NCA National Office of Clinical Audit | MTA Major Trauma Audit

MAJOR TRAUMA AUDIT NATIONAL REPORT 2022

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NATIONAL OFFICE OF CLINICAL AUDIT (NOCA)

NOCA was established in 2012 to create sustainable clinical audit programmes at national level. NOCA is funded by the Health Service Executive's (HSE) Office of the Chief Clinical Officer and operationally supported by the Royal College of Surgeons in Ireland. The National Clinical Effectiveness Committee (2015, p. 2) defines national clinical audit as "a cyclical process that aims to improve patient care and outcomes by systematic, structured review and evaluation of clinical care against explicit clinical standards on a national basis". NOCA supports hospitals to learn from their audit cycles.

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CONTENTS

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Professor Conor Deasy
National Clinical Lead
Major Trauma Audit
National Office of Clinical Audit
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29 August 2025

Dear Professor Deasy,

On behalf of the NOCA Governance Board, I wish to formally acknowledge receipt of the *Major Trauma Audit National Report 2022*.

We extend our sincere congratulations to you and the entire team for producing this significant report. This report represents a welcome return to national reporting following a cyberattack on the Trauma Audit and Research Network systems in 2023. We particularly commend the hospitals and audit personnel for their perseverance during this challenging period. Their commitment to continuing to collect high-quality data and prioritising the continuation of audit work in difficult circumstances is deeply valued. We look forward to the outputs of this data collection in future reports.

The data presented provides insights into the care of trauma patients across Ireland, reinforcing the urgent need for improvements in trauma system design, access to specialist services, and timely, coordinated care. The findings also contribute meaningfully to the implementation of the National Trauma Strategy and the development of trauma networks.

This letter serves as the formal endorsement of the NOCA Governance Board for the *Major Trauma Audit National Report 2022*. We trust that this report will inform future planning and strengthen trauma care delivery across the country.

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FOREWORD

The Major Trauma Audit has been an essential source of the data that continues to underpin improvements in trauma care as detailed in the National Trauma Strategy (A Trauma System for Ireland), approved by the Government and published in February 2018.

Notwithstanding the limitations in data coverage resulting from the cyber-attack on the Trauma Audit and Research Network (TARN) in April 2023, and the disruption caused as a result, this report continues to offer valuable insights into the performance and dynamics of the trauma system during this reporting period and the efforts of the National Office of Clinical Audit (NOCA) to recover and analyse available Irish data is to be commended.

In line with findings from previous years, data from 2022 highlights that the majority of major trauma happens at home. Additionally, only a small proportion of major trauma patients continue to be initially managed by a consultant-led trauma team. Also highlighted in the report is another consistent finding that approximately 20% of major trauma patients require at least one transfer to another hospital for further care. While such transfers are often clinically appropriate, the continued implementation of the trauma triage tool (TTT) will support pre-hospital care providers in identifying patients who would benefit from receiving their trauma care and transporting these patients directly to a Major Trauma Centre (MTC).

"The implementation of the National Trauma Strategy continues to be informed and supported by high quality audit data in the MTA."

The implementation of the National Trauma Strategy continues to be informed and supported by high quality audit data in the MTA. This data will form the basis of fundamental KQIs for monitoring the progress of the ongoing reconfiguration of the national trauma system.

We welcome the publication of the Major Trauma Audit National Report 2022 and look forward to continuing our collaboration with NOCA as we work to progress the recommendations of the National Trauma Strategy in the years ahead.

Mr Keith Synnott
National Clinical Lead for Trauma Services

EXECUTIVE SUMMARY

This is the ninth Major Trauma Audit (MTA) report to be published. It focuses on the data submitted on 3,323 patients and validated prior to a cyberattack on the University of Manchester. These data were recovered by the National Office of Clinical Audit (NOCA) during 2024.

The report is presented in a condensed format with hyperlinks to appendices and supporting documentation throughout.

The MTA is a clinically led audit established by NOCA in 2013. It focuses on the care of the more severely injured trauma patients in Ireland's healthcare system. In 2016, the MTA became the first national clinical audit endorsed by the National Clinical Effectiveness Committee (NCEC) and mandated by the Minister for Health. The methodological approach for the MTA was provided by the Trauma Audit and Research Network (TARN), which was based in the University of Manchester, United Kingdom, until March 2024. Due to a cyberattack on the University of Manchester in July 2023, the TARN audit suspended data collection in the United Kingdom until April 2024, and it has since been migrated onto the National Health Service England Outcomes and Registries Programme under the new title of the National Major Trauma Registry (NMTR).

"The MTA is a clinically led audit established by NOCA in 2013. It focuses on the care of the more severely injured trauma patients in Ireland's healthcare system."

Twenty-six eligible hospitals have been participating in the MTA, and data have been collected on more than 38,323 patients since 2014.

This report includes data from 20 of the participating hospitals. Due to vacant posts in 2022, 6 hospitals did not enter data.

While the system was offline due to the cyberattack, data collection continued at hospital level on paper, and uploading of these data onto the new NOCA MTA platform portal commenced on 26 March 2025, with accelerated coding provided by the NMTR team. After receiving the historical data that were entered for 2022 from the University of Manchester, the MTA Governance Committee agreed to complete a short report with the data available. This is acknowledged within the Methodology and Data Quality chapter. Although these data are retrospective and data coverage is less than 80%, it is still important to report on the data that were collected by each hospital. As the trauma system evolves, it is important to have a means of describing this period of development, not only in data chapters but also in terms of what is happening within the participating hospitals and the MTA as it transitions to a new platform.

Since the cyberattack, data have been unavailable; therefore, many MTA hospital governance committees have not had MTA data to include on their meeting agendas. Given that the data file is incomplete, it was agreed that recommendations could not be made from this report. The MTA has instead made a commitment from this report to support the return

"As the trauma system evolves, it is important to have a means of describing this period of development, not only in data chapters but also in terms of what is happening within the participating hospitals and the MTA as it transitions to a new platform."

to high-quality data entry and completeness within the new MTA NOCA portal and in doing so establish/re-establish effective hospital governance.

There was no change in the demographics for presentations in 2022: 57% males and 43% females. The median age increased by 2 years to 65.

As has been stated in previous reports, the leading cause (66%) of major trauma is from low falls, with 50% of major trauma happening in the home. Opportunities for injury prevention and safety awareness have been highlighted in previous reports. It is hoped that the data from this and previous reports will continue to inform the need for better safety measures in our homes, which are the most common setting for incidents causing injury. Some materials are already available on the NOCA website, including a home safety infographic, an injury prevention infographic and a home safety checklist.

This report once again reports a low level (13%) of pre-alert and a low level (7%) of patients with major trauma being received by a trauma team. Findings from this report will extend the understanding of the range of injuries associated with such incidents and the landscape of major trauma admissions prior to the reconfiguration of the trauma system in Ireland. This report also includes updates from the Trauma Office on developments in areas such the trauma triage tool and trauma team definitions. Throughout the data chapters in this report, some of the relevant updates are highlighted alongside the MTA data to show where the MTA will be best placed to monitor these initiatives. It is important to reflect on how our system is performing.

The report also captures the patient's voice, an individual experience of what matters most to our patients during their episode of care. This better helps us fully understand the needs of patients. In this report, we include an account of Debbie's experience following a bicycle accident, not only from the patient perspective but also as an experienced audit coordinator for the MTA.

The data available within this report provide an opportunity for facilitating quality improvement, leading to better outcomes for patients who experience major trauma. Each hospital is encouraged to use MTA reports for continuous quality improvement.

Without the constant leadership provided by the hospital clinical leads for the MTA and the dedication and hard work of the audit coordinators, this audit would not be possible. The NOCA Executive Team and the MTA Governance Committee wish to thank the clinical leads, audit coordinators and staff in the participating hospitals for their continued commitment to and engagement with this audit, especially over the past 18 months.

"The data available within this report provide an opportunity for facilitating quality improvement, leading to better outcomes for patients who experience major trauma."

ROAD TO RECOVERY FOR THE MAJOR TRAUMA AUDIT

JUNE 2023
Cyber attack on University of Manchester

Ongoing data collection continued manually

2024
Historical Irish data recovered to NOCA MTA

APRIL 2024
TARN migrated to NMTR platform for England data collection recommenced

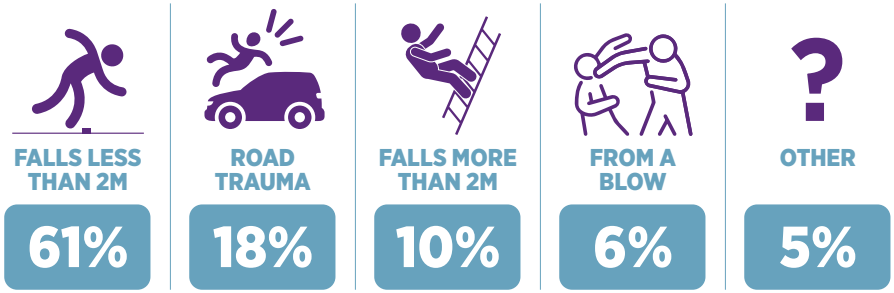
FEB 2025
NOCA PORTAL commenced data collection for the MTA in ROI

KEY FINDINGS

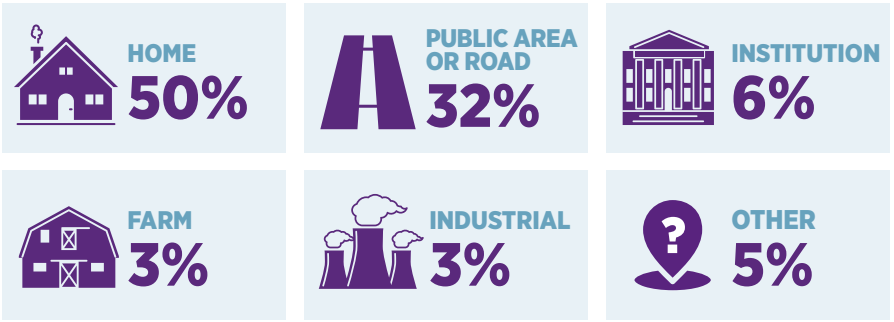
FROM THE MAJOR TRAUMA AUDIT 2022 REPORT

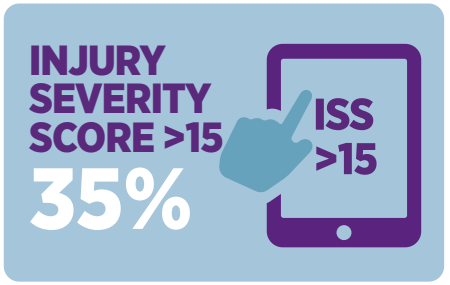
MEDIAN AGE 65 YEARS

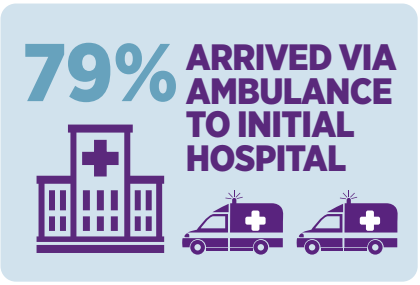
MECHANISM OF INJURY

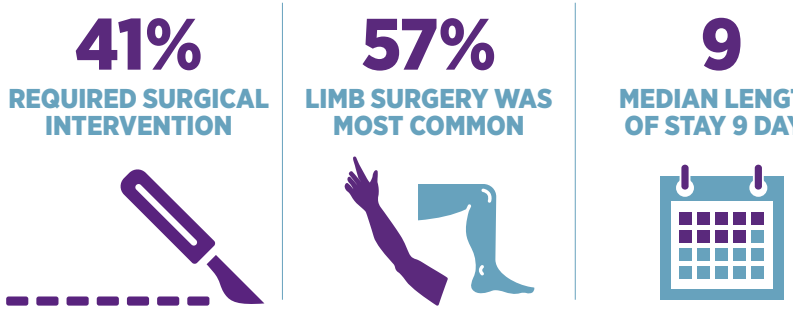


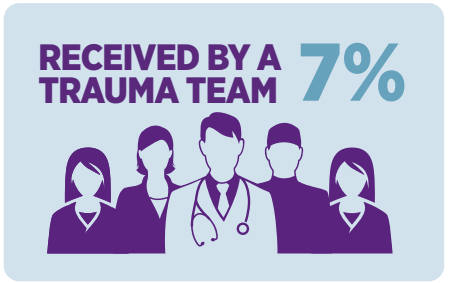
SETTING OF INJURY

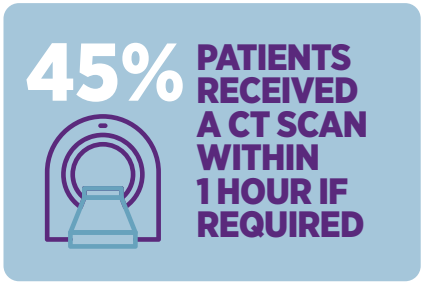


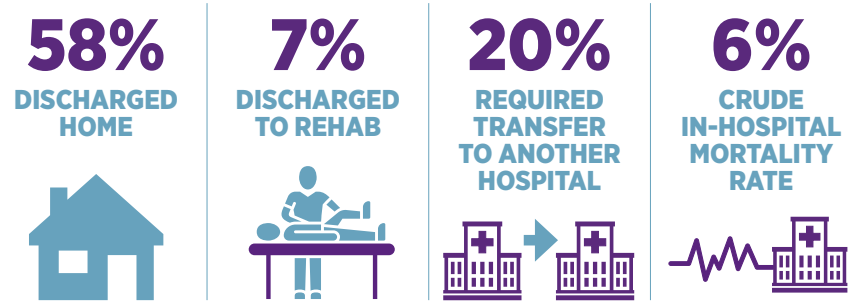












NOCA COMMITMENTS
FROM THE MAJOR TRAUMA AUDIT 2022 REPORT

NOCA WILL CONTINUE TO SUPPORT EACH HOSPITAL TO DO THE FOLLOWING:

- Achieve high standards of data quality and data completeness.
- Establish a local MTA governance committee.
- Pursue quality improvement through the provision of better quarterly reports and training in the use of the MTA dashboards.

