NoECCN
North of England Critical Care Network

NHS

Distances in miles

Critical and Acute Care: Unmet Need 2016

The Report of a Point Prevalence Survey into Patient Acuity and Levels of Care

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With thanks to all the members of the Outreach Teams who collected this data and without whose hard work this report would not have been possible.

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Executive Summary

A point prevalence survey looking at the level of care needed by each adult in-patient was conducted by the Network Outreach Group throughout the North of England Critical Care Network in January 2016. A total of **4733** patients were surveyed across **8** Trusts for the level of care they required using adapted ICS (2009) definitions (appendix A). County Durham and Darlington NHS FT did not participate as they had insufficient or no Outreach personnel at the time. Many teams reported that their hospitals were *'much quieter'* than they had been over the preceding weeks. The survey demonstrated that:

- Within the participating Trusts (even on a 'quiet day') there is a shortfall in the number of level 2 beds required across the North of England Critical Care Network (NoECCN) when compared to patient need. This is greater in some Trust's than others.

- The overall level 2 occupancy of commissioned L2 beds was **67%.** However, many of these unoccupied beds were 'committed' (**24**) for elective / urgent surgical cases, and to facilitate 'step down' from level 3 care, in addition to making provision for unplanned emergency admissions. Some level 2 patients (**45**) were being managed on the wards when there were beds available within the critical care units. Based on the participating Trusts in *this* survey, and assuming full level 2 occupancy all of the time, approximately up to **23%** more level 2 beds are needed across the NoECCN.

- There are frequently level 1 patients occupying a level 2 bed awaiting discharge to the ward; on this occasion **8** were reported on the Directory of Services (DOS).

- The overall occupancy of level 3 beds was **65%.** As with level 2 occupancy, **13** of these unoccupied beds were 'committed' for elective / urgent surgical cases; this equates to a total of **76%** of the total available capacity being utilised or committed.

- Not all of the level 3 beds are able to be opened all of the time due to difficulties in providing nursing staff. Indeed **16 beds** were unstaffed and therefore the average occupancy of the staffed and available beds is closer to **78%** rising to **88%** if committed beds are included. This demonstrates sufficient capacity was available across the NoECCN on this particular day, although some Trusts are under more pressure than others. Occupancy levels of < 80% allow the Network to contain peaks of demand in some areas without recourse to long distance transfers outside agreed transfer groups.

- An average of around **33%** of all in-patients in acute hospital beds are in need of level 1 care and can therefore be defined as at risk of critical illness. Not all hospitals in the NoECCN have 24/7 critical care outreach services to help support these 'at risk' patients. The provision of Critical Care Outreach Teams (CCOT's) who are available to provide specialist care and support all day, every day in each hospital remains a NoECCN priority to ensure equity across the Network.

- In comparison with previous surveys undertaken in the North East and Cumbria Locality (2004/2005, 2008, 2009) and the NoECCN (2010, 2011, 2013, 2014, 2015) (available at www.noeccn.org.uk), the need for the different levels of critical care, particularly level 1 care, has remained reasonably constant which adds some face validity to the findings.

- Do not attempt resuscitation (DNACPR's) data was also collected. Prevalence varies from **9% to 30% (811 patients)**. This information contributes to the body of knowledge related to inpatient populations.

- End of life care pathway (EoLCP) data was also collected; however very few were identified **(52 patients).**

Recommendations

The North of England Critical Care Network (NoECCN) Outreach Group makes the following recommendations based on the findings of this and previous point prevalence surveys on levels of care and patient need:

1. **There needs to be further investment in level 2 beds in some Trusts. A local analysis of unmet need for critical care based on local surveys such as: rates of cancelled elective surgery; rates of refusal of admission to critical care, out of hours (22.00 – 07.00hrs) transfers to wards, and re-admissions to critical care (within 48hrs) will assist identification of need.**

2. **Level 2 patients (with organ failure) will attract a tariff; it is important to ensure these patients are in the appropriate critical care environment. Local analysis of distribution of level 2a patients may yield this information. Considerations should include; relationships with ward capacity and capabilities, and ability to discharge from critical care units.**

3. **Patient acuity is high and 1:3 ward patients are 'sick'. Critical Care Outreach Teams are the '*safety engines of the hospital'; e*ach hospital should establish and maintain a Critical Care Outreach Service (or equivalent) that is available 24 hours per day, 7 days per week. The size of the Outreach Team should reflect the number and acuity of patients within each hospital. Each Outreach Team should be supported by funded Consultant Intensivist sessions.**

4. **The nature of the role of the outreach practitioner means that they often work alone without direct supervision, underlining the need for robust role preparation, education and support. History taking and physical assessment courses are a *minimum* prerequisite before rotating onto the team. Additional training such as the NoECCN 'Critical Care Outreach Course' (CCOrC) is recommended**. **The National Outreach Forum (NOrF) has published national guidance on '*Operational Standards and Competencies for Critical Care Outreach Services*' (NOrF 2012) (appendix C). These are also available at www.norf.org.uk**

5. **The development of 'enhanced care areas' to meet the requirements of those patients needing care between level 1 & level 2 may help improve efficiency and patient safety. This may be around specialist areas such as colorectal and gastro-intestinal (GI) surgery or chronic respiratory support, where targeted observation or intervention is needed over a short period of time, and where no significant co-morbidity exists. These areas should have enhanced staffing levels and be appropriately equipped and supported by Critical Care Outreach.**

6. **Multi professional education and competency based training for all ward staff in recognising and treating the acutely ill patient should be a priority (NICE 2007). This can be provided by ALERT / AIM 'type' courses and locally developed acute and critical care skills programmes.**

7. **Robust data collection systems are in place supported by appropriate levels of administration staff to capture data on patients receiving critical care in ward areas. It is also recommended that all CCOT's participate in the National Critical Care Outreach Activity and Outcome Data programme introduced by the National Outreach Forum (NOrF) in January 2011.**

8. **The use of IT solutions to assist recognition and reporting of patients at risk should be considered.**

9. **The use of the live national critical care 'Directory of Services' (DoS) is strongly encouraged.**

10. **The Level of Care Survey is repeated annually and includes ALL acute Hospitals within the NoECCN. Trusts work towards ensuring this survey is embedded within the annual audit cycle.**

11. **The Level of Care of patients within Critical Care Units is regularly identified to ensure efficient use of critical care resources, and ensure that 'the right patient is in the right place'.**

12. **Consider systems to review level 0 patients to distinguish between acuity and nursing / carer dependency, and those patients awaiting hospital discharge and social care packages.**

1: Background

1.1 Adult Critical Care underpins all secondary and specialist adult services (NHS England 2014) and is one of the core services needed by an increasing number of patients who are amongst the sickest in the hospital. They, like all other patients deserve the best services possible. Recent reports 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). The most recent report from the Royal College of Physicians; the National Early Warning Score (NEWS): Standardising the assessment of acute-illness severity in the NHS (2012) state 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. Capacity should be expanded as required to provide appropriate care of all critically ill patients wherever they present.

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 must be planned and delivered systematically across the whole health care system known as "critical care without walls". This concept recognised that Acute Trusts' care for critically ill patients in many areas, not just within designated critical care facilities. A new classification of critical care services was introduced, based on patient need, rather than location. The established categories of intensive care and high dependency care were re badged as level 3 and level 2 care respectively and two new categories were added. Level 0 care is used to describe those patients whose needs can be met through normal ward care in an acute hospital and level 1 to describe 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. More recently the 'NHS Standard Contract for Adult Critical Care' (NHSE 2014) emphasises the role played by Critical Care Outreach Services in supporting provider organisations in the implementation of their strategies to recognise the deteriorating patient, deliver a response to deteriorating health on the wards and the delivery of effective follow up of patients post discharge from Critical Care.

Levels of Critical Care for Adult Patients (ICS 2009)

Level of Care	General Identification
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 failing organ system or post-operative care, and those stepping down from higher levels of care.
3	Patients requiring advanced respiratory support alone or basic respiratory support together with support of at least 2 organs systems. This level includes all complex patients requiring support for multi organ failure.

The Intensive Care Society in agreement with the Department of Health published revised expanded guidance on critical care patient classification in 2009

2: 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. The level of patient acuity and unmet need for critical care across the entire NoECCN was undertaken for the first time in October 2010, although has been surveyed on numerous occasions in the North East and Cumbria Locality (previously the NE&CCCN). This is the sixth NoECCN wide survey.

Anecdotal evidence from Outreach Teams across the Network and previous audit data suggests that patient acuity on general wards is high.

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

- To determine the numbers of acutely ill patients, and those with the potential to become critically ill within the NoECCN. 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 The survey has been undertaken across the entire Network. At the time of the survey the participating hospitals had **246 critical care beds; 123 level 3 and 123 level 2,** *(10 L2 beds & 10 L3 beds at CDDFT were not counted as they did not participate).* This critical care capacity has mostly been developed in individual hospitals on an 'ad hoc' basis based on perceived local need and service development. The North East and Cumbria Locality (NE&CL) is larger than the Tees Valley and South Durham Locality (TV&SDL) and therefore has proportionally more critical care beds.

2.4 The mean age of patients admitted to critical care beds in the NoECCN is 62.1 years (ICNARC Network Report 2014 -15). The increasing level of active surgical interventions and additionally resuscitation in an ageing population is likely to increase pressure on critical care beds in the next decade. A change in service delivery with an emphasis on day cases for those patients and procedures where this is appropriate means that those who are admitted to hospital as inpatients are likely to be much sicker than in the past. The result of this is that the acuity of the inpatient population is increasing.

3. Methodology

1.1 The survey was organised by the NoECCN Outreach Group. The date was arranged so that *all* adult patients in each Trust were surveyed on the same day. Permission to undertake the survey was sought by the Outreach Team survey lead within their own organisation. Each team organised the resources they required. The NoECCN Team was available to help with this process if assistance was needed. County Durham and Darlington Trust did not participate as they had insufficient or no Outreach personnel at the time.

1.2 The basic dataset collected was the ***level of care required by each patient*** (appendix D). The definition of 'level of care' was taken from the Intensive Care Society, 'Levels of Critical Care for Adult Patients, (ICS 2009).

