

Greater Manchester Major Trauma Network

Adult Major Trauma Patient Pathways and Transfer Policy

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Record of Amendments

Section	Version	Date	Brief description
Document control	3.0	Aug 2024	Addition of document control page
Record of Amendments	3.0	Aug 2024	Addition of Record of Amendments
Contents	3.0	Aug 2024	Update and formatting change
Whole document	3.0	Aug 2024	Updated organisation names and nomenclature
Whole document	3.0	Aug 2024	Updated numbering and formatting
Section 2.2 Frail Injured Patients	3.0	Aug 2024	Addition
Section 2.3 Pathfinder outcomes	3.0	Aug 2024	Added FrIP box to chart Added inclusion of patients in traumatic cardiac arrest to 'catastrophe' definition
Section 2.4 NWS Pre-alerts	3.0	Aug 2024	Added inclusion of patients in traumatic cardiac arrest to 'catastrophe' definition
Section 2.5 Supplementary Pathfinder	3.0	Aug 2024	Clarifications to GM supplementary pathfinder
Section 2.6 Other pre-hospital services	3.0	Aug 2024	Added 'EMAS have their own pathfinder tool'
Section 3.1.2 Pit Stop Pathway	3.0	Aug 2024	Version 2.0 references patients in Traumatic Cardiac Arrest (TCA): 'This includes patients in traumatic cardiac arrest'. Updated nomenclature of Complex Incident Hub (CIH) (formerly referred to as 'Trauma Cell').
Section 3.2.1 The Injured Patient Pathway	3.0	Aug 2024	Updated to version 2.0. Emphasis on TTL decision making
Section 8 Abbreviations	3.0	Aug 2024	Addition of abbreviations section

Contents

Record of Amendments.....	2
1 Introduction	4
2 Primary Transfer	4
2.1 Pre-hospital major trauma triage tool	4
2.2 Frail Injured Patients.....	7
2.3 Pathfinder outcomes	8
2.4 NWS Pre-alerts.....	9
2.5 Supplementary pathfinder for Greater Manchester	10
2.6 Other pre-hospital services.....	11
3 Secondary Transfer	11
3.1 'Pit Stop'	11
3.1.1 Principles for 'Pit Stop' patients:	11
3.1.2 'Pit Stop' Pathway.....	13
3.2 Urgent Secondary Transfer	14
3.2.1 The Injured Patient Pathway	15
4 Transfer Principles	16
5 Ambulance Transfer Categories.....	16
6 Critical Care Transfers	17
7 Reverse Transfers.....	17
7.1 Greater Manchester Major Trauma Network Reverse Transfer Process	19
8 Abbreviations	20
Appendix A: Frail Injured Patient Pathway (FrIP)	21
Appendix B: Meet Harry	22
Appendix C: TTL to TTL Transfer Checklist.....	23

1 Introduction

This document describes the patient pathways and transfer protocols that should be followed within the Greater Manchester Major Trauma Network (GM MTN). It relates to the following scenarios.

- Primary transfer (from scene)
- Secondary transfer (inter-hospital transfer from initial site to a Major Trauma Centre)
 - Acute secondary transfer ('pit stop' scenario for patients with immediate life-threatening injuries)
 - Urgent secondary transfer
- Transfer of critically ill patients
- Reverse Transfers (repatriations)

2 Primary Transfer

2.1 Pre-hospital major trauma triage tool

Primary transfer is the transfer of a patient **from the scene** of the incident to the most appropriate care facility. To deliver appropriate triage at the pre-hospital stage and to identify the optimal destination, the North West Ambulance Service NHS Trust (NWAS) has developed a triage tool, '**Paramedic Pathfinder – Major Trauma in Adults**' [MT-Adult-Pathfinder-100515-1.pdf \(gmccmt.org.uk\)](https://www.gmccmt.org.uk/MT-Adult-Pathfinder-100515-1.pdf). This has been in use since April 2012 (Version 1.2, October 2011), and was updated and re-issued in September 2015 (Version 2.0, September 2015).

Please note that there are separate pathfinders for children, burns injuries, and non-major trauma

All eligible front-line staff members have been trained in the use of the major trauma pathfinder tool. NWAS has also established a 24/7 Complex Incident Hub (CIH) (formerly referred to as the 'Trauma Cell'). The hub provides support to staff when making decisions about the appropriate destination for patients falling into the major trauma category. It ensures correct resources are dispatched and that receiving trauma centres are fully aware of the patient condition in time for the patient arrival.

