dvm360 Find it all here.™

December 2017 | Volume 48 | Number 12 | dvm360.com

Toolkit: GI wellness

Take charge to manage the gastrointestinal problems your patients may have.

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Michael Dicks to retire from AVMA

Director of association's first Veterinary Economics Division will step down after annual convention in July.

By Kristi Reimer Fender, News Channel Director

In an announcement during the AVMA's Veterinary Economic Summit Oct. 23-24, Michael Dicks, PhD, announced that he would be retiring from his role as the association's chief economist after the AVMA's annual convention in July 2018.

"Believe it or not, I'm ready to rest and relax," Dicks told summit attendees gathered for dinner in a Hilton ballroom in Chicago. "I've been working since I was 13, and I want to get up one day in my life and say, 'I don't have anything to do today.'"

Dicks joined the AVMA in 2013 as director of the association's first Veterinary Economics Division. He set about hiring a team of economists with the goal of analyzing the veterinary markets, improving the economic environment for veterinarians and improving the performance of veterinary practices. To do that he needed a crash course in the profession—and the profession came through, he says.

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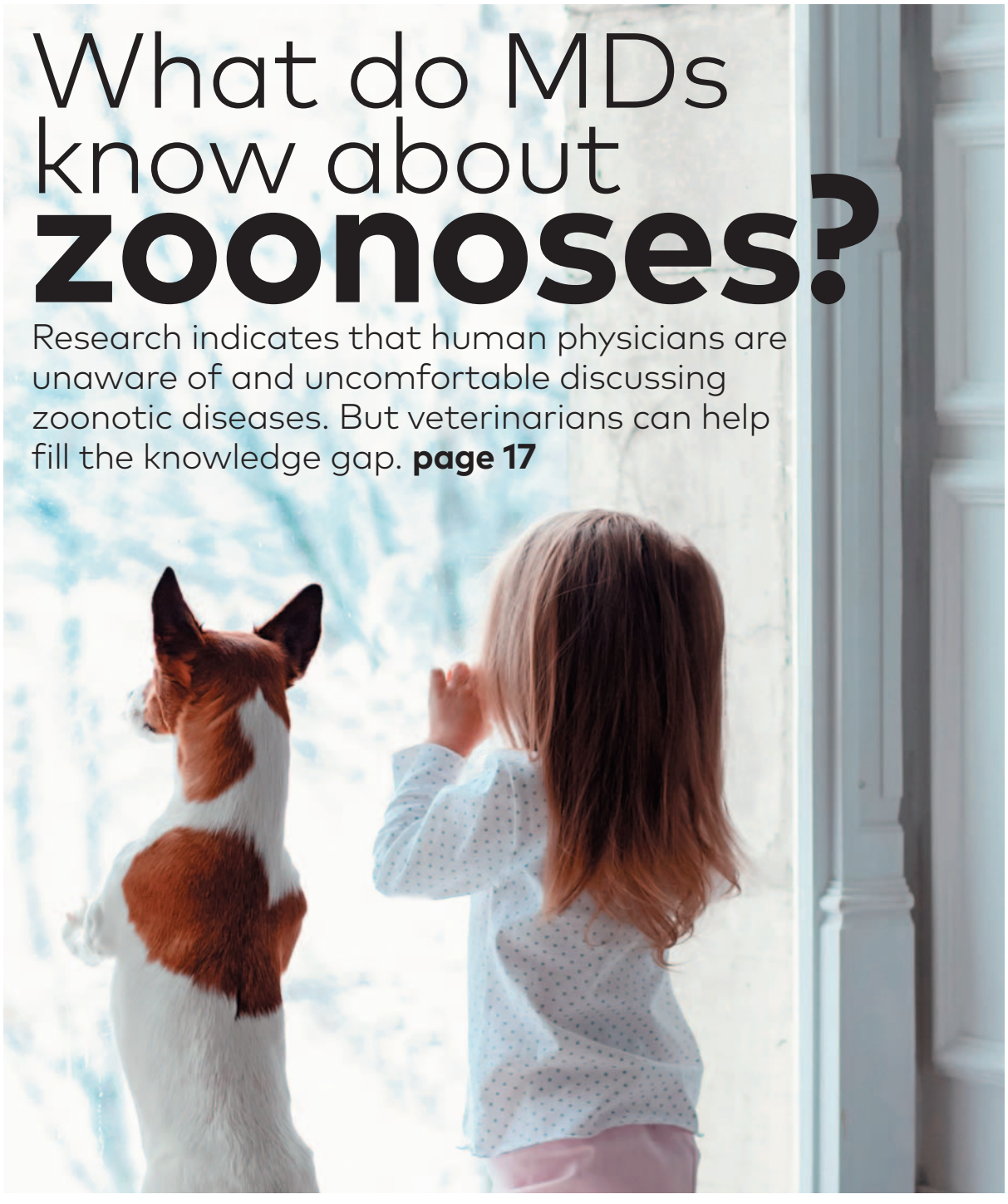
What do MDs know about zoonoses?

Research indicates that human physicians are unaware of and uncomfortable discussing zoonotic diseases. But veterinarians can help fill the knowledge gap. **page 17**



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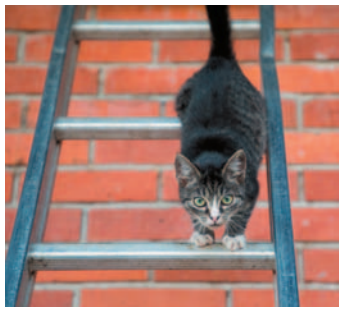

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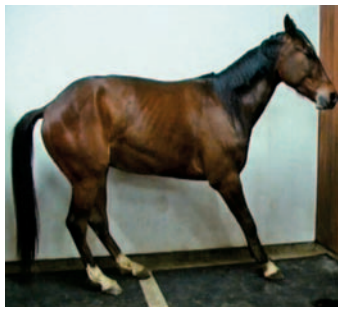

No hoof, no horse: Ending the scourge of laminitis

page 32

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Please see brief summary on page 03

[1]Data on file at Merial.

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UBM

Life, as chronicled by cash

Personal spending reveals more than the things we purchase.

My husband and I have recently started to get serious about our personal finances. While we were both fairly responsible with money before we got married (part of the attraction, frankly—yes, we were pragmatic 40-somethings), and have merged our accounts and our spending and saving patterns rather painlessly, we haven't really had a master plan. We are creating that plan now.

Part of that process, as any personal finance expert will tell you, is ruthless scrutiny of one's spending. You have to track the inflow and outflow of every dollar, and often you discover—sometimes in rather horrifying ways—that your spending does not reflect your personal priorities and values, and it is doing nothing for present-day peace of mind or future security.

That's when the fun begins: bloated budget categories for non-essentials get surgically amputated—or at least shrunk dramatically—and allocations for paying down debt and saving for retirement and other goals undergo massive augmentation. It hurts, but it "hurts good"—like sore muscles after a vigorous workout, the pain points ahead to greater health and well-being.

So in that personal context, I've been extra-interested in a new series on dvm360.com, "Personal accounts: True tales of veterinary spending," which relays every dollar spent by a veterinarian or team member over the course of a week (see page 16 for a sample, as well as **dvm360.com/personalaccounts** for the full list).

With associate veterinarians carrying staggering student debt loads, and with technicians taking home microscopic paychecks, the results are fascinating, eye-opening and sobering. The realities that we sometimes talk about in the abstract in the veterinary profession take on human form—and human pain.

These accounts also emphasize the passion that drives most veterinary professionals in their careers. Because it's certainly not the money or the ability to live a lavish lifestyle.

However we all come to financial equilibrium in life, we get there by traversing the path of daily choices. And Personal Accounts gives a glimpse into the choices your colleagues make every day.

Fetch dvm360 speakers up the ante with 'Cards Against Humanity' spinoff

fetch dvm360 CONFERENCE

The deck is stacked with these Fetch dvm360 speakers, who've worked the oh-so-scandalous card game into their sessions.

Cards Against Humanity is marketed as a 'party game for terrible people.' The prompts are innocent enough, but the answer cards often veer into the offensive and grotesque.

In the Fetch dvm360 conference session, "Veterinarians ~~Against~~ *For* Humanity: A career adventure game for (un) conventional professionals," sponsored by Banfield, Sarah Wooten, DVM, Kimberly Therrien, DVM, and Caitlin DeWilde, DVM, took a slightly different tack. The cards, now veterinary-themed, are still funny and sometimes pretty disgusting, but the idea is to become a better veterinarian and someone who feels much less terrible.

What better way to empower the crowd than give someone a card that proclaims their superpower is a wicked ability to castrate?

The session mixes interactivity and hilarity with something a little more serious. It turns out each prompt has a right answer that's less goofy. These answers address difficult issues facing veterinary professionals, focusing on six specific issues that women in the profession go through.

Is working harder making us happy? Is there a way to juggle the 5,000 tasks you have on your to-do list *and* your career? What goals do you have and how in the world can you accomplish them?

By discussing their own personal struggles and career paths, Drs. Wooten, Therrien and DeWilde deliver inspiration but also a tangible end. These successful women admit that they still struggle to let things go and still fight to get family time and work sorted out the way they want.

The doctors' take-home message? Have your tribe. Who do you have to back you up when you feel like screaming into the void?

The session ends on a note to drive you forward. Write down what you want to accomplish on your card. Date it and keep it at your desk as a reminder. This action goal leaves you with a little token of the session but also a reminder that you can fight (and maybe even laugh) your way through tough times.

Missed the session? You can still play!

This game was such a hit at Fetch dvm360 that we decided to make it a year-round possibility. Meet Vets Against Insanity: A fun, slightly scandalous take on the work and life of a veterinary professional. To get your paws on a box, visit dvm360.com/VAI.

Denver eyeing municipal declaw ban

A city panel moved the measure closer to approval in October.

Denver, Colorado, has joined the ranks of cities trying to pass bans on elective declawing. The city council advanced the proposed ban forward in October after hearing arguments from cat owners, rescue organizations and veterinary professionals who don't perform onychectomy procedures, according to the *Denver Post*.

The plan drew formal opposition from the Colorado Veterinary Medical Association (CVMA), who said it "oversimplifies complex decision-making" that veterinarians and cat owners use when deciding to perform the procedure, the *Post* reports.

If councilwoman Kendra Black's ban passes, Denver would be the first U.S. city to outlaw declaws outside of California, where eight cities have banned the procedure. Denver's proposal would provide an exemption when a declawing procedure was deemed medically necessary, and only if performed by a licensed veterinarian while the cat is under anesthesia, the *Post* says.

At the city council meeting CVMA's current and incoming presidents told the council's safety committee that they opposed declawing but didn't want local government to wade into medical decision-making. "We support the principle that complex medical decisions belong in the domain of the owner and the veterinarian," said Will French, DVM, the organization's current president, according to the *Post*.

The full council was scheduled to introduce the proposed ban Nov. 6 and could cast a final vote on Nov. 13. The procedure would still be available at suburban clinics if the ban is passed, the *Post* reports.

Petco launches in-store low-cost veterinary hospital

The company expects to open 12 additional hospitals by January 2018 in Texas, California and Colorado.

Petco has expanded its pet services to include in-store veterinary care and wellness services in addition to the onsite grooming, training and vaccination clinics it already offers, according to a company release. Its first hospital, operated by Thrive Affordable Vet Care, opened in Aldine, Texas, in early October. The company says the hospital offers $10 exams, which will make veterinary care accessible to more pet owners, and says it will specialize in thorough, routine and high-quality care.

The store in Aldine was built new and features Petco's newest store design, in addition to the space for the veterinary clinic. The company plans to open 12 additional hospitals in existing stores that will be completely remodeled, the release states. The other locations will be in Texas, California and Colorado.

"While pet health and wellness are increasingly important to pet parents, navigating veterinary services in particular can be confusing and overwhelming," says Petco CEO Brad Weston in the release. "Understanding what pets need at each stage of life; what constitutes routine care, urgent or specialty care; and when to seek veterinary expertise are common challenges pet parents face. That's why we believe it's so important for every pet parent to have a relationship with a veterinarian throughout the life of their pet."

PHOTO COURTESY OF PETCO

By expanding the company's in-store veterinary services, Petco's veterinary professionals can help pet owners manage their pets' health and wellness needs in one convenient location, Weston continues. "Our Aldine location is the first of our new in-store hospital design, and we are excited about bringing more of these locations to the Houston market in the next few months," he says.

Petco stores aim to provide a one-stop shopping experience where pet owners can purchase pet food, toys or apparel, while also addressing training needs, grooming and veterinary care, the release states. In addition to the new hospitals operated by Thrive and other independent veterinarians, Petco stores offer onsite vaccination and wellness clinics operated by Vetco and telemedicine pet health advice through PetCoach, the release notes.

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Please see brief summary on page 08

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ENT-0064

Client handout: **A preflight checklist for air travel with pets**

The holidays are coming, which means questions and concerns about traveling with pets will be coming too.

According to the U.S. Department of Transportation, around 2 million live animals travel by air every year in the United States. The vast majority of these pets arrive at their destinations and back home again safe and sound. Yet things do go wrong (26 pets died while in the care of an airline in 2016, according to the U.S. Department of Transportation's Air Travel Consumer Reports), and when they do, it tends to make the national news and cause pet owners to panic.

As to whether this worry is warranted, Jeff Werber, DVM, says probably not—at least for healthy pets. He likens the anxiety to people being more afraid of flying than of driving, even though far more people die in car crashes than plane crashes.

"According to the airlines, cargo areas carrying pets are controlled for temperature and pressure. When there is a problem, it's often related to other factors, such as stress, anxiety, breed-specific health problems and human error," says Dr. Werber.

Why travel etiquette matters

Dr. Werber is full of great stories. Here's another:

"A client of mine who took her dog in the cabin with her cheated and took the dog out of the carrier midflight to put him on her lap. She covered him with a blanket and proceeded to fall asleep. Later on, my client was elbowed awake by the passenger next to her: "Excuse me, ma'am. Your dog just pooped in the aisle."

An 'Oh no!' story with a happy ending

Dr. Werber told *dvm360* the following story to illustrate that human errors put pets in danger more often than plane errors:

"One of my good friends was moving and needed to transport his magnificent golden retriever in the cargo hold. My friend was careful to tell everybody on the airline staff that they were traveling with a dog. When he boarded the plane, he could see his dog's crate sitting on the tarmac. The airline wanted to load all of the luggage first and put the dog in last so it could be the first one out.

At least that was the plan.

All of a sudden, my friend heard the big clump! of the door closing and the pre-takeoff announcements begin. The engine started, and the plane began backing out … without the dog on board. The airline had forgotten to add the golden at the end! My friend caught it in time, but the moral of the story is that you're often dealing with human error more than plane error."

In the age of social media and online reviews, and at a time when pets are becoming more and more like family members, airlines and airports are wisely stepping up their game to be more pet-friendly, Dr. Werber says. This means that it may become increasingly common for veterinarians to step in and help clients evaluate whether traveling with pets by plane is worth the headache.

"With the availability of such amazing boarding facilities, I tell clients that they really need to evaluate if it's worth all of the trouble and the angst—for the pets and themselves—to take a pet on a short trip, says Dr. Werber.

If your clients decide that it is, in fact, worth all of the trouble and angst to fly with their pet, provide them with this handout of tips for preparing both the pets and the clients for air travel.

Download the handout by visiting **dvm360.com/flywithpets.**


FROM YOUR VETERINARIAN

dvm360

A preflight checklist for **air travel with pets:**

- ☑ Research (by phone, email or website) the airline of your choice to learn the following airline-specific information:
  - > Breed, size, destination and time-of-year restrictions for the cabin and the cargo area
  - > Types of carriers and kennels allowed and how they're supposed to be labeled
  - > Items that are prohibited in your pet's kennel (hint: You may not be able to send your pet's favorite toy!)
  - > Health certification requirements
  - > Feeding instructions
  - > Labeling requirements for your pet's collar
  - > Past performance transporting pets.
- ☑ When you make the reservation, let the airline know you'll be bringing a pet. If you want your pet to travel in the cabin, the earlier you can book one of these highly limited spots, the better.
- ☑ Give your pet at least one month to become familiar with the carrier or kennel you plan to use while traveling.
- ☑ If you're planning to take your pet in the cabin, make sure your your pet does well in a carrier for four to six hours. You won't be popular with other passengers if your pet can't be calm and quiet for that long. If you know your pet is a bad traveler, talk with your veterinarian about safe sedative options before your trip.
- ☑ Make sure the transportation you arrange at your travel destination can accommodate your pet and your carrier or kennel. (The same goes for your destination accommodations.)
- ☑ Healthy pets make the best travelers. Make an appointment to take your pet to the veterinarian for a wellness exam and pick up any health certification documents the airline requires within 10 days of your trip. Tell your veterinarian where you're traveling, as your pet may need to be given preventive medicine or even a vaccine to protect it from diseases that aren't a concern in your area but are common at your destination.

Every airline is different. Don't assume that what worked with airline A will work with airline B. Rules and restrictions can change over time, as well, so make sure you do your homework to have the most up-to-date information.

Finally—an excuse to take more photos of your pet. Keep a recent photo of your pet with you when you travel. If your pet becomes lost, it will make it easier for airline staff to locate your pet if they know exactly what they're looking for.

Pro pet parent tip. Find a 24-hour emergency clinic in your destination city and store its number and address in your phone. That way, if your pet becomes sick or injured, you won't have to waste time scrolling your phone's Google search results for help.

