The Lebanese Order of Pharmacists
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Teaming Up for Excellence in Patient Care
معاً للتميّز في رعاية المريض

Medication Management Process: Monitoring and Patient Education

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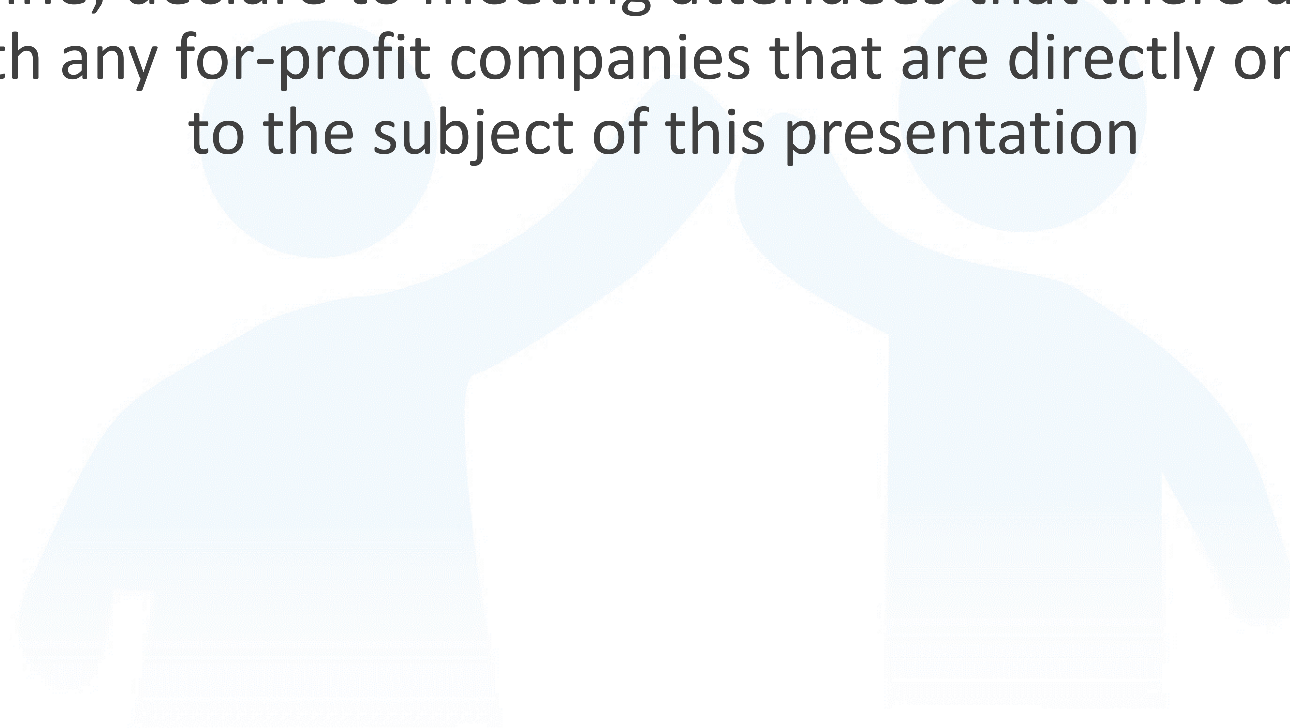
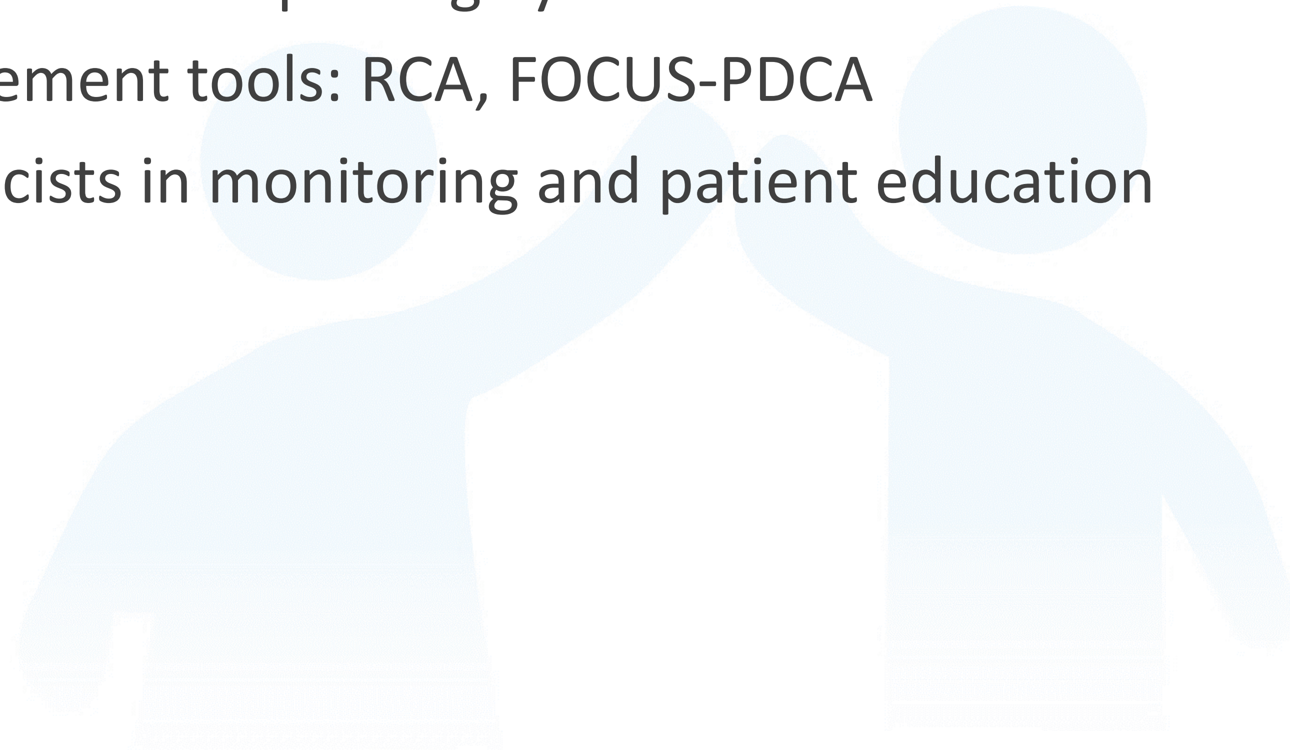
Disclosure