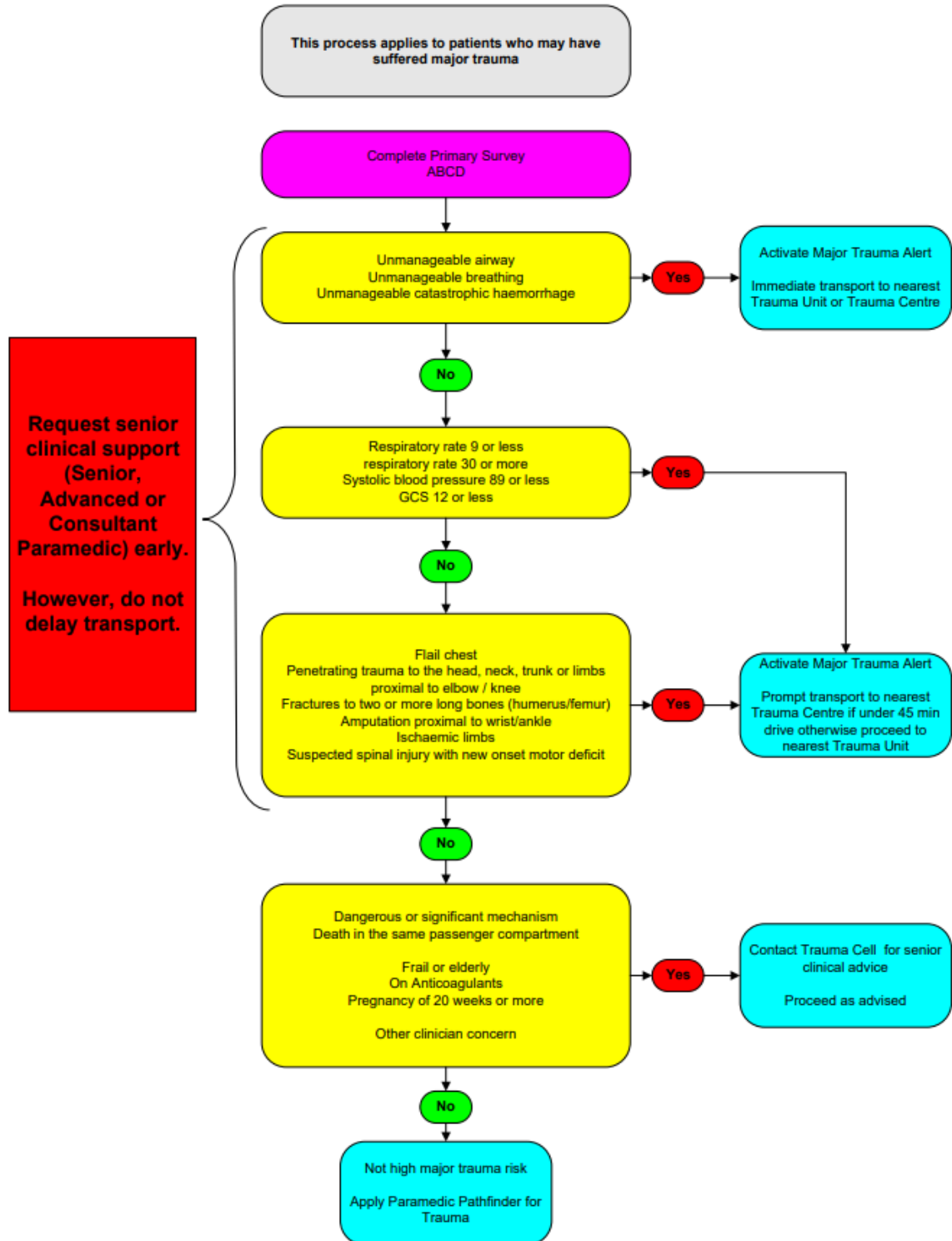
The **major trauma pathfinder** is divided into four main categories:

- Catastrophe
- Physiology
- Anatomy
- History



North West Ambulance Service NHS Trust

Paramedic Pathfinder - Major Trauma in Adults V 2.0 1 September 2015



The optimal destination for Major Trauma patients is usually a major trauma centre (MTC). The pathfinder identifies potential ('candidate') major trauma and activates bypass to the MTC (within a 45-minute drive time). If the journey time to the MTC is greater than 45 mins, patients should be conveyed to the nearest Trauma Unit (TU). Patients with catastrophic injuries (including traumatic cardiac arrest) should be conveyed to the nearest MTC or TU site.

If the ambulance crew have any clinical concern the pathfinder instructs them to call the Complex Incident Hub. CIH will then advise accordingly. This may involve CIH declaring the patient as 'major trauma positive' and contacting the MTC to inform of the patient's imminent arrival.

CIH may also declare the patient as **not** a suspected major trauma patient. These patients are known as 'major trauma pathfinder negative' patients. These cases adopt the NWS 'Trauma Pathfinder', and the patient is conveyed to the nearest Emergency Department (ED). On arrival to the ED (of the nearest hospital) it is advised that the crew inform the triage nurse that discussion with the CIH has taken place.

Major Trauma Pathfinder 'negative' patients do not require a pre-alert to receiving sites.

2.2 Frail Injured Patients

Data collected through TARN¹ has shown that the typical major trauma patient has changed from being young and male to being older with a lower degree of a male predominance.² The Frail Injured Patient (FriP) pathway was developed by the GM MT Network in 2019 in response to this change.

The FriP pathway acts as a secondary method of capture for older patients that often present following seemingly minor mechanisms of injury. They are not immediately identifiable as suspected major trauma patients due to altered physiology, pharmacology, and significant co-morbidities.

The pathway prompts discussion with the Complex Incident Hub. If the patient does not ‘trigger’ the major trauma pathfinder but there is still some clinical concern, a FriP pre-alert should be issued to the nearest hospital site. In this situation, although major trauma centres, Manchester Royal Infirmary and Salford Royal Hospital are also local hospital sites, so will also receive this patient group.

There is no mandated response to a FriP alert, but GM sites are encouraged to enact a system where the patient receives a senior review and early CT scan request.

