



FEATURES

SUFFERING IN SILENCE

Caring for research animals can take a severe mental toll.

Is anyone listening? *By David Grimm*

Conner Sessions's decision to combine his love of science and animals nearly destroyed him. Growing up in rural Washington state, he spent his early life surrounded by cows, horses, cats, and dogs. He cared about all of them and considered a career in veterinary medicine. But after graduating with a bachelor's degree in biochemistry from the University of Washington (UW), Seattle, in 2016, he saw a job ad that changed his mind.

The school needed an animal technician, someone to clean and feed mice, pigs,

dogs, and other creatures used in biomedical research. "I wanted to get involved with science, and working with animals was a big plus," Sessions says. He took the job, spending his shifts feeding and playing with dogs and livestock at the university, an echo of his youth. The sheep would head-butt him for snacks.

Sessions grew especially attached to the dogs, which was tough: Some were bred for two different forms of muscular dystrophy, one 100% fatal. He raised the puppies from birth, sometimes tube feeding those that had trouble nursing. "I trained one litter to line up in their kennel for treats,"

he says. Then he would walk in one morning and find some of them dead in their enclosures—victims of their disease.

Over the next few years, Sessions came to expect this. But it never got easier. Every time he entered the underground facility where the animals were kept, he panicked, fearful of what he might find. He became anxious and depressed, and began obsessively checking on the dogs throughout the day, a feeling that followed him home. "I'd be doing the dishes at 8 at night and wondering, 'Should I go back and check if my animals are OK?'" He hesitated to go on vacation or even take weekends off, worried



tion also strikes a shocking number of lab animal workers, a community of tens of thousands worldwide that includes everyone from cage cleaners to veterinarians who oversee entire animal facilities.

Besides the symptoms Sessions experienced, those who handle lab animals may face insomnia, chronic physical ailments, zombie-like lack of empathy, and, in extreme cases, severe depression, substance abuse, and thoughts of suicide. As many as nine in 10 people in the profession will suffer from compassion fatigue at some point during their careers, according to recent research, more than twice the rate of those who work in hospital intensive care units. It's one of the leading reasons animal care workers quit.

Yet few in the animal research community want to talk about the problem—and few want to listen.

Everyone *Science* spoke to for this story who works with lab animals stressed that they are critical for biomedical research. These caregivers also feel deeply bonded to these creatures, from rodents to rabbits to monkeys. This dichotomy puts them in a difficult position: Unlike doctors or pet vets, those in the lab animal community aren't just surrounded by pain and death—they're often the ones causing it. Experimental drugs can sicken animals, implanted devices may cause discomfort, and

ethanasia typically comes long before an animal would die of natural causes.

"It's one of the only caring professions where you have to harm the beings you're caring for," says Megan LaFollette, program director at the North American 3Rs Collaborative, which focuses on improving the lives—and reducing the numbers—of research animals.

That's made those in this field loath to reach out for help. At best, friends and family don't understand what they do, or why. At worst, animal rights groups vilify them as torturers and murderers. Institutions are squeamish about discussing or addressing compassion fatigue, for fear of attracting negative attention to their animal research programs, often hidden from public view in university basements or windowless facilities. So those who tend to lab animals have largely suffered in silence: Compassion fatigue is an invisible population's invisible disease.

Some at UW are trying to change this. A small group of volunteers has created a compassion fatigue outreach program at the school—the first and largest of its

kind—gathering data from those affected, trying new approaches to combat the problem, and hoping to spread the word. "It's time we started taking care of each other better," says J. Preston Van Hooser, the program's founder and co-chair. "We want people to know they're not alone."

Yet it's uncertain whether similar programs will gain steam elsewhere. It's also unclear whether their approaches will help. Many of the strategies that benefit others who suffer compassion fatigue may not work for the lab animal community—a profession ripe with unique triggers and challenges. Someone has to do something, however, Van Hooser says. "If we don't try, we won't survive."

VAN HOOSER KNOWS compassion fatigue all too well. A year after receiving his bachelor's in zoology in 1991, he began to work as a research scientist at UW, helping study a rare disorder called Leber congenital amaurosis, which can blind or severely restrict vision at birth. The work required him to euthanize massive numbers of mice—more than 13,000 a year—so the lab could study their eyes. Sometimes he had to kill dozens a day, using an approved procedure known as cervical dislocation that essentially involved breaking their necks.

"I became extremely overcome with emotions I didn't know I had. I had no idea what I was dealing with."

