



PROFESSIONALISM

Lecture4:

Human Factors & Patient Safety

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Please note that this file contains summaries and important notes only, your original source for studying is the full lectures file made by team 434, which will be revised by team 435 after each lecture. Link: [Lectures file \(revised\)](#).

Objectives-based Summary:

❖ Define and describe the Human Factors and its relation to patient safety

Definition: Human factors can be defined as anything that affects an individual's performance, which influence behavior at work in a way which can affect health and safety. They involve aspects:

1. **The job.** This includes matching the job to the physical and the mental strengths and limitations of people. Including nature of the job and the workload.
2. **The individual.** Including: Competency, Skills (changeable), Personality, attitude(fixed), Risk perception, Sleep deprivation. all influenceing behavior.
3. **The organization/environmental.** Including: Work patterns, The culture of the workplace, resources Communications, Leadership and so on.

❖ **Recognize the importance of applying human factors in healthcare**

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

❖ **Differentiate between the different types of Medical Errors.**

Medical Errors: Failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim.

Causes of Medical Errors:

<i>1- Healthcare Complexity</i>	<ul style="list-style-type: none"> ○ Complicated technologies ○ Prolonged hospital stay. ○ Multidisciplinary approach 	<ul style="list-style-type: none"> ○ Drugs interaction. ○ Intensive care
<i>2- System and Process Design</i>	<ul style="list-style-type: none"> ○ Inadequate communication ○ Unclear lines of authority 	
<i>3- Environmental factors.</i>	<ul style="list-style-type: none"> ○ Over crowded services ○ Unsafe care provision areas 	<ul style="list-style-type: none"> ○ Areas poorly designed for safe monitoring
<i>4- Infrastructure failure.</i>	<ul style="list-style-type: none"> ○ Lack of documentation process 	<ul style="list-style-type: none"> ○ Lack of continuous improvement process
<i>5- Human Factors and Ergonomics</i>	<ul style="list-style-type: none"> ○ Tired/fatigue/sleep less ○ lack of skilled workers. ○ Lack of training. 	<ul style="list-style-type: none"> ○ Hungry ○ Angry/ Emotions ○ Late/ lazy

Sources of System Error: (recall lecture 3-patient safety)

1. Active errors or human error:

Are committed by frontline staff and tend to have direct patient consequences. Example, giving the wrong medication.

2. Latent or system errors (most often):

Are those errors that occur due to a set of external forces and indirect failures involving management, organizational culture, protocols/processes, transfer of knowledge, and external factors. Example : understaffed wards or inadequate equipment.

❖ Describe several specific Actions to reduce medical errors as related to Humans Factors

1. Part 1: Organizational Management and Human Factors:

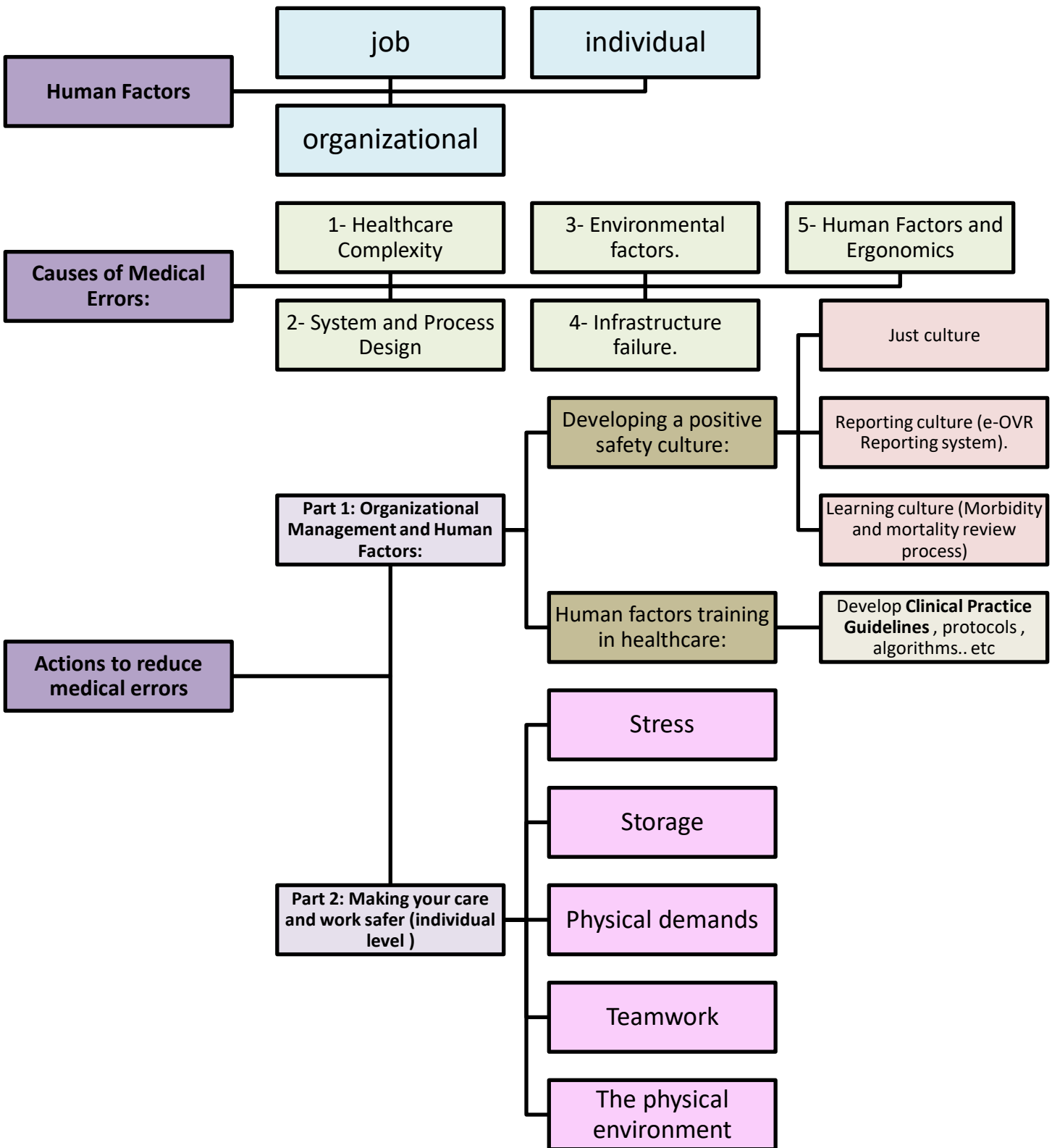
- Developing a positive safety culture:
 - Just culture
 - Reporting culture (e-OVR Reporting system). See below
 - Learning culture(Morbidity and mortality review process)
- Human factors training in healthcare:
 - Develop **Clinical Practice Guidelines** , protocols , algorithms.. etc

2. Part 2: Making your care and work safer (individual level)

- Stress
- Storage
- Physical demands
- Teamwork
- The physical environment

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.



Human Factors

job

individual

organizational

Causes of Medical Errors:

1- Healthcare Complexity

3- Environmental factors.

5- Human Factors and Ergonomics

2- System and Process Design

4- Infrastructure failure.

Just culture

Reporting culture (e-OVR Reporting system).

Learning culture (Morbidity and mortality review process)

Part 1: Organizational Management and Human Factors:

Developing a positive safety culture:

Human factors training in healthcare:

Develop **Clinical Practice Guidelines**, protocols, algorithms.. etc

Actions to reduce medical errors

Part 2: Making your care and work safer (individual level)

Stress

Storage

Physical demands

Teamwork

The physical environment