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IF THIS IS A POLICY OR A SERVICE CHANGE, HAS IT BEEN EQUIP'd? If so, please provide the unique EQUIP reference number below: **For guidance click on this link:** **http://nww.cht.nhs.uk/index.php?id=12474**	This policy has been through the Trust's EQUIP (Equality Impact Assessment Process) to assess the effects that it is likely to have on people from different protected groups, as defined in the Equality Act 2010. **EQUIP-2017-092**

This guideline has been registered with the trust.

Caution is advised when using guidelines after the review date.

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Critical Care Outreach Team (CCOT) Operational Guideline

Purpose of the Guideline

This guideline will detail the operational processes by which the Critical Care Outreach Service will achieve the essential objectives as recommended in 'Comprehensive Critical Care: A Review of Adult Critical Care Services', Department of Health (2000) (Appendix One).

These guidelines cannot provide for complex and untoward events, but, as far as possible will define operational processes to ensure the delivery of a safe, efficient and effective service for the target population.

This will include:

- Highlighting processes for the follow up care of patients post discharge from the combined Intensive Care Units (ICU)/ High Dependency Units (HDU) within the Trust.

- Outlining the process for the referral of critically ill ward patients for review by the Critical Care Outreach Team. This includes ensuring early identification of 'at risk' patients through the use of the National Early Warning Score (NEWS) and Nerve Centre™.

- Setting standards for the education, training and development of the skills of all frontline clinical staff to include: Recognising the deteriorating patient in line with NICE clinical guidelines (2007).

Locations where this guideline applies

The Outreach Team provides a service at both the Calderdale Royal Hospital (CRH) and the Huddersfield Royal Infirmary (HRI) sites 7 days a week between 07:30 – 20:00 hrs.

The Outreach team provides a service to all acute areas with the exception of neonates and paediatrics & supports the care of all adult patients with exception of the Critical Care Unit on each site.

This guideline will be relevant to all areas that have contact with patients at Calderdale Royal Hospital and Huddersfield Royal Infirmary.

Background

Following recommendations of the Comprehensive Critical Care Review (DH, 2000) the Outreach Service at Calderdale & Huddersfield NHS Foundation Trust (CHFT) was introduced in May 2004. Since that time the service has continually evolved to meet national and local drivers (Appendix two) and in response to the ever changing needs of patients & service users.

Outreach is defined as a 'systematic attempt to provide services beyond conventional limits' (Web definition). Translated into the context of critical care, the purpose of the outreach service is to 'facilitate the delivery of critical care practice to the patient outside critical care areas' (DH, 2005). Furthermore, Critical Care Outreach is an organisational approach to ensure equity of care for all patients with potential or established critical illness, irrespective of their location. The outreach service is integral to critical care delivery at the Calderdale and Huddersfield NHS Foundation Trust (CHFT) and its' future development is supported by the West Yorkshire Critical Care Network (WYCCN) and the CHFT Division of Surgery and Anaesthetics.

Our aim is to enhance the quality of care for all ward patients requiring higher levels of care (Appendix three) through training, education, support & collaborative working across professional and organisational boundaries.

However, the outreach service is not a remedy for inadequate resources, nor does it assume clinical responsibility for the care of all patients 'at risk' of deteriorating. Medical and nursing responsibility for such patients remains with the parent team and should be provided at a senior level. The outreach service will work collaboratively and in partnership with these teams to support and empower them in the recognition and care of the deteriorating patient.

Patient Care Delivery

- All patients under the care of the team will be assessed using the Acute Life Threatening Events: Recognition &Treatments (ALERT) process and treatment instigated according to individual need.

  The minimum standard is:
  Ward referrals or Nerve Centre™ alerts will aim to be reviewed within 30 minutes. If it is not possible to review a patient within 30 minutes, telephone advice will be given and the patient will be reviewed as soon as possible.
  All patients discharged from ICU/HDU will be seen within the first 24 hours post discharge from the unit.
  All patients will have a minimum of 2 visits from the team.
  (Appendix four)

- Following appropriate consultant to consultant referral the ICU anaesthetic teams will be available, along with the critical care outreach service, for support, advice and medical intervention in the ward setting where necessary.

- The NICE guidelines 'Acutely Ill Patient in Hospital' (2007) and CHFT trust policy recommend that patient observations are carried out every 8 hours (as a minimum unless decision to reduce by clinical team) and that the National Early Warning Score (NEWS) is calculated via Nerve Centre™ for every set of observations performed. Once observations are completed the referral algorithm must be followed and appropriate treatment initiated promptly. (Appendix five).

