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PATIENT SAFETY **a call for change**

Centricity Electronic
Medical Records User
Group, Dallas TX 2004

Patient Safety In EMR

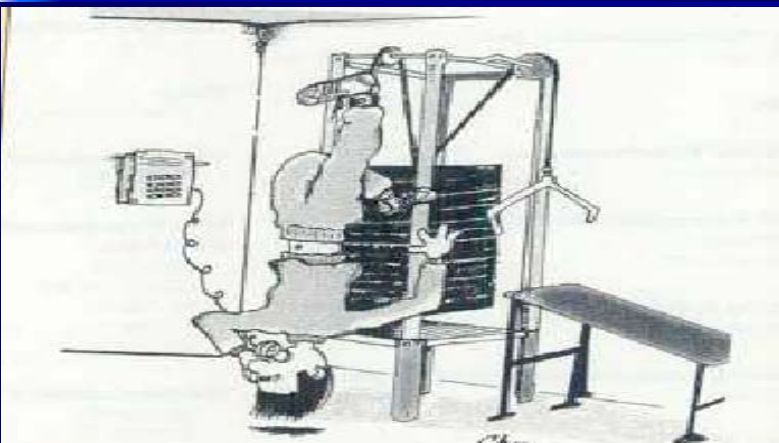
Does an EMR make you inherently safer?



"This is so cool! I'm flying this thing completely on my palm pilot!"

Patient Safety In EMR

EMR's are touted to improve safety- Will they?



"Hello, I need to talk to someone in tech support."

Historical Perspective

"In 1800 to Hippocrates and Galen would have recognized in largely agreed with most medical practice. In 1800 medicine remained what one historian called the withered arm of science."

The Great Influenza, John M. Barry P25

Thermometers

"Physicians had always avoided applying mathematics to the study of the body or disease. In the 1820's, 200 years after the discovery of thermometers, French clinicians began using them."

The Great Influenza, John M . Barry p25

Computers and medical records

In 2004, medicine in many respects is the 'withered arm' of computers and safety

Medicine has been very slow to adopt electronic medical records and is even slower to adopt the culture of safety

The New Challenge

Summed up in the Women's Health Bill of Rights Recently adopted by ACOG

Women's Health Bill of Rights

1. **Safety** and accountability and health-care
2. Appropriate and effective insurance coverage
3. Equity in gender-specific research
4. Freedom from discrimination based on gender, age, race, or ethnicity
5. Social economic and political equality

Women's Health Bill of Rights

6. Accessible, affordable, and safe forms of contraception
7. Freedom of reproductive choice
8. Freedom from domestic and sociopolitical violence
9. Culturally sensitive education in information
10. Access to healing environments & integrative approach to health & health care

Electronic medical records

- With the mandate by President Bush earlier this year electronic medical records has reached centerstage
- Current adoption rates in ambulatory settings is approximately 5-10% of physician offices but many are poised to adopt them
- Definitions of EMR's vary. Standard are coming but do they include the items needed for patient safety?

1999 Institute of medicine report "To Err is Human"

- 44,000-98,000 Patients deaths annually due to Errors
- Goal: 50% reduction in errors within five years
- Culture shift needed to make safety of priority
- How have we done so far?

Technology adoption Only part of the solution

- The airline and nuclear industry's did not automatically become safer by adopting technology
- A culture change of Safety had to happen in the industry
- Safety has become a way of life in everything they do

Patient Safety Culture

- Patient safety in the hospital setting is in its infancy
- Patient safety in the outpatient electronic medical record setting is in many respects still 'in Utero' waiting to be born in many organizations

Cultural barriers to reducing errors in ambulatory EMR's

- Fear of retribution
 - Internal (sanctions) and external (lawsuits)
- Shame of personal failure
- Sense of urgency
- Financial barriers
- Arrogance
- No systematic recording of errors

Cultural barriers: fear of retribution

- Outpatient quality review is currently can be use against the provider in a lawsuit (Only Hospital QA is sort of protected from being used against you in a lawsuit)
 - Local hospital required to give the state Peer review data
 - The House and Senate have recently past a bill that will hopefully improve protection

Cultural barriers: shame of personal failure

- Current system of quality “Name, Blame and Shame”
- Incidents are viewed as personal failures not system failures
- No current mechanism for using individual data and aggregate data to change the system

Cultural barriers: sense of urgency

- Everyone is pushed to be as efficient as possible. No time for safety
- Safety is many times not a priority, let alone a high priority in the outpatient setting
- Physician shortages will make this an even bigger problem.

