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March 2018 | Volume 49 | Number 3 | dvm360.com

Toolkit:
Flea control

Illuminating the myriad myths behind why some clients don't see the need for prevention.

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#MeToo in veterinary medicine:

Veterinary professionals open up about their own experiences with sexual harassment and assault, gender-related power plays—and downright creepiness.

By Portia Stewart

Shame. It coils through her chest and wraps around her throat, creating a chokehold that makes her chest tight and her eyes burn.

Guilt. She didn't want this to happen, but it did—and she couldn't stop it.

Anger. The haunting presence of her oppressor, his taking up rent-free occupancy in her mind.

She is an unwilling participant in secrecy, a condition forced on her by the aggressor who assaulted or harassed her. And now it's time for her—for all of us—to speak up.

Every 98 seconds, someone in the United States is sexually assaulted, according to data from the U.S. Department of Justice. About 12 percent of these assaults occur when the victim is working. And a December 2017 CNBC All-America Survey revealed that about one in five Americans reported experiencing sexual harassment in the workplace.

The #MeToo movement reaches to the

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Bite-sized tips from a big ol' hospital

Does the idea of a general practice with specialty referral and 24/7 emergency services under one roof make your head spin? It's just another day at the office for Wheat Ridge Animal Hospital, our 2018 dvm360 Hospital Design Competition Specialty Hospital of the Year. *By Ashley Griffin*

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VET+PET PRESENTED BY UBM & NAVC west

Introducing Vet+Pet, a mashup between dvm360 and NAVC

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Loan forgiveness program in jeopardy

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How to discount associates right out of practice

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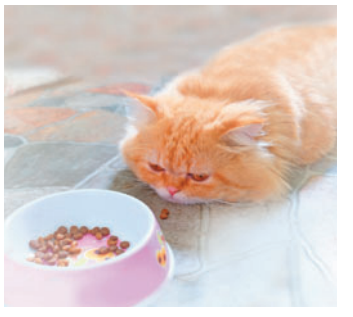

When the pet is obese and the client is oblivious

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Please see brief summary on page 03

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Through its extensive network of news sources, **dvm360** provides unbiased multimedia reporting on all issues affecting the veterinary profession.

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Silent shouts

To read more confessions submitted via the Vet Confessionals Project at our Fetch dvm360 conferences, visit **dvm360.com/silentshouts**. To read more coverage on the #MeToo movement in this issue, turn to page 8.

Confessions on sexual assault in the veterinary field shared at Fetch dvm360 conferences.

By Hannah Wagle

With the dawn of movements such as #MeToo and #TimesUp, women today are feeling more empowered than ever to share their stories of sexual harassment and sexual assault in the workplace. Until recently, many women kept these burdens to themselves, but anonymous and powerful confessions like the one above showcase the problems many women still face.

As more women enter the veterinary field, more are also coming under the threat of bullying, workplace toxicity, sexism and, yes, sexual harassment or assault. While those are not all one and the same, seemingly slight discriminations can easily progress into something worse.

From subtle slips to purposeful words and actions, women in the veterinary workplace experience a level of oppression that men normally do not. (That isn't to say it never happens to men. It does.) This is why it is so important to speak up to both expose and put an end to the unfair treatment.

Though there seem to be some steps being taken in the right direction in the wake of these new movements, professionals in the veterinary world need to be aware that discrimination, harassment and assault are still alive and well in the veterinary field.

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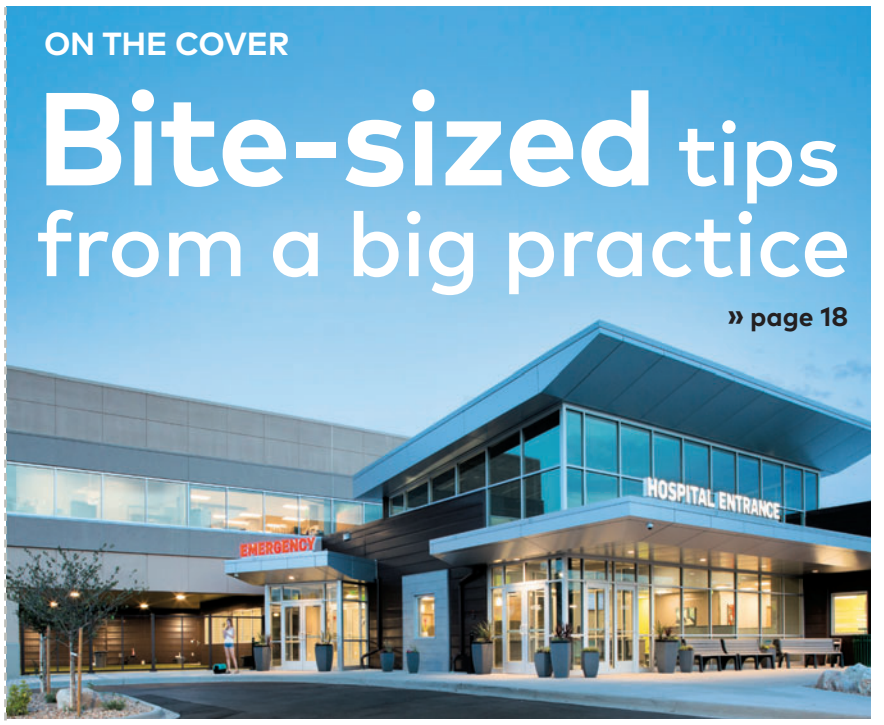

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Every 98 seconds, someone in the United States is sexually assaulted, according to data from the U.S. Department of Justice. About 12 percent of these assaults occur when the victim is working.

core of how these experiences of harassment, assault and discrimination teach women to think about themselves. How they will frame their lives and how they will value themselves and their contributions to work, family and society.

The glittering galas of Hollywood aren't the only places that hide the stank of sexual harassment and assault. While veterinary medicine may boast fewer sequins and Botox-enhanced smiles, your colleagues have spoken out, sharing their own experiences with sexual harassment, assault and discrimination in the workplace—and outside of it. In fact, I think you'd be hard pressed to find a profession untouched by these terrors.

As Hollywood has responded to the actions of its alleged assaulters and harassers, it has helped launch a movement aimed at giving voice to victims—to take the shame out of the experience and transform what was previously taboo into a platform to hold a conversation that can lead to change.

It's an opportunity for reflection and, for a profession in which women outnumber men (2016 AVMA statistics show about 44,000 male veterinarians in the United States and 64,000 female veterinarians), it's a chance to take a leadership position and tackle a problem that's haunted society since time immemorial.

Consider the accounts *dvm360* readers shared of their experiences with harassment, assault and discrimination:

I took a job with the USDA-FSIS in a beef slaughter plant a couple years after I graduated from veterinary college. … One of the plant foremen took umbrage with me and would yank on his crotch when I was around him. It culminated with him basically fondling himself early one morning when the inspector I was monitoring was out of eyesight. My supervisors handled it poorly when I complained, and I eventually resigned.

A male doctor at our practice kept his light battery pack in the front of his pants during surgery. When it needed to be changed, he'd ask young female team members to reach into his pocket to change the battery pack. While they were doing so he would pretend they were fondling him and embarrass them. When we filed a complaint with the state department of health about this and other egregious behavior, such as profanity-laced rages, the state regulatory agency had a "boys will be boys" attitude and did not want to hear about this. Fortunately he is gone from the practice.

The male practice owner called me into his office, where I found him sitting in his underwear. He wanted me to change an ace bandage on his lower leg. He said it was

What is the #MeToo movement?

The phrase "Me too" was first connected to sexual assault awareness in 2006 by civil rights activist Tarana Burke. When Burke, now senior director at Girls for Gender Equality and creator of Just Be Inc., a nonprofit that helps assault victims, was a camp counselor years ago, she was approached by a 13-year-old girl. The girl told Burke she'd been assaulted by her mother's boyfriend. In the moment Burke didn't know how to respond, but later she knew what she should have said. The words she would have used to respond to the young girl? "Me too."

Burke continued to use the phrase and the hashtag #MeToo to build awareness about sexual assault and, later, sexual harassment. In 2017 Alyssa Milano lodged allegations of sexual harassment and assault against media mogul Harvey Weinstein. On Oct. 17, 2017, Milano asked women on Twitter to use the hashtag #MeToo to identify themselves as someone who'd experienced sexual harassment or assault. By Oct. 24, CBS News was reporting that 1.7 million tweets included the hashtag #MeToo.

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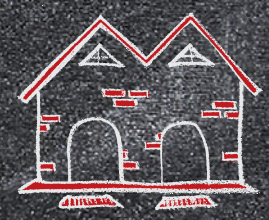

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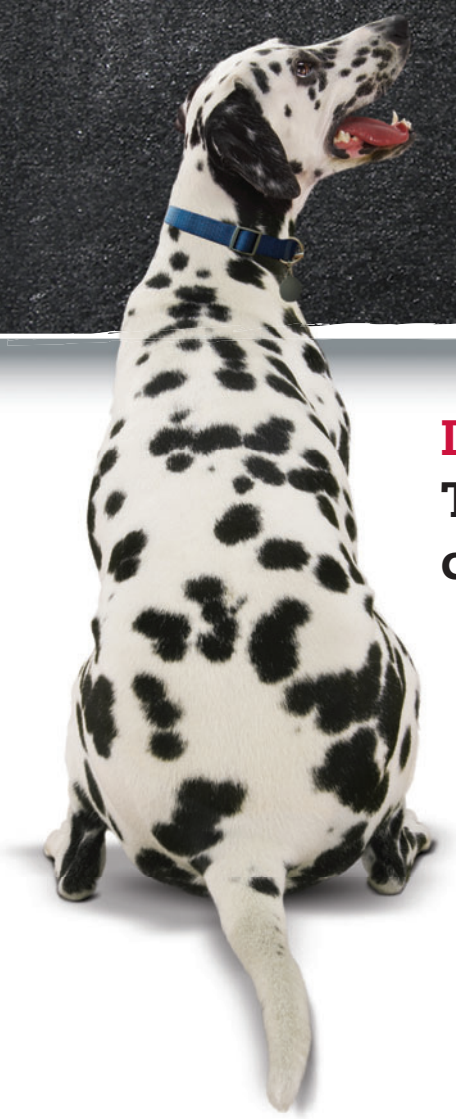

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[2]Levy S., Millership J., et al. (2010). Confirmation of presence of Borrelia burgdorferi outer surface protein C antigen and production of antibodies to Borrelia burgdorferi outer surface protein C in dogs vaccinated with a whole-cell Borrelia burgdorferi bacterin. *Intern J Appl Res Vet Med.* 8(3), 123–128.

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Victims: out of the shadows

Who can be harassed? Veterinarians. Practice owners. Associates. Practice managers. Technicians. Receptionists. Kennel attendants. Clients. Vendors. Women. Men. Straight people. Gay people. People who live on this planet. People who don't.

Who can be harassers? Veterinarians. Practice owners. Associates. Practice managers. Technicians. Receptionists. Kennel attendants. Clients. Vendors. Women. Men. Straight people. Gay people. People who live on this planet. People who don't.

According to the U.S. Equal Employment Opportunity Commission (EEOC), "both the victim and the harasser can be either a woman or a man, and the victim and harasser can be the same sex."

Where does sexual harassment happen? At the front desk. In the exam room and treatment areas. In the pharmacy, the kennel area or the parking lot. At the practice, away from the practice and—for ambulatory and large animal veterinarians—on the client's turf.

Bridget Heilsberg, DVM, is an equine veterinarian, owner of Crown 3 Veterinary Services in Whitesboro, Texas, and president of the Women's Veterinary Leadership Development Initiative (WVLDI). "One of the things I think we tend to overlook is the amount of sexual harassment and discrimination that happens to women veterinarians from their client base," Dr. Heilsberg says. "And we're talking about both the small animal clinical side as well as … ambulatory large animal practice."

Dr. Heilsberg says safety on farm calls is a regular discussion for the women in an equine practice Facebook group she's part of. Solutions range from traveling with a canine companion to calling friends, coworkers or loved ones before visiting a new client—even to carrying a firearm for protection.

"I personally not only have a firearm but I also have a German shepherd, and I travel with her to my farm calls," Dr. Heilsberg says. "I feel like it's an additional concern that women have because we have that concern in our everyday lives. Then it gets amplified when we go out on a farm call visit with someone we don't know."

If the idea of an assault during a farm call seems only faintly possible to you, consider this story from a *dvm360* reader:

A classmate and friend of mine who also worked at a dairy practice was at a guy's farm one winter, and the guy lassoed her and tied her to the stall divider in his stanchion-type barn. She told me she was counting the layers of clothing she had on (insulated coveralls, jacket, shirt, jeans, long underwear) and how long it might take him to rip them off. She chewed him out when he started laughing at her, and she managed to get untied. She did continue to work on the guy's farm, and he never tried that again with her.

All the feelings

Shame and guilt—these two powerful emotions often lie beneath the dirty layers of sexual harassment.

"The actual experience is sometimes shocking," says Elizabeth Strand, PhD, LCSW, the director of veterinary social work at the University of Tennessee. Dr. Strand points to the stress responses—fight, flight or freeze—to explain: "I think it can cause a freeze response where women don't know what to do because it's so shocking that it's actually happening."

In this author's mind, sexual harassment victims must deal with at least three phases of emotion. The first wave occurs the moment the event is happening—disbelief, shock, denial and

Sexual harassment, defined

There are two types of sexual harassment: hostile work environment and quid pro quo.

According to the EEOC, "Although the law doesn't prohibit simple teasing, offhand comments, or isolated incidents that are not very serious, harassment is illegal when it is so frequent or severe that it creates a hostile or offensive work environment or when it results in an adverse employment decision (such as the victim being fired or demoted)."

Keith Gutstein, JD, of law firm Kaufman Dolowich & Voluck, says federal law looks at severe and pervasive conduct—situations where "the workplace is so permeated with ridicule or insults that it alters the terms and conditions of the employee's job."

The second type of sexual harassment, quid pro quo, is defined as "this for that." "A male supervisor may say, 'Sleep with me and I'll give you a promotion,'" Gutstein says. "Or 'Go on a date with me and I won't fire you.'"

Be aware that your state or city may define laws regarding sexual harassment more extensively or differently.

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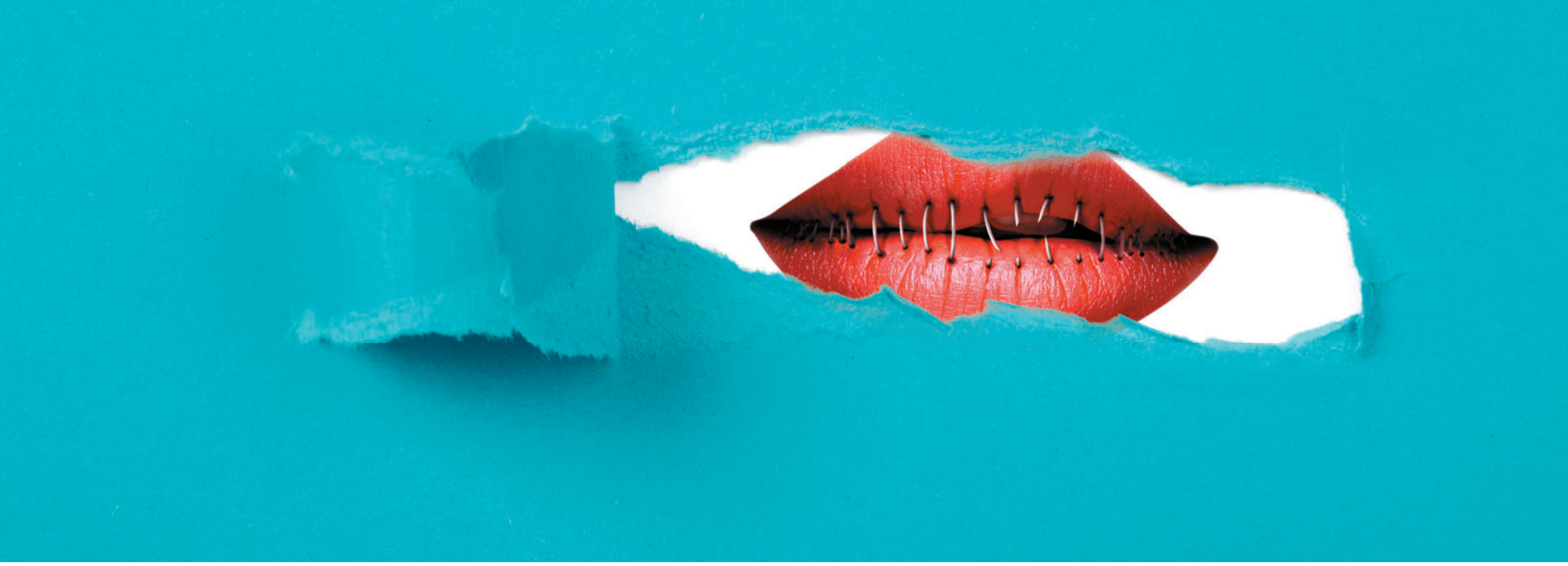


fear. The second surge includes internal shame, guilt and lack of self-worth over the secret. The third wave is fear of sharing what happened. Considering this, it's easy to see how victims can become mired in emotion and too paralyzed to act.

"There's a theory of moral development that says women have quite a different moral development than men," Dr. Strand says. "We tend to put relationships first, and if a relationship is not going well, we tend to look inside and say, 'What did I do?' I think because we're wired that way, one of the most challenging emotions that arises is shame and guilt."

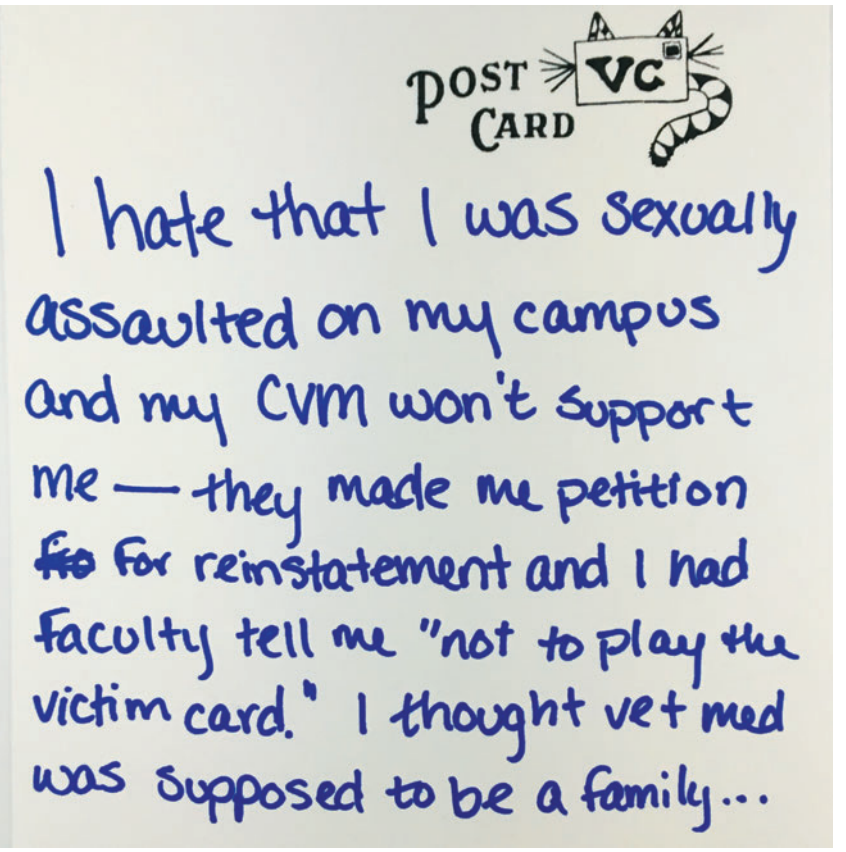
However, Dr. Strand continues, coming forward has become a movement, and that helps it feel less scary. "There's a sense of solidarity and comfort knowing that it's OK to talk about it," she says.

For Dr. Heilsberg, the goal is to break through the silence and the taboo nature of the topic.

"One of the most important messages for us as a society and for us as a profession to take out of the #MeToo movement is that we can no longer ignore sexual discrimination, sexual harassment and sexual assault in the workplace," she says. "It's not something we can sweep under the rug anymore and ignore politely. … We're starting to eliminate that taboo. Once society as a whole stops looking at something as a taboo subject, that's when we can really address it. Because you can't address something if you can't talk about it."

When the culture is to blame

The veterinary work environment plays a significant role in how discrimination and harassment play out. For example, say conversations amongst your coworkers in a hospital tend to turn a little blue. Everyone seems OK with the tone—until a new person joins the team. She doesn't feel comfortable with



Check out confessions on sexual misconduct from the Vet Confessionals Project at **dvm360.com/silentshouts**.

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the raunchiness. You might be inclined to tell the new employee, "Lighten up! We're just having fun." But Keith Gutstein, JD, a partner at Kaufman Dolowich & Voluck in Woodbury, New York, who handles labor and employment issues, advises against this stance.

In fact, Gutstein confesses that his law practice employees tend to call him the "morality police." "When people talk around the office, the old water cooler or locker room talk, when I walk around, that tends to stop," he says. "People should know that it's unacceptable at work. … If somebody else overhears you, it may make them uncomfortable."

Dr. Strand concurs, adding that women can play a powerful role by supporting each other: "Solidarity among women is really important," she says. Even if certain conduct doesn't bother you, she continues, it's worthwhile to make sure your fellow coworkers are also comfortable with the tone and culture.

Business owner liability

If you're a practice owner, take note. You have a duty to create a safe working environment for employees.

"It is extremely, extremely important for employers to have a sexual harassment/discrimination policy—not just articulating that this conduct is inappropriate and unacceptable, but also articulating what should be done if someone feels they are the victim of discrimination or harassment," Gutstein says.

Next, he says, you should have a clear procedure that identifies who to contact if someone believes they are the victim of harassment—and who to contact after that. (See "How to respond to sexual harassment" at **dvm360.com/reportharassment**.)

"I like to have a secondary person in the policy to receive complaints," Gutstein says. "If the alleged harasser is the person who's supposed to get the complaints, the employee's not going to complain."

Other important guidelines? Make sure your policy makes it easy to report a complaint, and be sure it outlines a policy against retaliation. "You also want to make sure your employees and supervisors are trained, so if someone does make a complaint they know how to deal with it," Gutstein says.

Once you receive a complaint, Gutstein says, it's a good idea to contact an attorney with expertise in sexual harassment prevention and training and ask how to proceed.

"The most important thing is to act and not ignore," Gutstein says. "You do want to take the complaints seriously. You do not want to ignore or delay response. You may need to separate the employee and the supervisor or the two employees. You do want to investigate thoroughly. You do want to, at the end of the investigation, take prompt remedial steps."

These steps may include additional training for your team, serving a warning for offensive conduct, recirculating your policies, or firing the alleged harasser, depending on the circumstances and severity of the events.

Resist retaliation

As an employer or manager, how you respond to a harassment or discrimination claim is critical. A poor response can look like retaliation—which could set you up for even more legal problems.

I worked for a male veterinarian who would come up behind me when I was standing at the pharmacy workstation and press up against me while I was working. He would also lean forward and whisper into my ear. He was the owner of the practice, and he did this continually. I told him it made me uncomfortable and asked him to stop doing it. He told me to "loosen up" and said he was "just trying to have a little fun." I was fired by the office manager and another veterinarian in the practice. I had already started my own job search, but I could not help feeling that I was fired because, unlike some of my coworkers, I didn't play along with it.

So what does retaliation look like?

The men of the #MeToo movement

While the majority of stories surrounding the #MeToo movement have come from female victims, males have identified themselves as victims as well. In fact, *dvm360* received several #MeToo stories from men, highlighting a range of experiences regarding discrimination and harassment:

Sexual discrimination is very common in the workplace. I'm the only male, therefore certain tasks always get passed on to me. They're rarely fun and pleasant.

—Male associate veterinarian

Several years ago a new female associate veterinarian came up to me at the clinic. She grabbed my gluteus maximus and told me she thought that I was cute. As a married man, I told her not to do it again, but it happened two other times.

—Male practice owner

The only time I had to fire a doctor was a female making advances on our divorced surgeon. She made some comments to him and showed up at his house—to pick up a used TV, but she thought it was for more.

—Male practice owner

Obviously getting fired is one form, Gutstein says. But retaliation can also involve demotion, cutting hours, giving unfavorable work assignments, passing someone over for a promotion, assigning all the difficult clients to one employee, or forcing someone to succumb to inappropriate advances.

"It can take a variety of forms. It's going to be something that has a chilling effect on the employee," Gutstein says. "Other employees are going to see that as a message: 'If you complain, this is what's going to happen to you.'"

The thing about retaliation, Gutstein says, is that retaliation against a complaint becomes a separate issue—something you can face a lawsuit for, regardless of whether the harassment actually occurred.

"If somebody complains on a Monday and they're fired on Wednesday, that's pretty good timing for a retaliation claim," Gutstein says. "You can sue for retaliation on its own, even without the underlying discrimination or harassment. As long as you have a good-faith belief and you complain, if you're retaliated against, you can sue."

What men can do

It can feel like an awkward time to be a man. And it's easy to wonder what behavior is appropriate and what crosses the line. Dr. Heilsberg says you can find the perfect guideline for how to support women in leadership by turning to the advice of Douglas Aspros, DVM. As the treasurer for WVLDI, Dr. Aspros speaks regularly on his role as a male ally.

"Male leaders are incredibly important, and Doug Aspros has a really powerful presentation on this," Dr. Heilsberg says. Her favorite line from his lecture to fellow men? "Don't be creepy."

"I think a lot of men in leadership positions don't realize how creepy they can be perceived to be," Dr. Heilsberg says. "Don't make inappropriate comments, and make sure you are staying at all times really professional."

Dr. Heilsberg offers these examples:

> The creepy greeting: A male colleague, meeting a female colleague, immediately comments on how good the woman looks in her clothing.

> The noncreepy greeting: A male colleague, meeting a female colleague, immediately comments on how pleased he is to meet her and much he's looking forward to working with her.

"Take a good look at the person in front of you, and if you wouldn't say it to a male colleague, don't say it to a female colleague," she says.

When I was in my 30s I worked at a small animal practice in a small town. One day the male practice owner (a veterinarian) was talking to a male veterinarian that also worked with us and they were comparing the female veterinarians at the practice to cattle. They joked that I looked more like a beef cow than a dairy cow (I assume due to the size of my udders, err breasts?). I did not work at that practice much longer and am now a practice owner. I figured if this insensitive clod could do it, how hard could it be?

Dr. Strand says men can also be allies in the #MeToo movement by holding each other accountable: "When men allies see their buddies behaving in a way that's out of line in the workplace or demeaning to their female colleagues, they need to have the courage to say, 'Hey man. I like you, dude, cool to work with you, but let's raise the bar here a little bit.'"

Male allies can also give women opportunities in meetings, offer women credit for the ideas they've had, put women in leadership positions and support those who are already there, Dr. Strand says—"especially in the veterinary profession, which has a large number of women in it."

Employer quick guide

As a medical professional, you know it's better to prevent than to treat. Keith Gutstein, JD, of Kaufman Dolowich & Voluck, offers this checklist to help prevent sexual harassment issues in your practice.

> Make sure your veterinary practice maintains an updated policy stating that discrimination and harassment are prohibited.

> Make sure there is a clear and easy-to-use complaint procedure, making it simple for someone to file an internal complaint if needed.

> Make sure the practice has a policy against retaliation.

> Make sure investigations are conducted promptly and thoroughly when a complaint is made and that the practice maintains confidentiality to the extent possible.

> Make sure the complaint procedure involves one or more alternative receivers of complaints.

> Make sure the whole veterinary team undergoes sexual harassment training.

Take the power back

Sexual harassment, discrimination and assault all come down to power. And at the core of #MeToo women are taking power back. That's the true beauty of #MeToo—erasing the shame and releasing the secrets we hold in silence.

Portia Stewart is team channel director for dvm360.com, the editor of Firstline *and the "she" at the beginning of this story. Read her #MeToo moment at* **dvm360.com/mymetoo**. *Do you have a #MeToo moment to share? Email* **dvmnews@ubm.com**.

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Public Service Loan Forgiveness program's future in jeopardy

New bill would eradicate program; lobbyists battle to maintain it.

By Katie James

The fact that students are graduating with crippling debt loads isn't news to those in the profession. Debt, coupled with low starting salaries, means many are unable to achieve financial freedom, often paying their loans back for the majority of their careers. Public service positions tend to have even lower starting salaries. This makes positions like working with the state veterinarian, in a public health laboratory or even with a nonprofit a daunting prospect, even though one may be a dream position.

One element that can help offset that gap is a President George W. Bush-era initiative called the Public Service Loan Forgiveness program (PSLF), which forgives the loans of those who spend 10 years of service in a qualified public position and make 120 on-time payments. This forgiveness is untaxed, according to the Office of Federal Financial Aid, which oversees the program.

"The idea is to encourage going into public service, into positions that normally would not pay as much as going into private practice," says Kevin Cain, director of governmental affairs for the American Association of Veterinary Medical Colleges (AAVMC).

A costly proposal

The program was established in October 2007, so the earliest any qualifying applicant would have been eligible for forgiveness was October 2017. As of September 2017, almost 740,000 public service professionals had submitted an employment certification form (ECF) signaling their interest in the PSLF program to the Office of Federal Financial Aid—making it potentially very costly to the federal government.

Perhaps not surprisingly, the program's future is now in jeopardy. A bill was introduced in December that would eliminate PSLF, among other reforms. H.R. 4508—also called the Promoting Real Opportunity, Success and Prosperity through Education Reform Act, or PROSPER Act—was introduced by representative Virginia Foxx (R-North Carolina) and is co-sponsored by representative Brett Guthrie (R-Kentucky).

President Trump's proposed 2018 budget also favors eliminating PSLF, though the document notes that the changes would be applicable only to loans entered into after July 1, 2018.

While the U.S. Department of Education, which oversees the Office of Federal Financial Aid, keeps track of the total number of borrowers, the agency doesn't release industry-specific numbers, making it difficult to determine how many in the veterinary profession would be affected by these changes.

"We know that there are many veterinarians counting on the program, because we've been trying to collect their stories," says Kent McClure, DVM, JD, chief government relations officer for the AVMA. "Whenever you're talking to members of Congress, personal stories help. The AVMA has been working to identify veterinarians who are looking to be part of the Public Service Loan Forgiveness program so we can highlight why the program is so important to the profession when we talk to members of Congress."

