



10-1-2003

A Day in the Life of a Field Service Team

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Bellwether

NO. 58 • FALL 2003

THE NEWSMAGAZINE OF THE UNIVERSITY OF PENNSYLVANIA SCHOOL OF VETERINARY MEDICINE

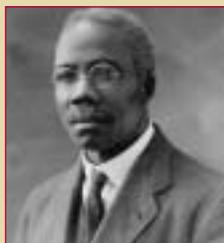


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A Day in the Life of a Field Service Team

by Susan I. Finkelstein

The William B. Boucher Field Service team at the School's New Bolton Center in Kennett Square, Pa. provides routine and emergency health care for local dairy and equine clients. The group's equine specialists offer routine preventive health care, reproductive services, evaluation and treatment of lameness, and state-of-the-art on-farm diagnostic services to approximately 5,600 horses annually. The Field Service dairy specialists provide routine on-farm health care and production medicine programs in nutrition, records evaluation, reproduction, milk quality, preventive herd health, and biosecurity on 20 dairy farms.

On a typical late-summer day, we rode along with equine specialist Dr. Alec Jorgensen on his rounds, from 8:30 a.m. to 5:30 p.m. The following article portrays an actual day in the life of a Field Service team comprised of a veterinarian and a fourth-year vet student.

The only signs that much of Chester County had been under several feet of water yesterday are the occasional standing puddles and the clumps of drying hay still twisted around the tops of fence posts, where the now-receded floodwaters had swept them. As much as eight inches of rain fell, more than 100,000 people lost power, hundreds of residents were evacuated, and most of the area became a virtual island, cut off from the rest of the world by impassable, submerged roadways.

Today, though, a bright morning sky shows no evidence of the recent deluge. Outside the William B. Boucher Field Service building at New Bolton Center, trucks of hay are being unloaded, horses are carefully led from trailers, and students, carrying steaming thermoses of coffee, are gathering to wait for their instruc-



Dr. Alec Jorgensen and Aarthi Subram, V'04.

tors and their next full day of Field Service.

Throughout their fourth year, Penn veterinary students can take rotations in New Bolton Center's Field Service practice, which includes providing emergency and routine medical care to dairy cattle, some beef cattle, horses, and the occasional alpaca or small ruminant. Students travel to owners' farms with veterinarians in specially equipped trucks (of which New Bolton has six) and acquire skills in reproduction, surgery, and medicine. It is recommended that students try to ride with all the clinicians at least once during their two-week rotation, but they have many opportunities to concentrate on either equine or dairy. Field Service and faculty in the Center for Animal Health and Productivity offer an eight-week intensive dairy-production medicine course for students desiring advanced skills in dairy production and consultation services. During this rotation, students evaluate records and farm-management practices on dairy herds routinely serviced by the Field Service staff. In all, more than 19,000 patient visits are made annually through the Boucher Field Service.

On this particular mid-September morning, at 9 o'clock sharp, Dr. Alec Jorgensen and Aarthi Subram, V'04, an equine major, climb into the converted white pickup truck clearly marked "University of Pennsylvania School of Veterinary Medicine" on either side, and set out for today's five cases. Dr. Jorgensen estimates that he travels an average of about 100 miles per day—and drove as many as 500 miles on one particular weekend. The visits generally are within a 40-minute drive from New Bolton Center.

A private farm in Cochranville, Pa. is the first stop. "Cookie," a 12-year-old Appaloosa, likely has contracted West Nile virus (WNV). He has been exhibiting symptoms typical of the disease: stumbling and incoordination, weakness of limbs, muscle twitching, fever. The mosquito-borne virus causes polioencephalomyelitis, or inflammation of the brain and spinal cord, ultimately interfering with central nervous system functioning and leading to severe clinical disease, or, in approximately 35 percent of cases, death of the horse. Because there is no cure for WNV, treatment consists of supportive care. Dr. Jorgensen has been administering a combination of anti-inflammatory drugs (one, the equine equivalent of ibuprofen) to Cookie—and the results are encouraging.



Photography by Addison Geary/addisongeary.com

A soundness test.

Aarthi first walks and trots the horse, then leads him in zig-zags, a more complicated maneuver to help the doctor determine whether the neurologic symptoms have abated. The Appaloosa appears to have improved, but the team will continue to monitor his progress. Cookie may have a long road ahead of him: recovery time for WNV-infected horses can be as long as six months to a year.

According to the USDA's Animal and Plant Health Inspection Services, during the first nine months of 2003, 98 equine cases of WNV were reported in Pennsylvania, 89 in New Jersey, 45 in Maryland, and 6 in Delaware. "Unfortunately, West Nile virus is a significant portion of my caseload at present," Jorgensen explains. "Hopefully we are getting through the worst now with the weather getting cooler—the sooner the first frost comes, the better. We've had to push the vaccine strongly this year; many of our horses are vaccinated now." In February 2003, the WNV vaccine manufactured by Wyeth's Fort Dodge Animal Health was granted a full license by the USDA and approved by the FDA; several million doses of the vaccine have since been administered to horses all across the country. Although the vaccine is not 100 percent effective in preventing disease, the majority of the horses that have become ill with WNV have been unvaccinated, and administration of the vaccine has greatly reduced occurrence of the disease.