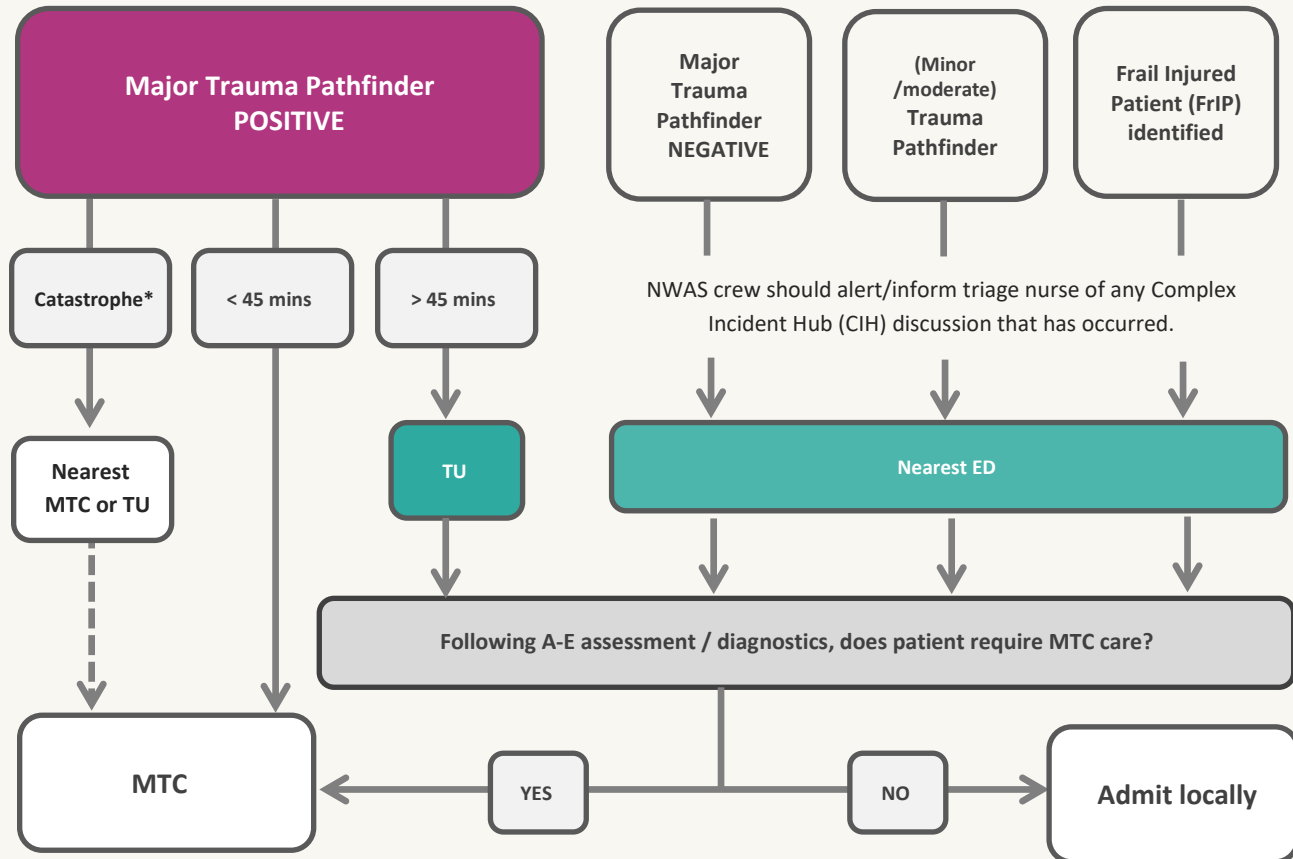
Older and/or frail patients are complex to assess and disguise occult injury well and, due to physiological and hormonal changes, have different presentation and responses to injury. The pathway highlights the potential for serious injury in a group that would otherwise not be identified. Patients are often ill as well as injured, so the pathway ([Appendix A](#)) and accompanying aide memoire, ‘Meet Harry’ ([Appendix B](#)) can be utilised in ED as well as in the pre-hospital environment.

The pre-hospital FriP pathway contains guidance to contact the Complex Incident Hub (CIH) to discuss the patient.

¹ The Trauma Audit & Research Network (TARN). Data collection system now known as the National Major Trauma Registry (NMTR) [National Major Trauma Registry \(NMTR\) Version 1.0 - NHS England Digital](#)

² TARN: Major Trauma in Older People (2017) [Major-Trauma-in-Older-People-2017-1.pdf \(gmccmt.org.uk\)](#)

2.3 Pathfinder outcomes



- *Catastrophe: Patients with unmanageable airway, unmanageable breathing, or unmanageable catastrophic haemorrhage. This includes patients in traumatic cardiac arrest.
- In GM, as a result of the geography of the conurbation, the majority of major trauma **triage positive** patients are able to reach the MTC within 45 minutes.
- MT triage positive patients should only be conveyed to a TU if the journey time to the MTC is more than 45 minutes or if the patient has suffered catastrophic injuries that require immediate clinical intervention **and** is unlikely to survive bypassing the nearest TU.
- **REMEMBER!** Not all trauma is major trauma. Minor and moderate trauma can be appropriately cared for at the nearest ED.

