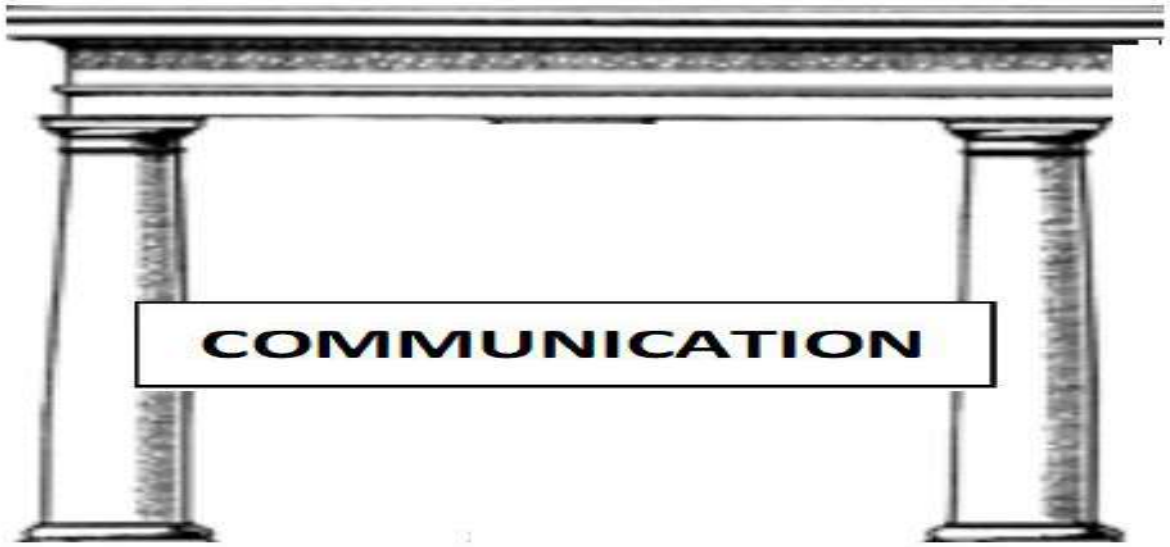
PATIENT SAFETY IN ICU



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The curious case of the blood in the ear….

Lady with Covid 19 on ventilator
Informed that ENT has been called overnight for ear bleed
Morning nurse came and said there was a mis-information
She was on end of her shift previous day when,
central line in jugular vein had to be changed urgently
During procedure, blood went into ear and she had informed next shift nurse
This was communicated to doctor as bleed from ear
Doctor called for ENT consult!

PROBLEM: Lack of clarity, Chinese whisper effect

The scenario of the virtual patient……

Informed one morning by a duty doctor that there was an intubated Covid 19 patient in ward needing ICU transfer
Gave message that a patient was being shifted out from ICU and bed would be ready in 30 minutes
15 minutes later – emergency call for help for difficult intubation in ward
ICU doctors rushed to scene – and 10 minutes later call for ICU bed
Informed that only one bed was available booked for an intubated patient earlier
There was confusion regarding number of patients needing emergency admission
Sorted out that : “intubated” patient and “difficult” intubation were the same patient

PROBLEM: No patient ID available at time of booking

The episode of a crash pre-transfer to the ward….

Patient from ICU post Covid 19 recovery stable, ready for transfer
Sudden hypotension just prior to transfer on to trolley – hypotension, hypoxia
Resuscitated, urgent evaluation for Pulmonary Embolism, CT-PA negative
Re evaluated records – as patients blood pressure continued to be labile
Record: patient had been on steroids which were stopped a year ago (already known) – cortisol sent: low value
Started stress dose steroids, patient stabilized, extubated after a few days and transferred