Physician shortages

Contemp OB/GYN Jan 2004

- Taking into account the number of medical school graduates, the number of foreign doctors, and the ongoing substitution of nurse practitioners, physicians' assistants, and nurse-midwives for physicians, they calculate that the nation will have a shortage of 50,000 physicians in 2010. If these trends continue, the shortage will rise to 200,000 by 2020, more than 20%

Cultural barriers:

Financial

- Double or triple-digit increases in liability insurance
- Falling reimbursements
- Increasing overhead
- Cost of implementing electronic records (no off-the-shelf solutions)

Cultural barriers: behavioral

- Physicians were taught to be independent and have been resistant to guidelines and systems
- Physicians view teamwork as golf teams not volleyball teams
- Disruptive behavior has been tolerated and in some respects rewarded among physicians

Cultural barriers: behavioral (look familiar?)



Cultural barriers:

Top 10 Error prone activities

(Performance Improvement International)

1. Time pressure
2. Distracted environment
3. High workload
4. First-time evolution
5. First working day after days off

Human Error Top 10 Traps (cont)

6. One half hour after wake up or meal
7. Vague or incorrect guidance
8. Overconfidence inducers
9. Imprecise communications
10. Work stress

Cultural barriers: reporting system

- No easy reporting system
 - Time-consuming
 - Cumbersome
 - Disruptive to workflow
 - Not standardized
 - Difficult to get the data in a usable format
 - Difficult to analyze the data
 - Difficult to decide priorities

Scope of the problem

- To err is human focuses primarily on errors that occur in hospitals and is based on the evidence available at the time the report was written
- Because the number of outpatient encounters exceeds the number of inpatient admissions, the consequences of medical errors in the former settings-and the opportunities to improve-may dwarf those in hospitals

Patient safety, IOM report, 2004

Institute of medicine report: Patient Safety 2004

"Better management of health information is a prerequisite to achieving patient safety is a standard of care"

In other words "Electronic records is the *start* not the end in patient safety!"

IOM Patient safety 2004 Recommendation 1

Americans expect and deserve safe care. Improved information and data systems are needed to support efforts to make patient safety a standard of care in hospitals, in doctors' offices, in nursing homes, and in every other health care setting. All health care organizations should establish comprehensive patient safety systems that:

IOM Patient safety 2004 Recommendation 1 (cont)

- Provide immediate access to complete patient information and decision support tools (e.g., alerts, reminders) for clinicians and their patients.
- Capture information on patient safety—including both adverse events and near misses—as a by-product of care, and use this information to design even safer care delivery systems.

Patient safety 2004 Recommendation 5

- All health care settings should establish comprehensive patient safety programs operated by trained personnel within a culture of safety. These programs should encompass
 - (1) case finding—identifying system failures,
 - (2) analysis—understanding the factors that contribute to system failures, and
 - (3) system redesign—making improvements in care processes to prevent errors in the future.Patient safety programs should invite the participation of patients and their families and be responsive to their inquiries.

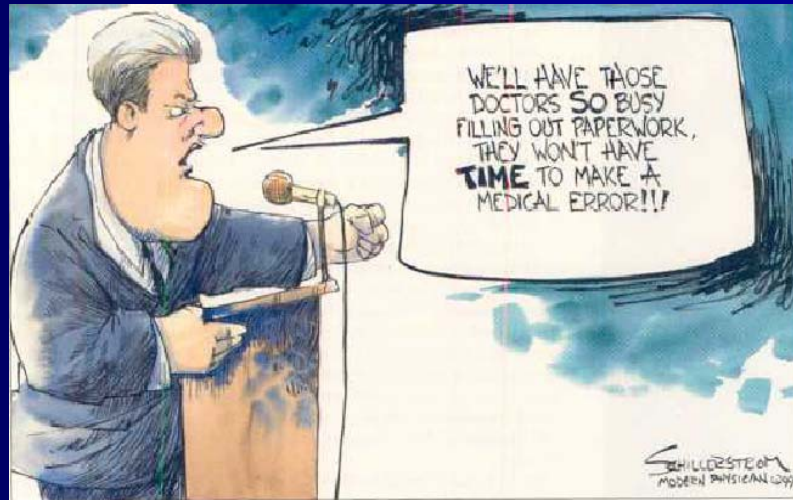
Patient safety in outpatient electronic records

Where we start?

