

Audit of the Northern Region Paediatric
Trauma Destination Policy

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INTRODUCTION

The Northern region is the only region in New Zealand with a designated major trauma destination policy for paediatric patients.

This poster outlines the results of a focused audit of the current Northern Region Paediatric Trauma Destination Policy to observe adherence, and to identify any areas for improvement.

AIM

To provide insights into the current recognition and adherence to the destination policy for paediatric patients with major trauma who are attended by ground emergency medical services (EMS) in the Northland and Auckland region.

To improve clinician adherence to the Northern region paediatric major trauma destination policy from 71% to 90% by October 2025 and reduce secondary transport to Starship Children’s Hospital following trauma for patients with high-risk factors from 28% to <10%.

RECOMMENDATIONS

- **Include an age of less than 15 years or paediatric to the high-risk factors section of the Trauma Triage and Transport section of the NZ CPGs.**
- **Lower the clinician threshold for transporting to SSH based on the patient having one or more high-risk factors.**
- **Bypass the closest major trauma hospital in favour of Starship Children’s hospital with all status 1 and 2 paediatric trauma.**

RESULTS

Where the CCPs agreed there was a requirement to use the policy (i.e., met the criteria for having major trauma according to the policy) (n=75, 65% of overall cases), adherence was 71% and nonadherence was 29%.

Interestingly, those patients where there was not adherence to the policy, (n=20, 26% of the total cases) nearly all of them presented with “high risk factors”.

In all 114 cases, the most common type of high-risk factor was “significant impact to head,” followed by, “ejection from vehicle”, “high speed MVA >60 kph,” “motor/cyclist impact >30 kph”, “pedestrian impact”, and “severe pain.” “Fall from height >3m” was controversial as some of these paediatric patients fell from a significant height relative to their height, however, it was not >3m. “Struck on the head from a falling object >3m height” was also a poor indicator as many patients had as significant impact to head such as a baseball bat, however, still didn’t meet criteria for in either “high-risk factor” table.

Over the observed period, 34 cases (30%) were secondarily transported. One case was a great example of staging, and another case was transferred correctly from Starship Children’s Hospital to Middlemore for the management of burns. The remaining 32 cases (28%) were secondary transports to Starship Children’s Hospital demonstrating that the policy is being followed. However, it may not be fit for purpose as the rate of secondary transport is suboptimal. Middlemore had 20 secondary transports, Whangārei had 10 and North Shore hospital had 2.

The ISS scores of the paediatric patients that were secondary transports to Starship ranged from 12 to 34. The mean ISS was 22.

METHOD

Inclusion criteria - All paediatric patients (<15yo) attended in the Northland and Auckland regions by EMS with available electronic EMS records that were identified as having an Injury Severity Score (ISS >11) within the national trauma registry (NTR) were included in the audit.

Each of the 114 cases received from the National Trauma Network were audited by 3 Critical Care Paramedics (CCPs).

We used the risk factors from the Victorian Ambulance Service and the New Zealand National Ambulance Clinical Practice Guidelines. In the audit, we asked the CCPs to select the risk factors associated with the mechanism of injury.

CONCLUSIONS

We can deduce from this audit that the policy may not be optimal, and perhaps there is scope for lowering the threshold for transporting to Starship Children’s Hospital where patients have high-risk factors.

28% of patients are secondarily transported to Starship Children’s hospital delaying treatment.

Paramedic recognition of major trauma is good, however, there is room for improvement and our threshold for transporting to definitive care with risk factors is too high.

Risk factors are often overlooked by paramedics suggesting a gap in knowledge of the CPGs.

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