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May 2016 | Volume 47 | Number 5 | dvm360.com

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Flea control

One more time, doctors, with gusto: Death to the devil's jumping beans!

Think private practice is the only way to use a veterinary degree? Don't be so black and white. Today's veterinarian faces a dazzling array of career choices. Come to think of it, new ways of meeting the needs of pet owners means private practice is anything but a monochromatic option. **Page 12**

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The service spectrum

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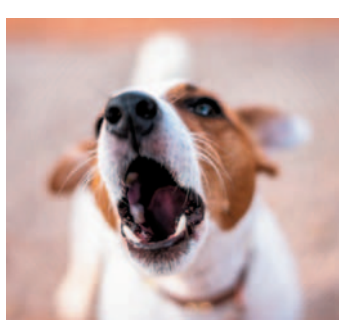

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[1] Data on file at Merial.

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Volume 47, Issue 5

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UBM

What exactly is an *'alternative career'*?

Here's a hint: It doesn't involve herbs or grunge music.

I'm one of those increasingly rare people who are doing exactly what they went to school to do. I studied journalism, both at the undergraduate and graduate levels, and I am now working for a magazine and website.

Back in those college years I didn't know I would be working with and for veterinarians day in and day out, but I knew my job would involve writing and editing, and here I am writing and editing—and feeling very privileged to work with such an amazing profession!

However, plenty of my J-school friends are doing different things these days: life coaching, leading church ministries, writing best-selling novels, raising kids, running businesses they launched themselves, programming websites for multimillion-dollar corporations—I could go on. The point is, whether by choice or because of circumstances, they forged a different path from the one they thought they'd head down originally.

Now, the cost of a journalism degree is nowhere near the cost of a veterinary degree, and many journalism skills can be transferred to other work situations, so the stakes are lower and the process perhaps easier for journalists than it is for veterinarians when it comes to choosing a different career path. However, we have identified a number of veterinarians who are using their degrees, training and experience in far different ways than they pictured starting out—or than society pictures when they think about veterinary medicine. Some have done it to find greater reward and fulfillment in their personal and professional lives; some have done it to respond to new ways pet owners are seeking to receive veterinary services these days—and some have found the sweet spot that does both.

Some have found greater reward in their personal and professional lives; some have responded to new ways pet owners are seeking veterinary services these days—and some have found the sweet spot that does both.

So what constitutes an "alternative career"? Here's my take: It's a career path that makes you happier than the one you embarked on orginally, or that your world thinks you should be on. And happiness looks different for every individual, so you can have 100 different DVMs in 100 different careers all finding joy in their chosen method of veterinary service. **dvm360**

Overtime for veterinary practice managers could soon become mandatory

Salary thresholds for employees who earn overtime pay may soon jump to $50,000 a year, meaning potential changes for practice managers and those who pay them. *By Sarah A. Moser*

If the Department of Labor approves President Obama's proposed change to the Fair Labor Standards Act, the salary threshold for veterinary practice managers eligible for overtime pay will increase considerably. A proposed rule would increase the level from $23,660 to as much as $50,440 a year.


Rep. Kurt Schrader, DVM

"President Obama was concerned about making sure people are paid a fair wage for a fair day's work," says Veterinary Medicine Caucus co-chair Kurt Schrader, DVM, a U.S. representative for Oregon's fifth district. "He found that overtime requirements for paying managers had not kept up with inflation. My reaction to this is similar to that of most practice owners: I'm very concerned. Salaries should be based on what your practice can afford. Having said that, obviously the threshold should be more than $23,000 a year."

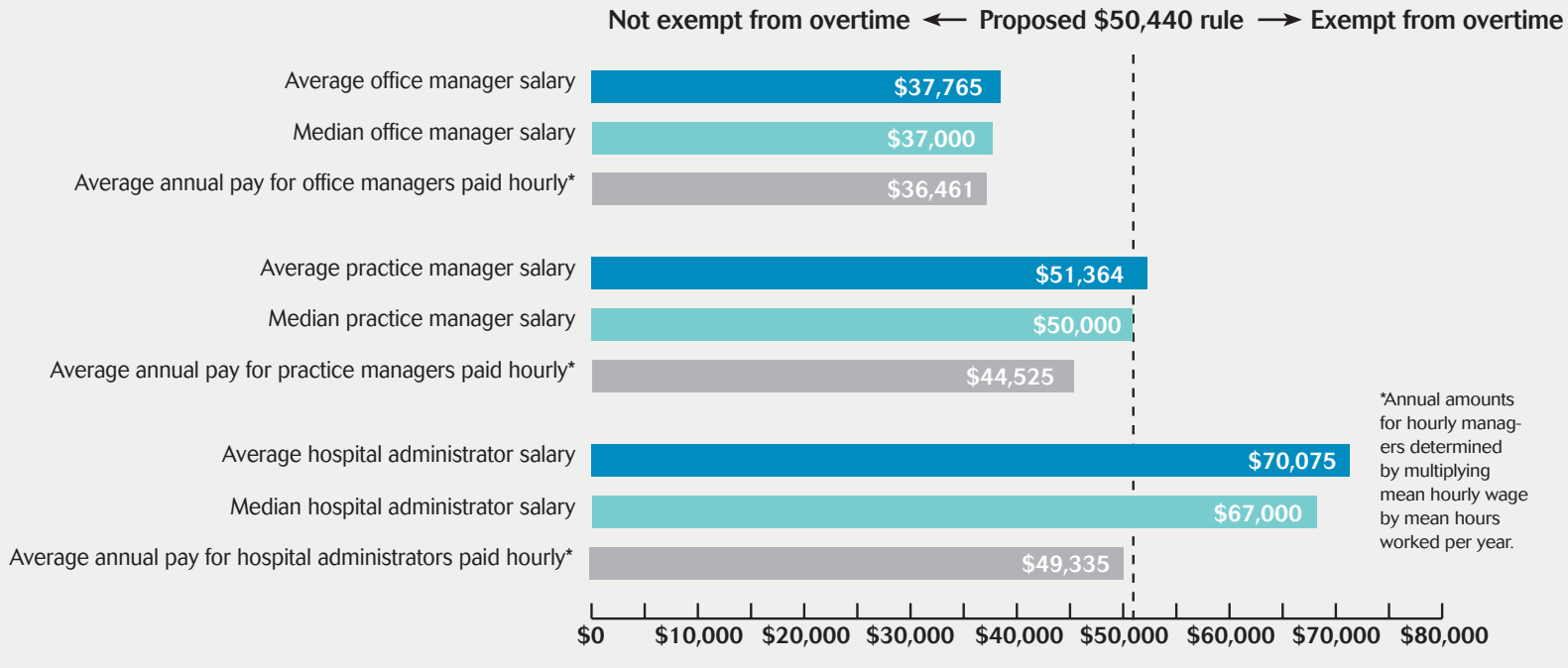
The proposal was submitted last summer with a comment period that ended Sept. 4, 2015. The proposal received 293,384 comments from the public and is now in the final rule stage of the regulatory timeline, with the Department of Labor mum on how public comments will affect the final rule.

"I think most veterinary practices are doing the right thing, paying their managers a good salary already," says Schrader. "If this rule passes as is, it could be a big blow to a veterinary business. What I wish would happen is an accommodation that lets everyone win. An increase but not a jump straight to the $50,000 range. Our practice managers are like family, and they deserve the reward of a good salary. But jumping straight to $50,000 is a huge move." **dvm360**

Sarah Moser is a freelance writer and editor in Lenexa, Kansas.

Oh no! (oh yes?) to overtime

A proposed change to the Fair Labor Standards Act could mean more managers would be entitled to overtime pay. How does your practice compare to these averages?



Source: Veterinary Hospital Managers Association 2015 Report on Compensation and Benefits for Veterinary Managers

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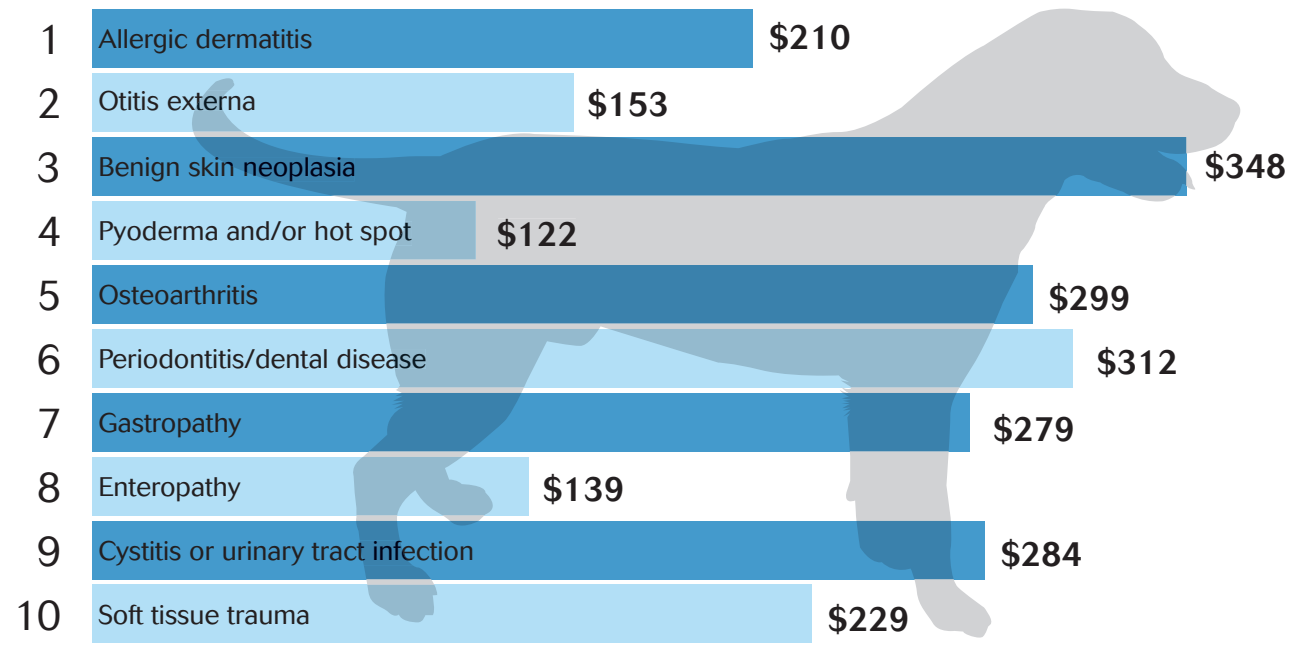
Nationwide identifies top conditions in dogs and cats

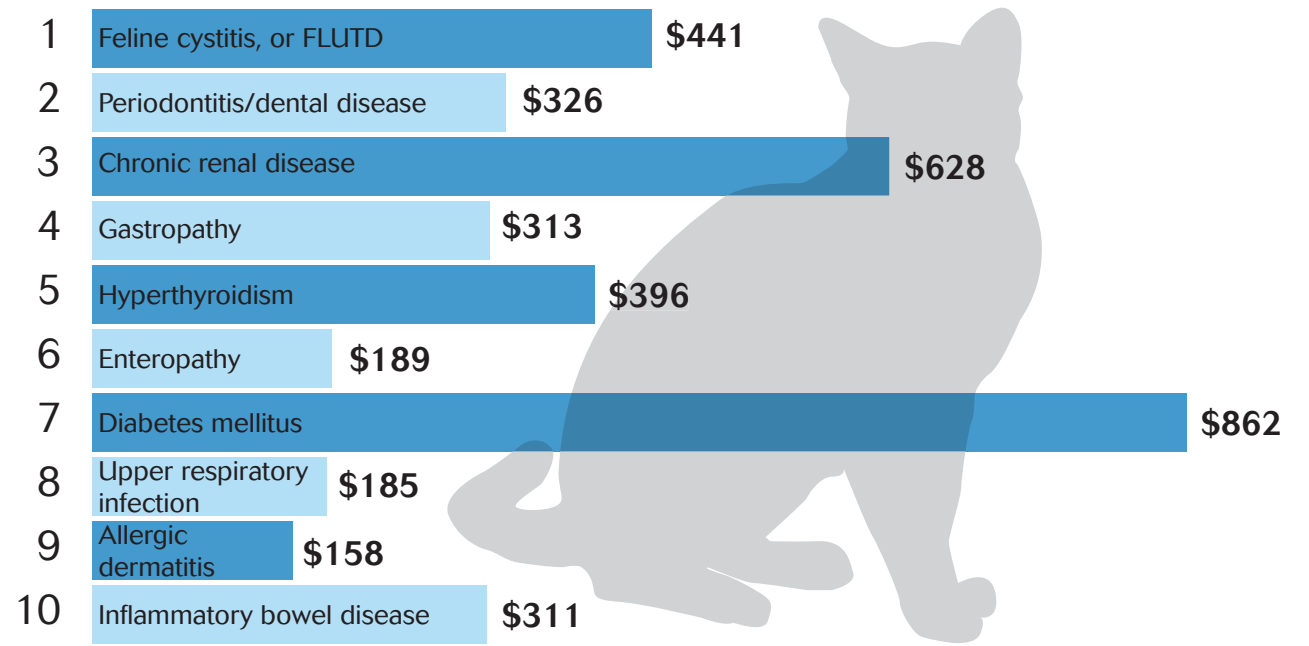
The results are in! Nationwide announces the top medical conditions of 2015 and the average cost to treat.

These results are based on more than 1.3 million pet insurance claims submitted to Nationwide last year for more than 550,000 pets. Without further ado, here are the top 10 medical conditions affecting dogs and cats and their associated costs based on Nationwide claims data. dvm360

TOP MEDICAL CONDITIONS IN DOGS



TOP MEDICAL CONDITIONS IN CATS



Canine flu now affecting cats too

University of Wisconsin reports an outbreak of H3N2 in cats in a midwestern shelter.

The University of Wisconsin (UW) School of Veterinary Medicine Shelter Medicine Program has identified a group of cats in a shelter in northwestern Indiana as being infected with the H3N2 influenza virus previously thought to affect dogs only.

"Suspicions of an outbreak in the cats were initially raised when a group of them displayed unusual signs of respiratory disease," said Sandra Newbury, director of the UW Shelter Medicine Program, in a press release from the university. "While this first confirmed report of multiple cats testing positive for canine influenza in the U.S. shows the virus can affect cats, we hope that infections and illness in felines will continue to be quite rare."

Affected cats were showing clinical signs of a runny nose, congestion, general malaise, lip smacking and excessive salivation. The signs have resolved quickly, and no cats have died of the infection.

Cases of feline infection had been previously reported in South Korea, and in one case last year, a cat had been found to be infected with the H3N2 virus in the United States. This new outbreak indicates that the virus can replicate and spread from cat to cat.

