



EMR

IT'S TIME HAS COME

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AN ORDERLY MIND IS ITS'
OWN REWARD.

AN ORDERLY CHART
ENHANCES PATIENT QUALITY
AND SAFETY

WHY NOW? THE TECHNOLOGY:

- THE CONFLUENCE OF FORCES:
- COMPUTER POWER
- COMPUTER PRICES

WHY NOW? THE ENVIRONMENT

- EXPLODING NUMBER OF GUIDELINES
- INCREASING AVAILABILITY OF NEW DATA
- THE NEW CONSUMERISM
- FOCUS ON MEDICAL MISTAKES (i.e.. The Institute of Medicine report, and the Leap Frog Group)

PATIENT SAFETY

- MOST SYSTEMS ALLOW FOR PATIENT PICTURES FOR SECURE IDENTIFICATION
- COMPUTERIZED ORDER ENTRY AND CAPTURE
- MEDICATION HISTORY AND INTERACTION CHECKING

THE BIG ADVANTAGE!!

A standardized, legible chart.

WHO REALLY WANTS TO READ
SOMEONE ELSE'S CHART
ENTRIES?

SEARCH IMAGINE

- You find what you see....
- You see what you look for...
- It's what makes magic work.
- Magic is an unsafe approach to patient care.

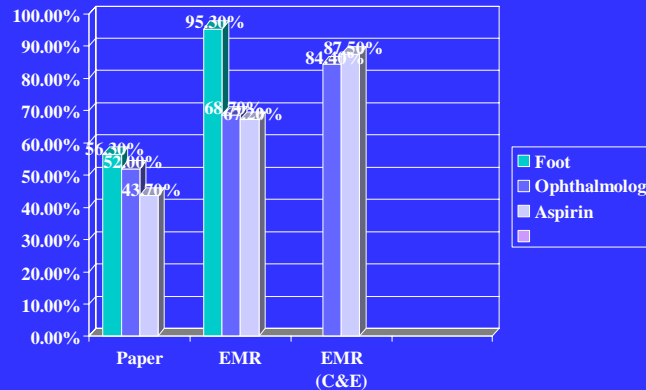
QUALITY OF CARE

- **ALLOWS THE SETTING OF A STANDARD APPROACH**
- **REMINDS PEOPLE WHAT THAT APPROACH IS**
- **ALLOWS REVIEW OF COMPLIANCE**
- **CAN BE EASILY MODIFIED AND UPDATED AS INFORMATION DEMANDS**

Improving Diabetic Standards of Care by Use of the Electronic Medical Record (EMR)

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Results



Sixty four patients met the criteria for this study with the average age of 58.9 years.

There was a significant increase in diabetic foot exams with the EMR 95.3% of patients.

Ophthalmology referrals were increased by over 16% and 32% more were counseled on the need for eye exams.

Aspirin was given to 24% more patient with the introduction of the EMR while 44% more were told of the need for aspirin.

Introduction

Annual ophthalmology and foot exams plus daily 81 mg of aspirin are standards of care for diabetic patients. This study is to determine if the utilization of the electronic medical record (EMR) has helped improve annual ophthalmology referrals, periodic diabetic foot exams, and the addition of 81 mg of aspirin.

Materials & Methods

Patients with diabetes that have been part of Clifton Family Practice from January 2002 to January '07 were reviewed. They had to have at least five visits prior to the implementation of the EMR as well as five visits during the use of the EMR. Paper and electronic charts were then compared.

Conclusions

There was a significant increase in counseling and education of both the need for 81 mg of aspirin and ophthalmologic exams in the EMR and their documentation. The paper charts had no documentation of the amount, kind, and content of counseling and education given to the patient. Ophthalmology and aspirin were only documented as part of the plan. Diabetic foot exams were nearly doubled when the diabetic exam template was utilized. To reach goals of improving standards of care the physicians will need to utilize the evidence based text templates. Only in the instances where templates were not used, patients did not receive foot exams, instructions on the need for aspirin or ophthalmology exams.

Conclusion:

The EMR has measurably improved indicators of quality in the care of diabetic patients.

- SEAMLESS AND NEARLY EFFORTLESS COMMUNICATION DOCTOR TO DOCTOR.
- SEAMLESS AND NEARLY EFFORTLESS COMMUNICATION OF PATIENT DATA WITHIN THE HOSPITAL COMMUNITY.

- GOOD FOR THE DOCTORS AND THE HOSPITAL-GREAT FOR THE PATIENTS AND THEIR CARE.
- THE MORE DOCTORS SHARING IT THE MORE POWERFUL IT GETS.

PATIENT TRACKING

- THE ABILITY TO RECALL PATIENTS FOR CARE:
- IMMUNIZATION UPDATES
- MEDICINE RECALLS
- FOLLOW-UP TESTS
- SCREENING TESTS
- WHEN NEW RECOMMENDATIONS ARE PROPAGATED

CAPABILITIES (INDIVIDUAL ENCOUNTERS)

- POP-UP REMINDERS
- DRUG-DRUG INTERACTIONS
- TRACKING ALLERGIES
- TRENDING RESULTS
- ORGANIZING PROBLEM LISTS
- ORGANIZING MEDICINE LISTS

CAPABILITIES (PART 2)

- INDIVIDUALIZED PATIENT EDUCATION
- INDIVIDUALIZED FOLLOW-UP INSTRUCTION
- LAB REPORTS DIRECTLY IMPORTED AND HIGHLIGHTED
- PRINTED PATIENT RESULTS AND INSTRUCTIONS