NOCA National Office of Clinical Audit

A PATIENT'S PERSPECTIVE: DEBBIE'S STORY

Debbie kindly shares her story with us in this report both from the perspective of one of our most experienced audit coordinators in the MTA, but also as a patient following a serious accident. We are very grateful to Debbie for giving us this unique insight from both sides of the trauma system.

MY OWN TRAUMA STORY – SHARED LEARNING

Last year I was involved in a cycling accident: 'SUV versus cyclist'. I was exiting a roundabout, wearing a helmet, but unfortunately the driver of the vehicle failed to spot me behind my fellow cyclist and also failed to stop even after the collision, dragging both myself and the bicycle a distance on the road. Thankfully, only the bicycle was crushed beneath the SUV, but I ended up lying in the middle of the roundabout. My initial reaction was relief, as I had a clear view of the underside of the vehicle. I tried to roll away from the tyres but soon heard the oncoming traffic on the roundabout. I sat up and crawled/shuffled to the centre paving as my cycling colleague stopped the traffic.

Passing civilians called the ambulance immediately. People offered me help and comfort and initial first aid was commenced and, needless to say, I began to feel the pain. Although the public rallied with first aid and comforting measures, I was relieved when the pre-hospital car and ambulance arrived simultaneously and the paramedics took over. I was now a patient, but I knew the drill; I had collected data for the Major Trauma Audit for many years but had no personal experience of the trauma system. Suffice to say all the boxes were ticked, and the great care I had already received continued when I arrived at my local hospital, my usual workplace. En route to the hospital, the paramedic, realising I was a nurse, enquired which area I worked in and if I was familiar with the emergency department staff. I replied, "Yes, but they won't be expecting me today!"

Interestingly, we had been progressing a recent hospital audit related to trauma team activation criteria as a quality improvement project. I had not intended to test these criteria or the pre-hospital triage system personally, but I did, and I am happy to say it works. I already knew the amazing work our pre-hospital and emergency medicine teams do in a very challenging environment, and how important it is to keep pushing for having the right people in the right place at the right time, both pre-hospital and in hospital. You may not need all the skills, but it's better to start the ball rolling early rather than chasing it.

"Interestingly, we had been progressing a recent hospital audit related to trauma team activation criteria as a quality improvement project. I had not intended to test these criteria or the pre-hospital triage system personally, but I did, and I am happy to say it works."

I was unlucky but actually lucky, as I escaped this ordeal with superficial facial and upper and lower limb soft tissue injuries – painful, as anyone who has suffered road rash will identify with, but minor at the end of the day. It is a very scary experience for patients. I can't imagine the pain and suffering seriously injured patients have endured, not to mention the psychological impact that trauma has on people's lives. As I looked through the ambulance skylight, the shock of what had just happened started to take over – that and the side effects of some of the medication, as was explained by the paramedics.

So why am I documenting this journey? Yes, it helps put things into perspective, but more importantly it is a reminder to us all how valuable our pre-hospital and acute hospital teams are and why we have worked and continue to work in this sector for most of our careers. I have a few take-home messages. It is hard putting your life in others' hands, but we must continue to put patients and family at the centre of the journey, involved in decisions about care and treatment, supported and constantly reassured. The patient may be horizontal, protected by a collar and vacuum mattress to protect their spine, attached to monitors and unable to see faces unless they come into their line of sight, but the other senses become highly exaggerated, so keep communicating.

"So why am I documenting this journey? Yes, it helps put things into perspective, but more importantly it is a reminder to us all how valuable our pre-hospital and acute hospital teams are and why we have worked and continue to work in this sector for most of our careers."

"The patient may be horizontal, protected by a collar and vacuum mattress to protect their spine, attached to monitors and unable to see faces unless they come into their line of sight, but the other senses become highly exaggerated, so keep communicating."

Lastly, as I recover from, thankfully, minor injuries and relive this experience, I am struggling to decide on a safe hobby for the future. I took up cycling with my best friend after years of running the roads and pavements, but more recently we found cycling easier on the ageing joints and more fun. We followed the rules of the road: we wore helmets and hi-vis clothing and rarely cycled two abreast. We took leisurely cycles, mostly on country roads, and chatted for miles, de-stressing after a busy week nursing. Unfortunately, even following all the rules of the road you are still at risk from those that do not. I appreciate that accidents do happen; the majority of people don't set out to harm other road users, and vehicles or bicycles can be replaced, but how can we make our roads safer in light of this constant unsolved challenge and source of misfortune for so many? I will replace my bicycle and cracked helmet and resume this hobby, but I know there will be no more road cycling; I am resorting to the local greenway and any other off-road areas until something changes for safe cycling on our roads. I noticed signs recently objecting to a new greenway locally and find it difficult to comprehend reasons for public objection to greenways when the reality is they can actually save lives. I can sit here today one week on and write my experience, sad for all those very unfortunate road users who have been less fortunate and suffer the physical and psychological trauma long after these incidents happen.

CHAPTER 1
INTRODUCTION

CHAPTER 1. **INTRODUCTION**

The *Major Trauma Audit National Report 2022* focuses on the care of 3,323 patients who had sustained a major trauma. Major trauma is defined as an incident resulting in life-threatening or life-changing injuries or any injury that has the potential to cause prolonged disability or death. It is one of the leading causes of death among children and young adults and is increasingly a cause of death among older adults, with 8% of the worldwide deaths reported as being the result of trauma (World Health Organization, 2024). In Ireland, the proportion of patients suffereing falls at home within the major trauma figures have been steadily increasing. (NOCA, 2022, 2023b).

Patients with major trauma often require highly specialised care, extended hospital stays and extensive rehabilitation in both acute and post-acute settings. The Major Trauma Audit (MTA) has demonstrated its ability to audit the patient's journey through the acute health system in order to improve outcomes.

The MTA Governance Committee (Appendix 1) has welcomed the *Major Trauma Audit Report 2022* and continues to support the reconfiguration of the trauma system in Ireland. The audit aims to ensure that the reconfiguration of services has the desired effect on processes and outcomes as captured in the MTA. This report is intended for use by a wide range of individuals and organisations, including healthcare professionals, hospital managers, hospital groups, policy-makers, patients, carers, patient organisations and the general public. The committee wants to acknowledge and thank the clinical leads and especially the audit coordinators who continued to collect data for the MTA on paper for a very prolonged period due to the cyberattack on the University of Manchester in 2023, which affected the Trauma Audit and Research Network (TARN).

We welcome the updates from the National office of Trauma services in this report. The impact of the evolving trauma system would not be expected to be seen within this report as these developments progressed after 2022. We look forward to exploring this in future reports.

Trauma Care Ireland

TRAUMA SYSTEM IMPLEMENTATION PROGRAMME UPDATE

The National Trauma Strategy *A Trauma System for Ireland* (Department of Health, 2018) was approved by the Government and published in February 2018. It recommends the phased development and implementation of an inclusive trauma system for Ireland, where care for injured patients is provided across two regional networks (the Central Trauma Network serving a population of 3.3 million and the South Trauma Network serving a population of 1.5 million). Both networks will operate a hub-and-spoke model, each with a Major Trauma Centre (MTC) as the hub and a number of supporting trauma units. The designation of University Hospital Galway as a trauma unit with specialist services (TUSS), which will have additional expertise above and beyond that provided at other trauma units, recognises the enhanced role the hospital currently plays in trauma care in the West and Northwest.

The Mater Misericordiae University Hospital (MMUH) and Cork University Hospital (CUH) have been designated as the MTCs for the Central Trauma Network and South Trauma Network, respectively. The first phase of development of the MTCs is nearing completion.

Major trauma centres

The MMUH has opened 24 additional beds for trauma, along with 9 acute trauma rehabilitation beds. These beds have facilitated the hospital to accept patients with major trauma as secondary transfers from hospitals across the Central Trauma Network. A dedicated trauma resuscitation room in the emergency department will open in 2025 to support the acute management of patients with major trauma injuries. Construction is under way to provide two dedicated trauma theatres and a diagnostic suite, which will further enhance the capability of the MMUH to accept patients with major trauma injuries. It is expected that these two new theatres will be completed in 2026.

The construction of a trauma resuscitation room at CUH is under way and will be completed in 2026. The room will provide a state-of-the-art facility to accept patients following major trauma injuries. A new helipad has opened and is operational on site, allowing direct transfer of patients by air to the hospital.

Trauma unit with specialist services

The first phase of development of University Hospital Galway as a TUSS will take place in 2025, with resources being provided for the Specialist Spine and Specialist Plastic Surgery Services. There will also be a dedicated theatre provided at Merlin Park University Hospital for the development of a planned trauma care service, providing a facility to manage ambulatory trauma cases.

Trauma units

The National Office for Trauma Services (NOTS) is also supporting Our Lady of Lourdes Hospital Drogheda and University Hospital Waterford in 2025 to enhance their trauma services by providing additional expert trauma staff. This will be the first phase of the development of trauma units in these hospitals.

Secondary hospital transfers

The referral of patients to MTCs from other hospitals is now facilitated by the trauma desk at the National Emergency Operations Centre operated by the National Ambulance Service (NAS), providing a dedicated number for all referrals. The HSE is developing an electronic referral system is in development that will be a standardised electronic system to refer patients and provide all the necessary clinical information to the MTCs.

Key quality indicators

A suite of key quality indicators (KQIs) is in development for the measurement of the quality of patient care across the entire trauma system. Many of these indicators are informed by data which are already collected by the National Office of Clinical Audit (NOCA) for the purposes of the MTA, and NOTS is currently working with NOCA on implementation plans for 2025 and 2026.

Trauma team

Trauma Care Ireland has developed a trauma team guidance document detailing the proposed composition of a trauma team in the new trauma system, developed in line with recommendations specific to MTCs, trauma units, and trauma training and education from the National Trauma Strategy and the *Major Trauma Audit Report 2019–2020* (NOCA, 2022). This document defines the trauma team composition and outlines the roles and responsibilities of each member. It also aims to act as a guide for each individual trauma-receiving hospital across the trauma system on how to ensure that staff are appropriately organised and trained in the core competencies required to effectively deliver trauma care.

Trauma triage tool

The Pre-Hospital Trauma Triage Tool has been approved by the Pre-Hospital Emergency Care Council, and it has been developed as a clinical practice guideline for use in pre-hospital emergency care.

The Trauma Triage Tool (TTT) has been developed as a tool to try to identify which patients may have sustained major trauma. When patients satisfy the criteria described primary bypass should occur to a Major Trauma Centre if within 45 minutes travel time or to a Trauma Unit if outside this travel time. Patients identified as Trauma Triage Tool positive should be received by a consultant led trauma team.

The TTT is completed in the pre-hospital environment or, if the patient self presents to Emergency Department, as part of the triage process. Status as per the TTT will be the denominator for these KPIs in the future.

A training module for the use of the TTT as been developed and is available on HSELand https://www.hseland.ie/dash/Account/Login.

Work is ongoing between NOTS, the NAS and Dublin Fire Brigade to implement the tool. It is expected that all pre-hospital emergency care providers will commence using the tool by the end of 2025.

Rehabilitation prescription

The national standardised rehabilitation prescription is in use in both the MTCs. It is planned to expand its use to all hospitals accepting trauma patients during 2025 and 2026.

Transfer of care and egress of trauma patients from acute hospitals

The Transfer of Care and Egress of Trauma Patients sets out Guidance on the transfer of care and egress of trauma patients. When appropriate, and when patients complete their acute care in the MTC, they will be transferred to a hospital closer to their home if ongoing care is needed.