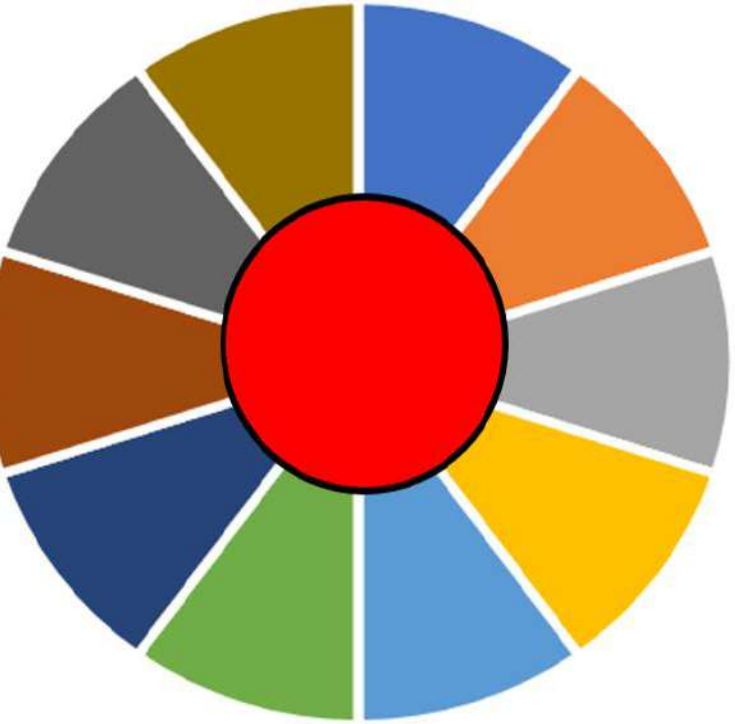
ISSUES:
Positive: Co ordinated teamwork for resuscitation, get CT PA done and review records
Subnormal stress function of adrenals probably temporarily masked by dexamethasone used for Covid 19

The inappropriate transfer to ICU…

Elderly patient transferred from ward to ICU for Covid 19 illness on Non Invasive Ventilation
Deteriorated in ICU – needing intubation and ventilation
Reviewed records – patient with previous stroke, parkinsonism, dementia, bed bound
Reviewed with family and Primary unit consultant
Goal shifted to comfort care

PROBLEM: Goal and outcome of ICU care not clearly identified prior to transfer ito ICU n discussion with family

INTENSIVE CARE UNIT: PROFILE OF STAFFING

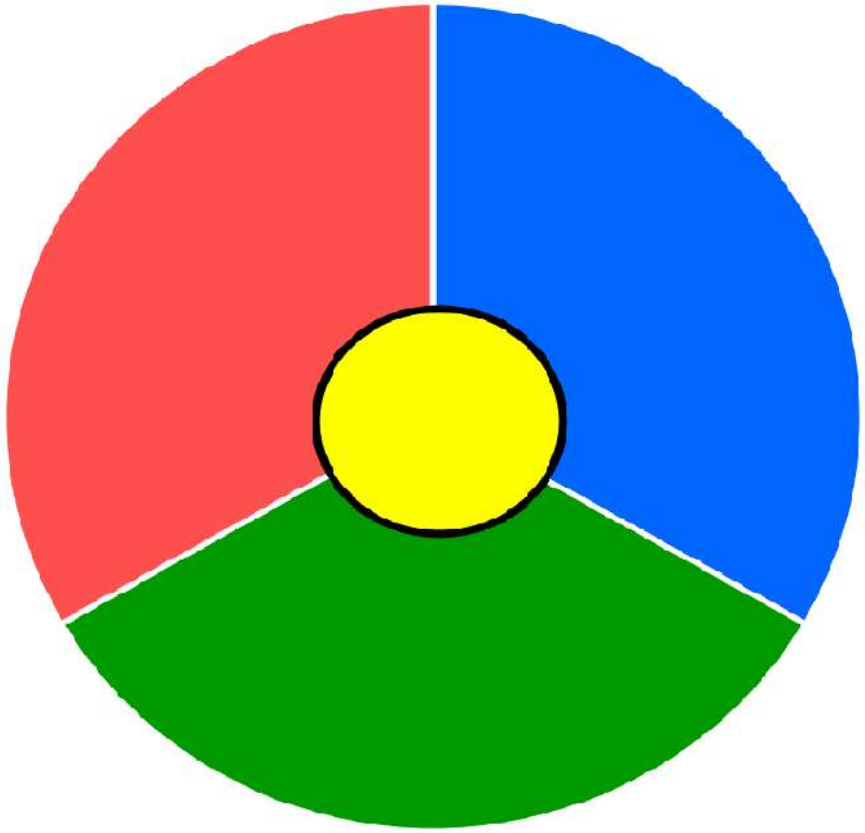


The number of total two person interactions in a group of n people can be calculated using the combination formula ${}^{n}C_{2}$ which works out to [n(n-2)]/2.
However, this assumes A interacting with B is same as B interacting with A (as in two football teams playing with each other).

In an ICU, A giving info to B is not same as B seeking information from A , so, in this situation, the division by 2 is not warranted and the formula is n (n-1).