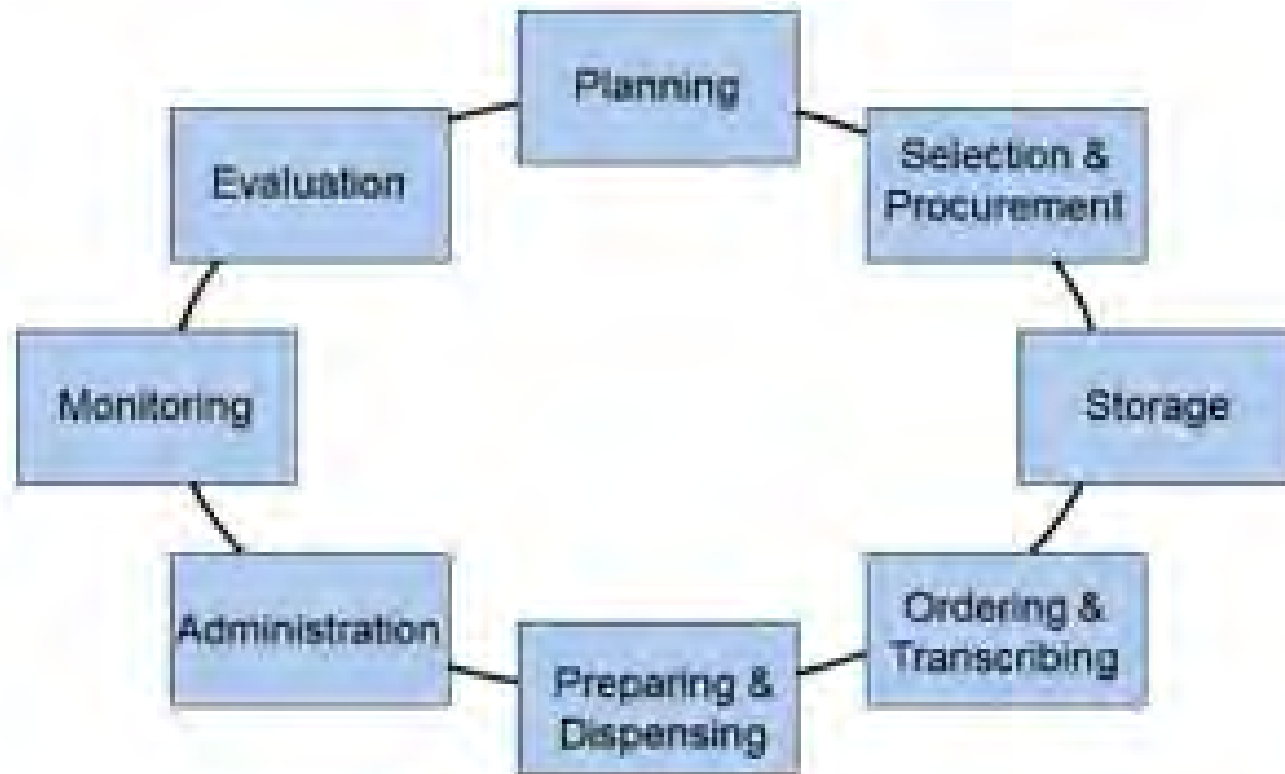
I, Jamal Yasmine, declare to meeting attendees that there are no financial relationships with any for-profit companies that are directly or indirectly related to the subject of this presentation

