

New Zealand Out-of-Hospital Major Trauma Destination Policy

Midland Area

This document is for the use of clinical personnel when determining the destination hospital for patients with major trauma in the out-of-hospital setting in the Midland Area of New Zealand. It has been developed by the Midland Trauma System in conjunction with the National Major Trauma Clinical Network and the Ambulance Sector.

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Major Trauma Destination Matrix

Midland Area



Area	Waikato					Bay of Plenty			Lakes		Taranaki		Tairāwhiti
	WKO	THA	TOK	TAU	TEK	TGA	WHK	ROT	TPO	TBH	HAW	GIS	
Incident Locality	WKO	THA	TOK	TAU	TEK	TGA	WHK	ROT	TPO	TBH	HAW	GIS	
Condition	Destination Facility												
Life threatening problem requiring immediate medical intervention	Closest appropriate medical facility. Activate staging if this is not a major trauma hospital												
Severe TBI likely to require urgent neurosurgery* (aged ≥15 years)	WKO	WKO	WKO	WKO	WKO	WKO	WKO	WKO	WKO	WKO	WKO	GIS	
Severe TBI likely to require urgent neurosurgery* (aged <15 years)	WKO	SSH	WKO	WKO	WKO	TGA	TGA	ROT	ROT	TBH	TBH	GIS	
Complex multi-system trauma	WKO	WKO	WKO	WKO	WKO	TGA	TGA	WKO	WKO	TBH	WKO	GIS	
Manageable airway obstruction	WKO	WKO	WKO	WKO	WKO	TGA	WHK	ROT	ROT	TBH	TBH	GIS	
Respiratory distress	WKO	WKO	WKO	WKO	WKO	TGA	TGA	ROT	ROT	TBH	TBH	GIS	
Shock	WKO	WKO	WKO	WKO	WKO	TGA	TGA	ROT	ROT	TBH	TBH	GIS	
Motor score less than or equal to five	WKO	WKO	WKO	WKO	WKO	TGA	TGA	ROT	WKO	TBH	TBH	GIS	
Penetrating injury to the neck or torso	WKO	WKO	WKO	WKO	WKO	TGA	TGA	ROT	ROT	TBH	TBH	GIS	
Crush injury to the neck or torso	WKO	WKO	WKO	WKO	WKO	TGA	TGA	ROT	ROT	TBH	TBH	GIS	
Flail chest	WKO	WKO	WKO	WKO	WKO	TGA	TGA	ROT	ROT	TBH	TBH	GIS	
Penetrating trauma to a limb with arterial injury	WKO	WKO	WKO	WKO	WKO	TGA	TGA	ROT	ROT	TBH	TBH	GIS	
More than one long bone fracture	WKO	WKO	WKO	WKO	WKO	TGA	TGA	ROT	ROT	TBH	TBH	GIS	
Crushed, amputated, mangled or pulseless limb	WKO	WKO	WKO	WKO	WKO	TGA	TGA	ROT	ROT	TBH	TBH	GIS	
Clinically obvious pelvic fracture	WKO	WKO	WKO	WKO	WKO	TGA	TGA	WKO	WKO	TBH	TBH	GIS	
Isolated paraplegia or quadriplegia** (aged ≥15 years)	MMH	MMH	MMH	MMH	MMH	TGA	TGA	WKO	WKO	TBH	TBH	GIS	
Isolated paraplegia or quadriplegia** (aged <15 years)	SSH	SSH	SSH	SSH	SSH	TGA	TGA	WKO	WKO	CCH	CCH	MMH	
Paraplegia or quadriplegia with other signs of major trauma**	WKO	WKO	WKO	WKO	WKO	SSH	SSH	SSH	SSH	SSH	SSH	SSH	
Burns involving the airway	WKO	WKO	WKO	WKO	WKO	WKO	WKO	WKO	WKO	WKO	WKO	GIS	
Burns >20% of body surface area	WKO	WKO	WKO	WKO	WKO	WKO	WKO	WKO	WKO	TBH	TBH	GIS	
Major facial injury	WKO	WKO	WKO	WKO	WKO	WKO	WKO	WKO	WKO	TBH	WKO	GIS	

Transport direct to the destination listed provided it is feasible and safe to do so

CCH	Christchurch Hospital	TEK	Te Kuiti Hospital
GIS	Gisborne Hospital	TGA	Tauranga Hospital
HAW	Hawera Hospital	THA	Thames Hospital
MMH	Middlemore Hospital	TOK	Tokoroa Hospital
ROT	Rotorua Hospital	TPO	Taupo Hospital
SSH	Starship Hospital	WHK	Whakatane Hospital
TAU	Taumarunui Hospital	WKO	Waikato Hospital
TBH	Taranaki Base Hospital		

Notes:

- ▶ *Criteria for severe TBI likely to require urgent neurosurgery:
 - Has been intubated and ventilated **or**
 - Has lateralising neurological signs (for example unilateral pupil dilatation or unilateral weakness) **or**
 - Has a clinically obvious penetrating brain injury.
- ▶ **Refer to the Spinal Cord Injury Destination Policy.

Major Trauma Destination Policy: Midland Area



Additional Information

Introduction

- ▶ This policy is for the use of personnel in the out-of-hospital setting, when determining the transport destination for patients with major trauma within the Midland Area of New Zealand.
- ▶ It should be read in conjunction with the Major Trauma Destination Matrix for the Midland Area, the New Zealand Out-of-Hospital Major Trauma Triage Policy, the National Major Trauma Network Staging Guidelines and the New Zealand Spinal Cord Injury Destination Policy.
- ▶ This policy is consistent with the Midland DHB Trauma Guidelines, the Midland Major Trauma Destination Matrix and the Midland Inter-hospital Transfer Policy.
- ▶ The goal of the policies is to ensure that patients with major trauma are transported directly to the most appropriate major trauma hospital, whenever it is feasible and safe to do so.

