Human Factors

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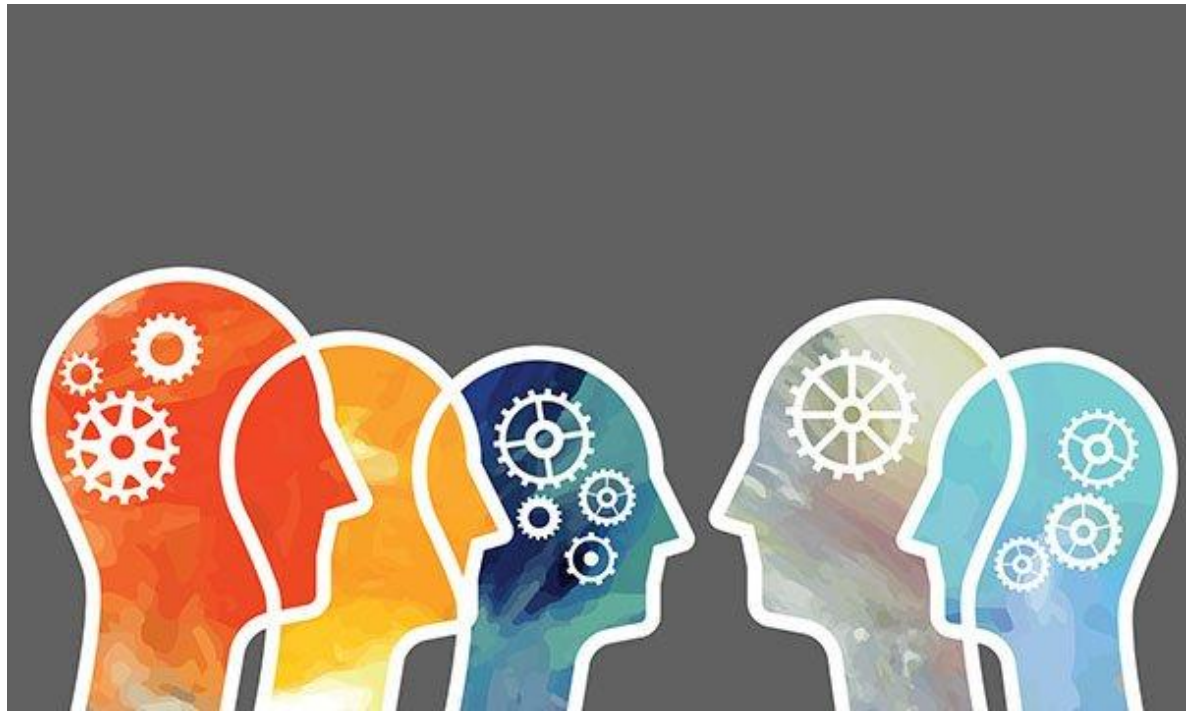


What even is “Human Factors”?

“Enhancing clinical performance through an understanding of the effects of teamwork, tasks, equipment, workspace, culture and organisation on human behaviour and abilities, and application of that knowledge in clinical settings.”

NHS England (2013)

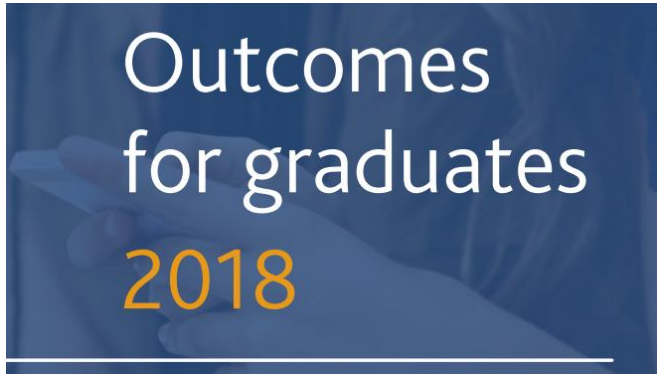
Why are Human Factors important?

