Patient Safety

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Scope of Problem & History of Patient Safety

- 1999: IOM

  To Err is Human: Building a Safer Health Care System

- **44,000 - 98,000** Americans die each year from medical errors

Jumbo jet crashing each and every day in the U.S.

Medical Error Theory

- Four factors contributing to medical errors:
  1- Human fallibility
  2- Complexity
  3- System deficiencies
  4- Vulnerability of defensive barriers

Medical Error Theory

1- Human fallibility

- " To err is human": mistakes are part of the human condition
- System changes to make it harder to do the wrong & easy to do the right thing

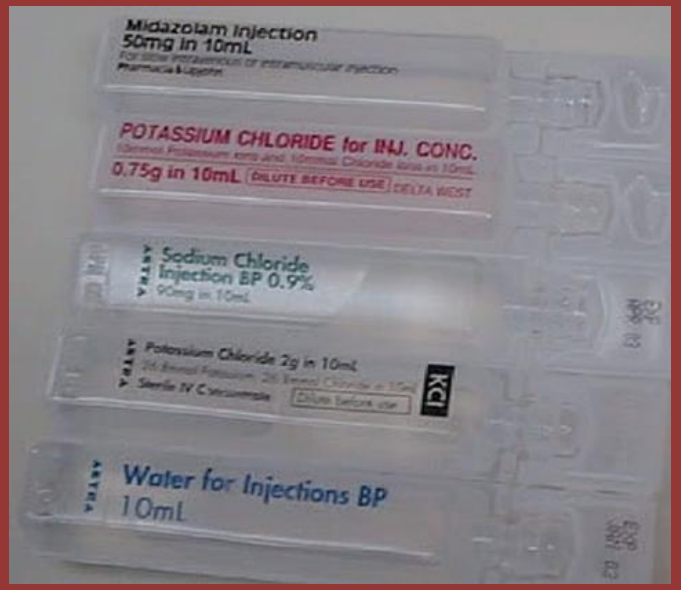
  A- Forcing functions

  B- Reminders @ the point of care

Medical Error Theory

- **A- Forcing functions:**

  - physical or process constraints that make errors difficult if not impossible



Medical Error Theory

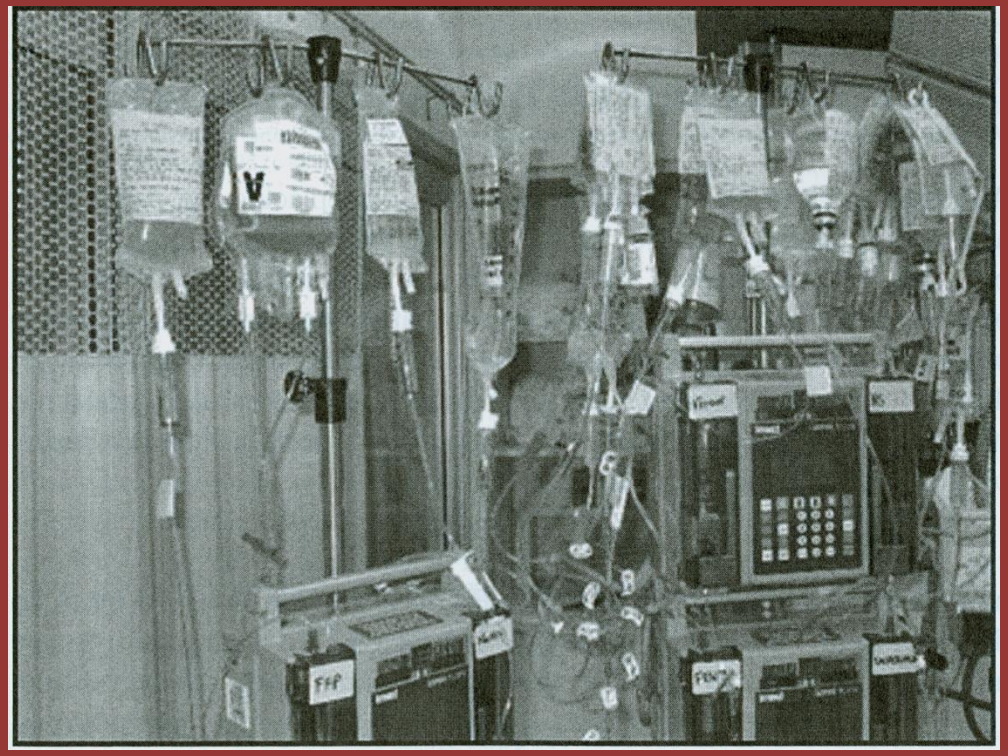
B- Reminders at the point of care

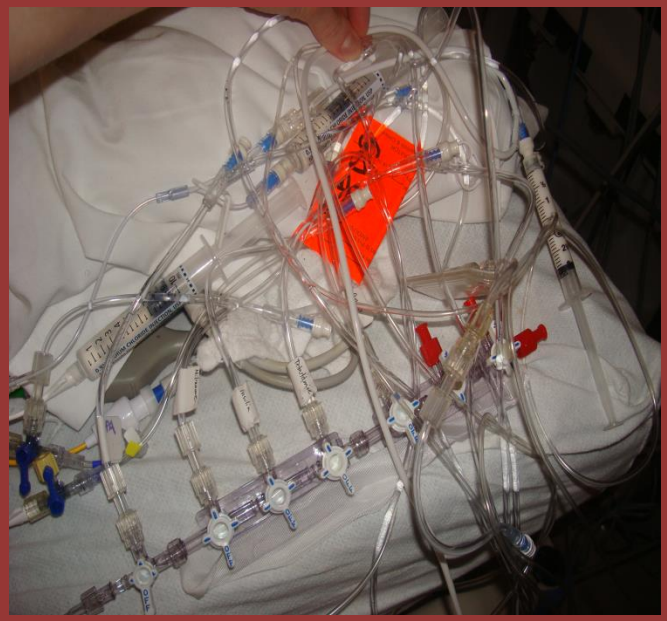
- keeping a **checklist** to help ensure the steps are performed in the proper sequence

