Back the MACC: Medication Administration Cross Check

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Conflict of Interest Disclosures:

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Consultant for Masimo: October, 2012

Objectives

- Highlight EMS environment characteristics that create risk of medication errors
- Discuss a taxonomy of medication errors for quality monitoring purposes
- Introduce a cross-check tool for medication administration

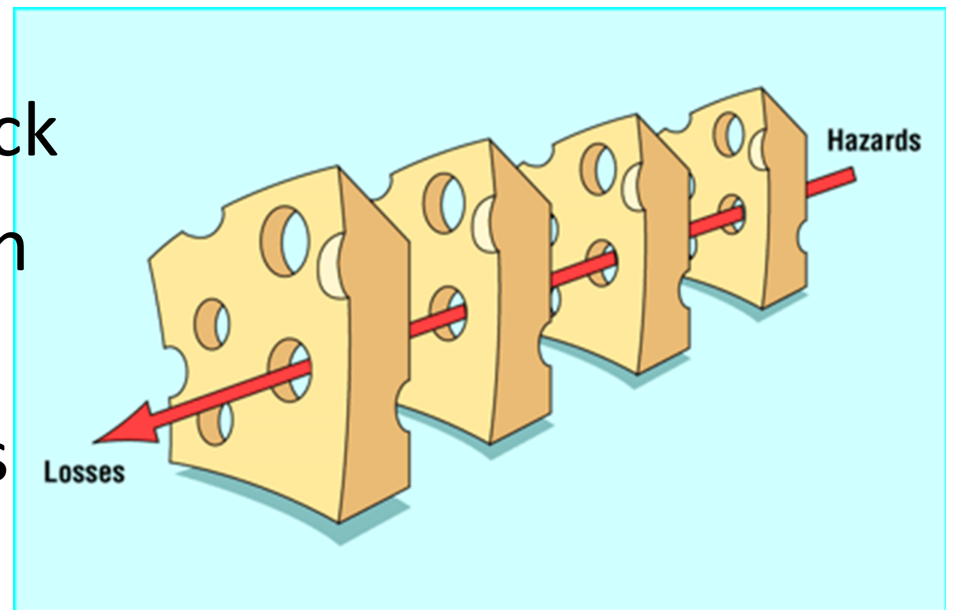
Medication Error Definition

"A medication error is any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer. Such events may be related to professional practice, health care products, procedures, and systems, including prescribing; order communication; product labeling, packaging, and nomenclature; compounding; dispensing; distribution; administration; education; monitoring; and use."

AHRQ Medication Safety http://www.ahrq.gov/qual/nurseshdbk/docs/hughesr_mas.pdf
IOM Preventing Medication Errors: http://www.nap.edu/catalog.php?record_id=11623

EMS Environmental Risks

- Emergency situation
- No written order
- No external crosscheck
- No electronic decision support
- High-risk medications
- Drug shortage issues and substitutions



IOM Testimony to Congress 5-3-2001:
http://www7.nationalacademies.org/ocga/testimony/Patient_Safety_and_Medication_Errors.asp
Reason, James. Human error: models and management. British Medical Journal 2000; 320:768-770.

