THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

PUBLIC MEETING ON SAFETY AND HEALTH IN THE HORSE RACING INDUSTRY AND BEST PRACTICES

Tuesday, May 22, 2007

Commencing at 9:08 a.m. at the Hyatt Regency Crystal City, 2799 Jefferson Davis Highway, Arlington, Virginia.

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1 P R O C E E D I N G S

2 WELCOMING/INTRODUCTIONS

3 MS. HENDRICKS: Good morning. Thank you

4 all for coming.

5 My name is Kitty Hendricks, and I'm with

6 the NIOSH Division of Safety Research, and I would

7 like to welcome you all to the public meeting on

8 safety and health in the horse racing industry and

9 best practices.

10 Before we start out this morning, I would

11 like to just make everyone aware that we are having

12 transcription services done for this meeting. So on

13 the tables, we don't have a lot of microphones. So

if you make sure you speak clearly and loudly and try to identify yourself, we would appreciate it.

To start this out this morning, I would like to take a few minutes for everybody to get to know each other. I have spoken with a lot of you on the phone, but it's nice to put some faces with the names.

So if we could just start out.

Do you want to start?

MR. BAHNO: Yes. My name is Tony Bahno. I work for AIG consultants as a safety professional.

MR. HORNUNG: Carl Hornung, University of Louisville.

MS. FARBEROW: Bonne Farberow, University of Pennsylvania.

MR. STANIUSZ: Andrew Staniusz, Magna Entertainment.

MR. GIBBINS: John Gibbins, NIOSH.

MS. PAGE: Elena Page, NIOSH.

MR. COLTON: Robert Colton, retired jockey

and director of the Delaware Jockeys Association.

MR. FRAVEL: Craig Fravel, Del Mar Thoroughbred Club.

MR. CASINI: Virgil Casini, NIOSH.

MS. HENDERSHOT: Peggy Hendershot, National Thoroughbred Racing Association.

MR. WALDROP: Alex Waldrop, National Thoroughbred Racing Association.

MR. HICKEY: Jay Hickey, American Horse Council.

MS. OPACICH: Karin Opacich, University of

Illinois.

MR. BOWEN: Ed Bowen, Grayson Jockey Club and Research Foundation.

MR. WATERMAN: Scot Waterman, Racing Medication and Testing Consortium.

MR. JOHNSTON: Jeff Johnston, The Jockey's Guild.

MS. STOUT: Nancy Stout, NIOSH.

MR. HEARL: I'm Frank Hearl with NIOSH.

MS. SCHNORR: Terri Schnorr with NIOSH.

MR. OTTERBACK: David Otterback with NIOSH.

MS. BULIK: Cindy Bulik, University of North Carolina, Chapel Hill.

MR. DEMARCO: Tony DeMarco with the Thoroughbred Racing Association.

MS. COUILLARD: Lauren Couillard with BNA.

MS. CASTILLO: Dawn Castillo for NIOSH.

MR. SEFTEL: I'm Dr. David Seftel. I'm medical director of Golden Gate Fields and Baymeadows.

MS. HENDRICKS: Before we get started this

morning, we do have a change in the agenda.

We are just going to flip flop Dr. Seftel's presentation with Dr. Hornung's. If you will just make that adjustment, and then we will get started.

I would like to introduce Frank Hearl. Frank is the chief of staff for NIOSH, and he is

going to be doing our opening comments this morning.

OPENING COMMENTS

MR. HEARL: Thank you, Kitty.

Good morning and thank you. My name is Frank Hearl, and I am Chief of Staff for the National Institute for Occupational Safety and Health.

On behalf of our Director, Dr. John Howard, and the management and staff of the Institute, particularly those involved in arranging this meeting, I want to welcome you to the meeting.

I want to thank you for taking time out of your busy schedules to come here and share with us your expertise and your experience related to the safety and health in the horse racing industry.

For those of you who may not be familiar with the National Institute for Occupational Safety and Health, NIOSH is a part of the Centers for Disease Control and Prevention, the CDC, which is in the Department of Health and Human Services.

The Occupational Safety and Health Act of 1970 created both NIOSH and the Occupational Safety and Health Administration, OSHA. OSHA is in the U.S. Department of Labor, and it is responsible for developing and enforcing workplace safety and health regulations.

As I said, NIOSH is the federal agency responsible for conducting research and making recommendations for the prevention of work-related injuries and illnesses.

We are not a regulatory agency.

NIOSH's mission is to conduct occupational safety and health research to identify health and safety risks for workers, and to develop and evaluate interventions; that is, preventive measures that can be taken to reduce or eliminate the risks of disease or injury.

NIOSH uses the results of our investigations to make science-based recommendations to regulatory bodies, such as OSHA, but we also

disseminate our findings to the public and to other stakeholders, including labor, industry, equipment manufacturers, academic researchers, and others who can work with us in partnership to reduce workers' risks.

To the best of my knowledge, NIOSH has not previously studied the horse racing industry, so this is a new venture for our NIOSH scientists. We became involved in this area after a request from Congressmen Bart Stupak from Michigan and Congressman Edward Whitfield from Kentucky.

In 2005, the House Energy and Commerce Committee's Subcommittee on Oversight and Investigations held a series of hearings on a need for adequate on-track injury insurance for jockeys and other racing industry workers. Those Congressional hearings created an awareness and revealed a number of serious hazards that jockeys and other racetrack workers face that can cause

serious and disabling injuries and even fatalities.

It was this raised awareness that prompted Congressmen Stupak and Whitfield to ask NIOSH to investigate.

Because the horse racing industry is not something that NIOSH is well acquainted with, we began our efforts to learn more about the industry. We began with an extensive review of existing scientific and medical literature.

Our scientists have visited the Keeneland racetrack in Lexington, Kentucky, and interviewed jockeys about their safety and health concerns. Our scientists also met with the director of the North American Racing Academy and the regional Jockey's Guild representative.

We are in the process of conducting, also, a research-based investigation into the recent death of a 65-year-old jockey at a racetrack in St. Croix, using our Fatality Assessment and Control Evaluation, also called the FACE program. This FACE investigation will produce a narrative report describing the circumstances of the events and will

make recommendations for preventing future deaths under similar circumstances.

NIOSH will also be conducting additional investigations of deaths or severe injuries in jockeys or other racetrack workers as we become aware of them. We will consider conducting this. We won't be conducting all fatality investigations.

From our efforts to date, we have learned many of the safety and health issues that are challenges for the horse racing industry today.

Of course, one of the most pressing challenges has been stated to us as, How do you keep a 115-pound rider riding an 1,100-pound animal going 40 miles an hour safe?

There are obviously inherent dangers associated with horse racing. There are some ways to make things somewhat safer and to reduce the risks.

New technology has made helmets and vests more protective. Padding installed in the starting gates and advances in the design of safety rails

have made important advances in reducing the risk of

injury to jockeys and other track workers. And we recognize that there may be other promising technologies that we are not aware of, and we hope that you will assist us in identifying them.

Many of these risk-reducing measures have been adopted by the horse racing industry. We are interested in learning about best practices that may be adopted by some, but could be widely adopted to benefit the industry as a whole.

We also understand that jockeys are not the only workers at risk. It appears that workers, across the board, from grooms to exercise riders and starters to outriders, are all subject to injury.

Again, we elicit your assistance in identifying risks for all workers involved in the horse racing industry, as well as promising prevention strategies for improving their safety.

We have learned of many concerns surrounding the health of jockeys as well. Beyond

the obvious concerns surrounding weight requirements and nutrition, we have learned of other health issues, such as the consequences of repeated head

traumas, musculoskeletal concerns due to the jockey's posture while racing, and exposure to lead in jockey's rooms.

So far, we have discovered a great deal, but we understand that there is much left for us to learn about this industry, which is why we are here today. This meeting is another venue for NIOSH to learn about safety and health of workers in the horseracing industry.

It is our hope that you, as the experts in the industry, can help us become more informed about the many issues related to safety and health in the horse racing industry.

In addition to participating in this meeting today, we hope that you will also take the time to submit written comments to the NIOSH docket, which will we have identified as Docket No. 104,

which will continue to be open for comments after this meeting and up through June 22.

From this meeting and the written submissions to the docket, we hope to be able to better focus our efforts in this area.

From this effort, we hope to develop recommendations for protective equipment, improved work practices, work environment, and rules which may eliminate or mitigate the dangers workers in this industry routinely confront.

We appreciate the willingness of you to be here today, to join us today. We are looking forward to learning from the presentations, and we hope to have a very productive meeting.

Once again, thank you for your attendance and for your participation.

Kitty.

MS. HENDRICKS: If we could go ahead and jump right into the presentations.

THE HEALTH STATUS OF THOROUGHBRED JOCKEYS:

RESULTS FROM THE JOCKEYS' HEALTH SURVEY

MR. HORNUNG: Good morning. It is a pleasure to be here and to have an opportunity to talk about such an important topic.

My name is Carl Hornung, and I'm an epidemiologist at the University of Louisville School of Public Health and Information Sciences and

Professor of Medicine at the University of Louisville.

What I will talk about today is the health status of the thoroughbred jockeys and results of some survey work we have done with the jockeys.

First, let me comment on and introduce the study team.

Along with myself is Bonne Farberow, who is also on the agenda for presentation later this afternoon. Lee Goldberg, also from the University of Pennsylvania, as is Bonne and Dave Seftel, who you have already met. He will also be presenting. And Barry Broad, who is the attorney for the

Jockey's Guild.

The health interview survey that we did was really an adaptation of the national health interview survey, which some of you probably know is a 35-page self-administered questionnaire. We prepared it in both English and in Spanish.

We administered it at a group setting at the 2006 annual assembly in Las Vegas of the Jockey's Guild.

All senators and board members were required to attend that meeting, and all Guild members were encouraged to attend.

And what I want to make clear is that the data that we have collected from these 51 jockeys probably reflects a healthy worker effect.

And, as you can probably surmise, the healthy worker effect means that you are getting data from the healthiest of the cohort rather than the least healthy. Many of those probably did not attend.

The survey content included demographics, jockey safety and track facilities, anchor track medical facilities, injuries and medical care that occurred to jockeys both during exercise periods as well as during races.

Their medical history, both in terms of acute and chronic conditions, and their health behaviors, their general health behaviors, smoking and alcohol consumption, and in particular health behaviors related to their weight control issues.

So 28 percent of the jockeys began their

career before age 18, and 50 percent before age 20, and some 75 percent before age 22.

The reason I present the data that way is to alert you to the fact that jockeys who begin, or individuals who begin a career by age 18 have really foreclosed and shut down a number of other opportunities.

Jockeys must then become involved in the sport, and tend to have fewer opportunities, for

example, for completing a college education or embarking on some other type of career.

Among the jockeys that we interviewed, some 70 percent had been riding for more than 15 years, and some 32 percent had been riding for more than 20 years.

So you can see we have data from a fairly experienced cohort of jockeys. And, again, as I said earlier, it probably reflects the healthy worker effect.

The age of the respondents, our mean age was some 39, median was 38, and the standard deviation, for those of you who are interested in

statistics, was some 7.6 years.

Ninety percent of the jockeys told us that they ride year round, and 70 percent ride both night and day races. About 70 percent ride three, four, or five races in a typical day, and over 80 percent regularly exercise horses each morning.

What is interesting about that is four of

the five who regularly exercise horses do not receive any extra compensation for their exercise work.

Injuries while riding or injuries that occurred during exercise periods, first, alert you the fact that the morning exercise period is the most dangerous, largely because of the large number of horses that are on the track during that time and the fact that it is dark or not full daylight, and the fact that the horses are going in every which direction rather than simply around the track in a circular fashion.

Sixty-two percent of the jockeys say they have suffered an injury that has prevented them from riding that day. Fourteen jockeys told us that they

reported suffering a total of 33 injuries while exercising horses within the past 30 days.

So you can see that injuries are highly prevalent in this group, particularly during the exercise periods.

Half of the 14 jockeys reported that there was no physician on the grounds when they were injured. Two reported that the ambulance crew never came to their aid.

And Jeff Johnston from the Jockey's Guild is here, and perhaps he will comment a little bit later on some of the cases that he is familiar with and illustrations of this kind of problem.

Let's talk about injuries that occur while racing.

Ninety-eight percent say they have been injured at least once while racing. Fifty-six percent reported ten or more injuries over their careers.

Again, ten injuries while racing, not just ten injuries total. It doesn't include the exercise time.

Forty percent say they have been injured and taken to the ER or hospitalized within the past month.

Now, what is important about that is that the frequent ER visits involve increased exposure to CT scans and x-rays and result in that jockey having 10 to 15 times the radiation exposure than the general population, which probably accounts for what we perceive to be a high rate of head and neck cancer.

Let's talk about the medical care for injured jockeys.

Twenty-six percent told us there was no physician available at the track to provide emergency care. Six jockeys claim to have suffered permanent physical harm that could have been prevented if better medical care was available. Three said their injuries were career ending.

The prevalence of selected chronic conditions that we looked at, over 30 percent report arthritis. Some 15 percent report cardiac arrhythmias, 15 percent with asthma. 13 percent

report ulcers, and some 15 percent report kidney

stones.

That's at least five times higher than the general population. And, again, we think this is a healthy worker effect, so we suspect that those problems are a little bit higher. And Bonne Farberow will present some data that would also suggest that.

Let's take a look at some of the other chronic conditions or symptoms.

Twenty-six percent report limitations of daily activity by symptoms of arthritis. Seventy-seven report low back pain. Thirty-six percent say they have had migraines or severe headaches within the past three months.

Sixty-two percent say that they have had symptoms of depression. Thirteen percent say they have tried but were unable or unsuccessful at having children. That, again, is four to the five times higher than the general population.

Track and jockey safety issues.

About two-thirds of the tracks, according

to these jockeys, have safety rails. About 90 percent use a flak jacket. Only about 10 percent use the European safety helmet, and only about 2 percent use safety reins.

In spite of the fact that 56 percent of the jockeys tell us they have had reins snap during the race, still only 2 percent use these safety reins. Whether that's the choice of the jockey or the trainer, we are unclear on.

Let's look at some lead exposure from dust wipe data that was collected in 2003.

Two dust wipes were done, one on the scale and the other where the saddles are placed between races.

The EPA says that 350 micrograms per square foot is the upper limit of allowable lead concentration for floors, and 200 micrograms per square foot is the upper limit for window sills.

This is what we find at 42 tracks across the country. The mean is 3,521 micrograms near the

scale. The valet table, the mean is some 1,339 micrograms.

Notice that the 25th percentile for the scale is still five times above, or six times, six and a half times above the recommended limit for a floor.

The 25th percentile is acceptable for the valet table, but look what we find for the 50th and 75th percentile, incredible levels of lead.

As a matter of fact, there is one track of the 42 that has 18 grams per square foot, when the recommended limit is 50 micrograms.

More than 90 percent of the jockeys in our survey tell us that they have never had a blood lead level done. That, we think, is a significant issue that needs to be addressed.

And given the fact that the valet table and other areas within the jockeys room is an area where jockeys' kids congregate and where others in the industry congregate, we think it is essential

that others be tested as well, which include the jockeys' children and significant others.

Let's look at the behavioral risk factors.

40 percent smoke, but 54 percent are exposed to

secondhand smoke in the jockeys room. The 40 percent who smoke, that's about 1.9 times the national average, which is about 22 or 23 percent of the individuals smoking.

As for alcohol, 89 percent use alcohol. 25 percent say that they drink daily.

Now, let's look at the highest and lowest body mass index for the past year. This I think is a very telltale and very informative slide. If we can take just a minute to work our way through it.

The red line indicates the distribution of body mass index. For their lowest BI, which is weight divided by height squared, this is the lowest level that they have achieved over the past year, and this is the highest level that they have achieved over the past year.

The mean is 19.3 for the lowest, 20.9 for the highest.

What is really significant is the value of 18.5, which is this line here, is the -- below that is what we call underweight. This is morbidly underweight.

And you will notice that that's 32 percent of the jockeys, or 32 percent of the distribution for jockeys at their lowest level, which is probably the level that they were at if they were actively riding.

The highest level, of course, is most likely to be in the off season. Off season, still nearly 10 percent are morbidly underweight.

In order to make weight, what would a typical jockey do? We asked them, If you gained a pound, what would you do? Well, some 22 percent say they would purge. Some 35 percent say they would skip a meal. 31 percent said they would use the sauna, and 41 percent said that they would run.

Certainly running would be the best option.

Sauna is dangerous, and there are instances of serious health problems resulting from excessive use of the sauna. Certainly skipping a meal is not a wise way to proceed.

And when it says 22 percent or 21 percent purge, that's, we believe, a significant

underestimate of the true prevalence of purging behavior.

As you probably are well aware, purging behavior results in a number of other health problems, including Barret's esophagus and loss of teeth, or at least the reduction of the enamel on the teeth. Many jockeys who purge end up with false teeth.

In addition to -- or those behaviors are in addition to those regularly used behaviors each week.

Sixty percent take diet pills. Another --

60 percent also take water pills, particularly Lasix. Sixty percent use laxatives, and some 58 percent use other medications.

Let's look at the use of the hot box.

Some 80 percent say what they use the hot box, at least occasionally. Twenty-five percent say they use it daily. In spite of that, only some 15 percent say that the hot box that they use is cleaned on a regular basis. And, nevertheless, 50 percent still report that they see mold in the hot

box that they are in at the track. That's a correctable problem.

Let's look at the issue of being fit to ride.

Forty-one percent of jockeys say they have experienced a dizzy spell or passed out just before a race. Twenty-four percent said they felt dizzy during a race. Forty-eight percent said they felt dizzy or passed out following a race. Seventy-five percent reported at least one instance of not

feeling well enough to ride.

Only 53 percent said that the stewards would allow them to take off from their mount. And in less than 30 percent of the cases was there a physician available to evaluate the jockey's fitness to ride, clearly a problem, and a problem that one of my colleagues and I are addressing with some research.

Peter Quesada is an engineer at the University of Louisville in the speed school, automechanical engineer. He and I are doing some studies with healthy volunteers working with one of

our medical students to look at performance on a wobble board, which is a board atop of a hemisphere. And when the individual tries to balance, we assess this evidence, and we can calculate all of their movements in an attempt to maintain their balance.

And we are doing this over the course of a day, asking them to fast.

So we are looking at blood glucose levels

and the relationship between blood glucose levels, as well as some electrolytes, and their performance on the balance board.

The interesting part about that, the implications of that are that if we find low levels of glucose and poor electrolytes lead to balance problems, you can imagine what that means to a jockey who has probably fasted most of the day during the racing season.

Let's look at a study that we propose doing. We have entitled this, Health Examination At the Race Track, or HEART.

It is a grant application that we made to NIOSH that we submitted back in February in response

to a program announcement from Occupational Safety and Health Research. It's an RO1 grant for some -- close to $2 million we have requested. It's a collaborative effort involving myself and Peter Quesada at the University of Louisville.

We also employ two graduate students, one

from the School of Public Health and one from engineering. And the School of Public Health student we have already identified, who as a degree in physics and biology from the University of Virginia.

The study also involves Lee Goldberg and Bonne Farberow from the University of Pennsylvania, and Dave Seftel and Barry Broad from the Jockey's Guild.

We also have an advisory board, and I recognize the names of some of you from your introductions.

From the Jockey's Guild, there is John Velazquez. From NTRA, Craig Fravel.

Craig, we look forward to working with you on the study.

From the Grayson-Jockey Club Research Foundation, Ed Bowen. We look forward to working with you.

From Magna Entertainment, Mr. Mills. From

Churchill Downs, Inc., Mr. Sexton.

The California Medical Association is represented as well as the California Horse Racing Board. That's the advisory board to oversee what we want to do.

Here are the objectives of what our research interests are in this field.

First, to assess jockey health history and their current health status, at least of the sample jockeys, and assess changes by repeat physical and examinations and health interviews at a year. We propose to do about 12 tracks across the country, and probably 20 to 25 jockeys at each of the tracks.

We want to determine the prevalence of occupational, environmental, and behavioral risk factors, particularly those related to mandated weight limits; and we want to assess their impact on the jockey's health status.

Thirdly, we want to determine physiologic changes in homodynamic parameters and blood glucose

that occur over a typical race day and assess their impact on balance and muscle fatigability.

That's part of the research we have already begun these in pilots with Peter Quesada and our medical students.

And finally, we want to compare health status and occupational, environmental, and behavioral risk factors within and between states to identify potential ways in which federal agencies, particularly NIOSH and OSHA, state and industry stakeholders can improve the safety and health of thoroughbred racehorse jockeys.