- A NEWS of 7 and/or a score of 3 of one parameter triggers an option to refer to the CCOT on Nerve Centre™

- Patients may be referred to the outreach team directly from the wards by the primary nursing, medical or physiotherapy team however any acutely ill patient (NEWS 5 or above) should receive input from the parent team at registrar level or above. The nurse in charge of the ward should also be informed (see NEWS referral algorithm).

- The referral algorithm is a guideline and does not replace clinical judgment. In the event of an acute emergency the algorithm may not be appropriate.

- Any patient referred to the team with pain as a primary problem will be referred by the outreach team to the pain team for review.

- Out of service hours referrals should be made to the Out of Hours Team (HOOP) and anaesthetic team if appropriate. Information will then be handed over to the outreach team and the patient will be reviewed when service hours recommence.

- A face to face handover will take place at morning and night between the CCOT and the HOOP utilising a structured format to include all patients of concern, a handover of the CCOT bleep and the CVAD patients (see appendix 4).

- Patients who are not for resuscitation but for active ward treatment may be referred to the outreach team for advice and support. The decision regarding ongoing outreach involvement will be made by the reviewing nurse following

discussion with the ward teams and will be dependent on whether or not further outreach intervention will be of any value to the management plan.

Interventions

- Outreach patients, whether referred or discharged from ICU/HDU, will be reviewed at least daily until their condition improves. Further outreach input will then be discussed with the ward multi-disciplinary team.

- Patients' whose condition has improved (NEWS <3) or who no longer require outreach support will be discharged from the outreach team. These patients' may be re-referred at any time if deterioration occurs or there is an increase in the NEWS.

- Do Not attempt Resuscitation (DNACPR) decisions are primarily the responsibility of the parent team. The outreach team will however instigate DNACPR and end of life discussions if transfer to HDU/ICU is deemed inappropriate/futile.

Quality Requirements for Transfer of Patients

- A nurse escort should be available to transfer patients from the ward to a critical care bed. This should include the ward nurse together with a member of the outreach team if required.

- Patients will ordinarily be moved to another unit/department only if the receiving unit/department offers a safer environment and the perceived benefits outweigh the risks of transfer.

- A ward nurse should be available to escort patients to other departments if required for clinical investigations. The outreach team may be able to provide additional support if workload allows.

- The decision to admit a patient to critical care should involve both the parent Consultant and the Critical Care Consultant. In the absence of a consultant the registrar may make the referral.

- In the event that a patient requires transfer to a higher level of care and no bed is available the outreach team may facilitate appropriate management along with the parent team, remain with the patient and provide individual patient care during the crisis period including arranging appropriate and timely transfer to a critical care bed when one becomes available.

- Where a patient in need of an ICU bed cannot be accommodated, the patient may be transferred to the theatre recovery room where the appropriate facilities to care for the patient safely can be provided (see General Guideline 'Admission and Discharge from ITU' February 2016).

Education, Training and Audit

- The team will provide informal and formal education to qualified and non-qualified staff with the aim that all staff providing acute care will be able to recognise basic signs of clinical deterioration.

- The team will deliver in-house study days for all clinical nursing staff. Qualified staff are invited to attend the 'Recognition and Response to Acute Deterioration' study day.

- Non-qualified support staffs are invited to attend the 'Assessing the Acutely Ill Patient' study day.

- The aim of the training days is to equip staff with the necessary knowledge and skills to enable them to safely and accurately perform patient observations, and to recognise and respond to acute deterioration. All sessions are evaluated and adapted based on feedback from attendees.

- The CCOT will work with Practice Learning Facilitators, clinical educators and senior nursing staff to address educational and training needs.

- The CCOT will contribute to regular surveillance and audit work, this includes supporting the audit of unplanned admissions to ICU/HDU.

- Adverse incidents/events, including incidents of suboptimal care, witnessed by the teams, will be reported according to Trust procedure. All incidents reported will be presented at monthly service meetings and discussed with the appropriate clinical areas. Information relating to critical incidents will provide the focus for future education programmes.

These operational guidelines have been prepared by Critical Care Outreach Team Leader on behalf of the service team. These guidelines will be reviewed bi-annually.

Appendix One

Essential objectives of the Critical Care Outreach Service

- To avert admission to critical care by identifying patients who are deteriorating and either helping to prevent admission or ensuring that admission to a critical care bed happens in a timely manner to ensure best outcome.

- To enable patient discharge from critical care by supporting the continued recovery of discharged patients on the wards and high dependency areas.

- To share critical care skills and experience with ward based teams.

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

Appendix Two

West Yorkshire Critical Care Network- Minimum Standards for Outreach Services

1. All Acute Trusts will provide a Critical Care Outreach Service.

2. All Critical Care Outreach teams will have a Lead Clinician (medical, nursing, AHP).

3. All Ward Managers of Acute Wards/Departments will ensure a national Early Warning Score (NEWS) is recorded with each set of observations.

