Automating Documentation at the Point of Care

MAYO CLINIC
Scottsdale, Arizona

SAINT FRANCIS
Hospital and Medical Center

IDX CARECAST
Advancing Fail-Safe Care™

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Automating Documentation at the Point of Care

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Clinical Informatics Manager, IDX Systems Corporation
- 9 years experience in health informatics industry

Karen Gurba, RN, MS
Clinical Informatics Manager, Saint Francis Medical Center
- 12 years experience in clinical informatics
- Clinical Informatics Manager, Clinical Project Manager, Clinical Project Team Leader, Clinical Analyst

Margo Saum, RN, MSN, MBA
Coordinator, Clinical Informatics Education, Mayo Clinic Hospital
- 13 years in healthcare informatics industry
- Implementation management and post implementation support, Sales, Information Systems Education, Systems Support
Goal of this session: To improve the integration of point of care technology into clinical operations and prepare staff for real-time documentation.
Learning objectives:

- Define point of care technology and the ways it can be used in nursing
- State the benefits of documenting at the point of care
- Discuss the challenges faced when implementing and supporting clinician charting at the point of care
- Formulate a strategy to integrate mobile devices into clinical operations and prepare staff for documenting at the point of care
Point Of Care

- Not just at the bedside
- Not just documentation
- Real-time data retrieval, documentation and decision support
- Wherever the patient is, i.e., at the point of care
Benefits

- Accuracy
- Accessibility
- Comprehensiveness
- Legibility
- Safety
- Time and cost savings
POC Technology for Nursing

- PC/laptops in alcoves
- Portable laptops
- Handheld devices
- Barcode scanners
- Monitoring devices
Challenges

- Double-documentation
- Bedside PC’s as plant holders
- Inadequate devices
- Ergonomics
- Confidentiality
- Noise
Challenges

Nurse: “I’m not interested in your bladder right now Mr. Jones. Tell me more about your cough.”

Mr. Jones: “But nurse, every time I cough, it is my bladder that has the problem.”

*Courtesy of: Ari Makinen, EPR Analyst, Chelsea and Westminster Healthcare, UK
Successes

- Laptops on carts
- Charting stations outside patient rooms
- Progress notes - “It’s fun...It’s like writing a story.”
- Vital signs captured automatically by monitoring devices
- Touch screens
- Syringe plungers make wonderful stylus pens
Successes

- Documentation time decreases -
  - Additional 1.5 hours per nurse per 12 hour shift

- Nursing autonomy increases -
  - Empowerment of nursing staff
  - Dramatic decrease in inappropriate admissions
Software Advancements:

IDX Systems Corporation

- 3,200 customer sites
- 4,755+ full time employees
- Clinical product development: Seattle, WA
Software Advancements:

Figure 1: Homebase screen prior to usability testing and redesign.

Figure 2: Homebase screen as redesigned following initial rounds of usability testing.
Hardware Advancements:
Microsoft® Windows® XP Tablet PC Edition

- Tablet
- Notebook

Writing when docked
View more in the office
Software Advancements:

SoftWare: The Next Generation
Hardware Advancements:

Hardware(?)
Summary

- Definition of POC
- Benefits
- Challenges
- Successes
- Hardware and Software Advances
Oh, the Places You’ll Go

You have brains in your head. You have feet in your shoes. You can steer yourself any direction you choose. You’re on your own. And you know what you know. And YOU are the (ones) who'll decide where to go.

-Dr. Seuss
Automating Documentation at the Point of Care: Initial Challenges

Karen Gurba, RN, MS
Clinical Informatics Manager
Saint Francis Hospital and Medical Center
Saint Francis Hospital and Medical Center

- Hartford, Connecticut
- Medical Center and Teaching Hospital
- 3 Facilities
- Providers
- Implemented a CIS in 1993
- CIS Evaluation/New System Selection in 2001
- New System Implementation Nov 03
Saint Francis Hospital and Medical Center
Organizational Priorities

1990
- Reduce FTE’s
- Reduce paper cost
- CPOE
- Improve charge Capture
- Minimum documentation

2001
- Patient safety initiatives
- Advanced Decision Support
- CPOE
- Integrated Pharmacy Module
- Clinical documentation
Documentation History

