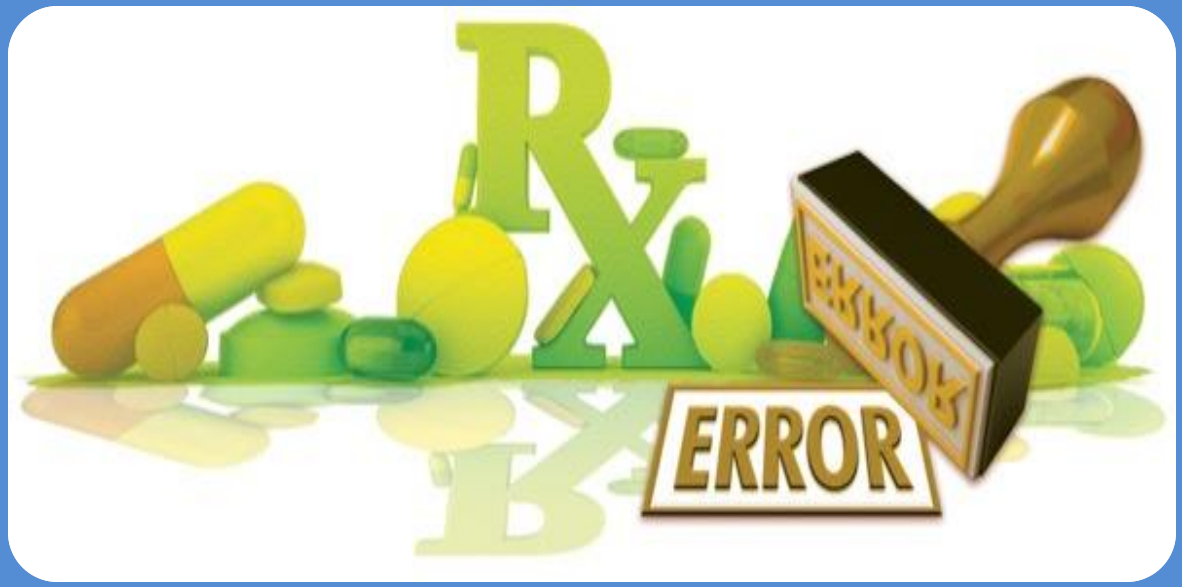
Overview of Medication Errors



Basic Medication Safety (BMS) Certification Course

King Saud bin Abdulaziz University for Health Sciences

Ministry of National Guard – Health Affairs

Saudi Medication Safety Center
المركز السعودي لسلامة الأدوية

Learning Objectives

- Identify Human Factors associated with medication errors
- Explain the concept of a Just Culture
- Review definitions related to medication safety
- Discuss the impact of latent failures on medication safety

To Err is Human

- Occupational injuries cause 6,000 deaths per year
- 7,000 deaths yearly are caused by medication errors[1]

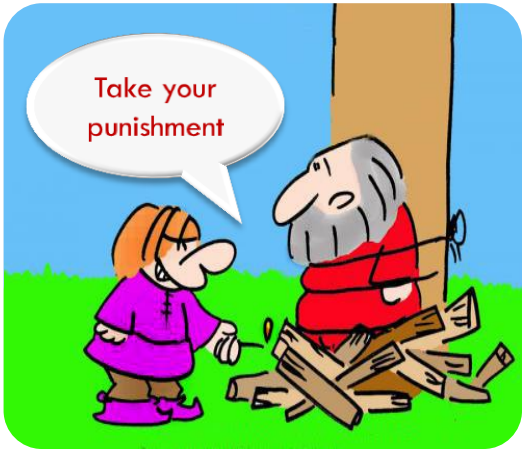
[1]Institute of Medicine (IOM) USA, 1999

Human Factors – Confront Two Myths

The perfection myth:

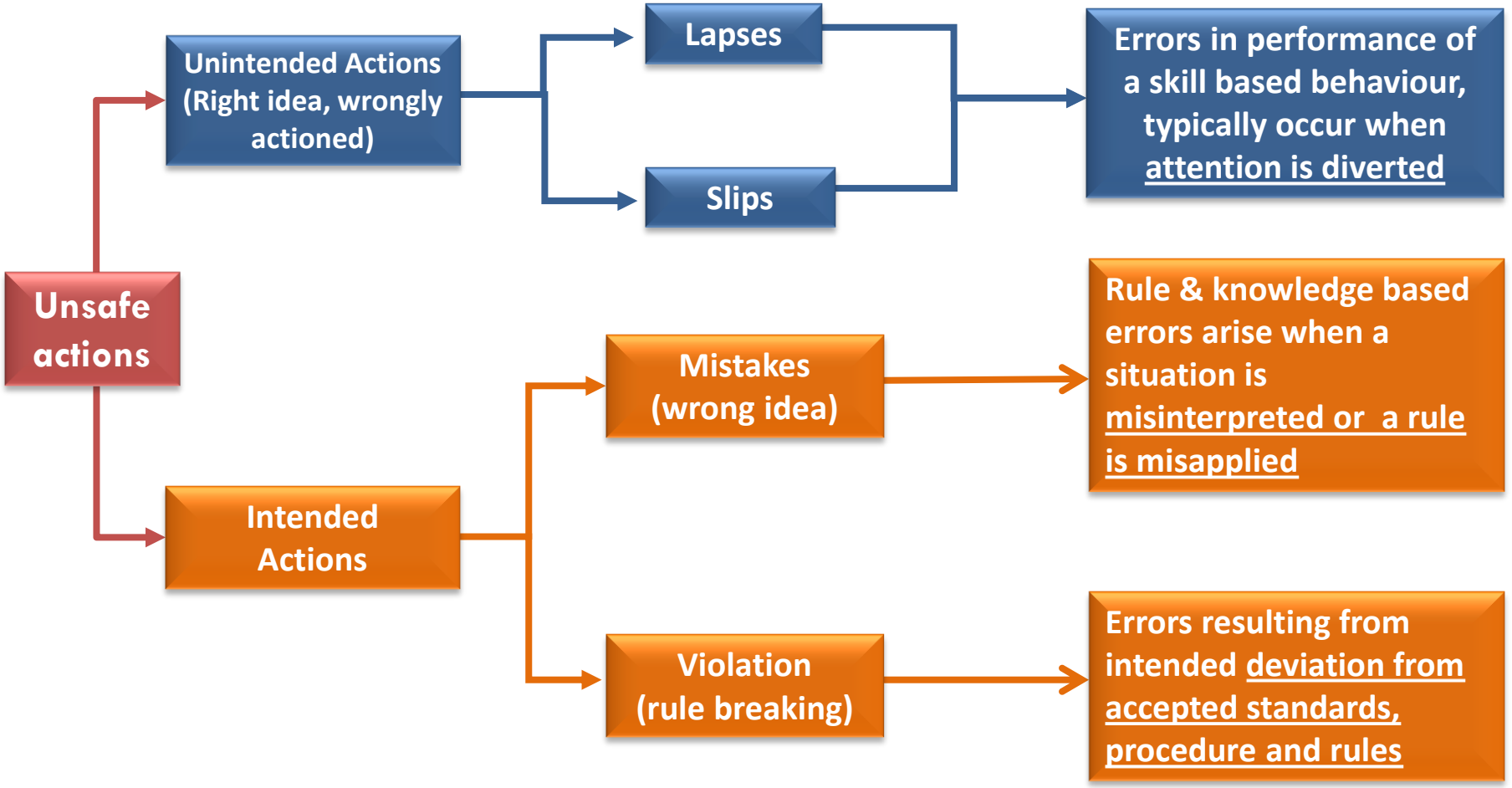
If people try hard enough they will not commit medication errors.

The punishment myth:



If we punish people when they make an error they will make fewer of them.

Human Factors – Error Types



The Three Behaviors

Human Error

Product of Our Current System Design and Behavioral Choices

Manage through changes in:

- Choices
- Processes
- Procedures
- Training
- Design
- Environment

Console

At-Risk Behavior

A Choice: Risk Believed Insignificant or Justified

Manage through:

- Removing incentives for at-risk behaviors
- Creating incentives for healthy behaviors
- Increasing situational awareness

Coach

Reckless Behavior

Conscious Disregard of Substantial and Unjustifiable Risk

Manage through:

- Remedial action
- Punitive action

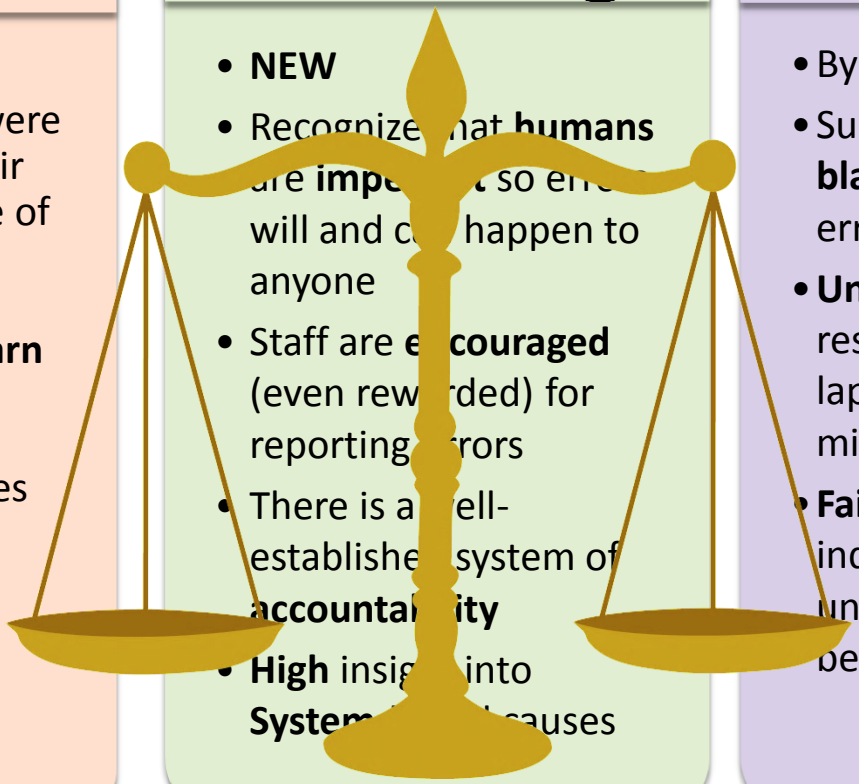
Discipline

Just Culture / Culture Of Accountability

Punitive Culture

- Before the 1990s
- Frontline workers were **afraid** to **report** their own errors or those of a colleague
- **Missed** enormous opportunities to **learn about Errors**
- **Little** insight into **System**-based causes