These definitions have been further expanded by the Outreach Group (appendix A) to include level 2a; (those patients for whom escalation *would* be appropriate), and level 2b; (those patients whose physiology trigger level 2 care but for whom critical care *is not* appropriate). This amendment has been made in acknowledgement that many patients who are reaching the end of their natural life, will fit the level 2 criteria, and therefore artificially inflate the legitimate burden of level 2 needs. Only level 2a data is included within the results. Level 2b patients were reported, have been added to the L0 patients

in order account for all patients surveyed and allow correct calculations. In-patients who were 'off ward' at the time of data collection were excluded.

The clinical areas to be included in the survey were also agreed within the Group (appendix E).

Individual teams also collected additional information such as:

- National Early Warning Scores (NEWS) or local track and trigger tool; prevalence of 'triggers', frequency of recording and accuracy of calculation.
- Vital observations; frequency, completeness and distribution (e.g.; whether or not recorded overnight).
- Bed occupancy.
- 'Do not attempt CPR' orders (DNACPR's).
- End of life care pathway (EoLCP's)
- Staffing levels.
- Number of level 0 patients awaiting/fit for discharge home/normal place of residence.

With the exception of DNACPR's and EoLCP's, this information has not been included within this report.

1.3 The survey was carried out on the **18th of January 2016** between 08.00 -18.00 hrs. Point prevalence methodology provides a 'snapshot' of information and interpretation of the data must be considered in this context.

4. Results

A total of **4733** patients in the NoECCN were surveyed for the level of care they needed as determined by individual need rather than patient location. Critical Care Unit occupancy was ascertained from the Directory of Services (DoS) from the 12 midday 'SITREP' (appendix F). **71** patients were identified as 'off ward' at the time of data collection.

Table 1a:

NoECCN: Point Prevelance Level of Care Results 2016

- L0: 2964 (62.63%)
- L1: 1554 (32.84%)
- L2: 127 (2.68%)
- L3: 87 (1.83%)

Y-axis: Number of Patients Surveyed — X-axis: Level of Care
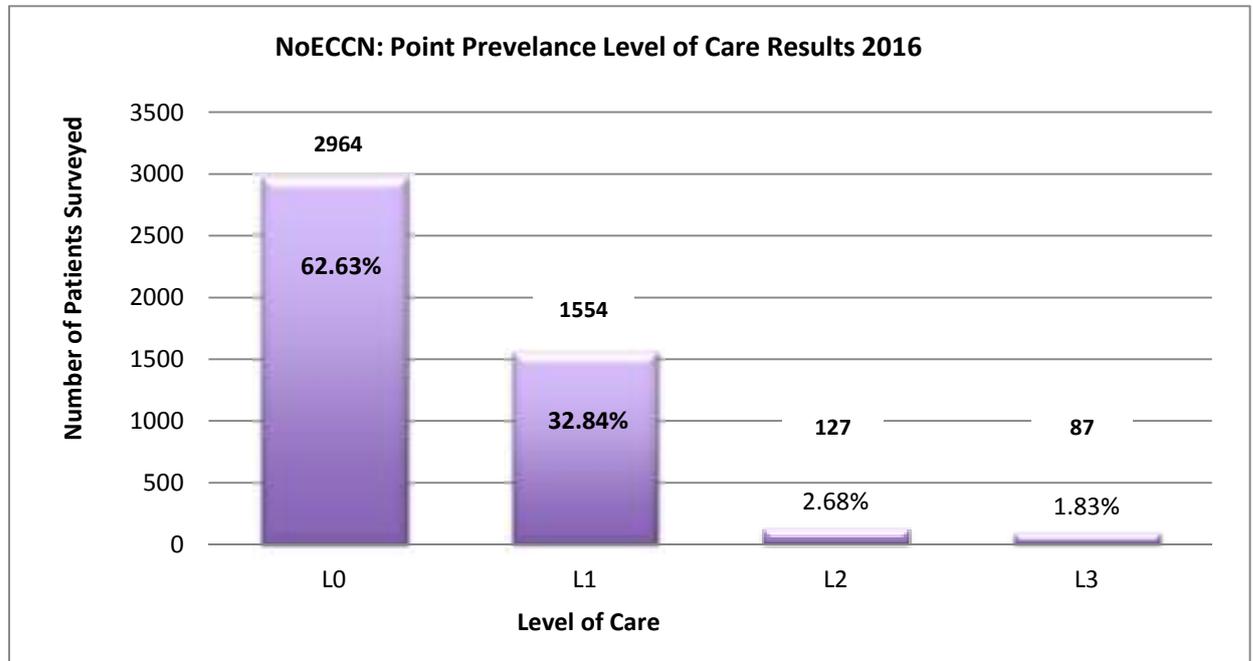
Table 1a: The results show that over **37% (1768)** of the in-patient population in our acute hospitals either need, or have the potential to need, input from the critical care team, or staff competent in delivering critical care during their inpatient stay.

Table 1b:

North of England Critical Care Network: Level of Care 2016 in Comparison (2010-2016)

Y-axis: % of Patients Surveyed — X-axis: Level of Care (Level 0, Level 1, Level 2, Level 3)

Legend: Oct-10, Oct-11, Jan-13, Jan-14, Jan-15, Jan-16

Table 2:

North of England Critical Care Network Levels of Care Need: Distribution by Hospital

4.1 Level 0 Care

Table 3:

North of England Critical Care Network: Level 0 Care Need by Hospital
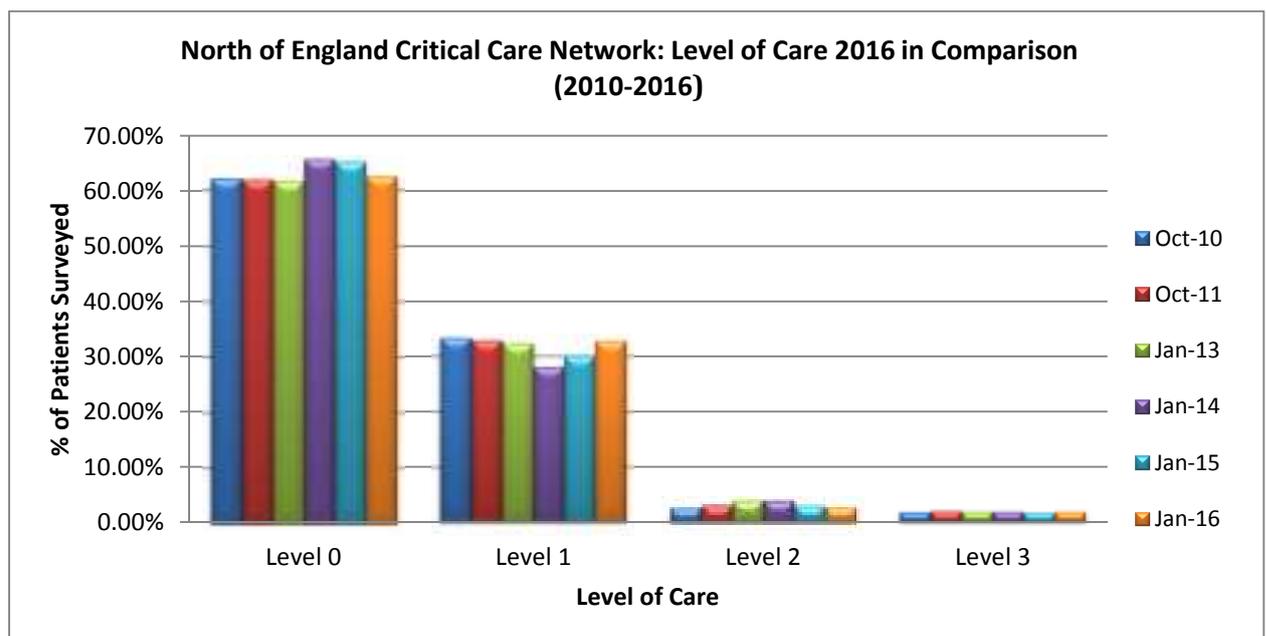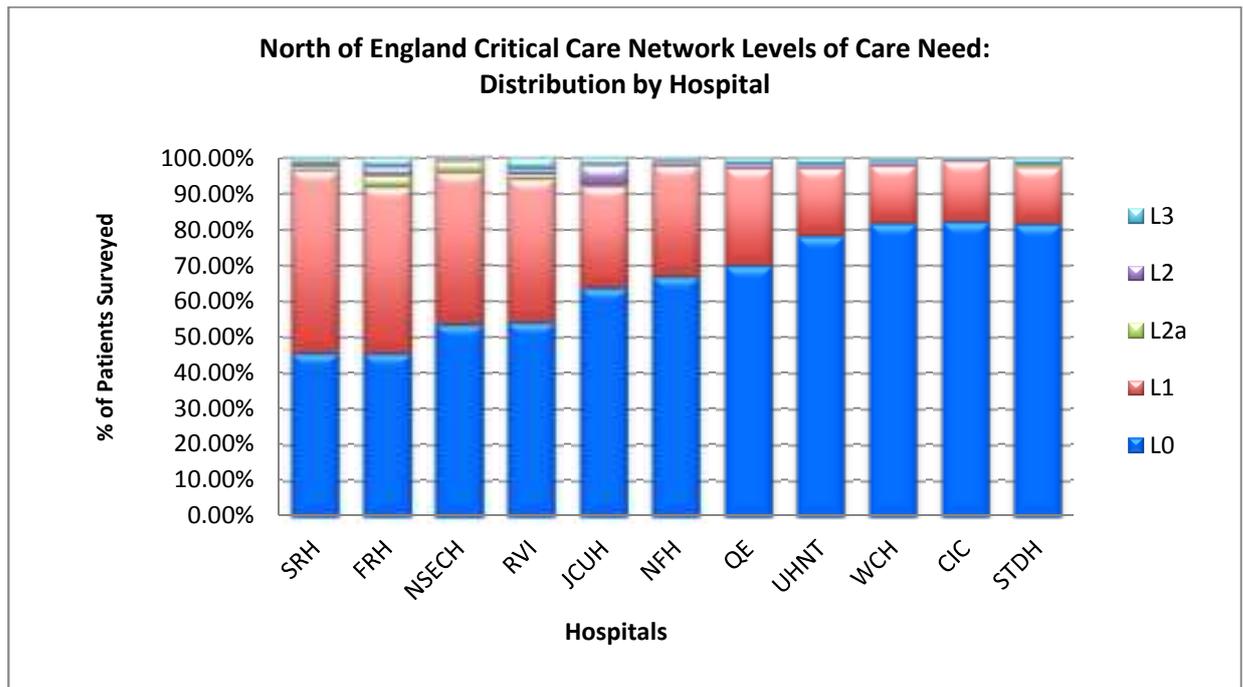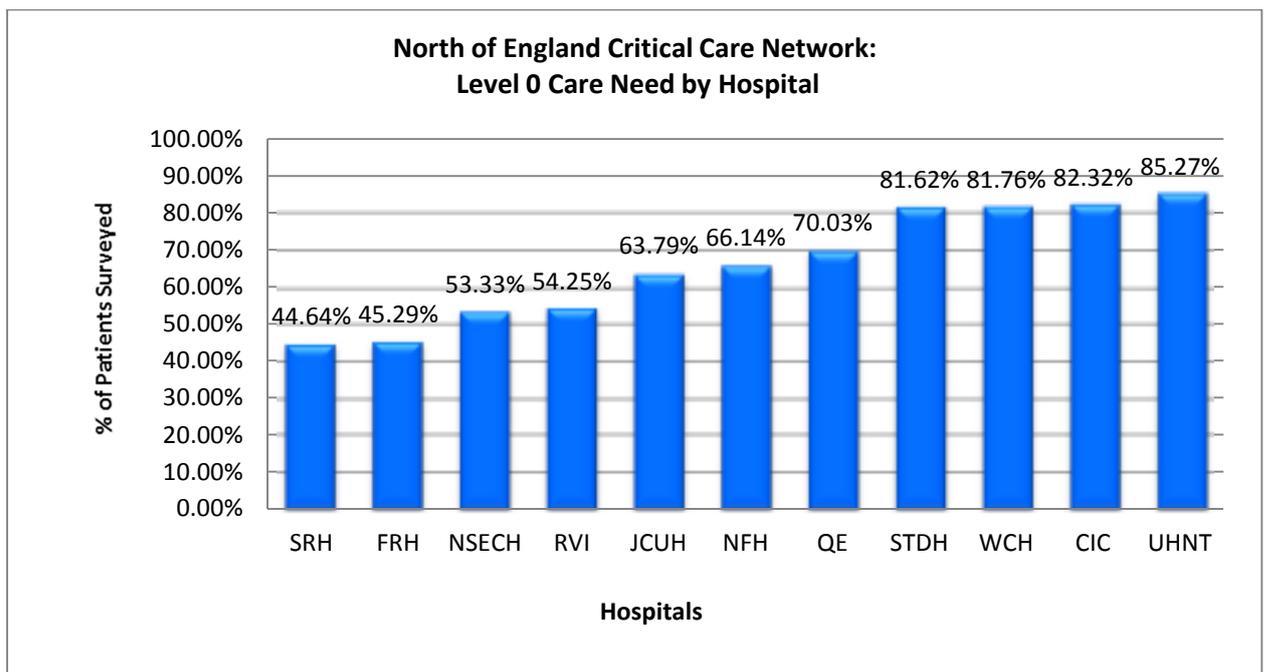
Table 3 The results show that nearly **63% (2964 patients)** require level 0 care; defined as '*normal ward care in an acute hospital*', and therefore not adding to the critical care burden. The range of level 0 patients reported in each hospital varied from **45% to 85%.** This finding is inversely proportional to the percentage of patients requiring level 1 care and the same caveats need to be applied when analysing this information as explained in section 5.1.

