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Critical Care Provision Outside the ICU

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Care Perspectives

‘Patients who are admitted to hospital believe that they are entering a place of safety, where they, and their families and carers, have the right to believe they will receive the best possible care. They feel confident that, should their condition deteriorate they are in the best place for prompt and effective treatment. Yet there is evidence to the contrary’ (NICE, 2007, p.5).

‘Although 90% of acutely ill patients receive good care, as much as 10% do not’ (NCEPOD, 2005, p.3).



Background

- NHS Perspective
 - Changing health care provision
 - Technological developments
 - Aging population
 - Complexity of medical and surgical treatments
 - As a consequence
 - Number of acutely ill patients increasing
 - Critically ill patients found throughout acute settings
- Academic rationale
 - Clinical backgrounds
 - Acute & Critical Care Masters Programme
 - Doctorate Research

Presentation aims



- Analyse suboptimal care
 - Impacts/rationale
- Multi-professional evidence-base
 - International/National perspectives
 - Local perspective – examples supporting, explaining or contradicting & adding to the evidence base
 - Qualitative local study exploring clinical staff's perspectives
- Potential solutions/discussion points

Suboptimal Care

- Seminal Paper - Confidential inquiry analysed care prior to ICU admission (McQuillan et al. 1998)
- Most early papers/research medically focused and led
- Major matters of concern particularly in standards of acute care on general wards
 - Failure to recognise or appreciate the severity of the problem/deterioration
 - Insufficient/untimely implementation of treatment/management options

Failure to Rescue

- Acutely ill patients require close surveillance with timely identification of any deterioration, and prompt, effective response to the deterioration – if not achieved ‘failure-to-rescue’ has occurred (Clarke, 2004)
- Failure-to-rescue/suboptimal care - severe and unnecessary consequences in morbidity and mortality rates for the acutely ill patient; a contributing factor to as many as one third of hospital deaths (NICE, 2007)



International Issue

- International, multi centre, prospective, observational study over three days in 2000
- UK, Australia and New Zealand
- Patients who are deteriorating or recovering are not always well managed
- Proportionally more deaths in UK (52.3% v 35.3%)

Increased ICU beds and Medical Emergency Teams (MET) were expected to positively influence outcomes from critical illness (Kause et al., 2004).

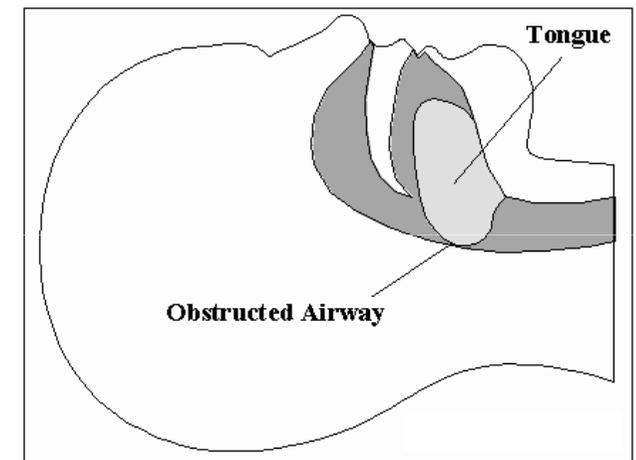


Failure to Rescue

- Many influencing variables resulting in treatment being delayed, inappropriate or both (NCEPOD, 2005)
- Cardiac arrest is often predictable (RCUK, 2005)
- Action taken during the early stages of acute illness can prevent deterioration (Smith & Poplett, 2002)
- 60% of adverse events were preceded by documented evidence of abnormal physiology for periods of up to 24 hours prior to a primary event (Kause et al., 2004)
- Mortality rates: 0.7% deaths – no physiological abnormalities, 4.4% with one, 9.2% with two and 21.3% with three or more (Goldhill & McNarry, 2004)

Antecedents

- Early detection and appropriate management is likely to result in positive benefit for patients
- Antecedents identified
 - Threatened airway
 - unrecognised or inadequately treated hypoxaemia
 - **Respiratory rate <5 or >36**
 - Pulse rate <40 or >140
 - Systolic BP <90 mmHg
 - Fall of Glasgow Coma Scale (GCS) by two points or more
 - Prolonged seizure activity