As the program stands now, the Congressional Budget Office estimates that PSLF will cost the government more than $23.7 billion in the next 10 years. For the next three fiscal years, the estimate is $425 million in 2018, $1.015 billion in 2019 and $1.42 billion in 2020.

This isn't the first time PSLF has come under scrutiny. Before leaving office, President Obama proposed capping the amount of forgiveness at $57,500, but that measure didn't pass. Several other measures originating in the House in the 114th Congress (the current session is the 115th Congress) also proposed capping the amount at $57,500, according to the AVMA's Governmental Relations Division.

How you can get involved

The AVMA, AAVMC and more than 110 other veterinary organizations are working to keep the program in place, sending letters to key members of the House Committee on Health, Education, Labor and Pensions and the House Committee on Education and the Workforce. Veterinarians can lend their support as well by sharing their PSLF stories with the AVMA's governmental relations team, who will share the experiences with government officials.

"The range of veterinary medicine that has signed on to this letter, I think is so helpful in making our case on the House of Representatives' side and it really opened a lot of eyes," says Cain. "That effort has been tremendous on behalf of veterinary medicine as a whole."

dvm360 Find it all here.

The ins and outs of PSLF

Want to learn more about PSLF? Find out how the program works and more information on how to take action at dvm360.com/PSLF.

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Banfield® PET HOSPITAL

Bite-sized tips, **giant-sized** veterinary hospital

Does the idea of a general practice with specialty referral and 24/7 emergency services under one roof make your head spin? Learn any-size-hospital tips from a XXXL-sized one. *By Ashley Griffin*

If you didn't know better, you might think this 37,819-square-foot facility was designed to treat people—not pets.

"We set our bar pretty high," says Donald Ostwald, DVM, DABVP. "The expectation was that it would look better than a human hospital."

Well, mission accomplished! Wheat Ridge Animal Hospital, part of Ethos Veterinary Health, in Wheat Ridge, Colorado, took home the 2018 dvm360 Hospital Design Competition's Specialty Hospital of the Year award. The judges praised this AAHA-accredited

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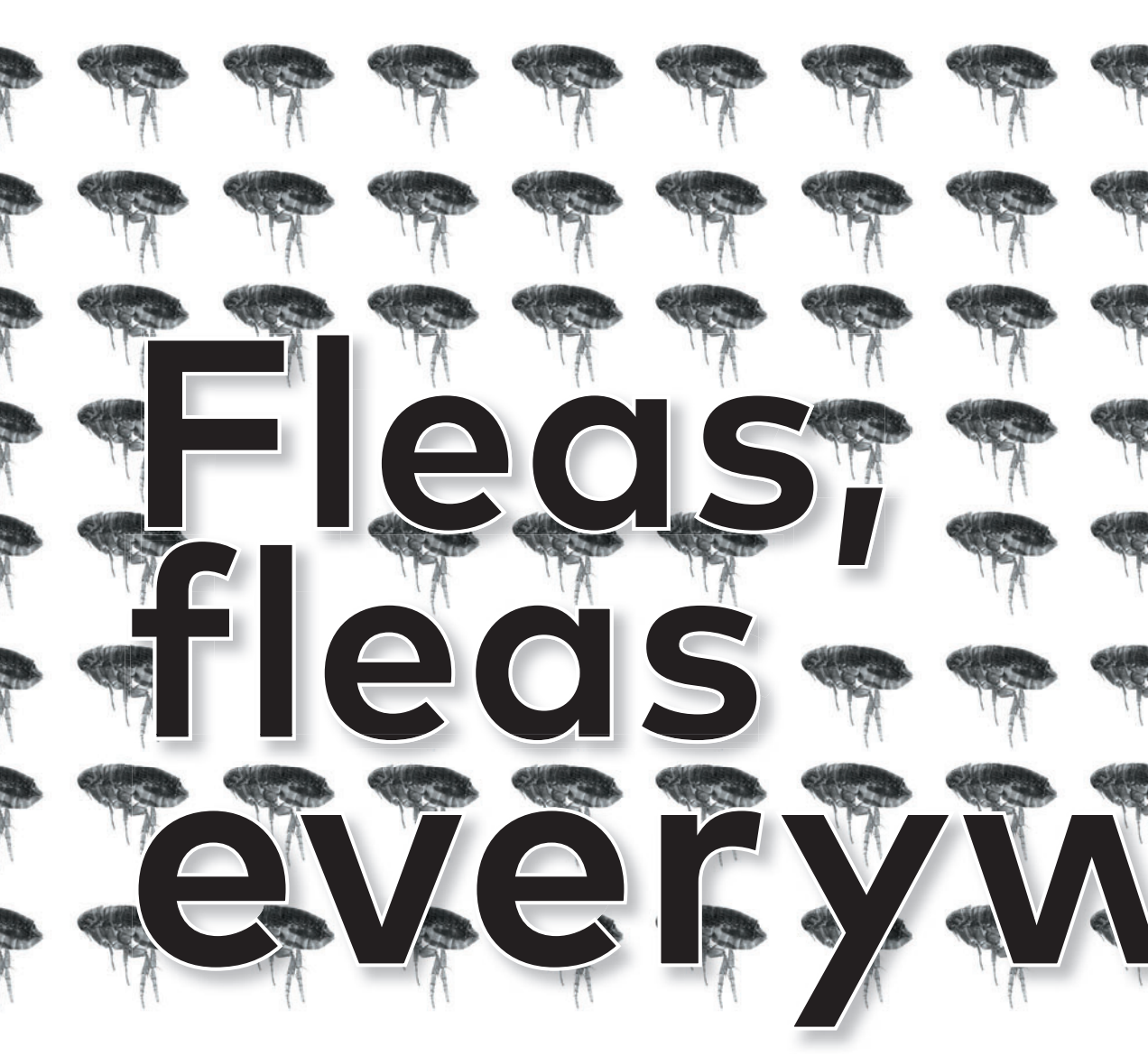
FLEA CONTROL

March 2018
dvm360.com/fleatoolkit

Fleas everywhere

Illuminating the myriad myths behind why some clients don't see the need for flea prevention. **p2**



Fleas, fleas everyw

During a Fetch dvm360 conference presentation in Kansas City in 2017, Allison Kirby, DVM, DACVD, shared some of the top quotes she's collected from clients who thought their pets weren't at risk of being exposed to fleas:

"We live in a gated community." Dr. Kirby has heard this one numerous times, and while she tries to give these clients the benefit of the doubt (e.g. perhaps the homeowners' association sprays for fleas), further investigation has revealed that these clients don't think fleas can get through the gates (prompting some client education on the size of fleas, of course).

GETTY IMAGES

where

"Princess has white hair. She can't get any fleas." Again, while Dr. Kirby assumed there was a logical explanation (e.g. maybe the fleas are more difficult to see on a dog with white fur), she was able to track down the source of the information: two websites affirming the client's convictions.

"My dog is absolutely 100 percent indoors. She has no access to the outdoors and only goes to the bathroom on pee pee pads. So obviously, she cannot get fleas." This opened up an opportunity for Dr. Kirby to discuss all the ways the client's indoor pup was exposed to the possibility of fleas (e.g. veterinarian and groomer visits).

"We live in a cul-de-sac. We don't have fleas." Dr. Kirby's response: "You have ants, correct? If you have ants, you're gonna get fleas, despite living on a cul-de-sac."

But even Dr. Kirby gets stumped sometimes, and that's OK. A recent client wanted to know all of the mechanisms of action of all the drugs and their effect on the honeybee population.

"I do not know a lot of these drugs and their effect on the honeybee population, but I do know that honeybees are in a drastic decline … So I'm going to be looking that up for this client to make sure I'm recommending the best flea control for her situation, since she refuses to use any flea control that could ever put stress on the honeybee population."

Scan this code to listen to a clip with more details on these real-life client interactions and how Dr. Kirby responded.

Scan the code to listen to a clip with more from Dr. Kirby on getting clients to open up about their pet's lifestyle and environment.

NIKITEEV_KONSTANTIN/SHUTTERSTOCK.COM

All of these excuses pushed Dr. Kirby to ponder how she could help clients realize the many places their pets are exposed to fleas.

When creating a tick control plan, you have to talk to clients about their lifestyle and their pet's lifestyle, she says. It's not information they readily offer, so you may have to ask multiple times and multiple ways to get the answers you need.

For example, Dr. Kirby often asks clients if they have access to dog parks. To her, a dog park is any open field with lots of dogs. But to some of her clients, a dog park must have "dog park" in the title.

According to Dr. Kirby, other important lifestyle factors to consider when creating a flea control plan include whether or not the pet goes to daycare or spends any time with a dog walker (and the dog walker's 15 other dog clients), as well as the pet's access to water.

How much access that dog has to water—whether from a pool, the lake or from bathing—is definitely going to play a role, says Dr. Kirby. Many of the dogs where she's based (balmy California) go to the pool three to five times a day for 20-minute stints, which is an important consideration when deciding which products to recommend.

Simparica™
(sarolaner) Chewables

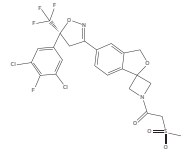
FOR ORAL USE IN DOGS ONLY

CAUTION: Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

Description:
SIMPARICA is a flavored, chewable tablet for administration to dogs over 6 months of age according to their weight. Each tablet is formulated to provide a minimum sarolaner dosage of 0.91 mg/lb (2 mg/kg) body weight.

Sarolaner is a member of the isoxazoline class of parasiticides and the chemical name is 1-(5'-((5S)-5-(3,5-Dichloro-4-fluorophenyl)-5-(trifluoromethyl)-4,5-dihydroisoxazol-3-yl)-3'-H-spiro(azetidine-3,1'-(2)benzofuran)-1-yl)-2-(methylsulfonyl)ethanone. SIMPARICA contains the S-enantiomer of sarolaner.

The chemical structure of the S-enantiomer of sarolaner is:



Indications:
SIMPARICA kills adult fleas, and is indicated for the treatment and prevention of flea infestations (*Ctenocephalides felis*), and the treatment and control of tick infestations [*Amblyomma americanum* (lone star tick), *Amblyomma maculatum* (Gulf Coast tick), *Dermacentor variabilis* (American dog tick), *Ixodes scapularis* (black-legged tick), and *Rhipicephalus sanguineus* (brown dog tick)] for one month in dogs 6 months of age or older and weighing 2.8 pounds or greater.

Dosage and Administration:
SIMPARICA is given orally once a month at the recommended minimum dosage of 0.91 mg/lb (2 mg/kg).

Dosage Schedule:

Body Weight	SAROLANER per Tablet (mg)	Number of Tablets Administered
2.8 to 5.5 lbs	5	One
5.6 to 11.0 lbs	10	One
11.1 to 22.0 lbs	20	One
22.1 to 44.0 lbs	40	One
44.1 to 88.0 lbs	80	One
88.1 to 132.0 lbs	120	One
>132.1 lbs	Administer the appropriate combination of tablets	

SIMPARICA can be offered by hand, in the food, or administered like other tablet medications.

Care should be taken that the dog consumes the complete dose, and treated animals should be observed for a few minutes to ensure that part of the dose is not lost or refused. If a dose is missed, administer SIMPARICA and resume a monthly dosing schedule.

SIMPARICA should be administered at monthly intervals.

Flea Treatment and Prevention:
Treatment with SIMPARICA may begin at any time of the year. In areas where fleas are common year-round, monthly treatment with SIMPARICA can continue the entire year without interruption.

To minimize the likelihood of flea re-infestation, it is important to treat all dogs and cats within a household with an approved flea control product.

Tick Treatment and Control:
Treatment with SIMPARICA can begin at any time of the year (see **Effectiveness**).

Contraindications:
There are no known contraindications for the use of SIMPARICA.

Warnings:
Not for use in humans. Keep this and all drugs out of reach of children and pets. For use in dogs only. Do not use SIMPARICA in cats.

SIMPARICA should not be used in dogs less than 6 months of age (see **Animal Safety**).

Precautions:
SIMPARICA may cause abnormal neurologic signs such as tremors, decreased conscious proprioception, ataxia, decreased or absent menace, and/or seizures (see **Animal Safety**).

The safe use of SIMPARICA has not been evaluated in breeding, pregnant, or lactating dogs.

Adverse Reactions:
SIMPARICA was administered in a well-controlled US field study, which included a total of 479 dogs (315 dogs treated with SIMPARICA and 164 dogs treated with active control once monthly for three treatments).

Over the 90-day study period, all observations of potential adverse reactions were recorded.

Table 1. Dogs with adverse reactions

Adverse reaction	sarolaner	sarolaner	active control	active control
	N	% (n = 315)	N	% (n =164)
Vomiting	3	0.95%	9	5.50%
Diarrhea	2	0.63%	2	1.20%
Lethargy	1	0.32%	2	1.20%
Inappetence	0	0%	3	1.80%

Additionally, one female dog aged 8.6 years exhibited lethargy, ataxia while posturing to eliminate, elevated third eyelids, and inappetence one day after receiving SIMPARICA concurrently with a heartworm preventative (ivermectin/pyrantel pamoate). The signs resolved one day later. After the day 14 visit, the owner elected to withdraw the dog from the study.

For a copy of the Safety Data Sheet (SDS) or to report adverse reactions call Zoetis Inc. at 1-888-963-8471. Additional information can be found at www.SIMPARICA.com. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or http://www.fda.gov/AnimalVeterinary/SafetyHealth.

Clinical Pharmacology:
Sarolaner is rapidly and well absorbed following oral administration of SIMPARICA. In a study of 12 Beagle dogs the mean maximum plasma concentration (C_{max}) was 1100 ng/mL and the mean time to maximum concentration (T_{max}) occurred at 3 hours following a single oral dose of 2 mg/kg to fasted animals. The mean oral bioavailability was 86% and 107% in fasted and fed dogs, respectively. The mean oral $T_{1/2}$ values for fasted and fed animals was 10 and 12 days respectively.

Sarolaner is distributed widely; the mean volume of distribution (Vdss) was 2.81 L/kg bodyweight following a 2 mg/kg intravenous dose of sarolaner. Sarolaner is highly bound (≥99.9%) to plasma proteins. The metabolism of sarolaner appears to be minimal in the dog. The primary route of sarolaner elimination from dogs is biliary excretion with elimination via the feces.

Following repeat administration of SIMPARICA once every 28 days for 10 doses to Beagle dogs at 1X, 3X, and 5X the maximum intended clinical dose of 4 mg/kg, steady-state plasma concentrations were reached after the 6th dose. Following treatment at 1X, 3X, and 5X the maximum intended clinical dose of 4 mg/kg, sarolaner systemic exposure was dose proportional over the range 1X to 5X.

Mode of Action:
The active substance of SIMPARICA, sarolaner, is an acaricide and insecticide belonging to the isoxazoline group. Sarolaner inhibits the function of the neurotransmitter gamma aminobutyric acid (GABA) receptor and glutamate receptor, and works at the neuromuscular junction in insects. This results in uncontrolled neuromuscular activity leading to death in insects or acarines.

Effectiveness:
In a well-controlled laboratory study, SIMPARICA began to kill fleas 3 hours after initial administration and reduced the number of live fleas by ≥96.2% within 8 hours after flea infestation through Day 35.

In a separate well-controlled laboratory study, SIMPARICA demonstrated 100% effectiveness against adult fleas within 24 hours following treatment and maintained 100% effectiveness against weekly re-infestations for 35 days.

In a study to explore flea egg production and viability, SIMPARICA killed fleas before they could lay eggs for 35 days. In a study to simulate a flea-infested home environment, with flea infestations established prior to the start of treatment and re-infestations on Days 7, 37 and 67, SIMPARICA administered monthly for three months demonstrated >95.6% reduction in adult fleas within 14 days after treatment and reached 100% on Day 60.

In well-controlled laboratory studies, SIMPARICA demonstrated ≥99% effectiveness against an initial infestation of *Amblyomma americanum, Amblyomma maculatum, Dermacentor variabilis, Ixodes scapularis,* and *Rhipicephalus sanguineus* 48 hours post-administration and maintained >96% effectiveness 48 hours post re-infestation for 30 days.

In a well-controlled 90-day US field study conducted in households with existing flea infestations of varying severity, the effectiveness of SIMPARICA against fleas on Day 30, 60 and 90 visits compared to baseline was 99.4%, 99.8%, and 100%, respectively. Dogs with signs of flea allergy dermatitis showed improvement in erythema, papules, scaling, alopecia, dermatitis/pyodermatitis and pruritus as a direct result of eliminating fleas.

Animal Safety:
In a margin of safety study, SIMPARICA was administered orally to 8-week-old Beagle puppies at doses of 0, 1X, 3X, and 5X the maximum recommended dose (4 mg/kg) at 28-day intervals for 10 doses (8 dogs per group). The control group received placebo tablets. No neurologic signs were observed in the 1X group. In the 3X group, one male dog exhibited tremors and ataxia post-dose on Day 0; one female dog exhibited tremors on Days 1, 2, 3, and 5; and one female dog exhibited tremors on Day 1. In the 5X group, one female dog had a seizure on Day 61 (5 days after third dose); one female dog had tremors post-dose on Day 0 and abnormal head coordination after dosing on Day 140; and one female dog exhibited seizures associated with the second and fourth doses and tremors associated with the second and third doses. All dogs recovered without treatment. Except for the observation of abnormal head coordination in one dog in the 5X group two hours after dosing on Day 140 (dose 6). There were no treatment-related neurological signs observed once the dogs reached the age of 6 months.

In a separate exploratory pharmacokinetic study, one female dog dosed at 12 mg/kg (3X the maximum recommended dose) exhibited lethargy, anorexia, and multiple neurological signs including ataxia, tremors, disorientation, hypersalivation, diminished proprioception, and absent menace, approximately 2 days after a third monthly dose. The dog was not treated, and was ultimately euthanized. The first two doses resulted in plasma concentrations that were consistent with those of the other dogs in the treatment group. Starting at 7 hours after the third dose, there was a rapid 2.5 fold increase in plasma concentrations within 41 hours, resulting in a C_{max} more than 7-fold higher than the mean C_{max} at the maximum recommended use dose. No cause for the sudden increase in sarolaner plasma concentrations was identified.

Storage Information:
Store at or below 30°C (86°F) with excursions permitted up to 40°C (104°F).

How Supplied:
SIMPARICA (sarolaner) Chewables are available in six flavored tablet sizes: 5, 10, 20, 40, 80, and 120 mg. Each tablet size is available in color-coded packages of one, three, or six tablets.

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"I have a bad habit of putting the topical on and deciding it's a really good time to scratch the dog. Bad track record."

"In San Diego, my experience is that topicals do not work. The fleas are outrageous. The only thing that's worked has been the chewable. I tried the topical for a while, and … no luck."

Pet owners weigh in on preventives

The real reasons clients choose one route of administration over the other.

Brian Conrad, CVPM, practice manager for Meadow Hills Veterinary Center in Kennewick, Washington, hosted a live panel of local pet owners at Fetch dvm360 in San Diego, so veterinary professionals in the next room could hear their unfiltered responses to the kind of questions that make you scratch your head on a daily basis.

At one point, the Fetch dvm360 pet owner panelists were asked whether they preferred to administer ectoparasite prevention via collar, topical, pill or chewable.

Chewables? What chewables?

The two members of team topical revealed in the discussion that they didn't know a chewable flea preventive for cats even existed. In fact, one cat owner later said she might change her mind about preferring topical administration in light of the chewable revelation (though she also admitted she's not currently giving her cat flea preventive "because he lives inside").

With this in mind, make sure your clients know about the different routes of administration available and the benefits they carry. Perhaps the pet owner of an indoor cat that *clearly* doesn't need flea preventive (wink, wink) will be more likely to take the plunge once she learns about all her options. Perhaps the pet owner who can't keep his hands off his fluffy dog needs to hear there's a better way. Whatever the reason, don't miss an opportunity for client education—and better protection for pets.

MINERVA STUDIO/SHUTTERSTOCK.COM

Essential oils? Not so fast

By Sarah Wooten, DVM

Most of the time we veterinarians think essential oils are harmless or, at worst, mildly noxious—but is that true? At a recent Fetch dvm360 conference, Tina Wismer, DVM, DABT, DABVT, medical director for the ASPCA Animal Poison Control Center in Urbana, Illinois, helped coach attendees on how to respond to clients who say they're using essential oils for flea control. Here's what she knows.

SERENA CARMINATI/SHUTTERSTOCK.COM

D-limonene

D-limonene is derived from orange pulp and has minimal to moderate efficacy to control fleas, Dr. Wismer says. If diluted properly, it has a high margin of safety; if not, it can cause dermatitis, oral irritation, lethargy, vomiting, salivation, ataxia and muscle tremors. This essential oil can penetrate the skin and cause peripheral vasodilation, leading to hypotension and hypothermia.

Melaleuca oil

Melaleuca oil is an essential oil from the Australian tea tree, *Melaleuca alternifolia*. It does have antibacterial and antifungal properties at higher concentrations, but the products labeled for use in animals are 5% or less, and the efficacy of this agent to repel or kill fleas has not been established, Dr. Wismer says. Inappropriate application of Melaleuca products or products not intended for external use may result in ataxia, weakness, tremors and depression.

Pennyroyal oil

If your clients have been on Dr. Google, they may have read that pennyroyal oil is effective against fleas and ticks. This has not been proven, Dr. Wismer says—but toxicity definitely has. Pennyroyal oil, derived from the leaves and flowers of the pennyroyal plant (also called squaw mint or mosquito plant), contains a volatile compound called pulegone, which is responsible for the plant's toxic effects. If pennyroyal is applied directly to an animal it can cause depression, vomiting, hepatic necrosis, diarrhea, epistaxis, seizures and death. Pennyroyal oil should never be used on animals.

What to do if your patient is exposed

With essential oils, treatment consists of getting the oil off the animal and providing fluids and supportive care, Dr. Wismer says. Keep in mind that if the oils have been applied to irritated or broken skin, the risk of toxicosis is higher due to increased systemic absorption. Bathe the pet in liquid dishwashing detergent, and be aware that most essential oils have long half-lives (days) due to enterohepatic recirculation. Administer appropriate pain control as needed, and monitor liver values in cases of pennyroyal exposure.

European pennyroyal, or *Mentha pulegium*, shown here in a vintage illustration. Despite what clients may read online, Dr. Tina Wismer says its oil should never be used on animals.

Time for the soapbox

It's up to us as veterinary professionals to ask our clients about any essential oil usage on their pets and then counsel them accordingly. If you're reticent (like me) to have these conversations because you think it may damage your relationship with the client, remember this: Fleas and ticks are more than a nuisance. They carry and transmit debilitating and sometimes fatal diseases, some of which are zoonotic. You can tell them that leading experts in our field, like Richard Gerhold, DVM, MS, PhD, confirm that there is no support for the use of essential oils as parasite control.

Yes, you may run up against some deeply seated beliefs, but use kindness and compassion, and make sure you cover your bases with thorough medical records that document the conversation.

Sample script

By Jenna Stregowski, RVT

Ms. Jones: What natural products can I use on my pet to repel ticks and fleas?

You: I understand your desire to use natural products for your pet. It is true that some natural products and supplements may be beneficial to pets when given under the supervision of a veterinarian. However, when it comes to fleas and ticks, natural products and home remedies simply aren't effective. In fact, some natural ingredients can do more harm than good. Steer clear of feeding your pet garlic and herbs, as these can be toxic. Also, avoid applying topical essential oils, which can irritate skin and overwhelm your pet's hypersensitive sense of smell.

Please be sure to contact us before using a natural product or home remedy on your pet so we can make sure it is safe first. For fleas and ticks, it's best to choose a product that has been proven through lots of research to be safe and effective. I'd be happy to go over the flea and tick prevention products recommended by our veterinarian.

Flea allergy dermatitis: Can you catch the signs?

A little itch? A little missing hair? (Well, really, a lot of itch? A lot of missing hair?) Fetch dvm360 presenter Anthea Schick, DVM, DACVD, says that dogs and cats often have telltale dermatologic signs if they have a flea problem.

She says that fleas cause itching and hair loss because of irritation due to bites, secondary bacterial infections or flea allergy dermatitis. Clinical signs of flea allergy dermatitis are often worse in warm weather when fleas are most numerous.

"In dogs with flea allergy dermatitis, you often find some evidence of fleas," says Dr. Schick. "You'll notice some flea dirt. You can do the flea comb technique where you schmear the comb on a wet paper towel and there's a nice little red line." (That's the poop, of course.)

In your always-more-subtle feline patients, of course, it's not so simple because cats are fastidious groomers. "You'll notice signs of mowing all over the fur," says Dr. Schick. "And they'll do it so precisely that their skin will be super calm, yet they're completely bald."

In cats, look for a caudal distribution (the pants area) of this mown-over, balding hair in cases of flea allergy dermatitis, says Dr. Schick. And she says that cats may also develop small crusts on their skin that are similar in appearance to tiny millet seeds, a condition known as miliary dermatitis.

A big take-home for flea allergies: Even one flea bite can cause a reaction. So as in all things, prevention is the best policy.

EKATERINA BRUSNIKA/SHUTTERSTOCK.COM

Leap over flea control barriers

Are your veterinary clients not buying flea preventives to protect their pets? You don't have to buy their excuses.

By Ciera Sallese, CVT, VTS

Most veterinary team members probably have a top 100 list of reasons owners have given them for not needing flea prevention for their pets. But what can we do? We can't force them to use it, and we know Fluffy won't be stopping in the office to buy it on his own. This is the roadblock most of us face when recommending products to an uninterested pet owner. Let's start with a few things we can let clients know that might just change their minds.

LIFE IN PIXELS/SHUTTERSTOCK.COM

1 Not a commentary on your cleanliness

When we mention fleas, some pet owners think we mean that their house is less-than-clean and that can make them defensive. But even the cleanest home can be the target of a flea infestation. In fact, infestations usually start because the fleas were picked up outside of the home and brought inside unknowingly. If a pet has access to a yard, dog parks, nature areas or kennels, he is at risk of picking up these pesky hitchhikers who make the owner's home their next bed and breakfast.

2 The false protection of the home bubble

Many owners say their pets stay indoors and, therefore, are not at any risk of having a parasitic infection. We can laugh at the "indoor dog" claim, but many pet owners honestly believe it. Unless a dog strictly uses pee pads and never goes on a single trip outside a client's home, he really isn't an "inside" dog. And even if this is the case, an indoor pet (whether dog or cat), is still at risk for a flea infestation. The chance is obviously lower, but there's no such thing as zero risk.

3 "See no" does not mean "no worries"

Pet owners not seeing a flea on their pets is often a major contributor to their thinking flea products are not necessary. This is where it becomes very important for veterinary staff to refer to these products as flea prevention, not flea treatment. This distinction stresses the fact that these products should be used before a flea infestation is seen so that it stays that way. Unfortunately, a flea problem can manifest before a single flea is even seen on a pet.

In the case of cats, which are notorious for their fastidious grooming, fleas might never be seen at all. However, this doesn't change the statistics. A single adult flea can lay up to 50 eggs a day, so it's easy to see how fast an infestation can start. Once an infestation is present, each pet must be treated along with the home and yard. A huge eye-opener for many pet owners is just knowing how much easier preventing fleas is than dealing with their consequences.

4 We can find a perfect match

Even though there are several choices available, pet owners can have one bad experience that turns them off all flea products in general. It's up to us to let them know the advantages and disadvantages of each product and find the one that is best for a pet.

For your clients who don't want to use a "greasy" topical, you can recommend an oral product instead. Many of these products are good for several months, so that's an upside for people who have a hard time remembering to apply the preventive monthly. Pets with sensitive stomachs would probably do better with the topical option. There are even products with active ingredients that affect only the parasites themselves and are never absorbed by the pet. In most situations, at least one product can fit the individual needs of the pet and their owner.

Ciera Miller is a CVT at Metzger Animal Hospital in State College, Pennsylvania.

Catch more clients with honey, not vinegar

By Patrick Fabricatore

When internet pharmacies came to veterinary medicine, most hospital management teams took it personally. For me, it often felt like the client trusted someone else with a job that used to only be ours. Management experts crammed us with advice on the best way to capture lost revenue. Everything was on the table—from flat-out denying client requests for prescriptions to fill elsewhere to letting the pharmacy go and focusing on other services.

Get your hands on videos, tips & tools at **dvm360.com/fleatoolkit**

Don't be judgy

Me? I stopped taking it personally when veterinary clients took their business to online pharmacies. Our hospital stopped refusing prescriptions that we'd otherwise have filled in our hospital. We focused on explaining the strengths and benefits of purchasing the products with us. We showed off our promotional deals (buy enough, get a free dose), our fully stocked-and-ready-to-dispense pharmacy and our doctors available to answer product-related questions.

The key was staying positive and not getting frustrated with clients for asking to fill prescriptions somewhere else.

Did positivity work?

Most of the time, clients realize through a soft, no-pressure approach that not only are we convenient, but that we're also often the most affordable option.

By no longer denying medications but rather embracing the client through continuing support for the best approach to medicine, we've had the greatest impact with staff that understand and truly support your decision.

Of course, we all hope clients buy the products through us. But simply supporting clients and focusing on our real benefits—better price points, instant availability and professional product knowledge—has won us the best outcome. Clients trust us to take this approach—the approach that always has the best interest of pets in mind.

Patrick Fabricatore is practice manager at Perkiomen Animal Hospital in Palm, Pennsylvania.

Social media: What's in (and out)

No one's reading your hospital's e-newsletter anymore? Try these marketing formats instead.

By Sarah Wooten, DVM

Facebook Messenger: In

Are you sick of your high-bounce, unopened email newsletters? Let's face it: For some of our customer segments, email marketing is dead. The hottest new trend to replace it is Facebook Messenger.

Really. Don't laugh.

In today's rapidly changing market, those who are the first to try a new feature are usually the ones who reach more customers for a lower cost.

Facebook Messenger has a great open rate, with people still spending tons of time on Facebook. The series of updates called Messenger Platform 2.2 in September was designed to make the app more convenient and user-friendly. The updated Messenger moves beyond one-on-one conversations and can send messages to a group of clients. It also has the capability to set up instant replies and specific "away" messages.

