

**EAST OF ENGLAND**

**CRITICAL CARE OPERATIONAL DELIVERY NETWORK**

**ADULT CRITICAL CARE NETWORK**

 **TRANSFER PROCEDURE**

**East of England Critical Care Operational Delivery Network**

**Adult Critical Care Network**

**Transfer Procedure**

**Documentation Control**

|  |  |
| --- | --- |
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**1. INTRODUCTION**

The East of England Critical Care Network Transfer **Policy** should be used for the decision-making process with regard to the transfer of the critically ill. Once the need for transfer has been identified and a destination secured; the patient has been deemed as medically safe as possible to transfer, and a risk assessment has been completed to select competent staff to carry out the transfer as described in the Transfer **Policy** and *Appendix 1.,* then the following **procedure** should be followed.

Medical handover documentation should be completed prior to transfer to aid effective transfer of the patient to the receiving hospital. A suggested template letter is available in *Appendix 2*.

This procedure applies to intra-hospital and road ambulance transfers only.

## 2 SAFETY STANDARDS

**2.1** The ICS advocates the use of a pre-transfer checklist ‘Is the patient stable for transport’ *(Appendix 3)*. This ensures the patient is appropriately resuscitated and stabilised prior to transfer to reduce the physiological disturbances associated with movement and reduce the risk of complications and deterioration during transfer ensuring that a minimum of intervention is required during the transfer. Time taken for the stabilisation needs to be balanced against the need for immediate transfer for specialist life-saving intervention.

**2.2** The airway should be assessed and if necessary secured and protected.

Intubated patients should normally be sedated (and sometimes

 paralysed), and mechanically ventilated. Inspired oxygen should be

 guided by oxygen saturation (SpO2) and ventilation by end tidal carbon

 dioxide (ETCO2). Following stabilisation on the transport ventilator, at

 least one arterial blood gas analysis should normally be performed prior

 to departure to ensure adequate gas exchange. Inspired gases should

 be humidified using a disposable heat and moisture exchanging (HME)

 filter.

**2.3** Patients should be securely strapped to the transfer trolley by means of a 5-point harness (or similar). Reassurance, sedation, analgesia and anti-emetics should be provided as required to reduce patient discomfort and distress.

 **2.4** All patients requiring transfer with a tracheostomy MUST have a

 complete tracheostomy safety box and spare inner cannulas; enough to

 manage any patient who may have an alternative tracheostomy tube

 type than is stocked by the receiving hospital. Spares are to be left

 with the receiving hospital if required.

**2.5** To enhance the safety of the entire transfer process a pre-departure

checklist should be used *(Appendix 4)*, this covers safety checks related

 to the patient, the welfare of staff, the equipment, the Ambulance and

 the Organisation.

 **2.6** Patients should be transferred in a land ambulance on a transfer trolley

compliant with CEN regulations. All monitoring and equipment must be suitable for use in the transfer environment and mounted on the transfer trolley in such a way as to be CEN compliant.

**2.7** All portable equipment must be securely stowed to reduce the risk of injury in the event of an accident.

 **2.8** Emergency ambulances should carry a minimum of 2000 litres of

oxygen. Most vehicles are now being equipped with 2 F size cylinders

 (total 2720 litres). In addition a national specification for new

 emergency vehicles has been agreed, which will include DC / AC power

 inverters, making them ideal for critical care transfers. They should also

 carry small cylinders to facilitate ward to ambulance transfer.

 **2.9** When using a bariatric trolley with extensions in use, confirm with the

ambulance service that they can provide a vehicle with the modified

 floor fixings.

 **2.10** The welfare of patients, staff, other road users and pedestrians must be

considered. A blue light and siren transfer may be advantageous for

 travelling through traffic, but high-speed transfers should be avoided except when clinically necessary.

**2.11** Staff must remain seated at all times and wear the seatbelts provided. If it is necessary to attend to the patient during transfer, the ambulance crew should be informed and the vehicle stopped in a safe place.