4.2 Level 1 Care

Table 4:

North of England Critical Care Network:
Level 1 Care Need by Hospital
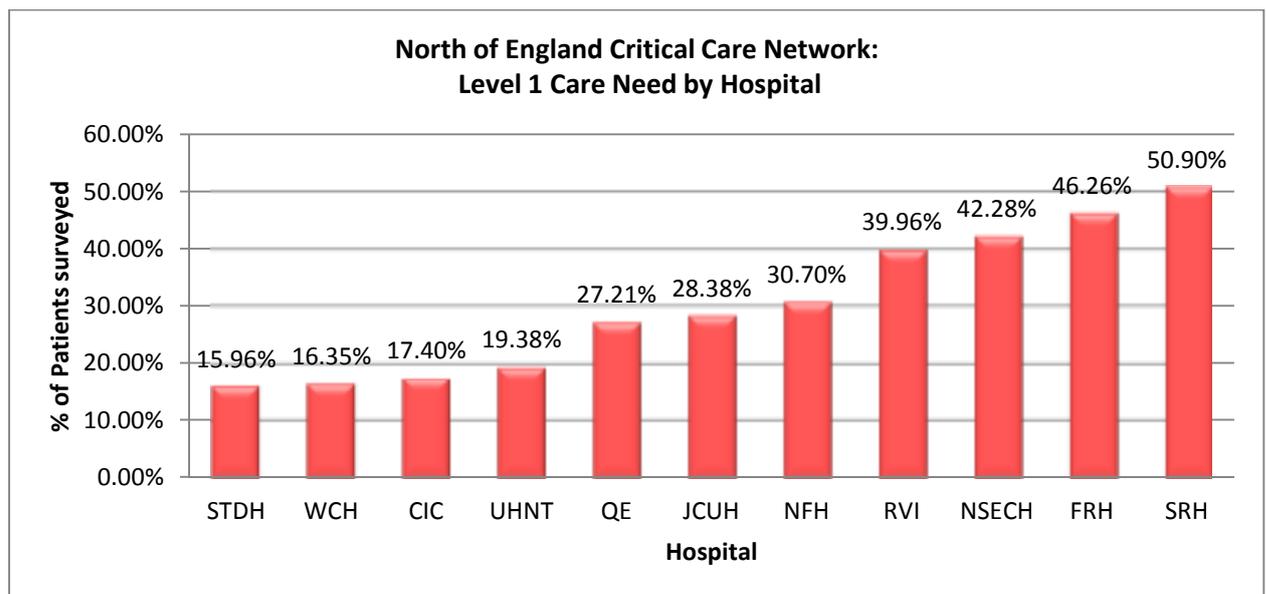
Table 4: Level 1 patients are defined as those "*at risk of their condition deteriorating, or those recently relocated from higher levels of care whose needs can be met on an acute ward with additional advice and support from the critical care team*". Of the **4733** patients surveyed **1554 (33%)** can therefore be defined as "at risk" of deterioration. The range of level 1 patients reported in each hospital identified varied from **16%** to **51%.**

4.2 Level 2 Care

Table 5:

North of England Critical Care Network:
Level 2 Care Need by Hospital
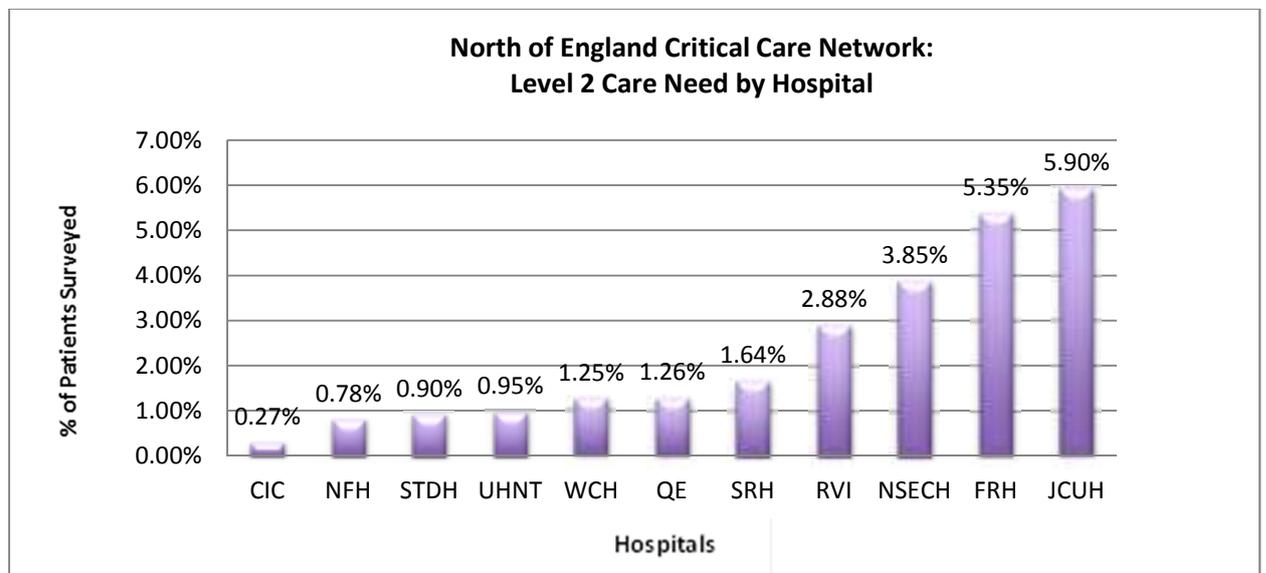
Table 5 Shows that the range of patients requiring care at level 2 & level 2a (defined as '*patients whose care either has been or should be escalated),* varied between **0.27%** and **5.9%.** A total of **127** level 2 patients were identified.