Put the fear of fleas in your clients

Here's a bonus video idea from Caitlin DeWilde, DVM, who owns the social media consulting company The Social DVM and practices as an associate at a St. Louis-area hospital:

Show an actual patient with fleas. If you're able to get a client's permission, you could point out the fleas, the flea dirt (I personally think a lot of owners have no idea what this looks like) and the secondary skin lesions. You could then describe the pet's signs and do a quick blurb on the other problems fleas can cause (e.g. tapeworm transmission, other diseases)

VIOLETBLUE/SHUTTERSTOCK.COM

Then there are these cool things called Chatbots, which allow you to build subscriber lists through website widgets, comments on posts, and messages through Facebook and Messenger Ads. Want to learn more? Veterinary consultant Brandon Brashears talks them up in an episode of his podcast.

Video: Sooooo in

If you want to get your practice and brand in front of consumers, then you need to create video content. Don't believe video is king? Check out these stats from consulting firm Insivia:

- By the end of 2017, online video will account for **74 percent** of all online traffic.
- **55 percent** of people watch videos online every day, and **65 percent** of those views lasted for more than three-fourths of a video.
- Including video in a landing page can increase conversion by **80 percent**.
- **Four out of five consumers** believe demo videos are helpful, and four times as

as well as how easy it is to prevent and treat with certain products.

Visual is key. Clients can see the parasites. They can see the pet in some degree of distress or discomfort. You have their attention long enough to give a little bit of background info on the medical implications as well as prevention and treatment. This approach establishes the veterinarian as both the source of information and the source of the solution, which is huge.

Get your paws on even more videos, tips & tools at **dvm360.com/fleatoolkit.**

many customers would rather watch a video about a product than read about it.

- **500 million people** watch videos on Facebook every day, and Snapchatters watch **10 billion** videos a day.
- Marketers who use video grow revenue **49 percent** faster than those who don't.
- On average, people spend **more than twice** as much time on pages with video than pages without.

In this day and age, your clients have a lot of competition for their attention, and video is a surefire way to stop people from scrolling past your content. It doesn't have to be anything elaborate—just hold up your phone and start recording.

Veterinarians who are just starting to grow their clientele make the best movie star candidates because they have the time and the hunger. Encourage your doctors to build their business by becoming a YouTube or Facebook Live expert. If they're reticent or nervous, get them a free teleprompter app.

Who knows? Maybe we'll be able to educate and enlighten the general public on what good veterinary medicine looks like, instead of what Animal Planet or Discovery Channel says is "normal" veterinary medicine. (Not naming names, but you know who what I mean.) It's high time we took back our own voice and shared our stories.

Boring blog: Waaaay out

If your clinic's website relies on content from your website or social media provider, then you can be assured that the blog content being pushed out to your website as part of the service is bland and unoriginal (i.e. they're sending the same content to every other practice using their service).

Snoozefest.

The standard, recycled content currently sitting on too many veterinary websites is borrrrrrring. Your blog is a valuable touchpoint where you can engage with your clients, build trust and rapport, and drive clinic traffic or product sales. It shows off your individual personality, which is the only thing that sets you apart from the crowd. Don't let anyone take that from you!

Blogs work best when they use personal stories to educate. If you want to do a marketing push on leptospirosis vaccines, for example, tell a story about a real patient (with the client's permission, of course) that recovered from lepto. Explain how scary it was for the client and provide a quick overview on risk factors, zoonotic potential and disease prevention.

Think about the material you post from your client's point of view. Is it understandable? Why should they care? Can you be funny or relatable? Even better than writing, post a 90-second vlog (video blog) to your blog instead of text.

Own your voice in the marketplace, and share with the world the thing it needs most: Your own unique perspective. That will always be in.

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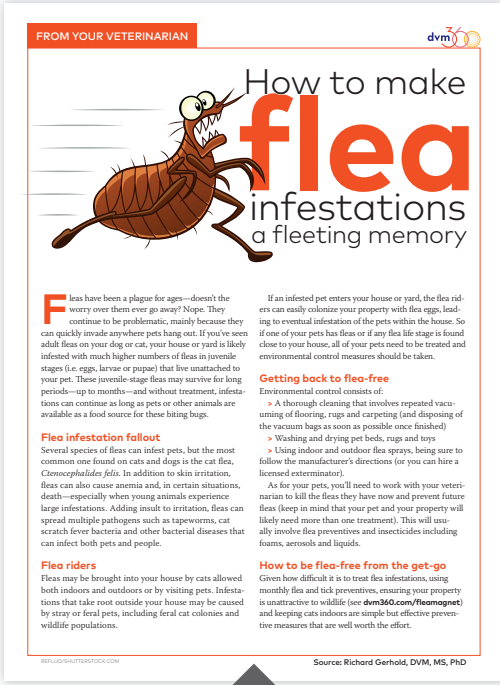
Get your hands on more videos, tips & tools at **dvm360.com/fleatoolkit**

Handouts for clients

Use these tools to help your team become the trusted partner for pet parents in the fight against fleas.

How to make flea infestations a fleeting memory

If you spot a stray flea or two—or even a hint of their existence—on one of your veterinary clinic's patients during a visit, this handout from Fetch dvm360 conference speaker Richard Gerhold, DVM, MS, PhD, can do much to calm owners and beef up the importance of keeping dogs and cats on preventives.



FROM YOUR VETERINARIAN

dvm360

How to make **flea** infestations a fleeting memory

Fleas have been a plague for ages—doesn't the worry over them ever go away? Nope. They continue to be problematic, mainly because they can quickly invade anywhere pets hang out. If you've seen adult fleas on your dog or cat, your house or yard is likely infested with much higher numbers of fleas in juvenile stages (i.e. eggs, larvae or pupae) that live unattached to your pet. These juvenile-stage fleas may survive for long periods—up to months—and without treatment, infestations can continue as long as pets or other animals are available as a food source for these biting bugs.

Flea infestation fallout

Several species of fleas can infest pets, but the most common one found on cats and dogs is the cat flea, *Ctenocephalides felis*. In addition to skin irritation, fleas can also cause anemia and, in certain situations, death—especially when young animals experience large infestations. Adding insult to irritation, fleas can spread multiple pathogens such as tapeworms, cat scratch fever bacteria and other bacterial diseases that can infect both pets and people.

Flea riders

Fleas may be brought into your house by cats allowed both indoors and outdoors or by visiting pets. Infestations that take root outside your house may be caused by stray or feral pets, including feral cat colonies and wildlife populations.

If an infested pet enters your house or yard, the flea riders can easily colonize your property with flea eggs, leading to eventual infestation of the pets within the house. So if one of your pets has fleas or if any flea life stage is found close to your house, all of your pets need to be treated and environmental control measures should be taken.

Getting back to flea-free

Environmental control consists of:

- A thorough cleaning that involves repeated vacuuming of flooring, rugs and carpeting (and disposing of the vacuum bags as soon as possible once finished)
- Washing and drying pet beds, rugs and toys
- Using indoor and outdoor flea sprays, being sure to follow the manufacturer's directions (or you can hire a licensed exterminator).

As for your pets, you'll need to work with your veterinarian to kill the fleas they have now and prevent future fleas (keep in mind that your pet and your property will likely need more than one treatment). This will usually involve flea preventives and insecticides including foams, aerosols and liquids.

How to be flea-free from the get-go

Given how difficult it is to treat flea infestations, using monthly flea and tick preventives, ensuring your property is unattractive to wildlife (see **dvm360.com/fleamagnet**) and keeping cats indoors are simple but effective preventive measures that are well worth the effort.

REFLUD/SHUTTERSTOCK.COM

Source: Richard Gerhold, DVM, MS, PhD

Scan to download now

Don't use your dog's flea and tick medication on your cat!

You know permethrins are bad news for cats, but there's a good chance your veterinary clients don't—and what they don't know can kill the cat. Help keep Sassy safe with this free client handout that educates on the dangers of permethrins and provides tips for toxicity prevention.

FROM YOUR VETERINARIAN

dvm360

Don't use your dog's flea and tick medicine on your cat!

Sharing isn't always caring—especially when it can cause harm to your cat. Learn why dog flea and tick preventives should never be used on cats and what you can do to keep your feline friend safe.

What you know: Flea and tick preventives promote long-term health and wellness

When you give your cat flea and tick preventive medication, you protect its outsides and its insides because fleas and ticks carry bacteria and parasites that can cause serious and even fatal disease in domestic cats.

What you may not know: Dog and cat flea and tick preventives often aren't created equal

Many prescription and over-the-counter flea and tick medications that are labeled for dogs (usually ones you apply topically rather than have your dog swallow) contain a synthetic compound called permethrin, which is safe for dogs but toxic to cats. If a product containing permethrin is mistakenly applied to a cat or eaten by one, it can cause seizures, coma and even death.

Partner with your veterinary team to keep your cat safe (from fleas, ticks and toxic compounds)

Flea and tick products that contain permethrin should always be labeled for use in dogs only. Some of these products also contain warnings to never use on a cat, but these warnings are sometimes small and hard to read.

If you buy flea and tick products from your veterinarian's office or from your veterinarian's online pharmacy (instead of from a big box store), the products should come with a prescription label that clearly states whether the product is safe for cats. You also have the benefit of being able to get direct guidance from your veterinary team on the best products for your cat for total peace of mind.

Safety tips

1. Store your dog's flea and tick products separately from the products for your cat. Since they have similar packaging and small print, it's easy to grab the wrong product by mistake. Speaking of keeping things separate, keep your dog away from your cat right after applying flea and tick medicine, as even close contact with permethrin can harm your cat.

2. Never split single doses of flea and tick medication between your dog and cat. In addition to toxicity concerns, dosing will be incorrect. Your pets won't get the protection they need, which could cause a flea infestation or tick problem.

3. If you ever have a question about your pet's flea and tick products, speak up! Your veterinary team is always ready to help—even if you decide to buy your pet's preventives somewhere else.

SUSAN SCHMITZ/SHUTTERSTOCK.COM

Source: Sarah J. Wooten, DVM

Scan to download now

Streamline

your flea product offerings and win back sales

HALFPOINT/SHUTTERSTOCK.COM

Give your hospital a clear focus and strengthen your recommendations to veterinary clients.

By Roger Zinn, CVPM

Why do we find ourselves losing sales on flea preventives? Are we carrying too many options? Do our clients have a skewed perception of risk because we don't offer education and recommendations?

In the last few years, the veterinary market has become saturated with a variety of prevention products, and practices aren't shying away from selling them. Instead, many are adding these new products to their inventory to provide a convenient route for clients to purchase them. What practices don't realize is that they're increasing their inventory costs and losing revenue and clients are still going to other sources, like online pharmacies, to purchase these products.

Veterinary professionals have an amazing power to help clients choose the right products for their pets, but our recommendations have become counterproductive. The products we recommend and sell should fit your clients' lifestyle needs.

Look at your inventory. How many products do you carry that do the exact same thing? We're giving clients far too many options, which devalues our recommendations and leaves customers unsatisfied. As a result, we lose the opportunity to sell in-house recommended flea preventives. It's important to help clients decide what's best for their pet by guiding them to targeted product recommendations. It's also vital to educate them about the method of action and proper product use.

Eliminating duplicate products will help reduce your inventory costs and allow opportunities to offer only the products your doctors recommend. Then educate your veterinary team on the products you carry. It's important to have these discussions to unify your team and create continuity in recommendations and conversations. Once the team is on board, you can educate your clients more effectively.

Using this approach in our hospital, we increased our total parasiticide revenue by almost 10 percent—an extra $14,000 in profit—compared to the year before. We realized it's not about how much you offer. It's about offering what you have and believing in it that makes the difference.

Roger L. Zinn, CVPM, is an ER administrator and partner at Animal ER of Northwest Houston.

Seize more fleas with these client communication tips

5 ways to freshen up flea education at your veterinary practice.

As we embark on a new year with countless unknowns, at least one constant remains: Your clients will still need to be reminded of the importance of flea preventives.

If you're feeling uninspired, perhaps these ideas can help.

1. Call to action

A simple addition to your appointment reminder calls can pave the way for better preventive conversations in the exam room, says Bash Halow, LVT, CVPM. Try this: "Please bring in all current medications you're giving your pet, including any flea and tick and heartworm medications." Your team will learn how many doses are left and be able to talk about the

ERMOLAEV ALEXANDER/SHUTTERSTOCK.COM

importance of keeping up with the preventives.

2. Flea fallin'

PetWorks Veterinary Hospital in Overland Park, Kansas, hangs 40 copies of illustrated fleas in its reception area to make the threat of fleas more tangible. Why 40? A single female flea can lay that many (and more) in a single day. In addition to giving your clients the heebie-jeebies, this "décor" is sure to spark some educational opportunities.

3. Give out a flea-bie

The Animal Wellness Clinic in Michigan City, Indiana, punches up flea prevention with punch cards. Clients get a punch for every flea-and-tick preventive dose purchased, and after 12 doses, they get one free. This freebie helps illustrate the importance your practice places on flea preventives and gives you a perk to promote in-person and online. (Note: To comply with EPA regulations, the Animal Wellness Clinic got extra product inserts from the company representatives to hand out with any single doses of preventive sold.)

4. Apples to apples, fleas to peanuts

You know you don't need to see fleas to be sure they're present, but your clients may not. Here's a tip from Allison Kirby, DVM, DACVD: Explain that it's like a peanut allergy. A person who's allergic to peanuts can see the telltale signs of exposure without seeing a single peanut. Thus, you'll need to teach your clients the telltale signs of flea infestation:

- flea feces, or pepper-like specks, in the pet's coat or on its bedding
- flea eggs, or light-colored specks, in the pet's coat or on its bedding
- scratching, biting at fur or legs
- patchy hair loss, especially near the tail or neck
- lethargy.

5. Statistically speaking

Clients tend to think that fleas simply reside on animals. If only. Tell clients that even in clean homes, 95 percent of fleas aren't on the pet—they're in both the indoor and outdoor home environment (for example, carpets, bedding, upholstered furniture, bushes, sidewalks and porches). This is a great opening to discuss how to eliminate fleas in the home environment.

We know talking about fleas day in and day out can be a slog, but keep up the good flea fight and let us know if you have any brilliant client communication ideas we haven't covered. Email us at firstline@ubm.com. We'll pay $50 for each tip we publish.

Get your paws on more videos, tips & tools to put to use in practice at **dvm360.com/fleatoolkit**

PHOTO COURTESY OF PETWORKS VETERINARY HOSPITAL

NOT ALL FLEA AND TICK CHEWS ARE CREATED EQUAL

Flea and tick protection that goes on and on and on...all month long

Simparica®
(sarolaner) Chewables
Dogged Protection

Recommend Simparica to your clients

Simparica acts fast—it starts killing fleas within 3 hours and ticks within 8 hours*—and keeps going strong for 35 days* **without losing effectiveness at the end of the month.**

Premium protection without the premium price—with our rebate offers and affordable price, you can compete against OTC brands and bring flea and tick protection back into your practice.

IMPORTANT SAFETY INFORMATION: Simparica is for use only in dogs, 6 months of age and older. Simparica may cause abnormal neurologic signs such as tremors, decreased conscious proprioception, ataxia, decreased or absent menace, and/or seizures. Simparica has not been evaluated in dogs that are pregnant, breeding or lactating. Simparica has been safely used in dogs treated with commonly prescribed vaccines, parasiticides and other medications. The most frequently reported adverse reactions were vomiting and diarrhea. See full Prescribing Information on page 06 and at **www.zoetisUS.com/SimparicaPI**.

*Studies show Simparica starts killing ticks in 8 hours and is ≥96.9% effective for 35 days against weekly reinfestations of *Ixodes scapularis*, *Amblyomma americanum*, *Amblyomma maculatum*, *Dermacentor variabilis*, and *Rhipicephalus sanguineus*.[1,2]

Learn more about Simparica.
Contact Zoetis Customer Service at
1-888-ZOETIS-1 or **1-888-963-8471**.

References: 1. Six RH, Geurden T, Carter L, et al. Evaluation of the speed of kill of sarolaner (Simparica™) against induced infestations of three species of ticks (*Amblyomma maculatum*, *Ixodes scapularis*, *Ixodes ricinus*) on dogs. *Vet Parasitol.* 2016;222:37-42. **2.** Six RH, Everett WR, Young DR, et al. Efficacy of a novel oral formulation of sarolaner (Simparica™) against five common tick species infesting dogs in the United States. *Vet Parasitol.* 2016;222:28-32.

zoetis

hospital for efficiently mixing general practice, specialty referral cases and 24/7 emergency services all under one—massive—roof.

In the pages that follow, Dr. Ostwald, one of Wheat Ridge's 10 building owners, provides tips you can take home to your hospital, no matter the size ...

1. It's not always love at first site

Dr. Ostwald says the biggest challenge with building the two-story practice was finding the perfect location. There weren't a lot of options in the city, especially when the team needed a lot big enough to triple the square footage of their current practice.

"We are, and have been, Wheat Ridge Animal Hospital for more than 60 years now," Dr. Ostwald says. "To be true to our roots, we wanted to stay in Wheat Ridge, a suburb of Denver, and Wheat Ridge isn't a big community."

It took the team two-and-a-half years and little bit of luck to finally land a suitable site. The good news? It was nine blocks from their current practice. The bad? It still wasn't big enough.

"The adjacent lot wasn't for sale, but we just asked the landlord if he would sell it and, lo and behold, he said, 'Yeah, I've been thinking about selling it anyway,'" Dr. Ostwald says.

Pro tip: Civic pride

If you want the city on your side, choose a location that needs to be revitalized. The team at Wheat Ridge even received an award for reinvesting back into the city.

2. Who wants a say? (It's a trick question—everybody wants a say)

"What are the must-haves?"

"What are the nice-to-haves?"

"What's on your equipment wish list?"

Dr. Ostwald and his architect asked representatives from each department at the hospital these three questions at the beginning of the planning process

By the numbers:

Owners: Drs. Donald Ostwald, Lenny Jonas and Lori Wise; Marianne Mallonee, CVPM
Number of doctors: 55
Exam rooms: 27
Total cost: $16,455,073
Cost per square foot: $333.01
Square footage: 37,819
Structure type: Addition, renovation
Architect: Brad Haswell, Studio DH Architecture
Secondary architect: Tony Cochrane, Animal Arts
Photographer: Tim Murphy, Murphy Foto Imagery

We'll be right with you! Look up in reception and you'll notice floor-to-ceiling windows that let the natural light shine in. Look down and you'll see highly durable, low-maintenance polished concrete floors. Four-seat beam seating is available for clients with a window view into rehab.

First floor facts: The first-floor outpatient treatment room features durable flooring that coves up the wall to ensure sanitary and easy clean up. Light fixtures are mounted to a green ceiling base, giving the room a pop of color. A wall-mounted flat-screen TV makes treatment "show-and-tell" a breeze.

Wall of fame: Love the pet photos in the exam rooms? Sorry, you'll have to shoot your own because these originals aren't for sale. "I've had quite a few clients reach out to me and say, 'Where did you get the photos?' Many of the photos are of staff members' own pets," Melissa Flygare, Wheat Ridge marketing coordinator, says. "The art is special to our clients even though they don't know the pets in the photos." And with 27 exam rooms, that's a lot of wall space to fill! Add a collapsible exam table, wall-mounted computer monitor and treat jar, and you've got an award-winning exam room.

Back up and running in no time: "We wanted to put sports medicine right up front so clients in the waiting room can watch agility therapy and patients on the underwater treadmill," says Flygare. The large rehab room includes a folding division wall to separate the wet and dry areas.

Room with a view: Look at those mountains! The judges loved the large windows in this surgery suite allowing natural lighting for surgical procedures. This is one of Wheat Ridge Animal Hospital's seven surgery suites, and it comes with a mountain view. *(Editor's note: This photo is staged and does not reflect the surgery standards or practices of the hospital.)*

A comfortable stay: With a 24/7 emergency clinic plus specialty services, Wheat Ridge Animal Hospital needed a welcoming and functional long-term reception area. Hospital Design Competition judges say they nailed it. "We wanted to make the waiting area comfortable. Many clients come from the mountains and stay all day," says Flygare.

Want more inspiring content from the dvm360 Hospital Design Competition?

For a list of winners of this year's competition and a schedule of when to keep an eye out for them to be featured in print and on dvm360.com, see page 21.

Vote for your favorite entrant in the 2018 People's Choice Award competition. View images of all 16 of this year's entrants at **dvm360.com/peopleschoice**.

Keep your eyes open for the 2018 Hospital Design Supplement arriving in June with your issue of *dvm360* magazine for even more great veterinary design content.

and incorporated as much feedback as they could into the new hospital.

"Twelve weeks prior to moving, we took staff members over to the construction site and showed them their areas of the building so they could start developing new work flows," Dr. Ostwald says. "I think because we involved them in that process, it made it a little easier on day one."

Pro tip: Morale

Consider forming a "Fun Committee" to boost morale during the hospital transition process. What's a fun committee? It's a group of "fun-minded" individuals who plan activities, like happy hours and bowling, for the entire staff, Dr. Ostwald says.

3. Go with the flow—and design accordingly

When it came to adding a second floor to the new hospital, the Wheat Ridge team had a strategy.

"We didn't want the outpatients

Attack your project from every angle at HospitalDesign360

Looking to build? Attend the 2018 HospitalDesign360 conference (formerly Veterinary Economics Hospital Design Conference) in Kansas City, Missouri, Aug. 15-17.

Learn from the profession's most noted veterinary design experts and compare options for design, construction, equipment, financing and more with our exclusive exhibit hall. For more, visit **fetchdvm360.com/hd**.

Bonus! Practice owners from both Hospitals of the Year will be on hand to share their secrets.

intermingling with the hospitalized patients or vice versa," Dr. Ostwald says. "So our design keeps outpatients on the first floor and hospitalized patients on the second floor."

Wheat Ridge's ICU is conveniently connected to the surgery suite on the second floor, creating easy access for severe cases that need postoperative care. And a centralized imaging center at the bottom of the stairs, makes it convenient for any animal that needs an ultrasound, Computed Tomography scan or Magnetic Resonance Imaging (MRI).

Pro tip: Delegation

"I know the challenges [veterinarians] have running a practice, and to think you can take on building a new hospital by yourself is foolish," Dr. Ostwald says. "Develop a strong support team to help you get the job done."

Ashley Griffin is a freelance writer based in Kansas City and a former content specialist for dvm360.

Meet the other 2018 winners

General Practice Hospital of the Year:

Northpointe Veterinary Hospital
Yuba City, California
Owner(s): Dr. Steven Sanders
Number of doctors: 12
Exam rooms: 8
Total cost: $4,880,534
Cost per square foot: $367.90
Square footage: 9,419
Structure type: Freestanding, new
Architect: Richard Rauh, Rauhaus Freedenfeld & Associates
Photographer: Larry Falke, Falke Photography
Month they'll be featured in *dvm360* and *Vetted* magazines: April

Merit Award winners:

Noah's Westside Animal Hospital
Indianapolis, Indiana
Owner(s): Dr. Mike Thomas, Chad Thomas
Number of doctors: 10
Exam rooms: 11
Total cost: $4,726,774
Cost per square foot: $207.71
Square footage: 14,877
Structure type: Freestanding, new
Architect: Wayne Usiak, BDA Architecture
Photographer: Jonathan Bednarski, Fotovan
Month they'll be featured in *dvm360* magazine: May

Care Animal Hospital of Pleasant Prairie
Pleasant Prairie, Wisconsin
Owner(s): Drs. Russel Brewer, Rebecca Wilsey-Brewer
Number of doctors: 6
Exam rooms: 10
Total cost: $4,472,758
Cost per square foot: $268
Square footage: 11,836
Structure type: Freestanding, new
Architect: Steve Klessig, Keller Inc.
Secondary architect: Edward Klister, Birschbach & Associates
Photographer: Jennifer Pelphrey, Pelphrey Photography
Month they'll be featured in *dvm360* magazine: July

Door County Veterinary Hospital
Sturgeon Bay, Wisconsin
Owner(s): Dr. Jordan Kobilca
Number of doctors: 2
Exam rooms: 4
Total cost: $1,438,713
Cost per square foot: $305.05
Square footage: 4,100
Structure type: Freestanding, new
Architect: Jeremy Lueck, DeLeers Construction
Secondary architect: Kelly Kueper, Integrity Engineering
Photographer: Cathy Carter, Fotosold
Month they'll be featured in *dvm360* magazine: August

Gold Coast Center for Veterinary Care
Huntington, New York
Owner(s): Dr. Alan Coren
Number of doctors: 6
Exam rooms: 8
Total cost: $4,348,772
Cost per square foot: $319
Square footage: 5,783
Structure type: Freestanding, new
Architect: Warren Freedenfeld, Rauhaus Freedenfeld & Associates
Photographer: Howard Doughty, Architectural Photography
Month they'll be featured in *dvm360* magazine: September

Queenstown Veterinary Hospital
Queenstown, Maryland
Owner(s): Dr. Marianne Bailey
Number of doctors: 4
Exam rooms: 5
Total cost: $2,043,000
Cost per square foot: $385
Square footage: 1,900
Structure type: Freestanding, new
Architect: Mark Moore, FMD Architects
Photographer: Lori Gross, Red Leash Pet Photography
Month they'll be featured in *dvm360* magazine: October

The **chaos** of compulsion

Canine compulsive disorder, much like OCD in people, produces blood and leaves scars—physical and psychological wounds that affect pets and owners. After decades of research in this field, Dr. Nicholas Dodman says there is hope. *By Hannah Wagle*

Doberman pinschers: highly intelligent, energetic, sweet and affectionate. Not many would believe that owning this friendly breed of dog could become a nightmare—that is, until the animal develops canine compulsive disorder (CCD). This condition includes behaviors like spinning, tail chasing, fly biting, licking, hoarding, biting or sucking, and it usually results in self-inflicted pain for the dog.

Now researchers, human doctors and veterinary professionals are helping animals afflicted with these problems thanks to a new field of research dedicated to compulsive disorders. All it takes is a close eye and the patience to find answers.

For Nicholas Dodman, BVMS, DVA, DACVA, DACVB, professor emeritus at Tufts University and the Cummings School of Veterinary Medicine, it started in the 1980s while he was researching cribbing, or compulsive biting, in horses. He quickly came to learn that using an opioid blocker—for example, he initially used naloxone—would help horses completely stop the behavior. "That was a pretty epic find," Dr. Dodman tells *dvm360*.

After publication of *The Boy*

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[1] Data on file.
[2] Data on file.

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Who Couldn't Stop Washing, which popularized the research of Judith Rapaport, MD, on obsessive compulsive disorder (OCD) in people, Dr. Dodman turned his attention to other species in need of help with their compulsions—for example, dogs with acral lick granuloma.

"Dr. Rapaport treated acral licking as you would treat human OCD and found that these dogs responded as humans did," Dr. Dodman explains. "So the research had face validity and predictive validity, though the construct between humans and dogs wasn't quite there. But still, that opened the veterinary field to start considering these tics that weren't researched or looked into as compulsive disorders."

"When we scanned the Dobermans with acral licking, we found they had sophisticated, minute details in the brain that are also found in humans suffering from OCD. The changes were, if not identical, compellingly similar."

—Dr. Nicholas Dodman

Canine compulsive disorder cannot be called "obsessive," Dr. Dodman says, because there's no scientific evidence proving that animals obsess like humans. Still, Dr. Dodman and those researching with him went as far as they could by doing an imaging study. "We took a bunch of Doberman pinschers, half with acral lick and half without, and MRI-scanned them with the help of the head of MRI at McLean Hospital, an affiliate of Harvard Medical School."

What Dr. Dodman found changed the game. "When we scanned the Dobermans with acral licking, we found they had sophisticated, minute details in the brain that are also found in people suffering from OCD," he says. "The changes were, if not identical, compellingly similar."

Along with MRI tests, Dr. Dodman also looked at genetics. "Again," Dr. Dodman says, "we chose Doberman pinschers and found a gene called CDH2, otherwise known as neural cadherin (NCAD), expressed most significantly in dogs with the compulsive problem." His research was confirmed in peer-reviewed medical journals. And later, psychiatrists in South Africa discovered that the same deformation of CDH2 was found in humans with OCD.

These findings are still widely discussed and debated, however. According to Dr. Dodman, that's because OCD and CCD look different to most observers. "Dogs would never count compulsively like a human with OCD might," Dr. Dodman says. "But dogs do hoard, and both conditions are linked to anxiety. Anyone that knows the literature knows that it's the

same—humans have OCD, dogs have CCD, cats have feline compulsive disorder (FCD). We're looking at feline genetics as we speak, and horses sometime in the future when we have more to go off of."

If many of the signs and symptoms are the same for people and canines, is the treatment the same as well? Dr. Dodman gives a resounding yes. "When tested in mice, blocking glutamate worked," he says. "It worked in dogs and horses as well. That's when we went to Harvard and requested permission from Dr. Michael Jenike, the founder of the Obsessive Compulsive Disorder Institute, to test it out on human patients using memantine."

The result? Dr. Dodman says it was "miraculous"—or, at least, the human patients tested used the very word. "Talking to Dr. Jenike today, he says hundreds of his patients are still on that treatment plan," Dr. Dodman says. "He was very skeptical at first, but by the end he knew that our veterinary science was onto something big."

Even after winning the belief of human doctors, though, Dr. Dodman is aware that skepticism still brews in the world of veterinary medicine. "Older generations typically believe what they were taught," Dr. Dodman explains. "And they were taught that dogs just lick a lot—that it's just a thing dogs do. And then they're told to put them on steroids and antibiotics and hope it stops. But it doesn't stop."

"The moment it dawns on you that it could be CCD, start treatment rather than wait for it to get worse."

—Dr. Nicholas Dodman

Dr. Dodman acknowledges that there are distinctions between CCD and other licking-related problems. "Not all licking is compulsive," he says. "You have to differentiate. If they're licking between their toes it could be pyoderma. If they're licking their limb, the location can be pretty conclusive of CCD. The difference is that CCD is a problem that starts in the head, not on the skin."

And Dr. Dodman's advice for veterinary professionals when it comes to compulsive disorders? "The moment it dawns on you that it could be CCD, start treatment rather than wait for it to get worse," he says. "I've treated sores that veterinarians have looked over, and even when the animal is better after treatment there are still scars and other injuries."

Dr. Dodman also emphasizes the value of a second opinion. "If whatever you're doing doesn't seem to be helping, get a second opinion," he says. "Teaching hospitals are really helpful for this sort of thing, as are board-certified dermatologists."

With new strides being made in research every day, animals, pet owners and people suffering from compulsive disorders can rest a bit easier knowing that there's hope for their problems as the veterinary world breaks barriers in scientific research.