Go Live

- Allergies
- Medical alerts
- Medication charting
- IV’s and transfusion charting

Added On

- Height and weight
- Outcomes associated to Clinical Pathways
- Discharge Instructions
Documentation Goals

- Replace existing functionality, Phase I
- Implement remaining documentation, Phase II
- Eliminate duplication
- Efficiently designed system
- Standardize system
Cultural Challenges

- Support learning curve
- Manage change
- Integration into practice
Documentation Input Methods

Present
- Keying in data
- Interface charted data

Future
- Keying in data
- Interface charted data
- Interface Monitored Data
- Bar Code Medication Administration
Design Challenges

- Identifying the data to file electronically
- Securing resources to provide input to design system and identify solutions
- Evaluating current and design future process and workflow
- Triggering alerts via charting actions
- Approval process
Design Challenges

- Preparation for downtime
- Hardware decisions
- Implementation
- Design a system to meet clinical needs
- Design functions that support policy and procedure
Hardware Review

- Open house
- Evaluation and feedback
- Separate Network and Infrastructure evaluations
Hardware Devices
Point of Care: First Generation
Hardware Evaluation

- PC’s mounted on carts
- Tablets
- Wall mounted PC’s
Summary: What We Have Learned

- Priorities changed
- Technology enhanced
- Goals remained the same
- CIS resulted in more educated users
- Process has many challenges
- Hardware selection and planning is critical
- Infrastructure to support choices
Automating Documentation at the Point of Care: The Challenges Continue!

Margo Saum, RN, MSN, MBA
Clinical Information System Education Coordinator
Mayo Clinic in Arizona
Mayo Clinic in Arizona

- Physician specialty practice since 1987
- Primarily ambulatory practice
- Mayo Clinic Hospital - opened October 1998
- 4 Primary Care sites
- IT Goal: Integrate the Mayo practice (Patient information access)
Mayo Clinic Hospital
Mayo Clinic in Arizona

- Current size
  - Physicians
  - Inpatient beds
  - Surgical suites/hospital
  - Surgical suites/clinic

- Distances between some sites are 40 miles or more
How we looked in 1998-99

- New hospital with computerized documentation - all disciplines
- Paper exceptions
- Filmless (Digital Radiography)
- Document imaging system for final legal record
- Many information sources feed the patient’s medical record
“Go Live”

- We relished Go Live, but soon became aware of the work that remained!

- Energies focused on implementation and Go Live - but the challenges and decisions continued!
Good News

- All hospital staff were new
  - Expectations - computerized documentation

- No ‘best liked form’ to give up

- Everyone new and learning!

- High Energy!
Bad News

- Design of Clinical Information System (hospital) without the benefit of:
  - a physical structure
  - paper documents
  - established policies
  - established workflows

- Design screens based on ‘perceived’ workflows
Revisiting Early Decisions

- Printing vs on-line MAR
- Printing vs on-line kardex
- Paperless vs electronic
  - We are electronic, but NOT paperless!
Cultural Challenges

- Managing the change process
- Ongoing education
- Integrating computerized documentation into practice
Managing Change Process

- Change process developed
- Change requests are:
  - Reviewed by multi-disciplinary group
  - Grouped and sent to IT analysts
  - Tested and verified
- Changes are communicated to staff
Ongoing Education

- Develop ongoing education process
  - Provide Super Users with education 1 week before changes go into effect (Production)

- Incorporate changes into New Hire Orientation
Integrating Computerized Documentation into Practice

- Continuous struggle to change practice
- Survey to obtain end user input
  - Changed out standard keyboard and mouse
  - Reduced the log-on requirements for bedside workstations
- Change in usage of bedside workstations minimal
Bedside Workstations
Med-Surg Hallway Workstation
ICU Alcove Workstation
Wireless and Portability

- Opened 24 new beds (end of 2002)
  - Wireless network
- Portable workstations
Portable Workstations
The Fun Never Ends

- And the fun continues!
  - Upgrades
  - New systems
  - Enhancements

- Decisions: changes, improvements and challenges
Summary

- Decisions and challenges continue for:
  - users of computerized clinical documentation systems
  - organizations during implementation, planning, and conversion
  - organizations during the post go-live and system maintenance periods
Questions & Answers
Thank You!

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