

## Online Eventing Risk Management Seminar

The Online FEI Eventing Risk Management Seminar took place on 23 January 2021 led by David O'Connor (USA), Chair of the FEI Eventing Committee, together with Geoff Sinclair (AUS), Chair of the Eventing Risk Management Steering Group.

Due to the world health situation, organising the Risk Management Seminar provided a virtual opportunity for different and interactive presentations and discussions allowing a higher attendance.

The main presentations provided information on Coronavirus related to Risk Management, Review of Risk Management Statistics, Studies and Research Projects. Presentations dedicated to Officials Roles during Cross Country and Education of Athletes and Coaches were also part of the important discussions that took place.

A total of 117 participants from 30 countries (ARG, AUS, AUT, BEL, BLR, BRA, CAN, COL, DEN, ESP, EST, FRA, GBR, GER, HKG, HUN, IRL, ITA, JPN, KSA, NAM, NED, NOR, NZL, POL, POR, SUI, SVK, SWE, THA and USA) officially attended, including FEI Eventing Officials, National Safety Officers, NF Representatives, Athletes, as well as invited speakers and guests (*see participants list – Annex I*). In addition, the seminar was publicly web streamed on YouTube through the FEI website which allowed 400 additional viewer/attendants.

### 1. Medical Presentation

*Dr Mark Hart, FEI Medical Committee Chair*

*Annex II*

*Annex III*

Virginia Tech Helmet Research

### Coronavirus related to Risk Management

- Mark Hart, Medical Committee Chair, provided a current picture of the Covid-19 impact on Equestrian Sport, by reviewing the symptoms, mitigation measures, virus' mutations, vaccines, FEI response in regard to safe running of International competitions and Tokyo Olympic Games.

An overview of the guidelines applied by the FEI and NFs was presented including the very pro-active action of the FEI to ensure competitions were run safely by creating a "return to play" policy. This tool helped to assess Covid-19 risk propagation and provided measures that OCs should follow to keep the venue safe. Everyone present on the venue were required to follow these mitigation measures (OC, Athletes, Grooms, Officials, etc.), however the area of concern identified was the social events during competitions which had led to Covid-19 propagation at certain events.

The "return to play" guidelines had been developed as a dynamic document and Mark Hart called for comments / suggestions, which would allow updates according to developments.

The Tokyo Olympic Games would be challenging in the pandemic situation, gathering people from all around the world at a venue was creating a complicated situation, which could put the medical system under additional pressure.

There were still many open questions linked to travel, accreditations, athletes' training (some countries had restrictions), effectiveness of the vaccine, etc. In addition, Equestrian sport had specific issues related in particular to additional delegation members linked to the horse i.e. grooms, Veterinarians and farriers, which could raise different issues if tested positive.

### Body protectors and other protective equipment

- Helmet

Helmets were currently certified to international standards on a pass/fail basis although the reasons for passing or failing were not specified.

The Virginia Tech Helmet Research were developing an Equestrian specific helmet rating system (by using a star system) to supplement certification standards based on real-world injury scenarios and concussion risk for equestrian sports. This would help to choose the

most protective helmet and will encourage manufacturers to improve helmets for Equestrian sport.

The specific issues relating to Equestrian sport needed to be taken into consideration such as the horses' weight of approx. 450 kg, travel at speeds up to 55 km/h over fixed obstacles, riders' head position at 2.7 meters off the ground, horse unpredictability, low incidence but high severity head injuries, linear and rotational head accelerations, etc.

Mark Hart encouraged participants to look at the "Virginia Tech Helmet Research" presentation (*Annex III*) given to the Medical Committee, as it was very informative.

The Medical Committee and Eventing Risk Management Steering Group was following up on the helmet standard subject and would provide updates to the Eventing Committee.

- Body protector

At the moment, there were not enough studies to base evidence to recommend the compulsory use of air vest. Solid evidence was required before making recommendations. Again the Medical Committee and RMSG were following this up.

#### Eventing Annex D - Medical Coverage

The Annex D-Medical specific guidelines had been reviewed and was included in the 2021 Eventing Rules as recommendations but not mandatory until 1 January 2023.

Mark Hart called for feedback on the "Annex D – Medical Coverage" from the Eventing Organisers, Officials to be sent to the Medical and Eventing Committees. This would allow a review of the medical resources in different countries to understand the most practical approach to the compulsory Medical coverage.