Version 2.0

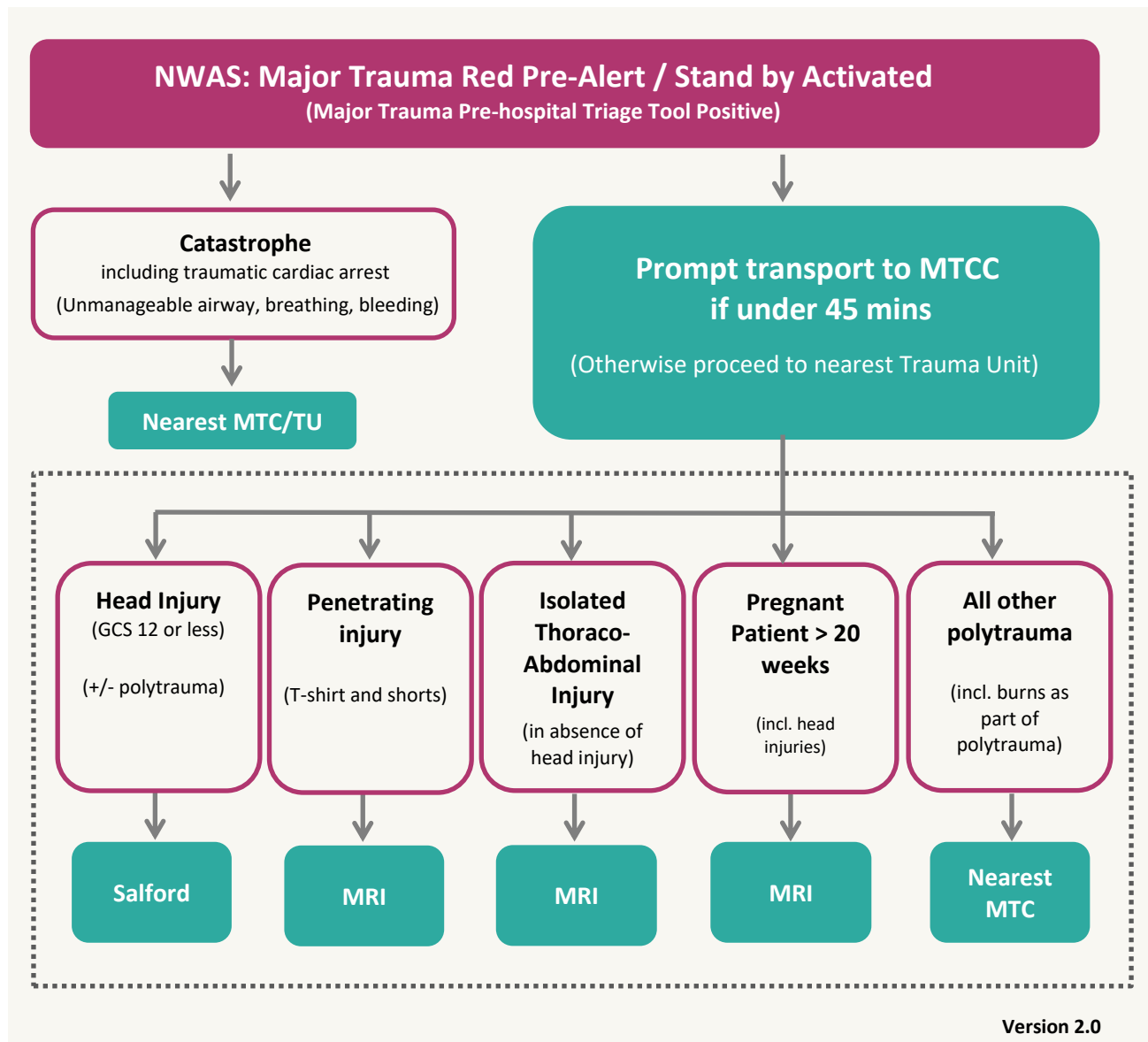
2.4 NWAS Pre-alerts

The following table details the types of pre-alert (relating to trauma patients) that emergency departments can expect to receive from NWAS.

Alert type	RED (Standby)	Frail Injured Patient (FrIP)	No pre-alert / Self presenters
Destination	<p>MTC (if within 45 mins)</p> <p>Nearest TU (if MTC cannot be reached within 45 mins)</p> <p>Nearest MTC/TU for 'catastrophe' patients including those in traumatic cardiac arrest.</p>	Nearest ED	Nearest ED
Patient type	<p>Patients with suspected MAJOR trauma – 'candidate' major trauma</p> <p>(NWAS MT Pathfinder <i>triage positive</i> patients)</p>	<p>Frail Injured Patient (FrIP): Elderly and/or frail injured patient that IS NOT major trauma triage positive, but there is some clinical concern</p>	<p>NWAS Major Trauma Pathfinder <i>triage negative</i> patients</p> <p>Patients with minor or moderate trauma but NOT major trauma</p> <p>Although not pre-alerted, NWAS crew must alert triage clinician of any previous CIH discussion</p>
Trust response	<p>Activate Trauma Team</p>	<p>Recommended early senior clinical review.</p> <p>The patient has not triggered the pathfinder for MAJOR trauma but should be assessed for occult injuries.</p> <p>Minimum requirements:</p> <ul style="list-style-type: none"> - Booked into ED - Set of observations recorded - A-E assessment 	<p>Minimum requirements:</p> <ul style="list-style-type: none"> - Booked into ED - Set of observations recorded - A-E assessment <p><i>Self-presenting patients may have major trauma</i></p>

2.5 Supplementary pathfinder for Greater Manchester

There are also supplementary pathfinders in place specifically for Greater Manchester which reflect the dispersal of specialist services across the conurbation. These are as follows:



N.B. Patients with **isolated severe burns** should be taken to Wythenshawe Hospital where the regional burns service is based (if under a 45-minute drive). There is separate guidance for burns patients in the event of a major incident being declared. [NHS England » Concept of operations for the management of mass casualties: burns annex](#)

2.6 Other pre-hospital services

A smaller number of patients will be conveyed by the East Midlands Ambulance Service (EMAS). EMAS has its own pathfinder tool. Similarly, private ambulances covering specialist events have access to the MTC standby phones and are able to contact the MTCs directly with suspected major trauma patients.

3 Secondary Transfer

This relates to the secondary transfer of patients from an existing (usually first receiving) care provider to an enhanced or specialised care provider. This falls into the following categories:

3.1 'Pit Stop'

When a patient has catastrophic injuries and presents with unmanageable airway, unmanageable breathing, or unmanageable catastrophic haemorrhage, they will be conveyed to the nearest MTC or TU. When the receiving site is a TU, this should be considered an initial 'pit stop' where the patient is stabilised for onward transfer to the MTC. This includes patients in traumatic cardiac arrest.

3.1.1 Principles for 'Pit Stop' patients:

- Management of 'Pit Stop' patients at the TU should be limited to rapid investigation and interventions that will maximise stabilisation with the aim of **rapid transfer** onwards to the MTC for definitive treatment ([Pit Stop Pathway](#)). Interventions should not include CT scans - do not delay transfer to perform CT.
- The TU should consider whether damage control surgery is required before transfer, but this is likely to be necessary in **exceptional circumstances only**.
- Where possible (and resources permit) the NWS crew should remain with the pit stop patient in order to continue transfer to the MTC. The crew should keep the Complex Incident Hub informed of progress. In the case of an extended delay the crew may be stood down and a new ambulance will need to be called.
- Pit stop patients should be transferred under the Trauma Team Leader (TTL) to Trauma Team Leader process. This should be on a 'send and call' basis.