"In healthcare, 80% of errors are attributed to human factors at individual level, organisational level, or commonly both."
(National Patient Safety Agency, 2008)

"96% of Never Events reported in 2017/18 should have been preventable with regular actions by humans." (CQC, 2018)

Understanding and applying Human Factors principles is fundamental to improving patient safety

It’s also in your curriculum!



Patient safety and quality improvement

5 Newly qualified doctors must demonstrate that they can practise safely. They must participate in and promote activity to improve the quality and safety of patient care and clinical outcomes.

They must be able to:

a place patients’ needs and safety at the centre of the care process

b promote and maintain health and safety in all care settings and escalate concerns to colleagues where appropriate, including when providing treatment and advice remotely

c recognise how errors can happen in practice and that errors should be shared openly and be able to learn from their own and others’ errors to promote a culture of safety

d apply measures to prevent the spread of infection, and apply the principles of infection prevention and control

e describe the principles of quality assurance, quality improvement, quality planning and quality control, and in which contexts these approaches should be used to maintain and improve quality and safety

f describe basic human factors principles and practice at individual, team, organisational and system levels and recognise and respond to opportunities for improvement to manage or mitigate risks

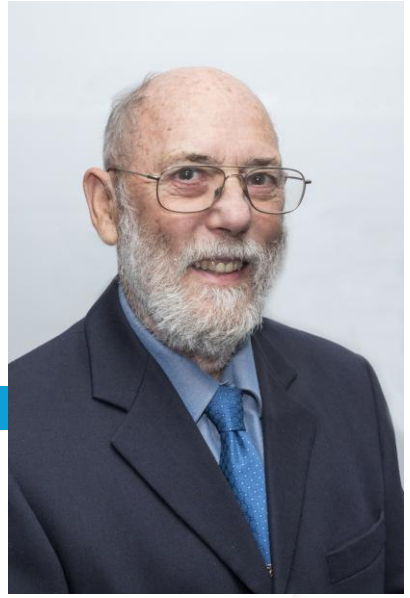
g apply the principles and methods of quality improvement to improve practice (for example, plan, do, study, act or action research), including seeking ways to continually improve the use and prioritisation of resources

h describe the value of national surveys and audits for measuring the quality of care.

How well do we teach Human Factors?