4. All Acute Trusts will have referral algorithm for NEWS and Outreach Services.

5. All members of the Critical Care Outreach team are able to refer to Senior Clinicians within admitting team.

6. All Level 2 and Level 3 patients will be seen by Critical Care Outreach teams post discharge from Critical Care areas.

7. All Critical Care Outreach teams will have competency based education & training in all aspects of Acute Care.**(See below)*

8. All Critical Care Outreach teams will assist in providing both formal and informal education & training to staff in Acute Care.

9. All Critical Care Outreach teams will continually audit & evaluate their service.

***Essential**	***Desirable**
• Arterial Blood Gas (ABGs) Interpretation • Non Invasive Ventilation (NIV) • Continuous Positive Airway Pressure Ventilation (CPAP) • Acute Life-threatening Events: Recognition & Treatment (ALERT) Training • Intermediate/Advanced Life Support • Patient Group Directive (PGD) Training (if using PGDs) • ECG Interpretation • Care of Tracheostomies • Care of Chest Drains • Care of Central Lines • Care of 02 Therapy • Aspects of Sepsis	• Chest X-Ray Interpretation • Outreach Training Course (with competencies) • Assessment & Diagnostic reasoning module (Leeds THT)

Appendix Three

Intensive Care Society Levels of Critical Care For Adult Patients

Level 0 Criteria:

Requires hospitalisation

Level One Criteria:

Patients recently discharged from a higher level of care

- Patients requiring a minimum of 4 hrly observations.

Patients in need of additional monitoring/clinical interventions, clinical input or advice

- Requiring a minimum of 4 hrly observation on the basis of clinical need
- Patients requiring continuous oxygen therapy
- Boluses of intravenous fluid (need not be determined by CVP)
- Epidural analgesia or Patient Controlled Analgesia in use
- Parenteral Nutrition.
- Postoperative surgical patients who are still requiring 4 hrly observations
- Patients requiring administration of bolus intravenous drugs through a Central Venous Catheter.
- Patients with a tracheostomy.
- Patients with a chest drain in situ.
- Patients requiring a minimum of 4 hourly GCS assessment.
- Diabetic patients receiving a continuous infusion of insulin.
- Patients who are at risk of aspiration pneumonia.
- Patients on established intermittent renal support.
- Patients requiring respiratory physiotherapy to treat or prevent respiratory failure.
- Patients requiring for clinical reasons frequent (> 2x day) Peak Expiratory
- Flow rate measurement.

Patients requiring critical care outreach service support

- 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.

Patients needing pre-operative optimisation
Patients needing extended post operative care
Patients stepping down to Level 2 care from Level 3
Patients receiving single organ support
Patients receiving Basic Respiratory Support

- Requiring more than 50% oxygen
- Close observation due to potential for acute deterioration to the point of needing advanced respiratory support
- Physiotherapy or suctioning at least 2 hrly

- Patients recently extubated after a long period of intubation and/or mechanical ventilation
- CPAP or NIV
- Patients who are intubated to protect their airway but otherwise stable

Patients requiring Basic Cardiovascular Support
Indicated by one or more of the following:

- Use of a CVP line for monitoring of CVP and/or provision of access to deliver titrated fluids to treat hypovolaemia
- Treatment of circulatory instability due to hypovolaemia from any cause
- Use of a CVP line for basic monitoring or central venous access to deliver therapeutic agents
- Use of an arterial line for basic monitoring of arterial pressure and/or sampling of arterial blood
- Single intravenous vasoactive drug used to support or control arterial pressure, cardiac output or organ perfusion
- Intravenous drugs to control cardiac arrhythmias

Renal Support, indicated
Indicated by:

- Acute renal replacement therapy
- or the provision of renal replacement therapy to a chronic renal failure patient who is requiring other acute organ support in a critical care situation

Neurological Support
Indicated by one or more of the following:

- Central nervous system depression sufficient to prejudice the airway & protective reflexes
- Invasive neurological monitoring or treatment eg, ICP, jugular bulb sampling, external ventricular drain
- Continuous intravenous medication to control seizures and/or continuous cerebral monitoring
- Therapeutic hypothermia using cooling protocols or devices

Dermatological Support
These patients should continue to require a minimum of hourly observations & be at risk of needing step up to level 3 care to fulfil this definition
Indicated by one or more of the following:

- Patients with major skin rashes, exfoliation or burns (>30% body surface affected)
- Use of multiple, large trauma dressings (multiple limb or limb & head dressings)
- Use of complex dressings (open abdomen or large skin area >30% of body surface area, open abdomen, vacuum dressings or large trauma such as multiple limb or limb & head dressings)

Hepatic Support

Patients should require a minimum of hourly observations consequent on the risk of clinical deterioration & fulfil one of the following categories:

