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UK Hosts Inaugural Horse Industry Safety Summit



Attendees listened to presentations on a variety of topics all centered around ways to keep equestrians and horse handlers safe.

The University of Kentucky (UK) Ag Equine Programs, Saddle Up Safely, and other partnering organizations hosted the inaugural Horse Industry Safety Summit on April 23 at Spindletop Hall, in Lexington.

The event featured researchers, equestrians, and equine enthusiasts giving oral and poster presentations and participating on expert panels. The day focused on keeping equestrians and horse handlers safe.

Highlights from the event are featured in this month's *Bluegrass Equine Digest*.

"I am extremely pleased with the inaugural Horse Industry Safety Summit," said Fernanda Camargo, DVM, PhD, associate professor, equine extension specialist, and planning committee chair. "The presentations were a perfect mix of scientific discoveries as well as practical tips. What makes this group of presenters even more special is that they

aren't just accomplished researchers, they are also horsemen."

Presentations included:

- A welcome address by Hall of Fame jockey Chris McCarron;
- How helmets protect riders' heads by Stephanie Bonin, PhD, PE, a senior biomechanical engineer with MEA Forensic Engineers and Scientists;
- The role of nutrition and fitness in rider safety and performance by Daniel Stewart of Pressure Proof Coaching Academy;
- Concussion baseline testing and return to ride protocol by Carl Matacola, PhD, ATC, FNATA, director of the Jockey Equestrian Initiative

and professor and associate dean of academic and faculty affairs in the UK College of Health Sciences;

- Life-changing aspects of a traumatic brain injury by Mindy Coleman, counsel for the Jockeys' Guild Inc.;
- The importance of protective vests by Sarah Andres, PhD, chair of the U.S. Pony Club safety committee;
- The safest way to fall off a horse by Danny and Keli Warrington of Land-safe Equestrian;
- Jockey injury reporting at Maryland Thoroughbred tracks by Gabrielle Garruppo, a researcher from MedStar's Maryland Horsemen's Health;
- A multidisciplinary approach to post-concussion care for equestrians by Lisa Harris, a physical therapist at Cardinal Hill Rehabilitation Hospital;
- Online equine behavior and safety education by Gayle Ecker, MS, Equine Guelph director;
- An equestrian-perspective safety panel, moderated by Jen Roytz, of the Retired Racehorse Project, and featuring Hall of Fame jockey Pat Day; Richard Picken, show jumping coach; Jane Beshear, former First Lady of the Commonwealth of Kentucky and avid amateur rider; and Eric Hamelback, former farm manager; and
- An organizational-perspective safety panel, moderated by Dan Fick, of the Racing Officials Accreditation Program, and featuring Coleman; Hamelback; Sonja Keating of the U.S. Equestrian Federation; Carol Kozlowski of the U.S. Eventing Association;

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INAUGURAL HORSE SAFETY SUMMIT

Vince Gabbert of Keeneland; and Steve Koch of the National Thoroughbred Racing Association.

The summit organizing committee included representatives from UK Ag Equine Programs, UK College of Health Science, Kentucky 4-H Horse Program, U.S. Pony Club, New Vocations Racehorse Adoption Program, Retired Racehorse Project, Saddle Up Safely, North American Racing Academy, and UK College of Public Health.

"I am very appreciative of all the members of the organizing committee, who have been meeting and working on the

program for the past year," Camargo said. "It is really gratifying to see this event launch and to see how well-received it has been. As a result, the committee will be meeting soon to start planning the second safety summit."

The UK Ag Equine Programs, UK HealthCare, Kentucky Horse Council, the Kentucky Department of Agriculture, Landsafe Equestrian, the National Horsemen's Benevolent and Protective Association, Dinsmore Equine Law/Laura Holoubek, and Ride Safe supported the Horse Industry Safety Summit. **UK**

>Holly Wiemers, MA, APR, is communications and managing director for UK Ag Equine Programs.

How Helmets Protect Your Head

Stephanie Bonin, PhD, PE, a forensic engineer who studies injury biomechanics, works for the Southern California firm MEA Forensic. A former event rider and self-described nerdy horse person who loves computer modeling, she studies brain injuries and helmet protection. At the Horse Industry Safety Summit she reviewed how helmets protect a rider's head.

In her research with MEA, Bonin examines how the human head responds to injury and evaluates the "crush" observed in a helmet to see what the head and brain experienced upon impact. Her research contributes to the concussion database by capturing head impact kinematics (a branch of classical mechanics that describes the motion of points, objects, and groups of objects without considering the forces that caused the motion), correlating kinematics to clinical diagnoses, and improving helmet protection. "What is the head experiencing during a fall, and how do we know what to design a helmet for?" she said. "What is the starting point? We have to understand what happens in order to make changes in helmet design."

Bonin said brain injuries are typically classified as either focal (which includes hematomas, hemorrhages, contusions, skull fractures, and edema) or diffuse (which includes concussion and indicates that the injury happened throughout the brain tissue). These injuries can be caused by:

- Linear acceleration (which is likely to cause issues such as skull fracture, epidural hematoma, or contusions secondary to skull fracture); and/or
- Rotational acceleration (which is likely to cause issues including concussion and diffuse axonal injury).

Both types of acceleration cause brain strain.

She said studying linear acceleration helps scientists and doctors understand what type of head trauma a person must experience to result in a concussion. She described how, in the automotive industry, researchers use test dummies with accelerometers to record acceleration during impact. Then, they use the accelerometer data to correlate dummy acceleration to injury.

"We're measuring 10 milliseconds of acceleration," Bonin said. "Mouthguards are another way to gather data; our top teeth are coupled to our skulls."

Bonin said riding helmets are designed to reduce peak linear accelerations ("The hard outer shell keeps things from penetrating the skull, and foam absorbs energy," she said), and some manufacturers are starting to produce helmets designed to reduce rotational



Stephanie Bonin

UNIVERSITY OF KENTUCKY

Masthead

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HOW HELMETS PROTECT RIDERS' HEADS

acceleration, as well.

“Equestrian helmet standards do not require rotational acceleration reduction—yet,” she said. “However, multi-directional impact protection system technology, or MIPS, is used in helmet design in other applications, such as bicycle and motorcycle helmets. With

MIPS helmets, the liner moves relative to the inner surface relative to the outer surface. MIPS systems have been shown to reduce rotational energy and, therefore, they add additional protection against brain injury.”

Bonin’s next steps in furthering equestrian helmet research include testing rotation management systems, correlating tests to real-life impacts, and collecting data on rider falls. She is also interested

in creating “point clouds” (simply, a set of data points) of racetracks using 3D virtual cameras so she can evaluate at the virtual environment by overlaying video with 3D rider models. **UK**

➤Karin Pekarchik, senior extension associate for distance learning within UK’s Biosystems and Agricultural Engineering Department, served on the planning committee for the Horse Industry Safety Summit.

How Eating Right, Staying Fit Help Keep Equestrians Safe

At the Horse Industry Safety Summit, Daniel Stewart, owner of Pressure Proof Coaching Academy, enlivened the crowd with his rollicking presentation about the role of nutrition and both mental and physical fitness in rider safety and performance.