B- Reminders at the point of care

2- Complexity

- Modern health care is the **most complex** activity ever undertaken by human beings





2- Complexity

- Inpatient medication system

Table 1
Inpatient medication system

Prescribe →	Transcribe →	Dispensing →	Administer →	Monitor
Clinical decision	Receive order	Data entry	Receive from pharmacy	Assess therapy effect
Choose drug	Verify correct	Prepare, mix, compound	Prepare to administer	Assess side effects
Determine dose	Check allergy	Check Accuracy	Verify order and allergy	Review labs
Med record document		Check allergy	Administer drug	Treat side effects
Order		Dispense to unit	Document in MAR	Document

Abbreviation: MAR, medication administration record.

Adapted from Aspden P, Wolcott J, Bootman, JL, et al. Preventing medication errors. Washington, DC: The National Academies Press; 2006. p. 60; with permission.

3- System deficiencies

- 2 major components: Sharp & Blunt Ends

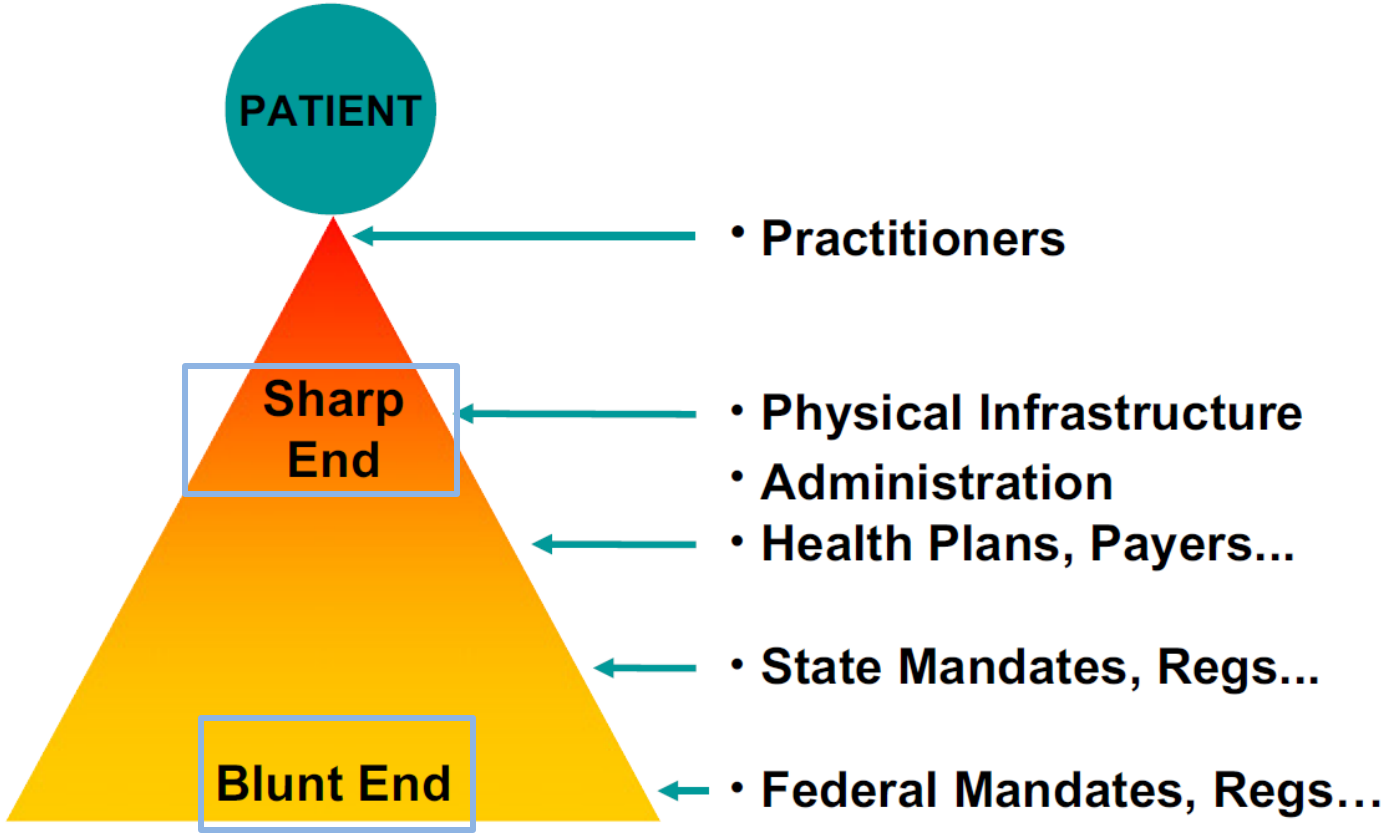


Fig. 1. Components of health systems.