- The transferring hospital should ensure that an appropriate transfer team is available to escort the patient as necessary.
- Where it has not been possible for the originating crew to remain at the TU, patients should be transferred via NWS in accordance with the NHS England Ambulance Response Programme standards (August 2017). The majority of major trauma patients being transferred via the TTL-to-TTL process require **Category 2: Emergency** transfers.
- As per NICE guidance, ([Recommendations | Major trauma: service delivery | Guidance | NICE](#)) patients with major trauma who need critical interventions at a major trauma centre should leave the sending emergency department within 30 minutes of the decision to transfer.
- In situations where either TTL (TU/LEH or MTC) feels that the transfer should be accelerated e.g. for patients who require time critical transfer because a specialist team is standing by to treat the patient (general surgeon, vascular surgeon, interventional radiologist, neurosurgeon etc.) the **MTC TTL** should contact the CIH to facilitate this.
- The Network has produced a 'Major Trauma Transfer TTL-TTL Checklist' to support these transfers ([see Appendix C](#)). For critical care transfers, the GM Critical Care Network's Transfer Form should be used. This is a summary form; the referring site should ensure full clinical information is also provided to the MTC.
- In cases where patients are referred directly to the speciality at another site, the receiving specialist has the overall responsibility to inform the TTL at the receiving ED. In addition to this, the transferring site should ensure a comprehensive handover of care takes place. This should take place via telephone call (rather than as part of an electronic referral).

3.1.2 'Pit Stop' Pathway

Pit Stop at Trauma Unit

(NWS Triage Positive for Major Trauma Pathfinder)

For patients who require life-saving intervention prior to ongoing transfer to MTC
This includes patients in **TRAUMATIC CARDIAC ARREST**

RED STANDBY MAJOR TRAUMA 'PIT STOP' CALL TO TRAUMA UNIT

Where possible, request that crew remain with patient to complete pit stop and continue transfer to MTC

Unmanageable airway

- Anaesthetic review
- Manage airway
- Think (timely) TXA

Unmanageable breathing

- Consider CXR +/- eFAST
- +/- Chest Drain(s)
- Think (timely) TXA

Unmanageable catastrophic haemorrhage

- Control external haemorrhage
- Pelvic binder/tourniquet
- +/- blood products
- Think anticoagulant reversal
- Think (timely) TXA
- Consider damage control surgery (rare)

TTL to (MTC) TTL Send and call

Timeframe for transfer as per NWS Transfer Categories

If in doubt about whether to transfer, liaise with the MTC TTL (SRH: 0161 206 2226 / MRI: 0161 276 4012)

If you have concerns about the timeframe for transfer, liaise with MTC TTL and Complex Incident Hub (formally Trauma Cell) (0161 227 7011)

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3.2 Urgent Secondary Transfer

In Greater Manchester, the most common occurring scenario requiring secondary transfer is when a patient has been conveyed to a TU/LEH because the pathfinder has not been triggered at the scene, or the patient has self-presented at a TU or LEH.

If the patient is found to have ‘major’ traumatic injuries that are likely to score an ISS > 15 (either single or a combination of injuries) they should be discussed with the MTC.

In such a scenario, the [Injured Patient Pathway](#) can be utilised to support decision making. The pathway includes guidance on minimum requirements, assessment, initial investigation, essential contact numbers and onward transfer.

- Patients must be booked into the initial receiving hospital
- A primary set of observations should be recorded
- A review by a senior clinician should take place

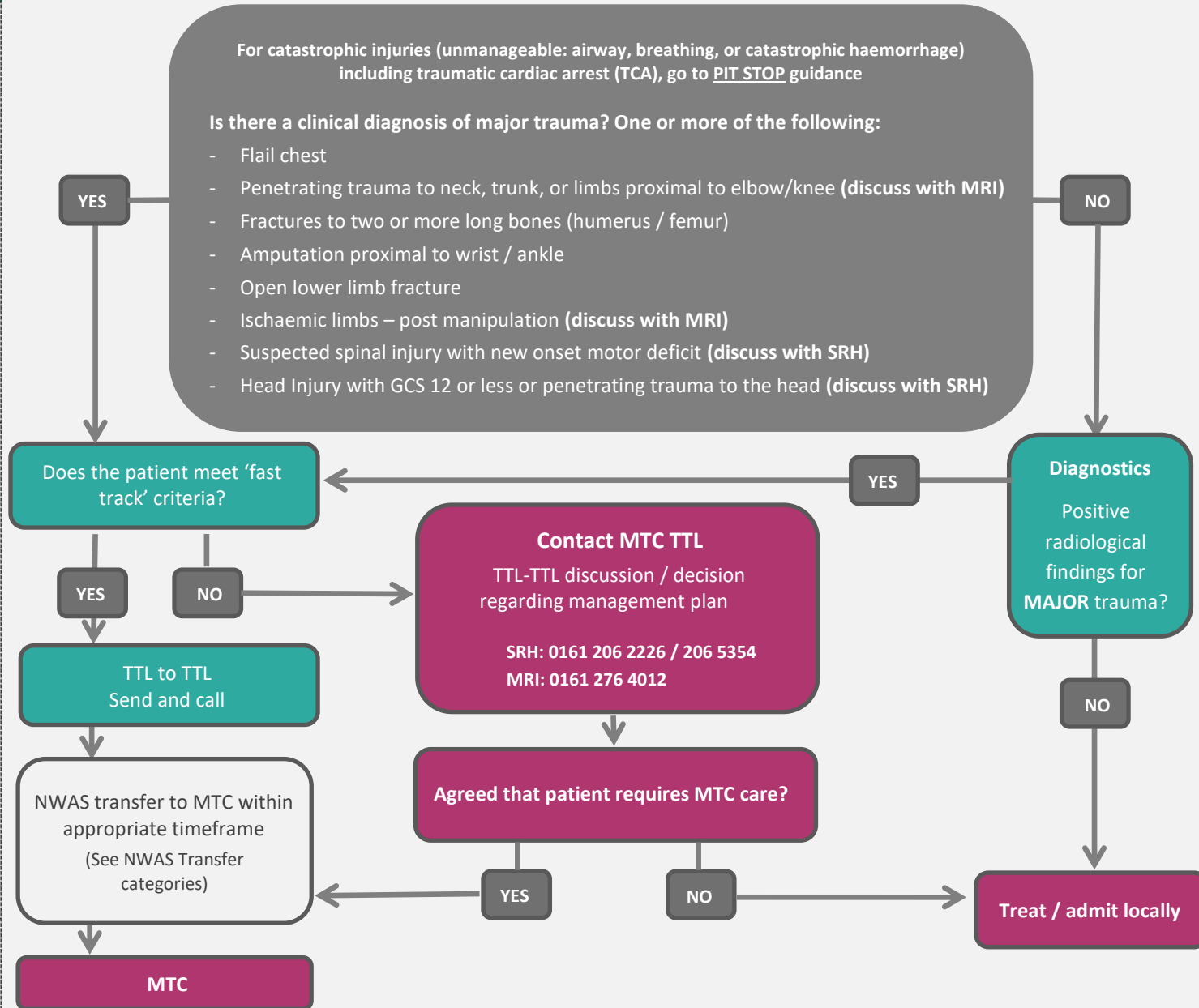
Following the decision to transfer the patient to the MTC:

- Urgent secondary transfer patients should be transferred under the Trauma Team Leader (TTL) to Trauma Team Leader process.
- The transferring hospital should ensure that an appropriate transfer team is available to escort the patient, as necessary.
- Patients should be transferred via NWSAS in accordance with the NHS England Ambulance Response Programme standards (August 2017). The majority of major trauma patients being transferred via the TTL-to-TTL process require **Category 2: Emergency** transfers.
- As per NICE guidance, patients with major trauma who need critical interventions at a major trauma centre should leave the sending emergency department within 30 minutes of the decision to transfer.
- In situations where either TTL (TU/LEH or MTC) feels that the transfer should be accelerated e.g. for patients who require time critical transfer because a specialist team is standing by to treat the patient (surgeon, vascular surgeon, interventional radiologist, neurosurgeon etc.) the **MTC TTL** should contact the Complex Incident Hub to facilitate this.
- The Network has produced a ‘Major Trauma Transfer TTL-TTL Checklist’ to support these transfers ([see Appendix C](#)). For critical care transfers, the GM Critical Care Network’s Transfer Form should be used. This is a summary form; the referring site should ensure full clinical information is also provided to the MTC.

The Injured Patient Pathway

For pre-hospital pathway **TRIAGE NEGATIVE** or self-presenting patients

‘Fast track’ Criteria	
Head injured patients aged 70 or under	Intubated AND abnormal scan, OR Extra-dural haematoma: >15mm thickness or >5mm midline shift, OR Acute subdural haematoma: >10mm thickness or >5mm midline shift
≤70 yrs	
Head injured patients over 70	GCS > 8 AND living independently, AND One of the following: - Extradural haematoma >15mm thickness or >5mm midline shift - Acute subdural haematoma > 10mm thickness or >5mm midline shift
>70 yrs	
Spinal Injuries	Spinal injuries with hard motor neurology





If conveyed by NWAS, ambulance crew must alert triage clinician of any previous CIH discussion.

Think TXA

Think anticoagulant reversal

Frailty/futility: Discuss with MTC – will the patient benefit from transfer?

AS A MINIMUM:

1. Patients should be booked into receiving hospital
2. Primary set of observations recorded
3. Review by senior ED clinician

Version 2.0

4 Transfer Principles

- No critically ill patient will be transferred without first being appropriately resuscitated and stabilised.
- All relevant parties, including the relatives, must be fully informed that the transfer is taking place.
- Risk assessments and checklists should be used to help ensure that all necessary preparations have been completed.
- Transfer should be in an appropriately equipped vehicle and accompanied by skilled and competent staff.
- It is the responsibility of the referring site to ensure that an appropriate transfer team is made available.
- The transfer team should all be familiar with the patient’s clinical condition.
- The GM Critical Care & Major Trauma Network Transfer Form should be completed for all patients requiring a critical care escort team. This form provides a summary; ensure full clinical information is also provided to the MTC.

5 Ambulance Transfer Categories

In 2017, NHS England implemented new ambulance standards across the country under the Ambulance Response Programme (ARP). NWS went live with the ARP in August 2017. There are four categories of call as per the table below:

Category	Mean	90 th Percentile
Life threatening Category 1	7 minutes	15 minutes
Emergency Category 2	18 minutes	40 minutes
Urgent Category 3	-	120 minutes
Less Urgent Category 4	-	180 minutes

- The majority of major trauma patients being transferred via the TTL-to-TTL process require **Category 2: Emergency transfers**. However, as per NICE guidance, patients with major trauma who need critical interventions at a major trauma centre should leave the sending emergency department within 30 minutes of the decision to transfer.
- In situations where either TTL (TU/LEH or MTC) feels that the transfer should be accelerated e.g. for patients who require time critical transfer because a specialist team is standing by to treat the patient (surgeon, vascular surgeon, interventional radiologist, neurosurgeon etc.) the MTC TTL should contact the Complex Incident Hub to facilitate this.

6 Critical Care Transfers

Critically ill patients should be transferred in line with Intensive Care Society (ICS) guidance [Intensive Care Society | Transfer of the critically ill adult \(ics.ac.uk\)](#) and the GM Critical Care Network's Transfer Policies ([Transfer group - MFT ODN \(gmccmt.org.uk\)](#))

7 Reverse Transfers

To enable Major Trauma Centres (MTCs) to provide trauma care for the most severely injured patients on a continuous basis, it is essential to have a system in place to enable patients to return to a suitable local hospital as soon as the MTC-specific phase of their trauma care is completed. This enables them to continue their treatment closer to home and helps provide capacity for the MTC to continue to function as a hub within the network.

The repatriation of major trauma patients to their local hospitals has the potential to be challenging for the patient, carers and organisations involved. Unnecessary delays are unhelpful in a number of ways:

- They can prevent acutely ill patients being admitted into designated beds
- They can impede care packages for patients
- They can be inconvenient or distressing for both patient and relatives
- They can be a source of frustration in relationships between hospitals

The Network Reverse Transfer policy aims to provide guidance to ensure a sustainable trauma service where delays are at the minimum, with robust escalation procedures should a delay occur.

The policy applies to adult major trauma patients only and covers all hospitals within the Greater Manchester Network footprint.