AAPSKY/SHUTTERSTOCK.COM

Sources: Jeff Werber, DVM; Humanesociety.org

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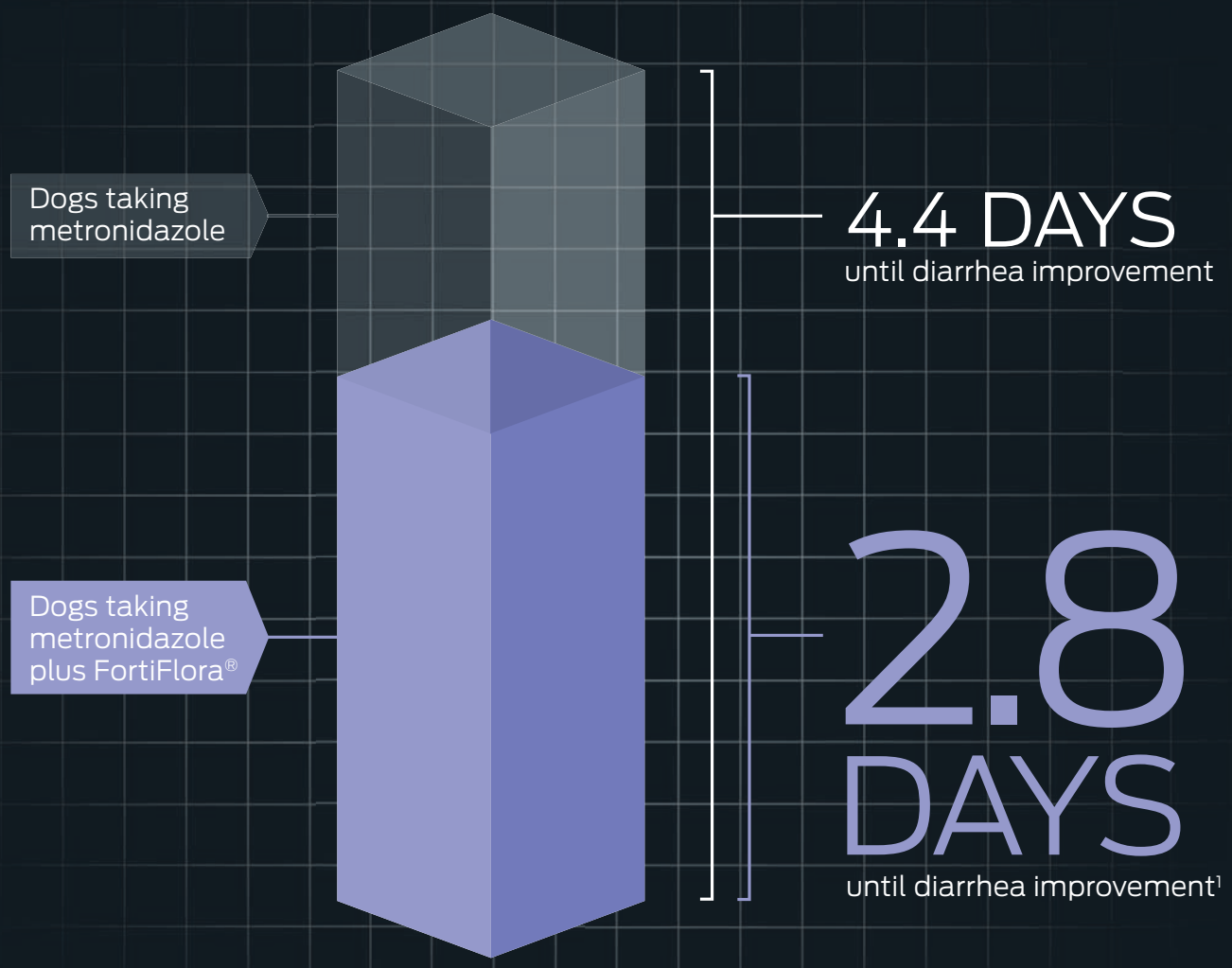

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1. Fenimore A, Groshong L, Scorza V, Lappin MR. Evaluation of Enterococcus faecium SF68 supplementation with metronidazole for the treatment of nonspecific diarrhea in dogs housed in animal shelters. J Vet Intern Med. 2012;26:793.
2. Kantar Millward Brown Veterinary Tracker, 2016.

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UK study suggests pet owners bully veterinarians

Nearly 90 percent of British veterinarians and team members say they've felt harassed by a client—often over cost of care. Here are the statistics and some tips on dealing with it.

The statistic makes for sad reading, according to the British Veterinary Nursing Association (BVNA). A full 89 percent of small-animal and mixed-animal veterinarians surveyed by the British Veterinary Association (BVA) say they or their team members have felt intimidated by a client's language or behavior.

The survey also revealed that pet owners' intimidating language and behavior is often related to the cost of treatment. No surprise—98 percent of all veterinarians said they've felt pressure to waive fees or accept late payments.

The survey results inspired the two UK associations together to jointly publish shared "Advice to deal with intimidating clients" online at bva.co.uk. Some of the tips include:

In the heat of the moment ...

> Try to remain calm, at all times. Be confident but never aggressive.

> If you feel intimidated by a client, try to not be alone with them. If you are concerned about your safety, politely ask the client to leave. If you see other team members facing difficult clients, do not leave them alone; remain within sight so you can go get help or step in and support your colleague.

After things cool down ...

> Inform the practice manager or owner so appropriate steps can be taken.

> Remember that people's behavior can arise for many reasons, including distress associated with their pet being ill. While not excusing the behavior, it can help to defuse a situation if a pet owner has the opportunity to express all their concerns. Try active listening and showing you've heard by reflecting those concerns back to the pet owner. Clients may also need to be reassured—"You've made the right decision" or "We're doing everything we can"—or asked whether they understand everything you've told them or have any questions.

> Discuss with colleagues any difficult situation you encounter with a client. Consider how you handled the situation: what you did well, what you could have done better and the final outcome. Use what you learn when you next encounter a difficult client, and work with your entire team to craft a practice policy on how to deal with intimidating situations.

In the future ...

> Use clear messaging within the practice that harassment and violence will not be tolerated. Clients should be made aware of what unacceptable behavior means.

> Attend training courses on understanding and dealing with these types of situations to help you and your clients.

dvm360 Find it all here.

Share your story

Have you ever felt threatened or bullied by a pet owner? Share your story with us at dvm360@ubm.com and any tips you have for others. We may share your stories and advice in future coverage.

YEEXIN RICHELLE/SHUTTERSTOCK.COM

Dog breeders encouraged to complete certification program

Program development was led by Purdue University animal welfare faculty.

Canine Care Certified, a voluntary U.S. program that aims to set rigorous, science-based standards for dog breeders, is accepting applications for breeders across the country to become certified, according to a release from the group. This national outreach follows research and pilot testing of the program within the breeder community, which was led by faculty from Purdue University.

The program is based on standards of care developed by researchers at Purdue's Center for Animal Welfare Science in 2013, and was peer-reviewed by animal scientists, veterinarians and canine welfare experts. Pilot testing of the program, which was developed in response to a request from responsible breeders, has been taking place since 2015, the release states.

"For responsible breeders, there should be no more important business practice than ensuring the health and well-being of their dogs," says Candace Croney, MS, PhD, director of the Center for Animal Welfare Science, in the release. "We took a hard, thorough look at the welfare status of the dogs we studied, public expectations and the relationship of breeders with their dogs."

An independent third-party auditing firm, Validus, completes onsite inspections of breeding facilities that apply and issues certificates to those who meet the standards of care. To begin the certification process, breeders are encouraged to create an account on the Canine Care Certified website.

A portion of the pilot-testing breeders who participated in Purdue's research have passed the audit and become certified, while several others are in the process of implementing the standards in preparation for their audit, according to the release.

Current regulatory programs provide a minimum level of breeding standards as required by law, but none fully address areas such as behavior or socialization, the release states.

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Big game column hits a big nerve

dvm360 readers—with one exception—support veterinarian who fired a protesting veterinary technician.

I just read Dr. Marc Rosenberg's column about Dr. Link and the technician protesting the big game hunter (September *dvm360*). I support Dr. Link. I can see how a "my-way-or-the-highway" attitude might not be palatable, especially if those are the words that are used. But I do believe that is the bottom line for any small business owner.

I am a practice owner in an at-will state. It is a small practice. We are a small team. It costs money to train new employees, and the practice benefits from the stability of long-term employees. Firing an employee is a last option for me, but I do appreciate having the option if I see my practice beginning to suffer.

If Dr. Link had started the dialogue along the lines of "let's work this out," is it possible he would have been setting himself up for liability when the negotiation failed to provide him with the result he needed? Ultimately it is not a democracy. Dr. Link has a business to own and make successful. Dr. Link is taking all the risks and it is his business. He has other employees to pay besides the one who decided it was appropriate to act on her opinion without considering the impact it would have on her employer.

The problem with negotiating is it is a double-edged sword. It sends a message to everybody else. My employees should not be bringing their pet social issues to their job if it interferes with the income flow that pays them and me. Whenever something like this comes up, I remind my employees we are only in the business of providing veterinary care. We aren't here for any other reason. We have no opinion about anything else.

Kevin Gibbs, DVM
Dallas, Texas

You include a disclaimer about this story being fictitious—I doubt that.

Dr. Link, whoever he or she truly is, is a poor representative of this profession. All veterinarians should protest big game hunters. All veterinarians should encourage their team members to protest big game hunters.

I would have encouraged this employee and helped her with her protests. Dr. Link had the "legal right" to fire her; however, he is morally repugnant and a pathetic DVM.

I would encourage this employee to sue him for violating her First Amendment rights and for sexual harassment.

Anonymous

As a 37-year DVM who started his scalpel career at age 12 doing taxidermy, a hunter, and a supporter of many conservative organizations, I think the anti-big game hunting technician epitomizes the emotionally myopic views of urban society today.

These views have produced a continuing assualt on rodeos, agriculture and other activities that these people have most likely never experienced or have very limited, only emotional knowledge of. I am no fan of canned hunts (even for whitetail deer), but the majority of trophy hunters are compassionate, ethical individuals who pay considerate sums to hunt these animals, which are almost always mature males on limited habitats, separated from the herd, and not actively breeding.

Incidentally, almost all refuges in Africa were established by British big game hunters around the turn of the 20th century. Without them, there would be no refuges, habitats or wildlife! Many of the African countries that have banned hunting—almost always due to political pressure from emotional, uninformed groups (who donate little money)—are regretting it.

I would suggest that the now-unemployed tech educate herself, and maybe even attend a few fundraising (hunting) banquets to experience in person the passion and appreciation us hunters have for the prey we pursue and the habitat they live in.

W.L. Connelly, DVM
Kingman, Arizona

Dr. Link absolutely did the right thing in firing a protesting employee.

No employee has the right to protest any business, policy or issue that may have a negative impact on the clinic or that does not reflect the views of the clinic or owners.

In the case of a public anti-hunting stance, an aspect that was disregarded in the article is the fact that many pet owners enjoy outdoor recreation, including hunting and fishing. Even in a suburban practice, it should be expected that many clients are hunters, and we are often caring for their hunting companions—the bird dogs.

There's absolutely no reason to assume that veterinary medicine or "animal advocacy" means opposition to hunting.

Drew L. Allen, DVM
Grantsville, Utah

I agree with Dr. Link's decision to fire the technician. She has a personal right to her beliefs and a right to protest but not to cause damage to the clinic's reputation by attacking another person's business while she is at the clinic. This situation is similar to the recent controversial NFL protests during the national anthem, which is harming the NFL both in reputation and in financial matters.

Before the technician engaged in her spiteful activity, was any attempt made to peacefully talk to the restaurant owner? The big game hunter has contributed to wildlife conservation through license fees and federal taxation. It is also possible that he provides financial or volunteer labor for conservation causes, as many men and women who hunt are actively involved in such endeavors.

It would be a much better world if we could accept diversity and live together in spite of our differences!

Keith Lorensen, DVM
Pueblo, Colorado

Good deeds share equal blame

I read the article "Doing good deeds in your clinic? Here's a cautionary tale" (November *dvm360*) regarding the lawsuit after a cat escaped in the car. Like the veterinarian in the article, I am a veterinarian in New Jersey who helps rescues and shelters. I have also assisted some AVMA PLIT attorneys with their cases, since I'm also an animal control officer and animal cruelty investigator.

I believe the client is also liable, since she failed to bring any proper form of restraint for the cat. As such, if the client chose to take the cat out of the clinic in the box that the veterinary staff provided, rather than keeping the cat another day at the veterinarian's office, that falls on her.

As a veterinarian, I would have taped down the box to make sure the cat could not get out, but even then I've seen cats get out of cardboard carriers when placed in them—and they're supposed to be designed to hold cats.

That's one reason I deal directly with rescues and don't do any adoptions from my office. Too much liability. Even when I take every precaution possible, I cannot guarantee that my staff will not make a mistake and not properly secure a carrier. I try to make sure I'm in the office whenever any patients return home from our clinic and double-check collars on dogs and carriers for cats. Even then I've had clients who loosen up the collars in the waiting room, stating that we put them on too tight—even when the dog has slipped out of the collar in the waiting room.

Unfortunately, no matter how hard you screen clients, there is no guarantee that a client won't be a problem.

Karen Negrin, DVM, ACO/ACI
Union, New Jersey

More highlights from the summit

Here are some additional trends and forecasts experts discussed at the AVMA Economic Summit in October:

- Indicators suggest the economy will continue to expand in the next 18 to 24 months, which means **veterinary practices will do better financially** in 2018 than they did in 2017.
- A **tight labor market** means practices will be more likely to have trouble finding and hiring qualified employees.
- The **"retail apocalypse"** affecting businesses will have an impact on traditional veterinary practices, which operate in the retail space.
- According to data from the veterinary school applicant pool, there has been a slight increase in **interest in rural veterinary medicine.**
- Requirements in the veterinary school application process might be **unfairly pushing out applicants** with a low socioeconomic status.
- The **gender wage gap** has shrunk from 9 percent in 2012 to 4 percent in 2017.
- Reauthorization of the Higher Education Act may include changes such as **capping cumulative borrowing** at $150,000 for graduate school and eliminating or curtailing the Public Service Loan Forgiveness program
- According to the forthcoming pet demographics study, **dog ownership is at its highest level** ever, and **cat ownership is at its lowest**.

> Continued from the cover

"A lot of you have helped me, mentored me and provided me information," Dicks said. "I couldn't ask for a better group of people to work with. It's been an honor to lead this work, and I'm indebted to you for your friendship and your guidance and your trust."

In the last five years Dicks and his team have conducted countless surveys, built a number of financial tools for veterinarians to use, published the AVMA Report on Veterinary Markets series, spoken at conferences and other industry events, and published a monthly column in *dvm360* magazine and on dvm360.com, among other endeavors. Many of those efforts will continue under the direction of the current team.

"We have hired an incredible staff," Dicks said, referring to his squad of PhD analysts, most of whom he hired straight out of grad school. "These people are some of the top economists I've ever worked with, and they're still here. They're the ones who do the work. I know what they're capable of, and I know you can count on them."

Dicks is excited about several projects that are just now coming to fruition, including the development of an economic modeling system that will allow the AVMA to predict the impact of specific changes on the profession, such as an increase in the supply of veterinarians entering the market every year. To help ensure that those efforts continue, Dicks will be assisting with the search for a new director of veterinary economics to take over when he retires in July.

"I believe we're very close to having one of the best economic programs of any profession that I've ever worked with," he says. "I want to make sure we continue on that path. And I believe the AVMA leadership and the VESC [Veterinary Economics Strategy Committee] are positioned to do that."

The challenges the profession faces going forward are considerable, and they're unprecedented in the veterinary field, Dicks says. Despite his efforts to remain a purely objective analyst, he has begun to take some of those challenges personally—especially the trend toward consolidation and the question of whether veterinarians, corporations or private equity will be the ones to direct the future of the profession.

"I've gotten so close to veterinarians that it's difficult to be a non-biased economist," he said. "I often wonder when I present results, who's going to use those results? Are the right people going to use them? I'm here to help AVMA members and veterinarians. I'm really not here to help corporate America."

Michael Dicks, PhD, addresses attendees at AVMA's Veterinary Economic Summit.

Despite this, Dicks says he sometimes feels like he's doing more for the people who are "trying to gobble up the profession" than for the profession itself. "It's trying on me," he says. "It's time for someone to come in and take the baton and start the race the way I did—to put that energy in and leave everything on the field."

Part of what Dicks has focused on more recently—and which he believes is important going into the future—is improving the financial literacy of individual veterinarians and their teams. This will help them better utilize the information provided by the Economics Division and other analysts and resources, he says.

"Many of the problems in the profession stem from financial illiteracy," he says. "There's so much out there for veterinarians, but they're not using it. How do we get the information we're providing into the hands of veterinarians—owners, managers and staff—so that better financial decisions can be made? That's something we have to figure out moving forward."

In his retirement Dicks plans to spend more time with his family, finish several books he's been writing, and sail the open waters. "I'm actually waiting for a call right now because I put an offer on a boat," he told summit attendees. "I am literally going to sail off into the next big adventure.

"I'm excited about what's next for the profession, but I'm equally excited about what's next for me," he continued. "Some of you have heard me talk about blue ocean opportunities—this is truly a blue ocean opportunity for me. You know, I love people, but I love being away from them too. And more importantly, some of those people love being away from me!"

Dicks says he can walk away with pride knowing that he helped establish the AVMA's first Veterinary Economics Division—and convincing his detractors that he really does want what's best for veterinary medicine. "I've worked with a lot of people over the years," he says. "Some relationships started off rocky, but when people took the time to figure out that I'm talking from data and analysis, and that I do want the best for the profession, we've formed a great relationship and moved forward.

"In this profession, I think there needs to be a lot more cooperation and a lot less focus on what's wrong," he continues. "There's so much that's great about the profession, and so many good people who have so much great information and data to share, that if we all collaborate we'll get there a lot quicker."

"In this profession, I think there needs to be a lot more cooperation and a lot less focus on what's wrong."
—Michael Dicks, PhD

Dicks says he doesn't like the word "legacy"—but he gets asked about it anyway. "I'm an educator and a farmer, and both have in common the planting of seeds," he says. "Throughout my career as an educator, my sole goal was to change one person at a time, to plant a seed that I could watch develop over the years. And I hope I've done that here. I hope the seeds I've planted with the AVMA—the important seeds of economics and financial knowledge—will help each veterinarian reach the professional and personal goals they dreamed of when they began the long process of becoming a veterinarian."

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Personal accounts: All-true tales of veterinary spending

This new series launches with the account of an associate who works in Virginia and makes $90,000.

I am a 2014 graduate of Virginia-Maryland Regional College of Veterinary Medicine. After graduation, I went to work in Florida, but recently my family and I have relocated back to Virginia. My family consists of myself; my husband; a dog, Birdie; and four cats, Moses, Juniper, Hamlet and Thibodeaux.

Relocating as an adult is complicated. My husband found a job first, and that determined our general location in northern Virginia. We decided to seek temporary housing until I figured out where I'd work.

This period of limbo was a strange three months. We lived in an AirBnB that miraculously allowed our pets. When that ended, we settled into a rental property that's too big, on a property that's too big, but we have a yard for the dog.

I took a job at a busy small animal general practice. I work on a "production-salary" basis, so I'm guaranteed an annual salary of $90,000, and make commission on what I produce for the practice in excess of my annual salary. That means I have to earn the "guaranteed" salary before I make any extra. My husband also works full-time and is lucky to have no education loans.

Here's a look into several days of spending the week of July 19 to 26.

Occupation and income

Full-time associate veterinarian: paid on production with $90,000 base salary.
Location: Leesburg, Virginia
Monthly income: $4,750
Monthly expenses
Housing: $3,400
Student loan: $2,257
Car loan: $247
Electricity: Unknown (waiting on first bill)
Auto insurance: $84
Water: $0 (we use a well)
Internet: $40
Pets: $40
Disability insurance: $286/$39 (author's and husband's)
Cell phone: $120 (two lines)
Netflix and Hulu: $25
Total: $6,538 (shared with husband)

Day 1: Wednesday

5:15 a.m. My cat wakes me promptly for breakfast time. I've always been an early riser and haven't had a need for an alarm in years. I let the dog out, pack lunches, and take my coffee to the porch for 15 minutes of "me time."

8:30 a.m. Surgery day—my favorite! I perform a single surgery, a spay on a 35-pound dog. Because I'm new to this practice, my surgery schedule is disappointingly light. I'm building a client base for myself, but in the meantime, I'm happy to have the single procedure to perform—it's better than nothing.