Number of people	Interactions: *A to B is not same as B to A*
2	2
3	6
4	12
5	20
6	30
7	42
8	56
9	72
10	90

ICU: Predominant interactions……



PATIENT

DOCTORS NURSES TECHNICIANS

Number of people	Interactions: *A to B is not same as B to A*
2	2
3	6

3 shifts a day for each: INCREASES interactions

Organisational Cultures

Westrum R. A typology of organisational cultures. Qual Saf Health Care 2004;13(Suppl II):22–27.
doi: 10.1136/qshc.2003.009522

PARAMETER	HIERARCHICAL	BUREAUCRATIC	PERFORMANCE
Goal	hierarchy based	rule based	solutions to optimize outcome
Creativity, novelty	eliminated	considered a problem	implemented if feasible
Responsibility	passed to top	stick by rules	shared
Failure	scapegoats sought	inquiry: guilty punished	problem focused not person focused
Co-operation	low	selective	high

Cultures determine how information is processed
Every form of culture has a place in a specific situation
The last mode is not necessarily the best for all situations but is usually more safe for all, open to change and improvement

Number of interventions……..and errors

A look into the nature and causes of human errors in the intensive care unit. Donchin Y, Gopher D et al. Crit Care Med. 1995 Feb;23(2):294-300

DOI: 10.1097/00003246-199502000-00015

- Average of 178 activities per patient per day in ICU
- Errors: 1.7 errors per patient per day
- Equally between doctors and nurses
- Many due to communication problems
- Not an incurable disease but a preventable phenomenon

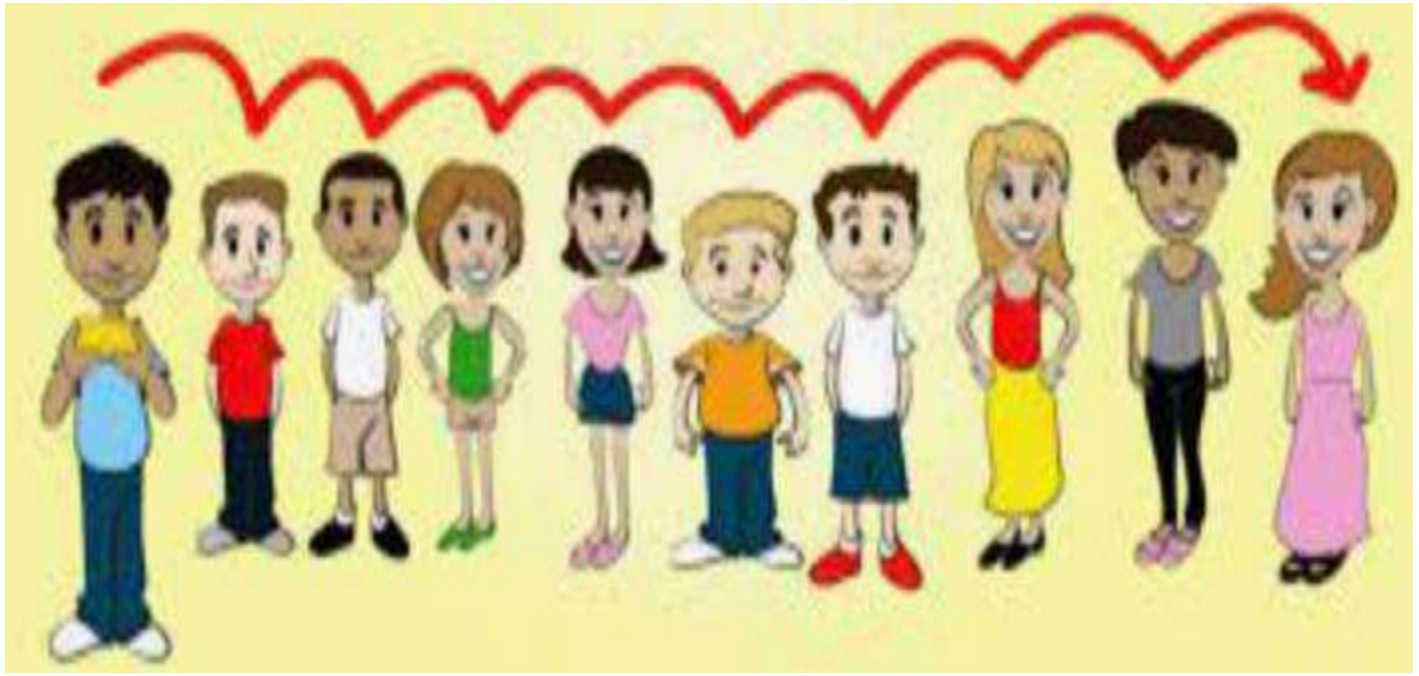
Handovers between……

- Intra Professionals: shift change
- Inter Professionals: within shift
- Ward-ICU (de-escalation/escalation)
- Services: imaging, laboratories, consultations with specialties
- Interhospital

Vision for handover…..