His presentation combined elements of sports psychology, physical and mental training, and self-empowerment gleaned from his experience as a high-level coach.

Stewart used humor to drive home important messages that have the potential to get lost, particularly because so many horse industry members focus on equine health and performance.

“We can control a lot things, so let’s not just look for frangible technologies and helmets,” he said. “Let’s look at the things we have control over, things that are closer to home,” he said.

He had the crowd laughing during his talk, but his message was serious: “Our behaviors define who we are in our sport.”

He drove this powerful message home with an anecdote about Swedish Olympic equestrians, who keep running shoes in their tack trunks so team members can cross-condition by running while at competitions. They are athletes first, equestrians second, he said.

“Working with horses is unpredictable, but one thing we can control is ourselves,” Stewart said. “We need to define ourselves as athletes, and we need to develop behaviors that help us be more of an athlete. What else can we do to protect ourselves? Fitness, food, function, focus. These are things we know; these are things we can do. We may not need to look any further than ourselves.”

Stewart discussed flexibility, body composition, strength, and endurance—all things an athlete needs but not necessarily what equestrians train to improve.

“We are either in shape or a shape,” he said. “And we can improve upon this.

“If we alter a couple of our behaviors, we can become more injury-proof, more athletic. Avoid close parking spots, sitting (to put on) socks, and soda pop. It’s on each and every one of us to

be athletes. Exercise, rest, and make sure we stay mentally and physically strong.”

He reminded the audience that it’s all too easy to lose the awareness of the horse-rider connection and recommended we become as fit as possible to avoid relying on technology to keep us safe.

He also outlined the athletic standards equestrians need to ride effectively.

“Strength is the ability to work on a challenge,” he said. “Endurance is necessary, because if the brain gets adequate oxygen, we can make good decisions. Coordination decreases as we begin to fatigue, and our ability to make clear decisions when we become dehydrated or malnourished is diminished.”

He recommended equestrians, like all athletes, develop a nutritional program that includes carbohydrates, proteins, and healthy fats.

“There is a true relationship between nutrition and safety,” Stewart said. “We must fuel our bodies with food and pay attention to hydration, nutrition, and supplements to maintain and improve the horse-rider connection. Rest, exercise, hydrate—we should treat ourselves like we treat our horses.”

In discussing equestrianism’s athletic demands, he noted that balance, symmetry, and body awareness are key components.

“As we develop skills, like greater balance and body awareness, we might not come off the horse,” he said. “We warm our horses up; we need to have a warm-

up and cool-down just like our horses and other athletes.”

Finally, touching on sports psychology, he said mood, psychological stressors, self-image, and emotional distraction can negatively affect riding performance. Anger, confusion, depression, and fatigue are correlated to injury.

Stewart reminded the audience, “We don’t have to be the best, we just have to do our best. We must base our values on our efforts, not on our results.” **UK**

➤Karin Pekarchik, senior extension associate for distance learning within UK’s Biosystems and Agricultural Engineering Department, served on the planning committee for the Horse Industry Safety Summit.



Daniel Stewart

UNIVERSITY OF KENTUCKY

Traumatic Brain Injuries in Equestrian Sport

Dan Han, PsyD, chief of the UK Neuropsychology Service's Clinical Section and associate professor of neurology, neurosurgery, and physical medicine and rehabilitation at the UK College of Medicine, spoke about traumatic brain injuries (TBI) and rehabilitation following TBI at the Horse Industry Safety Summit.

Starting off, he reiterated a common thread among the day's speakers: Equestrians are athletes, and athletes suffer injuries. He stated that, of sports-related TBIs, the highest incidence among adults occurred in equestrians.

"Riding requires a lot of athleticism," Han said. "Riding a horse is tougher than mixed martial arts and kickboxing. It requires a high level of athleticism and neural engagement to ride. It's also very complicated—riding marries a horse and person into synchrony. Other sports pale in comparison to high-level equestrian sports."

Han is accustomed to answering questions about head injuries across a range of sports. One question he's asked frequently is why there is such variability in recovery.

"I'm often asked why someone is able to bounce back from a comatose state and be Olympic-ready and why some recoveries are much slower," he said. "For example, William Fox-Pitt (who competed in the Olympic three-day eventing competition for Great Britain 10 months after a serious head injury) and Jonty Evans (an Irish Olympic eventer who was in a coma for six weeks following a head trauma



Dr. Dan Han

and had to learn to walk and talk again) had very different recovery times. I have to explain that the injury mechanisms are very different."

He explained what actually happens to the brain during head trauma.

"One side gets hit, and the brain squishes into the other side," Han said. "Microscopic tears occur during the injury. The analogy I use is worn fiber. For instance, imagine you see someone wearing a suit. The suit could look fine from a distance, but if the fiber is worn or even torn, you would only see that wear, which is really injury, when you are close up. The integrity of the fiber is affected. That's brain injury."

"There are 1.7 million documented TBIs each year, and TBI is a contributing factor in 30% of all injury-related deaths in the U.S.," he continued. "Health professionals have not always helped athletes understand TBI. It is estimated that up to three million TBIs go undocumented each year.

Doctors have to correctly recognize the injury and treat it appropriately."

Age when a TBI occurs is a significant variable, he said: "TBI affects kids very differently than adults. With kids, injury occurs during development and interrupts the development. Also, females have higher odds of poor outcomes than males."

Han described some of the difficulties associated with TBIs.

"Most concussions resolve in 24 or 48 hours, although they can last for two weeks for kids," he said. "Post-concussive disorder can last weeks, months, even years. TBI can affect memory and attention deficits. It can affect day-to-day function. Headaches are common; smell and taste loss can occur. The neurologic gauge in the brain for mood and emotional state can get out of whack after the trauma of concussion. TBI is related to quality of life and depression rates, because it interferes with enjoying experiences in life. There is a cumulative psychological toll associated with TBIs."

"The good news," Han continued, "is that recovery can still happen over three years post-injury. There is a 'Goldilocks' zone between rest and keeping brain from atrophying. Not doing anything is detrimental to recovery."

"Using physical therapy, occupational therapy, and speech therapy can help with functional recovery. Other parts of the brain take up the slack, but if you are still symptomatic at one year, that might be your new baseline." **UK**

>Karin Pekarchik, senior extension associate for distance learning within UK's Biosystems and Agricultural Engineering Department, served on the planning committee for the Horse Industry Safety Summit.

Diagnosing Head Injuries and Deciding When to Return to Riding

Studies have shown equestrians are at more risk for traumatic brain injuries than participants in most other sports. These can range in severity from concussions (mild traumatic brain injuries) to more severe and life-threatening traumatic brain injuries. Research has also shown that returning to riding or other intense activity prior to the brain fully healing can cause long-term cognitive effects and can also put the rider at risk of another significant injury.

Carl Mattacola, PhD, ATC, FNATA, professor and associate dean

of academic and faculty affairs in the UK College of Health Sciences and director of UK's Jockey & Equestrian Initiative, which conducts jockey and equestrian protection, safety, and performance research, spoke about baseline testing for those with head trauma and return to ride protocols at the Horse Industry Safety Summit.

