MEDICATION SAFETY - "A SYSTEMS APPROACH"

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Medication Errors

RATIONALE

- medication use has become increasingly complex in recent times
- medication error is a major cause of preventable patient harm

LEARNING OBJECTIVES

- To provide an overview of medication safety
- To encourage you to continue to learn and practice ways to improve the safety of medication use

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." (NCCMERP)

ADVERSE DRUG REACTION (WHO)

- as any response to a medication that is noxious, unintended and occurs at doses used for prophylaxis, diagnosis or therapy.

POTENTIAL ADVERSE DRUG EVENT:

An error that had the potential to cause an adverse drug event, but did not, either by interception or ‘luck.’

WHERE DO ERRORS OCCUR?

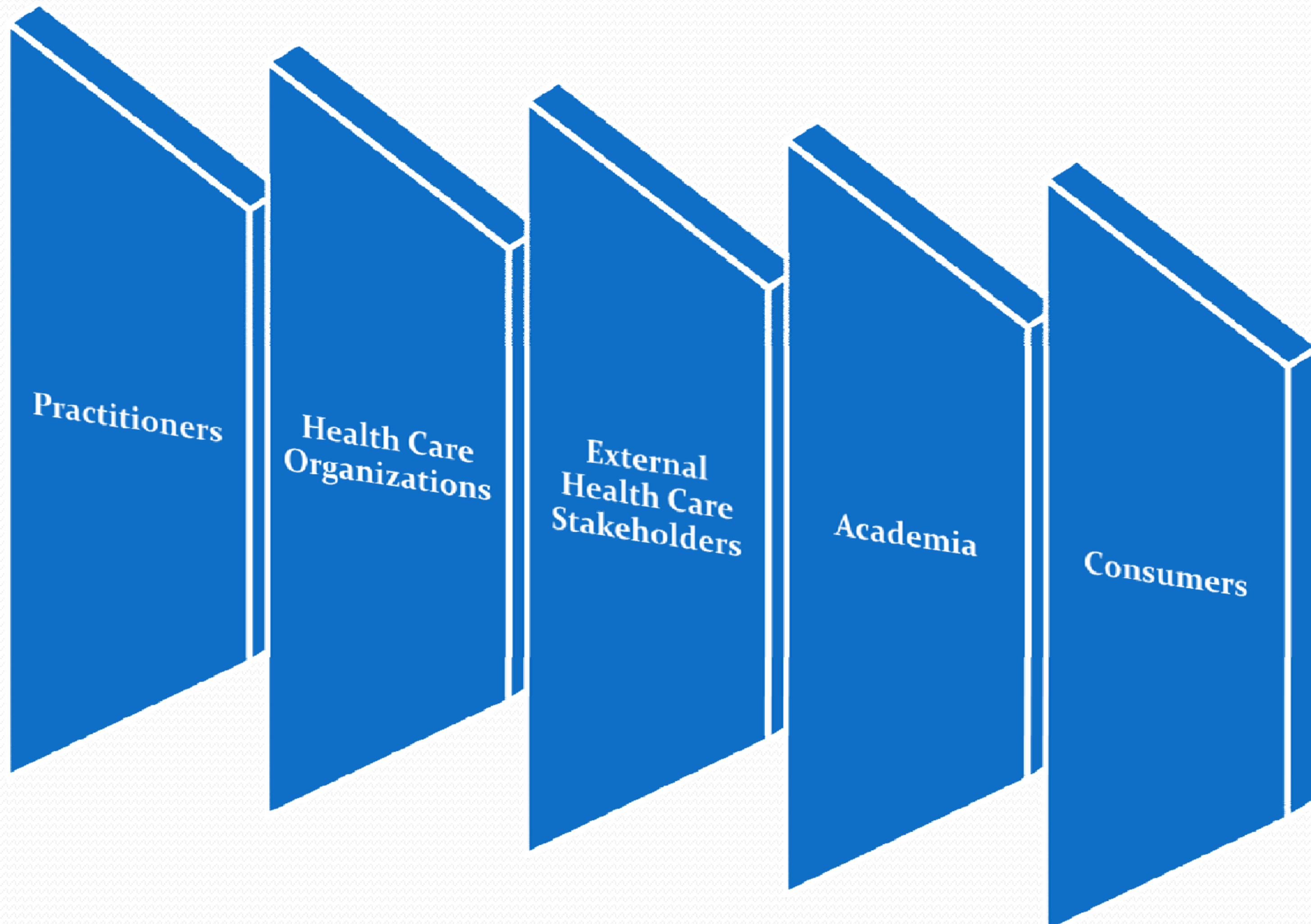
Prescribing

Dispensing

Administering

MEDICATION SAFETY:

