

Implementing a Program of Patient Safety in Small Rural Hospitals

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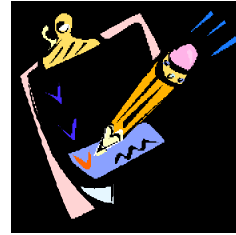
Background

- Quality improvement engine runs on a track of data and information management
(Calico et al., 2002)
- Providing tools for data collection and analysis can overcome rural barriers to patient safety and QI
 - low volume/small sample size
 - limited information mgt resources
 - limited human resources



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Tasks



- Obtain completed information sheet
- Signed contract
- Learn the Reporting System
 - Customize Medication Safety Reporting Form
 - Policy for organizational use of data
 - Importance of data entry and report generation—www.medmarx.com

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Site Visit Tasks

- Summarize role of voluntary reporting
- Introduce culture survey
- Introduce Medication Safety Policy Statement
- Introduce Medication Safety Form and MEDMARX
- Break
- Compare current process with best practices
- Tour facility to visualize process



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Errors in Our Health Care System

- 44,000 – 98,000 deaths per year due to medical errors
 - 8th cause of death
 - One jet airplane crash/day
- 2.9% - 3.7% of admissions result in adverse events
- Cost \$17 - \$29 billion/yr

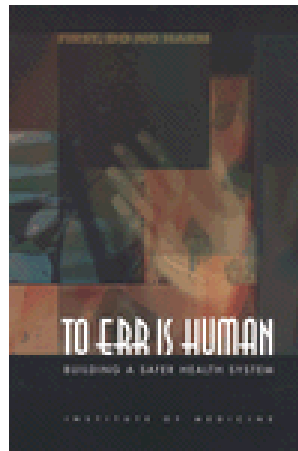


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Institute of Medicine: To Err is Human

“The problem is not bad people; the problem is that the system needs to be made safer.”

Institute of Medicine. (2000). *To Err is Human: Building a Safer Health System*. Washington, DC: National Academies Press, p. 49.



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It happens in rural hospitals, too!

- Order written for 1/3 normal saline...three bags of 3% hung
- 5 outpatient GI procedures scheduled. Fentanyl ordered for each...5 doses of sufentanyl drawn up...three administered. One patient required respiratory support.



Understanding Human Error

Reason (2000)

- Active failures – mosquitoes that bite the patient
- Latent conditions – the “system swamp” that gives rise to the mosquitoes



Role of Voluntary Medication Error Reporting in Patient Safety

- Purpose: learn from experience (Leape, 2002)
 - All responsible parties aware of hazards
 - Share lessons with others
- Identify latent system causes of medication error
- Implement change in the medication use system through QI projects
- Monitor impact of quality improvement projects

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Mechanisms to Increase Reporting

- Celebrate
 - Reporting As & Bs
 - Completeness of report (causes, contributing factors, actions taken)
 - Ideas to minimize system sources of error
 - Successful implementation of change
- Understand your culture – survey
 - www.ahrq.gov
 - Response rate

