How should the deteriorating patient be managed?

The Acute Physician’s Perspective

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I am one of the millions of health care workers in UK

We look after people when they become unwell

People trust us

We all believe that we do a great job

Patients who are admitted to hospital believe that they are entering a place of safety, and they, and their families and carers, have a right to believe that they will receive the best possible care there. They feel confident that should their condition deteriorate, they are in the best place for prompt and effective treatment.

•National Patient Safety Agency, UK
Analysis of 576 deaths reported to the National Patient Safety Agency (UK) in 2005:

Death of 64 patients were as a result of deterioration, not recognised or acted upon.

Majority of these incidents are attributed to three themes:

1. No observations made for a prolonged period: changes in a patient’s vital signs not detected

2. No recognition of the importance of the deterioration and/or no action taken other than recording of observations

3. Delay in the patient receiving medical attention, even when deterioration has been detected and recognised.
Recommendation by NPSA

- better recognition of patients at risk of deterioration, or who have deteriorated
- monitoring of vital signs
- accurate interpretation of clinical findings
- calling for help early and ensuring it arrives
- improving communication
- better situation analysis
- regularly risk-assessing resuscitation processes
- training
- ensuring appropriate drugs and equipment are available.
NCEPOD : Time to Intervene
A review of patients who underwent cardiopulmonary resuscitation as a result of an in-hospital cardiorespiratory arrest : July 2012

14 days study : 1\textsuperscript{st} -14\textsuperscript{th} November 2010

- The care was less than good in seven out of ten cases
- Physiological instability was noted in 73% cases
- Warning signs for cardiac arrest were present in 75% cases
- Cardiac arrest was predictable in 64% cases
- Cardiac arrest was potentially avoidable in 38% cases

Good practice: a standard that you would accept for yourself, your trainees and institution
So we are not doing well

A few cases
19 yr. old student: admitted to AMU at 8pm
Headache, breathlessness and bilateral blurring of vision: 48 hours
GP thought: alcohol related headache
“Vision seems dark, things look misty and hazy, unable to make out faces, can’t text”
No other symptom; Normal examination
Acidotic breathing: HCO₃:9

- Anion gap-30: Osmolal gap -20
- Methanol poisoning was suspected: level sent
- Ethyl alcohol and haemodialysis: 16 hours after admission
- Vision didn’t improve

- Delayed referral: lack of recognition of acidotic breathing & red flag sign: Knowledge
- Lack of communication at night
- Lack of appropriate action
65 year old lady in Acute Medical Unit: 4pm

- Pyrexial, breathless and hypotensive
- Right lower lobe pneumonia with severe sepsis
- Blood culture, Antibiotics & Fluid challenge
- Blood pressure improved after 500ml of saline
- More fluid
- Then became more breathless, wheezy, more tachycardic and hypotensive

Senior review urgently: Anaphylaxis due to Gelfusine

Adrenaline

- Knowledge
- Senior Decision Maker on the frontline
30 year old lady admitted at 6pm, weekend

- Intravenous drug abuse
- Mild confusion
- temp-35c, HR- 94/min, RR-22/min BP- 110/70
- Possible drug related confusion

- Deteriorated 2am – BP 70/50 RR -40/min
- Fluid challenge – transferred to Medical HDU
- Med Reg – diagnosed as Bronchopneumonia and severe sepsis
- 8AM – Consultant ward round – Possible TV endocarditis
- Bedside Echocardiography – TV vegetation
- Transferred to ICU – vasopressor support

- Delayed recognition of sepsis : delayed treatment
- Lack of communication: Handover
- Lack of appropriate monitoring: SEWS Score
- Late referral to Intensivist
21 year old girl, was brought to A&E:

- No cardiac output
- Pulseless Electrical Activity (PEA)
- Fluid resuscitated
- Output regained
- Sinus tachycardia
- CXR normal
- Suspected aetiology: hypovolaemia/Severe sepsis - ?cause/source

- Senior review
- Exposure – no rash : Vaginal bleeding
- Diagnosis: Ruptured ectopic pregnancy
- Resuscitated with Blood products and operated urgently
- Survived

- ABCDE approach was not followed appropriately
- Presence of Senior Decision Maker on the frontline
35 year old gentleman

- Central chest pain
- Right arm heaviness
- Known hypertensive – poor medication compliance
- no past history of IHD
- 12-lead ECG: Inferior wall ischaemia

Emergency focused echocardiography
45 year old lady with bilateral leg swelling

- Sudden onset left sided pleuritic chest pain
- Breathlessness
- Periarrest: Hypoxia, tachycardia and hypotension
- Apyrexial, clear chest and CXR on admission was normal
- 12-lead ECG – Sinus tachycardia

Emergency focused Echocardiography
What do we need to recognise and manage acutely unwell patients?

- Knowledge
- Skills: Ultrasonography
- Good pre-hospital assessment to recognise unwell patients: NEWS
- Right place for Acutely unwell patients: Acute Medical Unit
- Trained Medical and Nursing workforce: not trainee driven service
- Methodical approach of assessing patients on the frontline
- Consistency of delivery of service
- Education and training to improve awareness about acutely unwell patients: undergraduate and postgraduate training
- Non-technical skills so that knowledge can be applied
- A well coordinated team approach: move to team performance
- A system to provide a good quality safe acute care service
National Early Warning Scoring System (NEWS)  
(RCP: report of a working party: July 2012)

- Validated track-and-trigger tool: simple to use
- Derived from routine physiological observations
- Correlates with the scoring structure defined by NICE CG50
- All patients should have NEWS on admission and as a part of every reassessment
- Systems must be in place to ensure timely and appropriate responses to NEWS
- NEWS > 5 should trigger an assessment of ceilings of care and DNACPR status
- Reg flag scenarios should be considered at each assessment
- NEWS is not a substitute for competent clinical judgement
- Concern about a patient’s clinical condition should always override the calculated score from NEWS
- NEWS is a step towards standardisation of assessment & monitoring
Clinical Red Flags

- Cardiac chest pain at rest lasting longer than 20 minutes
- Headache of dramatically sudden onset
- Recent onset headache with scalp tenderness and/or jaw claudication
- Palpitations associated with syncope
- Cauda equina syndrome
- Painful swollen calf
Simple Methodical approach

- ABCDE: Diagnose & Act
- Look at Track & Trigger tool
- Follow pathways for clinical red flags
- Quick relevant examinations
- Think about sepsis
- SEPSIS6(oxygen, fluid, blood culture, antibiotics, lactate, urine output)
- Discuss with Senior Decision Maker early
- Discussion with appropriate Specialty/ICU team
Acute care Toolkit6
Recognition of altered physiology induced by ill-health and appropriate responses: May 2013

- Patient assessment: Physiological disturbance and NEWS
- Clinical responses to NEWS triggers
- Patient assessment: Clinical red flag scenarios
- Formal assessment on admission
- Timeliness of assessment and response to critical illness
- Consultant involvement in acute medical care
- The medical patient at risk due to severe sepsis
- Assessment of risk of medical complications: VTE / AKI
- The newly admitted or deteriorating patient: monitoring requirements
- Continuing assessment: NEWS to track and trigger
- Right patient – right bed: Level0, Level1, Level2, Level3
- Handover of care
- Ceilings of care
Nursing the nation : Molly Case

MOLLY'S POEM
Many thanks Molly

We do a great job

We have passion

We work hard

We will do more

Thank you