Next stop: Appleton Stables in Fair Hill, Md., an area bordered by Pennsylvania to the north and less than half a mile west of Delaware. Inside the stable, the sounds of country-western music twang from a transistor radio near one of the stalls. “Willy does better with country western music,” the stable owner explains—Willy being a horse, of course.

But it is a 15-year-old Appaloosa named “Indigo” who is the second patient of the day. Several days ago, Indigo sustained a mysterious eye wound—a severe injury that tore a flap of tissue from the front of the eyeball. Dr. Jorgensen surmises that the injury probably resulted from a flare-up of a recurrent ophthalmic condition (uveitis, or “moon-blindness”), which, coupled with fly irritation and bright sun, caused Indigo to traumatize her own eye by rubbing it against a post. “The eyelid was so swollen, so blown up, you could hardly see the eyeball,” Jorgensen recalls.

Wounds, whether self-inflicted or resulting from “horse disputes in the field,” as Dr. Jorgensen calls them, are his most common emergency cases. Oftentimes, these can be very serious. “Small wounds, caused by horses kicking other horses or horses getting caught up in a fence, can be catastrophic if they penetrate into a joint,” Jorgensen explains. Even a tiny wound that has pierced a tendon or a joint can result in permanent lameness or, ultimately, loss of the horse if the injury is not appropriately handled. (Colic and lameness, respectively, are the second and third most common equine emergencies encountered by the equine Field Service team.)

In this case, Indigo’s prognosis is very good. After closing all the stable’s doors and dimming the lights, Dr. Jorgensen and Aarthi use a small flashlight and ophthalmoscope to look into the horse’s eye, which is then stained and photographed for future comparison. A small green triangle on the surface of the eye indicates that the corneal defect has gotten smaller, and a thin layer of cell growth is already starting to fill in the abrasion. With the continued administration of eye drops, Indigo’s owner can expect her horse to make a full recovery from the injury, although a close watch will have to be kept for future uveitis flare-ups.

Back in the truck, alternately rolling past farmland and forest, Dr. Jorgensen discusses some unusual cases he has seen. He recounts stories from back in his native England: the

woman who was convinced her horse was dyslexic because it kept mixing up her signals, and his alarm when his boss informed him that the racehorse he had just anesthetized as an intern was “worth, comfortably, over a million dollars.” Aarthi talks about miniature horses, most weighing between 55 and 100 pounds, taught to assist blind people, much like Seeing Eye dogs. These Guide Horses are trained to live indoors, to ride in passenger vehicles (including taxi cabs, busses, and subway trains), to respond to voice commands, and to wear tiny sneakers so that their hooves do not slip on indoor flooring. Not only are miniature horses cheaper to keep than dogs, since their diet consists mostly of grains and grasses, but they usually live between 25 and 35 years, and



Checking the gait.

some have been known to reach 50.

Later in the afternoon, after a hasty lunch picked up at a gas station mini-mart and eaten en route, the field service team arrives at a stable in West Chester, Pa. for a pre-purchase examination of a 12-year-old blonde Quarter Horse pony aptly named “Gentlemen Prefer Blondes.” The client has the horse for a brief “trial” period, but would like the veterinarian to determine whether “Blondie” presents any risks or has any flaws before buying her—“a bit of a detective exercise,” notes Dr. Jorgensen. “This kind of visit can be the best and the worst,” he continues. “The best, because it is rewarding when a good match is found with all the client’s excitement and aspirations; the

worst, when a 12-year-old girl has her heart set on getting the horse, and you have to be the bad guy and point out problems.”

The heart and lungs are examined first for any cardiac abnormalities or murmurs, before the horse gets too excited. Next, the teeth, eyes, and skin are checked for irregularities, and the legs examined for signs of previous injury. Aside from some needed routine dental care and an old eye abnormality, so far, so good. The horse is fine when ridden around the ring and trotted by hand; however, Dr. Jorgensen notices that the front feet are a little “foresore” when turned on a hard surface. It is decided that it would be prudent to take some x-rays of the front feet.

In the stable, donning huge lead aprons, Aarthi and Dr. Jorgensen take radiographs of Blondie’s feet using a portable veterinary x-ray machine, a device that resembles an industrial-size yellow flashlight. The pictures will be developed back at New Bolton Center, at which time it will become clear whether the horse has serious underlying changes to the bones in the foot or has had previous episodes of laminitis (inflammation of the laminated tissue that attaches the hoof to the foot), which could be a serious and recurring problem. If Blondie gets a clean bill of health, she will serve as a “pleasure horse”—in other words, ridden only for leisure, not competitively—and enjoy a life of riding the trails of Chester County.

Around 5 p.m., on the way to the day’s last visit, again in West Chester, Dr. Jorgensen ponders a question regarding the extent to which horses are aware that he’s helping them. “Not at all, sadly. I think I’m just a big annoying fly to them.” Nevertheless, caring for horses, who have been part of his life since he started riding at the precocious age of 3, is tremendously rewarding.