4.4 Level 3 Care

Table 6:

North of England Critical Care Network:
Level 3 Care Need by Hospital

A bar chart titled "North of England Critical Care Network: Level 3 Care Need by Hospital" with Y-axis "Number of Patients Surveyed" (0 to 25) and X-axis "Hospital". Values: NFH = 1, CIC = 2, WCH = 2, STDH = 5, QE = 7, FRH Ward = 7, SRH = 8, UHNT = 9, JCUH = 12, FRH = 14, RVI = 20.
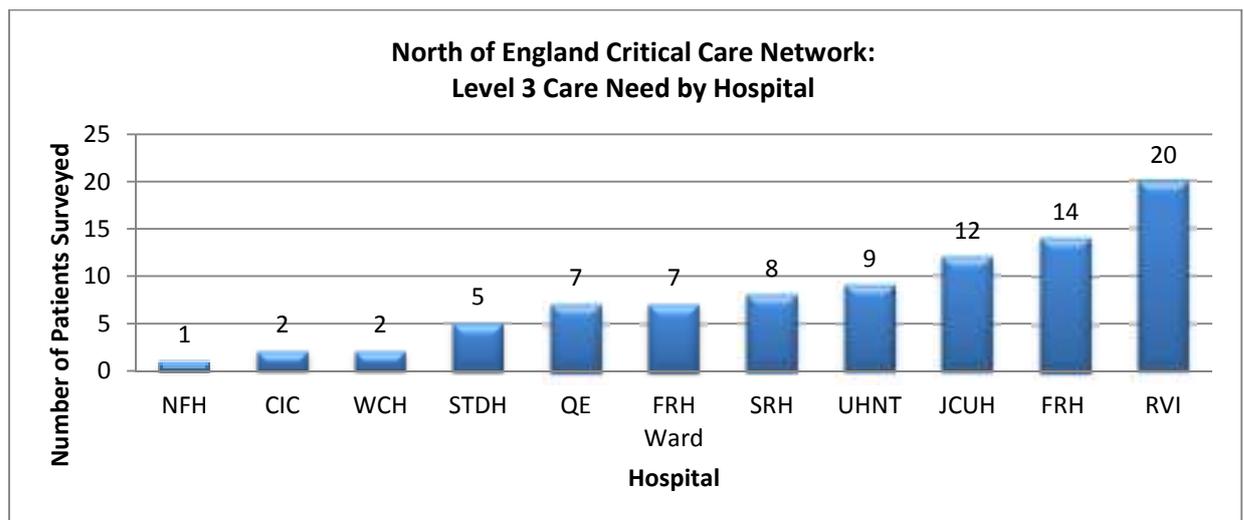
Table 6: Shows the number of patients requiring level 3 care: **80** patients were occupying level 3 beds.
An additional 7 level 3 patients with VADS /receiving pacing were identified on a specialist cardiac ward at FRH

4.5. Critical Care Capacity

Table 7:

North of England Critical care Network: Participating Trusts: Level 2a and Level 3
Need in Relation to Capacity

A bar chart titled "North of England Critical care Network: Participating Trusts: Level 2a and Level 3 Need in Relation to Capacity" with Y-axis (0 to 160) and X-axis "Levels of Care". Level 2: 127 Patients plus 24 Committed Level 2. Level 3: 87 Patients plus 13 Committed Level 3. Line marked "Level 2 (123) and Level 3 (123) Commissioned Beds".

Table 8:

North of England Critical Care Network:
Level 2a Patients Outside of Critical Care Units

Number of Patients Surveyed vs Hospitals (JCUH: 1, STDH: 2, SRH: 6, RVI: 8, NSECH: 9, FRH: 19)

Table 8: Shows the number of level 2a patients, **45** in total, identified *outside* of critical care units. This includes patients identified on coronary care, respiratory units and maternity 'high care' and may be entirely appropriate. However, level 2a patients on general ward areas clearly represent a risk to patient safety and thus a consequential risk to organisations. Additionally, many of these Level 2a patients (with organ failure) will attract a tariff if they are in the appropriate critical care environment.
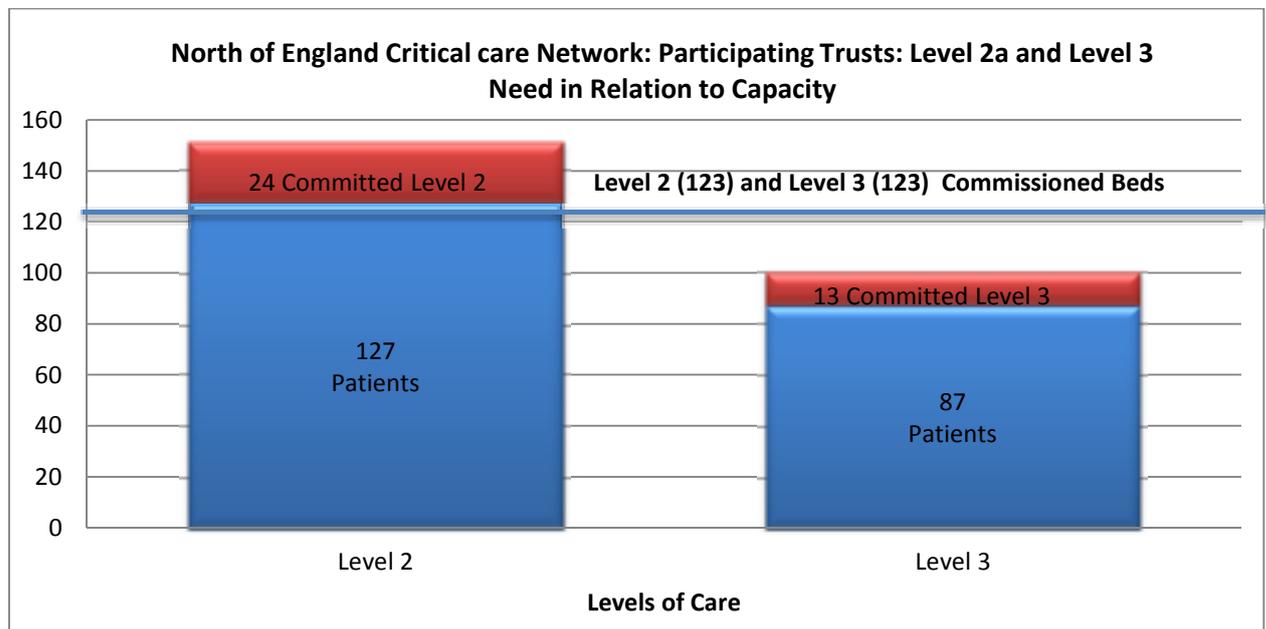
Table 9:

North of England Critical Care Network:
DNACPR by Hospital

% of Patients Surveyed vs Hospitals (RVI: 8.98%, FRH: 9.09%, SRH: 14.82%, NSECH: 15.08%, JCUH: 16.90%, CIC: 17.40%, WCH: 20.12%, STDH: 20.78%, NFH: 22.04%, QE: 22.99%, UHNT: 30.51%)

Table 9: Shows the number of DNACPR's (**811**) by hospital; this ranges from between **8.9%** to **30.51%.** This is for information only and is entirely susceptible to local practices. This information does however contribute to the body of knowledge related to inpatient populations.

**North of England Critical Care Network:
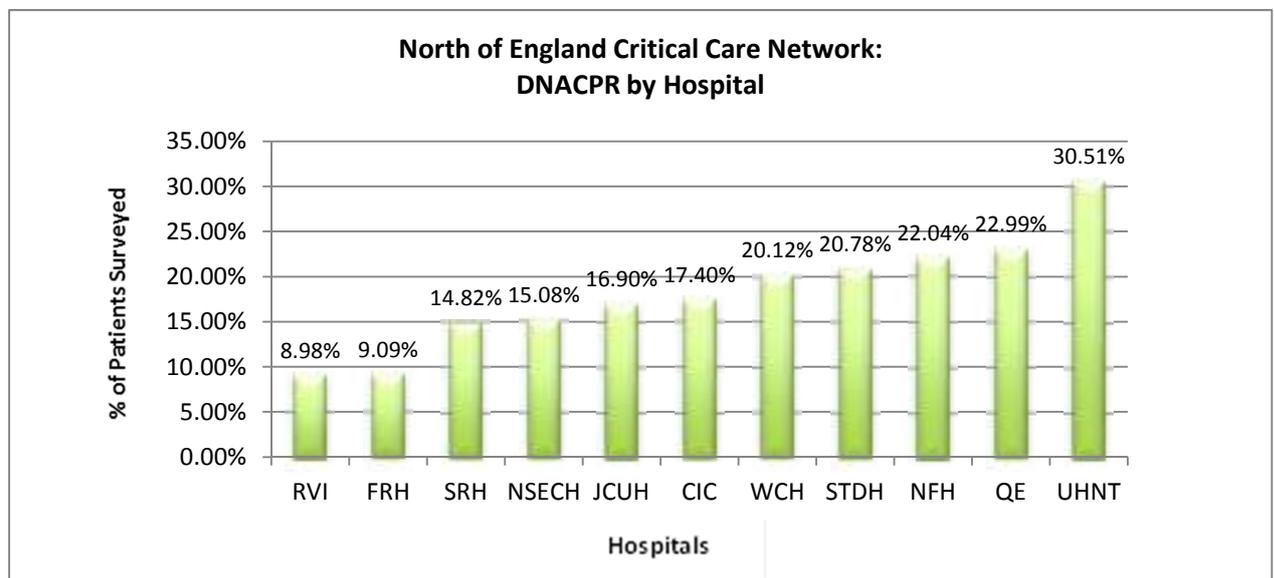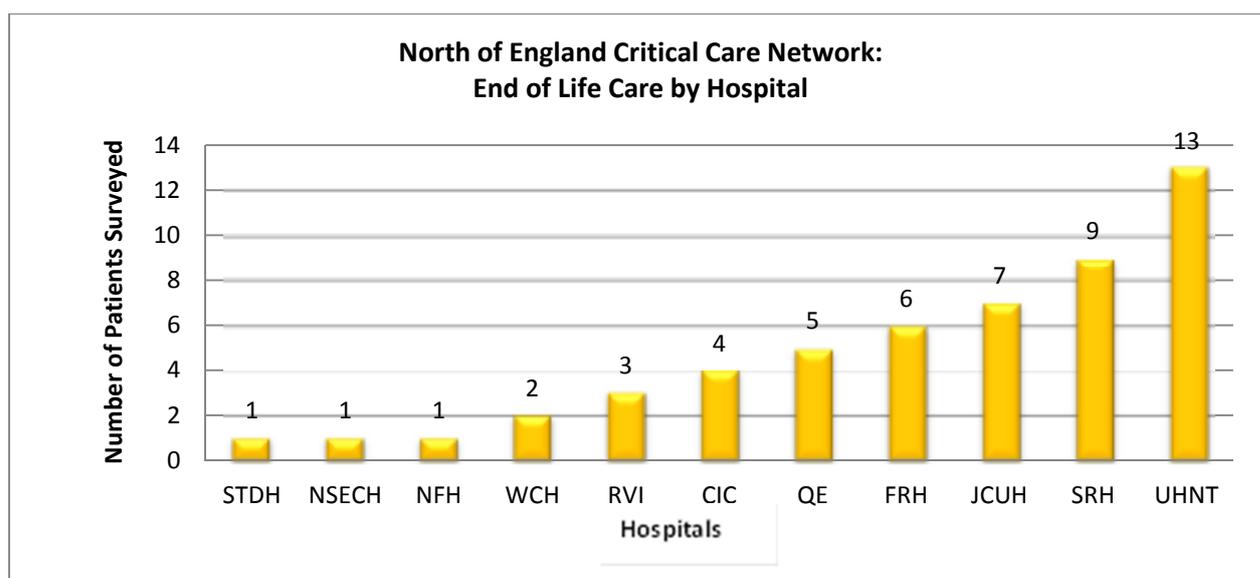End of Life Care by Hospital**

A bar chart titled "North of England Critical Care Network: End of Life Care by Hospital". The y-axis is labelled "Number of Patients Surveyed" ranging from 0 to 14. The x-axis is labelled "Hospitals". Bar values: STDH 1, NSECH 1, NFH 1, WCH 2, RVI 3, CIC 4, QE 5, FRH 6, JCUH 7, SRH 9, UHNT 13.