3- System deficiencies & defensive Barriers

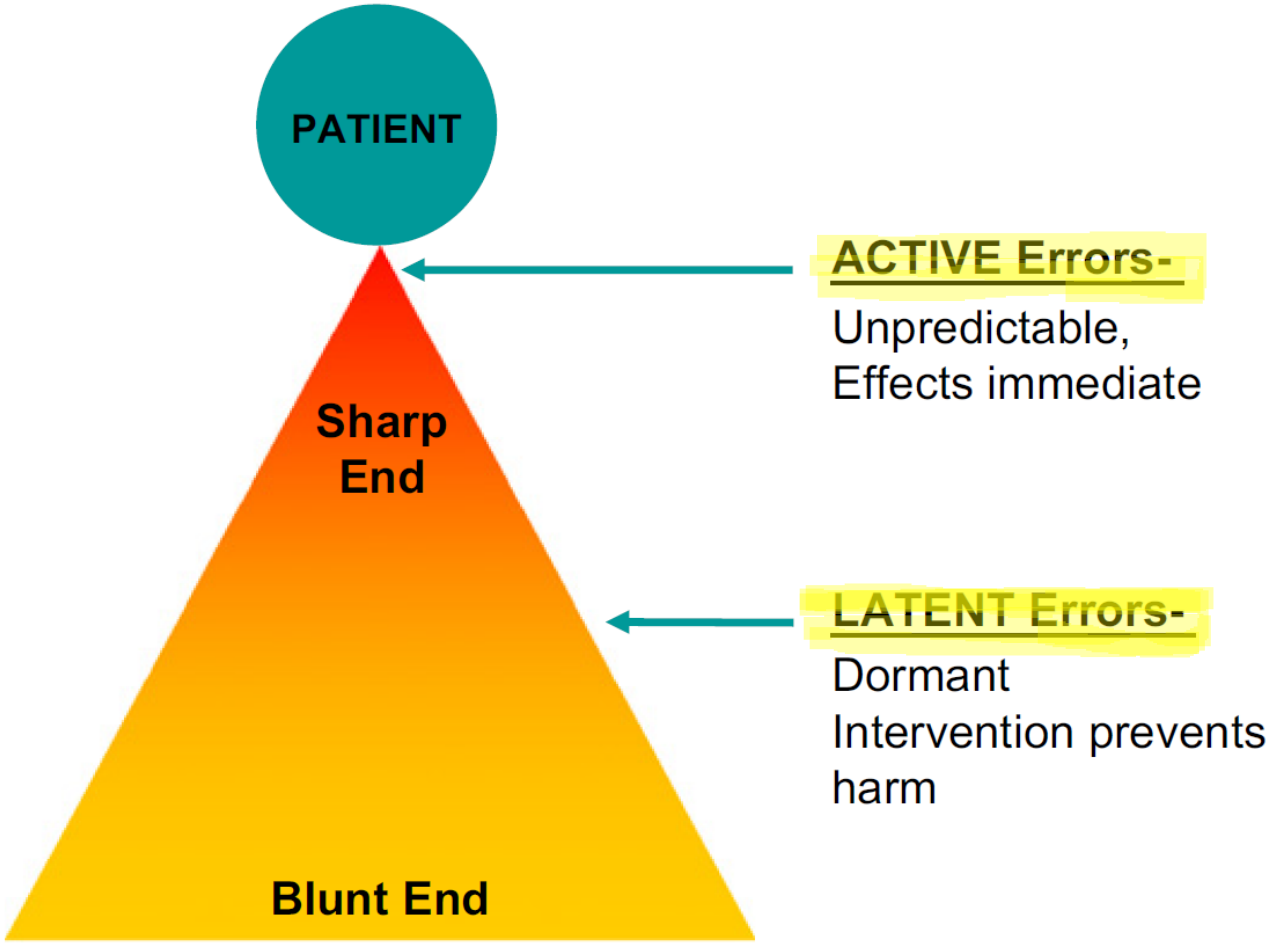


Fig. 2. Types of errors in health systems.

1- Active Errors

- @ the sharp end of care
- Immediate effects
- Generally unpredictable & unpreventable
- **Example:** inadvertent bladder injury during a hysterectomy for endometriosis with multiple adhesions
- There is no *" system"* that would prevent this injury

