1. What is Patient Safety

Objectives:

- Define The Basic Concepts Of Patient Safety.
- Identify The Application Of Patient Safety In Clinical Practice.
- Identify The Consequences Of Unsafe Practice In Health-care.

Basic concept of Patient Safety

↓↓ Risk of Unnecessary Harm to An Acceptable minimum

Application of Patient
Safety in Clinical Practice

① Safe

② Effective 👍

③ Timely ⏱

④ Family Centered

⑤ Efficient ↓ wastee 💵
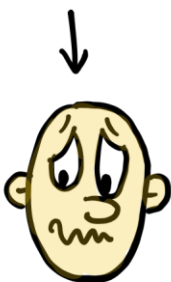
⑥ Equality in giving care 🟰

Harm

- Can't Be prevented

Error

- Can Be prevented

doing the WRONG thing = Comission
Not doing the RIGHT thing = Omission

External Factors
- management
- protocol/process
- organizational culture
- Transfer Factor

His Fault

Error

Active Human Error

Latent System Error

patient Safety Culture pattern

Pattern of:
Individual & ORganizational Behavior

↓↓ Risk of Harm

Based on:
A system of shared Beliefs & values

BLamE CUltURE
Blame-Free Culture
} inAppropriate

Just Culture : BalanCE tHE BLamE & No BLamE

Clinical incident oops

Concept : Similar definition to Error

" deviation FRom standard of CaRE & safety "

uintended HaRm, Loss or damage, complaint

tYPES

Adverse

Near Miss

Sentinee event

Serious injury

NEVER EVENT
-Normally NEVER Happens!

Adverse dRUG Reaction

7 Levels of Safety

patient Factors

Task Factors

Individual Factors

Team Factors

Organizational Factors

Working Conditions

External environment Factors

Focus On Definitions, Reasons & Classifications

1. Define The Basic Concepts Of Patient Safety.

Defining Patient Safety

The reduction of risk of unnecessary harm associated with health care to an acceptable minimum.
(WHO, World Alliance for Patient Safety 2009). There is a concept called six sigma (6σ) which deals with quality and applied at companies like "Pepsi" to reduce the error to 0. this is NOT applicable in hospitals because we're human being. That's why the definition said MINIMUM not ZERO.

2. Identify The Application Of Patient Safety In Clinical Practice.

VERY Important

The 6 Key Dimensions Of Healthcare Quality
أي Error بيصير بالمستشفيات يتبع أو مُشتق من أحد هذي ال dimensions

1. **Safe:** Avoiding injuries to patients from the care that is intended to help them. نكون اكسترا كير على البيشنت زي لما نسوي دبل تشيك على الميدكيشن

2. **Effective:** Providing services based on scientific knowledge to all who could benefit and refraining from providing services to those not likely to benefit (avoiding underuse and overuse). Doing the right thing for the right person at the right time. Best care and best outcome.
    مثل لما نمشي على القايدلاينز لما نسوي بروسيجر معيّنة وما نعتمد على طريقتنا التقليدية اللي ممكن تكون صحيحة !لكن لأننا نبغى أفضل نتائج لتحقيق الفاعلية.

3. **Timely:** Reducing waits and sometimes unfavorable delays for both those who receive and those who give care. مثل لما يتأخر دخول المريض على الطبيب مع إنه جاء على الموعد أو تأخير المريض على الطبيب فيتأثر جدول يومه كامل.

4. **Family-centered:** Providing care that is respectful of and responsive to individual patient references, needs and values, and ensuring that patient values guide all clinical decisions.
    مثل لما الطبيب يأخذ رأي المريض في كل قرار يتخذه. مثل زوجة بتستأصل رحم فالعائلة لازم يكون عندهم علم ,أو مريض بيصير له شلل بعد عملية معينة .ف نفس الشيء العائلة لازم يكونوا إنفولفد.

5. **Efficient:** Avoiding waste, in particular waste of equipment, supplies, ideas and energy. مثل لما Money!
    يكون عندي عملية وجهّزنا الغرفة و ما يجي البيشنت هنا صار عندنا استهلاك للستاف و الإيكويبمنت بعد.
    »الفرق بين النقطة 2 و 5 مهم «

6. **Equal:** Providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location and socio-economic status. All patients should receive same standard of care. مثل لما يروح شخص لمركز مسؤول عن إخراج شهادات لدورات معيّنة مثل BLS و غيره فيجي شخص و يطلب شهادة بدون تدريب فقط لأنه صاحب منصب.

