Derby Hospitals NHS Foundation Trust

Inter-Hospital Transfers of Critically Ill Patients from ICU/HDU at the Royal Derby Hospital

Reference No: CG-T/2014/180

Introduction

The transfer of critically ill or injured patients (level 2 or 3) between hospitals (inter-hospital transfer) has been shown repeatedly to be challenging, potentially hazardous and associated with critical incidents-, despite availability of specific transfer training, best preparations and dedicated transfer equipment. Transfers of critically ill or injured adults in the UK are predominantly undertaken on an ad-hoc basis, under severe time pressure by staff who undertake this activity very rarely; there are very few whole-time staffed dedicated transfer schemes for adults available with the exception of some ECMO centres or EMRS in Scotland.

Aim and Scope

To decrease morbidity and mortality and significant adverse events associated with transferring critically ill or injured adult patients between hospitals

Definitions

Level 3 patient: a patient requiring IPPV + other organ support
Level 2 patient: a patient requiring high flow oxygen, CPAP & organ support

Abbreviations

MTCCN: Mid Trent Critical Care Network
EMAS: East Midlands Ambulance Service NHS Trust
ECMO: Extra-Corporeal Membrane Oxygenation
EMRS: Emergency Medical Retrieval Service Scotland
ED: Emergency Department

Management Principles

1. Transfers of critically ill patients have dramatically reduced compared to 15 years ago and inter-hospital transfer activity has been relatively stable across the MTCCN in numbers over the last 3 years. Within the Mid Trent Critical Care Network (MTCCN) on average one critically ill patient is being transferred in 24 hours. The total number of audited ITU/HDU transfers out of the Royal Derby Hospital in 2012/2013 was approximately 30, - a rare event. Statistics do not include transfers from other locations in the Trust not involving anaesthetic staff or critical care nurses.

2. Transfer decisions and decisions on priority are being made by Consultants in Intensive Care for all patients who are cared for on ICU/HDU at Royal Derby Hospital.

3. Out of hours transfers are undertaken by the most suitably trained resident doctor with an appropriate level of airway skills, ICU experience and ideally inter-hospital transfer training; the decision re who is this individual rest with the ICU Consultant on-call and will be discussed if necessary with the 1st On-Call Consultant anaesthetist. This decision takes into consideration adequate skill mix and workload on ICU and in theatres. Between 8.00 and 18.00 hours transfers are usually undertaken by ITU doctors.

4. Ideally, all trainees should have undergone transfer training. Two one-day multi-disciplinary MTCCN Transfer Courses, which are delivered once a year at the Royal Derby Clinical Education & Skills Centre, are

the recommended course to gain transfer training.

5. Patients, who are transferred from ITU/HDU should be placed on the dedicated ITU transfer trolley, which is equipped with 2 size D oxygen cylinders, an Oxylog 3000, Propaq CS multimodality monitor, a vacuum mattress, an inverter, an Anderson Connector Spade Cable, a Laerdal suction unit and 3 fully charged Alaris ASENA infusion pumps; in addition, there is a dedicated 2 part orange transfer backpack.

6. The aim is to provide the same level of care during transfer as the patient has received whilst on ITU/HDU. This will at times be ambitious or difficult to achieve. It is prudent for the transfer team to minimize infusions to the essential ones only and keep everything as simple as possible.

7. A MTCCN transfer form must be completed for every transfer of a level 2 or 3 patient.

8. Any problems encountered during transfer should be documented in detail on the critical/clinical incident section on the transfer form.

9. Any problems or suggestions regarding transfers should be brought to the attention of the transfer lead clinician for Derby (currently Dr Juergen Klein, Consultant in Anaesthesia and Intensive Care)

10. There is an agreed Trent-wide Procedure for Booking Ambulance Transport for Critical Care Patients with EMAS, which is part of this guideline. See page 23 of the MTCCN Admission & Operational Policy – Version 8, September 2014 included in this document.

11. Clinical issues or lessons learnt from the yearly published reports 'MTCCN Audit of Transfers of the Critically Ill':