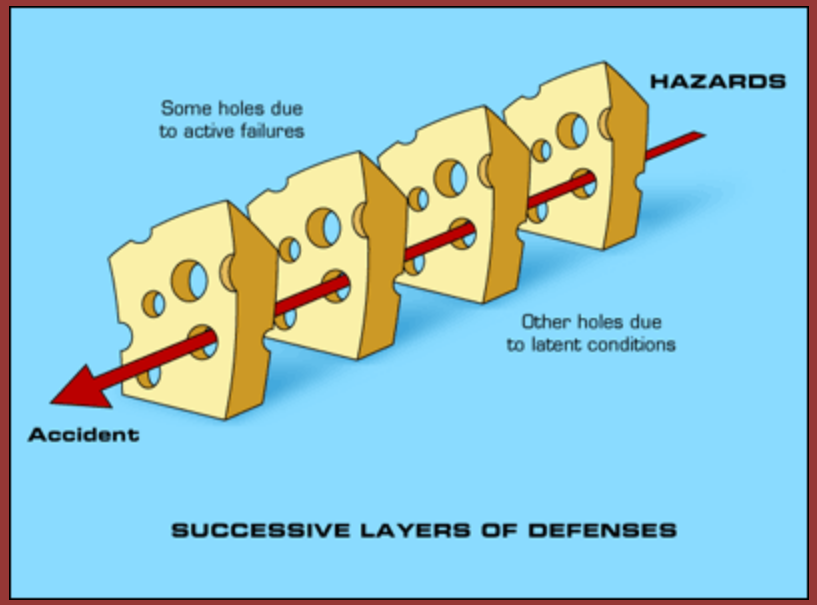
2- Latent Errors

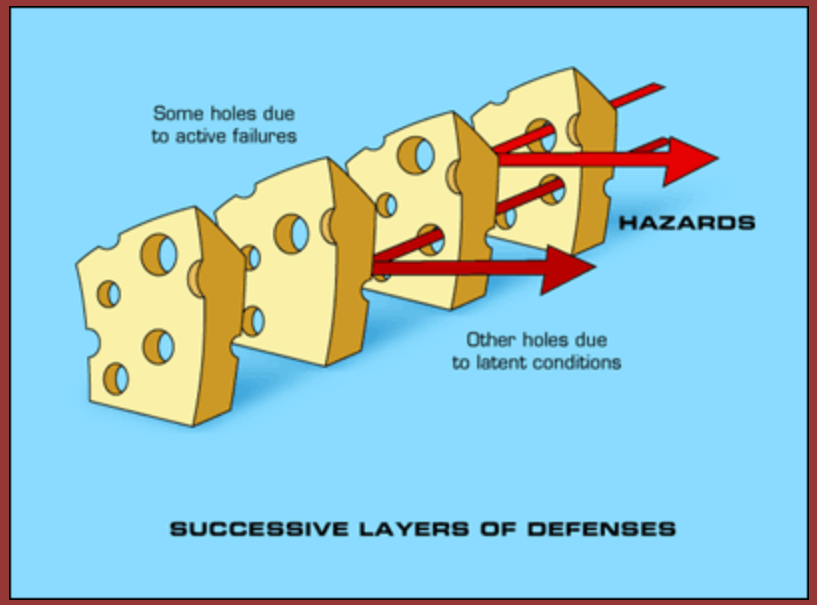
- System deficiencies hidden in the blunt end of care
- *Holes in Swiss cheese*
  - We work around these risks until the wrong set of circumstances occur → Patient injury
  - **Examples:** understaffing, engineering defects

Human Error

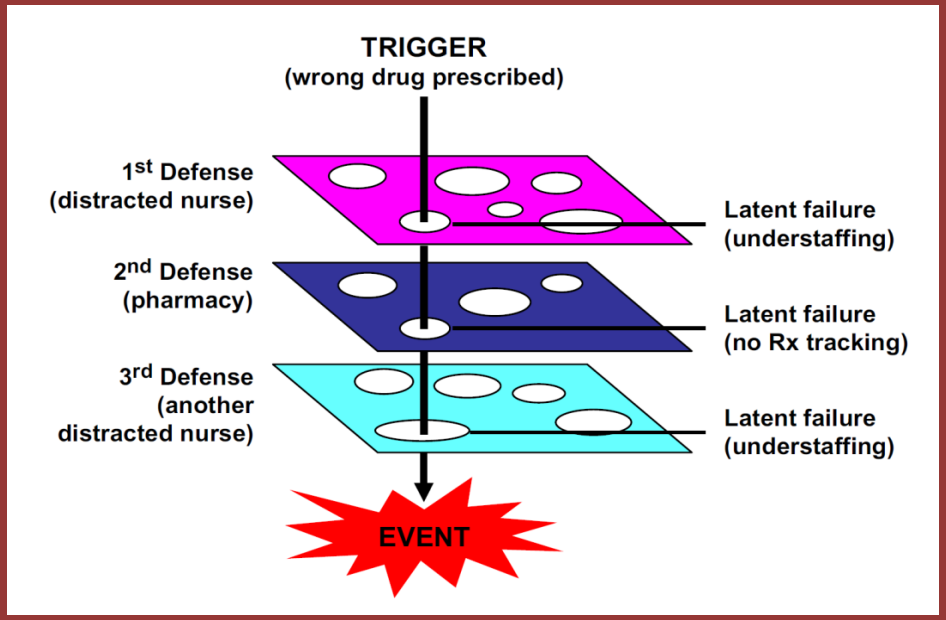
We cannot change the human condition, but we can change the conditions under which humans work