The MTA is a key enabler supporting the development of the trauma system in Ireland, and NOCA will continue to work in partnership with NOTS in planning future trauma services across the country. Data from the MTA will continue to inform KQIs to measure improvements for patients who suffer trauma injuries.

Update provided by the National Office of Trauma Services August 2025

CHAPTER 2
METHODOLOGY AND DATA QUALITY

CHAPTER 2. **METHODOLOGY AND DATA QUALITY**

METHODOLOGY

In 2024, the TARN Audit was transitioned into National Health Service (NHS) England and is now called the National Major Trauma Registry (NMTR). Essentially, it is the same audit located on the NHS England outcome registries platform. The MTA is using the NMTR methodology, formerly the TARN methodology, but the data entry platform is now housed on the NOCA portal. The methodology is described in the 2019-2020 report page 26. Additional information on the NMTR can be found on this web page Additional information describing glossary of terms and key quality indicator definitions can be found in Appendices 2 and 3.

DATA QUALITY

For the purpose of this report, coverage refers to the number of eligible cases of major trauma whose data have been entered into the database. Data accreditation refers to how complete those data are per case. The MTA did not complete a calculation of the data coverage for 2022 as hospitals did not have the opportunity to complete exclusions from the Hospital In-Patient Enquiry (HIPE) file following the TARN cyberattack because the system was inaccessible. For this reason, the still sizeable number of submissions (N=3637) allows us to present meaningful data at an aggregated level nationally. Supplementary analysis of the 2022 data is available within the supplementary frequency tables in Appendix 4. This information will complement this report and allow for extended reading.

DATA FOR THIS MTA REPORT

This report includes data entered into the TARN portal on or before June 2023 for all patients with major trauma who met the TARN inclusion criteria and arrived for trauma care between 1 January 2022 and 31 December 2022. Table 2.1 shows the number of all major trauma data submissions.

TABLE 1.2: DATA ANALYSIS FOR *MAJOR TRAUMA AUDIT REPORT 2022*

	2022
Number of participating hospitals	20
All TARN submissions	3637
Individual patients	3323
Not transferred (into or out of first hospital)	2647
Direct admissions	2976

DATA QUALITY STATEMENT

The purpose of the data quality statement (Table 2.2) is to present an outline of the assessment of the quality of the MTA data using internationally agreed dimensions of data quality as laid out in *Guidance on a data quality framework for health and social care* (Health Information and Quality Authority, 2018). The data quality statement identifies strengths in the data quality.

TABLE 2.2: OVERVIEW OF DATA QUALITY FOR *MAJOR TRAUMA AUDIT REPORT 2022*

Dimensions of data quality	Definition (HIQA, 2018)	Assessment of dimension (MTA)
Relevance 	**Data meet the current and potential future needs of users.**	The MTA dataset is reviewed continuously as part of the NMTR and MTA governance structures in order to ensure that all data fields are relevant. Monthly teleconferences with the audit coordinators enable any new data fields or definitions to be discussed, with feedback given to the National Major Trauma Registry (NMTR). During the offline period, the NMTR took the opportunity to establish a data quality committee, of which the Major Trauma Audit manager is a member. This ensures that Ireland is included in any amendments to the new data collection system. The MTA receives multiple research and data requests, especially relating to service development needs regarding reconfiguration of the trauma system. Research publications using MTA data are listed in Chapter 7.
Accuracy and reliability 	**Data correctly and consistently describe what they were designed to measure.**	The MTA collects data on trauma patients through a secure portal on the TARN website for this report. The reference population for the national report for 2022 was: All patients admitted in 2022 with major trauma who fulfilled the TARN criteria for inclusion The expected standard for reporting at hospital level is a minimum of 80% data coverage. This refers to the number of major trauma cases entered against the overall expected number of cases (also referred to as case ascertainment). The MTA did not complete a calculation of the data coverage for 2022 as hospitals did not have the opportunity to complete exclusions from the Hospital In-patient Enquiry system file following the TARN cyberattack as the system was abruptly taken offline. The majority of the data in this report is reported at an aggregated – not hospital – level for 2022. Data coverage for patients aged under 16 years is caveated as being less reliable, as data coverage for Children's Health Ireland (CHI) at Crumlin and CHI at Temple Street is incomplete. Twenty of the 26 hospitals entered data for 2022, and data entry varied from 50 to 480 cases entered. In 2024, online workshops were held for audit coordinators. These training sessions are available via the NOCA Audit Manager and NMTR training team.

TABLE 2.2: OVERVIEW OF DATA QUALITY FOR *MAJOR TRAUMA AUDIT REPORT 2022* CONTINUED

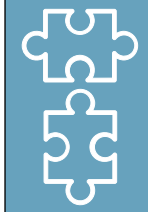
Dimensions of data quality	Definition (HIQA, 2018)	Assessment of dimension (MTA)
Timeliness and punctuality 	**Data are collected within a reasonable, agreed period and are delivered on the dates promised.**	NOCA issues a data collection and reporting calendar each year, with quarterly targets. These targets are adjusted when appropriate. During the data collection period for this report, the data collection process was monitored to ensure timely reporting. We were due to close reporting for Q3 2022 prior to the cyberattack. In the new MTA NMTR data entry system, reporting timelines will continue as agreed in April 2023, reporting a quarter in arrears. This will allow more timely quarterly reports to be circulated to participating hospitals. The NMTR recommendation is for cases to be entered within 40 days of discharge, but analysis of data submitted can be completed retrospectively at any time point.
Coherence and comparability 	**Data are consistent over time and across providers and can be easily combined with other sources.**	The MTA uses validated and comparable metrics to allow benchmarking, for example, the International Classification of Diseases, Tenth Revision (ICD-10) codes used in the HIPE system. NMTR and NOCA provide data entry guides, and procedure manuals are available from their respective websites. The MTA data dictionary is available via the MTA manager. MTA data can be compared directly with data in the UK through the NMTR audit. Some definitions vary slightly, but overall, the NMTR audit acts as an appropriate international comparator. For this report, access to TARN probability of survival scores was not available, and therefore only crude mortality rates are displayed.
Accessibility and clarity 	**Data are easily obtainable and clearly presented in a way that can be understood.**	A list of publications related to the MTA are available in the 'Reports and Research' section of the NOCA website. Hospitals and hospital regions (if requested) can access their MTA data via a secure portal on the NOCA website for a number of purposes, including research, service improvement, freedom of information requests and media queries. Ad hoc requests for data or audit reports must receive approval from the MTA Governance Committee. Ongoing work continues with the NMTR on issuing of the clinical working reports, dashboard reports and reports through the NMTR analytics portal. Access to NMTR data for Ireland is managed and governed by NOCA.

Figure 2.1 shows the volume of data entered by hospital during 2022 in the configuration of the new Health Service Executive (HSE) Regional Health Authorities (RHAs). It is important to note that we are missing an unknown amount of data for 2022 and that six hospitals did not submit data or complete the transfer and direct admission part of a case. The figure shows the distribution of patients who had suffered a major trauma: HSE Dublin and North East accounted for almost one-half (49%) of all patients with major trauma in 2022. This figure also highlights the variance in data entry nationally, ranging from 50 cases to 480 cases.

Since the new data entry system has been available in March 2025, Children's Health Ireland at Crumlin, Children's Health Ireland at Temple Street, Letterkenny University Hospital and Sligo University Hospital have recommenced data collection St Luke's Kilkenny, Mercy University Hospital and Midland Regional Hospital Portlaoise and Naas General Hospital have not commenced data collection within the system due to vacant posts.

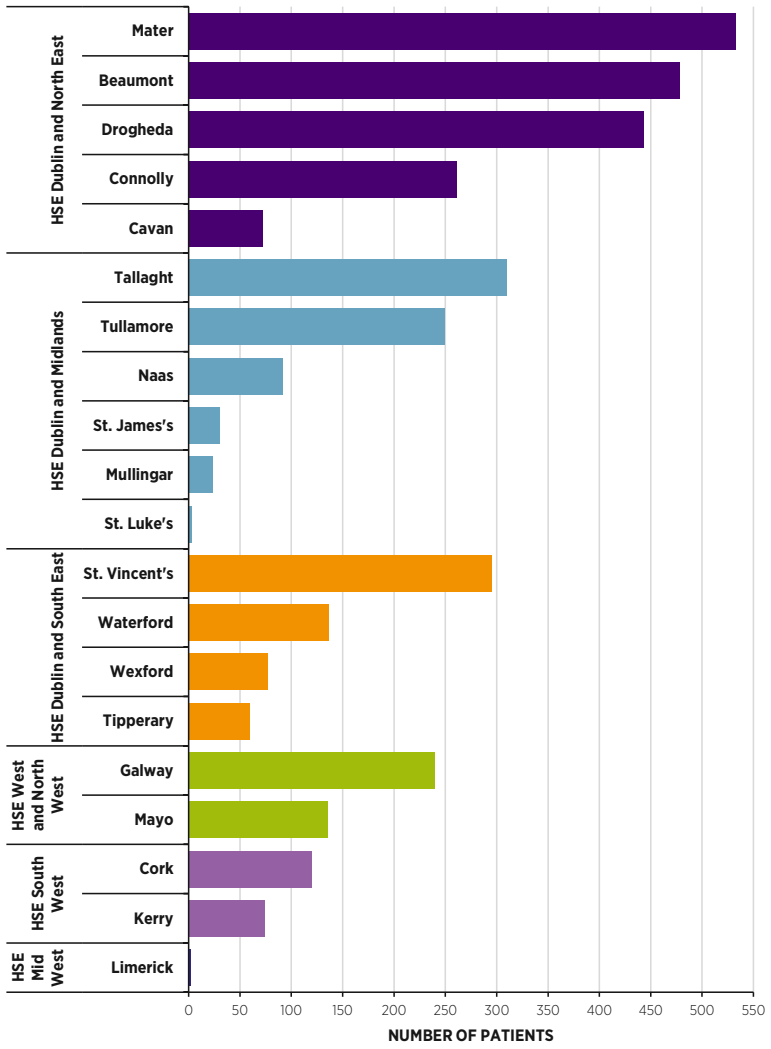


FIGURE 2.1: VOLUME OF CASES ENTERED BY HOSPITAL 2022 (N=3637). PRE-CYBER INCIDENT.[1]

[1] Children's Health Ireland at Crumlin, Children's Health Ireland at Temple Street, Letterkenny University Hospital, Mercy University Hospital, Midland Regional Hospital Portlaoise and Sligo University Hospital re excluded as no data was entered in 2022

CHAPTER 3
CASE MIX CHARACTERISTICS

CHAPTER 3: **CASE MIX CHARACTERISTICS**

This chapter describes the case mix characteristics of those who have sustained major trauma injuries.

3,323 PATIENTS RECORDED

MEAN AGE **62** YEARS

57% 43%

MECHANISM OF INJURY

FALLS LESS THAN 2M	ROAD TRAUMA	FALLS MORE THAN 2M	FROM A BLOW	OTHER
61%	18%	10%	6%	5%

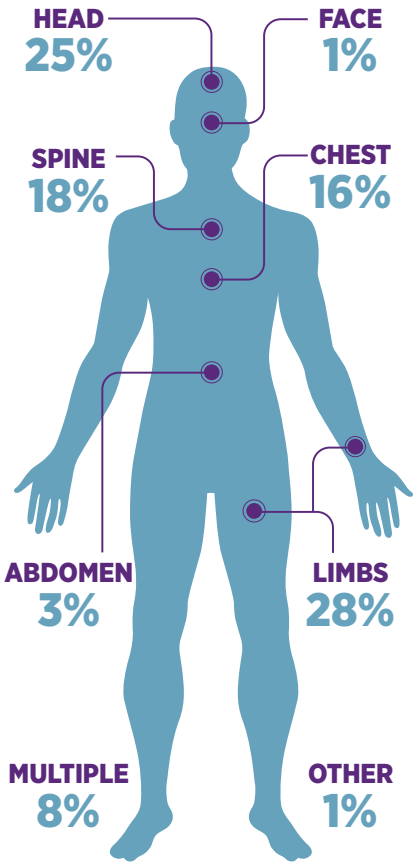
INJURY SEVERITY SCORE

ISS SEVERE >15	ISS MODERATE SEVERITY 9-15	ISS LOW SEVERITY 1-8
35%	46%	20%

SETTING OF INJURY

- HOME 50%
- PUBLIC AREA OR ROAD 32%
- INSTITUTION 6%
- FARM 3%
- INDUSTRIAL 3%
- OTHER 5%

BODY REGION INJURED



CHAPTER 4
PATIENT JOURNEY

CHAPTER 4: **PATIENT JOURNEY**

This chapter describes the patient journey through the hospital trauma system during 2022 for patients with major trauma. This includes both the pre-hospital and acute hospital stages of the episode of care. Optimal care of patients with serious injuries requires a coordinated, integrated and standardised system of trauma care. Inclusive trauma systems have been shown to significantly reduce the number of deaths and disabilities caused by major trauma by ensuring that the right patient gets the right treatment within the right time frame.