**No questions were asked.**

## **2. Risk Management Program**

*Annex IV*

*Geoff Sinclair, Risk Management Steering Group (RMSG) Chair*

*Annex V*

*David O'Connor, Eventing Committee Chair*

#### Risk Management Steering Group (RMSG) 2020 Update and 2021 Ongoing Projects

Geoff Sinclair presented the Risk Management Steering Group (RMSG) members and provided a brief overview of the 2020 activities and 2021 ongoing projects. These included the review of serious incidents, study of frangible device systems, update of XC Guide for Officials, development of FEI Campus Video projects, review of Statistics and Horse injuries, review for possible improvements to Athlete and Officials education, development of HFI with EquiRatings, review of Protective Equipment Standards, etc.

#### Highlights of International Statistics

- Due to the Covid19 situation, the number of competitions had diminished by 50%
- The new CC11\* - Intro level introduced 2 years ago, had grown in popularity
- The number of MERs obtained by Athletes at short format competitions had increased, however, the fall rates were lessened compared to previous years

It was positive, but raised the question "why"?

One positive hypothesis was that athletes had increased training during lockdown. The second hypothesis was that Cross Country courses were a little softer since competitions had resumed. Both assumptions could explain the lower fall rate, the 2021 data would provide additional information and possible confirmation.

Due to extraordinary situation and lesser competitions, it was hard to make any conclusion at this time.

For the last 3 years, falls not related to a XC fence were monitored. The data showed in 2020, 8% of the falls were non-XC fence related (on the flat) which needed to be considered by Course Designers and Officials. 12.5% falls happened in Jumping and 6.3% during Warm-up.

The main objective of the Eventing RM program remained the reduction of all horse falls and especially rotational falls. Statistics have shown a decrease of rotational falls over the

years, however work must continue as this type of fall is linked to the highest risk of serious injuries.

Injuries reporting had improved over the last years. The 2020 data showed 2 serious injuries out of 358 unseated athletes, 2 serious injuries out of the 92 non-rotational horse falls and 3 serious injuries out of 12 rotational falls which reemphasized the importance of reducing the rotational falls.

### 3. Frangible Devices Updated Standard

Annex VI

*Mike Etherington-Smith, Risk Management Steering Group (RMSG) Member*

*Dave Vos, Risk Management Steering Group (RMSG) Member and Frangible Device Working Group Member*

The following essential points were made by the RMSG:

**The mandatory use of frangible devices** had been extended to all levels as from 1<sup>st</sup> January 2021 for all open oxers, open corners, verticals or near verticals with open rails, top rail on triple bars and gates as stated in the 2021 Eventing Rules. Also now included in the Eventing rules were articles clarifying Cross Country design such as sloping leading edges or ground lines.

It was clearly communicated that **Officials were responsible**, in particular TDs and CDs to understand the frangible devices systems and how to fit them correctly. It was also important for Course builders be educated in regard to the different systems and how to fit them. All information on frangible device technology was available on the FEI website (*Eventing / Risk Management / Frangible Devices*) together with a MIM FAQs document which had been developed as well as a list of Frangible Device Advisors who could be contacted for any help with the fitting of MIM devices. The documents were regularly updated as soon as additional information was available. All involved were therefore invited to provide feedback.

Currently, the rules did not provide an exact definition of a **"Table fence"**, therefore it was recommended to use the new TABLE MIM devices on new tables.

A strong reminder was made to all to ensure that **no variation or experiment** be done to the approved frangible device systems as they were designed to activate as instructed following intensive testing and official approval process.

The **Cross Country guide for Officials** was an indispensable reference document containing information also on the use of frangible devices.

**MIM Yellow Clips** have been developed to be used for fences intended to be jumped at an angle by the CD. If the fence can be jumped at an angle or straight, the Course Designer's intention prevails in regard to the choice of the frangible device to be used (yellow or red clip).

#### Frangible pins update:

- For 2021, the use of front and reverse pins are allowed on existing fences only. All new fences **must** be fitted with frangible devices meeting the new standard.
- As from January 1<sup>st</sup> 2022, **no front pinning** will be allowed on any fences.
- **Reverse pin for back rails** for mass below 60kg is in final process of approval and heavier rails (up to 90 kg) will need further testing once the Covid-19 situation permits testing.
- The **keypoints from the Updated Standard** were described, new concepts are strongly encouraged and the RMSG would provide feedback on all new ideas.