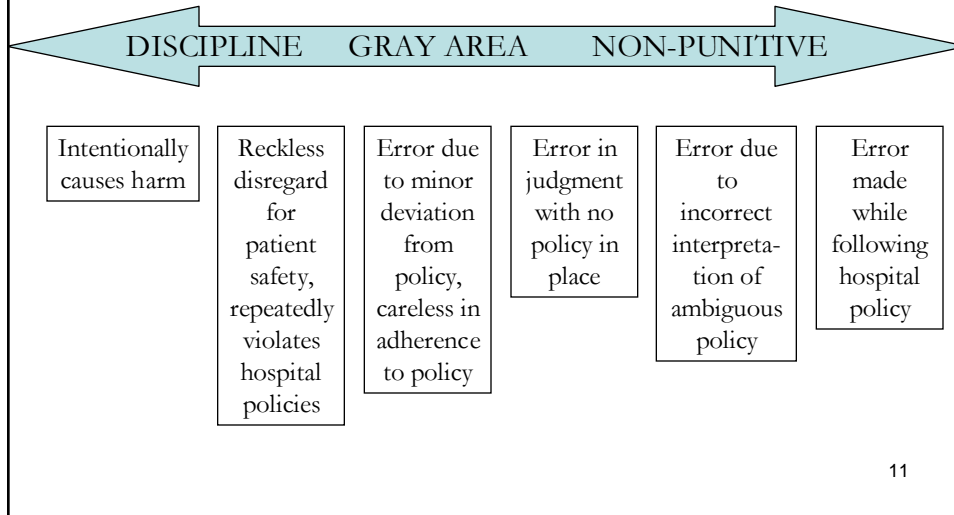


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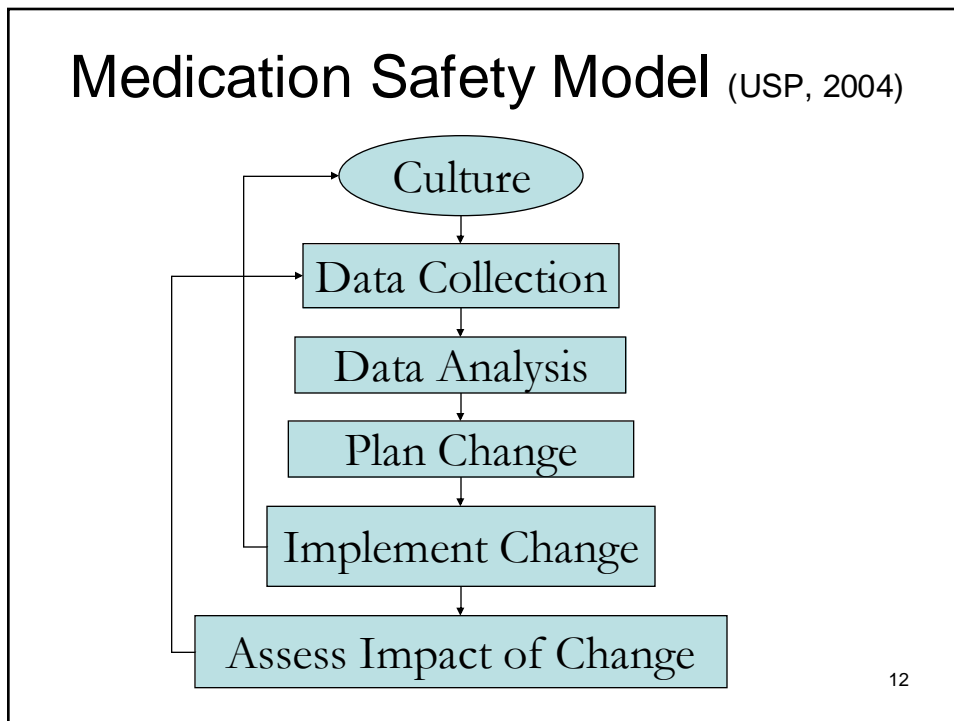
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Near Misses
Reported

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When Should We Blame? (USP, 2004)



Medication Safety Model (USP, 2004)



Safety Culture Survey (www.ahrq.gov)

- When an event is reported, it feels like the person is being written up, not the problem.
- Our procedures and systems are good at preventing errors from happening.
- When a mistake is made, but is caught and corrected before affecting the patient, how often is this reported?
- Hospital management seems interested in patient safety only after an adverse event happens.

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Survey Participants

- Survey all employees
 - Who have direct contact with patients (clinical staff and unit secretaries)
 - Whose work directly affects patient care (pharmacy, laboratory, pathology)
 - Administrator and managers
 - Physicians and Mid-levels



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Medication Safety Policy Statement

- Establishes nonpunitive format to achieve organizational learning from reporting
- Provides definitions
- Establishes procedures for reporting, data collection, data entry, feedback, and analysis