MOST SENIOR PRE-HOSPITAL HEALTHCARE PROFESSIONAL IN ATTENDANCE

Of the patients brought to hospital by road ambulance and/or helicopter, 46% (n=1066) were attended to by a paramedic (Figure 4.1), another 44% (n=1027) were attended to by an advanced paramedic. (NOCA, 2022).

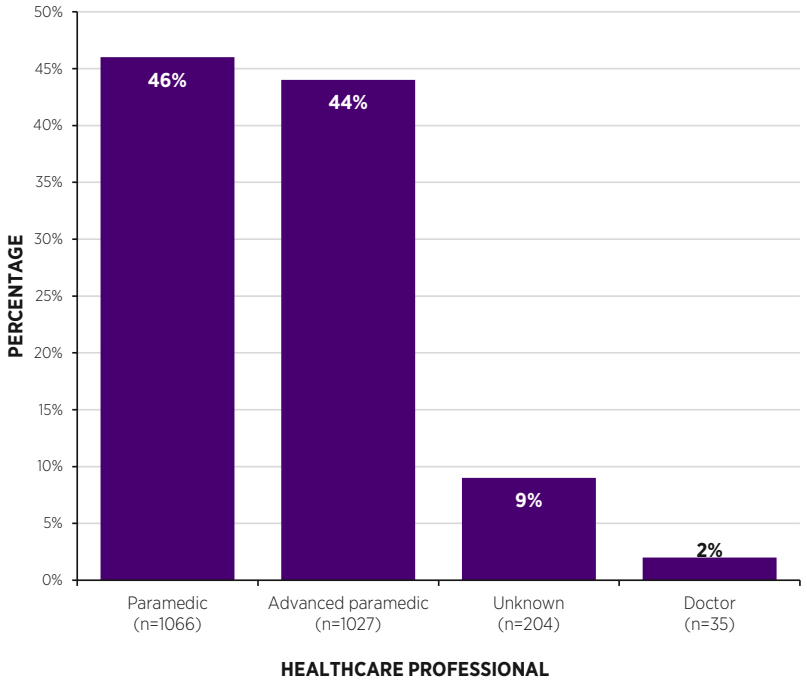


FIGURE 4.1: MOST SENIOR PRE-HOSPITAL HEALTHCARE PROFESSIONAL (n=2332)[2]

[2] Figure 4.1 refers to direct admissions only, and those who arrived by road ambulance and/or helicopter

MODE OF ARRIVAL

Road ambulance remains the most common mode of transportation to hospital for patients with major trauma (n=2273, 79%), with car been the second most common (n=451, 16%) (Figure 4.2).

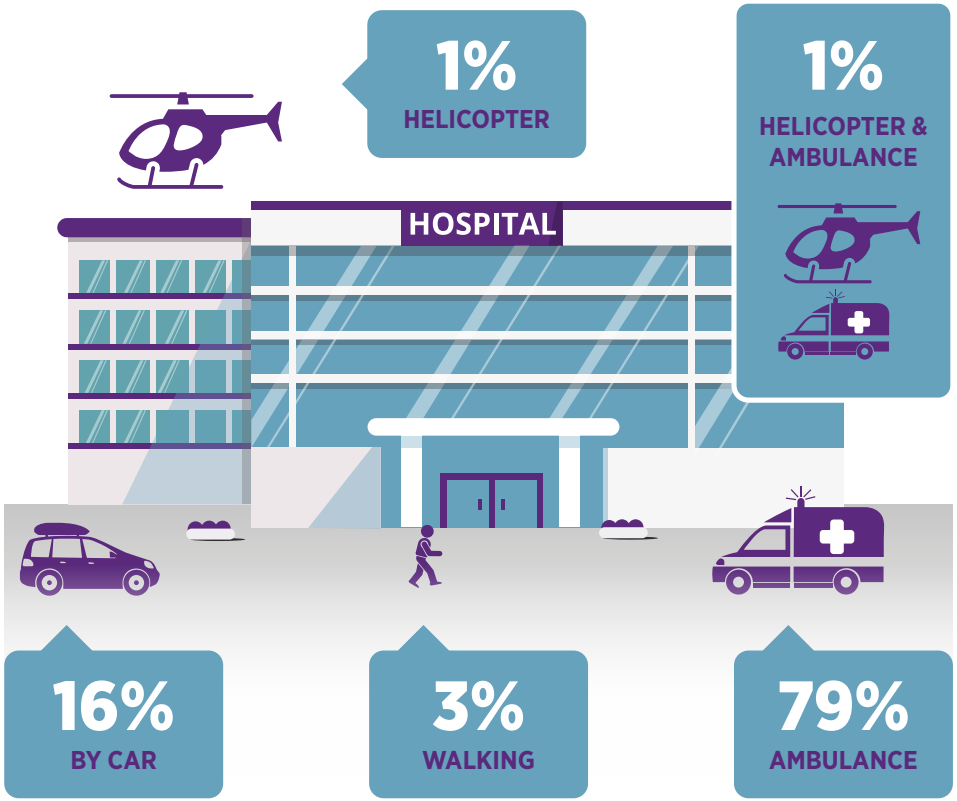


FIGURE 4.2: MODE OF ARRIVAL AT HOSPITAL (n=2881)[3]

PROPORTION OF PATIENTS WHO WERE DOCUMNETED AS BEEN PRE-ALERTED AND RECEIVED BY A TRAUMA TEAM

Pre-alert is a system whereby the ambulance service communicates to the receiving hospital that it is bringing a patient to the emergency department (ED), the nature of the patient's injuries, the patient's physiology, and their expected requirements on arrival, including an expected time of arrival.

Figure 4.3 includes analysis of pre-alert data relating to the hospital the patient is initially brought to after having sustained a traumatic injury. There continues to be a very low percentage of patients documented as having been pre-alerted (13%, n=399), although this information is gathered from medical notes, SIREN or other locally adapted forms within the emergency department. The data presented is what is captured by the audit coordinator and does not represent the overall pre-alerts that may have been issued by the National Ambulance Service National Emergency Operations Centre (NEOC), Dublin Fire Brigade or East Regional Control Centre (ERCC). Ongoing work has continued as part of the Targeted Review and Amalgamation of Unmapped Major Trauma and Ambulance Data (TRAUMA) study to ensure better data quality on pre-alert.

The MTA welcomes the NOTS launch of a trauma triage tool for pre-hospital care providers to identify patients who should receive their trauma care at an MTC and it will continue to monitor the impact of this introduction.

Time to critical interventions and outcomes are both improved when a trained trauma team is present on the arrival of a severely injured patient (Driscoll and Vincent, 1992). The overall percentage of patients with major trauma received by a trauma team remains extremely low (7%, n=221). *A Trauma System for Ireland* (Department of Health, 2018) references that each MTC will have "a consultant-led trauma team available at all times". This, along with the development of national trauma guidelines for older persons by NOTS (HSE, 2024a), represents a positive step in the management of patients with major trauma in Ireland. The MTA will be able to capture and report on the impact of the implementation of these measures in future reports.

[3] Patients who were transferred to another hospital have been excluded. Data on patients whose mode of transport to hospital was "Other" (n=95) are not presented in Figure 4.2.

TRAUMA TEAM

The National Office for Trauma Services has developed a Trauma Team guidance document detailing the proposed composition of a Trauma Team in the new Trauma System

TRAUMA TRIAGE TOOL

The Pre-Hospital Trauma Triage Tool has been approved by the Pre-Hospital Emergency Care Council, and it has been developed as a clinical practice guideline for use in pre-hospital emergency care. It is expected that all pre-hospital emergency care providers will commence using the tool in 2025. Trauma Triage Tool

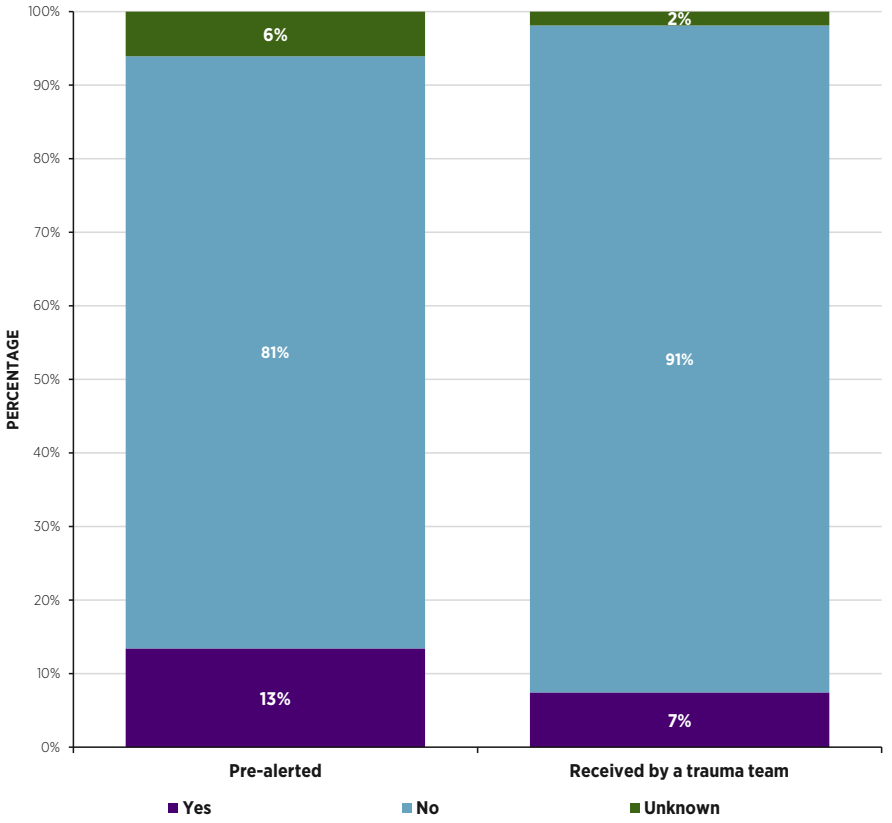


FIGURE 4.3: PROPORTION OF PATIENTS WHO WERE RECEIVED BY TRAUMA TEAM AND WERE PRE-ALERTED (n=2976)[4]

[4] Figure 4.3 refers to direct admissions only.

GRADE OF MOST SENIOR DOCTOR TREATING PATIENT ON ARRIVAL

Figure 4.4 shows the percentage of patients who were seen by a senior doctor in the ED. In 2022, 23% (n=679) of patients with a major trauma were seen by a consultant on arrival. All patients with major trauma should be met by a trauma team led by a consultant. Patients should be triaged and reviewed in a timely manner by the relevant grade of trauma-facing specialty doctor.

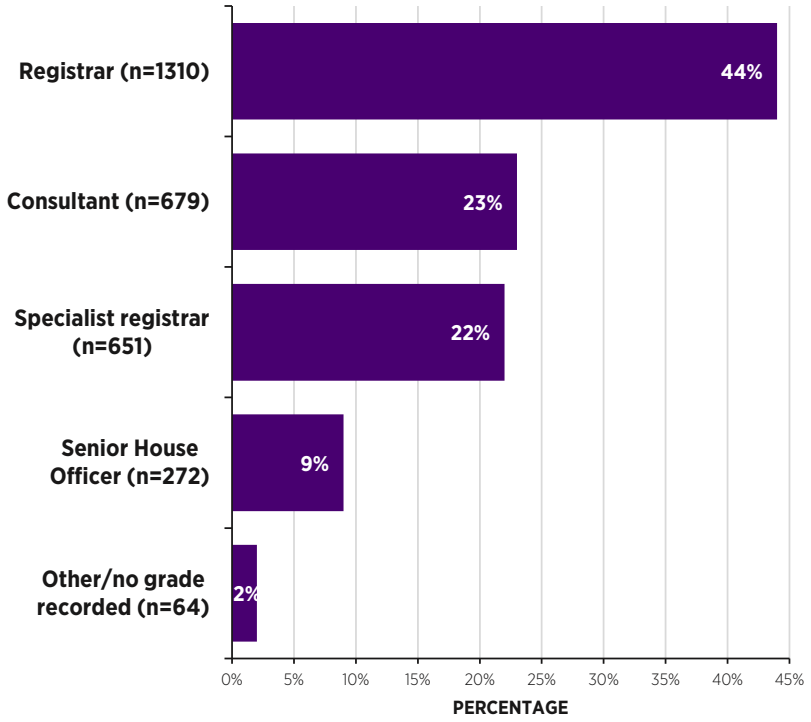


FIGURE 4.4: DOCUMENTED GRADE OF MOST SENIOR DOCTOR TREATING PATIENT ON ARRIVAL (n=2976)[5]

DOCUMENTED MOST SENIOR DOCTOR SEEING PATIENT ON ARRIVAL IN THE ED AND THOSE WITH AN INJURY SEVERITY SCORE >15

Patients with an Injury Severity Score (ISS) >15 would be considered the most severely injured and should trigger senior review.