#### Questions / Answers:

**Q: What was expected from a Ground Jury walking the course and facing an angled jump with a red clip and no yellow clip available?**

**A:** In 2021, for an existing fence, it would be acceptable. For a newly built fence, the fence would not be acceptable. As from 2022, all fences intended by the CD to be jumped at an angle will have to have a yellow clip to be in accordance with the rules.

**Q: What was the kettlebell test?**

A: The kettlebell and chain pendulum test had been introduced with the Updated Standard V2 for frangible/deformable cross country fences to better represent a 'hanging leg' impact scenario to reproduce severe impact on fence with some leading to rotational falls which frangible fences should help mitigate. The test was available on the FEI website under *Eventing / Risk Management / Deformable & Frangible Devices*

**Q: What is the min width (face) distance to use gate mechanism for Post and rail Jumps?**

A: the MIM system has been tested to be activated down to 1.4m jumpable width and up to 4.5m jumpable width. Dimension and mass limits need to be met as per instructions.

**4. Risk Management Studies Research Projects  
EquiRatings**

*Annex VII*

*Sam Watson and Diarmuid Byrne, EquiRatings*

**Horse Form Index**

The EquiRatings® presentation provided an explanation of the work, which had been ongoing for the last couple of years in upgrading their new risk management solution, the Horse Form Index (HFI). This index focused on the positive aspect of data collection with the aim to reduce horse falls. It comprised all of the same concepts as the ERQI (EquiRatings Quality Index) with a continued simplified focus on a horse's recent Cross Country performance.

Advantage of HFI:

The significant advantage was that the calculation formula and methodology being fully transparent and allowing Athletes and owners to calculate their own metrics at any time.

How it works:

The metric assessed how many positive outcomes vs. how many negative ones to allow Athletes one method to improve performance and assess risk before making a decision to enter a higher level. EquiRatings® has developed the metrics to provide clear evidence, easy to communicate, to reinforce Athlete's responsibility.

HFI Calculation table and implementation:

By selecting the level of competition at which the horse would be competing, a table providing the HFI score based on the 8 last runs average for CCI4\* and above or 6 last runs for CCI3\* and below will be available in the FEI databases' Horse profile with restricted visibility, by mid-2021.

Athlete responsibility:

The purpose of the HFI was to provide accurate metrics to enable Athletes one of many methods to make better-informed decisions about the suitability of their Horse to compete at any given level, at any given moment in time. It is not any guarantee of success or

failure at a particular level. The evidence of the HFI was also displayed by EquiRatings®, showing the difference in Cross Country performance from A-rated Horses to E-rated Horses, using the HFI. The HFI will be one complement of the existing qualification system providing a measurement of horse form.

### Questions / Answers:

#### Q: Will Officials have access to HFI data?

A: The HFI will continue to be sent to Officials (TDs) for 4\* and 5\* events

Q: **Will the FEI commit to releasing the reports (including specific methodology related to the development, testing and validation of models) that sit behind the EquiRatings work presented today?** Given the importance of any risk factor identification or risk prediction work in the development of policy aimed at protecting equine welfare and athlete health and safety, and taking into account that performance and risk are clearly not independent, it was felt important to clarify that pitching the HFI as a performance metric alone did not mean decisions based on the HFI will not impact on risk as well.

It was critical that policy developed to manage risk was robust and available for independent scrutiny and critique. Without understanding the genuine predictive ability of indices that might be used to make decisions about which competitions to enter, there is significant risk of providing a false sense of security to those who might not be ready to step up a level, therefore potentially doing more harm than good.

A: A transparent offline discussion to discuss how the FEI Risk Management Steering Group (RMSG) and Eventing Committee came to accepting the trial roll out of the HFI will be organised.

### Athlete Categorisation

In their additional research and analysis, EquiRatings® highlighted that there would be no significant impact on Athlete Categorisation from a risk management perspective should the validity period for an MER be changed from 8-years (current) to 5-years. When analysing fall rates statistics and reducing the validity period of MER from 8 to 5 years, the falls rates numbers did not significantly change. There may be other reasons that the RMSG and Eventing Committee will review athlete categorisation period.

### Return to Play

EquiRatings® provided percentages of Athlete and Horse fall rates for horses having competed at FEI 4\* & 5\* competitions from 2016-2019. The results highlighted that horses returning to FEI competition at 4\* or 5\* level without an MER within the past 18-months were at significantly higher risk than those without more recently obtained MER results. The RMSG would look into this information and provide a recommendation to the Eventing Committee.

