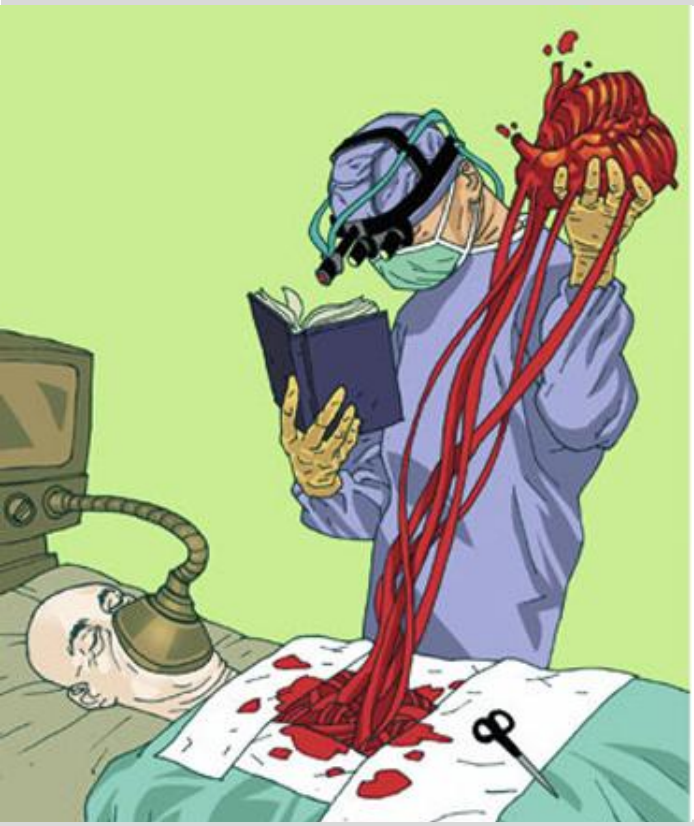
Professionalism

Human Factors
(4)



Objectives:

-Define and describe the Human Factors and its relation to patient safety -
Recognize the importance of applying human factors in healthcare
-Summarize the impact of Human Factors on people's health and patient safety -
Differentiate between the different types of Medical Errors
-Describe several specific Actions to reduce medical errors as related to Humans Factors

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Correction File

This work covers:
our slides +
433 Team work

What are Human Factors:

Human factors refer to environmental, organizational and job factors, and human and individual characteristics which influence behavior at work in a way which can affect health and safety.

Human factors can be defined as anything that affects an individual's performance.

human factors is to think about three aspects:

The job	The individual	The organization/environmental
This including: • **Nature of the task** • **Workload** • **Working environment** *This includes matching the job to the physical and the mental strengths and limitations of people.	Including: • **Competency** • **Skills (changeable)** • **Personality,attitude(fixed)** • **Risk perception** • **Sleep deprivation** * Individual characteristics influence behavior in complex ways.	Including: • **Work patterns** • **The culture of the workplace, resources Communications** • **Leadership and so on**

The Benefit of Applying Human Factors in Healthcare

.To prevent Medical Errors .
.Understand why healthcare staff make errors
.Identify 'systems factors' threaten patient safety
.To prevent occupational accidents and ill health

Medical errors..

Failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim, such as :

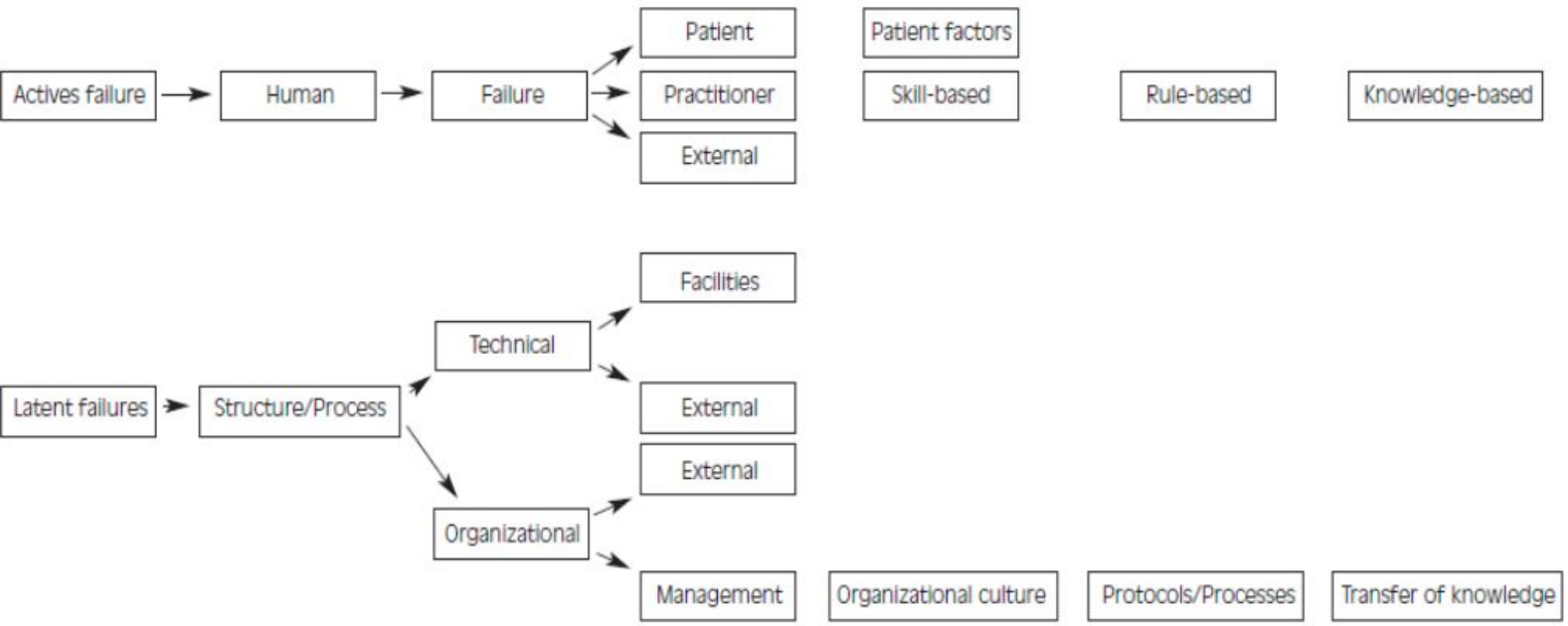
- **Retained surgical instruments.**
- **Restraint -related injuries.**