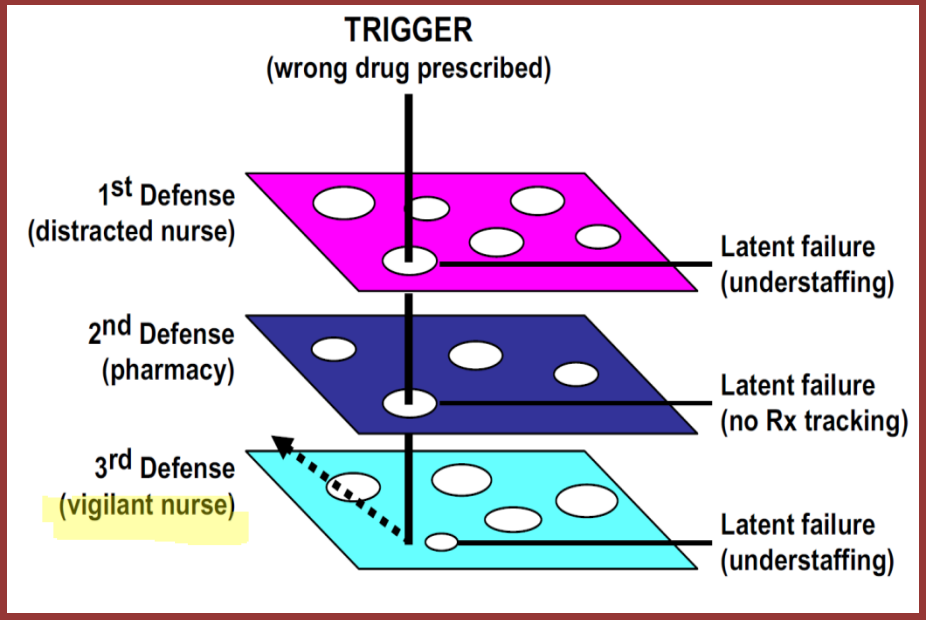
Defensive Barriers: Swiss cheese Model





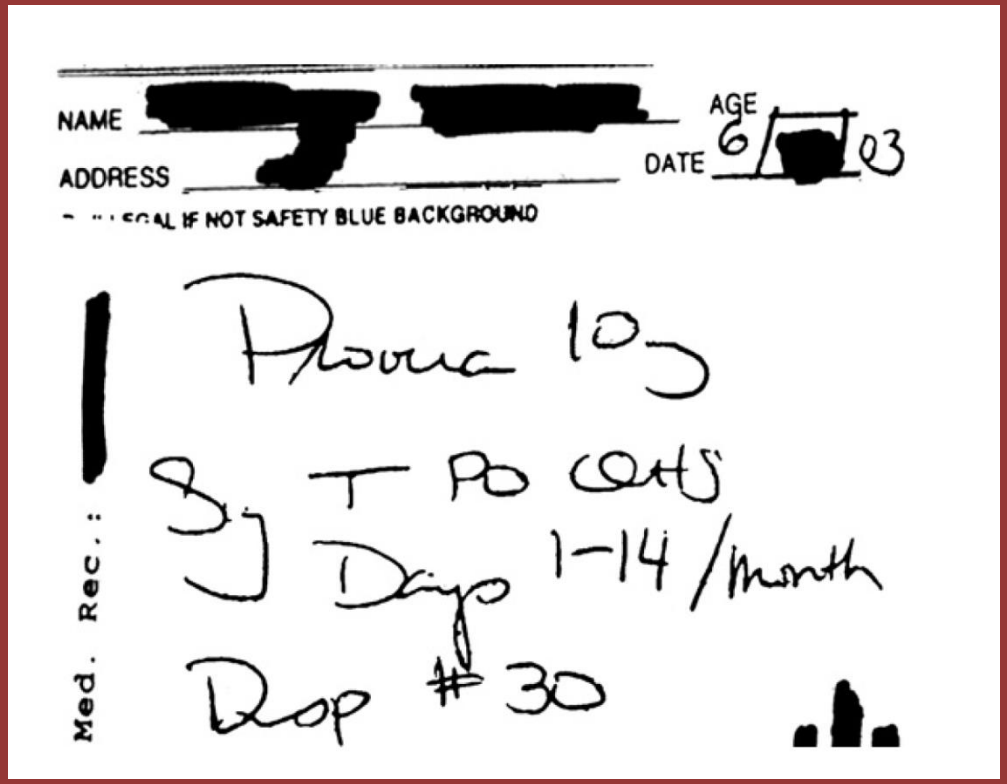
Trajectory of Error & Defensive Barriers