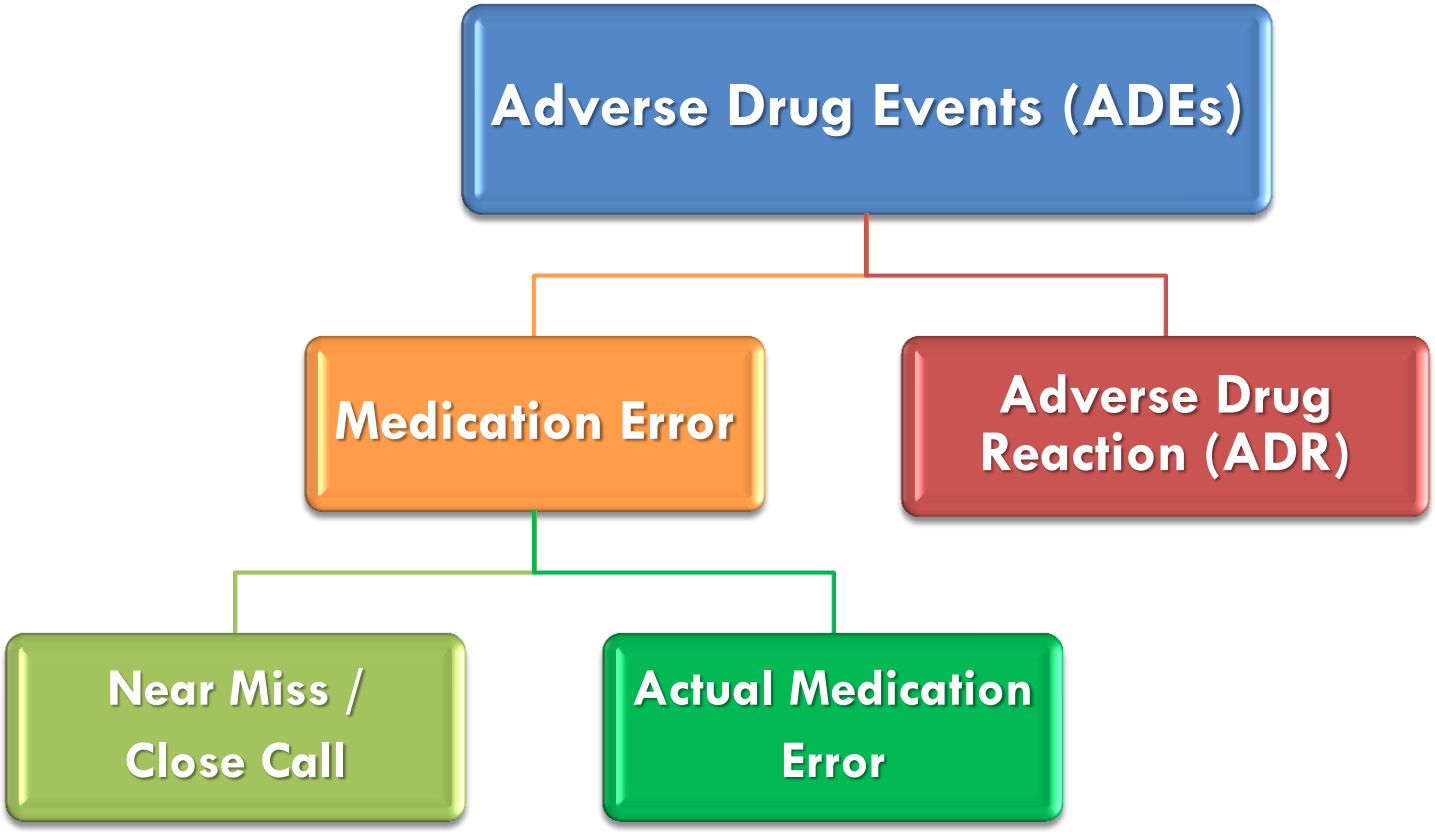
Just Culture



- **NEW**
- Recognize that **humans** are **impe** **t** so **err** will and c happen to anyone
- Staff are **e** **couraged** (even rew rded) for reporting rors
- There is a ell-establishe system of **accounta** **ity**
- **High** insig into **Syste** causes

Blame-Free Culture

- By the mid 1990s
- Supported a **"no-blame"** response to errors
- **Unsafe acts** were the result of mental slips or lapses, or honest mistakes
- **Fails** to tackle individuals who make unsafe / reckless behavioral choices


Adverse Drug Events (ADEs)
Medication Error
Adverse Drug Reaction (ADR)
Near Miss / Close Call
Actual Medication Error

Definitions

- **Adverse Drug Event (ADE)**

  An injury from a drug-related intervention, and can include Adverse Drug Reaction and can result from errors in prescribing, dispensing and administration.

- **Adverse Drug Reaction (ADR)**

  A response to a medicinal product which is noxious and unintended and which occurs at doses normally used for the prophylaxis, diagnosis or therapy of disease or for restoration, correction or modification of physiological function.

(APP 1434-07 Adverse Drug Events)

Definitions

- **Medication Error**

  Medication Error refers to 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 (ISMP, ASHSP, NCC MERP). Significant medication errors are all medication errors.

(APP 1434-07 Adverse Drug Events)

Definitions

- **Near Miss (Close Call)**

  An event, situation, or error that took place but was captured BEFORE reaching the patient.

  Example: The wrong drug was dispensed by pharmacy, and a nurse caught the error before it was administered to the patient.

- **Hazardous situations**

  refers to circumstances or events that have the capacity to cause error (e.g., confusion over LASA drugs or similar packaging).

  (APP 1434-07 Adverse Drug Events)

- **Defective Medicine**

  It is a medicine where the product presentation and quality is not in accordance with regulation and professional standards.

  (National Patient Safety Agency, UK)

Definitions

- **Latent Failure (hidden / dormant errors)**

  Refer to less apparent failures of organization or design that contributed to the occurrence of errors or allowed them to cause harm to patients. (Agency for Healthcare Research and Quality)