J. Preston Van Hooser,
University of Washington, Seattle

The work eventually helped the team restore sight in an animal model of the disease, but it took a toll on Van Hooser. He couldn't shake feelings of guilt, sadness, and regret. "I became extremely overcome with emotions I didn't know I had," he says. "I had no idea what I was dealing with."

So when an opportunity came up to take a more bureaucratic job, Van Hooser jumped. In 2002, he began to inspect experimental protocols and grants as a review scientist and compliance manager in the university's Office of Animal Welfare, a position he still holds today.

Van Hooser's compassion fatigue didn't go away, however. In some ways, it got worse. He was approving hundreds of sometimes highly invasive experiments—and not just on rodents, but on cats, dogs, and monkeys. Some protocols—such as one where two mice were sewn together to share a circulatory system—were emotionally difficult for him to review. Other times, experiments were conducted improperly, and animal lives were wasted. "I thought I was escaping," he says. "But I couldn't escape."

one of the dogs would die or be euthanized while he was away. "I wanted to be there for them," he says. "It's almost like they become your pets."

As time went on, Sessions's depression and anxiety got worse. He also began to struggle with a heavy hopelessness and guilt. Yet he didn't feel like he could talk to anyone about it. He worried his supervisors would think he was unfit for his job. Friends, swayed by animal rights campaigns, would say, "I can't believe you do this—you must really hate animals." Even his therapist was of little help. "She was like, 'Why don't you just change jobs?'"

Instead, Sessions found himself sneaking into the employee locker room and crying. He didn't know it at the time, but he was suffering from an affliction haunting many colleagues: compassion fatigue.

HEALTH CARE WORKERS and pet veterinarians are no strangers to compassion fatigue. Being surrounded by suffering and dying patients can extract a profound mental, emotional, and physical toll—a sort of traumatic stress by proxy. But the condi-

Like Sessions, Van Hooser had grown up around farm animals and considered himself an animal lover. And like Sessions, that became his Achilles' heel. "We don't get compassion fatigue because we're weak," Van Hooser says. "We get it because we care deeply."

Catherine Schuppli is all too familiar with the dilemma. A veterinarian who oversees two rodent facilities at the University of British Columbia, Vancouver, she seeks to foster empathy in the workers she trains so they provide better—and more compassionate—animal care. She shows her trainees videos of rats navigating obstacle courses, hoisting tiny buckets on a string, and even playing fetch with miniature balls. "The staff comes to realize how smart and cute they are," Schuppli says.

But on other days, Schuppli trains people how to decapitate the rats. Using what is effectively a tiny guillotine—a common form of euthanasia when gas or drugs could compromise an autopsy—she sometimes performs several of the procedures per day. The work has made her angry, depressed, and drained of energy—all of which she's tried to suppress. While training others how to turn their emotions on, she's found herself shutting her own off.

STORIES LIKE THIS concerned Sally Thompson-Iritani, the assistant vice provost responsible for UW's animal care program. "We want good, caring people to stay in the profession," she says. "We don't want them to become robots." So she began hatching a plan to change things.

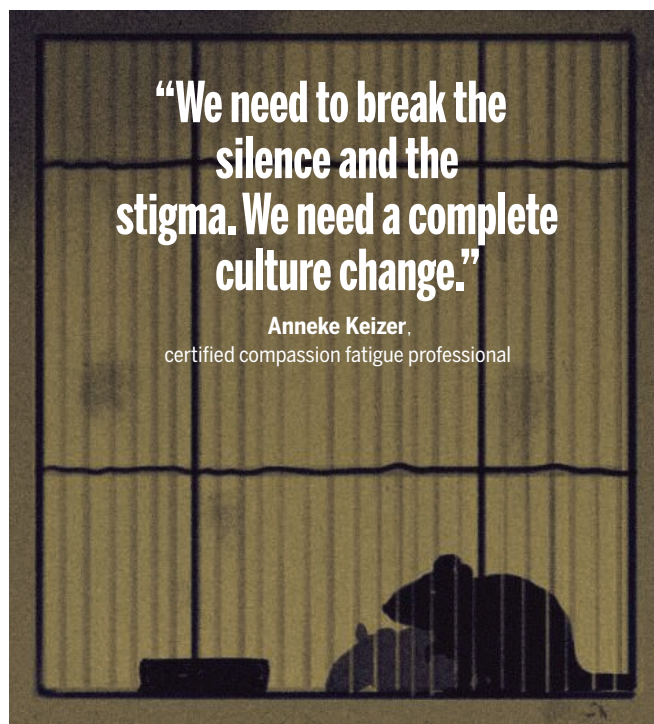
In 2016, hoping to get more people talking about compassion fatigue, Thompson-Iritani reached out to someone who was no stranger to its impact: Anneke Keizer. Keizer had spent decades in academic and industry labs, ultimately managing animal facilities. In her early years, she was involved with toxicology studies in various animals, helping assess lethal doses. The work gave her nightmares: She dreamed about the animals hunting her down. She also struggled to find support. "I told myself when I retired, 'I'm going to dedicate my life to helping people deal with these feelings,'" she says.

