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## **NYS Gaming Commission employing mobile tech to screen horses for undetected heart issues**

### **Mobile ECG device to be used to reduce risk of sudden death of racehorses; Study to determine prevalence of heart conditions in Thoroughbreds**

The New York State Gaming Commission has undertaken a groundbreaking pilot program using mobile application technology to screen Thoroughbred horses for cardiac arrhythmias prior to racing.

The program, led by New York State Equine Medical Director Scott E. Palmer, VMD, ABVP will test the feasibility of using a smartphone-compatible heart monitor, the [AliveCor Mobile ECG](#) to get diagnostic recordings and determine the prevalence of arrhythmias in a population of racehorses.

“To ensure equine health and safety, we must use every tool at our disposal,” said Dr. Palmer. “This mobile application has the capability to revolutionize how we evaluate horses both before and after a race by giving veterinarians instant access to important cardiac information. In the end, we hope this technology will enable us to greatly reduce the risk of sudden cardiovascular events in racehorses.”

AliveCor manufactures a veterinary heart monitor, as well as a monitor for humans, that is compatible with most iOS and Android mobile devices. The device is attached to the back of a smartphone or mobile device and then placed against the side of the horse just behind the left elbow to obtain a single-lead electrocardiogram (ECG). The ECG is labeled with the horse’s information and saved to a database. Importantly, the ECG data can also be sent directly from the phone to a veterinary cardiologist for expert consultation.

The use of smartphone-compatible heart monitors allows veterinarians to quickly and easily monitor horses’ heart health moments before they leave their stall for the paddock and track. This new practice gives veterinarians and horsepersons never-before-available stall-side information on horse health and enables them to make timely, informed medical decisions. Dr. Palmer will compile the results of the cardiac information gleaned from these scans with the intention of publishing a scientific paper in a research journal in the next year.

Dr. Palmer, in consultation with [N. Sydney Moise, DVM, MS, Chief of Cardiology at Cornell University](#), and [Romain Pariaut, Associate Professor of Cardiology](#), is establishing an experimental protocol with this technology to detect cardiac arrhythmias in Thoroughbred racehorses. If a pathologic heart condition is identified during the exam, the horse will be

scratched from the race and put on the veterinarian's list until such time as the condition has been corrected and the horse is certified by a veterinary cardiologist to be fit for racing.

The program was launched as per a finding made by [the New York Equine Safety Review Board's \(ESRB\) investigation of an elevated number of horse fatalities – including several cardiac-related deaths – at Saratoga Race Course in 2014](#). The ESRB found factors that relate to sudden cardiac deaths in young human athletes can also apply to racehorses. While exercise is generally considered to be protective of heart disease, in some cases trained and fit athletes die suddenly during competition. A number of conditions have been associated with sudden death in human athletes, including coronary artery disease, congenital abnormalities of the coronary arteries, disease of the heart muscle, and ill-defined electrical conduction disturbances that cause fatal arrhythmias.

For more information on the veterinary use of the AliveCor Mobile ECG please visit [www.alivecorvet.com](http://www.alivecorvet.com).

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