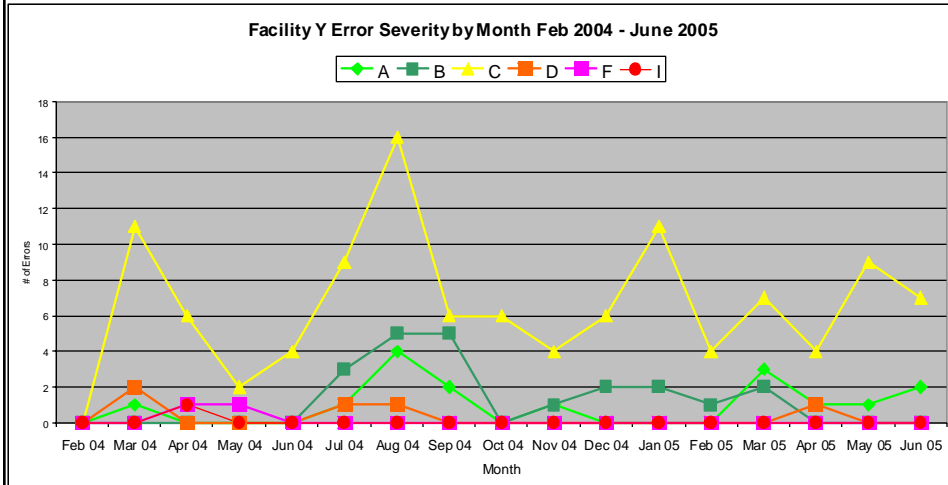
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NCC MERP Taxonomy of Severity

- A: capacity to cause error
- B: error occurred, did not reach patient
- C: error reached pt., no harm
- D: error reached pt., monitoring and intervention required
- E: temporary harm requiring intervention
- F: temporary harm requiring initial or prolonged hospitalization
- G: permanent harm
- H: intervention required to sustain life
- I: error contributed to or resulted in death

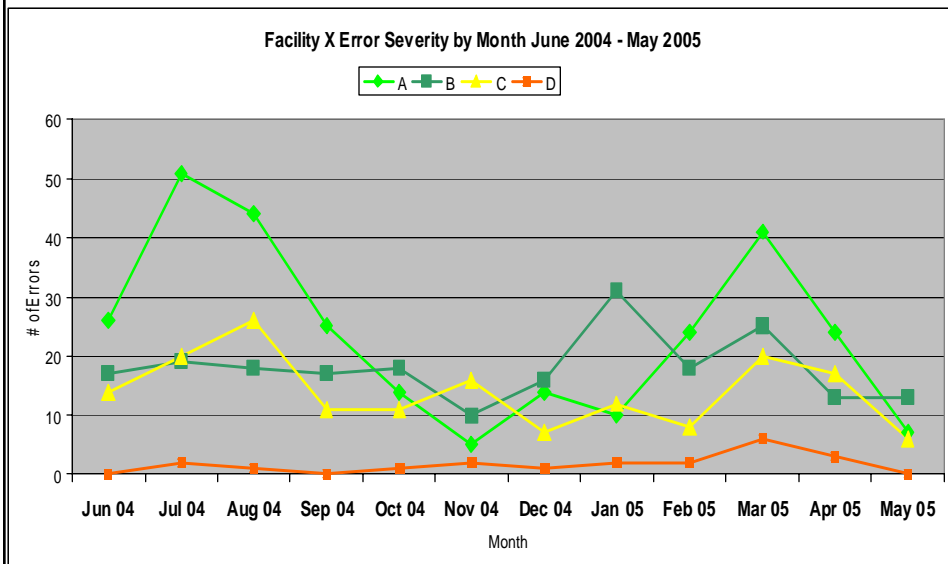
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Monitor Severity Over Time