Learning Objectives

- Clarify the types of medication misadventures: Near miss, medication errors, adverse drug events
- Features of Successful Reporting System
- Quality improvement tools: RCA, FOCUS-PDCA
- Role of pharmacists in monitoring and patient education



Medication Management Process



Joint Commission Resources

Monitoring

Monitoring involves:

- Evaluating the effect of medication on the patient's illness to identify the anticipated therapeutic response.
- Evaluating the patient for adverse effects such as allergic responses, unanticipated drug/drug interactions, or a change in the patient's equilibrium raising the risk of falls.
- Observing and documenting any adverse event.

Background

- Adverse Drug Reactions (ADRs), medication errors and adverse drug events (ADEs) are common.
- Systematic review reported that Drug Related Problems caused a median of 7.1% (range 5.7–16.2) of hospital admissions, of which 59% were considered preventable

Winterstein AG, Sauer BC, Hepler CD, Poole C. Preventable drug-related hospital admissions. Ann Pharmacother. 2002;36:1238–1248. doi: 10.1345/aph.1A225.

Monitoring in Accreditation

1. Medication adverse effects on patients are monitored and documented
2. The hospital establishes and implements a process for reporting and acting on medication errors and near misses
3. The hospital has a process to perform analysis (e.g. root-cause analysis) of the reported medications adverse events, medication errors and near misses to improve the medication processes

Medication Misadventures

Figure 1: Distinction between Adverse Drug Events and Medication Errors.

Categories of Medication Errors

Category A: Circumstances or events that have the capacity to cause error

Category B: An error occurred but the error did not reach the patient (An "error of omission" does reach the patient)

Category C: An error occurred that reached the patient but did not cause patient harm

Category D: An error occurred that reached the patient and required monitoring to confirm that it resulted in no harm to the patient and/or required intervention to preclude harm

Category E: An error occurred that may have contributed to or resulted in temporary harm to the patient and required intervention

Category F: An error occurred that may have contributed to or resulted in temporary harm to the patient and required initial or prolonged hospitalization

Category G: An error occurred that may have contributed to or resulted in permanent patient harm

Category H: An error occurred that required intervention necessary to sustain life

Category I: An error occurred that may have contributed to or resulted in the patient's death

No Error

Error, No Harm

Error, Harm

Error, Death

Figure 2: NCC MERP Index for Categorizing Medication Errors, 2001

Care management Never events

- Patient death or serious injury associated with a medication error (e.g., errors involving the wrong drug, wrong dose, wrong patient, wrong time, wrong rate, wrong preparation, or wrong route of administration)
- Investigate near miss incidents to identify the root cause and the weaknesses in the system that resulted in the circumstances that led to the near miss.
- Use investigation results to improve safety systems, hazard control, risk reduction, and lessons learned.
- All of these represent opportunity for training, feedback on performance and a commitment to continuous improvement.