3:30 p.m. I finish up the last of my paperwork and callbacks and head out for the day. I stop by the gas station on my way home for fuel. Total: $36.23

7 p.m. While finishing up my evening routine, I remember that I wanted to order some household items from Amazon. With my Prime membership I can get things delivered in two days, which is faster than waiting for my next day off. I purchase a set of air filters for the house ($40.23), makeup remover ($4.17), and some laundry detergent that will hopefully work better in the incredibly hard water our well provides ($38). Total: $83.37

Daily total: $118.63

Day 2: Thursday

5:15 a.m. Like clockwork, Moses wakes me. My morning routine repeats: lunches, coffee, shower, work.

12:15 p.m. One of my technicians asks me about ordering out for lunch. I brought some leftovers, and resist the urge of having someone order me a meal. Later, I'll scarf down my brown-bagged lunch while typing up my records.

8:30 p.m. A friend from out of state is having a baby. I get a polite invitation to her baby shower, and instead of booking a flight, I purchase something online and have it shipped to her. I choose an early visual development book for the kid ($8.44), a bottle of lotion for the mom ($7.50), and the biggest box of diapers I can find ($39.99). Total: $55.93

Daily total: $55.93

Day 3: Friday

5:25 a.m. Moses is running late. Repeat morning routine.

8 a.m. Today is my double shift. I hate it. The only silver lining? Fridays are "short" by an hour, as the clinic closes at 7 p.m. rather than 8 p.m. So my double shift is only 11 hours.

7:35 p.m. Overall, a good day with manageable disasters. I comment to one of my technicians that the worst part of the day was that there was no wine at home. My tech convinces me to swing by the grocery store on the way home. Total: $20.13

Daily total: $20.13

Day 4: Saturday

5:45 a.m. Moses is on time, but my husband is up first so I take advantage of the opportunity to relax a bit longer. I work roughly every other weekend, and today I have to go into work. As I'm getting ready to go, I kiss my husband goodbye and leave him with a "honey-do" list for the day.

2 p.m. A thunderstorm rolling in makes my last appointment cancel. A cancellation is normally annoying, knowing I'll lose that opportunity for income. However, a last-minute cancellation of the final appointment means I get an extra few minutes to finish charts, and I get to leave precisely at closing time. A rare occurrence!

10:30 p.m. My husband and I meet his sister, her husband, and their baby at a local brewery. The beers that we try are not to our taste, but the veggie burgers from the food truck outside are satisfying ($20.96 for beer, $25.30 for dinner). The boys convince us to stop at a second brewery in search of a more satisfying brew. The second establishment proves worthy of the extra trip ($22.02). Their beers are better and we leave satisfied with an enjoyable evening with our family. Total: $68.28

Daily total: $68.28

To find out how the this veterinarian's spending reaches a weekly total of $662, visit **dvm360.com/personalaccounts**.

dvm360 Find it all here.

Find more money tales

Ever wondered, "How can my coworker afford THAT?" or thought, "I don't know how anyone lives on what she makes?" Here's your chance to see how other veterinary professionals are managing their money. See dvm360.com/personalaccounts.

ALEXANDER MAZURKEVICH/SHUTTERSTOCK.COM

What do human doctors know about **zoonoses?**

Research shows that physicians are unaware of and uncomfortable discussing zoonotic diseases. But veterinarians can help fill the knowledge gap. *By Sarah J. Wooten, DVM*

If you visited your doctor and asked her to fill you in on zoonotic disease risks, how much do you think she'd be able to tell you, and how comfortable do you think she'd feel talking about it?

Most likely not very comfortable at all, says Audrey Ruple, DVM, MS, PhD, DACVPM, MRCVS, assistant professor of epidemiology at Purdue University's College of Veterinary Medicine and speaker at a recent Fetch dvm360 veterinary conference. When it comes down to it, zoonosis is the purview of veterinarians, Dr. Ruple says.

First, let's look at what the average human patient knows about zoonosis, according to research compiled by Dr. Ruple. In a survey conducted in 2009, only 54% of respondents said they knew they could get intestinal helminths from dogs.[1] People just don't know what they don't know. Here are some more findings:

> **98%** of respondents had heard of rabies (that's good!), but only 58% knew that rabies exposure could be deadly (that's bad).

> **83%** of respondents would go to the ER if exposed to rabies, and 89% of respondents knew you could get rabies from bats.

But wait. It gets better. When asked where they got their information about zoonotic disease:

> **49%** of respondents thought TV, newspaper or the internet was the most important source of information about zoonotic diseases.

> **35%** of respondents thought veterinarians were the most important source of information about zoonotic disease.

> Only **6%** of respondents thought doctors were the most important source of information about zoonotic disease.

According to that last statistic, people seem to already know that their doctors don't know much about zoonosis. Here's more evidence supporting the case, as presented by

Need a refresher?
Be sure to visit Fetch dvm360 in Virginia Beach and keep yourself updated on zoonosis and other public health concerns. Register at **fetchdvm360.com/vb.**

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Ixnay on the IBD

Handling patients with chronic enteropathies

When it comes to chronic gastrointestinal cases, it's time to throw out your outdated terms and diagnoses. **p2**

GI WELLNESS

December 2017
dvm360.com/GItoolkit

Ixnay on the IBD

An update on handling patients with chronic enteropathies

When it comes to chronic gastrointestinal cases, it's time to throw out your outdated terms and diagnoses.

By Sarah Wooten, DVM

Calling all chronic enteropathies! Wait, are you calling all your chronic gastrointestinal (GI) cases inflammatory bowel disease, or IBD, without doing a histopath of the small intestine because the owner won't let you biopsy?

STOP IT. Fetch dvm3360 conference speaker Craig Ruaux, BVSc (Hons), PhD, MACVSc, DACVIM-SA, says the term "inflammatory bowel disease" is outdated. Even in the cost-conscious world of private practice, there are new, more rational ways to approach your chronic enteropathy patients than, "Let's just pull out the pred and see what happens" that provide a better standard of care and won't break the bank.

Add an "I" for idiopathic

When veterinary professionals discuss chronic enteropathies, the term IBD is thrown around quite a bit. But Dr. Ruaux thinks IBD is markedly overdiagnosed in chronic gastrointestinal cases and is being used as a catch-all term for any time the small intestine is inflamed. There are a lot of diseases outside of IBD that can cause small intestinal inflammation, he says, and the underlying pathology is very different from true IBD.

When it comes to IBD, idiopathic inflammatory bowel disease (IIBD) is a more accurate term, says Dr. Ruaux. IIBD is a diagnosis of exclusion. It implies you've done a complete workup, including a minimum database, a fecal flotation and GI panel, and acquisition of biopsy samples of the intestines.

GI disease: Often painful for affected pets, challenging to diagnose, difficult to treat. When you're facing a case of pancreatitis or gastrointestinal dysfunction, have no worries. We've compiled the best articles, tips, tools and techniques on these gut-wrenching conditions from dvm360 right here. Find all this (and much more!) at dvm360.com/GItoolkit.

If not, your diagnosis is chronic enteropathy of unknown origin. Only diagnose something to the level with which you can describe it, Dr. Ruaux says.

Geez, those GI signs

Chronic enteropathies, regardless of the underlying cause, often present in a very similar manner, Dr. Ruaux says. Signs may include weight loss, lethargy, vomiting, diarrhea and appetite alterations—in dogs, at least.

Cats love to break all the rules. They often present polyphagic with large, voluminous diarrhea. They may also have steattorhea because chronically inflamed intestines lose the ability to absorb fat. Unabsorbed fat in the intestine stimulates diarrhea by osmotically drawing water into the lumen and by fostering an environment for the bacterial toxins. Cats with chronic enteropathy with steatorrhea that look like they have exocrine pancreatic insufficiency almost never do, Dr. Ruaux advises.

The deets on diagnostics

If this is the first time you are seeing a chronic enteropathy patient, Dr. Ruaux recommends starting with a complete blood count, serum chemistry profile, urinalysis, fecal flotation and GI panel, if the owner will let you. If you give a simple explanation of why you need these tests, such as, "We need to rule out causes outside the GI tract that cause diarrhea," or "Knowing serum cobalamin and folate concentrations will help us determine the extent of the disease and guide appropriate treatment decisions," you are more likely to get a yes to go ahead with diagnostics. Just remember to keep communication simple!

DORA ZETT/SHUTTERSTOCK.COM

Need a reminder about why folate and cobalamin are important diagnostic markers? Here you go: Folate is only absorbed from the duodenum and is decreased in cases of chronic duodenal mucosal inflammation. Cobalamin is only absorbed from the distal small intestine and is a very specific marker for distal ileal mucosal disease. Low cobalamin and folate concentrations are indicative of severe diffuse disease, and this will limit the efficacy of oral therapy for IIBD. Supplement with cobalamin and folate before instituting therapy, Dr. Ruaux says.

In cats, Dr. Ruaux recommends that the GI panel include trypsin-like immunoreactivity, cobalamin concentration, folate concentration, pancreatic lipase immunoreactivity, and a Spec feline pancreas-specific lipase test. It is useful to know if cats with chronic diarrhea also have chronic pancreatitis, as that will influence your treatment decisions. Dr. Ruaux notes that the canine pancreas-specific lipase test is less important in dogs with chronic enteropathy unless they present with vomiting.

As results of a GI panel can take up to five days, Dr. Ruaux recommends performing an abdominal ultrasonographic examination to inspect intestinal wall thickness while you are waiting. If an owner has financial constraints, Dr. Ruaux says forget the ultrasound and go straight to endoscopy or exploratory laparotomy and biopsy. While the ultrasonographic exam can tell you whether there is abnormal wall thickness, Dr. Ruaux finds abdominal ultrasonography has a low sensitivity and specificity for diagnosing GI disease, except in some cases of protein-losing enteropathy. Furthermore, doing an abdominal ultrasonographic examination does not change the diagnostic need for an intestinal biopsy, except in cases of very old or debilitated patients where anesthesia is a concern or patients with a palpable abdominal mass.

When it comes to choosing biopsy via exploratory laparotomy versus endoscopy, Dr. Ruaux says it really only matters in cats with GI lymphoma. GI lymphoma is located in the ileum and you cannot reach the ileum with endoscopy unless you use a transcolonic approach. If you only sample from the proximal intestine, you may miss the disease.

Specifics on treating those nonspecifics

If histopathologic examination of the intestinal biopsy samples reveals nonspecific inflammation, Dr. Ruaux rules out lymphosarcoma and lymphatic drainage diseases. Infectious disease, intestinal dysbiosis, food-responsive disease and IIBD all read as nonspecific inflammation. For nonspecific inflammation patients, Dr. Ruaux takes a five-step approach. These steps can still be followed if the client declines biopsy, as long as the client knows you are treating empirically.

STEP 1

Prescribe fenbendazole at 50 mg/kg for five days to treat for occult giardiasis or other

intestinal parasitic infections.

Dr. Ruaux does not use metronidazole to treat giardiasis because he thinks that in order to successfully eliminate giardiasis, you must use doses that are toxic.

STEP 2

Treat any cobalamin or folate deficiencies.

STEP 3

Rule out a food-responsive enteropathy (FRE) by instituting a dietary modification trial.

Dr. Ruaux prefers using a novel protein diet over a hydrolyzed diet. If he can, he will also prescribe a low-fat diet because of fat's ability to cause osmotic diarrhea if it is unabsorbed from the lumen. More than 60% of cats with chronic enteropathy signs show improvement with diet modification, according to Dr. Ruaux, and don't need corticosteroids. Dogs with classical FRE tend to be younger, large-breed dogs and can respond well to diet modification therapy.

Even though he prefers diet trials to last four to six weeks, Dr. Ruaux says that if there is no improvement after two weeks, it is likely the animal will not respond. If the patient isn't responding to a hydrolyzed diet, it is still possible to have an FRE that is reactive to the underlying protein source in the hydrolyzed diet, and a novel protein source must be chosen. At this point, if the owner is tired of the diarrhea, it is appropriate to continue the diet trial and also move to step 4.

STEP 4

Rule out small intestinal bacterial overgrowth (SIBO) or antibiotic-responsive enteropathy with an antibiotic trial. Oh, and it's no longer called SIBO.

Dr. Ruaux says the more appropriate term is "intestinal dysbiosis." SIBO implies that the patient's intestine has too many organisms or an overgrowth of pathogenic organisms. But in patients with chronic enteropathy, they tend to have a change in the GI microbiome that is correlated with dysfunction. Time to join the cool kids and change up your terminology.

Dr. Ruaux continues the diet trial and adds in 20 to 25 mg/kg of tylosin twice daily for four to six weeks, as well as probiotics and prebiotics. For clients who feed raw food or home-cooked food to their pets, a prebiotic such as fructooligosaccharide powder can be purchased from the health food store and should constitute 1% of the diet, which comes out to 1 g powder/100 g of food fed. For those clients who find this cost-prohibitive, explain that prebiotics are formulated into GI therapeutic diets.

What about metronidazole? Dr. Ruaux only uses metronidazole for patients with stress colitis or sepsis. He prefers that his patients receive tylosin over metronidazole for treatment of chronic enteropathy.

STEP 5

No improvement? Break out the corticosteroids.

If you are 21 days into the trial and the pet is not responding, it's time for corticosteroids and a diagnosis of IIBD. Dr. Ruaux prescribes 1 to 2 mg/kg prednisone (or prednisolone for a cat) per day. Pharmacokinetically, there is no difference between once-a-day and twice-a-day administration. If the patient is a dog that is not responsive *and* there is evidence of a protein-losing enteropathy, then Dr. Ruaux will add in

chlorambucil to increase survival time.[1]

For intestinal dysbiosis, food-responsive enteropathy or true IIBD, client education is as important as diagnostics and therapy, Dr. Ruaux says. Stress to veterinary clients that you are managing the disease, not curing it, and it will take trial and error to both obtain a diagnosis and treat the problem, especially in patients that have more than one condition. Advise clients that the gut is chronically inflamed, and it takes time and testing to figure out the root cause or causes. Many clients have their own GI distress journeys, and I have found that they understand the diagnostics and treatments surprisingly well. Be hands-on with these patients in follow-ups—don't be afraid to schedule multiple rechecks. Most clients will appreciate your effort, and you will get better compliance in pursuing diagnostics and adherence to the diet trial and therapeutic recommendations.

Reference

1. Dandrieux JR, Noble PJ, Scase TJ, et al. Comparison of a chlorambucil-prednisolone combination with an azathioprine-prednisolone combination for treatment of chronic enteropathy with concurrent protein-losing enteropathy in dogs: 27 cases (2007-2010). J Am Vet Med Assoc 2013;242(12):1705-1714.

JUPITERIMAGES/GETTYIMAGES

A veterinary nutritionist's advice on

client-requested diet curiosities

These docs tackle nutrition issues from everyday practice.

If you have difficulty remembering what you had for breakfast yourself, let alone the brand of food you gave your pet, your clients are likely in the same boat. Since pets' diets are important exam room information, Rebecca Remillard, PhD, DVM, DACVN, of Veterinary Nutritional Consultations in Hollister, North Carolina, is here with a few tips to help your clients come up with the answer. Gastrointestinal problems? Struvite crystalluria? In this clip, Dr. Remillard addresses Dr. Sarah Wooten's experiences with clients feeding their dogs grain-free, high-protein diets.

Scan this code to watch now.

2 ideas for talking about feline constipation on Facebook

Do you feel stuck when it comes to educating clients about this common kitty issue? Here are a couple of ways to get conversation, ahem, flowing.

Like religion and politics, pooping is one of those topics you're not supposed to bring up in polite conversation—unless, of course, you're in veterinary practice. Then, it's your duty to talk about doodie, and your practice's Facebook page can be a great place to start the conversation.

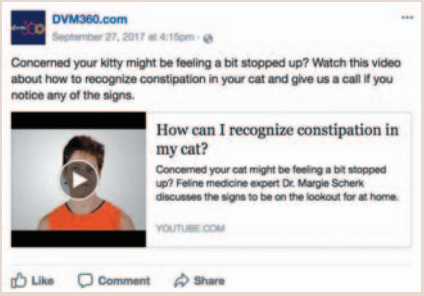
We've tried to make this duty a little easier by coming up with some simple client education posts you can use on your practice's Facebook page. Your clients will be boweled over by your helpful tips!

OLGA VASILJEVA/SHUTTERSTOCK.COM

POST #1
Constipation education video

1. Type the following text into a new post on your practice's Facebook page:

Concerned your kitty might be feeling a bit stopped up? Watch this video about how to recognize constipation in your cat and give us a call if you notice any of the signs. https://www.youtube.com/watch?v=ON_1YE7fBkE



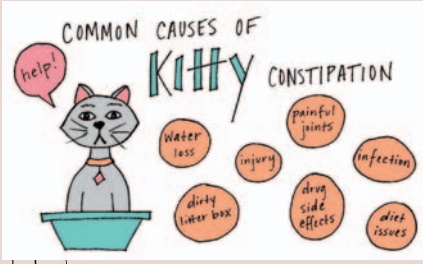
2. Once the link preview pops up, you can delete the link text. It should look like the image above.

POST #2
Constipation causes

1. Go to **dvm360.com/kittyconstipation** and drag and drop the image you find there (example below) onto your computer's desktop.

2. Post the image on your practice's Facebook page with the following text:

If your cat hasn't left anything in the litterbox for one or two days, it may need help getting things moving again. Give us a call so we can get to the BOTTOM of it and help your kitty feel better.



Client videos: **Defusing the tummy-twisting worry of GDV**

Save a life! Share these videos with your clients with dogs at risk for GDV.

Have veterinary clients whose stomachs are in knots over their concern for gastric dilatation-volvulus (GDV) in their at-risk dogs? They want to do their utmost to ensure their dogs aren't affected by this life-threatening turn of events, so we worked with Jennifer Wardlaw, DVM, DACVS, to develop videos you can share directly with your clients once you raise the issue of GDV with them. Scan the QR code to go straight to the video pages (and then use the tips on the next page to embed the videos on your site).

The first video discusses what signs clients should be on the lookout for in their dogs that mean an emergency visit to the veterinarian is called for, now!

The second video discusses what steps clients can be taking to make sure this never ever happens to their precious pups in the first place. A prophylactic gastropexy is always an option, but there are some steps your clients can be taking themselves to prevent GDV.

Follow these instructions to embed a YouTube video onto your veterinary practice's website.

- Press play on the video player. Then click the YouTube icon to view the video on YouTube.com.
- Beneath the bottom right corner of the video player, click the Share button, and share via social media. To share on your practice website, select Embed. Customization options will appear below.
- Click a standard video-player size or type in custom dimensions to fit your Web page.
- Click inside the embed code box to select the text. Next, copy the text.
- Open your Web page file, identify where you want the video to appear, and paste the embed text in your HTML code.
- Save and upload your revised page to your website.