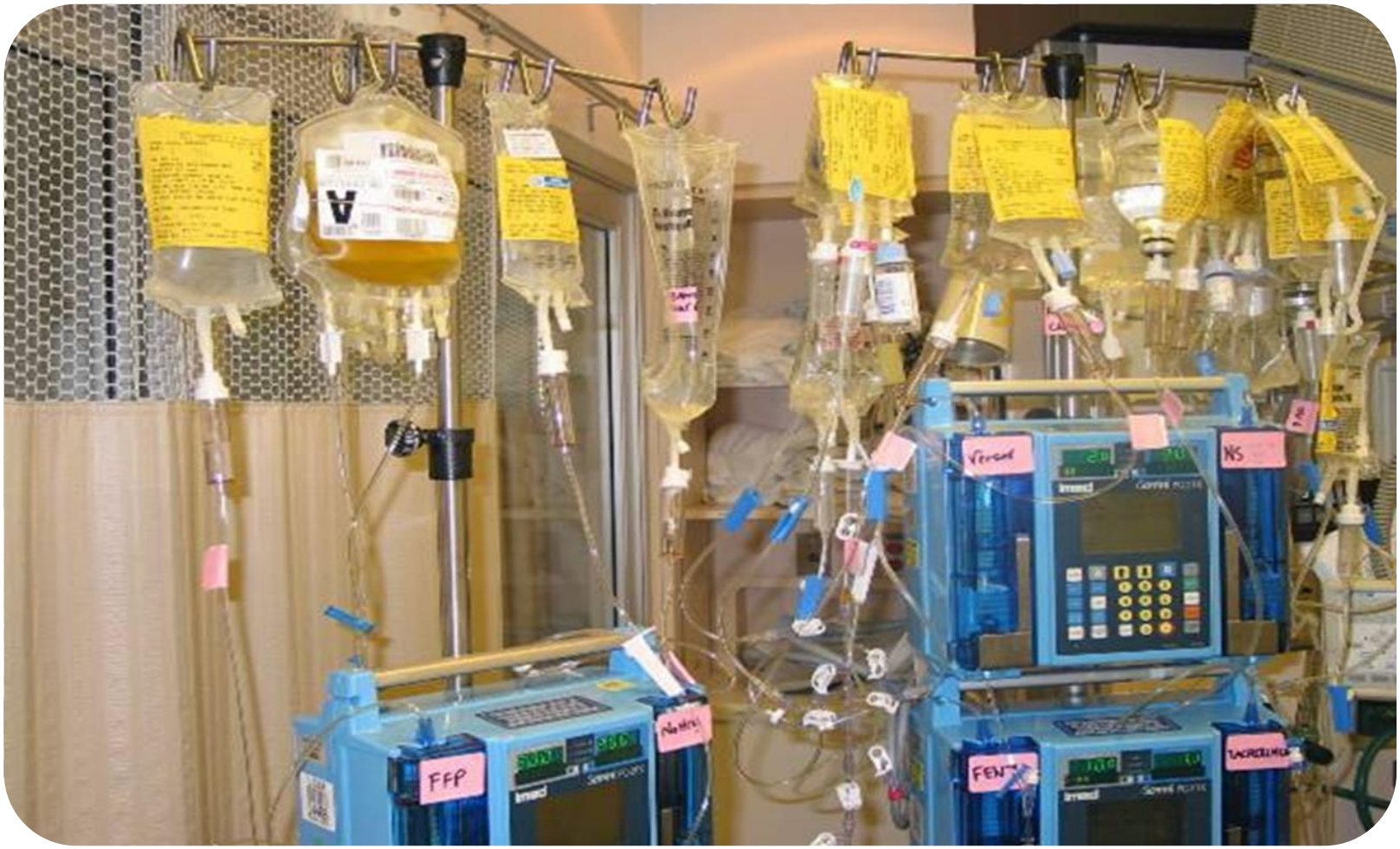
  - Environmental Factors (e.g. Noise, poor light, etc.)
  - Technology Factors
  - Lack of and / or complex policies and procedures
  - Communication Factors

