

POST-EVENT SUMMARY OF SYMPOSIA AND WORKSHOPS AT ARSC2015

(As at 16 September 2016)

Tuesday 6 September: 10:00am – 12:00pm

Room: Bradman

Symposium

The Real Cost of Injury (Draft Summary)

Key Organiser:

Lyn Journeaux

College of Surgeons

Lyn.Journeaux@surgeons.org

Overview:

Trauma is a significant public health problem and a major cause of death and disability in Australia, with young persons being the most affected. The 'costs' of trauma are extensive and intrusive, including human, social and financial costs. The health costs are also considerable, especially road transport related trauma, which accounts for more than half of the trauma surgery undertaken in Australia. This symposium explored the cost of patient care and the provision of adequate resources from the cost to the patient, their families and the community as well as hospitals, health providers and third party insurers. Topics included the need for leadership in areas of trauma prevention (especially for youth, quad bike users and all road users), decision-making in the operation theatre and effective and meaningful data collection.



Summary (Prepared by Jude Williams, ACRS):

Facilitators/ presenters in the Symposium included:

- Dr Ailene Fitzgerald, Rebekah Ogilvie – *P.A.R.T.Y. Program at Canberra Hospital*
- Warwick Teague – *Quad bike injuries in the young*
- Dr John Crozier, Australian Trauma Registry (for Dr Valerie Malka) – *Distracted young driver*
- Dr John Crozier (pictured right) – *Serious injuries, rehabilitation and costs*

Presentations

Dr Ailene Fitzgerald, Ms Rebekah Ogilvie, P.A.R.T.Y. Program at Canberra Hospital

The international P.A.R.T.Y. (Prevent Alcohol and Risk-Related Trauma in Youth) program has been running in Australia for over 15 years. It is an effective way to raise awareness to the 15-25 age group of the dangers of alcohol with particular attention to road trauma. Injury is the leading cause of death and hospitalization among young Australians and can result in long-term disability.



Key presentation points:

- Injury accounts for around two thirds of deaths in 15-24 year olds, with road trauma being the leading cause.
- The P.A.R.T.Y. ACT Pilot Program has been funded through the NRMA-ACT Road Safety Trust with additional recurrent funding through ACT Health. It is offered to Year 10 students but is suitable for youth aged 14-24 years. The onset of drinking in the ACT was noted at 14.3 years.
- The program is supported by the Royal Australasian College of Surgeons and has received widespread community support.
- The program aims to leave a 'lasting impression' of trauma, and what risk-taking behaviour can result in.

- Students attend the program within a hospital setting and hear presentations from medical practitioners, crash victims and their families on the personal cost of road trauma. They have the opportunity to experience life as a crash victim with mobility and diet restrictions, and even see the simulated placement of a body (dummy) in a body bag to reinforce the impact of the message.
- Canberra participants and delegates were shown the Queensland P.A.R.T.Y. video from Royal Brisbane Womens Hospital.
- Seed funding for the program was received from the ACT NRMA Road Safety Trust, and funding is now recurrent. In other jurisdictions funding has come from a variety of sources.
- Two main papers were cited in support of P.A.R.T.Y. – *Effectiveness of the P.A.R.T.Y. Program in Preventing Traumatic Injuries: A 10-Year Analysis* – Joanne M. Banfield et al, and *Effect of an Injury Awareness Education Program on Risk-Taking Behaviours and Injuries in Juvenile Justice Offenders: A Retrospective Cohort Study*.
- Challenges for the ACT pilot included: P.A.R.T.Y. is managed across Australia by nurses, who may not necessarily have a strong background; data linkage to demonstrate behaviour change is very difficult; and the ‘off the shelf’ survey tool did not meet the needs of the ACT population due to differences in legislation (such as the mandatory use of seat belts and provisional licensing to drive) and the education curriculum (such as driver readiness and risk-taking core units of study).
- A new survey tool has been developed based upon the Theory of Planned Behaviour – intention is the most immediate predictor of behaviour. It uses real life scenarios and provides a sliding scale ‘quite likely’ to ‘quite unlikely’ and questions for participants regarding their self-report behaviour and anticipated behaviour of parents and peers. Early data indicates that students don’t think they would undertake risk-taking behaviour, but their friends would.
- A formal collaborative agreement with other P.A.R.T.Y. programs is needed to enable coordinated responses to media and lobbying, and a coordinated approach to data linkage with police.
- Challenges around assessing efficacy, meaningful outcome measures and overall cost-effectiveness compared to other interventions were noted. Future funding sources may be required.