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What to tell clients about cats' chronic diarrhea

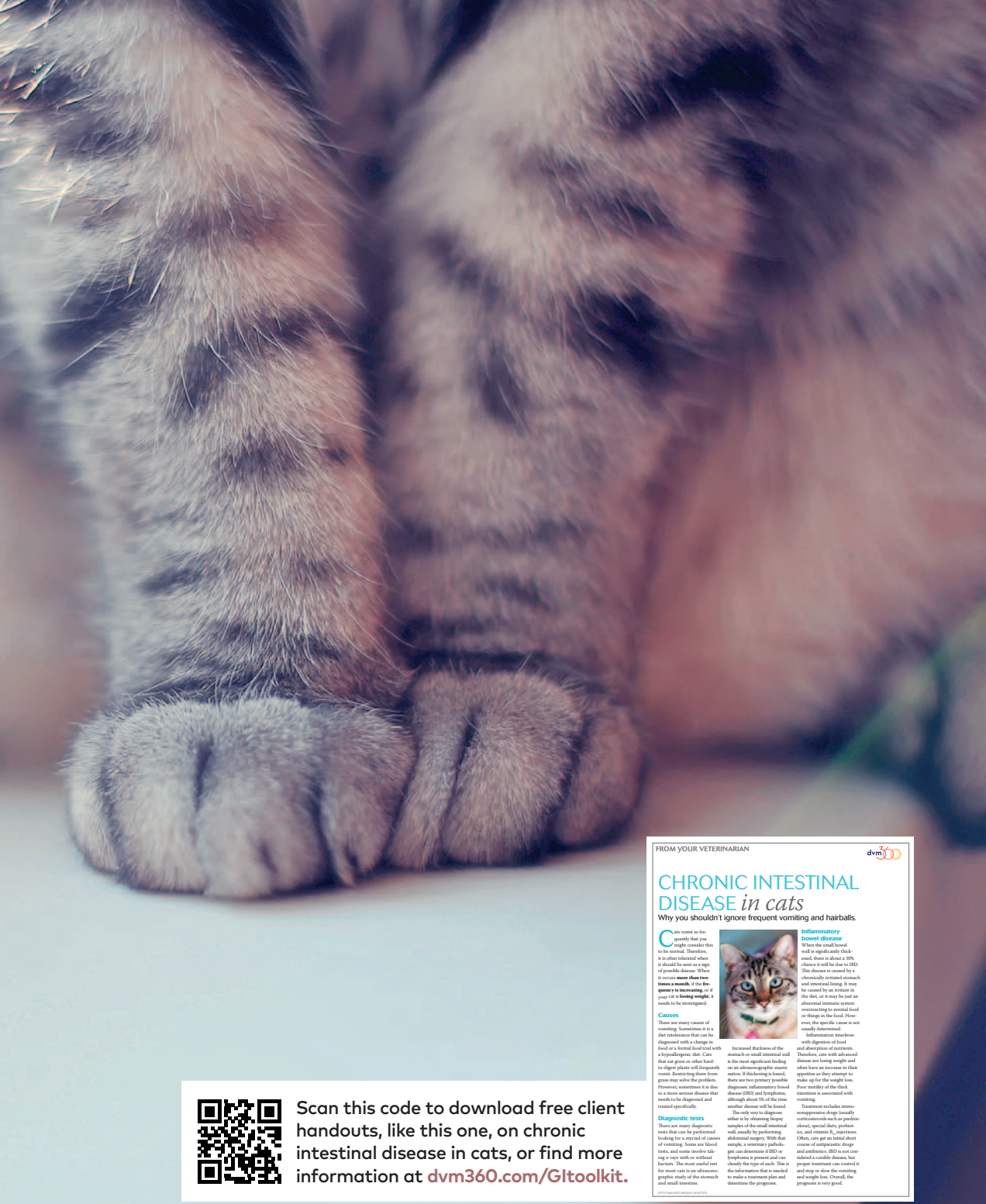
By David C. Twedt, DVM, DACVM

Cat owners need to know all hope is not lost.

Chronic diarrhea is certainly a frustration for cat owners, but at its worst, the condition may lead to the relinquishment of a pet—a loss for all involved. Fetch dvm360 conference speaker David Twedt, DVM, DACVIM, believes that your clients need to hear the situation is not hopeless.

"The biggest thing to tell the client is that we can resolve it, but it may take awhile using dietary trials (and other methods) to come to a conclusion," he says. Scan the code, left, to watch a video with more expert tips.

ALEKUWKA/SHUTTERSTOCK.COM



FROM YOUR VETERINARIAN

dvm360

CHRONIC INTESTINAL DISEASE *in cats*

Why you shouldn't ignore frequent vomiting and hairballs.

Cats vomit so frequently that you might consider this to be normal. Therefore, it is often tolerated when it should be seen as a sign of possible disease. When it occurs **more than two times a month**, if the **frequency is increasing**, or if your cat is **losing weight**, it needs to be investigated.

Causes

There are many causes of vomiting. Sometimes it is a diet intolerance that can be diagnosed with a change in food or a formal food trial with a hypoallergenic diet. Cats that eat grass or other hard-to-digest plants will frequently vomit. Restricting them from grass may solve the problem. However, sometimes it is due to a more serious disease that needs to be diagnosed and treated specifically.

Diagnostic tests

There are many diagnostic tests that can be performed looking for a myriad of causes of vomiting. Some are blood tests, and some involve taking x-rays with or without barium. The most useful test for most cats is an ultrasonographic study of the stomach and small intestine.

Increased thickness of the stomach or small intestinal wall is the most significant finding on an ultrasonographic examination. If thickening is found, there are two primary possible diagnoses: inflammatory bowel disease (IBD) and lymphoma, although about 5% of the time another disease will be found.

The only way to diagnose either is by obtaining biopsy samples of the small intestinal wall, usually by performing abdominal surgery. With that sample, a veterinary pathologist can determine if IBD or lymphoma is present and can classify the type of each. This is the information that is needed to make a treatment plan and determine the prognosis.

Inflammatory bowel disease

When the small bowel wall is significantly thickened, there is about a 50% chance it will be due to IBD. This disease is caused by a chronically irritated stomach and intestinal lining. It may be caused by an irritant in the diet, or it may be just an abnormal immune system overreacting to normal food or things in the food. However, the specific cause is not usually determined.

Inflammation interferes with digestion of food and absorption of nutrients. Therefore, cats with advanced disease are losing weight and often have an increase in their appetite as they attempt to make up for the weight loss. Poor motility of the thick intestines is associated with vomiting.

Treatment includes immunosuppressive drugs (usually corticosteroids such as prednisolone), special diets, probiotics, and vitamin B_{12} injections. Often, cats get an initial short course of antiparasitic drugs and antibiotics. IBD is not considered a curable disease, but proper treatment can control it and stop or slow the vomiting and weight loss. Overall, the prognosis is very good.

Scan this code to download free client handouts, like this one, on chronic intestinal disease in cats, or find more information at dvm360.com/GItoolkit.

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The Solution is Simple. ROYAL CANIN® GASTROINTESTINAL FIBER RESPONSE™

A PSYLLIUM-ENRICHED EXTRUDED DRY DIET FOR THE MANAGEMENT OF FELINE CONSTIPATION, OBSTIPATION AND MEGACOLON

D Houston[1], H Weese[1], M Evason[1], G Deswarte[2], Y Soulard[2], V Biourge[2].
[1]Medi-Cal Royal Canin, Guelph, ON, [2] Royal Canin Research Center, Aimargues, France.

The dietary management of constipation, obstipation and megacolon in cats is either based on a high fiber diet (total dietary fiber >20% on an as fed basis) or on highly digestible, low fiber diets supplemented with various soluble fiber sources including psyllium or canned pumpkin. The physical and chemical properties of dietary fiber vary considerably with high levels of insoluble fibers, such as cellulose, potentially exacerbating the clinical signs. The objective of this study was to assess the efficacy of a moderate fiber, psyllium-enriched, extruded dry feline diet in the management of recurrent feline constipation, obstipation and megacolon.

Fifty-one cats from clinics across Canada entered the study with a history of chronic constipation, obstipation or megacolon. Forty neutered cats (31 male and 9 female) have completed the trial. Cases had been on a variety of diets and treatments including lactulose (31/40; 77.5%) and cisapride (25/40; 63%). All of the cats underwent a complete clinical examination and could not have an impacted colon prior to introduction of the trial diet. The diet was a moderate fiber, psyllium enriched, dry extruded diet (protein 31%, fat 15%, total dietary fiber 11.2%, 3879 kcal ME/kg as fed). Fecal score and body weights were recorded at the beginning, mid-point and end of the study.

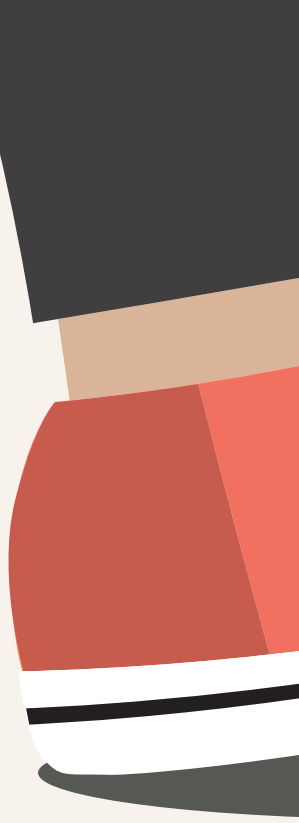
The mean age was 8.38 ± 4.3 (range from 0.75 years-16.5 years). All cats showed improvement in fecal scores. Mean fecal score at the beginning of the trial was 1.23 ± 0.55 (median 1) and mean fecal score at the end of the trial was 2.6 ± 0.55 (median 3). Body weight remained stable. None of the cats presented with an episode of constipation over the study period. By the end of the trial, 14 cats were off lactulose and 11 were off cisapride; in addition, 4 and 3 of the remaining cats had a reduction in the dosage of lactulose and cisapride respectively. The psyllium-enriched extruded dry diet used in this clinical study proved to be very effective in the management of constipation, obstipation and even megacolon. Decreased need for medications, surgery and euthanasia was noted.

Source: Houston D, et al. A psyllium-enriched extruded dry diet for the management of feline constipation, obstipation and megacolon. 11th Annual AAVN Clinical Nutrition and Research Symposium, 2011.

Learn more at www.royalcanin.com/vet/gi

STAY CONNECTED

Fecal testing: **Don't be afraid** to step in(to) it



Technicians, get ready to digest the diagnostics that help you become key advisors in the workup of patients with gastrointestinal disease.

During his presentation on diagnostic test options for gastrointestinal (GI) disease in dogs as part of the technician program at a recent Fetch dvm360 conference, Scott Owens, DVM, MS, DACVIM, highlighted the technician's role in this common area of disease—the arena of vomiting, diarrhea and the like.

Dr. Owens walked the audience through the steps of determining what's going on in patients with GI issues. First and foremost is that "Please tell all!" patient history, which technicians are vital in gathering. Hear Dr. Owens explain some of the things to ask about, including presenting complaints, an acute versus a chronic longevity, concurrent diseases, diet and current medications.

Listen to the audio here.

But let's get right to the poop. That fecal sample—so valuable. What can you do with it? Here's a quick overview.

Float it

A fecal flotation is the cornerstone of examining a fecal sample, which can be done in-house or sent out to a laboratory. Dr. Owens says fecal floatation is especially important when the history reveals the dog has been in an environment where parasites can be present. Hear what can make or break this fecal evaluation from Dr. Owens and what piece of equipment can do wonders for diagnosis, if you do it frequently:

Test it—and quick!

Two common culprits, giardiasis and parvovirus, are easy to pinpoint with enzyme-linked immunosorbent assay (ELISA) tests that require stool samples.

Culture it

Maybe …. Dr. Owens says fecal cultures can be tricky to interpret. When does he perform one? If the pet is eating a raw meat diet

HAPPYMAY/SHUTTERSTOCK.COM

and has evidently bloody stool, it may indicate a *Salmonella* species infection. It's also important to know if *Salmonella* or *Clostridium* species are running rampant if the pet is in a home with immunocompromised people.

Analyze its DNA

The IDEXX Canine and Feline Diarrhea RealPCR panel just takes a swab of stool and can catch several viral, bacterial and parasitic causes. Since you can get a lot of positive results that may or may not be significant, Dr. Owens relies more on the findings of the physical examination and patient history. "But if I'm really struggling—if a dog has a strong indication of bacterial disease and has been in that environment—I'm going to use it," Dr. Owens says.

Assess its protein content

If a protein-losing enteropathy is suspected, the fecal alpha-1 proteinase inhibitor test is a good go-to. It measures the amount of protein in the stool to show if the intestines are leaking this vital component, Dr. Owens says.

Examine it for blood

Blood in the stool can be hard to detect visually, which is where the fecal occult blood sample comes in. Since high protein in a pet's diet can cause a false positive result, Dr. Owens says it's best to feed a vegetarian diet for a few days before testing. The key to this test? A negative result is more informative. "If it's negative, I'm really happy—there's no bleeding," he says. "If it's positive, I shrug my shoulders and say, 'OK, it could be, it could not be that blood is present.'"

Don't hesitate to step in

Fecal examinations are just a part of a workup in a patient with a GI issue. Blood testing, biopsy, endoscopy and ultrasonography are other routes to diagnosis.

"The role of the technician is really valuable in knowing and maybe even saying 'Hey, you know, are we at that point? Do we need to think about biopsies?'" Dr. Owens says. "Taking that role in the hospital to have that comfort to say to the doctor, 'What about this test?' or 'What about this test, I heard about this ….' is really important."

A quick guide to gastric acid suppression in dogs and cats

How you can counteract the corrosive action of elevated gastric acid in your veterinary patients and when preventive use is indicated.

By Mindy Valcarcel, Medicine Channel Director

The same drugs you may reach for yourself to relieve the gastric effects of too much stress can be used in your veterinary patients. Here's some guidance on acid suppressant usage given by Katie Tolbert, DVM, PhD, DACVIM, an assistant professor at the University of Tennessee's College of Veterinary Medicine, during a recent Fetch dvm360 conference.

First, skip the antacids, which aren't as effective as decreasing gastric acid for a prolonged period. Instead go for acid suppressants. Two types are generally used in veterinary patients:

- Proton-pump inhibitors (PPIs) such as omeprazole, pantoprazole and esomeprazole.
- Histamine type-2 receptor antagonists (H2RAs) such as famotidine and ranitidine.

Administration advice

- PPIs are most effective when taken before a meal. Dr. Tolbert recommends giving them 30 minutes before breakfast.
- H2RAs can be taken with or without food.
- Patients may become tolerant of an H2RA's effects after several days of receiving the drug.
- Don't combine PPIs and H2RAs if you're looking to reduce acid, says Dr. Tolbert. Even though they may take a day or two to reach full effect, PPIs are just as effective as H2RA on day 1. However, in cases of nocturnal acid reflux, you can use the two drug types together (PPIs in the morning and H2RAs in night).

Prophylactic pointers

One big question: Should acid suppressants be given to patients considered at risk for gastrointestinal ulcers that might need transient therapy? Let's look at several scenarios:

Find references for this article at **dvm360.com/GItoolkit**.

1

Perioperative gastroesophageal reflux

Tolbert says this condition is common in dogs (10 to 55 percent), a little less so in cats (2 to 12 percent). One study showed that 30 percent of gastrointestinally healthy dogs undergoing orthopedic surgery had perioperative reflux.[1] In that study, the dogs benefitted from esomeprazole plus cisapride.

2

Kidney disease

Veterinarians often prescribe famotidine in patients with kidney disease, but Dr. Tolbert questions if they should be. Studies have shown no evidence of mucosal erosion or ulceration in patients with chronic kidney disease.[2] And these patients are already receiving plenty of drugs, so why add to the burden? On top of this, PPI administration in people has been associated with a higher risk of kidney disease.[3] Overall, further study is needed to define utility in patients with renal issues.

3

Liver disease

Although liver disease is one of the most common factors predisposing dogs to GI ulcers, Tolbert says there are so many other factors involved in ulcer development that acid suppressors may not be efficacious in these patients. In fact, a recent study shows that dogs with portosystemic shunts had significantly lower serum gastrin than healthy dogs.[4] But Dr. Tolbert says the study did not look into whether or not these dogs had ulcers. Her best plan of action? Reserve PPI use for patients with evidence of GI bleeding such as melena, iron-deficiency anemia, and regenerative anemia in the absence of hemolysis. One important note: Avoid cimetidine, says Dr. Tolbert, as it is associated with acute liver injury in people and is not an effective acid suppressant in dogs.

4

Pancreatitis:

The effects of PPIs in people have been mixed—some studies have shown that PPIs may cause pancreatitis while others say they help reduce inflammation associated with it—so there is no definitive answer here. If a patient isn't having persistent vomiting, there's no need to administer a gastric acid suppressant, says Dr. Tolbert.

Canine pancreatitis: Insight from an internist

By Jennifer L. Garcia, DVM, DACVIM

We all know how difficult the diagnosis and treatment of canine pancreatitis can be. In his presentation at the 2014 American College of Veterinary Internal Medicine Forum, "Canine pancreatitis: No such thing as a typical case," Michael Willard, DVM, MS, DACVIM, shared his experience in the management of these cases.

Diagnostic insight

While the history and physical examination are critical components of patient assessment, their utility in these cases has more to do with looking for and ruling out diseases that can mimic pancreatitis. Data collected from the minimum databases (complete blood count, serum chemistry profile and urinanalysis) will also help. Dr. Willard pointed out that, unlike before, we have come to know that amylase and lipase activities are not reliable markers of pancreatitis. Hyperlipidemia is not a common finding, but if it is noted in a patient with an acute onset of vomiting and diarrhea, pancreatitis should be high on the differential diagnosis list.

According to Dr. Willard, trypsin-like immunoreactivity (TLI) is not a very sensitive indicator of pancreatic inflammation but may be supportive if it is elevated. The canine pancreatic lipase immunoreactivity (cPLI) assay, on the other hand, is very sensitive (85% to 90%), but its specificity is questionable. Even a small, perhaps not clinically significant focus of inflammation in the pancreas can cause a positive result, he noted. The best use of cPLI is in ruling out pancreatitis if the results are negative.

Abdominal radiography is indicated in these cases to look for other problems as well; classic signs of pancreatitis (e.g. loss of detail in the right cranial quadrant, dilated duodenum) are not always present. Abdominal ultrasonography is the most useful imaging modality we have for diagnosing pancreatitis, but it is not perfect. Dr. Willard pointed out that he has seen some cases in which sonographic changes lag behind clinical signs, so serial ultrasonographic examinations may be needed. Findings may change even within a few hours.

Pancreatic abscesses may occur and are typically sterile, so they can often be treated medically with ultrasound-guided drainage. Septic abscesses may be more common in cats, Dr. Willard noted. In his experience, pancreatic masses are more often inflammatory in nature than cancerous masses and may not require surgical removal unless insulinoma is suspected. A biopsy will be needed for a definitive diagnosis.

