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Mid & South Essex Sustainability & Transformation Partnership

Update paper on steps taken to plan for a proposed patient transfer service

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Why we need an expanded clinical transfer service for mid and south Essex?

The STP for mid and south Essex is currently consulting with the public about proposed changes to some hospital services. More detail on these proposals can be found on the consultation website: www.nhsmidandsouthessex.nhs.uk

As part of the Acute Hospital Reconfiguration Plan for the Mid and South Essex STP it is proposed that all emergency patients continue to be assessed at Accident and Emergency departments located at the three hospitals (Mid Essex Hospital Services NHS Trust, Southend University Hospital NHS Foundation Trust and Basildon & Thurrock University Hospital NHS Foundation Trust). Patients will receive initial treatment and stabilisation in these hospitals.

Local clinicians have reached agreement through the development of these proposals that a cohort of patients would benefit from continuing their treatment at a specialised unit. When this unit is not located at the same site as the presenting A&E department, there will be a requirement to transfer the patient to the specialist unit. This is in addition to the current established pathways which exist between the hospitals for Burns and Plastics `patients, Cardiology and Cardiothoracic patients, ENT and Maxillofacial patients and cancer patients.

This document outlines the present status of our discussions around how such transfers might be supported.

From the modelling assumptions made for the pre-consultation business case, and as described in the public consultation, we anticipate that on average **15** patients per day will require inter-hospital transport following emergency presentation at A&E. This figure is likely to vary due to demand and patient specific factors; proposals are still subject to public consultation and work is on-going to refine clinical models with clinical teams. Appropriate repatriation of patients from specialist units needs to be considered as part of this work.

Under current proposals out to public consultation, inter-hospital transfers may be required for patients needing the following specialist care:

Specialist care required	**Site of specialist centre**	**Transfer may be needed from**
Complex Vascular care	Specialist Unit Basildon	Southend & Broomfield
Complex cardiology care (a small number of additional transfers to existing current pathways)	Specialist Unit Essex Cardiothoracic Centre	Southend & Broomfield
Complex Renal care	Specialist Unit Basildon	Southend & Broomfield
Stroke patients (needing up to 72 hours HASU care)	Specialist Stroke Centre Basildon	Southend & Broomfield
Complex Respiratory care	Specialist Unit Basildon	Southend & Broomfield
Non-Cancer Urology	Specialist Unit	Basildon & Southend

Emergencies	Broomfield	
Complex abdominal surgical care	Specialist Unit Broomfield	Basildon & Southend

Likely numbers of patients who could require transfer between hospitals from modelling are:

Originating hospital	**Receiving hospital**	**Potential no. of patients/day**
Broomfield	Southend	0-1
Broomfield	Basildon	2-3
Southend	Broomfield	5-6
Southend	Basildon	3-4
Basildon	Broomfield	3-4
Basildon	Southend	0-1

The clinical transfer of patients is not a discharge, but transfer from a bed at one mid and south Essex hospital to another mid and south Essex hospital. There will be clear communications materials displayed and available to all patients and relatives explaining this process. A patient's transfer will occur once they have attended their local hospital and have been assessed and had initial treatment commenced and any immediate clinical stabilisation required completed. It will be the senior clinician in charge of the patient's care who decides that their patient is ready to transfer to another hospital for specialist care, or after specialist care, to return to a hospital closer to home for ongoing care. Local clinical teams are currently developing specialty specific plans to ensure clarity around the conditions which are anticipated to benefit from this process

What steps have we taken to understand how similar clinical transfer services work?

We have examined existing models of inter-hospital transfer which have similarities to our proposals around England – including input from Northumbria, London, Staffordshire, Cumbria, the Pennines and West Yorkshire[1]. In these areas, as in many across the country, hospitals work together as a network and patients may be transferred during their admission to hospital for access to more specialist care, or to bring them back to a hospital closer to home after care elsewhere. These processes have been running for a number of years and have been carried out safely. Research internationally has shown that inter-hospital collaborations for a similar size of population as mid and south Essex can be effective in helping patients access high quality care[2]