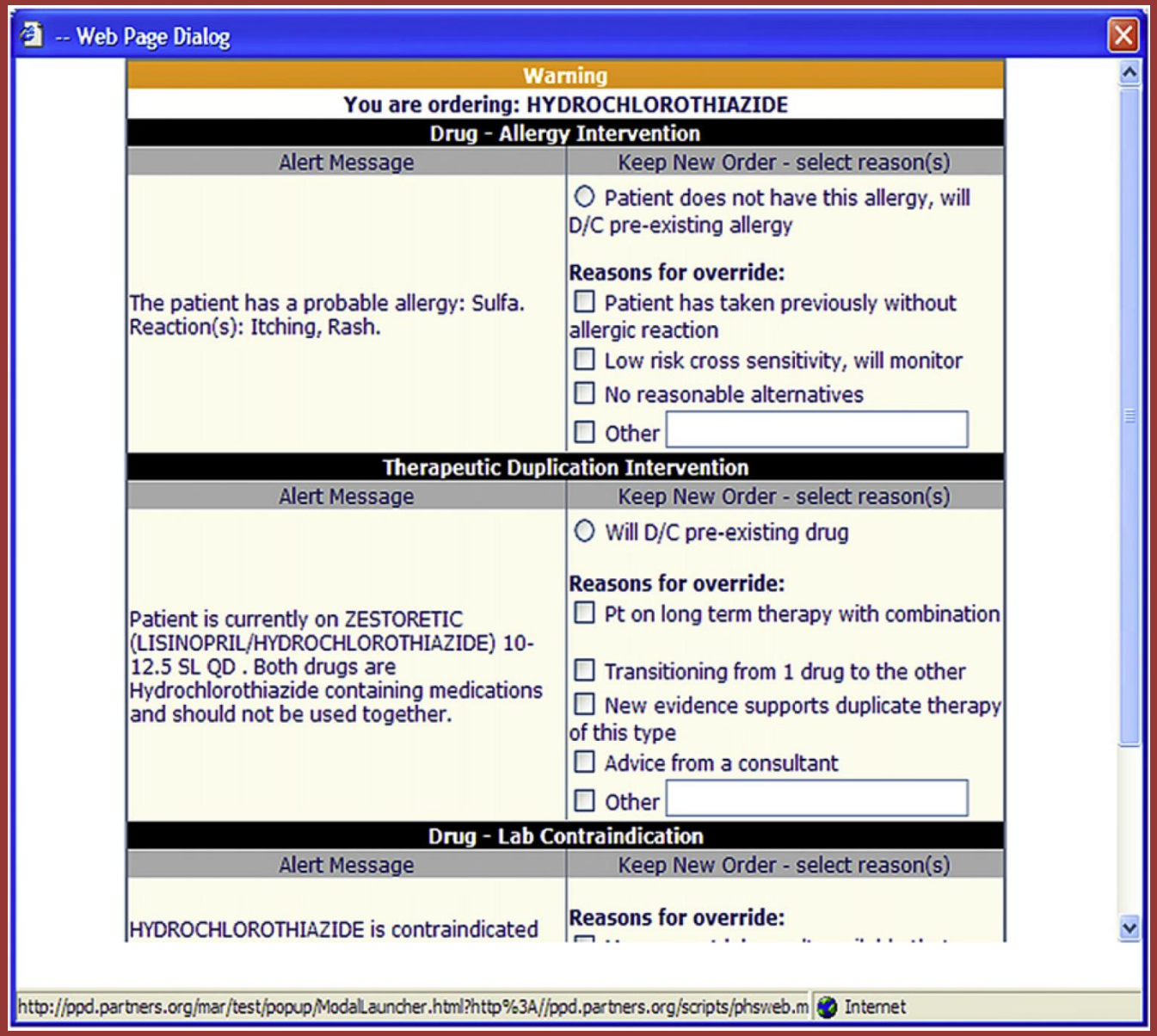


Practical solutions to improve safety in OB & GYN

- **Medication errors** account for the **largest** # of errors in health care

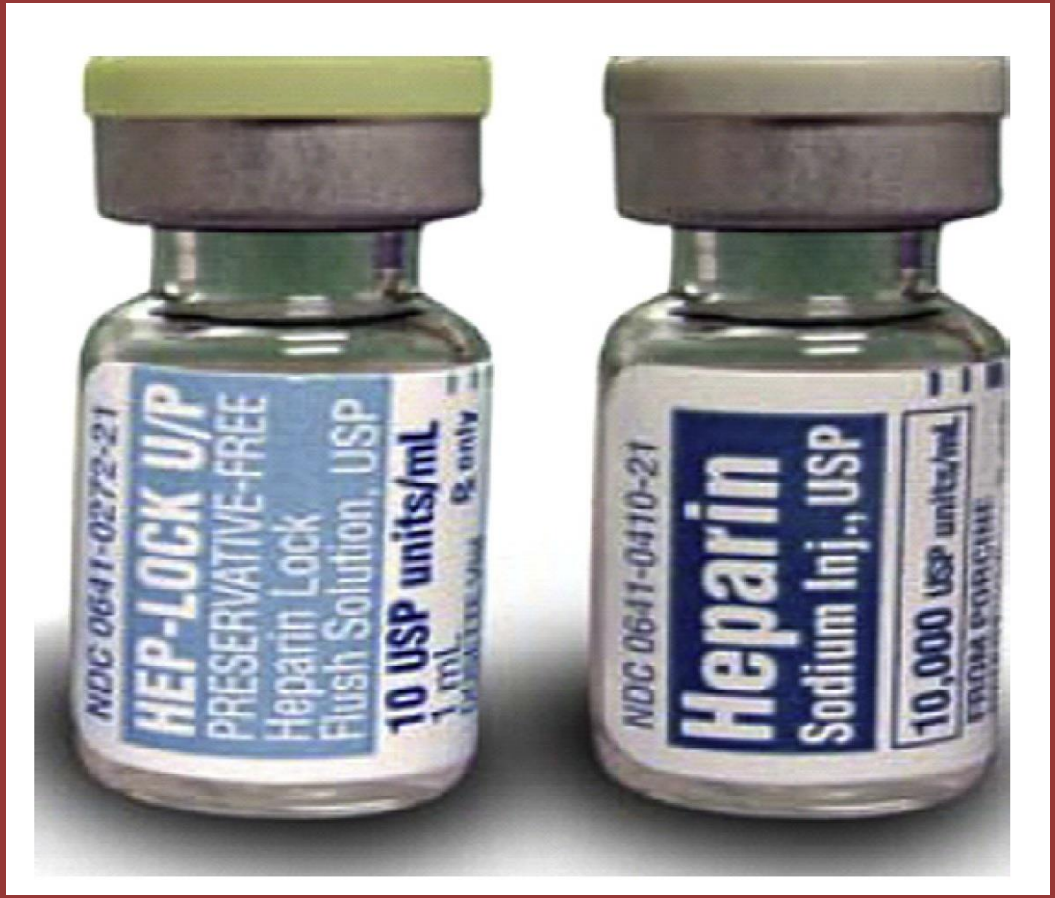


Medication Error: Advance Decision Support Alert

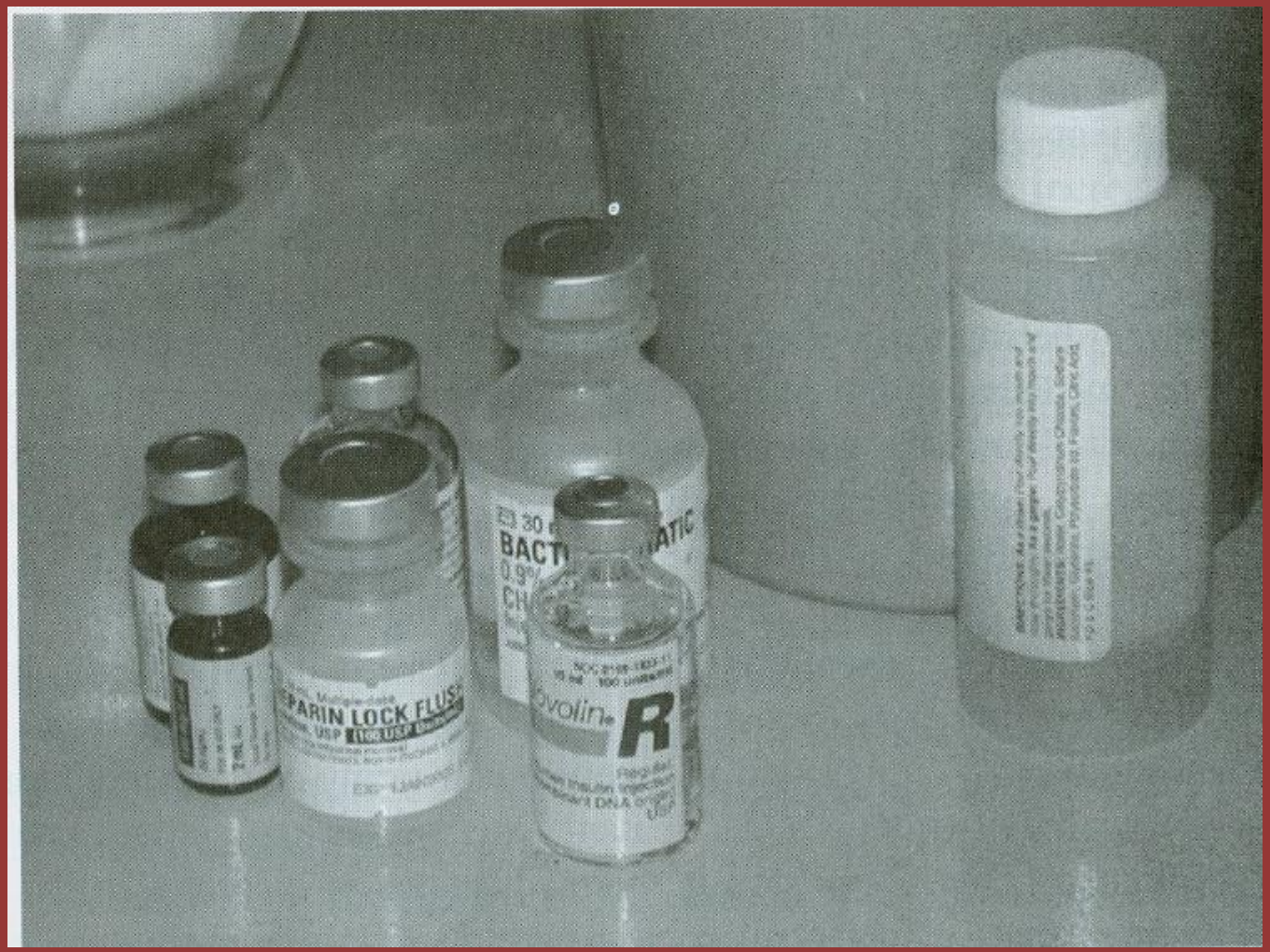


Indiana Hospital, NICU

3 preterm infants died as a result of lethal overdoses of IV heparin



Medication Errors



Medication Safety & Errors

- **Clear handwriting**
- Distinguishing between **look-alike** and **sound-alike** drugs
- **Avoid using abbreviations** / non-standard abbrev.
- Electronic system for generating & transmitting Rxs
- All prescriptions should include detailed instructions to pt for using the medications

Medication Safety & Errors

- Comprehensive recommendations/guidelines published by ACOG, ACS & Joint Commission

JCAHO's "do not use" list

To comply with Goal 2, hospitals are required develop a list of abbreviations, acronyms, and symbols that must not be used in orders or other medication-related documentation that are handwritten, are entered into a computer, or appear on pre-printed forms. JCAHO has created its own "do not use" list that facilities can emulate.

Do not use	Potential problem	Use instead
U (unit)	Mistaken for "0" (zero), the number "4", or "cc"	Write "unit."
IU (international unit)	Mistaken for IV or the number 10	Write "International Unit."
Q.D., QD, q.d., qd (daily) and Q.O.D., QOD, q.o.d., qod (every other day)	Mistaken for each other. Period after the Q mistaken for "I" and the "O" mistaken for "I"	Write "daily" or "every other day."
