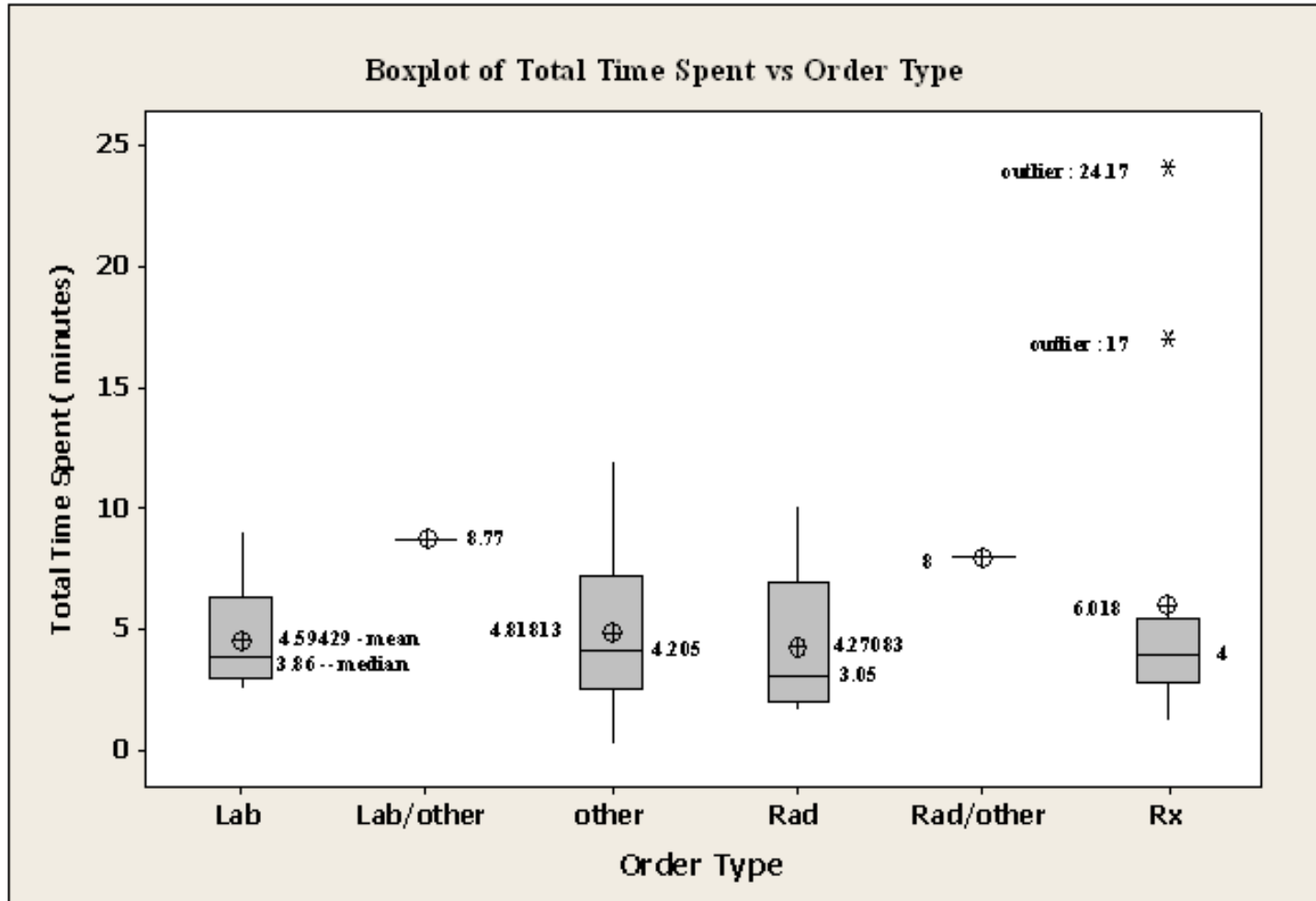
We checked the frequency of the orders and obtained the following chart: In 91 orders, there were 14 orders with the “Lab” type representing 15.38% of the total number of orders. There were 48 orders with the “Other” type representing 52.7 % of the total number of orders. The percentage for the RAD and RX type are similar, respectively 13.2% and 15.40%.



Time not well spent – ambiguous orders

2) Boxplot of Total time Spent vs. Order Type (91 orders):

- the median of total time spent in each order



Lessons learned

- Many orders are incomplete
- Takes time to identify who ordered and locate contact information
- The order may be legible but clinically “does not fit,” ambiguous
- Takes time and clinical experience to interpret the meaning of what was the intention of the order

How could we prevent this with CPOE?

- Get nursing involved early in validating Order Sets content and orderable services especially for “other” types of orders

A different perspective

■ Then...



Glass thermometers must remain in contact with sublingual tissue for 8 min. Rectal temperature takes 5 min, axillary temperatures up to 11 min.

Simple math:

Average nurse to patient ratio on med/surg unit 1:6

Taking only temperature on 6 patients = 48 minutes

Add the rest, BP, pulse and respirations = 4 min

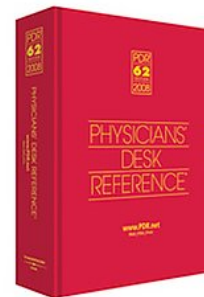
Total time for VSS = 12 min x 6 patients = 1hr 12 min

A different perspective

■ ...and now



Average time = 6 seconds x 6 patients = 36 seconds!



PROGRESS IS IMMINENT !

Nurses: the “glue” that holds it together



- Because nursing plays such a central role in patient safety, transforming the nurse’s work environment must be a critical part of every healthcare organization’s patient safety and IT strategy efforts
- A wide range of technology solutions are available today that can enhance the accuracy and efficiency of the many tasks that make up nursing work. When applied within the framework of appropriate process analysis and change, these technologies:
 - Reduce opportunities for error
 - Provide more comprehensive and timely information for clinical decision-making
 - Reduce time spent on administrative activities that can better be spent on direct patient care contributing to a safer care environment

Nurses: the “glue” that holds it together



- Nurses understand the **cross-disciplinary workflow** processes that will be impacted through CPOE implementations
- Nurses take a holistic, 360’ view of patient care, care process, workflow analysis and **change management**
- There is significant organizational complexity in implementing such systems. In order to successfully deploy CPOE systems, **transformation of care processes must occur**. Nurses and nurse informaticists are key catalysts in this transformation
- **Understanding communication processes is one of the keys to understanding the change management process with CPOE implementation**
- **The larger decision-making process of care delivery in an integrated clinical system is facilitated through changes in nursing practice**

NURSING IS THE HUB OF COMMUNICATION!

Communication flow



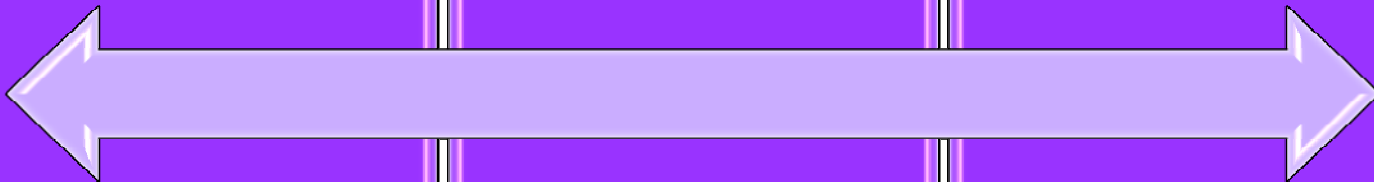
Physician



Nurse



Patient



What are nurses saying after CPOE implementation?



- “Having a **nursing department that is proficient is key** to the success of the CPOE initiative. **Physicians look to the nursing staff for assistance** and they are more inclined to take help from staff they know and trust than staff they are not familiar with (other IS staff). Also, **assistance in the planning of the order sets** by nursing enhances their buy-in and positive attitude. A **positive attitude towards the system is key to success.**”

Kathleen O’Connell, RN Director Medical Surgical Department

- “Nursing ties it all together...they do order entry, become proficient (**super-users**), then in turn **assist and educate the physicians**. Physicians have a rapport already with the nursing staff, so they would be more comfortable asking for their help. **Assistance in developing the order sets/assessments/data collection forms** helps with buy-in and use of the system.”

Sarah Rains RN, Sr. Clinical Analyst

What are nurses saying after CPOE implementation?

- “Nurses have **ALWAYS** been the glue with or without CPOE. We follow up with physicians, ancillaries dept, and families. We are great communicators, but we have to be as we are the pts voice, we ensure labs are drawn, tests are scheduled, coordinate treatments, ensure results are noted, and make sure outstanding issues are addressed...nothing has changed much with the implementation of CPOE, except where and how the information is stored, gathered, and entered. **Nursing adaptation to CPOE can be greatly influenced with early education and training of the system.**”

B.