Figure 4.5 shows the proportion of all patients with major trauma and the proportion of patients with an ISS >15 seen by a consultant in the ED.

In 2022, of patients with major trauma who were received by a trauma team, a consultant saw 49% (n=109) within 30 minutes of arrival to the ED. The proportion was higher (56%, n=83) among those who had an ISS score >15.

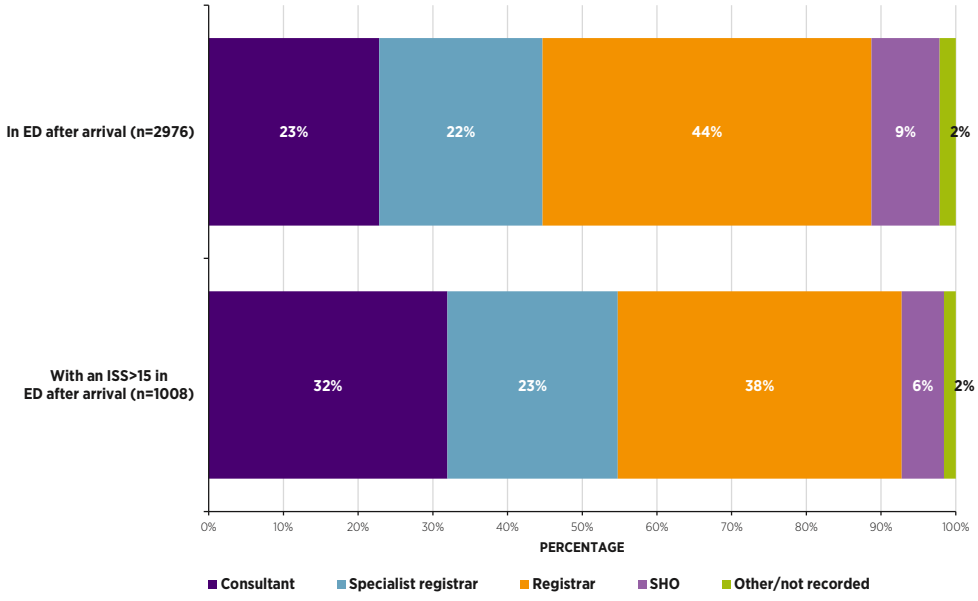


FIGURE 4.5: DOCUMENTED MOST SENIOR DOCTOR SEEING PATIENT ON ARRIVAL IN THE EMERGENCY DEPARTMENT AND THOSE WITH AN INJURY SEVERITY SCORE >15

[5] Figure 4.4 refers to direct admissions only.

SURGICAL INTERVENTION

Patients who sustain major trauma commonly have multiple injuries that can require multiple surgeries. In this report, all surgeries are reported; some patients had multiple surgeries and some had surgery at more than one hospital, thereby generating more than one data submission.

Out of 2,694 surgeries performed on 1,370 patients, the most common type of surgical intervention performed was limb surgery (n=1,526, 57%). Figure 4.6 shows a breakdown of surgical intervention by the body region on which surgery was performed.

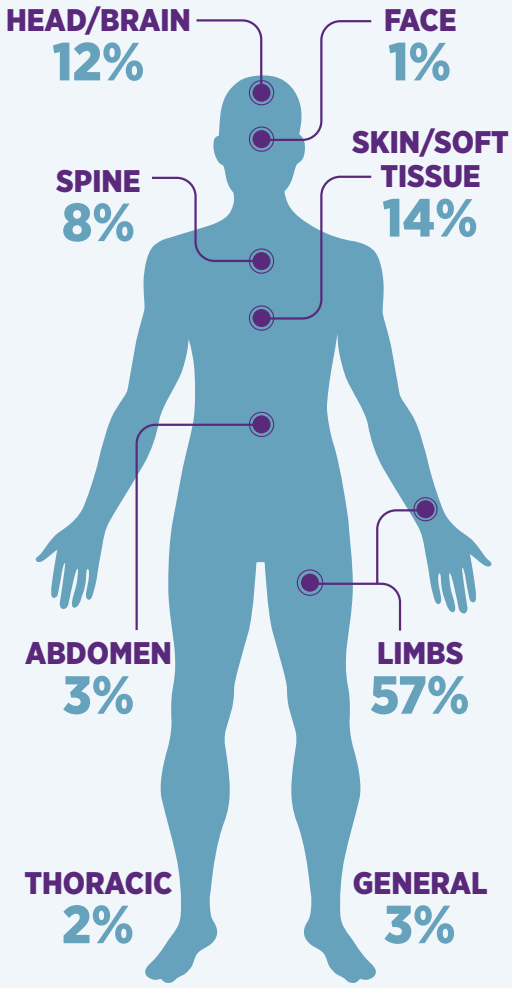


FIGURE 4.6: SURGICAL INTERVENTION, BY BODY REGION (n=2694)[6]

[6] A total of 1,370 patients had 2,694 had major surgeries performed. Figure 4.6 refers to all surgeries performed in the hospital to which the patient was admitted, including subsequent surgeries in the same hospital. A patient may have had two or more surgeries performed in two or more hospitals and will therefore be counted more than once in Figure 4.6.

PERCENTAGE OF PATIENTS WHO RECEIVED A BLOOD PRODUCT WITHIN 24 HOURS, BY BLOOD PRODUCT TYPE

Figure 4.7 displays the first blood product transfused within 24 hours of a patient sustaining a major trauma. The patients concerned may receive multiple blood product interventions throughout their hospital journey, but this analysis only reports the first blood product received. If a patient went to two hospitals, the first blood product they received in each hospital is reported.

In 2022, 5% (n=157) of patients with major trauma received blood products within 24 hours of sustaining their injury,[7] which accounted for 163 blood products.[8] The most common type of first blood product administered was red cells concentrate (RCC) (n=139, 85%).

Among patients who received tranexamic acid (TXA), 94% (n=33) received it within 3 hours of the incident, which is in line with the TARN average of 88%.

In 2022, fewer than five people were documented as having received Beriplex/Octaplex. It is worth noting that the numbers reported are small as this report has focused on only the first product being recorded; therefore, Octaplex may still have been given but not recorded if the first product transfused to a patient was RCC.

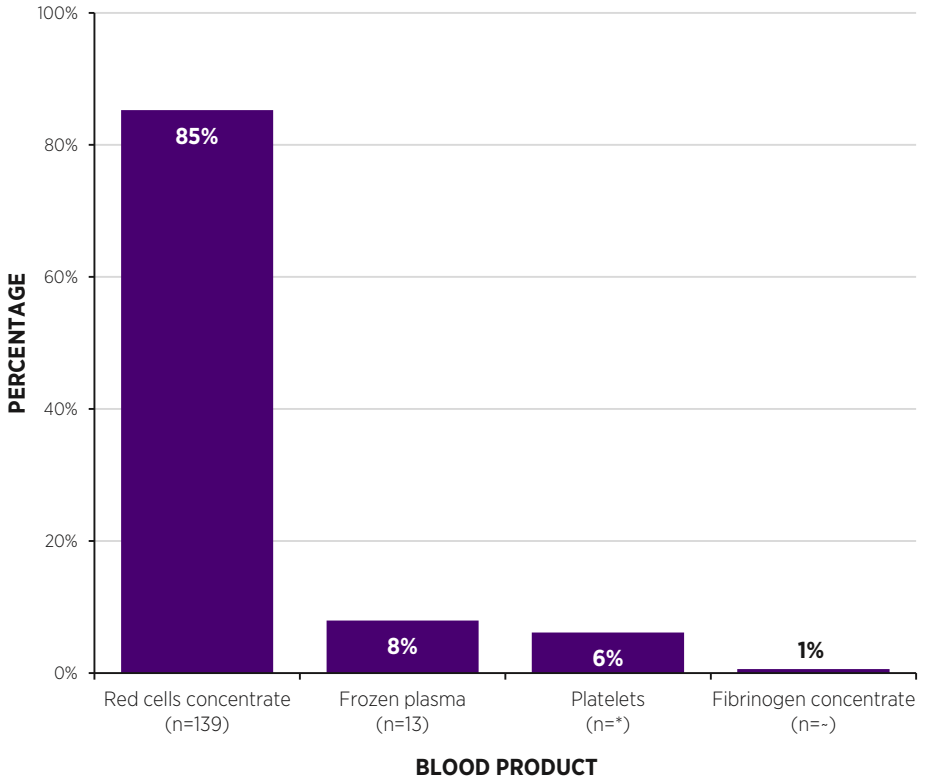


FIGURE 4.7: TYPE OF BLOOD PRODUCT (n=163)

~ Denotes five cases or fewer
* Further suppression required in order to prevent disclosure of five cases or fewer.

[7] Blood products: red cell concentrate (blood/plasma reduced cells, leucocyte-depleted red cells and plasma); frozen plasma (fresh frozen plasma, freeze-dried plasma, solvent detergent plasma); platelets; and fibrinogen concentrate.
[8] One patient may have had more than one blood product, in one or more hospitals.

TRANSFERS

Due to the current configuration of the trauma system in Ireland, care of patients with major trauma is often provided in more than one hospital. In 2022, 20% (n=676) of patients with major trauma were transferred at least once to another hospital for further care (Figure 4.8). This is usually because the specialist services required to treat the patient are not in the hospital they are initially brought to. The MTA welcomes the update from the Trauma Office below.

The referral of patients to the MTCs from other hospitals is now facilitated by the Trauma Desk at the National Emergency Operations Centre operated by the National Ambulance Service, providing a dedicated number for all referrals. The development of an electronic referral system is in development that will be a standardised electronic system to refer patients and provide all the necessary clinical information to the MTCs.

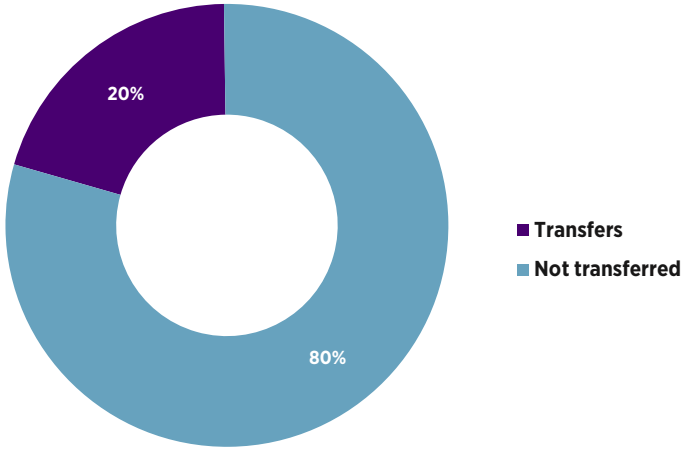


FIGURE 4.8: PROPORTION OF PATIENTS WITH MAJOR TRAUMA TRANSFERRED TO ANOTHER HOSPITAL (N=3323)

KEY FINDINGS FROM CHAPTER 4

- Ambulance continues to be the most common mode of transport to the initial treating hospital (79%).
- Reported pre-alert rates continue to be very low, at 13%.
- The overall percentage of patients with major trauma being received by a trauma team remains extremely low, at 7%.
- Of patients with major trauma who were taken to an ED, 23% were seen by a consultant in the ED.
- Forty-one percent of patients with major trauma required a surgical intervention, with almost one-third of these within the specialty of orthopaedics.
- Five percent of patients with major trauma required a blood product within the first 24 hours.
- Twenty per cent of patients with major trauma required transfer to another hospital for further care.

CHAPTER 5
OUTCOMES

CHAPTER 5: **OUTCOMES**

This chapter describes the outcomes of patients with major trauma in 2022 in terms of mortality and discharge destination. Mortality is reported at 30 days post-discharge.

MORTALITY AT 30 DAYS POST-DISCHARGE

Mortality is a crude measure of quality of care in patients with major trauma; quality of survival and return to independent living is a more patient-centred measure.

MORTALITY BY AGE

Figure 5.1 shows the percentage of patients within each age group who died (n=189). The overall crude mortality was 6%, with the highest proportion of deaths occurring among patients aged 85 years and over (33%, n=63).

Mortality rates were comparable between sexes. Of 1,429 female patients with major trauma, 5% (n=77) died within 30 days of discharge, and of 1,894 male patients with major trauma, 6% (n=112) died.

