

# Impact of Major Trauma Centre Status on the Inpatient Pain Team

A Service Evaluation  
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## Background

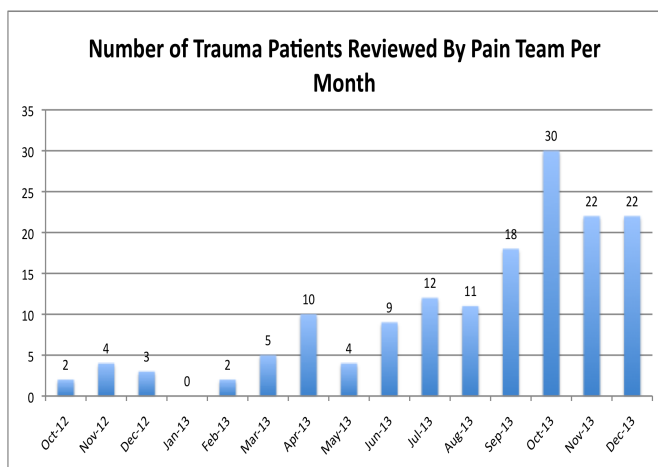
- Aintree University Hospital became a part of a Major Trauma Centre Collaborative during 2012.
- There has been a gradual increase in numbers of patients with major trauma cared for within the trust.
- This was anticipated to increase workload of the Inpatient Pain Team (IPT), as a result there was an increase in staffing by 1.5 Whole Time Equivalents of Band 6 nurses to provide weekend daytime cover for the pain service.
- Investigation of numbers of patients, complexity and time spent by Inpatient Pain Team became essential due to perception of underestimated workload increase

## Method

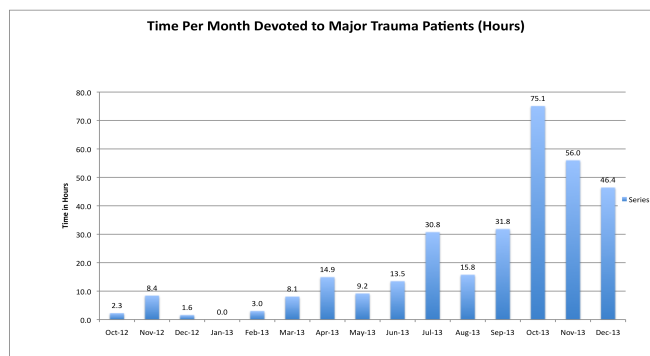
- Analysis of records of IPT for all patients referred for pain management due to major trauma.
- Individual patient record cards indicate demographics, injuries, complexity, time spent and management interventions.
- Patients identified from manual search of IPT records
- Input into Microsoft Excel spreadsheet and analysed using basic descriptive statistics available on Excel.
- Exclusions- fragility fractures which would have formed part of IPT workload before major trauma centre status. Patients not referred to or seen by IPT were not included

## Results

- Number of patients 154
- Date range Oct 2012 to December 2013
- Age range 16-93 yrs
- Mean age 49 years
- Bimodal age distribution, >70 yrs forms 16% of population



- Most common injury type was chest injury.
- 21/154 patients had pre-existing pain problem or major psychological co-morbidity
- 58% patients rated as severely injured, complex needs for pain management
- Majority of patients seen by Clinical Nurse Specialist alone 123 patients



- Worst month October 2013, additional 145 minutes per day extra workload.
- Low actual patient numbers conceals large amount of complex time consuming patients needing multiple visits from IPT
- Majority had nociceptive pain but 37% had co-existing neuropathic elements
- Low numbers of epidurals and paravertebral catheters for chest injury 9/77 patients
- Range of time spent with individual patients over their stay was 10-685 minutes
- Mean is 120 minutes over their stay
- Outliers consuming large amounts of IPT resources. One patient had 21 visits and total of 11 hours of IPT time

| Interventions          | Number |
|------------------------|--------|
| Device Management      | 71     |
| Antineuropathic agents | 57     |
| Strong Opioids         | 137    |
| Advice                 | 34     |
| Weak Opioids           | 32     |
| Other e.g. ketamine    | 18     |

## Summary

- Becoming part of a major trauma collaborative has increased the workload of the IPT
- Relatively low patient numbers seen by the IPT conceal large amounts of time needed to manage complex patients with complex pain problems who often remain in hospital for long periods
- Good pain management is essential for effective rehabilitation
- Increased staffing for IPT to cover weekend days does not meet additional demands on the service both in direct patient contact and in provision of education on pain management

## Next Steps

- Improvements in management of patients with chest trauma. Guideline for management of pain after chest injury completed. Increase numbers of patients with serious chest injury receiving regional techniques. Provision of devices and kit for paravertebral analgesia - in use summer 2014.
- Audit of provision of analgesia for major trauma patient in emergency department.
- Provision of special Major Trauma Pain Management study day
- Case of need for increased staffing to provide more comprehensive service and provide training for ward staff
- Case of need to provide more Pain Consultant sessions to improve numbers of these complex patients seen by Consultant.
- Access to psychology services for major trauma patients