Call To Action

1. Change the culture
2. Develop a reporting system
3. Focus on safety in template development

Call To Action Change to culture



First and Foremost: develop culture of safety

- Teamwork: volleyball team not a golf team
- Doctors need to learn to be System managers
- Develop standard procedures
- Deliver care as an integrated team

Culture Changes

What do I try?

- Teamwork exercises
- Focus on systems
- Reward desired behavior
- Develop improved communication techniques

Reporting system

- Make it simple and easy-to-use
 - (make it idiot proof)
- Nonpunitive
 - Eliminate the name, blame and shame
- Standardized
 - Set up common categories

Common Patient Safety Reporting format

- The Discovery
 - Who, How
- The Event
 - What, where, when, who, why
 - Risk assessment (severity, Preventability, Recurrence)
- Narrative
- Ancillary information
 - Product and Patient information
- Analysis
- Lessons Learned

IOM Patient Safety 2004 p 303

Simple reporting system Macro's (toolbar & speech)

Nonpunitive reporting system

- Develop ways to eliminate reporter and patient identifiers
- Use aggregate data as much as possible
- Make analysis using the systems approach

Analyze the Data

Australian incident monitoring system

Severity Frequency	catastrophic	major	moderate	minor	insignificant
Almost Certain	Red	Red	Orange	Orange	Yellow
Likely	Red	Red	Orange	Yellow	Yellow
Possible	Red	Orange	Yellow	Yellow	Green
Unlikely	Orange	Orange	Yellow	Green	Green
Rare	Orange	Orange	Yellow	Green	Green

Template safety

- Build safeguards into the templates
 - Alerts for critical values
 - Guidelines built into the template
 - “Just in time” information
 - Diagnosis support

CCC templates

Lipid OBE - CCC: Debbie Diabetes

Lipid OBE Risk Hx / PT Educ / Information Metabolic Syndrome/TO

Lipid Management Request Test

Most Recent Labs Lipid Flowchart View Current Lipid Meets Therapeutic Recommendations

NCEP Adult Treatment Panel III Risk Factors

Age 55 or greater yes no

Early menopause w/o HRT yes no

Diabetes yes no

HDL < 40 mg/dL (neg. risk) yes no

HDL > 48 mg/dL (neg. risk) yes no

FH of cardiovascular disease yes no

MI in female age < 65 yes no

MI in male age < 55 yes no

Smoking status current quit never

Hypertension yes no

ASHD (CAD) or CABG yes no

Stroke or TIA yes no

Peripheral vascular disease yes no

Abdominal Aortic Aneurysm yes no

Secondary Causes of Hyperlipidemia ruled out? Yes No

Consented on Adjunctive Measures? Yes No

Dietary Instruction on Lipid-Lowering Diet Provided? Yes No

Goals Automatically Calculated based on # Risk Factors

Check here to manually change Lipid Goals

Recommended Goals based on #s of Diabetes

Goals	Chol	LDL	HDL	Trig
Goals	200	100	40	150
Last value:	262	162	46	224
Last date:	02/18/2004	02/18/2004	02/18/2004	02/18/2004
Next due:	Now	Now	Now	Now

All lipid goals have NOT been met.

Consider interventions to lower LDL. HDL goal has been met. Consider interventions to lower triglycerides.

LDL cholesterol goal met? Yes No

Prev Form (Clin-Pg.43) New Form (Clin-Pg.43) Close

For Help, press F1

Patient Safety Conclusions

(One of One doctors recommend)

- Culture change is essential
- User-friendly Reporting system will help guide future development
- Clinical tools need to be enhanced and developed with error reduction in mind

Questions?