NHS never events list 2018

To increase reporting:

- Comprehensive policy and procedure
- Educate employees on the reason why near miss reporting is a necessity, the important role that they play, and the process for reporting
- Reinforce with employees that near miss reporting is non-punitive.
- Training for new employees as a part of their orientation
- Learning from incidents requires timely incident reporting in a fair and

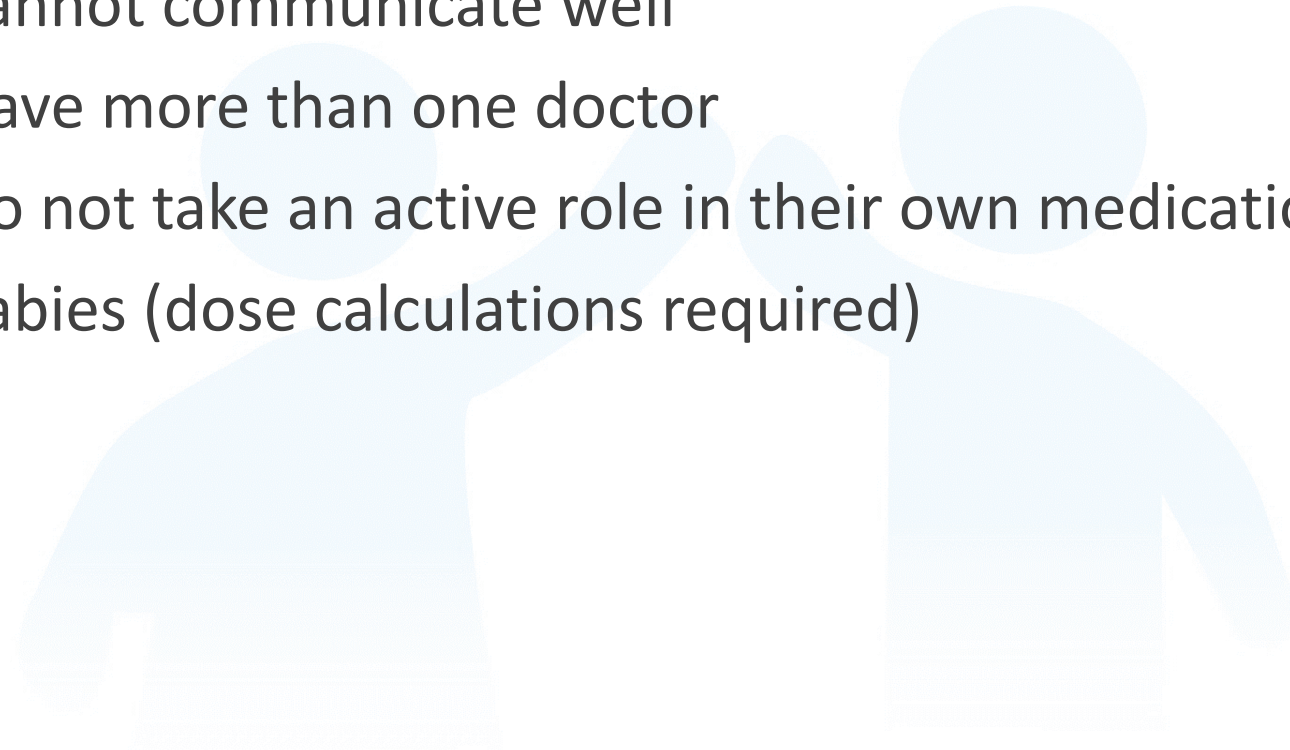
just culture.

Features of Successful Reporting Systems

- **Nonpunitive:** reporters do not fear punishment as a result of reporting
- **Confidential:** identities of reporter, patient, institution are never revealed to a 3rd party
- **Independent:** reporting is independent of any authority who has the power to discipline the reporter
- **Expert analysis:** reports are analyzed by those who have the knowledge to recognize underlying system causes of error
- **Timely:** reports are analyzed promptly and recommendations disseminated rapidly
- **Systems-oriented:** recommendations focus on systems not individuals
- **Responsive:** those receiving reports are capable of disseminating recommendations

Leape, LL. (2002). Reporting of adverse events. NEJM, 347, p. 1636.