Areas of Concern

- General wards as opposed to Critical Care areas, Emergency Departments or Theatres (McQuillan et al., 1998; McGloin et al., 1999)
- Patients on general wards also had a higher rate of significant antecedents recorded for longer periods prior to major adverse events (Hillman et al., 2002)
- More patients from general wards were late admissions to intensive care or required ICU which may have been unnecessary
- A higher %age of deaths occurred in patients admitted to ICU from general wards and many of these deaths were described as avoidable (McGloin et al., 1999)
- **Tip of the Iceberg (Goldhill et al. 1999; NPSA, 2007a). Not recognised or reported in the evidence?**

Local Perspective: Incidents



“... patients are so vulnerable on the wards if they do suddenly deteriorate ... we went to see one chap ... he had suddenly gone into renal failure ... it was a busy elderly ward ... when we got there they hadn’t even done a set of observations ... his blood pressure was like 70 systolic ... he hadn’t passed urine for the last 12 hours. No fluid balance was done I don’t think there was a MEWS score within days and although he had been treated acutely, initially (on MAU) because he was then out on the elderly ward and expected to go home at some point ... they didn’t see the relevance ... which is fine if it all goes to plan you know they are going home and you concentrate more on the rehab ... you think everywhere runs like ... here (MAU) ... but we’ve got doctors based here all the time and we’re well staffed”

MAU Sister on placement with outreach team

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Early Warning Scoring System – Adult

Score	3	2	1	0	1	2	3
Respiratory Rate		<8	8-11	12-20	21-25	26-30	>30
Oxygen saturation	<85%	86-89%	90-94%	>95%			
Respiratory Support/Oxygen therapy		>60% O ₂	Oxygen therapy				
Heart Rate		<40	41-50	51-100	101-110	111-130	>130
Blood Pressure (Systolic)	<70	71-80	81-100	101-179	180-199	200-220	>220
Central Nervous System (CNS)			Confusion	A Alert and responsive	V Responds to verbal command	P Responds to painful stimuli	U Unresponsive
Urine Output (millilitres in Last 4 hours)	<80	80-120	120-200		>800		

This scoring system should be used on every adult patient after each set of observations have been taken.

If the score is 3 or above follow the EWS flow chart overleaf.

Remember that if a patient's score is less than 3, but their condition is causing you concern help should still be sought using the EWS flow chart.

Critical Care Areas:



“[on ICU] ... you have got the staff, you have got the staffing levels and you have got the staff you need, yes you may have one day that you are two people short but for those two people they will not open two beds, they cannot physically open those beds, they (the patient) will go elsewhere”

Staff nurse ICU

Time & Resources



“It’s really difficult to pick up on it (patient deterioration) when you are busy ... sometimes it is just a nightmare ... and I think that’s why critical illness falls down and you haven’t the time... say you need to do half hourly obs(ervations) and when you have 16 patients and you are running ten to theatre and back and you have got the phone constantly ringing and you have patients who are (poorly) and you are trying to sort that out ... it is just not viable and I know they say the critically ill patients is the one you should be dealing with but if you have one person dealing with that one patient it all takes time and there is three of you on the ward the others (patients) are going to be critically ill by the end of that day because you are not doing what you should for them so it is really hard to prioritise”.

Experienced Staff Nurse

Staff

- Nurse:Patient ratios - Significant impression on quality & mortality rates (Safford and Schlotfeldt, 1960; Blegen et al., 1998; Aiken et al., 2003; Torangeau et al., 2007; Rafferty et al., 2007)
- RN:HCA ratios - Hospitals should maximise the proportion of RNs in providing direct care, even if this results in lower total numbers of nursing personal. The acutely ill patient requires RN with an increased knowledge and skill base to enable sophisticated clinical judgements to be made to provide safe, high quality care for patients' multi-faceted needs (Clarke, 2004;Tourangeau et al., 2007)

Cardiac Arrest Management

- Major issues in the recognising and managing a cardiac arrest
 - Not recognising when a patient has had a cardiac arrest
 - Not initialising resuscitation procedures
 - Not calling for required expert teams to implement advanced life support
 - Members of team late/failing to attend
 - Missing or faulty emergency equipment

(Resuscitation Council (UK)
2005; NPSA 2007a)

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Cardiac Arrest Management



- “...I mean I have attended arrests on other wards where staff are just sort of stood there saying the patient is there! Yes they are just like stood there pointing to where they (the patient) are, they are not actually anywhere near the patients ... it’s true! Not even pulled the bed out at the back, back rest off, initiated anything to do with maintaining the airway ... nothing!!”