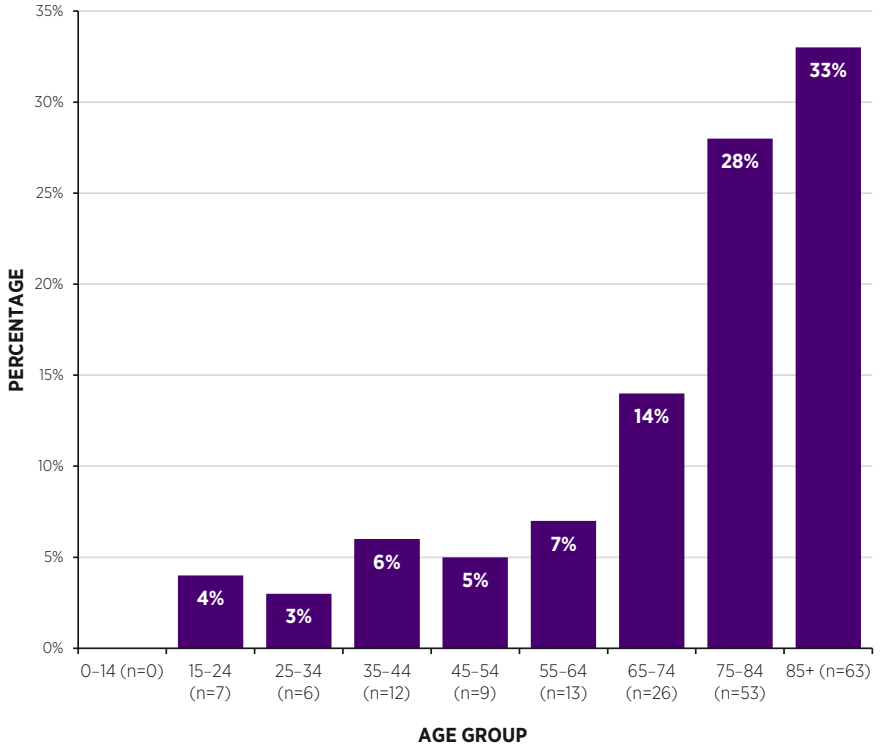


FIGURE 5.1: MORTALITY BY AGE GROUP (N=3323)

MORTALITY BY ISS

Among patients who died in 2022, 66% (n=125) had an ISS of >15, indicating severe injury (Figure 5.2).

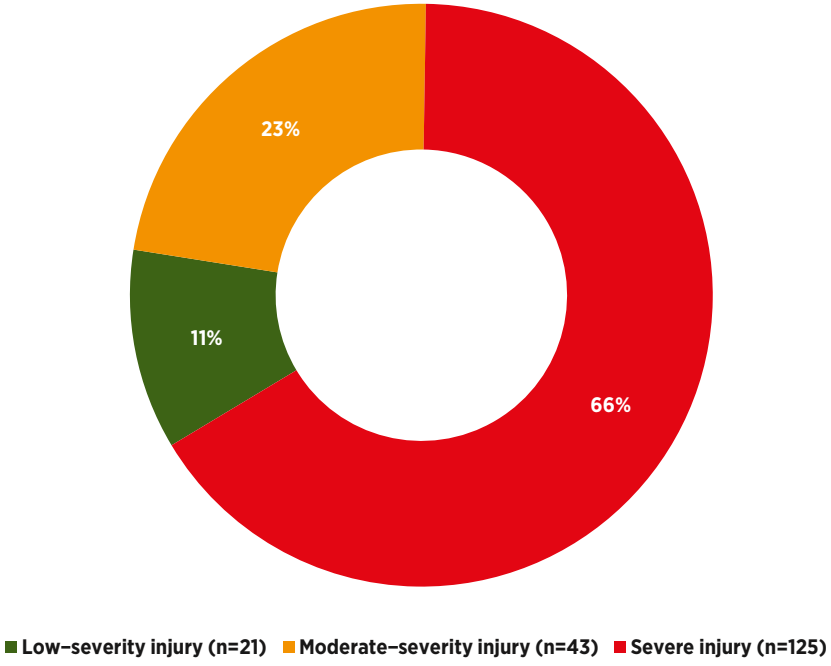


FIGURE 5.2: MORTALITY BY INJURY SEVERITY SCORE (n=189)

MORTALITY BY MECHANISM OF INJURY

The highest proportion (n=125, 66%) of deaths continues to be attributable to 'low falls' – those from less than 2 metres. The second leading recorded cause of mortality in patients with major trauma was road trauma (n=24, 13%). The third leading recorded cause is falls from more than 2 metres (n=21, 11%) (Figure 5.3).

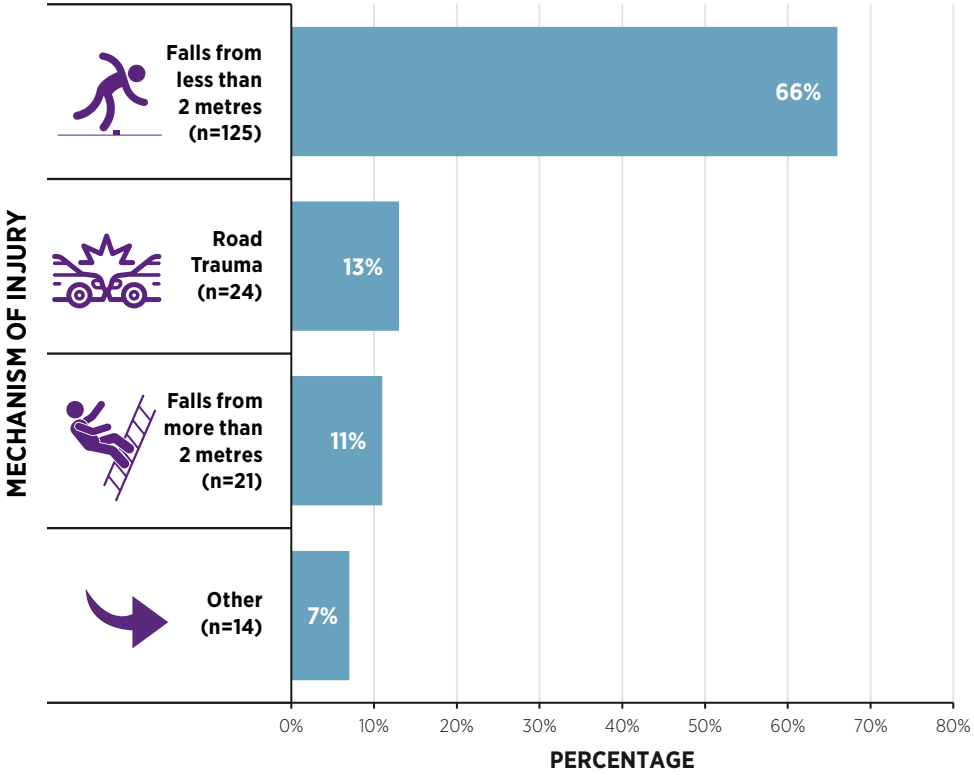


FIGURE 5.3: MORTALITY BY MECHANISM OF INJURY (n=189)

DISCHARGE DESTINATION

Figure 5.4 shows that over one-half (n=1938, 58%) of patients with major trauma were discharged directly home from hospital. Discharge to an inpatient rehabilitation facility remains consistent with previous years at 7%. The introduction of a rehabilitation prescription by NOTS to the MTCs in April 2023 is welcomed by the MTA, and further reports will look at the data variables outputs.

REHABILITATION PRESCRIPTION

The national standardised Rehabilitation Prescription is in use in both the MTCs. It is planned to expand its use by all hospitals accepting trauma patients during 2025 and 2026.

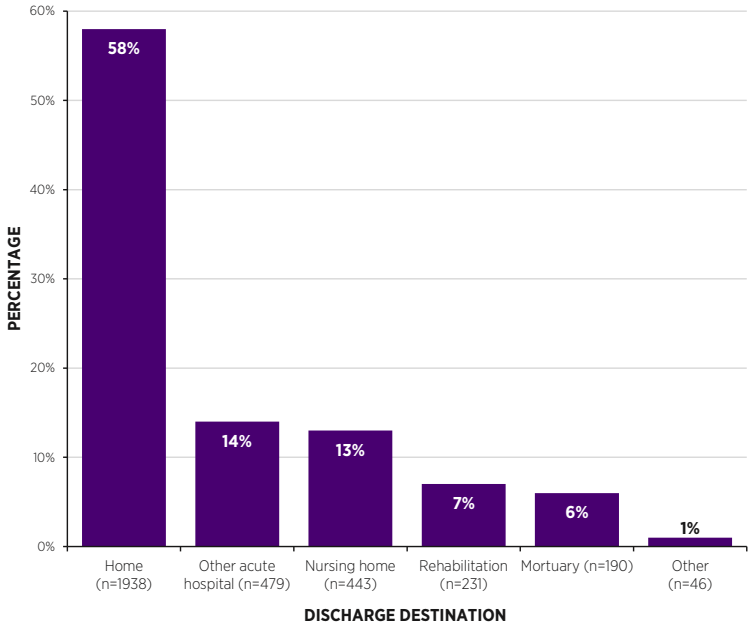


FIGURE 5.4: DISCHARGE DESTINATION (N=3327)

KEY FINDINGS FROM CHAPTER 5

- The highest proportion (n=63, 33%) of deaths occurred among patients aged 85 years and over.
- The highest proportion (n=125, 66%) of deaths continues to be attributable to 'low falls' – those from less than 2 metres.
- More than one-half (n=1938, 58%) of patients with major trauma were discharged directly home from hospital.

CHAPTER 6
QUALITY IMPROVEMENT

CHAPTER 6: **QUALITY IMPROVEMENT**

This chapter will focus on the MTA approach to quality improvement (QI). This includes training, dissemination of this training and the use of MTA dashboards to support the front-line ownership of QI. As the MTA has matured, embedding QI within the audit is a key goal for 2025.

Training will continue via workshops on QI methodology among the MTA co-coordinators. This will build on previous work, including a repository of resources that was created in 2022, which included how to display MTA data results, poster templates and resources available via the HSE National Quality and Patient Safety Quality Improvement Guide and Toolkit. Acknowledging that 2023–2024 has been a difficult year without access to validated data, we are very much looking to the further reaffirming of our commitment to QI within the audit.

A key driver for this is the development of the MTA dashboards. Analytical dashboards support each participating hospital to monitor the six key quality indicators (KQIs) in a timely fashion. The development of KQIs is based on clinical evidence to support improvement in patient care, and the MTA KQIs have been developed and approved by the MTA Governance Committee, with multisite feedback from participating MTA hospitals. The MTA has also continued to work with the Trauma Office to ensure that we are aligned in these metrics. The impact on QI from other NOCA audits with established dashboards has been hugely positive, as sites can easily identify trends of success or outliers within the KQIs and formulate QI action plans. Access to the interactive dashboard will be available in all hospitals participating in the MTA, and users have access to the results of each KQI from 2016 onwards, with the dashboards displaying the six KQIs and benchmarking against the national results. Figure 6.1 displays the prototype detailing the MTA KQIs. It is expected that each hospital should monitor its own trends and that if there is a deteriorating trend in three or more quarters, a QI plan should be considered.

A QI workshop is planned for Q3 2025 to launch the interactive access to the MTA dashboards and support the use of the dashboards for QI.

A suite of Key Quality Indicators is in development for the measurement of the quality of patient care across the entire Trauma System. Many of these quality indicators are informed by data which is already collected by the National Office of Clinical Audit (NOCA) for the purposes of the Major Trauma Audit (MTA) and the National Office for Trauma Services are currently working with NOCA on implementation plans for 2025 and 2026.

