

Recognition of and Response to Acute Illness in Adults in Hospital

Tracy Pilcher
Chair BACCN

Adapted from Dr Jane Eddleston
DoH Advisor Adult Critical Care

What this presentation will cover:

- Background to the Guidance
- Key recommendations
- Acute Care Competency Framework

Key Issues

- 12 million patients are admitted to the NHS annually (38,000 daily)
- 60% of admissions are emergency
- Acute Medicine > Acute Surgical emergencies
- In-patient treatment more complex and interventional
- Acutely ill patients are a core business for Acute NHS Trusts
- Medical and nursing undergraduate and post-graduate training has undergone significant changes

How effective is our care pathway for acutely ill patients ?:

- Frequently poor recognition of deteriorating health in our hospitals.
- Frequently inadequate processes in place to deliver safe care.
- Avoidable admission to critical care for some patients.
- Avoidable death for others.
- Differences in case-mix adjusted outcomes/morbidity across the country.

Confidential Inquiry into Quality of Care pre-ICU

McQuillan P, Pilkington S, Short A et al
BMJ 1998;316:1853-1858

- ~40% of admissions avoidable
- SMR's increased in this population
- Management of respiratory, cardiovascular systems *suboptimal*
- Oxygen therapy use and institution of monitoring *suboptimal*

McGloin et al 1998:

- Hospital deaths over 6 months
- 2 unexpected, potentially avoidable deaths a month
- Clear signs of prior deterioration over hours/days
 - a) untreated BP < 80mmHg for > 24 hours,
 - b) ↓ K⁺, ↓ O₂, ↓ BM

Multidisciplinary Courses

- Resuscitation Courses
- ALERT
- AIM
- IMPACT
- CRISP

Post-Graduate Education

- Foundation Programme
- Core Medical and Surgical Training
- CoBATRICE competencies for Critical Care Training
- Advanced Critical Care Practitioner Programme

CEPOD Report 2005

- Medical admissions to ICU in UK in one month in 2003 (~1500 admissions identified, ~600 died during that ICU admission). Mortality ~35%
- 58% received prompt and appropriate treatment prior to admission
- Suboptimal ward care contributed to death in about 1/3rd of ICU deaths
- 21% admissions to ICU deemed avoidable
- Consultant input very low

NPSA Report 2007

- NPSA 2007 report “ Safer care for the acutely ill patient: learning from serious incidents”. 576 deaths interpreted as potentially avoidable and relating to patient safety issues. 64 directly linked to failure to record, recognise or respond.

These two areas are:

- *clinical or physiological deterioration not recognised or not acted upon;*
- *resuscitation after cardiopulmonary arrest.*



435 deaths occurred in acute/general hospitals

- 71 related to a diffuse range of diagnostic errors
- 64 related to patient deterioration not recognised or not acted upon
- 43 deaths involved problems with cardiac arrest

Deterioration: issues and actions

- No observations made for a prolonged period prior to a patients death and changes in vital signs were not detected (21.8%)
- Despite the recording of vital signs, there was no recognition of clinical deterioration and/or no actions were undertaken (47%)
- Deterioration was recognised and assistance sought but significant delays occurred in the patient receiving medical attention (11%)

- *Recording of Vital signs: Measurement (technique and accuracy), and Documentation*
- *Recognition of abnormal values: knowledge of normal physiological measurements*
- *Interpretation of measurements in context of individual patients*
- *Intervention appropriate to abnormality*
- *Response being timely and matching skills to patient needs*
- *Organisational team working*

Key Recommendations

- Assessment and Monitoring
- Response
- Staff competencies
- Critical care

Assessment and Monitoring

- All Adult patients in Acute Hospital settings, including patients in the Emergency Department for whom a clinical decision to admit has been made, should have:
 - Physiological observations recorded and acted upon by staff who have been trained.
 - Mandated set of observations
- written monitoring plan which incorporates:
 - Patient's diagnosis
 - Presence of comorbidity
 - An agreed treatment plan

Assessment and monitoring: physiological observations

- Initial assessment should include at least:
 - heart rate
 - respiratory rate
 - systolic blood pressure
 - level of consciousness
 - oxygen saturation
 - temperature.

➤ Physiological track and trigger systems should be used to monitor all adult patients in acute hospital settings. Multiple parameter or aggregated systems should be used. This allows parameters to be tracked.

- Observations should be monitored at least every 12 hours
- Senior level decision to increase or decrease the frequency of observations
- Increase if abnormal physiology is detected (graded response)

Local Gap Analysis:

- Do you have agreement on variables?
- Have you standardised how observations will be undertaken?
- Is there an automated strategy?
- How will you include saturation?
- How are you assessing the ward staff's competency?
- Have you standardised frequency of observations?
- Does the policy cover exclusions?
- Do you have a standardised EWS?
- Is it Trust-wide?