## 3 Transfer equipment

**3.1** Minimum standards of monitoring must be applied in every case. Monitoring should be continuous throughout the transfer. All monitors, including ventilator displays and syringe drivers should be visible to accompanying staff. The transfer ventilator should be of appropriate standard. Back-up battery life must be adequate for the trip.

 **3.2** The transfer bag should contain all items required to deal with potential

emergencies including intubation, respiratory and cardiovascular

 support. Drugs and fluids needed for the trip should be adequate. It is

 the responsibility of the transfer anaesthetist to personally check that

 they have all the necessary equipment, drugs and fluids prior to

 departure. Spare batteries must be taken.

 **3.3** For Inter-hospital transfers high visibility jackets and a mobile phone should be made available for the transfer by the Trust. Use of the East of England Critical Care Operational Delivery Network (ODN) transfer form for the trip is essential: a patient record is vital for both medico-legal and audit purposes. White copy retained by transferring unit and green copy retained in patient notes. The transferring unit has the responsibility to scan and email a secure copy of the transfer form to mandy.baker6@nhs.net at earliest opportunity.

 **3.4** Following completion of transfer disposables, drugs and fluids should be

re-stocked. A written checklist for this purpose is useful. Monitoring

 and electrical equipment should be re-charged and made ready for use.

**4. Ambulance Provision**

**4.1** The East of England Ambulance Service will undertake the following journeys as part of the contractual responsibilities:

**4.1.1** Urgent inter-hospital emergency transfers if they are going for an ***upgrade in care requiring a time limited intervention***. This is for adult and paediatric patients. See ‘Urgent’ definition below.

**4.1.2** Critical Care transfers ***going to another critical care bed*** within the East of England region where the destination bed will provide a ***higher level acuity of care (an upgrade in care provision)***, adult and paediatric, where the journey necessitates an emergency 999 ambulance.

**4.2** At the time that is appropriate to your organisation, please inform the EEAST ambulance service so that the most appropriate transport may be identified and arranged. Always use the terminology ‘Critical Care Transfer’ to indicate the nature of the request.

**4.2** The control room operatorwill require answers to all clinician set questions so please ensure that all the information is available before making contact.Please see *Appendix 5*, for a guide as to the type of information required. Please have all patient notes and transfer details to hand when booking the transfer including responsible Consultant details.

**4.3** The urgency of response should be clarified during the initial telephone call and according to the **National Framework for Inter-Facility Transfers (IFT)** (NHS England and NHS Improvement 2019) the definitions are:

**IFT Level 1 (IFT1) Category 1**

Where the ambulance service staff are required to provide immediate additional clinical assistance for life-saving intervention, or there is an obstetric emergency (This would generally be from a facility such as an urgent care or birth unit and would not be applicable to Critical Care units in acute hospitals)

**Timescale for Ambulance Response: Closest rapid response vehicle (RRV) dispatched immediately**

**IFT Level 2 (IFT2) Category 2**

Where there is a need for an immediate intervention that cannot be carried out in the current facility, and the patient is at immediate risk of death or life changing loss of a limb or sight (includes neurosurgery, PPCI, major vascular blood)

**Timescale for Ambulance Response: Closest ambulance despatched immediately**

**IFT Level 3 (IFT3) Locally Determined Response**

Where the need is not considered immediately life or limb threatening but an urgent transfer is required for further treatment or intervention at a specialist centre where the transfer is to a higher level of care.

**Timescale for Ambulance Response: Determined through normal commissioning arrangements**

**IFT Level 4 (IFT4) Locally Determined Response**

All other transfers that do not fit the definitions above and require urgent transport for ongoing care but do not need to be managed as an emergency i.e. on-going management of elective or semi-elective procedures

**Timescale for Ambulance Response: Determined through normal commissioning arrangements**

**4.4 To request an emergency ambulance please use the following numbers. Record the CAD number on the regional transfer form and the time of request:**

* **Essex – 01245 443241**



* **Norfolk, Suffolk and Cambridgeshire –**

 **01603 888060**

  