"Sequential sampling of these individual cats have shown repeated positives and an increase in viral loads over time," said Kathy Toohey-Kurth, MS, PhD, the virology section head at the UW Diagnostic Laboratory.

Dogs in the same shelter in Indiana have also been reported to be infected, so UW is working to help manage the outbreak.

"At this time, all of the infected cats have been quarantined, and no infected cats or dogs have left this shelter," Newbury says. "We will continue to watch carefully for instances of the disease."

Newbury recommends that dogs or cats suspected of infection should be housed separately and that precautions be taken to prevent spread from hands or clothing. No vaccine is available for cats since the H3N2 vaccine is approved only for dogs. **dvm360**

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dvm360 leadership CHALLENGE VET 2.0

Break out of the gray! In this dvm360 Leadership Challenge, sponsored by Boehringer Ingelheim, we look at new (and old) ways DVMs can serve people and pets.

By Jessica Vogelsang, DVM, CVJ, and Brendan Howard

The service spectrum

Picture, if you will, one of the most common stereotypes in veterinary medicine. A young girl, bright-eyed and optimistic, decides by her seventh birthday that she will be a veterinarian. She works hard, gets her degree and lives happily ever after. This is what most people imagine about our lives if given the opportunity—and sometimes it goes just like that.

But what about everyone else? What about those who find themselves derailed from that course by family, debt, burnout and ennui? What about the veterinarians who can't figure out how they want to serve pet owners or animals because the "old way" just doesn't do it for them? There are plenty of those too. Often these veterinarians continue to slog through unrewarding jobs simply because they don't see any other options.

As veterinary medicine evolves, so do the needs of pet owners, the planet and veterinarians themselves. Opportunities for diverse careers are coming to the forefront as veterinarians look for alternative uses for their degree—and alternative visions for what practice looks like.

Veterinarians are finding all sorts of ways to put their degrees to good use. Some do it by design, others by luck, and some just head into the world to see what happens. Here's how they're reinventing the profession.

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Reference: 1. CEESA Q4 2015: CIRD Market Q4 YTD. Boehringer Ingelheim Vetmedica, Inc. March 2016.

dvm360 leadership CHALLENGE VET 2.0

Veterinarians: Reinventing themselves

On the wild path to serving the pet owner of the future, some veterinarians may need help seeing creative career solutions—and learning to appeal to folks who want veterinary care in a different way. That's where this dvm360 Leadership Challenge comes in. If the traditional path doesn't work for you, create a new one—here are some ideas to jump-start your thinking. You just might discover that the people and animals you want to serve have been waiting for you for a long time.

On deck in dvm360's sister publications:

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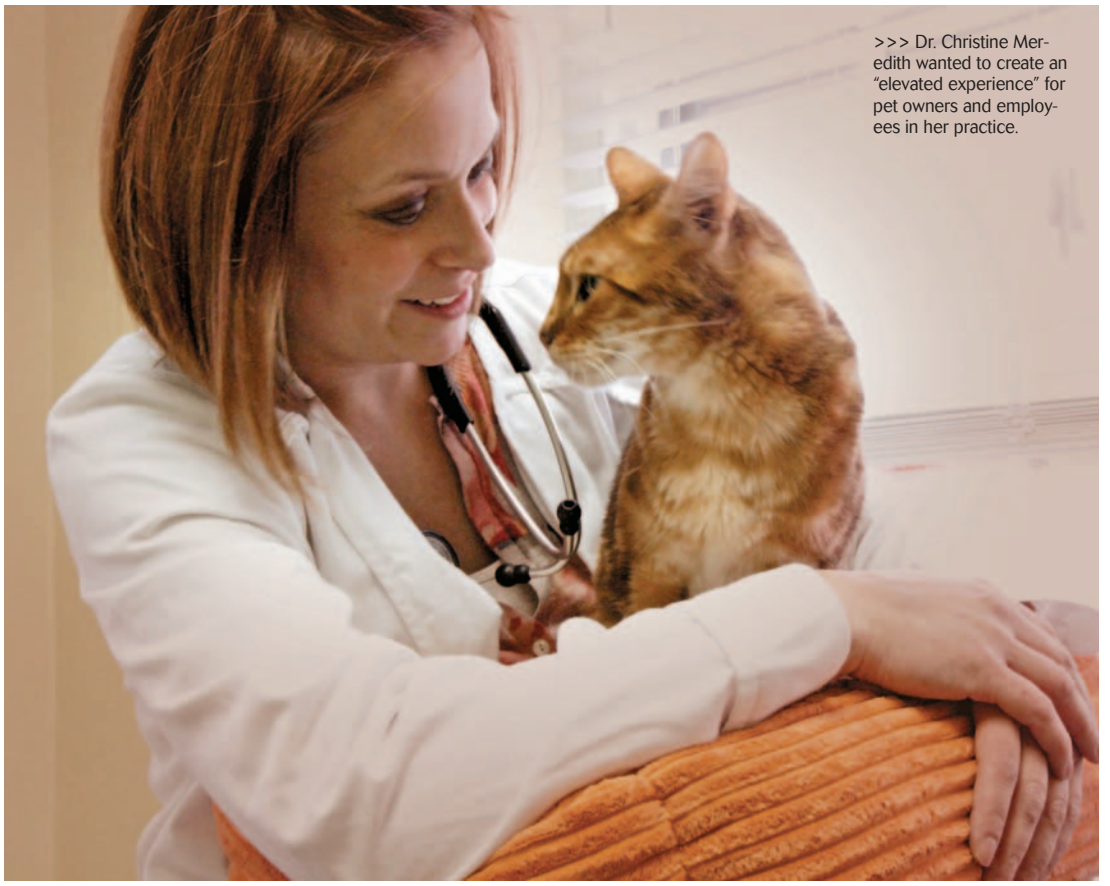
To find all of this coverage, plus online-exclusive content, visit dvm360.com/vet2point0.



>>> Dr. Christine Meredith wanted to create an "elevated experience" for pet owners and employees in her practice.

The Visionary

Christine Meredith, VMD

More than in any other generation, the veterinary road less traveled has become practice ownership. Christine Meredith, VMD, has been down the road twice. First, out of school, she bought a high-functioning practice from a retiring veterinarian in North Carolina and enjoyed a few years of happy if emotional practice.

"When I was young, I let things ruffle my feathers a lot easier," she says.

Eventually she moved back to Pennsylvania (she was born in Scranton) and bought a "jump-start" practice, one beat up and left to wind down by another practice owner. What would become Affinity Veterinary Center of Malvern, Pennsylvania, had just 100 clients when Meredith took over. There were three other practices in a five-mile radius.

But Meredith thought the old Chester County farmhouse was the perfect place to create an "elevated experience" for both pet owners and her employees. This time she put to work all the ideas she and her husband (Travis Meredith,

>>> Meredith established her practice in a prettied-up farmhouse in Chester County, Pennsylvania.

PHOTOS COURTESY OF DR. CHRISTINE MEREDITH

also a DVM, who has a love for business and marketing) had for keeping out the staff drama and bringing in an experience that was client-focused and parent-focused—in other words, people-focused.

The farmhouse was prettied up. The homey reception area was filled with Ikea furniture, easily replaceable if patients and clients scuffed and beat it up. But that doesn't even happen often since clients who come in the front door almost always head straight to an exam room.

In addition, "there's a lot of hand-holding through procedures and decision-making" in the practice, Meredith says. She's available seven days a week by email. Clients get it: "They understand and appreciate and respect our pricing structure, and I get few complaints about price per year," she says.

Meredith's biggest difficulty has been finding new people who fit her focused, unified team. She cultivates patience in herself to take time to find team members with skills other hospitals might skimp on.

"I focus more on care, compassion, communication skills and patience," she says, "that ability to go into an exam room and find a point of commonality with a client and express their cares and concerns, to show animals they can trust you, thereby showing the owners we're conscientious and caring."

Potential veterinary team members who'd "rather stay in the back and do procedures," she says, are weeded out during initial interviews.

Meredith's no-nonsense attitude to focusing completely on clients is mirrored perfectly in her high expectations for professionalism, adult behavior and camaraderie.

"We do not hold grudges," she says. "If you have a child who's sick, someone will cover for you. And next time, you know you'll cover someone else. And if you can't do it that time, no one is going to hold it over your head. There's zero tolerance for holding things against others."

Meredith and her husband toy with the idea of marketing this farmhouse look and feel in other locations, but she hesitates: "I don't know that we can. We are marketing a feeling. That's a difficult thing to do."

The road of veterinary practice ownership will continue to be the road less traveled. But doctors like Christine Meredith make us wonder whether a new generation of transparent, smart, client-focused—and, yes, female—veterinarians could keep the future of veterinary medicine always and forever in the hands of visionary entrepreneurial doctors.

"If I want to burn out, then it's the Christine Show. I'm smart enough to know I need competent, conscientious staff with great communication skills."

—Dr. Christine Meredith

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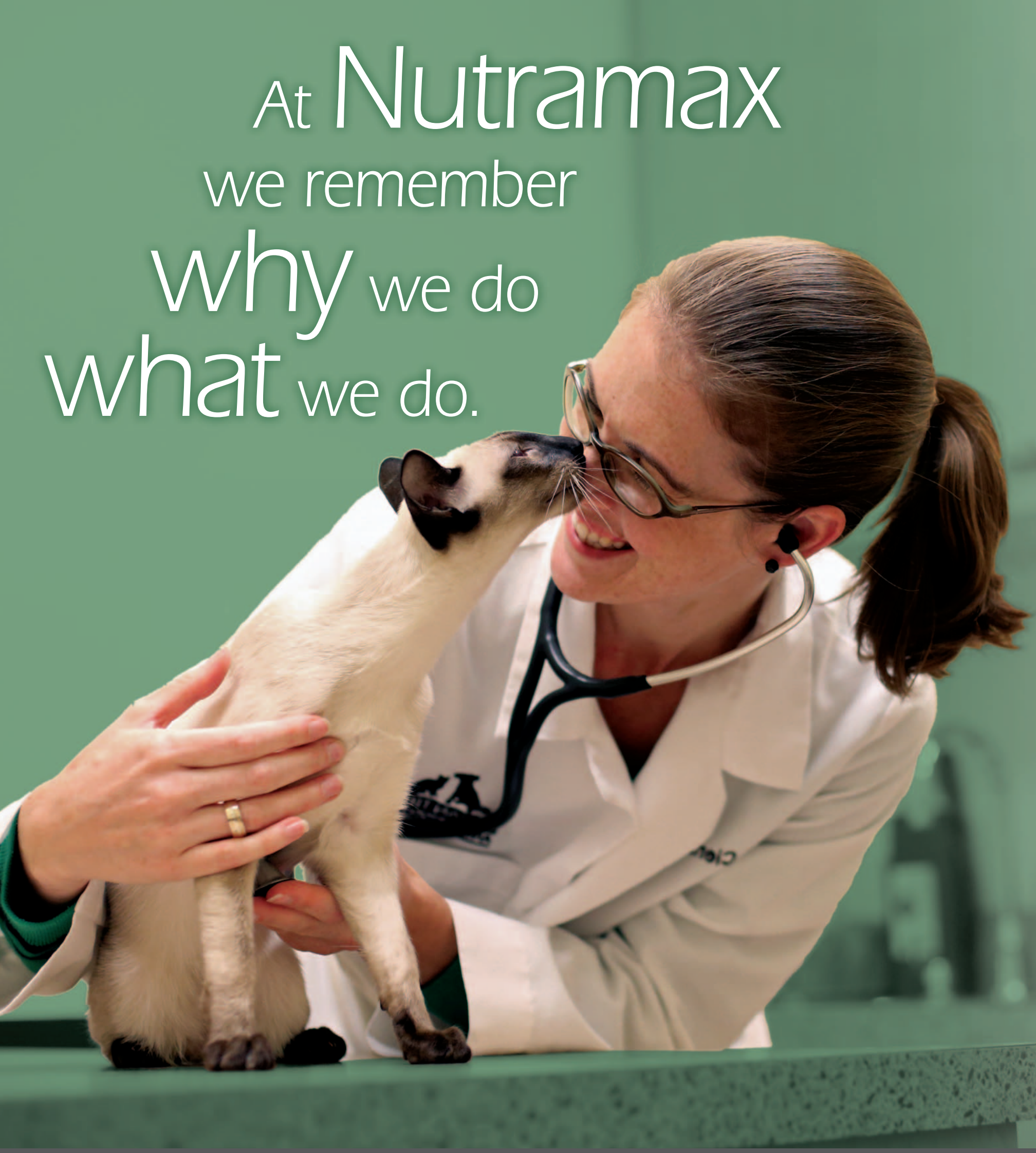

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The *researcher*

Sarah LaMere, DVM, PhD

Sarah LaMere, DVM, PhD, is not necessarily addicted to school—she just enjoys too many things to manage with just one graduate degree. LaMere developed an interest in science research while she was an undergraduate pre-vet student at Texas A&M, and it never quite went away.

"I hadn't decided when I graduated what I was going to do," LaMere says. "It was on my radar to possibly do a PhD, but I wasn't necessarily planning on focusing my career on research. Clinical medicine was still something I wanted to do. I didn't envision myself being solely an academic."

During breaks LaMere took advantage of the time to pursue research. One summer she applied for a pathology internship at Sea World in San Diego to study a virus found in orcas. After graduation she received additional funding to complete the project as a collaborative effort between the veterinary pathologists at the San Diego Zoo's Institute for Conservation Research and Sea World. During what little time off she had, she worked part time in veterinary clinics and volunteered with Mexico's Humane Society de Tijuana, just across the San Diego border.

Over the course of the orca project, LaMere consulted with HIV researchers at University of California-San Diego and the Scripps Research Institute. Their research into porcine viruses of zoonotic concern paralleled her own work, and she found herself drawn in.

"By that point," she says, "I decided I needed to do a PhD."

The next phase had begun. LaMere completed her doctorate in immunology in 2015, eight years after completing her veterinary degree.

"Looking back, I didn't really appreciate how hard it was going to be," LaMere says. So how hard was it? Her thesis focused on epigenetic mechanisms in CD4 T cell activation and memory formation, with wide applications across many species.

>>> Dr. Sarah LaMere, whose research career has involved work at Sea World and the San Diego Zoo conservation institute, tends to a sea lion patient.

Despite a grueling and sometimes erratic schedule working in the lab, LaMere was determined to use her DVM degree as well, not only to keep up her clinical skills, but also to help with her student loan debt. She started doing vaccine clinics on weekends and eventually started working with a home hospice and euthanasia practice. "I do enjoy it," she says. "I like the hospice aspect of it. It's very gratifying."

LaMere recently signed on as a postdoctoral fellow at the University of California, San Diego, School of Medicine Center for AIDS Research. While she studies HIV latency, she hopes to apply that knowledge to species such as orcas and koalas. In koalas, a retrovirus that has jumped into the genome—a process known as endogenizing—is thought to be associated with the development of leukemia and lymphoma, much like FeLV in felines. Research in one species often leads to breakthroughs in others, an idea that continues to motivate LaMere. She envisions an eventual role in academia as an assistant professor, which will allow her to continue her research.