ALS Provider

DNAR

- Insufficient use of treatment limitation plans when positive patient outcomes were no longer predicted (Smith and Poplett, 2002)
- Death is not necessarily an unsuccessful outcome if it is inevitable, it is obviously only an unsuccessful outcome if it could have been avoided

Problem Cases:

Evenings & Nights:

- Reduced number of staff – particularly experienced and senior
- Less facilities and resources - delay in reviews or investigations
- Junior staff do not always seek support when necessary (NCEPOD, 2005)
- Positive outcomes were often linked to promptness of senior medical review (Seward, 2003)

Available support

“You are constantly phoning doctors ... if you need a doctor you need one there and then, you are not just bleeping them for the good of your health ... as a nurse you can only do so much ... So you have got to have them there, you can only manage a situation so far before you get to a point where you need help”

Newly qualified ward based RN

In contrast on Critical Care:

“You have got the consultant anaesthetist, you have got the registrar... you only have to pull a buzzer and they come running. You know in a couple of seconds, you have got everybody there that you need”

ICU RN

Variables

Communication failure – Biggest contributing problem (NPSA, 2007b)

- Failure in
 - Verbal and written, particularly staff handovers and transfer to other areas of care
 - Identifying problems and seeking senior advice (NPSA, 2007a)
 - Nurses communicating effectively and convincingly, especially in persuading medical staff to visit or take action (McArthur-Rouse, 2001)
 - Junior Medical staff's inexperience or reluctance to seek help from senior staff – if they knew which person to call (NPSA, 2007a)

Communication



“it is not always possible to get a doctor ... and it is not always possible to get a doctor to listen to you when you can get hold of one ...and they don't always agree when you have a difference of opinion”

MAU RN

General Wards v MAU

“We were able to appreciate our skills on MAU, we went to other areas and saw the things that they had and hadn’t done to patients on other wards and it was quite frightening really to actually sit there and think if this patient was managed on MAU this whole situation would be managed so differently”

MAU RN

“I think (on MAU) you just get to know little bits about lots of things rather than, you know, just focusing on just one area. I think it’s the volume of acutely unwell people we get as well”

MAU RN

Specialised Practice



“There are certain things that they can deal with from a (specialist) point of view they are very good at dealing with patients that come in bleeding and they bleed and bleed and bleed worse than gastric bleeds and they drop their blood pressure and their haemoglobin drops it can be 12 when they come in and it can be 6 within an hour, they know how to deal with those things but we have the other patients, the outliers from all the other areas and they don't know how to deal with them properly and that is where the crutch of the problem is on these areas now as we have outliers practically all the time”

Experienced Staff Nurse

Specialised Practice (cont)



“One of the patients we went to see was a medical patient on a surgical ward and he was a surgical patient but he had medical issues and he was going between surgeons and medics ... his main problem was surgical so he was on a surgical ward, but the nurses were not knowledgeable of medical problems and on top of that they were quite reluctant. Their attitude was that they were not their problems so they were not interested in him”

CCU RN

Knowledge & Skills

- The prime cause of substandard care of the acutely unwell patient in hospital is the lack of medical and nursing staff's acute care **knowledge and appreciation** of clinical urgency (Smith & Poplett, 2002; DH, 2003; NCEPOD, 2005)
- Registered Nurses comprise the surveillance system for identifying complications and changes in the patients' condition. When at the bed-side, the RN is in the best possible position to initiate appropriate assessment and management and to minimise negative outcomes for the acutely ill patient (Clarke, 2004)

Education and training



- The DH and Modernisation Agency (2003) identified that current education does not properly equip healthcare providers to care for critically ill patients, particularly those outside designated critical care departments
- But little is known of the specific training needs of the ward staff caring for these patients (McArthur-Rouse, 2001).

The Educator's role



- ABCDE approach integral aspect of pre-registration nurse training (Prescott and Garside, 2009)
- Acute Illness Course (Garside and Prescott, 2008)
- MSc Health Studies (Acute and Critical Care)
- Impact?

“It is very evident that these [new] staff have already assimilated significant knowledge re assessment of sick patients and prevention of deterioration. Its refreshing to have staff for whom the ABCDE approach is second nature. The fact that most of them work so fluidly through the initial assessment and management of the patient in training scenario’s indicates to me that they are almost certainly using it in their every day practice. NHSLA standards require us to train staff in the recognition of the sick patient ... something that we really struggle to get across to some of our more experienced and ‘traditionally trained’ staff ... we are definitely noticing a significant improvement in those staff who have been trained by you. We have seen a new cohort of staff (in our training rooms at least) who are willing to learn, willing to actively and enthusiastically participate and who arrive with a solid foundation of knowledge regarding assessment and management of sick patients.”