On which educational technique he believes is more effective—fieldwork or traditional classroom learning—Dr. Jorgensen believes that, while both are required, hands-on experience is invaluable. “Once you’ve seen it, you remember it so much more clearly. When I was 15, I saw my local vet treat a cow with a uterine prolapse, and now, believe me, whenever I see one, the image of how the vet treated her all those years ago goes through my mind. It gets emblazoned so firmly in your brain that you don’t forget it.”

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Volunteers Needed to Foal Sit

New Bolton Center's Neonatal Intensive Care Unit (NICU) needs volunteers to "foal sit." The NICU operates this volunteer program from January through June, enlisting up to 100 volunteers. The foal sitters are trained to 'sit' with critically ill newborn foals to insure that the patients' tubes and catheters are not pulled out. Other duties may include assisting with a variety of diagnostic tasks, restocking medical supplies, watching high risk pregnancy mares for signs of foaling, and helping with standing and turning of the foals and other neonates. Volunteers are needed 24 hours a day, 7 days a week. The George D. Widener Hospital, the School's teaching hospital for large animals, is located at New Bolton Center, near Kennett Square, Pa.

"Last spring we treated more than 180 neonates, primarily foals, but also calves, kids, lambs, and crias, which are baby llamas or alpacas," says **Dr. Jon Palmer**, director of the Neonatal Intensive Care Unit. "Our Neonatal Intensive Care Unit specializes in treating critically ill farm animal neonates. Young animals

less than 30 days old are considered neonates." The NICU staff not only cares for neonates but also attends approximately 100 births and cares for almost 70 high-risk pregnancy cases. The busy NICU sends 84 percent of the neonates home. "Our high success rate is in large part



due to the team approach to our intensive care, and a major part of that team is focused on nursing care. The nursing effort is directed by specialized veterinary nurses who are helped by lay nursing assistants and a large group of community volunteers whom we call 'foal sitters,'" says Palmer.

Foal sitters come from all walks of life.

"Although many of our volunteers are college students thinking about becoming veterinarians, or local horse owners wanting to lend us a hand, we also have RNs looking for a different experience, accountants wanting to spend some time with animals, high school students (16 years or older) fulfilling community service assignments, employees from local businesses that encourage community outreach, and even an occasional senior citizen," explains Patti Gillen, volunteer coordinator. "You don't need horse experience or a medical background. The most important qualifications are compassion and responsibility. This opportunity to 'sit' with these little patients is very gratifying and worthwhile when you see your foals progress from lying in a coma to running and bucking at the side of their dam as they play outside for the first time." The NICU staff is currently organizing the Foal Sitting program for this spring. For information about joining the Foal Sitting team, contact the Foal Sitter Hotline at New Bolton Center at 610-925-6445 or email <foalsitters@vet.upenn.edu>.

Field Service

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Perhaps a part of the job as enjoyable for Dr. Jorgensen as treating horses is interacting with the School's widely diverse clientele; horse ownership sometimes is their only common characteristic. Over the course of any given day, the Field Service team encounters a true cross-section of society, and today was no exception. From professional stable owners managing other people's horses, to people keeping a little pony for their children to care for, to affluent pleasure-horse owners—all had animals that needed expert veterinary care, and all turned to Penn's Field Service.

Back at the New Bolton campus, the other Field Service trucks gradually roll in, and students and doctors from separate teams reconvene in the parking lot to discuss their day. Feelings of accomplishment and camaraderie are apparent amongst the group, and several students linger as the others head to their cars or their dorm rooms. Tomorrow there will be other cases to treat, and other opportunities to learn—for both veterinarians and students alike.

New Horses for the Carriage Program

The School received a very generous donation of five nationally registered horses to its Carriage Program from Ms. Gloria Austin of Weirsdale, Fla. Ms. Austin is renowned among coaching and carriage driving enthusiasts for her high-profile participation in the sport of pleasure driving, as well as for her remarkable collection of antique coaches and carriages housed at the Austin Carriage Museum in Weirsdale.

Ms. Austin's decision to help the Carriage Program at New Bolton Center grew out of Penn's historical connection to Mr. Fairman Rogers, a nineteenth-century Penn graduate and trustee, who was directly involved in the decision to establish Penn's Veterinary School in 1884. Fairman Rogers wrote the classic reference and historical work, *The Manual of Coaching*. His rare book collection on the

horse and equitation is housed in Penn's Van Pelt Library.

Penn's Carriage Program is an important outreach, education, and development tool that has helped raise significant funds for New Bolton Center. Because of the loss of its team of donated Morgan horses through illness earlier this year, the program was at risk. Generous friends of the School loaned a pair of Hackney-Clydesdales to New Bolton Center to ensure that the School could participate in several important benefit events during the summer.

Ms. Austin's gift of her highly trained Kladruby grays and National Show Pintos ensures that the School, by virtue of this special program, can continue to demonstrate to a wide variety of local and regional constituents how important and value veterinary medicine can be.