"There was a lot of serendipity in where I ended up. It seems like every time I tried something else, I got thrown back into research."
—Dr. Sarah LaMere

"There was a lot of serendipity in where I ended up," LaMere says. "It seems like every time I tried something else, I got thrown back into research."

She sees the small number of veterinarians who are involved in comparative medicine as an opportunity rather than a hindrance to her chosen path. "There's a need for it," she says. "This whole One Health idea is just now becoming popular, but we [veterinarians] have been doing it for decades."

PHOTO COURTESY OF DR. SARAH LAMERE

The *public health pro*

Ellen Carlin, DVM

"I never intended to become a traditional private practice veterinarian," begins Ellen Carlin, DVM. And she kept her word.

"I went to vet school with an interest in public health—infectious diseases and zoonotic diseases specifically. I liked the big picture of epidemiology and working with animals," Carlin says.

As she continued her studies, she learned that pursuing a career in public health "would be tricky" without another advanced degree. But going from four years of veterinary school straight into a graduate degree wasn't realistic. "I couldn't do that," she says. "I wanted to become part of the working world."

Seeking an alternative pathway, Carlin applied for an AVMA Governmental Relations externship, a four-week program that lets veterinary students work with legislators and staffers on Capitol Hill. The natural next step for Carlin was the AVMA Congressional Fellowship, a one-year opportunity to serve in Washington, D.C., as a scientific advisor to members of Congress.

The fellowship fell under the larger umbrella of the American Association for the Advancement of Sciences (AAAS), a scientific society that exposed Carlin to a wider variety of medical professionals and scientists with similar interests.

"It's a great opportunity for scientists, engineers and doctors to take a year break and get a different perspective on different ways to use their expertise," she says. "There's people just out of school or mid-career. It's a melting pot of different ages and careers."

At the end of the year, Carlin took a position in D.C. with the House of Representatives and the committee on Homeland Security. "There was a lot I could provide to them with a scientific background in infectious diseases," she says.

She remained in Washington, D.C., until 2013, when she decided it was time to move on. "It was an interesting place to be for someone who is relatively apolitical," Carlin says. "But the number of positions for veterinarians is relatively limited."

She turned her eye from policy back to science. Her next move was a fellowship with the Oak Ridge Institute for Science and Education, a Department of Energy institute that provides opportunities for scientists to collaborate with a wide variety of government, industry and academic institutions. Carlin was placed with the U.S. Food and Drug Administration's Center for Veterinary Medicine, spending a year working on antimicrobial resistance.

Looking into the Centers for Disease Control's Epidemic Intelligence Service as well as positions in academia, Carlin was reminded of the limitations she faced without an additional graduate degree. Undaunted, she launched her own consulting business. "It wasn't meant to be a permanent position," she says, "but…" She trails off and laughs.

While working in consulting means she is continually looking to acquire the next project, she also enjoys the variety of jobs. She's co-director of the Blue Ribbon Study Panel on Biodefense, advocating for improving the nation's biodefense by providing her veterinary perspective. Carlin recently travelled to Guinea with George Washington University to advise the government on how to improve policies on zoonotic disease. Next up is advising a national laboratory on business development.

"I've learned over the years there are people who had their eye on the ball and went straight for their goal, then there's the rest of us," she says. "Life is a bowl of cherries, and you want to experience it all."

The *one who did it all*

Teri Weronko, DVM

Teri Weronko, DVM, is on the move. She just moved into a new house in St. Kitts, and after her interview with dvm360 she needed to book a flight to Thailand for an upcoming trip to an elephant sanctuary. Before coming to St. Kitts, she had been sailing in France.

But her life didn't always look this way. Until a recent life change shook her up, she had followed the more traditional timeline of veterinarians in small animal practice.

For the first eight years after graduation, Weronko worked in emergency medicine. Her husband suggested buying a practice, so they converted a home in Washington state into a practice and lived in the nearby garage.

"Our six-week renovation turned into six years," she says.

She remained at that practice for 16 years, while volunteering on the side to keep things interesting.

> *"I was thrown kicking and screaming out of my nest by my divorce, but once this thing happened, I could stand back and ask myself what I wanted to do."*
>
> *—Dr. Teri Weronko*

"I was the head vet for a local zoo and did a lot of volunteer work there," she says. "I also did rescue work for our local disaster response."

Weronko decided it was time to sell the practice right at the time the recession hit. Compounding the stress, her marriage ended in divorce. Weronko started working with World Vets, leaving on international trips for 10 days at a time, and found those little breaks kept her spirits up during a rocky period. It took two years to find a buyer for her practice, and by then Weronko felt completely burned out.

"I was thrown kicking and screaming out of my nest by my divorce, but once this thing happened, I could stand back and ask myself what I wanted to do," she says. "Because I was miserable, I had to sit back and say, 'What will make me happy?'

She found herself thinking again and again about the World Vets trips.

"They made me feel good again, and I needed to do things that made me feel good," she says. "It was about getting excited again."

Weronko took a two-year sabbatical, living off the proceeds from the practice sale. She worried that she wasn't putting money away for retirement, but the tradeoff in terms of her attitude toward life and the profession was well worth it, she says. As a trip leader for World Vets, she rode horses in Mongolia, assisted flood victims in Thailand and treated donkeys in Tanzania. She spent six months in France learning to sail.

"That whole period changed my view of what we go into practice for," she says. "We go in to save animals, but it's not really what it turns out to be."

At the end of her sabbatical, Weronko returned to Washington and worked as a relief veterinarian, finding success and fulfillment with her new positive attitude.

Then a call from Ross University came: "I had applied for work there a few times. I told them I wanted to try teaching as a career move and also be in a position to share this idea I had about how to protect your spirit: Don't give it all up to try and make money. It's a dangerous slope to not love your life."

>>> Dr. Teri Weronko visits elephant sanctuaries in her work with World Vets, an international veterinary organization that provides humanitarian aid.

Weronko just began a three-year position at Ross University teaching students clinical medicine and, even more important to her, coping skills for long and fulfilling careers. "I meet myself over and over again at conferences, people scared to leave situations because of finances," she says. "It's about finding a way to serve. It's about making sure that I feel fulfilled, that the work feels useful." And with that, she's off to the beach with her dog.

These are just a few of the many veterinarians who are forging their own path in a surprisingly diverse field of work. Sometimes all it takes is the realization that other options are out there for people to change their perspective. With that in mind, see the following pages for a list some of the expected, and not-so-expected, uses for a degree in veterinary medicine. Some are paid, some are volunteer, and some are tongue-in-cheek, but they're all in play as we speak.

PHOTO COURTESY OF DR. TERI WERONKO

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37 ways to use a DVM degree

Whether you're heading into boards, heading into practice or heading toward a nervous breakdown in your current job, it's time to consider the many ways you can make a living, find a career and do good with your veterinary degree.

The obvious

- **Practice owner.** This one needs no elaboration.
- **Private-practice associate.** Perhaps a stepping stone to practice ownership down the road or a long-term goal of its own.
- **Corporate-practice associate.** Reliable benefits and consistent hours make these often larger practices a great fit for those looking for a part-time schedule.
- **Locum tenens.** Relief work is a great option for those who don't mind an occasionally sporadic schedule. In a small community where word gets around, relief veterinarians with a good reputation are often as busy as they want to be.
- **Practice management.** For experienced veterinarians who are more business-oriented.

The specialties

- **Physical rehabilitation.** Veterinary medicine is paralleling human medicine in terms of our recognition of the value of physical therapy following injuries and surgery and as an adjunct for chronic pain management. Veterinarians can become certified canine rehabilitation therapists.
- **Acupuncture and chiropractic.** Client demand for alternative care has led to a rise in the numbers of veterinarians studying these treatments.
- **Cat-only clinics.** Because some cats (and owners) really appreciate it.
- **Zoo medicine.** While many positions require a specialty in zoo medicine, not all of them do. General practitioners can often be found providing care to a variety of species in zoos and other similar facilities.
- **Laboratory medicine.** Like zoo medicine, many of these positions require a specialty—but not all.
- **Forensics.** Forensic veterinarians do exist, and they play an important role in many criminal and animal abuse cases. If *CSI* is can't-miss TV for you, this might be your thing.

The niches

- **Multiservice facility.** Why limit yourself—and your bottom line—to medicine? Many veterinarians are branching out to offer clients and pet owners doggy daycare, behavior training, grooming and boarding. (I'm still waiting on the truly dog-friendly café. Come on, people.)
- **Hospice/euthanasia.** Supported natural death is rarely discussed in veterinary medicine, although it is the norm in human medicine. Many clients ask for this service (I do it), and those who are positioned to offer specialized end-of-life care can find themselves in high demand. In-home euthanasia providers—either associated with a general practice or an independent, house call-only service—are gaining traction.
- **Mobile housecall.** Mobile work is a way to get flexibility in scheduling as well as a lot more time in the

Hey, it's not an exhaustive list, but it's certainly more than most of us thought about in school when we thought our two choices were (1) start work right away or (2) get an internship.

sunshine. The freedom to set your own schedule and get out of an office holds tremendous appeal for many.

> **Vaccine clinics.** Some argue that vaccine clinics undermine the value of an exam at a full-service clinic. Others say that vaccine clinics serve pets who otherwise wouldn't receive care at all. Either way, vaccine clinics are here to stay, and many veterinarians find them a good opportunity to earn some needed extra money.

> **Wildlife.** Wildlife rescue and rehabilitation is often a function of a web of private, nonprofit and government agencies. There's usually space for an eager veterinarian to help out and sometimes find a full-time gig.

> **Military.** Veterinarians in all branches of the Armed Forces work all over the world. It's not the easiest job, but many find it an adventure and challenge.

> **Government.** One Health roles, food safety inspectors, state veterinary board members: Veterinarians play all these huge roles in maintaining the public good.

> **Telemedicine.** It's the Wild West out there on the Internet, as regulatory agencies and policymakers try to stay ahead of growing consumer demand for telemedicine. As of right now, most veterinary apps and online-only services limit themselves to offering general advice, but expect the debate to continue over the coming years.

> **Lawyer.** Love 'em or hate 'em, lawyers feature prominently in veterinary medicine. While not many veterinarians take the plunge to add JD to their list of degrees, smart veterinarians add much-needed perspective to animal law. For those who shudder at the thought of another round of student debt, you can help in the courtroom without going to law school by becoming an expert witness.

Should you compete with 'shot clinics'?

On the one hand, you might think you should adjust your prices to compete with vaccine clinics associated with large retailers or nonprofits. We recommend setting your pricing to attract the client you want to serve—and the level of communication, education and service accordingly. If you offer premium products and high-level service, the clients who want that will find you.

The nonprofits

> **Volunteering.** Local rescues, cancer walks, international spay-neuter programs, unpaid rural work: The opportunities to give away your services are endless, as all veterinarians know well. The difference here is, you actually want to do it. It's a great way to break out of your doldrums, go somewhere new and gain perspective.

> **Shelter work.** Veterinarians, in conjunction with other animal care experts, are revolutionizing the way we manage homeless pets and get adoptable animals out into homes. Part medicine, part management, part herd health and all heart: It's hard work, but many veterinarians can't imagine doing anything else.

> **Animal causes.** Working with or even starting a nonprofit is a natural fit for many veterinarians. There are always more good animal-related causes than there are people to support them. World Vets—an organization that works in 45 countries on six continents—began with one vet who set a coffee can on the counter for donations in her practice lobby.

> **Disaster response.** Wildfires, floods, tornadoes … every area is prone to at least one kind of natural disaster. Becoming part of your area's emergency response team can be a valuable way to give back to your community. Veterinary Disaster Response teams exist on the federal, state and local levels and do require official training.

The teaching

> **Professor.** For those who really, really love the university environment.

> **Speaker.** You have to love the feel of hotel room sheets and the adrenaline buzz of a microphone running out of batteries, but speaking at conferences is how many veterinarians dip their toe into regional and national "expert" status.

> **Media source.** Sick of seeing bad information on the news whipping your clients up into a frenzy? Offer yourself to your local newscast or newspaper as a veterinary source.

> **YouTube/Instagram star.** If a kid narrating his Minecraft game in his parents' basement can become a multimillionaire, what's stopping you from showing off your abscess-lancing chops? There's an audience for everything these days. If you doubt this, look up "Doctor Pimple Popper" on YouTube. On second thought, don't.

> **Consulting.** These smart veterinarians work throughout the industry—

Dr. Jessica Vogelsang, a certified veterinary journalist, is a regular contributing writer for a number of publications, author of the memoir All Dogs Go to Kevin *and creator of the popular blog Pawcurious.com. Brendan Howard is Business Channel Director for dvm360.com.*

with other vets, with businesses that serve the profession, and with government and international agencies.

> **Life coach.** An increasing number of veterinarians who find happiness in their own lives spend time answering query after query about how they did it. Many of them use that as an opportunity to help others follow the same path through counseling, coaching or motivational speaking. We're a profession with struggles; we need all the help we can get.

> **Writer/editor.** It's true, writing is a profession known for its meager salary. But the good news is, you're a veterinarian so you're used to it. Freelance writing for websites or magazines seeking veterinary experts can occasionally lead to a job with a journal or veterinary publication.

The industry

> **Technical services veterinarian.** Lots of driving, meeting new people and learning more than you ever wanted to know about the minutiae of kibble manufacturing (or drug manufacturing, depending on your company). It's a different side of veterinary medicine, but immensely rewarding for those extroverted enough to enjoy all the meetings.

> **Diagnostic laboratories.** Often have a full cadre of tech support veterinarians.

> **Entrepreneur.** Why give away your ideas to a big company? CE conferences abound with enterprising veterinarians who have developed everything from toe grips to specialized harnesses to unique e-collars. If you've ever said to yourself, "Someone really ought to make something for this," there's no time like the present. After all, TV'S *Shark Tank* is still in production.

The funny (or sad)

> **Conversation starter at parties.** Say, "I'm a veterinarian." Now get comfortable. You're going to be there for a while.

> **Internet warrior.** All that horrible information out there on the web? You can try to correct it all. Honestly, though, I don't recommend it. Many hours have been wasted in fruitless arguments about the BARF diet. It never ends well.