Schomaker, RN, Sr. Clinical Analyst

- “I believe nursing is the "glue" throughout the patient stay in the hospital - not just for CPOE, but for **positive progression of the patient through the hospital experience**. Nurses advocate for the patient, coordinate services, etc. - we now use a different system to communicate and work with data (and continue to serve as **educators to physicians** for this system) - we've changed how we do things and addressed some patient safety and process issues along the way, but in the end **we still provide the coordination of all care of the patient.**”

Kathy Miller, MSN, RNC, Manager/CNS Pain Care Clinic

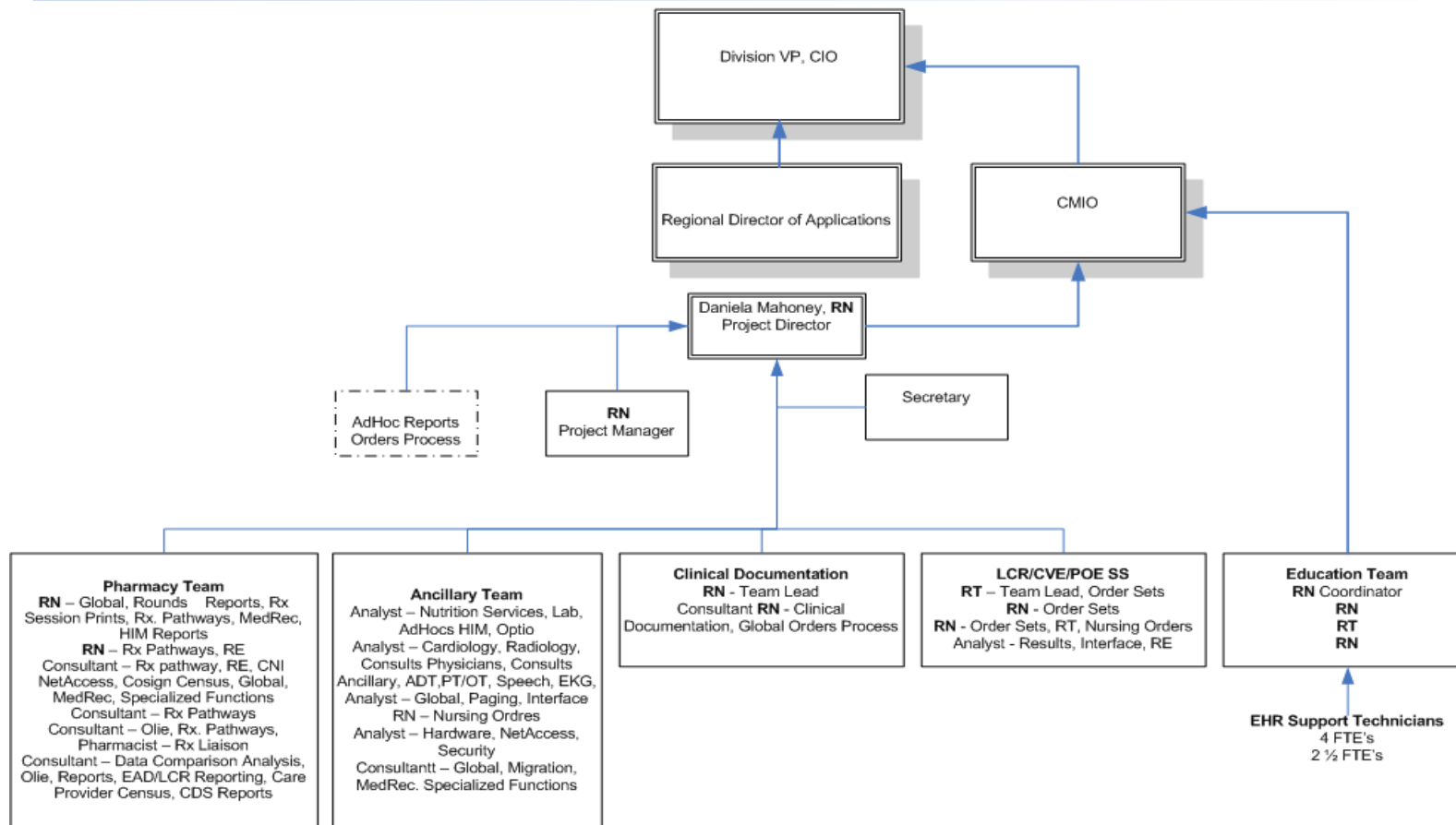
When do we get nursing involved?

...From the moment you start planning!

■ Nursing implication in a CPOE project implementation cycle begins with defining:

- Vision
- Scope
- Implementation approach
- Timeline
- Roll-out strategy
- Training strategy
- Support model
- Strategy for sustaining the system
- Measuring outcomes

EHR Team Structure



Deployment approach and nursing impact



| Deployment Strategy | Physician Consideration | Nursing Considerations | IT Considerations |
|--|--|---|--|
| Unit (or unit clusters based on patient transfer flow) | <ol style="list-style-type: none"> + All orders are in one location + Know where system is implemented + Support from nursing staff | <ol style="list-style-type: none"> + All orders are in one location, legible, eliminates time deciphering + Consistent processes for patients on the unit + Access to additional tools, standardizes the communication process | <ol style="list-style-type: none"> + Controlled, manageable support + Targeted content development + More known and predictable impact on processes |
| | <ol style="list-style-type: none"> - Transferred patients have orders in dual systems (CPOE and paper) - All physicians carrying for patients need to understand processes associated with dual systems (writing orders in CPOE on one unit and paper on other, communication impacts) - Not all specialties may be represented in CPOE during the early stages of deployment - Not all processes are defined since might have not yet been discovered | <ol style="list-style-type: none"> - Dual systems during implementation (patient transfer) - Decreased efficiency if CPOE physician adoption is not mandated - Maintaining data in one location results in backloading efforts | <ol style="list-style-type: none"> - Creates dual processes for clinicians, unanticipated system changes - Limited lesson learned during deployment (<u>Peds</u> will be different than ICU) - Able to support user demands if roll-out not realistically planned |

Deployment approach and nursing impact

| Deployment Strategy | Physician Consideration | Nursing Considerations | IT Considerations |
|---|---|--|---|
| Specialty (physician) Assumes clerical order entry for orders written on paper | 1. + Can use system regardless of location 2. + Achieve efficiency faster <hr/> 1. – Not all orders viewed in the system are physician entered (potential transcription errors) 2. – All location will have dual processes until all specialties are live 3. – Inconsistencies in communicating orders to the staff | 1. + Some of the orders are more legible <hr/> 1. – Dual processes 2. – Increased paper generation (single source of information is the paper chart) 3. – Potential errors related to loss of printouts 4. – Not be able to support physicians with CPOE functions | 1. + Targeted content development 2. + Targeted audience for training <hr/> 1. – Difficulty for support as physicians can enter orders on any unit 2. – Focus of implementation is limited to physicians 3. – Impact on many processes throughout the hospital with limited staff to support resolution |

Deployment approach and nursing impact

| Deployment Strategy | Physician Consideration | Nursing Considerations | IT Considerations |
|--|--|--|--|
| Patient Flow (Based on admission) | <ol style="list-style-type: none"> + Rapid use house wide + System available everywhere + All orders in one location + Reduced transition time (based on average LOS) | <ol style="list-style-type: none"> + Short transition from paper to electronic + Progressive transition, improved adaptability to accept the system + Orders in one location: system or paper chart | <ol style="list-style-type: none"> + Short transition from paper to electronic + Faster discovery of process issues and their resolution + Decreased roll-out time |
| | <ol style="list-style-type: none"> - Not all content may be available up-front - Not all processes may be well outlined - During transition, understand e-patients vs. paper patients | <ol style="list-style-type: none"> - Transition time creates communication difficulties (remembering what to do with paper vs., electronic orders) - Non-refined processes need rapid resolution and communication house wide - Bridging the gap between paper to electronic (between physicians and ancillaries) result in additional effort | <ol style="list-style-type: none"> - Support may be difficult based on hospital size - Increased up-front implementation time as all specialties need to be represented - Increased number of users to be trained at once - May not be able to do just in time training - Post live support for system enhancements – delays in addressing user needs |

Deployment approach and nursing impact



| Deployment Strategy | Physician Consideration | Nursing Considerations | IT Considerations |
|-----------------------|---|--|--|
| "Big bang" House wide | <ol style="list-style-type: none"> + All orders available in CPOE + Consistent processes + Increased efficiency | <ol style="list-style-type: none"> + All orders available in CPOE + Consistent processes + Increased efficiency | <ol style="list-style-type: none"> + Short transition from paper to electronic + Faster discovery of process issues and their resolution + Decreased roll-out time |
| | <ol style="list-style-type: none"> - Not all Order Sets may be available at live - More "a la carte" ordering in early months post deployment | <ol style="list-style-type: none"> - Non-refined processes need rapid resolution and communication house wide | <ol style="list-style-type: none"> - Support may be difficult based on hospital size - Increased up-front implementation time as all specialties need to be represented - Increased number of users to be trained at once - May not be able to do just in time training Post live support for system enhancements – delays in addressing user needs |

- Areas that present complex clinical and process needs
 - Emergency Department
 - ▶ Stand-alone tracking systems + CPOE = NO Integration
 - Nursing handoff communication
 - PAT/OR/PACU
 - ▶ JC requirements (hand-off communication of orders)
 - Nursing management of pre and post-op orders
 - Coordination of care related to patient's location
 - ▶ Reimbursement (CMS)
 - i.e., documentation of correct patient status PRIOR to procedure
 - » Obtaining documentation to meet requirements, multiple nursing processes

- Areas that present complex clinical and process needs
 - Dialysis
 - ▶ Serve inpatients & outpatients
 - Nursing order management: orders in dual systems (paper and CPOE), repetitive orders, meds ordered on the unit but needed in dialysis
 - Pediatrics/PICU/NICU
 - ▶ Wt based dosing
 - ▶ IV fluids volume management
 - Hematology/Oncology/BMT
 - ▶ Complex protocols
 - ▶ Complex calculations
 - ▶ Multiple checks & balance processes across disciplines
 - Nursing documentation of dual order checking, embedding hospital chemo policies into CPOE
 - Medication Reconciliation
 - Ownership, who does what, when and how

Investing in nursing training



September 2006 CDW survey (559 nurses)

- 25% indicated they received no IT training in previous 12 months
- 55% said more IT training would have the greatest impact on improving their use of the systems
- Even with the lack of training, 44% indicated they spend three or more hours/day using IT functions
- 86% strongly believe IT can improve patient care

Post implementation nursing training

Nursing survey purpose: evaluate best forms of communication for ongoing changes post CPOE roll-out.