- Transfer critical information – relevant, accurate, current, trends
- Seamless transition of care
- Continuing management plan to
  - improve outcome
  - reduce adverse events
- Efficient time management

Game of Chinese whisper……



STRUCTURED HANDOVER

- WHO is calling (self ID), who is it about (patient ID)
- WHY is the communication being made (reason)
- WHAT is the problem (diagnosis)
- HOW is it to be rectified (management plan)

Principles…..

- Patient centered
- Organised
- Focused
- Clear
- Dedicated time: minimize disturbances

SBAR

Shahid, S., Thomas, S. Situation, Background, Assessment, Recommendation (SBAR) Communication Tool for Handoff in Health Care – A Narrative Review. *Saf Health* 2018; **4,:**7-16 .
https://doi.org/10.1186/s40886-018-0073-1

- **S**ITUATION: *identify, chief complaints*
- **B**ACKGROUND: *number of days, admission diagnosis, past history*
- **A**SSESSMENT: *vitals parameters, present condition*
- **R**ECOMMENDATION: *plan of action*

iSOBAR: Australia

iSoBAR — a concept and handover checklist: the National Clinical Handover Initiative. Jill M Porteous, Edward G Stewart-Wynne et al. Med J Aust 2009; 190 (11): S152-S156.
doi: 10.5694/j.1326-5377.2009.tb02625.x

- **I**dentify: *self, patient, contact phone number*
- **S**ituation: *chief complaint, diagnosis, reason for triggering this communication*
- **O**bservations:: *vital parameters, access: venous*
- **B**ackground: *past history, medications, allergies*
- **A**greed Plan: *for transfer of care*
- **R**ead back: *clarification, summary*

What do studies show?

- Jigajinni S. The intensive care unit handover: the most stressful part of the shift. Brit J of Hosp. Med 2010; 71: M25-M27. DOI:10.12968/hmed.2010.71.Sup2.46506

- KOWITLAWAKUL Y et al. Observation of hanover process in an intensive care unt: barriers and quality improvement strategy. International J for Qauality and healthcare 2015: 27: 99-104 doi: 10.1093/intqhc/mzv002

- Manias E et al. Perspectives of clinical handover process: a multi site survey across different health professionals. J Clin Nursing 2016; 25: 80-91. doi: 10.1111/jocn.12986

- Malfait S et al. Do clinical handovers reduce handover duration? An observational study with implications for evidence based practice. Worldviews on Evidence based nursing 2018; 15:432-439 https://doi.org/10.1111/wvn.12330

- Ghosh S et al. Impact of structured clinical handover on communication and patient satisfaction. J of Patient Experience 2021: 1-6 https://doi.org/10.1177/237437352199773

Formats……

- Hawthorne effect of studies: altered behaviour due to observer presence

- Decentralised (bedside) vs Centralised (group meeting) handover

- Oral vs Written

- Information pass over
  - memory
  - rough paper
  - check list (main headings only)
  - handover sheet (critical contents included)
  - electronic: messaging, EMR based

- Patient involvement for bedside (not applicable for ICU)

Snapshot of studies…….on structured handover

- Distractions: people (other healthcare workers), events (monitor alarms), phone calls

- Time: some needed increased time for structured others less time; nurses longer than doctors

- Gaps between expectation and reality because of
  - Lack of training in handover
  - No senior role models
  - Not standardized
  - Not contextual: general vs specialty specific

Information
  - trends vs spot information at time of handover
  - missing: Nurses and Docs: *DNR status*; Docs: *Infections and antibiotic sensitivity*
  - irrelevant
  - repetition
  - miscommunication

Problems…..

- DEDICATED “*INTERRUPTION-FREE*” TIME for handover

- TRAINING IN HANDOVER

- DE-CENTRALISED (bedside) vs GROUP

  lack of group bonding and helping others out in bedside handovers

Summary….

MATRIX OF RESULTS		LOCATION of Handover	
		Centralised: *good professional group bonding*	Bedside: *decreased professional group bonding*
STRUCTURED: consistent quality of information transfer	YES	decreased total time, time per patient variable	decreased time per patient
	NO	increased total time and time per patient	variable time


ANY
QUESTIONS