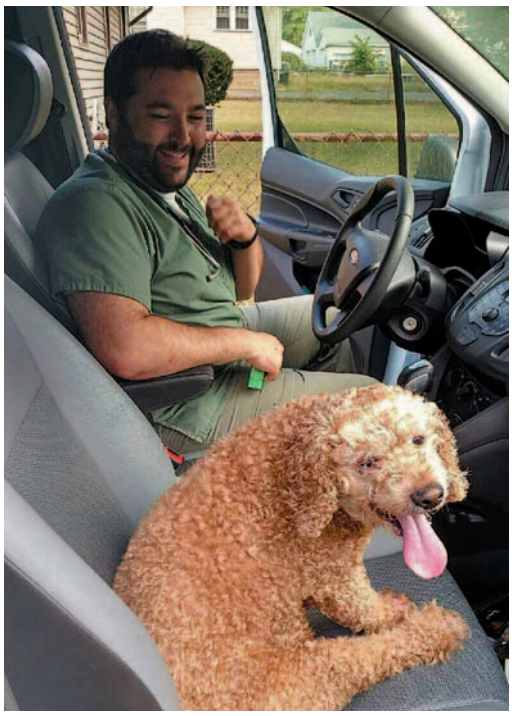
> **Conversation ender at parties.** Say, "Wanna see these maggots I filmed on my phone?" For times when you need a quick escape.

—Jessica Vogelsang

Here's a parting thought ... you could just go home

Lisa Aumiller, DVM, is bullish about staying home these days as a practice owner. Or rather, staying at other people's homes. "Today's clients want convenience, personal service and their pets to be treated as individuals," Aumiller says. "Mobile veterinary medicine rolls all this into one sweet package. With the standard of care changing to referring many medical and surgical cases, it's easy to provide most routine care at home.

"We literally see every demographic. Young professionals love it because they're so busy. People with families love it because they don't want to drive the kids to the hospital. Seniors who can't travel love it."



>>> Dr. Lisa Aumiller's technician is greeted by an eager patient during a visit on her mobile house call rounds.

Aumiller—owner of HousePaws Mobile Veterinary Service, a 12-doctor, 40-support-staff practice serving six counties in New Jersey and Pennsylvania—thinks the field for mobile veterinary services is hot, and she has lots of associates asking for jobs to prove it:

"One, they've become disenchanted with how standardized care was at their practices. Two, they enjoy adventure and mobile medicine is a lot like emergency medicine minus the life-and-death part. You have to think on your feet and roll with what comes at you. Three, they enjoy the holistic approach. Mobile vets get to see the environment the pet lives in. We get to smell it and see the interactions. We get to see the pet walking in its yard and where it eats and sleeps and uses the bathroom. We get clues that we would never get in an office setting." dvm360

—Brendan Howard

PHOTO COURTESY OF DR. LISA AUMILLER

Ketamine is an essential medicine, WSAVA says

Group urges veterinarians to support continued access to the drug.

Despite a recent decision by the United Nations Commission on Narcotic Drugs (UN CND) to reject the international scheduling of ketamine, the World Small Animal Veterinary Association (WSAVA) remains concerned that access to ketamine is under threat. The group asks veterinarians to support its campaign to ensure continued access to the drug for veterinary and human medicine, according to a release from WSAVA Global Pain Council.

"Ketamine is a safe anesthetic which has been used worldwide for more than 50 years," says Sheilah Robertson, DVM, board member of the WSAVA's Global Pain Council. "It does not depress respiration or the circulation and can be used without oxygen, ventilators and electricity supply and support systems required for other anesthetics. These characteristics make it the only anesthetic suitable for both medical and veterinary use in the developing world."

Ketamine is used to treat trauma, traffic and sporting injuries, and those resulting from natural disasters and conflict zones, Dr. Robertson says. It is often the only product that can be used for dog and cat neutering initiatives, making it critical for the control of zoonotic diseases, such as rabies, she says.

A number of countries, led by China, have been campaigning to have ketamine internationally scheduled. This would prevent access to the drug in most developing countries, as the documentation required for internationally scheduled drugs can be prohibitively bureaucratic. As a result, says the WSAVA, it would put a complete stop to surgical treatment in many parts of the world, including dog and cat neutering programs.

While the WHO Expert Committee on Drug Dependence and the UN CND have both recently advised against placing ketamine under international control, China has announced that it will lobby for the decision to be reversed at future meetings.

To sign a petition to keep ketamine available, visit chn.ge/1RFSou6. For more about the WSAVA's ketamine campaign, visit wsava.org/educational/global-pain-council. **dvm360**

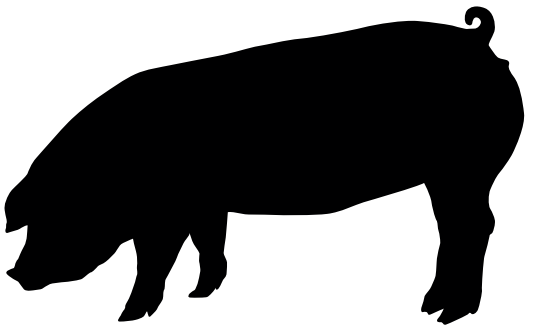
FDA seeks to rescind swine drug approval due to human cancer concerns

Risk may be associated with long-term consumption of pork products containing residue of carbadox, an antibacterial and growth promoter.

The days of using carbadox (Mecadox—Phibro Animal Health), an antibacterial and growth promoter for swine, in the United States may be numbered. According to a press release from the U.S. Food and Drug Administration (FDA), the FDA's Center for Veterinary Medicine (CVM) is taking its first step toward rescinding approval of carbadox.

The concern: It may leave trace amounts of a carcinogenic residue in people who consume pork—especially pork liver—derived from pigs treated with the drug.

"The manufacturer of carbadox has failed to provide sufficient scientific data to demonstrate the safety of this drug given evidence that carbadox may result in carcinogenic residues," says Michael R. Taylor, FDA deputy commissioner for foods and veterinary medicine, in the FDA release. "As a result, FDA's Center for Veterinary Medicine is taking legal action to remove this product from the marketplace."



That action is filing a notice of opportunity hearing, which gives the manufacturer of carbadox 30 days to request a hearing on whether carbadox's approval should be withdrawn. If no hearing is requested, the FDA can remove carbadox from the U.S. market. The notice was filed on April 8, 2016.

Carbadox was first approved in the early 1970s with indications for swine dysentery and bacterial swine enteritis. Pork producers have also used the drug for weight gain and feed efficiency.

The issue of toxic residue arose in a World Health Organization (WHO) report in July 2014. A WHO commission determined there was no safe level of residues of carbadox or its metabolites in food that was an acceptable risk to consumers.

Pork liver can be found in liverwurst, hot dogs, lunchmeat and some sausages. But the FDA doesn't think people need to change their diet during this withdrawal of approval process. Since the risk of cancer from consuming pork products that contain carbadox residue is cumulative over a person's lifetime, short-term diet changes are unlikely to affect the risk, according to the release. **dvm360**

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CAPC forecast: 2016 shaping up to be a big year for ticks, mosquitoes

High levels of parasitic activity create year-round menace for pets.

The Companion Animal Parasite Council (CAPC) has released its annual parasite forecasts. The predictions for 2016 show that the threat of vector-borne disease agents transmitted by ticks and mosquitoes will continue to spread, creating a year-round menace to both pets and their owners.

The annual parasite forecasts are developed from multiple data points to calculate the probability of a dog testing positive for the agents of four key parasite-transmitted diseases: Lyme disease, anaplasmosis, ehrlichiosis and heartworm.

"We use our annual forecast to help veterinarians and pet owners understand parasites are a true risk to both pets and people," says CAPC President Susan Little, DVM, PhD, in a CAPC release. "The maps inform our forecasts, which are critical educational tools for veterinary hospitals, and allow veterinarians to demonstrate to pet owners that parasites are ever-changing and widespread, sometimes surprisingly so."

For 2016, CAPC predicts the following risks for parasite-related diseases:

> Lyme disease is a high threat again this year. Ticks that transmit the bacteria associated with Lyme disease have expanded their range and become established in Illinois, Iowa, Indiana and Kentucky. However, New England, which has traditionally been in the "bulls-eye of Lyme disease" is thankfully forecasted to see below-normal activity, although infection in this region still poses a major risk.

> Ehrlichiosis is already common to western Texas, Oklahoma and Missouri, but these regions are expected to have even higher activity this year. Increased risk is also forecast for Southern California and throughout the Southeast, especially east of the Mississippi River.

> Anaplasmosis transmission is poised to be a problem in Northern California, New York state, western Pennsylvania and West Virginia, where it is forecasted to have an active year.

> Heartworm infection, which causes a potentially fatal disease and is transmitted by mosquitoes, is expected to be above average nationwide. The forecast also predicts the hyper-endemic prevalence seen in the lower Mississippi River region will expand into eastern Missouri, southern Illinois and southern Indiana.

CAPC offers prevalence data that localizes parasitic disease activity at the county level for veterinarians to use in their discussions about year-round testing and protection. This information is available for free at the CAPC website (capcvet.org) or in the free CAPC app available for download at the iTunes Store. Practices can use these maps as an educational tool to stress the importance of year-round protection.

The parasite forecasts represent the collective opinion of academic parasitologists who engage in research and data interpretation to understand and monitor vector-borne disease agent transmission and changing life cycles of parasites. The annual CAPC parasite forecasts are based on many factors, including temperature, precipitation and population density. **dvm360**

Karen Bradley elected to AVMA board of directors

Bradley will represent district 1 and begin her term in August.

Karen Bradley, DVM, has been elected to the American Veterinary Medical Association (AVMA) board of directors, according to an association announcement. She will begin her six-year term as district 1 representative in August during the 2016 AVMA convention. District 1 includes AVMA members who live in Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island and Vermont.

Bradley lives in Vermont and co-owns a small animal practice. She first became involved in organized veterinary medicine with the Vermont Veterinary Medical Association (VVMA), serving on the animal welfare committee, legislative advisory/governmental relations committee and executive board. The VVMA also elected Bradley to the AVMA House of Delegates, where she has served as an alternate delegate, delegate and on the AVMA House Advisory Committee. She has also chaired the AVMA governance engagement team.


Dr. Karen Bradley

Bradley is also a founding member of the Women's Veterinary Leadership Development Initiative (WVLDI) and served as president for three years.

Bradley will succeed John de Jong, DVM, on the AVMA board. **dvm360**

Bernard Rollin, veterinary ethicist, receives lifetime achievement award

Colorado State philosophy professor honored for lifelong work with animals, including pioneering change in views of animal pain.

Bernard Rollin, PhD, a distinguished professor at Colorado State University, was honored in early April in Bellevue, Washington, with a Lifetime Achievement Award for Excellence in Research Ethics from nonprofit group Public Responsibility in Medicine & Research (PRIM&R), an organization that strives to create standards and credentials in research ethics and be active in public policy.

Rollin is the first award recipient recognized for animal care and use and only the eighth person to receive the award since 2001. The award recognizes individuals who have made extraordinary contributions to the field of research ethics and, more specifically, honors people whose work has been seminal, exemplary and the embodiment of a commitment to advancing research ethics.

Rollin arrived at CSU in 1969 to teach philosophy and began teaching courses in medical ethics. He began teaching a course in veterinary medical ethics in 1978; it is the first class of its kind at the university level, and the course has been a mandatory part of the curriculum since then. His title is professor of philosophy, animal sciences and biomedical sciences.

Rollin was instrumental in changing the way doctors thought about pain control for animals undergoing surgery. He has given 1,500 lectures around the world during his career, including providing animal welfare talks to nearly 40 veterinary medical schools and colleges in North America. He is the author or co-author of hundreds of published papers, some co-authored with his son Michael, a Denver-based psychiatrist, and 20 books. dvm360

dvm360 Find it all here

Rollin on dvm360

Visit dvm360.com/rollin to find links to more articles featuring Rollin, including:

> "Rollin uncensored"
> "Now is the time to take a stand on animal welfare"
> More exclusive interviews.

Bernard Rollin, PhD, talks with Engineering Professional Leadership Institute students about the ethics of animal research in April 2014.

PHOTO COURTESY OF COLORADO STATE UNIVERSITY.

Hey, vet school:

Grads not earning? No loans for you!

The Department of Education can deny some schools federal loan dollars if their graduates don't wind up with a decent income. What are the implications for the veterinary profession and its off-kilter debt-to-income ratio?

The recent Fix the Debt Summit hosted by the American Veterinary Medical Association (AVMA) and Michigan State University in April was surprisingly timely considering a recent federal court ruling. In March, the U.S. Department of Education (DOE) won a summary judgment in the U.S. Court of Appeals in Washington, D.C., to maintain its so-called "gainful employment" regulations.

These rules, introduced in 2015 by the Obama Administration, determine whether an educational program produces graduates capable of earning enough income to pay their student loans. Failure to meet the gainful employment provisions renders students attending those institutions ineligible for access to federal loans. The rules were challenged by the Association of Private Sector Colleges and Universities but are holding their own in court.

The gainful employment regulations do not apply to public institutions, so most U.S. veterinary schools are not affected. But at the Fix the Debt summit, participants discussed a target debt-to-income ratio (DIR) that would help veterinary colleges comply with the intent of the regulations. In doing this the veterinary profession can help itself and at the same time lead the way for other professions struggling with similar issues.

The government could withhold federal loans from veterinary schools whose graduates make lousy salaries.

Uncle Sam doesn't want to pay for degrees that just don't pay

The DOE regulations require that most for-profit programs prepare students for "gainful employment in a recognized occupation." This means, according to the agency, that when students graduate from one of these programs, their monthly college loan payments must not exceed 8 percent of their gross income or 20 percent of their disposable income. If they do exceed this threshold (the schools are required to disclose these statistics to the government), that program becomes ineligible for federal loan dollars.

For-profit institutions have been specifically targeted for a reason. "Based on available data … about 1,400 programs serving 840,000 students—of whom 99 percent are at for-profit institutions—would not pass the accountability standards," the DOE states in a release. The regulations establish a framework for accountability and transparency for both for-profit institutions and public or private nonprofit institutions. But the DOE makes it clear that the rules came about because of "high costs, poor outcomes and deceptive practices at some institutions in the for-profit sector."

What does this mean for veterinary colleges?

These regulations are included in the Higher Education Act legislation being considered for renewal in Congress. They currently affect the two AVMA-accredited Caribbean schools—St. George's University and Ross University—but Congress could opt to expand the rules to include all public and nonprofit institutions. Do all our colleges of veterinary medicine meet the gainful

Find it all here dvm360.com

How debt hurts

Paying down debt early in their careers plays a role in veterinarians' satisfaction. Read the whole story at dvm360.com/debthurts.