This is a Brief Survey...

(This survey is also available by selecting EHR Communication Survey from the navigator on the left)

The EHR team welcomes your feedback regarding the best communication options to provide you with timely EHR updates or new enhancements. Please choose your preferred methods of communication: (Select all that apply)

Would you like to be able to participate in "on the unit" training sessions?

HQ1 Yes No For how long?

Are one page updates (flyers) beneficial or useful for you?

HQ2 Yes No

Do you feel that a one or two hour "refresher course" would be beneficial?

HQ3 Yes No What time is best for you? Start of Shift Middle of Shift End of Shift

Have you used the orange "EHR Resource Guide" available on your unit?

HQ4 Yes No

Which of the following do you think is most important for staff education?

H01 WebEx Online Conference - 30 minutes each month offered at various times.

H02 Online computer based training modules, accessed via thinkwise at any time

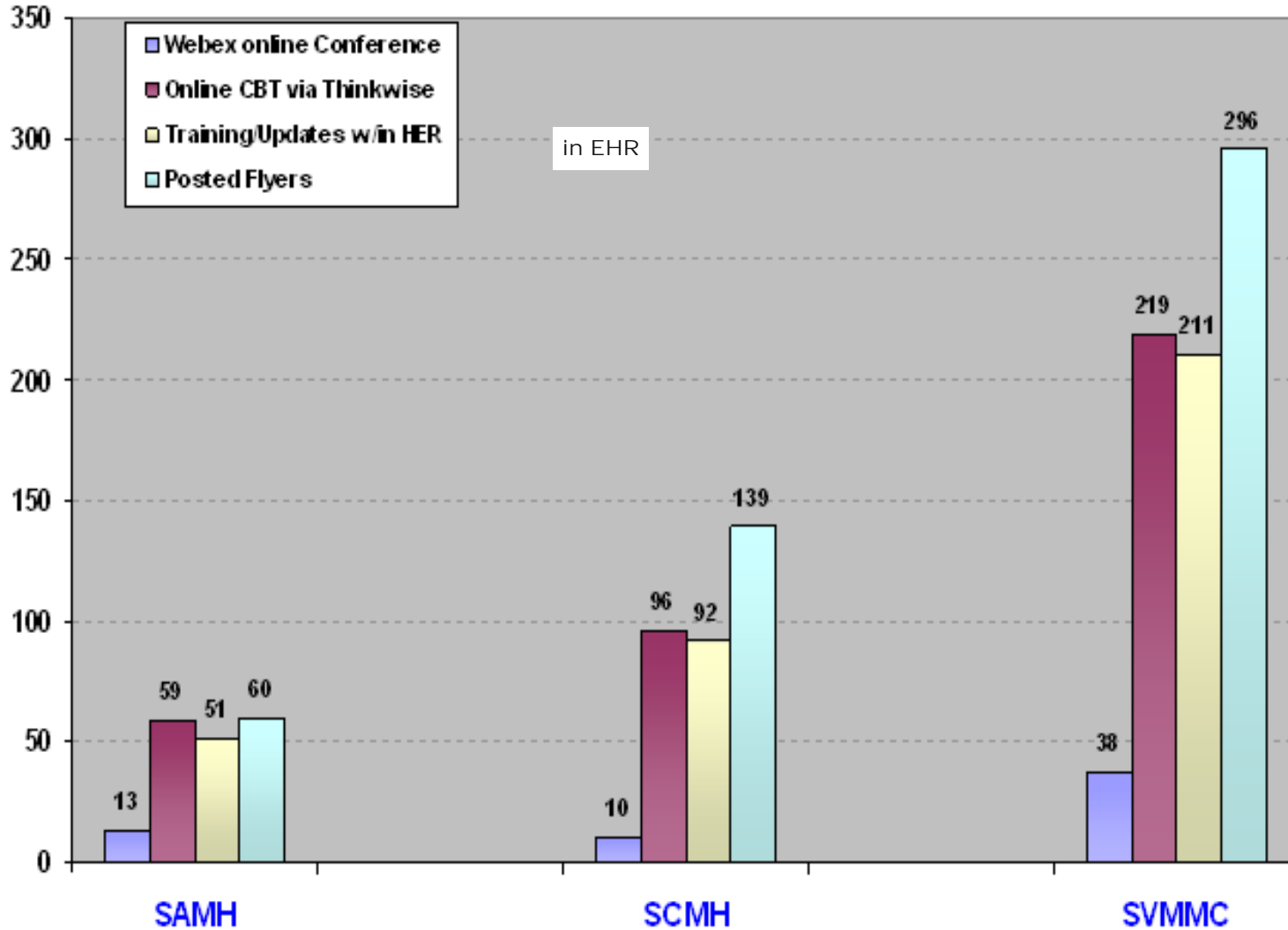
H03 EHR Training/Updates within Netaccess and EHR