One of the biggest challenges with this disease is pets with severe clinical signs and whether they have severe sterile pancreatitis versus septic peritonitis. These conditions may look similar in that they both can have abdominal effusion, and bacteria may not always be seen even in cases of septic peritonitis. The abdominal fluid in both cases may be variably inflammatory.

TETRA IMAGES/GETTYIMAGES

Treatment tips

In terms of management, Dr. Willard offered the following:

- Offer low-fat food as soon as possible. You may consider this step even if there is some low-grade vomiting as long as feeding does not make the patient worse. Be sure to start slow.
- Begin fluid therapy. We tend to underestimate a patient's need for fluids, so err on the side of more in the absence of cardiac or renal disease. Hydration status may be difficult to assess in obese (no skin tent) or nauseated dogs (moist mucous membranes due to nausea).
- Since there are no robust studies, it is controversial whether fresh frozen plasma provides any benefit. It can be used if you suspect disseminated intravascular coagulopathy.
- Consider administering colloids. You can consider hetastarch if the albumin concentration is < 2 mg/dl (will provide more oncotic support than plasma).
- Total or partial parenteral nutrition is rarely needed.
- Administer analgesics. Consider butorphanol for very mild cases, methadone for moderate cases, and hydromorphone or fentanyl for severe cases.
- Only use antiemetics if vomiting or nausea are severe; otherwise, they may mask improvement. Dr. Willard recommended maropitant as a first-line drug.
- Consider proton pump inhibitors for dyspepsia—pantoprazole or omeprazole.
- Administer antibiotics only for severe cases or those with suspected systemic inflammatory response syndrome. If possible, consider sample collection (e.g. peritoneal fluid, aspirated abscess material) before antibiotic administration.
- Since their use in pancreatitis is controversial, reserve corticosteroids for patients that are not responding to therapy and then consider a physiologic dose.

Prep clients for long-term care

Be clear with clients about their pet's chronic disease management from the start.

In his first few years out of veterinary school, Jeremy Keen, DVM, saw a lot of pets with chronic disease (many of whom were on long-term medications). But few actually returned to the clinic for recheck appointments or follow-up care. The reason? Clients weren't fully educated about the disease, didn't know how it needed to be treated, and didn't understand how long they'd be invested—both emotionally and financially—in the disease management process, Dr. Keen says.

Seeing a need for more client education, Dr. Keen came up with the idea to create client handouts that would detail the tests needed to confirm a diagnosis and monitor progress once treatment was underway. The handouts needed to give pet owners an understanding of the financial responsibility and time commitment they would face managing the disease as well as improve efficiency in the veterinary clinic and make everyone's job easier.

How it works

Everyone in Dr. Keen's clinic now plays a part in the client education experience when a chronic disease is diagnosed. Once an initial diagnosis is made and the doctor briefly explains the disease and next steps to the client, a technician takes over and gives the client the appropriate handouts—which include the cost of additional tests and treatment—to review at home. A receptionist then schedules a follow-up call in a few days to discuss any questions.

Since incorporating the handouts and this tiered approach to client education, Dr. Keen and his staff have seen the benefits of a much more efficient workflow process—not to mention a boost in client compliance. "We've seen client compliance increase exponentially," he says. "When clients are fully educated about a condition and understand it, they are willing to pursue the long-term treatments."

Head over to **dvm360.com/chronicdisease** to download a handout on canine hyperadrenocorticism you can edit for use in your practice.


Will my pet
BE IN PAIN?
Anything that is painful for you will likely also be painful for your pet.

Client handout: Managing pets' pain

Pets need your help to get the care they need to live happy, healthy and comfortable lives. And an important step to meet that goal is to manage their pain. Use this client handout from Tasha McNerney, BS, CVT, CVPP, VTS (anesthesia and analgesia), to start a pain management conversation with pet owners.

Scan the QR code or head over to **dvm360.com/GItoolkit** to download this free handout to share with your veterinary team.

Should DVMs sell pet food?

If your answers to the two questions in this article are "yes," then ABSOLUTELY your veterinary hospital needs to sell pet food to pet owners, according to Ernie Ward, DVM.

You know what Ernie Ward, DVM—a Fetch dvm360 conference speaker and founder of the Association for Pet Obesity Prevention—is going to say: Nutrition for patients is important for every veterinary practice ... and every patient.

What does that mean? For some practices, it means picking foods to recommend and selling them. But it's not about the sale, Dr. Ward says.

"Do you sell wellness? Do you encourage preventive medicine?" Dr. Ward asks. If the answer to that is "yes," than you sell pet food.

It's about advocating for quality of life, he says.

And you know full well some pet diets out there aren't great, so Dr. Ward is urging all DVMs to learn what's good, what's bad, and recommend the right thing.

What does that look like? Aim for two protocols to make sure nutrition is a part of your care:

- Sell pet foods you've researched and recommend
- Ask every pet owner what they feed their pet—and how often and how much.

"We have to start these conversations," Dr. Ward says. "It's essential."

Watch Dr. Ward's impassioned plea by scanning the code below.

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STAY CONNECTED

Dr. Ruple: Tennessee is a hot area for Rocky Mountain spotted fever in both people and pets, but in a 2009 survey about knowledge, attitudes and practices regarding Rocky Mountain spotted fever among healthcare providers in Tennessee:[2]

> Only **39%** of doctors knew how to treat the disease in children or were aware of the case fatality rate. However …

> **71%** knew the incubation period, and

> **77%** knew the treatment time frame.

What about obstetrician-gynecologists' knowledge of cryptosporidiosis? Dr. Ruple discussed yet another set of study findings:[3]

> Just **44%** of OBGYNs would include crypto on a rule-out list for prolonged diarrhea in a pregnant woman.

> **19%** of OBGYNs knew animal contact was a risk factor.

> **14%** of OBGYNs knew hand sanitizers didn't inactivate Cryptosporidium species.

> Less than **10%** of OBGYNs were aware that crypto was a reportable disease.

You might think that physicians would make a special effort for their patients at higher risk of contracting a zoonotic disease, but that doesn't seem to be the case, Dr. Ruple says. In a 2009 study, 50% of MDs who had patients with known animal contact (in other words, farmers) were mostly or strongly uncomfortable with their knowledge of zoonotic diseases.[4] In a 2012 survey of both veterinarians and medical doctors:[5]

> **71%** of MDs said they never or almost never asked their HIV-positive patients if they had contact with animals.

> **94%** of MDs never or almost never initiated discussions about zoonotic diseases with patients with HIV or AIDS.

> **54%** of MDs felt uncomfortable or very uncomfortable advising patients with HIV/AIDS on the potential of zoonotic diseases.

How often did patients with HIV/AIDS initiate discussions with doctors about zoonoses? Never. How often did MDs contact DVMs for advice on zoonotic disease? Never. But when veterinarians were asked the same questions as MDs,[5] here's what researchers found:

> Only **13%** of veterinarians felt uncomfortable advising clients with HIV/AIDS on the potential of zoonotic diseases.

> **90%** of veterinarians discussed the risk of contact between any immunocompromised person and a pet that had a diagnosed zoonotic disease.

MDs consider zoonotic diseases to be a diagnostic challenge for several reasons, Dr. Ruple says, including the fact that many zoonoses have nonspecific flulike symptoms and they occur infrequently (or so physicians think). Plus, MDs inquire about animal contact and pet ownership only inconsistently during history-taking, and zoonotic pathogens are linked to 130 species! It's true: Zoonotic disease is hard. Veterinarians are clearly more comfortable and confident in these discussions, as Dr. Ruple's research indicates. A 2008 study found that:[6]

It's obvious that veterinarians have the knowledge and feel more comfortable talking about zoonotic disease, while many MDs are uncomfortable.

> **77%** of DVMs thought it was very important to educate clients about zoonotic disease prevention.

> **43%** initiated discussions about zoonotic disease with clients on a daily basis.

> **57%** kept client education materials about zoonotic disease in their practice.

Interestingly, another investigation Dr. Ruple discussed found that if a human patient was diagnosed with a zoonotic disease and their doctor recommended that they consult with a veterinarian, 80% said they would—and they would pay out of pocket. Ninety-one percent said they would consult with a veterinarian if insurance covered it.[7]

It's obvious that veterinarians have the knowledge and feel more comfortable talking about zoonotic disease, while many MDs are uncomfortable discussing zoonotic disease and lack appropriate knowledge about the subject. So why aren't more veterinarians working with medical doctors to combat zoonotic disease? For the sake of public health, it's time to open up the lines of communication, Dr. Ruple says. Here are some of her tips on how to open the lines of communication and build bridges with your local MD community:

1. Consider starting a journal club made up of veterinarians and MDs. Take turns choosing journal articles on zoonotic disease to read and present to each other. That way you all learn together. Pediatricians love this stuff because children are at higher risk, Dr. Ruple says.

2. Speaking of children, give a talk about zoonoses at your local school. Kids love veterinarians! And they'll go home and tell their parents about all the yucky diseases they learned about.

3. Check with your health department to see if there are any openings on the board. Most public health departments hold a space for a veterinarian.

4. Call the CDC and see if they have any posters that they can send you, then jazz your clinic up with pictures of cutaneous larva migrans.

5. Add a zoonotic disease section to your website.

Considering that 60% of all diseases are zoonotic and 75% of emerging diseases are zoonotic, Dr. Ruple thinks it's high time that animal doctors, who have the knowledge, and human doctors, who have the influence, take their jobs as sentinels of human health seriously and work together to keep the public educated and safe from zoonotic disease.

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Dr. Sarah Wooten works in private practice in Greeley, Colorado. She regularly speaks on leadership and practice management.

Who's driving this practice?!

The associate vet is confident. The practice owner is insecure. An outburst is about to turn everybody's day upside-down.

It's another sunny day, yet the waters seem a bit muddy as Dr. Codger steps into the office. Always first to arrive, he locks the door behind him so he can get in some office time before the head receptionist gets things rolling.

But there's a nagging feeling of losing control that's been haunting the old vet ever since he gave young associate Dr. Greenskin maybe a little too much responsibility. (Read about it at **dvm360.com/likeaboss**.) You see, Dr. Codger believes there's a certain omnipresence and authority that must be maintained by a man of his position. And now he's feeling a little worried that the staff are sensing weakness in him. Was it right to just hand over control of something so important as hiring a new staff member? What's he going to give up next?

There's already some chatter from the lead technician about possibly changing one of the exam room posters without even talking to him. If that weren't devious enough, it's been rumored that the new kennel attendant has been using two pumps of dog shampoo for just about every bath.

Dr. Codger feels a bit like the wounded lion. And try as he might, he's having a hard time suppressing his natural instinct to take back his territory. No wonder retiring is such a hurdle.

Of course, open communication might've helped. If you ask Dr. Codger, he'd tell you that regular staff meetings cover all of the important changes and that he's being up-front and transparent about his search for an exit strategy.

Talking with the team, however, you may hear a different story. Some might ask you to define the word "meeting." Others would be quick to point out that the last real get-together was more than three months ago, and only half the staff were present because the hospital was too busy for everyone to participate.

Enter the blossoming associate veterinarian ...

Dr. Greenskin, however, has continued building her confidence. The new technician she found has been working out great. Not only does the new RVT fit right in with the team, but she's also active with numerous dog-show organizations, and those contacts have been good for business. Dr. Greenskin's planning has worked out just as she'd hoped. The extra support is allowing her to handle more cases more efficiently, and she's been feeling like a "real doctor" instead of spending her time helping with technical duties.

So it's no coincidence that on the day Dr. Codger is thinking too much about his loss of control, Dr. Greenskin strolls in feeling good at her usual time (after completing her meditation podcast and waiting in a very long coffee drive-thru line for a $6 mochiattasomethingorother). She smiles confidently and jokes with the morning crew while looking through the completed labs and preparing a strategy for her surgery day. She's been gaining so much momentum that she almost feels like she owns the place.

Enter the disgruntled practice owner ...

Dr. Codger walks into the treatment area, and he seems a little off to Dr. Greenskin. He's known to have a mood swing here and there, but this is out of the norm. Dr. Greenskin and two technicians do their best to give a smile and a "good morning," but boss man isn't having any of it. He starts in with

ILLUSTRATION BY RYAN OSTRANDER

a series of complaints and demands:

"Who left the oxygen running last night?! We're going to be down to one e-tank now for the whole day!

"Also, the cat ward is a complete mess. You better get the kennel people to take care of that immediately.

"Since our oxygen supply is so limited, surgery time is a real factor today. I'm taking the surgeries to make sure we don't have any issues.

"You can go ahead and jump in on regular appointments, Greenskin."

Well, Dr. Codger sure got everyone's attention, and maybe not in the best of ways. He walks briskly toward the reception area to notify the front staff of the scheduling changes.

Dr. Greenskin isn't completely surprised by the outburst. She's no stranger to Codger's style, but she's left feeling a bit helpless this morning. As she has matured as an associate, Greenskin has done her best to avoid blaming herself for the day-to-day issues that arise. However, when her respected mentor so blatantly and easily points out things she should've noticed, her fragile confidence is shaken to the core. One second, she was feeling up to the challenge, and in an instant she was completely deflated and left uncertain about how to proceed in life itself.

When doctors clash—if only in their heads

As she starts reviewing appointment charts, Dr. Greenskin finds it difficult to focus. Her thoughts are continually interrupted by negative self-talk and doubts as to whether she should even continue practicing veterinary medicine. Even the smiles and praises of her first two clients are not enough to put a spring back in her step on this day.

With ever-present tension throughout the hospital, the two doctors get through their day without so much as a nod to each other or a couple of mumbles about a patient's history. With such a difficult working environment, all are ready to pack it up and head home when the final client leaves. There is not enough energy left on either side to talk about or confront this day's major communication breakdown. Both doctors and the rest of the team end the day with a sense of muddled frustration. Even Dr. Greenskin, who usually enjoys grabbing problems by the horns and fixing this right now, is unsure how to approach the problem. Her usual resolve and tenacity has vanished, right along with her self-confidence.

We all experience moments of career frustration and doubt. Was this instance made particularly harmful by a lack of compassion or professionalism? Is anyone to blame specifically, and was there a failure to define expectations on either side? Is either side justified in the way they handled this day?

Dr. Codger may want to tread more carefully if he truly wants to retire and sell to Dr. Greenskin. And Dr. Greenskin may need to learn techniques to avoid becoming so totally frazzled.

Will these two find a way to resolve the day's conflict, or will it be added to the pile? How will the building tensions affect the outcome of the ongoing business dealings?

Dr. Jeremy Campfield works in general practice in California's Sacramento Valley. He is an avid kiteboarder.

When old and new clash, change is the casualty

A new associate suggests some small upgrades for the good of the practice. Can he convince his bosses to go along with it?

The Harp brothers, Lee and Hank, had been practicing veterinary medicine together for 38 years. They had a successful small animal practice and devoted clients. They were "old-school vets" and proud of it. This didn't mean they practiced antiquated medicine—quite the opposite.

But they did give clients their home numbers for after-hours phone calls. They made house calls if necessary and ran a tab for older clients who wanted to pay as they were able. It's true that this flew in the face of many "modern" veterinary practices, but it worked for the Harp brothers.

Eventually the brothers reluctantly accepted the fact that they weren't getting any younger and decided it was time to add an associate veterinarian. They ultimately decided on a young man with excellent clinical skills and a charisma that wowed clients. The young doctor embraced the personalized style of practice that had made the brothers beloved anachronisms in the veterinary community—but he also had some suggestions.

He scheduled a meeting with his two bosses to talk about client and creature comforts. A personalized approach to veterinary care was admirable but an antiquated physical plant was not, he said. The first hurdle was the waiting room. The clinic, which was in fact a remodeled Victorian home, had a reception area that hadn't been updated in years. The young associate suggested brighter LED lighting, calming music, a coffeemaker, new seamless flooring and a bright contemporary restroom makeover.

The Harp brothers' first response was, "What's wrong with what we have now?"

This is exactly what the young doctor wanted to hear.

He responded that his update suggestions weren't simply for modernization but also to help pets, clients and ultimately the practice. He said calming background music comforted anxious clients and pets. In addition, it created a pleasant "white noise" buffer to keep waiting clients from overhearing the receptionist's phone conversations. A coffeemaker was almost a waiting room expectation, but more importantly it emitted a pleasant, familiar scent that counteracted unpleasant clinic odors.

Seamless flooring prevented crevices that harbored debris and allowed quicker and more efficient daily cleaning. Brighter LED lighting had been shown to contribute to the positive feeling of a hygienic medical facility. Finally, more clients than the brothers imagined visited the restroom. And they often judged overall clinic hygiene and cleanliness based on that experience. The young associate also recommended that professional promotional signage gracefully adorn the walls. A poster of a cute dog that recommended once-a-month heartworm preventive was both appropriate and informational.

The older doctors looked at one another quizzically. Was their waiting area really that bad? They had no complaints. They thought music, coffee and lighting were all gimmicks. A clean, welcoming waiting room atmosphere was what they offered their clients. They said that, sure, accessorized waiting rooms were appearing in more and more in veterinary practices—but were they really improvements? They told their young associate the seamless floor covering was a good suggestion and would be implemented. But as for the rest, they didn't want to teach an old dog new tricks when the old tricks had served them so well.

The associate was disappointed but had great respect for the two senior doctors. Clients were still coming in the door—and many of them may very well have been threatened by changes to the veterinary environment they'd known for years. There was something to be said for staying in your comfort zone. Personally, he thought this hesitation would ultimately lead to practice stagnation. But at least they'd get a new floor!

Who do you agree with: the Doctors Harp or the young associate? We would like to know. Send an email to **dvmnews@ubm.com**.

Rosenberg's response

There is room for variation in veterinary facilities' styles, but there is never room for poor hygiene or stagnant medical care. That said, I have to side with the young associate. The veterinary profession has to look at the changing needs and expectations of its clientele. A serene, clean waiting area makes a pet owner more receptive to hearing veterinary directives. We can be sure that our patients present the same problems and charms as the years pass, but as for their owners, that's a different story. The times they are a-changin' and so must we.

Dr. Marc Rosenberg is director of the Voorhees Veterinary Center in Voorhees, NJ. Although many of his scenarios in "The Dilemma" are based on real-life events, the veterinary practices, doctors and employees described are fictional.

PHOVOIR/SHUTTERSTOCK.COM

Debating an equipment purchase? Consider taxes—and the big picture

AHA-SOFT/SHUTTERSTOCK.COM

Depreciation on a new unit for your practice can improve your tax situation. But if it doesn't generate ROI, it's not worth it.

It's almost the end of the year. Are you wondering if you should buy that new piece of equipment you've been eyeing for months?

The good news is, any equipment you purchase and place into service before year-end can be deducted for tax purposes using the Section 179 depreciation expense. The deduction limitation is $500,000, with indexed increases of $10,000 increments in future years.

In addition to Section 179 depreciation, bonus depreciation is also an option for 2017. Bonus depreciation allows an immediate 50 percent depreciation deduction on any *new* equipment acquired and placed in service during the year. The remaining asset basis is then depreciated over its tax life, which is typically five or seven years. In 2018 bonus depreciation will be reduced to 40 percent, and in 2019 it will drop to 30 percent.