And with that, I would be glad to answer any questions, or would you prefer we hold questions for later?

I'll take questions now.

Yes?

MS. HENDERSHOT: You said you had 51 participants?

MR. HORNUNG: I'm sorry?

MS. HENDERSHOT: Fifty-one participants. Is that...

MR. HORNUNG: Fifty-one, that's correct.

MS. HENDERSHOT: Have you-all considered mailing the survey to the Jockey's Guild members or something else? Because I believe there is more than a thousand --

MR. HORNUNG: Yeah, there is probably about 1,600.

Yes, there are some discussions underway and some intentions of doing that, but at this point, we have not had the time or the opportunity to do it.

But, yeah, but there are certain kinds of problems that will be -- that that will introduce, not the least of which is the language problems.

So we will have to mail them probably in both in English and Spanish and figure out some way of assisting them.

But, yeah, we do need more. We do need much more data.

Any other questions?

MS. HENDERSHOT: You said 90 percent had never had a blood lead, which implies that if you had had a blood lead taken, do you know the results of those blood leads that -- of people who had them drawn?

MR. HORNUNG: No, I don't. No, I don't.

Dr. Seftel will have some comments on that a little later, I'm sure.

Bonne, did you have something?

MS. FARBEROW: Actually, the additional percentage, we didn't know whether... (inaudible).

MS. HENDRICKS: May I ask everybody to please just speak up so that the court reporter can hear?

MR. HORNUNG: Anything else?

Well, thank you very much for your attention, and I hope that was helpful.

MS. HENDRICKS: Thank you. Next we have Craig Fravel from the Del Mar Thoroughbred Club. He is going to be talking about on-track safety

programs in thoroughbred racing.

ON-TRACK SAFETY PROGRAMS FOR THOROUGHBRED RACING

MR. FRAVEL: Thank you.

What I thought I would do coming in here, I gave some testimony in front of the select committee in Congress a year ago that related to a jockey in California by the name of Alex Solis.

On July 24, 2004, Alex was riding a dark brown four-year old mare named Golden KK in a $32,000 claiming race at Del Mar. Although Alex's mount was fading from contention in the race in the seventh position, an apprentice rider also out of contention cut Alex off along the rail.

Those two horses clipped heels, a term in horse racing that basically means they tripped over one another. And the apprentice's horse and Alex fell to the ground.

While the horse was fine, Alex rolled under the safety rail near the quarter pole and remained there, as his training as well as instincts

led him to do.

In about 30 seconds, he was attended by two emergency medical technicians that were in an ambulance following the race, as is true with every

single race in California that is conducted under California licensed racing association.

Alex was placed on the board, immobilized, and transported to an onsite medical clinic at the racetrack where he was immediately attended by a physician who determined that Alex should be transported to a local emergency room for further evaluation.

While Alex was being transported, the races resumed with a backup ambulance that is also located at the racetrack during the time. And no race would continue without an ambulance, who are also required to go to a hospital or elsewhere.

Alex was eventually diagnosed with a fractured vertebra, three broken ribs, and was operated on at the University of California, San

Diego Medical Center.

Unfortunately, he was unable to return to work for six months, yet still managed to rank nationally -- ninth nationally in total purse earnings in 2004 with about eleven and a half million dollars.

While this is an unfortunate story, the silver lining is in the fact that the trainer of the horse that Alex was riding was required by the rules and regulations of the California Horse Racing Board to maintain a policy of workman's compensation insurance. That policy covered Alex to the same extent as any other worker in California would be covered in the event of a work-related injury.

Under the terms of that policy and California law, Alex's medical expenses were covered to the extent required to cure or relieve the effects of the injury with no deductible or co-payments by Alex.

He was also entitled to temporary

disability benefits to replace lost wages. And had he been unable to return to his profession, he would have been entitled to permanent disability benefits and supplemental job displacement benefits.

The cost of that insurance was paid by the trainer of Golden KK, and in the case of the rider, billed to the owner of the horse.

Under two programs authorized by

California law, the cost of that insurance is subsidized by racetracks and horsemen through a variety of funds derived from wagering on California races.

In addition, every California track pays for supplemental catastrophic injury insurance through a TRA sponsored group program that would pay significant benefits in the event of permanent disability or death.

What this story illustrates in part is the leadership role California has assumed in the thoroughbred racing industry with regard to jockey

safety and health issues.

It is one of five states that currently mandates workers' compensation coverage for jockeys and exercise riders, and one of two that provides funding through wagering dollars to provide health insurance for jockeys and their dependents. And that may have expanded by one more recently, but I'm not quite positive about that.

But at least all of our -- California provided health insurance for jockeys and their

families.

Racetracks, horsemen, and representatives of the riders have worked together for years in California to develop legislative and regulatory standards for track safety and to contribute significant funding to the Disabled Jockeys Endowment.

Del Mar was the first racetrack in the United States to install the Fontana safety rail on its dirt track, an innovation that has saved lives

and prevented serious injury since its installation.

More recently, we have worked closely with the California Horse Racing Board and Barry Broad, whose name you have heard mentioned here, to pass AB 1180, a bill signed into law by Governor Schwarzenegger in 2005. That new law memorializes a number of safety and health initiatives for the benefit of California riders, including a peer reviewed academic nutritional and health assessment designed to provide a scientific basis for future policy decisions concerning the jockey scale of weight and nutrition and weight management programs.

We have completed the first phases of that through Dr. Dan Benardot of Georgia State University, and hope to begin releasing some of that data and information as soon as the data analysis is completed.

Moreover, California is the only -- to my knowledge, is the only state in the country to require a postmortem examination of every horse that

dies on the grounds of a licensed racetrack or training center.

That requirement has enabled the industry to support and benefit from research into the causes of catastrophic injuries to horses conducted by the University of California at the Davis School of Veterinary Medicine.

That research most recently led to the adoption of a regulation limiting the use of horseshoes with toe grabs on California racing surfaces based upon findings that there is a significant correlation between the use of medium and high toe grabs and the incidence of catastrophic limb failure in horses while racing or training.

Similar research has and will continue to contribute significantly to our ability to increase safety for horses and riders as we are more able to confidently identify the causes of injury and attempt to prevent them before they occur.

This is a point I think worthy of some

amplification here.

There is an intricate relationship, obviously, between horse and rider, not only for the success of a racehorse and a rider, but also for their mutual safety. And I think that is something that we tend to overlook a little bit.

Every time most -- and I think probably the research that has been conducted would verify that most of the musculoskeletal injuries that happen with riders is a result of either the horse breaking down or falling off.

And to the extent that we can reduce or eliminate injuries to the horses, we can have a marked and positive effect on the number of jockey injuries as well.

To that end, California has recently been

the only state in the country to mandate the installation of what have been referred to as engineered synthetic racing surfaces. They are used for both racing and training purposes.

Del Mar has just completed the installation of a surface known as polytrack. And while the data is green in the insurance returns, we firmly believe, based on earlier results, that the reduction in the level of injuries to horses and riders can be reduced through these surfaces by as much as 80 percent.

And I think if your NIOSH team has spent any time on the racetrack, you would have seen probably the preeminent example of a polytrack surface in action where injury rates have been dramatically reduced in the past year and a half.

I personally am incredibly encouraged by the development of these racetracks and their ability to reduce the kinds of minor injuries that ultimately result in major and significant injuries to horses through training and exercise.

As I mentioned earlier, racetracks in

Southern California operate under probably the most comprehensive series of safety and -- safety

requirements of any in the country.

We have annual safety inspections by the California Horse Racing Board to ensure our compliance with those regulations. We meet regularly the Jockey's Guild representatives to identify problem areas and work together on those.

The new legislation I mentioned also contains provisions in it requiring the Racing Board to certify from a safety standpoint the jockey vest as well as safety helmets. And I believe there is a conference going on simultaneous with this one to begin -- or to make some progress on the work of enhancing the level of equipment that is used by jockeys in races, and, of course, also evaluating the use of safety rings in California.

I did want to take a brief opportunity, if it is okay with you, Kitty, to introduce Robert Colton, who works with the jockeys at Delaware Park, and Robert has instituted some novel approaches with management there to enhance safety cooperation

between racetracks and jockeys.

And I thought it would be helpful for him to kind of finish off my portion of this.

MR. COLTON: Thank you, Craig, for putting me on the spot here.

If it seems like I'm slightly prepared, I am. And hopefully I won't make my thoughts too incoherent, just a little too much wine last night.

Anyway, a lot of problems that -- I should say a lot of issues that come up with safety are local.

Now, I think that as we move forward in trying to design protocols for a safer racetrack and working environment for riders, a lot of it has to be done locally.

What we did in Delaware last year, I went to management, Bill Paisley (phonetic), and said, We need a safety committee. We have a lot of issues locally, and there are a lot of idiosyncrasies at any track in terms of maintenance, the rail, you know, things that happen at that particular track

only.

And I said, We really need all of the departments there so we can get things done very, very quickly.

In addition, you know, to gain -- that's to gain the respect of the participants around the horse. And also we need some serious backbone to this, some serious bite on the racing commission.

We dealt with a lot of different issues. We have a state-of-the-art warning system that has lights and sirens, for example. And when those sirens go off, there is a loose horse in the morning, you have no second warning.

You are to immediately pull your horse up, and we implemented an enormous fine. It is $2,500 because that's how serious we take the safety issue in Delaware. But we have resolved a lot of other issues.

We have kept a lot of accidents from occurring. We have given our outriders enormous

power. At any time they feel anybody out there on the track or any horse is unsafe, they can immediately remove that horse or rider.

Some of the other issues that we have dealt with, we are in the process of designing some new whips -- we have tested a few already and didn't like them -- which would be a Pro Cush whip, trying to be a little more humane, and not pushing the horses past their capability.

On the insurance side, we did institute a program recently that expanded our on-track coverage from 1 million to 2 million. And more importantly, the coverage went from two years to five years.

And we really took a different approach to this in that we went to management and said, Look, we are independent contractors, and we can't keep going to -- our horse -- the tracks keep expanding, coming up a cost. And that -- the cost of the additional insurance is picked up by the riders.

So, you know, we now have workers' comp,

arguably the best on-track insurance in the United States.

I'm just trying to think of some of the other issues that we deal with.

We got to developing Philadelphia Park, a

track that is only about 60 miles away from us. And I participated yesterday in their first safety committee meeting, and hopefully we resolved a lot of issues.

As you look over with solving these -- you will find a very, at times, dysfunctional industry. And just getting us to the table to speak together at times is very difficult.

And that's part of what the safety committee, part of the idea that I had behind us in Delaware, and even in Philly where they tend to get -- you know, it's year round racing, tend to get along less than Delaware because we only have seasonal, just wanted to get them to the table and work forward on a common issue.

And I think that we have been able to get a lot of -- a lot of issues resolved.

One of the biggest hurdles that you will face moving forward, you know, is jockeys themselves.

And I have run into this in this industry repeatedly, in that, you know, as any time you try

and legislate or force health changes or personal changes or the personal life choices, it's difficult, and it's going to take a tremendous amount of education to slowly change the riders. It's not going to happen overnight.

I experienced many of those weight reduction methods and many of those accidents that were on that screen. And, you know, it's really hard to teach an old dog a new trick when you have become so used to pulling your weight a certain way, and because of the time constraints and sometimes because of, you know, your personal choices of not -- you know, we won't use the word lazy, but not

doing things the right way, it becomes easier to use those methods.

So, you know, as we move forward, a lot of the responsibility is going to have to be put on the riders. They have to be responsible.

That's what we have done in Delaware in the morning, to cut down our accidents, is that everybody is responsible out there.

Everybody on or near a horse has to, you

know, use common sense or at least horse sense. It's best to prevent the accident than, you know, to deal with the injury afterwards.

Thank you.

MR. FRAVEL: Thanks, Robert, for filling us in on the East Coast version of what we do in California.

One more thing I did want to mention before I finish.

And in California, three years ago we ran into a huge crisis in the workmans' compensation

world. California in general was subjected to dramatic increases in workers' compensation costs, not just for horse racing, but for every industry across the board.

Canada carriers stopped wanting to write insurance in California because the levels of fraud and excessive medical charges and other factors were overwhelming the system. And Governor Schwarzenegger and the legislature got together and drafted some comprehensive workers' compensation reforms that dramatically cut costs.

But at the same time, the racing industry, as I mentioned earlier, got together and formed a consortium that was designed, not only to subsidize workers' compensation costs, but also to institute safety programs that would reduce the levels of injury as well.

And I can tell you from standing here that that was directed, not just at backstretch workers alone, but also riders, exercise riders. Because,

candidly, the vast bulk of our workmans' compensation costs in the backstretch arena is related to either jockeys or exercise riders.

And by instituting a very aggressive hands-on risk management program for trainers, who are the employers on the backstretch for riders and exercise riders, we have managed to cut back our claims levels dramatically.

There are some accidents, like horses that just clip heels with one another. They are simply unavoidable for the most part.

But many other accidents, simply by virtue of exercising better care and good risk management

programs within the industry, have developed and resulted in dramatic improvements in claims.

And I think our friends from AIG can probably confirm that for me.

That program is not green anymore. I think it is well established, and the data has proven that you can, if you put your mind to it,

reduce the levels of risk. You can't eliminate them altogether, which I think is true of every industry, but you can make dramatic improvements.

So if you have any questions, I would be happy to answer them. Otherwise, I'll turn it over to the next speaker.

Thank you.

MS. HENDRICKS: Thanks.

Next we have Ed Bowen with the Grayson Jockey Club Research Foundation. Mr. Bowen is going to be speaking on ongoing horse safety research within the industry.

ON-GOING HORSE SAFETY RESEARCH WITHIN THE INDUSTRY

MR. BOWEN: Good morning. I am Ed Bowen, and I am president of the Grayson-Jockey Club

Research Foundation. We are a 501(c)(3) organization and an affiliate of The Jockey Club.

The Jockey Club is the body with which all American Thoroughbreds are registered.

In this context, the word "thoroughbred,"

of course, is not merely a synonym for "purebred," but refers to the specific breed of horse maintained primarily for racing and other athletic endeavors since being developed in England some 300 years ago.

The Jockey Club, with headquarters in New York and offices in Lexington, Kentucky, not only maintains the Thoroughbred registry, but operates a family of various companies providing information services and technical support to breeders, owners, fans, and racetracks.

The mission of our division, the Grayson-Jockey Club Research Foundation, is to identify and fund the best projects available in the various fields of veterinary medicine aimed specifically at improving the lot of horses.

This includes musculoskeletal considerations, the cardiovascular system,

communicable and other diseases, reproductive problems, and nutritional advancement.

The origins of the Foundation date from

1940, when leaders of the Thoroughbred racing community created the Grayson Foundation. There was recognition that, even at a time when millions of horses were still used in warfare, as it was conducted at the time, the federal government would stress research on the food chain animals more than on horses. The private sector would always be called upon to fund advances in care of horses.

The name Grayson was used for the foundation in appreciation of the advice given the organizers by Admiral Cary Grayson. Admiral Grayson, whose family still owns a breeding farm, Blue Ridge Farm outside Middleburg, Virginia, was a unique and interesting American citizen.

He had been personal physician to President Woodrow Wilson during his presidency, and later Admiral Grayson was head of the American Red Cross. He was a friend of both Presidents Theodore and Franklin Roosevelt.

The Grayson Foundation was capitalized in

1940 with an endowment of $100,000. Years later, it merged with a separate entity created by The Jockey Club. And thus since 1989, we have had the unwieldy title of the Grayson-Jockey Club Research Foundation.

Over the years, fundraising through memberships, private donations, and special events, along with portfolio management, has created considerable growth.

This year we were able to provide $1.1 million in payments for research. This is small by some Washington standards, I realize, but it is a record for any horse-specific foundation as far as I know.

Typically, we have about 20 projects being funded at any given time. In the last 24 years, we have provided $14 million to fund 230 projects at 32 universities.

I want to stress that all our income is derived from the generosity of people in the horse world, people who care about the animal and

understand the importance of research. We do not receive any automatic check-off from registration fees, pari-mutuel wagering, or any other source.

More than two million Americans own more than 9 million horses. Our support comes from a tiny portion of those owners, while there are other organizations, such as the American Quarter Horse Foundation and the Morris Animal Foundation, which also derive a share of funding from individual horse lovers.

And of course when you say 32 universities that have an equine research component, there is also a great deal of support for those universities from individuals in their areas or for their alma mater.

As is true from the beginning, the Grayson-Jockey Club Research Foundation funds research beneficial to all horses and ponies, not just Thoroughbreds. However, since the preponderance of our funding has come from the Thoroughbred sector, the health and soundness

concerns of the racehorse have always been a high

priority.

It is easy to make the connection, as Mr. Fravel said, between the horse and jockey, as well, since riding a sound racehorse to compete at 35 to 40 miles an hour is a far rosier proposition than being aboard a horse that's about to break down or fall.

The Foundation board consists of 23 individuals noted and well-respected in the Thoroughbred world. They serve without pay.

Annually, we set a deadline of October 1 for proposals, and we receive around 50 in most years. They are reviewed by individual teams among our overall Research Advisory Committee of 32 researchers and veterinarians, who also serve without pay.

We then bring all 32 together to determine which projects are most highly regarded in terms of impact on most horses, excellence of scientific

methodology, and proper budgeting.

We track all projects funded and expect that each one results in a paper published in a

peer-reviewed journal, which is the gold standard for proof of successful research.

In any given budget cycle, a high priority goes to projects that are directly involved with either preventing or treating the sort of injuries which mean that the safety of the jockey coincides with the safety and soundness of the horse.

This includes work on proper shoeing and maximal design and maintenance of racing surfaces, as well as those things physically connected to the actual horse itself.

Among projects in recent years that I am most encouraged by is a study we funded at Colorado State University which undertook to discern when the soundness issues were developing, prior to an injury actually being culminated.

This project built upon knowledge gained

from human studies of osteoporosis and sought use of serum markers to determine when the metabolic profile of a horse was changing.

As you know, blood can tell many things. And when and if this study leads to a commercially

available test kit of some sort, we will have handed horse trainers and managers a major new early warning system.

Knowing that change is taking place and being able to distinguish between change caused merely by training and change of a negative nature will be a major step in protecting the horse from injury.

And, to repeat the obvious, a horse safe from injuring himself at high speed is the best thing we can hand over to his/her jockey or exercise rider.

In recent years, as we said earlier, the use of synthetic racing surfaces rather than dirt tracks has come into vogue. Early indications are

that the safety of these tracks to horse and rider is markedly improved.

Our Foundation funded a study which is analyzing the stride of horses as it relates to grass courses, dirt courses, and these synthetic surfaces.

This will help steer the industry toward

maximal safety of racing surfaces.

Similarly, work done over the years with Foundation grants has determined that certain popular horseshoe designs create increased risk for injury.

As is often the case, what is intuitive can be at odds with what is real.

For many years, conscientious horse trainers have felt they were increasing the safety of their charges by fitting their front shoes with extensions, known as toe grabs at the bottom of the leading edge of the shoe.

The thought was that this provided

traction and protected the horse from slippage.

However, our studies have shown that the real impact of the toe grab is to abrogate a helpful slide segment of the stride, causing the hoof to undergo heavy loading that compresses the heel unnaturally.

This research was important in a recent decision by the California Horse Racing Board to eliminate use of front toe grabs of more than four

millimeters for horses racing in the state.

Last year, The Jockey Club and the Grayson-Jockey Club Research Foundation organized and underwrote a Welfare and Safety of the Racehorse Summit. One of the committees created from this effort worked with the California Horse Racing Board.

A recent presentation by the chairman of that committee helped the Racing Commissioners International convention approve a model rule against toe grabs in all states.

As you probably know, and I'm sure you know, Thoroughbred racing is regulated state by state. So it is a matter now of urging each racing commission to follow through on this model rule.

The end result, we hope, will be more or less universal recognition that banning high toe grabs in front reduces the chance of injury.

Another aspect where what is intuitive is not in fact the case is the visual suggestion that an injury to a horse, especially a leg fracture or ligament or tendon trauma, is a spontaneous event.

There certainly are some cases where a totally sound and healthy horse either takes an awkward step or is bumped or tripped accidentally by a competitor and suffers a spontaneous injury. The famous case of Barbaro is a prime example.

However, research at the University of California at Davis, which we have helped fund, has found that the majority of injuries actually are the culmination of some pattern of pathology, or

abnormal change, which leads eventually to something giving way.