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COMPARISON CHART: VETERINARY SCHOOLS AND GAINFUL EMPLOYMENT

The Department of Education requires that the federal loan payments made by graduates of certain programs not exceed a specific percentage of their income. Here's how U.S. veterinary schools stack up, with **boldfaced** schools exceeding that percentage:

	Mean debt payment as a percentage of income	No. of students in sample
Texas A&M University	10%	79
Louisiana State University	14%	34
Washington State University	14%	52
Purdue University	15%	34
Oklahoma State University	15%	49
Auburn University	15%	41
University of Tennessee	16%	30
University of Georgia	16%	45
University of Wisconsin	16%	30
Oregon State University	**17%**	**19**
North Carolina State University	**17%**	**26**
University of Illinois	**17%**	**58**
Kansas State University	**17%**	**43**
Virginia-Maryland Regional College of Veterinary Medicine	**18%**	**45**
University of Missouri-Columbia	**18%**	**63**
University of California-Davis	**18%**	**35**
Cornell Veterinary College	**19%**	**22**
University of Florida	**20%**	**41**
Iowa State University	**21%**	**75**
The Ohio State University	**22%**	**57**
Cummings SVM at Tufts University	**23%**	**25**
Michigan State University	**24%**	**44**
Colorado State University	**25%**	**49**
Mississippi State University	**26%**	**31**
University of Minnesota	**26%**	**40**
University of Pennsylvania	**26%**	**28**
Tuskegee University	**29%**	**22**
Western University—California	**37%**	**23**
Total	**19%**	**1,140**

employment restrictions? We decided to find out.

The calculations described in the regulations are complicated and somewhat amorphous. We simplified things by using the mean debt from students who indicated they had full-time employment prior to graduation. We then amortized the debt obligation at 7.21 percent interest over 20 years.

In the chart above, we use the mean of the debt-to-income ratios, with debt computed according to the DOE regulations. The costs associated with a veterinary degree are not those associated with an undergraduate degree, and we assigned 50 percent of total debt to living expenses. Using this liberal approach, there are just nine schools that meet the DOE benchmark.

Veterinary education's big 10-year plan

Recommendations from the recent AVMA Fix the Debt Summit could move the debt-to-income ratio from roughly 2:1 today to 1.4:1 over 10 years (see my column in the April issue for an overview of this plan). This proactive effort by the profession could help guide the DOE in developing regulations—specifically, to eliminate interest on loans while students are in school and reduce interest after graduation to be more in line with loans with similar default rates—that support efforts of the education community to improve the returns to professional education.

As education costs continue to rise at rates that exceed gains in income, financial stress on new professionals will grow, and these professionals will gain an ever-increasing voice in Congress

The gainful employment provision could have a major impact on the veterinary profession if it comes to be applied more broadly. As education costs continue to rise at rates that exceed gains in income, financial stress on new professionals will continue to grow and the rising numbers of these professionals will gain an ever-increasing voice in Congress. A proactive effort by the veterinary profession is imperative to reduce the risk of government involvement in veterinary education. dvm360

Dr. Mike Dicks, director of the AVMA's Veterinary Economics Division, holds a doctorate in agricultural economics from the University of Missouri. He has worked in Africa on water delivery and energy production technologies and has served with the USDA's Economic Research Service.

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Boehringer Ingelheim

3 potential legal storms *for veterinarians*

Whether you're an associate or practice owner, watch for these threatening clouds on the horizon—and take steps to avoid them.

In life there are times when the sun's shining and you can afford to act impulsively, to take some unjustified risks, to jump in with both feet without checking the water's temperature first. There are also times when a storm is in the air and you can't afford to play it by ear, when you'll pay a steep price for not getting it right the first time. The trick is knowing which is which and when is when.

For example, if you sign a year lease on an apartment you can't really afford, you'll manage somehow. When the rent is late, maybe you'll get evicted and your credit score will take a hit—for a while. Possibly you can sublet or even ask your family for a loan. It's just not going to be the end of the world.

But if you buy a house on impulse, failing to research the neighborhood, market trends and historical data, you can really suffer. If you buy the place because you "just love it" and close your eyes to the potential impact of an adjustable rate mortgage, you could take a life-altering hit. That cozy bungalow you fell in love with could suddenly turn on you, leaving you inexorably tethered to a loan balance that far exceeds the house's value. Your impulsiveness might end up being financially devastating and lead to foreclosure, bankruptcy—even permanent damage to personal relationships.

All because you didn't take the steps required to get it right the first time.

Similarly, we veterinarians owe it to ourselves, our financial well-being and the well-being of our dependents to decide when it's OK to sign papers willy-nilly and when we need to do painstaking due diligence and think about possible alternative outcomes. Consider these three potential storms and take precautions to make the right decision from the start—and avoid total devastation.

GETTY IMAGES/BORIS JORDAN PHOTOGRAPHY

1 Purchasing a practice with a small profitability cushion

I'm a great believer in practice ownership as a route to professional financial success. Buying and operating a practice isn't easy, but it can be very rewarding financially—as long as you get the financial details right the first time.

As with a house purchase, a veterinarian can fall in love with a practice irrationally: the clinic where he works, a practice conveniently located near his home, or a well-established hospital that just "seems to print money" for the current owner.

Then, on the basis of a "gut feeling," the veterinarian will jump at the chance to buy the practice at virtually any price, with money borrowed on unjustifiable terms or without consideration of a possible local, regional or national economic downturn.

Once the paperwork is signed and the practice changes hands, that new owner can find himself in a world where he just can't get ahead no matter how hard he works. The practice fails to grow at its prior rate. Interest rates on his loans rise while business stays stagnant. Some competitor opens a practice on a vacant lot with better curb appeal or traffic flow.

Suddenly, that decision to buy—without securing a reasonable price, without looking at interest rate projections, without considering local economic trends or the potential impact of competitors—becomes a regrettable nightmare.

2 Buying into or selling part of an established veterinary practice

Once an associate becomes aware of the financial benefits of practice equity, she may decide to make a play for partnership—especially if the practice where she works appears to be well-managed and highly profitable.

And it isn't unreasonable for a doctor who's spent many years and countless hours developing a thriving clinic to want to throttle back his workweek, splitting the profits and sharing the headaches with his eager-to-own associate.

Be advised, oh you potential buyers-in and partial sellers-out! These are "get it right the first time" moves.

For the associate, the decision to buy in with her boss can be life-changing. If she gets good advice, does excellent due diligence, identifies all the key financial facts and objectively appraises the dynamics of the working relationship she will have with her former employer (soon to be partner), things may unfold beautifully. She may find herself part owner of a terrific, financially rewarding veterinary medical enterprise.

But what if she doesn't get it right the first time? In a word, trouble.

While I'm not saying that there's no emerging from a badly planned equity acquisition in a veterinary clinic, there may be a lot of shoveling required to get out of the hole. Bad planning as well as poor accounting, legal and professional counseling in the prepurchase period can lead to problems like these:

> **Irreconcilable personal disagreement.** At the risk of being overly simplistic, consider what often happens: A highly efficient associate buys into a practice and pays fair value for a minority interest. Later, the seller chooses to cut back his own hours and, to maximize cash flow, caps the minority partner's salary while increasing his own. The buy-in money is nonrefundable and the two practitioners (and their spouses) are locked into a long-term resentment fest.

> **Sudden realization that the associate has been hoodwinked.** An example from my filing cabinet: After a market valuation, an associate buys into a large clinic by purchasing a 10 percent ownership for $100,000. The seller now has a captive medical director. When he subsequently approaches a large corporate veterinary group, he can present a turnkey practice with a fully invested veterinarian whose only escape would be to walk away from his six-figure investment. If the associate had enlisted quality prepurchase advice, documents would have been drafted to prevent such a bait and switch.

> **Seller is blindsided by unexpected issues with his minority partner.** In an effort to create an incentive for his high-quality associate, the clinic owner sells him 25 percent of the practice with a set salary and obligatory annual distribution of profits pro rata. All goes well for two years until the associate gets seriously ill—but is still able to work occasionally. Or the associate gets divorced and moves away or becomes addicted to pain medication or alcohol.

Uh oh! Nothing in the bylaws, purchase agreement or shareholder documents provides for terminating the partnership except in the event of death or total disability. The seller/majority partner veterinarian has to keep sending checks to his virtual absentee partner (or his wife, or his creditors, or Medicaid) until the dust of years of litigation settles.

3 Signing an employment contract without anticipating the future

Time and again associates will sign an employment agreement with no review or just a cursory reading. They do this without brainstorming the future. Sometimes it doesn't matter and never causes a problem. But in lots of cases this decision to ink a deal without evaluating the details turns into a costly failure to get it right the first time. Here are some typical examples of how this frequently plays out.

> **"I'll just move if this job doesn't work out for me."** That justification proves naïve. After a few years pass, relationships develop and suddenly the doctor has a wife and two kids in the local school. When the clinic where the doctor works is sold, along with his assignable noncompete, he can't move, even though the new management is intolerable to work for.

> **"I'm sure that the noncompete language is unenforceable because it's too far and too long."** The good news, doctor, is that you're right. The noncompete you signed without thinking probably is overbroad and you are likely to win any eventual litigation. But there's some bad news. From the time you decide to leave your job until the noncompetition terms are fully litigated or settled, nobody around is going to hire you. No new employer is likely to want to step into that mess. And trust me, the wheels of justice can turn very slowly—especially when the one being sued has no income. dvm360

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

Dining and signing: Serving up a tasteful employment contract

Will Dr. Greenskin bite back at Dr. Codger's carefully prepared offer?

The good doctors have made very little progress in settling Dr. Greenskin's contract. Dr. Greenskin wishes this could just be done so she can make some concrete decisions about how to manage her financial life. With their receptionist frequently overbooking appointments and add-ons for sick patients, our two doctors haven't had time to finalize the work agreement.

Dinner and a contract

Today, they've made the wise decision to get out of the hospital, and they're meeting for lunch. Dr. Codger even offered to pick up the tab at his favorite all-American diner! As Dr. Greenskin picks at a wedge salad, she starts to outline some of her concerns with Dr. Codger's offer. Dr. Codger listens carefully while munching just a little too loudly on his BLT on rye. Dr. Greenskin is pushing for a flat salary with twice-yearly meetings to evaluate her numbers and consider a salary increase. Dr. Codger likes the idea of this low-maintenance scenario. He was worried that spending time to look at Dr. Greenskin's numbers each pay period would take away what little time he already had to keep up his fly-tying skills. But he also thinks that six months is too long to go between evaluations, so they settle on a quarterly performance review.

Hold that heartburn, Dr. Codger

As Dr. Greenskin goes on, Dr. Codger begins to sweat a little bit. Dr. Greenskin's list of requests is adding up to some serious dollars. The international conference she wants to attend (with airfare), membership fees for no fewer than 14 veterinary organizations and the full trio of health insurances are making Dr. Codger wonder if he should just hire two cheaper associates instead. He maintains his composure and waves the waitress over to top off his black decaf.

Just as Dr. Greenskin starts to comment about how the practice really needs a sevoflurane vaporizer and a new surgery table, Dr. Codger deftly takes the lead and sets the offer firmly in front of Dr. Greenskin. He'll go up to the $70,000 as requested, but there will be 10 paid vacation days instead of 14, which will include any time for CE.

ILLUSTRATION BY RYAN OSTRANDER

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REFERENCES: 1. Pollmeier M, Toulemonde C, Fleishman C, Hanson PD. Clinical evaluation of firocoxib and carprofen for the treatment of dogs with osteoarthritis. ***Vet Rec.*** 2006;159(17):547-551. **2.** Data on file at Merial.

See brief summary on page 38

Dr. Codger also gives a little bit on the CE and professional dues allowances, but he coaches Dr. Greenskin that she may want to focus on paying dues for the more important organizations. Dr. Greenskin will have to foot the bill herself if she wishes to keep her membership with the Women's International Society of Ferret Practitioners.

Just desserts

Dr. Greenskin sips her macchiato and prepares a counter. Before she can up the ante, Dr. Codger throws in a remark about last week's surgical procedures. He had to rush into the office when Dr. Greenskin realized she'd bitten off more than she could handle. Understanding that the old Dr. Codger's offer was reasonable, and knowing that she still relies heavily on the old man for many of her patients, Dr. Greenskin smiles and shakes hands with Dr. Codger.

With the agreement settled at that moment, Dr. Codger reflects on how important this relationship will be for his own practice, his clients and his patients. He ended up offering Dr. Greenskin a salary higher than he had originally planned, but he's been reading tons of articles about the crippling student debt issue. He sympathizes with the young new doctor, and he wonders whether he would have stuck with his own chosen career if the debt problem had been so immense back when he was in school.

A nagging worry: Dr. Codger wonders if he may need to start running a more efficient business to make sure that Dr. Greenskin can earn enough to make her expensive education and all the stress of being a veterinarian worthwhile. Dr. Greenskin is a good egg, and Dr. Codger knows that if he plans on courting her into buying his practice someday—hopefully soon—he'll need to demonstrate to her that his business is rewarding, sustainable and secure.

Dr. Greenskin feels a sense of security in knowing what her short-term financial future looks like, and she also begins to feel the weight of responsibility to her profession as well as her new hospital family. Yes, she still has a ton to learn. But in less than a year working for Dr. Codger, she's seen a large caseload, completed dozens of surgical procedures and is beginning to feel more and more like a "real vet."

Her outlook is based on survival on a year-to-year basis. She plans on implementing some strict austerity measures to take some huge chunks out of her debt burden. While she was initially worried about how her relationship would go with Dr. Codger, she's beginning to feel a sense of gratitude for the old man and all of his wisdom.

Will things continue to be all warm and fuzzy for our two vet heroes? Or will the day-to-day frustrations take their toll? Find out next time, in Old School, New School! dvm360

Dr. Jeremy Campfield works in emergency and critical care private practice in Southern California. This series originally appeared in Pulse, *the publication of the Southern California Veterinary Medical Association.*

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

Warnings:
Not for human use. Keep this and all drugs out of the reach of children. Keep the product in the original packaging until use, in order to prevent children from getting direct access to the product. Do not eat, drink or smoke while handling the product. Wash hands thoroughly with soap and water immediately after use of the product.

Precautions:
Bravecto has not been shown to be effective for 12-weeks duration in puppies less than 6 months of age. Bravecto is not effective against *Amblyomma americanum* ticks beyond 8 weeks after dosing.

Adverse Reactions:
In a well-controlled U.S. field study, which included 294 dogs (224 dogs were administered Bravecto every 12 weeks and 70 dogs were administered an oral active control every 4 weeks and were provided with a tick collar); there were no serious adverse reactions. All potential adverse reactions were recorded in dogs treated with Bravecto over a 182-day period and in dogs treated with the active control over an 84-day period. The most frequently reported adverse reaction in dogs in the Bravecto and active control groups was vomiting.

Percentage of Dogs with Adverse Reactions in the Field Study

Adverse Reaction (AR)	Bravecto Group: Percentage of Dogs with the AR During the 182-Day Study (n=224 dogs)	Active Control Group: Percentage of Dogs with the AR During the 84-Day Study (n=70 dogs)
Vomiting	7.1	14.3
Decreased Appetite	6.7	0.0
Diarrhea	4.9	2.9
Lethargy	5.4	7.1
Polydipsia	1.8	4.3
Flatulence	1.3	0.0

In a well-controlled laboratory dose confirmation study, one dog developed edema and hyperemia of the upper lips within one hour of receiving Bravecto. The edema improved progressively through the day and had resolved without medical intervention by the next morning.