Study: Veterinarians aren't mentally ill, but they are **quite stressed**

Just 41 percent would recommend the profession; financial strain is a serious concern, according to research from Merck. *By Kristi Reimer*

The findings of a study spearheaded by Merck Animal Health, unveiled Feb. 6 during VMX in Orlando, Florida, show that veterinarians are not plagued with mental health problems when compared with the general population, but they do experience significant stress—or, put another way, lower levels of well-being.

"The good news is that veterinary medicine does not have a mental health crisis," analyst John Volk of Brakke Consulting told the *dvm360* team during a private briefing on the results of the study, an extensive investigation of veterinarians designed to quantify the prevalence of mental illness and stress in the veterinary profession.

"But we have to do something," chimed in Elizabeth Strand, PhD, LCSW, director of veterinary social work at the University of Tennessee and another study collaborator. "We don't have to panic, but we can't ignore what we've learned."

Conducted by Brakke in collaboration with the AVMA and Merck Animal Health, the study involved survey results from more than 3,500 veterinarians, with results weighted based on age, gender and region to accurately represent the U.S. veterinary population.

To gauge mental health, the study relied on the Kessler Psychological Distress Scale, a scientifically validated tool for measuring serious psychological distress. For well-being, researchers used a customized index created from three widely accepted measures.

Investigators also compared results from veterinary respondents to employed adults in the University of Michigan Panel Study of Income Dynamics, the longest-running longitudinal household study in the world, according to a release from Merck. This comparison allowed researchers to benchmark findings from the veterinary population against those of the general public.

"This survey is unique in that, for the first time, a nationally representative sample of veterinarians in the U.S. were asked about their well-being, which is a broader measure of happiness and life satisfaction than mental health alone," says Linda Lord, PhD, DVM, of Merck Animal Health, formerly associate dean at The Ohio State University College of Veterinary Medicine. "Based on the survey results, we are particularly concerned about younger veterinarians."

Here are some key findings from the Merck Animal Health Veterinary Wellbeing Study:

About 1 in 20 veterinarians suffers from serious psychological distress. This is in line with the general population, the Merck release reports. However, when segmenting the data by gender and age, analysts found women and younger veterinarians (those 45 and under) to be more impacted by the financial and emotional stresses of professional veterinary life than older male veterinarians and individuals in the general population. Some additional findings:

- Depression, burnout and anxiety are the most frequently reported psychological problems.
- Suicide attempts among veterinarians are about the same as those in the general population, although suicidal ideation (thoughts about taking one's own life) are higher, consistent with the results of a 2014 CDC study.
- Older male veterinarians and food animal veterinarians "are flourishing," Dr. Lord says—psychological distress and emotional well-being problems are lowest in these groups.

Only half of veterinarians with serious psychological distress are seeking help, creating a large mental health treatment gap. This is compounded by the fact that only a few employers offer employee assistance programs, the release notes.

"This is a very important finding for me," says Dr. Strand. "Obviously there is still a stigma attached to seeking help. And we have to change that."

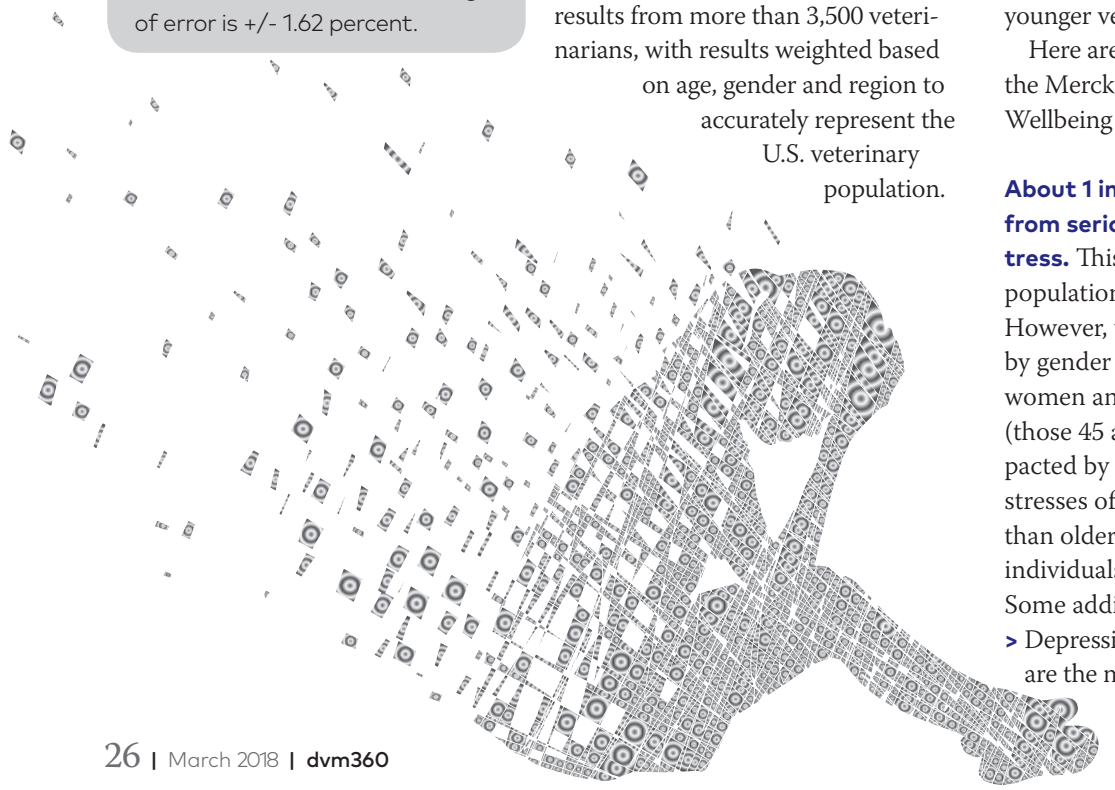
In addition, only 16 percent of respondents had ever accessed resources regarding well-being and mental health through national or state veterinary organizations, reflecting a potential lack of awareness of these resources' existence.

Veterinarians experience slightly lower levels of well-being than the general population. Well-being is defined as "how you feel about your life compared with the ideal," Volk says. While veterinarians are legitimately worse off in this area than those in other professions, he continues, the good news is that well-being can be elevated through lifestyle changes—in contrast to serious psychological distress, which often requires therapy, medication or both to alleviate. Some additional findings regarding contributing factors and mitigating factors:

- High student debt levels and relatively low income contribute to a

Methodology

An online survey was conducted by Brakke Consulting in November 2017 among 3,540 of a sample of 20,000 randomly selected veterinarians in the U.S. Data were weighted based on age, gender and region of the U.S. All data were tested for statistical significance at the 95 percent confidence level. For the sample as a whole, the maximum margin of error is +/- 1.62 percent.



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sense of poor well-being.
- A life outside the practice—family time, socialization, travel, exercise—is "absolutely essential," researchers say; it correlates highly with well-being.
- High participation in social media (more than one hour a day) is negatively correlated with a sense of well-being.

Only 24 percent of veterinarians age 34 and younger would recommend a veterinary career to a friend or family member. The survey showed that veterinarians today do not strongly endorse their profession. Only 41 percent of veterinarians overall would recommend the profession to a friend or family member, and even many of those who scored high in well-being and mental health wouldn't recommend the profession. The endorsement rate drops to 24 percent for those 34 years old and younger. In contrast, 62 percent of veterinarians age 65 and older would recommend the profession.

In the general population, 70 percent of employed adults would recommend their profession to a friend or family member, and 51 percent of human health physicians would do the same.

Student debt and low income contribute to emotional stress. Among younger veterinarians, high student debt was the top concern voiced, with 67 percent rating it as a critically important issue. After student debt, respondents said the most serious issues facing young professionals today were stress levels (53 percent) and suicide rates (52 percent).

Beyond solving the challenges of high student debt and low incomes, which the entire profession is wrestling with, it's important for both individuals and organizations within the profession to take action in response to these study results, organizers say.

"Most vets are mentally well but they have poor well-being," Volk told the *dvm360* team. "They tend to work on small teams in isolation from each other, so they think, 'This must be just me.' This study normalizes it, which might be the impetus for a key lifestyle change."

"I might propose that it's more important for organizations to start to change," Dr. Lord added. "Just like children can't be healthy in unhealthy homes, veterinarians can't be healthy in unhealthy practice environments."

Dr. Strand agreed, adding, "It would be great if we could start to see veterinarians applauding each other for leaving at 5:00, even if that creates slightly more work for the rest of the team. If that starts to happen, veterinarians will find it easier to take action to take care of themselves."

Action steps

Here are the action steps that can elevate well-being and alleviate stress, according to study presenters.

Veterinary organizations should:
- Educate constituents.
- Reduce barriers to seeking help.
- Provide and require CE credits in emotional crisis skills and suicide prevention.
- Create peer-to-peer support networks.
- Provide telehealth behavioral health services.
- Evaluate and publicize resources.
- Decrease student debt and increase income.
- Require students to engage in stress management behaviors during veterinary school.

Employers should:
- Educate employees.
- Promote work-life balance.
- Provide mentoring programs.
- Provide access to veterinary social work professionals.

Individuals should:
- Develop a stress management plan with help from a mental health professional or coach.
- Budget time for healthy activities and self-care.
- Consult with a financial planner.
- Limit social media to one hour or less a day and occasionally take a social media sabbatical.
- Look for signs of psychological distress in themselves.
- Seek help or encourage others to seek help.
- Show support for others' efforts toward promoting well-being—e.g. if they want to go home on time to be with family, support their decision.

Veterinary product highlights from VMX 2018

We poked around the big exhibit hall in Orlando, and here are a few new (or new-to-us) products that jumped out at us. #ICYMI, here's a quick sneak peek.

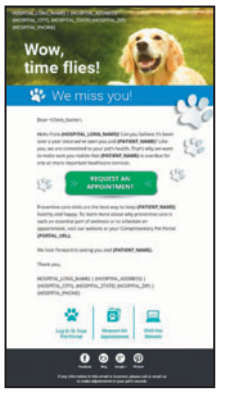
Sikka Software
Practice Assistant

This company says more than 12,000 practices are feeding data from practice software into their system these days through a free web browser add-on. The payoff for practice owners who use that add-on? A select few metrics drawn out of regionally applicable averages on fees, visit numbers and client numbers. But for as little as $545 a month, practices can avail themselves of the far more robust Practice Optimizer, which offers far more information on local averages that can be applied to pricing. If you really need this information to comfortably and reliably adjust your numbers, you could easily make back the cost of this software in a year's worth of fee adjustments. You can get similar information on your smartphone with Practice Mobilizer.

But that's not the cool new thing: You can totally buy a subscription to Sikka on your Amazon Echo device.

"Access your practice from the comfort of your own home, hands free," reads the brochure.

The Sikka Practice Assistant is either a fun gimmick, a cool new way to plan your morning or another way to take your work home with you.



Henry Schein Animal Health
Patient Recapture

If you don't do a perfect job of checking in with lapsed clients gone for 18 months or more and you're a user of Henry Schein software already—AVImark or ImproMed—check in on this program. The distributor will use an ever-evolving algorithm to send snail mail or electronic messages to your lapsed clients, and you pay $25 per client who, in fact, shows up for an appointment.

If you want to bone up on managing lapsed or inactive clients first, you can check out data at **dvm360.com/inactivedata** or try your hand at reaching out first with a sample letter at **dvm360.com/inactiveclient**. Of course, the big reason you don't pay attention to lapsed clients is you're probably too busy, so you may wind up back at Henry Schein's doorstep for this new service.

Visit **dvm360.com/VMXhighlights** to read the wide array of VMX launches that stood out:
- BLUE Natural Veterinary Diet NP Novel Protein Alligator for Dogs and Cats
- Purina Pro Plan Veterinary Diets NF Kidney Function diets
- Credelio from Elanco Animal Health is a new monthly oral tick and flea treatment
- Banfield anesthesia toolkit

and much more!

Four women pioneers receive a Feather In Her Cap

Veterinary industry leaders recognized at inaugural event during 2018 VMX.

Four women in the animal health industry have received a Feather In Her Cap award for their achievements and contributions to the industry and for mentoring other women leaders. At a dinner and awards presentation held at the Orlando Museum of Art in conjunction with VMX, the following women were presented with the inaugural Feather In Her Cap awards:

> Kimberly Allen, president of commercial operations for Henry Schein Animal Health, was the first woman to serve on and chair the American Veterinary Distributors Association Board, among other accomplishments, according to a release from the Feather In Her Cap organization.

> Catherine Knupp, DVM, MS, executive vice president and president of research and development for Zoetis, has encouraged women scientists to pursue project team leadership opportunities, and today, nearly half of project team leaders at Zoetis are women.

> Marie-Paul Lachaud, DVM, founded the first animal health clinical research organization in Europe, and for the last 10 years she has been an independent consultant to pharmaceutical companies in veterinary medicine. Dr. Lachaud has also been a mentor to those around her, helping women advance in their careers and in the veterinary industry, the release states.

> Joyce Lee, president of North America for Bayer Animal Health, has led teams in general management, strategy, sales, marketing, R&D, engineering, manufacturing and information technology in the course of her career. Lee is known for championing other women by utilizing mentorship as a development tool and serving as a connector among women in the industry.

The Feather In Her Cap award was established in 2017 by a group of women leaders in animal health—including Linda Rhodes, VMD, PhD; Susan Longhofer DVM, MS, DACVIM (SAIM); Diane Larsen, DVM, PhD; Lesley Rausch-Derra, DVM, MS; Kristen Khanna, PhD, MBA; and Julia Stephanus—who formed a nonprofit association to honor women who have made outstanding contributions in animal health and demonstrated commitment to mentoring women in the industry.

New women in industry group

A kickoff event for Women in Leadership and Management in Animal Health (WILMAH) was also held during VMX. The association says its mission is to connect and support women leaders through professional resources, development opportunities and advocacy. According to materials distributed at the event, WILMAH members aim to:

> Establish paths to help, encourage and inspire each other in current and evolving roles.

> Identify and overcome common barriers to success.

> Provide resources and mentorship opportunities to improve career possibilities.

> Provide advocacy, action and enrichment for women in animal health.

Learn more at wilmah.org.

The Bridge Club:

A video-based community for veterinary professionals

Brenda Andresen, Catherine Haskins envision a new medium for profession-wide communication.

In today's world of social platforms, apps and texting, good communication is becoming extinct, say the founders of The Bridge Club, a video-based community for veterinary professionals launched at VMX this year. Longtime industry insiders Brenda Andresen and Catherine Haskins, who've plied their marketing and PR expertise on behalf of a number of veterinary organizations over the years, aim to change that.

The Bridge Club was created to combine the expertise of TED talks, the networking potential of LinkedIn, and the laughter and insight of a longstanding book club, according to a media release about the launch. At the heart of the community is a series of 25-minute-long conversations (not presentations, Haskins and Andresen emphasize) on topics important to veterinary professionals. The goal is a 30-30-30-10 mix: 30 percent professional topics (e.g. finding a new position), 30 percent personal topics (well-being and self-care), 30 percent veterinary-specific topics (telemedicine) and 10 percent "potluck" or wild card.

An expert host kicks off the discussion, and participants chime in after 10 minutes or so with questions and additional insights. Haskins and Andresen take the roles of facilitator and technical operator. Everyone's face is viewable in a *Brady Bunch*-style grid on the computer screen, thanks to the Zoom video conference platform.

Membership in The Bridge Club is available at three levels: a free membership allows participants to take part in any virtual conversation; all-access members, who pay $95 a year, can attend virtual as well as live events and also receive recordings of virtual sessions; and community partners are high-level corporate sponsors.

To learn more, visit the website at www.thebridgeclub.com.

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IMPORTANT SAFETY INFORMATION

The safe use of Credelio in breeding, pregnant or lactating dogs has not been evaluated. Use with caution in dogs with a history of seizures. The most frequently reported adverse reactions are weight loss, elevated blood urea nitrogen, excessive urination, and diarrhea. See package insert for full safety information.

1. Karadzovska, D. et al. 2017. "*A randomized, controlled field study to assess the efficacy and safety of lotilaner flavored chewable tablets (Credelio™) in eliminating fleas in client-owned dogs in the USA.*" Parasites & Vectors. 10:528. **2.** Murphy, M. et al. 2017. "*Laboratory evaluation of the speed of kill of lotilaner (Credelio™) against Ixodes ricinus ticks on dogs.*" Parasites & Vectors. 10:541. **3.** Cavalleri, D. et al. 2017. "*Assessment of the speed of flea kill of lotilaner (Credelio™) throughout the month following oral administration to dogs.*" Parasites & Vectors. 10:529.

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Please see Brief Summary on page 30.

Introducing Vet+Pet West

UBM and NAVC are introducing a new veterinary conference experience in sunny San Diego to embrace different aspects of the animal care market. *By Gabrielle Roman*

UBM Animal Care, parent company for the dvm360 media family and Fetch dvm360 veterinary conferences, is excited to announce a strategic alliance with the North American Veterinarian Community (NAVC) that will create a new conference experience in Dec. 2018—Vet+Pet West, a paradigm-shifting, three-pronged convention and expo hosted in San Diego. Vet+Pet West will address

the needs of three segments of the animal care market: veterinary professionals, retailers and engaged pet parents.

Veterinarians, retailers and pet parents are all important to ensuring pets get the best care possible, so through helping all the people who care for pets, Vet+Pet West will help improve the health of pets across the board.

"This unprecedented strategic alliance leverages the strengths of both organizations and will set the new bar for presenting information and innovation for all aspects of animal care," says Christie McFall, vice president and managing director of UBM Animal Care. "Combining the resources of the dedicated UBM and NAVC teams puts us in a position to deliver a truly unique opportunity for attendees and for our sponsors and exhibitor partners."

Fetch, a dvm360 conference (produced by the same brain trust that powers dvm360.com), will run Dec.13-16, 2018. In addition to high-quality, innovative CE, Fetch dvm360 gives veterinarians a 360-degree conference experience that targets well-being and equips attendees with everything they need to succeed in practice and life. The exhibit hall adds to the experience, offering products and services specifically for veterinary practices that can boost business and revenue, while offering some fun ways to get involved.

Pounce, the retail pet expo, will run Dec. 14-16, 2018, and focuses on pet retailers (and veterinary professionals who offer retail products in their practices). It will present new technologies and innovative products that enhance pets' health and well-being—something different than your typical collar and sweater showcase. In addition, Pounce will provide high-engagement education centered around what's keeping pet retailers up at night.

Wag, the PetCon, targets affluent and highly engaged pet parents and will run Dec. 15-16, 2018. This isn't your typical consumer convention, but one for pet owners who want to be informed about and involved in the health of their pets. This means products, new technologies and innovative thinking tied to pet health and well-being. Not only that, Wag will have open discussions about common health and behavior questions that pet owners have.

"We're excited to bring a game-changing event to market that reflects that reality and gives all the stakeholders opportunities to improve the care pets receive and enhance the exchange of information about the innovative products and solutions available," says NAVC CEO Thomas Bohn, CAE.

Want more details about Vet+Pet West? They'll be coming down the pike soon.

Fetch dvm360 conference will still be the same, with the added bonus of Vet+Pet West. Pictured above: Dr. Matthew Brunke scares stress away by donning his inflatable dinosaur suit at Fetch dvm360 in San Diego. (Image courtesy of Dr. Sarah Wooten.)

New directory aims to make reporting animal abuse easier

More than 6,500 counties, cities and towns across the U.S. are listed in the coalition's database of investigating agencies.

The National Resource Center on the Link between Animal Abuse and Human Violence, or the National Link Coalition, has published a new national directory of agencies that investigate animal abuse. The directory represents more than 6,500 counties, cities and towns across the United States and identifies which agency follows up on reports of suspected animal cruelty, abuse and neglect, according to a release from the coalition.

The directory was created in response to laws in 36 states, as well as policies from the AVMA and AAHA, that either require or permit veterinarians to report suspected animal cruelty. Lack of uniform systems for investigating these reports or unclear procedures for reporting may make it difficult for practitioners to determine who to contact, the group says.

The coalition was founded in 2008 and is made up of 3,400 veterinary, animal care and control, law enforcement, domestic violence, child and adult protection, academic, human health, and prosecution professionals in all 50 states and 53 foreign nations, the release states. The coalition, which focuses on the link between animal abuse and human violence, has the goal of making communities safer by recognizing that animal abuse is often the first link in the chain of family and community violence and may point to co-occurring or future violence.

The directory can be found at nationallinkcoalition.org/how-do-i-report-suspected-abuse. An interactive map lists the names and phone numbers of investigating agencies organized by county and city within each state, with the intent of eliminating confusion and making reporting easier.

"Veterinarians who want to report suspected animal abuse often encounter a bureaucratic runaround," says coalition coordinator Phil Arkow in the release. "Unlike the simplified statewide hotlines for child abuse, domestic violence and elder abuse, the animal protection field is extremely fragmented with no national or statewide coordination of services. Each local agency operates independently with its own varying degree of enforcement powers, resources, training, organizational capacity and program priorities.

"A caller to an animal control or humane agency may be told to call law enforcement; the police or sheriff may say they are not trained in animal welfare issues and to call animal control," Arkow continues. "The result is a veterinarian who gives up in frustration and animal abuse that goes unresolved. Our goal is for people to use the directory to cut through the confusion."

The directory also includes information for reporting suspected child and elder abuse and domestic violence. Veterinary personnel are mandated reporters of suspected child and elder abuse in 23 states, without fear of civil or criminal liability.

The directory will be updated continually, the group says. To report or request edits to the listings, contact the National Link Coalition at arkowpets@snip.net.

Study finds successful vets develop coping skills after adverse events

All veterinarians experience complications, sad outcomes and patient deaths, but some have developed coping skills and strategies that help them manage these events' emotional impact and learn and grow from them, according to a study that appears in the February 2018 issue of the journal *Anthrozoös*, says Sara White, DVM, MSc (health ergonomics), the author of the study, in a media release.

The study polled 32 shelter and spay-neuter veterinarians about their experiences and how they coped with life-threatening complications or death related to the spay or neuter procedure, the release states. Qualitative analysis was used to identify themes and patterns in the responses of veterinarians who were successful in coping with adverse events.

After an adverse outcome, veterinarians described feeling guilt, sadness, anxiety and self-doubt, as well as deep empathy for their clients. Some veterinarians were able to turn the incidents into learning experiences and changes for growth, while some weren't ever able to recover from the trauma. The veterinarians who coped most effectively were those who talked openly with colleagues about the events and were able to learn and improve protocols, the study found. The successful veterinarians learned to put the loss into perspective and support themselves through the event's aftermath.

"Successfully coping with adverse events is important not just for the mental health and peace of mind of individual vets, but for their future patients as well," says Dr. White in the release. "The more comfortable vets can be thinking about dealing with things that don't go as planned, the better they will be at evaluating, refining and updating the way they care for patients."

The study gives veterinarians "a language to think and talk about their responses to complications and patient deaths," as well as steps they can take to recover from these events, says Jen Brandt, LISW-S, PhD, AVMA director of well-being and diversity initiatives, in the release. "Helping veterinarians understand that they are not alone in their feelings and reactions to unanticipated events may help decrease the negative impact of these reactions, and allow veterinarians to respond and cope more effectively," she says.

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PURINA PRO PLAN VETERINARY DIETS

A Staged Approach to Diagnosis and Management of Chronic Kidney Disease in Cats

A Roundtable Discussion Sponsored by Purina® Pro Plan® Veterinary Diets

DIAGNOSIS OF CHRONIC KIDNEY DISEASE

Dr. Laflamme: Chronic kidney disease (CKD) is a common diagnosis in middle-aged and older cats. Some estimates say more than 30% of cats 10 years or older are impacted with some degree of kidney disease. Knowing how common this condition is, should senior cats be routinely screened?

Dr. Churchill: I recommend a health screen for seniors, starting at age 7 or 8, that incorporates evaluation for renal disease. This screen includes a thorough medical and diet history, as well as a physical exam that includes kidney palpation, palpation of the colon and evaluation of body condition, muscle condition and body weight. A senior evaluation also includes a complete blood count (CBC), serum chemistry profile (including creatinine), a urinalysis, symmetric dimethylarginine (SDMA) and thyroid function. I reserve some of the urine sample to allow a culture or a urine protein creatinine ratio (UPC) if the urinalysis results indicate this follow-up is needed. I also measure the cat's blood pressure (BP).

Dr. Scherk: I start conducting what I call an annual "mature cat screening" at age 8. It includes a comprehensive physical examination and discussion regarding nutrition, along with performing a CBC, serum chemistry profile, urinalysis and BP. After 12 years of age, I increase the frequency to twice a year. It all depends on how the individual is doing; if they're ill, more frequent rechecks are needed.

Dr. Laflamme: Dr. Brown, you are a member of the International Renal Interest Society (IRIS), which focuses on post-diagnostic staging of CKD. How does IRIS outline its key diagnostic criteria and why are these important?

Dr. Brown: The IRIS group supports routine screening of middle-aged and senior cats, starting between 7 and 10 years of age. The idea of the staging system is to move toward individualized care; as CKD advances, patients need to be seen more frequently. By the time they reach stage 4 CKD, they should probably be seen at least every three months.

The diagnostic criteria forming the basis of the IRIS staging system is a fasting serum creatinine in a stable hydrated cat, augmented by appropriate additional tests. These should include a complete urinalysis, UPC, systolic arterial BP, body condition score (BCS) and, possibly, SDMA. While its use is still preliminary, we expect the IRIS guidelines to be updated as the veterinary profession gains experience using SDMA alongside creatinine.

Dr. Laflamme: How can practitioners improve their approach to diagnosing renal disease in cats?

Dr. Quimby: I think that one of the most important factors is to observe what's happening with the patient over time. I don't view diagnosis as a one-time lab test

"I think that one of the most important factors is to observe what's happening with the patient over time. I don't view diagnosis as a one-time lab test or event; a diagnosis of CKD comes from monitoring trends over time."

Dr. Jessica Quimby

or event; a diagnosis of CKD (see Table 1) comes from monitoring trends over time, whether it's changes in the creatinine level, urine specific gravity (USG) or the SDMA. My hope for practitioners is that by strengthening their clinical intuition about the onset of CKD, they can identify the disease earlier. I pay close attention to trends, which supports the value of regular screening for these patients, particularly as they become geriatric.

Dr. Churchill: I get a thorough history and find out why the cat is coming in. What's the back story? Are they just coming in for a wellness exam or is the cat really ill? Are they eating normally? Is their body weight and condition stable? Are they dehydrated?

Dr. Scherk: Related to that, a really easy way to assess hydration is to assess stool character—it doesn't lie. I ask the client to describe their cat's feces as hard pellets, moist logs, cow patties or colored water. Unless the cat has diarrhea, I can already tell if the cat is hydrated or dehydrated.

Dr. Brown: If it's in any way possible, I tell practitioners to get a urine sample and look at the specific gravity. If you evaluate an employee, you look at their work product, so why would a veterinarian evaluate the kidney and not look at its work product? If you want to evaluate the kidney, you don't look in the ears—you obtain a urine sample coupled with a blood sample. It's essential. It will help to determine if a suspicious creatinine reading is renal, post-renal or pre-renal.

Dr. Quimby: I place a high importance on diagnostic imaging. I want a radiograph and ultrasound when azotemia is first diagnosed to get a better idea of what I might be missing in the kidney, particularly as it relates to stone disease or hydronephrosis that is related to a stricture or some other type of ureteral accident.

Dr. Laflamme: Would you comment on blood urea nitrogen (BUN)?

Dr. Quimby: I always look at it, but I rarely use it as a primary driver of my decision process, as we know that BUN is impacted by other factors. The USG might be trending downward. The SDMA might be elevated. So BUN is secondary for me when I'm evaluating the different parameters. I agree that it's really important to evaluate the patient's hydration and put it in the medical record. It gives me a more complete picture of what's going on, as well as how to interpret the creatinine and USG results.

Table 1. Diagnostic Testing and Evaluation for Feline CKD.

	Pre-diagnosis	Post-diagnosis
Physical evaluations		
Comprehensive physical examination and nutritional assessment	Annually after age 7 Semi-annually after age 12	Semi-annually*
Weight	At every visit	At every visit
Body Condition Score (BCS)	At every visit	At every visit
Muscle Condition Score (MCS)	At every visit	At every visit
Blood pressure (BP)	Annually after age 7 Semi-annually after age 12	At every visit
Laboratory tests		
Complete Blood Count (CBC)	Annually after age 7 Semi-annually after age 12	Semi-annually*
Serum Chemistry Panel	Annually after age 7 Semi-annually after age 12	Semi-annually*
Urinalysis	Annually after age 7 Semi-annually after age 12	Semi-annually*
Urine Protein: Creatinine** ratio (UPC)	Run if urinalysis shows increased protein	Semi-annually*
SDMA	In cats with low MCS	
Thyroid***	Annually after age 7	

*Depends on stability of patient. If declining or in Stage 4, then increase frequency to every 3-4 months
**Requires inactive sediment
***Earlier screen if thyroid gland palpated or a history of weight loss occurs

"The more often practitioners perform BP evaluations, the better they get at doing them. It helps to start measuring BP in both well cats and younger cats, when you're less concerned about the results."
Dr. Margie Scherk

Dr. Laflamme: Proteinuria is an important factor. When should UPC be measured?

Dr. Quimby: If proteinuria is present on the dipstick, I typically look at the urinalysis—including urine sediment—to determine if measuring UPC is appropriate to quantify proteinuria. This is necessary because we know the dipstick can be somewhat inaccurate, with both false-negative and false-positive results occurring. As a general rule, grossly bloody urine, or even 250-300 red blood cells per high-power field, could potentially impact the UPC. Just as with bacteriuria, these cells can represent inflammatory or infectious processes in the urinary tract that could confound test results.

It's important to note that there are big differences between CKD in the dog and cat. The majority of dogs have proteinuric kidney disease and are more likely to have glomerular kidney disease, as opposed to cats, which are more likely to have interstitial disease. True glomerular dysfunction in cats is fairly uncommon. My general impression is that low levels of tubular proteinuria tend to occur in later-stage cats as a sequela to their CKD as opposed to being the driving force.

Dr. Laflamme: Let's talk about blood pressure. How important is it to measure BP in cats with definitively diagnosed kidney disease?