Educating even experienced professionals that this is the case will be an ongoing effort growing out of the summit, which I mentioned earlier.

In my profession, specifically trainers, I think it is very important for them to realize that when you have an accident, the jockey, all of them say, it seemed like the horse stepped in a hole. Well, they don't put holes in racetracks. That's just what it seems like to the jockey.

And this whole idea, this understanding

that there is an ongoing problem rather than a spontaneous problem in so many cases, I think it's something that we really want to help the trainers, help the tracks. Going to the racing commission has helped the trainers.

Another area where health of the horse and the jockey go hand in hand is determination of what

medications are safe and appropriate for racing.

As is well documented in other sports, this is a regulatory matter as well as an issue of safety and just plain determination to protect the sanctity of the competition.

And in this case, I'm talking about medication to the horse itself.

The Grayson-Jockey Club Foundation two years ago took under its auspices a committee known as the Equine Drug Research Institute. Through a separate channel of funding, again by concerned horse owners, we have contracted to provide Dr. Don Catlin more than $2 million over three years to seek tests for medications which are, one, illegal; two, potentially dangerous to the horse, and, three,

cannot be detected by current state of technology.

Dr. Catlin is well known as probably the world's top expert in medication testing for the Olympics and other sports. He is now devoting a considerable amount of his time to this effort on

behalf of horse racing.

Once Dr. Catlin's lab develops a test for any of a sequence of illegal substances, the methodology of that test will be provided free of charge to any and all labs across the country which have contracts with state racing commissions to conduct drug testing.

Again, because racing is regulated state by state, most state legislatures prefer that money on testing is done at an in-state lab. So there is no central lab, as there is with Olympic testing in most countries.

Now, I understand your agency is interested in all aspects of health in people in racing, not just the riders. Therefore, I would like to spend my remaining minutes with a sort of addendum to my presentation.

The Jockey Club also operates a separate foundation devoted to helping people with health and financial difficulties. This Foundation is created

on behalf of people in racing and their families.

This Jockey Club Foundation distributed $540,000 in grants during 2006 and. Since 1985, the foundation has been able to help more than 1,000 needy individuals and their families involved in the Thoroughbred industry by providing nearly $12 million in support.

Grants through its monthly assistance program totaled $300,00 last year and helped cover the basic living expenses of 45 individuals beset by hardship, including those out of work due to serious injury or health issues.

One-time or short-term grants were made to 65 individuals last year for another quarter of a million dollars.

These grants covered a wide range of expenses, such as medical bills not covered by insurance; physical therapy and equipment for in-home rehabilitation; child-care providers in

extenuating circumstances; and emergency travel for

family health matters.

The industry knows of this work primarily through word of mouth or the website. But, also, we are alerted to many cases by individuals and the racetrack chaplains across the country who see and know the workers on the backstretch on a daily basis and are familiar with their needs.

Again, these are two separate foundations. The Grayson-Jockey Club Research Foundation for horses, the Jockey Club Foundation for people.

I appreciate the opportunity to describe these foundations, and I look forward to answering any questions have now or later.

Thank you.

MS. HENDRICKS: Next, we have Anthony Bahno with AIG. Anthony is going to be speaking about improving protective vests for exercise riders and jockeys.

IMPROVING PROTECTIVE VESTS FOR EXERCISE RIDERS AND JOCKEYS

MR. BAHNO: Good morning. Thank you very

much for the opportunity to address this meeting.

This is an issue that's been very passionate for me as a safety professional, and -- but I wanted to first start off by making a major disclaimer. By no means am I any kind of expert in this industry.

I have learned a lot since I have worked with people in this industry, and only way I guarantee that I will become an expert is if I ever get on the horse within an official race, and that's never going to happen.

I actually go by Tony, and I work for a company called AIG Consultants, which is part of AIG Insurance Company, better known as American International Group. I have been working within the horse racing industry as a safety professional since 2003.

AIG has a pretty prominent placeholder within this industry. For example, we have workers' compensation insurance programs in three states

within the United States, and some of those workers' compensation insurance programs cover employees at

all levels, meaning not only is it jockeys and exercise riders, but, in fact, some of the backstretch workers.

We also, through one of the AIG programs, we provide accident and health insurance for jockeys, which is better known as an on-track accident insurance policy, and we probably have about, say, roughly 90 percent of the tracks within the United States to the best of my knowledge.

Some of my things that I have worked with previously within the horse racing industry, primarily within California, have been several things.

One of the first things that we got together with my California client is we determined that there was a need for major improvements in terms of safety and education programs. And through the help of them and an outside video production

company, we produced a 12-minute safety video that covers all aspects, from backstretch workers to exercise riders, and also jockeys.

And that was produced as DVD, and it is

also in English and Spanish. And we are fortunate to involve two prominent jockeys who I believe are Hall of Fame members. One was Chris McCarron and also was Lafitt Pincay.

So some of the other things I have been involved in, most recently, I completed a safety best practice audit at six major racetracks across the United States. I was out in California, so that broadened my overall level of experience and knowledge.

And we have gotten into some recent things in terms of testing both helmets and also vests. And the thing I'll be talking to you today is really about -- really about the issue that's associated with the protective vests.

This is a risky business, as other people

talking before me have no doubt expressed. It's perhaps the only industry to my knowledge that I have ever worked with in 25 years as safety professional where an ambulance follows the workers as they go to work.

Think about that. There's no other

industry that I know of -- or maybe you folks can kind of shed some light on that, but it's truly a unique industry. And also, perhaps, within the insurance world in terms of workers' comp, you have a highly motivated work force that wants to get back to work no matter what.

So that obviously causes some major problems down the road.

This picture kind of sums it up to follow up on the risky business aspect.

Imagine yourself in the position of that jockey who was not fortunate enough to get out of the way and to roll underneath the safety rail, but, in fact, had to tuck into the ball and hope to God

that that horse didn't step on him.

What I want to talk about now is a little bit about some accident data that we have collected. And I know there will be some other speakers within this room that will also have some accident data to share with us.

Falls from horses, within our experience, accounted for 24 percent of the total injuries

during 2003 to 2006, and about over $4.2 has been incurred in terms of workers' compensation claims.

The exercise riders and jockeys accounted for 72 percent of the total number falls from horseback. These occurred during training and also live racing.

The highest percentage of falls within our experience were at racetracks located within Southern California. And for those of you who don't know, there are five major racetracks within California.

It just so happened that the majority of

them happened at the Southern California tracks. Why? We are really not sure.

A little bit about injury by body part. Injuries to the upper trunk and extremities were perhaps the most common, including chest, shoulder, and spine. Secondary body parts included leg, arms, and ankles.

One comment here is that there's not much -- the availability of data on horse racing injuries to jockeys is not readily available within

the United States. I believe the last study was done by the University of North Carolina I think back in the 1990s.

In some of my research through my own efforts -- thank goodness for the internet because we would not be able to find things then -- there has been major studies that I'm aware of that has been done in Australia and also Ireland.

And for myself as a safety professional, I have actually tapped into some of those sources.

However, some of the things are obviously the same, and then some are perhaps different.

So we talked about the injuries, and, within the safety world, you always look for how you can control things, how you can reduce what the overall exposure is.

And actually several people have commented upon this one issue is that there's not much to be done when you have a 1,200-pound animal that is running 35 to 40 miles an hour from a true exposure standpoint.

So from a risk standpoint, I would look at

other ways to possibly reduce that.

So what we did with the group, I started off in conducting a series of meetings with the jockeys and exercise riders beginning April 2006 at the racetracks within California. And the objective of these meetings was to increase the awareness and level of education regarding limitations, proper fit, and care of protective vests and also helmets.

Now, recognizing that I did not have that base of knowledge, I contacted several equipment manufacturers and wanted to utilize their overall background and knowledge within this -- within that category.

And I was able to really get one that really took -- really took the bit and said, Sure, we will come out. And so we had a series of meetings at each of the California tracks where we had both exercise riders and also jockeys participate.

I got to tell you, I think it was really interesting in several aspects. Probably -- perhaps the most major one was it first started out as a

lecture series more or less.

We talked about, okay, how you properly care for a vest? Do you leave it in the back window of your car to dry it out? Do you -- you know, do you buy it from someone you don't know? Those kinds of things.

And really, probably about the third or fourth meeting, the jockeys really, I guess, just kind of sat up and took notice. And what I mean by that is what they started to do is give us critical feedback. It became an excellent forum for two-way communication, which I think is essential within this industry.

And so we got feedback regarding, okay, my current vest does this. My current helmet does this, and really got some major suggestions in terms of making some improvements to increase the functionality of the vest itself.

And we looked at a variety of vests from pretty much all over the -- I would have to say all over the world.

Yes, there are U.S. manufacturers, but

there is also manufacturers within Japan, Argentina, Chile. And some of these, if you would look at them, you would just say, Well, how can this possibly offer any degree of overall protection?

So one conclusion that we came to was that the construction and the materials used in the vests does not provide a high degree of flexibility in terms of a jockey being able to tuck and roll when falling off a horse.

And, Robert, you can probably back me up on this, but that was the foremost comment that came from the jockeys.

Now, there's a vest out there, if you look at the standards, which I will give you just a little bit of insight into -- that's in a second here.

But if you look at the standard that would require somebody to actually wear the vest that is, quote, certified by the ASTM, that vest is almost like a flak jacket that would be worn by a police officer, for example. It's very thick padding and, most importantly, very, very restrictive.

And we were fortunate in California to kind of enlighten the California Horse Racing Board

of this fact because they were about ready to mandate that the jockeys were supposed to wear that ASTM version of the vest, which probably would have caused a lot more problems. I will get into a little bit next as to where we are.

So one other thing that came out of this series of education things is that the manufacturer of the vest had the first opportunity to get key critical feedback from the actual user.

I mean, imagine making a product and never talking to the users. It is just kind of insane, but, I got to tell you, it happens time and time again.

So I think that was one of the key aspects for the manufacturer, as well as myself.

These are some of the interested groups that we have in our little task force that we are working with. The California Horseman Safety Alliance. Craig gave some insight into that. That's the group that was formed when AIG put

together the workers' comp program.

We have had the great benefit to work with the Jockey's Guild, both in the U.S., and Canada, AIG.

Phoenix Performance Products. They are, in fact, the vest company that we are -- that we are working with. And they are -- they manufacture the Tipperary brand of vest, which is the product in 90 -- I think it is used by about 90 percent of the riders out there.

Charles Owens is one of the other companies that we have gotten some feedback in.

And then from the testing standpoint we have used a company called Dynamic Research. And then also our efforts have been known, and also we have gone to the California Horse Racing Board, as we said, to get some of their feedback and most importantly, their endorsement, involvement, if you will.

Little bit about the history of what I will call protective vest standards. There's -- the major one that was out there and still exists today

is the BETA standard, which is British Equestrian Trade standard. And there are several levels of protection, or at least there used to be.

And believe it or not, a lot of the states, when you go to research what the state regulations say in terms of, A jockey must wear this level of overall protective equipment, are way outdated.

For example, in California and many other states still specify a BETA 5 vest, which is totally irrelevant because they don't make them anymore. Because back in the year 2000, BETA revised their standards to basically incorporate three levels of protection, and what they consider appropriate for jockeys is actually Level 1.

Then there's some international standards as well. There's the SATRA standard. There's the Australian Horse Racing Association standard. As I have indicated before, the ASTM, American Standards and Testing Materials. And these standards are in

fact generic and apply to all equine sports.

That's the major area of perhaps the

greatest opportunity for us as a group to really change the face of protective vests.

The interesting thing about the protective vests, too, for -- as I alluded to before, spending a lot of time within some of the jockeys' rooms and just talking to them, you get the sense that, one, the quality of these vests vary from manufacturer to manufacturer.

The actual condition of the vest that is -- is wide ranging depending upon age and also care.

One of the more challenging aspects to this level of overall protective equipment is that you have a user population that, some are making a lot of money, and very many are not making a lot of money.

So you have an entry barrier for a vest that costs 200 to 300-plus dollars. Sometimes more

because somebody happens to get a, quote, deal on them because they are selling them out of the back of their car. Some people just can't afford it.

So you see vests that have been there well

past their prime in terms of overall condition.

I have also seen vests that, believe it or not, despite the best efforts of all these standards and all these manufacturers, that the padding has been removed. Okay?

That -- just for whatever reason, they take the padding out.

I have also seen vests where I have seen additional padding put in, okay, just for comfort, you know, factors, you know, for whatever other reasons.

One or the things that we are able to do as a result of working with the jockey's groups was we got that feedback and, actually, Phoenix Performance went back to the drawing board, and they created one or two prototypes of vests that offered,

I guess, a high degree of overall flexibility perhaps, especially from the shoulder region, so that the jockey was able to get down within that riding position, that vest would not ride up within a certain aspect. So there are manufacturers that are willing to go basically back to the drawing

board, if you will.

So to kind of summarize where we are, is, again, a team comprised of jockeys, vest manufacturers, horse racing industry. Research consultants, along with myself, are now working -- we are actually part of the ASTM community for protective body padding, that's F 08.55.

And where we are now, believe it or not, is the vote is actually going to be taking place to adopt our draft standard, and our draft standard is going to be essentially for body protective use within equine competition and racing.

So it's not going to be an overall generic standard, but perhaps our efforts are hopefully

going to -- hopefully going to succeed because we want to get one that is more specific to this industry.

So -- and, like I said, the vote actually takes place I think tomorrow and Thursday. So after I leave here, I'm headed down to Norfolk, Virginia, and we will see what happens.

Thank you very much for giving me the

opportunity to talk with you.

Are there any questions.

Craig?

MR. FRAVEL: Tony, do you have a similar project underway for the helmets?

MR. BAHNO: Comment about helmets. Within my experience, about 90 percent of the population, jockeys and exercise riders are wearing a helmet, called the Caliente, which I believe is no longer manufactured since 1985. But yet they still somehow survive out there.

Recognizing that, I believe, Kentucky is

the only state within the country that has mandated a new ASTM helmet. What we are doing right now, Craig, is we are -- we are actually testing both helmets, the Caliente and also the ASTM approved helmet.

What I mean by testing, the company that we are using is Dynamic Research. They are in Southern California, and they done a ton of research for the automotive industry and for motorcycle helmets and stuff like that.

So what we have done is we have gotten actually a -- what do you call it? I guess it's called a headform with a sensor. And we are dropping them from a height of eight feet, and we are dropping them down on both the turf, synthetic, and also the dirt, and we are going to see what the levels are.

So we are still kind of about halfway through that. So that will also hopefully provide -- shed some light on -- as to what our

direction should be with respect to that.

Does that answer your question?

Anybody else?

Robert?

MR. COLTON: Tony, do you have a time line on how long to implement from the draft standard to where the product will be available?

MR. BAHNO: From what the folks at ASTM tell me and the chairman of our little group, if it's passed during this meeting, and -- I guess it gets put out to a vote. And then you have to address each and every negative.

So if it's passed this time, then I think it comes up for one more final vote in the Fall meeting, which is September/October time frame.

So if everything goes according to plan, I would say probably by the end of this year.

Okay?

All right. I thank you very much.

MS. HENDRICKS: We will have short break

right now. If we could reconvene back here by 11.

(A recess was taken.)

MS. HENDRICKS: Next we have Dr. David Seftel, medical advisor to the Jockey's Guild presenting on examining environmental health and safety factors at equestrian race courses nationwide.

EXAMINING ENVIRONMENTAL HEALTH AND SAFETY FACTORS AT EQUESTRIAN RACECOURSES NATIONWIDE: RATIONALE, APPROACH AND PRELIMINARY FOCUS

MR. SEFTEL: Thank you, Kitty.

I want to extend a special vote of thanks to Frank Hearl and Kitty Hendricks for the extraordinary act in pulling together this meeting

on very short notice and to bring literally the who's who of the industry to the table.

What I'm going to be doing with you today is walking you firstly through the common pathologies that we have experienced and seen at the racetracks and then try to put it into some kind of

organized framework so that we can examine the various areas that need to be studied.

Firstly, improved jockey care will benefit everybody, not just jockeys.

And we see that accidents are a combination of human error, horse health and behavior, from our colleagues at Grayson, track conditions, and trainer practices. Ultimately fewer accidents will save money and lives. Workers' comp premiums will be reduced as well as the track catastrophic liability.

It obviously needs to be guided by an objective picture of needs. And a few of you have pointed out, there is an enormous amount of state and national momentum for this comprehensive study that we plan to engage upon. We have to have some

good peer review studies in this industry in order for everybody to have a sense of direction.

The National Jockeys Health Initiative is the first comprehensive look at both health and

fitness of the jockey population on and off the track.

As has already been pointed out, it is going to be modeled on the NIH study process, such as that used for the landmark Women's Health Initiative study.

Fundamentally, there is sort of the conflict in the understanding about jockeys. People look at them and they see, oh, they are physically fit, but at the same time, there are many serious medical maladies.

In my own data, 20 percent of my jockeys have kidney stones, 40 percent have hematuria and proteinuria in the urine, an early sign of nephritis, and 25 percent have immune compromise with persistent and repeated infections that I will detail shortly.

In addition, when you look at the National

Health Claims Data when our jockeys get to the hospital, we see a lofty number of very, very

serious morbidities. Head and neck cancers, leukemias, lymphomas, as well as the kidney stones, pancreatitis.

We even have jockeys with kidney failure requiring transplantation, including one defined in an HBO special.

I had one patient that required a complete heart transplant because of heart failure that resulted from pulmonary hypertension from the use of amphetamine related medications such as phen-fen.

Two categories of what ails jockeys, their medical conditions and obviously occupational issues and trauma.

Very quickly, the medical maladies. We see recurrent upper respiratory tract infections, an enormous amount of gastro-esophageal reflux disease, the kidney stones that I mentioned previously, a huge excess and incidence of asthma and COPD related to smoking, dust, and dirt.

And then a panoply of skin infections,

viral, bacterial, and fungal, which are related not only to the immunocompromised, but also to poor working conditions.

This entire picture is complicated by a terrible trio: Dehydration; malnutrition; and weakened immunity.

What are the top ten traumas that we see?

Obviously muscle and tendon injuries are right at the top of the list. But if you see No. 2 is concussion.

And indeed the only good peer review published article from the field was an article from 1996 which did some retrospective analysis of jockeys' health accident data and showed that concussion and head injuries was by far the commonest of these serious injuries affecting this population.

All the others, we will see shortly just why they are just such a significant problem.

The problem related not only to the stresses of the profession, but also due to a

22 variety of environmental occupational factors.

1 One of the key tenets is that riding is an
2 extremely high torsion profession.
3 When you talk about riding on a horse,
4 it's very easy to think of them as just sitting
5 there at the top tips of their toes and holding on
6 with their fingertips.
7 Every single muscle in a jockey's body is
8 stressed to the max. Jeff Johnston will tell you a
9 little bit later on about just how stressful that
10 can be.
11 One of the key maxims again, rest is
12 medicine and must be taken seriously.
13 The jockeys have an population which is a
14 pure paid-for-performance profession. If they don't
15 ride, they don't get paid, unlike any other
16 profession. So there's an enormous stress on them
17 to get back to work before they are ready to get
18 back to work. And this obviously complicates the
19 occupational and environmental health picture.

Jeff will talk to you about how many times -- how many times did you have a collarbone broken, Jeff?

MR. JOHNSTON: Zero.

MR. SEFTEL: He is an extremely lucky guy.

How many of your colleagues had a collarbone fracture?

MR. JOHNSTON: I'm seeing it every day now.

MR. SEFTEL: The collarbone is the Achilles heel of most riders.

It only takes eight pounds per square inch of direct torsional force on the collarbone to snap it. And collarbone fractures reflect a fundamental problem with the flak jackets and the torsional forces on the chest wall.

It is also a very debilitating injury because it takes you out of work for four to six weeks and obviously has significant economic potential.

One thing that is not readily known is that there is another threat that is being borne out by the latest jockey health claims data. It is invisible, but it indispensable, radiation, the silent killer.

Every X-ray adds to the risk, as you know. Jockeys are subject to 10 to 15 times the radiation as the general public. Because they have so many spills, they have more and more x-rays. And that is one of the reasons that we believe that we are seeing an excess in the cancer rates.

So obviously, to avoid excess cancer, we need to think about things like low dose x-ray systems at the tracks or facilities that treat jockeys.

I think a beautiful example that Craig brought up is the excellent medical care that is being provided at certain tracks. We would like to see what Craig described at every single track in the country.

The sad truth is, there is there is a lack of standardization of quality of medical care across four racetracks. I'm one of the very few physicians who actually has the privilege to work with this community.