For technical assistance or to report a suspected adverse drug reaction, contact Merck Animal Health at 1-800-224-5318. Additional information can be found at www.bravecto.com. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or online at http://www.fda.gov/AnimalVeterinary/ SafetyHealth.

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The complications of charity

Veterinarian is challenged by a colleague about his use of out-of-date drugs for procedures when owners can't afford to pay.

Hope Veterinary Hospital had a mission statement: "Help all that we can with the tools that we have." The three veterinarians, five technicians and three receptionists were a long-term team. For 11 years they had balanced the needs of their mixed clientele, which consisted of both indigent and wealthy pet owners, with compassion and commitment, holding unswervingly to their mission statement.

Dr. Keets, the practice owner, did most of the surgeries while his associates handled nonsurgical cases. Dr. Keets had a personal wrist surgery coming up, so he hired Dr. Han, a local relief veterinarian, to do his surgeries while he was incapacitated.

On his first day of relief surgery at Hope Veterinary Hospital, Dr. Han

GETTY IMAGES/DANE MARK

Dr. Keets believed that recently expired nonreturnable medications were still effective, and it saved money when offering charitable procedures at no charge. He'd told his staff that expired meds were no longer guaranteed to perform as claimed yet were still very effective.

had five routine procedures scheduled. He noted when reviewing the records that two of the surgeries were marked "No charge due to financial constraints." He thought to himself that charitable surgeries were something he did not see very often in his relief veterinary travels.

A diligent surgeon, Dr. Han oversaw all aspects of his procedures. He approved anesthetic protocols, checked the dosage calculations and administered all IV medications. He was a bit obsessive, but this style resulted in very few surgical mishaps. He noticed that his first procedure was one of the two "no charge" surgeries. He reviewed the anesthetic and analgesic agents and noticed that several were expired by about 30 days.

He brought this to his surgery technician's attention. She replied that Dr. Keets used these meds on all of his no-charge patients. Dr. Keets believed that recently expired nonreturnable medications were still effective, and at the same time it saved him some money when offering charitable procedures at no charge. Dr. Keets had told his staff that these expired meds were simply no longer guaranteed to perform as claimed yet were still very effective.

Dr. Han was startled. He understood the rationale but did not agree with it. Dr. Han then asked that all of his procedures for the day be performed with properly stored and dated anesthetic and analgesic medications. He advised the staff that he would discuss his decision with Dr. Keets when the practice owner retuned to work.

The following week the two men had a discussion. Dr. Han was diplomatic—after all, he wanted to maintain a good working relationship with Dr. Keets. He said that he understood that Dr. Keets was well-intentioned but that substandard care of indigent patients was unacceptable.

Dr. Keets replied that the care was not substandard. All his patients were monitored during and after surgery. If any animals showed signs of pain or inadequate anesthesia this was addressed immediately. He went on to say that offering charitable services required realistic monetary considerations. If he could not use recently outdated medications, he could not afford to offer these much-needed services.

He went on to say that Dr. Han traveled from practice to practice assisting veterinarians and pets on a short-term basis. He on the other hand had a responsibility to a clientele that day-in and day-out needed services they could not afford. As a result, he had to be creative in order to assist them.

A bit frustrated, Dr. Han finally said that Dr. Keets' practices were a violation of practice statutes. Dr. Keets' reply? "I've never had a complaint, and I have scores of grateful pets and pet owners." With that the conversation was over, and Dr. Han never returned to that practice. Do you agree with Dr. Han or Dr. Keets in this scenario?

Rosenberg's response

Shades of gray can make life difficult! It is absolutely true that the use of expired medications was a violation of the veterinary practice act in Dr. Keets' state. Dr. Keets was aware of this but chose to help those in need and also manage any complications that may have arisen from the use of the expired medications.

There is no doubt Dr. Keets was well-intentioned. But he could have solved his medication issues in other ways. Advising vendors of his charitable efforts and asking them to participate would have been an option, as well as soliciting his more affluent clients and enlisting them in an effort to help his good works.

Rules and laws exist to prevent abuse and protect our patients. Dr. Keets gets an "A" for effort but does not pass the profession's ethical standards test. I must side with Dr. Han and draw the line when it comes to violating the practice act. **dvm360**

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.

Make veterinary visits a *walk in the park* for pets

Ahhh! The sweet smell of the great—*indoors*?! The trees and park details in this clinic seem so real, you almost forget you're inside.

By Ashley Griffin

When pets walk into Bigger Road Veterinary Center they see blue skies, large oak trees and small cottages. Sure, the skies are painted, the trees are building columns and the cottages are exam rooms, but these design disguises are a welcome change of scenery for clients and their four-legged family members. The Bigger Road team dedicated the design of their 9,105-square-foot-conversion clinic in Springboro, Ohio, to creating a Fear Free practice. We'd say they succeeded, considering they earned a Merit Award in the 2016 Hospital Design Competition. And many clients think the trees are real.

"We've had several clients ask us how we keep the trees alive in the winter," says John Talmadge, DVM, one of four co-owners of Bigger Road.

Here's how to make like a tree and leave outdated designs in the dust. Take home

PHOTOS COURTESY OF ERIN GROTE

these takeaways, courtesy of the Bigger Road, and design your own more pleasant, lower-stress clinic.

What do clients want? You have to ask them!

Rather than guessing what pet owners wanted to see in their second clinic, the Bigger Road veterinary team went straight to the source. They conducted a focus group with clients and asked the following:

- > What are we doing well?
- > How can we improve?
- > What services would you like us to add?

Clients were honest about wants and needs, and Bigger Road took their comments to heart.

"Our online pharmacy and wellness plans came directly out of this feedback," the Bigger Road owners said in their 2016 Veterinary Economics Hospital Design Competition application. "Our clients also wanted an environment that truly helped them celebrate the relationship with their pets."

When it comes to design, the sky's the limit

In a era when dogs and cats are more like family members than pets, the Bigger Road team knew they needed to create an atmosphere to match that shift.

"The goal was to reinterpret the veterinary clinic as an 'indoor walk in the park' and create a familiar, non-threatening environment for pets and owners while maintaining a functional and efficient plan for the practice," says Dana Shoup, AIA, of Bon Builders in Vandalia, Ohio, the primary architect on the project.

Corridors were transformed into "outdoor paths," clinic walls turned to stone, and street lamps were brought indoors. Murals of outdoor scenery throughout the clinic reinforce the theme, and mailboxes outside each "cottage" serve as a secret exam room availability system. >>>

>>> Upgrade! This conversion hospital moved on up to a larger space within the same strip mall (photo, facing page). "The anchor business is an upscale grocery store that attracts the type of demographic we look for," says John Talmadge, DVM. Custom dog-bone and paw-print wrought iron fencing sets the scene outside the clinic and this detail can be spotted inside the hospital as well. The strip mall provides large potted flowers ❶, which are maintained throughout spring and summer. A two-door entrance system ❷ reduces air temperature changes and helps prevent pet escapes.

>>> Home away from home: Real building materials (wood shingles, brick, stone, etc.) were used to create these eight elevated cottage fronts—err, exam rooms, complete with address numbers and names ❶, chosen by clients. The doors include peepholes, mailboxes (secret chart holders) and red flags to signal the status of the appointment ❷. The serpentine, river rock wall divides the exam rooms from ancillary services to the left ❸ and street lamps add soft lighting ❹ to the scene. Support beams were turned into maple trees thanks to a talented recreation artist in St. Louis, bringing the entire theme to life ❺. "The trees really do look real. We have had several clients ask us how we keep them alive," Talmadge says. "It makes you feel like you're outdoors."

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

[2] Lulich JP, Kruger JM, MacLeay JM, et al. **Efficacy of two commercially available, low-magnesium, urine-acidifying dry foods for the dissolution of struvite uroliths in cats.** *J Am Vet Med Assoc*. 2013;243(8):1147-1153. Average 27 days *in vivo* study in urolith forming cats.

[3] Floerchinger AM, Jackson MI, Jewell DE, et al. **Effects of feeding a weight loss food beyond a caloric restriction period on body composition and resistance to weight gain in cats.** *J Am Vet Med Assoc*. 2015;247(4):365-374.

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>>> For all your comfy needs: This specialty suite is primarily used for behavior consultations, although the team can also use it for euthanasias, consultations and patient releases. It's the only exam room with two doors for a quick entrance or exit mid-appointment. A viewing window, covered by blinds, makes observations easier for the team. And there's no exam table here! "We do most of our exams on the floor or on the owner's lap," the team said in their competition entry. "We keep a small tray of supplies under the couch and can perform blood draws and catheter placements easily."

>>> Do it better: Bigger Road is working toward a new pharmacy initiative to keep a minimal amount of products on their shelves and offer much more online in the clinic store. This way, the clinic saves plenty of room and staffing costs, and clients save money. For the drugs they do keep in stock, there are cabinets for narcotics, a small refrigerator for vaccines and an electronic pill counter to help with inventory management. The pharmacy is very accessible, located in a hallway accessible three different ways.

>>> Calm down: How do you design a low-stress exam? Two of Bigger Road's six traditional exam rooms are cat-only, complete with cat trees in the corners, and all rooms are stocked with toys and treats. Species-specific pheromones are used, and fresh water is available for pets in a bowl on a placemat in every room. Two rooms have lift tables and the rest have drop-down tables, but doctors often perform exams on the floor or on pet owners' laps. "We let patients decide where they're most comfortable," they say.

"The best compliments we receive come from pet owners who say pets seem more relaxed in the new environment," Shoup says.

Expand your horizon

Another huge takeaway from the focus group was learning more about pet owners' biggest challenges when it comes to veterinary care.

"The most limiting resource for most of our clients isn't money, it's time," the Bigger Road team said. "They said they wanted us to be successful and looked to us to provide the services we were previously referring to other local businesses." This is why the clinic expanded services to include:

- Behavior and training
- Daycare services
- Physical rehabilitation/ underwater treadmill
- Integrative medicine
- Acupuncture
- Herbal medicine
- Cold laser therapy

After Bigger Road expanded its services and designed a low-stress experience, veterinary care is now a walk in the park for pets. **dvm360**

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

"The most limiting resource for most of our clients isn't money, it's time."
—The Bigger Road team

veterinary economics

HospitalDesign

Everything you need to know—in one place

The Veterinary Economics Hospital Design Conference at CVC Kansas City is a fantastic resource for planning, building and decorating your new hospital or remodel project. Plus included in your registration is a free one-on-one consultation with one of our architectural or engineering experts. See **dvm360.com/hdconf** for more. And before you show up to talk to your accountant, your architect, your builder or your engineer, go to **dvm360.com/needwhat**. Nothing's worse than an, "oh, that's at home!" conversation to start off your big hospital build.

Practice ownership is not a cage

You can make time for life and family and hobbies and healthy priorities and boundaries as a practice owner. Let your team help.

By Michael Watts, DVM

Editor's note: This is an exclusive excerpt from Benchmarks 2015: A Study of Well-Managed Practices, *with data on the fee schedule, the revenue metrics and the variable and fixed expenses as well as retirement and partnership strategic planning for high-functioning veterinary hospitals. Get your copy at* **dvm360.com/Benchmarks**.

When I was asked for *Benchmarks 2015: A Study of Well-Managed Practices* to answer the question, "How do I own a practice without giving up my life?" it threw me for a loop. And I'm not really sure why. Perhaps it's because it gets to the heart of why I'm a practice owner. It's less about what I do and more about who I am.

Ownership lets me set my own schedule

While there were many factors that went into my decision to own, the major impetus was my inability to coach my daughter's softball team after being asked again and again. I love baseball, I love spending time with my daughter, and I would've loved to coach her team. Despite all those years of school, I found myself working somewhere that wouldn't allow me to be available three afternoons a week at 5 p.m. I decided my career was supposed to support my life—not be my life. I could only fully realize that vision as an owner.

So the first step was setting expectations of what I wanted in my personal life and then structuring my practice schedule to allow it. My kids get dropped off at school at 8 a.m., so I started my appointments at 8:30 a.m. to allow me to drive them to school every day. I struggle with the experts' advice to schedule appointments six months in advance because I write new doctor schedules every few months when the new Little League or swim team schedule is announced.

I work as much as I can … whenever I don't have family, community or personal activities to pursue. In

>>> Associates are afraid of the "cage" of business loans and management responsibilities that keep them from family and a personal life. Practice owner Dr. Michael Watts managed those fears himself.

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[1] Nobivac: A portfolio of advanced vaccines for the well-being of canine family members [brochure]. Summit, NJ: Merck Animal Health; 2013. MAH-VC-851.

* Indicated for the prevention of leptospirosis and leptospiruria caused by *L. canicola*, *L. grippotyphosa* and *L. icterohaemorrhagiae* and as an aid in the prevention of leptospirosis and leptospiruria caused by *L. pomona*.

** *L. grippotyphosa*

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addition to leaving time for my kids, I've built my work schedule around symphony subscriptions, season tickets to sports teams, vacation opportunities, charitable activities, holidays and even seasonal water levels on the river for canoeing. There's plenty of time to work in between.

If you're a good doctor and you treat people well, enough folks will rearrange their schedules to see you when you're available. However, it doesn't work the other way around. Your kids won't wait until your work schedule is clear before they grow up. A hike with your spouse through the colorful autumn mountains can't be put off until January when business slows.

Ownership finds me delegating and mentoring—a lot

I spend time mentoring my associates and staff in my philosophy of practice. My ability to get away depends on my practice being able to care for my patients when I'm gone. If I have a bunch of problems to fix when I return, I really haven't had time off—I've just delayed and compounded my workload. I love when a client prefers someone I've recruited, hired and mentored over me. It means my business plan is working. If I'm doing my job as a practice owner, I'm not just there to see patients. I'm there to build a business that reflects my way of doing things, that functions with or without me there and that ultimately can support my personal life.

Ownership means I know my business

My final bit of reflection is that paying attention to the business aspect of ownership is an important part of not being tied to the practice 24/7. Without charging appropriately, hiring and keeping the right amount of well-trained support staff, and delegating management activities, ownership would be just another burden on top of the stresses of practicing medicine.

By planning for the future and ensuring all of those things are in place, I can be more productive when I am available to work. I can get the same amount done in less time. Why would I want to extend the time it takes me to accomplish the same tasks at the expense of having less time and energy to do other things I enjoy? With a little planning, priority setting and personal motivation, it's possible to do more than those who are willing to settle for less.

