"AMBULANCES ARE NOT EQUAL"

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Introduction

- 2 daughters started riding Motocross when aged 9 and 10
- Still remember their first event at Schools MX Champs at Ardmore Track
- Needless to say one of them ended up being assessed at Middlemore Hospital for a shoulder injury
- I was also questioned by my colleagues as to "Why would I let my children do such a dangerous sport?"
- But they were hooked and so began their, and my foray in to motorsport, spanning about 15 years from 1998-2013

Situation then.

- Events were governed by the MNZ Manual of Motorcycle Sport latest update is 2007
- Regulation 6-2-1 "All clubs and sports bodies holding motorcycle competitions under the jurisdiction of MNZ must provide first aid equipment and approved, efficient fire extinguishers in the pits and at strategic positions on the course. The club official in charge must notify the Steward and officials of the whereabouts of the first aid and fire fighting equipment
- Regulation 6-2-2- No meeting shall be held unless a person trained in first aid is in attendance, recommended a doctor at road races.

“Lack of Equipment at sporting Event”

- Published 2006 Medical Protection Handbook. At a boxing match in the UK, 2 doctors were in attendance and an ambulance. However due to presumably lack of knowledge by the doctors, but also a lack of necessary equipment coupled with inexperienced ambulance officers, the appropriate airway management was not undertaken. The patient suffered long term neurological impairment and successfully sued the doctors.
- Learning points in the judgement included that skills and knowledge must be current, medical attendees must have a knowledge of the sport, its risks and potential injuries to participants, and ensure appropriate equipment and support is available.

What to do about this?

- I agreed to become the medical adviser of a private ambulance service, which subsequently went in to receivership. Subsequently I set up Pukekohe Motorcycle Medics which provided the medical cover for our club, trail rides and other motorcycle events- when I could not say "No"! This continued until 2013 when I "retired" having never really come to grips as to where the clutch and throttle were on a motorbike, despite many fairly "hair-raising" trips on the back of someone's bike to attend trackside.
- I was involved in many often serious medical events, but I am not going to dwell on them today. Hopefully I made a difference and am still somewhat "qualified" to comment today.

Donald Rumsfeld, American Politician

- Secretary of Defence 1975-1977 and again 2001-2006, making him the youngest and oldest to hold this position
- in 2002 used the terms
- known knowns- things we know we know
- known unknowns-things we know we do not know
- unknown unknowns-the things we don't know we don't know.
- Are there in fact unknown knowns, things we "subconsciously" know but refuse to acknowledge.
- Enough philosophising.

Medical Requirements

- Governed by

- Geography of event
- Risks involved
- Number of riders
- Occurrence of injuries

Trauma and motorcycles

- Unrestrained
- Speed
- Falls from height
- Blunt trauma
- Variable protection re equipment
- Unpredictable injuries

Evidence

- What evidence do we have that early appropriate medical care makes a difference to outcome?
- Who and how many trained medical personnel should be at an event?
- How are we going to fund the optimum medical cover?
- Can we even access the required personnel, whether it be from St John, Wellington Free or the myriad of private "ambulance services"?
- These are known unknowns- but I will outline some of the problems as I see them, current initiatives to improve care and give certainty and clarity to MNZ and members.

Current problems with nomenclature prehospital personnel

- Paramedicine is not currently recognised under the HPCA act. Currently hoped to be in place by 2020
- Currently anyone can call themselves a paramedic, advanced paramedic or whatever
- St John, initiative commenced 2015
- -First Responder, 4 day course
- -EMT, diploma in paramedicine
- -Paramedic degree in paramedicine
- -ICP (intensive care paramedic)- postgraduate of paramedicine

Scopes of Practice and desirable attributes

- Each level of ambulance personnel as outlined are permitted to do a certain number of tasks, administer only certain medications.
- As important perhaps is the individual's experience and ability to recognise and act upon time critical injuries and take appropriate action, arranging appropriate transport as required
- Experience with motorsport preferable, as often a very challenging, dirty and noisy environment
- Be mindful of their own level of expertise, current assistance available from club members and officials , the location of event
- Have the gumption to "stick to their guns" re e.g. stopping the race, suspending riders from further racing if injured
- Know the environment e.g. track layout, steward for day, communication channels

What can you do while awaiting personnel to arrive ?