The issues aren't very complex. Riders migrate frequently. There is no communication about

medical issues amongst providers. This discontinuity of care leads to poor care.

The same thing that we see mirrored in the rest of the population is amplified in the jockey community. Obviously, we need to think about issues such as common electronic medical records going forward.

In summary, improved racetrack care will benefit all players. Jockeys getting rapid evaluation of their injury status, our workers' comp providers will enjoy lower claim costs, will avoid unnecessary ER visits. And ultimately these lower claim costs will filter down to reduced premiums

paid by trainers and track operators.

So one of the tenets that we are working on is that jockey health and safety and operating profitability are actually inseparable. And we would like to see a process of renewal and research being driven by objective measures and impartial research.

What I would like to do now is to go to a deeper level of granularity and share with you the

actual process flow, how things work in the racetrack.

When I first came here six years ago, I was a complete novice. I had never been to a race in my life.

My background, I'm a board certified internist. I have background in infectious disease management. I have worked at national research centers utilizing various technologies.

I really did not have any expectation that I would discover literally a cesspool of disease in

these facilities along with enormous challenges.

But understanding about the way that horse racing works has really helped me understand the some of the factors we need to study.

Firstly, racing is a highly time sensitive industry. Everything happens to a schedule. It's like putting on a Broadway show every single day of the week. And, therefore, you have the additional time constraints.

So let's see what happens.

The grooms get up at 4 a.m. in the morning

to prepare the horses for the exercise riders and the jockeys to go on to the track between 4 a.m. and 5 a.m. An exercise rider and jockey will exercise between five and 14 horses until approximately 10 a.m.

You will see some pictures and video about just how irascible some of these horses can be. Because, remember, there are many levels of training.

These horses, some of them are very young, and others are old, but they are -- it is always an extremely challenging situation, and we always see more injuries in the morning exercise period than we see during the race day itself.

Particularly important, during the wintertime, reduced visibility. The tracks try the best they can with their lights up. The reduced visibility contributes to a lot of accidents.

An ambulance crew is usually on the sidelines. The big problem is, the ambulance crew members are usually basic life support certified, not ACLS certified. This is a fundamental problem

that we need to address.

Exercise riders weigh between 140 and 150 pounds, but yet they ride the same horses that the jockeys ride that afternoon. And there is no adverse increase, no increase in adverse events as a result of that excess weight.

This has implications for our studies on

the weight limits for jockeys.

So what happens after 10 o'clock? It's a process called "reduce to ride." If you don't reduce, you won't ride.

The jockeys go into what is euphemistically referred to as a "hot box," but basically is a place where you have induced hyperthermia. In addition to that, they may take laxatives and diuretics or practice self-induced vomiting.

Secondly, they dress for success, but not safety.

You will see the jockeys donning these featherweight boots, silks, protective helmets, flak jackets, and goggles for each race, but there is

still an extraordinary high rate of serious head and chest and extremity injuries.

At this point, what I would like to do is actually show you some of the helmets that jockeys wear.

And, Jeff, if you come up and just share with them the differences.

This, what I have in my hand, is the most commonly used helmet.

MR. JOHNSTON: This is the Caliente helmet that was referred to earlier. This is used by approximately 90 percent of the jockeys out there today.

I think they mentioned that one state has rules regarding helmets. It is actually two. Indiana had on its books the same -- they had copied the rule in Kentucky to use ASTM certified helmets.

The director of the racing commission gave me an opportunity to address the issue and explain to him why we didn't want, or the jockeys didn't want ASTM helmets.

I effectively approached the commission,

and they introduced a law to not only recommend, require -- they require ASTM helmets as well as other industry worldwide standards, such as EN 1384,

the British standard, BAC 015, and the Australian standard, ASNZ 3838.

So it gives the problem with the ASTM helmet, which is -- the only one currently on the market is the Charles Owen.

The study took place -- I went down, and I witnessed the study in Lexington, Kentucky by Lexington Safety Products, which was introduced through the Jockey's Guild, the management at the time, and the Kentucky Racing Commission, did the study to convince that they need an ASTM approved helmet.

But that helmet was, excuse my language, crap. It didn't stand up. And you could drop it on the floor, it would break. The jockeys hated it. Effectively, they said they weren't going to ride if they had to use that helmet.

So the Kentucky commission loosened up, said, Okay, we will look into it more. But then the

Charles Owen company came around and introduced this

helmet, which jockeys were okay with, but they still don't like it.

It's made -- it was essentially made for equestrian activities, such as hunter jumper events, things -- stuff like that. It's not made for the posture that a jockey assumes in a riding position.

Other industry or other racing industries, such as steeplechase industry, racing in Britain, France, Australia, have effectively done studies since 1985 on helmet research.

The EN 1384 standard is effectively the same standard as the ASTM. However, they have maybe one test that is different. One has a penetration test that's a little more severe. One tests the frontal lobe as compared to the rear of the helmet a little more. The standards are a little higher, but effectively they are the same helmets.

The padding circumvents the entire head. It has the same polystyrene lining that absorbs the impact, instead of -- the Caliente, the impact goes directly -- there is nothing to take the impact

away. It goes directly to the brain. The polystyrene will dent, but it disperses the energy, so instead of going to the brain, it goes to the helmet.

The bad part is, once you are in a spill with one of these helmets, you have to throw the helmet away.

And some of the helmets range -- when I was doing a presentation for Indiana, I got helmets from all over the world. I got a helmet from Japan, one from Australia, one -- a couple of different favorite brands used in Italy, France, and Britain.

And one of those helmets cost $900. Most of them range between 3 and 400.

It's hard to discard a 3 or 400 dollar helmet, let alone a $900 helmet.

So it's going to have to be considered if the commissions or the racing industry puts new helmet laws into effect, they are going to have to consider the cost of the helmet.

I'm certainly for it. I don't mind. The

jockeys I represent are, as Robert Colton said,

resistant to change.

There will be have to be some documentation to go along and explain to them why it's in their best interests, but I'm certainly for it. And I'll fight against the industry to make sure that we get these helmets out of the jockeys room and get the new improved helmets, especially the British helmets designed for racing on the heads of the jockeys.

MR. SEFTEL: Thank you, Jeff.

I just wanted to show from a medical perspective, I almost lost a patient because of one of these helmets. And I going to actually walk this around because it is very important that you see what I'm going to be showing you.

This helmet I'm holding above me, you will notice that it has padding over the occipital and the frontal lobes, but it has no padding over the temporal reaches of the brain.

20 As you know from the anatomy of the skull,
21 the skull is weakest over these temporal areas.
22 And I had one of my riders who got kicked

1 by a horse, thrown off the horse, and the horse flew
2 higher than him and kicked him on the temporal lobe.
3 He had a massive, massive subarachnoid hemorrhage.
4 His brain literally turned into his spinal cord, and
5 it was only due to very rapid admission to Stanford
6 that we were able to save his life.
7 By contrast, the European helmet's
8 bulkiness and ungainliness does have a
9 circumferential -- a circumferential -- sorry.
10 It has circumferential padding.
11 As Jeff has pointed, this is basically
12 like an airbag. Once it's used, it is done, and at
13 a significant economic consequence.
14 One of the things we were talking about
15 earlier was who bears the cost, who bears the
16 responsibility for safety in the workplace, and this
17 is obviously an ongoing debate that will continue.

I will hand these around so you can look.

So what happens after they dress for success?

Then they go up the scales where there's a really vigilant weight watcher. He is not there to

maintain their physical health, but he is there to make sure that every jockey leaves the room at their published weight.

But the jockeys are weighed in and out each race by the clerk of scales.

To equalize the amount of weight borne by every horse who is in the same race, a combination of saddle pads and lead weights are used. This titrating weight is done by the jockeys, their valets, and sometimes even the clerk of scales.

Multiple individuals will handle these weights.

Unfortunately, throughout the country, there is variable protection which risks very significant lead toxicity. And this is basically a

preview of the discussion that we will have after lunch in more detail.

The lead weights are often unprotected, have very friable edges, and they visibly shed lead dust. Some are sewn into leather pockets, while others are covered in a minimally protective paint, and we'll show you photographs.

Heavy rubber mats placed under the saddle are supposed to be the primary weight equalizing units. The lead weights, unfortunately, are almost always still needed to top the weight up for fine balancing.

Interestingly, if you look at the history of these rubber mats, they were originally designed to save horses from leg related pathology, but no concern was raised about the valets and the jockeys.

Clearly horses are mammals, too, and I think they ought to be treated equally.

At this point, I'm going to show you a short video presentation called, A Day At The Races.

This is more like a YouTube video. It's not professional, but I think it captures the flavor of what we have spoken about and sets the stage for the further discussion.

(The video began playing.)

MR. SEFTEL: Very often, as the horses slow down, a lot of dangers occur. Horse racing is like riding an airplane. The most dangerous times are leaving the gate and coming to the finish line

and after the finish line. And cornering is also tricky.

What you see here is a shot of one of our the jockey's rooms. You can see that the quarters look relatively constrained. Jockeys do not have a great deal of privacy.

This is the box of lead weights. And you see it positioned right next to the scale and next to all of the blankets and combs.

And you can see the lead dust in this particular shot, quite visible. You see the friable

edges of the lead weights right there, and you see how these edges have become eroded.

Now, how are these lead weights actually used? We will see shortly how they are slotted in to this particular area of the saddle.

And there are a number of different pockets they use either the leather-encased lead weights or the raw lead weights.

There is a lot of pharmacy. A lot of the jockeys will abuse pseudoephedrine containing compounds.

These are some of the shots of the flak jackets. And they are pitifully thin, offering very little protection. One of the recurring themes is that we need biomedical engineers to join us in this research effort to develop and design better protective technologies.

Again, an inside shot of the helmet that we spoke about.

Now that -- this is one of the exercise

riders. He is going to determine what his weight is, and how this works.

(Short colloquy on video)

These are shots of the exercise riders working in the morning.

As he pointed out, he is riding the exact same horse as the jockey will have to ride, at two-thirds the weight. We don't see any excess of breakdown as a result of that.

You can see how irascible the horses can be. It doesn't take much for the rider to be dismounted, particularly in the morning sessions.

This is another example of an unruly

horse.

This is a valet, and he is placing the leather-encased lead waits into the saddle at this point.

One thing should be mentioned, the fact that the lead is encased in leather does not seal or prevent the lead from leaching through the seams.

This is not a watertight seal at all.

(More colloquy on the video)

Just a quick commentary, that is a 19-year-old apprentice rider, Kyle Kaenel, whose helmets are circulating here. He very kindly let us lend them.

Kyle suffered a very severe neck fracture approximately two years ago.

So it's not atypical that the riders get head injuries and neck injuries. He is also five foot ten. So you can see how thoroughly emaciated he is. He is typical of the riders that really have to struggle with their current weight limits.

What we see here is another valet who is actually inserting the naked lead weights or the

slightly paint covered lead weights with his bare hands.

(More colloquy on the video.)

This is the clerk of scales demonstrating how he does the balance.

We have got a Windows problem.

What this is meant to illustrate is that the fact that, even though we have science personally about the dangers of lead, even though efforts are been made to contain and seal lead weights, fundamentally having lead in the workplace of this concentration and this level and this friable is an untenable situation, and we will talk about it more this afternoon.

Once the race is over, they use a series of water trucks and irrigation trucks to resurface or reprepare the surface for the next race. And I will talk about the implications of this process from an environmental perspective shortly.

I want you to notice that these particular trucks are spraying very close to the horses and the humans as well as to the fans.

We have a problem with dust and debris disposal spreading disease. In between races, the jockeys clean track debris from their faces with

standing water and sponges that are located next to their cubicles. Dedicated sinks for each jockey cubicle are relatively rare.

There's frequent reuse of contaminated water and sponges, which leads to self-inoculation with bacterial, fungal, and viral pathogens, and also exacerbates underlying allergic dermatoses.

I have seen virtually every imaginable dermatological condition in this population. And, again, it is exacerbated by medical conditions and underlying immunocompromised.

The second bucket unfortunately usually serves as a heaving bowl or a spittoon for self-induced vomiting.

Crowded cubicles ultimately contribute to communicable conditions. Unfortunately, the cubicle upholstery is rarely cleaned and serves as a very rich polypathological culture medium.

It's important to point out that jockeys,

unlike other professional athletes, spend anywhere

from seven to ten hours a day in these jockey rooms. So this is a critical environment for -- that needs to be healthy and safe.

Unfortunately, many are antiquated and are cramped with poor ventilation. This obviously contributes to the rapid spread of airborne and contact mediated communicable diseases. And because many are immunocompromised, these diseases and conditions are more persistent and severe.

As you saw, after the end of each race, you have track grooming. And, again, there's not a lot of research and not a lot of study of this, but it is something that bears proper investigation.

The water that is used to spray on the surfaces is usually recycled from barnyard effluent bioremediation ponds.

You may have seen those little fountains that the horses can -- in the center of the field. Those are actually sewage disposal plants that the facilities are required to manage. And the water that comes from those is used to fill these tanks.

Now, by law, they are supposed to do coliform counts to make sure there are a certain minimal level of coliforms before spraying this water. Unfortunately, racetrack scientists are rare.

At our facility, I make sure that the coliform count is low, but clearly, without proper regulation, we could have problem with many facilities around the country.

Depending on ambient wind, humidity, and temperature, a proportionate amount can be carried into the workspace of the jockeys, the outriders, and the breathing air of thousands of fans who line up close to the track side.

This is again something that we need to work on in a team fashion.

Remediation will involve installation of airborne sensors to monitor, measure, and report excessive coliforms or other airborne particulate and gaseous pathogens that are released from the

dirt and synthetic surfaces as a result of grooming and horse riding activities.

And this is an important segue into the issue of synthetic surfaces.

There is a very strong movement in the industry to test synthetic surfaces because of anecdotal evidence that it is less traumatic for horses and leads to fewer soft tissue injuries.

Certainly it seems like, from a historical perspective, the European tracks have had great success with this.

The problem from my own professional health perspective is that no good independent peer reviewed studies have been done to document the safety of the plume that's produced by horses' hooves or tractors.

These are synthetic surfaces made up of silica, hydrocarbons, motorcycle tires, a whole variety of compounds that are known carcinogens and respiratory pathogens.

This is one area where I believe that we need to have federal and state standards. And we, importantly, need to have independent peer reviewed studies to demonstrate that the surface is actually

safe and healthy for horses and humans before it is ubiquitously deployed across the country.

As I mentioned before, the jockeys are fundamentally constrained by regulatory weight limits.

The jockeys are the only professional athletes in American that are subject to state-mandated malnutrition. It is in the regulations. There is no other member of the U.S. population that has to meet these kind of mandates.

Unfortunately, as Americans are getting bigger, jockeys are being forced to remain within the same weight limits.

Obviously, a rational science-based approach is needed to illuminate this issue and provide general guidance to all participants.

The medical challenges that we outlined earlier are very close linked to environmental and occupational factors.

Thoroughbred horse racing is the most dangerous professional sport, with more severe head injuries, clavicular fractures, spinal fractures and

ankle and wrist injuries than any other sport.

If we look at the factors, we have to look at them one by one.

First of all, horse factors. And I think my colleague from Grayson Research has pointed out there is an enormous amount of effort being made into this area as it is important and critical that it has to be done.

Unfortunately a lot of trainers and owners and veterinarians still are distributing steroids, which weaken the bones and tendons of the horses and contribute to horse breakdowns, accidents, that obviously result in the horse's demise and serious injury.

There is an issue of poor training and poor breeding, inconsistent and unforgiving running surfaces, which is one of the motivations for the synthetic surfaces, inadequate diagnosis and treatment of horse stress fractures, and overrunning. That is the economic drive for owners and trainers to run the horses before the horses are rested and reconditioned and ready to ride.

Horse racing is an enormously expensive business for owners and trainers. There is an incredible pressure to make sure that they get a return on their investment. They shouldn't get a return on the investment that leads to the death of a horse and morbidity and mortality for the rider.

We need to have a proper balance.

The human factors that contribute to the situation are jockey inexperience, incoordination, cognitive compromise. Again, these are factors that may be related to malnutrition and hypoglycemia.

They are emaciated, so they have myopathy.

Their muscles are not as strong and as flexible as they need to be.

I have jockeys coming to my office, and I take their blood sugar, and it's 35. You and I would be in a coma if our blood sugar was 35.

Obviously things like lead poisoning can lead to hypertension. The dehydration can lead to hypernatremia. A lot of them are chronic smokers. You compound that with particulate matter from the track, you get hypoxic.

Hypokalemia, that is the decrease in potassium, is frequently seen due to diuretic abuse. And, as you know, they are predisposed to arrhythmias.

We see hypomagnesemia, and a combination of hyper and hypocalcemia depending on whether the jockeys are overdosing on medications like Tums in order to suppress the acids that are being produced by self-induced vomiting.

Cardiomyopathy, as I mentioned before, I

had a patient that had a heart transplant because of behavioral and substance abuse that led to irreversible cardiac failure.

And very sadly, acute and chronic renal failure. There is nothing worse than for somebody to be on dialysis. It is one of the most difficult and painful processes in medical care.

The alcoholic factors, the alcoholic intoxication and pulmonary hypertension secondary to stimulant abuse.

In terms of the environmental factors that we need to study, obviously, variable track

conditions, consistency, and shock absorbing capability.

Do these toxic dust plumes affect the health of the horses and humans adversely? Is there a presence of excessive coliforms that can contribute to a panoply of pathology?

Does poor ventilation in the jockeys rooms contribute to the rapid spread of infectious disease

and the concentration of airborne toxins, including lead?

The occupational factors.

These include these contra-physiological weight limits which leads to cascading immunocompromise due to malnutrition.

So if we had a framework of causation, a way to look at all of these factors and how they interact with each other.

Horse, human, environmental and occupational factors all contribute to this cascade. You have weight limits that promote anorexia, bulimia, stimulant abuse, laxative abuse, alcohol abuse, and narcotic abuse.

These conditions may acutely and chronically precipitate electrolyte abnormalities and cognitive and muscular compromise.

You will have impaired coordination; your concentration is off; your balance and judgment may be impaired; and this is all in a sport that has

absolutely no room for error.

So these physical and mental challenges may well contribute to risky jockey behavior and poor responsiveness to dangerous riding situations.

One of the things that I have thought to appreciate is a horse is always a wild animal. We like to believe that we train them, that they become our friends.

But they are beautiful in their power and their unpredictability. And Jeff can tell you innumerable situations which bear this out.

So we have to have, for jockeys to be safe, they have to respect the animal, and they have to be able to take of it, and they need to have all of their faculties in order to do this.

So the Jockey's Health Initiative is

actually an unprecedented coalition of the horse racing industry, Craig Fravel, the Grayson-Jockey Club, California state regulators, horse owners, trainers and jockeys, all searching for science

based solutions.

But it's very important for us to have the guidance and support and leadership of NIOSH and the CDC to help us conduct the required research and obviously to implement the best solutions.

We look forward eagerly to the opportunity to partner with NIOSH to supplant mythology with methodology and replace fiction with fact.

Thank you very much.

MS. HENDRICKS: Thank you, Dr. Seftel. We are going to break for lunch now.

I think we are running just a little bit late, but we are going to take an hour for lunch. If we could get back here by quarter to 1.

(A luncheon recess was taken.)

MS. HENDRICKS: We are going to go ahead and get started. It looks like we are short a few people.

Our next presenter will be Bonne Farberow from the University of Pennsylvania, and she will be

presenting preventive medicine with remote telemedicine and case studies in jockeys.

PREVENTIVE MEDICINE WITH REMOTE TELEMEDICINE; CASE STUDIES & JOCKEY'S HEALTH

MS. FARBEROW: Thank you all for coming. It's a pleasure to be here.

Basically, I would like to share with you all my experience over the past two years to be fortunate enough to work with Dr. Seftel out at Golden Gate and Baymeadows.

Basically, what I realized pretty quickly -- and I ended up meeting Dr. Dave, or Dr. Seftel, purely by accident testing a medical device that I was helping the device company achieve validation data for their FK and 52K approval (phonetic).

So we worked together very critical under their IRB approval at Golden Gate Medical approximately 12 to 18 months testing these remote technologies out in the clinics there.

What I realized is that the racetrack basically is a family practice setting. There were not only the jockeys, but also the employees of the track and fans of the track that were in and out of the clinic multiple times throughout the day.

It also became an acute triage clinic and a remote emergency room, either trackside or in the clinic.