Dr. Brown: Measuring BP in cats with CKD is extremely important. Between one-fourth and one-half of cats with CKD have systemic hypertension, which can add up to 15 percent of aged cats and up to 2 to 4 percent of all cats—and hypertension has important adverse consequences. A significant number of cats with unmanaged severe hypertension will have ocular abnormalities. Depression can also occur, but it can be difficult to know if the cat is depressed because of uremia or because of a hypertension-induced "headache," which is a common clinical finding in people with uncontrolled hypertension.

Dr. Scherk: The more often practitioners perform BP evaluations, the better they get at doing them. It helps to start measuring BP in both well cats and younger cats, when you're less concerned about the results.

Dr. Quimby: I agree—it's so important to look at the trends. If the cat typically is stressed when it comes to the hospital but has had normal BP evaluations over time, you can recognize what becomes an upward trend. As a tip, I recommend using headphones with the Doppler.

Dr. Laflamme: Let's talk about SDMA and explore the advantages or limitations you see to using this marker as a measure of kidney function.

Dr. Brown: Symmetric dimethylarginine is a by-product of somatic cell metabolism that's eliminated by renal filtration, so the concentration of SDMA in plasma reflects glomerular filtration rate (GFR). In the past, creatinine has been the hallmark for measuring adequacy of GFR because its elimination is by filtration in cats. A challenge with creatinine is that the rate of its production is dependent on skeletal muscle mass. As we all know, geriatric cats lose muscle mass, which causes creatinine production to fall. This means that "normal" ranges for older cats should be lower than for younger cats, but we don't yet have those ranges available to us.

I believe that we're very early in our use of SDMA. While it looks promising as a way to identify cats with chronic kidney disease earlier than creatinine does—especially as cats lose skeletal muscle mass—we don't yet know what variables there are to SDMA production.

Dr. Quimby: We desperately need biomarkers in order to better study chronic kidney disease and understand what happens with therapies, but no test is 100% right. I agree that we're early in understanding SDMA as a diagnostic and need to better understand its strengths and weaknesses. SDMA may be a way to further evaluate the IRIS stage and determine how to manage the disease at different points in time. Based on the SDMA, I may bump a patient from IRIS stage 2 up to stage 3, and with that comes heightened supportive care and monitoring. However, I do not want SDMA to become a substitute for not getting urine. I'm going to want to look at the creatinine, SDMA, USG and the urinalysis all together to make a decision about what's going on with the patient.

MEDICAL MANAGEMENT OF CHRONIC KIDNEY DISEASE

Dr. Laflamme: Amlodipine is an anti-hypertensive medication, while benazepril is an ACE inhibitor. How do these drugs work and when should they be used in the CKD cat?

Dr. Brown: Amlodipine is a calcium channel blocker that peripherally dilates the afferent arteriole in the cat. Meanwhile, benazepril indirectly but preferentially dilates the efferent arteriole, which is often thought to be a desirable effect.

Some papers suggest that amlodipine use carries some risks in other species, particularly people and rats. In the case of cats, however, I think it can substantially lower BP, thus obviating most of the risk to the kidney of dilating the afferent arteriole.

The IRIS guidelines suggest that these medications be introduced in the presence of persistent hypertension (systolic BP that exceeds 160 mmHg), which can occur in early stages—often in stage 2. It's important to ensure that patients are adequately hydrated before introducing ACE inhibitors to avoid precipitous drops in a patient's glomerular filtration rate.

Dr. Laflamme: What's your take on the use of phosphate binders in cats with CKD? When would you use them and when wouldn't you?

Dr. Churchill: I don't use them until I see a rise in serum phosphorus, which is usually at stage 3. I prefer to reduce phosphorus through diet first, then add phosphate binders if needed. I think adding phosphate binders on top of a diet that's not phosphorus-restricted has questionable efficacy.

Dr. Quimby: I would ask for someone to give me a tasty phosphate binder, because we struggle with this. If we put the phosphate binder in the food as opposed to trying diet first, we can be shooting ourselves in the foot, because phosphate binders can keep cats from meeting their caloric intake goals.

NUTRITIONAL MANAGEMENT OF CHRONIC KIDNEY DISEASE

Dr. Laflamme: That's a good segue to discussing diet and the role of nutrients (see Table 2) in managing CKD. Dietary protein restriction has been promoted for decades as an important component of management. Let's explore the basis for this long-standing recommendation.

Dr. Brown: Over the years, two separate rationales have been given for dietary protein restriction. The first, for cats in stages 3 and 4, is that some of the key uremic toxins are by-products of protein catabolism and that protein restriction would, therefore, reduce their production. The second rationale is the idea that protein restriction might slow the progression of kidney disease or prevent its onset. There is considerable doubt about this second idea—that dietary protein intake is a progression factor in dogs and cats.

There isn't any evidence in either species that the level of protein intake significantly impacts the rate of progression from IRIS stage 2 to 3 to 4. I don't think it's reasonable to recommend restriction of dietary protein as a treatment goal in early chronic kidney disease before the onset of clinical signs.

If we have a feline patient with low muscle condition score (MCS), low BCS and/or low lean body mass, it would seem that protein restriction would be an undesirable therapeutic maneuver. While there appears to be a valid argument that dietary protein restriction could reduce uremia in later stages, there's no data to indicate that restricting protein in earlier stages can slow the progression of disease in cats.

Dr. Laflamme: Were studies conducted on protein- and phosphorus-restricted diets or were the study diets specifically protein-restricted with phosphorus being maintained at normal levels?

Dr. Brown: The impacts of low protein and phosphorus were often not separated in studies. The data that reducing phosphate intake in cats is beneficial is overwhelming, and we're beginning to understand that it's important in uremia as well as progression. Thus, most—or all—of the benefits to renal diets seen in some studies could have been attributable to phosphorus restriction.

"There isn't any evidence in either species that the level of protein intake significantly impacts the rate of progression from IRIS stage 2 to 3 to 4. I don't think it's reasonable to recommend restriction of dietary protein as a treatment goal in early chronic kidney disease before the onset of clinical signs."
Dr. Scott Brown

Dr. Churchill: I agree. It is tricky because protein is often the source of phosphorus, and the two are lumped together. My biggest quandary is deciding how to manage cats in IRIS stage 2. There's such a range of variability in the clinical picture, and we need to make sure we're meeting the patient's minimum protein requirements. I'm much more resistant to feeding a traditional renal diet at this stage.

Dr. Laflamme: For what reasons might we want to restrict protein?

Dr. Quimby: I struggle because we don't have the studies we need, and the studies we have were done decades ago with diets that we're no longer feeding. Meanwhile, if you can't get the cat to eat, how can you evaluate what the right diet is, especially if it impacts intake? I get lost in the complexity.

Dr. Scherk: The role of body and muscle condition on longevity has been studied in cats with CKD as well as other conditions, such as cardiac disease and cancer. And we know that if a cat is losing muscle condition, the last thing we want to do is reduce their dietary protein.

Dr. Laflamme: So if you had a large group of cats and were going to feed half of them a lower-protein diet and half of them a higher-protein diet, would you expect to see a difference in muscle mass between those two groups of cats?

Dr. Churchill: I would expect the lower-protein ones to have a more rapid reduction in muscle condition as they age. It's largely clinical experience, but there are some studies that show protein requirements increase in cats as they age.

Dr. Scherk: Cats with CKD live a long time, and old cats need more protein. Rather than just focusing on the CKD, we need to focus on the whole cat.

Dr. Laflamme: Do we have evidence that phosphorus restriction is beneficial in cats or other species?

Dr. Brown: The evidence is strong that phosphorus restriction has a beneficial impact, as early as stage 2. I think we've got a lot more to learn about what that modification should look like, but there's clear evidence that phosphorus restriction can be beneficial. A low normal serum phosphorus has been identified as a harbinger of long survival.

There are proposed mechanisms for the benefit of phosphorus restriction, but we don't know exactly what is operating in cats with kidney disase. From the standpoint of a practicing veterinarian, elucidating the exact mechanism probably isn't critical. We know it helps!

"My biggest quandary is deciding how to manage cats in IRIS stage 2. There's such a range of variability in the clinical picture, and we need to make sure we're meeting the patient's minimum protein requirements."
Dr. Julie Churchill

Dr. Laflamme: Is there any evidence to tell us what level of dietary phosphorus we should be targeting?

Dr. Churchill: It's not very academic. When selecting a diet, I set the protein as high and the phosphorus as low as I can. In terms of milligrams per kilocalorie, it is probably 100 milligrams or less—that's based on the renal diets currently out there. Right now, we just believe that less is best.

Dr. Laflamme: Let's talk about other nutrients that may be important in managing kidney disease, including omega-3 fatty acids and antioxidants. Why would those be beneficial?

Dr. Brown: An argument for using omega-3 in cats with chronic kidney disease could be their potential anti-inflammatory effects. In dog studies of chronic kidney disease, there was a clear benefit to omega-3 supplementation; in a study in cats, fairly high levels of supplementation tended to increase renal blood flow. At the time of the study, I thought the increase in renal blood flow from fish oil supplementation might potentially have a deleterious impact. Now my thinking has shifted on kidney disease in cats, with a focus on the role of tubulointerstitial hypoxia as a factor in progression. If intrarenal hypoxia turns out to be important in affected cats, then increasing renal blood flow could be beneficial.

Dr. Quimby: I am very interested in hypoxia and how oxidative stress might lead to potential damage. We've been studying telomere length and cellular senescence in CKD, and have demonstrated that telomeres are shorter in kidney disease. We cannot prove that telomeres are shorter in the elderly cat, but they are definitely shorter in cats with CKD, likely because of repeated replication and repair and oxidative stress.

Dr. Churchill: Supplementing with antioxidants has become standard practice in diets for the senior pet. I think that because of the age of the population we're talking about (cats with CKD), antioxidants would be perceived to have potential benefit.

Table 2. Nutrient Rationale in Management of Feline CKD.

Nutrient	Recommendation and Rationale
Protein	In earlier stages, feed moderate levels of high-quality protein to help maintain the cat's lean muscle mass. As disease progresses, feed reduced levels of high-quality protein to minimize the production of filtered nitrogenous wastes.*
Phosphorus	Restrict phosphorus in all stages of disease. Failure to excrete phosphorus leads to the release of parathyroid hormone and secondary renal hyperparathyroidism.
Potassium and B vitamins	Increase levels to help compensate for loss due to polyuria.
Sodium	Sodium levels should be controlled to avoid extremes and prevent the activation of the renin-angiotensin-aldosterone system.
Omega-3 fatty acids	Added EPA can help reduce inflammatory mediators.
Other considerations	
Non-acidifying	Helps counteract metabolic acidosis
Energy-dense	Can provide essential nutrient in smaller meals

*Decision to switch to a lower-protein diet should be made on a case-by-case basis, taking into consideration factors such as body and muscle condition, presence of uremia, etc.

Dr. Laflamme: Should potassium be increased?

Dr. Scherk: Potassium is impacted by metabolic acidosis. Correcting both metabolic acidosis and hypokalemia appears to be really important in cats with CKD.

Dr. Quimby: Cats with renal disease are often profoundly hypokalemic. There's some evidence that hypokalemia leads to progression of kidney disease in other species, but we don't know if that's true in the cat. We believe that supplementing is important for muscle and intracellular health, and it helps keep them eating. We used to put potassium in subcutaneous fluids, but that is currently not recommended due to new compounding regulations. Dealing with it on a dietary level is ideal.

Dr. Brown: The clinical signs of acidosis have been studied quite well in rodents, and they're almost identical to the clinical signs of uremia. We definitely need to manage acidosis.

Dr. Laflamme: We've talked about a number of nutrients. Knowing that cats are all different, which nutrients do you believe are most important?

Dr. Churchill: For earlier-stage cats, I'm going to choose energy and water as my top priorities to meet their energy needs and ensure hydration. Within the calories consumed, we need to meet feline nutritional needs. I want the diet to be palatable and well-consumed, and I would like it to be phosphorus-restricted and protein-replete. I would also enrich the diet with omega-3 fatty acids and potassium.

Dr. Laflamme: Would your list be different if it was later? Let's say stage 3.

Dr. Churchill: I would answer "maybe." I'm sorry to be vague, but this is really about individualized care. I cannot build a diet for all cats at stage 2 or stage 3, because I need to follow that cat's trends and meet his or her nutritional needs based on individual intake and appetite.

Dr. Quimby: I completely agree. I can't say that all stage 2 cats should get this and all stage 3 cats should get that. I think my nutrient order would be very similar.

Dr. Scherk: Regular fluid therapy can often be enough to correct the acidosis. But I think with respect to the food, we have to look at the cat's MCS and BCS, then assess and reassess. Using a renal diet should be viewed as a medical prescription. We need to get these patients back in for follow-ups to see how they are responding to the prescription.

Dr. Laflamme: Do you think the level of protein should change in the late stage of CKD?

Dr. Churchill: It likely may not, because intake is often declining further. If the cat has a feeding tube in place and intake is maintained, it might. I'm a late adopter of protein restriction.

Dr. Brown: The question that's floating around is, if we have a renal diet that is moderate in protein level, would you find it useful? Early on, yes. When the cat is in IRIS stage 3 or 4, we typically would want to reduce protein intake. On the other hand, you might also suspect that the later-stage cat is eating less, which means it's probably protein-restricting itself. We've spent so much time worrying about the impact of protein on progression of CKD, but we need to understand more about uremia. There are a number of potential causes of uremia in cats, and not all are related to protein intake.

Dr. Laflamme: We've talked at length about diet and the importance of intake. How do you address inappetance in the CKD cat?

Dr. Quimby: I'm proactive about prescribing appetite stimulants. Quite frankly, I begin initiating appetite stimulants, regardless of IRIS staging, when a cat is experiencing a problem with appetite. We're trying to mitigate all the different processes associated with their disease, but when it comes right down to it, we know that poor body condition is tied to a poor prognosis. In addition, owners view appetite as a major factor in quality of life. Cats that aren't eating often get euthanized for this reason.

I frequently have discussions with clients about managing nutrition with feeding tubes and what a great way it can also be to give medications and fluids. Unfortunately, some people view this as a way to falsely prolong life because of associations they have with feeding tubes and life support in human medicine. Some people even tell me they feel that appetite stimulants are unnatural.

Dr. Churchill: I think the biggest error when we talk about feeding tubes is to position them as something you do at the very end, when it's way too late. I try to normalize it and position it as a way to maintain quality of life. I stress that it is a personal decision, but when a cat's quality of life is generally good but the cat cannot maintain a healthy weight or when feeding the cat is becoming too stressful for the client, it's a good time to consider a feeding tube. Nutrition and nurturing are so intimately aligned.

Another advantage to feeding tubes is ease of hydration. Not only does tube feeding remove a major stressor, but my clinical experience tells me that cats generally feel much better when they're hydrated. They're much more active and they maintain their weight better.

Dr. Laflamme: When would you place a feeding tube versus using a medical appetite stimulant?

Dr. Quimby: I take into account the steepness of the hill. If the cat is mildly muscle-wasted and starting to lose weight, I prescribe an appetite stimulant like mirtazapine. But if the cat has really slipped downhill and we're struggling, that appetite stimulant is probably not going to get us anywhere. I would turn to a feeding tube before we run out of time.

Dr. Churchill: When deciding which type of feeding tube, I recommend practitioners put in the tube that they're comfortable placing quickly and effectively. Cats tolerate both gastrostomy and esophagostomy tubes quite well.

Dr. Laflamme: What are your thoughts on administering subcutaneous fluids?

Dr. Scherk: I think the importance of hydration goes back to appetite. If you are dehydrated, you feel sluggish. If you are dehydrated you may have a headache. If you have a headache, you feel nauseous and you eat less. You can correct a lot of things by maintaining proper hydration status. It's important that owners not think of fluids as something to give as-needed when they're seeing signs of dehydration; hydration is something they need to maintain.

Dr. Laflamme: What do you want veterinarians in practice to see as the primary takeaways of this discussion? What can they do differently in order to enhance the care of cats with CKD?

Dr. Quimby: I think making the additional effort to fully assess the CKD patient is crucial to the best outcome, and a nutritional assessment needs to be part of the physical assessment.

Dr. Brown: Careful assessment and reassessment of patients is essential. I think sometimes we get hung up on which drug to use or whether to restrict protein intake when the patient's energy intake or body and muscle mass maintenance are the critical things that we as veterinarians should be addressing.

Dr. Churchill: I would add that no one test takes on any greater importance; what matters is looking at the whole picture. I also think we need to emphasize the importance of hydration and food intake.

Dr. Scherk: No single parameter is enough in diagnosis and assessment; all must be reviewed in context and over time, and reassessment is key. Look for trends.

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When the pet is obese and the client is oblivious

According to veterinary nutritionist Deborah Linder, the battle of the bulge starts with your clients' hearts and minds. *By Sarah J. Wooten, DVM*

Obesity is an epidemic in the veterinary field, but the biggest barrier you're likely to face in this battle of the bulge isn't the pet's waistline—it's the client's perception, says Fetch dvm360 speaker Deborah Linder, DVM, MS, DACVN, head of the Tufts Obesity Clinic for Animals in North Grafton, Massachusetts.

While more than half the cats and dogs in the United States are overweight, only half of the owners of these fat pets believe their pets are overweight (even after the veterinarian has discussed the patient's body condition score), and very few have a good understanding of how many calories they're feeding their pets on a daily basis.

So according to Dr. Linder, the key to making a dent in the obesity epidemic isn't solely in feeding the right diet. The solution is a complex one that requires developing mad skills in the areas of communication, education and empathy. We must understand our clients' perceptions and motivations to get them to budge, because until clients understand that a fat pet is a suffering pet, nothing will change.

Will it take some time? Probably.

Is it hard? Maybe—but nobody ever said this profession was easy.

Are we gangsters who can become amazing communicators to eradicate pet obesity and solve world hunger?

>>> Well, clearly this box has gotten smaller.

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Yes, we are. (OK, that last part may be a bit strong, but who knows?)

What do your clients say when you break the news that their pet has a weight problem? Here are some of the more common client comments, followed by Dr. Linder's recommendations on how to respond—along with a few tips of my own.

"Eh. I don't really care if he's fat. He's happy."

Here's how Dr. Linder replies to this comment: "Yes, there might be more of him to love, but you'll have less time to love him. A landmark lifetime study of Labrador retrievers showed that dogs live almost two years less if they're overweight."[1]

In addition, I tell pet owners that overweight dogs get disease earlier than thin dogs, which costs them more in vet bills and causes unnecessary pain and suffering. I find that this line really hits home for my clients because they don't want to see their pets suffer, and they don't want expensive veterinary visits. It's good to know your clients' biggest concerns for their pets.

A caveat: If a client is not ready to address the pet's weight problem, don't push it. You can actually compound the problem or lose the client's trust completely. Just give the client the information and let it be.

"But it's cruel to put her on a diet. I know I hate being on a diet. I don't want her to suffer."

Dr. Linder's response: "Actually, pets are happier when they have a healthy weight. They have better energy and less pain from arthritis. Feeding treats is an important part of the human-animal bond, however, and I still want you to have that with your pet. Let's look at some healthier, lower-calorie options."

Dr. Linder creates daily calorie plans in which patients get 90 percent of their calories from a complete and balanced diet and 10 percent of their calories from treats (if feeding treats is an important part of the client-pet relationship). She also likes to find out what the client's non-negotiables are (i.e. the items they'll feed their pets no matter what you say) and incorporate them into the diet plan. The more you can compromise with your client without putting the pet's health at risk, the better.

I tell pet owners that overweight dogs get disease earlier than thin dogs, which costs clients more in vet bills and causes unnecessary pain and suffering. I find that this line really hits home for my clients because they don't want to see their pets suffer, and they don't want expensive veterinary visits. It's good to know your clients' biggest concerns for their pets.

"OK. I'll just feed my pet less of his regular food."

We want to cut calories, not nutrients. Let your clients know that if they have to drastically cut calories, the pet may not get adequate protein or other essential nutrients from a maintenance diet, and this can cause muscle loss instead of fat loss. Weight-loss diets are specially designed to reduce calories and maintain adequate nutrient levels.

Severely obese pets and orthopedic patients on extended cage rest are the best candidates for therapeutic diets. If the main problem is drastic overfeeding or if the pet doesn't have much to lose, OTC diets are adequate.

When it comes to high-fiber weight-loss diets, research findings vary, says Dr. Linder. Some studies say fiber increases satiety; others say fiber has no effect on satiety at all. So Dr. Linder tells clients that while high-fiber diets may help with satiety, one thing is

Weight-loss plan: 3 critical components

1. Trust. Build trust with clients to the point that they would be comfortable telling you they feed their dog Big Macs. Emphasize that you and the client are on the same team in working together for the best health of the pet.

2. Complete diet history. People don't usually overfeed their pets consciously, Dr. Linder says. Get to the bottom of the situation by utilizing open-ended questions, like "What treats do you give?" or "What does your pet's bedtime routine consist of?" Ask about treats, chews, medication administration and supplements. Many clients use food to administer medication, and those calories count. If you don't have time to obtain a full history, ask the client to fill out a diet history and make plans to follow up over the phone or via email. You could also have the client fill out the diet history while waiting to be seen.

3. Follow-up. You have to check in with the client and make adjustments to the diet plan as necessary. Dr. Linder tells clients that the first two weeks are just a test phase—she has no idea what the pet's metabolism is like or whether the pet will lose, gain or stay static, so she sets the client's expectations ahead of time that anything can happen during the first two weeks. Communicate that after the test phase, the goal is for the pet to lose 1 percent of its total body weight every week. (Note: The weight loss safe range is between 0.5 and 2 percent per week. If you go higher, the pet is likely to lose muscle, not fat, and have rebound weight gain.)

certain: There will be more stool. That can be a deal-breaker for some clients.

You may find that your clients object to fiber, calling it "filler." (Thanks, grain-free diet craze.) If that's the case, tell them that it is a filler and that it's intentionally put in the diet to fill the pet up so he won't eat as much.

"I love my roly-poly puppy/kitten. I mean, look at that cute belly!"

There's a reason why human health classes start in elementary school. For us as veterinarians, puppy and kitten visits are the best way to get clients started out on the right nutritional foot.

No time to talk about nutrition? No problem! Train your team to teach clients about body condition scores and nutritional management. Include information in the spay/neuter discharge instructions about the need to reduce caloric intake after surgery (due to hormonal changes, there can be up to a 30 percent decrease in caloric needs), then reinforce this information at the surgical recheck (because, as we all know, pet parents rarely hear what we say the first time).

Dr. Linder recommends WSAVA.org for unbranded nutritional charts, videos, client handouts and all sorts of other free resources that can help you communicate with your clients. To help cat owners better understand their felines, she recommends the Ohio State Indoor Pet Initiative.

"But my cat is driving me *crazy* for food at 4 a.m.!"

Food should never come straight from the client, Dr. Linder says, because this solidifies the client as the food source (meaning the cat will of course come yowling whenever she's hungry—even 4 a.m.).

Dr. Linder suggests using a timed feeder scheduled to dispense food five minutes before the cat usually comes whining. She's also a big fan of food puzzles and "no bowl" systems that help control calories and provide environmental enrichment.

In the end, you must change hearts and minds to change waistlines. It may not be easy, but the potential of adding years onto your patients' lives makes all the extra work and awkward conversations worth it.

Reference

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Dr. Sarah J. Wooten is a member of the American Society of Veterinary Journalists and divides her professional time between small animal practice in Greeley, Colorado, public speaking on associate issues, leadership and client communication, and writing. She enjoys camping with her family, skiing and SCUBA.

'Weight. I'm fat?!'

Data from Nationwide reveals that pet obesity is on the rise for the seventh straight year.

Last year brought some heavy news for pets—and their health. In a press release Nationwide reports that its members filed 1.4 million pet insurance claims for conditions and diseases related to obesity—racking up more than $62 million in veterinary expenses. And obesity-related claims swelled 24 percent over the last four years.

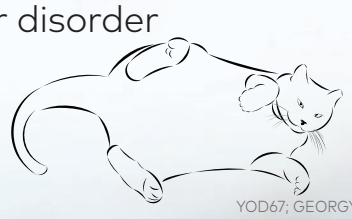
Nationwide recently sorted through its database of more than 630,000 insured pets to determine the top 10 most common dog and cat obesity-related conditions. Here are the weighty results:

Most common dog obesity-related conditions

1. Osteoarthritis
2. Cystitis or urinary tract disease
3. Hepatitis or hepatopathy
4. Hypothyroidism
5. Cruciate ligament
6. Diabetes
7. Intervertebral disc disease
8. Chronic renal disease
9. Congestive heart failure
10. Hypertension

Most common cat obesity-related conditions

1. Cystitis or urinary tract disease
2. Chronic renal disease
3. Diabetes
4. Asthma
5. Hepatitis or hepatopathy
6. Osteoarthritis
7. Hypertension
8. Congestive heart failure
9. Gall bladder disorder
10. Spondylosis



In 2016, Nationwide reports that it received more than **51,000** pet insurance claims for osteoarthritis in portly pooches—the most common disease aggravated by excessive weight—and the average treatment fee was **$310** per pet. Cystitis, the most common obesity-related condition in less-than-svelte kitties, garnered more than **5,000** pet insurance claims, with an average treatment cost of **$443** per pet.

Pain relief reminder for veterinarians

"NSAIDs really are wonderful things," says rehab specialist Matthew Brunke.

When it comes to pain-relief tools in the veterinary practice, Fetch dvm360 conference speaker and rehabilitation specialist Matthew Brunke, DVM, CCRP, CVPP, CVA, sings the praises of the nonsteroidal anti-inflammatory drug (NSAID) class. With name-brand and generic NSAIDs available, veterinary practitioners have several options to choose from when prescribing a treatment, he says.


Dr. Matthew Brunke

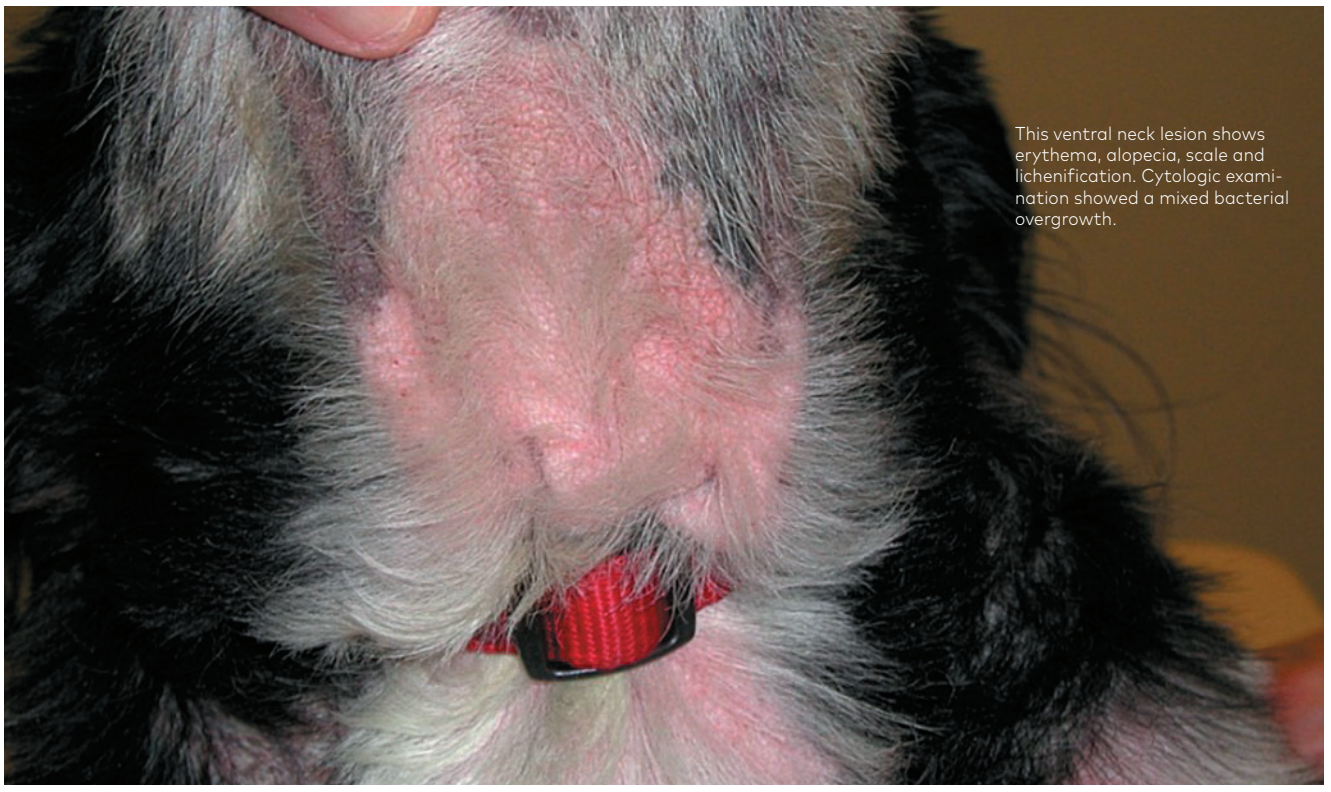
Dr. Brunke stresses the importance of establishing good baseline bloodwork parameters and then following up on that bloodwork during courses of therapy. He points out that this applies to patients of any age.

In addition to perioperative pain relief, he notes that NSAIDs have other wide-ranging applications.

"We use them for long-term relief for managing arthritis," he says, "but they also have benefits in other disease processes, helping out with cancer as well."

To read and even *hear* more from Dr. Brunke on this topic and others, visit **dvm360.com/brunke**.


MATTHEW WILLIAMS-ELLIS/SHUTTERSTOCK.COM



This ventral neck lesion shows erythema, alopecia, scale and lichenification. Cytologic examination showed a mixed bacterial overgrowth.

Got a pyoderma? Step away from the systemics

At least until you know you need them, that is. For bacterial overgrowth and superficial cases, topical therapy may be all you need for your veterinary patients. *By Sarah J. Wooten, DVM*

Pyoderma is a straightforward bacterial overgrowth on the skin—or is it? Fetch dvm360 speaker Craig Griffin, DVM, DACVD, of Animal Dermatology Clinic in San Diego, maintains that while bacterial overgrowth on the skin can lead to pyoderma, they are not the same thing and should be treated differently. Furthermore, pyoderma in adult dogs is a progressive disease perpetuated by a long list of factors. If you don't address those factors, you're staring down the barrel of recurrent pyoderma or antibiotic resistance.