"If you suspect an athlete or rider of having a concussion, they should be removed from play immediately and be assessed using the SCAT5 protocol," he said. "The evaluation should be administered by a medical advisor or health care professional who has been trained in the evaluation and management of a concussion."

The SCAT5 protocol, which stands for "sport concussion assessment tool 5," can be used to evaluate medical and physical changes in persons age 13 or older following a head injury (there is also a Child SCAT5 for children 12 and younger). Testing

DIAGNOSING HEAD INJURIES

involves on-field or sideline assessment of potential concerns, such as neck pain, double vision, severe or increasing headache, seizure, loss of consciousness, deteriorating conscious state, vomiting, increasing restlessness, or irritability, followed by a cognitive and physical assessment of the individual.

While the old adage says, “if you fall off a horse, get right back on,” when it comes to a rider who has possibly suffered a brain injury, this is one of the worst things to do. Mattacola explained that, usually, a concussed individual won’t immediately be aware of their symptoms. This is why it is imperative for others around them to pay close attention to their behaviors and actions immediately after an incident and prevent them from returning to riding or other strenuous activities.

“Usually the athlete will not recall if they’ve had a momentary loss of consciousness, and it may be more apparent to others observing them if they are experiencing disorientation or confusion, balance or coordination issues, loss of memory, or a blank or vacant stare,” he said. “Their behavior should be monitored; they should not drink alcohol; and they should refrain from operating a motor vehicle.”

Mattacola said a good test to give someone suspected of having a concussion is to ask them a simple question or two, such as what their dog’s name is, then ask them five to 10 minutes later, “Do you remember what I asked you? What was your answer?”

Signs to watch for in the 24 to 48 hours after a possible concussion include:

- A headache that gets worse;
- Drowsiness or difficulty being woken up;
- Repeated vomiting;
- Difficulty recognizing people or places;
- Irritability, aggression, or confusion;
- Seizures; and
- Weakening in the extremities.

Seek (or assist the patient in seeking) medical attention if such symptoms develop.

In the case of a more severe traumatic brain injury, in which the victim loses consciousness for an extended period, call first-aid immediately, do not attempt to move them (other than to maintain an open airway), and don’t remove their helmet or clothing. A medical professional



Studies have shown that equestrians are at more risk for traumatic brain injuries than participants in most other sports.

should assess the individual for a spinal cord injury prior to moving him or her, Mattacola said.

Returning to play (or riding, as the case might be) after a concussion or traumatic brain injury should be a gradual process guided by a physician and coach.

“Who makes the final decision to allow an athlete to return to play?” Mattacola said. “The physician gives the OK for the graduated return to activity, but the coach makes the ultimate decision of

the athlete returning to competition, so it’s a team decision. Coming back from a traumatic brain injury too quickly not only compromises your own safety but the safety of riders, drivers, and others around you.” **UK**

>Jen Roytz, executive director of the Retired Racehorse Project and co-owner of Topline Communications, served on the planning committee for the Horse Industry Safety Summit.

How Protective Vests Impact Equestrian Safety

Researchers know that equestrian sports have a higher injury risk than many other mainstream sports, including football, basketball, and baseball. While much research has been done on helmet safety and the reduced risk of serious injury to a rider when wearing a helmet, there has been little scientific research done on the effect of other pieces of safety equipment, including protective vests, on injury prevention.

At the Horse Industry Safety Summit, Sarah Andres, PhD, chair of the United States Pony Club’s (USPC) Safety Committee, addressed this topic in her presentation about the importance of protective vests for equestrians.

Andres noted that the USPC collects detailed data in the form of incident reports on any fall or other potentially harmful occurrence sustained by a member. These reports include the age, sex, certification level, type of activity, a description of the incident and any resulting injuries, what protective equipment was being worn at the time of the incident, and possible contributing factors to the incident.

This data, Andres said, was a key contributing factor in the USPC updating the language in its rules at the beginning of 2019 from “strongly encouraging” to “requiring” riders to wear protective vests while riding cross-country.

In a retrospective analysis, Andres and colleagues looked back at the 718 incidents reported between 2011 and 2017. They found that 91.6% (658) occurred while the individual was mounted on a horse; of those, 25% of riders were wearing a protective vest. The data was statistically insignificant as to whether a rider had a lower incidence of

PROTECTIVE VESTS

injury while on the flat and jumping in an arena when wearing a protective vest, as these types of riding activities traditionally have a lower associated risk of injury because they do not involve solid obstacles, she said.

Of incidents that occurred when riders were navigating cross-country obstacles, riders wearing protective vests had a 56% reduction in the relative risk of injury compared to those not wearing vests.

Andres looked specifically at injuries involving areas covered by a vest, such as the torso, collarbone, shoulders, ribs, chest, and tailbone. Of the 493 reported injuries in which the rider was not wearing a vest, 123 (24.9%) involved the torso. Of the 165 injuries in which the rider was wearing a vest, 29 (17.6%) involved the torso, suggesting that wearing body protection can prevent torso injuries.

Andres also looked at research done in other equestrian disciplines in which protective vests are common or required. In a study conducted by Michael R. Whitlock of injury outcomes for jockeys in Ireland, the use of protective vests resulted in a decrease in rib fractures in jockeys who fell.

While the data has demonstrated the viability of protective vests when used in more extreme equestrian sports, such as cross-country—part of eventing,



A survey showed that 72% of responding U.S. Pony Club members owned a protective vest.

a popular discipline with many USPC members—Andres wondered how savvy the average USPC member is about protective vests. In 2016, the USPC developed and distributed a survey about protective vests to its members. About 10% of the total USPC membership at

the time returned responses, giving data from 890 members.

USPC members are categorized from beginners (uncertified to the D1-3 levels), intermediate (C levels) and advanced (national level certifications of C3, B, and A). While the survey showed that 72% of respondents owned a protective vest, that number rose to 86% when considering D2 certifications or higher and 93% when considering C-level certification or higher. This means the more experienced the rider, the more likely they are to own a protective vest.

Of the members who did not own a protective vest, 50% cited cost as the primary reason, while other reasons included being unsure of the benefit of wearing one, the vests being uncomfortable, and difficulty fitting them properly. Most members who owned protective vests said they wore them only for cross-country riding.

While Andres' study did not address air vests (an inflatable vest or jacket air bag worn over a traditional protective vest, which deploys during a fall), she is hoping to collect data on such newer styles of safety equipment in future years. **UK**

>Jen Roytz, executive director of the Retired Racehorse Project and co-owner of Topline Communications, served on the planning committee for the Horse Industry Safety Summit.

The 'Right Way' to Fall Off a Horse

While it might seem impossible, riders can teach their bodies how to react when they part ways with their horses to minimize injury risk.

Horse Industry Safety Summit attendees had no time to be bored, especially when Danny Warrington, who founded Landsafe Equestrian with his wife Keli, approached the podium.

Throughout the engaging presentation, he showed videos and images of riders parting ways with their mounts—both correctly and incorrectly. Warrington slowed videos down to show the audience at what point in the fall rider decisions either helped or hindered their safety.

Warrington believes there is a gap in rider education: teaching riders how to fall safely. Deeply committed to rider safety, the Warringtons created Landsafe with three main goals: save lives, reduce injuries, and increase safety education of parents and riders.