Some of the medical treatments that we actually observed out there during the study -- I was out there usually Fridays through Sundays, multiple times throughout the year -- were acute asthmatic attacks, fractures, multiple concussions, dehydration, pretty much on a daily basis, acute trauma, hypertension, and arrhythmias.

But I also learned pretty quickly through interacting and being at the Jockey's Guild meeting that there is physicians at some of the tracks. There's nurses at some of the tracks. And there are EMTs, Dr. David Seftel said this morning that are not ACLS, are not paramedics, track side.

Jockeys are an athlete, a partner, a

parent, a friend, a colleague. And that many have families that were all the around the track, in the jockey's rooms throughout the day.

And the study that we actually conducted included 43 supposedly healthy volunteers, testing 2D and 3D ultrasound, EKGs, and spirometry, and we were uploading taking images, comparing these two devices.

The jockeys were, again, at both Golden Gate and Baymeadows -- the device and the equipment moved between the two clinics, depending on which track was live.

Currently ultrasounds are only done at the hospital, so this was an interesting learning experience as well because normally it is done outpatient. The jockeys would be have to be transported over to an outpatient radiological or emergency room, hospitals, and the transmitting be completed by ultrasonographers and radiologists.

We were fortunate enough to be able to do,

both in emergency settings and in screening, the jockeys, and to transmit remotely to remote

radiologists for reading. As well as Dr. David Seftel read them, and all of the ultrasounds were performed by an ultrasonographer at the track.

The data ended up being healthy, supposedly, volunteers. Actually, astonishing, we found multiple renal calculi. We also found cysts, hydronephrosis, which is enlarged there by the kidneys.

I know that during the time I was there, Dr. Seftel ended up having to send two of the jockeys to the hospital. One had surgery, I believe, on their bile duct, on an occluded bile duct.

So again, these healthy athletes had multiple anomalies. Unexpected findings that we found were 15 jockeys out of the 43 showed evidence of renal pathology, either diminished kidney size, multiple micro or macro renal calculi.

Five had significant cholelithiasis, which is of the gallbladder.

There were abnormalities in seven out of 28 of the jockeys due to hypo and hyperkalemia.

Seven also had an obstructive or asthmatic type lung disease, and these were the only ones that came in for the spirometry testing.

I observed, as I shared with you earlier, multiple other jockeys that ended up coming in for nebulizer treatments by Dr. Seftel.

One important aspect is basically seeing that there is increased importance and focus needed on safety of the jockeys, proactive versus reactive treatment, which is currently happening so frequently. Identifying the health issues and treating them, and increasing the quality life for this population of athletes.

Very interesting, which Carl actually called me and said that the documentary was on -- it was produced and filmed back in 2004. It's running

currently until June 3. I think I sent the link to Kitty.

But it's of three jockeys that actually helped film the documentary from Churchill Downs, and it really, really got into a lot of the things that I was able to observe and share with Dr. Seftel

over this past two years.

So if you have opportunity to be able to watch it, again, it's on HBO On Demand until June 3.

I tried to see if we could get any clips from it, which we could not.

And that is the basic data. Does anybody have any questions?

Thank you, again.

UNIDENTIFIED SPEAKER: Actually, I have a question.

On your study, have you published the results of that, or are those data available elsewhere?

MS. FARBEROW: Actually, we haven't. I

just presented it down at ATA, American Telehealth Association, and it was written in the proposal that we actually submitted to NIOSH.

We have not had the opportunity -- I'm presenting again in June at the Drug Information, DIA Association.

So those are the two so far that it's been publicly presented.

UNIDENTIFIED SPEAKER: Great.

MS. HENDRICKS: Thank you, Bonne.

Next we are going to have another presentation by Dr. Seftel on workplace lead exposure in the equestrian race environment.

While we get through our technical delay result, we are going to go ahead and skip to the next presenter, Scot Waterman, from the Racing Medication and Testing Consortium.

Scot is going to be presenting an overview of medication control in horse racing.

AN OVERVIEW OF MEDICATION CONTROL IN HORSE RACING

MR. WATERMAN: Good afternoon. My name is Scot Waterman.

I received my Doctor of Veterinary Medicine from the University of Illinois in 1990 and also completed the bachelor's program of the University of Arizona racetrack Industry Program in 2001.

I have been working on medication issues in racehorses for six years now. Currently I am the executive director of the Racing Medication &

Testing Consortium.

The Consortium is a 501c3 organization that was developed by the industry four years ago to focus exclusively on issues related to the use of drugs, both therapeutic and non-therapeutic, in all three racing breeds, thoroughbred, quarterhorse, and standardbred.

Our mission is to develop, promote, and coordinate at the national level policies, research, and educational programs which seek to ensure the

fairness and integrity of racing and the health and welfare of racehorses and participants and protect the interests of the betting public.

The Board of Directors of the Consortium consists of twenty-three racing industry stakeholder groups, including the Jockey's Guild, that bring a wide range of experiences and expertise to the table in order to build consensus on a unified, national approach towards the use, regulation, and detection of drugs.

Our Board members are all volunteer and give freely of their time in order to help this

industry move forward on these very important issues.

I appreciate the opportunity to be here today, and my remarks will hopefully provide you with a broad overview of the resources the industry uses to combat the illegal use of drugs and to regulate the use of medications of therapeutic benefit to the horse.

There is little doubt that the industry views the welfare of the racehorse as inextricably linked with the welfare of the rider. In fact, I think we have heard that three times already this morning.

This is best evidenced by the purpose language found in all state rulebooks establishing the regulatory authority of the state racing commission on matters of equine welfare.

To quote from Chapter 11 of the Racing Commissioners International Model Rules on Racing, entitled Equine Veterinary Practices, Health, and Medication, the purpose of the chapter is to describe requirements and procedures used to ensure

the health and welfare of racehorses and to safeguard the interests of the public and participants in racing.

The first topic I would like to cover is the forensic testing system employed by states to identify prohibited drugs and to regulate permitted

concentrations of therapeutic drugs in equine samples.

Overall, approximately $30 million is spent on an annual basis by the industry for drug testing.

To put this figure in some context, the 2005 testing budget for the United States Anti-Doping Agency, the organization financially responsible for all amateur athletic testing in the United States, was $5.6 million.

And the budget for the World Anti-Doping Agency, which pays for out-of-competition testing for Olympic athletes for the same year was $2.1 million.

Every winner of every race in the United States has a post-race sample, either blood, urine,

or in many cases both, collected. And in most states, the stewards who act as sort of onsite referees have the power to send additional horses to the test barn following the race. This means that

over 150,000 horses are sampled throughout the country every year.

Equine testing laboratories analyze samples for a far wider variety of drugs than their counterparts on the human athletic side.

At any given time, laboratories may be screening for hundreds of chemical compounds, including local anesthetics, tranquilizers and anesthetic agents, narcotics, stimulants, beta agonists, non-narcotic analgesics, non-steroidal anti-inflammatory drugs, corticosteroids, anabolic steroids, and other classes of potentially performance altering drugs.

Historically, the screening of samples relied on thin layer chromatography, which is a non-specific and not very sensitive technology.

However, over the last ten to fifteen years, enzyme-linked immunosorbent assays, or

ELISAs, have become the backbone of sample screening in horse racing.

ELISAs offer both increased sensitivity and specificity and have been a step forward in terms of the industry's ability to identify prohibited drugs.

Many laboratories are now also employing mass spectral methods, most notably liquid chromatography/mass spectrometry, which allow the detection of drugs down into the low picogram per milliliter concentration range.

This phenomenal sensitivity is a huge advancement in the detection of illicit drugs but presents a dilemma to the industry because the detection of minute concentrations of therapeutic drugs pushes appropriate veterinary treatment further and further out, potentially impacting the normal care of the equine athlete.

The Consortium is currently working to find that balance between allowing the proper veterinary care while at the same time protecting the horse, rider, and the betting public.

There are currently 18 laboratories conducting post-race sample analyses in the United States, five of which have been accredited to the International Standards Organization 17025 document, which is entitled "General Requirements for the Competence of Calibration and Testing Laboratories."

There are two quality assurance programs for laboratories in the industry administered by the Testing Integrity Program and the Interstate Drug Testing Alliance and overseen by the Racing Commissioners International.

The challenge for the Consortium going forward will be in how we can improve the industry's post-race testing efforts. Our focus will be on the fact that our testing dollars are divided amongst 18 laboratories rather than concentrated at one or two, as is the case with most other sports.

Laboratory consolidation will be a politically difficult issue, but the Consortium is exploring strategies that will achieve this effect.

The second topic I would like to cover is

the equine medication and health rules themselves.

Mr. Waldrop will provide you with an overview of how racing is regulated, but just to give you a preview; pari-mutuel wagering is a state regulated enterprise, and there exists no national organization in our sport with any ability to mandate rules to the states.

Therefore, as pari-mutuel wagering has been made legal across states over a number of years, probably 60 years, differing rules have been put in place.

The rules on medication and equine welfare are no different. This is no doubt a frustration to licensees who move across state lines. But while the rules may be different, the purpose of each state in regulating equine medication and health is not.

States make decisions on rule language regarding the use of medication and detection strategies based on input from scientific experts

within or utilized by the state; typically practicing and regulatory veterinarians, academicians, and analytical chemists.

It is reasonable to expect that opinions may differ between groups of experts, as often happens in any scientifically based field, but that does not mean there was an intent to be different or adopt language that would negatively impact the horse or the rider.

There may also be legitimate geographic and climate reasons for rule variations.

That being said, one of the chief goals of the Consortium is to harmonize as many of the medication rules across the country as possible.

While we go to great lengths to ensure that policies developed by the Consortium for national implementation are based on the best available science and protect the welfare of the horse, the main purpose in trying to accomplish this goal is not because our organization believed that

the existing framework of rules did not protect the welfare of the horse and rider adequately. Instead, the intent was more to make state-to-state movement of horses a simpler process and to bring racing more on par with how other sports operate.

As of this day, 30 of the 38 pari-mutuel states have adopted the Consortium's first phase of the model rules. And, because of this, the medication rules in United States are as close to being uniform as they ever have been. Our organization expects to see continued progress towards uniformity over the next few years.

Third, I would like to discuss the industry's effort at research and development. As Mr. Bowen noted this morning, there is comparatively little money for equine research in general, just for the general horse population compared to other species and for human research.

The Consortium has worked to supplement existing sources of funding and has awarded over

$600,000 in grants to universities and laboratories since 2001 to fund studies that seek to support regulations involving the use of therapeutic medications and also that seek to develop new testing methods for substances of abuse.

In addition to the Consortium funds, several states set aside funding out of the

pari-mutuel handle via various mechanisms to fund drug and drug testing research.

Kentucky, Florida, Ohio, and Pennsylvania are the most prominent states in this regard and, in aggregate, raised over $1 million for research in 2005.

Dollars raised by a state are typically restricted for use by a university within the state, which does place some limitations on what types of studies are conducted.

Mr. Bowen also mentioned the formation of the Equine Drug Research Institute and the participation of Dr. Don Catlin, which we believe

will produce science that will assist the industry in the detection of prohibited substances.

Looking at aggregate dollars devoted to funding research, the racing industry is on par with other sports agencies. As a comparison, United States Anti-Doping Administration had a research budget of $2 million in 2005.

It is a goal of the Consortium to continually grow our research budget because many of

the challenges we face on medication and testing issues can be resolved by following peer reviewed science.

I will close with a couple of projects the Consortium is working on that we feel will allow us to make strides in several areas that are currently challenges for the industry.

First, the Consortium has created a business plan for a research stable of twenty-five horses that would be housed in Lexington, Kentucky. The horses would be maintained at race training

fitness levels and managed similarly to horses you would find on backstretches throughout the country.

This stable will allow us to administer therapeutic medications to a population of horses with more similar demographics and collect far more data than is available from the standard university study which typically employs five to six horses that are either sedentary or treadmill trained.

We believe the resulting data will allow us to make more accurate assessments in terms of the regulatory indices for the appropriate use of

therapeutic medications.

The Consortium is in the process of exploring a partnership with Kentucky Equine Drug Council, which is funded by a percentage of pari-mutuel handle in Kentucky, to fund this stable and we are actively looking for other possible funding sources, including federal, in order to establish the stable.

Second, a longer term goal of the

Consortium is to establish an industry-owned reference and research laboratory, which will be dedicated to method development and the creation of laboratory minimum standards for equine forensic laboratories.

It is anticipated that 4 to 5 million dollars will be required to equip and staff the laboratory, and the annual budget will likely be in the 1 to 2 million dollar range.

The Consortium is currently seeking industry sources of funding for this project which we have tentatively added to our 2009 budget.

That concludes my prepared remarks. I

would be happy to address any questions.

Thank you very much for your attention.

MS. HENDRICKS: Thank you, Dr. Waterman.

Next we are going to have Dr. Seftel, I believe.

WORKPLACE LEAD EXPOSURE IN THE EQUESTRIAN RACING ENVIRONMENT -- PRELIMINARY DATA

AND REMEDIATION STRATEGIES

MR. SEFTEL: Yes, we are.

Thank you, again.

What you will be hearing in the next 15 minutes is looking at some of the specifics of lead in the racing workplace, what the diseases -- how it manifests itself and what action should be potentially be taken.

I think everybody in this room recognizes that lead is probably one of the most significant environmental toxins that we have to deal with, and all steps must be taken to reduce both aerosol and particulate exposure to this very important toxin.

For those that are schooled in lead toxicity, lead causes both acute and chronic

toxicity that you get from ingesting it and inhalation.

Poor ventilation and cramped quarters can amplify the ingestion and inhalation of lead.

What is not really appreciated is that low

level lead can exacerbate major medical morbidities as well as, obviously, traditional -- traditionally seen high level lead toxicity.

And interestingly, low level lead exposure can exacerbate the pre-existing kidney problems that jockeys face because of all of the other challenges, the dehydration, the chronic hyperthermia, and malnutrition.

So, again, this is a co-factor for accelerating and exacerbating the kidney disease in this population.

There's a strong link between kidneys disease, hypertension, and gout with lead poisoning.

Recent studies show that exposure to even low levels of lead may have potentially hazardous effects on the speed of progression of kidney failure.

Lead causes a characteristic typical pattern of iron-deficiency anemia with hypochromia and microcytosis, with iron deficiency as well. It

also has profound reproductive and carcinogenic effects. One of the problems at least talked about in this population is infertility.

Jockeys have many reasons for being infertile. And one of them is the prolonged hyperthermia, which, as you know, affects the spermatogenesis. Add to that the malnutrition, dehydration, all those co-factors. But you add lead into the equation, and it obviously amplifies the problem.

We know that lead has been classified apparently as a Group 2B carcinogen in animals.

So who handles the lead? We have shown you some of the people in the video this morning.

It is handled on a daily basis by valets, jockeys, the clerk of scales, the cleaners, sometimes even the children of the jockeys that have access to the jockey's room, grooms, and exercise riders.

And as we know, children are especially

vulnerable because of their developing bone structure to the impact of environmental lead.

How often do they handle lead? Well, we did a very small observational study just watching and documenting how many times lead was used by the various participants. And we showed the valet handled lead up to 14 times a day, that is for every race.

Jockeys will handle lead up to five to eight times per day to adjust their own saddles if the valet is not available. And the clerk of scales may handle the lead, too, four times a day to top up a particular saddle.

In addition, the cleaning population in the evenings is also exposed to that lead, both handling it and inhalation. But interestingly, as we saw in the video, much of the lead dust remains, and the cleaners do not remove that.

And, again, how do they handle it? They handle it with their hands, which is probably one of the worst ways to handle lead. It is a major

problem with not washing after contact.

One of the greatest challenges we have, not only eliminating lead from the workplace, but also making a pronounced educational campaign in order to get people to realize the dangers and take remedial action.

How is that lead stored? You saw it. Most of it is in open air, which aids in aerosolization.

The storage box often contains visible particulate lead. You saw how they threw the lead weighs into the box, and that's a major mechanism for breaking what the -- breaking the lead, causing it to fracture, generate more particles, and obviously aerosolize.

The coating that was used is very frail and friable.

Most of the facilities do not have a designated lead safety officer who is available to provide constant supervision.

If you are going to have lead in the

workplace, it seems reasonable that you have

somebody who is well versed in the toxicity and intervention strategies.

And, as you saw, the lead weights are fundamentally very difficult to encase robustly. And even the leather-sacheted weights continually leak lead particulate material from the seams.

I have something to show you today because a lot of people don't believe it.

Bonne.

This is bagged in five plastic bags. These are the lead weights.

You take them around and show people, just show them exactly what we are talking about.

You see how the blue one is friable and breaking down, and the other one is the one encased in leather, and yet lead is seeping out through the seams.

So what should be done?

I believe it is imperative that we issue

an immediate and binding directive to remove all lead from the workplace.

The reality is these lead weights can

inexpensively replaced with cast iron.

Now this is very critical. Jockeys who have their own personal lead weights must surrender them and ensure that all household contact, especially children, are tested and their household environment detoxified.

I want to ask Jeff to come up and tell you a little story which is illustrative of the depth of the problem.

MR. JOHNSTON: I came in last night, and we were going over -- they were telling me what they were doing to discuss here today.

I had an interesting story from -- I guess some of you probably know Mike Manganello, who was the Kentucky Derby winning jockey on Dust Commander.

I was telling him that they were looking into the lead issue, and he said, Well, I have a

story to tell. When I was riding in Cleveland, at Thistledown in Cleveland, they had a kitchen upstairs. He said he would go up to the kitchen, and the cook was using the lead weights to keep the bacon flat.

So with it in the room, it is -- everybody is exposed to it. So I'm glad, thankful that everybody is starting to look into the different issues that we need to address in the jockeys' quarter.

MR. HEARL: Can I ask a question?

Are lead weights are also part of your personal equipment?

MR. JOHNSTON: You get them when you buy -- most jockeys have three different saddles. They will have a light saddle for your lighter horses, a medium saddle that makes you most comfortable for the midrange horses.

And then you have a saddle with pockets in it like you saw on the video, that when you have

your horses with your high weights, you will put the lead in the pockets.

And most of the saddles when you buy them, come with the weights.

Most of them now are leather coated. But in the jockeys room, they have the exposed lead that you saw that was in the box. And they chip off, and

you -- Keeneland is the only factory that I been to that has the best pads, which I think you saw in the video as well. Those are -- there is an easy remedy for the lead weight issue.

And I know some jockeys are getting -- we are getting into resistance by the jockeys who have changed, don't like the weighted pads.

But, again, a period of change, and it's something for their best interest, in their best interest, and for the betterment of all the participants in racing.

MR. SEFTEL: Thank you, Jeff.

So obviously, particularly if you just

dined, no cooking should be performed with lead weights.

All potentially exposed persons should be submitted to hematological testing for lead levels. We found this relatively inexpensive. We negotiated a price of $4.19 per person. At that rate, we could test everybody multiple times, if necessary.

For the high risk -- especially high risk high exposure population, that is the valets and the

jockeys, we should consider bone lead studies using techniques like x-ray flourescence analysis in order to assess cumulative exposure. As you know, blood levels only give us an idea of current, but not cumulative lead exposure.

So please, people, this is not one of those sit-back-and-think-about-it decisions. We must act now to prevent a legacy of disease and disability. Please let's put lead to bed.

Finally, just to summarize on the points that we discussed this morning, remediation avenues

to potentially consider.

Firstly, a comprehensive study to develop composite physiological criteria to judge jockey fitness to ride.

Jockeys should not be judged just on the basis of weight. We need a composite measure, which we will determine through our research, whether that is a measure of hydration, glycemia, coordination, body fat, or some other measure that would come out of structured research, but we need to have a better way to judge jockeys fit or unfit to ride.

We need to introduce mandatory nutritional education and counseling for all jockeys as part of the qualification process.

Before they get their jockeys license, they must show that they understand the principles of nutrition because it's a critical element that we have discovered in our work, that there is a poor level of knowledge about nutritional standards and behavioral practices that are consistent with good

health.

We need to develop and implement comprehensive and consistent trackside emergency care standards and avoid unnecessarily poor outcomes after injury.

That young man we saw in the video, Kyle Kaenel, almost died waiting for an ambulance when his neck was fractured. This is an unacceptable state of affairs when you have a sport that is the most dangerous of all sports out there. They deserve to have the same level of care as NFL players and NHL players. They have the right to qualified doctors, paramedics, and appropriate

emergency care at all tracks.

We need to develop and implement solid standards for trackside medical care staffing and facilities to bring horse racing in line with the medical standards and facilities provided by other professional athletic sports.

