

The Equine Excellence Initiative

Homecoming Farm, Inc

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Introduction

Project Overview

Homecoming Farm, Inc. proposes to begin a comprehensive program to introduce the specialties of physical medicine and rehabilitation and sports medicine to horses internationally. This ambitious program was designed to accommodate the advancement of techniques in veterinary medicine without the complicating factors of third party agendas. The *Initiative* will accomplish the following:

- Main Research and Education Center which investigates and documents advances in veterinary rehabilitative and sports medicine and disseminates these advances internationally through seminars, publications and collaboration with other experts.
- Satellite Research, Education and Treatment Centers will be established at equine rescue facilities, race tracks and sport horse training centers worldwide.
- Accredited Veterinary Physical Therapy Educational Programs will be developed at existing schools of human physical therapy and in collaboration with the existing certification system in the UK and other countries.
- An active advisory relationship between our staff and horse racing and other animal sport governing boards to assist in the improvement in ethics and safety in these industries so that the animals are better protected from injury through regulation.
- Continued collaboration with physicians who are experts in Physical Medicine and Rehabilitation and Sports Medicine to share insights that will be of benefit to both human medicine and veterinary medicine.

Homecoming Farm, Inc. Mission

Homecoming Farm, Inc. is a 501c3 nonprofit organization dedicated to promoting the safety and well being of horses and other animals by accomplishing the following:

- Developing new specialties in service and education in veterinary medicine which support and enhance injury prevention, accurate diagnosis and scientifically directed rehabilitation.
- Promote the proper education of professional and paraprofessionals who work with animals.
- Promote the safe and humane handling and management of animals used in sport.
- Promote among the public the benefits of responsible regulation of animal sports.
- Collaborate with other veterinary organizations and associations, and sport regulatory authorities.

Homecoming Farm, Inc. Goals

Homecoming farm, Inc. will achieve its mission by achieving the following goals:

- To establish diagnostic/rehabilitation centers at major racetracks and equestrian centers.
- To train new paraprofessionals as Health Care Managers to work in training stables.
- To create fellowship, internship and residency opportunities for veterinary students; veterinarians; physical therapists; health care managers; farriers; grooms; and others through our American College of Veterinary Sports Medicine and Rehabilitation program.
- To collect data through our centers that will be amassed and stored collectively for the benefit of studies in the prevalence of injury and the determination of its cause and successful treatment by professionals worldwide
- To define a proactive relationship between these new veterinary specialists and racing/training operations.

Homecoming Farm, Inc. History

In 1989, following 4 years in private elite equine sports medicine practice, Dr. Sheila Lyons began a three year fellowship in human Physical Medicine and Rehabilitation in Boston through Harvard Medical School. Homecoming Farm, Inc. was founded in 1989 by Dr. Lyons to provide rehabilitative care to injured horses and to train their caretakers in the methods used to achieve their recovery and protect them from re-injury. Originally conceived as a kind of laboratory to research the effective transfer of methods in practice in human physical medicine and rehabilitation, documentation and education, this work began at a farm in Peterborough New Hampshire. Among the organization's first patients were horses that had been given no chance for survival by their attending veterinarians. Dr. Lyons worked with physician colleagues to develop a rehabilitative program for each patient while training paraprofessionals in the appropriate care of the animals. This early work laid the foundation for understanding the application of scientifically well established methods in human medical practice for the benefit of injured animals. In addition, the animals' own caretakers and trainers were trained at the farm to provide them with a sound foundation and new management skills for future maintenance of the horses when they returned home after treatment and recovery.

This laboratory environment was maintained for four years. During that time more than 200 horses were treated at the farm and 100 in the field- all utilizing new rehabilitative treatment techniques. Of these, 100 had been "signed off on" by three veterinarians (as mortality insurance requires) indicating that there was nothing more that could be done to return these horses to productive athletic soundness. The results have been compelling: of these 300+ horses, all are alive and well. 100 are productive but have not been returned to athletic work. The remaining 200 have returned to the ideal use stated by the owner when they were admitted for treatment. This ideal use includes racing or competing in horse sports at the highest international elite level.

How was this dramatic turn around accomplished? The techniques that have been developed through these clinical trials are based on the principles on which Homecoming farm, Inc was founded. These include:

- Horse owners were charged no more than the direct cost for the rehabilitation services of their horses, thus allowing each horse to stay as long as its recovery dictates for the best results. No promises or advance prognosis was made to owners who were required to consent to allowing us to collaborate with physician colleagues and use methods that are not available through traditional veterinary practice. When necessary and when the research value of a case was high, horses were treated at no charge to their owner.
- Diagnosis was careful and thorough utilizing the latest techniques in medical technology. The whole horse was fully evaluated biomechanically physiologically and anatomically. This approach enabled the identification of predisposing factors that were the cause of overuse injury and the opportunity to make corrections that led to full and permanent recovery. Individual body parts such as tendons, ligaments and joints are evaluated as part of a whole body picture rather than as isolated injured parts.
- The horses' management and care was meticulously prescribed and delivered through skilled paraprofessionals without improvising.
- Cases were fully and meticulously documented so that protocols are reproducible and results can be interpreted scientifically.
- All information is maintained in a data base so that other professionals can make use of our work to further research and understanding. In the future we will maintain an internet based data storage and access system so that we can be easily linked with affiliate centers and colleagues all over the world.