Landsafe uses a simulator to help riders learn how to fall safely. While Safety Summit attendees did not get to try it



Learning how to react to trouble and fall safely can help reduce rider injury risk.

ANNE M. EBERHARDT/THE HORSE

THE 'RIGHT WAY' TO FALL OFF A HORSE

out, audience members who'd used the simulator in Landsafe clinics shared how the experience helped them learn to fall correctly, minimizing injury.

Surprising Statistics

Warrington began his talk sharing some statistics. While there's substantial research into statistics on topics such as airplane safety, there is much to learn about the safety of equestrian sports, despite the fact that an estimated 7 million people engage in equestrian sports annually. Fédération Equestre Internationale (FEI, the governing body of international horse sport) research shows that the risk of a fall resulting in an injury ranges from 1 in every 250 starts for low-impact falls to

1 in every 520 starts for serious injuries. The Landsafe team estimates the risk of a serious injury is 1 in every 55 falls.

Equestrians and governing bodies have made strides in trying to improve fall outcomes; the implementation of frangible pin technology on cross-country has decidedly impacted the sport positively and minimized rotational falls. Rotational falls can be catastrophic for horse and rider; one in every five rotational falls results in a serious injury.

The key to even more injury-free falls is for every rider to have an exit strategy, every time they get on, Warrington said.

How to Fall Correctly

One of Warrington's key points was that, no matter what, where the rider's eyes go, so does the body. He reiterated this by showing videos and images of

both successful falls and injurious falls. Pausing the video frame-by-frame allowed him to show what went right, and wrong, in every part of the fall. While many riders have heard they should "tuck and roll," Warrington is seeking to reprogram riders' thinking during falls.

The first thing many riders do when they realize they are going to fall is to do everything in their power to stay on the horse. While this might be the first instinct, it's not always the best one, Warrington said.

He encourages riders to have an exit strategy. When falling, this means riders should put out their arms to absorb most of the impact on landing. This doesn't mean putting out the hands, which would place all the concussive forces on the wrist (potentially breaking them), he said; rather, aim for the long part of the arm, from the elbow to the side of the hand, to take the impact.

Next, riders should roll away from their horses with their hands up (think of a boxer preparing to spar) to decelerate the impact.

It's also important, Warrington noted, to round the back to save the neck while falling. Tucking the chin to the chest automatically rounds the back, reducing the chance of a neck injury.

So during a fall: Arms out, legs and chin tucked, eyes looking out of the circle of rotation (away from the horse), and roll away, he summarized.

One thing a rider should never do, said Warrington while showing video evidence, is hold onto the horse while falling.

"Someone will catch your horse," he said. "Let go!"

He also said he feels passionately that, in any equestrian sport, riders need the right horse and to be riding at an appropriate level. This is even more key to safety than learning how to fall, he said.



Horse-Related Histories


When teaching riders how to fall safely in a clinic setting, the Warringtons first teach tumbling on a mat. Keli Warrington, an accomplished gymnast who is also an event rider, teaches body awareness to riders through basic gymnastic skills. From there, the riders move onto the Landsafe simulator, which recreates real-life fall scenarios at speeds that allow the riders to practice fall response techniques. Danny Warrington compared the drills Landsafe offers their riders to those of a fire drill: They repeat the correct way

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THE 'RIGHT WAY' TO FALL OFF A HORSE

to fall until it's instinct.

A former steeplechase jockey who became an international advanced three-day event rider, Danny Warrington noted that in nearly all falls, there is time to react to the situation; the only riders that have no time to react are jockeys when horses clip heels, he said.

By teaching riders the correct way to fall, the Warringtons are giving them additional tools to keep them safe and able to enjoy riding for years to come.

Learn more at landsafeequestrian.com. **UK**

>Sarah E. Coleman, director of public and community relations for New Vocations Racehorse Adoption Program and co-owner of Topline Communications, served on the planning committee for the Horse Industry Safety Summit.

Jockey Injury Reporting at Maryland Thoroughbred Racetracks

The U.S. Thoroughbred racing industry would be best served by a multidisciplinary approach to data collection and record keeping, recognizing that with every injury report, the industry could help improve safety for jockeys and exercise riders at the track. This was the take-home message from a pair of presenters at the Horse Industry Safety Summit.

Kelly Ryan, DO, CAQSM, is a primary care sports medicine physician for MedStar Sports Medicine, faculty member at the MedStar Franklin Square Medical Center Department of Family Medicine, a sports racing provider for Laurel and Pimlico racetracks in Maryland, and an assistant professor at the Georgetown University School of Medicine. Gabrielle Garruppo, BS, BA, is a Master of Health Science candidate at Johns Hopkins University Bloomberg School of Public Health.

The pair said reporting should include but not be limited to medical professionals, epidemiologists and/or researchers, jockey representatives, track engineers and specialists, and regulators. They also recommended that all jockey researchers utilize the European Consensus Statement for data standardization and ease of data collection, processing, and

comparison.

Garruppo shared how the Maryland Horsemen's Health System, in coordination with MedStar Sports Medicine, collects data using a sports medicine model. MedStar Health became the official medical provider of the Maryland Thoroughbred Horsemen's Association in September 2015.

She outlined how she and her team reviewed the data collection and reporting from previous epidemiological studies at racetracks and reviewed ways to improve that data collection at the Maryland tracks to be consistent with the more robust European Consensus Statement.

In a recent study, Ryan and Garruppo found that each published epidemiological study utilizes different methods of injury data recording and collecting, including medial officials versus racetrack stewards, along with insurance claims versus self-reported surveys versus injury report forms.

Her team found that even the definition of injury differs between the various methods and that using differing mechanisms of data collecting can affect the results and lead to underreporting of minor injuries.

The European Consensus Statement Injury Report Form currently requires the



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A multidisciplinary approach to data collection and record keeping could help the U.S. racing industry improve safety for jockeys and exercise riders on the track.

following elements:

- Study reference number;
- Injury date;
- Date of return to full participation;
- Activity at time of injury (training, racing, etc.);
- Description of circumstances leading to injury;
- Injury location (track, paddock, etc.);
- Injury cause;
- Injury nature (gradual vs. acute);
- Injury type;
- Body location (including side of body); and
- Index or recurring.

The form also includes a section for describing specific pathology and documenting information provided by medical professionals. Additionally, the form is completed as soon as an injury

occurs, but is updated further as evaluation, treatment, and other milestones occur.

Garruppo and her team believe data from U.S. tracks could be improved by applying a more consistent classification system, specifically for the cause and nature of injury. She said the current forms should be updated to include:

- Updates after new medical information is received;
- Follow-up appointment notes;
- Medical record information from hospitals, if necessary; and
- Imaging, if necessary. **UK**

>Holly Wiemers, MA, APR, is communications and managing director for UK Ag Equine Programs.



Post-Concussion Care for Equestrians

While most equestrians are anxious to get back in the saddle, Harris said people who have sustained head injuries might not be able to react with the necessary speed to stay safe around horses.

Lisa Harris, PT, MS, HPCS, Cert MDT, MSVSc, of Cardinal Hill Outpatient Rehabilitation in Lexington, Kentucky, has worked extensively with equestrians who have experienced brain injuries.

