

## **Establishment of a formal trauma system in NZ to improve post-crash outcomes for trauma patients: Challenges and Achievements**

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Major Trauma National Clinical Network

### **Abstract**

In 2012 the Ministry of Health (MOH) and the Accident Compensation Corporation (ACC) in NZ established a Major Trauma National Clinical Network (MTNCN). The objectives of the Network were to ensure that there was a planned and consistent approach to the provision of major trauma services across New Zealand. Key concepts necessary to achieve those goals required a cultural change within the community of trauma care providers to focus on optimal outcomes rather than convenience or past expectations. Progress and achievements of these goals has been steady and the challenges and achievements will be outlined in this presentation.

### **Background**

Major trauma can result in a both loss of life and substantial disability. Road traffic crashes and falls are the predominant mechanisms of injury resulting in major trauma. Trauma care in NZ prior to 2012 was largely provided on an “ad hoc” system and there was no measuring tool to determine whether the quality of that care and the outcomes were consistent with results in other jurisdictions in similar healthcare environments. In an era of quality and safety in healthcare the MOH and the ACC agreed to establish a MTNCN with objectives including improving the quality and safety of trauma care and benchmarking the results. Key objectives included determining the capacity and capability of trauma receiving hospitals, formulating and instituting prehospital destination policies and describing guidelines for clinical care. The use of a National Health Index number in NZ allows the potential of seamlessly following patient care and outcome from incident (via the prehospital e-Patient Report Form) through hospital care to rehabilitation. Capturing this information through development of a national major trauma registry was essential to determine incidence and outcomes following major trauma.

### **Method**

Development of the Network involved appointment of a Clinical Leader and a Program Coordinator. Together these appointees were responsible for interacting with the wider trauma care community as well as non-clinical stake holders such as the Automobile Association, and the public at large. Presentations at all trauma receiving hospitals and collaboration with key clinicians and administrators were used as the prime methodology to inform and encourage change. Development of a National Major Trauma Registry was linked to an already functional web-based regional trauma registry. The minimum data set was matched to that used by the Australian Trauma Registry for benchmarking and subsequent integration.

### **Results**

Over a three year period a systematic change was initiated such that every hospitals capability to receive major trauma patients was determined and destination policies enacted such that where possible patients were preferentially taken to those hospitals able to effectively manage their immediate episode of care. Different regions took slightly different approaches standardized guidelines were used where possible. A National Major Trauma Registry was established so that data on all major trauma patients was entered from 1 July 2015.

**Conclusions**

All these initiatives required substantial cultural change both among hospital administrators and trauma care providers. No single approach was universally successful in resulting in change. A combination of personal advocacy, clinical presentation, scientific research and financial planning were all needed to move clinicians and administrators towards achieving the goals of the Network. As with all cultural change the process needed considerable effort to initiate and will require ongoing efforts over a number of years until the concrete goals of the Network can be shown to have been achieved