Don't get me wrong. I work hard. Early on, as a solo practitioner, I worked often. But it's always been about my practice supporting my life and my family—not my life and family supporting the practice. I work hard as a practice owner, and I also work hard at being a good husband and a good father. I work hard at giving back to the community. And I play hard. Life's better that way. **dvm360**

Dr. Michael Watts owns Clevengers Corner Veterinary Care in Amissville, Virginia.

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Depression article triggers memory from years earlier

Dr. Marty Becker helped this dvm360 reader get the best of his friends—and brought light to an issue he can relate to all too well.

I've never met Marty Becker, but I became aware of him from articles in trade journals starting not long after I graduated in 1986. I've never seen him speak, and yet we once spoke on the phone, and he did grant a big request on my behalf.

I was 10 years out of veterinary school and getting close to finally opening my own practice. The years had been long and lean. I was used to working six to seven days per week. I ran down to Orlando from my home in Ormond Beach to buy equipment at the annual NAVC meeting. Good buys were to be had if sales reps didn't have to pay to ship floor models home. I was feeling good. I got to the meeting early and ran downstairs to grab a quick lunch.

Though I had never seen him before, I saw a man sitting alone at a table who I would have sworn was Marty Becker. He didn't look like he was having a good day. I wasn't emotionally mature enough at that time to go over, say hello and offer a shoulder, so I bought lunch and sat alone wondering what I should do—which ended up being nothing.

Years passed and I finally decided to share that story with some new friends in a management group I'd recently joined. Spirits were high around the dinner table, and I tried to share that story as an example of how all people, no matter how renowned, successful and respected, can have their bad days. Leave it to a bunch of smart and semi-hammered male veterinarians to change that story quickly. By the end of dinner I was Marty Becker's best friend and confidante. For weeks after, one of those guys sent me every picture published of Marty Becker. Luckily he's a handsome dude.

So how could I get my revenge? Aha! How better to get even than to enjoin Marty Becker himself in my cause? I finally sat down and wrote him a three-page letter detailing our possible crossing of paths in Orlando and the chain of subsequent events. I thought myself a fool to mail that letter, but ... nothing ventured, nothing gained.

Weeks went by and I decided I had indeed been a fool to mail that letter. I hoped if nothing else that it would give Marty a smile. But then I walked into my office and found his message. He had called and left two numbers where he could be reached. We spoke and set up a plan.

At our next management meeting, he called our group while he was waiting to tape a segment on *Good Morning America*. Thanks to Dr. Becker's generosity, our group shared a moment we would never forget—nor would I.

That was 2007, and life seemed good, but significant changes were brewing. My younger first cousin committed suicide the following year. Not much more than a month later, one of my veterinary school classmates committed suicide. I was trying to keep a brave face but was in turmoil. The recession hit and my successful practice started to fail as our once dynamic economy crumbled. I was living on stress and sleep deprivation, and the emotional fatigue overtook me. I started experiencing that black hole others had described and was falling into it.

Weeks went by and I decided I had indeed been a fool to mail that letter. I hoped if nothing else that it would give Marty Becker a smile. But then I walked into my office and found his message.

In my family depression was prevalent, so I had an idea what was happening, but that didn't make it easier. The days were desperate, but thanks to the nurse who heard something in my voice when I finally called and found an opening for me that day, thanks to my doctor who showed understanding and compassion when he prescribed the medications my exhausted brain needed, and thanks to that handful of friends who propped me up when I needed it most, I got through those awful days.

Dr. Sophia Yin committed suicide not that long ago for all the same reasons others do, and the profession finally started to discuss a topic that

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should have been addressed years ago—suicide in this profession was already occurring. In my simple analysis, for whatever reason, for those of us affected, our brain stops metabolizing serotonin and/or dopamine properly and we fall victim to irrational feelings we are challenged to overcome. Life gets dark and lonely. No level of success or reassurance from those we love and respect allows us to overcome those negative feelings. It's another lesson of how fragile we really are when those amazing biochemical pathways start to falter.

Today I read an incredibly insightful article from that very same Marty Becker I interacted with years earlier ("Putting my darkness into the light," March). In the article he bravely chronicles the tragic loss of his father by suicide, his struggles with depression, his friendship with Dr. Yin and his efforts to cope with the suicide of a friend. Though we've never met face to face I felt such compassion and respect for this very man who had taken time to help out a stranger years before. How well I could understand the obstacles he's faced. Success is a veneer when you feel unworthy on the inside.

Despite his concerns that such an admission of his struggles might impact his reputation, I am writing to say that this was your finest moment so far, Dr. Becker, in a lifetime of amazing achievement. Let's pull back the curtains on this awful disease and let a little sunshine in. I felt a little of that sunshine today. I saw the man who experienced loss in ways none of us should have to experience. I saw the man and not the reputation, and I have more respect than ever before.

I hope we will meet someday, Dr. Becker. Thanks again.

Lee Stuart, DVM
Palm Coast, Florida

Veterinary debt comparison to general population misleading

Parallels to medical, legal professions would be more shocking.

I think Dr. Michael Dicks' column "Lifestyle sacrifices: The true cost of student debt?" (see the March issue of dvm360) is very eye-opening as far as it goes. But I think the true comparison to general population debt is not as apparent as, say, comparing veterinary student debt and lifestyle to that of physical therapists, nurses, doctors and lawyers.

That type of comparison, provided that same-age recent graduates were compared, would be enlightening. But the deans of the veterinary schools, especially the new ones, do not want that truth to see the light of day.

For 35 years I've endured the comments from the general public, even from doctors and lawyers, about how much money I make—as if it was more than what they make. The general public's perception of how much money veterinarians make is ludicrous and unrealistic. Students exposed to this line of thought begin to believe it before they enroll in or graduate from veterinary school. Hence we have a high suicide and divorce rate in our profession because of this illusion.

When I try to tell people honestly, especially parents of students, they don't believe me and accuse me of lying. Twenty years ago I applied for a loan to buy a truck at a local dealership. Because I was busy, the salesman started the paperwork for me and called me about my income. I told him I made about $100,000. When I reviewed the paperwork before signing it, the salesman had indicated that I made $100,000 per month! That's how ill-informed the general public is about how much money veterinarians make.

W. Byron Garrity Jr., DVM
Natchez, Mississippi

Veterinarian not to blame for rising costs of care

Increasing hard costs and restrictions on income have driven up veterinary prices.

In dvm360's interview with Dr. Pol (April issue), I was not surprised to see a question brought up about client costs for veterinary care. It was asked in the typical way, insinuating that veterinarians are charging too much.

I would hope at some point we can start rephrasing this type of question to encompass all aspects and all participants in the perceived "problem" and stop focusing on the veterinarian. I have been a veterinarian for 13 years, and during that period costs for medications, equipment, staff and education have continued to rise. However, my income has plummeted on medications. Heartworm preventives once were marked up 100 percent; now we are lucky to have a 30- to 50-percent markup.

Economists say we should not concentrate on selling medications for income, so we should charge more for our procedures, exams and so on, but then the profession is blasted for charging too much. So when will the drug companies be asked to stop charging so much for medications? When will equipment become cheaper to buy? When will colleges start lowering tuition? The solution to cheaper client costs for veterinary care has to be an all-inclusive answer. Please stop blaming the veterinarian.

Philip Kelch, DVM
Batavia, Ohio

Editor's note: *In the original interview, dvm360 editors discussed technological advancements and their impact on the rising costs of veterinary care, but this obviously did not come through in the edited version. We would never intend to blame the veterinary profession as a whole and agree with this reader that the solutions to rising costs of care have to be multifaceted and involve multiple groups of stakeholders.*

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[1] Data on file at Merial.

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Virbac's Movoflex Soft Chews provide comprehensive canine joint support in a once-a-day, palatable soft chew. Movoflex Soft Chews utilize Biovaflex eggshell membrane, a hydrolyzed, water-soluble eggshell membrane powder that is rich in collagen, elastin, glycosaminoglycans and essential amino acids, which support joint flexibility and elasticity. The chews also feature Zanthin natural astaxanthin, an antioxidant; *Boswellia serrata* to support the integrity of joints and connective tissue; hyaluronic acid for lubrication and shock absorption; and vitamin D3 to support healthy bones.

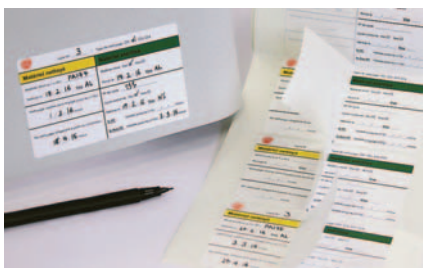
For fastest response visit virbacvet.com

VetBiotek

Dermatologic wipes

VetBiotek has launched BioHex Wipes, an aqueous-based antiseptic cleansing formula indicated for topical application on dogs, cats and horses in the management of topical skin conditions responsive to chlorhexidine and climbazole. The product is packaged with 50 wipes per jar and is sold exclusively through licensed veterinarians. The wipes contain a proprietary formulation of chlorhexidine, climbazole microsilver BGTM and ceramide in an aqueous-based micellar solution for enhanced broad-spectrum activity.

For fastest response visit vetbiotek.com



Computer Imprintable Label Systems

Durable handwritten labels

Computer Imprintable Label Systems (CILS) has engineered labels to preserve critical handwritten data (and to stay secure) through high-temperature cleaning and autoclaving. The labels utilize both a unique CILS label coating and a clear, overlaminate tab that can be applied over half of the label to protect data from smudging or fading.

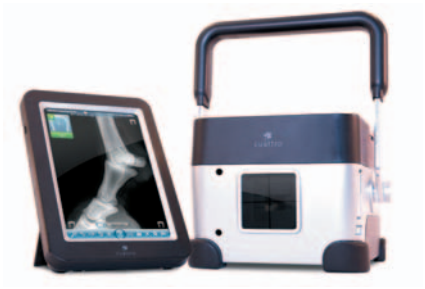
For fastest response visit cils-international.com

Embark Veterinary

Canine genetic testing

Embark Veterinary, a new startup, has partnered with the Cornell University College of Veterinary Medicine to offer the Embark Dog DNA Test, developed by leaders in dog and consumer genomics. The test will track more than 200,000 genetic markers, providing an extensive overview of both genetic disease risk and heritable traits. The information will help users to understand their dog's health, plan for its future and provide personalized care.

For fastest response visit embarkvet.com



Heska Corp.

Digital radiography platform

Heska has released the Uno 6 Digital Radiography system. The unit, exclusively from Cuattro, is a 16-lb, wireless, all-in-one 90kVp/20mA handheld wireless digital radiography system with a removable full HD image acquisition and clinical review control. On-the-fly image adjustments and series order changes are made at a touch. *For fastest response call (800) 709-4515 or visit heska.com*

Purina Pro Plan

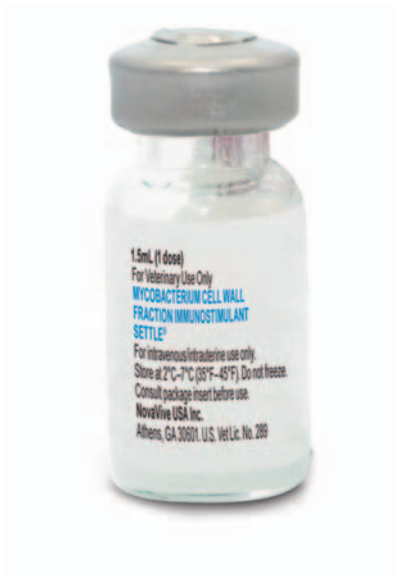
Therapeutic diets

Purina Pro Plan Veterinary Diets is introducing dry UR Urinary Ox/St Canine Formula as an additional dietary option for managing struvite or calcium oxalate bladder stones in dogs. The new diet was formulated with controlled mineral levels to promote a urinary environment that is unfavorable to the development of both sterile struvite and calcium oxalate crystals. It also provides a moderate calorie content and is formulated for the maintenance of adult dogs. *For fastest response visit purinaproplanvets.com*

Patterson Veterinary

Practice management software

Patterson Veterinary and Vetter Software have partnered to provide veterinarians with a seamless way to manage inventory in their clinics. Through a piece of middleware called eShelf, a cloud-based software, veterinarians using Vetter Software's cloud practice management software can now automate ordering and fulfilling processes with Patterson. Patterson customers who also use Vetter Software's cloud practice management software can access this integration for no additional fee. *For fastest response visit pattersonvet.com*



NovaVive

Equine medication

NovaVive, a Canadian immunobiology company, is offering an alternative to antibiotics for the treatment of equine endometritis. Settle is an immunotherapeutic used as an aid in the treatment of equine endometritis caused by *Streptococcus zooepidemicus*. This product is fully approved by regulators in the U.S. and Australia.

For fastest response visit novavive.ca

Engler Engineering Corp.

Surgery machine

Engler Engineering Corp. has introduced the Electro-Son, an easy-to-use touchscreen electrosurgery unit. The unit has a 100-watt mono- and bipolar high-frequency generator with eight preprogrammed parameters and six levels of pure cut and blend modes. It has a 4.3-in backlit touchscreen and can be adjusted for auto or manual operation and has options for white coagulation or spray coagulation with several blend levels, all with fulguration activation.

For fastest response visit englerusa.com

Aurora Pharmaceutical

Lubrication jelly

Clarity Non-Spermicidal A.I. Lubricating Jelly from Aurora Pharmaceutical is a preserved, isotonic, pH-buffered, nonspermicidal, water-soluble lubricating jelly for catheter lubrication and all types of nonsterile medical procedures. The product is sold in a convenient multiuse squeeze container. Antimicrobial effectiveness testing has shown it will continue to be safe to use even if the product is exposed to contamination from the environment.

For fastest response visit aurorapharmaceutical.com

VetBadger Software

Practice management software

VetBadger Practice Management Software is a simplified, role-optimized, task-based practice management system designed to minimize chaotic clinic workflow and management. The software features an enhanced QuickBooks integration, and referral tracking allows clinics to gauge the efficacy of advertising dollars spent. Subscriptions to the cloud-based system are available on both a monthly and annual basis and can be used on traditional computers, Chromebooks and mobile phones.

For fastest response visit vetbadger.com

Nutramax Laboratories Veterinary Sciences

Digestive supplement

Nutramax Laboratories' Proviable-Forte Digestive Health Supplement contains multiple bacteria strains and provides billions of beneficial microorganisms per daily administration. Proviable-Forte capsules contain twice as many bacterial colony forming units (CFUs) as Proviable—10 billion vs. 5 billion—to reestablish healthy intestinal flora. A complementary product, Proviable-KP paste, contains ingredients to help firm stools. Both formulations contain probiotics and prebiotics, a symbiotic approach that encourages the growth of beneficial microorganisms within the intestinal tract.