Harm VS Error

	HARM	ERROR
Definition	Impairment of structure or function of the body and/or any deleterious effect arising from interaction with health care. Harm includes disease, injury, suffering, disability and death.	An error is a failure to carry out a planned action as intended. Errors may manifest by doing the wrong thing (commission) or by failing to do the right thing (omission). مثل لما النيرس تعطي دوز غلط بدون ما تسوي دبل تشيك فهنا الخطة العلاجية كانت صح و البروسيجرز صح بس جا الخطأ من برا» .ممكن النيرس كان عندها ضغط وتعتني ببيشنتس أكثر من الستاندرد العالمي اللي المفروض تكون مسؤولة عنهم
Ex	A patient with breast cancer undergoes chemotherapy. The treatment causes severe nausea and vomiting (a known complication) and she is admitted with clinical dehydration. "Side effects"	A patient with shortness of breath is diagnosed with pneumonia and treated with an antibiotic. A few days later she is admitted as her condition worsens. Subsequent investigations reveal a pulmonary embolism as the true problem. This is treated with anticoagulation.

An error **can be** prevented while harm **can not** be prevented. Example: when a patient has surgery I can't prevent him from feeling pain (harm) but I can stop him from getting an infection (error).

Sources of System Error

	All errors can be divided into two main groups:	
	Active errors or human error	*Latent or system errors*
Definition	Are committed by frontline staff and tend to have direct patient consequences.	Are those errors that occur due to a set of external forces and indirect failures involving management, protocols/ processes, organizational culture, transfer of knowledge, and external factors
Ex	Giving the wrong medication, treating the wrong patient or the wrong anatomical site, or not following the correct policies and procedures..	Understaffed wards or inadequate equipment. Not trained to work on a specific equipment. مثل لما أجيب جهاز جديد أو لما أجيب نيرس جديدة و ما أعلّمها بخصوص القايدلاينز و البروسيجرز اللي عندنا مثل الإجهاض و غيره فلما تخطئ هنا الخطأ مو منها من السيستم اللي ما درّيها.

Error In Medicine:

- Errors in health care can be caused by ''active failures'' or ''latent conditions.''

- Most errors are not a result of personal error or negligence, but arise from system flaws or organizational failures

Definition Of *Patient Safety Culture*

An integrated pattern of individual and organizational behavior, based on a system of shared beliefs and values, that continuously seeks to minimize patient harm that may result from the process of care delivery. To apply the culture, everyone should have it not just one person especially the big boss☺. So that an error doesn't occur.

- Previously, in many cases the traditional response to adverse incidents in health care has been to **blame, shame and punish** individuals. Hospitals that apply this kill patient safety because if someone reports a mistake and the person in question is severely punished (fired) they will hesitate before reporting again.

  زي المستشفيات الخاصة على طول طرد لو صار فيه خطأ فالطبيب نفسه يكون تحت ضغط.

- The opposite of a 'blame' culture is a **'blame-free'** culture, which is equally inappropriate. In some instances, the responsible individual should be held accountable.(in case of negligence or recklessness)

- Recently, the a '**just' culture** has been adapted which means: **balancing** the 'blame' and 'no blame' approaches.

  People don't do errors or mistakes on purpose so we **shouldn't** directly blame the person. We must look at the whole system and blame the system before the staff. (what is responsible not who is responsible)

	Clinical Incident
The concept	A clinical incident is an event or circumstance resulting from health care which could have, or did lead to unintended harm to a person, loss or damage, and/or a complaint. (deviation from standard of care and safety) similar definition to **error** (من نفس العائلة) في الإختبار ماراح يجوا مع بعض من ضمن الخيارات.
Exs	Medication errors (e.g. Wrong medication, omission, overdose); Patient falls; Intended self harm or suicidal behavior; Therapeutic equipment failure; Contaminated food; Problems with blood products; Documentation errors; Delayed diagnosis; Surgical operation complications; Hospital acquired infection.

Types Of Clinical Incident

1. Adverse Event: An adverse event is an unintended injury or complication which results in disability, death or prolonged hospital stay, and is caused by health-care management
Example: *Medication errors*

  i. Sentinel Event: A sentinel event is an unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof. Serious injury specifically includes loss of limb or function.
Example: Hemolytic transfusion reaction involving administration of blood or blood products having major blood group incompatibilities

<div align="right">يكون شيء مصيبة ويأدي إلى وفاة أو إصابة شديدة ويرفع للوزارة</div>

  ii. Never Event: Events should never happen while in a hospital, and can be prevented in most cases. (for your information just read it)
Example: Infant discharged to the wrong person Wrong surgical procedure performed on a Patient. Patient death or serious disability associated with a medication error

  iii. Adverse Drug reaction: A response to a drug which is noxious and unintended, and which occurs at doses normally used in man for the prophylaxis, diagnosis, or therapy of disease, or for the modifications of physiological function.(WHO,1972) (2 drugs that interact and cause reaction) (for your information just read it)

2. Near Miss: Is any situations that did not cause harm to patients (that did not reach the patient), but could have done. Example: if you are walking in the hall and there is a puddle of water and you slipped but didn't fall because your friend caught you. The error could have occurred but didn't but the problem is still there which is that the cleaning lady didn't put the caution wet sign.