H04 Posting Flyers of Updates and changes

H05 Other

Nursing training feedback

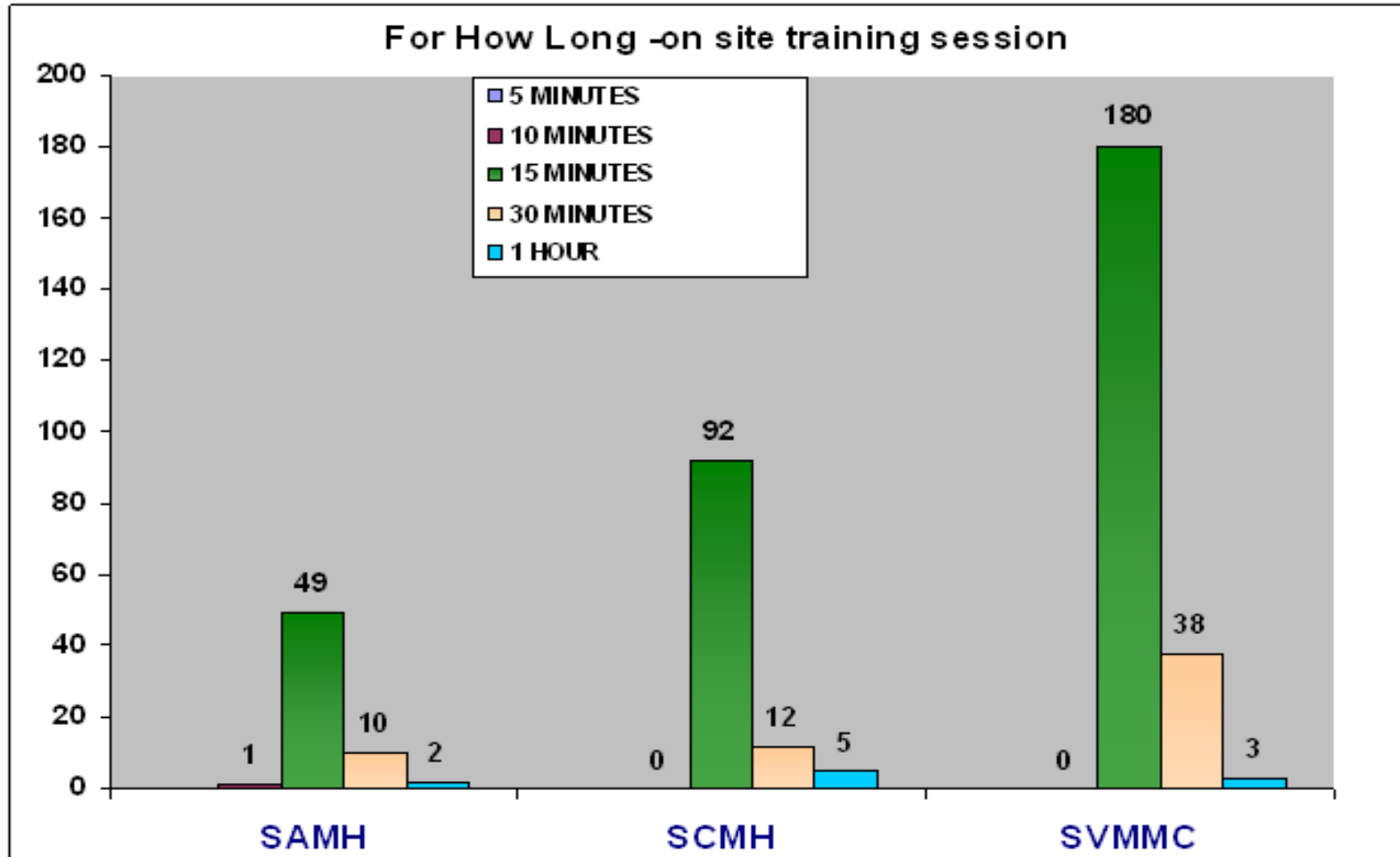
The Importance for Staff Education



Nursing training

Question: **Would you like "On the unit" training sessions?**

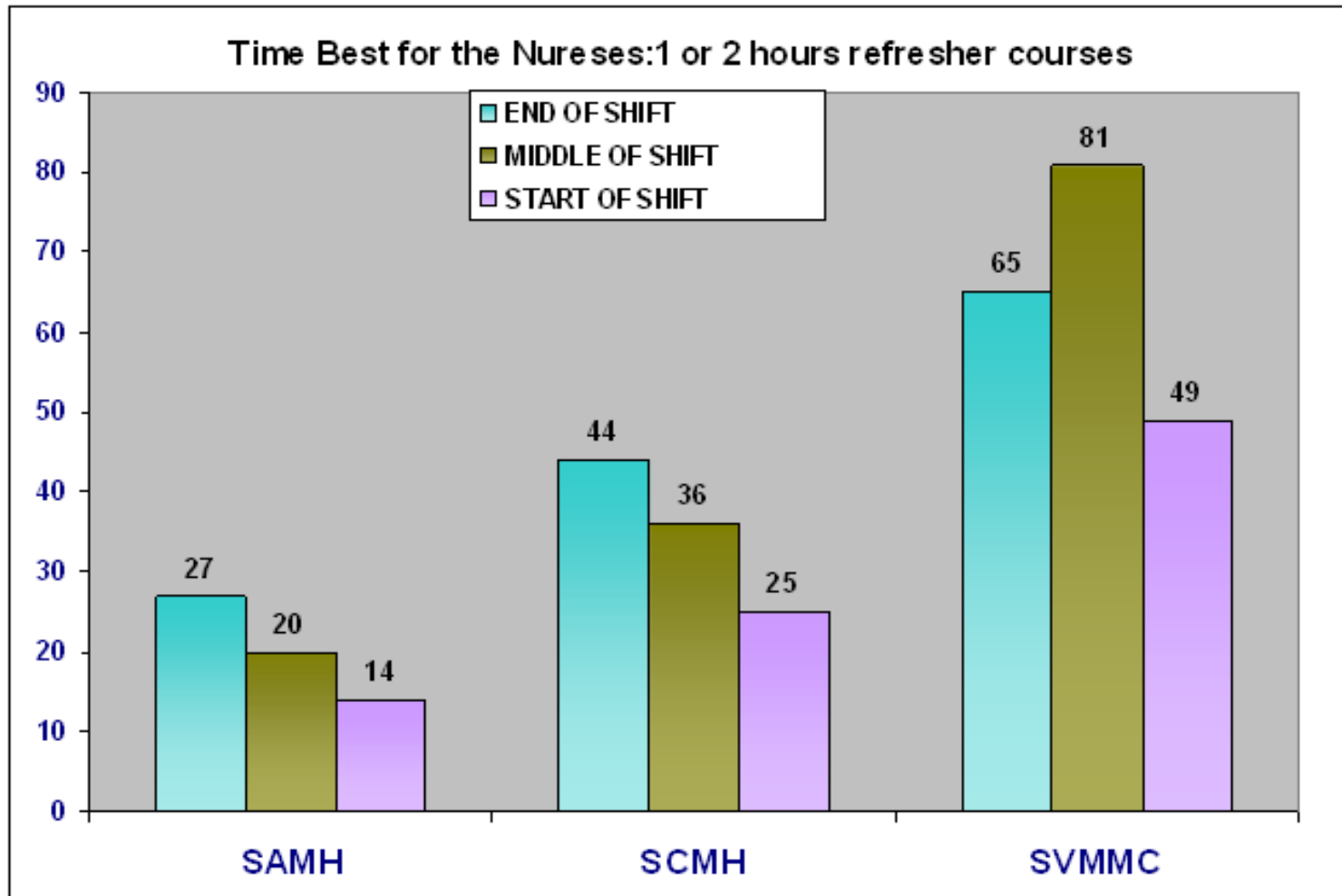
There are **75** nurses in SAMH, **144** nurses in SCMh and **279** Nurses in SVMMMC who chose the "Yes".
FOR HOW LONG? Their answers are in the following graph:



Nursing training

There are **62** nurses in SAMH, **105** nurses in SCMH and **195** Nurses in SVMMC who chose the "Yes". |

What time is best for you? Their answers are in the following graph:



Cost of nursing involvement

- Why is this important?
 - Who will budget for educating the nursing staff, IS or Nursing?
 - Budgets are done 12-16 months prior to training – share the plans with all departments EARLY
 - Is your organization measuring productivity?

Example: Hospital staffing costs associated with CPOE training of RN's

| Task | Number | Hrs/Wk | \$/Hr | | Annual Cost |
|--|--------|--------|-------|-----------|------------------|
| Planning/Design (12 mo) | 4 | 4 | \$35 | \$560 | \$26,880 |
| Nurse Champions Training (6 mo) | 24 | 8 | \$35 | \$6,720 | \$174,720 |
| Training Materials | | | | | \$25,000 |
| Nursing Staff Training for CPOE | 1200 | 4 | \$36 | \$172,800 | \$172,800 |
| Retraining/Contingency 20% of total | | | | | \$79,880 |
| Total Capital \$ for Nursing Training | | | | | \$479,280 |

Support model – set real expectations



EHR - Inpatient Unit Support Structure Model - Draft (August 04, 2004)

| Week of Live | Support Structure Diagram | Staffing Coverage | Total (Hrs) | FTEs | |
|----------------|---------------------------|----------------------------------|--|------|-----|
| Week 1* | | Unit X (Unit Support) - Days/Eve | RN:2 (one for each shift) HUC:- 1 (days?) | 112 | 28 |
| | | Unit X (Unit Support) - Nights | RN:1 HUC:0 | 96 | 14 |
| | | Weekly Totals | | 208 | 5.6 |
| | | Staffing Coverage | | | |
| | | Total (Hrs) | | | |
| Post Live Wk 2 | | Unit X (Unit Support) - Days/Eve | RN:2 (one for each shift) HUC:- 1 (days?) | 112 | 28 |
| | | Unit X (Unit Support) - Nights | RN:1 HUC:0 | 96 | 14 |
| | | Weekly Totals | | 208 | 5.6 |
| | | Staffing Coverage | | | |
| | | Total (Hrs) | | | |
| Post Live Wk 3 | | Unit X (Unit Support) - Days/Eve | RN:2 (one for each shift) HUC:0.5 | 112 | 28 |
| | | Unit X (Unit Support) - Nights | RN:1 HUC:0 | 96 | 14 |
| | | Weekly Totals | | 196 | 4.9 |
| | | Staffing Coverage | | | |
| | | Total (Hrs) | | | |
| Post Live Wk 4 | | Unit X (Unit Support) - Days/Eve | RN:1 (0.5 for each shift) HUC:0 | 96 | 14 |
| | | Unit X (Unit Support) - Nights | RN:0 HUC:0 | 0 | 0 |
| | | Weekly Totals | | 96 | 14 |
| | | Staffing Coverage | | | |
| | | Total (Hrs) | | | |
| Ongoing | | | | | |
| | | | | | |

Support model – staff tracking tool

HIMSS

Central & Southern Ohio Chapter

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Database Entry Form

EHR Support Call Tracking System - Entry Form

Tracking ID: Date Reported: Time Reported: Time elapsed from page to user contact : (min.) **11/13/2007 9:46:44 AM**

Location:

Notification Type:

| | | | | |
|---|--|---|---|--|
| <input type="checkbox"/> Mary Beth DeLa Torre | <input type="checkbox"/> Judy Kamelesky | <input type="checkbox"/> Jerry Scheanwald | <input type="checkbox"/> Steve Wilson | <input type="checkbox"/> Regina Molnar |
| <input type="checkbox"/> Nancy Gordon | <input type="checkbox"/> Sharon Sass | <input type="checkbox"/> Deb Webb | <input type="checkbox"/> Rebecca Ray | <input type="checkbox"/> Liza Crooks |
| <input type="checkbox"/> Amy Brighton | <input type="checkbox"/> Lasonya Kimbrough | <input type="checkbox"/> Tim Grabowski | <input type="checkbox"/> Valancy DeAnda | <input type="checkbox"/> Lisa Gardner |
| <input type="checkbox"/> Diane Manion | <input type="checkbox"/> Danelle Howard | <input type="checkbox"/> Korey South | <input type="checkbox"/> Paula Cowell | <input type="checkbox"/> Sandy Opfer |

General

Caller Type: Caller Name: Time Spent w/Caller:

Resolution upon 1st Call ?
 Yes No
 If No, number of calls to resolve:

Call turned over to :

EHR Member - Name:

Magic Ticket Opened

Help Desk - Ticket # :

Dept Manager - Name:

Call Category:

| | | |
|---|--|------------------------------------|
| <input type="radio"/> AdminRx | <input type="radio"/> Printing/Reports | <input type="radio"/> EHR Dietary |
| <input type="radio"/> Bug Tracker Follow-up | <input type="radio"/> Physician Refusal | <input type="radio"/> EHR Lab |
| <input type="radio"/> Feedback | <input type="radio"/> Security | <input type="radio"/> EHR Rad |
| <input type="radio"/> Hardware | <input type="radio"/> Support | <input type="radio"/> EHR Pharmacy |
| <input type="radio"/> NetAccess | <input type="radio"/> Education | <input type="radio"/> EHR Clindoc |
| <input type="radio"/> Non-EHR Software | <input type="radio"/> EHR Global Order Entry Functions | <input type="radio"/> Other |
| <input type="radio"/> Process | <input type="radio"/> EHR Consults | |