The Need for *The Equine Excellence Initiative*

Sport horses are breaking down and being euthanized in great numbers. This huge loss is caused by a gap in the care delivery system for equine athletes which leads to incomplete recovery, re-injury, poor performance and catastrophic breakdown in race horses: there is no specialty field in veterinary sports medicine and rehabilitation. Veterinarians are able to surgically "fix" or medically "treat" patients but without comparable and complementary expert services in physical medicine and rehabilitation coupled with sports medicine understanding to return patients to strength and fitness for sports activity, the animal is delivered back into the training environment in an unfit and weakened condition.

Traditionally veterinarians are trained to respond to the short term needs of horses through diagnostics, surgery and drug therapy. In private practice, ambulatory veterinarians travel to major show and racing circuits, and since these athletes are "on the road" there is no time, means, nor system to provide any other kind of specialized care. Horses with chronic pain or long term professionally delivered care needs are traditionally euthanized. Veterinarians have not been able to recommend the rest and skilled care needed by these horses because up until now, there were no training programs for staff nor facilities to provide for their specialized care requirements, and therefore the chance of successful recovery was poor.

Physicians refer their athlete patients to physicians specialists for evaluation and treatment. In equine practice, no such specialty exists. Instead, grooms, trainers, and untrained and uncertified self proclaimed "equino therapists" deliver treatments that are not based in science but in anecdote and dogma of the horse industry. Much of the information relied upon for protocols is driven by the business interests of manufacturers of therapeutic equipment. Education in this veterinary specialty field does not exist. Veterinary technicians are currently the only other licensed personnel who are trained and available to work with veterinarians in the USA. But they do not have education in physical therapy or sports medicine.

Equine physical medicine and rehabilitation is not covered by any veterinary school nor by any specialty board. 75% of career altering injuries are of the "overuse" type that can be addressed successfully with expert rehabilitation. Science has determined that most racing breakdowns are caused by an accumulation of stresses, acquired over a prolonged period of time rather than the single step failures they are assumed to be. In other words- most of these racing breakdowns can be prevented.

So why is there no demand from every horse owner in support of the development of equine physical medicine and rehabilitation and sports medicine?

- For many years equine sports injuries have been treated ineffectively resulting in chronic pain and diminished athletic performance, leading to retirement from sport or euthanasia. It is very difficult to convince an entire industry that a new approach will produce better results. Participants in past clinical trials of Homecoming farm are convinced and can help to provide the critical mass needed to gain the interest and confidence of the sport horse owners.
- Currently, if three veterinarians "sign off" on a horse, the animal is euthanized and the horse's owner is paid the value of the insurance policy. Professional rehabilitation provides a possibility that a horse will recover but not a guarantee. Therefore, the horse owner who submits his horse for rehabilitation services instead of choosing euthanasia is risking many thousands of dollars that would otherwise be paid through a mortality claim. There have been insufficient numbers of cases to encourage them to forgo the insurance benefit and give the horse a chance for recovery.
- This research must be done in controlled settings and by strict scientific standards, supported by unbiased funders, in order to collect statistically relevant data to establish a foundation of evidence to provide a basis for thoughtful prognosis. These factors have not existed until now.

- Horse owners and trainers are very wary of rehabilitation for their athletic horses. Their only exposure to this specialty has been at the hands of equipment therapeutic product vendors who have sold them products with the promise of successful recovery from injury. Without specialized veterinary guidance and clinical trials to assist in their application these costly products have not for the most part, been beneficial to equine rehabilitation. Owners have wasted money, time and personnel resources.

Therefore, why is the rehabilitation of horses, through the veterinary medical scientific advances, and professional and paraprofessional education and training so necessary? What are the benefits of our proposed programs?