Patients at risk for Medication Errors

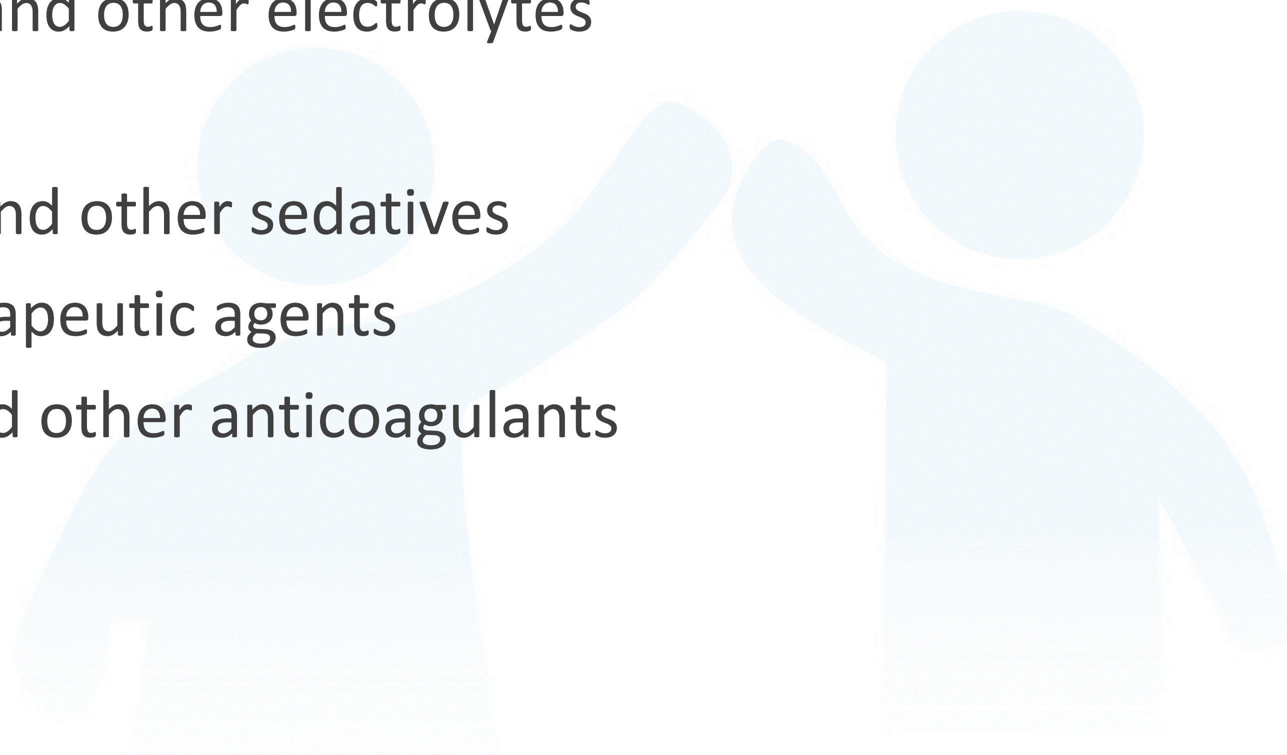


- Patients on multiple medications
- Patients with another condition, e.g. renal impairment, pregnancy
- Patients who cannot communicate well
- Patients who have more than one doctor
- Patients who do not take an active role in their own medication use
- Children and babies (dose calculations required)