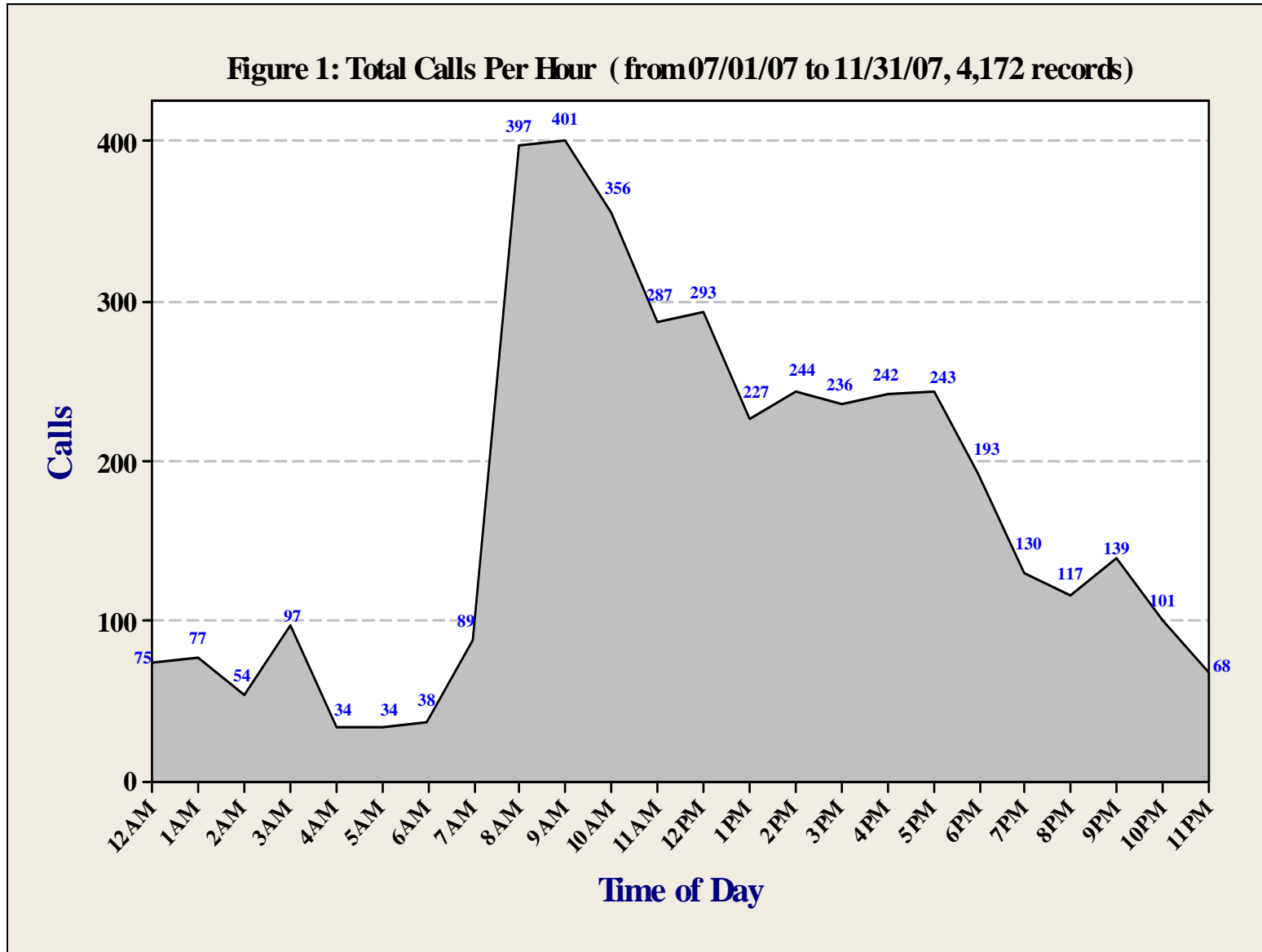
Description:

[Exit without Saving](#) [Save](#) [Next](#) [Back to Main Menu](#)

Total of records: **26871**

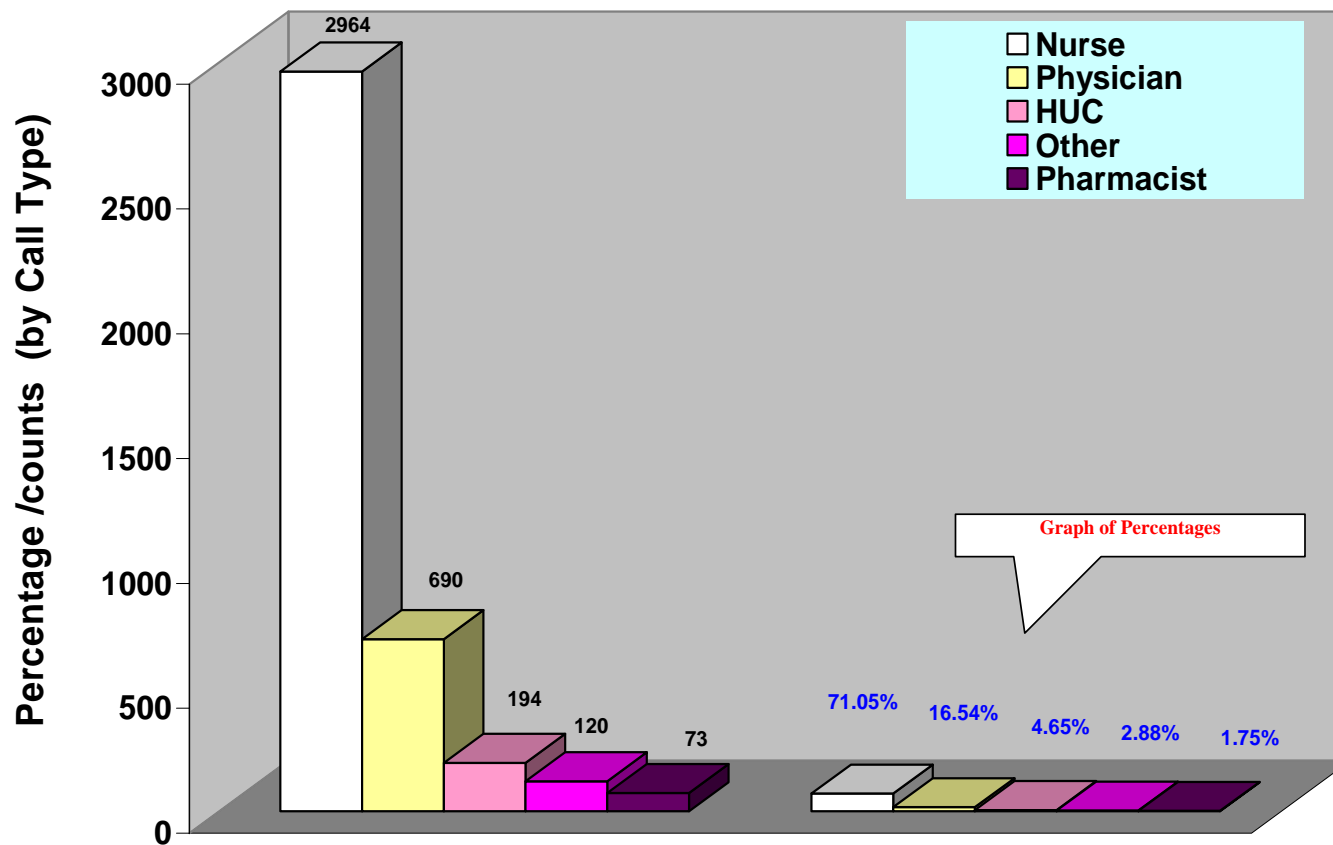
Support model – user calls distribution

Figure 1: Total Calls Per Hour (from 07/01/07 to 11/31/07, 4,172 records)