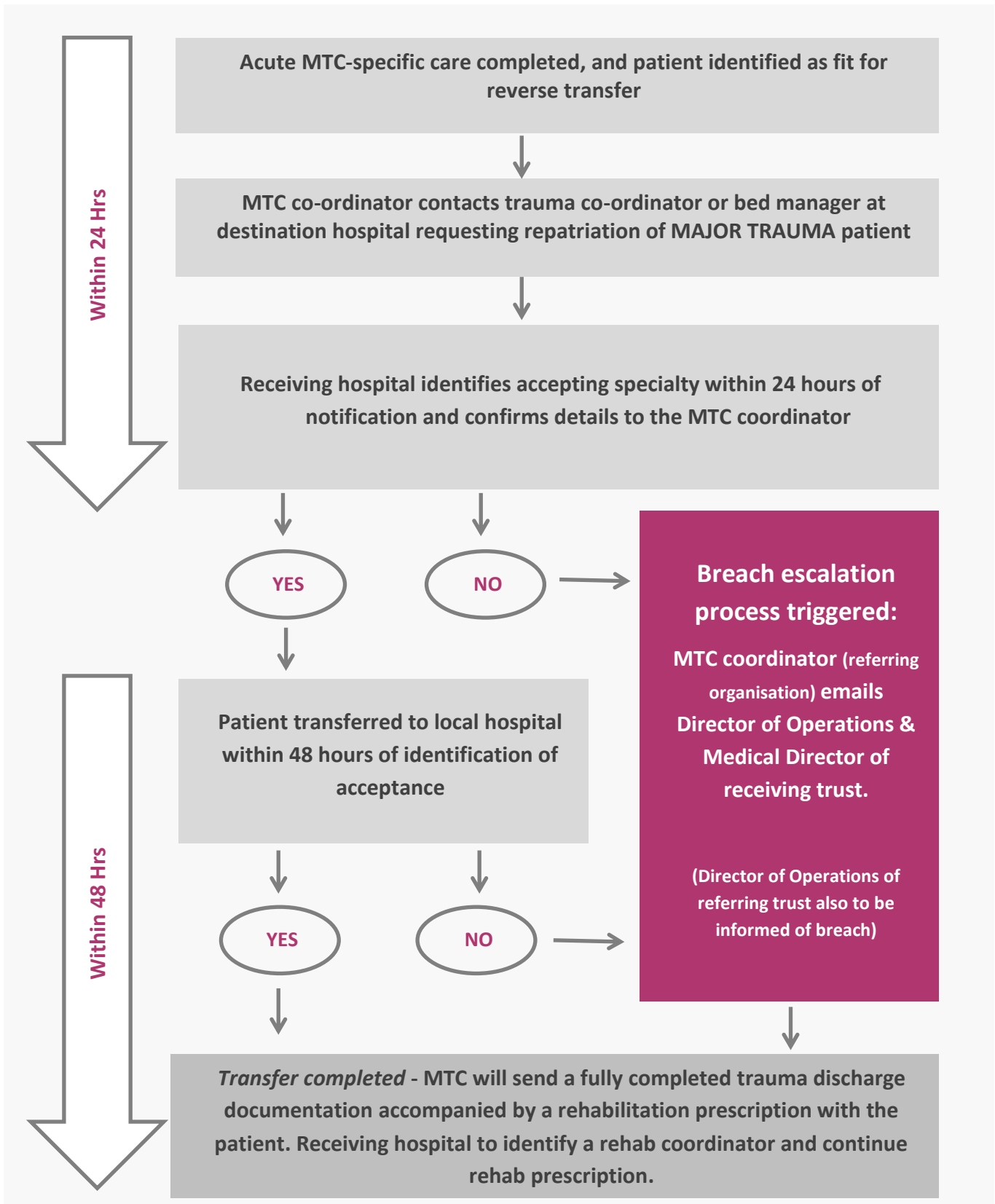
When a patient has completed their acute (MTC-specific care) and is deemed medically fit for transfer, it is appropriate that they should be repatriated (reverse transferred) to their local hospital. This could be

for continuation of medical care, continuation of rehabilitation or for non-medical reasons such as organising community care packages prior to discharge.

The procedure for this is as follows:

- The major trauma co-ordinator at the MTC will contact the trauma coordinator/bed manager at the patient's local hospital.
- **Stage 1:** The receiving hospital must identify an accepting specialty within 24 hours of notification and confirm details to the MTC coordinator.
- ***Failure to identify an accepting speciality within 24 hours will trigger the escalation process.***
- **Stage 2:** Once an accepting speciality has been identified, the Trust has 48hrs to enact the transfer.
- ***Failure to transfer the patient within 48 hours will trigger the escalation process.***
- Transfer principles:
 - The protocol should be adhered to 24/7, however repatriations should not ideally take place between the hours of 10pm and 6am
 - The patient and next of kin should be informed of the proposed move
 - The transferring hospital is responsible for appropriate escorting personnel
 - Network transfer principles must be followed
- Fully completed trauma discharge documentation and a rehabilitation prescription should be printed and sent with the patient.
- The receiving hospital must allocate a trauma or rehabilitation coordinator within 24 hours of reverse transfer, who will continue to update the rehabilitation prescription throughout the patient's length of stay. A copy of the final document should be returned to the referring MTC.
- An MTC contact name and number should be provided for any additional information required.
- Some flexibility in acceptance of patients for admission and repatriation will be necessary, and expected, as some geographical areas may be served by more than one hospital.
- The escalation process is triggered by a breach at either of stages 1 or 2. In the event of a breach the MTC coordinator will escalate the incident to the Director of Operations/Chief Operating Officer and the Medical Director of the receiving trust. They should also alert their own Director of Operations that a breach has occurred.