And she did. In 2010, Keizer began to give talks about compassion fatigue in the lab animal community wherever she could, becoming one of the first people to speak openly about the subject. When Thompson-

Iritani asked whether she would present at a large conference for lab animal professionals in Washington state, Keizer was eager to continue to spread the word.

Keizer spoke of her own experiences with compassion fatigue. "Nobody told me about these emotions," she told the audience. She urged the community to open up about the issue, and she had a special message for managers: "Never underestimate the feelings of your people."

When Thompson-Iritani returned to UW, she gathered the leaders in her department and asked whether any of them wanted to start a compassion fatigue program. "No one raised their hand," Van Hooser said. "So I did."



Van Hooser had no idea what he was doing. So he brought in Keizer. She spent a week at the school that summer, surveying its enormous lab animal program—one of the largest in the country with more than 200,000 animals at both the university and its national primate center—and interviewing more than 150 animal care staff. The effort, the first compassion fatigue needs assessment conducted by any institution, revealed a dramatic statistic: More than 95% of those interviewed had suffered, or were suffering, from compassion fatigue. "Oh my God," Van Hooser recalls thinking. "This is a much bigger problem than we thought it was."

One of the biggest triggers employees cited was a lack of "endpoint notification"—a heads up when an animal they were looking after was about to be euthanized. "There would be

cases where someone had been caring for a monkey for 7 years," Van Hooser says. "They had named it. Then they'd go away on vacation and come back, and it would be gone. They didn't have the chance to say goodbye."

A handful of studies conducted since the UW survey, some national in scope, have come to similar conclusions. Compassion fatigue affects up to 86% of lab animal workers at some point during their careers, according to one North American report. (In comparison, surveys suggest somewhere between 7% and 40% of workers in human intensive care and 41% of pet vet technicians have experienced compassion fatigue.) The gender and age of the employee doesn't seem to matter, and caring for mice can take as big a toll as handling primates.

Euthanasia is a major trigger, as is a lack of social support. That may be why nearly half of workers reported new or worse symptoms during the pandemic, as euthanasia rates skyrocketed at institutions that no longer had the staff to care for their animals, and as an already isolated population became even more isolated.

All of these data come from North America, but Keizer—now a certified compassion fatigue professional who has conducted needs assessments at dozens of facilities in the United States and Europe—says the numbers are similar everywhere she goes.

What meager mental health resources institutions provide—catch-alls such as yoga and meditation—also don't seem to help, the research shows. So Van Hooser sought a different approach.

IN LATE 2016, Van Hooser formed a committee of animal caregivers, researchers, vets, and administrators, and launched a program called Dare 2 Care. One of its first initiatives, a website, acknowledged the seriousness of compassion fatigue and provided resources for people to recognize signs and symptoms. Dare 2 Care also set up a "crisis" phone line and email for those who are struggling, manned by Van Hooser, Thompson-Iritani, and other volunteers with compassion fatigue experience.

To tackle the lack of endpoint notification, the program has begun to place heart-shaped stickers or notes on the enclosures of animals slated to be euthanized. "We will miss and remember them all," one reads. It has also installed 20 wooden boxes across various lab animal facilities,

where employees can drop remembrance notes or poems as a way to cope with their grief and honor the lives of the creatures they work with. “Some draw pictures of the animals,” Van Hooser says. The goal is to boost compassion satisfaction, the pleasure that comes from caring for others, and the yin to compassion fatigue’s yang.

When animal care staff are trained, they now also learn about compassion fatigue. And questions related to the condition have been added to their regular health assessments.

But one of Van Hooser’s biggest pushes is to make the university’s invisible population feel seen. He encourages scientists to name animal workers in meeting posters and publications. He also invites researchers to visit animal facilities (their labs are often in a different part of campus) to explain the importance of their science. “They make it all seem less arbitrary,” says Sessions, whose work with the muscular dystrophy dogs often left him more upset than enlightened. “Now, I understand why everything that happened needed to happen. It makes us feel appreciated, like unsung heroes.”