Change to a Culture of Safety

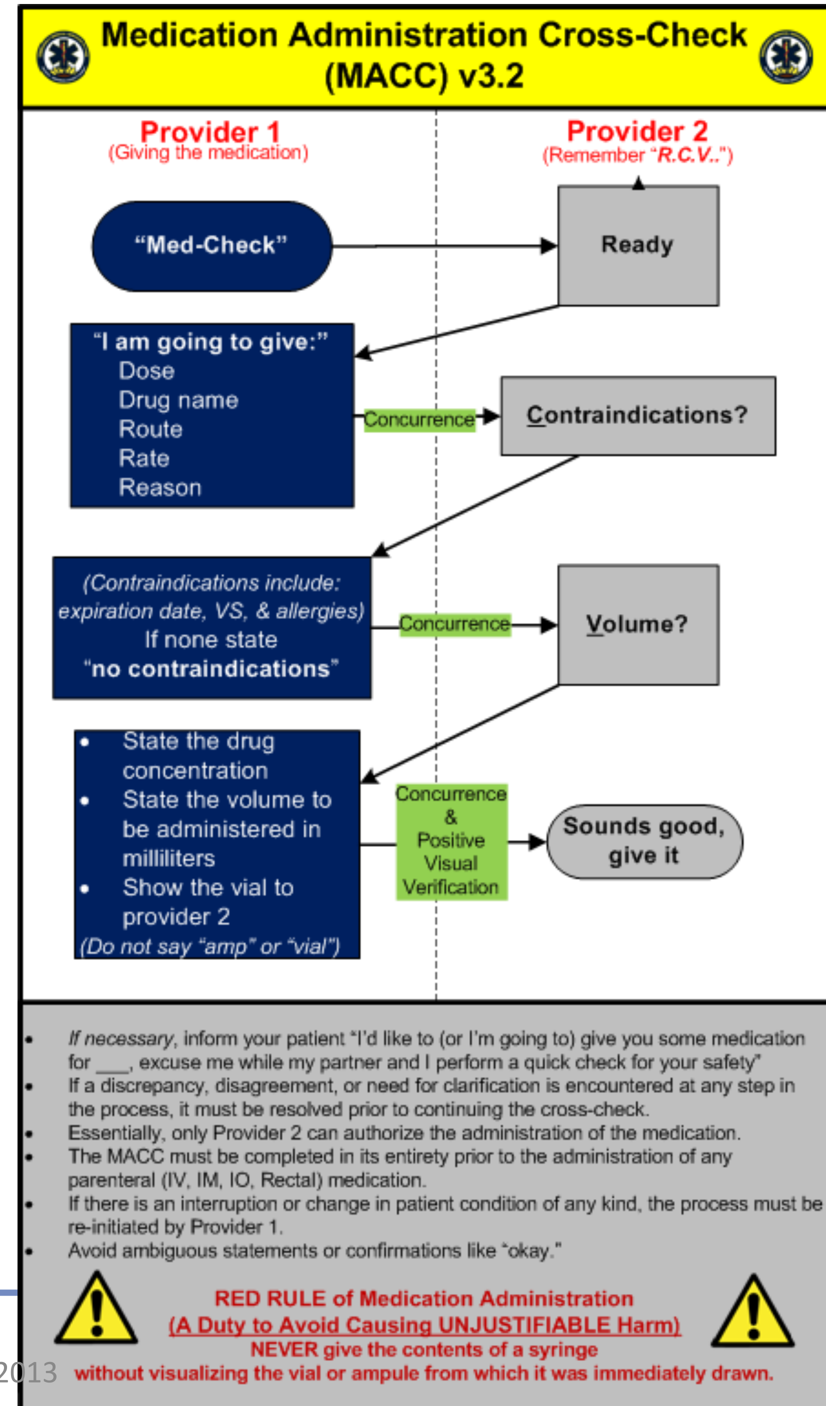
- acknowledge the **high-risk** nature of an organization's activities
- determine to achieve **consistently safe** operations
- a **blame-free** environment to report errors or near misses
- encourage **collaboration** to seek solutions to patient safety problems
- commit organizational **resources** to address safety concerns

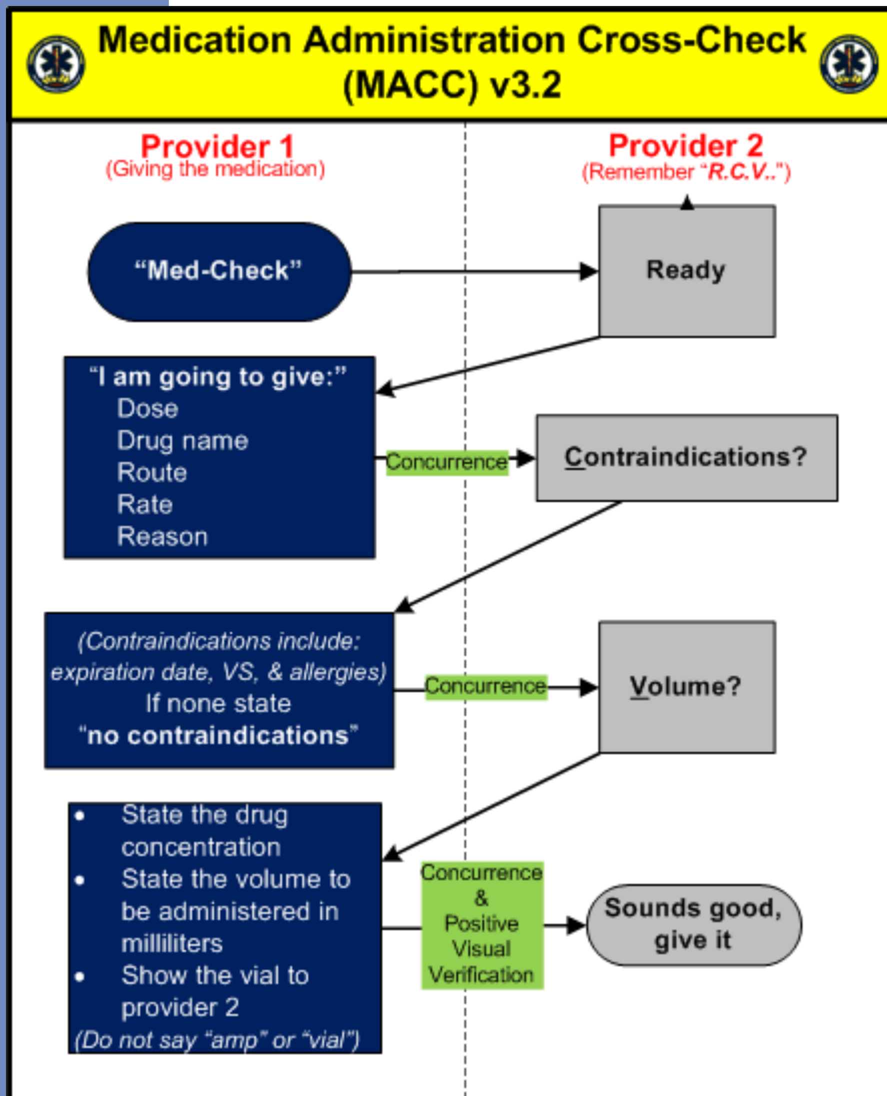
http://www.psnet.ahrq.gov/primer.aspx?primerID=5
www.emscultureofsafety.org

