Critical Care Networks of England, Wales and Northern Ireland

West Yorkshire Critical Care & Major Trauma Operational Delivery Networks

Patient Acuity & Levels of Care Point Prevalence Audit

Audit Guidance Notes

January 2019

Contents

Background

1.1 Adult Critical care underpins all secondary and specialist adult services (NHS England 2019) and is one of the core services needed by an increasing number of patients who are amongst the sickest in the hospital. As such it is acknowledged that adult critical care no longer refers only to the services delivered in discrete locations such as Intensive Care and High Dependency Units, it also encompasses the teams who support patients in general ward areas who at risk of deterioration.

Many reports however suggest that the recognition and management of acutely ill or at-risk patients remains suboptimal across the country (NOrF 2003, 2011, NCEPOD, 2005, 2007, 2009, NPSA, 2007; NICE CG 50, 2007, Patient Safety First Campaign 2008, Royal College of Physicians 2011, 2012). The most recent report from the Royal College of Physicians (2017) stated that early detection, timeliness and competency of clinical response are a triad of determinants of clinical outcome in people with acute illness. All of the above reports have identified the importance of recognising and responding to the needs of the acute and critically ill patient in hospital, which includes caring for them in an environment appropriate to their clinical needs. Recent years have seen great changes in the way critical care is delivered, with more capacity, new ways of working and service improvements. Yet there remains a crucial lack of information regarding the legitimate burden of critical care need, in particular level 1 care, at both local and national levels.

The Critical Care Stakeholders Forum (DH 2005, p 11) recommended that critical care capacity in both designated critical care areas and on general wards should be evaluated at a local level. Commissioners are recommended to work with their local Critical Care Networks' and Trusts' Critical Care Delivery Groups to achieve co-ordinated and integrated planning and delivery of the service.

1.2 Comprehensive Critical Care (DH, 2000) recommended that critical care services be planned and delivered systematically across the whole health system introducing the term "critical care without walls". This concept recognised that Acute Trusts provide care for critically ill patients in many clinical areas and not

just in the designated critical care units. This new classification of critical care was based on patient need rather than physical location.

1.3 As such the established categories of Intensive Care and High Dependency were renamed Level 3 and Level 2 care respectively and two new categories were added. Level 0 was introduced to refer to patients whose needs could be met through normal ward care in an acute hospital; Level 1 referred to patients at risk of their condition deteriorating, or those relocated from higher levels of care whose needs could be met on acute wards with additional advice and support provided from the critical care team.

1.4 Over the past 20 years Critical Care Outreach Teams have been introduced across many organisations to provide this bridge between critical care and sick and deteriorating patients in non-critical care areas across acute trust. The role of the Critical Care Outreach Teams has been emphasised in the recently published NHS Standard Contract for Adult Critical Care and GPICS V2 in supporting organisations in the implementation of their strategies to recognise the deteriorating patient, deliver a response to deteriorating health on wards and deliver the effective follow up of patients post critical care discharge. Where teams exist they provide varying cover and differ significantly in make up.

Table1. Levels of Care (ICS, 2009)

Level of Care	Description
0	Patients whose needs can be met through normal WARD care in an acute hospital
1	Patients at risk of their condition deteriorating, or those recently relocated from higher levels of care, whose needs can be met on an acute WARD with additional advice and support from the critical care team.)
2	Patients requiring more detailed observation or intervention including support for a single failing organ system or post-operative care and those 'stepping down' from higher levels of care.
3	Patients requiring advanced respiratory support alone or monitoring and support for two or more organ systems. This level includes all complex patients requiring support for multi-organ failure.

Introduction

2.1 Comprehensive Critical Care (DH 2000) changed the emphasis on critical care from defining specific critical care areas to identifying patient need and responding to that need wherever it occurs in the hospital setting. Anecdotal evidence from Outreach Teams across the Network suggests that patient acuity and levels of unmet need on general wards is high. The purpose of this audit is to provide actual numbers of patients requiring the different levels of care within an organisation on a specific day within the acute bed base. It is also noted that there has been a slow but growing move nationally towards the development of Level 1+ areas to accommodate some of the higher acuity patients thereby reducing some of the burden both on general ward areas and the Level 2 beds within organisations. This information can help inform such developments.

2.2 The aims of the Level of Care Point Prevalence Audit are as follows:

- To determine the numbers of acutely ill patients, and those with the potential to become critically ill within the participating acute hospitals in West Yorkshire. This is the legitimate burden of acute and critical care need within each participating hospital
- Offer recommendations based on findings

(Readers are reminded that this document analyses patient 'acuity' only, and takes no account of patients' nursing 'dependency').