Guidelines produced by the Association of Anaesthetists of Great Britain and Ireland following a working party examining the evidence, indicated that transfer of patients between hospitals can be safely accomplished even in extremely ill patients. It was noted that the decision to transfer must involve a senior and experienced clinician, and that hospitals should form transfer networks to coordinate and manage clinically indicated transfers. By working together as a single team across the three hospitals in mid and south Essex we can make sure we are able to achieve this. Guidelines for the transport of the critically ill adult from the Intensive Care Society provide a framework for the development of robust safety standards which are nationally recognised.[3]

[1] West Yorkshire Inter-Facility Transfer algorithm, October 2012

[2] Quality of Care and Interhospital Collaboration: A Study of Patient Transfers in Italy, Lomi et al, Med Care. 2014 May ; 52(5): 407–414

[3] AAGB Safety Guideline: Interhospital Transfer; The Association of Anaesthetists of Great Britain and Ireland, 2009

Transfer of patients for medical and surgical specialist care is common in other systems for a variety of patient focused benefits, such as at East Kent Hospitals NHS Foundation Trust which has redesigned the service model in medicine in order to improve patient care/safety out-of-hours and at weekends along with ensuring appropriate supervision/support for trainees. The model is based on a "hot"(emergency) and "cold" (planned admission) site model[4]; at Kings College NHS Foundation Trust established a new day case 'treat and transfer Endoscopic Retrograde Cholangio-Pancreatography (ERCP)' service. The new service allows local hospitals to transfer inpatients requiring urgent ERCP to King's endoscopy unit for a day case ERCP procedure. Patients are discharged back to their referring hospitals after four hours observation period post completion of ERCP. A peer-reviewed study showed all patients were safely discharged back to their referring hospitals after the short observation period post-ERCP. No complications related to anaesthesia or endoscopies were reported peri- or post-procedure.[5]

From the existing evidence base, it is clear that communication, efficiency and appropriateness are key factors that are advanced as impacting on the quality and safety of non-emergency transport services. Standardization of the non-emergency transport process shows promise in reducing risk and increasing efficiency.[6]

1. How are patients transferred between services at the moment?

At the moment in mid and south Essex, we do transfer patients for specialist care between our hospitals with current agreed pathways operating for cardiology patients (to and from the Essex Cardiothoracic Centre in Basildon), for patients needing care for burns and plastic surgery (to and from St Andrews Burns Centre at the Broomfield site), and for patients needing maxillofacial and ENT services (to and from Broomfield Hospital).

The current system for transfer of critically ill patients will continue and is not affected by this process (e.g. level 3,2 inter hospital ITU transfers, Neurosurgical Emergency transfers to neurosurgical units, major trauma patients transferring from trauma Units to Trauma centres). All clinical pathways for transfer are developed jointly with A&E clinicians and speciality leads including the safeguarding of high risk patients.

CONSIDERATIONS FOR THE DESIGN OF A TRANFER SERVICE

This paper outlines a number of the key areas where clinicians are working together to think about the design and safe delivery of an extended clinical transfer service for inpatients across mid and south Essex, as this forms an important enabling aspect of current proposals. This document is not a policy or clinical guideline in any way, it is aimed to provide an update on work ongoing and help stimulate further discussion with partners and patients as any plans progress following the close of consultation.

2. How will we assess patients for transfer and decide who should be transferred?

Within the Treat and Transfer Model all patients within this category of transport (i.e. excluding those critically ill patients such as trauma already cared for in the present system) will be

[4] http://www.nact.org.uk/getfile/4633/
[5] http://gut.bmj.com/content/66/Suppl_2/A76.1
[6] Isla M. Hains, Anne Marks, Andrew Georgiou, Johanna I. Westbrook; Non-emergency patient transport: what are the quality and safety issues? A systematic review, International Journal for Quality in Health Care, Volume 23, Issue 1, 1 February 2011, Pages 68–75

assessed and stabilised in the presenting Emergency Department before safe transfer to the specialised site. Any potential transfer would require patients to have had a chance to discuss and consent to transfer, and senior clinician-to-clinician communication across sites. It is important to remember that it is only a specific cohort of patients presenting to our hospitals who will be transferred – these are patients for whom there is clinical agreement that their ongoing management, following initial stabilisation, will benefit from concentrated specialist input

Leadership

We will identify a Lead Clinician across the three hospitals who will ensure that appropriate pathways are developed where necessary, transfer protocols are in line with best practice and system quality assurance programmes are in place. We have identified a lead clinician to take forward current proposals, and we would aim to build on this as the new A&E and Emergency Care Hub model develops, hopefully strengthened and accelerated by these proposals. The lead clinician will oversee audit and ongoing data collection on the transfer service and report these data and exceptions to the relevant Patient Safety & Quality Committees of the Trust Boards to ensure that the Board is sighted on the safe development and running of the service. As with all trust clinical services, the service will be connected to incident and risk reporting and appropriate in-house escalation policies.

