

# New Zealand Out-of-Hospital Major Trauma Destination Policy

Northland and Auckland Areas

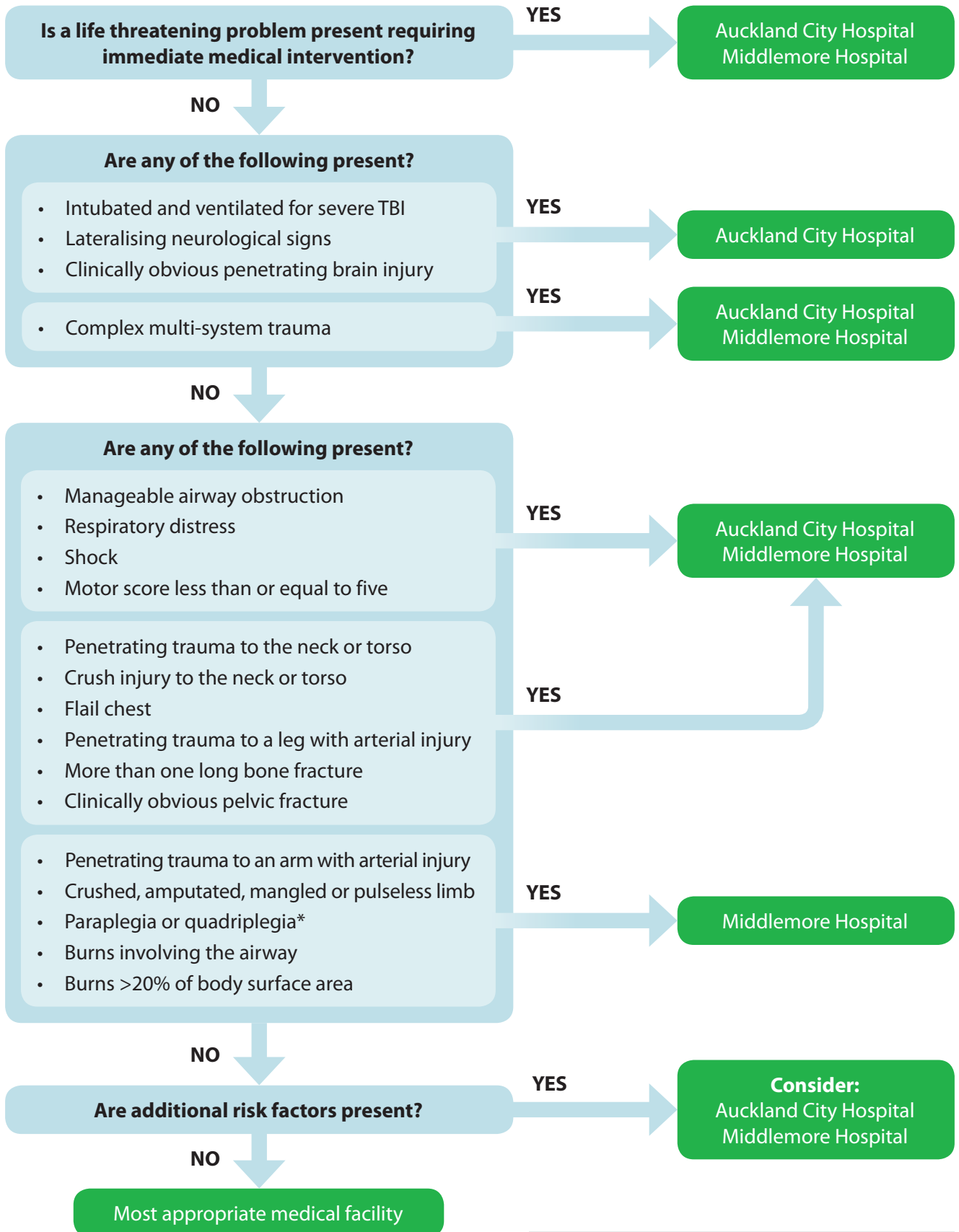
This document is for the use of clinical personnel when determining the destination hospital for patients with major trauma in the out-of-hospital setting in the Northland and Auckland Areas of New Zealand. It has been developed by the Northern Regional Major Trauma Network in conjunction with the National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