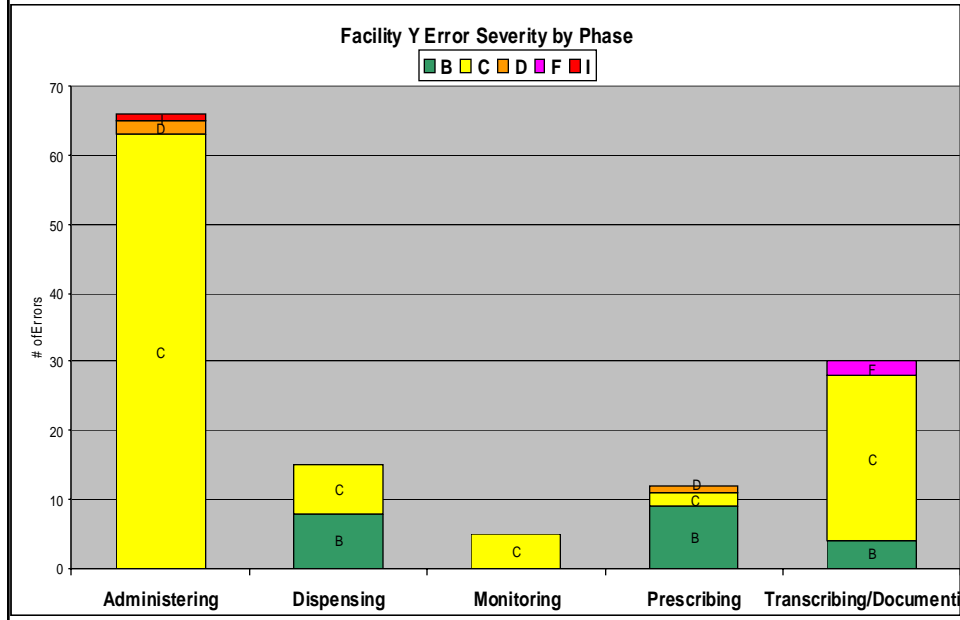
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Monitor Severity Over Time: Goal



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Where do Harmful Errors Originate?



Cause...Dangerous Abbreviations

Abbreviation	Intended	Misinterpretation	Correction
q.d.	Every day	q.i.d.	Daily, every day
U or u	Unit	Zero or four	Unit
IU	International unit	IV	units
cc	Cubic cent.	U (units)	mL
SC	Subcutaneous	SL	Subcut.
x3d	For 3 days	Three doses	For three days
HCTZ	HCTZ 50mg	HCT 250	

Cause...Decimal Points

“Always lead, never follow”

Always use zero before a decimal when dose is less than a whole unit

Do not use terminal zeros for doses expressed in whole numbers



It wasn't a stray bullet that killed her.

It was a stray decimal point.

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High Alert Medications

- Heparin (all forms)
- Insulin
- Potassium chloride
- Sodium chloride (hypertonic)
- Warfarin
- Narcotics
- Neuromuscular blocking agents
- Total parenteral nutrition solutions
- Pediatric dosage calculations in CAHs

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Preventing Prescribing Errors

- Read back policy for all telephone or verbal orders
- No “may take home meds” orders
 - Reconcile across the continuum of care
- Pharmacy evaluation of all orders
 - Appropriateness, interactions, allergies
- Include purpose on order
- Preprinted order forms
- Computerized physician order entry

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Preventing Dispensing / Administration Errors

- Dispensing
 - Unit Dose
 - Inventory Control
 - OR / Chemo... separate from regular stock
 - Automated Dispensing
 - Pyxis
- Administration
 - 7 Rights
 - Patient, Drug, Dose, Route, Time, Reason, Documentation
 - Wrist bar coding
 - Automatic IV pumps / alarms

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Patient / Family Involvement

- Last line of defense
- Only “common element” across care settings
- Establish expectations
- Provide name and purpose of all medications
- Educate / Counsel
- JCAHO “Speak Up” Campaign
www.jcaho.org

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Where Do I Start?

- Am I using proven medication safety practices?
- Am I getting feedback about the entire system?
- How well does my system intercept/correct errors?
- Where do harmful errors originate?
- What are the most frequent types of error reports?
- Which types of errors reach the patient?
- What error types are most likely to cause harm?
- What are the causes of errors?
- Conduct root cause analysis on harmful, potentially harmful errors

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Conclusion

- Accept that we are human – develop a system that prevents error
- Move from culture of fear and blame to an open culture of learning and safety
- Evaluate your current process from a systems perspective
- Report Report Report - Don't wait for the system to fail and harm a patient
- Demand feedback from reporting and QI
- The medication administration system is dynamic and requires continuous monitoring and improvement

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