- The prevention of injury in sport horses and all athletic animals is the goal of society as it is the only humane and ethical standard and should always be paramount.
- The horse racing industry will be greatly improved through the infusion of successfully rehabilitated horses back into the mix. Currently the industry must "start over" many times as horses leave the industry through injury. Any athlete improves with experience over time so the sports will reach higher levels of performance through the development of this veterinary science and clinical service.
- Research in this specialty field will advance not only veterinary science but can contribute to human medical science through other species understanding.
- New skilled jobs will be created for paraprofessionals to work in the sports industries.
- Conducting research in the training environment through our planned centers at race tracks and other sport horse centers is the ideal set up and has not yet been achieved. Our system will partner the education and training, and research directly with the centers where hundreds of horses train and compete.
- All veterinary medicine will benefit as new methodologies in practice are applied and understood. Rehabilitation is a specialty that can benefit many types of patient, not only athletes.
- Athletic animals are typically young, strong, fit individuals and offer an ideal patient type to test methods in practice. As in human medicine, the understanding can be gained on these physically ideal horses and later delivered to older or medically ill patients for wider benefit.
- Our centers will hold great appeal to the companies that wish to test their products under strict scientifically controlled conditions.
- Students of our educational programs can gain hands on experience and familiarity with the demands of the different sports. This opportunity is not available through veterinary schools that are removed from sport training facilities.
- Horsemen will appreciate the research conducted since it will take place where their horses train. By making it local, they will be more likely to engage and support our efforts since they will be receiving the benefits through improved services for their horses.

Case Study

It is difficult to determine the real cause of a horse's injury if it is not diagnosed at its' earliest and most unambiguous stage. Veterinarians have not been trained to actively participate in the earliest injury detection and recovery process they are typically not invited to. The result is that trainers will medicate and push a horse to perform even when it is injured. Trainers are also not expert at recognizing the earliest stage of injury so most go unrecognized. This additional training can lead to secondary injury distracting veterinarians from the originating problem, making the primary injury more difficult to detect. Often this compounded injury state will be viewed by veterinarians as if the injured tissues were completely unrelated.

This scenario was embodied by a case of a dressage horse sent to Homecoming Farm from Germany. The owner did not want the horse back if it could not compete successfully in the highest level in dressage. After meticulous examination and educated analysis of the likely cause of the original injury, the horse underwent six months of specialized rehabilitation with ongoing diagnostics, ongoing consultation with physician colleagues, a whole body physical medicine program, and a carefully and scientifically guided return to athletic activity, strength, and fitness. The horse returned to its owner and ranked in the top ten dressage horses internationally. This horse had the benefit of not only specialized veterinary service but also that of our uniquely trained farrier and physical therapist. Our team approach was essential to this animal's full recovery.

The American College of Veterinary Sports Medicine and Rehabilitation Project Description

The American College of Veterinary Sports Medicine and Rehabilitation (ACVSMR) is the name for the project of Homecoming Farm, Inc that will go forward to provide education to veterinarians; veterinary students; veterinary physical therapists; farriers; researchers; horsemen; equine health care managers and others worldwide. It will be modeled after the human medical specialty in its scientific methods, educational structure for professionals and paraprofessionals; and will maintain a relationship with physician advisors so that we can take full advantage of ongoing developments in the human specialty field. The ACVSMR will establish a system for injury reporting and clinical service data collection and storage utilizing the internet so that epidemiological evidence can be collected and shared with researchers worldwide. We will act as advisors to regulatory boards for animal sports so as to ensure that animals are humanely and responsibly managed for the benefit and protection of both the general public's interests and the animals well being and safety. A main research center will be established and satellite facilities will follow as staffing through our training programs accommodates. Affiliations will be established with equine rescue organizations for the purpose of partnering with our educational programs so that students can get hands on experience in the new techniques and so that the horses have an opportunity to recover.

Research and Development - A Main Research Center for the ACVSMR

The core of the ACVSMR project requires the establishment of a main research and educational center that also accommodates the ongoing training of sport horses of all types. This can be achieved by securing a location that is adjacent to a race track or training center and by creating training facilities on site for other equestrian sports. The center will also incorporate educational, dormitory, clinical, diagnostic and research facilities. This Main Research Center will also house the administrative offices for Homecoming Farm.

The Main Research Center will create and accomplish the following:

- State of the science technology for diagnostics, therapeutics, data collection, research, and education.
- Specialty purpose driven facility design that will serve as a model for other centers and institutions.
- Gait analysis in a laboratory setting and in the training environment.
- Research facilities for PhD and physician colleagues who wish to conduct research on sport horses.
- Serve a minimum of 100 horses each year at no cost based on their value in our clinical research studies.
- Provide clinical services to the community at or below cost to benefit our studies and introduce horsemen to the benefits of proactive sports medicine.
- Collect and store data from other satellite centers and institutions for epidemiological understanding.
- Coordinate and recommend protocols for examination and treatment with other satellite centers, private veterinary practices and institutions to improve standards in practice worldwide.