What is most important:
Deliver medication quickly?
Deliver medication correctly?

Medication Administration Cross-Check (MACC):

Standardized method for medication administration, every time, every med





- 2 person verbal procedure
- Contains error traps
- Fast, simple
- Only the 2nd provider 'authorizes' the med administration
- barrier to error reaching the patient
- Creates a pause point

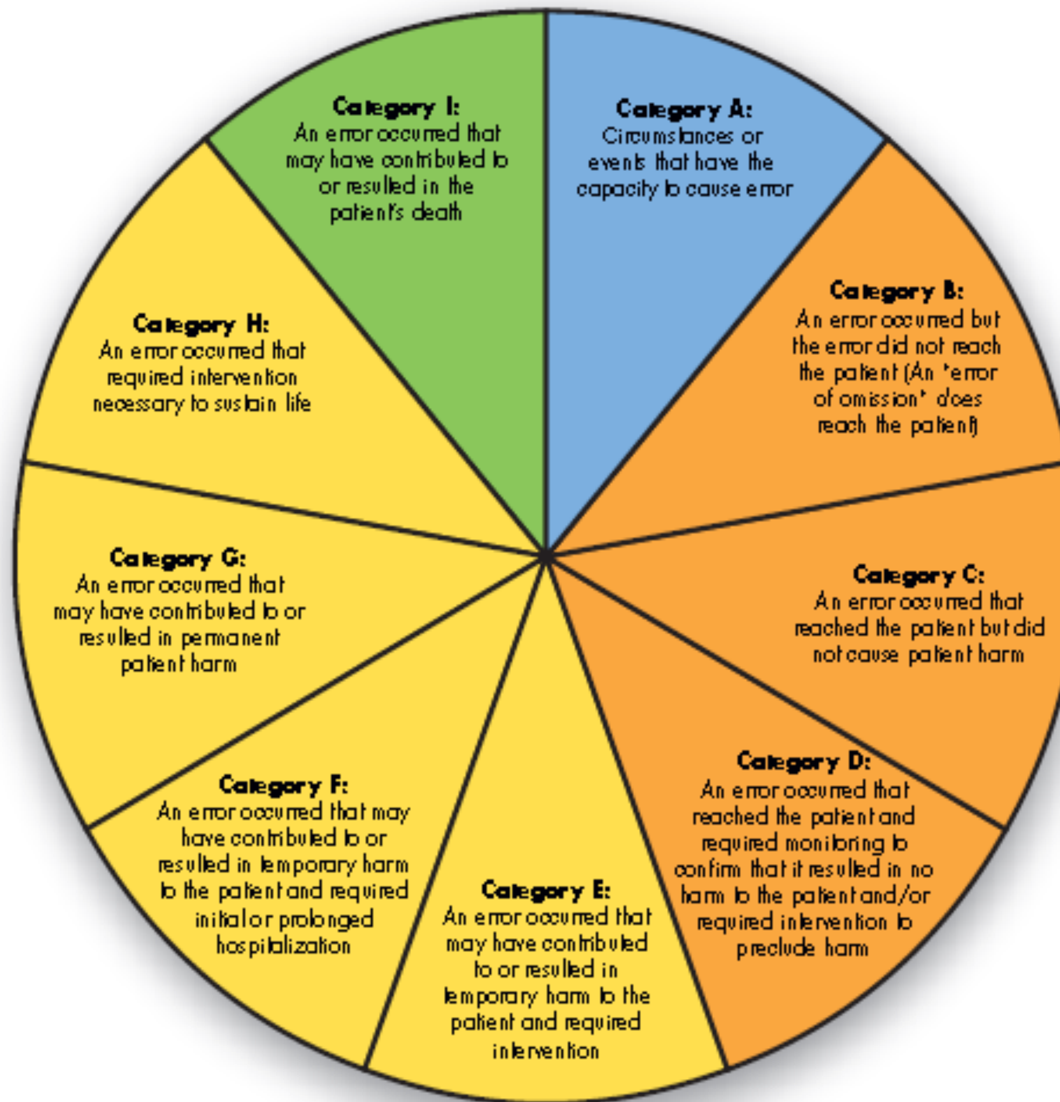
MACC Demonstration

- Error found
- No error found

No error video: http://vimeo.com/wscomd/review/40680029/9b7a58c827

Error video: http://vimeo.com/wscomd/review/40680482/6cd27b443f

NCC MERP Index for Categorizing Medication Errors



- No Error
- Error, No Harm
- Error, Harm
- Error, Death

Definitions

Harm
Impairment of the physical, emotional, or psychological function or structure of the body and/or pain resulting therefrom.