Additionally, Harris owns a private practice that incorporates hippotherapy into patient's treatment plans to assist in healing. Harris is no stranger to the saddle, either, having graduated with an "A" rating from the United States Pony Club; she has evented through the two-star level and has coached young riders through preliminary.

Her educational and equestrian background make her a vehement supporter of horses as aides in healing—both physically and mentally. She spoke recently about post-concussion care at the Horse Industry Safety Summit.

Not a One-Size-Fits-All Treatment Plan

Cardinal Hill Outpatient Rehabilitation has a multidisciplinary approach to managing brain-injury patients. Research shows that approach to be the most effective in managing and alleviating concussive symptoms.

No single test can prove if a patient has post-concussion syndrome (PCS). Patients can experience PCS in a variety of ways, but common complaints include depression, nausea, blurred or double vision, sleep disturbances, restlessness, irritability, frustration, poor memory, poor concentration, dizziness, noise sensitivity, taking longer to think, headaches, and fatigue.

Patients with concussions frequently experience symptoms in multiple clinical

domains, including cervical (neck) pain, headaches, dizziness, imbalance, visual motion sensitivity, convergence insufficiency, cognitive fatigue, difficulty with memory and attention, and sleep disturbances, Harris said. These symptoms require various health care specialists to collaborate to allow for optimal functional outcomes.

When first assessing an injured equestrian, Harris notes the following so she has a baseline for each patient: balance, visual scanning, and how the body responds to specific questions. She also notes the patient's pain level and strength. She then considers which modalities might best help the patient return to a normal lifestyle; these include vision therapy, balance therapy, physical therapy, exertional therapy, and cognitive behavioral therapy.

Many people with brain injuries experience visual challenges. The early diagnosis of any form of head injury is key, especially if vision is involved. In such cases, Harris refers her patients to an optometrist who specializes in neuro-optometry (a specialty field of vision care that combines neurology and optometry to determine how the damaged brain is processing information sent to the eyes) and behavioral optometry (a field that takes into consideration what visual demands each person has, at work and at home, including reading or working on computers). From there the goal is to return patients as much as possible to their pre-injury state.

Balance therapy is helpful for patients with dizziness or balance problems after

a concussion. This type of therapy can include balance training, gaze stability training, or habituation exercises, which repeatedly expose patients to specific motions or stimuli that prompt vertigo in an effort to decrease their effects on the body.

Exertional therapy focuses on controlled exercises under supervision. Cognitive behavioral therapy can help patients experiencing depression or anxiety; it focuses on identifying negative thought patterns and teaches skills patients can use to manage these feelings.

Harris said PCS patients might need to hear commands or words multiple times before they understand. They also might struggle to find appropriate words or use more words than normal to get their point across, she said.

Some symptoms might resolve faster than others (the physical symptoms often decrease rapidly, while the cognitive and emotional issues can take longer to resolve).

Just Say Whoa

While most equestrians are anxious to get back in the saddle, Harris said they should be cautious when returning to the barn and being around horses post-concussion.

"Horses need a quick reaction time," she said, regarding the animal's fight-or-flight response. People who have sustained head injuries might not be able to react with the necessary speed to stay safe around horses.

While the end goal is to have the patient return to his or her normal life, it's important to understand that a concussed brain can take months to heal. Though it might be tempting for some patients to find solace in the saddle when healing isn't progressing as quickly as they'd like, Harris reiterated that a second brain injury could be even more traumatic.

Harris works in conjunction with multiple other specialists to create a program that has the best chance of returning a patient to the life they had before, including work, social, and leisure activities. It's important to remember, she stressed, that every case is different and might require different treatment protocols. **UK**

>Sarah E. Coleman, director of public and community relations for New Vocations Racehorse Adoption Program and co-owner of Topline Communications, served on the planning committee for the Horse Industry Safety Summit.

Online Horse Behavior, Safety Education for the Equine Industry

Online classes are now the norm in education, but can they assist in promoting safety to equine enthusiasts?

Online education has become the norm in a plethora of settings, from high schools and colleges to professions requiring additional training and continuing educational opportunities. The option of online learning allows students access to teachers, role models, and mentors nation- and worldwide; this interaction offers students the possibility of building a relationship with an industry professional.

Recognizing this online learning trend, researchers at the University of Guelph, in Ontario, Canada, wanted to see if offering a short course on equine behavior and safety to the equine industry might help reduce the risk of injuries and create positive change.

Gayle Ecker, MS, is the director of Equine Guelph, part of the University of Guelph that serves the horse and the equine industry through education, research, health care promotion, and industry development. Equine Guelph was founded in 2003 and is overseen by equine industry groups; the organization is dedicated to improving horse health and well-being.

During the Horse Industry Safety Summit, Ecker said one of the catalysts for creating the short course was the revelation that some children were becoming injured while at the barn or on a horse but refrained from telling their parents about their injury. The children's silence had a multitude of reasons, including fear they would be in trouble or not be allowed to ride. Of the children who'd been injured that were surveyed, 85% said the injury could have been prevented but that they had not changed their behavior to prevent future injuries.

With potentially dangerous behaviors being repeated and perpetuated, Equine Guelph launched the "Horse Behavior and Safety" online short course to improve outreach to equestrians at minimal cost. Thus far, the course has been offered six times with 400 students participating. Ecker said the students came from diverse backgrounds and geographic regions. Equine Guelph also developed a version of the program targeted specifically at youth, which has been run four times and attended by 110 students.

The class included text-based discussion with peers, class instructors, and experts. Presented as a forum, this allowed for flexibility in time management and for students across varying time zones to take part.

The course content included:

- Horse behavior: wild vs. stabled;
- How horses see and hear;
- Herd behavior: how horses interact with each other;
- Horse handling: basic safety around horses;
- Rider/helmet safety;
- Safe trailering basics;

- Fire safety;
- Safety around the barn and paddocks; and
- Returning from injury.

The course included minimal reading and was based mainly on student interaction. The students completed self-assessments and received a certification at the end of the course. From the end-of-course survey results, some students:

- Felt they would have gotten more out of the class if it had offered a hands-on portion;
- Requested live webinars to enhance class engagement;
- Became frustrated with peers who were not safe (and who continued unsafe practices even after learning how to execute behaviors safely); and
- Created customized fire prevention and safety plans specific to the farm at which they rode.

The students said they enjoyed the sense of community the online classes fostered as well as the course videos. Many students claimed they would be changing their behavior around horses to be safer after taking the course.

Additionally, many parents said they took the online classes with their children to engage with them and learn safe behavior around horses.

In addition to the United States, people in India, Uganda, and Brazil took the course; students from these locations noted that they were taking the information they had learned online back to their riding schools and sharing information with instructors and other riding students.

Ecker said the online platform is an effective method for increasing knowledge of best management practices and equine safety and will benefit the equine industry by reducing the risk of injury.

More Equine Education Opportunities

Equine Guelph also offers short courses on preventing illness, equine first-aid, horse care and welfare, gut health and colic prevention, and fire and emergency preparedness.