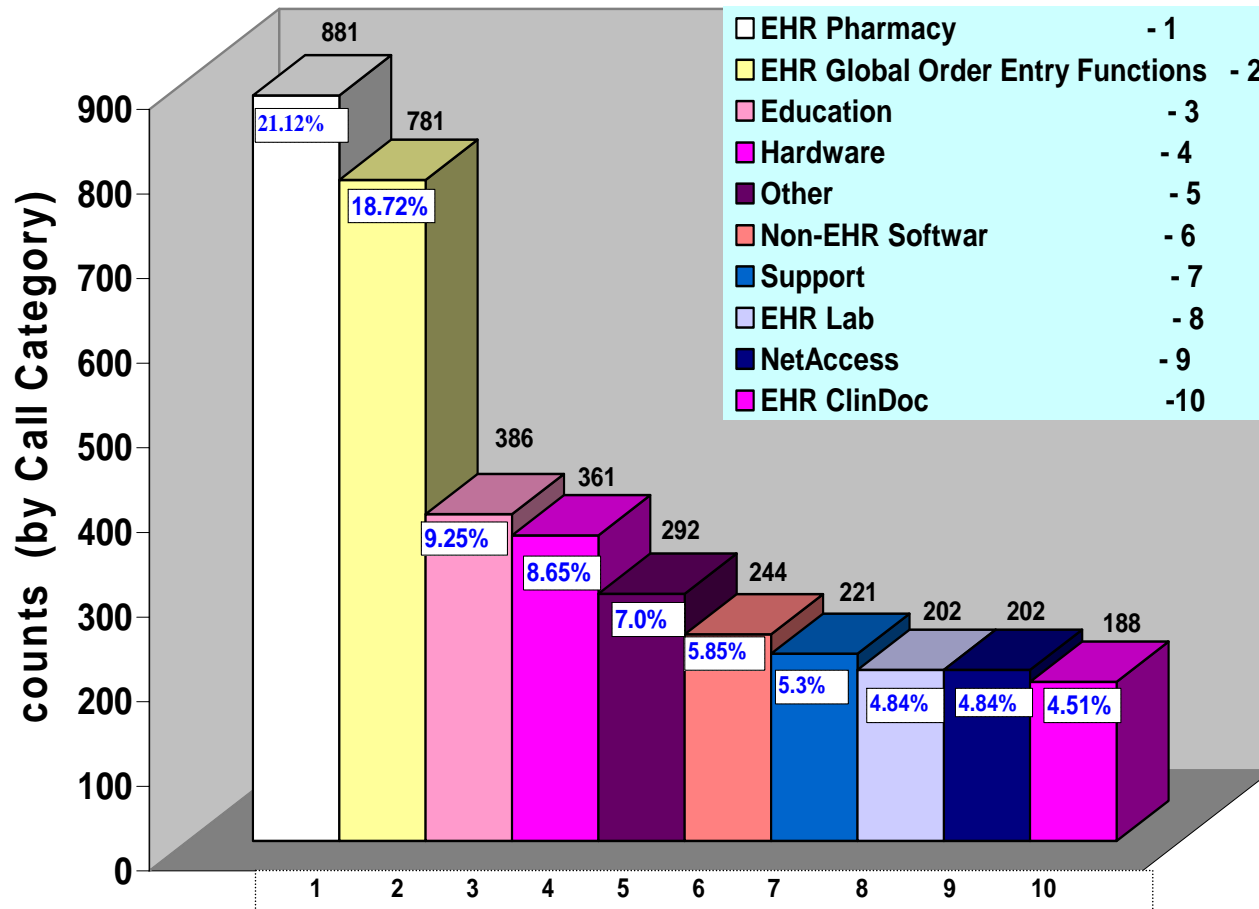
Support model – calls per user type

Figure 3: Data categorized by Call Type
07/01/07- 10/30/07



Support model – type of user calls

Figure 4: Data categorized by Call Category
from 07/01/07 to 10/31/06 (4,172 records-Top 10)



Top ten considerations for nursing in CPOE implementations

- Get nursing involved in establishing and participating in the governance structure
- Include nursing in physician design meetings and decisions
- Address # 1 nursing concern: notification of new and/or changed orders
- Evaluate nursing computer skills prior to CPOE, train if necessary, allocate \$
- Establish nursing champions as part of your support structure, allocate \$

Top ten considerations for nursing in CPOE implementations

- Understand clinical workflow for process intense areas; form multidisciplinary clinical teams to provide solutions
- Must involve nursing in Order Sets development as well as service selection options and structure
- Involve nursing in synonym definition
- Provide functions in CPOE to help nursing manage the electronic orders
- Define a clear process for hand-off communication of CPOE orders

Examples of Nursing Functions in CPOE

Examples (System Screens)

Medication Reconciliation Reminder

Complete Orders

Note Orders

ED and Post-op Orders Management

Nurse Shift Check

Display Orders Flags and Structure (workflow based)

“Success is the good fortune that comes from aspiration, desperation, perspiration and inspiration.” (Evan Esar)

Compliance reminder

Rules Engine Alert/Reminder

Admission History has not been completed and 12 hours or more have passed since patient ZZHPFTEST ,SVMMC has been admitted.

In order to comply with the policy guidelines, please complete the admission history assessment promptly. Thank you.

The following Home Medication(s) for this patient have not been reconciled within the 20 hour limit:

| ORDER # | START DT/TM | MEDICATION |
|---------|-------------|---|
| 00153 | 04/28 01:38 | FUROSEMIDE TABLET 20 MG ORAL 1 TIME/DAY |
| 00154 | 04/28 01:38 | CAPTAPRIL 25 MG ORAL 1 TIME/DAY |
| 00155 | 04/28 01:38 | POTASSIUM CL 20 MEQ ORAL 1 TIME/DAY |

Note: This computer generated reminder is provided to supplement the knowledge of health care professionals. It is not intended to replace current medical practices, sound professional judgement, or individualized patient care.

Page created: Monday, April 28, 2008 1:38 AM For: MAHDRN [Top of Page](#)

[Close](#)

Visual reminder



Patient: **Zzhpftest ,Svmmc**

User: **MAHDRN** Log Off

Select Facility/Patient

St. Vincent Nurse View

Unit Census

7777

Patient Index

Clinical Summary

EHR Orders

Enter Orders

Enter/Activate

Stand-by Orders

Complete Orders

Hold All Orders

Home Meds/

eDisch

Nursing Options

Display/Print

Orders

Work

Lists/Reports

Update Service

View

Allergies

Condensed

Patient Summary

EHR ClinDoc

Display Results

Order Processing

Patient

Management

ZZHPFTEST ,SVMCMC 56Y M 5/6/1951 Allergies: NKA
 MR#: 7340419 Attn: BERTKA, KENNETH R
 Location: ZZZZ /080801 MED IA Isol:

Reconcile Home Meds Now - Click Here Ordering Physician: **Change** Linked Orders **Feedback**

All Orders Order Sets Pt Care/Therapies Nursing Lab/Tests Meds & IVs Sign

| ORD | STS | ORDER DESCRIPTION | START DATE | TIME | ORDER PHYSICIAN |
|---|-----|---|------------|------|-------------------|
| 150 | STS | (D/C # 148) FUROSEMIDE TABLET 20 MG ORAL UNKNOWN FREQUENCY | 04/25 | 1744 | BERTKA, KENNETH R |
| 151 | STS | (D/C # 146) OMEPRAZOLE 20 MG ORAL 1 TIME/DAY | 04/25 | 1744 | BERTKA, KENNETH R |
| 152 | STS | (D/C # 145) RE-EVAL NEED FOR STRESS ULCER PROPHYLAXIS WHEN | 04/25 | 1744 | BERTKA, KENNETH R |
| 148 | DIS | FUROSEMIDE TABLET 20 MG ORAL UNKNOWN FREQUENCY | 04/14 | 1200 | BERTKA, KENNETH R |
| DISCONTD 04/25/08 17:44 BY: R.MOLNAR M.D. | | | | | |
| 146 | DIS | OMEPRAZOLE 20 MG ORAL 1 TIME/DAY | 04/09 | 1900 | ABAWI, SULAIMAN |
| ADDITIONAL DIRECTIONS: PLEASE GIVE 1ST DOSE WITHIN 2H | | | | | |
| DISCONTD 04/25/08 17:44 BY: R.MOLNAR M.D. | | | | | |
| 145 | DIS | RE-EVAL NEED FOR STRESS ULCER PROPHYLAXIS WHEN TRANSFERRED | 04/09 | 1717 | ABAWI, SULAIMAN |
| DISCONTD 04/25/08 17:44 BY: R.MOLNAR M.D. | | | | | |
| 147 | VER | LORAZEPAM 0.5 MG ORAL 1 TIME/DAY | 04/12 | 0900 | BERTKA, KENNETH R |
| 112 | CAN | AMYLASE TODAY | 03/25 | 1000 | BERTKA, KENNETH R |
| LAB ADD-ON: YES | | | | | |
| 137 | STS | (D/C # 128) CULT,FUNGUS AWAITING SPECIMEN | 03/31 | 2243 | ZZZTEST, EHR DOCT |
| 138 | STS | (D/C # 129) CULT,FUNGUS CSF | 03/31 | 2243 | ZZZTEST, EHR DOCT |
| 139 | STS | (D/C # 121) CULT,AEROBE AWAITING SPECIMEN | 03/31 | 2243 | ZZZTEST, EHR DOCT |
| 140 | STS | (D/C # 122) CULT,AEROBE AWAITING SPECIMEN | 03/31 | 2243 | ZZZTEST, EHR DOCT |
| 141 | STS | (D/C # 36) ADMIT TO INPATIENT STATUS | 03/31 | 2243 | ZZZTEST, EHR DOCT |

- Verify
- D/C
- D/C All
- Renew
- Hold
- Hold All
- Resume
- Revise
- Undo
- Note Order
- Order Detail

Home Med Orders Exist Stand-by Orders Exist Discharge Orders Exist

Lexi-Comp

[OVR] PEGEND30:P 04/28/2008 01:40

Physician selection verification

SVMMC RN Enterprise View [Patient Index] - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Favorites Links

Patient: **Zzhpftest ,Svmmc** User: **MAHDRN** [Log Off](#)

Select Facility/Patient

- St. Vincent Nurse View
- Unit Census
- 7777
- Patient Index**
 - Clinical Summary
 - EHR Orders
 - Enter Orders**
 - Enter/Activate
 - Stand-by Orders
 - Complete Orders
 - Hold All Orders
 - Home Meds/eDisch
 - Nursing Options
 - Display/Print Orders
 - Work Lists/Reports
 - Update Service View
 - Allergies
 - Condensed Patient Summary
 - EHR ClinDoc
 - Display Results
 - Order Processing
 - Patient Management

ZZHPFTEST ,SVMMC 56Y M 5/6/1951 Allergies: NKA
 MR#: 7340419 Attn: BERTKA, KENNETH R
 Location: 7777 / 080801 MED IA Isol:

[Go to Current Orders - Click Here](#) [Change](#) Alpha [Feedback](#)

Home Meds [Add Home Med](#) [Sign](#)

Legend

| | |
|-----|---------------------------|
| CNT | Continue on Admission |
| NDT | Not Continue on Admission |
| CSB | Continue to Standby |
| CND | Already Ordered |
| VHM | Verify w Ordering Phys |
| RVM | Revise Home Medication |
| REM | Remove From List |

Home Meds Table:

| | RVM | REM |
|-------------------|--------------------------|--------------------------|
| BERRY, JERROLD L | <input type="checkbox"/> | <input type="checkbox"/> |
| BERTKA, KENNETH R | <input type="checkbox"/> | <input type="checkbox"/> |
| BERTKA, VICKI M | <input type="checkbox"/> | <input type="checkbox"/> |
| BERTUCH, FRANKLIN | <input type="checkbox"/> | <input type="checkbox"/> |

Dialog Box:

Cancel

Placing the order under the name of the physician selected will require the selected physician to co-sign your order.