2.3 For the purpose of this audit level 2 has been divided in to sub sections a & b. This allows auditors to differentiate between patients where care escalation is appropriate and those patients where escalation would be unsuitable but they may be triggering the NEWS. More information and examples are available in appendix 1.

Level 2a	Patients who would be for escalation of care. Included in this group are those patients who have a DNACPR but may benefit from further critical care intervention other than resuscitation
Level 2 b	Patients who have a DNACPR order and /or would not be suitable for further escalation of care

Guidance Notes

The guidance notes have been put together to try and answer questions that may arise when planning and undertaking the audit. Clearly these notes are not exhaustive and telephone advice will be available on audit day. A teleconference is also planned with Lesley Durham, Network Director, NoECCN for Wednesday 5th February 2020 at 14.00. Dial in details will be circulated prior to the event.

Pre audit arrangements

3.1 Prior to the audit being undertaken agreement must be in place from the Trust.

3.2 The date of the audit **is March 3rd 2020**.

3.3 Each Trust will be required to identify a lead responsible for co-ordinating the audit and liaising with the WYCCODN

3.4 The audit lead will need to be determine the size of team required to complete the audit and identify who the team will be. Appendix 2 gives a guide to trust acute bed base and team size required to the undertake audit.

3.5 The Audit Lead will be responsible for ensuring that all clinical areas within the Trust are informed the audit is being undertaken and outline what is expected on the day.

3.6 There needs to be a plan prepared in advance identifying which staff will be auditing which clinical areas on the day

3.7 Ensure all resources are available for staff to commence the audit at 08.00 e.g. if using paper audit forms enough to cover the trust; clip boards; pens etc.

Audit Day Information

4.1 The audit will take place between the hours of **08.00 and 18.00**

4.2 All patients in acute beds will be included in the audit. Areas to be covered are set out below:

- All acute wards
- A&E majors and Resus
- CCU
- Maternity – all areas
- Recovery/PACU areas should be surveyed for level 3 boarders
- Critical Care Areas
- Any higher level care areas e.g. High Observation Beds (HOBs) Respiratory Units

Further information available in Appendix 3

4.3 Each clinical area should be visited once during the audit period

4.4 Each patient will require assessment to determine their latest NEWS score and Level of Care (LoC) at the time of audit (Appendix 4)

4.5 Additional information needed to be collected will be whether a patient has an:

- Treatment Escalation Plan (TEP)
- End of Life Care Plan (EoLCP)
- Do not attempt CPR order (DNACPR)

Audit Tips

5.1 To support your audit team consider using Student Nurses; Trainees; RnD Staff; Audit staff; Resus Department Staff.

5.2 Try to work in pairs as this will speed up the process

5.3 Seek consensus agreement as to what constitutes a Treatment Escalation Plan in your organisation and what it is called prior to the audit otherwise this could cause uncertainty and delays for staff.

Post Audit

6.1 Following the audit where possible raw data should be input in to the spread sheet provided by the WYCCODN

6.2 If this is not possible all paper documentation should be returned to the WYCCODN

6.3 Please ensure all data is completed correctly and that information such as speciality; ward type; number of beds; number of patients. It will be very difficult to the ODN to analyse data without all the information fields completed.

References

Department of Health (2000) Comprehensive Critical Care: A Review of Adult Critical Care Services London,

Department of Health http://www.doh.gov.uk/pdfs/criticalcare.pdf

Guidelines for the Provision of Intensive Care Services (2015)

Intensive Care National Audit and Research Centre (2018)

Intensive Care Society (2009) 'Levels of critical care for adult patients London, Intensive Care Society'

National Outreach Forum 2003 'Critical Care Outreach 2003: Progress in Developing Services' NHS Modernisation Agency.

National Outreach Forum 2010 http://www.norf.org.uk

National Outreach Forum (2012) 'Operational Standards and Competencies for Critical Care Outreach Services' http://www.norf.org.uk

NCEPOD (2009) "Adding insult to injury". A review of the care of patients who died in hospital with a primary diagnosis of acute kidney injury. National Confidential Enquiries into Patient Outcome and Death (NCEPOD), June 2009

NCEPOD (2007) A Journey in the right direction? A Report of the National Confidential Enquiry into Patient Outcome and Death London

NCEPOD (2005) "An Acute problem" - A report of the National Confidential Enquiry into Patient Outcome and Death.