## 5. Risk Management Studies Research Projects

*Annex VIII*

### **Alogo Equine Sensor Device "Move Pro"**

*David Deillon, Alogo CEO*

*Staffan Lidbeck, Risk Management Steering Group Member*

*Dave Vos, Risk Management Steering Group Member*

David Deillon the developer of Alogo, introduced a technology concept that could improve evaluation of the jump action on Cross Country. As a former professional Jumping Athlete, David Deillon's objective was to develop a device to visualise and monitor horse jumps to better understand how to improve performance. This resulted in the development of a smart sensor monitoring the Horses' movement that could also be of great value for analysis on a Cross Country course.

The device was water and shock resistant, on battery supply, placed under the girth of the Horse monitoring the Horse's movement, trajectory, pathway, course mapping, roll, pitch, angles, strike velocity, strides, speed, intensity & energy consumption, cardiovascular load, cadence and up to 36 other functionalities, providing precise data (1 cm margin

error). Alogo, once the Horses' data was collected, showed comparative trajectory graphs, stride analysis and data comparatives.

Dave Vos supported the development of such a device to monitor Horses' trajectory and information on Cross Country and stressed the importance of the measured cardiovascular load as support to Risk Management and performance data. The device would enable to open another level of perspective to Horses' evaluation on Cross Country.

Staffan Lidbeck highlighted the Alogo device could be tremendously useful to correlate changes in stride and locomotion patterns to identify fatigue of Horses at high level Eventing Competitions. The aim was to fit the Alogo sensor on 100-150 Horses during the full Cross Country test at 2-3 5\* level competition and video record each horse at beginning, middle and end of the XC Course. An objective assessment of each horse at finish regarding degree of fatigue would be measured by a selected panel of Sport professionals. The aims of the study would be to identify specific patterns correlated to Horse fatigue on course, fitness, risk factors that would predispose to Horse fatigue. This could have significant value on improving training methods and to reduce the stress of Horses work levels.

David O'Connor believed that this was a fascinating device and precision developed technology could bring improvements to safety and performance of the sport.

Funding would be necessary to continue to develop and start implementing the Alogo device use. A call for interest was made to all participants. Such devices were also available for personal use.

#### Questions / Answers:

**Q: Who is going to gather and analyse all the data from the sensor? Will the results be published by FEI?**

A: Data will be analysed by Artificial Intelligence Algorithms by Alogo and shared with the FEI. The RMSG group would then further correlated data with existing evidence and further publish results.

#### 6. Officials Role during Cross Country Day

*Annex IX*

*Anne-Mette Binder (DEN), FEI Eventing Judge*

*Alec Lochore (GBR), FEI Eventing Technical Delegate and Course Designer*

*Pierre Le Goupil (FRA), Eventing Committee Member and FEI Eventing Course Designer*

The focus of the presentation was on Ground Jury, Technical Delegate and Course Designer roles during Cross Country, whilst they are all working together with the other key Officials such as the Veterinary Delegate, Veterinary Service Manager, Chief Medical Officer and FEI Stewards.

It was important to remind ourselves what our responsibilities were:

- We are responsible for the best interest of the Horse
- We are responsible for the best interest of the Athlete
- We are responsible for the actions of one another

Together we are all responsible for the best interest of the Sport

- We must work to ensure high levels of risk management
- We must work to ensure high levels of integrity
- We must champion and congratulate equine welfare, good riding and Horsemanship in whatever form we see it

The roles before, during and after XC were to:

- ensure the safety of the course at all times
- work as a team with a positive, respectful and robust communication
- take decisions on dangerous riding
- take decisions on breaking of frangible devices
- gathering information, interviewing and sanctioning at the end of the session
- debriefing between the Ground Jury members, CD and TD

Proactivity was a key word to prepare for Cross Country day.

The key criteria for the management of risk was:

- Communication
- Course needs to be at the appropriate level
- Must attend a serious incident meetings
- Language might be an issue – but should not prevent to have a robust communication plan
- Even if difficult to remove a fence, need to be brave enough to do it, and inform all concerned about it (steward, commentator, athletes, etc.)

### Questions / Answers:

#### Q: How to use video reporting for narrow fences?

A: For the judging of narrow fences, smartphones and tablet devices have proven to be very useful. The position of fence judges and kind of device used must be discussed beforehand by the TD and GJ when walking and assessing the course. This will allow the review of video footage of narrow fences.