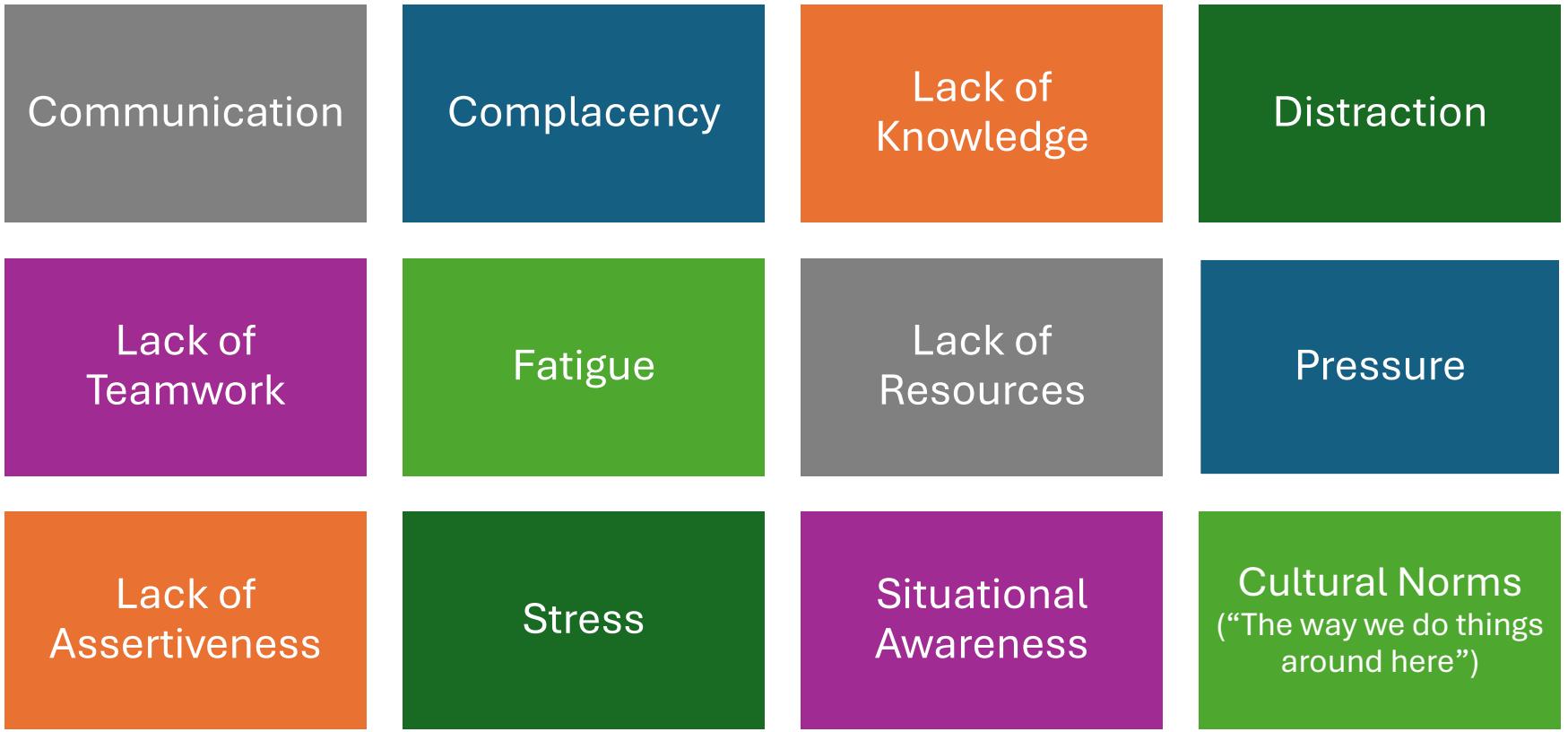
- CQC report “Opening the door to change – NHS safety culture and the need for transformation” (2018)
  - Examined “Never Events” and wider patient safety incidents
  - Highly critical of current educational practice:
    - “*Training in human factors … has long been recognised as important but has not been effectively implemented.*”
    - “*Whilst trusts recognise the importance of patient safety, human factors education is not a priority for leaders in the same way that operational targets are. Other industries regard ongoing training as crucial to prevent habitual behaviour and errors.*”

The “Dirty Dozen”



- Developed by Gordon DuPont (a Canadian aviation expert and accident investigator) in the 1990s
- Aimed to explain why certain activities that were engineered for safety and had robust operating procedures still generated accidents
- Lists twelve of the most common “human error preconditions”
- Not a comprehensive list, but a useful introduction to open discussion into human error and Human Factors

DuPont's "Dirty Dozen"



Case Study: “Just a Routine Operation”

Which of the “Dirty Dozen” were potentially relevant in this case?

1. Situational Awareness + Stress

   Due to stress, the consultants became highly focussed on repeat intubation attempts. As a result of this, they lost sight of the bigger picture.

2. Teamwork + Communication

   There was no clear team leader. All three consultants provided input but there was no-one in charge. This led to a breakdown in the decision-making process and in overall communication.

3. Lack of Assertiveness

   Nurses reportedly brought the airway emergency kit into theatres and stated it was available, but did not raise their concerns aloud when it was not utilised, due to perceived “hierarchy”.

Your “Homework”

- Post-workshop survey/evaluation https://forms.office.com/e/x5kTpHsiL3
- Reflect on today’s session
- Next time you are on clinical placement - why not try and identify some of the “Dirty Dozen”?
- Follow-up survey in ~2 months - take part for a chance to win one of x3 £15 Amazon eGift vouchers!

References

1. National Quality Board (NPB). *Human Factors in Healthcare - A Concordat from the National Quality Board*.; 2013.
2. General Medical Council (GMC). *Outcomes for Graduates 2018*.
3. Care Quality Commission (CQC). *Opening the Door to Change - NHS Safety Culture and the Need for Transformation*.; 2018.
4. Gordon DuPont. The Human Factors “Dirty Dozen.” Accessed January 22, 2025. https://skybrary.aero/articles/human-factors-dirty-dozen

Thank you for listening!

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