

HRABC Data Quality Workshop 2003 Orthopedics & Trauma

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This year, the workshop was presented as part of the HRABC Annual Conference. Three informative speakers presented information related to Trauma and Orthopedics. I have attempted to summarize the key points.

The first speaker of the afternoon was **Dr. Mariana Brussoni**, from the B.C. Injury Research and Prevention Unit from Vancouver. She explained the mission of the Unit was to “make BC a safe place by coordinating efforts that will prevent and significantly reduce injuries and their consequences, thereby reducing the unacceptable costs to individuals and society”. If the cost of injuries in BC is approximately \$11 billion/year, it is no surprise that reducing injuries would save money. It was stated that reliable data is important to understand injuries and implement prevention endeavors. She spoke of the Emergency Department Injury Surveillance System (EDISS) and its creation to establish a minimum data set for injury surveillance and standardize data elements. The three requirements of the data elements are:

- Minimum impact on the workload of the emergency department staff.
- Consistent with CIHI’s National Ambulatory Care Reporting System.
- Potential to link with other health databases.

Dr. Brussoni spoke of the role of the Health Record coder in the evaluation process. Chart audits involved a random sample of approximately 200 charts, in addition to 100 selected charts from three hospitals. Nine hundred charts were used to record minimum data set information.

Demographics:	Chart Number DOB	PHN Sex	Postal Code
Injury Event:	Date of Visit Nature of Injury (2 codes) Activity when Injured Visit Disposition	External Cause Place of Occurrence Narrative Description	

Coding issues surfaced with the transition from ICD 9 to 10. Some of the obstacles were delays in software updates, data coding and abstracting in 2001/02; workload backlogs in Health Records, and inconsistent coding systems between hospitals.

Data collection presented challenges. If the patient was not proficient in English or was in extreme pain, it was difficult to collect the necessary information. Privacy issues, emotionally upset patients or differing stories affected reliability or completeness. The Care Card was an issue when patients would use someone else’s care card or their own

card was not updated. What about the homeless who did not have a Care card? Emergency forms created another barrier when not all the information was printable or there was not sufficient space for detailed charting. Shortage of staff along with time constraints or unfamiliarity with the project or the data elements affected the collection of reliable data.

Dr. Brussoni shared the data collected from the Fraser South Health Area by graphing the types of injuries, injuries by gender, fractures amongst the elderly, and place of fracture injury, to name a few. Falls among seniors have been recognized as a target area for injury prevention.

In conclusion, she listed the benefits of the Provincial Surveillance System; the effort coordinates injury prevention efforts, promotes knowledge transfer, supports responsible use of resources, reduces burden of injury and reduces the cost of injury.

Sharon Kasic from the BC Trauma Registry was our next speaker. The registry, which started in 1992, collects, stores, analyzes, and reports trauma patient data. A trauma patient is defined as one who endured an injury and required a hospital stay of greater than two days or whose discharge disposition was death, so not all injuries are reported. Currently, eight hospitals are participating in the data collection using the Collector software program. The BC Trauma Registry works along side the BC Trauma Advisory Committee and both bodies report to the Provincial Health Services Authority, which reports to the Ministry of Health.

It was mentioned that HRAs are responsible for data abstraction, quality, and analysis along with maintaining Collector and responding to requests of information. The data is used to provide optimal care, understand the cause, treatment and outcomes and manage variability. In 1999, there were 5114 cases. In the following year, there were 6250 cases reported and in 2001, 5621 cases. Looking at the 2001/2001 data, the highest category of injuries was falls, which comprised 54% of all injuries, while motor vehicle accidents ranked second at 31%.

The speaker shared how the Trauma Registry's data is used to track activity and patient acuity through the use of a scoring system. The data assists with performance improvement by monitoring trends and setting benchmarks and outcome measures by viewing the data statistically. It is also used for research. Through injury prevention, patterns and relative rates of serious injuries in alpine skiers and snowboards were analyzed and the Free Helmet Rental Campaign was started.

It was mentioned that future plans for the Trauma Registry are to expand the collection of data elements as well as facility participation while working towards concurrent data collection and data linkages. It is recognized that data quality drives the performance improvement program and is the foundation for the development and ongoing success of the Trauma Programs.

The last speaker was **Dr. Peter Dryden**, an orthopedic surgeon from Victoria. His presentation covered anatomy, physiology, and the presentation of some orthopedic devices, such as intramedullary nail, hip replacements, and cannulated nails with a very interactive question and answer period.

Dr. Dryden started the presentation by explaining the origin of the word ‘orthopedics’ by explaining ‘ortho’ means crooked and ‘ped’ is child. We learned skin injuries resulting from trauma are just as important as the treatment of the fracture as explained with compartment syndrome. He explained arthritis surgery (debridement, arthodesis, arthroplasty). Osteochondral lesions equate to chondromalacia and are the area of cartilage injury involving the articular surface and underlying bone. Discussion about orthopedic injuries sustained in sports such as ACL tears, shoulder instability with Bankart repair, and Achilles tendon rupture and treatment were thoroughly presented.

As always, there is a grey area. When discussing care to the back, Dr. Dryden noted that orthopedic and neurosurgeon expertise treat conditions such as spinal stenosis, cauda equina, and disk herniation. (From a coding perspective, how do you service these procedures at your hospital? Chances are there is variation in the province.)

Common eponyms were also explained. Salter fracture is an injury to the growth plate (epiphyseal) of the bone and should be considered the distal end of the bone versus the shaft (diaphyseal). Maissonneuve fractures occur in the ankle. It involves a ligament injury between the tibia and fibula with a fibular fracture. Treatment involves fixating the ankle but nothing is done for the fibular fracture.

Dr. Dryden closed his presentation by discussing the orthopedic devices he brought as visuals. When the intramedullary nail was highlighted, it was explained that it was ‘skewered’ into the bone and can often involve an aggressive workout! It certainly was a lot longer than I imagined it to be! Titanium is used for devices for its weight and strength. Solid nails, cannulated nails (ones with holes) and elastic nails (flexible and used for children) were discussed. Dr. Dryden continued explaining the plates for intertrochanteric hip fractures and the blade plate for the distal end of the femur along with the modular prosthesis. By this time, the speaker had stepped down from the podium with the instruments inviting the participants to come and see. Within a few seconds, the audience had surrounded him bombarding him with questions, which left him in the Crystal Ballroom for an additional 30 minutes past the schedule.

The Data Quality Committee thanks the speakers and the attendees for their participation, and for making this another successful workshop. Feedback through the evaluation forms from the participants will assist the Data Quality Committee to plan the next educational workshop.