<div align="right">خطأ كان بيصير بس ما صار .طيب ليش لازم نبلغ عنه؟ عشان نعرف عن خلل موجود ونحمي المريض بحيث ما يتكرر الحدث ويصير خطأ.</div>

In the exam: we will bring a definition and ask you what factor is it

Seven levels of safety

1. _Patient factors_: such as personality, language (if you cannot understand the patient this will compromise the safety) and psychological problems may also be important as they can influence communication with staff.

2. _Task factors:_ The design of the task, the availability and utility of protocols. and guidelines.

3. _Individual factors:_ include the knowledge, skills and experience of each member of staff (example: a resident and a consultant are not equal in terms of knowledge, experience and skills)

4. _Team factors:_ The way an individual practices, and their impact on the patient, is influenced by other members of the team and the way they communicate and support each other. (important especially in ICU)

5. _Working conditions:_ These include the physical environment, availability of equipment and supplies and the light, heat, interruptions and distractions that staff endure.

6. _Organizational factors:_ The team is influenced in turn by management actions and by decisions made at a higher level in the organization. These include policies, continuing education, training and supervision and the availability of equipment and supplies.

7. _External environment factors:_ The organization itself is affected by financial constraints, external regulatory bodies and the broader economic and political climate. (example: in Syria)

The Physician's Role In Patient Safety

| Adhere and follow the National **Patient Safety Goals/** ROP(Required Organization Practice) |
| --- |

- Adverse reporting
- Client verification
- Medication reconciliation (form mention all drugs the patient is on)
- Dangerous abbreviations (ممنوع نستخدم اختصارات)
- Transfer of client information at transition points (example between shifts)
- Control of concentrated electrolytes (locked up)
- Infusion pumps training (In the OR)
- High-alert medications

- Hand hygiene
- Antibiotic prophylaxis during surgery
- Falls prevention strategy
- Pressure ulcer prevention
- Venous thromboembolism prophylaxis
- Safe injection practices
- Safe surgical practices
- Preventive maintenance program

You're Finished congrats!!

Summary

Patient Safety : The reduction of risk of unnecessary harm associated with health care to an acceptable minimum.

Key Dimensions Of Healthcare Quality

Safe	effective	Timely	Family-centered	efficient	equal
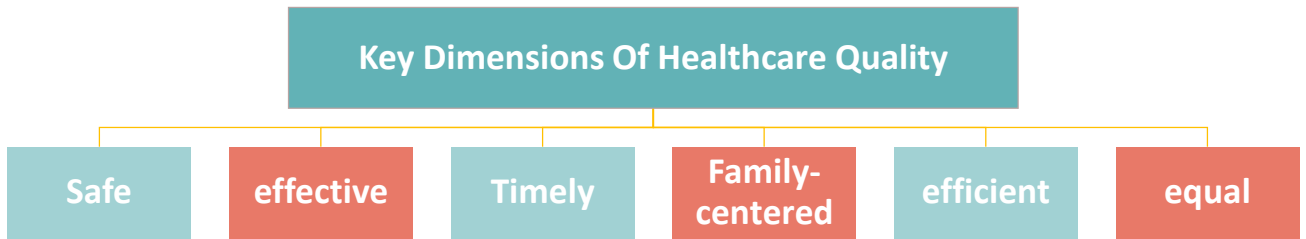
Effective: Doing the right thing for the right person at the right time
Efficient: Doing the things right