Longer-format learning is also an option: Equine Guelph offers 12-week online courses on topics including equine genetics, welfare, behavior, finance and risk management, health and disease prevention, advanced equine health through nutrition, and managing the equine environment.

Equine Guelph is considered a leader in online studies, with 19 accredited courses available to students.

The "Horse Behavior and Safety" course is a partnership between Equine Guelph, the University of Guelph, and Saddle Up Safely (a rider safety awareness program sponsored by UK HealthCare; UK College of Agriculture, Food and Environment; and community organizations). Equine Guelph's online education program on TheHorsePortal.ca is a partnership with the provincial equestrian federations in Canada, Equestrian Canada, the Ontario racing industry, and various local organizations. **UK**

>Sarah E. Coleman, director of public and community relations for New Vocations Racehorse Adoption Program and co-owner of Topline Communications, served on the planning committee for the Horse Industry Safety Summit.



Ecker said one of the catalysts for creating the short course was the revelation that some children were becoming injured while at the barn or on a horse but refrained from telling their parents about their injury.

Keeneland Gifts \$1.3 Million to UK for Equine Drug Research, Testing Program

The Keeneland Association is continuing its long-standing philanthropic relationship with UK with a gift of \$1.3 million to the Keeneland Endowed Chair in Equine Veterinary Science.

This gift will grow the fund to \$3 million and will allow the UK College of Agriculture, Food and Environment's Gluck Equine Research Center to launch a world-class equine drug research and testing program under the direction of Scott Stanley, PhD.

Stanley, an internationally recognized equine researcher, came to UK in late 2018 from California, where he served as director of the K.L. Maddy Equine Analytical Chemistry Laboratory at the University of California, Davis.

"This wonderful gift will help our college make new advances as we strive to serve the industry in all aspects of safety," said Nancy Cox, MS, PhD, dean of the UK College of Agriculture, Food and Environment. "The research capability afforded by this gift will



COURTESY KEENELAND

The Keeneland Association has helped establish and support equine research at UK for more than 30 years.

allow a robust effort to develop new tests. This research will serve the new commercial testing laboratory that will be led by Dr. Stanley in partnership with the U.S. Equestrian Federation. We greatly appreciate the association's support of the college."

The laboratory at UK's Coldstream Research Campus, in Lexington, will provide drug testing services to a diverse equine clientele from the performance horse

and racehorse industries. The Keeneland Association's gift will support the research side that will underpin the commercial venture.

"Keeneland applauds UK's commitment to create a true center of excellence at the Gluck Center," Keeneland president and CEO Bill Thomason said. "In support of our mission, Keeneland has long championed UK's goal to become an industry leader in equine safety, integrity, and research. We believe the important work undertaken by Dr. Stanley will serve as a platform for change in Kentucky and beyond."

Mike Richey, UK vice president for philanthropy and alumni engagement, added, "Keeneland symbolizes the grace, elegance, and competitiveness of Thoroughbred horse racing and has long been recognized for its visionary leadership throughout the Thoroughbred horse industry. As partners, Keeneland and UK are proud to advance an industry that is valued at nearly \$24 billion for the commonwealth. We are most grateful to the Keeneland Association for their commitment to endow excellence."

The Keeneland Association has helped establish and support equine research at UK for more than 30 years. Through its endowed professorship, the Keeneland Association has supported and advanced equine research, most recently in infectious disease.

"Historically, the Keeneland Association and its leadership have been instrumental in the successful achievement of the mission of the Gluck Equine Research Center to advance the health and well-being of the horse," said Stuart Brown, DVM, chair of the Gluck Equine Research Foundation. "The support received by this latest gift allows this effort to continue in a vital area of research that will serve to enhance our understanding and capabilities in the areas of equine drug testing and surveillance that impact the spectrum of equestrian competition. We appreciate their continued commitment and trust to invest in the faculty and research at the Gluck Center which remains focused on the needs of the horse and the people who care for them." **UK**

>Laura Skillman is the director of UK's Agricultural Communications Service.

Sarcoids in Horses

Sarcoids are believed to be the most common skin tumor of the horse and affect about 2% of the worldwide population. Although they do not metastasize (spread to distant locations), they undoubtedly cause welfare concerns, especially in the ulcerated "fibroblastic" form. This may be through discomfort from the lesions themselves, from fly interference with the lesions, and also from administered treatments. In their most extreme forms, they can affect eyelid function and lead to secondary ulceration of the eye's surface (Figure 1).

Clearly, they are not a "benign" lesion, despite their benign classification, and they should never be ignored. The presence of sarcoids also has financial implications not only due to the (sometimes very high) cost of treatment, but also due to reduced resale value.

There is compelling evidence that sarcoids are caused by a bovine papillomavirus, which is believed to be transmitted by flies, most likely from infected cattle, but possibly also from infected horses. It remains unclear exactly how the virus leads to neoplastic (cancerous) change, or why the virus is able to cause disease in more than one species. Interestingly, a (human) papillomavirus also is responsible for the vast majority of



FIGURE 1

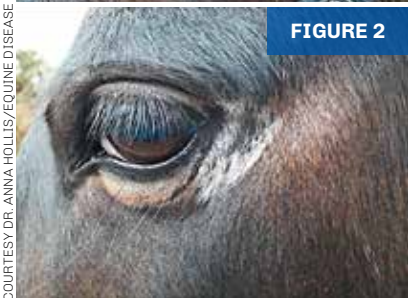


FIGURE 2

A horse before and 2 ½ years after receiving treatment for a sarcoid.

COURTESY DR. ANNA HOLLIS/EQUINE DISEASE QUARTERLY

SARCOIDS IN HORSES

cases of cervical cancer and an increasingly large proportion of tumors of the head and neck in humans; clearly there is much to be learned about the implications of infection with papillomaviruses in all species.

There is little doubt that there is a heritable component to the disease. In Warmbloods, the heritability has been well demonstrated: Breeding two sarcoid-affected horses vastly increases the risk of producing a horse that develops sarcoids at some stage in its life. There also appear to be breed-related differences in sarcoid risk: Thoroughbreds are more likely to develop sarcoids than Standardbreds, and Lipizzaners seem more resistant to sarcoid development.

Unlike melanomas, there is no color predisposition and gender doesn't affect the chance of developing the disease. Specific gene variations, noted in horses with sarcoids, are also associated with virally

induced cancers in humans. The reasons for this association are unclear, but it is likely due to differences in immune function and may explain the apparent breed-specific variation in sarcoid risk.

Treatment options for sarcoids are numerous, with no one option being suitable for every case. Traditionally, sarcoids were often left without treatment, but as they almost invariably become larger and more difficult to treat, early intervention is strongly recommended to avoid long-term sequelae. Treatment may involve topical or intra-lesional (administered into the lesion) chemotherapy or immune modulators, surgical procedures, or radiotherapy. Electrochemotherapy is a relatively new alternative treatment option with apparently very good results, but it unfortunately necessitates the use of multiple general anesthetics, so the risks must be carefully considered.

Appropriate treatment selection is largely dictated by the location and type of the lesion (Figure 2, previous page). Laser surgical excision is the author's

treatment of choice for the majority of lesions in locations other than around the eye; periocular lesions are treated via radiotherapy with great success. Reported success rates for laser surgical excision are in the order of 83% and for radiotherapy are around 90%; compared to other treatment options they represent the least risk to the horse and lead to the best results. However, not every lesion—or horse—is a suitable candidate for these treatments, and the key is to select the method most likely to be successful in the first instance.