* **Hertfordshire and Bedfordshire –**

 **01234 716120**



**Healthcare professionals should always call 999 in immediately**

**life-threatening emergencies (potential C1 responses).**

In cases where there is a delayed response to a booked transfer, the senior clinician responsible for the patient’s care should contact the following number to escalate concern, quoting the CAD number:

**Hertfordshire and Bedfordshire –** 01234 243313

**Essex** – 01245 442072

**Norfolk, Suffolk & Cambridgeshire** – 01603 422884

**4.5 Repatriations**

4.5.1 Repatriations back to a local CCU or originating hospital **are outside the** **specifications of the emergency contract specifications.** Alternative sources must be tried for repatriations or journeys outside of the East of England. For alternative sources and /or understanding of the non-emergency/PTS contract please contact your local CCG. Repatriations are **NOT** covered within the emergency /999 contract delivered by EEAST.

**4.6 Exclusions**

4.6.1 Currently the following transfers/journeys are outside of the emergency response provision and local commissioning, Patient Transport Services (PTS) or alternative local arrangements should be sought:

* Neonatal transfers
* Pre-planned journeys or routine transfers, e.g. appointments or scheduled interventions
* Acute healthcare / social care providers (including maternity) needing to move patients between hospital sites for same or lower level of care e.g. repatriations
* Moving patients due to capacity pressures
* Discharge of care from healthcare (or social care) setting or downgrade of care transport/repatriation.
* Transport outside of the East of England
* Return journeys of transfer staff

## 5. Conduct of transfer

 **5.1** The practicalities of transfer demand that all tubes and lines be secured

in advance of moving the patient. IV access should be immediately

 available & working throughout. Staff are expected to wear seat belts

 and remain seated for the journey. If the patient requires attention that

 involves removal of the staff seatbelt, the ambulance should stop in a

 safe place to facilitate this. A plan for patient sedation with or without

 paralysis should be made in advance. **All replacement drug syringes**

 **should be drawn up and labelled ready for use.**

 **5.2** Complete the relevant discharge summary / letter, clinical and social

information. Ensure there is a clear on-going management plan

 accompanying the patient

 **5.3** Ensure communication with all the relevant teams at the receiving

hospital for on-going medical and surgical problems.

 **5.4** The transfer unit MUST phone the receiving Critical Care Unit before

commencingthe journey.

 **5.5** It is essential that the East of England Critical Care ODN transfer form is completed for all inter-hospital transfers as a patient record is vital for both medico-legal and audit purposes. The white copy is retained by transferring unit and green copy retained in patient notes. The transferring unit has the responsibility to scan and email a copy of the transfer form to mandy.baker6@nhs.net at earliest opportunity. Further transfer forms can be obtained from mandy.baker6@nhs.net

 **5.6** On arrival a thorough medical and nursing handover is mandatory and

 the medical transfer template in *Appendix 3* would be useful for this.

**6. Notes and X-rays/Scans**

 **6.1** All notes relating to the current admission should be photocopied and

provided for the receiving hospital. However transfer should not be delayed for photocopying purposes as this can be completed at the receiving hospital and notes returned with the transfer team. Further patient management may only be possible with the complete set of old notes and if requested should be provided in their entirety.

 **6.2** All imaging including x-rays, CT and MRI scans should have been sent digitally and seen by the receiving hospital in advance of the transfer.

**7. Blood Transfusion**

**7.1** The local blood transfusion department must be contacted at the earliest opportunity if blood is required for an out of hospital transfer.

**7.2** State blood is required for an out of hour transfer and it will be supplied in the correct transport box.

**7.3** Blood is suitable for transfusion within the timeframe stated on the associated paperwork with the transport box, provided the seal is unbroken.

**During Transfer**

**7.4** Ensure the blood transport box remains sealed unless blood is required for immediate transfusion.

**7.5** If blood is required, transfuse blood in accordance with local policy

**7.6** Once transport box is opened all units must be transfused within 4 hours or discarded.

**7.7** If blood is removed ensure the transport box lid is replaced securely between units.

**On Arrival**

**7.8** If blood is not immediately required take the transport box directly to blood transfusion laboratory.

**7.9** If blood is immediately required, give the transport box to the receivint staff member in the clinical area.

**7.10** State how much blood was transfused during the journey and any adverse events (if occurred).

**7.11** Ensure documentation is fully completed as blood has to be tracked from source to final destination.

**7.12** Responsibility for the blood now lies with the receiving hospital in line with their local policy.

## 8. Family

**8.1** The family of the patient should be informed of all decisions regarding the transfer.

**8.2** The family should be made aware that transfer decisions are the responsibility of the medical staff operating within the policy of the Trust and the network.