BERTKA, KENNETH R With Speciality (FAM)

Is the selected name the physician who provided the Verbal Order?

Undo

Order Detail

Stand-by Orders Exist Discharge Orders Exist

Lexi-Comp Full Detail Enter Order Changes

OVR PEGENDHM:P 04/28/2008 01:41

Applet started

start MetaFrame P... Citrix ICA ... VPN Client - V... Microsoft Pow... 100% 1:43 AM

Medication reconciliation intelligent selections

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SVMCM RN Enterprise View [Patient Index] - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Home Favorites Links

Patient: **Zzhpfest ,svmcm** User: MAHDRN Log Off

ZZHPFTEST ,SVMCM 56Y M 5/6/1951 Allergies: NKA
 MR#: 7340419 Attn: BERTKA, KENNETH R
 Location: ZZZZ / 080801 MED IA Isol:

[Go to Current Orders - Click Here](#) Ordering Physician: [Change](#) Alpha [Feedback](#)

Home Meds [Add Home Med](#) [Sign](#)

| Legend | ORD | STS | HOME MEDS (Orders in RED need to be clarified) | CNT | NOT | CSB | CNO | VHM | RVM | REM |
|-------------------------------|-----|-----|--|-------------------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| CNT Continue on Admission | 2 | IHM | ACETAMINOPHEN 650 MG ORAL EVERY 4 HRS PRN | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| NOT Not Continue on Admission | 3 | IHM | DIPHENHYDRAMINE 25 MG ORAL EVERY 4 HRS PRN | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| CSB Continue to Standby | 13 | IHM | ASPIRIN 325 MG ORAL 1 TIME/DAY | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| CNO Already Ordered | 67 | IHM | R- FUROSEMIDE TABLET 20 MG ORAL 1 TIME/DAY | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| VHM Verify w Ordering Phys | 153 | IHM | FUROSEMIDE TABLET 20 MG ORAL 1 TIME/DAY | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| RVM Revise Home Medication | 154 | IHM | CAPTAPRIL 25 MG ORAL 1 TIME/DAY | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| REM Remove From List | 155 | IHM | POTASSIUM CL20 MEQ ORAL 1 TIME/DAY | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Undo

Order Detail

Stand-by Orders Exist [Discharge Orders Exist](#)

[Lexi-Comp](#) [Full Detail](#) [Enter Order Changes](#)

[OVR] PEGENDHM:P 04/28/2008 01:44

Visual alerts

SVMCM RN Enterprise View [Patient Index] - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Home Favorites Links

Patient: **Zzhpftest ,Svmmc** User: MAHDRN **Log Off**

Select Facility/Patient
 St. Vincent Nurse View
 Unit Census
 7777
Patient Index
 Clinical Summary
 EHR Orders
 Enter Orders
 Enter/Activate Stand-by Orders
 Complete Orders
 Hold All Orders
 Home Meds/eDisch
 Nursing Options
 Display/Print Orders
 Work Lists/Reports
 Update Service View
 Allergies
 Condensed Patient Summary
 EHR ClinDoc
 Display Results
 Order Processing
 Patient Management

ZZHPFTST ,SVMCM 56Y M 5/6/1951 Allergies: NKA
 MR#: 7340419 Attn: BERTKA, KENNETH R
 Location: ZZZZ / 080801 MED IA Isol:

Ordering Physician: **Change** Linked Orders **Feedback**

Current Ords Order Sets Pt Care/Therapies Nursing Lab/Tests Meds & IVs Sign

NO ORDERS APPROACHING EXPIRATION

| ORD STS | PHARMACY | START DATE | TIME | ORDER PHYSICIAN |
|---------|---|------------|------|-------------------|
| 156 | VER FUROSEMIDE TABLET 20 MG ORAL 1 TIME/DAY | 04/28 | 0900 | BERTKA, KENNETH R |
| 157 | VER POTASSIUM CL 20 MEQ ORAL 1 TIME/DAY | 04/28 | 0900 | BERTKA, KENNETH R |
| 158 | VER CAPTOPRIL 25 MG ORAL 1 TIME/DAY | 04/28 | 0900 | BERTKA, KENNETH R |
| 147 | VER LORAZEPAM 0.5 MG ORAL 1 TIME/DAY | 04/12 | 0900 | BERTKA, KENNETH R |

Adjust Time
Verify
D/C
D/C All
Renew
Hold
Hold All
Resume
Revise
Undo
Note Order
Order Detail

Home Med Orders Exist Stand-by Orders Exist Discharge Orders Exist

Lexi-Comp All Orders No Held Orders Enter Order Changes

OVR PEGEND30:P 04/28/2008 01:45

Discharge medication reconciliation

HIMSS

Central & Southern Ohio Chapter

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Patient: **Zzhpftest ,Svmmc** User: **MAHDRN** Log Off

ZZHPFTST ,SVMCMC 56Y M 5/6/1951 Allergies: NKA
 MR#: 7340419 Attn: BERTKA, KENNETH R
 Location: ZZZZ / 080801 MED IA Isol:

Go to Current Orders - Click Here Ordering Physician: **BERTKA, KENNETH R** **Change** Alpha **Feedback**

Home/Curr. **Add Disch Med** Sign

Legend


| Legend | NO ORDERS APPROACHING EXPIRATION | ORD STS | PHARMACY | START DATE | TIME | CNT | NOT |
|--------------------------------------|----------------------------------|---------|--|------------|------|-------------------------------------|-------------------------------------|
| CNT Continue on Discharge | | 2 | IHM ACETAMINOPHEN 650 MG ORAL EVERY 4 HRS PRN | 02/25 | 1058 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| NOT Not Continue on Discharge | | 179 | VER AMPICILLIN-SULB 1.5 GM / NS 50 ML INTRAVEN. EVERY 8 HRS | 04/28 | 1300 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Home Medications in Purple | | 13 | IHM ASPIRIN 325 MG ORAL 1 TIME/DAY | 03/05 | 0900 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| | | 181 | VER AZITHROMYCIN 250 MG ORAL EVERY 4 HRS X 5 DAYS | 04/28 | 1300 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| | CAPOTEN | | CAPTAPRIL 25 MG ORAL 1 TIME/DAY | 04/28 | 0900 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Current Orders in Yellow | | 158 | VER CAPTOPRIL 25 MG ORAL 1 TIME/DAY | 04/28 | 0900 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | 180 | VER CEFEPIME 1 GM / D5W 50 ML INTRAVEN. EVERY 6 HRS | 04/28 | 1300 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | 3 | IHM DIPHENHYDRAMINE 25 MG ORAL EVERY 4 HRS PRN | 02/25 | 1058 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| | | 67 | IHM R- FUROSEMIDE TABLET 20 MG ORAL 1 TIME/DAY | 03/14 | 0900 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | 153 | IHM FUROSEMIDE TABLET 20 MG ORAL 1 TIME/DAY | 04/28 | 0900 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| | | 156 | VER FUROSEMIDE TABLET 20 MG ORAL 1 TIME/DAY | 04/28 | 0900 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | 147 | VER LORAZEPAM 0.5 MG ORAL 1 TIME/DAY | 04/12 | 0900 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | 171 | VER NALOXONE 40 MCG INTRAVEN. AS DIRECTED PRN | 04/28 | 0152 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | 160 | VER BASAL RATE: 50 MCG /HR PATIENT DOSE: 25 MCG FENTANYL CITR DE | 04/28 | 0151 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | 155 | IHM POTASSIUM CL 20 MEQ ORAL 1 TIME/DAY | 04/28 | 0900 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| | | 157 | VER POTASSIUM CL 20 MEQ ORAL 1 TIME/DAY | 04/28 | 0900 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Undo **Order Detail**

Lexi-Comp **Disch Ord** **Enter Order Changes W / Revise** **Enter Order Changes**

1100445: ALL ORDERS WERE SKIPPED. OVR PEGENDHC:P 04/28/2008 17:51

Compliance reminders

Patient: **Zzhpftest ,Svmmc** User: **MAHDRN** 

ZZZZ

- Patient Index
 - Clinical Summary
 - EHR Orders
 - Enter Orders
 - Enter/Activate
 - Stand-by Orders
 - Complete Orders
 - Hold All Orders
 - Home Meds/
 - eDisch
 - Nursing Options
 - Pending
 - Orders
 - ▶ Nurse Shift
 - Check Nurse Shift Check
 - Nurse To
 - Nurse Orders
 - Issue
 - Blood/Blood
 - Product
 - Display/Print
 - Orders
 - Work
 - Lists/Reports
 - Update Service
 - View
 - Allergies
 - Condensed
 - Patient Summary
 - EHR ClinDoc
 - Display Results
 - Order Processing
 - Patient

ZZHPFTEST ,SVMCC 56Y M 5/6/1951 Allergies:

MR#: 7340419 Attn: BERTKA, KENNETH R

Location: ZZZZ / 080801 MED IA Isol:

Clinical Alert/Reminder

The pneumococcal and/or influenza vaccination information is still incomplete in the nursing admission history. Please complete this required information in the Enter Patient Factor section of EHR Clindoc.

Note

This computer generated reminder is provided to supplement the knowledge of health care professionals. It is not intended to replace current medical practices, sound professional judgement, or individualized patient care.