Recurrent sarcoids become increasingly difficult to manage and convey a far worse prognosis than those appropriately treated in the first place.

CONTACT—Anna Hollis, BVetMed, Dipl. ACVIM, ECEIM, MRCVS—anna.hollis@ah.org.uk—Animal Health Trust, Newmarket, U.K. **UK**

This is an excerpt from *Equine Disease Quarterly*, funded by underwriters at Lloyd's, London.

Evicting Carpenter Bees From Horse Barns

Q Carpenter bees have taken up residence in my horse's shed. I am trying to find the best way to get rid of the bees without harming my horse if he comes into contact with the insecticide used. The insecticides I have seen most effective against carpenter bees are Drione dust, Tempo 1% Dust, and Delta Dust. The labels say "for use around horse barns," but then have a warning about coming into contact with animals. Are these products safe to use, or do you have any other suggestions?

—Jennifer Clarke, via email

A Carpenter bees are important pollinators and do not aggressively defend their galleries, but the large bees are intimidating and, when abundant, can cause extensive structural damage. This can be compounded by woodpeckers that drill holes in the wood in search of carpenter bee larvae.

The weathered, slightly roughened surfaces of soft woods in barns and sheds provide ideal nesting sites for carpenter bees. Every spring, carpenter bees that have spent the winter in their tunnels emerge to expand established tunnels or begin to chew new ones, often nearby. These bees stock their tunnels with pollen as food for their developing larvae. Large aggregations of carpenter bees can accumulate in a structure over time.

Structures with exposed soft wood always attract carpenter bees, so management will be a continuous process. There are three major control options, which can be used singly or in combinations:

- When bees become active, treat entry holes by puffing a labeled insecticidal dust (such as those you mentioned) into the openings. Read and follow label directions and precautions



Large carpenter bee populations can cause extensive structural damage to barns and sheds.

WIKIMEDIA COMMONS/DOCTEURCOSMOS

that must be taken when using these products around animals. Seal the holes with sections of dowel rod about two days after treatment.

- Try carpenter bee traps (various designs are available on the Internet). Put these out when the bees are first active and searching for nesting sites.
- Carpenter bees are very unlikely to attack slick, hard surfaces. Sanding and painting surfaces, though it's not always practical to do so, can deter these insects. Stains and preservatives, however, are less likely to be effective. **UK**

>Lee Townsend, MS, PhD, is an entomologist in the UK College of Agriculture.

Safety Around Horses: Equestrian and Organizational Perspectives

An accomplished group of panelists presented two different perspectives on horse rider and handler safety at the Horse Industry Safety Summit.

Jen Roytz, Retired Racehorse Project executive director, co-owner of Topline Communications, and an avid equestrian, moderated the horse handler and rider panel, which included Hall of Fame jockey Pat Day, show jumping coach Richard Picken, former First Lady of the Commonwealth of Kentucky and amateur rider Jane Beshear, and former horse farm manager and current CEO of the National Horsemen's Benevolent and Protective Association (HBPA) Eric Hamelback.

Dan Fick, of the Racing Officials Accreditation Program, moderated the panel of representatives from various equine organizations. Panelists included Hamelback; Mindy Coleman, counsel for the Jockeys' Guild Inc.; Sonja Keating, executive vice president and general counsel for the U.S. Equestrian Federation (USEF); Carol Kozlowski, president of the U.S. Eventing Association (USEA); Vince Gabbert, Keeneland Racing Association's vice president and chief operating officer; and Steve Koch, executive director of the National Thoroughbred Racing Association (NTRA) Safety and Integrity Alliance.

An Equestrian's Perspective

Some common themes emerged from the sessions. From the equestrian perspective, a key point was for riders to stay vigilant and aware.

"When you're around horses frequently, every now and then you get too lax, you get too comfortable in your environment, and that's when you can get hurt," Beshear said. "We all forget that from the moment we are on the back of an animal, we are taking a risk. In a blink of an eye, something can happen."

She shared her experience falling from her seasoned mount when walking to her trailer at a horse show last year. She suffered a concussion in the fall.

"Never trust a horse, no matter what," Picken added. "He has his own brain."

He recalled an equine accident, almost a decade ago, in which he broke his back and, now, can't ride as much. He



Jen Roytz (standing) moderated the equestrian panel, which included (seated left to right) Jane Beshear, Richard Picken, Pat Day, and Eric Hamelback.

reiterated that handling a horse is often more dangerous than riding and that handlers must learn to be vigilant.

In his career, Day rode more than 40,000 races over 32 years.

"I hit the ground many times, but by the grace of God, I got up and walked away," he said. "The worst was a broken collarbone."

He credited avoiding injury in large part to beginning in rodeo at age 9; that time in the arena taught him how to fall, he said: "I wasn't very good, so I hit the ground a lot!"

Day said one of the biggest dangers to jockeys is the starting gate. And, he added, remember that one of the horse's only means of protection is flight. If something happens, they're going to run.

"(With horses,) every now and then you get too lax, you get too comfortable in your environment, and that's when you can get hurt."

JANE BESHEAR

Hamelback recalled experiences from his more than 30 years in the industry and shared some of the dangers his colleagues faced when handling horses in the breeding shed. He praised the more recent use of safety vests and helmets in the breeding shed as a good thing for handlers' safety.

"When you're around horses, you're going to get hurt," he said. "It's not an if, but a when."

The panel also discussed the psychological aspect of returning to riding after an injury.

Beshear admitted she's still working to recover her confidence a year after her fall.

Day shared that, as a young rider of 5 or 6 years old, he was bucked off a pony he'd kicked in the sides. He said he often wonders what his life would have been like if his father hadn't made him get right back on. Would he have had the career in the sport he had?

He also talked about how a horse will respond to your emotions and that he'd rather ride with a "kamikaze pilot than a scared rider," which he called a "wreck looking for a place to happen."

If afraid, don't do it, or figure out how to have confidence, he said.

Hamelback reminded attendees to keep sharp, but not fearful. Pay attention to what's going on.

Day agreed: "You can't be too careful of animals," he said. "Be aware of your surroundings. Be alert. Don't text and walk down the shed row. Pay attention to your horse and surroundings."

An Organizational Perspective

Next, during the organizational panel, each speaker outlined safety improvements their respective organizations had made and are continuing to make.

Keating noted two main areas: human safety and injury reporting, as well as abuse in the sport. She discussed reporting steps when a rider is concussed or apparently concussed, including a reporting hotline, and said there needs to be a more in-depth look at instances of multiple concussions and a watch list for dangerous riding and trends in the sport.

SAFETY AROUND HORSES: EQUESTRIAN AND ORGANIZATION PERSPECTIVES

She said USEF has recently undertaken a significant educational effort, including introducing an online learning center and revamped website.

And, she explained how the organization is alert for the possibility of abuse in the sport as part of its SafeSport Initiative. She said USEF has trained more than 49,000 people in the last few months via its SafeSport training module.