Unsafe Practice	**Harm**	
	Error	*Active or human*
		Latent or system
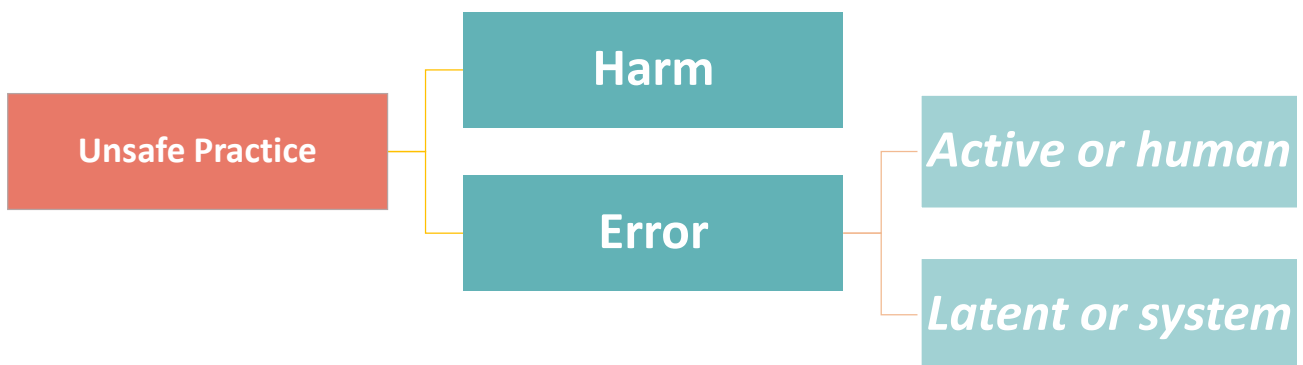
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iii. Adverse Drug reaction

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Seven levels of safety

1. Patient factors   **2. Task factors**
3. Individual factors   **4. Team factors**
5. Working condition   **6. Organizational factors**
7. External environment factors

Case1:

A 21 years old drug addict male patient was admitted to ER at the Resuscitation area.

He was prescribed 20 mg of Naloxone diluted in one liter of normal saline.

In pharmacy, technician opened only one ampoule of Naloxone 0.4 mg/ml and 49 ampules of naloxone 0.02 mg/ml (by mistake).

Upon checking, this mistake was discovered and the whole preparation was discarded and new accurate preparation was prepared.

Q1: What's the recommended actions?
- Pharmacists / Technician should READ / CHECK carefully the label of each medication they prepare.
- DOUBLE CHECKING is essential tool to avoid such mistakes
- Look Alike medications should be stored separately with proper labeling to avoid such mistakes
- To change the brand the hospital purchases of either drugs if possible

Case2:

A 38-year-old woman comes to the hospital with 20 minutes of itchy red rash and facial swelling; she has a history of serious allergic reactions

A nurse draws up 10 mls of 1:10,000 adrenaline (epinephrine) into a 10 ml syringe and leaves it at the bedside ready to use (1 mg in total) just in case the doctor requests it

Meanwhile the doctor inserts an intravenous cannula

The doctor sees the 10 ml syringe of clear fluid that the nurse has drawn up and assumes it is normal saline. There is no communication between the doctor and the nurse at this time. The doctor gives all 10 mls of adrenaline (epinephrine)through the intravenous cannula thinking he is using saline to flush the line. The patient suddenly feels terrible, anxious, becomes tachycardia and then becomes unconscious with no pulse. She is discovered to be in ventricular tachycardia, is resuscitated and fortunately makes a good recovery. Recommended dose of adrenaline (epinephrine) in anaphylaxis is 0.3 - 0.5 mg IM, this patient received 1mg IV.

Q1: Can you identify the contributing factors for this error?
- Lack of communication
- Inadequate labeling of syringe
- Giving a substance without checking and double checking what it is
- Lack of care with a potent medication

Q2: How could this error have been prevented?
- Never give a medication unless you are sure you know what it is; be suspicious of unlabeled syringes
- Never use an unlabeled syringe unless you have drawn the medication up yourself
- Label all syringes
- Communication - nurse and doctor to keep each other informed of what they are doing e.g. nurse: "I'm drawing up some adrenaline"
- Develop checking habits before administering every medication … go through the 5 Rse.g doctor: "What is in this syringe?"

Q1: List the 6 key dimensions of healthcare quality.
- Safe
- Effective
- Timely
- Family-centered
- Efficient
- Equal

Q2: Compare between Effective & Efficient.

Effective	Efficient
Providing services based on scientific knowledge to all who could benefit and refraining from providing services to those not likely to benefit (avoiding underuse and overuse). Doing the right thing for the right person at the right time.	Avoiding waste, in particular waste of equipment, supplies, ideas and energy.

Q3: Choose the correct answer

i. **The design of the task, the availability and utility of protocols is the definition of?**
  - A. Task factors
  - B. Team Factors
  - C. Working factors
  - D. Organizational factors

ii. **The organization itself is affected by financial constraints, external regulatory bodies and the broader economic and political climate**
  - A. External environment factors
  - B. Organizational factors
  - C. Working conditions
  - D. Team factors

i: A – ii: A

PATIENT SAFETY
436 TEAM

Maha Alghamdi & Abdulaziz Alangari

Jawaher Abanumy

Khalid Aleisa

Nora AlSahli

Ryan Alqarni

Samar Alqahtani

Lecture Overview Is Drawn By:

Norah Alshabib

References: Doctors' slides & notes.