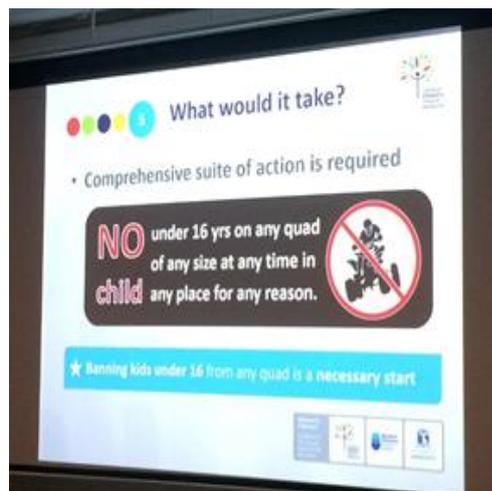
Dr Warwick Teague, Quad bike injuries in the young

Quad bike trauma represents a concerning and increasing burden of injury across Australia, with children accounting for 1 in 5 serious quad bike related injuries or deaths. On average, 15 Australians die each year from quad bike related injuries. Legislative changes may play an important role in future efforts to reduce quad bike injuries and deaths in Australian children.

Key presentation points:

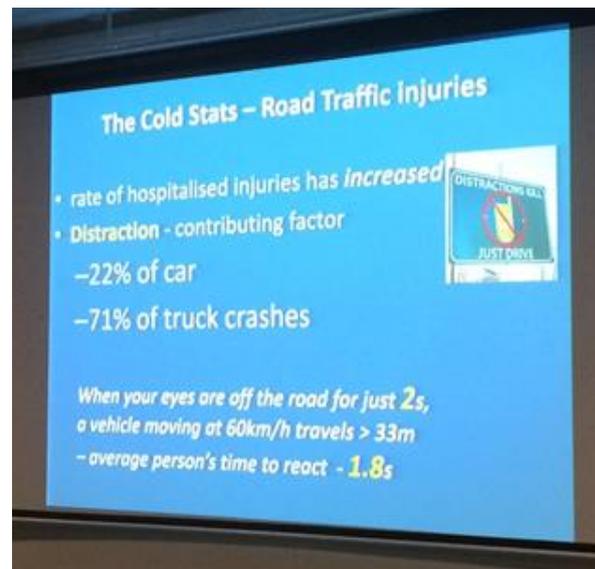
- Quad bike fatality statistics for the last 15 years were noted:

- The goal is zero deaths. The US experience shows that zero is possible. Since 2011, 'Sean's Law', has coincided with zero fatalities for children under the age of 14, and a reduction in injury.
- Warwick's key messages: "Too many kids are dying on quad bikes and the current recommendations are not enough; quads are the gift that keeps on costing; and there should be a ban on all children under 16 years getting on any sized quad, as well as safer practices, safer designs, and safer choices."
- Children are much more likely than adults to be injured in a recreational activity rather than work-based activity.
- Children under 16 don't have the mental capacity to make safe decisions on such an inherently unstable vehicle, and don't have the body mass to maintain control.
- 961+ injury presentations in FY03/04-14/15 (combined VISU and RCH Trauma Registry data) – massive underrepresentation (maybe 30-40%) due to miscoding and underreporting.
- Ongoing disability is noted in approximately 40% of cases (on top of those who died before they got to hospital). The financial burden of quad bike related injury is high.
- Final message:



Dr Valerie Malka, Distracted young driver (presented on day by John Crozier)

The use of mobile phones is a contributing factor in one in five car crashes and two in three truck crashes. It is difficult to estimate the size of the problem because these statistics are not collected in hospitals. However more than 90% of Australian drivers own a mobile phone, and 60% report using their mobile phone while driving.

