Implementing the NICE Guidelines for the Acutely Ill Patient

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National guidance

- **Acutely ill patients in Hospital - CG50, July 2007**
  - Hospitals must measure and record physiological observations: BP, HR, RR, Temp, SaO$_2$, AVPU
  - Must implement ‘track and trigger’ systems
  - 4 levels of escalation

- **Acute medical care – RCP Oct 2007**
  - Minimum clinical dataset for physiological obs
  - NHS EWS – across care pathway
  - Standardised observation charts

- **NPSA – November 2007**
  - Recognising and responding appropriately to early signs of deterioration in hospitalised patients
How far have we come?

Much has been achieved in recognising and responding appropriately to deterioration but a lot more needs to be done.

We must improve the reliability and timeliness of observations and the management of fluids and measure that improvement.

We should embrace technology that supports staff to ‘get it right’ and no longer accept systems of care that set them up to fail.

We must do more to recognise and act on sepsis.

We can no longer accept that in-patient cardiac arrests are largely unavoidable – they are frequently the outcome of failure to rescue.
Why is it so difficult to consistently and effectively do nursing observations?
System, not person failure

Reason’s model of accident causation (1990)

Unsafe acts eg:
- failure to observe,
- escalate care

Unsafe supervision eg:
- poor training about obs taking

Organisational factors eg:
- complex EWS, staffing mix, environment

Preconditions for unsafe acts eg:
- absent staff, heavy workload

Unsafe acts eg:
- failure to observe, escalate care

Latent failures

Active failures
More monitoring ...
More policies ...
More training ...
The holes in the cheese

- Observations continue to be largely taken at set times rather than in response to patient need
- Most observations taken by untrained staff
- EWS complex to calculate – particularly in sick patients
- The sickest patients are the least likely to have their observations taken on time (as per hospital protocol)
- Observations continue to be frequently missed at night
- Multiple paper-based records and charts
- Reluctance to escalate
Fluid balance???

- What is the goal?
- What is the plan?
- Which patients need a fluid chart?
- Which patients need a catheter?
- When should totals be calculated?
- How much tea in a cup??

The patient was placed on a fluid balance chart.
2. Intelligent Fluid Management Flows

This diagram was developed to show the process that Intelligent Fluid Management will follow and how education and communications are required at each and every stage of the process. The principles that follow in the next section follow this flow.
Embracing technology - more consistent care delivery ...

- More legible charts
- 99% completeness of observations
- 40% quicker to record observations / escalate care
- 100% accuracy EWS
- More timely observations
- More observations through the night
- Improved communication
- Earlier intervention by medical teams
Transform from batch to need-based observations
(Acute medical admissions ward - CXH)

- VitalPAC drives timeliness of obs compliance towards protocol
- Greatest improvements in obs timeliness for highest EWS patient cohort
More accurate identification of high risk patients


(n= 198,755 obs from 35,585 episodes)

ViEWS

VitalPAC Early Warning Score

ViEWS = 5:
82% deaths identified by triggering
20.1% obs
Decision support
Immediate, at the bedside
Sepsis...a major medical emergency

Merinoff definition, 30th September 2010

- Sepsis is a life-threatening condition that arises when the body's response to an infection injures its own tissues and organs.

- Sepsis leads to shock, multiple organ failure and death especially if not recognized early and treated promptly.

- Sepsis remains the primary cause of death from infection despite advances in modern medicine, including vaccines, antibiotics and acute care.

- Millions of people die of sepsis every year worldwide
Stroke

67,000 deaths per year
FAST Campaign
National Stroke Association
Target: Specialist assessment in 60 min
40% mortality reduction

Myocardial infarction/ ACS
89,000 deaths per year
National Infarct Angioplasty Project
Target: Call-to-needle 60 min
Door-to-needle 20 min

Sepsis
42,000 deaths per year
........
The Sepsis Six

1. Give high-flow oxygen via non-rebreath bag
2. Take blood cultures and consider source control
3. Give IV antibiotics according to local protocol
4. Start IV fluid resuscitation Hartmann’s or equivalent
5. Check lactate
6. Monitor hourly urine output consider catheterisation

within one hour

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Deterioration or failure to rescue?

‘A cardiac arrest call is, more often than not, a red flag being waved, that not everything that could or should have been done, has been done, rather than a sign of a healthcare system 'doing everything.'

‘The concept and culture of cardiac arrest calls, cardiac arrest teams and cardiac arrest trolleys needs to be replaced with the concept and culture of emergency calls, emergency teams and emergency trolleys.’

Dr Alex Stone, Consultant, Southend NHS Foundation Trust
1960s Resuscitation

- It works in theory, so….
- Little or no structured education
- Poor and variable in-hospital response systems
- **14%** survival to discharge *

* McGrath, 1987
Resuscitation in 2011

• Extensive evidence base
• Extensive staff education programmes
• Highly coordinated in-hospital response
• 17% survival to discharge *

* Peberdy et al, 2003
Is this really where we can make the biggest impact on practice?
Reducing in-patient cardiac arrests

Improve observation timeliness and reliability, individualised around patient need

Measure improvement and target weakness in the system

Review fluid management protocols and use fluid charts wisely

Implement and embed the ‘sepsis six’ throughout the organisation – *think sepsis!*

Promote changes to the culture around cardiac arrests, resuscitation teams and training

Embrace technology to improve recognition and to free up time to care
Fewer deaths
28% lower death rate over 28 mths - 1,000 bed hospital
Failure to rescue
Avoidable patient deterioration & complications
Questions?

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