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HUMAN FACTORS, NON-TECHNICAL SKILLS, SITUATIONAL AWARENESS, & COMMUNICATION IN THE HEALTHCARE ENVIRONMENT

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HUMAN FACTORS AND SITUATIONAL AWARENESS

Objectives

- Some definitions
- Why is this SO important
- Some research
- Some new ideas

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HUMAN FACTORS

Human factors may be defined as the environmental, organisational and job factors, and human and individual characteristics which influence behaviour at work in a way which can affect health and safety

(Health and Safety Executive United Kingdom 2016)

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SITUATIONAL AWARENESS

'Situational Awareness' is the ability to identify, process, and comprehend the critical elements of information about what is happening to the team with regards to the mission.

More simply, it's knowing what is going on around you'

(United states Coastguard 2016)

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SITUATIONAL AWARENESS

- Nursing is a team sport
- To maximize survival rates and improve prognosis, advanced non-technical skill competency of the entire team is required, including both cognitive (decision making and situation awareness) and interpersonal (communication and teamwork) skills (Komasawa 2016)
- The importance of establishing ' team' training is essential from the viewpoints of crisis management and resuscitation (Komasawa 2016)
- Situational awareness is used and well-understood in organizations, such as aviation, air traffic control, and nuclear power; however, the same use of the term is not as prevalent or well-understood in nursing (Sculli et al. 2011)

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SITUATIONAL AWARENESS

- This is changing as situational awareness is taking centre stage in health research and practice
- In Australian literature an adverse event may be defined as 'an unintended injury or complication which resulted in disability, death or prolongation of hospital stay, and is caused by healthcare management rather than the patient's disease' (Kable, Gibberd & Spigelman 2002)
- Surgical complications are estimated at between 50% and 75% of all adverse medical events (Pinney, Pearce & Feldman 2010)
- Slightly more recent research reported that surgical adverse events occur in 3.6% of all hospital admissions representing 65% of all reported adverse events (Zegers, et al. 2011)

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SITUATIONAL AWARENESS

- These adverse events were severe in nature and 41% were considered to have been preventable (Zegers et al. 2011)
- Recent studies indicate that the main cause (70%) of adverse events can be attributed to the lack of team members' non-technical skills, such as;
  - poor communication
  - poor teamwork
  - poor leadership
  - poor decision-making
  - poor situational awareness (Green, Tsiroyannis & Brennan 2016)

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DISTRACTIONS

- Australian research observed 160 planned & unplanned surgeries over 10 specialities to observe relationships between interruptions, team familiarity, miscommunications
- During 107 procedures, 243 interruptions occurred
- In 91 procedures there were 175 miscommunication events
- There was statistical significance between interruptions, length of surgery & miscommunications (Gillespie, Chaboyer & Fairweather 2012)

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ON-CALL MOBILE PHONES

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NOISE REDUCTION

- http://www.belowtenthousand.com
- Smith, P & Gibbs, J 2016, "Below ten thousand': An effective behavioural noise reduction strategy?', *The Journal of Nursing in Australia*, vol. 29, no. 3, pp. 29-32.
- Smith, PJ & Gipps, J 2016, 'A pathway to clinician-led culture change in the operating theatre', *British Journal of Nursing*, vol. 26 no. 6, pp. 134-7.

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CPR

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PRIOR PROPER PLANNING PREVENT POOR PERFORMANCE (THE 6 P'S)

BE PREPARED FOR AN EMERGENCY

At the start of a shift when you know who you are caring for, begin to think about the possible complications that could occur

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PRIOR PROPER PLANNING PREVENT POOR PERFORMANCE (THE 6 P'S)

HAVING A LEADER AND BEING PREPARED FOR AN EMERGENCY SUCH AS CPR

- Management of CPR - things to consider
- Simulation training as a team with team leaders
- Allocation of jobs in CPR at the start of a shift
  - In charge – senior nursing staff to take charge of arrest and do defibrillation
  - Ventilation
  - Chest compression
  - Scribe

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COMMUNICATION

Why are we spending time looking at communication?