We need to consider low dose x-ray and

ultrasound in more circumstances to reduce the currently high cumulative radiation exposure suffered by jockeys with the apparent excess of malignancies that we know are in the historic medical records.

We should mandate use of strong but flexible safety reins.

Jeff, could you show them the safety reins?

One of the biggest problems that occurs on the track is the reins may snap in the middle of the race.

You can imagine, the rider is essentially balancing on the tips of his toes and his fingertips. And if the reins snap, he has no

control.

Could you explain to them what the principles are?

MR. JOHNSTON: This is another easy fix in my mind.

Ohio actually implemented a rule, regulation a few months ago that goes into effect in the summer of 2008 that implements -- that mandates the use of safety reins.

This is what they are. They are reins, just like the reins they use today.

They have a cable, a parachute cord, a piece of nylon attached to the hook that runs to the end of the rubber.

So what happens, in the daily use of this equipment, you can want see what happens, what the leather looks like underneath the rubber grip. And then they wash it, it rains, the water drips down in, and you can't see.

When a rein breaks, 90 percent of the time it breaks inside this leather. And I'm sure both of you have seen it in, I think, Black-eyed Susan last

year. Many riders have been years or -- months, even years off recuperating from injuries suffered from a rein breaking.

And it is unbelievable how quick the ground comes up when you have all of your pressure against one of these reins, the rein breaks, and immediately you are on the ground. You have got horses running over you.

This is a simple fix. And they have been independently tested.

There's another -- there's plenty of providers that make the reins available. The guy who invented it, who has the patent on it that made them available to many manufacturers, they are working on increasing production for many states. I believe it's trying to go through in California. And they are also working on passing a regulation in Oregon. And I hope that all of the other states will consider passing it as well.

I know the RCI, the recent RCI convention, they made a standard rule, or a standard provision that they should be passed and implemented in all states.

I will bring these around so that everybody can look at them. And, again, I think this is an easy fix to increase the safety and protection of jockeys.

UNIDENTIFIED SPEAKER: Jeff, just a question.

Is it jockey choice not to use them, or is it trainers who say they don't want them used?

MR. JOHNSTON: Well, the jockeys equipment consists of the saddle, helmet, whip, and vest and girths.

The equipment the horse comes over with to the paddock is the choice of the trainer or owner.

MR. BAHNO: Yeah. Right now, I have several tracks in California. We are running a test program on those.

And they are about $25 more than the other costs, I believe, of the conventional reins. But we are working with the manufacturer to get some sort of discount, you know, arrangement.

Interesting thing, at least within my

personal experience, is that I'm not aware of any jockey injuries that are associated with the California program that actually involved a broken rein, but, nonetheless, I basically concur what with what you said. I think that's a great idea.

The interesting thing is when the first test ones came back from the manufacturer, there was some sort of a miscommunication because, here, again, to my earlier comment about if you make protective equipment, talk to the population that's going to use it.

When the first set of reins came back from California, they were too short. What I mean by too short, the rubber piece was not long enough. Because I think the first set that they sent us was used, I believe, in the harness racing world.

And, you know, basically jockeys taking it in such a way that you knot them up; right, that you kind of --

MR. JOHNSTON: Right. You tie the ends of

them in case they come unbuckled, you wouldn't drop one rein.

MR. BAHNO: So then, in fact, we went back to the drawing board with the manufacturer, and now we have another shipment that is basically long enough for those jockeys to be able to do what they need to do.

MR. JOHNSTON: Any other questions?

I'll pass these around so everybody can see what they consist of.

MR. SEFTEL: Remediation avenues 3, remove all lead from the workplace.

We also need to work with the industry to improve horse running surface consistency and shock absorbing capability.

The efficacy of these synthetic tracks should be demonstrated for horses and humans before they are ubiquitously deployed to replace the dirt surfaces.

We also need to develop and implement a

comprehensive nationwide injury and illness package system to be able to prospectively detect trends and drive an effective and expeditious corrective intervention.

This is just some pathology, and I think most people are familiar with that.

Thank you, again, everybody. If there are any questions, I will be happy to entertain them.

MS. HENDRICKS: Next we have oversight regulation of the pari-mutuel horse racing industry by Alexandria Waldrop from the National Thoroughbred Racing Association.

OVERSIGHT AND REGULATION OF THE PARI-MUTUEL HORSE RACING INDUSTRY

MR. WALDROP: First, I want to thank you for this opportunity to address the National Institute of Occupational Safety and Health regarding safety and health issues in the thoroughbred industry.

The NTRA is a not-for-profit member-based

trade association that represents a broad spectrum of owners, breeders, horsemen, racetracks and other horse racing interests.

The purpose of the NTRA is to strengthen the Thoroughbred racing industry by increasing public awareness, creating a centralized national

structure, implementing comprehensive marketing strategies, and enhancing the industry's economic condition by achieving revenue increases and cost reductions for its membership.

To accomplish these objectives, the NTRA represents its members in marketing and television contracts, public affairs, sponsorship sales, and group purchasing programs.

The NTRA also serves from time to time as something we call a convening authority to address national issues. Over the years, the organization has impaneled industry groups to address a variety of issues, including equine medication and drug testing, wagering integrity, industry economics,

15 governmental deregulation, and most recently, jockey
16 insurance.
17 The NTRA does not contract with jockeys,
18 backstretch workers, or exercise riders. However,
19 like all members of the racing community, we
20 recognize the important role that these individuals
21 play in our industry and the risks that they incur
22 each year while discharging their duties in

1 connection with the care, exercising, and riding of
2 some 74,000 racehorses participating in 58,000 races
3 and making a combined total of 487,000 starts.
4 The horse racing industry is committed to
5 ensuring that the racing environment is safe for
6 both equine and human athletes as a matter of
7 routine. The safety features may vary between
8 jurisdictions, but generally they include:
9 Pre-race inspection exams by
10 state-licensed veterinarians for all race-day equine
11 competitors; post-race equine drug testing under an
12 industry-sponsored program; track maintenance that

includes harrowing, soil conditioning, and watering, as needed, to produce a safe and consistent surface; safety rails designed to minimize injuries to horses and riders should a racing accident occur; engineered racing surfaces such as Polytrack, which are designed to reduce the incidence of on-track injuries for horses; an ambulance that follows each racing field from starting gate to finish; padded starting gate stalls and professional handlers for each of the horses at the starting gates; on-track

alarms to alert jockeys in the event of an emergency during a race or during training hours; and protective helmets and vests for jockeys.

Members of our industry meet regularly to exchange ideas and information regarding numerous issues, including racetrack safety. These industry conferences include the University of Arizona's annual Symposium on Racing, the Thoroughbred Racing Association of North America's annual convention, the Asian Racing Conference; the International

Federation of Racing Authorities. The American Association of Equine Practitioners also has an annual convention, and there are conferences conducted by the Association of Racing Commissioners International, just to name a few.

Most recently, The Jockey Club organized a Horse Health and Safety Summit to identify critical issues that affect horse health and/or shorten the career of racehorses. The summit resulted in a strategic plan for assuring the health and safety of the Thoroughbred.

The participants drafted action plans in

six areas to improve conditions in various facets of the Thoroughbred industry.

The six areas include education and licensing; racing conditions/racing office; research; health and medical records; racing surfaces, shoeing, and hoof care; and breeding practices.

Among the recommendations coming out of

that two-day summit included a need to research, development, and publication of additional statistics that will provide insight into the durability and longevity of progeny of breeding stock; make efforts to have scientific research more widely distributed among industry stakeholders; examine the use of or ban of certain horseshoes, such as toe-grabs, in the wake of presentations and research by Dr. Sue Stover and other participants; develop a uniform on-track injury reporting system for horses and humans; provide continuing education for all horsemen, exercise riders, farriers; and make initiatives like the Groom Elite Program more available throughout the country.

The summit was coordinated and underwritten by the Grayson-Jockey Club Research Foundation and The Jockey Club, and it was hosted by The Keeneland Association in Lexington, Kentucky.

Numerous industry organizations provide assistance for jockeys and other members of the

racing community. Again, The Jockey Club Foundation, established in 1947 there to assist industry workers, including injured jockeys; the Shoemaker Foundation, formed in 1991 with a mission to provide financial assistance to any individual in the racing industry who has suffered a catastrophic illness or accident after exhausting available workers' compensation and insurance benefits.

The Don Macbeth Memorial Fund, providing a wide range of assistance to riders, from purchasing medical equipment to providing monetary assistance.

And the NTRA Charities' Permanently Disabled Jockeys Fund, which provides disability payments for 54 permanently disabled jockeys.

In addition, numerous benevolent groups exist among horsemen's associations to assist

backstretch workers in need, while organizations, such as the Winners Federation and the racetrack Chaplaincy, provide substance abuse counseling and other social services.

As the speakers before me have noted, the racing industry also supports a substantial amount of research that is geared toward the health and safety of horses and riders.

Reducing the incidence and severity of racetrack injuries is a critical component of risk management for our sport and for preserving its reputation for integrity and safety.

Dr. Waterman has already covered the work of the Racing Medication and Testing Consortium, so I will not go into any detail regarding the RMTC and its important work.

There is the regular medical research focusing on equine health and safety, funded largely by the industry itself through the Grayson-Jockey Club Research Foundation, which is the world's largest private funder of equine medical research.

The NTRA recently formed our own NTRA

Charities, the Barbaro Memorial Fund, as a memorial to the 2006 Kentucky Derby winner Barbaro, who

battled bravely to survive the effects of a catastrophic injury suffered in the 2006 Preakness Stakes before he died of laminitis eight months after his injuries.

The NTRA Charities Barbaro Memorial Fund seeks to raise money for equine health and safety research as well.

Additionally, the University of California-Davis conducts a racehorse necropsy program funded by the racing industry to determine the nature of catastrophic injuries to horses and develop injury prevention strategies.

Ongoing scientific research into racetrack injuries is aimed at identifying causal factors for injuries with the goal of reducing the incidence and severity of equine injuries, and indirectly, the safety of jockeys and exercise riders.

Horse racing supports a pari-mutuel industry that generates over $15 billion in annual wagers throughout North America. It also is a major

economic driver for the horse industry as a whole, which supports a $39 billion agri-business and a half-million full-time jobs.

Racing also produces $2 billion, that's a B, $2 billion in tax revenues at the federal, state, and local level, making government one of the prime economic beneficiaries of racing.

I am tempted at this point to launch into a diatribe about the over-regulation of racing by state governments, especially economic regulation and what some have called confiscatory excise taxes, tax rates that drain this industry of much needed revenue, revenue that could be used to address some of the problems we are talking about today, but I will resist that temptation.

Horse racing has a strong presence in more than 30 states, including California, New York, Florida, Pennsylvania, Maryland, Kentucky, Texas, and Louisiana, to name but a few.

In California, for example, the horse industry, as a whole, carries an economic impact of nearly $7 billion. In Florida and Texas, the

industry's impact is $5 billion. In Kentucky, it is $3.5 billion.

More than 58,000 races were run in North America in 2006, carrying gross purses of $1.2 billion. The public auction market for Thoroughbred bloodstock is worth more than $1.2 billion.

As we have said many times today, racing is heavily regulated in every state where it is conducted. State racing authorities regulate, not only pari-mutuel wagering, but also, in these states, almost every aspect of racing, from concessionaire contracts to backstretch living conditions.

Let me assure this body that the horse racing industry, in concert with state regulatory agencies, is committed to ensuring that our sport continues to operate in a manner that will protect both its participants and its public.

Can we do more to ensure the safety and health of our athletic participants? Yes.

Are we committed to do doing more?

Absolutely.

We at the NTRA are encouraged by collaborative business and industry solutions to enhance safety and health, such as the safety committee at Delaware Park, discussed previously by Mr. Colton and Mr. Fravel.

These types of innovations are critical to our industry's ability to respond to its safety and health challenges.

The NTRA is committed to supporting and promoting these efforts, not only because it is good business and important to promote safety and health of our equine and human athlete, but it's also the right thing to do.

Information gathering is critical, but the implementation of solutions will be a challenge without broad industry support.

The National Thoroughbred Racing Association is uniquely positioned to build that

support.

I thank you very much for your time. I will take any questions, if you have them.

Yes, sir.

MR. HORNUNG: Yeah, I have one.

One of the things that was brought up to me when I originally spoke with some of the members from the oversight committee that were interested in this topic was the state rules regarding slot machines and gambling require racing dates through months when the weather is inclement, where perhaps -- you know, I was wondering if you could comment on whether those kinds of work requirements are required to run races at times when it might be a little bit more hazardous than on a clear day.

MR. WALDROP: I'm not aware of any state law or regulation that requires that racing be conducted.

Every state that I'm familiar with in the United States allows racetracks and horsemen to

apply for racing days.

And so there are historic times on the calendar when racing is conducted.

For instance, in Kentucky, there are races in the winter, and it's very important to the economic viability of the horse industry that there

be a year-round circuit, a racing circuit.

And so the demand of the media and the industry participants, those winter days, if you will, are critical, and they are applied for and highly coveted. Granted they are perhaps not the ideal times, but the economics of the industry are such that to field the competition year round, those days are necessary.

So I don't think that winter racing or inclement weather racing is mandated. I just think that the economics of business encourage that people take advantage of those dates on the calendar.

Any other questions?

If not, I thank you very much for your

time.

MS. HENDRICKS: Next we have Dr. Karin Opacich from the University of Illinois presenting collecting and translating incidents and injury data in the horse racing industry.

COLLECTING AND TRANSLATING INCIDENT AND INJURY DATA IN THE HORSE RACING INDUSTRY

MS. OPACICH: Thank you.

Some of you are curious about why I'm here, so I will share you just a little bit about my background.

My clinical background is occupational therapy and occupational science. I have also have a degree in health professions education, and my doctoral degree is in public health.

I also happen to be a horsewoman who has been a participant/observer in the industry for well over 20 years. So this is a convergence of both my interests and my concerns.

I always like to know who I'm speaking to,

so how many in the room are scientists?

How many of you are scientists who have been to the races? Okay.

How many of you are horsemen? How many of you are horsemen who are also scientists?

I know at least one over there.

So, okay. We have different groups of people who come from very different cultures. And I think one of the professionals missing in the group is an anthropologist. Do we have any

anthropologists in here?

It is necessary to understand both the culture and the science to really understand racing, so I imagine for some of you, particularly those of you in NIOSH, that you're facing a big learning curve. So if there are things that you don't understand about this, please do ask us.

What I'm going to present to you is really a work in progress, and it is a work that has been in progress for over two years now.

We are not going to meet, those of us who have an interest in racing, and we recognize both some of the opportunities and some of the problems.

We are beginning to recognize each other. It's been a little difficult to identify human scientists in this community, and so, as we do that and we identify each other's interests, we are finding more opportunities to collaborate.

This particular endeavor resulted from meeting new colleagues who are both equine scientists and human scientists who were preparing for the welfare summit and who had interests in

epidemiology and some of the safety issues in the industry.

So here's a statement of the problem.

Currently there are no uniform mechanisms for capturing underlying causes of the incidents and injuries in the horse racing industry.

While -- I mean, there are many tracks and many racing corporations who gather data, that data

is generally not systematic in the way that it needs to be for scientists to analyze that data, nor is it uniform.

So we are looking at apples and oranges and trying to make sense out of that.

All of you who have done literature searches on the internet know that there are only two published jockey injury studies in the literature. There is one eminent, but it's not in the literature yet.

So we have a bit of a dissemination problem in the science that we have already accumulated.

One of the advantages of being a later

presenter is being able to identify the themes of the meeting. So resoundingly, one of the themes here has come both from the literature and from others who have spoken, including Dr. Seftel, who said what we really need is a database.

What we really need is to systematically

collect data that can support us when we raise questions and formulate hypotheses.

And that, even though the studies that do appear in the literature are very old in terms of science and significantly flawed, they both -- both teams of investigators recommended long ago that we have a national databank of information about accidents and injuries for humans.

In designing a system, any kind of surveillance system, the rule, the cardinal rule is that the quality of the available data and its utility in decision making is based on the breadth and depth of the data collection process.

So one of the problems that many concerned people have had when they try to do retrospective studies of injuries is that the data is so limited,

that you come up with a number of conclusions, and you cannot see trends predicated on a small group of incidents and accidents.

This just reiterates some of the things

that you already heard about the industry that made this kind of endeavor challenging.

Each racing corporation is autonomous. There is some skepticism in the industry about how information will be used and why it needs to be collected and shared. State racing boards are autonomous, and there is no national jurisdiction.

We have national agencies and national associations, but we don't have a national jurisdiction the way that Canada does or some other venues do globally.

For those of you who have tried to acquire epidemiological data, you know that the databases are very limited.

Right now, if you look at equine injuries in the Bureau of Labor Statistics, you will find only very cursory broad information that does not inform this industry in the development of

interventions.

State EMT data is available, but it too is

very general. A few IC9 codes about broken bone, concussion, whatever, it doesn't give us that rich array of data necessary to analyze the situation. It's not contextual.

Racing industry injuries are usually excluded from state agricultural industry injury databases. You will find things about carriage turnovers among the Mennonites and the Amish communities, but you won't find racing related injuries in most agricultural databases.

And, again, the data currently collected for those who collect it may not be the right set of data or broad enough or profound enough data to really inform decision making.

This theme has emerged in virtually every presenter's material here. And, once again, I would like to reiterate that accidents and injuries are multifactorial. Rarely are they attributed to one single cause.

And so here we have a combination of

equine attributes, human attributes, you know, infrastructure, and training practices.

Another theme that has clearly emerged, and I think it is understood by both the NIOSH health and safety folks and the industry people, is that there is an inextricable symbiotic relationship between human and horse. And the health of one and the well being of one affects the well being of the other.

So for a full understanding, we really have to have a full picture.

So the kind of data that we need should be triangulated data, and that's both quantitative and qualitative and across those four parameters of human attributes, equine attributes, infrastructure, and training practices.

This is just a visual depiction of where racing occurs in the United States. And I want to make sure that you understand that it does not necessarily represent major racetracks or tracks where pari-mutuel betting occurs or tracks with

22 extensive meets.

1 This is just a depiction of counties where
2 racing occurs that has some impact and economic
3 impact on those communities. And you can see that
4 it's not just a Delaware problem or a Florida
5 problem or a New York problem. It's really pretty
6 well distributed throughout the United States.
7 So the workhorse is well distributed
8 throughout the United States as well.
9 I want to share with you that certainly my
10 interest and that of the other scientists here
11 probably didn't emerge just yesterday. Many of us
12 have been traipsing down this road for a long period
13 of time.
14 And my current work is funded through an
15 EXPORT center, and then to the EXPORT center that
16 specializes in rural health and health disparities.
17 And that will come to a conclusion at the
18 end of August, and I'm looking at publications
19 associated with that right now.

The highlighted parts are those presentations that have in -- specific to surveillance in the industry. So this is also

something that didn't just pop up yesterday.

You will see that -- politically, I try to approach this as building enthusiasm for accident and injury surveillance in horseracing, and then illuminate it to our regulators because they seem to have the most authority to implement this kind of thing at this point in time, through the RCI.

You will notice that oral health is also included. A lot of my work, my team and physicians, dental physician, dental epidemiologists, an occupational science nurse, myself and a whole plethora of other people who have been involved to date.

I participated in a welfare summit for the racehorse, not primarily because I'm concerned about horses, but primarily because I wanted to represent human interests there.

And I was invited to a committee that was establishing, or that was developing the on-track injury reporting system for horses, and my contribution there was the human side of things.

And I will show you -- it was primarily

Dr. Scollay who authored the system, and I'll be speaking directly to that in a minute.

This year at the RCI, we tried to talk about the impact of what the data can do to inform policy decisions in the industry.

Translation is not only understanding the language, but we in science know that it's translating to action and to practice the findings of research.

The advisory board that has been involved in this to date -- and this is growing with the effort as well. Dan Fick from The Jockey Club. Peggy Goetsch, who has been a health care administrator in Illinois for 25 years on a racetracks.

Wayne MacIlwraith, who is an orthopedic epidemiologist, veterinarian epidemiologist.

Mick Peterson, who is an engineer for racing services, and I'm sure you have read some of his work.

Dr. Chip Petrea, who is an agriculture safety expert, and I believe NIOSH was one of the

founders of his very seminal study about the policies, procedures, and recommendations for agriculture, which also is a very widely variant sort of an industry.

And Dr. Mary Scollay, who is the regulatory vet that generated the on-track injury reporting system.

Specific objectives of this project, the first one is micro compared to the others, but we have a rare opportunity here to look at the impact of synthetic track services before and after.

