MAJOR TRAUMA AUDIT
NATIONAL REPORT
2016

PRESENTED BY:
DR CONOR DEASY,
NATIONAL CLINICAL LEAD
Established in Ireland in 2013

2014 - 22 hospitals

2015 - 24 hospitals

Data accreditation 96%
Who are major trauma patients?
Those suffering life threatening or life changing injury.
The changing face of major trauma
Major Trauma in the 90s
• Median age 36.1 yrs
• 0-24yrs = 40%
• 60% RTA
• 5% ‘low falls’

Major Trauma now
• Median age 59 yrs
• >65 yrs = 40%
• 18% RTA
• 51% ‘low falls’
FIGURE 5: GENDER BREAKDOWN OF MAJOR TRAUMA PATIENTS BY AGE BAND (N=4,426)

PERCENTAGES

AGE BAND

<15  15-24  25-34  35-44  45-54  55-64  65-74  75-84  85+

Male

Female

63%  77%  78%  83%  70%  55%  53%  40%  28%

58%
How were they injured?
How were they injured?
FIGURE 10: PLACE OF INJURY (N=4,426)

- **Home**: 47%
- **Public area and road**: 39%
- **Other**: 5%
- **Institution**: 4%
- **Farm**: 4%
- **Industrial**: 2%
**Figure 17: Mode of Arrival to Hospital (n=3,194)**

- **1%** Helicopter
- **1%** Helicopter and Car
- **13%** By Car
- **2%** Walking
- **71%** Ambulance

**Figure 18: Most Senior Pre-Hospital Healthcare Professional (n=2,377)**

- 55% Paramedic
- 33% Doctor
- 11% Advanced Paramedic
- 1% Other
- <1% Not Known

28% of patients had to be transferred to another hospital.
8% of major trauma patients were received by a trauma team.
**Figure 30: Time to CT Scan within One Hour (n=251)**

- **33%** No
- **67%** Yes
INJURIES SUSTAINED

FIGURE 8: INJURIES SUSTAINED BY BODY REGION (N=6,524)

All injuries recorded: 6,524

**HEAD**
- All head injuries: 1,161 (18%)
- Severe head injuries: 1,022 (88%)
- Isolated severe head injuries: 570 (56%)
- Severe head injuries and other associated injuries: 452 (44%

**FACE**
- All face injuries: 593 (9%)
- Severe face injuries: 8 (7%)
- Isolated severe face injuries: 0
- Severe face injuries and other associated injuries: 8 (100%)

**LIMB**
- All limb injuries: 1,652 (25%)
- Severe limb injuries: 1,016 (62%)
- Isolated severe limb injuries: 806 (79%)
- Severe limb injuries and other associated injuries: 210 (21%)

**CHEST AND ABDOMINAL**
- All chest and abdominal injuries: 1,293 (20%)
- Severe chest and abdominal injuries: 917 (71%)
- Isolated severe chest and abdominal injuries: 324 (35%)
- Severe chest and abdominal injuries and other associated injuries: 593 (65%)

**SPINAL**
- All spinal injuries: 1,021 (16%)
- Severe spinal injuries: 512 (50%)
- Isolated severe spinal injuries: 319 (62%)
- Severe spinal injuries and other associated injuries: 193 (38%)

**PELVIC**
- All pelvic injuries: 591 (9%)
- Severe pelvic injuries: 79 (13%)
- Isolated severe pelvic injuries: 21 (27%)
- Severe pelvic injuries and other associated injuries: 88 (73%)

**OTHER**
- All other injuries: 223 (3%)
- Severe other injuries: 69 (31%)
- Isolated severe other injuries: 57 (83%)
- Severe other injuries and other associated injuries: 12 (17%)

**FIGURE 25: SURGICAL INTERVENTION BY BODY REGION (n=1,219)*

- Head and brain: 2%
- Thoracic: 2%
- General: 2%
- Spine: 4%
- Abdomen: 5%
- Skin/soft tissue: 7%
- Face: 9%
- Limbs: 69%
45% of patients with severe TBI not treated at Neurosurgical Centre
11% of patients with severe TBI brought directly to a Neurosurgical Centre
**TABLE 8: HOSPITAL LOS FOR MAJOR TRAUMA PATIENTS**