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MESSAGES FROM THE VMIA INSURANCE AGENCY

Contributing factors driving insurance claims (patients who sued)

- **Poor communication with the patient**
- **Poor communication between staff**
- **Poor documentation**
- **Failure to escalate**
- **Failure to refer**
- **Inexperience**
- **Poor culture** **(Stephen Grant - Senior Claims Specialist 2016)**

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COMMON THEMES FROM THE CORONER

- Poor documentation
- Inadequate handover
- Poor communication
- Inadequate risk assessments (English 2015)

Can you see the pattern forming?

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WHAT DOES RESEARCH AND THE EXPERTS TELL US?

- The Australian and New Zealand Audit of Surgical Mortality (ANZASM) is an independent, external peer review of surgical mortality in all states and territories of Australia
- During 1/1/2009 to 31/12/2014 a total of 30,196 deaths were reported to ANZASM

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WHAT DOES RESEARCH AND THE EXPERTS TELL US?

- Clinical information on handover, delays in transfer, and procedure-related sepsis are ongoing issues that need to be addressed
- All health professionals should increase their awareness of these risks, especially in transfer delays and clinical handover between teams, to improve the quality of care and patient safety
- Communication is one of the key elements to good patient care
- This includes communication between surgeons and their junior staff, between disciplines, and between nursing and medical staff to avoid functioning in isolation
- Improved postoperative management is important
- The patient should be discharged to the ward with comprehensive orders, including preventative measures for reducing complications

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WHAT DOES RESEARCH AND THE EXPERTS TELL US?

- Instructions must be given regarding further management when a patient is discharged from a clinical team
- The patient should be transferred to a medical unit if elderly, high risk and if medical issues are assessed as being the prominent clinical factor during the admission episode, providing that the surgical postoperative care can be performed appropriately in that setting (Royal Australasian College of Surgeons / Australian and New Zealand Audit of Surgical Mortality 2015)
- The evidence is strong that better communication would improve patient safety, but the practice seems to be lagging behind (Allard 2007 as cited in Civil 2015)

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COMMUNICATION & SAFETY

- Communication is defined as 'the transfer of information and understanding from one person to another' (Australian Medical Association 2006 as cited in Gillespie, Chaboyer, Longbottom & Wallis 2010, p. 733)
- Human factors may be defined as the environmental, organisational and job factors, and human and individual characteristics which influence behaviour at work in a way which can affect health and safety (Health and Safety Executive United Kingdom 2016)

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COMMUNICATION & SAFETY

- Poor teamwork is a symptom of a the structural fault line in medicine and surgery, where persistent autocratic practices shape inflexible work hierarchies that stifle effective communication (Bleakley, Bligh & Browne 2011)
- For years I have asked people to be nice to each other for social reasons
- Now there is irrefutable evidence that poor behaviours lead to poor communication and this is linked to poor patient safety
- This is a new platform from which to attack this problem

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THE COURAGE TO CARE

Do you know 'Mean Mary'?

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THE COURAGE TO CARE

- **Do you know 'Nasty Norm'?**

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RESEARCH HAS NOW SHOWN THAT:

- Communication, team work and efficiency are widely recognised to be suboptimal (Bethune, Sasirekha, Sahu, Cawthorn & Pullyblank 2011)
- Traditional hierarchies generate climates of monologue (telling and informing) rather than dialogue (asking, conversing and debating), and this pattern may be the norm for surgeons in operating theatres, setting an atmosphere and climate (Bleakley, Allard & Hobbs 2012)
- A third of surgeon-led communication exchanges may potentially jeopardise patient safety, particularly when they include tension-provoking statements (Lingard et al. 2004)
- Where surgical teams work collaboratively and communicate effectively through dialogue, they counter and often prevent the potential for small problems to accumulate and escalate into crisis (Catchpole et al. 2007)

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RESEARCH HAS NOW SHOWN THAT:

Poor communication is the single biggest cause of medical error (Bethune et al. 2011)

Effective communication and teamwork are a fundamental skill within healthcare to promote patient safety and prevent adverse events

