

Zurich 2012: our cohort of 'concussionologists' - conveying consensus

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Dr Mike Evans' YouTube video 'Concussions 101'¹ plays on many desktops partly as a superb audiovisual aid to patients but mostly as a humbling reminder to us as to how efficiently Evans has conveyed to 50 363 people (so far!) the mantra of concussion care. Similarly, every time we watch a South African rugby match, we are astounded by the efficiency of the Wayne Viljoen managed BokSmart² initiative that has put a field side concussion card in the pocket of 45 432 coaches and referees at all levels of South African rugby countrywide.

CONCUSSION STATUS QUO

For those of us who deal frequently with concussed patients, the series of international conferences,³⁻⁵ and the consensus documents and team physician guidelines⁶⁻⁷ that have emerged since Vienna 2001, have reassuringly guided us from the somewhat dogmatic neurological grading systems of the past to an evolving framework of consensus protocols that facilitate a more personalised approach to the concussed player based on both

subjective feedback and objective clinical and cognitive evaluations. We have become comfortable with the on-field screening questions, field side SCAT2, serial office assessments, balance testing and return-to-play protocols.

ZURICH 2012

The Fourth International Conference on Concussion in Sport in Zurich from 1 to 2 November 2012 represents the latest gathering of sports neurology's most distinguished minds to further enhance our ability to more objectively and effectively manage this enigmatic neuropathological process. The concussion-in-sport leadership group continues to engage increasingly widely and harness the resources of key international sports bodies. Challenges posed have been taken up internationally and effectively addressed at levels as diverse as state legislatures (the USNs 'Lystedt Law') and rural development programmes (South Africa's BokSmart).

For 'concussionologists' some frustrations remain. The field has evolved from an anecdotal to a consensus approach but not yet achieved an evidence-based stature. Published research expresses our desire to find genetic⁸ and diagnostic markers,⁹ significant and accessible imaging techniques¹⁰⁻¹² and, perhaps the ultimate holy grail of concussion, meaningful medical interventions that might hasten recovery.¹³⁻¹⁴ Despite many advances, it can be frustrating for

clinicians to be in what seems like an 'observer status' in relation to the patient. Current management consists of monitoring physical and cognitive rest as the concussed patient recovers; it would be ideal if there were some way that clinicians could expedite healing.

As concussion clinicians we have con-

sensus on early identification and removal from play (Mike Evans and BokSmart have both comprehended and disseminated this) followed by individualised serial evaluations that facilitate return-to-play based on the resolution of physical, cognitive, emotional and sleep symptom complexes (that's where we play our part).

IMPLEMENTATION AND DISSEMINATION LAG

Unfortunately, our propagation of these guidelines, as with other public health agendas, still has some way to go.¹⁵⁻¹⁶ In a recent issue of *BJSM*, Price *et al* 'Current Practices in Determining Return to Play Following Head Injury in Professional Football in the UK' report that 56% of professional league football teams in the UK do not follow consensus guidelines. Apart from soccer, concussion protocols are not yet widely applied in the sports of rugby union¹⁷⁻¹⁸ and ice hockey.¹⁹ Dissemination of new protocols into family/general practice takes time; concussion guidelines are not yet widely adopted in that setting.²⁰ Language barriers provide additional challenges—the bulk of literature and dissemination has been in English to date. A major international rugby team from a non-English speaking country still does not obtain computerised baseline data nor does it use SCAT2. Hence, there remains work to be done to implement concussion-in-sport management consistently and widely. Concussion is a public health concern that

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warrants international clinical consensus -we in sports and exercise need medicine must continue to help our colleagues adopt the recommendations.

IN THE FIRST INSTANCE IT IS INEVITABLE THAT WE WILL BE PREACHING TO THE CONVERTED...

Most of the 180 delegates to the Zurich meeting will be au fait with nearly every aspect of concussion-related neuroscience that will have been processed via a series of preconference reviews and moulded by the doyens of concussion science into the Fourth Consensus Statement. This level of expertise may, however, not be available at the coalface of concussion care.

TIME TO DISSEMINATE MORE WIDELY: HOW CAN WE BETTER ENGAGE THE GATEKEEPERS?

Emergency departments and family physicians are the gatekeepers who care for most amateur athletes. Failure to disseminate information effectively among these colleagues will hinder access for sports-persons. This applies particularly in young amateur athletes who have a higher incidence of injury²¹ and may also be more vulnerable to its effects.²²⁻²⁴ Remember that field side concussion expertise is unlikely to be available in many situations and that many patients will present to the emergency room or family practitioner.²⁵

INNOVATIVE STRATEGIES TO TRANSFORM CONSENSUS INTO CUSTOM

Sports safety policy and practice requires action across all levels of the sports delivery setting.²⁶⁻²⁷ For our concussion circle this may encompass involving new partners and adopting novel approaches that acknowledge those closest to the player (eg, coaches and parents) as well as primary care clinicians as significant 'end-users'.²⁸ Adjuncts to current tactics might contribute to a two-pronged approach that makes concussion part of the lexicon of both a broader gamut of medical professionals as well as targeting enhanced public awareness. The following suggestions may help to convert consensus to custom and address the 'gap in care' highlighted by Price and others:

.. Publication of consensus guidelines beyond just sports medicine and neuroscience journals.

10- 'Marketing' protocols as 'Guidelines for emergency room concussion management' or 'A Family Practitioner's guide to care for the concussed athlete'.

10- Translation of consensus statements and protocols into languages other than English.

10- Embracing popular and electronic media sources which provide a large proportion of public information;¹⁹ a central website containing protocols, guidelines and useful links and an orchestrated media campaign that emphasises the practical translation of evidence-based neuroscience rather than speculative and sensational aspects of the condition.

BROADENING OUR CLINICAL TEMPLATE

SCAT2 is our clinical gold standard but it has limitations. Attempts have been made to customise and improve it⁹ and more multifaceted concussion assessment criteria such as the Sports Concussion Office Assessment Tool⁰ are now commonly used by South African rugby clinicians. These may allow for wider clinical dissemination among the medical profession. Clearer office assessment guidelines would allow concussion protocol to take its place in the family practitioner's armamentarium alongside diabetic/¹ asthma³² and hypertension intervention³³ guidelines. Currently, many GPs feel the need to refer on and specialist expertise may not be readily or promptly accessible.

TIME TO CONVERT

The 'Concussion in Sport' group of experts conceived in Vienna has constructively altered our perception and clinical approach to concussion. The exponential increase in research articles on concussion that will be reviewed for Zurich 2012 is a tribute to their insight and has created a milieu in which diagnostic and interventional advances may well be imminent. However, we must not rest on our laurels. Greater implementation of our existing conventions is always desirable; the 2012 consensus meeting is likely to galvanise international cooperation. It is incumbent upon all of us with an interest in sport-associated brain injury to provide the momentum to disseminate this information.

What Mike Evans and BokSmart have understood well is that often the most important people involved in initial concussion intervention are those closest to the player-coaches, referees and parents. If these actors understand the injury's potential sequelae, it will expedite removal from impending danger and facilitate referral into our network of medical care. The international concussion network will gain superior

knowledge and be expanded in number because of the coherent messages that are likely to emerge from Zurich 2012.

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