Table 10 Shows the number of EoLCP's (**52**) by hospital

5. Discussion

As discussed previously, point prevalence methodology provides a 'snapshot' of information and interpretation of the data must be considered in this context. Some teams collecting the data reported that their organisations were '*much quieter*' than they had been over the Christmas and New Year period, where there were anecdotal reports of many 'sick patients' on the general wards.

5.1 Level 0 Activity

5.1.1   According to this survey just over 63% of all hospital in-patients were identified as level 0, defined as 'normal ward care in an acute hospital', and therefore not adding to the critical care burden. The range of level 0 patients reported in each hospital varied from 42% to 82%. This finding is inversely proportional to the percentage of patients requiring level 1 care. Clearly this demonstrates differences of the acuity profile and case mix between organisations*.*

5.1.2   Given the national agenda to reduce inappropriate admissions and reduce length of stay in Acute Trusts', organisations may wish to consider systems to review level 0 patients to distinguish between acuity and nursing / carer dependency, and those patients awaiting social care packages to release additional capacity.

5.2. Level 1 Activity

5.2.1   According to this survey 33% of patients were identified as level 1. This supports anecdotal reports from Outreach Teams and ward based colleagues that the patients are getting sicker. Patients need of level 1 care, which is defined as 'those patients at risk of deteriorating', (See appendix A) demonstrates a varied and wide range from 16% to 51%. This may be a genuine reflection of hospital case mix and surgical activity at the time of the survey, or may more simply reflect local practices and guidelines relating to recording 4 hourly observations. For example, all patients

receiving oxygen and intravenous fluids 'should' receive a higher level of monitoring and observation.

5.2.2   The inclusion of greater than 4 hourly observations as a trigger point for identifying level 1 care is recognised as a potential weakness in defining the critical care burden. However, Outreach Teams have spent a great deal of time and effort encouraging and supporting ward staff to record patients observations more regularly to support the use of the National Early Warning Score (NEWS) (or local equivalent); it was therefore decided not to change this particular criteria when we looked at our local definitions.

5.2.3   Level 1 activity will however reflect the perceived acuity of patients within the inpatient population, and could be used to guide best use of nursing resources and the establishment and maintenance of suitably sized and skilled Outreach Teams.

5.2.4   The development of 'enhanced care areas' to meet the requirements of those patients needing level 1 care may help improve patient care. These areas may be around specialisms such as gastro-intestinal, colorectal surgery or chronic respiratory support, where targeted observation or intervention is needed over a short period of time and no significant co-morbidity exists. These areas should have enhanced staffing levels, be appropriately equipped and supported by Outreach.

5.3. Level 2 Activity

5.3.1   According to the results of this survey even on a 'quiet day' level 2 activity continues to exceed allocated resources by around 23% across the participating Trusts within the NoECCN. A total of 45 patients meeting the level 2a criteria were identified outside of critical care units. Weaknesses in the level 2 definitions are acknowledged and may need refining further; however the local redefinition of 'Level 2' into 2 groups (level 2a and level 2b) to help identify the genuine critical care burden, rather than all patients whose physiology triggers the level 2 criteria adds weight to these findings. The number of level 2a patients outside of a critical care unit is congruent with previous studies.

5.3.2   As most critical care beds across the Network are used flexibly a number of these patients could be accommodated within any spare capacity that exists at level 3. This capacity however is not always available in any particular unit and therefore cannot be relied upon.

5.3.3   It is important to ensure that patients are in 'the right place'. Local audit and anecdotal reports of increasing difficulty to discharge patients from Critical Care Units may indicate that as a result 'sicker' patients remain on the wards, whilst less sick patients remain within the Critical Care Units. Indeed, some teams reported level 1 patients occupying level 2 beds awaiting discharge; (8 were reported on DoS). Many Level 2a patients (with organ failure) will attract a tariff; therefore it is additionally important to ensure these patients are in the appropriate environment. The introduction of the 'delayed discharge CQUIN' should help improve patient flow to enable efficient use of the Critical Care resource.

5.3.4   Across the Network an increase of level 2 bed capacity in some organisations is arguably necessary. Other ways of providing the level of care required by these patients such as the development of enhanced care areas need to be identified by each Trust. Clearly, the safety of level 2a patients outside of a critical care unit represents a risk to patients and to the organisations concerned.

5.3.5   Critical Care Outreach Teams are the safety engines of the hospital and pivotal to organisational patient safety strategies, and also facilitating the acutely and critically ill patient pathway. They have a vital role to play in assisting to identify and support 'at risk' patients in ward areas, and providing ward staff with the support, confidence & critical care skills necessary to maintain patient safety.

5.4. Level 3 Activity

5.4.1   Level 3 activity across the NoECCN varied, and is of course reflective of the size of the Trust and specialities offered. According to the DoS 12 midday SITREP the average occupancy of level 3 beds across the NoECCN was 65%; however, an additional 13 of these unoccupied beds were 'committed' for elective / urgent surgical cases; this equates to a total of 76% of the total available capacity being utilised or committed.

5.4.2   This demonstrates sufficient capacity was available across the NoECCN on this particular day, although some Trusts are under more pressure than others. Occupancy levels of < 80% allow the Network to contain peaks of demand in some areas without recourse to long distance transfers outside agreed transfer groups. Patient transfers are monitored and regularly reviewed by the Network Transfer Group.

Factors that need to be considered;

- There is a need for flexibility in level 3 capacity in order to meet sudden variations in demand.
- That level 3 beds are used collaboratively across Hospital & Trust boundaries and in certain circumstances have to be thought of as a common regional resource within the Network. For example unprecedented pressures such as A/H1N1, major incidents and emergency and unplanned work (this does not include commissioned elective cases).
- Any reduction in critical care bed stock at level 3 may result in region's inability to respond effectively to unexpected pressures, and long distance patient transfers, as local ability to cope with peaks of demand would be decreased.
- It is common practice in most units now to use level 3 and level 2 beds flexibly in order to meet peaks in pressure.
- Not all of the level 3 beds are able to be opened all of the time due to difficulties in providing nursing staff. Indeed 16 beds were unstaffed and therefore the average occupancy of the staffed and available beds is closer to 78% rising to 88% if committed beds are included.
- As part of Trusts' escalation plans critical care teams often open temporary level 3 facilities, over spilling into recovery and level 2 areas in order to avoid cancellation of urgent surgery and transfers at times when no level 3 facilities are available. None were identified during this survey.

5.5. Critical Care Outreach Services

5.5.1   Comprehensive Critical Care Outreach (3CO) can be defined as *"a multi-disciplinary organisational approach to ensure safe, equitable and quality care for all acutely unwell, critically ill and recovering patients irrespective of location or pathway"* (NOrF 2010 www.norf.org.uk). 3CO as a continuum is exemplified by 7 core elements:

- **P**atient track and trigger
- **R**apid response
- **E**ducation, training and support
- **P**atient safety and clinical governance
- **A**udit and evaluation; monitoring of patient outcomes and continuing quality care
- **R**ehabilitation after critical illness (RaCI)
- **E**nhancing service delivery

Critical Care Outreach is a well-established service in most organisations across the NoECCN. All but one organisation within the NE&C Locality provide a 24/7/365 Outreach service. Within the TV&SD Locality the hours of service provided in each acute hospital varies from the Network aspired 24/7/365 to no *formal* Critical Care Outreach service at all in one hospital.

5.5.2   The level of service provision each Outreach Team offers is different depending upon their resources and perceived local need. Some of the less well developed services are often used to fill the nurse staffing gaps in critical care units at times of high demand; as this peak often reflects an increase in general hospital activity; denuding the Outreach service may leave vulnerable ward patients at risk.

5.5.3   The level of investment in education and preparation of Outreach personnel also varies between organisations. Outreach Practitioners mostly undergo comprehensive preparation and training and receive an excellent level of supervision from a Consultant Intensivist colleague. Some personnel however still receive inadequate preparation for the role.

The nature of the Outreach Practitioner role necessitates that they often work independently and alone, underlining the need for adequate role preparation, education and support. History taking and physical assessment courses should be the *minimum* prerequisite before rotating onto the team. Additional training such as the Networks Critical Care Outreach Course (CCOrC) is strongly encouraged. This is available to Outreach personnel across the NoECCN and further afield. The National Outreach Forum (NOrF) has published national guidance on '*Operational Standards and Competencies for Critical Care Outreach Services*' (NOrF 2012) (Appendix C). These are also available at www.norf.org.uk

5.5.4   Some of the Outreach Teams have no permanent members of staff or a dedicated service lead, and join the teams on a rotational basis from the critical care units. The exclusively rotational nature of these posts is thought to been less than ideal as there is no permanent ownership of the service by any of the staff. It is thought that ideally as a *minimum* 50% of the staff should be permanently attached to an Outreach service, with the rest of the posts remaining rotational in order address succession planning and to supply an interesting development opportunity for those nurses wishing to broaden their critical care experience.

5.5.5   Whilst increasing, there remains few funded Consultant sessions for Outreach across the Network, although teams report to feel generally well supported. Ideally, there should be fully funded Consultant sessions for all Outreach Teams and services.