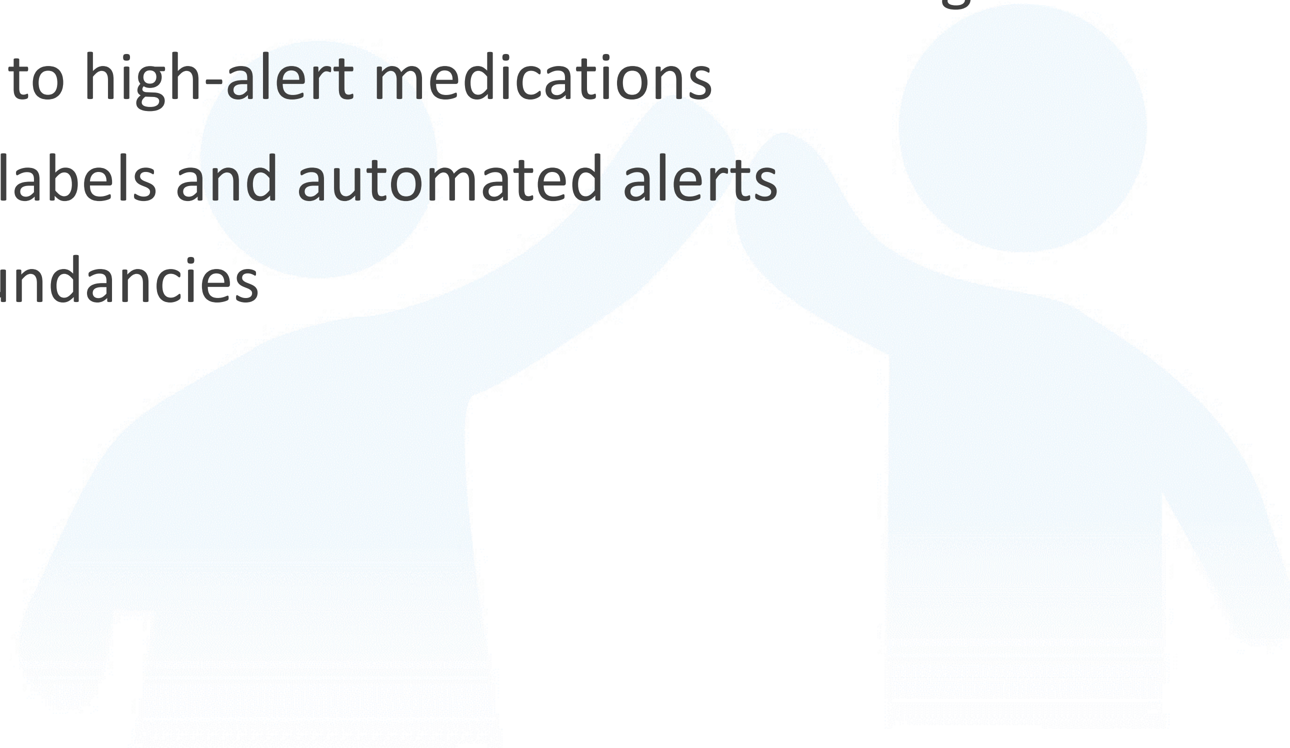
Medications at risk to Harm Patients

A-PINCH

- A – Anti-infectives
- P – Potassium and other electrolytes
- I – Insulin
- N – Narcotics and other sedatives
- C – Chemotherapeutic agents
- H – Heparin and other anticoagulants



To reduce Harm from High Alert medications



- Standardizing the ordering, storage, preparation, and administration of these medications
- Improving access to information about these drugs
- Limiting access to high-alert medications
- Using auxiliary labels and automated alerts
- Employing redundancies

Root Cause Analysis

- RCA is a tool that helps identify and clarify the bottom line factors that precipitate an error or near miss.
- RCA focuses on systems and processes, not on individual performance.
- The RCA process repeatedly digs deeper into an issue by asking “Why” questions until no additional logical answers can be identified.
- A team begins with a standardized template called an Ishikawa diagram