<table>
<thead>
<tr>
<th>Loss for</th>
<th>Median (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All major trauma patients</td>
<td>9 (5-17)</td>
</tr>
<tr>
<td>Major trauma patients if ISS &gt; 15</td>
<td>10 (5-22)</td>
</tr>
</tbody>
</table>

**TABLE 7: ICU LOS**

<table>
<thead>
<tr>
<th></th>
<th>ICU LOS FOR ALL MTA PATIENTS</th>
<th>ICU LOS FOR MTA PATIENTS ISS &gt; 15</th>
<th>ICU LOS FOR MTA PATIENTS WITH SEVERE TBI</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>758</td>
<td>478</td>
<td>120</td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>3 (1-8)</td>
<td>4 (2-9)</td>
<td>5 (1-12)</td>
</tr>
<tr>
<td>ICU bed days</td>
<td>4,843</td>
<td>3,713</td>
<td>911</td>
</tr>
</tbody>
</table>

**FIGURE 31: HOSPITAL LENGTH OF STAY BY AGE BAND (N=4,426)**

<table>
<thead>
<tr>
<th>Age Band</th>
<th>Median Length of Stay (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;15</td>
<td>5</td>
</tr>
<tr>
<td>15-24</td>
<td>6</td>
</tr>
<tr>
<td>25-34</td>
<td>6</td>
</tr>
<tr>
<td>35-44</td>
<td>8</td>
</tr>
<tr>
<td>45-54</td>
<td>7</td>
</tr>
<tr>
<td>55-64</td>
<td>8</td>
</tr>
<tr>
<td>65-74</td>
<td>10</td>
</tr>
<tr>
<td>75-84</td>
<td>13</td>
</tr>
<tr>
<td>85+</td>
<td>13</td>
</tr>
</tbody>
</table>
96% OF MAJOR TRAUMA PATIENTS SURVIVED

Older patients are more likely to die and suffer higher levels of disability than younger major trauma patients with a similar injury severity score (ISS).
Only 62% of major trauma patients were discharged directly home. Older patients are less likely to be discharged home and more likely to be discharged to rehabilitation or long-term care compared to younger patients.
REPORT HIGHLIGHTS 2016

26 PARTICIPATING HOSPITALS

COMPLETENESS
74% of MTA cases captured in 2016

PATIENT AGE PROFILE
55% of patients were aged between 15 and 64 years

MOST COMMON INJURY LOCATION
47% of patients sustained an injury in their own home

MOST COMMON MECHANISM
51% of patients had a 'low fall' of less than 2 metres

SURGERY
69% of patients who had surgery had surgery on a limb/s

GENDER
58% of patients were male

42% of patients were female

96% of patients survived

9: Median length of stay was 9 days

Percentages shown are representative of the cases entered in MTA in 2016.
KEY RECOMMENDATIONS

INFORMING TRAUMA POLICY:

- Reconfiguration of trauma services is required to provide timely, appropriate and optimal care to major trauma patients to ensure the right patient is brought to the right hospital for the right treatment at the right time.

- A national definition and a standard on what should constitute a trauma team and activation criteria for such a team are required.

- Pre-hospital carers and emergency medicine professionals should exercise a high level of suspicion of major trauma in older patients with low-energy mechanism injuries.
  
  - To support this approach to care:
    - Clinical assessment and triage tools should be adapted to suitably assess older patients.
    - Education programmes for pre-hospital carers and emergency medicine professionals should include care for the older patient with low-energy mechanism injuries.

DATA QUALITY:

- MTA is an NCEC-accredited audit and the participating hospitals must support the resourcing of data collection for this audit. Data completeness of at least 80% and data accreditation of 95% are required to ensure good data quality and reporting.

- NOCA will work with the Healthcare Pricing Office, TARN and hospitals to adjust the annual hospital denominators to reflect accurately the level of completeness of individual hospitals’ data.

- Functional and quality-of-life measures should be included in the future development of the audit.
National MTA Contacts

Dr. Conor Deasy- National MTA Clinical Lead
Conor.deasy@hse.ie

Louise Brent National MTA & IHFD Audit Coordinator
Louisebrent@noca.ie  0871159892