THE STAKEHOLDERS



Practitioners

- must speak out about patient safety issues, voluntarily report errors, near misses, and hazardous situations to internal and external programs
- practitioners need to maintain competencies, stay abreast of current medication safety literature, and
- make the necessary changes in practice when safety recommendations are offered.

Prescribing involves …

- choosing an appropriate medication for a given clinical situation taking individual patient factors into account such as allergies
- selecting the administration route, dose, time and regimen
- communicating details of the plan with:
  - whoever will administer the medication (written-transcribing and/or verbal)
  - and the patient
- documentation

THIS REPORT SAYS MEDICAL ERRORS SUCH AS INDECIPHERABLE PRESCRIPTIONS CAUSE THE DEATHS OF 98 PATIENTS A YEAR, OR IS THAT 98,000? IT'S HARD TO READ THIS. IN ANY CASE, WE'RE SUPPOSED TO REPORT THEM, OR IS THAT REPEAT THEM?
HOW ABOUT REPRESS THEM?

External Health Care Stakeholders

- Organizations need to incorporate patient safety into their mission statement and uphold practice issues.
- **Regulatory, accrediting, and licensing bodies** need to adopt safety standards as identified by scientific research and expert committees

Academia

- On the academic front, educators should be accountable for weaving current medication safety concepts throughout the entire curriculum so students can develop the critical thinking skills necessary

Consumers

- Patients can no longer be passive about their health care. They must see themselves as active partners.

- Patient education and compliance necessary

Using Medications Wisely

- **Learn about your medications.**
- **Read the label each time you take the medicine.**
- **Never take anyone else's prescription medication.**
- **Treat medications just like dangerous chemicals.**
- **Don't chew, break, or crush capsules or tablets unless instructed by your physician.**

Contd

- **Use only the cup or other measuring device supplied with the drug when administering liquid medications. Other measuring devices - such as household measuring spoons - may not give accurate measurements.**

- **Inform your physician and pharmacist if you take any herbal or natural remedies**

COMMON CAUSES OF MEDICATION ERRORS

A. Human factors
B. Systems
C. Abbreviations
D. Oral orders
E. Look-alike and sound-alike drugs
F. Dosage calculation
G. At-risk population
H. At-risk drugs

Risk of errors

- Risk because of calculation errors

HUMAN FACTORS THAT LEAD TO MEDICATION ERRORS

- Fatigue/Lack of sleep
- Illness
- Drugs or alcohol
- Boredom
- Frustration
- Fear
- Stress

SYSTEMS FACTORS THAT LEAD TO MEDICATION ERRORS

- Distractions
- Noise
- Heat
- Clutter
- Motion
- Lighting
- Unnatural workflow
- Poorly designed procedures or devices

APPROACHES TO REDUCING ADVERSE EVENTS:

- Collect data on the prevalence and individual details of errors.
- Analyze sources of error by **ROOT CAUSE ANALYSIS.**
- Propose and disseminate methods for error prevention.
- Design and conduct pilot projects to study safety initiatives, including monitoring of results.
- Raise awareness and inform the public, health professionals, providers, purchasers and employers.

REPORTING (contd)

- Reporting is only of value if it leads to a constructive response.

- Meaningful analysis, learning, and dissemination of lessons learned requires expertise and other human and financial resources.