Root Cause Analysis

Root Cause Analysis

Equipment

Process

Lack of scanner for labels in certain rooms

No "hard stops" in EMR

Labels not clear

Second check by nurse not performed

Medication errors

Residents sleep deprived

Rounds interrupted

Change in pharmacy leadership with restructuring of dept

Nurses distracted

No place for drug Dispensing machine In the unit

Poor pharmacy support

No financial support for new label scanners

People

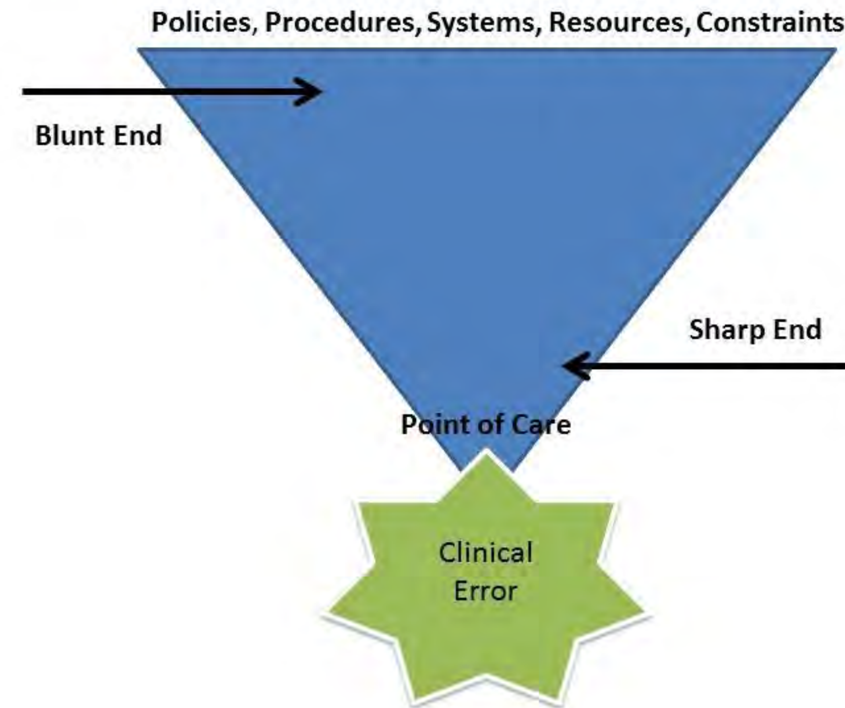
Environment

Management

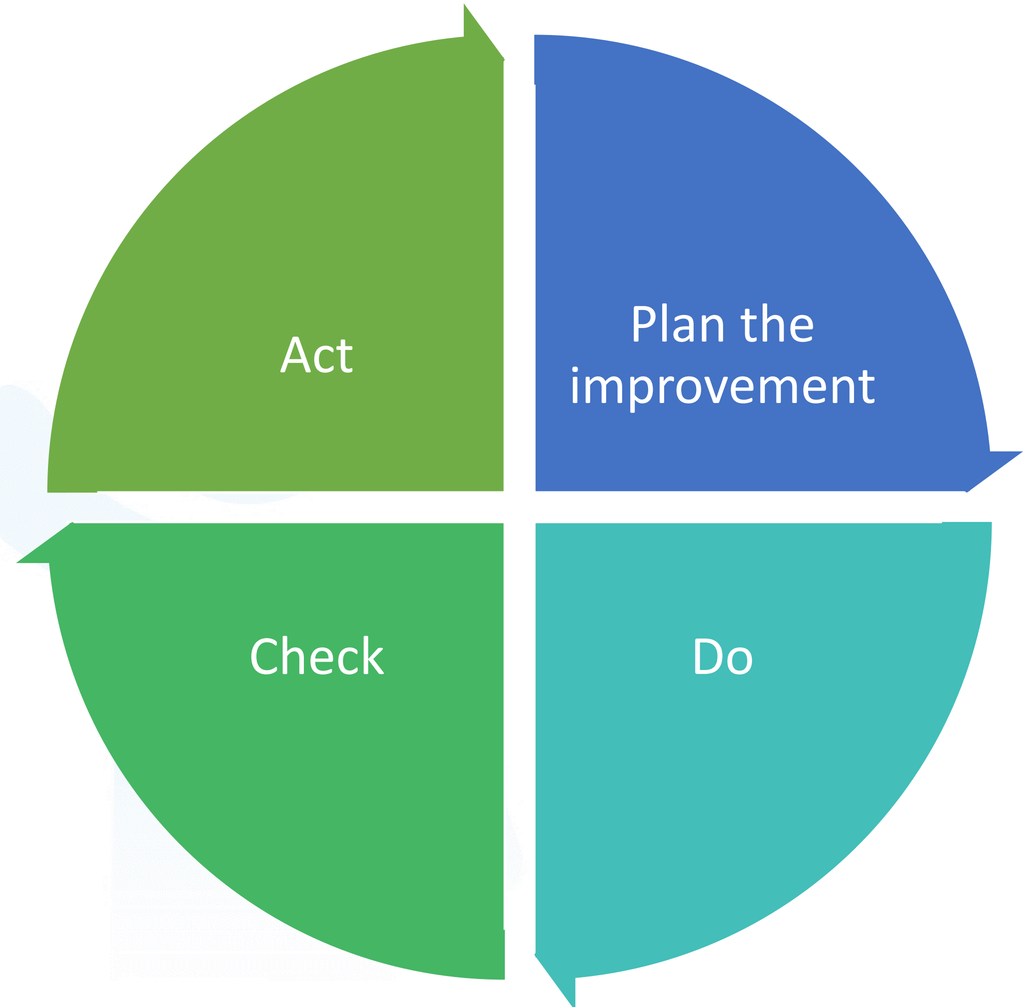
Figure 3: Fishbone Diagram showing potential causes for medication errors

Case Analysis by Blunt End/Sharp End

- Majority of errors known to be due to factors at the blunt end
- Near misses reveal latent errors



Continuous Quality Improvement



Role of Pharmacists

4. Pharmacists are involved in interdisciplinary rounds in critical areas and in monitoring medication effects on patients