**8.3** All conversations with family should be clearly documented in the patients notes.

**8.4** It is the responsibility of relatives and friends to arrange their own transport, to make any journeys to the receiving hospital.

**8.5** Patients and their relatives should be kept informed at all stages of the transfer process and should be provided with appropriate written information.

**9. Infection Status**

 **9.1** The infectionstatus of the patient will not delay bed allocation at the

 receiving trust and any infection status must be declared.

 **9.2** Where a trust has a local policy for only accepting critical care

 transfers into an isolation room, this must not delay the transfer of

 the patient.

**10. Communication**

 Who should:-

 **10.1** Be aware of the document – Trusts, Critical Care Units, Specialised

 Commissioners, Clinical Commissioning Groups, EEAST

 **10.2** Understand the document – Critical Care Units, Trust Operational

 Teams, Emergency Department

 **10.3** Sign up to the document – Critical Care units, Trust Operational

Teams, Emergency Department

 **11. Incident Reporting**

 **11.1** All trusts within the East of England Critical Care ODN will

 continue to operate within their own clinical governance

 framework and all adverse incidents should be reported in

 line with their internal governance system.

 **11.2** Untoward and critical incidents will be recorded on the transfer

documentation and investigated by the relevant personnel.

 **11.3** Any incidents associated with repatriation and/or transfer

 should be reported in line with the trusts internal processes

 along with notifying the trust local Critical Care Delivery

 Group and the Network Office.

 **11.4** Quarterly Reporting of Incidents to the Network Office

* Date of Incident
* Factual account
* Action Taken or Planned
* Outcome
* Supporting evidence if applicable

**12. The Critical Care Network**

 **12.1** The medical lead for the network will monitor the development of

 referral pathways and transfer policies.

 **12.2** Information from completed transfer forms is to be recorded on a

database with regular reports developed.

 **12.3** The network should have mechanisms in place to liaise with EEAST

 and CCG personnel responsible for the 999 and non-emergency

 contracts.

**References:**

Intensive Care Society (2019) Guidance On: The transfer of the critically ill adult

NHS England and NHS Improvement (2019) National Framework for Inter-Facility Transfers

***APPENDIX 1***

East of England Critical Care ODN

**Risk assessment prior to transfer**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Low Risk** | **Medium Risk** | **High Risk** |
| * Nurse or clinical practitioner with appropriate competencies
 | * Critical Care Nurse, accompanied by Doctor if potential to deteriorate in transit, may need escalation of care.
* Paramedic support for intubation may be deemed appropriate if risk at lower end of scale
 | * Anaesthetist with Critical Care Competency and advanced airway competencies
* Nurse with appropriate critical care skills
 |
| **NEWS2 1 - 4** | **NEWS2 5 - 6** | **NEWS2 7 or more \*** |
| **Airway****Breathing****Circulation****Disability****Exposure****Add Other Considerations** | Maintaining airwayAdequate blood gases for patient – FiO2 <0.4Stable no inotropic or vasoactive supportGCS 14+Normothermic | Maintaining airwayBlood gases for patient – FiO2 >0.4 and <0.6Stable, low dose inotropes or vasopressor support < 0.2mg/kg/min GCS 9-13 consider elective intubationMild Hypo / Hyperthermia | IntubatedVentilated - FiO2 ≥0.6 / Base deficit worse than -8 mmol/lCVS instability, significant inotrope / vasoactive support > 0.2mg/kg/minGCS <8 or sedatedModerate Hypo / HyperthermiaMajor Trauma Eg. Multiple injuries, unstable C spine, chest injuries, significant head injuries, abdominal or pelvic injury |
| **NEWS2 Score:** (tick level of risk) | □ | □ | □ |
| Print name: Sign: Designation: Grade: Bleep/contact no: Date: / / Time: |