King Saud University Medical City (KSUMC)-Medical Errors:

- Expired medication.
- dispensed Un planned hysterectomy.
- Wrong Sponge counting.
- Self extubation.
- Wrong patient ID , went to wrong procedure.
- Wrong medication delivered.
- Wrong dose administered.

Sources of Error: (Read only)

Table I. Classification of causes (JCAHO - Joint Commission on Accreditation of Healthcare Organizations).



Modified from Chang et al., 2005 [5].

Types of Medical Errora: (Important)

Diagnostic • Error or delay in diagnosis (in the case of the diabetic patient may lead to blindness or glaucoma). • Use of outmoded tests or therapy.	**Preventive** • Failure to provide • prophylactic treatment • Inadequate monitoring or • follow-up of treatment (no order for anticoagulant post major orthopedic procedure may lead to PE).
Treatment • Error in the performance of an operation, procedure, or test(inserting a breathing tube into a patient's esophagus). • Error in the dose or method of using a drug .	**Other** • Failure of communication. • Equipment failure.

The Most Common Medical Errors:

- Wrong site surgery (13.4%)
- Patient suicide (11.9%) (not common on our hospitals)
- Operative and post operative complication (10.8%)
- Delay in treatment (8.6 %)
- Medication error (8.1 %)
- Patient fall (6.4 %)

If You Have Any Questions Or Comments Please Inform Us:
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Causes of Medical Errors: (Important)

1- Healthcare Complexity	2- System and Process Design	3- Environmental factors	4-Infrastructure failure	5- Human Factors and Ergonomics
- Complicated technologies. - Drugs interaction. - Intensive care. -Prolonged hospital stay. -Multidisciplinary approach.	- Inadequate communication - Unclear lines of authority.	- Over crowded services. - Unsafe care provision areas. - Areas poorly designed for safe monitoring.	- Lack of documentation process. - Lack of continuous improvement process.	- HALT → Hungry, Angry/ Emotions , Late/ lazy , Tired/fatigue/sleep less. - Lack of skilled workers. - Lack of training

Actions to Reduce Medical Errors as Related to Humans Factors..

Part 1: (Organization level) Organizational Management and Human Factors (important)..

1) Developing a positive safety culture.
   - Just culture.
   - Reporting culture (e-OVR Reporting system).
   - Learning culture(Morbidity and mortality review process).

2) Human factors training in healthcare.

3) Develop Clinical Practice Guidelines , protocols , algorithms.. etc

<u>Part 2:</u> Making your care and work safer (individual level) (important) *Don't memorize the examples

Stress	Complex calculations	Storage	Physical demands
-Focus first on the tasks that are high risk or where it is particularly important. - In emergency situations : use algorithms and protocols. - Quickly allocate a clear leader. - Consider if there is a way of running a simulation with your team.	- Find out if there is a pre-calculated list available in your area. - Before you start the task, think about ways of managing or avoiding distractions. For example, ask a colleague to take your bleep for a minute. - Look at the dose strengths of ampoules in your drug cupboard. - Double check with your colleague.	- Look at the products you use and have stored. E.g Look-alike packaging.	- Physical tiredness : get enough sleeping before your duty. - Demands exceeding capability : Most people at some time overestimate their abilities or underestimate their limitations.
Teamwork	**Reliance on vigilance and memory**	**Distractions**	**The physical environment**
- Briefing and debriefing can help teams develop a shared mental model of a planned procedure or a patient's clinical status. - SBAR (Situation, Background, Assessment, Recommendation).	- When you have a large number of tasks to remember making lists can be a helpful - Checklists or visible permanent reminders (The World Health Organization's (WHO) Surgical Safety Checklist).	- Think about the tasks you do that require your focus (examples could be giving a blood transfusion, drug prescribing).	- Poor lighting: Look at the lighting in the areas where you need to perform detailed or complex tasks.

OVR(Occurrence Variance Reporting) or IR(Incident Reporting):

Occurrence :An Occurrence is defined as any event or circumstance that deviates from established standards of care & safety.

OVR :an internal form/system used to document the details of the occurrence/event and the investigation of an occurrence and the corrective actions taken.

Quiz

1. Among the environmental factors that can lead to medical errors:
a. Lack of skilled workers.
b. Tired and fatigue staff.
c. Poorly designed patient care area.

2. An unexpected occurrence involving death or serious physical or psychological injury is definition of:
a. Medication errors.
b. Sentinel event.
c. Near mis

Thanks for checking our work!

ANS:
1/C
2/B