There are only a handful of tracks who have synthetic surfaces at this point in time. So

it would be really important to look at recent history and what's happening right now.

I know that in Illinois, Arlington racetrack has written a letter of support, and they are willing to let me look at that data. So we will probably go in and do that throughout some portion of this meet.

To field test and refine the utility of an on-track system. Every system has its quirks and

flaws. And in order -- before you implement something on any large scale, of course, you have to test it and get a lot of input.

To explore relationships -- and this one is huge -- among these attributes, these different parameters and their relative contribution to incidents and human injuries. And ultimately, that would lead to some sort of a regression model that could apply and help us to predict and prevent injuries.

Certainly, it would appear that the

information that we would get from such a system would be more valuable than the systems that we already employ, but we don't have any evidence of that at this time.

And finally most importantly would be to use the results of scientific data to inform decision making and risk management in order to improve health and safety of human participants in horse racing.

I concentrate on humans because it gives a variety of expertise.

So here is some of the proposed strategies, and you can see by this big laundry list -- I won't bore everybody to death -- but there is a kind of a process, and it really takes a long period of time, a lot of people and money in order to develop a very sound surveillance system that can be applied across the industry and that has utility and longevity because we certainly don't want to do this -- don't want to create this system every year.

The development of this particular tool has been informed by the current literature. And the literature tells us that we need to collect data broadly and specifically as well.

So we need to collect, not only the nature of the injury or the illness, but the part of the body affected, the source of the injury, illness, the exposures or the event that resulted in injury or illness. And then the secondary source of injury or illness.

It is not at all uncommon for a jockey who may have one of these chronic conditions or may be malnourished to fall off their horse and then to be

trampled by three horses behind him. So those are those secondary kinds of injuries.

Injury surveillance also tells us that we should identify in the data what is the absolutely minimum data that you have to have to make sense of accidents and injuries, and you should reach beyond that.

If you have the opportunity, there should be optional data and even supplementary data, and that is the qualitative data that results from interviewing people and following up and doing those sorts of things.

I'm going to show you the on-track injury surveillance system that Dr. Scollay developed because the human system was designed, that form was designed to link with this and to make use of that data as well.

And I wanted to contrast and show you a little something here. These are tracks that I have to date that Dr. Scollay has got commitments from to pilot the equine system.

And there's some advantages there because

there are regulatory vets in place. It can be easily trained to collect this data without doing something that is terribly different from their daily routine.

There's some costs associated with all

this, certainly the analysis of the data and data input and so on, but, you know, the data collectors are already available.

Dr. Scollay will probably also get some assistance from the Jockey Club because these are -- this is clearly a very important source of data that was identified in the welfare summit and it's appropriate for their funding streams.

Now, there's also some concern in the industry about -- and we will talk about some of the concerns later, but you see this last point, the unique identifiers. This applies to horses as well.

In a surveillance system, it would be necessary to protect the identity of those horses and only aggregate data would be available in any known public format.

And you can see the form. This form has

been streamlined. The data goes beyond what is usually examined by regulatory vets, but much of it is part of the routine that's already been

established on those tracks. It's just matter of capturing that data.

And then I would imagine that there are many different parameters on this that most of the human scientists would be even aware of because, again, this is a very different culture with very different concerns.

One of the places to start with is identifying what an injury is or at least what time frame it occurs, and we have, both in horses and the humans, identified the injury, the whole time period, the immediate time period surrounding racing and racing as the appropriate time frame to look at injuries.

One of the issues with human injuries at this point in time is that many of the minor injuries go unreported. Unless the paramedic is required, we don't even know about it. So it looks like there's a disproportionate number of

catastrophic or very serious injuries when that

probably isn't the case at all.

Some issues in the process for completing human forms would be potentially the paramedics, but we'll talk about that in a moment -- could be engaged to attempt the entries during racing and be trained to complete the form during some sort of pilot period.

The second point is a bit of sticky wicket because forms will be completed for both minor and major injuries, and there are always minor injuries during racing or riding. Having suffered many of them myself, there are always minor injuries.

A neutral third party would be necessary to deidentify the data and link the two systems to deidentify the data, and then it would be analyzed, and aggregate data reported.

Here is one part of the human form, and you will see many different parameters here.

Including safety equipment, observable things because we know what -- we would be dealing with necessary physicians or nurse-practitioners who

are examining these people. So some indication of neurological status and respiratory status are included in this. Some visual indicators, where the people are injured, whether or not there were visible fractures and visible lacerations, and so on.

There's a pain scale and dispensation.

Most people who have -- if you can, sort of the horseman's rule. If you can put yourself together with duct tape, you get back on. That is just, again, part of the culture. And there is a tremendous incentive for people to ride through an injury.

And there's some follow-up data that would be helpful here.

Now, here's some challenges and issues remaining to be addressed.

Even in my current inquiries about this, there is disagreement about what level of IRP approval that would be required for this kind of a system and some HIPPA regulations.

22 Some people feel that collecting this kind

1 of data from humans, are considered vulnerable
2 humans, and so it requires informed consent. If it
3 requires informed consent, that's sort of another
4 barrier, I think, to collecting the broad data.
5 Another opinion that I collected said that
6 if we could request a waiver of informed or written
7 consent, and then we would have to have that
8 certainly the deidentifying and cleansing of the
9 data piece before the data was ever forwarded to the
10 principal investigators or the researchers that were
11 managing this data. And then it could be used in an
12 expedited review of nonhuman data.
13 So NIOSH could be very helpful to us in
14 advising how we handle those sorts of surveillance
15 systems like this.
16 Let's see. Ethical and legal issues
17 pertain both to the human HIPPA sort of thing and
18 the horseman's reluctance to share information.
19 The whole industry is based on

competition, and it's based on sort of keeping your cards close about your horses and who is healthy, who is likely to win, and so on.

When this data becomes too accessible to other horsemen, we create issues that -- issues in the selling, trading, buying, and running of horses.

And there is some concern about discoverability and who is going to be held accountable for having collected that information and shared.

So some of those ethical and legal issues need to be worked out in managing the data system that may not be as prominent in some other environments.

Who should be the data collectors? You have already heard that there are different levels of care available to even the racing population, the jockeys on track, some of them being paramedics with no advanced life support, others being physicians.

There is also different levels of

investments in those people in collecting the data and making sure that the data is accurate.

In many cases, as is the case in Illinois, companies are contracted to provide paramedics. So you have different paramedics virtually every day.

So it would make more sense to train a constant cohort of data collectors, and that also entails cost.

Assuring confidentiality of that data would be better managed by a constant cohort of data collectors as well.

And then we would have to decide what information, education, training should be provided to those data collectors.

And what are the perceived -- we have to deal with very transparently what the perceived or real harms would be to participants in the racing industry.

If owners believe that having this information would be harmful to their businesses, we

have to deal with that, and we have to deal with and discuss that initially.

If jockeys believe that having this available will affect their careers and people will select them as riders on their horses, we need to deal with that.

I also believe that there are -- there is

such a small number of human scientists who are interested in this venue that we would be far better off collaborating rather than competing for what is already a shrinking pot of scientific money.

And that we need some sort of mechanism for communicating and identifying who we are, what our interests are, and sharing the research announcements, and -- I think last year, I have met virtually I think all of the scientists who were involved in the Grayson industry.

Getting buy-in from the horsemen and racetracks is no small task either. It's easy to talk to the willing and the brave and the folks at

the welfare sign were all very enthused.

However, we have everybody from the small trainers in the industry to trainers of, you know, multiple stables at multiple tracks.

And just changing the thinking -- again, the anthropologist part of me says the cultural shift from competition to collaboration is really very different in the racing industry.

So selling this widely, collected, share

this information, again, we would have to proceed very cautiously.

Valuing what collaboration can render would be very important. And communicating the message -- and I heard this here in a couple of presentations, but I don't think it is well understood, nor is it demonstrated economically nor do we have the data to actually substantiate this now, but from other industries, we know that a healthy work force contributes to a robust industry.

And so the investment on the one side

really should pay off on the other side.

Oh, details, details, details.

You know, these things are all under development. Right now, that's what this is, this design, so far is an idea. What's necessary, you know, is being nimble, responding to the needs of the industry, establishing that this project would really be best as a two-year pilot.

A two-year pilot would cost money. And by my worksheets and estimations of the costs of both people, power, and data development and data

analysis, it would be about a half a million dollar project over two years.

And funding sources, we need direction in terms of the funding sources and the potential for a RO1 structure as well. Certainly there are enough ideas in progress in this room that we could assemble something or another. So any facilitation that NIOSH could provide in that area would be greatly appreciated.

And that's concludes my remarks.

Questions?

MR. COLTON: On the legal issues, first of all, I want to commend you for taking this project on. It would be monumental to get it off the ground, especially to get all of our dysfunctional family together.

Talking about right perspectives on dealing with confidentiality of the horse. I just don't see where that exists.

I get on the horse. I certainly should have the right to know what medical procedures, what drugs, everything in this horse. To me, the

confidentiality should be out the door.

And I know I am probably annoying a lot of horsemen saying that.

And, you know, just to give you an example, the utility of this database, we have a starters list. We have a stewards list from the horses. They keep it on a clipboard.

The minute that that horse is taken off, there is no record of it. The horse is claimed. We have a migrant business.

I'm on the horse a year or two later. This horse had a habit. Horses are creatures of habit. All of a sudden, I'm close to the gate, he bolts.

You know, so having that information available should be, you know, absolute your ability to have it.

I know that probably bogged it down somewhat, but I know that we are probably looking for is what they do in England. In England, they have a database on all horses, that if they get a soft tissue, bone injury, that that is on record.

And before that they can come back and race them, they have to be cleared.

MS. OPACICH: The problem, some of the problem as I understand it, both with humans and with horses, is how much is enough in deciding who

should access to that particular data set.

And I think that we -- well, there are mechanisms for controlling all of that, but we need to discuss them, and we certainly need to look at them on both sides of the fence.

Now, Dr. Seftel mentioned something that has also been another -- everybody in the horse racing work force across the board could benefit from electronic medical records.

You know, a good proportion of the population, they do move from racetrack to racetrack from the top to the bottom.

And that is a problem always because, not only for the horses, but with the people. You're starting at ground zero every single time.

So there are certainly some systems being -- Indian (phonetic) Health Service actually

has one of the best electronic records that has been developed to date. So I don't think we need to reinvent the wheel on that. The software and the

opportunity to develop this does exist.

There was some talk about microchipping horses, and you might want to talk to others who were at RCI and who were at the welfare summit that had that particular issue and what kind of data they would start with for chipping.

Because, again, this would be a huge cultural shift for this industry.

MR. COLTON: On a slightly different note, we are going to start implementing here in Delaware soon, we borrowed it from the National Steeplechase Association, we are going to require all riders to carry a medical ID card, with a picture that has all the medical emergency contact information on there, in addition to the insurance card.

MS. OPACICH: Go ahead.

MR. HORNUNG: Karin, just a comment on vocabulary.

One of the terms we use quite frequently

in discussions of physicians is the term accident.

MS. OPACICH: Yes.

MR. HORNUNG: The problem with that is the term "accident" implies that it is a random event, that it's unexplainable or unpredictable.

The point of the matter is, it is not random. It's not unexplainable. It is indeed predictable, and, therefore, you know, we really need to change that kind of vocabulary.

MS. OPACICH: I would agree except where it pertains to the horses.

And I have used all three of those terms. And the title of the presentation was incident and injury reporting because I firmly believe that in the sphere of which humans control, I would agree with you.

I also ride horses, and I know that there is a degree of unpredictability with the horses, whether or not -- there is certainly human attributes that would help us to reduce -- look at attributes and responses and infrastructure that would help us to reduce those accidents, but I don't

think that there will ever be a way to absolutely predict and control the horse end of it.

It's the interaction piece.

UNIDENTIFIED SPEAKER: You talk about collecting injury data for equine and humans, but what about other conditions, track conditions --

MS. OPACICH: Absolutely. There is -- on the equine input, injury input form, there are -- there are slots that indicate that, the track conditions, the track surface.

And actually for Equibase, for the Jockey Club systems, you need -- the intent is to extract that information and download it into the equine injury report.

UNIDENTIFIED SPEAKER: What about -- other than the horse's health, their racing history.

MS. OPACICH: Absolutely, same thing.

UNIDENTIFIED SPEAKER: -- as well as the jockey's racing history.

MS. OPACICH: Well, that would be

21 interesting.

22 UNIDENTIFIED SPEAKER: And experienced

1 versus inexperienced jockeys.

2 MS. OPACICH: Yes. As opposed to

3 apprentices and whatever, absolutely.

4 Because I'm sure there will be

5 relationships. How strong the relationships and

6 associations are, we don't really know, but I'm sure

7 of us have many hypotheses.

8 Thank you.

9 MS. HENDRICKS: Our final speaker for

10 today is Andrew Staniusz from the Magna

11 Entertainment Board. He will be presenting on

12 insurance data and injury prevention.

13 INSURANCE DATA AND INJURY PREVENTION

14 MR. STANIUSZ: Well, there is nothing like

15 being the last speaker in a day-long event, so I

16 will try to keep my comments brief and try not to

17 pull out the next break by too much.

18 My name is Andrew Staniusz. I'm a legal

counsel with Magna Entertainment Corporation. As many of you are aware, Magna Entertainment owns and operates ten thoroughbred tracks in the United States.

As part of my responsibilities, I oversee health and safety for both -- from an employee perspective and also from a sports participant perspective.

Four of our tracks are in workers' compensation states, California and Maryland. And six are nonworkers' compensation states, and they run the gamut from former Breeders' Cup venues such as Gulf Stream Park and Lone Star Park to tracks in smaller markets, such as Great Lakes Downs in Muskegon, Michigan, and Portland Meadows in Portland, Oregon.

What I'm here to talk to you about is, once again, a work in progress.

With the six nonworkers' comp states, they are all covered on the on-track accident insurance

with AIG. And back during the Congressional testimony, hearings, I should say, our then chief operating officer, Don Amos, in his testimony before Congress, outlined MEC's intention to conduct safety audits at the six tracks that are under the AIG policy.

So to give you an update of where that's at, we did -- Magna did retain AIG Consulting. And, in fact, Tony, who spoke earlier today, was retained to conduct these audits.

All six of these tracks have now been visited with the last audit being performed in April. So a report is due later this month or sometime next month.

So we will get those results shortly.

One preliminary indication that we were given was that each one of our tracks, whether it's the smallest or the largest of the sample group, each one had at least one best practice that can now be conveyed to the rest of the Magna family.

So once the report is received, we are going to disseminate the best practices throughout the whole group. So we are going to use a methodology pretty much in the way Tony described his projects in California.

So with that, with that knowledge base, we will be able to communicate and then extend that out throughout the industry. So that's basically a

starting point.

So the key point that I want to make regarding this -- the whole issue here of loss control and risk management is that there is a process that is underway, and it's going on right now.

And with AIG having the California policy and the majority of the tracks in the United States in the nonworkers' compensation states, they are developing a critical mass of information regarding incidents and injuries, both frequency and severity.

And, you know, with that data being

gathered, you can start analyzing, and you can start improving things based on empirical evidence rather than what we have been historically left with is anecdotal evidence, or incomplete evidence.

And this is not an endorsement of AIG, although they have done a great job of helping this industry in a couple of the California crises in the issue of on-track insurance, but any other insurers that will come onto the market will have the ability to gather that information as well from their group.

And the reality is that insurance is going to be a key driver to this whole process.

We may be considered to be proactive because we went up and commissioned the audits and started the process.

But even the most reactive operator is going to be forced by the dictates of the market to implement certain, you know, implement remedial efforts, improvements, and what have you, to be able to get affordable insurance.

And I think, you know, one of the things -- it's without debate that one of the key drivers of changing behavior, both individual behavior, institutional behavior, business behavior are the dictates of insurance.

So that process is there, and we think that, you know, I think you got a good glimpse of the comprehensive methodology that AIG Consulting takes to this.

So we are quite confident that in -- you know, over the next little while, there's going to be a, you know -- there will be changes being made

based on two things.

One is, you know, empirical data, which can then be correlated with our, you know, with the accidents, accident reports that we can prioritize, which needs to be -- you know, what would create the most amount of safety, what then -- and then you take your priorities that you can do everything else in life, you know, the top priorities, subordinate

priorities, and then, you know, whatever is left over.

So, as they say, there's an approach that is underway, and the -- and basically the approach that the market is being guided by are the dictates of the marketplace.

Now, in my remaining time, I want to spend just a few minutes addressing the issue of -- the whole issue of lead exposure.

The first time we were -- MEC was made aware of the lead issue was in November of 2005. And the context in which this happened was I attended the offices of the Jockey's Guild for the purpose of discussing implementation of on-track

insurance, but at that time, we had a proposal and basically a cautionary proposal.

And Dr. Gertmenian -- and this was just a couple of -- just after the first set of Congressional hearings, where Dr. Gertmenian testified and before the second set, where the other

stakeholders testified.

And Dr. Gertmenian interposed himself into my meeting because I was meeting with other people. And, as some of you are aware, Dr. Gertmenian has a good ability to change the agenda of any meeting.

What the meeting turned into was him seeking an endorsement from Magna Entertainment that we have, as an organization, been able to work with him on a businesslike relationship.

But the criticism with Dr. Gertmenian was that he didn't get along with anybody. So he is trying to prove -- you know, have the board members call me, and I would say that, no, we have always had a good businesslike relationship, which by and large are true, but -- they weren't productive, but they were at least cordial.

He then in that context said to me, By the way, I want to give you some information as a heads-up.

He then gave me three lead sample results

from our -- three of our tracks. And those of you who know Dr. Gertmenian know his proclivity for hyperbole, and he said basically that we had a huge issue. I'm just, you know, giving you a heads-up on it.

Now, a more cynical man would say this is an attempt to extort an endorsement by keeping this information quiet. Not being cynical, you know, he said he was my friend, so why I would think that?

Anyway, in our programs, I wasn't too concerned because we conducted health and safety audits and inspections as part of our program. Magna Entertainment came as a subsidiary from a manufacturing company, so we had those types of processes in place.

So I thought, you know, I called the Magna safety -- the director of safety and said, Do we have a problem with lead? He said, no, none has

come up in any audits.

I said, Well, double check. And I

explained the meeting.

I found out later, was informed that, you know, we probably didn't inspect, you know, take a close enough look in those jockeys room, you know, that we would have liked.

So in light of that, we commissioned samples at the three facilities that I was given test results for, and -- with the instruction that Magna needed to know the answer before we were going to go up before Congress.

So we got the three results back. One of them, Remington Park, the sampling results that we received from -- that I was handed to by Dr. Gertmenian showed two samples, one 60 times above the limit. Another sample, the second sample, nine times above the limit.

The sample was conducted by Liberty Mutual. They took eight samplings using an OSHA standard approach on lead sampling.

We have -- first of all, there was no

airborne exposure detected. So that was the primary thing. In fact, our safety director, he told me, we don't really have a major issue here. It is manageable. And that was his biggest concern, was the airborne.

We had two -- one was six times above, one was two times above.

Then Lone Star Park, the results given to me by Dr. Gertmenian had one sample 75 times above, another 20 times above. Once again, no airborne exposure was detected.

We had two -- one was a hot spot. It was 65 times higher, but that's the saddle cleaning area, which makes sense. And one was slightly above the standard. It was 0043 instead of the standard I think it's 004. Once again, it was manageable.

The third one was Great Lakes Downs, two samples, one 18 times above the standard, another 130 times above the standard.

In fairness, Great Lakes Downs, at that time, was no longer -- the racing season was over.

But the point to be made from this is,

once you clean the place up, you don't have anything left over.

So, you know, proper hygiene would take care of that finding in Lone Star if you used proper hygiene and procedures.

So we were told that whatever issues you have with lead are manageable. And what we did in June of 2006, we rolled out a rough procedure, which I have copy here. If anyone is interested, I would be happy to provide you with a copy.

And in a health and safety conference, which we held by webcast, we basically said, Either adopt the procedure, or you will replace the lead weights.

Now, in fairness, we were thinking of terms of plastic encapsulation. We didn't really consider the leather. We will take that under advisement whether that -- you know, whether that's sufficient. Once again, we will deal with it there.

So, once again, our only point here, when

it comes to workplace hazards, they exist. The goal is to eliminate. Where they are not eliminated, you

manage it. You manage it by prudent means within, you know, government regulation, government standard, which, you know -- and I realize that, you know, in the long run, you know, replacing -- you know, getting the lead out of our workplaces is a logical goal, but there are steps that can be taken that are quite acceptable under OSHA to manage that.