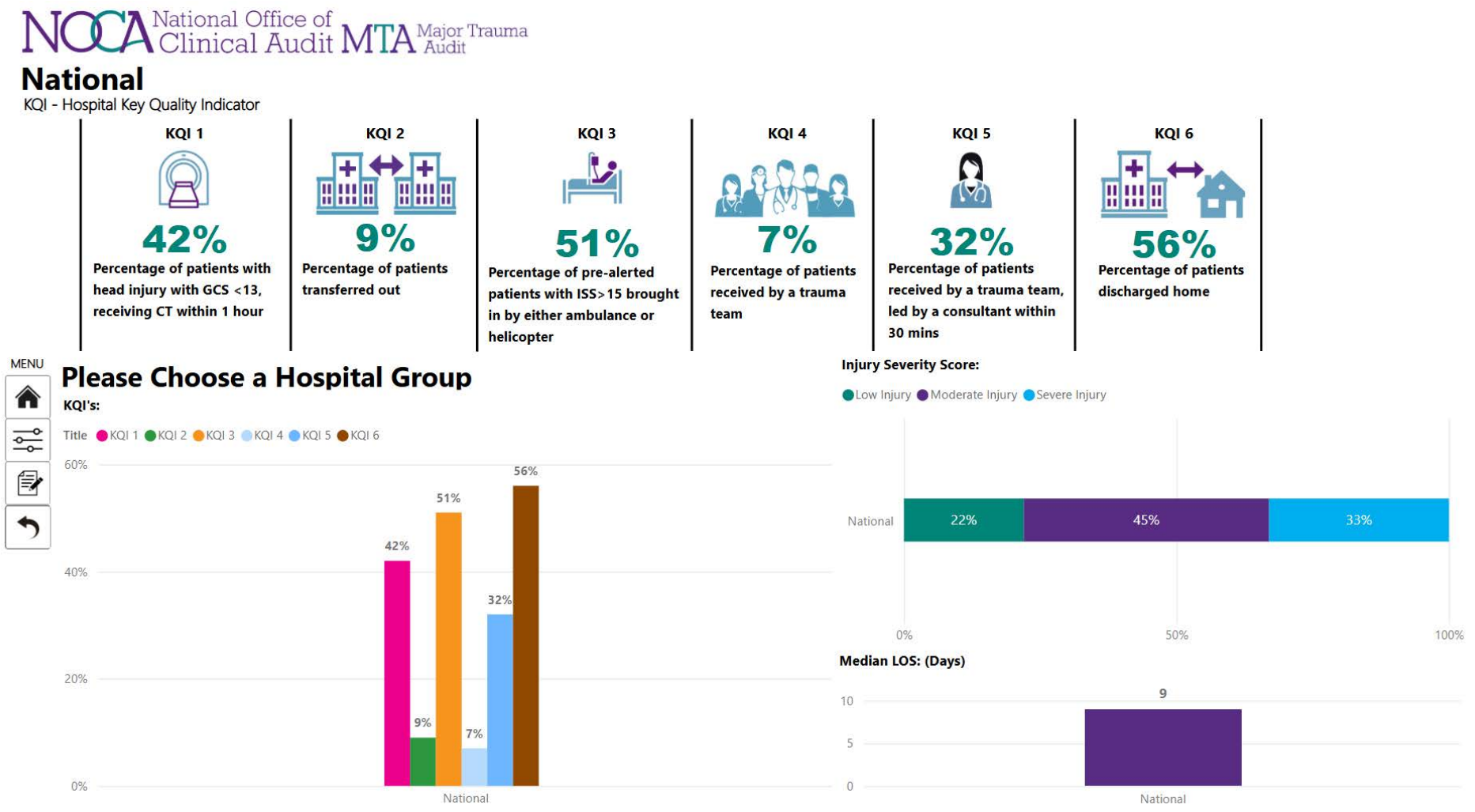


FIGURE 6.1: MAJOR TRAUMA AUDIT DASHBOARD PROTOTYPE

HOSPITAL KQIs

TARN historically reported on five core KQIs for the MTA, which are presented in Table 6.1. Along with the MTA-specific KQIs, we will continue to report and support improvement via the new MTA/NMTR platform. The data presented in Table 6.1 summarise compliance with the five TARN KQIs. Glossary of terms and definition of each KQI can be found in Appendix 2 and 3. Hospitals should use these data to facilitate a focus on QI. It is important when interpreting Table 6.1 that the coverage or volume of cases is also considered for each given year.

TABLE 6.1: HOSPITAL SYSTEMS PERFORMANCE BY YEAR, 2021 AND 2022

		2021	2022
1. Airway management of MTA patients with a GCS <9	No intubation	3%	4%
	Intubated – ED	72%	79%
	Intubated – pre-hospital	0%	6%
	Intubated – both ED and pre-hospital	6%	4%
	Not known	20%	6%
2. Management of shocked patients	Crude survival rate	92%	93%
3. Time to CT for head injury patients at initial treating hospital	Proportion of patients who had a CT scan within 1 hour	50%	45%
4. ICU admission LOS (median and IQR)	All MTA patients	4 (IQR:2–8)	4 (IQR:2–11)
	MTA patients with an ISS >15	5 (IQR:2–10)	5 (IQR:2–14)
	MTA patients with a severe TBI	11 (IQR:2–19)	8 (IQR:2–20)
5. Hospital LOS (median and IQR)	All MTA patients	9 (IQR:5–19)	9 (IQR:5–19)
	Patients with an ISS >15	11 (IQR:6–24)	11 (IQR:6–23)
	MTA patients with a severe TBI	17 (IQR:3–52)	12 (IQR:3–46)

Here is an example of a QI output using a problem statement and a SMART aim statement (guidance is available from the HSE National Centre Clinical Audit and tool kits are available from the HSE National Quality and Patient Safety website.

SMART AIM STATEMENT

A SMART aim statement describes what a successful project is expected to achieve. This statement must be:

S	**SPECIFIC**	(explicit statements, not open to interpretation)
M	**MEASURABLE**	
A	**ACHIEVABLE**	(a level of acceptable performance agreed with stakeholders)
R	**RELEVANT**	(related to important aspects of care)
T	**THEORETICALLY SOUND AND TIMELY**	(evidence based).

PROBLEM STATEMENT **(what quality problem?)**	We have a problem with our time to brain computed tomography (CT) within 1 hour for patients with a Glasgow Coma Score (GCS) <13. We know this is a problem because the MTA audit reports that in 2021, 23% of patients achieved this KQI. This is a problem worth spending time and effort tackling because the evidence suggests that early identification of potential life-threatening or disabling conditions like brain damage or bleeding can be achieved and early management commenced.
SHARED GOAL **(what would constitute an improvement)**	We will increase the percentage of patients who receive a brain CT from 23% to above the national average of 55% over two quarters in one hospital which participates in the MTA.

We will increase the number of CT scans performed within 1 hour for patients who present with a head injury profile and GCS <13 from 23% to 55% in Hospital X over a 6-month period.

CHAPTER 7
AUDIT UPDATE

CHAPTER 7: **AUDIT UPDATE**

The Targeted Review and Amalgamation of Unmapped Major trauma and Ambulance data in Ireland (TRAUMA) study commenced in 2022. Funded by the Health Research Board (HRB), the study is a collaboration between the Royal College of Surgeons in Ireland (RCSI), NOCA and the National Ambulance Service (NAS).

The TRAUMA study website was launched in November 2022; it provides information about each of the work packages, publications and news related to the TRAUMA project can be found at Trauma study website.

For the first time, we have successfully merged pre-hospital data from the NAS with the MTA dataset in order to create a seamless database of the patient journey from incident to hospital discharge for the years 2020–2022.

So far, we have conducted a systematic review of trauma triage tools (TTTs) that support pre-hospital staff to identify patients with major trauma based on pre-hospital characteristics. By analysing 92 papers, we found that while there is very good agreement in the higher-level categories used in TTTs, the thresholds adopted for each variable within these categories vary widely (e.g. different levels of blood pressure). See Donnelly *et al.* (2025) in the Publications list at the end of this chapter."

To develop a clinical prediction rule using the NAS data will require significant data from the Dublin area, where more than 80% of patients with major trauma are transported by Dublin Fire Brigade. Currently, we are working on comparing international trauma scoring systems with the national TTT used by NAS professionals. We find that age is a significant predictor of severity and mortality and perhaps could be implemented into the currently used TTT.

To inform the patient journey, we are using a sophisticated statistical approach called Latent Class Analysis to identify different typical patient journeys. We have identified two cohorts of older patients who experience a low fall: the more severely injured patients tend to have head injuries, whereas the less severely injured cohort tend to have limb injuries.

A separate work package explored whether stakeholder collective intelligence engagement techniques could inform best practice mechanisms for combining the NAS and MTA datasets. We found complex results, for example, stakeholders generated a total of 102 challenges, divided into 12 categories, that would need to be addressed to optimise ongoing data merging.

The third work package will explore geospatial attributes in relation to major trauma incidents nationally in Ireland. We are using open-source software to calculate the travel distance between incident and the nearest hospital and/or MTC, and work is ongoing.

The TRAUMA study is funded by the HRB (SDAP-2021-006).

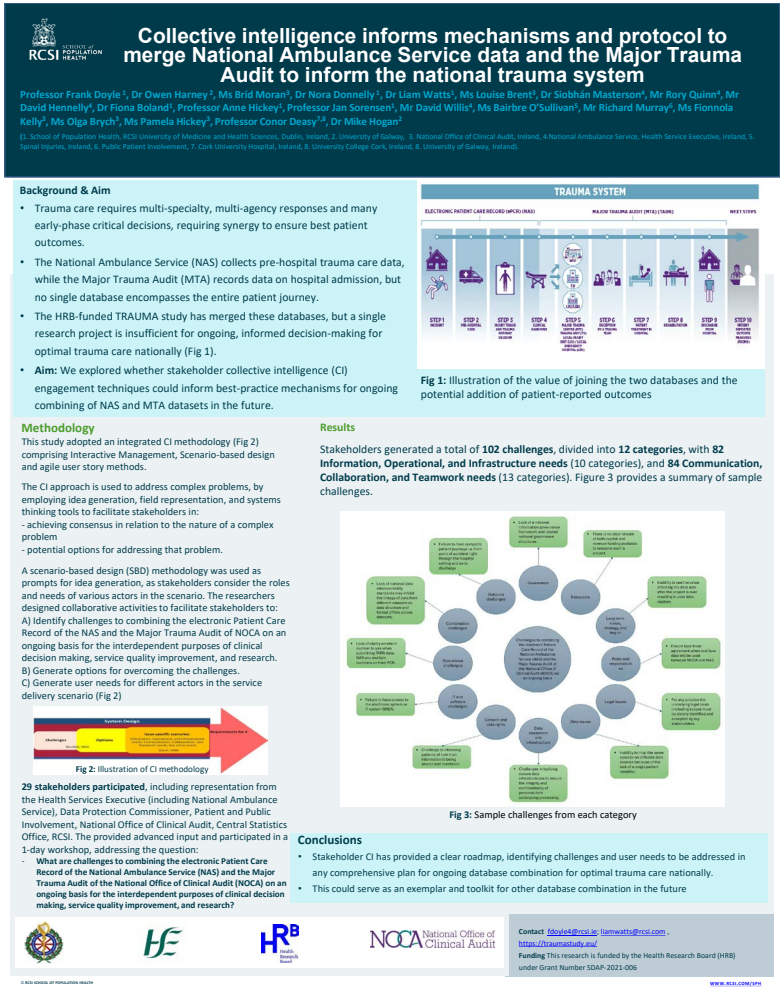


FIGURE 7.1: TRAUMA STUDY POSTER

MTC STORY: CORK UNIVERSITY HOSPITAL

One year on as a designated major trauma centre

Since being formally designated to become an MTC in April 2023, Cork University Hospital (CUH) has seen changes on the ground – from the beginnings of infrastructure projects and new staff and roles to the way trauma care is delivered and coordinated. As the MTC for the South Trauma Network, CUH plays a central role in delivering on *A Trauma System for Ireland* (Department of Health, 2018), with the goal of improving outcomes for people with life-threatening, life-changing and complex injuries.

On-the-ground developments

CUH's emergency department (ED), the busiest in the country, continues to manage a high volume of critically unwell patients. While there have not yet been major structural changes to the resuscitation area since the MTC designation, key internal processes have been refined to streamline trauma care. For example, the standard operating procedure for the reception of patients with major trauma outlines a clear protocol for the injured patient's reception, including the trauma team response, trauma team leadership by a consultant in emergency medicine, and rapid imaging, with primary trauma survey X-rays (chest and pelvis) completed in the resuscitation area prior to patient transfer to the CT scanner. Currently, CT imaging remains a distance from the resuscitation room, and patients requiring CT must be safely transferred out of the ED. However, this will change with the building of the CT scanner and the associated two trauma bays within the ED, due to be delivered at the end of 2025 or early in 2026. Despite the logistical challenges, coordinated planning and early trauma team activation continue to support timely access to diagnostics and intervention. A key enabler for rapid transfers into CUH from around Munster and South Leinster has been the installation of an on-site helicopter landing pad. This has already been used in time-critical transfers, giving patients the optimal chance of accessing the right care in the right place by the right experts, reducing delays for patients who are flown in directly from the scene from more remote areas.

Multidisciplinary team (MDT) working

Trauma care is very much a team effort. At CUH, we have formalised trauma team activations, with senior decision-makers from emergency medicine, surgery, anaesthetics, radiology, orthopaedics, neurosurgery and the intensive care unit (ICU) all involved early. There is also a growing role for trauma nurse coordinators, advanced nurse practitioners, and rehabilitation staff in ensuring that patient pathways run smoothly from the ED right through to discharge and follow-up. While some of this was in place before, the MTC designation has brought added structure, accountability and urgency to MDT collaboration.