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Maintaining Competence

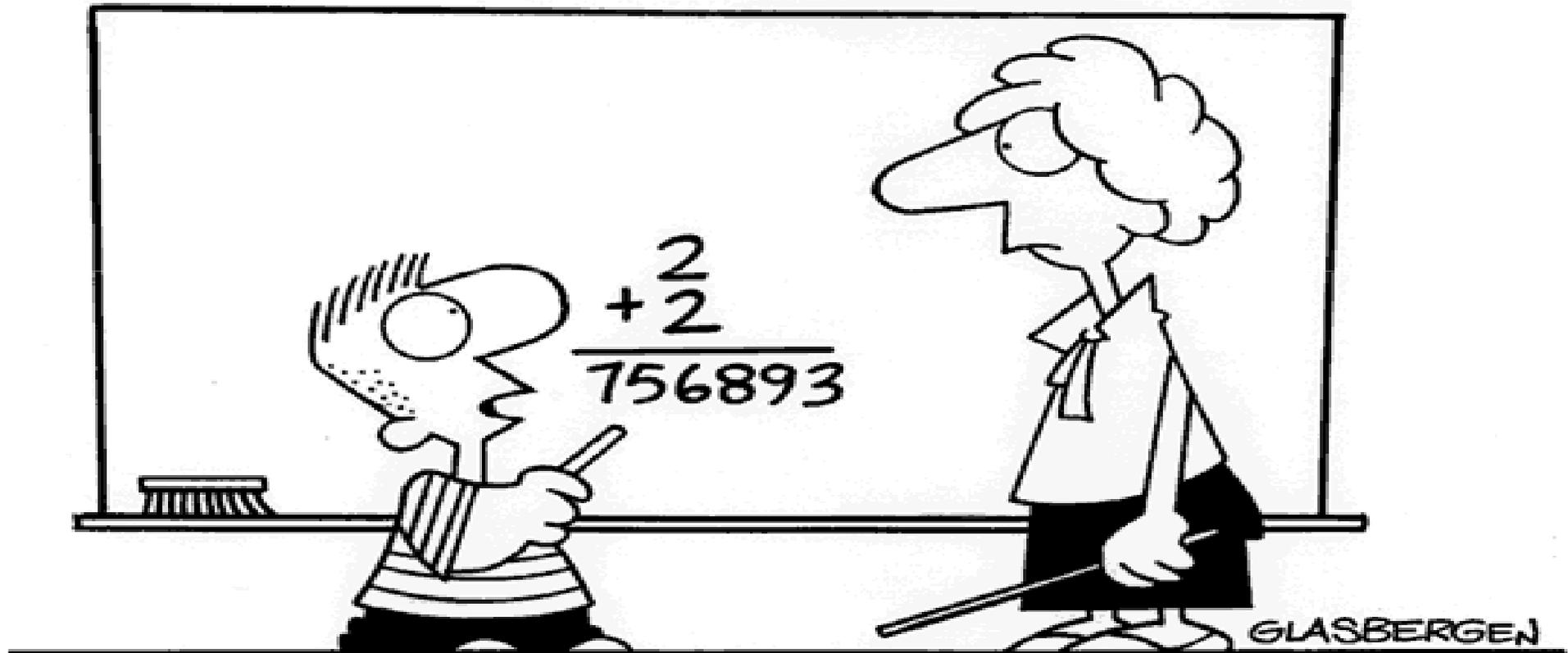
“... you do deskill and it is alright doing mandatory training once a year if you do things like your basic life support one year ... But if you don't use it until a year later, or you don't use it at all that year then when it comes to the update, you have forgotten your skills”

Ward RN



Bloomfield, Roberts and While (2010)

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**“In an increasingly complex world,
sometimes old questions require new answers.”**

Summary

- The findings of this locally conducted study are resonant with the national and international picture the occurrence of the suboptimal care of acutely ill patients in non-critical care settings (NCEPOD, 2005; NPSA, 2007a; NICE, 2007)
- Suboptimal care was in evidence on the general ward (2008/2009)
- Subjective belief that knowledge of staff and the standards of care were superior on critical care & assessment units to those on general wards.

Any Questions?

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Thank you for listening

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