And so what we are going to do is we have our audits and inspections. We run fairly decentralized, so we will give you an option of how to run your business, but we are going to take a look at how you do it.

And so when our audits and inspections go through there, that's one of the things we will look at. And, no doubt, somebody, you know, will not have done what we have asked them to do, and we will force them into that.

So as I say, that's how we have dealt with

the lead issue. I mean, we have got the lead procedure. We are going to give them a choice of how to do the lead procedures.

You know, if put you up postings and

surveil people and do all of that stuff, that's fine, but I think it is probably easier for you to replace.

And the only other thing I think we need to do is replace the cook at Thistledown, you know, because -- now, the one point about that is, it would be nice to know about that.

How long -- when did that happen? Who talked about it? And did anyone ever, you know, tell management that that's going on? Did any of that -- because I can tell you that the person who was the general manager at Thistledown is now our general manager at the Gulf Stream Park.

I mean, common sense would have prevailed.

So I think, like, all of these issues that we have here in both areas that I have talked upon

in my comments, there is a process where you can manage through these issues with data. And that's -- you know, that's how safety is done in all workplaces, where you need here, because we are dealing with athletic activity, but still the means are there and they are underway already in

addressing many of these issues.

So with that, I'm not too late for your break.

Any questions?

MR. BAHNO: Do I have your permission to share one best practice that I think the group would benefit from hearing?

MR. STANIUSZ: Sure.

MR. BAHNO: We talked a lot today about medical treatment aspects. And one of the things that I was asked to take a look at was actually who responds to an on-track injury accident, incident, whatever you want to call it, and how do they do that.

And interestingly enough, one track, Thistledown, which is out in Ohio, actually does something which is going to be one of my major recommendations, not only to the Magna tracks, but perhaps every track that I come across.

And what they are required to do by the state of Ohio, and mandated from a regulatory standpoint, is they need to have annual accident

simulation exercise.

What I mean by that is they basically get the ambulance crew out there, they have got the jockey out there. They get the horse out that. They put the jockey down in the mud, whatever the conditions are. They get the outriders.

Each and every person who is in fact responsible for responding to that incident gets trained all at the same time. But most importantly, they videotape it.

Now, they have to send it into I think the State of Ohio Racing Commission. But that is a

practice that time and time again other tracks can certainly benefit from. Because it's videotaped, it can be used as a training tool for those basic EMT responders, perhaps, and also, you know, some of the paramedics.

Because sometimes there is, you know, somebody who only has one or two years of experience, and sometimes those guys on the ambulance crews maybe have never worked around a horse before, too.

That was one key thing that I think just, by going to six individual locations, was really beneficial. The light went on, You know, everybody should be doing this.

MR. SEFTEL: Tony, I think that is an important point, but we also need to step away from tokenism. Working the emergency medicine one demo a year is not going to cut it.

And the other big problem is all of these ambulance crews that are independent contractors.

They are kids coming from college. They have a volume of people rotating. If you have one demo a year, there is no way you can train a crew.

You cannot have a racetrack relying on a temporary rotating work force. You have to have permanent staff that are trained and experienced exactly the way Tony mentioned to be able to handle it. Having a demo a year, absolutely useless for emergency medicine.

I work in the ER all the time. You have to draw once a month, once every two weeks. Once a year doesn't cut it.

Just a comment on Andrew's point about the lead. Maybe you're not privy to all of the machinations of the past. In coordination with the Jockey's Guild, Dr. Gertmenian, an economics professor, essentially ransacked the Guild.

I had nothing to do with him particularly, but the reality is that the lead issue is completely above and beyond the politics of the situation.

That comes from your racetrack, Andrew. There were no signs up there, no procedures in place.

Obviously we have work to do. Let's work together and fix it.

That's what I would like to recommend.

MR. STANIUSZ: I have no problem with that.

I was just saying there is a mechanism to deal with it and to manage it. And by auditing and inspecting, we will deal with efficiencies that way.

Any other questions?

Thank you.

MS. HENDRICKS: We are going to go ahead

and take a short ten-minute break.

(A recess was taken.)

PUBLIC COMMENT

MS. HENDRICKS: If everybody would take a seat, we are going to get started again.

We are going to have a brief time to open

it up for comments right now before we move onto discussion.

Once again, I would like to remind everyone that we do have transcription services, so if you would please speak loudly enough that he can hear you, and if you can please identify yourself before speaking.

Does anybody else wish to make a comment for the record?

Would you like to come up?

MR. COLTON: No. Just from here is fine.

First of all, I want to thank you and NIOSH for holding this conference, looking after the health and welfare of not just jockeys, but all the other trackside workers.

In addition, on the transcript, will most

of the reports and the presentations, the overhead presentations be there?

MS. HENDRICKS: They will be available. After the docket closes, they will all be submitted

to the docket, and they will be posted on the web after the docket is closed.

Anyone else have anything they would like to say?

GENERAL DISCUSSION

MS. HENDRICKS: Okay. We can go ahead and move on to just general discussion. If anybody has a topic that wasn't covered earlier that they would like to bring up or any just general discussion about some of the general presentations that we heard earlier.

Well, I have just a couple of questions I would like to bring up, if anybody would like the weigh in on some of these issues.

One of the first things, I know that Ohio recently increased the age for jockeys to be licensed from 16 to 18. I believe that's the first date to do that. And I just -- if anybody has an

opinion on that? Anybody have any ideas if it's a good thing, a bad thing, something other states

should adopt?

MR. JOHNSTON: Jeff Johnston, Jockey's Guild.

First of all, I would like to thank NIOSH and all of the attendees here today. I think we all have the same goals in common to increase the safety of the industry.

I heard a lot today on research that's being done on horses, and I have been aware of the research. And hopefully, now, through NIOSH and other organizations, we can help to improve the safety of jockeys.

A lot of these issues just haven't been brought to the attention of the industry before, and jockeys themselves don't realize that they are putting their health at risk.

They are so worried about their careers. The racing industry is just a cutthroat industry. And they have seen -- through history, they have seen their fathers abuse their bodies in the same

way, but not under the same conditions.

So hopefully if we can bring it to their attention, they will be at the forefront with the racing industry trying to improve the conditions.

As far as the racing age, as a representative of the Jockey's Guild, we don't have a set proposal or recommendation at this point.

Personally, I think Ohio did the right thing increasing the age to 18. Many jockeys are still individuals still in high school at the age of 16. I think probably maybe 95, maybe a hundred percent of them are in high school at age 16.

I know of some that have taken accelerated courses to graduate so they could go on to ride. Those jockeys are few and far between.

For the most part, I think you find more jockeys that drop out of school in the 8th grade or 9th grade, especially a lot of the riders in Louisiana where they have racing at push tracks or different competitive events that lead those jockeys away from school to ride.

22 The recent Kentucky Derby winning jockey

is one example.

It makes it again, like Robert said, the jockeys themselves are an obstacle in making some of these changes, and part of the reason is that they don't understand.

They left school. They didn't have the financial background or educational background to make the right decision and learn about the health studies and the other -- actually, the other opportunities that they could have if they weren't jockeys.

I would venture to guess that 50 percent of your jockeys -- I'm just throwing a number out there -- would stop riding if they had the opportunity, but they don't know anything else.

They were brought into the business. Most of them grew up on the racetrack. Their fathers were jockeys or their mothers were jockeys or grooms or trainers.

And if they were small enough or wanted to, they became riders and alleviated any other opportunities that they would have had.

And I know of riders that for some reason, whether it was an injury or weight restrictions or something like that, that left the racetrack and went and did something else, whether it be the airport or painting or construction or something like that.

And when they come back to the racetrack, they are happy. The stress level was so intense in the racing industry, so competitive, that when they go out and they do other things and they find that they can earn wages and they can have health benefits and weekends off and holidays off, that they don't return.

And that's one of the things that, as they learn this, I hope we can realize as an industry that we need to help these guys to stabilize their lifestyles and their finances and their health.

Yes.

MS. OPACICH: I would suggest that many of the people who come to racing as jockeys are already members of the health disparate populations. So that they come -- health disparate populations are

people who are vulnerable by virtue of poverty or education or race to a poor quality of health, so when they already enter vulnerable -- they won't develop the health literacy and social and behavioral sorts of background to be able to cope with some of these issues.

It may be a chicken-and-the-egg issue, but many of them are representative of their population.

MR. JOHNSTON: Exactly right. And it's becoming ever worse and prevalent. Because as the weight restrictions remain the same -- this is just another issue that we have addressed today.

As the weight restrictions remain the same and the human population is bigger, the industry is being forced to go outside its borders to obtain

riders who are small enough.

And they bring -- when they come, they come from, what you just said.

MS. OPACICH: Disparate populations.

MR. JOHNSTON: Disparate populations.

And they bring -- so their standard, their level, their standard of living is not what we are

used to here in the United States.

So they are a group that, too, we need to educate when they come over here.

I think it was brought up earlier, a school that needs -- they should have to go through some type of training or school or certification process, even when they come from other countries or have a certification from such a school in Peru, where they have some formal training and some education.

So when they come over here, they are ready to ride. Or when they get over here, maybe they can pass an equivalency exam of the school that

we have in the United States that teaches these kids about health issues, diet, finances.

Yeah, Robert.

MR. COLTON: Yeah, Jeff, I wholeheartedly agree with you, and I really think that the issue should be brought across the United States.

There are theories (inaudible) physically because an additional two years. And you know, you have experienced the life, and I don't think anybody

else here ever has.

It's unfortunate that many jockeys retract into a 14- or 16-year-old mentality. And part of it is a requirement of the job, to shun responsibility. If you are responsible to the individual, you are not going to your job because, you know, it's not a matter of if. It's when you are going to be injured.

It would give a lot more maturity level to the riders.

MR. JOHNSTON: One other issue I would

like to bring up is -- and I know we have gone over this as well -- but the ambulance crews, to be certified ambulance crews.

I know, for example, some of the tracks -- let me outline first what my position now is.

I rode for 20 years. I retired last August to take a job as regional manager with the Jockey's Guild. Currently I represent six states, including Kentucky, Illinois, Ohio, Indiana, Iowa, and Minnesota.

And in visiting these racetracks, I find

it funny that I don't watch a single race.

I'm talking to these riders and finding out the issues that they have in the room or around the track or with the stewards or different things, so basically either putting out fires or answering questions.

And I don't watch the races. So as far as an industry, you know, I'm not -- they're not gaining anything from me.

But some of the problems that I have envisioned or seen when I go to these racetracks, for instance, the ambulance, their response times need to be improved. The people on the ambulances, the crews, need to be certified.

I have got some crews -- and I think Dr. Seftel brought up, that they are independent contractors, or they are commissioned by, for instance, one track.

It's like a local fire -- they have EMTs, but they are not able to perform some of the duties that potentially need to be performed.

In New York last year, there was a rider

who would have died had the paramedic not been able to give him a tracheotomy on the way to the hospital.

Once some of the jockeys found that out, they went to their paramedic crew, their ambulance crews and found that they weren't accredited. They wouldn't be able to that. Had that kid been at that

racetrack, he would have died.

We had a -- there was a case in one Dr. Seftel's practice, if Dr. Seftel wouldn't have been there to revive him in the infield, he would have died.

These are black eyes that this industry doesn't need, and I feel are easily prevented if we have those certified physicians, certified technicians to take care of any potential injuries that will happen, not could happen, will happen.

Also, the doctor. I think this was -- somebody kind of alluded to this earlier, but -- this may be a beef that I have that maybe doesn't go with this, but it's an industry beef I have.

Jockeys, when they feel ill or want to

take off, they can go to -- they have to get a physician to excuse them from their mounts, or they will be fined. The fine is probably double what their mount fee is.

When they come back the next day, that

doctor cannot allow them, cannot inspect them and say, Okay, you are approved to ride.

Those jockeys have to go to an independent physician off the racetrack, sometimes on Saturday or Sunday, or an emergency room, and spend the money to get a physical to say that they are able to ride, when maybe the day before, it was a stomach ache or diarrhea or a cramp or whatever, female problems.

If they are not able to -- they can go to the doctor, and he can excuse them from their mount. But when they come back the next day, the stewards won't accept his word that they are able to ride.

MR. SEFTEL: I mean, essentially these jockeys are being penalized for medical conditions that are brought on by appointment.

And understanding my situation is a very rare one. There are probably only three or four

track physicians in this country. And the jockeys at my track are able to get immediate turnaround service and are not penalized for conditions --

medical conditions that are outside of their control.

Jeff raises an absolutely critical point. For an industry that is so accident prone and so many potential dangers, the least the jockeys deserve is consistent board certified and accessible medical treatment.

MR. JOHNSTON: Also, I think I brought up the jockeys tend to come back too early off of injuries.

I just recently -- this week in fact, a jockey had a broken collarbone. He came back after four weeks. He walks around with a limp. He is taped up. He is sore. But he was forced to come back because, just the disability payments, the timeliness it takes for him -- he hadn't received any payments yet. There was a glitch in the system, so it wasn't his mistake. It was a racetrack mistake. Somebody didn't receive a fax.

The racetrack had done it properly. The

jockey was there when they did it, but somewhere in the system, it got screwed up. So he was yet to receive a disability payment.

He borrowed money to pay his rent. He borrowed money to pay his car payment. He borrowed money to buy groceries.

He was forced to go back to riding to earn a living.

And, again, that's probably not something that NIOSH is able to look into, but it's an industry problem and a problem that the jockeys face.

I don't know what the solution is to make sure that these guys give themselves enough time to heal.

And there's some injuries that have been -- for instance, myself. I was fortunate, very fortunate in my career to -- although I suffered some severe spills, the worst injuries I sustained were a broken pelvic bone, broken fingers, a bruised tailbone, and a bruised liver.

But I was fortunate. I have run into people that have broken virtually every bone in their body. I was with Tony Donito (phonetic) after a spill at Churchill where they had virtually glued every one of his ribs back in place.

The doctor came in and he said, Tony, the good news is I put your ribs back. He said, but the other news is I don't know if I got Rib 1 where Rib 3 is supposed to go, or Rib 6 where Rib 7 is supposed to go, but you have a rib cage again.

MR. SEFTEL: This is another important predication for universal workers' comp. And I mean that would have gone a long way to meeting the issues of child support or supporting the families during these periods of required recuperation.

MR. JOHNSTON: Is there anything -- I don't mean to be up here on my soapbox, but if there's any questions specific to jockeys that anybody has, I would be glad to answer them.

Otherwise I will sit down and let somebody else take over.

MS. HENDRICKS: Do we have any other --

anyone else who would like to speak, any other discussion?

MS. HENDERSHOT: Can you just explain what the next steps are after this meeting, what NIOSH will do with this information or with the transcripts? What happens next?

MS. HENDRICKS: Well, we will wait -- I should just go ahead and put this -- I know have I asked most of you already that presented to make sure that your presentations are submitted to the docket.

Anyone else who would wish to provide written comments, the docket will remain open a month after the meeting. Once the docket is closed, it will be posted on the web -- I believe I'm telling you correctly here -- along with the presentations.

After that, we plan on using this meeting to help us formulate what our next steps will be.

UNIDENTIFIED SPEAKER: Can you assess the range of those possible steps?

MS. HENDRICKS: Frank, do you want to do

that?

MR. HEARL: Sure.

I think, for me, it is little bit difficult to give you the full range of what the possibilities are, but, you know, one thing that we have talked about is the possibility of putting together a guidance or some kind of an alert type of a document that could be used by the industry and so forth to be eliciting best practices.

I think we really are interested in having you submit information to the docket. Particularly we heard a lot of presentations that there were other identifiable best practices out there, and we would hope that people could submit specific examples to us because that would be the basis for us to be able to dig into that a little bit deeper.

There also was discussion of research

18 papers had been published in peer review journals
19 that folks alluded to, and we would be very
20 interested in following up and looking into those in
21 some greater detail as well.
22 And to the extent that even a simple email

1 message with the reference IDs and so forth would be
2 helpful to us.
3 I mentioned in my hoping statement that we
4 did do a literature, exhaustive literature review.
5 And, you know, we have had to look in places that we
6 know by our own experience -- and as I also
7 mentioned, we don't have a whole lot of experience
8 with the horse racing industry.
9 So we are hoping that you could open our
10 eyes to perhaps some other resources that we are not
11 aware of so we can take a look at that.
12 Beyond that, you know, I think it would be
13 premature for me to try to speculate on what we
14 might be able to do from there.
15 I know there's a grant application in the

process, and we do have open announcement that we keep regularly available for -- as a program announcement for people who have research ideas.

I think, you know, this particular docket, if you go to the NIOSH website, I don't think the web address is up there right now, but I will tell it to you. It's www.cdc.gov/niosh.

That will bring you up to the NIOSH home page. And if you go down on the right-hand side of the page in the bottom corner, there's a listing of dockets.

And if you pull up Docket No. 104 on that list, you will find hopefully all of the presentations here, plus everything that people submit to the docket, plus the transcripts that we have taken today, all of that will be there.

And that can also help serve as, hopefully, as a resource to others from there.

We also could, you know -- again, I don't want to speculate, but one of the things that we

like to do is to use the internet to our advantage.

And we have created various topic pages on different subjects if we feel like we have enough material that would merit that, then we might put together a topic page that might draw together some of these ideas.

So this is our range of immediate possibilities.

Yes.

MR. WALDROP: I think you said at the beginning that this was probably by a letter from Congressmen Whitfield and Stupak?

MR. HEARL: That's correct.

MR. WALDROP: Will what you do involve some response to them?

MR. HEARL: Well, I think what we will do is actually go back to them and offer them a briefing on what we have learned from our experiences with this meeting.

Again, it will be sometime after we finish

evaluating what goes into the docket after it closes on June 22, I think is the date that it closes.

So, you know, that will be something that we will offer them.

MR. WALDROP: Any idea anybody how long that might be after June 22? Five years? 30 days?

MR. HEARL: I would say it will be weeks to a couple of months, probably, to assess what comes in.

Of course, if thousands of pages of stuff comes in, it would take me on the longer side of

that months. But I would think it would be not too long after that we would be advising him, or at least offering him the briefing.

Any other questions?

Before I return the microphone back to Kitty, I want to say thanks to Kitty and to Dawn Castillo, Elena Page, Virgil Casini, Nancy Stout, and Terri Schnorr, the NIOSH folks who have been involved in putting this meeting together.

And I'm sure there are other folks back in Morgantown and also Cincinnati who assisted, and I want to offer my thanks to all of them for pulling that together.

I want to say a special thanks to all of you who came today, especially our speakers who provided us with a wealth of information and opened our eyes to some new problems that we hadn't anticipated in the industry that we may need to take a further look at.

So thank you all. And I ask for a round of applause from those who participated, for the speakers, and for Kitty Hendricks and the NIOSH

staff for putting the meeting together.

Kitty, do you want to close the meeting out?

CLOSING COMMENTS

MS. HENDRICKS: Sure.

I would just like to add my thanks to all of you for attending. And again, much thanks to all

of our presenters. You have obviously given us a lot of think about today, and we will take that back with us and hopefully make some progress in those areas.

Once again, the docket, please remember to submit everything you can to the docket and please remember to reference Docket NIOSH 104 so it gets to the right place.

If there aren't any other comments or discussion, I think we are finished for today. Once again, thanks for taking the time out of your busy schedules to help us.

UNIDENTIFIED SPEAKER: Can you email us a list of who attended the meeting today, just the participant group?

MR. HEARL: We can do that.

MS. HENDRICKS: As long as I have your email address, I think we can probably take care of that.

Anything else?

MR. HEARL: It will be in the docket anyways.

MS. HENDRICKS: It will be in the docket, but I can email that to you.

Thank you all for attending.

(Whereupon, the proceedings in the above-captioned matter were concluded at 3:27 p.m.)

CERTIFICATE OF REPORTER

I, Joseph A. Inabnet, do hereby certify that the transcript of the foregoing proceedings was

taken by me in Stenotype and thereafter reduced to typewriting under my supervision; that said transcript is a true record of the proceedings; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and further, that I am not a relative or employee of any attorney or counsel employed by the parties thereto, nor financially or otherwise interested in the outcome of the action.

_____

Joseph A. Inabnet
Court Reporter

Original transcript provided by the commissioned court transcriber was modified on 6/21/2007 to correct an obvious error on page 5, line 5 of this document. The last name of the speaker was incorrect and the first name was misspelled. Also spelling error was corrected on page 157, line 1.