    ISBAR

    Identification
    Situation
    Background
    Assessment
    Recommendation

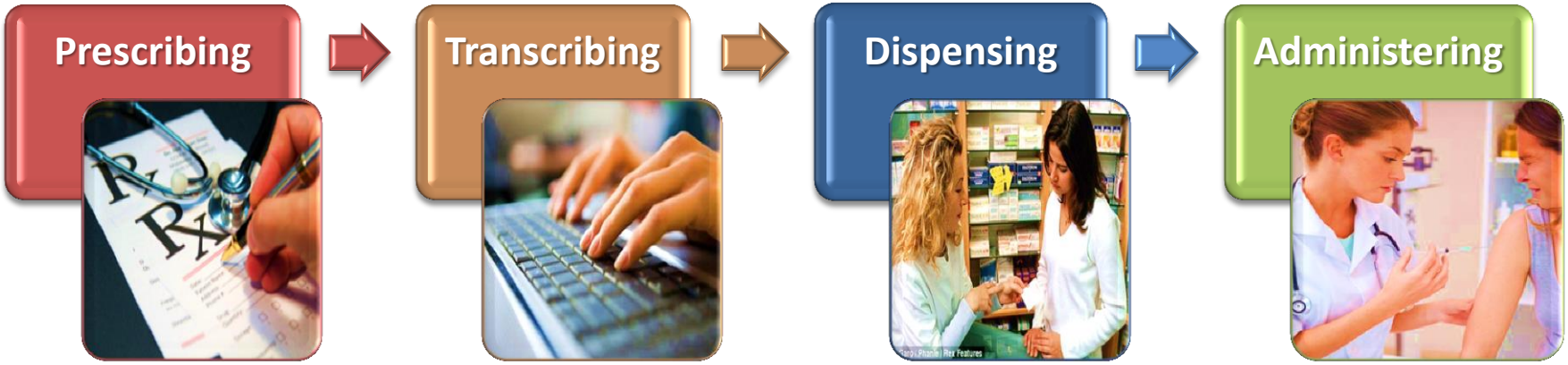
APP 1435-07 Patient Care Handover and Verbal/Telephone Communication

Risk Exists All Around Us



Errors In Medication Use Process

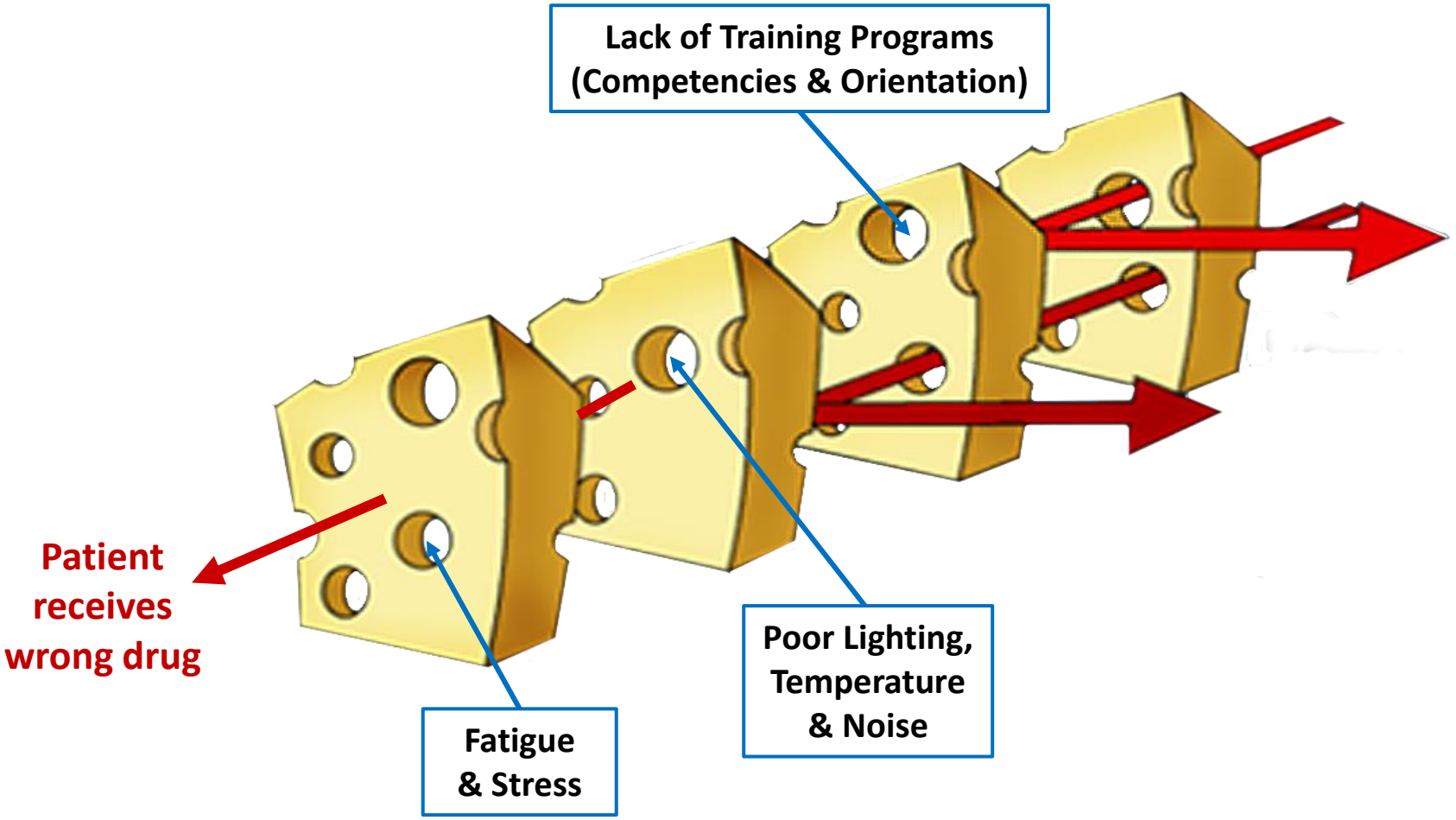
	Prescribing	Transcribing	Dispensing	Administering
Potential For Harm[(1)] (Rate per 100 patients)	63.69	0.28	0.28	3.37
Errors **NOT** Intercepted (ADE)[(2)]				84%