Simulation and training

To support team readiness, CUH has introduced regular trauma simulation (SIM) sessions. These bring different disciplines together to practise responding to major trauma in a realistic and controlled setting. Feedback has been positive – the SIMs have helped build confidence, clarify roles and flag areas for improvement in real time. Staff are also engaging with formal trauma training courses, including Advanced Trauma Life Support (ATLS), Major Incident Medical Management and Support (MIMMS), and Trauma Nursing Core Course (TNCC). The inaugural Cork European Trauma Course was hosted in University College Cork (UCC) over 3–6 June 2025. General surgeons and anaesthetics/ICU colleagues have also run successful cadaveric and simulation courses with international faculty at the ASSERT centre in UCC. This focus on training is helping to build quality of care at every level.

Much done, more to do!

Strategic Investment

A key strategic development for the people of Munster and South Leinster who avail of trauma, critical care and key quaternary services at CUH is the Trauma Acute Critical Care development. This CUH proposal, with political support, would be transformative for all patients that CUH serves, not just those suffering trauma, as it will create much-needed capacity in ward beds, ICU, acute floor, diagnostics and operating theatres

Margaret Keohane and Ann Deasy, MTA audit coordinators, Cork University Hospital

MTC STORY: THE MATER MISERICORDIAE UNIVERSITY HOSPITAL

Since being designated as the MTC for the Central Trauma Network (CTN) in 2021, the Mater Misericordiae University Hospital (MMUH) has been committed to planning and developing trauma services to improve care and ensure that patients receive the right care in the right place, first time. MMUH has laid strong foundations to achieve the best possible outcomes for trauma patients through ongoing strategic development, enhancing current services and investing in staff.

In 2022, substantial groundwork established the vision and strategy for the future of trauma services. Extensive planning took place through a series of focused workshops coordinated by the Mater Transformation and Strategic Projects teams. These workshops mapped patient journeys, clarified clinical roles and established pathways that would form the basis of the trauma services. A Trauma Point Prevalence Study and "Roadside to Theatre", a comprehensive interdisciplinary simulation event involving more than 100 participants, significantly informed this process. By the end of 2022, the interim phase of the project was launched, which introduced new standardised patient pathways and established a dedicated trauma service team to provide enhanced clinical support.

The momentum built up in 2022 continued into 2023. A significant milestone was the opening of the first dedicated trauma ward, St Peters, in the new Rock Wing of the hospital, enabling MMUH to begin incrementally accepting secondary trauma transfers from within the CTN. MMUH became the first hospital nationally to implement the new standardised trauma referral system, initially accepting complex musculoskeletal, spinal, and multisystem pelvic injuries. Daily trauma multidisciplinary meetings involving a range of clinical specialties ensure comprehensive, cohesive and continuous patient care. Notably, a dedicated governance pathway for traumatic brain injuries (TBIs) was implemented, significantly improving specialised patient management for this cohort.

Furthermore, in 2023, the first Acute Trauma Rehabilitation Ward, St Gemma's, was opened in the Misericordiae Wing. This specially designed nine-bed rehabilitation facility has enhanced MMUH's capacity to provide integrated inpatient rehabilitation within an acute hospital setting. Throughout the year, MMUH remained a prominent facilitator in trauma education and simulation at local, national and international levels. We host a range of courses, including the European Trauma Course (ETC) and Trauma Nursing Core Course (TNCC), strengthening trauma care expertise.

Throughout 2024, MMUH continued developing key infrastructure to enhance trauma service delivery. The temporary designation of its Theatre 5 for trauma cases improved surgical access and capacity. The clinical design phase for the purpose-built MTC facility was completed, with engagement from over 200 staff. The dedicated four-bed brain injury unit in St Teresa's Ward was opened, offering specialised care in a single location. Concurrently, construction commenced on new trauma theatres and expansion of diagnostic imaging facilities. The MMUH continues to lead and support clinical engagement through the National Trauma Forum, a twice-monthly online platform for multidisciplinary discussion of major trauma cases.

As the MMUH continues on the journey towards becoming a fully operational MTC, it remains committed to building upon the work to date. While significant strides have been made, sustaining this high-quality care amid growing demands remains challenging. The team at MMUH continues to navigate these pressures and relies on innovative and collaborative solutions, underscoring the critical need for ongoing investment and sustainable support to ensure long-term excellence in trauma care delivery.

Members of the Mater Misericordiae University Hospital multidisciplinary trauma team

PUBLICATIONS

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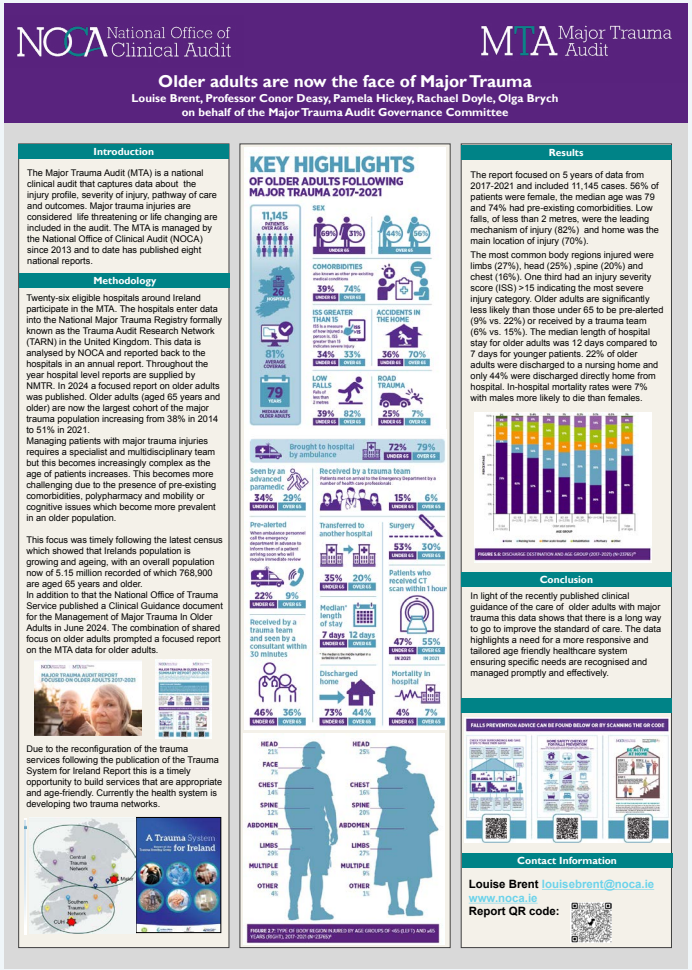
Sigle, M. *et al*. (2025) AI-enabled forecasting of prehospital transfusion needs in trauma patients. Awaiting publication.

PRESENTATION AT EVENTS

NOCA Conference (Charter Week) - RCSI
Trauma Forum – Dublin
Trauma Care Conference – Belfast
Irish Orthopaedic Association- Galway
Irish Association Emergency Medicine – Kerry
Irish Gerontological Society - Galway
National Patient Safety Conference - Dublin
Public Health Conference - Dublin

AWARDS

Older adults are now the face of Major Trauma in Ireland" has won the Eva Huggins award for Best Nurses and AHP poster at the BGS Spring conference 2025.



NOCA COMMITMENT UPDATES
FROM 2017–2021 MTA REPORT

NOCA National Office of Clinical Audit

This report highlights the continuing challenges faced within the trauma system in 2022 in recognising and delivering the right care for older adult patients with major trauma. Since 2022, NOCA and the MTA have been committed to do the following.

- **"Work with relevant organisations and stakeholders to support the transition to the NHS England National Major Trauma Registry (NMTR) (formerly known as TARN)"** This will ensure that trauma teams in the Ireland are able to enter data as quickly as possible. This has been achieved, and audit coordinators commenced data entry on 26 February 2025.
- **"Provide training and education for the new NMTR so that hospitals will have clinical audit data that allow them to quality assure their care, benchmark against clinical standards and use the data for quality improvement, service planning and research."** More than 20 training and education sessions for the new NMTR have been held for this purpose.
- **"Develop new reports for hospitals, health regions and trauma networks using the NMTR."** Once information governance is completed with NMTR-Ongoing.
- **"Resume providing an annual national report summarising the care within the trauma system for all patients."** Once information governance to be completed with NMTR.
- **"Task the MTA Governance Committee with identifying key areas for quality improvement from this report, with its first focus being alignment with the new core principles of major trauma care for older adults."**
- **"Promote the circulation of the *Trauma System Implementation Programme Clinical Guidance Document: Management of Major Trauma in Older Adults* (HSE, 2024)"** We have done this at many national and international conferences.
- **"Use the core principles from that guidance document to benchmark the care of older adults on a continuous basis in the MTA."** Awaiting new data entry - ongoing
- **"Collaborate with key stakeholder groups, including the National Office for Trauma Services, the National Integrated Care Programme for Older Persons and Healthcare Strategy (Older Persons), Age Friendly Homes Ireland and Nursing Homes Ireland."** This work had continued.
- We have also continued our collaboration with the Road Safety Authority, in particular in the collection of high-quality data on injuries sustained involving e-scooters. These data have been added to the data collection since 2020, and training to ensure that data quality is ongoing. This will be included in the analysis for further reports.
- **"Work with public and patient groups (e.g. Age Action Ireland and Spinal Injuries Ireland) to raise awareness about the causes of major trauma (namely, low falls at home and in nursing homes) and to promote the circulation of this information to the public and patient organisations."** We have held webinars with our stakeholders in order to share resources and learnings from the audit.
- **"Continue to use the data to inform research, including the Health Research Board-funded Targeted Review and Amalgamation of Unmapped Major trauma and Ambulance data in Ireland (TRAUMA project), which aims to merge the MTA data with the National Ambulance Service data to create prediction models and ultimately make triage tools more attuned to different patient groups."** This work will continue into 2025/2026.

CHAPTER 8
NOCA COMMITMENTS

CHAPTER 8: **NOCA COMMITMENTS**

NOCA National Office of Clinical Audit

The National Office of Clinical Audit (NOCA) should continue to support each hospital to do the following:

- **Achieve high standards of data quality and data completeness.**
- **Establish a local MTA governance committee.**
- **Pursue quality improvement through the provision of better quarterly reports and training in the use of the MTA dashboards.**

Since the cyberattack on the University of Manchester, data have been unavailable and many MTA hospital governance committees have not had MTA data to include on their meeting agendas.

NOCA has committed to improve the reporting from the MTA and the usability of the data in order to better support the hospitals and MTA hospital governance committees to engage in the audit.

Through a series of workshops and the publication of guidance documents, NOCA will support MTA hospital clinical leads and hospitals to develop local MTA governance committees.

NOCA will hold workshops and training for MTA hospital clinical leads and audit coordinators on how to set up and maintain a local MTA governance committee.

NOCA will develop reports in collaboration with the clinical leads and audit coordinators in order to support their meetings and enable them to use the data for quality improvement.

CHAPTER 9
CONCLUSION

CHAPTER 9: **CONCLUSION**

This report describes the journey of 3,323 patients with major trauma injuries through the trauma system in 2022. It is an aggregated analysis of patient characteristics, mechanisms of injury, injury profiles, management, treatment and outcomes.

The message from this report seems to indicate that there was little change throughout 2022 in terms of the trauma system compared to previous years. Low falls in the home continue to be an area of concern at a societal level, and it shows a system that pre-dates the establishment of Major Trauma Centres, with low levels of pre-alerts, trauma team activation and patients being transferred in order to complete an episode of care.

As the new trauma system develops and changes, continued support for the Major Trauma Audit will be critical in order to track the impact of these changes, make the right resources and care pathways available for patients with major trauma, and ensure that patient outcomes are monitored and improved continuously. Such is the maturity of the audit that it is now a rich repository of quality information.

As falls are by far the most prevalent mechanism of injury, the responsibility rests with all of us as healthcare professionals, managers and members of the public to create awareness of this in every home in Ireland. This requires a 'whole-system' approach to reduce the burden of injury, involving architects, engineers, designers, planning authorities and the health service. Using the home safety infographic published in the *Major Trauma Audit National Report 2018,* we have built on the home safety message by further recommending a home safety checklist that can be used by all healthcare workers visiting a patient's home, or indeed by members of the public to assess their own homes.

"The message from this report seems to indicate that there was little change throughout 2022 in terms of the trauma system compared to previous years."

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REFERENCES

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ACCESSING REPORT APPENDICES

National Office of Clinical Audit (2025) *Major Trauma Audit Report 2022 - Appendices.*
Dublin: National Office of Clinical Audit.
Available via the NOCA website

APPENDIX 1	MTA GOVERNANCE COMMITTEE ATTENDANCE 2024	CLICK HERE
APPENDIX 2	GLOSSARY OF TERMS	CLICK HERE
APPENDIX 3	KQI DEFINITIONS	CLICK HERE
APPENDIX 4	FREQUENCY TABLES	CLICK HERE

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