

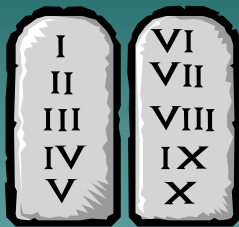
Virtual Paper: Recording Progress Notes with Handwriting on a Tablet PC

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Overview

- ◆ Compliance+
- ◆ Goals
- ◆ Documentation roles
- ◆ Documentation content & systems integration
- ◆ Mobility
- ◆ Project status
- ◆ Conclusions

Before there was paper...



Compliance+



Compliance+

- ◆ Microsoft Windows OS for Tablet
- ◆ Installed client
- ◆ Handwriting via stylus on screen, &/or keyboard
- ◆ Wireless connectivity ► Shared document access in real time
- ◆ Documentation stored as an image on central server
- ◆ Interface capabilities (ADT, Pathology, Pharmacy, billing systems...)

Project Goals

1. Improve medical records coding by documenting more completely the disease state of the patient. 1% improvement would be worth \$1.8M (Department of Medicine)
2. Test concurrent coding process (facility)
3. Professional fee charge capture
4. Improve physician workflow
5. Utilization management
6. Safety

Project Goals

- ◆ Partnership in development: JH & Salar
- ◆ Software development & evaluation
- ◆ Deploy in three settings (Hospitalists, I.D. unit, Firms)
- ◆ Positive ROI (Hospital coding, profee, labor, other expenses)
- ◆ Physician adoption
 - Efficiencies
 - Judicious messaging
- ◆ Safety
 - Patient documentation

Roles: Who uses the chart? A partial list...

- ◆ Physicians
 - Attending, residents, interns, medical students...
- ◆ Medical records – facility coding
- ◆ Professional fee – documentation based billing
- ◆ Nursing
- ◆ Pharmacy
- ◆ Therapy services (nutrition, physical, occupational...)
- ◆ Social workers
- ◆ Case managers
- ◆ Performance Improvement / Utilization Management
- ◆ Compliance (ProFee, Facility, JCAHO)

What do physicians document?

- ◆ Summary
 - ◆ History
 - ◆ Exam
 - ◆ Labs
 - ◆ Assessment (problems & diagnoses)
 - ◆ Active medications
 - ◆ Allergies
 - ◆ Plans
 - ◆ Profee
 - ◆ Scut list (to-do)
- ◆ Forms of documents
 - Progress note
 - Patient summary/status
 - Sign-out notes
 - ◆ Lots of transcription
 - ◆ Many redundancies
 - Data copied to multiple forms
 - Multiple copies for many physicians

Medical Records Coding

- ◆ Currently done post discharge; code diagnoses and procedures
- ◆ Review chart, nursing notes, EPR, labs, POE, other
- ◆ Guidelines require a statement of diagnosis by the physician; symbols, lab values can't be interpreted
- ◆ Query process
- ◆ Validation (2nd review)
- ◆ Coding is the basis for rate setting in Maryland (coding drives revenue)

Possible ways to improve coding

1. Extract more information from existing documentation
2. Document more thoroughly patient's diagnoses and procedures

Systems Integration



Mobility

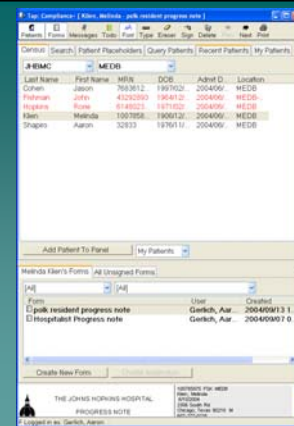
- ◆ Wireless connectivity on the units
- ◆ Cached copies on the tablets
- ◆ Note images could be viewed via web
- ◆ Battery life???
- ◆ COWS (computers on wheels)???
- ◆ Other functionality w/ tablets: POE, EPR, Web, paging, e mail...
- ◆ Leave the physical chart behind
- ◆ Current information (labs, draft notes...)

Compliance+: features

- ◆ Copy forward reusable portions of notes
- ◆ Sign-out note extracted from current progress notes
- ◆ Integration of current lab and medication data (coming soon...)
- ◆ Customized forms
- ◆ Integrated profee charge capture
- ◆ ICD9
 - Handwriting recognition
 - Keyword mappings
 - Fuzzy logic lookup
 - Available to both facilities and profee coding systems

Project Status

- ◆ Deployed on two units (one floor each)
- ◆ Functionality deployed:
 - progress notes
 - sign out notes
 - profee billing (by physician selection)
 - Concurrent coding (remote location)
 - Physician messaging



Dr. Thornton -
 There was an order for a nutrition consult and per ensure does this patient have malnutrition?
 Thomas
 Jenny
 Yes pt E rehydration 2* to caloric decrease

TO BE COMPLETED BY PHYSICIAN:

Thornton, Katherine
 Physician Name
 Schwerdtfeger, Jenni
 Clinical Documentation Specialist
 9/24/2004
 Date
 09/28/2004
 Date

THE JOHNS HOPKINS HOSPITAL
 PROGRESS NOTE
 Date 09/28/04 Time 10:30 AM
 Assessment Plan
 40g/dl c APACHE 2 score 20
 # continue osimadin
 # decrease O2 -> dehumidifier
 # PIV home of oral
 # BW stability re: D/C plan
 Mrs. S. M.

1. ICD-9 Coding Accuracy 2. ICD-9 Coding Accuracy 3. ICD-9 Coding Accuracy
 4. ICD-9 Coding Accuracy 5. ICD-9 Coding Accuracy 6. ICD-9 Coding Accuracy
 Approved for Billing Use & Application
 Approved: [Signature] Date: [Date]

Conclusions

- ◆ Promising technology
 - Physician adoption - initial success & improving
 - Efficiencies through linkage of systems, elimination of transcription
 - Can do concurrent coding, good query process
 - ROI pending completion of study and fully controlled analysis
 - Profee can be bound to documentation process