Veterinarians often ask me, "What difference does it make if I take Section 179 or bonus depreciation?" Here's the answer: Section 179 can be taken on new or used asset purchases. Bonus is limited to new asset purchases only. If your practice is a partnership or S corporation, Section 179 is separately stated from the practice income and passed through on a K-1 to your personal tax return, where there may be limitations based on your tax situation. Bonus depreciation is taken at the entity level, where it can create a tax loss.

Beyond just the tax aspects, do your homework! Shop around to ensure you're paying a fair price with fair terms. Calculate your return on investment. If you can make your money back in 18 to 36 months, it's likely a good investment.

Also, don't buy anything that's going to sit in a corner and never be used. Why do I mention this? Because I've seen it happen! Don't throw your money away just to save on taxes.

And, of course, here's the CPA disclaimer: Because every situation is unique, it's always best to seek advice from a tax professional to make sure you're making the best decision for you and your practice.

Camala C. Bailey, CPA, CVA, is known as the CPA-4-Vets. She and her team give practice owners financial information and advice to help them successfully start, buy, grow and sell their practices. You can reach her at Cammi@CPA4Vets.com.

The cost of a seat:

State funding, vet school tuition and easy assumptions

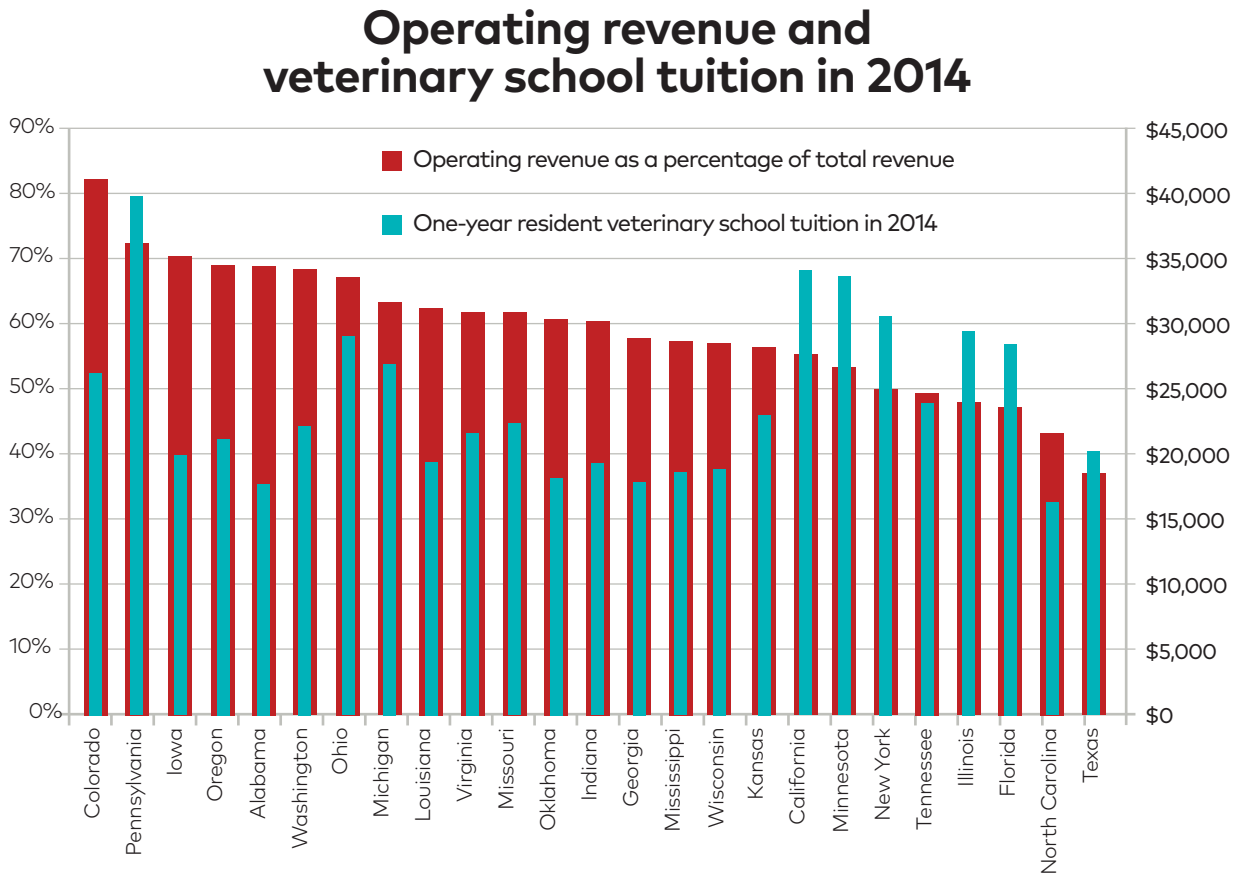
It's easy to presume that veterinary colleges receiving lots of public support can charge lower tuition—but is this presumption true? The AVMA Econ team decided to find out.

The level of debt veterinary students carry into their careers has been the subject of much discussion in the profession, along with the unhealthy debt-to-income ratio (DIR) resulting from high debt loads and relatively low starting salaries. A logical question to ask in these conversations is, why does a veterinary education cost so much? And, by extension, why are some veterinary schools so much more expensive than others? The answer, it turns out, is far from simple.

The cost of tuition and fees at all American Association of Veterinary Medical Colleges (AAVMC) member institutions, both domestic and international, is available on the AAVMC website. The four-year cost per seat ranges from roughly $71,000 to just more than $145,000 for the 24 U.S. veterinary colleges that offer resident tuition. However, when we look at all seats (resident and nonresident), we see that four-year tuition varies from $71,000 to just less than $254,000.

TOBIAS ARHELGER/SHUTTERSTOCK.COM

FIGURE 1



One explanation that has been offered for this extreme variation is the difference in state funding that each veterinary college receives. The greater the level of state funding (so the theory goes), the lower the tuition and fees will be for a four-year program—and the less student debt graduates will have to take on as a result. This would also explain the large discrepancy between the 25 publicly assisted and five non-publicly assisted colleges of veterinary medicine.

Putting theory to the test

So is this explanation supported by the data? We wanted to find out. First, we looked at public support for all four-year public institutions in the United States. We found that in 2014, public funding as a percentage of total revenue (which also includes student tuition, research grants and so on) for these four-year schools ranged from 15 percent in Colorado to 58 percent in Wyoming, according to the National Center for Education Statistics. In other words, Colorado colleges and universities had the lowest level of public funding support, while Wyoming schools had the highest.

So did those veterinary colleges with a high percentage of public support charge lower tutition and fees? Did those with a low percentage of public support charge higher tuition and fees? No. The proportion of revenue from state appropriations had zero impact on resident tuition and fees charged at U.S. colleges of veterinary medicine.

Figure 1 shows this relationship (or lack thereof)—if you know how to look at it. Public funding is categorized as non-operating revenue; operating revenue is what a school receives in exchange for providing educational services (tuition is an example of operating revenue). So schools with higher operating revenue percentages (red bars) will have lower percentages of non-operating revenue (public funding) and, according to our theory, supposedly charge higher tuition (blue bars). So the slope of blue bars would be expected to reflect the slope of the red bars—and as you can see, it clearly doesn't.

So what's really going on?

Because there's no relationship between public support levels and resident tuition rates at the various veterinary colleges, we have to assume that other factors explain the variation in veterinary education costs by college. For one thing, higher education governing bodies may not allocate state appropriations across public institutions equally. In addition, individual institutions don't necessarily allocate public funds across various colleges and programs within the institution equally either.

It's safe to say that, in general, declining public support for all public higher education has contributed to the rise in tuition over the past two decades. But the share of public support each state provides higher education has no relationship to the tuition and fees paid by veterinary students at the 25 publicly assisted veterinary colleges. To identify veterinary colleges with more efficient educational delivery systems, we need more information. This will be important in any efforts the profession makes to reduce the cost of veterinary education.

AVMA | Veterinary Economics

Michael Dicks is director of the AVMA's Veterinary Economics Division.

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Christopher J. Allen, DVM, JD

For your consideration:

The laddered noncompete

New veterinary talent wants noncompete language that won't be unfairly burdensome. Employers want noncompete language that will hold up in court. Could a laddered noncompete serve the diverging interests of both parties?

When a veterinary practice offers a position to an associate veterinarian and provides a contract for her to sign, one of the very first points that doctor is likely to focus on is the noncompete language—and for good reason.

From day one, the veterinarian is burdened by a restrictive covenant lasting a full two years—even if the practice (or the doctor) chooses to end the relationship within just a few months. Regardless of how long the doctor works at that practice, the noncompete term (let's say, for example, a two-year period) will not even begin to run until after the doctor leaves the practice. So if the veterinarian starts at the practice in 2017 and works there for 10 years, that noncompete doesn't expire until 2029.

The practice, on the other hand, can typically lay off or fire that associate veterinarian at any time with as little as 30 days' notice, depending on the contract.

The concerns for the doctor are obvious, but there should be genuine concern on the part of the veterinary practice as well, as there is a real question regarding the enforceability of that two-year noncompete.

Let's say, for example, that the newly hired doctor decides the practice isn't a good fit and departs after only three months. If she goes to work for a competing practice in violation of the noncompete term, the first employer must hope that the terms of the noncompete are enforced—that the judge will look at the circumstances and the contract and decide that a 24-month

ANTONIA GROS/SHUTTERSTOCK.COM

noncompete for a worker who has only been employed a few months is fair enough to pass the "smell test."

In order to explore a better way of serving these competing interests, we'll need to start with an overview of the legal theory in play in this dispute over what a layperson might call simple fairness but that lawyers have termed "consideration."

Let's consider consideration

There is a concept in contract law that defines what's required for a true contractual relationship to be formed. One requirement is a "meeting of the minds," which means that both sides agree to the fundamental terms of the deal. Another requirement is that something be relinquished or given up by both sides. That something is referred to as "consideration." Without consideration, a transfer of goods or services from one party to another is merely a gift, and contract law and the law of gifts are entirely different.

Under common law, consideration may be virtually anything of value. For example, the deed to your house probably starts out with the words, "For one dollar and other good and valuable consideration … " Deeds often don't reveal the actual price of a house, yet deeds must include a reference to some consideration or the transfer of ownership would be void.

Consideration has changed considerably

Today, public policy has made changes in the enforceability of contracts, particularly where human rights and human labor are involved. Many courts and legislatures have intervened in employment relationships and altered the old concept that anything of value may be adequate consideration for an employment contract.

Thus, while it would theoretically constitute an enforceable contract under common law for a Delaware veterinary clinic to offer a one-year employment deal to an associate in exchange for $100,000 and a promise to never practice veterinary medicine east of the Mississippi River for 100 years, even to the legally untrained, that doesn't seem like a fair trade. And in court, that noncompete term would almost certainly collapse.

As is always the case, fair consideration is whatever a judge (or an appellate judge) says it is. And clearly, both sides in an employment contract want the consideration to be fair. The associate wants the noncompetition language in the contract to be reasonable so that she isn't unduly burdened by the commitment, and the employer simply wants it to be fair enough that it won't be thrown out in court. The spot where these two interests meet is the ideal noncompete. To that end, I propose the "laddered" noncompete.

A laddered noncompete provides an inherent benefit to the clinic in that it clearly shows an effort on the part of the employer to be fair.

What is a laddered noncompete?

A laddered noncompete is one that gives the newly hired veterinarian a fair opportunity to assess how well she fits with the new practice without being immediately burdened by a promise not to work elsewhere nearby for a long period of time. Here is how the laddering might work:

The DVM could spend the first two or three months learning the ropes and meeting her coworkers before entering a noncompete commitment. As a practice owner myself, I know it takes a while—maybe a few visits or a couple of recheck appointments—for a client or a family to bond with a new veterinary practitioner. The clinic has little reason to worry that the new doctor will develop such a following in the first few months of employment that she'll be able to divert clients to some other competing clinic should she choose to bow out at the close of the entry period.

In addition to providing a couple of months of "tire-kicking" for both the hiring practice and the new hire, laddering allows the noncompete commitment to be gradually phased in instead of 100 percent locked in all at once. For example, a laddered noncompete could call for a five-mile, 90-day noncompete commitment to take effect after two months of employment. After six months, the commitment could increase to one year. After the end of year one, the noncompete could become fully engaged—to perhaps 18 or 24 months.

What's in it for the employer?

Plenty. First, a laddered noncompete provides an inherent benefit to the veterinary clinic in that it clearly shows an effort on the part of the employer to be fair. Laddering demonstrates that the practice is only interested in protecting its business, not in preventing the hired DVM from being able to earn a living. And when a noncompetition covenant is interpreted by a court, it's much more likely to stand when fairness is built in. It's also less likely to make a potential new hire edgy and uncertain about trying out the job.

A laddered approach offers clinics another benefit that's less obvious. Try to imagine the level of resentment a veterinary associate, burdened by a two-year noncompete, would feel after deciding to leave a new clinic job shortly after being hired because the schedule, work environment or level of practice quality was misrepresented.

That veterinarian would very likely land somewhere outside the noncompete, and then the frustration and feelings of victimization (justified or not) could be shared with other area DVMs at local veterinary association meetings and on the internet. This could have a serious negative impact on the former employer's ability to recruit new talent, perhaps for years to come.

On the other hand, a laddered noncompete allows a new hire to depart on good terms while having an enhanced likelihood of legal enforceability.

With the question of whether a laddered noncompete can serve the diverging interests of both the associate veterinarian and the hiring clinic answered, this question remains: Will anyone be willing to give it a try?

Dr. Christopher Allen is president of Associates in Veterinary Law PC, which provides legal and consulting services to veterinarians. Call (607) 754-1510 or email info@veterinarylaw.com.

Banfield to provide debt relief for veterinarians

National veterinary practice announces program to help ease financial strain for its more than 3,500 doctors.

Banfield Pet Hospital has launched a new debt-relief program for its veterinarians.

"High levels of veterinary student debt are plaguing the industry, and Banfield is committed to helping veterinarians address this significant burden," said Daniel Aja, DVM, Banfield's senior vice president and chief medical officer, in a media release. "We're investing in the new Banfield Veterinary Student Debt Relief Pilot Program to support our doctors first and foremost—but also set the bar for the veterinary profession to help address this industry-wide issue."

The new Banfield Veterinary Student Debt Relief Pilot Program for will include three main elements:

1. A low-interest refinancing option with a supplementary 0.25 percent interest-rate reduction from a third-party financial institution.

2. A monthly student loan contribution of $150 paid by Banfield directly on qualifying student loans.

3. A one-time $2,500 payment for each qualifying Banfield student program in which the doctor participates prior to graduating.

The program is intended to begin to help relieve financial burdens and promote the financial health and well-being of Banfield doctors, the release states. It is designed to help doctors focus on what matters most to them—providing high-quality care to pets. Other health and well-being strategies for Banfield doctors include:

- comprehensive benefits
- programs that focus on mind and body, as well as financial, career and community well-being
- flexible schedules
- continuing education funds
- Banfield-sponsored industry memberships
- 100 percent practice-paid partial income replacement for full-time associates to cover illness, pregnancy and unexpected life events
- 100 percent practice-paid life insurance coverage.

Photos: Banfield comes to the aid of pets in Puerto Rico

Veterinarians and team members, with the help of Banfield's charitable arm, have been working to keep pets on the island safe and healthy in the wake of disaster.

Medications and vaccinations donated by the Banfield Foundation arrive at Isla Grande Airport in San Juan, Puerto Rico, following the devastation of Hurricane Maria.

Two of the four Banfield hospitals in Puerto Rico have remained open in the wake of Hurricane Maria in order to provide free care to pets on the island, according to a recent Banfield report. The Banfield Pet Hospital in Bayamon, Puerto Rico, was one of the first veterinary hospitals to open after Hurricane Maria, where residents lined up as early as 5 a.m. for pets to receive free care. The hospitals' teams have treated more than 2,000 pets to date, administering thousands of tests for zoonotic diseases such as rabies and leptospirosis and providing medications, heartworm prevention and flea and tick products for animals affected by the massive destruction resulting from the hurricane, which some sources have said will total $90 billion in monetary damage.

Banfield's charitable arm, the Banfield Foundation, has donated $60,000 in disaster relief grants and $50,000 in medication to local non-Banfield veterinarians helping pets in remote areas, Banfield says.

More than $50,000 in medications and vaccinations donated by Banfield Foundation to the Miami Veterinary Foundation will be used in free veterinary clinics in remote parts of Puerto Rico. To see more photos vist **dvm360.com/BanfieldPuertoRico**.

Banfield Pet Hospital associates in Bayamon, Puerto Rico, treat local pets like Cereza. Michelle Biello, DVM, and veterinary assistant Yanice Quiles smile with Cereza while owners Carmen Colon, Felix Rodriguez and Jeoliness Molina observe.

A chronicle of a vet's life—updated

Inspired by James Herriot, Dr. P.J. Miller decided to recount his adventures as a veterinarian in the modern age.

Growing up in New York City. Receiving his degree from the Royal School of Veterinary Studies in Edinburgh, Scotland. Running a veterinary practice in Florida. How can there not be a load of stories inside such a swath of experience?

And P.J. Miller, DVM, has recorded just such stories in his book *Cute Poodles, Sweet Old Ladies and Hugs: Veterinary Tales*. The tales include colorful clients, wisecracking hospital staff and pets that aren't always friendly. (You can relate a little to that, right?)

We asked Dr. Miller about the inspiration for his book. "Like a lot of veterinarians I was a big fan of James Herriot. He set the bar that may never be reached again," he says. "When I embarked on writing this book, it was to give young adults an insight as to what it was really like to be a veterinarian."

As he started actually capturing his stories, Dr. Miller's focus switched up a bit. "It transformed and became more for adults," he says. "I feel it gives the general public a look into what we, as well as our staff, go through on a daily basis. We face many challenges as veterinarians, in particular dealing with the general public. In this book I employed a great deal of humor to tell my story."

About that Herriot bar: "I am no James Herriot and was skeptical about the response my book would get. However, I have been blown away by the positive response and feedback it has been getting," says Dr. Miller. "I enjoyed writing it, and there may be a part two in the future."

As he percolates on his next book, Dr. Miller continues as chief of staff at Merritt Animal Clinic in Eustis, Florida, and lives with his wife and two children. He loves all animals, but with his twist on all creatures great and small, he says he's partial to bulldogs, Chihuahuas and cats that act like dogs. And like most transplanted New Yorkers, he's still looking for that perfect slice of pizza.

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No hoof, no horse: Ending the crippling effects of laminitis

With less than three years to go, will researchers meet the ambitious goal of Vision 2020—to conquer laminitis? *By Ed Kane, PhD*

Laminitis—the crippling disease from damage to the hoof's sensitive laminae—has been a scourge for ages, but it may soon be overcome. It is estimated that 15 percent of horses in the U.S. are afflicted by laminitis in their lifetime. Up to 75 percent of those affected eventually develop severe or chronic lameness and debilitation.