### 7. Education of Athletes & Coaches

Annex X

*Chris Bartle (GBR), Coach and former Olympic Athlete*

*Clips to be watched on YouTube*

*Jonathan Holling (USA), Athlete, Coach, Member of the Risk Management Steering Group*

*William Fox-Pitt (GBR), Athlete, Member of the Eventing Committee*

### Athletes Moving up a Level

Achieving a Minimum Eligibility Requirements did not automatically entail that the Athlete / Horse were competent to move up a level.

MERs was a technical base for the FEI to ensure the Athletes and Horses had a minimum experience to move to the next stage at the very base level. MERs were necessary but more importantly, the Athlete with the Coach, must then feel competent and confident at the level.

It was emphasised that Athletes had the responsibility. An MER was not a right to move up and Athletes needed to be honest with themselves.

**The hierarchy of competence** was presented as a basic reference allowing to raise awareness. The table included:

- Unconscious Incompetence: you are unaware of the skill and your lack of proficiency.
- Conscious Incompetence: you are aware of the skill but not yet proficient.
- Conscious Competence: you are able to use the skill but only with effort.
- Unconscious Competence: performing the skill becomes automatic.

### Officials:

- Officials, Coaches, Peers/Friends should not be afraid to provide feedback on an Athlete's ride.
- Athletes encourages Officials to **be brave** on the Cross Country day and not be afraid to take decisions, as Athletes needed it. Officials' responsibility included the protection of the Horse and the Sport.
- Riders tent at major events with CCTV: allowed a good appreciation of good and bad riding during XC. It was recommended that GJ spend time during XC in this tent.
- Sanction system must be used fully by the Officials.

### Athletes:

- There was a difference between performance and safe riding: Coaches will do their best to train Athletes to achieve a performance. A good performance ensured a safer ride, but sometimes, safe riding and the importance of good picture were not prioritised.
- Style award / technical merit prizes could be a good idea for training but should be separated from the actual Eventing competitions. Assessors need to be very experienced.

### Questions / Answers:

#### Q: How were style awards competitions run?

A: In Germany and North America as a separate classification. It rewarded good XC riding and not necessarily good show jump riding over XC fences. It was important to have the appropriate "Judges".

#### Video Clips:

Several clips were shown and commented as to what the situation would require as decision from the Athlete and Officials.

*Clip 1: Case of performance taking over safe riding – not a good balance / rider struggling with the strides. GJ should have a talk with the athlete. The rest of the ride had to be taken into consideration as the cumulative effect was key.*

*Clip 2: It was not dangerous riding, it was more of a stupid move and was bad horsemanship/choice. This athlete should be talked to as losing temper and correcting a horse in front of the saddle should be addressed.*

*Clip 3: It could be asked to the CD and TD if in this table to table configuration, it was made clear enough that the second table fence was to be jumped as a corner and not as a table. It was not dangerous riding but a performance issue.*

*Clip 4: The fence was not very well ridden and the design of the fence could be questioned, was there a ground line? The second horse had a sharp bit and hit fence with hind legs, luckily the fence breaks. Sharp bits cause problems as pain in the mouth could lead the horse to closing his eyes.*

*Clip 5: The horse almost jumped from a standstill. From a Course Design point of view these fences could have been separately numbered to allow a circle to the left. The athlete should at least be talked to.*

*Clip 6: It was an example of good riding.*

*Clip 7: The horse has a sharp bit, the athlete is struggling for control, the athlete should have been stopped. It was dangerous riding.*

*Clip 8: The horse was tired, grinds to a halt in front of a table, is represented without impulsion. The athlete should have been pulled up, potentially penalised.*

*Clip 9: The horse and rider initially seemed to be in good shape, long stirrups, galloped up a hill, which seemed to have an impact on the horse. The horse showed signs of tiredness and lacked impulsion on an open oxer resulting in a fall. The athlete should have received a yellow card and would need some advice.*

It was strongly felt that sanctions must be given and **Officials need to be brave** to give out sanctions to protect the horse and the Sport as a whole. It was the official way of making sure these athletes were given a penalty to better understand what lead up to the sanction.

The sanction system had changed in 2020, [Articles 525, 526 and 527 of the Eventing Rules](#) should be referred to.

#### Conclusion:

The FEI RMSG, Eventing and IT Department were thanked for organising the Online Seminar. The presenters were sincerely thanked for their time, contribution and valuable input to give these immensely appreciated presentations.

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