



# Introduction To Patient Safety

Patient Safety  
Lecture no. 1

## COLOR INDEX

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# Objectives:



Recognize the magnitude and the importance of patient safety



Define and describe the key elements of healthcare quality



Summarize the differences between error and harm



Recognizing characteristics of a just culture



Understand & differentiate between the different types of clinical incidence



Describe several specific behaviors you can practice to foster a culture of safety in your workplace



## Outline:

- › Introduction and defining patient safety
- › The key dimensions of healthcare quality
- › Harm Versus error
- › Sources of System Error
- › Patient safety culture
- › Types of clinical incident
- › Seven levels of safety
- › The physician's role in patient safety
- › Case scenario

◆ This lecture was presented by Dr. Sara Abou AlSaud

◆ For the required reading **from Blackboard** click [here](#)



# Patient Safety

## Definition

The **absence / reduction** of risk of **any unnecessary harm** to a patient during / associated with the process of healthcare to an acceptable minimum. (WHO, World Alliance for Patient Safety 2009)

- Significant numbers of patients are harmed due to their healthcare provider, either resulting in permanent injury, increased length of stay (LOS) in healthcare facilities, or even death.
- 1,000,000 injuries/year U.S. hospitals.
- 44,000 – 98,000 deaths caused by medical error/year.
- There are more deaths annually as a result of healthcare than from road accidents, breast cancer and AIDS **combined**.



## Why Is It a Problem?

Hospital / Country	Years in which data was collected	Number of hospital admissions	Number of adverse event	Adverse event rate (%)
US (Harvard Medical Practice Study)	1984	30195	1133	3.8 %
Australian (Quality in Australian healthcare study)	1992	14179	2353	16.6 %
UK	1999-2000	1014	119	11.7 %
Denmark	1998	1097	176	9 %
KKUH	2014	47211	2950	6.2 %

Source: World Health Organization. Executive board 109th session, provisional agenda item 3,4,5, 2001,EB 109/9. A worldwide problem to be highlighted and avoided.



# Key Elements of Professionalism

## The 6 key dimensions of healthcare quality

Nm.	Element	Definition
1	Safe	Avoiding injuries to patients from the care that is intended to help them.
2	Effective	<ul style="list-style-type: none"> <li>Providing services based on scientific knowledge - don't give information based on posts you see in TikTok :) - to all who could benefit and refraining from providing services to those not likely to benefit (avoiding underuse and overuse).</li> <li>Doing the right thing for the right person at the right time.</li> </ul>
3	Timely	Reducing waits and sometimes unfavorable delays for both those who receive and those who give care.
4	Family Centered	Providing care that is respectful of and responsive to individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions (participate in decision-making). e.g. when the husband says: I want my wife to be delivered by a female doctor, not a male. you should respect that and respect patient religion & preference.
5	Efficient	Avoiding waste, in particular waste of equipment, supplies, ideas and energy. e.g. don't request tests for a patient who does not need them
6	Equal	Providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location and socio-economic status.



## Error in Medicine

- Errors in healthcare can be caused by “active failures” or “latent conditions”
- Most errors are not a result of human (personal) error or negligence (Active errors), but arise from system flaws or organizational failures (Latent errors).

Sources of system errors: All errors can be divided into two main groups

### Active (human) errors (Direct):

They are committed by frontline staff and tend to have direct patient consequences.

Example:

- Giving the wrong medication
- Treating the wrong patient or the wrong anatomical site
- Not following the correct policies & procedures

### Latent or system errors (Indirect):

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.

Example:

- Understaffed wards
- Inadequate equipment
- Insurance paperwork.

# Swiss Cheese Model of Accident Causation

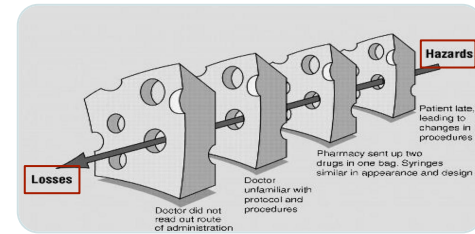
It is a theoretical model that illustrates how **accidents** could occur in organizations.

The systems has many holes some from active (human) failures and others from latent (system) conditions.

It proposes that the typical **accident** occurs because several (human) errors that occur at all levels in the organization in a way that made such accident unavoidable.