Publication date February 2017



# Major Trauma Destination Flowchart: Adults

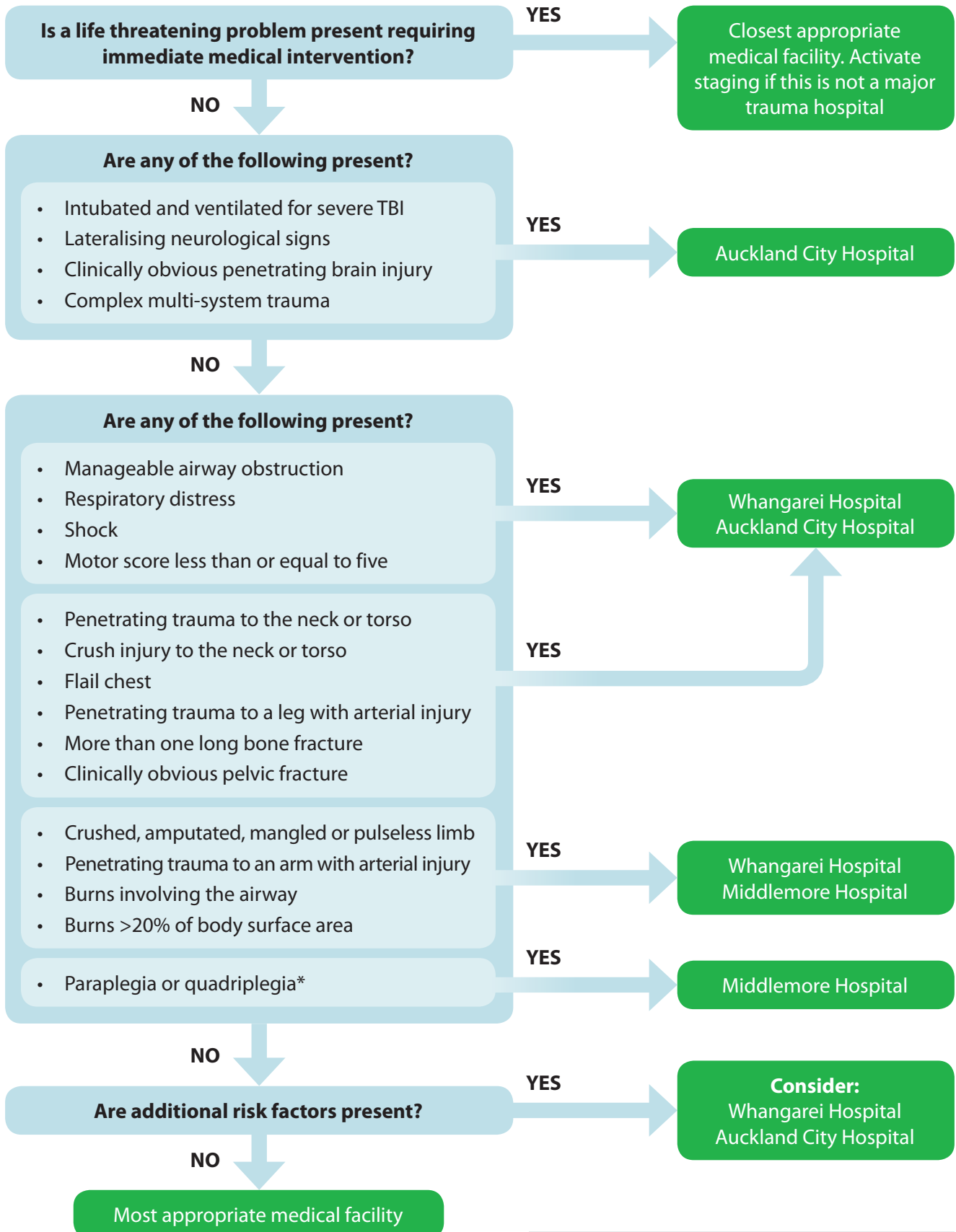
Auckland Area



**Note:**  
\* Refer to the Spinal Cord Injury Destination Policy.

# Major Trauma Destination Flowchart: Adults

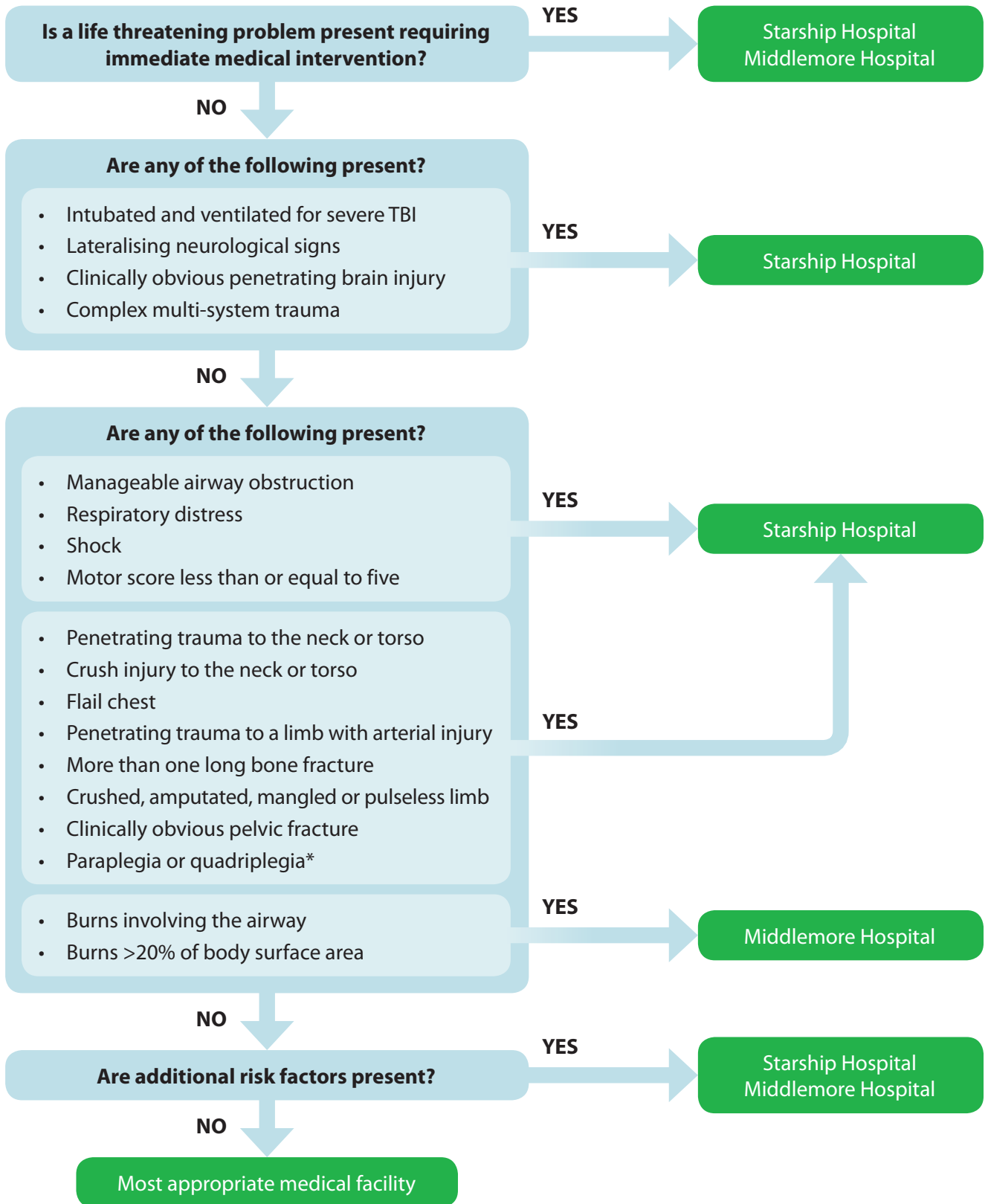
Northland Area



**Note:**  
\* Refer to the Spinal Cord Injury Destination Policy.

# Major Trauma Destination Flowchart: Children

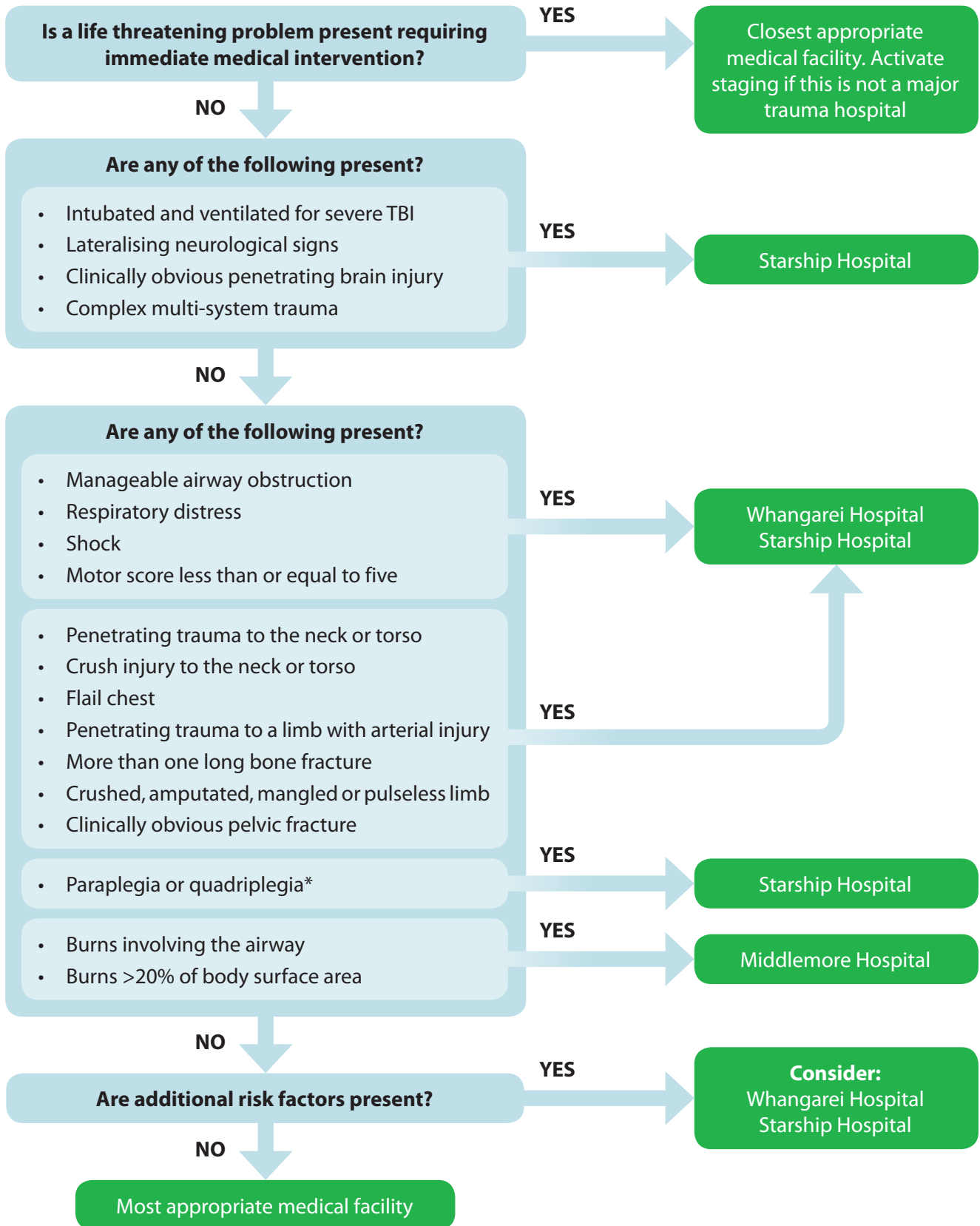
Auckland Area



**Note:**  
\* Refer to the Spinal Cord Injury Destination Policy.

# Major Trauma Destination Flowchart: Children

Northland Area



**Note:**  
\* Refer to the Spinal Cord Injury Destination Policy.

# Major Trauma Destination Policy: Northland and Auckland Areas



## 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 Northland and Auckland areas of New Zealand.
- ▶ It should be read in conjunction with the Major Trauma Destination Flowcharts for the Northland and Auckland areas, 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.
- ▶ 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:
  - Whangarei Hospital (adults and children).
  - Auckland City Hospital (adults only).
  - Starship Hospital (children only).
  - Middlemore Hospital (adults and children\*).

\*Note: Middlemore Hospital is designated to receive children with burns and children with a life threatening problem requiring immediate medical intervention.

- ▶ The following hospitals are tertiary major trauma hospitals:
  - Auckland City Hospital (adults only).
  - Starship Hospital (children only).
  - Middlemore Hospital (adults only).

