



COMPASSIONATE

CARE

In Hagyard's neonatal unit, veterinarians and technicians work round the clock to save newborn foals

By Glenye Cain Oakford / Photos by Anne M. Eberhardt



The gray filly's birth could not have gone much worse. She arrived two weeks early after the placenta separated from her dam's uterus. She entered the world with a case of fetal diarrhea. And when she emerged at 3:30 a.m. on April 8, 2010, she wasn't breathing. Dr. Stuart Brown, who bred the filly with his wife, Christine, performed CPR on the still, small form and managed to resuscitate her.

And then, the Browns did what many other Kentucky breeders do every foaling season when faced with such a crisis: They rushed their foal directly to Hagyard Equine Medical Institute's Neonatal Intensive Care Unit.

The filly had a challenging prognosis, and only because such a facility was available did she have any chance of surviving, as Brown knew better than most: He also is an equine reproductive veterinarian at Hagyard and is the hospital's director of external relationships. Named Patinka, the Browns' filly slipped into a coma not long after arriving at Hagyard. She woke up three days later. Under the watchful eye of Dr. Kim Sprayberry — a board-certified internist and critical-care specialist — and her dedicated staff, Patinka began a road to recovery that involved learning to stand, nurse, and be a normal foal.

"Patinka was truly one of those foals who never should have survived," Brown recalled. "What's so great about this area is that we have almost immediate intervention available to us. Our veterinarians are networked so well across our practice; the care is comprehensive; and there's little time wasted. We have people within minutes of most of the foaling farms, so we're able to be horse-side, support the patient, and get them to a facility like this for intensive care."

Hagyard's neonatal intensive care unit — known as NICU — cared for 248 foals in 2014. That's a small fraction of Kentucky's 11,000-foal crop for the year, but each foal also repre-

Hagyard's neonatal unit allows sick foals to stay with their mothers whenever possible.

sented a significant investment by its owner, whether in money paid for a stud fee or in love for a companion animal. For foals, Hagyard's NICU on Iron Works Pike in Lexington often makes the difference between death or disability and a healthy, athletic life, and it does this through a combination of state-of-the-art veterinary technology and good hands-on care.

"I like to say the facility is built on the Mayo Clinic model," Brown said of the Hagyard clinic. "Our service is multi-dimensional, so we're able to customize the care and treatment, depending on what the presentation of the patient is."

Hagyard has been providing veterinary care in the Bluegrass since 1876, and its promotion of equine health, research, and good management practices has helped the Kentucky horse business become the commonwealth's signature industry. The NICU is just one example of Hagyard's tradition of innovation and its close involvement with the horse community that surrounds it.

"Hagyard has always had an extremely collaborative culture that goes back to its inception," Brown said. "Hagyard has always been woven into the equine community here. It's been a gathering place for the intersection of new ideas and concepts that have advanced equine veterinary medicine here in Central Kentucky and also around the world."

At the NICU, those practices help save and improve the lives of the youngest Thoroughbreds with a high level of success: More than 85 percent of the NICU's patients will recover and return home, says Dr. Nathan Slovis, director of Hagyard's McGee Medicine Center. "They leave and have a good prognosis," he said.

Technician coordinator Lynne Hewlett, the 17-year Hagyard veteran who oversees the NICU patients' daily care, receives pre-



Hagyard's Dr. Stuart Brown, also a breeder, knows the NICU's benefits first-hand.

mature foals, foals that were deprived of oxygen during birth, foals with angular limb deformities that require splints or casts, and

foals with infections. "We see ruptured bladders; we had a foal earlier this week who needed to be on a ventilator," she said. "We do pretty much everything in our neonatal ICU that they do in a children's hospital."

"We're blessed to have some of the world's best clients who give us the opportunity to stretch our knowledge of veterinary medicine and our treatments," said Slovis. "When we treat a foal, we can learn from that, and we can save other animals down the line."

Sometimes, Slovis adds, data and knowledge about drugs in the equine veterinary field also can give back to the human medical field. "Sometimes a human researcher can take that data and say, 'It seems to be safe in a mammal; let's investigate this

further for human use,'" he said. "It's a way horses can give back to human medicine."

Going the extra step

Hagyard's 13-stall NICU feels surprisingly like a human hospital in many respects: the clean, brightly lighted building, the whiff of disinfectant, the rolling carts of medical equipment, and the busy, highly organized staff quietly working with patients. But the equine facility is specifically for foals ages two weeks or younger and is designed to accommodate both foals and their dams, with wide aisles and spacious stalls that are bedded deeply with golden straw and lined with thick blue bumper pads that prevent wobbly or recumbent foals from banging



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against the stalls' cinder block walls.

The NICU is, in fact, a working barn that resembles ones you'd see at any of the Thoroughbred farms surrounding Hagyard. Lead shanks and an empty feed tub hang on each of the metal-grate stall doors, along with a bag full of the brushes grooms use to keep horses' coats clean — a reminder that these patients are also horses that need their regular care.

But there are many signs of the NICU's true function. Visitors and staff alike must slide on ankle-high rubber boots and then step into a tub of liquid disinfectant (foot-bath mixtures throughout the facility are "virucidal, fungicidal, bactericidal," said Brown) before entering the unit, and there are additional rectangular foot dips outside each stall — the most visible part of the comprehensive bio-security protocols Slovis has implemented at Hagyard.

"One of the things that's unique about our hospital is that, in this age of bio-security, we have the segmentation of populations of horses, which is probably very much more protective," Brown said. "We have surgery cases that stay in surgery facilities; we have internal medicine cases that stay in internal medicine facilities; we have infectious disease cases that stay quarantined in separate facilities. We implement an extreme bio-security program that protects patients



"They leave and have a good prognosis," Dr. Nathan Slovis, left, said of most NICU patients.

while they're in the hospital."