- Assess scene for safety
- Stop any obvious major external haemorrhage (DDIT)- uncommon in motorsport, usually blunt internal injury
- Call for help
- ABCD if trained in first aid
- Reassure the patient
- Keep the patient as warm and dry as possible to minimise long term complications e.g. clotting defects, acidosis and decreased cardiac output

Hypothermia- you can help avoid this

- Maintain the injured person's temperature above 35 degrees (not that you will have a thermometer!)
- This will help to ensure that if the person is more severely injured, their chances of a good long term outcome are enhanced.
- Medical management is increasingly focussed on looking at long term outcomes- not just immediate survival but quality of survival at say 30 days, 60 days and longer.
- Foil blankets are cheap and very portable.
- So, keep warm and avoid potentially disastrous consequences of clotting disorders, acidosis and decreased heart function.

CONCUSSION

- Deliberately in red
- Kevin Henshall, Trauma Nurse Specialist Middlemore Hospital
- "I think you should purvey the message about the lack of tbi (traumatic brain injury) screening within motorsport. This is a very evolving space internationally. The NZ trauma community and ACC are working to lead the way for consistent screening, negating barriers with easing the access for clients to rehab whilst improving self- management rehab education"

WHY?

- Concussions are common-
- It is often difficult to recognise
- A Layman's definition of Concussion as per ACC:-
- "Concussion is a brain injury that can occur in any sport, particularly where there is body contact. Concussion is caused by the impact of force (a blow) to a part of the body not necessarily the head"
- It does not need to involve a period of unconsciousness
- Repeated concussions are potentially dangerous
- Second impact syndrome
- Chronic Traumatic Encephalopathy (CTE)-e.g. in American footballers, rugby,- Dylan Cleaver NZ Herald articles May 2018, no contact in sport in 12 year olds and under

Concussion, ACC Sportsmart, Rugby Union initiatives

- Estimated 36,000 head injuries per annum in NZ -21% from sport. ACC only received claims for 6250 suggesting 1100 currently go untreated.
- 2009-2013, ACC sports related concussion cost $76 million
- 46% are classified as "mild with a high risk of complications"- mainly in rugby, equestrian and cycling- unable to get stats for motorsport
- 11% had multiple concussions within a two year period (2009-2013)
- Evidence shows that with repeat concussions people may experience a decline in general health and quality of life up to 10 years following the injury (ies), at times with disastrous outcomes e.g. poor general health, severe depression and suicide
- Rugby Initiative

Concussion Recognition Tool

- 1) Recognise and Remove from play
- 2)Red Flags
- 3)Signs (what you see)
- 4)Symptoms (what the patient feels)
- 5)Memory assessment- all this available on the ACC Sportsmart website/concussion recognition tool 5

- Available in a "pocket format"- do download
- Know your riders- if they do not seem to be "quite right" they may be suffering a concussion- better to be safe than sorry
- Have the conviction especially at non MNZ events, practice sessions on private tracks, to suggest a rider may have a concussion and stop them riding until medically assessed

Return to Sport

- The injured person must be cleared by a doctor. There is an important document "5th International Joint Consensus statement on Concussion in Sport"- Berlin 2016, published 2017.
- Doctor will assess symptoms, cognition, balance, reaction time, neurologic function, often on a stepwise plan e.g. using SCAT 5
- ACU U.K. guidelines
- >20 years 9 days
- 16-19 years 12 days
- 15 and under 23 days
- But these are the minimum times, the person may require much longer and should be honest about their symptoms to avoid potential long term detriment as outlined before- e.g. fatigue, poor memory, poor concentration, poor sleep, irritability, personality changes, depression

The unconscious rider

- The unconscious rider has a concussion until proved otherwise- i.e. a rider may suffer from one of AEIOU
- A= alcohol
- E = epilepsy
- I =Insulin
- O= Overdose
- U = Underdose
- but it is most likely from TIPS
- T= trauma, and not
- I=Infection
- P=Psychosis
- S= Stroke
- in time the other causes should be ruled out, especially testing for blood glucose level.
- If come across a rider not moving, "snoring" or apparently not responding, the most important thing is to maintain the airway either by jaw support or chin lift.

Take Home messages

- Accidents do happen, initial recognition, management and referral is critical especially in major injuries.
- Encourage club members to be trained in first aid, even at First Responder level, a 4 day course.
- Have a system for reporting injuries to the medical staff- ISBAR:-Introduce, Situation, Background, Assessment and Requirements
- ATMIST-Age rider, Time of injury, Mechanism of Injury, Injury, Signs and Symptoms, Treatment
- PHEM (Pre Hospital Emergency Medicine)will become a subspecialty in its own right, starting now in the UK-difficult in the past to know which specialty it should come under- surgery, anaesthesia, emergency medicine.

Final take home messages

- Keep up the good work at club level, and please apply for funding for medical cover, with MNZ help, if necessary.
- Above all, help MNZ to "Foster the Sport of Motorcycling, making it fun, safe and fair."
- Thank you for your attention- drinks await.
- Questions?