- Provide a site for student interns, residents, fellows in equine science; veterinary medicine; veterinary technology; physical therapy; PhD candidates; physicians; farriers; health care managers; and horsemen.
- Welcome trainers, owners, veterinary colleagues and others to visit and see our teams provide the specialized care for sport horses.
- Identify and coordinate clinical trials and other studies on behalf of pharmaceutical companies, therapy equipment manufacturers, diagnostic equipment developers and others.
- Coordinate and oversee the creation of satellite centers to be located at race tracks and other sport horse centers.
- Develop protocols for injury prevention and provide wellness sports medicine services to the community.
- Partner with veterinary colleges and associations to share scientific information.
- Publish scientific papers and other educational material for professionals and horsemen.
- Advise sport horse regulators on the topic of safety and responsible sports medicine.
- Provide seminars and short courses for owners, trainers, veterinarians, farriers, physical therapists and others.
- Develop and provide a certification program for veterinarians, farriers, physical therapists and equine health care managers and oversee the credentialing process.
- Develop a Masters Degree curriculum for farrier science.
- Provide dormitory housing for students and employees of the Main Research Center.
- Generate funding through the development of grant proposals and secure major gifts and create an endowment sufficient to support our continued operations and programs.

Organization, Treatment and Data Collection at Satellite Centers of the ACVSMR

Satellite research and clinical centers exist to evaluate and treat horses with equal excellence through their relationship with the Main Research Center staff and ongoing collaboration. Each satellite center will be in a geographic area of need- either at race tracks or nearby other equestrian sport training and competition centers. Satellite centers will be run by a local board of directors who will be responsible for maintaining the standards in facility, staffing and programs. Board membership will be voluntary and no consideration will be given to board members in exchange for their service to the center.

All clinical data will be shared by the satellite centers with the Main Research Center. Horses receiving service at these affiliate satellite centers will be treated in the best way possible to achieve complete recovery with no short cuts to accommodate training demands. Protocols will be established through ongoing collaboration with the Main Research Center and will be adhered to strictly in order to maintain standards in excellence established by our ACVSMR programs. Staffing will be made available through our graduate interns, residents, farriers and other certified paraprofessionals so that a continuity in methods in practice can be assured.

Unlike the Main Research Center which concentrates its resources on advancing the research and providing education to many types of students, the satellite centers will charge reasonable fees for the services provided, while maintaining the ethics, purpose and standards of a nonprofit organization.

Satellite centers will be required to maintain diagnostic equipment, therapeutic equipment and general facilities necessary to provide the highest quality of care in accordance with our Main Research Center's evolving standards.

Documentation, Evaluation and Dissemination

One of the main functions of the *Equine Excellence Initiative* is to document, evaluate, and disseminate information regarding rehabilitative and preventive veterinary medicine to veterinarians and paraprofessionals around the world. This communication will be accomplished by the following:

- The Internet. The Initiative will begin disseminating information about protocols with veterinarians and horsemen around the world.
- Initiative Fellows and associates will write articles for trade journals.
- Homecoming Farm has been involved with answering horsemen's questions in sport horse publications and will continue to provide this service.
- The executive director of Homecoming farm and founder of the ACVSMR project, Dr. Sheila Lyons has been approached by Premiere Horse Network to serve as an ongoing equine veterinary consultant for this new cable network expected to be on air in 1996.
- Information about the Main Research Center and the ACVSMR programs will be developed by a freelance writer and disseminated widely.
- Design and produce a series of educational videotapes for farriers, horsemen and equine studies students.
- Create a library of video tapes of horses with gait abnormalities and the demonstration of their gait recovery over time for educational and research purposes.
- Produce educational booklets for veterinary students and horsemen.
- Lectures, seminars, and other presentations at conferences and meetings for farriers, veterinarians, physical therapists and horsemen.

Financial Structure

Once the satellite centers are up and running, they will contribute up to 75% of the operating costs of the Main Research Center and general ACVSMR programs, thus underscoring the essential ongoing role of the continued research and education. The Main Research Center will also solicit corporate, foundation, government, and individual grants and donations. The Main Research Center will also benefit from contracts with race tracks and others, that will help to sustain the administrative, operational and capital expenses of the Main Research Center.

Staff Qualifications

Sheila Lyons, DVM is the founder and executive director of Homecoming Farm, Inc. Dr. Lyons received her degree from Tufts Veterinary School in 1985. She has served approximately 1000 sport horse patients since that time with an international private practice focused on equine sports medicine and rehabilitation. Dr. Lyons has participated as the US official team veterinarian at numerous international events including the World Championships in Dressage, the World Cup, the Pan American Games, The Olympics, the Young Riders National Finals in 3-day Eventing. Dr Lyons completed a 3-year fellowship in Boston and Los Angeles in the human medical specialty of Physical Medicine and Rehabilitation and Sports Medicine. She has lectured at numerous veterinary schools and at scientific conferences including the Center for Sports Science in Moscow.