A high risk score may also be achieved by scoring 3 in one parameter as it refers to extreme variation in a single physiological parameter.

|  |
| --- |
| **Additional Comments:** |

|  |
| --- |
| **Please note:*** Largely subjective decision
* This chart is for guidance
* Not exclusive, if there are other factors not highlighted in this risk assessment, please add them in as a consideration in the risk assessment process
 |



***APPENDIX 2***

**MEDICAL LETTER FOR**

**INTER-HOSPITAL**

**PATIENT TRANSFERS**

|  |  |
| --- | --- |
| **Patient Name:** | **Date of birth:** |
| **NHS No:** | **Hospital No:** |

|  |  |
| --- | --- |
| **Hospital Admission Date:** | **Transfer Date:** |
| **Transfer from Hospital and Dept:** | **Receiving Hospital and Dept:** |
| **Referring Consultant:** | **Accepting Consultant:** |
| **DIAGNOSIS / Reason for Transfer:** |

|  |  |
| --- | --- |
| **Next of Kin Name:** | **Relationship:** |
| **Contact Tel No:** | **Aware of transfer: Yes □ No □** |

|  |  |
| --- | --- |
| **Previous Medical History:** | **Allergies:** |
| **Normal BP (if known):** |
| **Usual Medication (Pre-admission):** |
| **Psychosocial History/Relevant Family Information:** |

|  |
| --- |
| **Summary of Admission:** |

|  |
| --- |
| **Current clinical condition:** |
| **Airway secured with:****Grade of intubation:** |  |
| **Respiratory:****Ventilation:****Chest:** |  |
| **Cardiovascular:****Inotropes:** |  |
| **Neurological:****GCS: Pupils:****Fitting:** |  |
| **Renal:** |  |
| **Gastro-intestinal:****Bowels:****Stoma:** |  |
| **Pain Control:****Analgesia:** |  |
| **Sedation:****Agitation/Delirium:** |  |
| **Fluid balance status:** |  |
| **Current Medication, including infusions:** |

|  |  |  |
| --- | --- | --- |
| **Positive Microbiology:** | **Site:** | **Antibiotics:** |
|  |  |  |
|  |  |  |

|  |  |
| --- | --- |
| **Current Invasive Lines** | **Invasive device record enclosed □** (Tick)**(aseptic technique for infection control** |
| Arterial Line Site: | Date Inserted: □ |
| Central Venous Catheter Site: | Date Inserted: □ |
| Peripheral Cannula Site: | Date Inserted: □ |
| Peripheral Cannula Site: | Date Inserted: □ |
| Haemofiltration Lines Site: | Date Inserted: □ |
| NG Tube Size: Type: | Date Inserted:Correct placement confirmed? Yes/NoHow confirmed?  |
| Urinary Catheter: Urethral □ Supra-pubic □ | Date Inserted: □ |
| Drains (Please specify): | Date Inserted:  |

|  |  |
| --- | --- |
| **Latest blood results dated:**Hb: Na+:WBC: K+:Platelet: Urea:PT: Creatinine:APTT: Glucose:Fibrinogen: Other:Other:X-match sent: Yes □ No □ If Yes, date:**ABG: Date: Time: FiO2:**pH PaO2 PaCO2HCO3- BE Lactate | **Current Infection Status:** (answer: Yes, No, Awaiting Results, other)**MRSA:****Clostridium Difficile:** **VRE:****Other (specify):****Treatment Information:****Receiving hospital informed of any infection:**  |

|  |  |
| --- | --- |
| **TRANSFER RISK** **ASSESSMENT****COMPLETED** and appropriately skilled staff identified for the transfer.Consider the following: | •The potential benefit of the transfer outweighs the clinical risk.•Are there any specific risks related to the underlying condition and / or co-morbidity which the patient might encounter during transfer?•Is the patient stable, use PAR score plus other appropriate indicators if necessary?•The anticipated length of the journey, mode of transport and any specific transport related issues.  |
| **Transfer Letter Prepared by:** | **Designation:** |
| **Signed:** | **Dated:** |