(Carney, West, Neilly, Mills & Bagian 2010)

Outcome measures to assess teamwork include, morbidity mortality, technical errors, operating time, delays & communication failures (Nurok, Sundt & Frankel 2011)

Failures of communication are the most common cause of sentinel events & wrong site surgery (Makary et al 2006)

Inadequate teamwork behaviours were also associated with increased death & complications (Nurok, Sundt & Frankel 2011)

Medical errors cause between 44000 – 98000 deaths in the USA per year and the single biggest cause is poor communication between health professionals

(Bethune et al. 2011)

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SALIENT POINTS

- Good teamwork reduces surgical error
- Surgical culture's historical legacy of hierarchy frustrates effective teamwork
- Modelling good teamwork requires a designed and sustained educational intervention
- Establishing collaborative teamwork, as a cultural change, requires a precondition of attitude change
- Sustaining an educational intervention can result in an incremental, positive valuing of teamwork and safety by practitioners (Bleakley, Allard & Hobbs 2012)

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IMPROVING BEHAVIOUR

It is time to stop 'doing nothing and ignoring or tolerating bad behaviour'

- Speak up if you see bullying or bad behaviours if you can
- If you do not feel able to speak up at least report the behaviour to your manager
- Consider above and below line behaviours and enforce these
- The Department of Health and Human Services has released a statement - Our pathway to change: eliminating bullying and harassment in healthcare - Creating a culture and environment that supports both patient and staff safety in healthcare settings

(Department of Health and Human Services 2016)

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MORNING TEAM MEETINGS (NOW CALLED HUDDLES)

As a result preoperative briefings they found that 34% of staff members were able to identify a problem with the subsequent list (Lingard, Regehr & Orser 2008)

These briefings also discovered knowledge deficiencies amongst team members, creating communication breakdowns (Lingard, Regehr & Orser 2008)

These statistics support how beneficial these briefings can be

This is supported by Carney et al. (2010) who believes preoperative briefings are known to improve cohesive teamwork amongst the multidisciplinary team

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HUDDLES

- Recently a revived strategy has been the HUDDLE which from its initial conception, was originally an acronym for healthcare utilising deliberate discussion linking events; with the concept being intentional and focused informative communication (Whitehorn 2021)
- For the best healthcare outcomes, processes are required to quickly identify and resolve problems and encourage collaborative decision-making; and increasingly, staff huddles are being implemented to address this (Melton et al. 2017)

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HUDDLES

- International and clinical contexts collectively support the assertion that huddles are worthwhile within healthcare settings
- There is a known increase in communication, collaboration and planning in efforts to improve patient safety and create situational awareness across disciplines
- There is no one-size-fits-all format for huddles as this discussion has demonstrated
- However, while the format can differ, some characteristics of huddles should be standard, including regularity**, being of short duration, adopting a structured design and fostering a cordial environment for staff participation**

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TEAM MEETINGS/ BRIEFINGS AND DE-BRIEFINGS

Briefings and debriefings in the healthcare have reduced communication failures;

- by two-thirds (Linguard 2008 as cited in Civil 2015)
- reduced non-routine events by 25% (Einav 2010 as cited in Civil 2015)
- effectively surfaced potential surgical safety hazards (Bandari 2012 as cited in Civil 2015)
- reduced staff perception of risk
- increased their sense of team collaboration. In a Johns Hopkins study, reduced unexpected delays by 31% (Nundy 2008 as cited in Civil 2015)
- surgeon-reported unexpected delays by 82%.6 (Nundy 2008 as cited in Civil 2015)

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GROUP THINK

- In research conducted on university students (n=210) group think was noted in some groups where members followed the same or similar pathways and made similar decisions, whether these were correct or incorrect (Foran 2022 –not published)
- This was despite knowing that their assessments would be individually graded (Foran 2022- not published)
- Cleary, Lees and Sayers (2019) suggest that as this phenomenon may have significant implications on group thinking, this knowledge should provide a salient message to clinicians working at the coalface of healthcare to be aware of this possible occurrence during clinical decision making

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Food for thought!!!!!!

Discussion

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