Major trauma hospitals

- ▶ The following hospitals are designated to receive patients with major trauma:
 - Waikato Hospital.
 - Tauranga Hospital.
 - Whakatane Hospital.
 - Rotorua Hospital.
 - Gisborne Hospital.
 - Taranaki Base Hospital.
 - Starship Hospital.
- ▶ Waikato Hospital is the tertiary major trauma hospital.

Determining the most appropriate major trauma hospital

- ▶ The destination matrix describes the preferred major trauma hospital, based on the best descriptor of the patient's clinical condition.
- ▶ The patient should be transported to the preferred major trauma hospital as described in the matrix, whenever it is feasible and safe to do so.
- ▶ To use the matrix:
 - Begin at the top and choose the locality that best describes the location of the incident.
 - Go down the matrix to the condition that best describes the patient's known injuries.
 - The hospital listed is the preferred major trauma hospital.
- ▶ If it is not feasible or safe to transport the patient to the preferred major trauma hospital, the patient should be transported to the most appropriate major trauma hospital. This will usually be the nearest major trauma hospital, but it may be appropriate to transport the patient to another major trauma hospital if that hospital has the most appropriate facilities to meet the patient's needs.
- ▶ In situations where there will be deviation from the matrix, personnel will determine the most appropriate major trauma hospital taking into account all of the following:
 - The nature of the patient's known injuries.
 - The patient's anticipated clinical needs.

- The facilities at the major trauma hospitals it is feasible and safe to transport to.
 - The location of the incident.
 - The transport modes available and the effect of weather on helicopter transport.
 - The transport times to the major trauma hospitals it is feasible and safe to transport to.
 - The other patients being transported from the scene, particularly if the number of patients is significant.
- ▶ Personnel should have a low threshold for seeking clinical advice if:
- The transport time to the chosen major trauma hospital is significantly longer (this is not defined and requires clinical judgement) than the transport time to the nearest major trauma hospital **or**
 - Transport to the chosen major trauma hospital will involve bypassing (or over flying) another major trauma hospital **or**
 - There is deviation from the matrix.

Life threatening problems requiring immediate medical intervention

- ▶ The patient should be transported to the closest appropriate medical facility if they have a life threatening problem requiring immediate medical intervention that cannot be provided by personnel at the scene.
- ▶ Clinical judgement is required when determining that the medical facility is appropriate, but the medical facility must have the personnel and facilities to provide the required medical intervention.
- ▶ Personnel must activate staging via Control/Comms if the medical facility is not a major trauma hospital, preferably before leaving the scene.
- ▶ Personnel in the receiving medical facility must be notified as soon as possible of the intent to stage at the medical facility, preferably before leaving the scene.

Severe traumatic brain injury (TBI) likely to require urgent neurosurgery

- ▶ Most patients with severe TBI do not require urgent neurosurgery. However, patients with a high probability of requiring urgent neurosurgery should be transported to a major trauma hospital with neurosurgical facilities.
- ▶ A patient with severe TBI and any of the following clinical features should be transported to Waikato Hospital or Starship Hospital provided this is feasible and safe, unless otherwise described in the matrix:
 - Has been intubated and ventilated **or**
 - Has lateralising neurological signs (for example unilateral pupil dilatation or unilateral weakness) **or**
 - Has a clinically obvious penetrating brain injury.
- ▶ Personnel should have a low threshold for seeking clinical advice if transport to Waikato Hospital or Starship Hospital will involve bypassing (or over flying) another major trauma hospital, particularly if the patient is not intubated and ventilated.

Complex multi-system trauma

- ▶ Patients with complex multi-system trauma will usually benefit from transport to Waikato Hospital (which is a tertiary major trauma hospital) provided this is feasible and safe, unless otherwise described in the matrix. This is because tertiary major trauma hospitals have additional facilities and personnel to manage patients with complex multi-system trauma.
- ▶ Complex multi-system trauma cannot be tightly defined and clinical judgement is required, but includes patients with major trauma involving very severe injuries to more than one body region.

Burns

- ▶ Patients with burns greater than 20% of body surface area should be transported to Waikato Hospital unless otherwise described in the matrix, provided it is feasible and safe to do so.
- ▶ Burns less than or equal to 20% of body surface area and burns involving the face (without airway burns), hands or genitals may require treatment in a Burn Centre, but in the absence of major trauma these are not time critical and the patient should usually be transported to the most appropriate hospital and be subsequently referred if required.

Major facial injury

- ▶ Major facial injury is not an injury pattern defined within the New Zealand Out-of-Hospital Major Trauma Triage Policy. However, patients with major facial injury will usually benefit from being transported to Waikato Hospital (which has plastic surgical facilities) provided this is feasible and safe, unless otherwise described in the matrix.
- ▶ Major facial injury cannot be tightly defined and clinical judgement is required, but examples include significant soft tissue loss or significant soft tissue mangling.

Major trauma hospitals outside the Midland Area

- ▶ Rarely, it may be appropriate for a patient to be transported to a major trauma hospital that is outside the Midland Area, for example if the patient has a time critical problem and the chosen major trauma hospital is significantly closer than the major trauma hospital defined in the matrix. In this setting:
 - This must be expected to confer a clinical benefit to the patient **and**
 - Personnel should have a low threshold for seeking clinical advice.