Foals here frequently benefit from procedures, equipment, and technology familiar to human medicine: ultrasound machines, defibrillators, ventilators, a hyperbaric chamber — all of these technologies and more are available for foals and their dams. And keeping mare and foal together whenever possible is one of the hallmarks of Hagyard's neonatal facility, Brown said.

"We know how intimate that relationship is for the normal development of foals in the wild but also in our domesticated horses," Brown explained. "In some of these very intensive cases, sometimes it's counterproductive for them to stay together. Sometimes there are challenges that make

it difficult to do the best thing for the pair if they stay together. We're very fortunate in this area to get to work with such great nurse-mare providers. They help us foster foals with wonderful mothers that take on these orphans and raise them as their own. These nurse mares provide them with the same social care and interaction that we know are very helpful in terms of these foals reaching the potential of full development as racing athletes."

Most of the foals in the unit are Thoroughbreds, and the unit's biggest rush occurs between March and May, around the peak of foaling season at Kentucky's commercial Thoroughbred farms, which breed and sell racing prospects. But the unit's services are open to all breeds and types of horses. A stay in the NICU can range into the thousands of dollars, but the treatment options — and the dedicated observation and intensive hands-on care foals receive from the unit's veterinary technicians and nursing staff — are often impossible to duplicate at a farm, where high-level bio-security is hard to maintain and workers must divide their time among more horses.

Bringing their A game

One blustery March morning, technician coordinator Hewlett detailed one case that illustrated the level of technology and nursing care that go into these foals' treatment. A large chestnut filly was delivered by Caesarean section before her dam died, and, concerned that she might not have received enough oxygen to her brain, vets placed the filly on oxygen via intranasal tube.

"You also have to be worried about pneumonia, with the amount of fluid in the lungs, because they're not being born the natural way," Hewlett said. "We were feeding her through a stomach tube the first day, but today she's doing really well. She's bright, and she has a great suckle reflex, so we've started feeding her from a pan. It's fun to see



"We do pretty much everything they do in a children's hospital," said tech coordinator Lynne Hewlett.



them have the nasogastric tube taken out and see them realize they need to drink from something."

The next step, Hewlett said, is to introduce the filly to her substitute dam, a local nurse mare. "She's never seen another mare, so she'll figure out now that the nurses here are not her real mother," Hewlett said. "She got a little bit attached to some of the girls here. That can happen because that's all some of these foals have seen."

Hewlett manages about 30 veterinary technicians and assistant

technicians in the McGee Medicine Center, the department that includes the NICU. The work is physical and intense, and good time-management skills are a must, says Hewlett.

"Because you are on the clock," she explained. "Every patient has a chart, and it's hour by hour. I probably look at my watch several hundred times a day because you have to be on time with your treatments."

Work in the NICU is highly demanding. During Thoroughbred foaling season at least two veterinarians are at the unit at all times, and primary-care vets in the NICU must all be board-certified, which requires additional training after vet school. Technicians, too, undergo rigorous training at Hagyard.

"The foals are so fragile that they can change the clinical picture within hours or minutes," Slovis said. "It really challenges the veterinarians to be on their A game. There's no such thing as a B game or a junior varsity league. If you and your technicians don't bring your A game, you will not catch subtle signs that your pa-



The NICU's "Mayo Clinic model" combines advanced medical technology and dedicated nursing care.

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tient isn't doing well, and that's so important.

"It's an adrenaline rush as soon as you get in the door until you leave."

The ratio of technicians to patients generally is one to three, giving staff the ability to focus closely on their charges and perform their job well. That's rewarding, both for patients and their caretakers, who do have soft spots for the foals. A strict client confidentiality code prevents Hewlett



More than 85 percent of the NICU patients will recover and go home.

from naming specific horses, but, yes, she's had favorites.

"I've seen lots of really famous horses, and I've had some favorites that weren't famous to anyone but me," she said. "Their personalities are wonderful, and I love the way they'll interact with you. Every horse that comes in here does have an individual personality, and it takes you a couple of days to figure them out, how to move around them, and how to read them, because you have to be able to read your patient."

That's exactly the kind of attention that makes the NICU so successful, Brown and Slovis say.

"The value of the technicians to treatments and supportive care of the foals cannot be overstated," Brown said. "The facility would be nothing if it were not for the dedication of the wonderful nurses and technicians that attend to those babies."

Are all the care and expense worth it? Ask a horse owner like Brown. The Browns' filly Patinka, rushed to the hospital back in 2010, was a Haggard success story. After her perilous start in life, she matured into a 16.3-hand, 1,100-pound racehorse and made it to the winner's circle in 2013.

"We invest in cutting-edge technology so we can apply the latest principals and concepts for the benefit of our patients because of the intense investment in these horses here," Brown said. "These horses are valuable, and not only in terms of the monetary value in stud fees or the potential commercial value of the horse, but there's also the value of their genetics. Many times these horses are a long-term investment. For example, with a well-bred filly, you're also thinking about the future progeny she may produce. Or a colt may be a full brother to an exceptional stallion or racehorse that also justifies that level of investment. And there's also a value we place upon our horses that's beyond the economics. Our horses mean so much to many of us."

"All of this is obviously expensive and takes a lot of effort," Brown added. "But our belief is that the patients we care for are worth this level of effort. We intend to send them home healthy again. That's our expectation, and we're not willing to cut any corners. That's not negotiable." **KM**



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