Table 11: Outreach Services in the NoECCN 2016

North of England Critical care Network: Outreach Services 2016			
Hospital	**Days per week**	**Funded Consultant Sessions**	**Hours of service**
Freeman Hospital	Mon-Sun	0.25 of a PA	24/7
Royal Victoria Infirmary	Mon-Sun	None	24/7
Northumbria Specialist Emergency Hospital	Mon-Sun	None	7 days a week 07:30-17:00/17:30 x 4 per week. 07:30-18:00 x 3 per week. 1 team member on secondment (no annual leave cover)
Queen Elizabeth Hospital	Mon-Sun	1 PA per week	24/7
South Tyneside District Hospital	Mon-Sun	None	24/7
Sunderland Royal Hospital	Mon-Sun	None	24/7
Cumberland Infirmary	Mon-Sun	None	24/7
West Cumberland Hospital	Mon-Sun	None	24/7
James Cook University Hospital	Mon-Sun	5 PAs per week	24/7
Northallerton Friarage Hospital	Mon- Sun	None	12 hours a day
University Hospital North Tees	Mon-Sun	None	24/7
University Hospital North Durham	Mon-Sun	None	No dedicated team. MET service only
Darlington Memorial Hospital		None	Cover 6 nights no daytime cover 2WTE band 6

6. Conclusion

6.1 The findings of *this* point prevalence survey demonstrates that acute hospital in-patients have a significant acuity, and supports the findings of National and local audits. The levels of care needed across the NoECCN have shown that even on a quiet day the demand for level 2 critical care beds exceeds funded capacity by some **23%.** The requirement for extra capacity falls at level 2 and the establishment of enhanced care areas. This fact together with the acuity of ward based patients reflected in level 1 activity exceeding 33% (1:3 patients) in many hospitals signifies a need for continued investment in Critical Care Outreach Teams, to ensure that they are constantly available to support ward staff providing care for these at risk patients, and enable a safe environment. This level of acuity needs to be recognised and supported by commissioners.

6.2 Direct observation by NoECCN Outreach Teams has concluded that most acute ward areas across the Network are frequently overstretched; with staff education programmes the first casualty of ever increasing demands on service delivery. The ability of these areas to meet the needs of acutely and critically ill patients without the support of comprehensive Critical Care Outreach Services it is suggested is near impossible.

6.3 As previously discussed, recent reports 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). The most recent report from the Royal College of Physicians; the National Early Warning Score (NEWS): Standardising the assessment of acute-illness severity in the NHS (2012) state 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 identified that delayed recognition and referral were prime causes in poor outcomes for patients who deteriorate unexpectedly in ward areas, aggravated by poor communication between clinical teams.

Common themes include:

- Low standards of observation and documentation on general wards.

- Failure to recognise; an inadequate understanding of, and exposure to critical illness and its presentation.

- Failure to respond and rescue; sub-optimal and inappropriate treatment of the patient who is 'at-risk' or deteriorating. This 'failure to rescue' may be due to a lack of appropriately trained nurses and doctors, compounded by organisational failings such as a failure to introduce and / or enforce a tiered response to the National or local early warning scoring system.

- The late and poorly co-ordinated transfer of patients from acute wards to critical care facilities. In some cases, transfers took place without responsible Consultants being aware for many hours. In some cases these transfers reflect 'too much, too late'.

6.4 The NCEPOD (2005) report (among others) recommends 24 hour Outreach services should be available 7 days per week, recognising that Outreach Teams add immeasurable value bridging these communication, skills and competency gaps. Outreach Teams are therefore pivotal to an organisations

patient safety strategy and, in part able to provide organisations with the agility and resilience they need to manage the burden of acute and critical care needs that exists on acute wards today.

7. Recommendations

The NoECCN Outreach Group makes the following recommendations based on the findings of this and previous point prevalence surveys on levels of care and patient need:

7.1 There needs to be further investment in level 2 beds in some Trusts. A local analysis of unmet need for critical care based on local surveys such as: rates of cancelled elective surgery; rates of refusal of admission to critical care, out of hours (22.00 – 07.00hrs) transfers to wards, and re-admissions to critical care (within 48hrs) will assist identification of need.

7.2 Level 2 patients (with organ failure) will attract a tariff. It is important to ensure these patients are in the appropriate critical care environment. Local analysis of distribution of level 2a patients may yield this information. Considerations should include; relationships with ward capacity and capabilities, and ability to discharge from critical care units.

7.3 Patient acuity is high and 1:3 ward patients are 'sick'. Critical Care Outreach Teams are the *'safety engines of the hospital'; e*ach hospital should establish and maintain a Critical Care Outreach Service that is available 24 hours per day, 7 days per week. The size of the Outreach Team should reflect the number and acuity of patients within each hospital. Each Outreach Team should be supported by funded Consultant Intensivist sessions.

7.4 The nature of the role of the outreach practitioner means that they often work alone without direct supervision, underlining the need for robust role preparation, education and support. History taking and physical assessment courses are a _minimum_ prerequisite before rotating onto the team. Additional training such as the NoECCN 'Critical Care Outreach Course' (CCOrC) is recommended. The National Outreach Forum (NOrF) has published national guidance on '*Operational Standards and Competencies for Critical Care Outreach Services*' (NOrF 2011) (appendix C). These are also available at www.norf.org.uk

7.5 The development of 'enhanced care areas' to meet the requirements of those patients needing care between level 1 & level 2 may help improve efficiency and patient safety. These areas may be around specialisms such as colorectal and gastro-intestinal (GI) surgery or chronic respiratory support, where targeted observation or intervention is needed over a short period of time, and where no significant co-morbidity exists. These areas should have enhanced staffing levels, be appropriately equipped and supported by Critical Care Outreach.

7.6 Multi professional education and competency based training for all ward staff in recognising and treating the acutely ill patient should be a priority (NICE 2007). This can be provided by ALERT / AIM 'type' courses and locally developed acute and critical care skills programmes.

7.7 Robust data collection systems are in place supported by appropriate levels of administration staff to capture data on patients receiving critical care in ward areas. It is also recommended that all CCOT's participate in the National Critical Care Outreach Activity and Outcome Data programme introduced by the National Outreach Forum (NOrF) in January 2011.

7.8 The use of IT solutions to assist recognition and reporting of patients at risk should be considered.

7.9 The use of the live national critical care 'Directory of Services' (DoS) is strongly encouraged.

7.10 The Level of Care Survey is repeated annually and includes ALL acute Hospitals within the NoECCN. Trusts work towards ensuring this survey is embedded within the annual audit cycle

7.11 The Level of Care of patients within Critical Care Units is regularly identified to ensure efficient use of critical care resources, and ensure that 'the right patient is in the right place'.

7.12 Consider systems to review level 0 patients to distinguish between acuity and nursing / carer dependency, and those patients awaiting hospital discharge and social care packages.

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Appendices

Appendix A - Definitions of Level of Care

Expanded Guidance on Levels of Care (2010)

Based on the ICS guidelines but adapted by the North of England Critical Care Network Outreach Group

Level 0 criteria	Examples
Requires hospitalisation -needs can be met through normal ward care	Oral medication Bolus medication Observations required less frequently than 4 hourly
Level 1 criteria	**Examples**
Patient recently discharged from a higher level of care	Within 24 hours of discharge from level 2 or level 3
Patients in need of additional monitoring, clinical input or advice	Observations required at least 4 hourly but not more than 2 hourly Physiotherapy or airway suctioning required at least 6 hourly but not more than 2 hourly Routine telemetry PCA Stable patient with central line +/_ monitoring Fluid balance at least 4 hourly
Patients requiring critical care outreach support	Abnormal vital signs but not requiring a higher level of critical care
Patients requiring staff with special expertise and/or additional facilities for at least one aspect of critical care delivered in a general ward environment	Renal replacement therapy (stable chronic renal failure) Epidural analgesia Tracheostomy care
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 **DNAR** but may benefit from further critical care intervention other than resuscitation **Level 2b** - Patients who have a **DNAR** order **and /or** would not be suitable for further escalation of care
Patients needing single organ system monitoring and support (ACP definitions for patients already in receipt of single organ support are applicable to this group) (Patients in need of advanced respiratory support as the only major organ system supported due to an acute illness would normally satisfy the criteria for level 3)	**Respiratory** Needing more than 50% inspired oxygen Within 24 hours of tracheostomy insertion Requiring non-invasive ventilation or CPAP Requiring physiotherapy or suctioning at least every 2 hours **Cardiovascular** Unstable, requiring continuous ECG **and** invasive pressure monitoring Temporary pacing wire Haemodynamic instability due to hypovolaemia/haemorrhage/sepsis Requiring single infusion of vasoactive drug with appropriate monitoring **Central nervous system** CNS depression sufficient to prejudice airway and protective reflexes Invasive neurological monitoring **Other** Major uncorrected renal, electrolyte or metabolic function Diabetic Ketoacidosis,Alcoholic Liver Disease

	Acute Pancreatitis
Patients needing pre-operative optimisation: Requiring invasive monitoring and treatment to improve organ function	Haemodynamic/respiratory resuscitation or optimisation Insertion of invasive monitoring
Patients needing extended postoperative care: Extended postoperative observation is required either because of the nature of the procedure and/or the patient's condition	**Procedure** Major elective surgery Emergency surgery in unstable or high-risk patient Increased risk of postoperative complications/interventions/monitoring **Patient** Intermediate surgery in patient **>** 70 years or ASA 111 or IV (severe system disease with functional limitation or worse)
Patients needing a greater degree of observation and monitoring	Observation and monitoring that cannot be safely provided at level 1 or below, judged on the basis of clinical circumstances and ward resources Observations required 2hrly more frequently
Patients moving to step-down care	No longer need level 3, but not well enough to be classified as level 1 or 0
Patients with major uncorrected physiological abnormalities: These physiological abnormities, if uncorrected, are likely to indicate a patient requiring at least level 2 care. Patients with lesser degree of abnormality or other physiological abnormalities may also require level 2 or 3 care	Respiratory rate >40 breaths/min or >30 breaths/min for >6 hours Heart rate>120 beats/min Temperature <35°C for >1 hour Hypotension, e.g. systolic BP <80 mmHg for >1 hour Glasgow Coma Score (GCS) <10 and at risk of acute deterioration
Level 3 criteria	**Examples**
Patients needing advanced respiratory monitoring and support: (ACP definitions for patients already in receipt of advanced respiratory support are applicable to this group)	Respiratory failure from any cause that requires invasive, positive pressure mechanical ventilator support BIPAP via any form of tracheal tube Extracorporeal respiratory support
Patients needing monitoring and support for two or more organ systems one of which may be basic or advanced respiratory support (Note that this clarifies the apparent inconsistency between the suggested levels criteria in 'Comprehensive Critical Care' and existing ACP definitions) (ACP definitions for patients already in receipt of multiple organ support are applicable to this group)	SIMV or CMV and continuous intravenous vasoactive drugs SIMV or CMV and haemofiltration High risk patients undergoing major surgery who are likely to require advanced respiratory support and monitoring/support of other organ systems Continuous intravenous medication to control seizures and supplementary oxygen/airway monitoring
Patients with chronic impairment of one or more organ systems sufficient to restrict daily activities (co-morbidity) and who require support for an acute reversible failure of another organ system (ACP definitions for patients already in receipt of single organ support are the applicable group)	Severe ischaemic heart disease **and** major perioprative haemorrhage COPD requiring home oxygen presenting **with** sepsis related to immunosuppression Angina on mild **and** bronchopneumonia requiring CPAP

Foreword

This guidance is aimed at providing a standardised framework for the implementation and delivery of Critical Care Outreach Services and Acute Care teams across the United Kingdom.