Role of pharmacists as part of healthcare team:

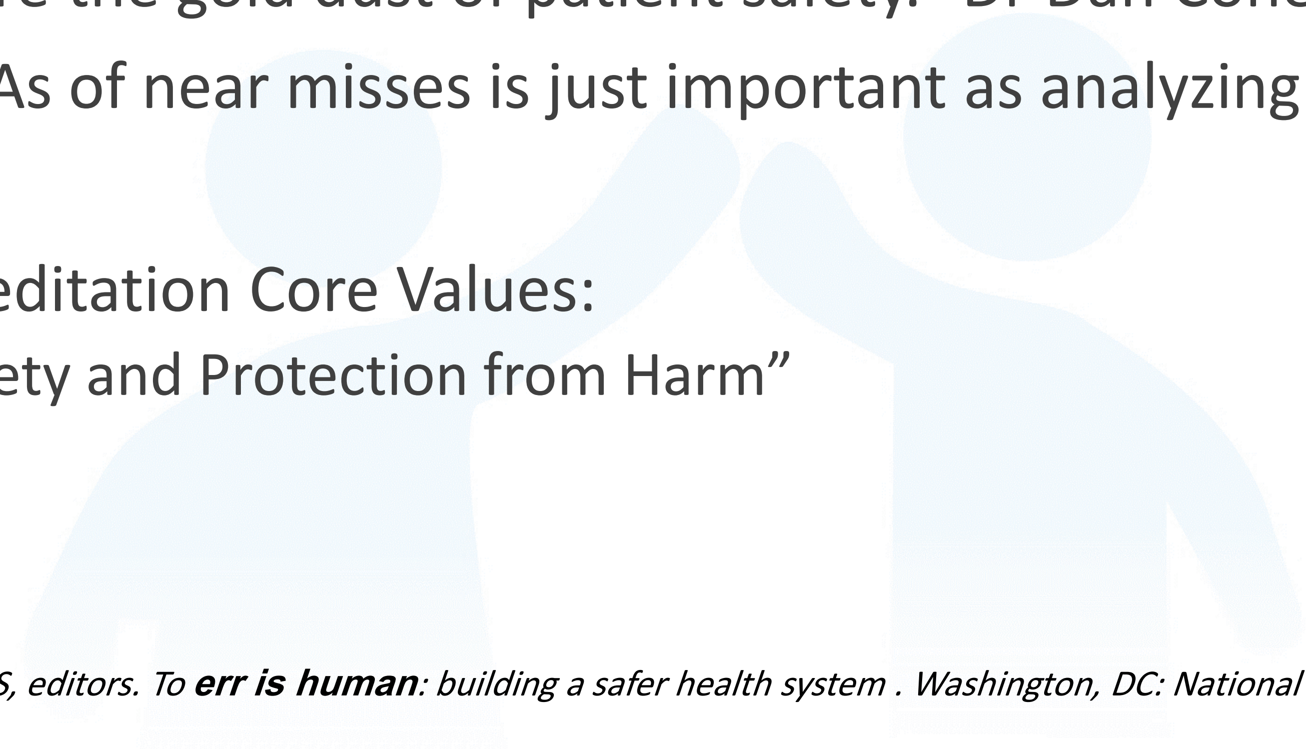
- Help choose right drug, right dose
- Focus on high risk therapies, highly complex patients
- Monitor response to drug therapy
- Improve safety of medication use system
- Improve outcomes from medication therapy
- Lower cost of therapy

Patient and Families Education

5. Patients and families are educated about the safe and effective use of all medications, potential side effects of medications, and prevention of potential interactions with over-the-counter medications and/or food.

Key Takeaways

- Poor reporting systems and failure to learn from past near misses and adverse events: Absence of a safety culture in the workplace
- “Near misses are the gold dust of patient safety.” Dr Dan Cohen
- Conducting RCAs of near misses is just important as analyzing harmful events



- Lebanese Accreditation Core Values:
  - “ Patient Safety and Protection from Harm”

*Kohn LT, Corrigan JM, Donaldson MS, editors. To **err is human**: building a safer health system . Washington, DC: National Academy Press, **Institute of Medicine**; 1999.*

Key Takeaways

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

Kohn LT, Corrigan JM, Donaldson MS, editors. To ***err is human****: building a safer health system . Washington, DC: National Academy Press,* ***Institute of Medicine****; 1999.*

THANK YOU