Kozlowski said the USEA has implemented many similar measures. In some ways, eventing has had a higher profile with accidents in the past decade, she added.

She said there is much to be proud of in the safety measures and outcomes in recent years. For instance, the fatality rate has dropped over the past 10 years thanks to educational opportunities as well as increased use of frangible jumps (which give way if impacted at certain angles and with specific forces to help falls be less catastrophic) on cross-country.

She added that training of judges and technical delegates, use of air vests, the USEA's instructor certification program, and continued education have also contributed to improved safety outcomes for the sport.

Kozlowski said the stats show the organization is on the right path. The rotational fall rate was one in every 228 starts in 2007 and dropped to one in every 746 starts in 2018.

"But we can continue to do better," she said. "A mistake should not be fatal."

Koch shared the NTRA's background and the perspective of the mid-2000s, with the high-profile fatalities of racehorses Eight Belles and Barbaro.

"We had Congress knocking at the door and our people asking reasonable questions, and we needed to give reassuring answers," he said.

He outlined the organization's track accreditation process, a way the industry can reform and self-regulate. It includes a Code of Standards and a real push for data and science-driven implementation. Efforts have included injury reporting and prevention, safer racing and training environment, uniform medication, jockey health and welfare, retired racehorse aftercare, and wagering security.

"Today's best practices are tomorrow's standards," he said.

He also encouraged attendees to read

more about the efforts at NTRAAlliance.com.

Hamelback said the Safety and Integrity Alliance has moved the needle for the industry, and in a good way, in his opinion.

Coleman shared the formation of the Jockey's Guild and how it was established in 1940 because there had been no jockey voice on insurance coverage. Over the past 75 years, she said, the organization has resulted in a safer racing environment; insurance and benefits; and the implementation of state, local, and federal laws. The organization currently has 1,270 members.

Coleman said there are now improved safety and standards, including the use of equipment like helmets, vests, and padded starting gates.

Reiterating the "not if, but when" an injury will occur theme, Coleman pointed

out how dangerous the sport is for jockeys in particular.

"It's the only profession that an ambulance follows you while you are doing your job," she said. "That's an indication of how dangerous it is."

Add to that the stress of the profession, from making weight, to the diets, starvation, use of hot boxes, extensive exercise, and other unsafe practices, all of which have repercussions on jockey health, she said.

Gabbert outlined how safety is a 24/7, 365 focus at Keeneland. It was the first track to have a jockey injury database and the first to establish a concussion protocol. The track also looks at misses and near misses in its data. [UK](#)

>Holly Wiemers, MA, APR, is communications and managing director for UK Ag Equine Programs.

Stephenson Named UK Cooperative Extension Service Director

Laura Stephenson, PhD, has been named associate dean and director of the UK Cooperative Extension Service in the College of Agriculture, Food and Environment. She will begin her duties on Aug. 1.

"Dr. Stephenson's appointment is one more step in the college's ongoing efforts to provide the best leadership and fiscal management for a system that is indispensable to communities across Kentucky," said Nancy Cox, PhD, dean of the UK College of Agriculture, Food and Environment. "We are happy to have her back home and excited about the wealth of knowledge and leadership she brings to the post."

Stephenson is currently serving as assistant dean of extension and department chair of family and consumer sciences at the University of Tennessee. However, much of her extension career has been in Kentucky.

She brings an abundance of experience to the system, having served the state as an extension agent, district director, and assistant director for family and consumer sciences extension field programs. Stephenson is a strong advocate for county-based programming, building capacity of interdisciplinary faculty teams and engagement of local, regional, and state stakeholders.

"The expertise and talents of the faculty, staff, and volunteer leaders solidly position us to build local skills to meet community challenges. Extension is the strong bridge between the university and the people across the state," Stephenson said. "I am honored to lead the University of Kentucky Cooperative Extension Service's efforts to serve each of the 120 counties in the commonwealth."

A transition team will be named soon to assist Stephenson in the initiatives she'll undertake in the weeks and months ahead.

Stephenson holds bachelor's and master's degrees from Eastern Kentucky University and a doctorate in gerontology from UK. She began her career in Cooperative Extension in 1988 and transitioned into leadership roles at UK before leaving for Tennessee in 2013. [UK](#)

>Laura Skillman is the director of UK's Agricultural Communications Service.



COURTESY UNIVERSITY OF KENTUCKY

Upcoming Events

May 30, 3:30-8 p.m.

UK Equine Farm & Facilities Expo

Olive Hill Sport Horses, 4746 Huffman Mill Pike, Lexington, KY

3:30 p.m. Registration

4 p.m. Exhibitor booths

5 p.m. Welcome with dinner provided by Fayette County Cattleman's Association

5:30 p.m. Olive Hill Sport Horses overview—Brian and Diana Conlon, owners

6-8 p.m. Educational sessions (run concurrently every half hour):
 Harnessing on-farm solar potential—Brian Conlon
 Overseeding damaged pastures—Ray Smith, PhD
 Weed control on horse farms—Bill Witt, PhD
 Utilizing hay feeders to reduce waste—Bob Coleman, PhD

Carter Named to UK College of Agriculture Government Relations Post

Nicholas Carter, MS, has been named the UK College of Agriculture, Food and Environment county and local government relations director. He will assume the role July 1.

"Relationships with our local, state, and federal government partners are critical to the success of the college," said Nancy Cox, PhD, dean of the UK College of Agriculture, Food and Environment. "Nick brings a depth of understanding of these important partnerships along with a passion for the mission of the college to this position. I am excited to have him in this role."

Carter will serve as a point of contact for county and municipal officials on collegewide issues, including such mandated programs as Cooperative Extension, the Agricultural Experiment Station, Veterinary Diagnostic Laboratory, and Regulatory Services. In concert with the college's new as-yet unnamed director for state and federal government relations, Carter will lead a statewide effort to promote government relations and awareness of UK, as well as advise and represent the dean and the college with various agriculture, food, and natural resource leadership organizations. He will also ensure real-time communications between Cooperative Extension leadership and judge executives and extension district boards.

Carter, who holds a bachelor's degree in farm management from Eastern Kentucky University and a master's degree in crop science from UK, currently is the agriculture and natural resources extension agent in Fayette County. His experience in multiple facets of agriculture and government and industry relations makes him well-suited to this new role. He was a farm manager in Bourbon County for 14 years; he also worked for Kentucky Bank as an agriculture loan officer in five Central Kentucky counties and as regional manager in Clark County. Carter is also a graduate of the Kentucky Cattleman's Leadership Program, Leadership Winchester, and the Lexington Leadership Program. As an extension agent, he built close professional relationships with members of the Lexington-Fayette Urban County Government.

"I think Cooperative Extension is hugely important in Kentucky," Carter said. "A lot of times, it's the glue that holds communities together, in my opinion. It plays such an important part in building relationships and in meeting local needs with scientific-based information that we bring from UK."

"I think this position will open up communications both ways to give everyone a voice. I'm looking forward to working with all the counties and their elected officials, as well as the commodity groups, to make the extension service in Kentucky stronger than ever," he added. [UK](#)

>Carol Lea Spence is an agricultural communications specialist with UK's College of Agriculture, Food and Environment.



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