SINCE DARE 2 CARE launched, a few other institutions have followed suit. In 2017, the Texas Biomedical Research Institute started a compassion fatigue program, which hosts educational workshops and regular animal remembrance events, the largest of which involved the entire campus and included tables and poster boards where staff could place pictures of the animals they worked with surrounded by flowers and notes. The University of Michigan began a similar program the following year, with talks on self-care strategies and “lunch & learns” that educate animal care staff on the science behind the work they do. LaFollette’s North American 3Rs Collaborative, meanwhile, has created a compassion fatigue initiative for the entire lab animal community, offering webinars and helping institutions set up their own programs.

Yet many universities remain leery of joining them, because such initiatives inevitably draw attention to their animal research. They may even resist conducting a needs assessment like the one that launched Dare 2 Care,

Dare 2 Care puts heart-shaped stickers noting planned euthanasia dates on cages, so workers who care for the animals are not blindsided—a major trigger for compassion fatigue.



Dare 2 Care places boxes around animal facilities so workers can share their feelings and remembrances about the creatures they look after.

according to Patricia Turner, corporate vice president of global animal welfare at Charles River Laboratories, a leading lab animal supplier and pharmaceutical company. “No one wants to author a study saying, ‘This is how bad things were before we started our program,’” says Turner, who has published one of the few large-scale studies on compassion fatigue in the research animal field.

University funding is also a roadblock, says Andreanna Pavan Hsieh, who has researched the prevalence of compassion fatigue in the animal care program at Ohio State University, Columbus. “Lab animal facilities don’t necessarily bring in a profit, so their budgets are limited,” she says. “That can make compassion fatigue initiatives challenging.”

And so far, evidence that they actually help lab workers is scarce. Most strategies have been ported over from the human health care field, notes Caroline Warren, a postdoc at the University of Virginia’s Center for Teaching Excellence who has studied compassion fatigue in the lab animal community. “They’re full of platitudes like, ‘Take care of yourself,’” she says. “They’re not based on any real data.”

LaFollette is currently conducting a 3-year interventional study to see which approaches work—based on employee retention and job satisfaction, for example—and which don’t.

Primatologist Melanie Graham of the University of Minnesota, Twin Cities, believes *more* compassion may be the best antidote to compassion fatigue. Her lab studies obesity, diabetes,

and other diseases in monkeys, baboons, rats, mice, and pigs. She encourages her staff to name the animals, say good morning to them, and hang out with them after experimental procedures, giving them treats and grooming them. “I want everyone who interacts with my animals to have real relationships with them,” she says.

Schuppli, who recently began to work with her university to provide more compassion fatigue resources, agrees. When nothing else alleviates her symptoms, she doubles down on her empathy for the rats under her care, making sure their cages have hammocks and places to dig, giving them access to playpens, and spoiling them with Cheerios and other treats. “I think increasing welfare is key,” she says. “When I feel drained, it fills my emotional bucket back up.”

WHEN KEIZER gives talks these days, she brings along a stuffed toy rat she’s named Larry. He’s a reminder of all the animals she’s worked with throughout her career—and of the fact that compassion fatigue never fully goes away. “It’s always there,” she says. “Like a drawer in your soul.”

Ultimately, Keizer says, the true key to combating compassion fatigue is to stop hiding it. “We need to break the silence and the stigma,” she says. “We need a complete culture change.”

Thompson-Iritani feels that’s starting to happen. Data she’s been collecting show there have been dozens of presentations and posters about compassion fatigue at recent lab animal conferences, compared with almost none a decade ago. A workshop held by the U.S. National Academies of Sciences, Engineering, and Medicine in 2019 also focused heavily on the topic. “It used to be hard to even get on the agenda,” she says. “Now, people are asking for it.”

Dare 2 Care is growing as well. Its website gets more than three times as many visitors as it used to, van Hooser says, about 22,000 a month from nearly 100 countries. “So many people have asked me for help getting their own program set up.”

Sessions is now a research scientist at UW. He’s graduated from cleaning cages to helping scientists study prostate and bladder cancer in mice. He still struggles with compassion fatigue, but not as much as he used to. And he’s more comfortable talking about it with friends, family, and colleagues. “I know I will have support if I speak my mind.”

Programs like Dare 2 Care are helping him and others feel seen for the first time, Sessions says. “It brings us into the light instead of hiding us in the basement. We’re no longer in the shadows.” ■