NHS England (2019) 'NHS Standard Contract for Adult Critical Care' NHS England/d05 https://www.england.nhs.uk/commissioning/spec-services/npc-crg/group-d/d05/

NICE Clinical Guideline 50 (2007) Acutely ill patients in hospital: recognition of and response to acute illness in adults in hospital London

National Patient Safety Agency (2007) Recognising and responding appropriately to early signs of deterioration in hospitalised patients London

National Patient Safety Agency (2007) Safer care for the acutely ill patient; learning from serious incidents. London

Patient Safety First Campaign 2008
http://www.patientsafetyfirst.nhs.uk/content.aspx?path=/

Royal College of Physicians (2011) 'Standardising the Assessment of Acute Illness Severity in the NHS:

Recommendations for a National Early Warning Score' National Stakeholders Consultation March 2011

Appendix

Appendix 1 - Expanded Guidance on Levels of Care Based on ICS guidelines (2009) and adapted by the NoECCN Outreach Group 2019

Level 0 Criteria	**Examples**
Requires hospitalisation Needs can be met through normal ward care	Intravenous therapy Observations required **less** frequently than 4 hrly

Level 1 Criteria	**Examples**
Patients recently discharged from a higher level of care	Patients requiring a minimum of 4 hrly observations
Patients in need of additional monitoring/clinical input or advice	
Patients requiring critical care outreach support service	Abnormal vital signs but not requiring a higher level of critical care. Risk of clinical deterioration and potential need to step up to level 2 care. Patients fulfil the "medium" risk category as defined by NICE Guideline No: 50.
Level 2 Criteria	**Examples**
Level 2 patients who trigger the level 2 criteria will be divided into two groups	**Level 2a** - Patients who would be for escalation of care. Included in this group are those patients who have a **DNACPR** but may benefit from further critical care intervention other than resuscitation. **Level 2b** - Patients who have a **DNACPR** order and / or would not be suitable for further escalation of care.
Level 2a Criteria	**Examples**
Patients needing pre-operative optimisation	Cardiovascular, renal or respiratory optimisation required prior to surgery. (Invasive monitoring inserted to assist optimisation) (arterial line, and CVP as a minimum)
Patients needing extended postoperative care	Immediate care following major elective surgery. Emergency surgery in unstable or high risk patients. Where there is a risk of postoperative complications or a need for

	enhanced interventions and monitoring.
Patients stepping down to Level 2 care from Level 3	Requiring a minimum of hourly observations. At risk of deterioration and requiring Level 3 care again.
Patients receiving single organ support *(Exceptions: Basic Respiratory and Basic Cardiovascular Support occurring simultaneously without any other organ support should be considered as Level 2 and Advanced Respiratory Support alone is Level 3).*	
Patients receiving Basic Respiratory Support ***(NB: Where Basic Respiratory and Basic Cardiovascular support are provided at the same time during the same critical care spell and no other organ support is required, the care is considered to be Level 2 care)***	Indicated by <u>one</u> or <u>more</u> of the following: Mask / hood CPAP or mask / hood Bi-level positive airway pressure (non-invasive ventilation) Patients who are intubated to protect the airway but needing no ventilatory support CPAP via a tracheostomy More than 50% oxygen delivered by face mask. (*Note, more than 50% has been chosen to identify the more seriously ill patients in a hospital)*. Short-term increased in Fi02 to facilitate procedures such as transfers or physiotherapy do not qualify. Close observation due to the potential for acute deterioration to the point of needing advanced respiratory support *(e.g. severely compromised airway or deteriorating respiratory muscle function)* Physiotherapy or suction to clear secretions at least two hourly, whether via tracheostomy, minitracheostomy, or in the absence of an artificial airway. Patients who are recently (within 24 hours) extubated after a period (greater than 24 hours) of mechanical ventilation via an endotracheal tube. *NB: The presence of a tracheostomy used for long term airway access only does not qualify for basic respiratory support.*
Patients receiving Basic Cardiovascular Support ***(NB: Where Basic Respiratory and Basic Cardiovascular support are provided at the same time during the same critical care spell and no other organ support is required, the care is considered to be Level 2 care)***	Indicated by one or more of the following: Use of CVP line for monitoring of central venous pressure and / or provision of central venous access to deliver titrated fluids to treat hypovolaemia Use of an arterial line for monitoring the arterial pressure and / or sampling of arterial blood Single intravenous vasoactive drug used to support or control arterial pressure, cardiac output or organ perfusion Single /multiple intravenous rhythm Controlling drug(s) to support or control cardiac arrhythmias