Phase 1 – Baseline data collection

- Baseline data collection
- In November and December 2007 – 47 consecutive days
- Consecutive patients admitted to MAU and AM1
- Ethics approval allowed an opt out model of consent

Phase 1 – Key results

- 747 patients were recruited
- 116 patients alerted and between them they generated 567 alerts (EWS 3 or more)
 - 47% EWS of 3
 - 30% EWS of 4
 - 23% EWS of 5 or above

Phase 1 – key results

- 95% had a full set of observations
- 20% of EWS were incorrectly calculated
- 31% of patients with an EWS of 3 or above had a documented clinical response (16% for EWS 6 or more)
- 65% of patients with an EWS of 3 or above continued to trigger
- 3 cardiac arrests
- 9.4% hospital mortality for the cohort
- 21 critical care admissions (58 bed days)

Phase 3 – Alerting and escalation

- In addition to raising an alert when observations were due to be performed, the system now alerted clinical staff when the EWS was raised
- Using our standard bleep the alert provides:
 - a patient name
 - a ward
 - the EWS
 - and the target time

Phase 3

- The alert keeps going until either:
 - the patient gets better or
 - the clinician attends the patient
- If neither of these things happen the alert escalates to a higher tier of response
- And on and on...

Phase 3 - results

- 100% observations performed (no summing errors)
- 83% of patients with an EWS of 3 or above had a documented clinical response (67% for EWS of 6 or more within 30 minutes)
- 48% of patients with an EWS of 3 or above continued to trigger
- No cardiac arrests
- 7.1% hospital mortality for the cohort
- 21 critical care admissions (29 bed days)

Response

- Decision to admit patient to a critical care area should involve both the consultant caring for the patient on the ward and in critical care
- A graded response strategy for patients identified at risk should be agreed and delivered locally consisting of three levels:
 - Low score
 - Medium score
 - High score

This response should match competencies of staff to patient needs.

Local Assessment:

- Have you identified low, medium and high risk patient populations?
- Have you identified appropriate response times?
- How will the response be summoned?
- Are there any parent teams which will not possess the acute care competencies appropriate to the level of secondary responder?
- How will these patients be managed within the system?
- What happens when response times are not met?

Staff Competencies

- Staff caring for patients should have competencies in monitoring, measurement, interpretation and prompt response appropriate to level of care they are providing.
- Education and training should be provided.
- Staff should be assessed to ensure that they can demonstrate them.