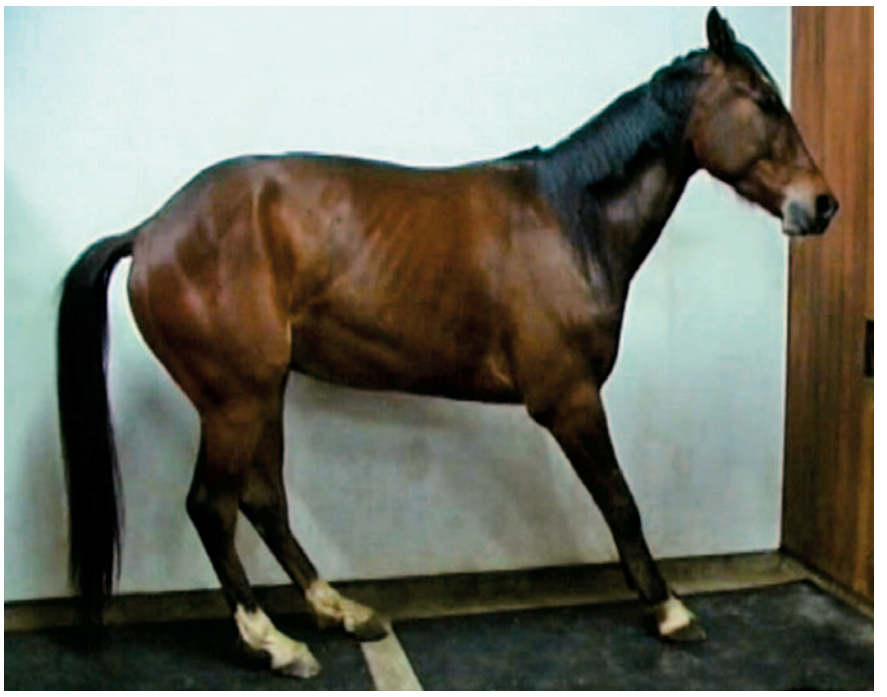
In 1989, we lost Secretariat. In 2002, we lost Sunday Silence. In 2008, we lost Barbaro. The efforts to save Barbaro brought laminitis into the spotlight, raised public awareness about this dreaded disease's impact on individual horses and the equine industry, and emphasized the need to step up research.

Now in 2017, there is reason for hope. Veterinarians at major universities worldwide are working on and inching closer to a cure.

"I've studied laminitis for nearly 20 years, and I'm finally becoming optimistic," says Andrew van Eps, BVSc, PhD, associate professor of equine musculoskeletal research at the University of Pennsylvania School of Veterinary Medicine's New Bolton Center.

The Vision 2020 effort of the veterinary community is working to make "meaningful progress toward conquering laminitis by 2020," according to Rustin Moore, DVM, PhD, DACVS, chair of the Department of Veterinary Clinical Sciences at The Ohio State University College of Veterinary Medicine.[1]

So how are researchers doing?



A horse with a classic laminitis stance.

Getting closer

"When I look back at when Barbaro was at New Bolton Center [2007-2008], I'm amazed at how little we knew about laminitis," Dr. van Eps states. "During those years, real evidence-based scientific research on the mechanisms of different forms of laminitis was just gaining momentum. We were just starting to come to grips with the fact that different types of laminitis existed."

Dr. van Eps explains that there are three different etiologies:

- **Endocrinopathic laminitis**, which is associated with endocrine dysfunction and increased blood insulin
- **Supporting-limb laminitis**, which develops in the contralateral limb of horses with a painful limb condition
- **Sepsis-associated laminitis**, which occurs secondary to systemic inflammatory disease.

According to Dr. van Eps, equine veterinarians are better equipped to intervene because they're more aware of the mechanisms involved in each type of laminitis.

The New Bolton Center team—which consists of Dr. van Eps; senior research investigator Hannah Galantino-Homer, VMD, PhD; and associate pathology professor Julie Engiles, VMD—is actively researching laminitis pathophysiology. "We have the benefit of some strong collaborations with researchers like Belknap at OSU," Dr. van Eps says. James Belknap, DVM, PhD, DACVS, has been researching laminitis mechanisms at the tissue level at The Ohio State University.

Endocrinopathic laminitis

Dr. van Eps says researchers are close to identifying why laminitis occurs secondary to endocrine disorders that lead to increased blood insulin—conditions such as Cushing's disease, pituitary pars intermedia dysfunction and equine metabolic syndrome. "Some horses and ponies inherently produce a lot of insulin in response to ingested carbohydrates, particularly from grazing pasture," he says. "We're close to identifying why high blood insulin causes the changes in the lamellar tissue of the foot itself, which creates the disease. … We're looking at different ways to directly block those processes from happening."

A major part of that approach is to

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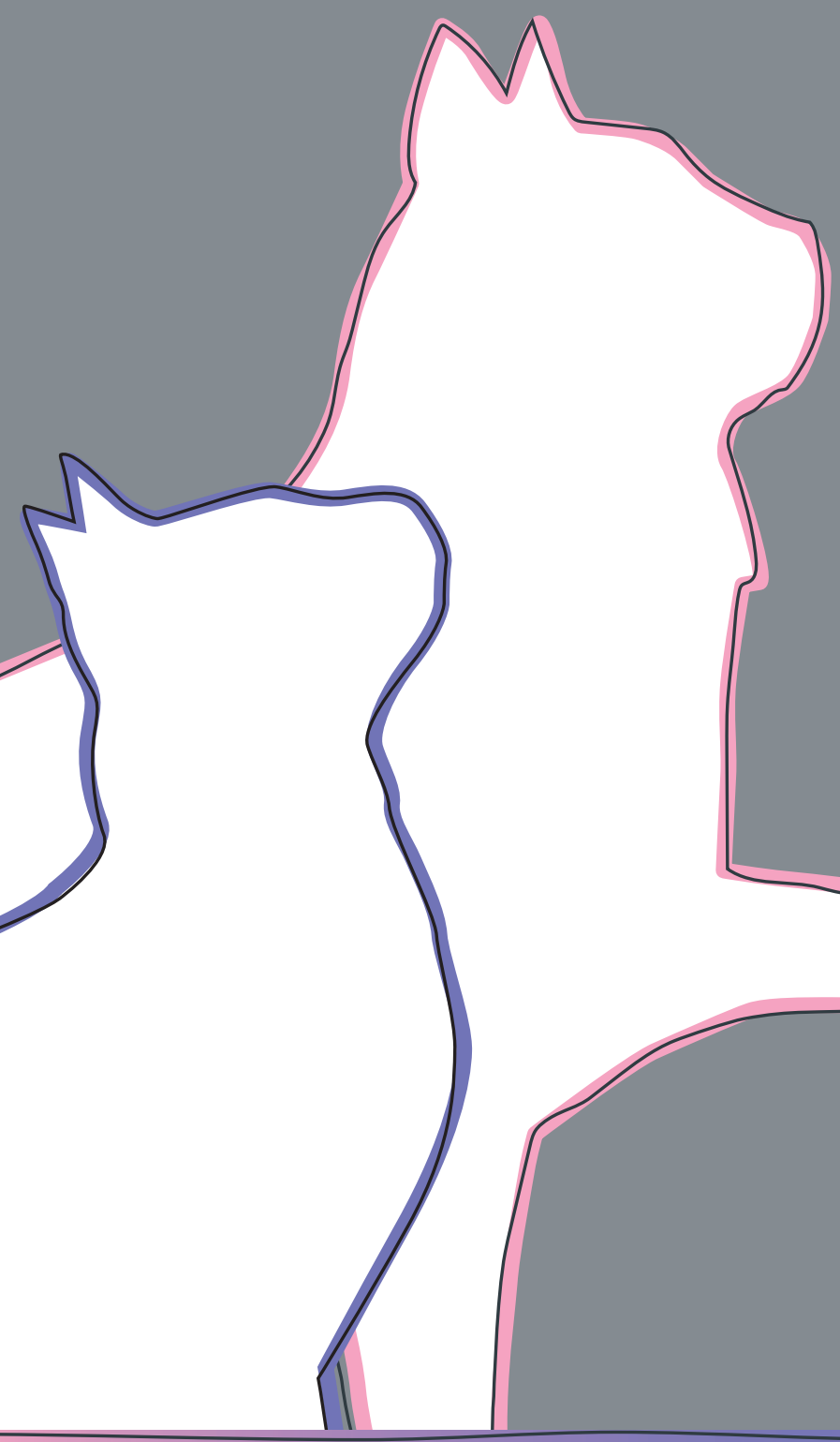

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address the underlying endocrine issue. Now Dr. van Eps thinks it's possible even to reverse early laminitic changes in some horses and ponies if the issue is caught early and the underlying endocrine disease is carefully controlled.

Supporting-limb laminitis

Dr. van Eps is also optimistic about being able to effectively intervene and prevent supporting-limb laminitis in clinical cases. This is the kind of laminitis that affected Barbaro. "Preventive strategies are more achievable than we had previously thought," he says.

Researchers are learning that when horses preferentially place weight on a limb, it directly interferes with blood flow to the hoof (see Figure 1). To properly perfuse the lamellar tissue in the hoof, the horse must cycle weight on and off the limb, Dr. van Eps explains. When a horse puts a lot of weight on a leg, it appears that they need to cycle that leg even more frequently than normal. Clinicians can help with that.

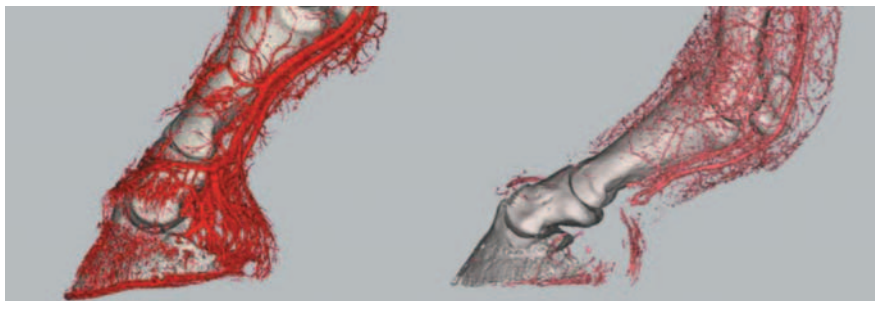

Figure 1. CT scan contrast arteriography of an unloaded (left) and loaded (right) limb. This demonstrates the effects of weightbearing on vascular patency in the equine distal limb relevant to supporting-limb laminitis.

"We're starting to recognize effective interventions to prevent supporting-limb laminitis and are currently testing these," Dr. van Eps says. "These involve providing partial, intermittent relief of weight-bearing on the support limb."

Dr. van Eps says preventing supporting-limb laminitis can help orthopedic surgeons truly save many injured horses. "Surgeons like [Dean Richardson, DVM, DACVS, of Penn's New Bolton Center] can fix jigsaw-puzzle fractures like Barbaro's," he says. "But despite this amazing work, these horses still succumb to supporting-limb laminitis. I was a resident when Barbaro was at New Bolton Center. A lot of what I do today and much of the research my colleagues have done on supporting-limb laminitis are a result of Barbaro and his owners Fittingly, this work supports his legacy."

Sepsis-associated laminitis

The laminitis type that has been studied most is the kind that develops in horses that are systemically sick with endotoxemia or sepsis. In people with sepsis, organ failure is common. And although septic people don't develop laminitis, they do develop lung injury or kidney failure.

Equine practitioners do know that this type of laminitis can often be prevented by cooling the feet. There is good clinical evidence for this approach, particularly in cases of diarrhea and colitis. "We recently published studies that looked closer at the mechanism that explains why cryotherapy works," Dr. van Eps says. "It probably has to do with slowing the metabolic rate within the lamellar tissue itself. We used to think cryotherapy simply inhibited inflammation, but our recent research shows that's not necessarily the case.

Although it seems that cryotherapy should be a fairly easy procedure to perform, Dr. van Eps notes that it's actually quite difficult to administer continuously over long periods.

Dr. van Eps witnessed the transition from those days when cooling the feet was not routine and newer treatments had not been developed for horses with diarrhea, pneumonia or retained fetal membranes. "About 25 percent of those horses would founder," he says. "Now it's much less common for these horses to develop severe laminitis if they receive appropriate treatment. We have improved our treatment of the primary disease, but I think cooling the feet has also helped stop laminitis in those cases."

Dr. van Eps notes that he has seen dramatic reductions in inflammatory cytokine production occur when researchers cooled horses' feet experimentally. But when his team applied foot cooling as horses began to show the onset of clinical laminitis, "it didn't affect the inflammatory cytokines at all," he says. Still, there was a dramatic effect in preventing progression.

Dr. van Eps says that in human sepsis, researchers think systemic disease may affect the energy metabolism of tissues in various organs, resulting in dysfunction.

The promise of research

Dr. van Eps is encouraged that clinicians are close to being able to diagnose the different forms of laminitis earlier than they could previously and to treat, prevent and even reverse the disease.

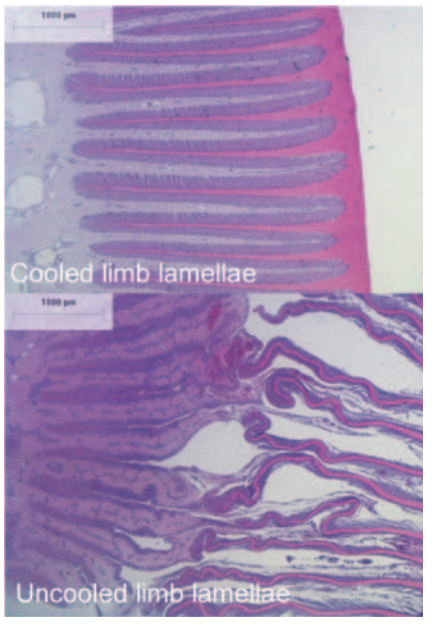

Figure 2. Histology shows remarkable preservation of the lamellae in the cooled limb (top) compared with the uncooled limb (bottom). Research is uncovering the mechanisms by which cooling exerts its protective effects.

Researchers are zeroing in on the cellular mechanisms involved—processes that disrupt the normal attachment of lamellar tissue to hoof and bone.

What's more, awareness of the different types of laminitis has changed the way veterinarians think about clinical cases. "With most endocrine-associated laminitis in horses and ponies, early intervention and tight control of the underlying endocrine issue is the absolute key," Dr. van Eps says. "With sick horses, we can prevent laminitis by cooling their feet, even though we still don't know exactly why this works."

In the years since Barbaro's death, much has been discovered about laminitis, and practitioners are taking steps to successfully manage it in clinical settings. "This is the first time I've been so optimistic about finally enabling the equine veterinary profession, as Vision 2020 states, to 'conquer the different forms of laminitis by 2020,'" Dr. van Eps says. "It's really exciting!"

References

References and suggested reading for this article can be found at **dvm360.com/KaneLaminitis**.

Acknowledgment: Dr. van Eps and his team would like to thank the Grayson-Jockey Club Research Foundation, which has funded laminitis research at the University of Pennsylvania New Bolton Center since 2009.

Ed Kane, PhD, is a researcher, author and editor in Seattle, Washington.

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MEDICINE | Endocrinology

Feline hypoadrenocorticism: Yes, our feline friends get Addison's disease too

While there's no cure for this adrenal condition, cats can achieve their full life expectancy with appropriate treatment.

By David Bruyette, DVM, DACVIM

Think Addison's is just a dog disease? Not so fast—while it's uncommon relative to the incidence in dogs, cats can have primary hypoadrenocorticism too. The disease tends to affect middle-aged cats but can show up in felines anywhere from 1.5 to 14 years of age. No sex or breed seems to be affected more than another.[1-3]

Diagnosis

The most common problems that show up in the history are lethargy, anorexia and weight loss. Unlike dogs with adrenal insufficiency, cats with Addison's disease don't tend to experience diarrhea, but 40% have histories of episodic vomiting.[4-12] Similar to hypoadrenocorticism in dogs, cats often experience waxing and waning of clinical disease, including temporary "remissions" associated with parenteral fluid or corticosteroid administration.

The most common findings on physical examination include depression, weakness and mild to severe dehydration. Up to 40% of patients present with severe shock, weak pulses, slow capillary refill times and extreme weakness or collapse.[1-3] Cats tend to experience clinical signs for a median of 14 days before hypoadrenocorticism is diagnosed, with the range of duration spanning five to 100 days.

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Clinicopathologic findings in cats with primary hypoadrenocorticism parallel the patterns seen in dogs. Most cats show serum electrolyte changes characteristic of mineralocorticoid deficiency. Serum sodium:potassium ratios are less than 24 (range 17.9-23.7) with hyponatremia, hypochloremia and hyperkalemia. All cats have mild to severe azotemia (blood urea nitrogen concentration = 31 to 80 mg/dl [normal range = 5 to 30 mg/dl], creatinine concentration = 1.6 to 6 mg/dl [normal range = 0.5 to 1.5 mg/dl]) and hyperphosphatemia (inorganic phosphorus concentration = 6.1 to 9.1 mg/dl [normal range 3 to 6 mg/dl]). Hypercalcemia has been noted in one cat.[2] Keep in mind that electrolyte abnormalities similar to those associated with Addison's disease can also occur in a variety of clinical disorders in cats.[13]

Despite signs of dehydration and prerenal azotemia, urine specific gravity tends to be greater than 1.030 in only 40% of cats.[2] The loss of renal medullary solutes, particularly sodium, is thought to result in impaired renal concentrating ability. Distinguishing hypoadrenocorticism from acute or chronic renal failure is critical to establishing an appropriate prognosis for clients.

Treatment

Long-term management of cats with primary hypoadrenocorticism requires lifetime mineralocorticoid and glucocorticoid supplementation. Oral administration of fludrocortisone acetate (0.1 mg/day) or intramuscular injections of desoxycorticosterone pivalate (DOCP; 10 to 12.5 mg/month) have been successful in maintaining cats with Addison's disease.

Adjust the dose of mineralocorticoid as needed based on follow-up serum electrolyte concentrations monitored every one to two weeks during the initial maintenance period. Normal electrolyte parameters two weeks after DOCP injection suggest adequate dosing but do not provide information concerning the duration of action of each injection. Eighty percent of dogs require DOCP more frequently than every 30 days (5% need to receive DOCP every three weeks), so frequent sampling during the early management period is recommended.[14]

Prednisone (1.25 mg orally once a day) or intramuscular methylprednisolone acetate (10 mg once a month), can be used to provide adequate long-term glucocorticoid supplementation. Cats surviving the initial adrenal crisis can be managed successfully for many years. Sixty percent of cats diagnosed with primary hypoadrenocorticism are alive a median of 2.75 years after diagnosis.[2] With appropriate glucocorticoid and mineralocorticoid supplementation, cats with adrenocortical insufficiency should have a normal life expectancy.

References

References for this article can be found at **dvm360.com/hypocat**.

Dr. David Bruyette is currently the chief medical officer at Anivive Lifesciences and a frequent speaker at the Fetch dvm360 veterinary conferences.