CONTINUE

End of shift documentation

Patient: **Zzhpftest ,Svmmc** User: **MAHDRN**

ZZZZ

ZZHPFTEST ,SVMCMC 56Y M 5/6/1951 Allergies: NKA
MR#: 7340419 Attn: BERTKA, KENNETH R
Location: ZZZZ /080801 MED IA Isol:

Nursing Order * Required

NURSE SHIFT CHECK

Shift Check Interval **12 HOUR SHIFT CHECK**

Non Standard Interval

*Date: **4/28/2008** *Time: **0157**

All orders have been noted and reviewed.

Name: D.MAHONEY RNM Verified With:

Additional Directions:

OVR RONNE001:P 04/28/2008 01:57

Navigation Menu:

- ZZZZ
- Patient Index
 - Clinical Summary
 - EHR Orders
 - Enter Orders
 - Enter/Activate
 - Stand-by Orders
 - Complete Orders
 - Hold All Orders
 - Home Meds/eDisch
 - Nursing Options
 - Pending Orders
 - ▶ Nurse Shift Check
 - Nurse To
 - Nurse Orders
 - Issue
 - Blood/Blood Product
 - Display/Print Orders
 - Work
 - Lists/Reports
 - Update Service View
- Allergies
- Condensed Patient Summary
- EHR ClinDoc
- Display Results
- Order Processing
- Patient Management

Nursing communication



Patient: Zzhpftest ,svmmc

User: MAHDRN 

7777

Patient Index

Clinical Summary

EHR Orders

Enter Orders

Enter/Activate

Stand-by Orders

Complete Orders

Hold All Orders

Home Meds/

eDisch

Nursing Options

Pending

Orders

Nurse Shift

Check

Nurse To

Nurse Orders

Issue

Blood/Blood

Product

Display/Print

Orders

Work

Lists/Reports

Update Service

View

Allergies

Condensed

Patient Summary

EHR ClinDoc

Display Results

Order Processing

Patient

| | | | | |
|-------------------------|-------------------------|-----|----------|------------|
| ZZHPFTEST ,SVMMC | 56Y | M | 5/6/1951 | Allergies: |
| MR#: 7340419 | Attn: BERTKA, KENNETH R | NKA | | |
| Location: ZZZZ | / 080801 | MED | IA | Isol: |

Nurse to Nurse Order

Feedback

* Required

NURSE TO NURSE ORDER (30 Character Max.)

Once Every

For Until D/C

*Start: Today Next AM

On At

Educational Corner:

NOTICE

Nurse to Nurse Orders are to be used only for nurse to nurse communication, as they do not require physician signature. These orders can only be discontinued and will generate no printouts. Be aware that all Nurse to Nurse Orders are a part of the patient's medical record.

(240 Character Max.)

Additional Directions:

OK

Cancel

Patient: **Zzhpftest ,Svmmc** User: **MAHDRN** Log Off

ZZHPFTST ,SVMCC 56Y M 5/6/1951 Allergies:

MR#: 7340419 Attn: BERTKA, KENNETH R
Location: ZZZZ / 080801 MED IA Isol:

DEEP VEIN THROMBOSIS PROPHYLAXIS

:: Risk Factor Assessment :: Feedback

Check all RISK FACTORS:

| | |
|--|---|
| <input checked="" type="checkbox"/> Age 41 to 60 years | <input type="checkbox"/> Shock/Dehydration |
| <input type="checkbox"/> Age 61 to 74 years | <input type="checkbox"/> Pregnancy, or postpartum less than 1 month |
| <input type="checkbox"/> Age over 74 years | <input type="checkbox"/> Recent (past 2 weeks) C-section or operative vaginal delivery |
| <input type="checkbox"/> Documented history of DVT or PE | <input type="checkbox"/> Uterine instrumentation |
| <input type="checkbox"/> Family history of DVT or PE | <input type="checkbox"/> Multiple trauma |
| <input checked="" type="checkbox"/> Leg swelling, ulcers, stasis, varicose veins | <input type="checkbox"/> Hyperhomocysteinemia |
| <input type="checkbox"/> Recent (past month) pelvic or long bone fracture | <input type="checkbox"/> Hypercoaguable states (including Activated protein C resistance (Factor V leiden mutation), Antithrombin III deficiency, Antiphospholipid antibodies or lupus anticoagulant) |
| <input type="checkbox"/> Lower extremity arthroscopy in patients over 50 years of age | <input type="checkbox"/> Oral contraceptives or hormone replacement therapy |
| <input type="checkbox"/> History of, or anticipated bed confinement/ immobilization over 12 hours | <input type="checkbox"/> General anesthesia over 30 minutes with hospital stay greater than 24 hours. |
| <input type="checkbox"/> Confining air/ground travel over 4 hours within 1 week of admission | <input type="checkbox"/> Infection |
| <input type="checkbox"/> Spinal cord injury with paralysis | <input type="checkbox"/> Cancer / malignancy |
| <input type="checkbox"/> Stroke with paralysis | <input checked="" type="checkbox"/> Lung disease (COPD/emphysema) |
| <input type="checkbox"/> Mitral valve prolapse | <input checked="" type="checkbox"/> Knee or Hip Replacement |
| <input type="checkbox"/> MI / CHF | |
| <input checked="" type="checkbox"/> Obesity | |
| <input type="checkbox"/> Hip Fracture | |

1 **Assessment Score = 9**

Continue Prev Cancel

OV R DVTPRASS:P 04/28/2008 11:48



Patient: Zzhpftest ,Svmmc

User: MAHDRN 

- Select Facility/Patient
- St. Vincent Nurse View
- Unit Census
- ZZZZ
- Patient Index**
 - Clinical Summary
 - EHR Orders
 - EHR ClinDoc
 - Admission Hx
 - Vital Signs
 - Intake & Output
 - Nursing Reports
 - Enter PT. Factors
 - View DVT Assessment
 - Enter DVT Assessment
 - Display Results
 - Order Processing
 - Patient Management

ZZHPFTEST ,SVMC 56Y M 5/6/1951 Allergies:
MR#: 7340419 Attn: BERTKA, KENNETH R
Location: ZZZZ / 080801 MED IA Isol:

DEEP VEIN THROMBOSIS PROPHYLAXIS

Feedback

:: Risk Factor Assessment ::

Assessment Score:

9

RISK CATEGORY:

VERY HIGH RISK

(Hip Fracture / Knee Replacement / Surgery > 30 min)

Contraindications to Anticoagulation

Relative:

- History of cerebral hemorrhage
- GI, GU bleed or stroke within past 6 months
- Thrombocytopenia
- Coagulopathy
- Active intracranial lesions/neoplasms
- Proliferative retinopathy
- Vascular access / biopsy sites inaccessible to hemostatic control
- Epidural catheter in place

Absolute:

- Active hemorrhage from wounds, drains, lesions
- Heparin use in heparin induced thrombocytopenia
- Warfarin use in pregnancy
- Severe trauma to head, spinal cord or extremities with hemorrhage within 4 wks

2

Prev

Update/Complete

Cancel

OVR DVTPRASS:P 04/28/2008 11:48

Visual aids – research orders

Patient: Zzzzconsultstes ,Dontdisc User: MAHDRN Log Off

ZZZZCONSULTSTES ,DONTDISC 39Y M 2/16/1969 Allergies: TOPROL XL

MR#: 7313063 Attn: BERTKA, KENNETH R
Location: ZZZZ /080501 FAM IA Isol:

Ordering Physician: [Dropdown] Change Linked Orders Feedback

Current Ords Order Sets Pt Care/Therapies Nursing Lab/Tests Meds & IVs Sign

| | | | |
|--------------|---|--------------------------------|-------------------|
| Adjust Time | 1087 VER R- INV-0806101 STU 1 EA / TOTAL VOLUME 300 ML INTRAVEN. EVE^ | 04/28 1000 | BERTKA, KENNETH R |
| Verify | INV-0806101 STUDY DRUG | 1 EA | |
| D/C | TOTAL VOLUME | 300 ML | |
| D/C All | ORDER DURATION: | UNTIL DISCONTINUE | |
| Renew | ADDITIONAL DIRECTIONS: | RANDOMIZATION # | |
| Hold | | RESEARCH PATIENT # | |
| Hold All | | PATIENT MAY BE ON LINEZOLID | |
| Resume | | 600 MG OR VANCOMYCIN ___MG. | |
| Revise | | DOSE ADJUSTED PER RENAL | |
| Undo | | FUNCTION. RUN STUDY DRUG IN | |
| Note Order | | OVER 2 HOURS | |
| Order Detail | | PFIZER PNEUMONIA, ZEPHYR STUDY | |
| | ORD STS LABORATORY | START DATE TIME | ORDER PHYSICIAN |
| | 1083 VER R- CBC WITH DIFF NEXT AM | 04/29 0500 | BERTKA, KENNETH R |
| | 1084 VER R- ALBUMIN NEXT AM | 04/29 0500 | BERTKA, KENNETH R |
| | 1085 VER R- AMYLASE NEXT AM | 04/29 0500 | BERTKA, KENNETH R |
| | 1086 VER R- BLOOD GAS,ART NEXT AM | 04/29 0500 | BERTKA, KENNETH R |
| | ORD STS RADIOLOGY | START DATE TIME | ORDER PHYSICIAN |

Home Med Orders Exist Stand-by Orders Exist Discharge Orders Exist

Lexi-Comp All Orders No Held Orders Enter Order Changes

OVR PEGEND30:P 04/28/2008 17:37



Questions?

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Improving workflow and patient outcomes through customized EHR consulting.