High incidence for **ADEs** due to medication **administration** errors justify the need to target interventions to prevent these errors in a hospital setting.

(1) Qual Safe Health Care 2010; 19:e30 doi:10.1136/qshc.2008.031179
(2) BMJ Qual Saf 2012;21:933-938 Doi:10.1136/bmjqs-2012-000946

Swiss Cheese Model



James Reason, 1991

Verbal and Telephone Orders

- **Why Standardize Verbal / Telephone Orders?**

  Inherently problematic: Different accents and limited short-term memory.

- **When do you take a telephone order?**
  - Emergent situation
  - Urgent situation: The prescribing practitioner has determined that the patient is in need of a medication within a specific time period and he / she is unable to physically enter the order in the patient's clinical record due to his / her physical location.

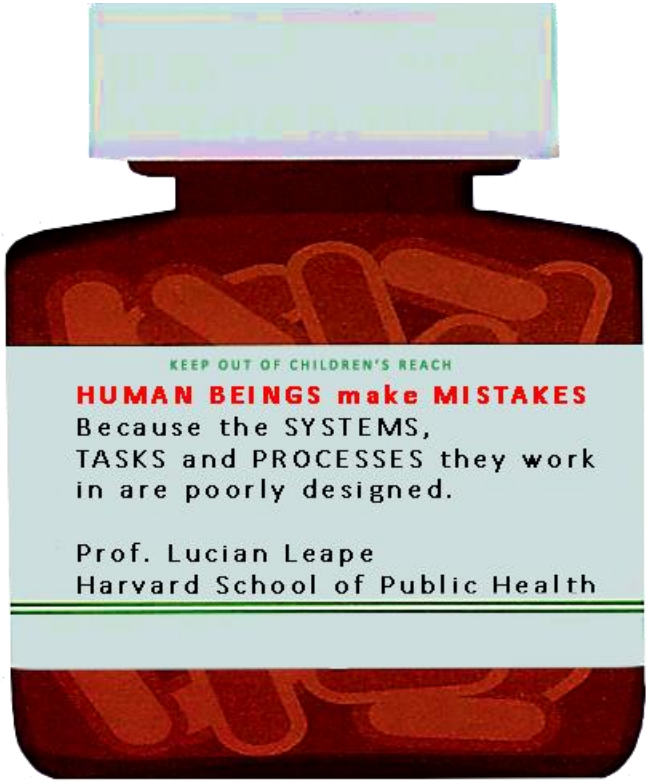
Verbal and Telephone Orders

- Telephone Order Procedure
- 1st Nurse records, 2nd Nurse “Reads Back”
- “Read Back” – NOT repeat back
- Spell out 1- 5 for 15 [confused with 50]

- NOT allowed for the following:
  - Chemotherapeutic agents
  - Parenteral nutrition
  - Initiation of:
    - Epidural medications
    - Patient Controlled Analgesia / narcotic drips
    - Parenteral pressor agents
    - Parenteral skeletal muscle relaxants

System Focused Thinking

- Humans are imperfect
- Accept that errors will occur
- Focus on the system, not the people



Safe Patient Care Is Our Goal

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