The predominant pathogen that causes pyoderma is *Staphylococcus pseudintermedius*, an overgrowth of normal flora that resides on the mucosal surfaces and hair coats of dogs. *Staphylococcus schleiferi*, *Escherichia coli*, and *Cornynebacterium*, *Enterococcus* and *Pseudomonas* species have also been identified on culture in dogs with pyoderma. But no matter the pathogen, clinical presentation is usually the same, Dr. Griffin says.

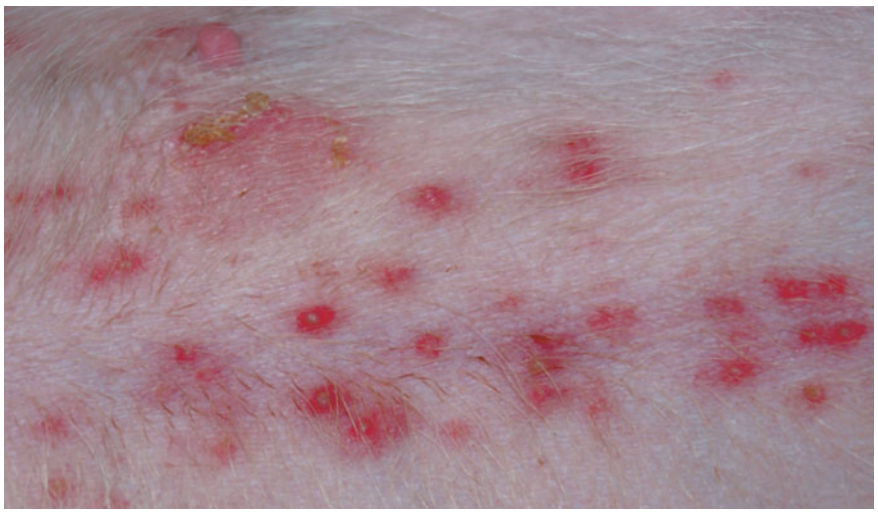
The medical definition of pyoderma is a bacterial skin inflammation marked by pus-filled lesions. So to call it pyoderma, you have to have pus, Dr. Griffin says. The classic lesions of pyoderma are pustules, furuncles, fistulas, crusts, papules, nodules and epidermal collarettes, though lichenification may also be a lesion of pyoderma. Diagnosis is confirmed with cytologic examination of the skin that shows neutrophils with bacteria, preferably intracellular.

In contrast, if you have a dog with red, itchy, dry skin and a preponderance of bacteria but no neutrophils, then you have a bacterial overgrowth. Because of concerns surrounding methicillin-resistant *Staphylococcus* (MRS) species, Dr. Griffin recommends that the treatment for bacterial overgrowth without evidence of inflammation differ from the classic pyoderma treatment.

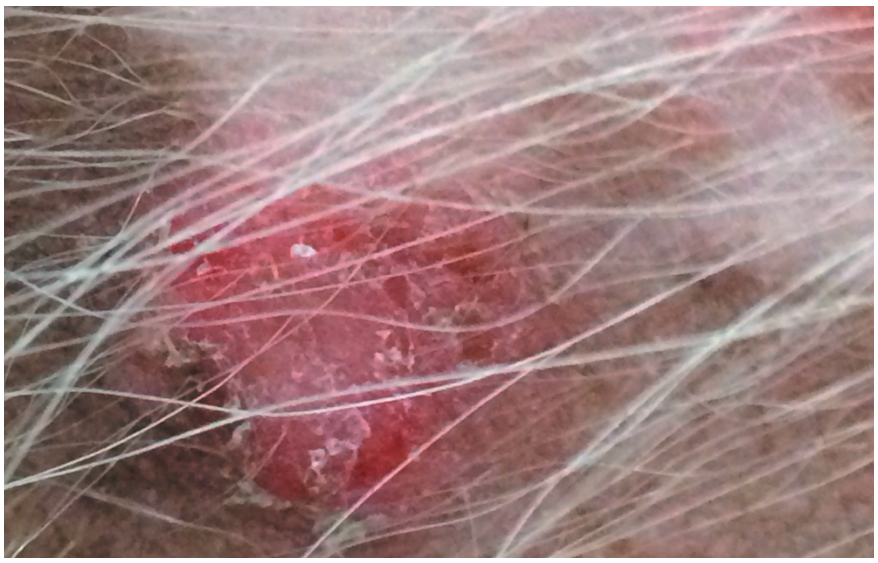
Predisposing and perpetuating factors

Veterinarians are well-versed in predisposing conditions such as atopy, obesity, endocrine disorders, inappropriate friction, pressure (callus) and alteration in skin microenvironment from traits such as skin folds—all factors that make a dog more likely to develop pyoderma. Drugs such as corticosteroids may also have an impact, Dr. Griffin suggests.

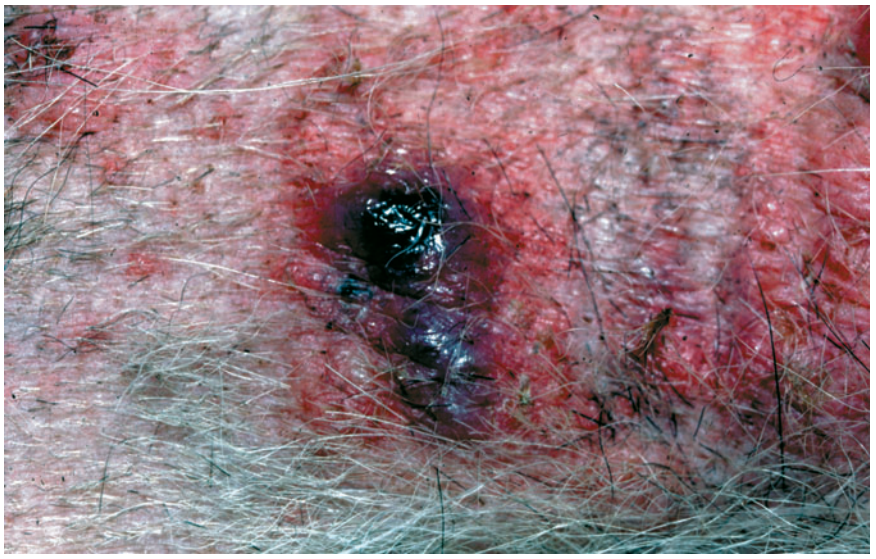
Perpetuating factors are pathologic changes in the skin due to pyoderma that make the condition more likely to continue. Folliculitis, common in pyoderma, often results in foci of alopecia, exposing the skin to ultraviolet radiation. That radiation or keratin released from follicular rupture may affect the local immune response, the hair follicle structure or cutaneous inflammation, Dr. Griffin says. Another perpetuating factor is fibrosis, which may be less apparent unless it occurs grossly. Perifollicular fibrosis often



Pustules, papules and crusts in a dog with bacterial folliculitis.



Papule crusts and epidermal collarette in a dog with bacterial folliculitis.



Hemorrhagic furuncles in a dog with folliculitis (note the surrounding erythematous papules) and furunculosis where the follicles have ruptured deeper in the dermis.

occurs at the microscopic level, and certain breeds (Doberman pinschers, bull and Staffordshire terriers, rottweilers) seem predisposed to excessive scarring that makes resolution of pyoderma more difficult. Perform a biopsy to identify scarring in these patients.

Dr. Griffin suggests that pyoderma may be a perpetuating factor in itself. He believes that the longer a dog has pyoderma, the more altered the skin barrier becomes and the harder the infection becomes to control. So does the presence of pyoderma result in changes that perpetuate the development of chronic inflammation, leading to more pyoderma? Some clinical observations support this theory, but studies are needed for definitive answers, Dr. Griffin says.

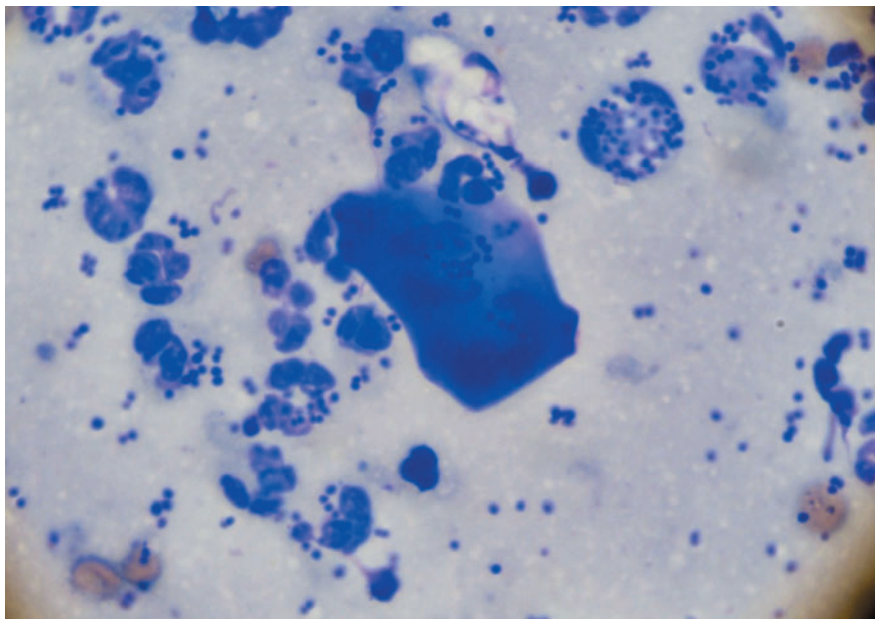
Treatment plan: A better way

Historically, canine pyoderma was treated using antibiotics chosen empirically and some topical therapy. This approach is no longer always appropriate or even reliable, Dr. Griffin says, especially in regions of the world areas where methicillin and multidrug *Staphylococci* resistance is becoming more common. One way veterinarians can fight the development of resistant bacterial infections is to adopt new approaches to treating bacterial overgrowth and pyoderma, Dr. Griffin says.

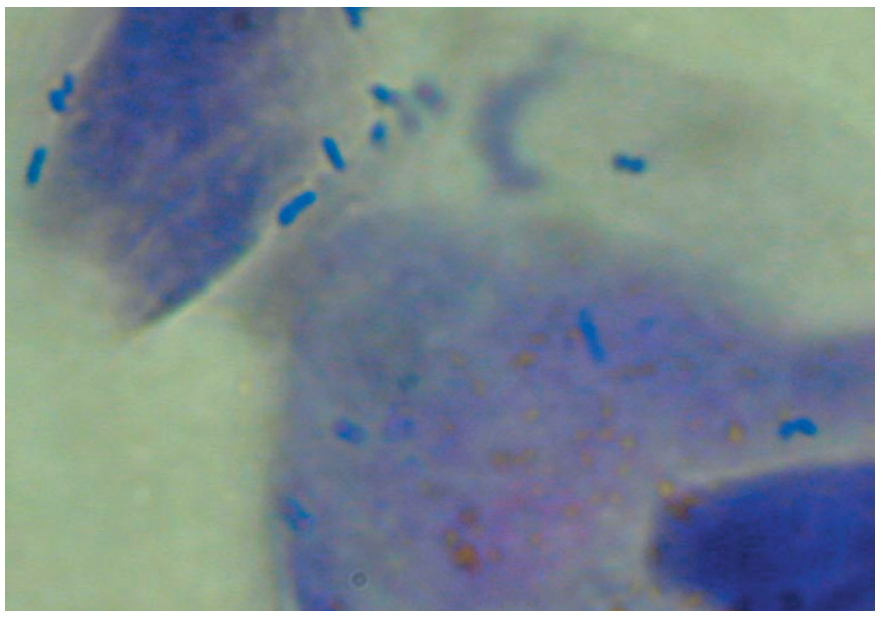
Superficial cases. For bacterial overgrowth, localized pyoderma or mild lesions, or to prevent recurrence of pyoderma while you're pursuing diagnostics for underlying conditions, Dr. Griffin says topical therapy alone—without systemic antibiotic therapy—is an appropriate approach.

Multiple studies have shown that topical therapy alone may resolve pyoderma, including cases involving methicillin-resistant *Staphylococcus pseudintermedius* (MRSP). More than 50% of these patients can have their infections eliminated, with the most success reported with chlorhexidine-containing shampoos.[1-3]

In one study, treatment with topical 4% chlorhexidine products showed resolution of clinical signs in all dogs and was found to be as effective in treating superficial pyoderma as systemic therapy with amoxicillin-clavulanic acid.[4] Dr. Griffin recommends using topical products containing 3% or higher chlorhexidine with standalone products, or 2% or higher in combination products.



Cytology of superficial pyoderma with cocci and numerous neturophils. Most contain phagocytized intracellular cocci. The center large blue keratinocyte is present.



Bacterial overgrowth with lack of neutrophils but more bacterial rods than would be present on normal skin. Some cocci are also present.

Cleaning the skin promotes desquamation, which removes surface bacteria and yeast as well as irritants and allergens, normalizes keratinization, and can improve barrier function. Anti-inflammatory ingredients or even just cool water can also be used to help decrease inflammation. Moisturizing and cooling the skin will also decrease pruritus. In general, Dr. Griffin recommends bathing the pet frequently—every other day is preferred, though some cases do respond to twice-weekly bathing, especially if topical antiseptic sprays are used between baths. Two times a week is generally effective in preventing recurrent pyoderma and bacterial overgrowth. Daily bathing is sometimes required for full resolution.

Have a patient with chronic or recurrent bacterial overgrowth secondary to poorly controlled perpetuating factors? Dr. Griffin advises teaching your client to recognize the signs of bacterial overgrowth (mainly odor and possibly red skin, scaling or pruritus) and instructing them to bathe the dog with an antiseptic shampoo before pyoderma develops—or give a standing order to bathe the dog weekly.

Profound cases. Systemic antibiotic therapy is required to treat deep pyoderma, some recurrent pyoderma and pyoderma with perpetuating factors; it's also necessary in cases of poor or nonexistent compliance with topical therapies. Here are some guidelines:

> Combine systemic with topical therapy where possible.

> Choose antibiotics based on impression cytology, along with the results of culture and sensitivity testing.

> Keep in mind that most pyoderma therapy should be instituted for at least three to four weeks. If you're using topical therapy as well, use your judgment about whether to decrease the duration of systemic therapy.

When designing a treatment plan for both pyoderma and bacterial overgrowth, Dr. Griffin says, you must identify, reverse or control any perpetuating factors, or your chance of success is limited—and the chance of an irritated client is high. Recurrent or chronic pyoderma? Time to go hunting for perpetuating factors as well as predisposing factors.

Some treatments may need to be directed at reversing pathologic changes in the skin, or the patient may require long-term therapy until the body naturally remodels or reverses those changes. You may need to consider surgical removal of localized fibrotic or granulomatous lesions. Long-term pentoxifylline may help reverse scarring in cases with widespread lesions not amenable to surgical therapy, Dr. Griffin says. Glucocorticoids have been used in some cases with residual granulomas, but Dr. Griffin recommends corticosteroids be used only after antibiotic therapy has eliminated the bacteria and the granulomas are sterile based on culture. The sooner you stop and control perpetuating factors, the better the dog will be long term.

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Think your clients will balk? Hear us out

Before you walk away from this article in disgust muttering, "There is *no way* my 86-year-old client is going to bathe a 75-pound dog daily," I exhort you: keep an open mind.

Yes, your clients are likely to tell you that bathing is stressful for all parties involved, and their bathing facilities may be limited. However, if you explain why you're telling them to bathe their dogs (to minimize the development of resistant bacteria and reduce impact to the rest of the body) and how it benefits their pets (speeds healing, decreases the amount of time systemic microbials must be used, removes nasty crusts and makes the hair look healthier), I have found that nine times out of 10 pet owners get it. What's more, they actually do it!

A recent study suggests that, depending on the formulation, residual antibacterial activity can last for a week after an animal is bathed with 2% or 3% chlorhexidine shampoo.[1] Depending on the shampoo formulation, hair length, severity of disease, and perpetuating factors, the client may only need to bathe the dog twice a week.

Teaching owners to catch when their dogs have bacterial overgrowth on their skin will reduce the development of pyoderma and perpetuating factors, leading to healthier patients and happier clients.

Reference

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An update on heartworm disease and HARD in cats

Dr. Ray Dillon shares why this 'juvenile delinquent' form of heartworm disease causes so much trouble in feline patients.

What do veterinarians need to know about feline heartworm disease and heartworm-associated respiratory disease (HARD) in cats? Ray Dillon, DVM, MS, MBA, DACVIM, professor of small animal internal medicine at Auburn University, took a few minutes to answer these questions at the 15th Triennial Heartworm Symposium in New Orleans.

Feline heartworm disease: Think quality of life, not life or death

"When we first started thinking of this disease 40 years ago, we made the mistake of always assuming it is a fatal disease," says Dr. Dillon. "And now we recognize that it is rarely a fatal disease."

Feline heartworm disease does, however, affect the cat's quality of life—often for the duration of the cat's life, Dr. Dillon says.

Even an "unsuccessful" infection—one where the parasite doesn't make it to the adult stage—can have dire consequences on the cat's respiratory tract, Dr. Dillon says. The cat is still likely to suffer from disease even though it's not the adult parasite causing it.

So what's the takeaway? According to Dr. Dillon, both veterinary professionals and clients need to be reminded that this is a quality-of-life disease instead of a life-or-death disease.

HARD: Hard diagnostics

"The incidence of HARD (and even the incidence of heartworms) in cats is an ongoing question people always want to know," says Dr. Dillon. But instead of wading through percentages with clients, Dr. Dillon simply reminds them that if it occurs in their cat, it affects 100 percent of the cat.

"We know that the infection rate throughout most of the Southeast in cats is about a third of all cats come up heartworm-antibody-positive at some point in their lives, which means they were successfully infected," says Dr. Dillon. But the real question is how far the worms traveled and developed in the cat before dying.

"Did they die precardiac?" he says. "Did they make it to the HARD stage and die? Did they make it to the adult heartworm [stage] and then the adult heartworm died?"

Dr. Dillon explains that HARD is seasonal instead of lifelong, which can complicate diagnostics.

"HARD represents a juvenile delinquent form of the adult heartworm, so it's very much like a car wreck caused by a juvenile delinquent driver: They come in, they have a wreck, they cause all kinds of damage and then they're gone," he says. "There's no way to go back and prove who caused that accident."

Because HARD is so transient, clinicians can't easily perform diagnostics that confirm the disease 100 percent. "Necropsy studies only study cats that develop fully mature adult heartworms, and that's simply the tip of the iceberg," Dr. Dillon says.

dvm360 Find it all here.

Get the scoop on HARD

Finding more information about HARD can be easy. Watch Dr. Dillon himself explain heartworm-associated respiratory disease at dvm360.com/HARDupdates.

Only a click away: Statewide alerts on infectious disease outbreaks in horses

This easy-to-use online tool keeps you current on equine infectious disease cases occurring in your state. *By Jennifer Gaumnitz*

At the 2017 Fetch dvm360 conference in Kansas City, I overheard a Missouri equine veterinarian describe being called out to see a horse that was exhibiting clinical signs he suspected were the result of a rabies infection. It turned out that the diagnosis was, instead, a West Nile virus infection, and unfortunately the horse ended up being euthanized.

This is a depressing story because, of course, there are vaccines to prevent West Nile virus (and rabies, had that been the diagnosis); this horse simply was not vaccinated. The veterinarian commented that the owners, who had not been his clients, quickly became believers in vaccinating their remaining horses. This story followed on the heels of an equine infectious anemia outbreak in Finney County, Kansas, in August 2017, and all of this set me to wondering about what equine diseases were occurring in my state (Kansas) and the surrounding states.

Turns out there's an easy-to-use, up-to-date website where you can keep informed about all kinds of equine disease outbreak information. The Equine Disease Communication Center maintains the site here: equinediseasecc.org/alerts/outbreaks.

You simply click on the state you're investigating (or use the dropdown menu) and choose the disease you're interested in. Then you choose a time frame (30, 60 and 90 days) to see if there are any alerts for that particular disease in that state. Updates on current disease outbreaks are listed as they occur and include the date listed, the disease name, the location and current status. Specific premises are not named but the general location by town, county and state are listed. When locations, events or horses are at risk, they will be listed. Updates are posted as they are received.

With the new year come new partnerships for AVMA

Single trust created for AVMA LIFE and AVMA PLIT; association to collaborate with Veterinary Medical Association Executives.

The coming year will bring two key changes to the AVMA family, according to statements made during the AVMA Veterinary Leadership Conference in early 2018.

Unified trust for AVMA LIFE and AVMA PLIT

AVMA LIFE and AVMA PLIT will be joining forces under a single umbrella trust, says an association release. Both AVMA LIFE, which provides health, medical and life insurance, and AVMA PLIT, which offers professional and liability insurance, have been available to AVMA members for over 60 years, and both entities have been (and will continue to be) involved in the formation of the united entity.

According to the release, the goal of the restructure is to better provide for the evolving needs of veterinarians. New products, services and bundling options under the umbrella trust are being explored.

"'Veterinarians serving veterinarians' is more than a tagline," says AVMA PLIT CEO Andrew Clark, DVM, MBA, in the release. "We have always been, and always will be, absolutely member-focused. We are adapting to match the changing needs of AVMA members and how they do business. The umbrella trust is an example of how unifying the efforts of our veterinary family is a step in our evolution to the next level of heightened member focus."

VMAE partnership

As of Jan. 1, the AVMA has been providing association management services to the Veterinary Medical Association Executives (VMAE), which was officially welcomed by AVMA Executive Vice President and CEO Janet Donlin, DVM, at the AVMA leadership conference, according to a second association release.

"Executives of state and allied associations contribute a tremendous depth of perspective and understanding of the issues facing our profession," says AVMA President Michael Topper, DVM, PhD, DACVP, in the release. "This liaison is one more way we can work together to protect, promote and advocate for the interests of the entire veterinary profession."

As CEO of the VMAE, Ralph Johnson is tasked with overseeing the AVMA's association management services. And as the newly appointed director of special projects for the AVMA, Johnson is also responsible for helping the association continue to develop and deliver products and services to AVMA members.

Johnson sees the collaboration as a win for both associations.

"This arrangement strengthens VMAE's ability to help VMA executives create thriving organizations and provide effective leadership within the veterinary profession," Johnson says in the release. "We'll all be rowing in the same direction—with gusto!"

Hagyard announces it's joining MAVANA

Equine hospital joins 22 other practices currently under the Mixed Animal Veterinary Associates of North America banner.

Hagyard Equine Medical Institute in Lexington, Kentucky, recently announced its partnership with Mixed Animal Veterinary Associates of North America (MAVANA), a 98-percent-veterinarian-owned group of equine and mixed animal veterinary practices located throughout the United States, according to a release from Hagyard.

Though it has partnered with MAVANA, Hagyard remains independently operated.

With the addition of Hagyard, MAVANA now comprises 23 veterinary practices and 190 full-time veterinarians, including other equine-only clinics like TFB Equine in Fort Lauderdale, Florida, and the Chicago Equine Medical Center.

As with the other practices in the group, Haygard remains independently operated. According to the release, MAVANA's "home rule" approach is designed to mitigate disruptions to the day-to-day operations of its practices, which the group says already provide high standards of patient and client care.

The benefits of partnership include cost efficiencies and liquidity options for shareholders, as well as increased purchasing power, industry relevance and mentorship opportunities, with overarching goals of delivering better medical care and customer service, the release says.

"Hagyard's partnership with the other MAVANA veterinary practices and veterinarians will only allow us to elevate our ability to offer our clients and their horses the highest level of care," says Hagyard's Stuart E. Brown II, DVM, in the release. "Furthermore, our practice and its members have long been committed to developing and mentoring the next generation of equine medical professionals, and our inclusion in MAVANA will allow us to continue to expand those efforts."

IMAGE COURTESY OF HAGYARD EQUINE MEDICAL INSTITUTE

The Year of the Dog: Death to vacuums, and lidless trashcans for all

Every dog has its day, and now every dog is having its year, thanks to the Chinese zodiac. *By Sarah Mouton Dowdy*

If you've noticed an air of pride in your canine patients lately, we may know why. February 16 was Chinese New Year, which marked the beginning of—you guessed it—the Year of the Dog. And while this festival is traditionally a time to honor deities and ancestors, we can't help thinking dogs must view it a bit differently. Using extensive anecdotal evidence, we've compiled a list of what dogs must think the Year of the Dog entails.

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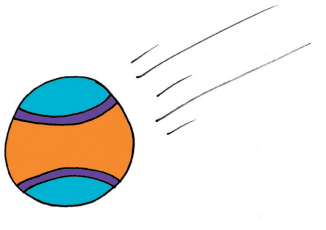

An end to fake ball throwing

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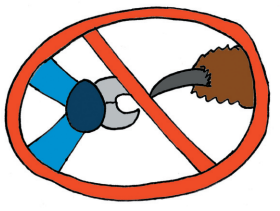


Nail trims, schmail trims (sooo last year)

3

Very ... slow ... squirrels (in large quantities)

4

Lidless kitchen trashcans for all

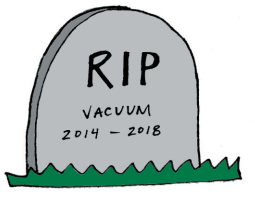
5

Owner becoming stay-at-home dog parent

6

Owner focusing humiliating costume energies on the cat

7



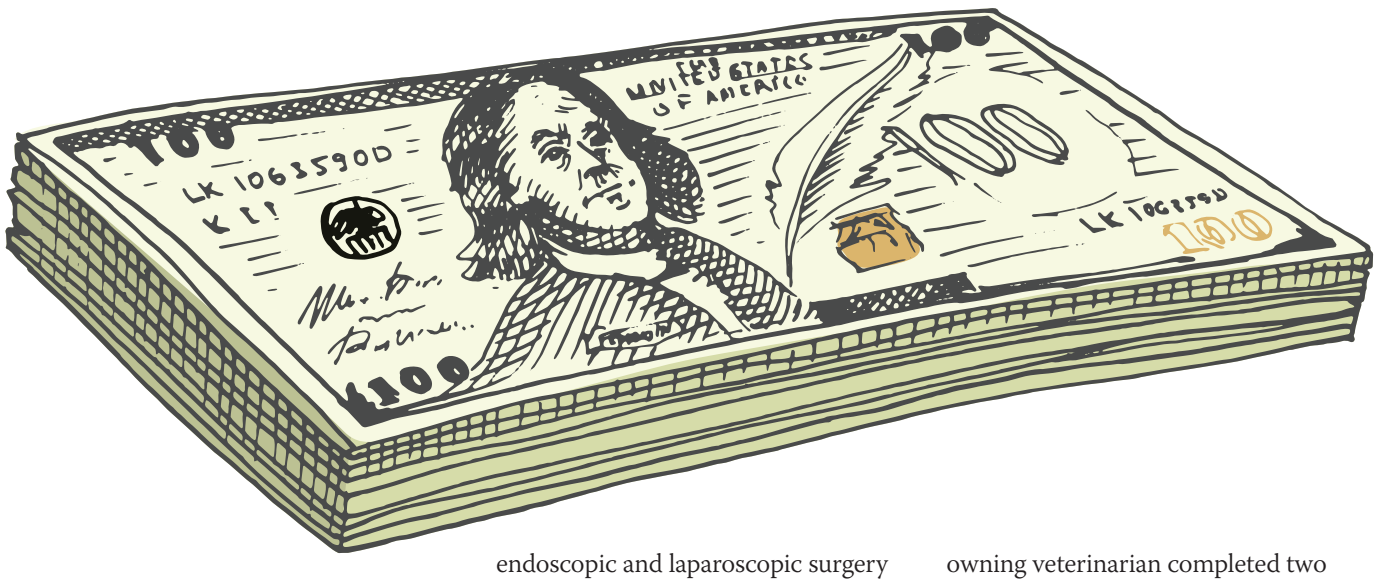
An end to the evil vacuum's reign of terror

Are rigid endoscopy and laparoscopy worth the investment?

The procedures may be minimally invasive for the patients, but they come with a steep learning curve and startup price for veterinary clinics. *By Sarah J. Wooten, DVM*

Client demand for endoscopic and laparoscopic surgery is on the rise—especially for routine procedures like an ovariectomy (OVE) and a prophylactic gastropexy—thanks to their relative safety and their reduced pain, length of recovery and incidence of surgical site infections.

But there's a catch: The learning curve and costs associated with training and equipping a clinic to provide endoscopic and laparoscopic surgery are steep, which may be why they aren't widely used in practice. We veterinarians need to be convinced it's worth the investment.



This study sought to evaluate the economic and clinical feasibility of using rigid endoscopy and laparoscopy in small animal general practice by comparing investment costs with revenue generated during the first 12 months of use in a single small animal practice.

What they did

Over the course of one year, researchers followed the veterinarians in a two-doctor (one practice owner, one associate) small animal practice as they trained in rigid endoscopic and laparoscopic procedures and subsequently performed 78 endoscopic procedures. The researchers collected information about the animals from the owners, and the cost of training and equipment was evaluated in light of revenue, complications and client satisfaction.

Neither veterinarian had any previous experience or training in endoscopy or laparoscopy. The practice-owning veterinarian completed two days of one-on-one, in-house training with a board-certified surgeon and was assisted by the surgeon in performing four laparoscopic procedures. The practice's associate veterinarian participated in two days of continuing education training at a separate training site and was assisted by the practice owner during her first five procedures.

All patients that underwent laparoscopic and endoscopic procedures during the year following the two veterinarians' training, including OVE, cryptorchidectomy, gastropexy, visceral biopsy, otoscopy, rhinoscopy, vaginoscopy and preputial exploration, were included in the study. All patient information—including history, signalment, surgery time and complications—was recorded, and intraoperative complications were categorized as major or minor.

What they found

Seventy-eight laparoscopic and endoscopic procedures were performed on 73 animals by the two veterinarians during the study period.

Surgery time: Forty-four laparoscopy OVE procedures were performed with a mean surgery time of 64 minutes (± 20 minutes). Thirty-four of these were performed by the practice owner with a mean time of 59 minutes (± 16.5 minutes). The veterinarians performed five laparoscopic OVE with prophylactic gastropexy procedures with a mean surgery time of 73 minutes (± 34 minutes) and 19 video-otoscopic procedures with a mean surgery time of 42 minutes (± 24 minutes).

Client satisfaction: Client follow-up, which was conducted at the time of the follow-up examination or by telephone, revealed that 49 of the 73 clients were satisfied with their pets' recovery. The other 24 clients were unable to be contacted.