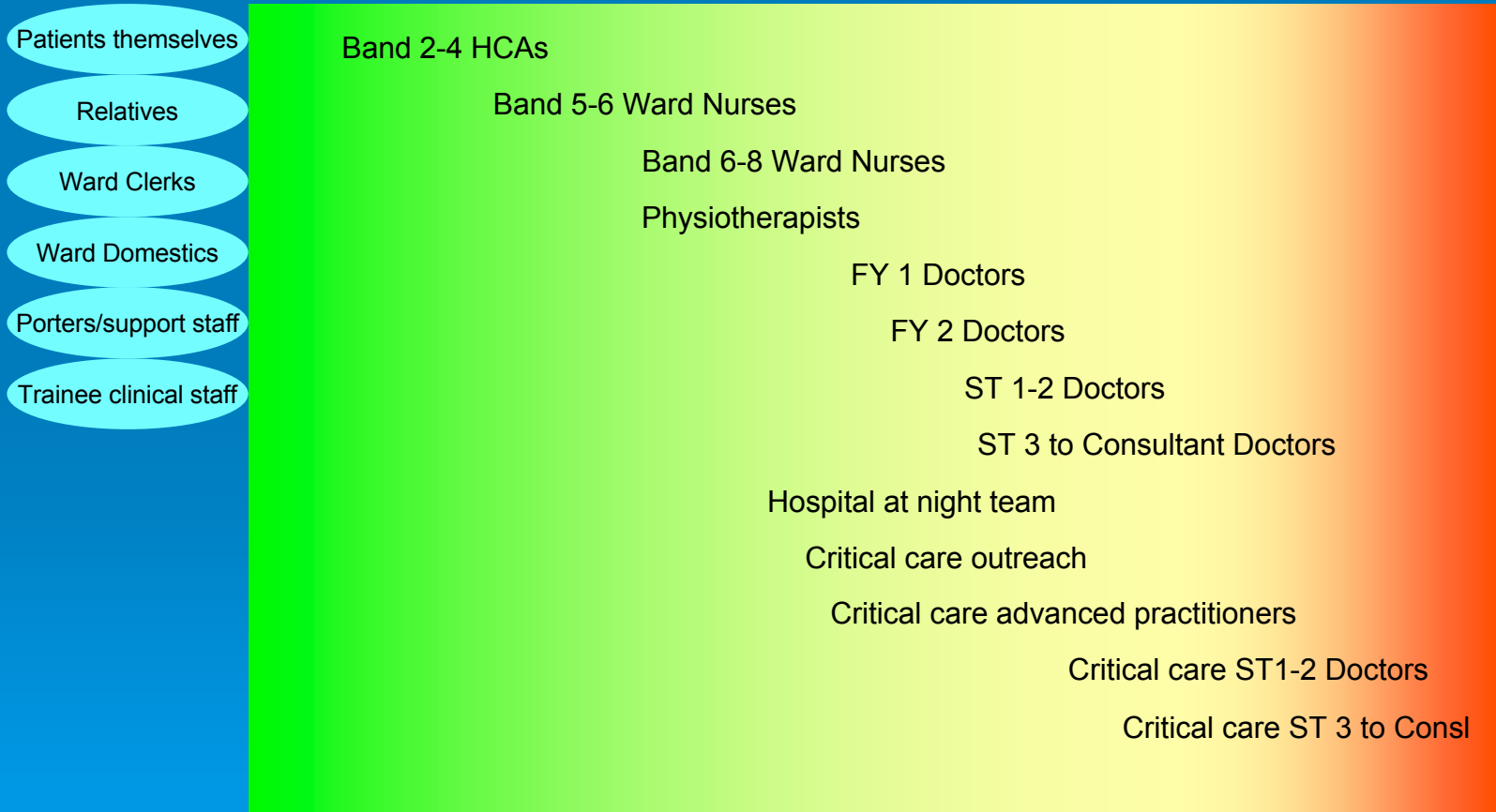


Competencies for Recognising and Responding to Acutely Ill Patients in Hospital

Acute Care Competencies for Ward Staff

- Complimentary to existing competencies
- ~ 75 competencies described in 5 themes
 - Airway, Breathing, Ventilation and Oxygenation
 - Circulation
 - Acute Neurological Care
 - Transportation
 - Team working, Communication, Infection Control
- Does not specify which staff groups should deliver each grade of competency
- Does not specify model of care
- Due for imminent release for consultation

Competency Group	Non clinical Staff	"Recorder"	"Recogniser"	"Primary Responder"	"Secondary responder"	Critical Care
Description of group role	call for help and recognition of illness	recorder and interpretation within T&T protocol	recognition and interpretation of observations	primary response and intervention	Secondary response and intervention	Tertiary response and Critical care
NICE Response Level		Low Risk	Low Risk	Low Risk	Medium Risk	High Risk



Local needs assessment?

- How do you currently record training and competencies?
- Can your system deliver reports by grade, location, and identify which staff do not possess the necessary skills?
- What local acute care courses are there?
- Who delivers these courses?
- What is the current need?
- Do you assess competency on these courses?
- Are the courses multidisciplinary?

Local needs assessment?

- Do all new starters have an assessment as part of induction?
- How will each grade of response be delivered?
- How will the site respond to specialities whose parent teams lack acute care competencies appropriate to secondary responder role?
- Will this change out-of-hours?
- Do the HCSW receive training and assessment?
- How can you use the framework to redesign the delivery of Acute Care on the wards?.

Critical Care

- Transfer patients from critical care to general ward as early as possible during the day.
 - Avoid between 2200 and 0700
 - Document it as an adverse incident if it occurs.
- The critical care transferring team and receiving ward team should jointly ensure:
 - Structured handover of care with written plan
 - Receiving ward can deliver the agreed plan

Critical Care

- The formal structured handover of care should include:
 - Summary of critical care stay
 - A monitoring and investigation plan
 - A plan for ongoing treatment
 - Physical and rehabilitation needs
 - Psychological and emotional needs
 - Specific communication or language needs

Local assessment:

- Does your Trust monitor Night time and delayed discharges from Critical Care?
- Night time discharges: are these delayed or premature?
- How many patients die after discharge from ICU annually in your hospital?
- Are all deaths investigated?
- Have themes emerged from these deaths?
- If discharge is delayed how does the bed management system work?

Local assessment:

- Do you document consultant consultation at admission?
- Is there effective communication between teams?
- Is there a standard discharge format, ideally in electronic format?
- Do you have a discharge pathway?
- Is it clear who has responsibility at each level?

Access to the Guideline online

- Quick reference guide – a summary
- NICE guideline – all of the recommendations
- Full guideline – all of the evidence and rationale
- ‘Understanding NICE guidance’ – a version for patients and carers

■ www.nice.org.uk/CG050

To Conclude:

- The guidance should save lives.
- All in-patients included.
- Sets a standard for minimum parameters to be monitored and minimum frequency of assessment.
- Sets a standard structured framework for recording, recognition and response to acute illness in hospital.
- Local existing Track and Trigger Systems need to be evaluated for effectiveness, most need adjustment to score SPO2 recordings.

- Dictates measures of quality for the admission and discharge process into and from Critical Care.
- Provides an opportunity for Acute Medicine to redesign the pathway and flow of patients in Hospital.
- Is there a place for level 1 medical units?