Monitoring
To observe or record relevant physiological or psychological signs.

Intervention
May include change in therapy or active medical/surgical treatment.

Intervention Necessary to Sustain Life
Includes cardiovascular and respiratory support (e.g., CPR, defibrillation, intubation, etc.)

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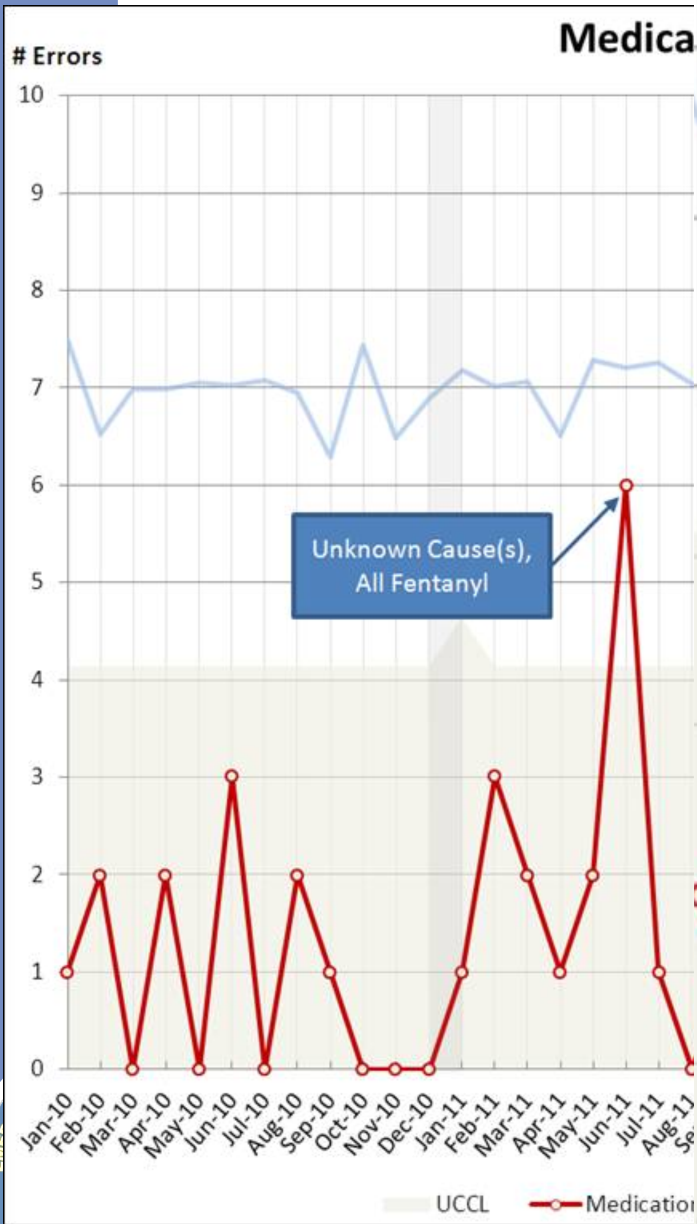
Errors
10
9
8
7
6
5
4
3
2
1
0
Unknown Cause(s), All Fentanyl
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Jan-11
Feb-11
Mar-11
Apr-11
May-11
Jun-11
Jul-11
Aug-11
UCCL
New Protocols Implemented
Introduction of MACC

Take-Home Points

- Medication errors are happening, whether recognized or not
- Find system opportunities to limit medication error
- Promote a culture of reporting and thoughtful analysis of incidents

Thank You

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