Each hospital medical management team will identify a nominated clinician who will work with the Lead Clinician on system development and act as the main hospital contact point for the service issues.

Prioritisation of transfers

There needs to be an agreed priority and response time for the service which is audited and part of the quality assurance process. This will be determined when we have finalised the detail of commissioned services and locations, however looking at similar approaches, initial options include: Setting a single response time for all such transfers e.g. 30/45/60 minutes from alert to vehicle arriving; or alternatively having a response time according to individual patient urgency according to categories of need (C1,2,3). As we plan the individual clinical pathways we will define a clear process involving agreed senior clinical input for the decision to transfer a patient from one hospital to a specialist unit, and the process of confirming acceptance and tracking to agreed priority timescales.

3. What will the transfer involve?

The current arrangements which are in place to transfer category 2 (patients requiring more detailed observation or intervention including support for a single failing organ system or post-operative care) and category 3 (patients requiring advanced respiratory support alone or monitoring and support for two or more organ systems) requiring transfer between critical care facilities, or transfer to specialist units (e.g. Neurosurgical centres, Trauma centres) will remain in place and are not affected by these proposals.

This system will utilise road-based transport modes only, and vehicles used will meet current best practice standards, equipped with the appropriate monitoring and life support equipment to enable safe patient transfer. The specification for these vehicles and items will be determined once appropriate advice has been obtained from relevant national bodies.

Staffing the transfer service

Inter-hospital transfers at the level proposed will require dedicated transport teams who will manage patient care during transport, hand the patient over to the receiving team at the hospital, and ensure that communication between hospital teams, patients and relatives is optimal. The level of support needing to be provided from within the team for each transfer will be driven by patient-specific risk assessments. It will be important also in developing the workforce model for the team, that the constitution of this team must not denude the hospital of vital staff, but instead offer an additional development opportunity and career option to attract new skills to the system.

The opportunity to consider engaging with the PHEM (Pre Hospital Emergency Medicine) doctor training scheme, Advanced Paramedic training scheme and CEM Advanced Care Practitioner schemes will be investigated, as will the opportunity to engage with other Allied Health Practitioners who carry out transport roles in other systems (such as Operating Department Practitioners) The ability to create roles which retains paramedic and emergency medical doctors in the area is a potential strength of this process.

All staff involved in patient transfers should have appropriate training and competencies. The competency framework outlined in the Intensive Care Society "Guidelines for the transport of the critically ill adult" (3rd Edition 2011) are suggested for this programme (see Appendix).

Transfer coordination

A group wide, cross-site system to coordinate patient transfers will be developed to coordinate timely transfer, aligned to bed availability and appropriate logistics oversight. This will be embedded in the development of the hospital group-wide bed management process which has already begun to some extent across the system (e.g. 2017/8 winter coordination) and will develop further through application of Teletracking planned for roll-out from 2018, and integration of digital systems and standardisation of site management and discharge processes which are in train within the STP.

Communication with patients and families/carers

Communication between hospitals, between medical teams and with patient and relatives is paramount in the transfer of patients. Patients will be informed at the earliest opportunity of the need for a transfer and provided with an explanation of why the transfer is necessary. Consent from the patient and input from carers will be sought in the decision to transfer. With the consent of the patient, their relatives, friends or others will also be advised of transfers to another hospital. If a patient with capacity refuses to transfer to a location which is thought to be best for their care their wishes will be adhered to and every effort will be made to optimise care where they wish to remain including specialists travelling to the patient if required or directing optimal care from the specialist centre.

If a clinician or the clinical team consider patient transfer not to be in the patient's best interest then the patient will not transfer and every effort will be made to optimise patient care including specialists travelling to the patient or directing care from the specialist unit.