The creation of this framework has been clinically led, is evidence based where possible and reflects current national practice and thinking.

This guidance was ratified at the National Outreach Forum 6th AGM on 4th November 2011 and has been endorsed by Dr Bruce L Taylor Intensive Care Society President and Professor Bryan Williams Chair of the National Early Warning Scoring Design and Implementation Group - NEWSDIG.

The framework covers the seven core elements of Comprehensive Critical Care Outreach: **PREPARE** and outlines the desired requirements for each element.

The aim is to provide a nationally recognised framework that will assist existing and newly developing services. It is anticipated that a standardised approach will improve equity of access and quality of care as well as providing guidance to assist teams achieve their aspirations for service development.

National Outreach Forum

Operational Standards and Competencies for Critical Care Outreach Services

1. **NOrF Mission Statement and Purpose**

   3. To optimise the quality of the patients treatment, care and experience

   4. To provide a representative forum for Critical Care Outreach Service providers and recipients across the country.

   5. To meet the Department of Health's objectives for critical and acute care, and   to ensure there is a strategic approach to delivery of Critical Care Outreach Services nationally, which reflects that of the National Strategy and those of the Critical Care Networks.

   6. To underpin Critical Care Outreach practice and service development with the best evidence where it is available.

2. **Definition**

   Comprehensive Critical Care Outreach (3CO) can be defined as **"*a multidisciplinary organisational approach to ensure safe, equitable and quality care for all acutely unwell, critically ill and recovering patients irrespective of location or pathway*"**

3. **Core Elements of Comprehensive Critical Care Outreach (3CO)** as a continuum is exemplified by 7 core elements:

   - **P**atient Track and Trigger
   - **R**apid response
   - **E**ducation, training and support
   - **P**atient safety and clinical governance
   - **A**udit and evaluation; monitoring of patient outcome and continuing quality care
   - **R**ehabilitation after critical illness (RaCI)
   - **E**nhancing service delivery

4. **Introduction**

   This document sets out an operational framework of standards and competencies for Critical Care Outreach and Acute Care Team Services. It responds to calls from National Outreach Forum (NOrF) members to provide a national document to standardise and benchmark existing services, to enable equity of access, and to provide guidance on future service development. The framework has been

developed in a "RAG" rating format to allow users to self-assess their service against the national recommendations thereby identifying areas that they may wish to develop.

RED — Not achieved and no current plans to review
AMBER — Partial provision and/or currently under development
GREEN — Fully achieved

5. Background

The introduction of Critical Care Outreach Services (CCOS) was recommended in Comprehensive Critical Care (2000) in response to the growing body of evidence demonstrating failure to recognise, and respond to obvious physiological deterioration. The aim was to ensure patients received timely intervention regardless of location, with Outreach staff sharing critical care skills with ward based colleagues to improve recognition, intervention and outcome. Subsequently there have been further recommendations for the implementation of CCOS inclusive of the Intensive Care Society (ICS) 2002, NOrF 2003, NCEPOD 2005 and the Critical Care Stakeholder Forum (CCSF) 2005.

In the absence of a national strategy for their implementation, CCOS and team configurations have developed on an ad hoc basis dependent upon perceived local need and resources available. Additionally, the level of investment in education and preparation of Outreach personnel also varies between organisations. The underpinning purpose of this document is therefore to re-address the absence of national guidance and provide a standardised operational framework of standards and competencies for Critical Care Outreach, Acute Care and NEWS, Response Teams, whilst recognising the organisational links required with other hospital providers to facilitate provision of a robust 24hr service.

6. Origins of the Standards and Competencies Framework

This work has been led by the National Outreach Forum (NOrF) Executive Board in consultation with multidisciplinary expert members of NOrF. The document draws together the numerous statements and recommendations that have been published over the last 10 years and is set out using the PREPARE acronym which exemplifies the seven core elements of Comprehensive Critical Care Outreach (3CO).

Core Elements of Comprehensive Critical Care Outreach (3CO) as a continuum is exemplified by 7 core elements	RED	AMBER	GREEN	Qualifying notes
Patient Track and Trigger				
Rapid response				
Education, training and support				
Patient safety and clinical governance				
Audit and evaluation; monitoring of patient outcomes and continuing quality care				
Rehabilitation after critical illness (RaCI)				
Enhancing service delivery				

	RED	AMBER	GREEN	Qualifying notes
1. Patient Track and Trigger				
1.1. Trust wide use of NEWS or a locally validated Track and Trigger system that allows rapid deterioration of the signs of early clinical deterioration in all adult patients over 16yrs, except pregnant women & those requiring palliative care (NCEPOD, RCP, NOrF)				
1.2. The Track and Trigger system should include the following physiological parameters: HR, SBP, RR, Temp, SaO2, and AVPU. (NICE CG50, RCP, NOrF). Other 'standalone' parameters may be used alongside the chosen track and trigger system. e.g. Urine Output				
1.3. Vital observations with a total NEWS/EWS/MEWS score should be undertaken a minimum of 12 hourly, with escalation in frequency of recording as part of an agreed Trust wide graded response.				
1.4. Physiological observations should be undertaken and recorded by staff that have been appropriately trained and assessed as competent in monitoring, measurement, and interpretation.				
2. Rapid Response				
2.1. Trust wide use of a graded clinical response strategy consisting of 3 levels (low, medium, & high) (RCP, NICE 2007)				
2.2. Each level of response should detail what is required from staff in terms of observational frequency, skills and competence, interventional therapies and senior clinical involvement.				

		RED	AMBER	GREEN	Qualifying notes
2.3.	It should define the speed/urgency of response, including a clear escalation policy to ensure that an appropriate response always occurs and is available 24/7.				
2.4.	Who responds, i.e. the seniority and clinical competencies of the responder/s.				
2.5.	The appropriate settings for on-going care including access to monitoring equipment and critical care.				
2.6.	The frequency of subsequent clinical monitoring				
3.	**Education Training and Support**				
	Critical Care Outreach Personnel				
3.1.	Each organisation should ensure patients receive care from appropriately trained Critical Care Outreach / Acute Care Team / NEWS Response Team Personnel				
3.2.	Lead Practitioner should have a postgraduate qualification in critical care / acute care				
3.3.	Senior practitioners ideally with a minimum of 3 years critical/acute care experience should deliver the Outreach service. Teams may consist of nurses, physiotherapists, doctors and other healthcare professionals.				
3.4.	All Critical Care Outreach /Acute Care Team/NEWS Response Team practitioners should possess a clinically relevant post basic qualification and ideally be working towards an MSc in clinical practice or equivalent relevant clinical modules				

		RED	AMBER	GREEN	Qualifying notes
3.5.	There must be a documented mandatory induction programme for all new staff members to the outreach team. An agreed learning contract to include annual competency based assessment of core and additional specific competencies				
3.6.	The reference basis of training for Critical Care Outreach/Acute Care Team/NEWS Response Team personnel should be directed by the DH Competencies for recognising and responding to acutely ill patients in hospital (2007).				
3.7.	All Critical Care Outreach/Acute Care Team/NEWS Response Team personnel must be trained and assessed as competent to function at a minimum of primary responder level, (some may develop particular skills to facilitate functioning at a secondary responder level)				
3.8.	Each practitioner must be able to:- Perform a comprehensive physical examination and demonstrate the ability to recognise normal, deviation from normal findings in relation to the following systems Airway, Respiratory, Cardiovascular, Gastrointestinal, Renal, Neurological and Endocrine				
3.9.	Assess and provide first line treatment for a patient with acute or developing critical illness and those requiring emergency assistance of above systems including sepsis				
3.10.	Provide basic, immediate and advanced life-support in accordance with the level of response delivered.				
3.11.	Recognise situations where consideration for withdrawal of treatment should be given and initiate review by appropriate medical staff, palliative care or end of life teams.				

		RED	AMBER	GREEN	Qualifying notes
3.12.	Provide effective leadership and support for critical care teams and ward staff when caring for acutely ill ward patients with developing critical illness				
3.13.	Ensure safe transfer and transport of the acutely ill patient. Ideally staff undertaking intra and inter hospital transfers should have received formal training in this skill. (ICS 2002).				
3.14.	Understand clinical limitations, and enable direct referral to other members of the multidisciplinary specialist team including Physiotherapy, Pain team, Dietetics, Speech and Language Therapist, Psychologist.				
In addition to DH Competencies for recognising and responding to acutely ill patients in hospital (2007), specific and regularly demonstrated competencies should ideally include (NOrF 2003/11):					
3.15.	Perform and interpret clinical findings on chest and abdomen auscultation				
3.16.	Initiate laboratory clinical tests, obtain blood via venepuncture and correctly interpret results: Biochemistry, Haematology, Coagulation screening				
3.17.	Prepare for and carry out intravenous cannulation.				
3.18.	Record and interpret electrocardiograph (ECG)				
3.19.	Assess the individual's level of consciousness, utilising AVPU, Glasgow Coma Scale.				
3.20.	Obtain arterial blood gas sample and demonstrate ability to interpret results/recognise deviation from normal and report and treat accordingly.				