These holes are continuously opening, shutting, and shifting their location. In any one slice, the hole does not normally cause harm, because the other intact slices prevent hazards from reaching the potential victim. **For example, a patient's late by its own does not lead to harm.**

Only when the holes in many layers quickly (momentarily) line up does the trajectory of accident opportunity reach the victim causing the damage.



# Patient Safety Culture

## Definition

An integrated pattern of individual and organizational behavior, based on a system of shared beliefs and values, that determine the organization's commitment to quality and patient safety and continuously seeks to minimize patient harm that may result from the process of care delivery.

If a patient is found to have received the **wrong** medication and suffered a subsequent allergic reaction, there will be two types of response to this mistake:

### Blame Culture

we **look for the individual**; student, pharmacist, nurse or doctor who ordered, dispensed or administered the wrong drug and blame that person for the patient's condition care at the time of the incident and hold them accountable. **Useless because other people will do the same mistake**

### Just Culture

we **look for the system defect** such as communication, protocols and processes for medication management, in addition to investigate the negligence or recklessness of the worker. **We see why this mistake happened and deal with & improve it. In this way, other people will not fall into the same mistake**



# Clinical Incident

## Definition

- Is any unplanned event or circumstance resulting from health care which causes or has the potential to cause (lead to) unintended harm to a person, loss or damage, and/or a complaint (deviation from standard of care and safety).
- Healthcare providers are **required to report all incidents**, near misses, and complaints so that risks to patient safety are recognized and action is taken to prevent recurrence.



## Examples:

- ★ Medication errors (e.g. wrong medication omission, overdose)
- ★ Patient falls
- ★ Intended self harm or suicidal behaviour
- ★ Therapeutic equipment failure
- ★ Contaminated food
- ★ Problems with blood products
- ★ Documentation errors
- ★ Delayed diagnosis
- ★ Surgical operation complications
- ★ Hospital acquired infection

## Types of clinical incident

### Adverse Event

#### Sentinel Event

- Is an **unexpected occurrence** of an event **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

#### Adverse Drug Reaction

A response to a drug which is noxious and unintended, which **occurs at dose normally used** in man for the prophylaxis, diagnosis, or therapy of disease, or for the modifications of physiological function

### Near Miss

- Is any situation that might have resulted in harm, but the problem did **not** reach the patient -but could have done- (so **did not cause harm to patients**) because of timely intervention by healthcare providers or the patient or family, or due to good fortune.
- Example: patient was going to take a drug that he was allergic to, but for any intervention, he didn't take it so no harm occurred.





# Clinical Incident cont...

## How to Maintain Safety in Clinical Incident?

Adhere and follow the national Patient safety goals / Required Organization Practice (ROP)

Adverse reporting	Client/patient verification	Medication reconciliation	Control of concentrated electrolytes
Dangerous abbreviations	High-alert medications	Hand hygiene	Falls prevention strategy
Infusion pumps training	Safe injection practices	Pressure ulcer prevention	Safe surgical practices
Antibiotic prophylaxis during surgery	Venous thromboembolism prophylaxis	Preventive maintenance program	Transfer of client information at transition points



## Case Study

A 38-year-old woman comes to the hospital with 20min of itchy red rash and facial swelling; she has a history of serious allergic reactions. A nurse draws up 10mls of 1:10,000 adrenaline (epinephrine) into a 10ml syringe and leaves it at the bedside ready to use (1mg in total) just in case the doctor requests it. Meanwhile the doctor inserts an intravenous cannula, the doctor sees the 10ml 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 normal 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 0.3-0.5mg IM, this patient received 1mg IV)



**Can you identify the contributing factors to this error?**

- 1 Lack of communication
- 2 Inadequate labeling of syringe
- 3 Lack of care with a potent medication
- 4 Giving a substance without checking and double checking what it is



## Conclusion

- ⊙ Patient safety is the avoidance, prevention and amelioration of harm from healthcare provider
- ⊙ Two approaches to the problem of human fallibility exist:
  - The human (person) approach: focuses on the errors of individuals, blaming them
  - The system approach: concentrates on the conditions under which individuals work
- ⊙ Some errors cause harm but many do not
- ⊙ Blaming and then punishing individuals is not an effective approach for improving safety within the system
- ⊙ Adverse events often occur because of system breakdowns
- ⊙ Standardizing & simplifying clinical processes is a powerful way of improving patient safety



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