Preparation for transport

Patients should be appropriately resuscitated and stabilised prior to transfer to reduce the risk of deterioration during the transfer, and discussion with the patient and/or carers about the need for transfer been conducted and understanding checked. A risk assessment process of each patient will determine the level of anticipated risk during transfer. The outcome of this risk assessment will be used to determine the competencies of the staff required to accompany the patient during transfer. The risk assessment tool provided by the Intensive Care Society in their

2011 document is provided at appendix 2. This was developed prior to the NEWS tool and could be adapted for use within this system coupled with clinical judgement. This assessment will be carried out by a suitably experienced member of the medical staff and will form part of the transfer record.

Pre departure checklists should be used to ensure that all the necessary preparations have been completed and should form part of the transfer record. Examples of checklists from the Intensive care Society document are provided at Appendix 3.

Monitoring and safety during transport

Monitoring during transport should be in line with current best practice and should mirror, as a minimum, the monitoring which would be provided for an individual patient in hospital. Every effort should be made to ensure that there is compatibility in monitoring systems across the three hospitals and with the transport provider. Standardised documentation should be developed across the system and should be used for all transfers. This should form part of the patient record, it should contain a core data set for audit purposes. Appropriate safety restraints for patients, staff and equipment bags and monitoring equipment should be in place during transport. These should conform to current best practice.

Assurance will be in place on this procedural, technical and administrative compatibility and the safety of continuous patient monitoring prior to any transfer pathway being initiated.

4. How will we make sure that the transfer service is safe?

The Lead Clinician must ensure that adequate governance arrangements are in place across the system and that all patient transfers are subject to audit, clinical incident reporting and review.

Comprehensive, specialty specific, clinical guidelines should be developed.

Appropriate insurance and indemnity should be in place to cover all involved in the transfer

Who have we worked with on these draft plans so far?

Work to think about a clinical transfer service began in earnest in Summer 2017, and has been led by Dr. Ronan Fenton, Medical Director for the hospital programme of the STP and Consultant Anaesthetist who works at Mid Essex Hospital and with the Herts and Essex Air Ambulance. A group of emergency department clinicians from across the three local hospitals, and including East of England Ambulance Service NHS Trust, has been meeting regularly to develop plans and continues to do so.

External clinicians who form part of the East of England Clinical Senate also reviewed proposals for the “treat and transfer” model for emergency inpatients who need specialist care as part of their Stage 1 review in September 2017.

In addition to input from East of England Ambulance Service, we have also had contributions from the North East London Trauma network, East of England Trauma Network and the Mid & South Essex STP Strategic A&E Delivery Board. We have also taken advice from other parts of the UK operating inter-hospital transfer, and from the relevant medical societies mentioned during the document. The topic of inter-hospital transfer has been discussed (in some cases in detail) with GPs and primary care colleagues across out STP during engagement, and with hospital staff and the local public as part of public consultation. Hundreds of comments and questions about transport have been received to date.

What are the next steps to take forward a proposed patient transfer service in mid and south Essex?

In order to validate and further iterate assumptions about the numbers and particular clinical categories of patients who might require transfer in these proposals, a local real-life audit has been undertaken against existing patient records. Clinicians within the trusts have examined patient details to understand how the transfer model might work in these cases. To date the audit is supporting planning assumptions on patient volumes as outlined in the consultation document. It is planned to undertake two further audit for longer periods of time during March and April 2018 to help validate this further and add detail to draft plans.

The “treat and transfer” model which forms part of key proposals of hospital changes will be examined again in detail by the East of England Clinical Senate, during their site visit to Basildon Hospital in April 2018, and the final Stage 2 panel review. The Senate will provide independent advice to commissioners about the likely safety and viability of the model, based on their review of evidence.

Within the local Sustainability and Transformation Partnership, a planning group begins work developing more detail of any transport service (including working up opportunities to enhance staff, elective patient and patient relative transport opportunities) and steps to implementation from April 2018.However further work will be done in earnest to develop and test plans for the best provider options once a decision is made by commissioners about the future model of care for hospital services in mid and south Essex. We anticipate this to be in Summer 2018. Commissioners and leadership of the trusts will require full assurance about the plans for any transfer service, the equipment, processes, vehicles and workfare for its safe implementation before any changes would be put into practice.