***APPENDIX 3***

**Pre-transfer Check list 1. Is patient stable for transport?**

Airway

• Airway safe or secured by intubation

• Tracheal tube position confirmed on chest x-ray

Ventilation

• Adequate spontaneous respiration or ventilation established on transport ventilator

• Adequate gas exchange confirmed by arterial blood gas

• Sedated and paralysed as appropriate

Circulation

• Heart rate, BP optimised

• Tissue & organ perfusion adequate

• Any obvious blood loss controlled

• Circulating blood volume restored

• Haemoglobin adequate

• Minimum of two routes of venous access

• Arterial line and central venous access if appropriate

Neurology

• Seizures controlled, metabolic causes excluded

• Raised intracranial pressure appropriately managed

Trauma

• Cervical spine protected

• Pneumothoraces drained

• Intra-thoracic & intra-abdominal bleeding controlled

• Intra-abdominal injuries adequately investigated and appropriately managed

• Long bone / pelvic fractures stabilised

Metabolic

• Blood glucose > 4 mmol/l

• Potassium < 6 mmol/l

• Ionised Calcium > 1 mmol/l

• Acid – base balance acceptable

• Temperature maintained

Monitoring

• ECG

• Blood pressure

• Oxygen saturation

• End tidal carbon dioxide

• Temperature

***APPENDIX 4***

**Pre-transfer Check list 2. Are you ready for departure?**

Patient

• Stable on transport trolley

• Appropriately monitored

• All infusions running and lines adequately secured and labelled

• Adequately sedated and paralysed

• Adequately secured to trolley

• Adequately wrapped to prevent heat loss

Staff

• Transfer risk assessment completed

• Staff adequately trained and experienced

• Received appropriate handover

• Adequately clothed and insured

Equipment

• Appropriately equipped ambulance

• Appropriate equipment and drugs

• Pre-drawn up medication syringes appropriately labelled and capped

• Batteries checked to have suffient power for the duration of transfer (spare batteries available)

• Sufficient oxygen supplies for anticipated journey (confirm with ambulance crew)

• Portable phone charged and available

• Money for emergencies

Organisation

• Case notes, x-rays, results, blood collected

• Transfer documentation prepared

• Location of bed and receiving doctor known

• Receiving unit advised of departure time and estimated time of arrival

• Telephone numbers of referring and receiving units available

• Relatives informed

• Return travel arrangements in place (not relying on ambulance service)

• Ambulance crew briefed

• Police escort arranged if appropriate

Departure

• Patient trolley secured

• Electrical equipment plugged into ambulance power supply where available

• Ventilator transferred to ambulance oxygen supply

• All equipment safely mounted or stowed

• Staff seated and wearing seat belts

***APPENDIX 5.***

 **Ambulance Booking Questions**

N.B. this is a guide only and questions and order may be subject to change

|  |
| --- |
| **Clinician set questions** |
| Is there a need for an immediate intervention that cannot be carried out at the current facility and the patient is at immediate risk of death or life changing loss of limb? |
| What is the clinical reason or diagnosis of the patient? |
| What is the mobility of the patient? |
| Is there any clinical intervention required en route to hospital? |
| Prioritisation as per IFT category? |
| What is your name / role? |
| What is your direct phone number? |
| Who will be travelling in the ambulance with the patient? |
| Pick up address / unit? |
| Patient name / Sex / DOB / Phone number / NHS number? |
| Any other risk factors or patient information to be aware of?(Obesity, infection, etc.) |
| Delivery address / unit  |
| Any specialist equipment travelling with patient? Transport requirements: critical care trolley / ventilated / monitoring / infusions / oxygen |

Please note that this is the **minimum** information required.

**Please record the following information on the East of England Critical Care Network Inter-hospital transfer form ready for departure:**

**Date and time of the call**

**Time ambulance arrived**

**Time of departure from hospital**

**Ambulance CAD Number**