- Acute or chronic hepatocellular failure requiring management of coagulopathy and/or portal hypertension (including hepatic purification & detoxification techniques); or
- Primary acute hepatocellular failure patients who are being considered for transplantation & require management of coagulopathy and/or portal hypertension (including hepatic purification & detoxification techniques)

Level Three Criteria:

Patients requiring Advanced Respiratory Support alone

Patients receiving a minimum of 2 organs supported

Patients receiving Advanced Cardiovascular Support

Appendix 4

CALDERDALE AND HUDDERSFIELD NHS FOUNDATION TRUST

STANDARD OPERATING PROCEDURE

Hand over between Critical Care Outreach and Hospital Out Of Hours Programme

Purpose

The aim of this operating procedure is to facilitate the transfer of care of patients between the Critical Care Outreach Team (CCOT) and Hospital Out Of Hours Programme (HOOP). This process will be used to maintain high quality and care over a 24 hour period within the Calderdale and Huddersfield NHS Foundation Trust (CHFT).

Introduction

Handovers of patient care thus introduce a 'vulnerable gap' that may result in adverse events if clinically relevant information is not shared accurately and in a timely manner (Bhabra 2007). This operating procedure will outline the process for a face to face handover which will take place twice in a 24 hour period across two hospital sites. It will consist of a safety brief and include the transfer of confidential patient information from one care professional to the next. The time, place and process will be outlined in this document.

Responsibilities

CCOT team are available from 07.30-20.00 seven days a week.
HOOP team are available 17.00-0800 week days and 24 hour cover on weekends and bank holidays.

It is the responsibility of the CCOT/HOOP nurses to collect structured information of patients which are deemed appropriate for further clinical review over the following 12 hour shift. The data will be collected using the MEDICUS handover format. The disposal of this document will be with CCOT/HOOP nurses on a daily basis using confidential waste bin. Use of the SBAR (Situation, Background, Assessment, and Recommendation) tool is recommended by CHFT.

Procedure

Handover time, as at present, must be built into all rotas in order to allow for team members to share information. Handover should ideally take place in an area which prevents interruptions from phones, bleeps, other staff, relatives and patients and ensures patient confidentiality.

Handover Time and Place

Calderdale site:

Time	Morning handover – 07.45
	Evening handover- 19.45
Place	HOOP office level 1

Huddersfield site:

Time	Morning handover- 07.45
	Evening handover- 19.45
Place	HOOP Office Corridor 5 ground floor

How should it happen and what information needs to be provided

The handover should be conducted according to a structured format using the handover checklist	
The handover should be conducted according to a structured format using the handover checklist	
All bleeps handed over (if appropriate)	
Patients who are of concern / need review (use SBAR) (please specify any escalation plan already made)	
Bed status info provided (including HDU/ICU)	
CVAD issues	
Site issues	

Reference

Bhabra G, MacKeith S, Monteiro P, Pothier DD. An experimental comparison of handover methods. Annals of the Royal College of Surgeons of England 2007;89:298–300.

References

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- Department of Health (2007) 'Saving Lives – Clean Safe Care'

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- NHS Modernisation Agency (2003) 'Critical Care Outreach: Progress in Developing Services

- Smith, G (2003) ALERT – Acute Life Threatening Events- Recognition and Treatment

- NICE CG 50 (2007) 'Acutely Ill Patient in Hospital'

Guideline developed by

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Guideline to be ratified by Critical Care Directorate Management Team, Deteriorating Patient Group and Surgical Division Patient Safety Quality Borad.

List of interested groups

Group name	Information only	Requires Sign-off	Date signed off
Critical Care Directorate Management Team		Y	
Deteriorating Patient Group		Y	
Surgical Division Patient Safety Quality Board		Y	
Medical Division Patient Safety Quality Board	Y		
FSS Division Patient Safety Quality Board	Y		

Distribution list and areas where guideline should be readily available

CHFT Intranet site only

Arrangements for training

Nil training required

List of changes and dates of changes

Date change implemented	Change (with paragraph reference)	Who is responsible for change	Full sign-off required (no or fully signed off)
29/3/17	Removal of all references in document to the Central Venous Access Device guidance. This guidance is now available in its own operational guideline.	M Hytch T Jackson	No
29/3/17	Operational guideline amended to reflect changes to the Adult Physiological Observation Policy (version 4). CCOT no-longer responsible for the completion of audit of NEWS. See pg 9 in version 2 document this replaces.	M Hytch C Briggs	Yes
29/3/17	Operational guideline amended to reflect changes to the out of hours team via introduction of HOOP (see pg. 11 and utilisation of standard operational procedure for the handover (see appendix 4).	M Hytch C Briggs	No