7.1 Greater Manchester Major Trauma Network Reverse Transfer Process



8 Abbreviations

ARP	Ambulance Response Programme
CIH	Complex Incident Hub
CT	Computed Tomography
CXR	Chest x-ray
ED	Emergency Department
e-FAST	Extended Focused Assessment with Sonography in Trauma
EMAS	East Midlands Ambulance Service
FrIP	Frail Injured Patient (Pathway)
GM	Greater Manchester
ICS	Intensive Care Society
ISS	Injury Severity Score
LEH	Local Emergency Hospital
MFT	Manchester University Hospital NHS Foundation Trust
MRI	Manchester Royal Infirmary
MT	Major Trauma
MTC	Major Trauma Centre
MTCC	Major Trauma Centre Collaborative
MTN	Major Trauma Network
NHSE	NHS England
NICE	National Institute for Health and Care Excellence
NWAA	North West Air Ambulance Charity
NWAS	North West Ambulance Service
ODN	Operational Delivery Network
SRH	Salford Royal Hospital
TARN	Trauma Audit and Research Network
TCA	Traumatic Cardiac Arrest
TTL	Trauma Team Leader
TU	Trauma Unit
TXA	Tranexamic Acid

Appendix A: Frail Injured Patient Pathway (FrIP)

THE FRAIL INJURED PATIENT PATHWAY (FrIP) – Pre-Hospital (v2.0)

Discuss the possibility of a FrIP pre-alert to nearest hospital with the Complex Incident Hub (CIH)

Mechanism of Injury

Low Impact Mechanisms

Falls <2m are the largest injury group in major trauma

Consider -

Collapse from Standing

Medical presentations
'Found on floor' presentations
Roll out of bed presentations

Impact Zone

Lack of peripheral injuries should elicit a high index of suspicion
Injury to 2 or more body systems

Pharmacology

Anticoagulants

Consider visible haemorrhage and occult bleeding to head, chest, abdomen, pelvis or long bones.

Consider -

Beta Blockers

Will mask tachycardia in the major trauma patient

Steroids

History of steroid use in chronic disease means fractures are more likely

Other medications

Consider polypharmacy and antiplatelet use (e.g. aspirin). Anticoagulants include warfarin, LMWH and DOACs (apixaban, rivaroxaban, dabigatran and edoxaban).

LMWH: low molecular weight heparin, DOAC: direct oral anticoagulants

Physiology

SBP <110mmHg

***Worried? What is the patient's normal blood pressure?**

Consider -

Existing Disease Process

Note any changes in physiology of the chest wall. Chest wall injuries are common and difficult to diagnose and require careful examination.

Previous Recent Injury History

Consider acute on chronic injury to the brain and other regions

- Consider previous recent collapses
- Consider potential for undiagnosed injury with previous, recent hospital attendances

Older people may sustain serious injury from low mechanisms. Illness may be present as well as injury. Consider early TXA and pre-alert. Be aware of anticoagulant use and potential for reversal. Recognise potential for occult injury.

Appendix B: Meet Harry

Meet Harry...



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Appendix C: TTL to TTL Transfer Checklist

This form is to be completed for all **Major Trauma TTL to TTL** transfers. It is the responsibility of the Trauma Team Leader to ensure this is completed for the safe transfer of the patient. Any deviation from this checklist should be clearly documented. This form does not replace the Network inter-hospital transfer form which should be completed for every transfer. A copy of this checklist should remain with the transferring unit and the original form should go with the patient

**PATIENTS WHO NEED CRITICAL INTERVENTION SHOULD LEAVE ED
WITHIN 30 MINUTES OF THE DECISION TO TRANSFER (NICE 2016)**

MAJOR TRAUMA Transfer Checklist

Date/ Time of injury:

Patient Name:

Name of accepting Clinician (TTL @ receiving site):

Date/ Time of TTL acceptance:

EXTERNAL HAEMORRHAGE CONTROL	Yes	No	N/A
Tourniquet in situ (time applied if applicable:)			
External pressure dressings			
AIRWAY	Yes	No	N/A
Is the airway safe and secure			
Comment:			
ETT position OK			
C-spine protected or cleared			
BREATHING	Yes	No	N/A
Established on transport ventilator			
Capnography in use			
Pneumothoraces managed			
Chest drains secure			
Arterial blood gases (+ iCa if available)			
CIRCULATION	Yes	No	N/A
Thoracic /abdominal bleeding optimised			
2 routes patent IV access (accessible fluids running or ready to run)			
Blood & FFP available and checked if required			
Long bone splinted & pelvic binder in situ if required			
TXA (time)			
DISABILITY	Yes	No	N/A
Sedation+/- paralysis			
Seizures controlled			
ICP management			
EXPOSURE/METABOLIC	Yes	No	N/A
Temperature maintained			
Spinal protection (if required)			
Glucose > 4 mmols/L			
Potassium < 6mmols			
IMMEDIATE PRE-DEPARTURE CHECK	Yes	No	N/A
Transfer Team introductions			
Patient monitor connected (and fully charged)			
Emergency airway equipment available			
Oxygen & battery replacements			
IV access patent/ lines secure			
Spare sedatives/vasopressors/inotropes/fluids available			
Temperature control measures in place			
Receiving ED informed of departure			

Name/ Signature of referring TTL:

Receiving hospital to undertake 'Hands off' handover			
At receiving hospital MAJOR TRAUMA handover			
Handover Preparation			
	Yes	No	N/A
Introductions complete			
Team Leader supervising airway/ supervising transfer identified			
Fluids/Lines identified			
Procedures			
	Yes	No	N/A
Patient established on ventilator			
Is the airway safe and secure			
Infusions transferred			
Monitoring transferred			
Handover (all staff to listen to handover)	Yes	No	N/A
MEDICAL HANDOVER			
History (SBAR summary)			
Airway or ventilation problems			
Interventions			
Current medications			
Tubes and lines			
Wounds and drains			
Imaging (on disc or loaded on PACS)			
Past Medical history if known			
Any other issues:			
NURSING HANDOVER			
	Yes	No	N/A
Pressure areas and tissue viability			
Property			
Relative information			
Documentation / Case note handover			
Any other issues			
D. Transfer information			
	Yes	No	N/A
Both transferring and receiving Drs to sign transfer form			
Ensure handover checklist completed and boxes ticked on form			
Copy of the Inter-hospital transfer form sent to the Network			
Name/ Signature of receiving TTL:			