	RED	AMBER	GREEN	Qualifying notes
3.21. Request and interpret radiological examination e.g. chest X ray, abdominal X ray.				
3.22. Perform haemodynamic monitoring to obtain physiological measurements: continuous electrocardiograph, central venous pressure and arterial pressure monitoring				
3.23. Recognise indications for oxygen therapy and select appropriate device for administration of oxygen therapy.				
3.24. Administer oxygen therapy at rate and concentration as prescribed or as per patient group directive.				
3.25. Establish Non-Invasive Ventilation Therapy on patients in respiratory failure and assist in subsequent management.				
3.26. Administer intravenous fluids as per patient group directive / or as an independent prescriber				
3.27. Possess and demonstrate effective communication skills facilitating clear goal setting between all levels of the multi-disciplinary team, patients and significant others.				
3.28. Use of effective communication tools by all staff e.g. RSVP/SBAR				
3.29. Document and communicate clear patient monitoring plans in medical notes				
3.30. Possess and demonstrate effective ability to manage conflict and breaking bad news				
Additional competencies may include all or some of the following (depending on organisational clinical need).				

	RED	AMBER	GREEN	Qualifying notes
3.31. Perform verification of expected death where DNACPR order in place				
3.32. Perform male and female urinary catheterisation.				
3.33. Assist with central line triage and insertion				
3.34. Undertake Non-Medical Nurse prescribing				
3.35. Assist with nocturnal respiratory support.				
3.36. Assist with intra hospital transfers of patients requiring additional tests or intervention				
3.37. Assist with emergency trans-thoracic pacing				
3.38. Be able to assess patients for and undertake changing of tracheostomy tubes, insertion of mini tracheostomies and decannulation.				
Hospital/Ward Based Personnel				
3.39. Each organisation should provide accessible educational support for registered and non-registered ward staff in caring for the acutely ill ward patient in line with recorder and first responder level outlined in DH competencies for recognising and responding to acutely ill patients in hospital (2007).				
3.40. All staff should be trained in the locally used Track and Trigger system and be aware of and be able to instigate the referral process.				
3.41. Clinical competencies should be considered dependent on service provision and senior support available, with annual monitoring via the appraisal / PADR system				

	RED	AMBER	GREEN	Qualifying notes
3.42. Clinical competencies for medical staff should be assessed regularly by senior clinicians				
3.43. Accurate record of nurse training maintained in relation to Acute Care competencies for both registered and non-registered nurses / practitioners				
4. Patient Safety and Clinical Governance				
4.1. Each organisation should deliver the seven core elements of Comprehensive Critical Care Outreach (3CO) PREPARE.				
4.2. Each organisation must have a clearly defined referral strategy including Critical Care Outreach/Acute Care Team/NEWS Response Team service to support acutely ill patient activity 24 hours 7 days per week				
4.3. Medical staff with critical care training must be available to support graded response				
4.4. Provision of continuous bedside support available to ward based staff when necessary (CCSF).				
4.5. Each organisation must have a clear Operational Policy for Critical Care Outreach/Acute Care Team/NEWS Response Teams that delineates the team's remit and includes the seven core elements of comprehensive critical care outreach (3CO) PREPARE. This should be ratified at Trust Board level.				
4.6. Operational policy should include explicit guidance on patient referral to the team and referral onto other multidisciplinary professionals				

	RED	AMBER	GREEN	Qualifying notes
4.7. Consider Trust wide introduction of patient or carer activated calls to the Critical Care Outreach Team.				
4.8. Each team should have a systematic approach to policy protocol development and review utilising national and local guidance, and agreed by governing body within the Trust				
4.9. All national standards should be followed which relate to the acutely ill patient (where appropriate).				
4.10. Each team should have a system in place for reporting, investigating and learning from adverse incidents and near misses. This should feed into the Trust wide clinical governance process to facilitate Trust wide scrutiny of practice (Patient Safety First 2008).				
4.11. Each team should regularly participate in speciality based mortality & morbidity meetings (NCEPOD)				
5. Audit and evaluation; monitoring of patient outcomes and continuing quality of care.				
Ideally all Critical Care Outreach Teams to participate in the "National Critical Care Outreach Activity Outcome Data Set" (NOrF 2011). Essential monthly data collection should include:				
5.1. Number of inpatient calls to the cardiac arrest team				
5.2. Critical care "Follow-ups"				
5.3. Number of individual patients followed up after critical care discharge				

	RED	AMBER	GREEN	Qualifying notes
5.4. Number of clinical reviews (visits) for patients followed up after critical care discharge				
5.5. Early re-admissions to critical care (within 48 hrs of discharge).				
5.6. In Patients - either in critical care or being followed up after critical care (triggers or referrals)				
5.7. Number of calls to Outreach				
5.8. Number of individual inpatients referred to Outreach				
5.9. Number of individual patients attended by Outreach				
5.10. Number of clinical reviews (visits) for non-critical care referred patients				
Desirable monthly data collection should include:				
5.11. Hospital standardised mortality ratio.				
5.12. Median Outreach response time.				
5.13. Median "Score–2–door" time. Oglesby et al (2011)				
5.14. Median length of stay (survivors post critical care).				
5.15. Hospital mortality amongst critical care survivors				
5.16. Number of monthly hospital admissions				

		RED	AMBER	GREEN	Qualifying notes
5.17.	An audit of compliance with performance standards must be fed back to Trust Boards and Networks including compliance with CG50				
5.18.	Each trust should develop an audit tool to assess utilisation of their Track and Trigger and graded response system with clear governance procedures for action of poor compliance trust wide				
5.19.	Undertake annual patient & carer satisfaction surveys (CCSF)				
6.	**Rehabilitation after critical illness (Follow-up)**				
6.1.	This may be undertaken by different teams locally but the process must include compliance with the NICE 83 guidelines "Rehabilitation after a period of critical illness" ensuring rehabilitation and traditional medical and nursing care are aligned.				
6.2.	Each Trust must have a rehabilitation post critical illness pathway / operational policy. These should reflect the NICE 83 guidance with clear line accountability but be relevant and achievable within their organisation. This should be aligned to the Network wide Racy pathway where one exists				
6.3.	All organisations must involve an expert patient or patient advisor groups e.g. ICU Steps in designing, formulating and reviewing local guidance				
6.4.	Each Trust should provide regular audits (minimum annually) that measure the compliance with CG83 rehabilitation following critical illness, reviewing and adapting service delivery as required				
6.5.	Each organisation should provide awareness training, educational support and supervision or mentoring for registered and non-registered ward staff in the requirements and holistic approach to rehabilitating the critically ill patient				

	RED	AMBER	GREEN	Qualifying notes
6.6. Clinical experts should devise the rehabilitation plans for patients establishing clear time orientated interventions that can be followed and implemented by all ward staff who hold the competencies to fulfil these requirements.				
7. Enhancing service delivery				
Staffing Requirements				
7.1. Separately rostered Outreach team available 24 hours per day, 7 days a week (NCEPOD, CCSF, NOrF).				
7.2. Sufficient staff to deliver 3CO/PREPARE 24 hours per day, 7 days per week				
7.3. Outreach team support by sessional commitment from Consultant Intensivist or consultant in Acute Care Medicine				
7.4. Shared trainee medical staff with critical care units and acute care who have no responsibilities other than those directly related to providing the graded response				
7.5. Senior Physiotherapist with sessional commitment to Outreach sufficient to follow up patients discharged from critical care and receive appropriate referrals.				
7.6. Allied health professionals (pharmacy, dietetics, speech and language and occupational therapy) available for Outreach referrals				
Organisation				

	RED	AMBER	GREEN	Qualifying notes
7.7. Nominated lead of service at Trust Board level with appropriate communication cascade (Comprehensive Critical Care DH 2000).				
7.8. Lead Medical Consultant with a qualification in either intensive care or acute care speciality to support service development and delivery.				
7.9. Lead Practitioner and Consultant integral to Critical Care Delivery Group to facilitate Trust wide discussion on acute care ward based issues.				
7.10. Mechanisms in place to ensure full engagement of ward based colleagues (e.g. "Link Nurse System").				
7.11. Mechanisms in place to ensure views and opinions of patients and cares are reflected in service development.				
7.12. Full engagement with regional Critical Care Network				
7.13. Critical Care Outreach / Acute Care / NEWS Response Teams should regularly review service provision to facilitate proactive approaches in order to match service configuration against local demands. These should be reflected in the operational policy				

Advisory Contributors

Caroline Barclay - Outreach Lead University Hospitals of Leicester NHS Trust

Carmel Gordon-Dark – Critical Care Outreach Sister, The London Clinic

Alison Dinning - Outreach Sister Nottingham University Hospitals NHS Trust

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Sarah Quinton – Outreach lead Nurse Heart of England NHS Trust

Elizabeth Smith – Patient safety Manager. Wales Patient Safety Team

Catherine Thomas - Consultant Respiratory Physiotherapist

Duncan Watson – Consultant Anaesthesia and Critical Care, University Hospital of Coventry and Warwickshire

John Welch – Nurse Consultant Critical Care, University College London Hospitals

Areas to be covered

Point Prevalence Survey for 2016

NoECCN Outreach Group

It was decided at the Outreach conference call in January 2016 that the point prevalence survey for 2016 should include **all adult inpatient areas** and:

Excluded;

- 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

Included should be;

- A&E majors and Resus
- CCU
- Maternity – all areas
- Recovery/PACU areas should be surveyed for level 3 boarders

If you have any questions or need any help please contact:

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NoECCN
North of England Critical Care Network

Appendix D – Data Collection Form

Speciality:...................Ward:..................No. Beds:..................No. Patients..................

Patient	LOC	DNACPR	EoLCP	Off Ward	Patient	LOC	DNACPR	EoLCP	Off Ward	Patient	LOC	DNACPR	EoLCP	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 Level 0   Total Level 1   Total Level 2   Total Level 2a   Total Level 2b   Total Level 3

*Number of level 0 patients awaiting/fit for discharge home/normal place of residence. Total

Voluntary question

Appendix E– DoS 'SITREP'

Name of data collector: ....

DoS Reporting Template

North of England Critical Care Network

Appendix F – List of Contributors

NoECCN: Level of Care Point Prevalence Survey 18th January 2016

Acknowledgements and thanks to the following:

NE&C Locality administrator: Jan Malone

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