CAPABILITIES DISEASE MANAGEMENT

- CONSTRUCTION OF DISEASE BASED TEMPLATES (TO STANDARDIZE CARE)
- INTEGRATION OF DISEASE TEMPLATES (i.e.. Diabetes plus hypertension and hyperlipidemia=METABOLIC SYNDROME)
- PREFERRED LAB GROUPINGS
- FLOW CHARTING
- GUIDELINE INTEGRATION

RESIDENCY AND MEDICAL STUDENT TEACHING

- ALLOWS PRECEPTOR TO SEE NOTE IN PROGRESS
- ALLOWS GUIDELINE SPECIFIC INPUT
- 'TEMPLATING' ASSURES CONSISTENT STANDARD OF CARE
- LEGIBILITY NOT AN ISSUE
- ASSURES REVIEW BEFORE NOTE CLOSURE
- TRACKS TYPE AND FREQUENCY OF PATIENT ENCOUNTERS

Residency and Med Student (cont'd)

- We all need to meet the new standards for competency. Start with a presentation about a disease entity or problem. Agree on an approach. Design and agree on a template.
- Evidence based medicine, professionalism, systems based practice, economics of medicine, patient education and safety, all accomplished in an integrated approach.

PRESCRIPTIONS

- LEGIBLE PRINTED OR AUTOFAX CAPABILITY
- ALLERGIES CHECKED
- INTERACTION CHECKED
- SPECIFIC FORMULARY CHECKING BY INSURER (included in some)
- REFILLS A CLICK AWAY

Always Up to Date

- MEDICINE LISTS are updated with each prescription.
- PROBLEM LISTS are updated at each visit.

“LOCAL MEDICAL NECESSITY”

- MANY OF THE NEW RECORDS HAVE A CHECK IN THEM FOR THIS. IT CORRELATES DIAGNOSIS WITH THE TEST OR PROCEDURE PERFORMED TO REDUCE DENIAL AND DELAYS IN CARE.

OFF SITE/CALL ACCESS

- POSSIBLE WITH INTERNET OR TABLET STORAGE DEVICES and a feature of most good systems.

CODING ASSISTANCE

- MOST WILL HAVE A CODING “SUGGESTOR”
- HIGHLIGHTS BILLABLES
- HIGHLIGHTS NON-MATCHING CODES
- ICD CODING TO CURRENT DIAGNOSTIC CODES
- LIKELY INCREASED REVENUE BECAUSE OF LEGIBILITY
- TRADITIONALLY CODING REFLECTS WHAT’S ON THE SUPERBILL NOT THE ACTUAL DIAGNOSIS

RESEARCH

- WITH THE ABILITY TO SEARCH BY MULTIPLE INDICATORS RESEARCH WITHIN THE PRACTICE CAN EXPLODE.
- CUSTOM SEARCHES ALLOW AN UNDERSTANDING OF PATIENT POPULATION AND CARE PREVIOUSLY ONLY DONE BY LABORIOUS CHART REVIEW
- RESIDENT FOLLOW-UP AND ANALYSIS OF VISITS BY TYPE AND DEMOGRAPHICS GREATLY FACILITATED

LOST PATIENT CHARTS

- DISCOUNTING CRASHES (WHICH SHOULD BE RETRIEVABLE FROM PROPER BACK-UP) CHART SEARCHING SHOULD BE OVER.
- SQUIRRELS SHOULD NO LONGER HAVE THE NUTS (OR MAKE OTHERS NUTS)
- MULTIPLE PEOPLE CAN HAVE THE CHART AT ONCE

ECONOMICS (expense saving)

- IF DICTATIONS ARE A BIG EXPENSE THEY SHOULD LARGELY GO AWAY
- LESS MEDICAL RECORDS HELP AND STORAGE
- LAB REPORTS DIRECTLY IMPORTED
- REFILLS SHOULD BE A BREEZE
- THE CONSTANT “PULLING” AND “RE-FILING” OF CHARTS SHOULD END

HIPAA COMPLIANCE

- PASSWORD SECURED DATA
- INQUIRY LOGGED
- MULTIPLE ACCESS LEVELS POSSIBLE
- DATA RELEASE TRACKING
- OFF SITE OR OTHER SECURE BACK-UP IS ENABLED

ECONOMICS (revenue generating)

- IMPROVED CODING
- LEGIBILITY FOR EASE OF RECORD REVIEW
- COMPLIANT NOTES
- FEWER DENIALS FOR LACK OF MEDICAL NECESSITY

OBSTACLES

- MONEY- UP FRONT INVESTMENT REQUIRED (WHERE TO GET IT)
- RESISTANCE TO CHANGE
- SIGNIFICANT LEARNING CURVE
- SIGNIFICANT INVESTMENT IN EFFORT FOR IMPLEMENTATION
- ONGOING MAINTENANCE REQUIRED

THE BOTTOM LINE

- FEW THINK THAT IN 2010 WE WILL STILL BE PAPER BASED
- TO BE TRAINING MED STUDENTS AND RESIDENTS ON PAPER IS THEREFORE PROBLEMATIC
- SIGNIFICANT QUALITY IMPROVEMENT SHOULD RESULT
- “BEST PRACTICE” GUIDELINES LIKELY TO INCLUDE AN EMR

The Larger Picture....

- We have as yet no standard to move to the larger communication issue- RIO, and bigger.
- We have little agreement on Security vs. information sharing.
- We have a patchwork of special diseases and conditions; HIV and Psych come to mind.

Security Vs. Access....

A HUGE issue likely to be intensely clouded by special agendas. My take is that you are far more likely to be injured by what I don't know than what some one else does...

Thank You!