### Determining the most appropriate major trauma hospital

- ▶ The flowcharts describe the preferred major trauma hospital/s, 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 flowchart, whenever it is feasible and safe to do so.
- ▶ If it is not feasible or safe to transport the patient to the preferred major trauma hospital or more than one major trauma hospital is listed as an option, 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.
- ▶ 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.

## Life threatening problems requiring immediate medical intervention

- ▶ Auckland Area: the size and geography of the Auckland Area is such that the patient should be transported to a major trauma hospital, even in the presence of a life threatening problem requiring immediate medical intervention.
- ▶ Northland Area: the size and geography of the Northland Area is such that 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 will usually benefit from being transported to a major trauma hospital with neurosurgical facilities.
- ▶ It is preferable to transport a patient with severe TBI and any of the following clinical features to Auckland City Hospital (adults) or Starship Hospital (children) whenever it is feasible and safe to do so:
- 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.
- ▶ Auckland Area: patients with the above clinical features should be transported to Auckland City Hospital (adults) or Starship Hospital (children), even if the scene is south of Middlemore Hospital and transport is by road, unless there is a compelling reason to transport to Middlemore Hospital.
- ▶ Northland Area: patients with the above clinical features being transported by road should usually be transported to Whangarei Hospital. Patients with the above clinical features being transported by helicopter should be transported to Auckland City Hospital (adults) or Starship Hospital (children) unless there is a compelling reason to transport to Whangarei Hospital.

## Complex multi-system trauma

- ▶ Patients with complex multi-system trauma will usually benefit from transport to a tertiary major trauma hospital. 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.
- ▶ Auckland Area: patients with complex multi-system trauma should be transported to Auckland City Hospital (adults), Middlemore Hospital (adults) or Starship Hospital (children).
- ▶ Northland Area: patients with complex multi-system trauma being transported by road should usually be transported to Whangarei Hospital. Patients with complex multi-system trauma being transported by helicopter should be transported to Auckland City Hospital (adults) or Starship Hospital (children) unless there is a compelling reason to transport to Whangarei Hospital.

## Limb injuries

- ▶ A differentiation has been made within the flowchart between adults with an upper limb injury involving arterial injury and adults with a lower limb injury involving arterial injury.
- ▶ Adults with an upper limb injury involving arterial injury are preferably transported to Middlemore Hospital. This is because a combined approach involving plastic surgery and vascular surgery is almost always required and these services are only both available at Middlemore Hospital:
  - Auckland area: adults should be transported to Middlemore Hospital unless there is a compelling reason to transport to Auckland City Hospital.
  - Northland area: adults being transported by road should usually be transported to Whangarei Hospital. Adults being transported by helicopter should be transported to Middlemore Hospital unless there is a compelling reason to transport to Whangarei Hospital.
- ▶ Adults with limb injury involving crush, amputation or mangled should be transported to Middlemore Hospital. This is because a combined approach involving plastic surgery and orthopaedic surgery is almost always required and these services are only both available at Middlemore Hospital:
  - Auckland area: adults should be transported to Middlemore Hospital unless there is a compelling reason to transport to Auckland City Hospital.
  - Northland area: adults being transported by road should usually be transported to Whangarei Hospital. Adults being transported by helicopter should be transported to Middlemore Hospital unless there is a compelling reason to transport to Whangarei Hospital.
- ▶ Children with limb injuries involving arterial injury, crush, amputation or mangled:
  - Auckland area: children should be transported to Starship Hospital unless there is a compelling reason to transport to Middlemore Hospital.
  - Northland area: children being transported by road should usually be transported to Whangarei Hospital. Children being transported by helicopter should be transported to Starship Hospital unless there is a compelling reason to transport to Whangarei Hospital.

## Burns

- ▶ Patients with burns greater than 20% of body surface area should be transported to Middlemore Hospital whenever it is feasible and safe to do so, including from the Northland Area.
- ▶ Patients with airway burns should usually be transported to Middlemore Hospital, but should be transported to another major trauma hospital if this hospital is significantly closer than Middlemore Hospital and there is significant concern about the patient's airway.
- ▶ Patients with burns 5–20% of body surface area:
  - Auckland Area: patients should be transported to Middlemore Hospital unless there is a compelling reason to transport to another hospital.
  - Northland Area: patients should be transported to the most appropriate hospital and be subsequently referred to Middlemore Hospital if required.
- ▶ Patients with burns less than 5% of body surface area should be transported to the most appropriate hospital.