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Appendices: supporting materials

Appendix 1 - DRAFT - Competencies of accompanying personnel likely to support dedicated transfer team, taken from the Intensive Care Society "Guidelines for the transport of the critically ill adult" (3rd Edition 2011)

Core competencies required of all staff (levels required appropriate to role)

Knowledge	Knowledge of Local / Network / National transport guidelines Understands the principles of safe transfer of patients Knowledge of ambulance / transfer environment and associated health and safety issues and relevant legislation Knowledge of Advanced Life Support guidelines
Skills	Use of oxygen, respiratory therapies and portable ventilator Use of basic monitoring (ECG, NIBP, Pulse oximetry) Use of transport equipment Competent to carry out advanced life support
Attitudes and Behaviour	Evidence of good team working Evidence that plans for and prevents problems during transfer Understands the benefit of pre-transfer check lists and uses these in clinical practice. Understands the need for good communication with referring & receiving institutions & teams and evidence of this in practice. Completes all required documentation including clinical notes / observations charts / audit forms. Seeks support from senior / more experienced colleagues appropriately

Competencies required by medical staff to undertake level 2/3 transfer

Additional competencies which may be required by medical staff to undertake level 2 / 3 transfer, depending on the clinical condition of the patient and the outcome of pre-transfer risk assessment.

Knowledge	Knowledge of physiology of critical illness Knowledge of pharmacology of drugs including sedatives / muscle relaxants / inotropes and vasopressors Knowledge of the physiological effects of the transfer process and acceleration / deceleration forces in the critically ill

Skills	Use of a structured approach for assessment of critically ill patient prior to transfer Ability to interpret blood gases, and other clinically relevant investigations Ability to identify potential needs of patient prior to and during transfer Ability to respond to changes in the patient's condition during transfer including ability to undertake the following procedures if required • Basic / advanced respiratory support • Bag mask ventilation • Intubation • Emergency needle decompression / chest drainage • Resuscitation / optimisation of haemodynamic status including appropriate use of fluids / inotropes / vasopressors • Management of dysrhythmias including cardiac arrest • Ability to care for arterial lines / central lines and other indwelling catheters and to use / access appropriately
Attitudes and Behaviours	Ability to assume leadership role during transfer Ability to provides clear and precise structured handover to receiving unit

Competencies required for second attendant accompanying level 2/3 patient

Knowledge	Knowledge of the physiology of critical illness Knowledge of the administration of drugs likely to be required during transfer (includes sedatives / muscle relaxants / inotropes and vasopressors Knowledge of the potential problems associated with movement acceleration / deceleration forces
Skills	Ability to carry out appropriate nursing observations and nursing care in the transport environment. Ability to assist with: irway support - including intubation espiratory support - including use of oxygen therapy devices and basic ventilator operation ardiovascular resuscitation luid management including the preparation of infusions he use of sedative drugs and the use of syringe pumps

Appendix 2 – DRAFT - Patient risk assessment/stratification prior to transfer

Adapted from The Pennine Acute Hospitals NHS Trust: Transfer Policy 2010

1. No transfer is so urgent as to compromise patient safety.
2. The potential benefits of any transfer must be weighed against the clinical risk.
3. Prior to any transfer a risk assessment must be undertaken to identify the level of anticipated risk and hence the competencies required of the staff who will accompany the patient.

Risk assessment should include the following:

- **Clinical History:** Are there any specific risks related to the underlying condition and / or co-morbidity which the patient might encounter during transfer?

- **Current Clinical Condition:** Is the patient stable and / or what is the trend? Use a recognised track and trigger scoring system (e.g. MEWS) and if possible allow sufficient time for more than one observation.

- **Other information** available from additional monitoring (e.g. oxygen saturation) and / or specific investigations (e.g. lactate, blood glucose, base deficit, arterial pH)

- **The anticipated length of the journey**, mode of transport and any specific transport related issues.

Modified Early Warning Score:

Score	3	2	1	0	1	2	3
HR	<40	40-50	51-100	101-110		111-129	>130
BP systolic	<70	71-80	81-100	101-170		171-199	>200
RR	<7	9-14	19-22	23-29	>30		
Temp	<34.9		35.0-38.3	>38.4			
CNS	New confusion agitation	Alert	Voice	Pain	Unresponsive		

Appendix 3 – DRAFT- Example Pre-Departure Checklist

Taken from the Intensive Care Society "Guidelines for the transport of the critically ill adult" (3rd Edition 2011)

Pre Transfer checklist – Is patient stable for transfer?

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

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 (spare batteries available)
• Sufficient oxygen supplies for anticipated journey
• 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
• 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