Trailing zero (X.0 mg) Lack of leading zero (.X mg)	Decimal point may be missed.	Write "X mg" or "0.X mg." (Trailing zero may be used only when required to demonstrate the level of precision of the value being reported, such as for lab results, imaging studies that report the size of lesions, or catheter/tube sizes.)
MS	Can mean morphine sulfate or magnesium sulfate	Write "morphine sulfate" or "magnesium sulfate."
MSO_4 and $MgSO_4$	Mistaken for each other	Write "morphine sulfate" or "magnesium sulfate."

In addition, JCAHO is considering the following items for inclusion on its do not use list: All abbreviations for drug names; the symbols "<" (less than), ">" (greater than), and "@" (at); the abbreviations "cc" and "µg"; and apothecary units. While these items are not currently prohibited, eliminating them now will make it easier to meet this requirement if JCAHO does add them to the list in coming years.

Source: Joint Commission on Accreditation of Healthcare Organizations. "The official Do Not Use list." 2006. www.jointcommission.org/PatientSafety/DoNotUseList2006 (11 Sept. 2006).

Patient Role in her safety

- Speak up if you have questions or concerns
- Pay attention to the care you're receiving
- Educate yourself about your diagnosis , tests you are undergoing and your treatment plan
- Know what medications you take and why you take them *(medication errors are the most common healthcare errors)*
- Participate in all decisions about your treatment