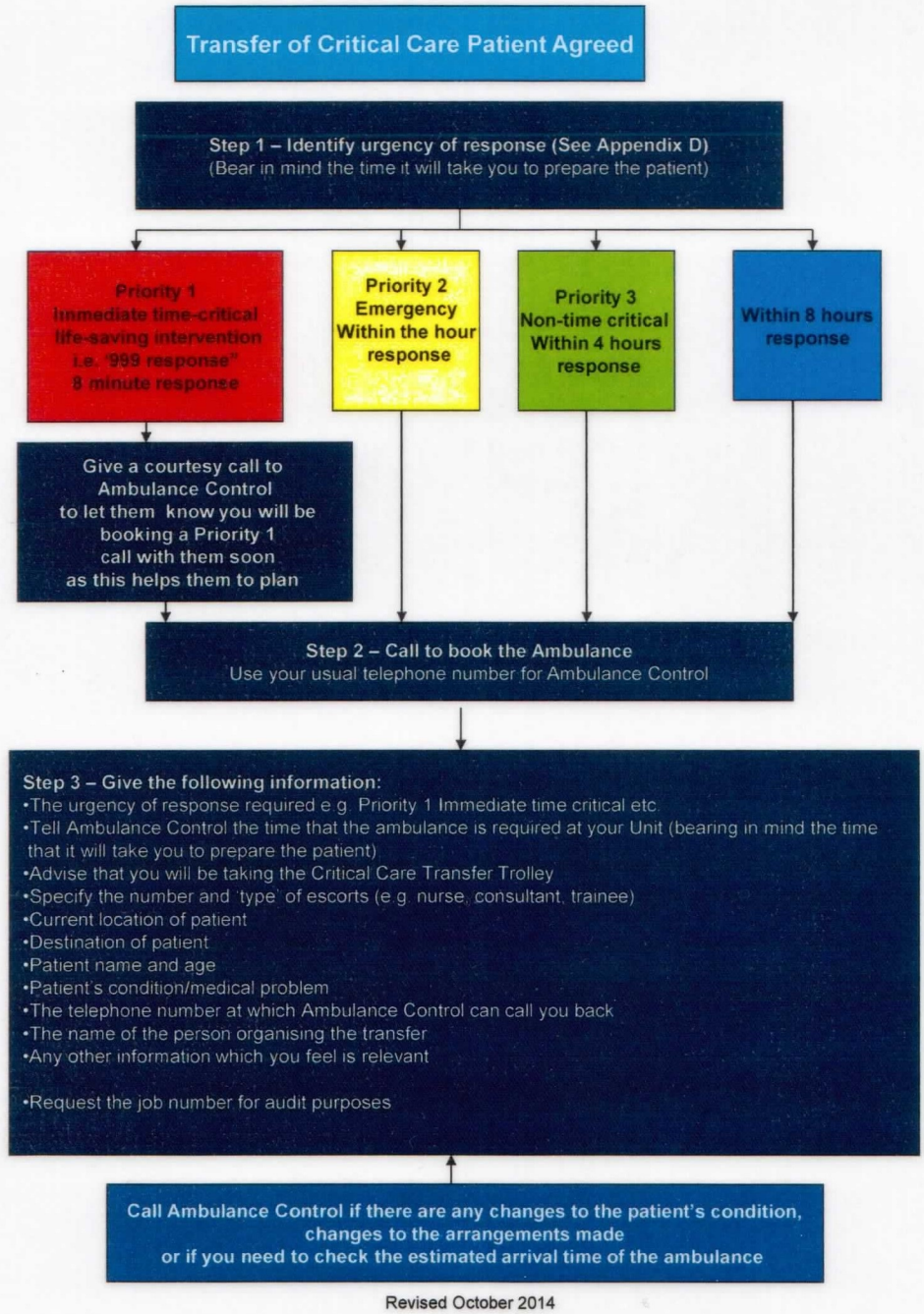
- unfamiliarity with transfer equipment or unavailability of transfer equipment
- End-tidal capnography not being used in every ventilated patient, not just neurological transfers
- Equipment failure or malfunction being the most frequently reported incident with particular reference to loss of power supply to the monitor or syringe pumps due to inadequate charging routines
- Omission to instigate endotracheal intubation and ventilation prior to transfer in patients with a GCS of ≤ 8
- Inadequate assessment of patients by the transfer team prior to transfer or inadequate handover at the receiving unit
- Failure to complete the MTCCN transfer forms legibly and ensure that the appropriate copies are sent on to the MTCCN Transfer Audit coordinator

12. Organisational issues or lessons learnt from the yearly published reports 'MTCCN Audit of Transfers of the Critically Ill':

- Delays in transfer are a common occurrence, often due to lack of knowledge of the agreed procedures or transfer training, lack of timely progress in packaging the patient onto the transfer trolley on ICU/HDU or in the ED or due to demands on EMAS exceeding their operational capacity at the time of arranging a transfer
- An EMAS paramedic crew is being requested rather than a NON-PARAMEDIC A&E crew
- Ambulances travelling out of the EMAS area may get lost despite Satellite Navigation Systems

13. The ITU Transfer team should have at least one member who is trained to undertake transfers or experienced in transferring critically ill patients.

Appendix B – Ambulance Booking Procedure



Revised October 2014

NB:

With the introduction of QMC as our Major Trauma Centre and the RDH being a Trauma Unit the vast majority of patients with severe head injuries will be packaged as level 3 patients onto the MTCCN Transfer Trolley in the ED and be transferred as Priority 1 by EMAS with either an appropriately trained doctor from ICU or Anaesthesia following the pre-agreed 'Send&Call' Policy.

References:

Berston A D, Soni N, Oh's Intensive Care Manual, 7th edition, 2013
MTCCN Admission & Operational Policy – Version 8, September 2014
MTCCN 2013 A Network Comparison with the ICS Standards & Guidelines, October 2014

Documentation Control

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