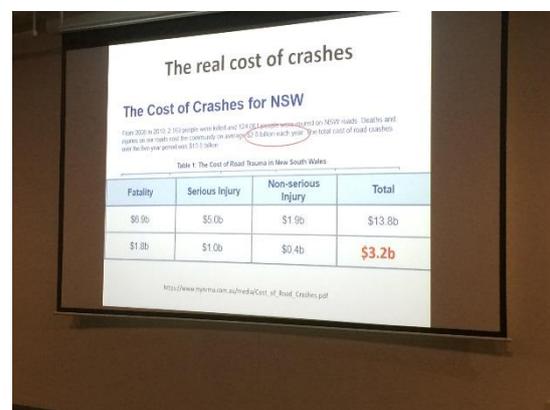


- 1.3m people die annually from RTA and 50 million are injured.
- Distraction is a contributing factor in 22% of car and 71% of truck crashes.
- When you are distracted for just 2 seconds, at 60km/h you travel 33m. The average person takes 1.8 seconds to react.
- Drivers using a mobile phone are 4 times more likely to have a crash.
- Global estimates report 60-70% of drivers report using a mobile phone whilst driving.
- 3/5 of Australian drivers aged 18-24 report sending or receiving texts while driving compared with 1/3 over 25 years.

Dr John Crozier, Australian Trauma Registry - Serious injuries, rehabilitation and costs

The Australian Trauma Registry collates data from patients with an Injury Severity Score greater than 12 from 25 major trauma centres. The registry can track actions of the National Road Safety Strategy and provide relevant information on serious injuries from road crashes. The registry is a key to measuring trauma performance and cost, which can lead to improved understanding of variability in trauma care and encourage practices of the best performing services.

- RTA costs hospitals \$27b per annum in Australia, or \$3.2b per year in NSW. Cost reporting isn't always accurately documented.
- The average capacity of hospital beds around Australia is 100% daily, so there is limited surge capacity.
- A multicentre study showed the cost of trauma at MTCs in NSW cost \$180m in 2008 (Kate Curtis): *2008 Major trauma: the unseen financial burden to trauma centres.*
- The case study of a seriously injured patient was presented, taking into account the time, cost and number of practitioners involved in the patient's long term care.



- Unless our science is based on measurement, it's a faith system.
- Linkage of trauma registry and hospitalisations ABF data linked 16,693 patient data – <http://dx.doi.org/10.1016/j.injury.2012.10.002>
- ISS or NISS score – 12 or above is when injury gets expensive.
- Even a minor increase in serious trauma across the state can result in a big variance in hospital dollars spent.
- 2015 national health priority areas - \$56.6m allocated to injury research, as opposed to \$110m for Cardio Vascular Disease research, despite the fact trauma is the leading cause of death in under 45 year olds.
- The current trauma cost documented is based on the Diagnostic Related Group Model (DRGM) and is significantly lower than the real cost to a variance of \$15m.
- The Trauma Registry Model needs to be used and presents a far more accurate basis. It is anticipated we are underfunding our hospitals based on the DRGM.
- Funding to continue the Trauma Registry is being sought through Government lobbying and presents a small funding investment in real terms to ensure accurate trauma care and services provision.

Challenges

Australia - 422,130 hospitalisations (08/09) = 2nd cardiovascular disease
 leading cause of death & disability in people aged <45 years
 leading cause of death in children aged 1-15. (x2 cancer)

| Health Priority Area | 2013 | 2014 | 2015 |
|----------------------------|----------|----------|----------------|
| Alcohol and Drug Use | \$49.70 | \$50.50 | \$60.70 |
| Arthritis and Osteoporosis | \$25.40 | \$21.50 | \$21.00 |
| Cancer | \$197.40 | \$185.50 | \$176.50 |
| Cardiovascular Disease | \$103.50 | \$123.40 | \$110.20 |
| Diabetes | \$72.60 | \$69.80 | \$53.00 |
| Injury | \$52.30 | \$58.30 | \$56.60 |
| Mental Health | \$78.70 | \$84.00 | \$78.80 |
| Obesity | \$45.20 | \$40.20 | \$34.00 |

Conclusions

- Trauma registries are essential measurement tools
 - relevant information on serious injuries from road crashes
 - validate measures of trauma performance and cost, and improve efficiency
- RACS, with the support of the Australian Automobile Association, recommends that the Commonwealth support the Australian Trauma Registry by providing \$450,000 for a three-year period to allow the establishment of private and public partnership