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New review helps illuminate cognitive dysfunction syndrome

Without cold, hard lab numbers and clear scientific proof, diagnosing neurologic conditions in your patients can be tough to describe, and without owner buy-in, they can be tough to treat. However, a recent review provides a starting point for giving clients objective evidence. *By Kathryn Primm, DVM*

Do you ever see ads for drugs treating various veterinary diseases and syndromes and think, "I've never even heard of X Disease—Are they making this whole thing up just to sell medications?!"

This thought has crept into my mind many times. It's not that I'm trying to be overly skeptical (or cynical), but some diseases and syndromes are easier to demonstrate than others. When I diagnose kidney failure, for example, I can point to lab results to substantiate my case. Numbers help me feel empowered to have a straightforward discussion with the client about the patient's condition. Who can argue with cold, hard facts?

Diagnosing cognitive dysfunction syndrome (CDS), on the other hand, is different, because living patients cannot be definitively diagnosed. It's a tough conversation to have with clients when my arsenal of proof is devoid of black and white numbers, or even just some clear scientific evidence that supports the diagnosis. But CDS is real, and a recent article in *Veterinary Pathology* can help illuminate the condition for both you and your clients.

Ch-ch-changes in the brain

Though the aging process is associated with several changes, those that occur in the brain are especially important because of the behavioral and cognitive effects they can cause. And as veterinarians, we need to understand these changes in order to help our clients improve the lives of their aging pets.

Age-related cognitive decline that cannot be attributed to other medical conditions, such as sensory deficit, infection or cancer, is termed CDS in veterinary medicine. It is analogous to Alzheimer's disease in people.

Some consider CDS to be a reasonable model for studying Alzheimer's disease because the patterns of impairment (such as memory loss) are comparable, as are the histopathologic changes, like amyloid plaques and cerebral amyloid angiopathy.

Each of these dogs is not like the other

There is a tremendous amount of variability in how dogs progress as they age. Some show cognitive decline while others continue to function like younger animals. For example, a study of cognitive dysfunction in older beagles produced three different categories: successful agers, impaired dogs and severely impaired dogs.[1]

CDS has only recently been recognized in cats. One study estimates that over one-fourth of cats between the ages of 11 and 14 experience cognitive decline, and the proportion swells to over one-half for cats 15 and older.[2] Although cognitive dysfunction has not been documented in horses, many think they experience it, as well.

Clients with older pets may mention observing disorientation, sleep cycle disruption, inappropriate urination and activity changes in their cats and dogs. It is critical to rule out non-age-related causes of these changes before CDS can be diagnosed.

While treatment options are not within the scope of this review, it provided much-needed (and appreciated) evidence that CDS is scientifically demonstrated, documenting several cellular and pathologic changes in the brains of affected animals and people.

Exam room application

CDS can be less concrete, but it deserves recognition, discussion and further research. As we learn more about age-related cognitive decline in both animals and people, we may be able to develop more effective management and treatment options. This review has helped illuminate the CDS diagnosis to me so I can approach the topic with more confidence.

Featured reference

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Dr. Kathryn Primm owns Applebrook Animal Hospital in Ooltewah, Tennessee, and has a growing career as a writer, speaker and online voice for veterinarians and pet owners alike. Dr. Primm is the author of Tennessee Tails: Pets and Their People. *She was also the nation's first Fear Free certified professional.*

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Aggression is not a diagnosis

According to behavior expert and Fetch dvm360 speaker Dr. John Ciribassi, many clients (and veterinary professionals!) fail to recognize aggression for what it really is—a clinical sign.

Fetch dvm360 conference speaker John Ciribassi, DVM, DACVB, says that one of the most common behavior misconceptions he hears from clients and fellow veterinarians is the view that aggression is a diagnosis rather than a sign of an underlying problem.

Dr. Ciribassi makes an analogy to vomit—presumably so you can get a nice mental picture: "You don't say the diagnosis is vomiting. You say the symptom is vomiting. Now we have to find out, why is that occurring? Same with aggression," he says.

According to Dr. Ciribassi, thinking of aggression as a clinical sign forces us to dig deeper to determine its causes, such as fear, territoriality or a maternal problem.

"Your goal as a veterinary practitioner is to diagnose why that symptom is occurring and then address the cause," he says.

This paradigm applies to both dogs and cats, though Dr. Ciribassi says the range of causes of aggression as a clinical sign is wider in dogs than in cats.

"But it's the same idea," he says. "Cats display aggression for a few different reasons—fear and territoriality are probably the biggest. And then we can see pain as well in both species."

Go to **dvm360.com/aggressive-sign** to watch Dr. Sarah Wooten's interview with Dr. Ciribassi on this topic from this year's Fetch dvm360 conference in Kansas City.

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Keep current on calorie counts

No, calorie content is not required (yet) on pet food labels. But you can still help your clients figure out caloric intake in order to help them make good feeding choices.

As a veterinary professional, you know how important it is for pet owners to make good feeding choices for their pets. But, of course, it's much harder for pet owners to discern caloric intake for their fur babies than it is for you. Calories from treats and table foods shouldn't make up more than 10 percent of a pet's total caloric intake, according to nutrition expert and Fetch dvm360 educator Martha Cline, DVM, DACVN. "So if calorie information isn't available," she says, "how are pet owners supposed to determine how much is too much?"

Due to recent standards set by the Association of American Feed Control Officials (AAFCO), it's become easier for pet owners and veterinary professionals alike to discern ideal amounts. "While it's the state that regulates all animal feed and pet food," AAFCO states on its website, "AAFCO has determined the nutritional standards for complete and balanced pet food."

Along with this, AAFCO has provided an accessible way to calculate calorie content on pet food labels. "Where a label calorie content statement is required or simply desirable, it may be calculated from the same proximate analysis data used for setting guarantees," AAFCO states on its website. "The calorie content of a good is dependent on the amounts of crude protein, crude fat and carbohydrate in the product." In other words, whether or not the pet food label spells out caloric content, there's still a way to figure it out.

However, Dr. Cline knows that many pet owners won't take the time to calculate this. "I find that many pet owners feed by volume and not by calories," she says. "For example, a client will always feed her dog one cup of food twice daily, regardless of the type of food they're buying." According to Dr. Cline, the calorie content of dry dog food can start at 300 calories (kcal) per cup—approaching up to 600 calories in some cases. "If they're just switching around from food to food, this can lead to over- or underfeeding a pet."

Which is where veterinarians come in. "Knowing how much an animal is eating in terms of calories is helpful for managing various medical conditions if they involve weight loss or gain," Dr. Cline says, "so we as veterinarians should know how to adjust the feedings."

When in doubt, Dr. Cline wants veterinary clients to know it's better to bypass food where calorie content is a mystery, rather than try to calculate crude content in the middle of the pet food aisle. "I tell the owner that if the pet food or treat they pick up doesn't have calories listed on the label," she says, "I consider it a red flag and tell them they should put it back. There are plenty of other good options."

Is there an optimal food type for cats with idiopathic cystitis?

Feeding a cystitis-prevention diet may be of benefit, but the exact food components responsible for the beneficial effect are unclear. *By Jennifer L. Garcia, DVM, DACVIM*

Feline idiopathic cystitis (FIC) is a common cause of hematuria, dysuria, pollakiuria and periuria in both male and female cats. Few agents and procedures proposed to manage cats with FIC have been evaluated in clinical trials. Dietary management specifically has only been evaluated in two clinical studies. The authors of this randomized, controlled clinical trial evaluated the efficacy of a commercially available multipurpose, cystitis-prevention food compared with a control diet for the management of cats with FIC.

Putting a cystitis-prevention diet to the test

The authors enrolled 31 client-owned cats in which FIC was diagnosed between June 2009 and October 2010. FIC was diagnosed based on two or more compatible clinical signs within the preceding seven days (e.g. dysuria, hematuria, pollakiuria, stranguria) as well as evaluation of a complete blood count (CBC), serum chemistry profile, FeLV and FIV testing, urinalysis including a pH determination by meter, quantitative aerobic bacterial urine

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Reference: 1. Data on file. Vet Innovations, Inc., Pet Owner Field Trial, 10/17.

culture, survey abdominal radiography and abdominal ultrasonography. All cats were between 1 and 8 years of age, housed indoors, neutered, and current on routine vaccinations. Excluded from the study were cats with certain medical and nutritional interventions within the previous seven to 30 days; evidence of major organ disease, urethral obstruction or vertebral disease; another identifiable cause of lower urinary tract (LUT) signs; persistent LUT signs of 14 days' duration; or a pattern of voiding on vertical surfaces, as were cats that resided in a home with more than one additional cat.

The researchers randomized the cats to receive either a cystitis-prevention diet (Prescription Diet c/d Multicare Feline Dry) or a control diet custom manufactured to mimic commonly available commercial adult feline maintenance foods. The owners could choose to feed either dry or wet formulations of the foods, and the diets differed only in antioxidant, fatty acid and mineral profiles. The clients and clinical care team were masked as to which cats were fed which food.

In addition to providing ample amounts of fresh water, the owners were instructed to feed solely the study diet (following a seven-day transition period) for 12 months. The owners were also instructed to record their daily observations of five clinical signs—dysuria, hematuria, periuria, pollakiuria and stranguria. If two or more LUT signs were noted within 24 hours, immediate reevaluation was recommended. A physical examination, urinalysis (including pH) and urine bacterial culture were performed at one, three, six, nine and 12 months. Abdominal radiographs were repeated at six and 12 months, and a CBC and serum chemistry profile were repeated at 12 months.

After improvement in clinical signs, the presence of two or more LUT signs on any given day during the study period was considered evidence of recurrence. The researchers note that this approach was taken in part to mitigate the effects of behavioral disorders (periuria) that may persist even in light of resolution of underlying cystitis.

Did the prevention diet live up to its name?

The most common clinical sign noted in all cats was periuria, while hematuria in the absence of pyuria was the most common urinalysis abnormality found on urinalysis. The researchers noted no significant differences between the two groups in terms of diet formulation (wet or dry), age, sex, number of cats in the household, body weight, body condition score, history of previous episodes of LUT signs, history of previous consumption of prevention diets, clinical signs or duration of clinical signs before enrollment. There was also no significant difference between the groups with respect to the presence of environmental stressors or environmental enrichment strategies (e.g. scratching posts, window perches) over the course of the study.

The researchers found that the incidence rate of recurrent episodes was almost eight times lower among cats fed the prevention diet compared with those in the control diet group (relative risk, 7.89; 95% confidence interval, 3.58 to 17.36; P = 0.013). The researchers note, however, that not all cats with recurrent clinical signs returned for reevaluation, so whether another cause for the LUT signs was present could not be determined in many instances.

The authors also found that cats in the control food group were more likely to require opioid analgesics at some point during the clinical study (P = 0.02).

In addition, the researchers found that "[t]he mean incidence rate of episodes of individual signs for hematuria, dysuria and stranguria was significantly lower in cats fed prevention food, compared with cats fed control food."

Take-home message

Feeding a cystitis-prevention diet may be of benefit in reducing the rate of recurrent episodes of FIC as well as diminishing the occurrence of individual LUT signs such as hematuria, dysuria and stranguria. But the exact food components responsible for the beneficial effects remain unclear.

Kruger JM, Lulich JP, MacLeay J, et al. Comparison of foods with differing nutritional profiles for long-term management of acute nonobstructive idiopathic cystitis in cats. *J Am Vet Med Assoc* 2015;247(5):508-517.

Dr. Jennifer Garcia is a veterinary internal medicine consultant in Houston, Texas.

Question: What do disappearing insects, pollution, the black plague and veterinary practice have in common?

Answer: One Health. Such a significant movement—and you're a vital part!

By Jennifer Gaumnitz, Senior Content Specialist

Every year on November 3, International One Health Day is observed around the world. With this in mind, we at dvm360 want to take a moment to remind you of how important you and your team are to the interdisciplinary collaboration that is at the core of the One Health movement.

Veterinarians and their teams are involved in many of the areas that fall under the One Health umbrella. You provide care for cats, dogs, horses and exotic pets to prevent zoonoses from spreading to their human families and to preserve the human-animal bond for as many years as possible. You know a lot about vector-borne and parasitic infections and how to prevent them. You strive to ensure food safety and are at the forefront of combating antimicrobial resistance. You work on technology and procedures that one day may translate to human medicine, or you're working to adapt human medical advances to the veterinary field.

And you see One Health connections everywhere you look. When you see the science bulletin "'This is very alarming!': Flying insects vanish from nature preserves" from the *Washington Post*, you're knowledgeable enough to understand the implications—and you see the connections. Or when you see the news article "Pollution linked to 9 million deaths worldwide each year" from *CBS News*, you're concerned about pollution's effects on animals as well as humanity—and you see the connections. Or when you read about current events like the deadly black plague outbreak in Madagascar, you know Yersinia is usually transmitted through flea bites and rodents are involved—and you see the connections.

Should you ever doubt the importance of your role in One Health, take 13 minutes to watch the inspiring TEDx Talk "The One Health Movement; Animals, Environment and Us," by Ralph Richardson, DVM, ACVIM (internal medicine and oncology), former dean of the College of Veterinary Medicine at Kansas State University.

We also suggest you educate clients on how your veterinary team is an integral part of the larger One Health movement. Get the conversation started by sharing one of these short, engaging videos via your practice's social media channels:

> "One World, One Health," a fun 2.5-minute animated short by HealthforAnimals.

> "One Health: From Concept to Action," by the Centers for Disease Control and Prevention (CDC), is 2.5 minutes and features photos with catchy music.

We at dvm360 think your daily work is vital to the One Health movement, and with International One Health Day still fresh in our minds, we want that realization to really and truly sink in.

For more One Health content and links to the videos and articles mentioned in this piece, visit **dvm360.com/moreonehealth**.

Dr. Marty Becker with Temple Grandin, who is bringing her expertise in animal welfare to the Fear Free movement.

Temple Grandin joins Fear Free advisory board

A longtime advocate for the well-being of food animals, Grandin is now lending her expertise to the veterinary environment.

The Fear Free Advisory Group recently welcomed a new member: animal welfare and autism advocate Temple Grandin, PhD, according to an article on the organization's website.

Fear Free founder Marty Becker, DVM, who describes himself as a longtime admirer of Grandin's work in improving the lives of food animals, saw Grandin as a natural partner in his efforts to advance animal well-being in the veterinary environment.

"Temple is the epitome of someone who combines both science and soul," Dr. Becker says in the article. "She has a gift for working with and understanding animals. It's not just her gift; she's an experienced researcher."

Grandin has wasted no time in sharing her unique combination of science and soul with her fellow board members. According to Grandin, the No. 1 mistake veterinary professionals are making is stripping familiar scents from pets and replacing them with scents that are offensive or threatening, the article says.

"Temple is the epitome of someone who combines both science and soul."
—Dr. Marty Becker

Grandin's solution: Have clients bring a pet's favorite soft toy or blanket from home to veterinary visits. Think of it as the animal version of a child's security blanket.

The second biggest mistake Grandin notes is keeping pets off-balance, which makes them uncomfortable. Exam tables are the main culprit here.

"For a pet on the exam table, it's probably a lot like what we might feel like if we were elevated off the ground onto a slippery surface and were standing on roller skates," Dr. Becker says in the article.

In addition to avoiding the exam table, Grandin suggests incorporating bathmats to help keep pets balanced as they are soft, nonslip and washable.

Grandin's last piece of advice to the Fear Free Advisory Group is to pay attention to animals' nonverbal cues. Animals, she said, are constantly communicating whether they're content or fearful, and veterinary professionals can use this information to determine how to best interact.

PHOTO COURTESY OF DR. MARTY BECKER

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Zipwhip's two-way, business-texting platform enables veterinary hospitals and clinics to send and receive texts from their existing office landlines, VoIP or toll-free phone numbers. This eliminates phone tag during the busy work day and unnecessary hold time for clients who want to quickly schedule an appointment, have a prescription refilled or ask a simple question about their pet's health. Veterinary practices can also strengthen client relationships by sharing high-quality photos of pets to keep owners updated during procedures or overnight stays.

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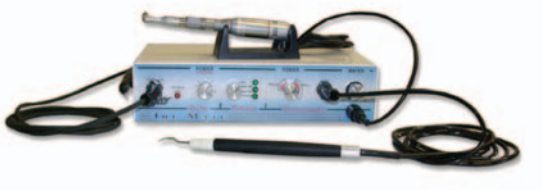

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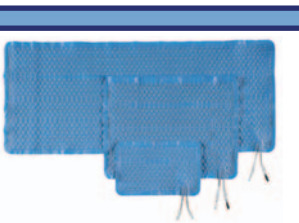

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The stethoscope: Not just a doc prop

A stethoscope at the ready is a sign of progress in veterinary medicine, says Dr. Miller, as it encourages frequent use and thus more familiarization with what's normal and what isn't.

Before I entered this profession, and during the decade after my graduation, most veterinarians did not visibly wear a stethoscope. The small animal practitioners kept them in an examining room drawer. The large animal practitioners kept them in their vehicles' dashboard glove boxes. The stethoscopes were removed from concealment only when needed for thoracic or abdominal examination.

Why I always had one at the ready

When I began practice myself, I realized that recognizing the abnormal requires a thorough knowledge of the normal, so I always carried my stethoscope. On large animal calls, it was in my pocket. In the small animal office, it was in my white examining gown pocket. I tried to use it on every patient, even if just for a routine vaccination.

Today when I visit a veterinary practice or when I watch the increasingly popular and varied television programs featuring real veterinary practices, I see that the doctors invariably have their stethoscopes draped around their necks. This is good. It encourages more frequent use and more familiarization with the variations that occur within normalcy.

It's the same as understanding an animal's gait. You must know the variations in normal gaits to recognize the slightly abnormal. For example, I recall an experience wherein four colleagues, all in separate practices, were asked simultaneously to evaluate the gait of an extremely valuable stallion. Two of us recognized a very slight right hind lameness. The other two (significantly younger and probably having better eyesight) could not see the lameness.

Milking a moment of client confusion

Always wearing my stethoscope inevitably led to some amusing incidents. For example, when a 13-year-old girl fainted in the exam room while watching an IV injection and hit her head on the floor, I rushed her to a local physician. (We did not yet have a hospital in town.)

The physician said to leave her in his office until he felt it was safe to send her home. I gratefully rushed out of his exam room, and as I passed the reception desk with my white gown and my stethoscope fluttering, the receptionist was admitting a patient. She said, "Mrs. McCarthy, do you want to see Dr. Larsen or Dr. Brisbane?"

Mrs. McCarthy replied, "It doesn't matter."

Then, as I passed, she added, "Except him—he's a vet! He treats our horses and dogs! What are you doing here, Dr. Miller?"

"I'm only here part-time," I explained as I rushed past.

Robert M. Miller, DVM, is an author, cartoonist and speaker from Thousand Oaks, Calif. His thoughts in "Mind Over Miller" are drawn from 32 years as a mixed-animal practitioner. Visit his website at www.robertmmiller.com.

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