Patients receiving Advanced Cardiovascular Support ***(NB: Basic Cardiovascular support will frequently occur prior to Advanced Cardiovascular support and should not lead to both Advanced Cardiovascular support and Basic Cardiovascular support being recorded at the same calendar day. Advanced Cardiovascular support supersedes Basic Cardiovascular support where this occurs.)***	Indicated by one or more of the following: Multiple intravenous vasoactive and / or rhythm controlling drugs when used simultaneously to support or control arterial pressure, cardiac output or organ / tissue perfusion, *(e.g. inotropes, amiodarone, nitrates). To qualify for advanced support status, at least one drug needs to be vasoactive* Continuous observation of cardiac output and derived indices *(e.g. pulmonary artery catheter, lithium dilution, pulse contour analyses, oesophageal Doppler, impedance and conductance methods)* Intra aortic balloon pumping and other assist devices Insertion of temporary cardiac pacemaker (criteria valid for each day of therapeutic connection to a (functioning external pacemaker unit)
Patients receiving Renal Support	Indicated by: Acute renal replacement therapy (e.g. haemodialysis, haemofiltration etc.) or Provision of renal replacement therapy to a chronic renal failure patient who is requiring other acute organ support in a critical care bed.
Patients receiving Neurological Support	Indicated by one or more of the following: Central nervous system depression sufficient to prejudice the airway and protective reflexes, <u>excluding that caused by sedation prescribed to facilitate mechanical ventilation or poisoning (e.g. deliberate or accidental overdose, alcohol, drugs etc.</u>) Invasive neurological monitoring or treatment e.g. ICP, jugular bulb sampling, external ventricular drain. Continuous intravenous medication to control seizures and / or continuous cerebral monitoring <u>Therapeutic hypothermia using cooling protocols or devices</u>
Patients receiving Dermatological Support	Indicated by one or more of the following: Patients with major skin rashes, exfoliation or burns *(e.g. greater than 30% body surface area affected)*. Use of complex dressings *(e.g. large skin area greater than 30% of body surface area, open abdomen, vacuum dressings or, large*

	trauma such as multiple limb or limb and head dressings)
Level 3 Criteria	**Examples**
Patients receiving Advanced Respiratory Support alone ***(NB: Basic Respiratory support will frequently occur prior to Advanced Respiratory support and should not lead to both Advanced Respiratory support and Basic Respiratory support recorded at the same calendar day. Advanced Respiratory support supersedes Basic Respiratory support where this occurs)***	Indicated by one of the following: Invasive mechanical ventilatory support applied via a trans-laryngeal tracheal tube or applied via a tracheostomy. Bi-level positive airway pressure applied via a trans-laryngeal tracheal tube or applied via a tracheostomy CPAP via a trans-laryngeal tracheal tube Extracorporeal respiratory support
OR **Patients receiving a minimum of 2 organs supported** ***(NB: Basic Respiratory and Basic Cardiovascular do not count as 2 organs if they occur simultaneously (see above under Level 2 care), but will count as Level 3 if another organ is supported at the same time)***	Examples: Basic Respiratory and Neurological support Basic Respiratory and Hepatic support Basic Respiratory and Renal support Basic Cardiovascular and Hepatic support Basic Cardiovascular and Renal support Advanced Cardiovascular and Renal support Advanced Cardiovascular and Hepatic support Advanced Cardiovascular and Neurological support

Appendix 2 - Estimated bed numbers

The table below provides a rough guide to the number of acute beds in each trust and an indicative number of staff required for audit purposes. Please note this is only a guide.

Trust	**Estimated number acute beds**	**Indicative team size for audit**
Airedale	400	4
Bradford	800	6
Calderdale & Huddersfield	850	6
Harrogate	400	4
Mid Yorkshire	650	6
Leeds Teaching Hospitals SJUH LGI	 1000 1000	 8 8

Appendix 3 - Clinical areas to be audited

The point prevalence survey for 2019 should I**nclude**:

- All adult inpatient areas
- A&E majors and Resus
- CCU
- Maternity – all areas
- Recovery/PACU areas should be surveyed for level 3 boarders
- Critical Care Areas
- Any higher level care areas e.g. High Observation Beds (HOBs) Respiratory Units

Excluded from the audit are the following areas;

- A&E minors and walk in centres
- Theatres, recovery and cath labs
- Day units, day wards and clinics
- Outpatients
- Endoscopy units
- Community /specialist hospitals
- Regular dialysis units
- Any paediatric facility

Appendix 4 - Level of Care Audit Tool

Level of Care Point Prevalence Study 3rd March 2020 **Data Collection Sheet**

Name of data collector: ……

Hospital:……. Speciality:……. Ward & Type:…… No. Beds:…….. No. Patients……

Patient	LOC	TEP	NEWS Score	DNACPR	EoLC	Off Ward	Patient	LOC	TEP	NEWS Score	DNACPR	EoLC	Off Ward	Patient	LOC	TEP	NEWS Score	DNACPR	EoLC	Off Ward
1							13							25						
2							14							26						
3							15							27						
4							16							28						
5							17							29						
6							18							30						
7							19							31						
8							20							32						
9							21							33						
10							22							34						
11							23							35						
12							24							36						

	Total		Total		Total
Level 0 patients		Level 2b patients		DNACPR	
Level 1 patients		Off Ward		EoLC	
Level 2a patients		TEP			

Enhanced care area Y/N		Enhanced nursing ratio Y/N	