Surgical Environment

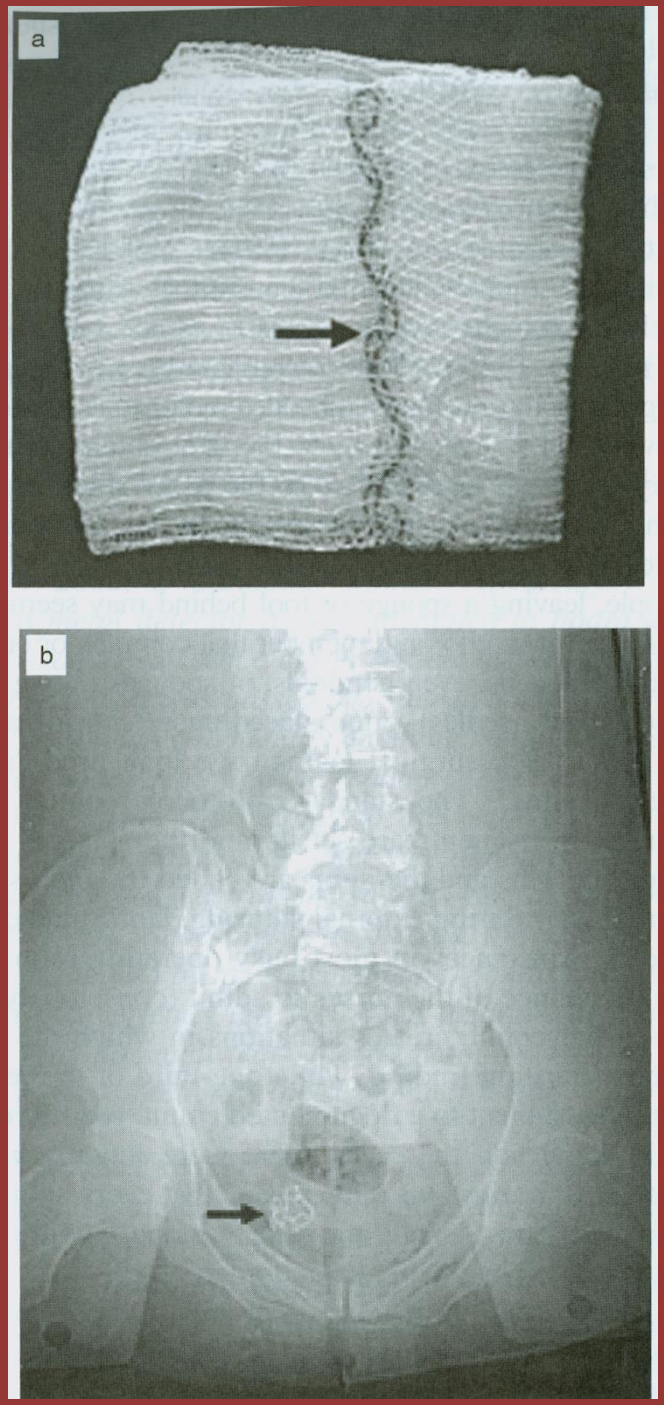
- In **Obstetrics & Gynecology** , the risks of surgical error may have increased because :
  - ↑Cesarean sections
  - ↑Minimally Invasive Surgeries
  - ↑Robot-assisted laparoscopy
  - ↑Pressure for short lengths of stay postop
  - ↑More outpatient procedures

1- Retained Foreign Objects

- Sponges, surgical instruments
- Indefensible!
- “Correct sponge count” does **not** exonerate the surgeon

Retained Foreign Objects

- Radiopaque thread detectable by X-ray



2- Surgical Fire

Surgical Environment

- **Surgical Fires**

  - Rare

  - We in **O & G** have all the 3 elements necessary to start / support fires:

  1- Oxidizers: supplies of oxygen gas

  2- Ignition sources: electrocautary, fiberoptic light cables, lasers

  3- Flammable fuels: surgical drapes, alcohol-based prepping agents, anesthetic gases

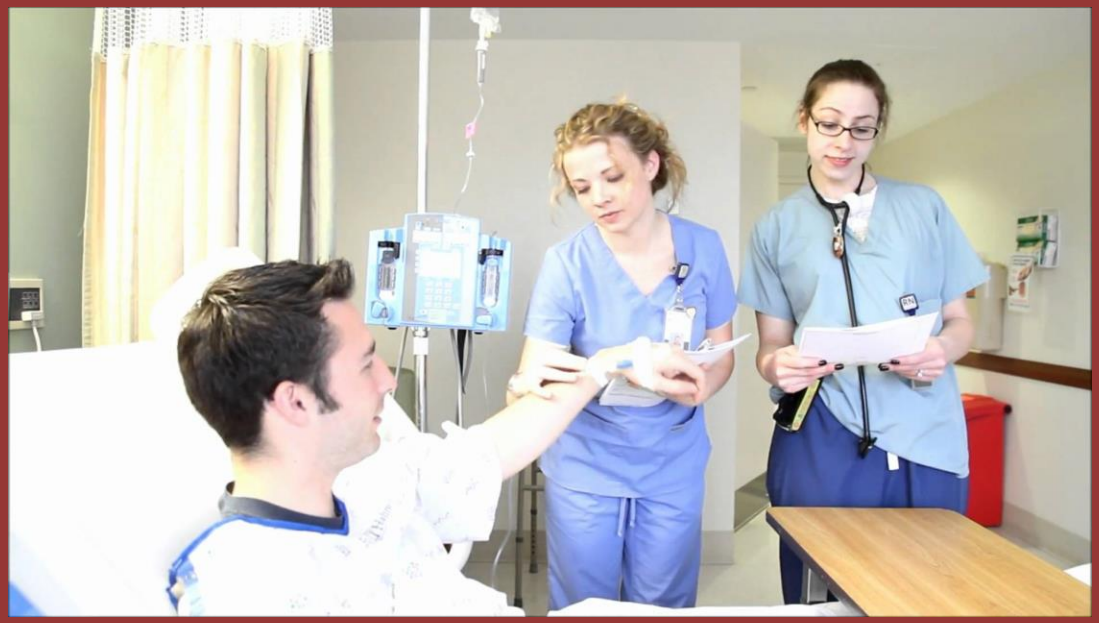
Surgical Fires

3 - Transition & Handoff Errors

- “ Care transition ” , “ Hand over ”or “ shift change”
- Breakage of the continuity of care
- **Risky time:**

  1- Provider handoff

  2- Patient handoff

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Ευχαριστώ
Kiitos
Hvala
Obrigado
谢谢
Merci
Danke
תוֹדָה
Thank you
Gracias
Grazie
감사합니다
شكرا