Costs: Primary equipment costs were just over $10,675 per year and were financed via a five-year lease. Other disposable items cost $995 for the year, and training required another $3,140. Total costs came to $14,810.

Revenue: The total amount of revenue generated from endoscopic and laparoscopic procedures during the year-long study period was $50,424.

Complications: The 54 laparoscopic surgical procedures resulted in 12 minor intraoperative complications. No major or postoperative complications were recorded.

ARTUR BALYTSKYI/SHUTTERSTOCK.COM

Take-home message

Results suggest that laparoscopic and endoscopic procedures were clinically and economically feasible in this small animal practice. Surgery times and complications were considered acceptable, and client satisfaction was high. Though the surgery times for laparoscopic OVE in this study were two to three times longer than the mean surgery time reported for board-certified surgeons performing the same procedure, this was attributed to the newly trained veterinarians' lack of experience. And although upfront costs and training are required, the procedures generated three times the direct costs associated with equipment and training.

According to this study, economic feasibility is dependent on four things: effective marketing, good client communication, appropriate pricing and frequent equipment use. If equipment is not used regularly, revenue can't be generated and skills can't improve. And because laparoscopic surgeries are more expensive, the researchers stressed the importance of good client communication and marketing to explain why minimally invasive procedures are superior to traditional open surgeries.

If you are considering using rigid endoscopy and laparoscopy in your practice, prudence is warranted. It requires thorough initial and ongoing training, and patient safety is of utmost importance. Complications associated with lack of training, inadequate equipment or inexperience aren't acceptable. When recommending procedures, fully inform clients of the potential risks versus benefits.

According to this study, economic feasibility is dependent on four things: effective marketing, good client communication, appropriate pricing and frequent equipment use.

Jones K, Case JB, Evans B, et al. Evaluation of the economic and clinical feasibility of introducing rigid endoscopy and laparoscopy to a small animal general practice. *J Am Vet Med Assoc* 2017;250(7):795-800.

Dr. Sarah Wooten graduated from UC Davis School of Veterinary Medicine in 2002. A member of the American Society of Veterinary Journalists, Dr. Wooten divides her professional time between small animal practice in Greeley, Colorado, public speaking on associate issues, leadership, and client communication and writing. She enjoys camping with her family, skiing, SCUBA, and participating in triathlons.

Two new dog breeds recognized by American Kennel Club

The registry has added the Nederlandse Kooikerhondje and Grand Basset Griffon Vendéen to their list of AKC-recognized breeds.

The American Kennel Club (AKC) announced recently that the dog breeds Nederlandse Kooikerhondje and Grand Basset Griffon Vendéen (GBGV) received full recognition, bringing the total number of AKC-recognized breeds to 192.

According to an AKC release, the Nederlandse Kooikerhondje (pronounced Netherlands-e Coy-ker-hond-tsje) is a spaniel-type dog that originated hundreds of years ago in Europe as a duck hunter. They are energetic, friendly and alert dogs that have a moderate activity level and are in need of regular mental and physical activity to be happy. To keep them free of tangles, their medium-length coat requires weekly brushing.

As for the Grand Basset Griffon Vendéen (GBGV, pronounced Grahnd Bah-SAY Grif-FON Vahn-DAY-ahn), this breed belongs more in the hound group. These dogs were bred as rabbit and hare hunters in France, the release states, and come with a lot of stamina and speed. This is a laid-back, intelligent, friendly breed that gets along well with other dogs. GBGVs are also courageous and passionate, with a high activity level—which means they need vigorous exercise. The GBGV's coat is rough and straight and needs weekly brushing to prevent matting.

"These are two very different dogs—a duck hunter and a scent hound—and they make wonderful companions for a variety of people."
—Gina DiNardo

Both breeds are said to make great companions. "We're excited to welcome these two breeds into the AKC family," says Gina DiNardo, AKC's executive secretary, in the release. "These are two very different dogs—a duck hunter and a scent hound—and they make wonderful companions for a variety of people."

Both breeds became eligible to compete in their respective groups on Jan. 1. To become an AKC-recognized breed, there must be a minimum number of dogs geographically distributed throughout the United States, the release states. Along with this, there must be an established breed club of responsible owners and breeders.

Grand Basset Griffon Vendéen

Nederlandse Kooikerhondje

(Photo courtesy of the American Kennel Club)

SANNE VD BERG FOTOGRAFIE/SHUTTERSTOCK.COM


AVMA EYE ON ECONOMICS |
Michael Dicks, PhD; Bridgette Bain, PhD

The changing landscape of veterinary education

Grads from foreign and private schools, as well as those with zero debt, may be impacting the profession's economic vitality in ways we don't yet understand.

Over the years the landscape of veterinary education has changed dramatically. It used to be that most vet students attended the public institution in their state (or one nearby) and paid resident tuition rates. But escalating demand for a veterinary career has prompted more and more students to attend vet school out of state (and pay nonresident tuition), enroll in a private institution or attend veterinary school in another country. This changing composition of veterinary school seats has, of course, fueled the growth of student debt loads. But what effect has it had on the debt-to-income ratio (DIR), the most important indicator of the health of the veterinary education market?

The short answer is that we don't know all the details yet, but it's important to figure out. As a first step, let's look at mean and median debt for graduates in a few of these major groups.

Who pays what?

Twenty-five states maintain publicly supported colleges of veterinary medicine. Residents of these states pay in-state tuition, while nonresidents must pay higher out-of-state tuition. But some states let out-of-state students obtain residency status and others offer "contract" seats where nonresidents pay resident rates (their home state pays the out-of-state portion). Because of this, we prefer the terms "discounted" and "nondiscounted" to distinguish these types of seats. Although we know the number of students who graduate with resident status vs. nonresident status, we need more data to determine the proportion of nonresidents who received discounted seats.

All publicly assisted schools receive some state and local funding to operate, which reduces the tuition and fees charged to students. Private schools do not receive such funds, and thus they charge more for tuition and fees. Foreign schools are also more expensive for U.S. students to attend. In 2017, 16 percent of U.S. veterinarians graduated from private institutions (up from 13 percent in 2001), and 19 percent of veterinary students with U.S. citizen-

ship obtained veterinary degrees from foreign schools.

With the growth in the number of graduates from private schools, with U.S.-accredited foreign veterinary colleges increasing in number, and with the loans taken by these students outpacing those of students at U.S. veterinary colleges, mean and median debt for all graduates would have ballooned even if veterinary colleges had not increased their tuition and fees.

Here's where it gets complicated

Since 2014, the AVMA has been working with all U.S.-accredited veterinary schools, foreign and domestic, to collect data on debt and income of graduates. In 2017, 17 percent of the graduates of U.S. colleges reported graduating with zero debt, up from 11 percent in 2015. The increasing percentage of graduates with no debt reduces the mean debt of all graduates, and thus the DIR.

However, how these graduates with zero debt are distributed across public and private, foreign and domestic, and discounted and nondiscounted seats affects the mean and median debt. For instance, if a greater number of those with zero debt graduate from the higher-cost private schools, a larger reduction in the DIR will occur than if they had graduated from the lower-cost public schools.

Further complicating matters is the differing graduation cycle in Caribbean schools, which provides a survey sample of less than 50 percent of students (compared to a 100 percent sample for domestic schools) and yields debt and income data on only 20 to 75 percent of that reduced sample (compared with a 60 to 100 percent response rate for domestic schools). If we include foreign seats in our DIR calculation, we have to account for the differences between domestic and foreign schools in sample size, response rates and percentage of graduates with zero debt.

The takeaway

The value of a veterinarian in the marketplace is determined by relative scarcity (the number of other veterinarians in the market) and general economic conditions. We can control for some demographic factors—such as gender, practice type and region—when calculating this value, but we don't yet fully understand the impact of others, such as the distribution of graduates across all types of seats and the effect of graduating with zero debt. If we don't know how these factors affect the DIR, we limit the value the DIR as an indicator of veterinary market health.

Obtaining the data to match seat type, level of debt and starting salary is difficult. It will require considerable collaboration across numerous colleges and organizations. But for the profession to gain a better understanding of the costs of obtaining a DVM degree and the factors affecting student debt, it is work that must be done.

AVMA | Veterinary Economics

Dr. Michael Dicks is director of the AVMA's Veterinary Economics Division. Dr. Bridgette Bain is an analyst with the Veterinary Economics Division.

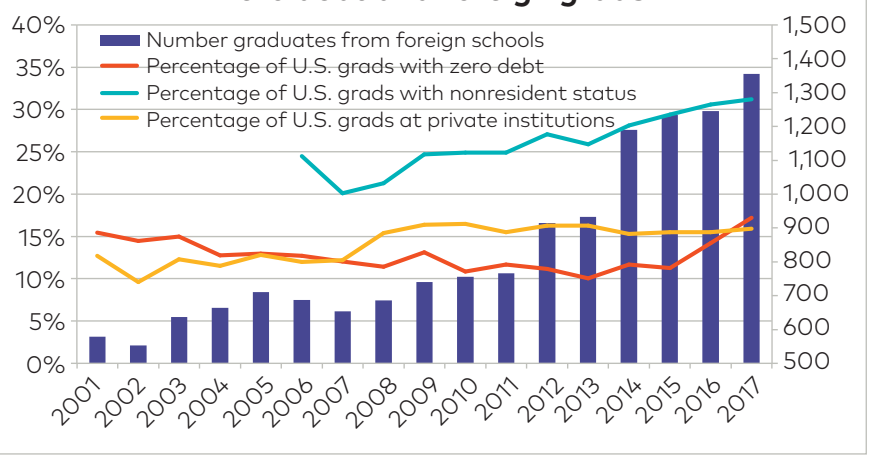
TABLE 1

U.S citizens currently enrolled in veterinary school

	Number of U.S. citizen students	U.S citizens as a percentage of total class
United States	13,068	99.3%
Caribbean	2,378	92.5%
Canada	141	8.7%
Other international	659	10.7%

Source: American Association of Veterinary Medical Colleges

TABLE 2



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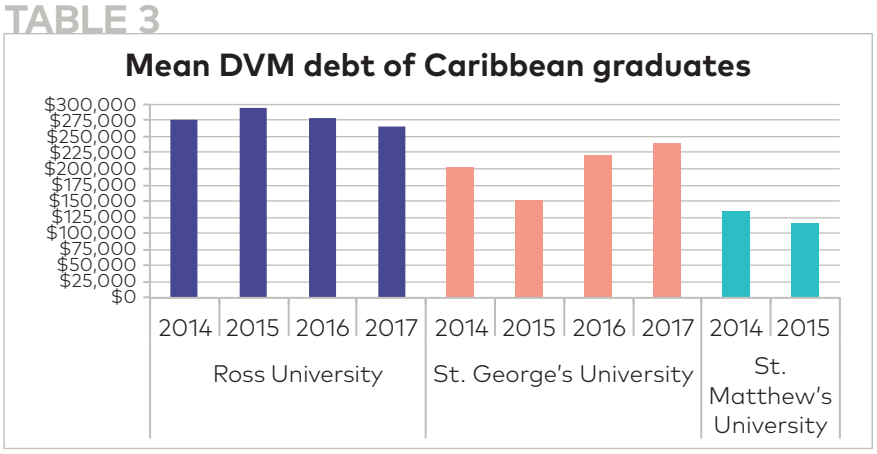
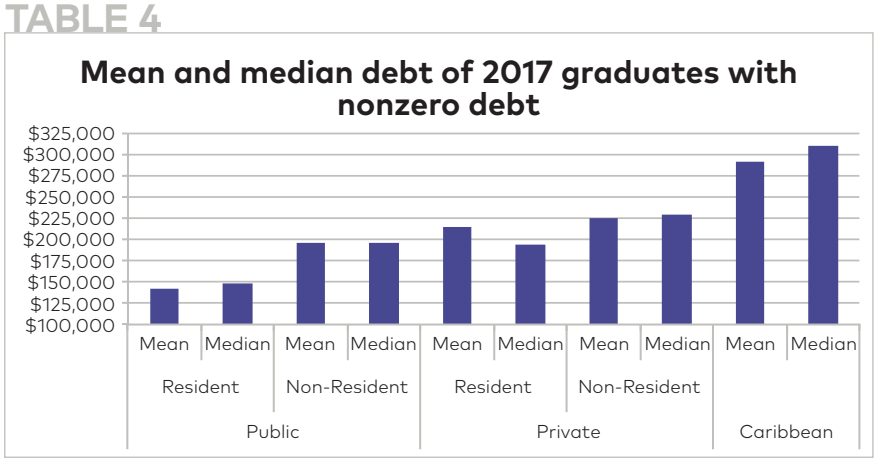


TABLE 4



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Reference: 1. Data on file, Vetstreet Data Analytics. Virbac Corporation.

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Shaping the future of animal health

How to **discount associates** right **out** of practice

Dr. Codger wants to help, so he cuts prices for his veterinary clients. Dr. Greenskin wants to do top-quality medicine and charge appropriately. Are the two medical cases in this story going to be the straw that breaks the camel's back?

Editors' note: The problems here started last month in "How judgy is too judgy?" See ***dvm360.com/judgy*** *to catch up.*

Practice owner Dr. Codger and his young female associate, Dr. Greenskin, are keeping up with a busy day of appointments, but two sick patients are straining the technical staff. Doornail is in dire straits, and his owner, Ms. Ded, isn't sure she wants to pay for diagnostics. They've been moved to the grieving room while the client deliberates—and because euthanasia looks likely. Drippy needs surgery, but her owner, Mr. Sepsis, isn't sure he can pay for the procedure. See the problem?

Drippy's situation is easier to resolve: The team has orders from Dr. Codger to get Mr. Sepsis' dog on the surgery table no matter what. After some generous price-slashing, including senior, service-member and loyal-client discounts—plus a quick approval for the in-clinic interest-free payment plan—Mr. Sepsis grants Dr. Codger a chance to save the champion show dog. Twenty minutes, a few signatures and a $300 deposit later, Drippy is on fluids, antibiotics and pain control, and team members are hurriedly prepping the OR and

ILLUSTRATION BY RYAN OSTRANDER

deciding who gets to stay late via a high-energy "rock, paper, scissors" tournament.

Doornail's case is less straightforward. There's no clear diagnosis or owner commitment, so there can be no expectation for treatment or prognosis. Dr. Greenskin does her best to piece together her most conservative treatment plan yet. For a mere $2,200, Ms. Ded will get the peace of mind of knowing the clinic is doing everything it can. For 48 hours. Unless something goes wrong. Without anyone watching the dog overnight. Without confirming a diagnosis. With no guarantee that Doornail will survive. The $80 euthanasia option is still on the table, and Ms. Ded's keen business sense is in direct conflict with love for her loyal canine.

As can be expected, when things get tense between Dr. Greenskin and Ms. Ded, Dr. Codger manages to worm his way into the conversation. He demands a complete recap of the case as Dr. Greenskin rushes off to manage her 25 other cases. She does her best to stay in multitask mode while giving Dr. Codger the information he demands.

"Look, the dog is critical, and I'm not sure what's wrong—the owner has no money and won't let us run bloodwork," Dr. Greenskin explains. "But she wants us to save the dog, and I think she ought to just put him to sleep!"

Alarmed, Dr. Codger decides he needs to rush in and save the day: "I'll go take a look at Doornail and have a talk with Ms. Ded." Without looking for agreement, Dr. Codger heads toward the treatment area before Dr. Greenskin can muster a response. The young doctor guesses that another round of big discounts is on its way. Noble as the old doc's efforts may be, Dr. Greenskin shudders at the thought of discounting services. However, she's all too happy to get something off of her plate. Dr. Greenskin eventually heads home, exhausted, figuring she'll get the update when everyone returns nice and fresh to the clinic in the morning.

The following day Dr. Greenskin heads straight to the sick ward to see what happened overnight. Dr. Codger has apparently been hard at it: Drippy is still recovering from her spay, on fluids and looking comfortable. In the next run, Dr. Greenskin is surprised and elated to see the cute and cuddly Doornail standing next to his empty food bowl and wagging his tail, eager to see any human who might offer some friendly pats.

Dr. Greenskin's joy deflates when Dr. Codger enters, looking like he hasn't slept all night and spoiling for a confrontation.

"Well, Dr. Greenskin, looks like old Doornail here just had a simple tummyache," he says. "I wanted to talk with you about your estimate. Poor Ms. Ded was distraught, and I think your huge estimate made the situation worse. I got her bill down to around $250. A couple of fluid bags, some injectable Flagyl and some Reglan—that cost us maybe $60, so the clinic still comes out ahead. You quoted her for all this unnecessary stuff—lab tests and ultrasound and radiographs. Better to start conservative and see how the patient does, I say. Plus, this'll be one happy client. She may even give us a great Yelp review!"

Dr. Greenskin, nervous about getting an online reputation for "cheapest vet in town," is quick to respond: "I'm very glad the poor dog looks so much better. I'm sorry, Dr. Codger, but I don't think the clinic wins on this case. It looks like you were here very late, and I bet there's some staff overtime to pay out. I also don't love the idea of Ms. Ded telling everyone in town that we saved her dog for pennies on the dollar. You may not have massive student loans to pay off, but I do, and neither giving away services nor practicing subpar medicine make me feel professionally fulfilled. And you don't actually know the dog just had a tummyache. There was no history of dietary indescretion, vomiting or diarrhea. How are we going to handle this if the dog is just as sick again in a couple of days?"

Dr. Codger is ready to defend the Codger legacy!

"We can't know everything for sure," he says. "You need to get comfortable with that, Dr. Greenskin. I know your fancy vet school had fancy CT scans and all those laboratories, but our clients around here aren't ready for all that. Plus, they can't afford it! This dog is all patched up now, ready to go home tonight. Isn't that better than putting him to sleep just because you didn't get to run your tests and you need to pay back a bunch of money to the government?"

Dr. Greenskin blinks back tears and heads to her office. Dr. Codger feels a twinge of regret for being so hard on his protégé, but he knows she needed to hear it.

Later, Dr. Greenskin finds Dr. Codger back in the office. She's carrying her purse and coffee mug, which slightly worries Dr. Codger.

"This whole situation is really bothering me, Dr. Codger," she says. "I don't think I can focus on my job today. I'm going to take a couple of days off. I'll give you a call next Monday to discuss when I might return. In the meantime, feel free to call in a relief vet."

Dr. Greenskin leaves no room for response as she fishes her keys out of her purse and heads toward the door. Dr. Codger feels a sinking feeling that he hasn't experienced in many years, and he wonders what will become of his relationship with the younger, valuable and very capable Dr. Greenskin.

Editors' note:

Who's right in this scenario? Email us at **dvm360@ubm.com** *to let us know your thoughts—and tell us how you've dealt with these kinds of conflicts in your own practice life.*

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

8 plays to keep your winning team

You've got a dream team full of champion staff members. So how can you make sure you keep them in a tight job market? Here are some ideas.

When I was a kid, athletes and employees stayed with a team for years. Today everyone is a free agent, and players and employees are always looking for better opportunities. So how do you retain the great team you've worked so hard to recruit—especially in a super-tight labor market? (Because let's face it: While 4 percent unemployment might signal a strong economy, it makes it tough for owners and managers who are trying to fill open positions.) Here are eight things to put into play right now.

1 Build your stats

Let's start with the environment or culture you've created. In a time when people have lots of jobs to choose from, we must concern ourselves with concepts like happiness and well-being. People often join your team because of a reputation for representing ideals. As long as you embody those values, they will likely remain loyal—but if the values of the practice fail to consistently live up to expectation, be prepared for staff turnover.

2 Learn to coach, Coach

First and foremost, avoid creating frustration. Make sure your expectations are clear to new hires in terms of job duties and standards of

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performance. Check in often with them and make sure to give regular feedback and advice. No team member is ever a finished project—meaning there's always room for positive growth and improvement.

3 Make a good thing better

Regardless of how well a new pair of shoes fits, there's always a break-in period. New team members need that same period of adjustment—a chance to become comfortable with the rest of the staff and vice versa. Plus, your technologies or methods may not be familiar to them, so provide training early—and be open to new ideas from your employee. She may have some great tips and techniques you (and your team) had never considered!

4 Play fair

Compensation is always an issue, but it's also one of the simplest issues to resolve. A low unemployment rate in the community means your compensation has to be higher. Pay fairly, not just what feels good. Salaries and hourly wages should always be in league with the competition. If they are, your employees are more likely to stay.

5 Time out for talks

Have a policy of open communication among team members and between staff and management. Issues that aren't discussed and resolved tend to fester, resulting in a toxic team environment.

6 Make your team feel like family

The small things count. Provide a comfortable break and lunch area. Let your team members know you support their health and well-being. Make sure employees are comfortable and safe. Give them the chance to grow by providing opportunities for professional education as well as personal development.

7 Get a feel of the room

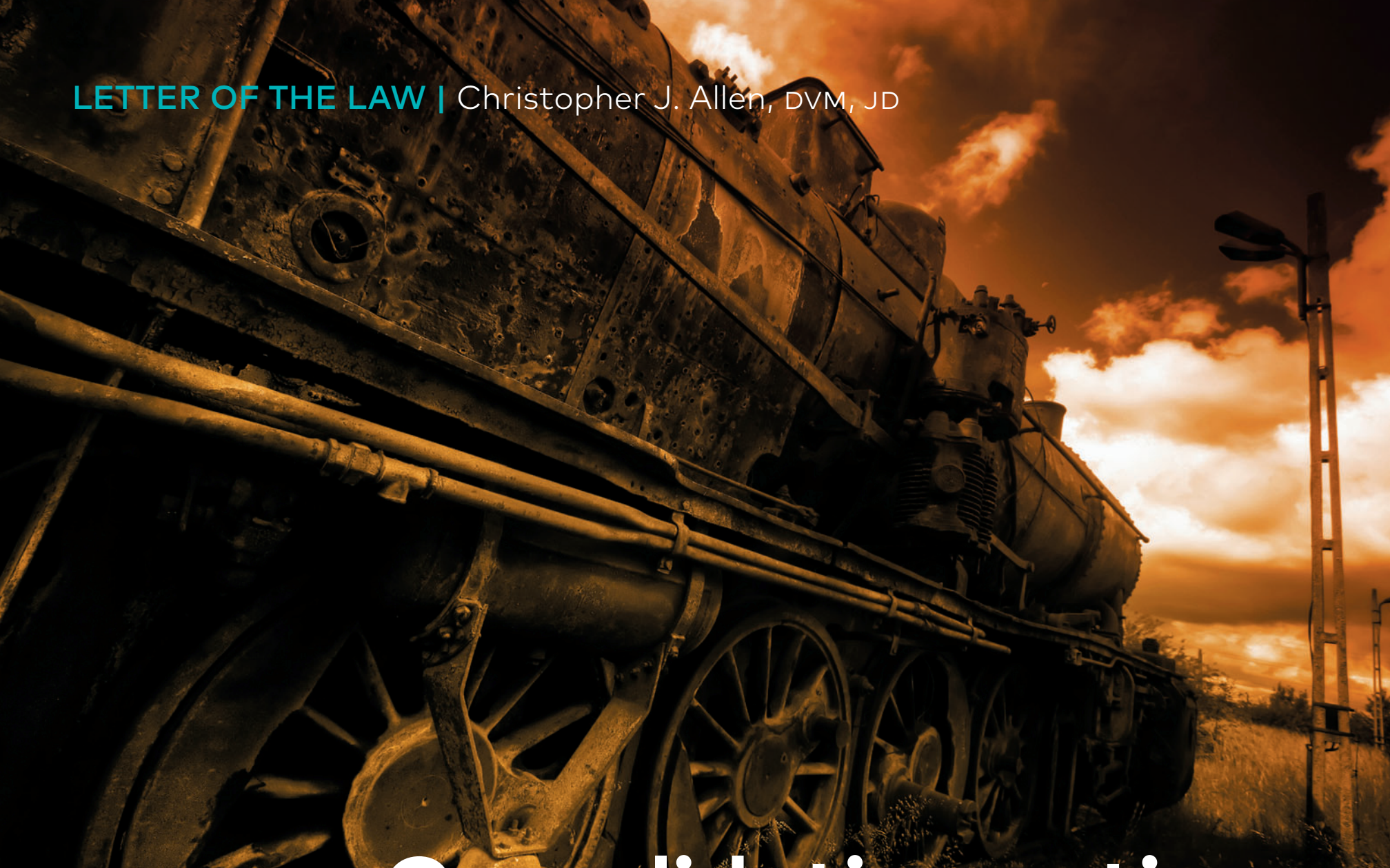
Management gurus advocate for exit interviews that let you ask team members why they're leaving. But perhaps we also should conduct periodic "stay interviews." That way you can ask things like, "What are we doing here that you like? What would you like to see us do better?" Then work on what could be improved.

8 Spread praise and shoulder responsibility

Everyone likes to be recognized. You should always praise and reward good performance in an employee. Positive feedback on a job well done goes a long way toward creating a sense of personal fulfillment. Casting blame breaks a team member's spirit and weakens commitment.

As always, you should continue to recruit and hire the best available prospects. But you should also put just as much effort into retaining them long term. This creates a winning team that anyone would be proud to play on.

Dr. Paul is the former executive director of the Companion Animal Parasite Council and a former president of the American Animal Hospital Association. He is currently the principal of MAGPIE Veterinary Consulting. He is retired from practice and lives in Anguilla, British West Indies.



Consolidation nation: Why veterinarians who hate corporate ownership end up selling out

Just like the transcontinental railroad transformed the American West, the veterinary profession is experiencing changes the likes of which it's never seen before.

For many of us who've spent most of our adult lives practicing veterinary medicine, the micro- and macroeconomic trends emerging in our profession can be disturbing. Our world is changing, much as America west of the Mississippi changed upon completion of the transcontinental railroad.

I've watched these changes unfold over a lifetime. Growing up as the son of a 1939 Cornell veterinary graduate and having spent much of my early life baling hay and shoveling horse manure, I could never have imagined, until relatively recently, just what the veterinary world would look like after the turn of the 21st century.

The anachronism of independent practice

Human physicians understand, probably better than most, the corporatization of healthcare services. While I still remember my family doctor having his own office and making house calls, the home visit has all but disappeared and solo and partnership medical practice are near-extinct.

When expensive diagnostics and therapies nobody could pay for out-of-pocket came along, the insurance juggernaut was launched. With it came government oversight in the realms of residency, Medicare and Medicaid. There were more sticks than carrots for the typical MD, not the least of which was control over hospital admitting privileges.

The doctors who wanted to focus on care more than compliance fell into line, and now the private medical practice is disappearing, much like the bison in the late 19th century. For better or worse, human medicine has emerged as corporate, notwithstanding that any given hospital chain might be organized under state law as "not for profit."

In the veterinary world, some would argue that a matching scenario is unfolding for clinicians who treat animals. Diagnostic equipment is too costly for individuals and small partnerships; pet insurance is proliferating, along with its inherent red tape. And

MIRCEA RUBA/SHUTTERSTOCK.COM

there's that ongoing lament: "How can we possibly be expected to tie up that much money in this many costly pharmaceuticals and OTC products?"

Law is more flexible than economics

I don't love it that the neighborhood hardware store I used to visit with my dad was razed in 1995 and is now a Home Depot. It makes me sad that one of Dad's best clients, Charlotte, was forced out of the liquor business by a wholesale spirits chain that opened a giant discount operation just a few blocks away.

And while I hate to admit I like paying a low price for Tito's (I try to buy American) and that I enjoy being able to buy any size wrench on a Sunday afternoon, I miss the way it used to be. But it's understandable that in the booze and hammer businesses, the big money was destined to bury the little guy.

What's harder to conceive is that in my hometown, Hamlin's Drugs and the corner optician are also mere memories. While the government used to stand fast against the corporate ownership of "learned professions," today, sure enough, I can buy my pills and my glasses at Walmart. How could this happen? At one point I wondered if doctors just weren't "special" anymore. Then came law school—and all of my provincial fantasies were torn asunder.

Consider Justice Tilzer of the New York State Supreme Court

Once I had some training in the law, I discovered why Mr. Hamlin's drugstore had given way to CVS and Walgreens. And I now know who's responsible for allowing a candy company to own a monstrous catalog of veterinary hospitals across America. The person responsible is George Tilzer.

You don't have to read the entire opinion Justice Tilzer wrote in the critical 1960 New York State Supreme Court case. Here's the operative language: "The Court finds that the defendant [Sterling Optical Inc.] is not prohibited from employing licensed optometrists for the *limited purpose of examining the eyes* of its customers" (emphasis mine).

Of course, we can't hold the good judge exclusively responsible for the proliferation of corporate dental, veterinary, pharmacy and physical therapy practices across the United States. Similar cases have played out across the country, creating a fertile environment for venture capital to enter the health provision space. And it has. And it's done very well.

How and why are consolidators successful?

Having drafted and read countless veterinary clinic profit-and-loss statements, tax documents and employment contracts, I believe that several key factors have led to the success of corporate veterinary practice consolidators (sometimes referred to as "roll-ups").

Consider that in the 19th century, nobody had profited from a transcontinental railroad because nobody had created one. But once Central Pacific and Union Pacific accomplished the unthinkable, every railroad company large and small wanted a piece of the action. In our business, seminal litigation like the People v. Sterling Optical case opened the door for virtually every licensed profession to be "operated" by big business. Wall Street set about feasting on the dentists' lunch, then the undertakers'—and now there's rapidly developing interest in ours.

One might ask, at least as far as the veterinary field is concerned, "If we are resistant to corporate practice ownership, why is it proliferating?" I talked with a lot of veterinarians and heard a lot of opinions. Here are my personal conclusions, based on information obtained from my unique grapevine:

Corporations don't have to make a profit at the start. With their extensive financial resources and backing, consolidators have an advantage over independent veterinarians in negotiating a clinic purchase. If a practice's location, demographics, staffing and culture are solid and can be significantly improved under new management, a roll-up can offer an outsized price to a seller. A corporation can—and will—take a hit on a clinic's purchase price as long as its long-term profitability and growth prospects appear satisfactory.

Cash is king, and it always will be. All things being equal, would you rather sell your house to Buyer No. 1, who has a cashier's check for the full price in his pocket and can close almost immediately, or Buyer No. 2, for whom you'll have to finance some or all of the purchase yourself?

Consolidators create their own labor price control structure. Imagine a sunny southern city of 500,000 that has two or three corporations vying for general practice associates. All the corporate clinics have a very good idea of what the competition will offer a candidate. DVM pay is unlikely to increase much due to supply and demand forces—those forces cease to apply when a large percentage of the local jobs offer virtually identical pay (which is likely to be around 20 percent of the veterinarian's personal production—probably with a negative accrual).

