



University of
HUDDERSFIELD
Inspiring global professionals

Principles of Patient Assessment and recognising the deteriorating patient

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With thanks to Dr Stephen Prescott

Objectives

Provide	Provide a historical perspective
Consider	Consider the evidence
Consider	Consider the emerging roles in healthcare
Consider	Consider the impact of education on patient outcomes

McQuillan *et al.* (1998)

Reviewed case notes

Two 'expert' assessors

- Quality of medical care
- Timeliness of admission to ICU.

'Suboptimal care'

- Management of oxygen therapy, airway, breathing, circulation and monitoring.

54/100 patients received suboptimal care.



Kause *et al.* (2004)

International, multi centre, prospective, observational study

UK, Australia and New Zealand

Over 3 days in October 2000

Studied the incidence of antecedents

638 Primary events

- 308 death
- 141 cardiac arrests
- 189 unplanned ICU admissions.

Kause *et al.* (2004)



Threatened airway

Respiratory rate < 5

Respiratory rate > 36

Pulse rate < 40

Pulse rate > 140

Systolic BP < 90mmHg

Glasgow Coma Score (GCS) fall by two points or more

Prolonged seizure activity

Kause *et al.* (2004, p.280)

“Several patients studied had exhibited antecedents that were recorded continuously for periods of up to 24 hours prior to a primary event.”

WARD:		PATIENT IDENTIFICATION LABEL	
CONSULTANT:			
Date:			
Time:			
COMA SCALE	Eyes open	Spontaneously To speech To pain None	Eyes closed by swelling = C
	Best verbal response	Orientated Confused Inappropriate words Incomprehensible sounds None	Endotracheal tube or tracheostomy = T
	Best motor response	Obeys commands Localises pain Withdraws to pain Flexion to pain Extension to pain None	Usually record the best initial response
PUPILS	Right	Size Reaction	+ reacts - no reaction c eyes closed
	Left	Size Reaction	
LIMB MOVEMENT	Arms	Normal power Mild weakness Severe weakness Spastic flexion Extension No response	Record right (R) and left (L) separately if there is a difference between the two sides
	Legs	Normal power Mild weakness Severe weakness Extension No response	
Blood pressure and pulse rate		Temperature °C	
Pupil scale (mm)		Respiration	

Go to [menti.com](https://www.menti.com) and type in code **1476 7329**
and tell me why you think these things
happened?



Research showed...

1. Incorrect use of oxygen therapy
2. Failure to monitor patients
3. Failure to involve experienced senior staff
4. Failure to use a systematic approach
5. Poor communication
6. Lack of teamwork
7. Insufficient use of treatment limitation plans.

Three sub-themes emerged;

1. Failure to measure basic observations of vital signs;
2. Lack of recognition of the importance of worsening vital signs;
3. Delay in responding to deteriorating vital signs.

Acutely ill patients in hospital

Implementing NICE guidance

July 2007

NICE clinical guideline 50





NICE (2007)

Physiological observations should be recorded at least every 12 hours:

- Senior decision to increase or decrease frequency;
- Heart rate, respiratory rate, oxygen saturation, systolic blood pressure, level of consciousness, temperature.

Use of a 'track and trigger' system.

Guidelines reviewed in 2020 and decision made not to update at this time.

Critical Care
Outreach,
rapid
response
teams, DART
teams...and
many more

- Staff caring for patients in acute hospital settings should have competencies in monitoring, measurement, interpretation and prompt response to the acutely ill patient appropriate to the level of care they are providing. Education and training should be provided to ensure staff have these competencies, and they should be assessed to ensure they can demonstrate them.
- The response strategy for patients identified as being at risk of clinical deterioration should be triggered by either physiological track and trigger score or clinical concern.
- Trigger thresholds for track and trigger systems should be set locally. The threshold should be reviewed regularly to optimise sensitivity and specificity.



Rattray *et al.* (2011, p.723)



“Education and professional development should focus more on developing and maximising clinical experience and expertise rather than knowledge acquisition alone.”

LIFELONG LEARNING

Staffing levels and educating the workforce

A contentious issue...

There is a difference between 'crude mortality rates' and unexpected deaths.

The evidence shows an increase in degree educated nurses decreases patient mortality.

The evidence shows decreases in staffing levels negatively impacts on mortality rates of patients.

(Haegdorens, Van Bogaert, De Meester, & Monsieurs, 2019; Aikin, et al., 2014)



References/Useful links

- Aikin, L. H., Sloane, D. M., Bruyneel, L., Van den Heede, K., Griffiths, P., Busse, R., . . . Sermeus, W. (2014). Nurse staffing and education and hospital mortality in nine European countries: a retrospective observational study. *The Lancet*, 383(9931), 1824-1830. doi:[https://doi.org/10.1016/S0140-6736\(13\)62631-8](https://doi.org/10.1016/S0140-6736(13)62631-8)
- Haegdorens, F., Van Bogaert, P., De Meester, K., & Monsieurs, K. G. (2019). The impact of nurse staffing levels and nurse's education on patient mortality in medical and surgical wards: an observational multicentre study. *BMC Health Services Research*, 19(864). doi:<https://doi.org/10.1186/s12913-019-4688-7>
- Kause, J., Smith, G., Prytherch, D., Parr, M., Flabouris, A., & Hillman, K. (2004). A comparison of Antecedents to Cardiac Arrest, Deaths and Emergency Intensive Care Admissions in Australia and New Zealand, and the United Kingdom – the ACADEMIA study. *Resuscitation*, 62, 275-282.
- McQuillan , P., Pilkinton, S., Allan , A., Taylor, B., Short, A., Morgan, G., . . . Collins, G. (1998). Confidential enquiry into quality of care before admission to intensive care. *British Medical Journal*, 316, 1853-1858.
- National Institute for Health and Care Excellence. (2017, July 25). *Acutely ill adults in hospital: recognising and responding to deterioration*. Retrieved from <https://www.nice.org.uk/guidance/cg50>