WRITTEN MEDICATION ORDERS: COMPLETE INFORMATION
1) Prescribing

- Patient's Name
- Patient-Specific Data
- Generic and Brand Name
- Drug Strength
- Dosage Form
- Amount
- Directions for Use
- Purpose
- Refills

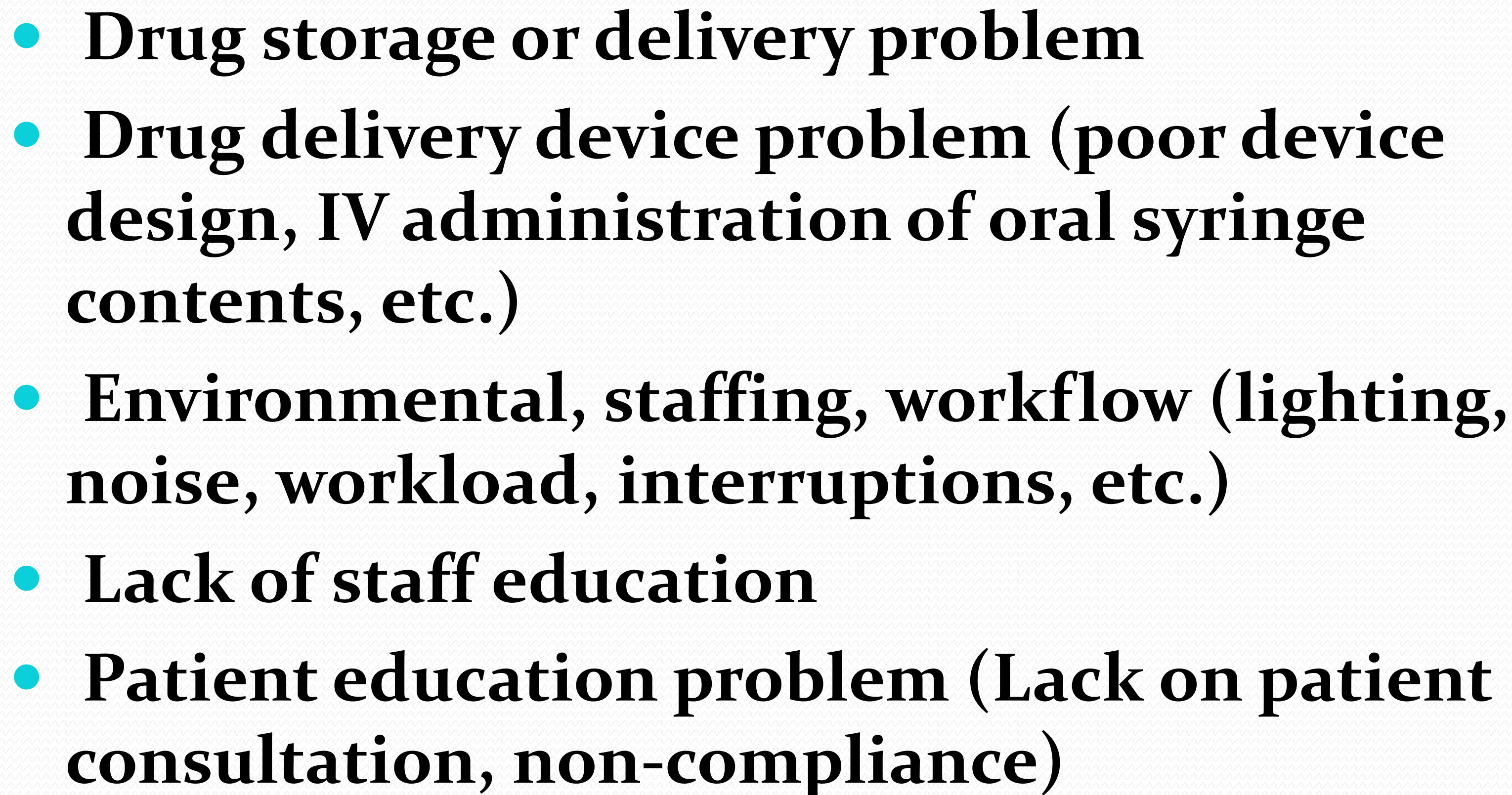
2)ADMINISTERING AND DISPENSING

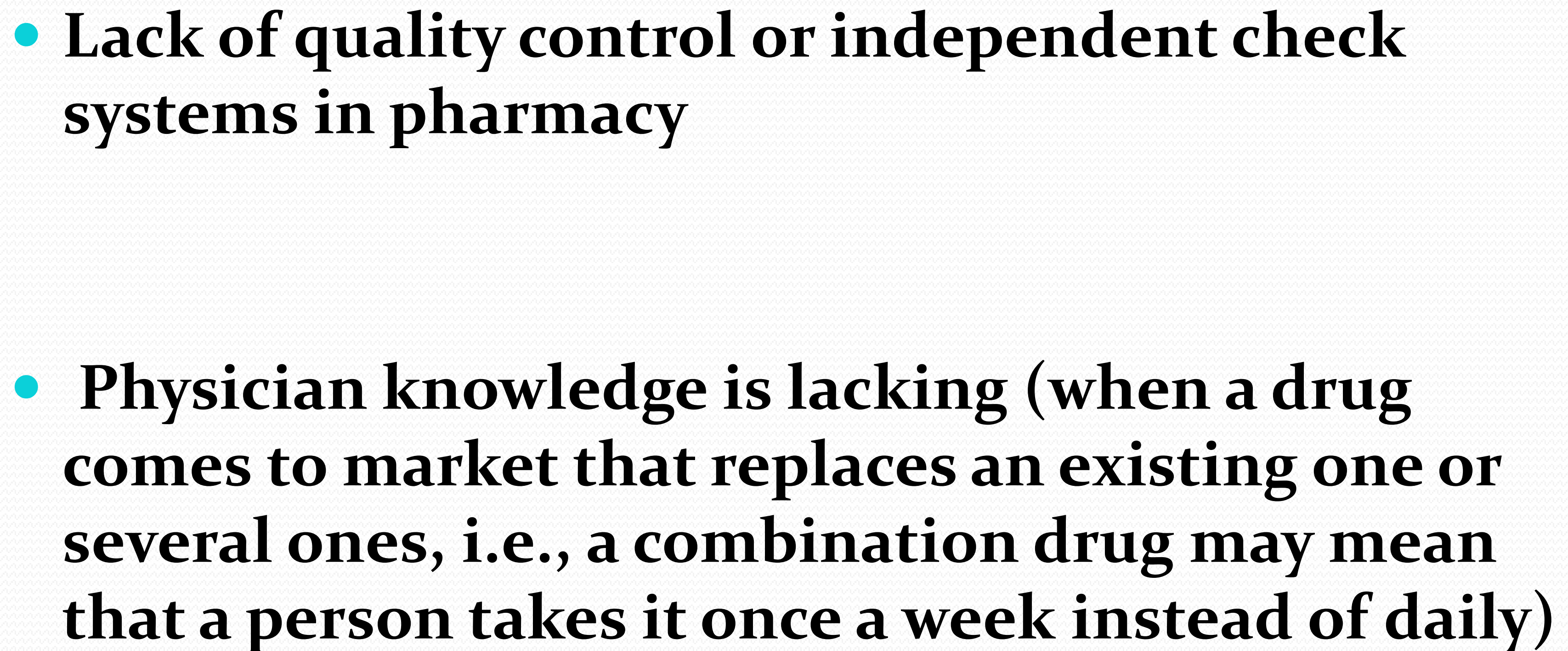
CHECK 5 R'S

- Right Patient
- Right Drug
- Right Dose
- Right Route
- Right Time

Major Causes of Medication Errors

- **Critical patient information is missing (allergies, age, weight, pregnancy, etc.)**
- **Critical drug information is missing (outdated references, inadequate computer screening, etc.)**
- **Miscommunication of drug order (illegible, incomplete, misheard, etc.)**
- **Drug name, label, packaging problem (look/sound alike, faulty drug identification)**


Drug storage or delivery problem
Drug delivery device problem (poor device design, IV administration of oral syringe contents, etc.)
Environmental, staffing, workflow (lighting, noise, workload, interruptions, etc.)
Lack of staff education
Patient education problem (Lack on patient consultation, non-compliance)


Lack of quality control or independent check systems in pharmacy
Physician knowledge is lacking (when a drug comes to market that replaces an existing one or several ones, i.e., a combination drug may mean that a person takes it once a week instead of daily)

THANK YOU

Let Us Make An Honest Effort To Reduce Medication Error And Ensure Patient Safety