Consolidators don't have to compete with online pharmacies. They can purchase product at the same price as online pharmacies due to their size and scale. Add to that the reality that many corporate groups no longer include refill prescriptions as part of their associates' gross production, and it becomes clear: Corporate veterinary practices can thrive, while competing independent clinics have trouble making a profit high enough to keep them from selling out to—well, a corporation.

Parting thoughts

Young professionals used to have an advantage in our competitive market economy. A license to practice a profession gave access to business opportunities that only a select few were qualified to participate. The dearth of competition was precious: it meant ownership was likely available, profitable enough to make financing a snap and, for those possessing even marginal management ability, likely to be lucrative.

Then somebody let the highly capitalized roosters into the henhouse. Practice buyers proliferated and clinic prices rose. The luxury of choosing to buy a practice "at a convenient time in life" devolved into a scramble to locate a hospital—any hospital—that hasn't already sold or whose price has not already been hopelessly bid up.

Bottom line: If a DVM wants to be an owner now, she'd better be alert when opportunity knocks, savvy when negotiating price and terms, and disciplined enough to compete with the big dogs when she finds herself the owner of a veterinary business.

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.

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A practice owner's trust leads to an embarrassing and costly theft. Are you making the same mistake?

Pet Vet Care Clinic is a success story. Dr. Cord opened his practice 19 years ago in a growing suburban community, and it's been growing ever since.

At first, he personally handled his banking, hiring, regulatory compliance and other business demands of the practice. However, as the years went on, those demands started to outstrip his capabilities. He added administrative staff and used outside advisors to meet his growing financial and HR needs.

It was very important to Dr. Cord that his practice not lose the personal one-on-one relationships with his clients as it got larger. He had seen how large practices had gone to computerized phone responses, rigid practice policies and slow response times.

That was unacceptable to Dr. Cord, because his personalized approach was the secret to his growth. Informality and flexibility was his recipe for success. If a client wanted one heartworm preventive pill instead of six, he made it happen. If a senior client couldn't get to the clinic, he arranged transportation. When staff members needed flexible schedules or extended time off for legitimate reasons, he approved.

One morning, his administrator came to him and told him the bank deposit envelope she'd placed on her desk that morning had disappeared. The administrator went to the bank twice a week. She kept the house money in a locked file cabinet whenever she left. But when she was working with deposits and kept cash at her desk, it never occurred to her to lock things up when she went to the restroom.

There were no surveillance cameras or strict security protocols. Why? The staff was trustworthy, and most had been with the clinic for quite some time.

Needless to say, Dr. Cord was devastated. He called the police and then his insurance agent. The police made a report and commented on the clinic's lax security protocols. The detective said that with no surveillance cameras, no safe and no burglar alarm, a theft of this nature was inevitable. His insurance agent assured him that he was covered, but a claim of this amount would lead to higher premiums for the next five years. He recommended that Dr. Cord not claim the loss.

They never did find the thief. This was a crime of opportunity most likely committed by an otherwise honest employee who couldn't resist unguarded money in plain sight. Pet Vet Care Clinic added camera surveillance, a secure safe and strict money handling protocols. Dr. Cord blamed himself. His staff had grown and grown, and he still treated them all like trusted family. His conclusion was, "Shame on me!"

Rosenberg's response

Small, intimate practices can grow into large, less intimate workplaces in just a few short years. Dr. Cord was quick to retain accountants, administrators and consultants as larger practice challenges got beyond his level of expertise. He neglected to add a security advisor to the list because he didn't see this as a day-to-day need in his workplace.

I can assure you that theft happens at some level in just about every veterinary practice. It may be as minor as a pet treat or some medication for the family dog, or it may be thousands of dollars, as it was in Dr. Cord's case.

"Fool me once, shame on you. Fool me twice, shame on me." I guess a better but cornier phrase in this case would be, "Better (a secure) safe than sorry."

Do you think Dr. Cord was an enabler or a victim? Let us know at **dvm360@ubm.com**.

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

SKYLINES/SHUTTERSTOCK.COM

LONE STAR TICKS

RISK TO DOGS, RISK TO HUMANS.

BRIAN HERRIN
DVM, PhD, DACVM, Kansas State University College of Veterinary Medicine

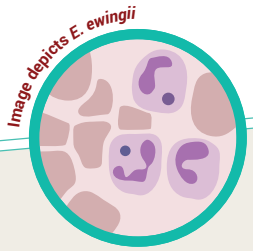
ONYINYE IWEALA
MD, PhD, University of North Carolina

SCOTT COMMINS
MD, PhD, University of North Carolina

THOMAS MATHER
BS, MS, PhD, University of Rhode Island

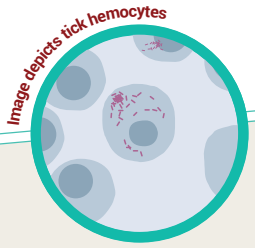
LONE STAR TICKS CAN TRANSMIT PATHOGENS.

While ticks are certainly an unpleasant sight for pet owners, hygiene is far from the primary concern. Lone star ticks can carry several pathogens that may be transmitted to the host during feeding. It's important to have a standardized plan throughout your clinic for prevention, diagnosis and treatment of each tick-borne disease.



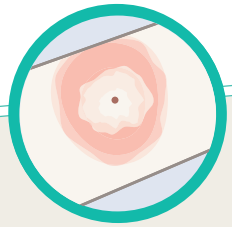
EHRLICHIA SPP.

Lone star ticks can transmit both *E. ewingii* and *E. chaffeensis*. In-house antibody tests do not distinguish between *E. canis* and other species. Consider clinical signs and CBC/ platelet count to help determine if there is an active infection before making treatment decisions.



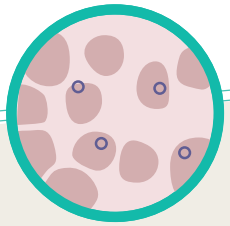
RICKETTSIA SPP.

While lone star ticks have been shown to carry *R. amblyommii* and *R. montanensis*, they have also been shown to infrequently transmit *R. rickettsia*, which causes Rocky Mountain spotted fever.[1] Antibody tests can't distinguish between these three pathogens, so clinical signs are very important to help diagnose Rocky Mountain spotted fever. Antibiotic therapy should not be delayed in a patient with signs suggestive of Rocky Mountain spotted fever.



STARI

Southern Tick-Associated Rash Illness (STARI) is associated with the feeding of lone star ticks, although the causative agent is unknown. STARI mimics the target lesion of Lyme disease in humans but is not known to cause clinical disease in pets.



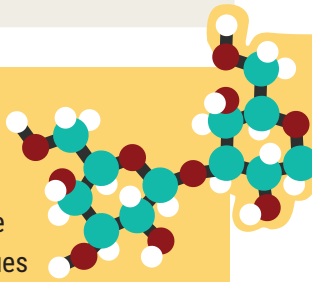
CYTAUXZOON FELIS

This feline pathogen can lead to potentially fatal disease. Infected cats may be jaundiced and painful on splenic palpation. Diagnosis can be confirmed with blood tests.

RED MEAT ALLERGIES: A UNIQUE RISK FOR HUMANS.

A 2009 study linked a series of allergic reactions in Virginia and Missouri to consumption of red meat.[2] Patients who had eaten red meat without a problem in the past now developed symptoms 3 to 6 hours after meat ingestion.

Comparison of geographical distribution of red meat allergy cases, tick-borne diseases, and tick distribution suggested a connection between lone star tick bites and red meat allergies.



ALPHA-GAL

Galactose-α-1,3-galactose (alpha-gal) is a carbohydrate normally present in the tissues of most mammals (except for humans and apes). After being bitten by a lone star tick, some individuals develop an allergic immune response to alpha-gal. A person who develops this allergy can have a severe reaction after ingesting red meat. Thus, the common name for this condition is "red meat allergy," or sometimes "alpha-gal syndrome." Blood tests have been used to identify patients with this allergy.

5 THINGS TO KNOW ABOUT LONE STAR TICKS.

Thomas N. Mather, PhD, Professor and Director, University of Rhode Island Center for Vector-Borne Disease and its Tick Resource Center, offers five unique facts about the lone star tick.

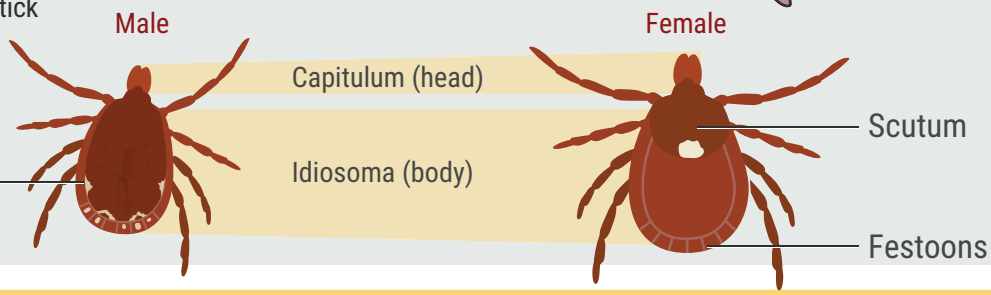
1 LONE STAR TICKS ARE FAST.

Lone star ticks move very quickly and will run aggressively toward a host. Compared to other ticks, they scramble quickly through fur or up a pant leg. Tick checks are very important, even if the pet has only been outside briefly.

2 LONE STAR TICKS ARE COMMONLY MISIDENTIFIED.

Steps to confirm a lone star tick:

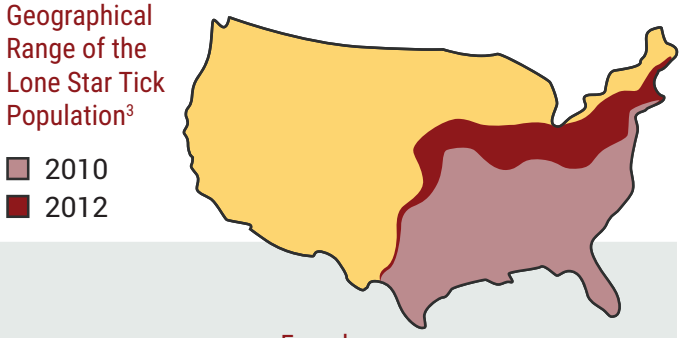
- Narrow your vision to just the scutum (or shield)
- Check for the distinctive white spot (or "lone star") which identifies the adult female lone star tick
- The adult male lacks the white spot but typically has spots or streaks of white around the outer edge of the body



3 LONE STAR TICKS ARE EXPANDING THEIR RANGE.

Information gathered from the TickSpotters program indicates that lone star ticks are spreading into the Upper Midwest. Dr. Mather suggests that the spread of this tick species is related to the increased abundance and suburbanization of white-tailed deer, a key host.

Geographical Range of the Lone Star Tick Population[3]



4 LONE STAR TICKS DO NOT TRANSMIT LYME DISEASE.

In a study testing more than 22,500 lone star tick specimens, there was no measurable prevalence of *Borrelia burgdorferi*.[4] This may be partly because this tick species rarely attaches to white-footed mice,[5] the primary reservoir of *B. burgdorferi*, but favors white-tailed deer, an animal rarely infectious for the Lyme disease germ. It could also be related to potentially borreliacidal properties of lone star tick saliva.

5 LONE STAR TICK LARVAE ARE TINY.

The larvae are so small they can crawl right through the fabric of socks! Wearing permethrin-treated clothing can help prevent bites. Look out for tiny, poppy seed-sized engorged larvae especially on pet's feet, or wandering loose in homes.

LONE STAR TIPS:

- Make a plan to handle tick-borne diseases in your clinic – Don't be caught surprised!
- If treatment fails initially, consider the possibility of a co-infection with several pathogens.
- Prevention is key.

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Boehringer Ingelheim

A strong veterinarian-farrier relationship is just plain horse sense

Collaborative partnerships between equine veterinarians and farriers support healthier hooves and horses. *By Ed Kane, PhD*

A strong veterinarian-farrier relationship is a crucial component in keeping horses healthy—especially thoroughbred racehorses, due to their propensity to foot-related lameness—says Raul J. Bras, DVM, CJF, APF. For centuries, the farrier and the veterinarian were the same person—someone who would take the initiative in dealing with hoof problems. Now that the two professions are separate, tension and conflict often occur along the fuzzy boundaries of the two roles as they figure out how to work together. When both professions understand, respect and integrate the knowledge and expertise offered by the other, everyone—especially the horse—benefits.

Sam Zalesky, CJF, and Josh Wilbers, APF, of Rood and Riddle Equine Hospital.

Don't step on each other's hooves

Dr. Bras, who works in the podiatry department at Rood and Riddle Equine Hospital in Lexington, Kentucky, understands the importance of the collaboration between the two professions.

"When there is a foot-related problem, you need both the veterinarian and the farrier to work in concert for the benefit the horse," says Dr. Bras. "The perfect case is when the farrier becomes the veterinarian's best ally—when the two have an understanding of and respect for each other's expertise. The veterinarian provides medical knowledge and experience, while the farrier brings his practical knowledge and mechanical skills, such as hoof-shaping, shoeing and even therapeutic shoeing."

However, this important relationship is conflict-prone, usually when a farrier attempts to assume the duties of a veterinarian and vice versa, says Dr. Bras. Horse owners can inadvertently exacerbate the situation with comments like, "Well, that's what the veterinarian told me," to the farrier and, "That's what I was told by the farrier," to the veterinarian, creating opposing sides.

Know your role

The first step in building better relationships is for each profession to have a thorough understanding of the skills and expertise the other possesses.

"We still lack equine podiatry within the veterinary school education curriculum in many institutions," Dr. Bras says. "Many equine practitioners graduate veterinary school and then try to assume the farrier's role, despite lacking many of the practical skills of farriery."

The farrier is the best person to ensure good shoe, good foot—as per the adage "No hoof, no horse." When farriers work on horses without foot issues, they are the professionals, says Dr. Bras. A skilled farrier's various duties include selecting proper shoes for horses and providing regular hoof care and maintenance. Farriers also replace worn shoes and provide therapeutic trimming and shoeing when necessary.

Because thoroughbred racehorses are essentially always shod, various problems such as contracted heels, underrun heels, hoof wall separation under the shoe and elongated toes can occur. Though farriers take the lead on these issues, it's critically important that they collaborate with veterinarians when lameness occurs.

Bridle your tongue

Another key in preventing conflict is to foster clear, open communication between the two professionals. Farriers and veterinarians should communicate directly with each other (preferably face-to-face), and they should seek each other's opinions before deciding on a course of action.

Whether a horse develops a foot problem because of injury, illness, poor genetics or unbalanced shoeing, the farrier and veterinarian should develop a therapeutic shoeing plan in concert. This is especially necessary when treating horses with debilitating and even life-threatening hoof aliments. Both professionals should also be sensitive to the jargon they're using and strive to communicate using shared terminology.

Gallop into a better future

"Advancement of farriery has come a really long way, and during recent years, farriers have been able to take advantage of continuing education," says Dr. Bras.

Similarly, veterinarians are experiencing an increased focus on equine foot care at conferences and in veterinary school. And as long as the two professions continue to move toward collaboration while improving themselves individually, equine care will improve as well.

"The horse is in a better place when both the farrier and veterinarian work in harmony," says Dr. Bras.

Ed Kane, PhD, is a researcher and consultant in animal nutrition. He is an author and editor on nutrition, physiology and veterinary medicine.

Hoof maintenance

An adult hoof grows about 0.38 inches per month, depending on season, exercise, metabolic rate and genetics. For horses on pasture, hooves need to be trimmed and reshod every six to eight weeks. For dirt-racing thoroughbreds, this needs to occur every three to four weeks.

IMAGE COURTESY OF DR. RAUL BRAS

Nevada—home to far more than the WVC

Sure, there are casinos, showgirls, all-you-can-eat buffets and a certain veterinary conference—but the state is much more than all that. It's also home to endless vistas, many mustangs and poetry-telling buckaroos.

The enormous sprawling state of Nevada is probably best known in our profession for the Western Veterinary Conference (WVC), a large conference held early in the year in Las Vegas.

However, across the world, there are millions of people who have never heard of Nevada or WVC but have heard of Las Vegas—Sin City. This entertainment and gambling capital of the world isn't even the capital of Nevada. That is Carson City, a rather sedate and quiet town. Actually, there are only two populous communities in this huge state, Las Vegas and Reno, which are hundreds of miles apart.

To me, Nevada typifies the entire United States because of its diversity, cultural extremes, vast size and geographic variety.

Take Las Vegas, for example. Known the world over for its frivolity, decadence and garishness, its growing population is largely conservative. It's a military town, a university town and a mecca for retired people, and it has a large Mormon community. I know longtime residents of Las Vegas who have not been to the Strip, where most of the action is, for years.

Outdoor enthusiasts like Las Vegas too, and I don't just mean because of the golf courses and swimming pools. There is skiing close by, Lake Mead is great for boating and fishing, and you can visit such wonders as Valley of Fire State Park.

Still, my personal visits to Las Vegas have always involved veterinary conferences. I find that after four days, I'm overwhelmed with the glitz, the glamour and the seedy side of human nature and am ready to go home. Yet it's the decadence that prompts me to say that Nevada is pure Americana because, away from the casino-supported cities, the state is still Western frontier.

Although much of the state is desert, there are also beautiful snowcapped mountains and endless vistas of agricultural lands. Many of the largest cattle ranches in the United States are in Nevada, and here the buckaroo reigns supreme. The Nevada buckaroo's attire, equipment and technique are different from that of most American cowboys. The annual cowboy poetry gathering held in Elko, Nevada, celebrates the startling talent that can be found in the nation's hinterlands and is a nostalgic reminder that all of our frontier-born values still exist.

Home to most of the nation's mustangs, thriving mineral wealth, abundant wildlife, great flocks of sheep and endless open space, Nevada is a great place to visit. My grandchildren live less than half an hour west of Reno, in the Sierra Nevada forest, so I visit Nevada periodically. (Reno, too, is host to an important veterinary conference, the Wild West Veterinary Conference.)

However, I'm pretty content living in California, at least until my next life when I'll move to rural Hawaii just as soon as I graduate veterinary school.

Dr. Robert M. Miller is an author, cartoonist and speaker from Thousand Oaks, California. 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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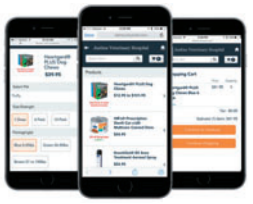

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For fastest response visit pvmarkethound.com

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Updated manual app

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For fastest response visit merckvetmanual.com

Brakke Consulting

Equine market study

Ever since the Great Recession, the U.S. equine market has been in a period of decline. A new study shows that retraction is still taking place, but it also shows that spending per owner is up, even though there are fewer horse owners and they each own fewer horses. The study is a national survey of more than 900 horse owners with detailed information about demographics, reading and shopping habits, Internet and social media use, and involvement in equine events. The research examines what product brands were purchased, how often they were purchased, where they were purchased, amount of money spent, and who most influenced their selection of brands.

For fastest response visit brakkeconsulting.com

General Mills to acquire Blue Buffalo for $8 billion

Deal expected to close by the end of General Mills' fiscal year.

General Mills has entered an agreement in which the company will acquire Blue Buffalo for $40 per share in cash, or a value of approximately $8 billion, according to a release from the companies. Blue Buffalo makes food and treats for dogs and cats under its Blue brand, which includes Blue Life Protection Formula, Blue Wilderness, Blue Basics, Blue Freedom and Blue Natural Veterinary Diet.

"The addition of Blue to our family of well-loved brands provides General Mills with the leading position in the large and growing wholesome natural pet food category and represents a significant milestone as we reshape our portfolio to drive additional growth and value creation for our shareholders," says General Mills CEO Jeff Harmening, MBA, in the release.

"We are competing more effectively in our existing categories by really listening to consumers and providing a variety of options that meet their needs," Harmening continues. "In pet food, as in human food, consumers are seeking more natural and premium products and we have tremendous respect for how attentive Blue Buffalo has been to the needs of their consumers, pet parents and pets, as they have built their brand. ... We expect to help Blue Buffalo by leveraging our extensive supply chain, R&D and sales and marketing resources. We will in turn benefit from their experience building one of the strongest pull brands in the [consumer packaged goods] world."

According to the release, General Mills is the third-largest natural and organic food producer in the U.S. with brands that include Annie's, Lärabar, Liberté, Cascadian Farm, Muir Glen and EPIC. After the transaction has been completed, General Mills will operate Blue Buffalo as a new pet operating segment alongside its four current operating segments: North American Retail, Convenience Stores and Foodservice, Europe and Australia, and Asia and Latin America. It will maintain Blue Buffalo's Wilton, Connecticut, headquarters and its Joplin, Missouri, and Richmond, Indiana, manufacturing and R&D facilities. Blue Buffalo's CEO, Billy Bishop, will continue to lead the business and report to Jeff Harmening, the release states.

The board of directors for both companies have approved the transaction, but it is still subject to regulatory approvals and closing conditions. It is expected to close by the end of General Mills' 2018 fiscal year. Invus LP and founding Bishop family shareholders, who represent more than 50 percent of Blue Buffalo's outstanding shares, have approved the transaction and no other approvals from the board of directors or shareholders is needed to complete the transaction, the release says.

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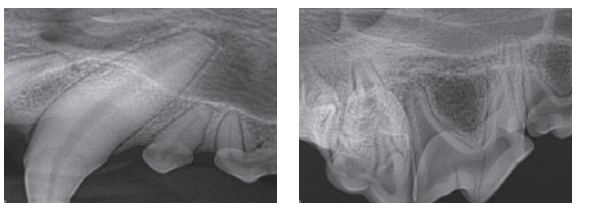

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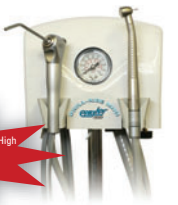

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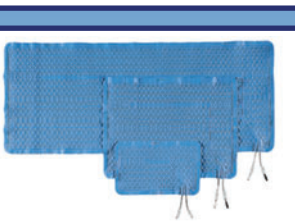

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Fetch dvm360 in Virginia Beach
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Fetch dvm360 in Kansas City
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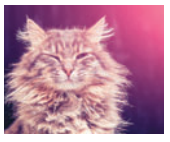

December 13-16, 2018
Fetch dvm360 in San Diego
(800) 255-6864, ext. 6
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Here are the CE opportunities coming in the next few months

March 11
It's What's Up Front That Counts!
Oklahoma City, OK
(303) 674-8169
vmc-inc.com

March 17-18
Ultrasound of the Equine Upper Limb, Neck, Back & Pelvis
Littleton, CO
(844) 870-6097
vetpd.com

March 23-24
Ultrasound-Guided Orthopedic Injection Techniques & Therapies
Ashland, VA
(844) 870-6097
vetpd.com

March 23-25
Veterinary Dentistry AVDC Mock Examination 2018
Orlando, FL
(941) 276-9141
veterinarydentistry.net

March 26-27
Hindlimb Lameness Diagnostics & Therapies
Dover, NH
(844) 870-6097
vetpd.com

March 26-28
Vet Vacation CE
Whistler, BC
(888) 488-3882
vetvacationce.com

April 6-7
Evidence-Based Farriery for Equine Practitioners
Irving, TX
(844) 870-6097
vetpd.com

April 6-7
Abdominal, Thoracic & Soft Tissue Ultrasound
Stillwater, MN
(844) 870-6097
vetpd.com

April 6-8
American Laser Study Club's Symposium
Orlando, FL
americanlaserstudy-club.org/symposium

April 8
It's What's Up Front That Counts!
Seattle, WA
(303) 674-8169
vmc-inc.com

April 13-15
American Academy of Veterinary Acupuncture Annual Meeting
Santa Fe, NM
(931) 438-0238
aava.org

April 14-15
Feline Dentistry CE Course and Dental Extraction Wet Lab
Orlando, FL
(941) 276-9141
veterinarydentistry.net

April 21-22
Canine Dentistry CE Course and Dental Extraction Wet Lab
Orlando, FL
(941) 276-9141
veterinarydentistry.net

April 28-29
Oncology for the General Practitioner
San Diego, CA
(629) 640-9583
sdcvma.org

April 28-29
San Diego County Veterinary Medical Association (VMA) Conference
San Diego, CA
(629) 640-9583
sdcvma.org

April 29
It's What's Up Front That Counts!
Hartford, CT
(303) 674-8169
vmc-inc.com

May 5-6
Veterinary Dental Extraction Course Weekend Dog & Cat Wet Lab
Atlanta, GA
(941) 276-9141
veterinarydentistry.net

May 5-6
Veterinary Dentistry For Technicians Weekend Extravaganza
Atlanta, GA
(941) 276-9141
veterinarydentistry.net

May 7-8
Human Resources Boot Camp
Minneapolis, MN
(303) 674-8169
vmc-inc.com

May 10-11
Financial Boot Camp
Chicago, IL
(303) 674-8169
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May 11-13
Animal Chiropractic Program: Parker University
Dallas, TX
(800) 266-4723
ce.parker.edu

May 13-17
The Inagural Chicago-land Veterinary Conference
Chicago, IL
(877) 978-7084
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May 15-17
Internal Medicine and Emergency Critical Care
Savannah, GA
(888) 488-3882
vetvacationce.com

May 31-June 1
Dairy Cattle Welfare Symposium
Scottsdale, AZ
(614) 292-9453
dcwcouncil.org

June 2-3
Veterinary Dental Extraction Course Weekend Dog & Cat Wet Lab
Los Angeles, CA
(941) 276-9141
veterinarydentistry.net

June 2-3
Veterinary Dentistry For Technicians Weekend Extravaganza
Las Angeles, CA
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Shoving a marshmallow into a piggybank

The tale of a veterinarian who battled a cow's prolapsed uterus and won—but not without a little mud, sweat and swears.

The sight of a prolapsed uterus on a cow makes my back sore. You know how hard it is to get an inside-out, caruncle-covered uterus about half the size of a 50-gallon barrel back inside a cow. It's like shoving a marshmallow into a piggybank.

Dr. Katy, a friend and fellow veterinarian, was on her way to a wedding when her cellphone rang. It was one of her good friends, calling to ask a favor: One of the friend's cows had delivered a baby and the uterus had prolapsed.

Dr. Katy has one vehicle—a pickup truck with a vet box on it. And, fortunately, she keeps a pair of coveralls in the truck for just such an emergency. Dr. Katy headed to help the cow on a cool evening in West Virginia.

A dress and high heels aren't typical ranch attire, so upon arrival, Dr. Katy looked for signs of human life before changing into the coveralls. But when she opened the compartment that normally housed the coveralls, she found only a pair of shorts and a tank top. She'd taken the coveralls into the house to wash and hadn't put them back.

No worries—one can replace a uterus in shorts and a tank top, no problem. It was a bit cold out, but this wouldn't take long. Thank goodness her rubber boots were still in the truck. At least her feet would be warm and dry.

Once through the barn, Dr. Katy saw the poor cow resting on her side in the middle of a large muddy pen. She could see the giant uterus lying behind the cow and began plotting ways to poke it back in, but she first needed to get a closer look to determine what tools she'd have to pull from her truck.

Dr. Katy climbed over a six-foot pipe fence. The mud got deeper as she approached the three-foot electric fence. With her left foot firmly planted on the ground, she threw her right leg over the electrified wire and planted it on safe ground on the other side. But when she put all of her weight on her right leg to lift her left, her right leg sank deeper into sloppy mud. This caused Dr. Katy's entire body to lower so much that her "girl parts" contacted the electric wire.

Dr. Katy screamed and jumped involuntarily, leaving her right boot stuck in the mud—with no foot in it. Finally she came to rest face-down in the mud.

Any hopes of making it to the wedding on time were abandoned, but she thought she could still make the reception (after a quick run home for a shower) if she hurried. So Dr. Katy trudged across the pen with one boot and one muddy foot to look the cow over and determine the tools she'd need.

After her electrifying experience, Dr. Katy wanted to take a different route back to the truck. She went all the way around to the other side of the barn, but when she got to the door leading into the barn, it was locked from the inside. So Dr. Katy had to retrace her steps and face the dang fence again.

As she cautiously placed her foot on the ground to go over the wire, it began to hail. She was determined not to get shocked again, but she hadn't anticipated how much her shorts were sagging from getting soaked in the rain. Once again a shock sent her flying face down into the mud, this time with both feet naked.

With soaking clothes and frozen feet, Dr. Katy got what she needed and went back to the cow's side without meeting the electric wire again. By this point, the hail had given way to blowing snow.

The prolapse wasn't going to be easily fixed. Dr. Katy would push one side of the uterus in and the other side would pop back out. The more she wrestled with the uterus, the bigger it seemed to get.

Dr. Katy went back to the truck and got some bandage material to try and wrap the thing tight enough that it would slide back in. No luck. An hour of extreme struggle had yielded only a mud-covered veterinarian and two tears in the uterus.

Finally, in a moment of desperation, Dr. Katy decided to use her leg. It was already covered in mud (as was the entire uterus). Pushing her fanny deep into the slop, Dr. Katy placed one foot against the center of the uterus and bent her leg like she was about to push against the squat machine at the gym.

With this method, Dr. Katy felt the uterus gradually give way and start slipping back in to the cow, inch by inch. This taste of success gave her just enough energy to deliver another mighty shove. At last the uterus was back where it belonged—safe inside the cow, along with Dr. Katy's right leg.

Dr. Katy was freezing, mud-caked and exhausted (and her leg was in a cow's vagina), but she had won.

After cleaning out the cow and giving her the proper medicines to keep her comfortable and prevent infection, Dr. Katy hopped in her truck and gave me a call on her drive home. I haven't stopped laughing since.

Dr. Bo Brock owns Brock Veterinary Clinic in Lamesa, Texas. His latest book is Crowded in the Middle of Nowhere: Tales of Humor and Healing From Rural America.

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1. Toresson L, Steiner JM, Suchodolski JS, Spillman T. Oral cobalamin supplementation in dogs with chronic enteropathies and hypocobalaminemia. *J Vet Intern Med* 2016;30(1):101-107. doi: 10.1111/jvim.13797.
2. Toresson L, Steiner JM, Suchodolski JS, et al. Oral cobalamin supplementation in cats with hypocobalaminemia. *J Vet Intern Med* 2016;30(1):417-418;abstract ESCG-P-10.

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