For fastest response visit proviable-forte.com or call (888) 886-6442

Aratana Therapeutics

Non-COX-inhibiting NSAID pain medication

Aratana Therapeutics has received FDA approval of Galliprant (grapiprant tablets). The medication is used for the control of pain and inflammation associated with osteoarthritis in dogs and is expected to be available in fall 2016. Galliprant is a prostaglandin E2 (PGE2) EP4 receptor antagonist (PRA), a non-cyclooxygenase-inhibiting, nonsteroidal anti-inflammatory drug, which blocks PGE2-elicited pain and inflammation.

For fastest response visit aratana.com

Imprint Plus

Reusable name badges

The Mighty Badge kit from Imprint Plus gives veterinarians the on-site tools and software to instantly create and personalize badges with names, colors and logos. The metallic-finish badges offer the look of engraved badges yet are more affordable. The badge plate, personalized insert, lens cover and signature magnetic fastener can be snapped together or apart easily without the messy tape sometimes found on other badges. When a new team member comes on board, just replace the old insert with a new one.

For fastest response visit themightybadge.com

The Green Pet Shop

Transdermal cannabidiol gel

The Green Pet Shop has released its CBD Gel Pen designed specifically for pets. The pen is crafted to dispense 50 "pumps" of gel, each consisting of 1 mg of purified CBD (cannabidiol). When the gel is applied to a pet's inner ear or any exposed, venous skin, it is absorbed directly into the animal's system. The CBD is derived from the flowers of Colorado-grown, 100 percent organic industrial hemp cannabis plants that have been selected for optimal CBD levels. It contains far below 0.3 percent THC, so it is legally and scientifically classified as hemp and may be shipped everywhere hemp is legal.

For fastest response visit thegreenpetshop.com

MEDICINE | Behavior

How dangerous is that dog?

If you're faced with a canine patient that just had a bite incident and aren't sure what to do next, here's some guidance. *By Mindy Valcarcel*

Is every dog with a history of bite behavior a hopeless case? Not at all, says Wayne Hunthausen, DVM, the director of Animal Behavior Consultations in Westwood, Kansas, and the owner of Westwood Animal Hospital. He says there are four key areas that can help you assess the danger for future behavior and whether a dog can safely stay in a home.

1. Predictability

There is cause for hope if a dog has a few known, predictable triggers for aggressive behavior, the dog provides a significant warning before biting, and the family or the victim has time to recognize warning signs and make the situation safe. Another positive factor is whether the dog acts consistently in each situation. But if triggers for bite behavior are

>>> Heads up! May 15-21 is Dog Bite Prevention Week. Check out these tips for dealing with bite inicdients—and ensure they don't happen again.

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unknown, Hunthausen advises that it's best to assume the dog could be aggressive at any time.

Good sign: The dog in question has defined, recognizable behavior triggers and has always responded consistently to those triggers.

Bad sign: The triggers are unknown, and the dog has a history of giving no warning signs before biting.

2. Potential to cause damage

The size of the dog is a factor, of course, but more important is the dog's bite inhibition. "If a large pet has bitten a variety of people in a variety of situations many times and has caused nothing more than light contusions, it is in all probability a safer pet than a smaller one that is unable to inhibit the force of its bite and, even though it has only bitten a few times, has caused serious injuries such as deep tears or broken bones," Hunthausen says. Other negative factors? Hunthausen points to multiple bites in one incident and the dog's pursuing the victim.

Good sign: The bite caused minimal damage and was delivered when the person got too close to the dog's personal space.

Bad sign: The dog ran after the person and bit multiple times with serious injury.

The best case is one in which the owner is aware of the danger the pet poses, can be depended on to always provide safe control of the pet, and—upon recognizing subtle signs of threatening or aggressive behavior—makes sure to prevent escalation.

3. Family variables

Supervision of the dog is key. "Large families or those with young children often have difficulty providing safe supervision or confinement of the pet," Hunthausen says. "Doors are left open, locks on gates are forgotten, and supervisory duties are not consistent." Even worse are families that deny there is a problem. The best case is one in which the owner is aware of the danger the pet poses, can be depended on to always provide safe control of the pet, and—upon recognizing subtle signs of threatening or aggressive behavior—makes sure to prevent escalation.

Good sign: Every member of the family is acutely aware of the problem and takes steps to prevent known triggers for aggressive behavior.

Bad sign: The family thinks their dog isn't dangerous and allows dangerous interactions with other people or animals, or some family members have cognitive or maturity problems that prevent good decision-making.

4. Overall complexity of the situation

If a pet displays many types of aggression (e.g. fear, territorial) and a wide variety of stimuli trigger aggressive behavior, the danger increases, says Hunthausen. A concurrent behavior problem can increase the risk of that aggression. "For example, if the owner of a pet with a fear-related aggression problem is upset about destructive behavior or housesoiling, the person might be likely to react impulsively in a way that will elicit an aggressive response from the pet," he says.

Good sign: The dog is aggressive under one or a few clearly defined circumstances.

Bad sign: The dog is spurred to an aggressive response from a variety of different triggers.

After the assessment

More good signs than bad: If the aggressive triggers are known and can be managed by diligent owners and the history of injury is mild to moderate, Hunthausen says you can likely keep the pet in the home and start a discussion of treatment options.

More bad signs than good: If several factors are at play—a large dog that bites children unpredictably without bite inhibition, the home is busy with many small children, and the adults provide poor supervision and can't comprehend the danger of the situation—then there is an extremely high risk for a serious injury. "Removing the pet from the home will be a priority in this case," says Hunthausen. "Euthanasia may be a necessary choice, although rehoming may be an option in select cases." dvm360

Heads up! A precaution from Dr. Wayne Hunthausen

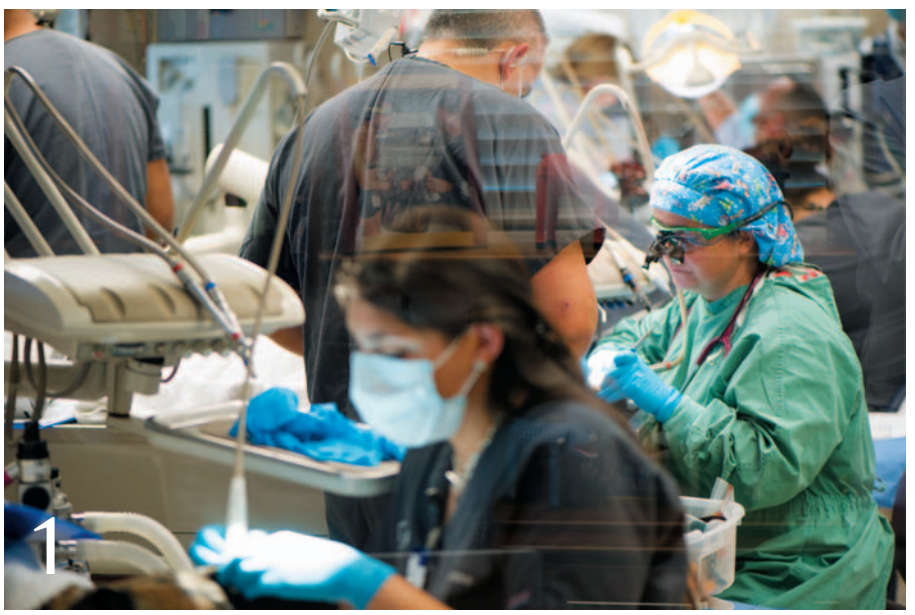
The points made in this article are merely guidelines for assessing danger of the pet and helping explain to the pet owner the amount of danger inherent in the current situation. They should not be used to guarantee to the family that the pet is safe. The only 100 percent guarantee that a pet will not bite again will be to either remove the pet from the home, never allow it to have contact with people or animals outside the family, or euthanize it. Aggression problems are often very complex, and, whenever possible, the family should be referred to a qualified behavior consultant.

The ABCs of veterinary dentistry: **A to C**

The start of an alphabetic journey through the management of our veterinary patients' oral problems.

By Jan Bellows, DVM, DAVDC, DABVP, FAVD

Our alphabet of 26 letters forms the foundation for billions of words. I've narrowed the list down to a mere 26 related to dental care in pets. I hope you enjoy this series of articles starting with A for dental anesthesia and ending with Z for dental zebras (I'm still searching for a good Y dental concept! If you have one please email me at dentalvet@aol.com). Each letter holds major importance in our quest to do the best for our veterinary patients.



>>>Figure 1. A peek inside All Pets Dental, Dr. Bellows' veterinary practice in Weston, Florida.

A is for Anesthesia

Most people recline in the dental chair, open their mouths and are OK with a suction tube placed under their tongues, probes placed into their sulci and radiograph sensors placed next to their teeth. But dogs and cats will not tolerate this without a fight—and who wants to fight? General anesthesia is needed to thoroughly clean, polish and examine the teeth and oral cavities in our patients (Figure 1).

Unfortunately many of our clients are so worried about anesthetizing their dogs and cats that proper care is declined. How can you allay your clients' fears? Share with them the efforts you take to make anesthesia as safe as possible by choosing the right anesthesia for the patient after thorough examination and preoperative testing.

Monitoring. Close patient monitoring is paramount during and after anesthesia. The American College of Veterinary Anesthesiologists (ACVA) recommends monitoring for:

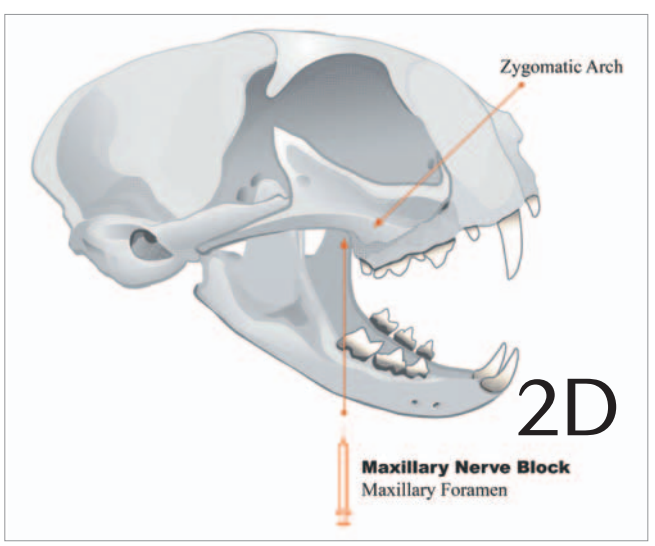
- Circulation—Ensure that blood flow to tissues is adequate; measured via blood pressure.
- Oxygenation—Ensure adequate oxygen concentration in the patient's arterial blood; measured via pulse oximetry.
- Ventilation—Ensure that the patient's ventilation is adequately maintained; measured via capnography (Figure 2A).
- Temperature—Ensure avoidance of hypothermia, which is common in anesthetized dental patients and a source of trouble for perfusion and ventilation.

The ACVA recommends having a trained veterinary technician at the patient's side. The technician can respond to feedback from the electronic monitoring system, use his or her hands-on clinical expertise to manage the patient's proper anesthetic depth, and maintain an anesthetic record of significant events and trends in monitored parameters. In our procedures, the technician relays information to

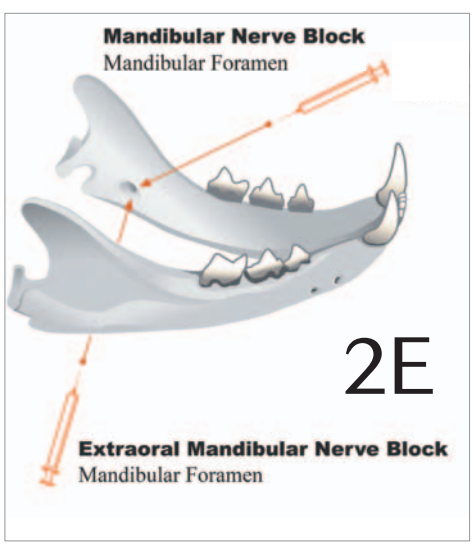
>>>Figure 2A. An inline capnograph.

>>>Figure 2B. A dental technician monitoring, relaying and recording anesthesia monitor findings.

>>>Figure 2C. A cat monitored during anesthesia with 5-in-1 parameter electric and apnea monitors.



>>>Figure 2D. Site for a maxillary nerve block. (Illustrations by Sathyanarayana)



>>>Figure 2E. Site for a mandibular nerve block.

the veterinarian, who is apprised of the patient's condition at least every five minutes throughout the procedure (Figure 2B).

How to monitor. Monitoring is accomplished through subjective methods (e.g. clinical appearance) and objective methods (e.g. electronic systems). During anesthesia, the patient should have minimal jaw tone and no palpebral reflex. The femoral pulse should be palpable, and the capillary refill time should be two seconds or less. Breathing during balanced anesthesia should be even and regular.

Electronic monitors may detect anesthetic complications before they are recognized by a trained clinician. In these situations, seconds count. Often, the advanced warning systems can head off problems before they become critical or do long-term damage. Electronic monitoring systems help to provide positive patient outcomes and reduce stress during the procedure.

Although many veterinary hospitals have accumulated a variety of monitoring devices, often single-parameter monitors, it would be wise to migrate to a 5-in-1 multiparameter monitor for all anesthetic procedures (Figure 2C). An ideal monitor includes noninvasive blood pressure measurement, capnography, pulse oximetry, electrocardiography and temperature. The advantages of a multiparameter monitor over individual devices include:

- More efficient for patient setup and alarm management
- Consistent operating menu
- Ability to store, print and download data for all parameters
- Economy of scale—less expensive than acquiring individual devices
- Single point of contact for service, maintenance and troubleshooting

Be aware that choosing a monitor that has been designed specifically for use on animals can make a significant difference in performance and accuracy.

Local anesthesia. Every oral procedure performed that may be painful should be accompanied by local anesthesia. The two most commonly performed local anesthetic blocks are the maxillary (Figure 2D) and mandibular (Figure 2E), which can be performed either intraorally or extraorally.

Honorable mentions for A—analgesia, apical, attached gingiva.

B and C are for the Basic Concepts of operative dentistry

Creating a dental treatment plan can be confusing and frustrating. As with other veterinary disciplines, dental diagnosis and care entails approximately one-third understanding of anatomy, physiology and dental principles; one-third recognition of disease; and one-third access to proper equipment and expertise to perform needed care.

Most dental problems can be treated by one of the eight options outlined here:

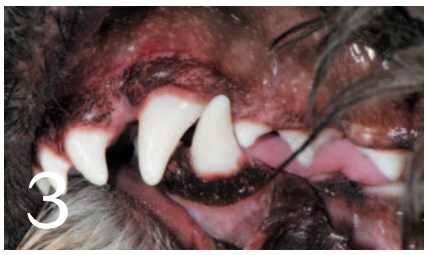
1. Do nothing with the observed pathology other than future follow up. No immediate treatment is needed where there is a functional abnormality (i.e. even though the dentition is not normal, the animal is not experiencing adverse effects). One example of a functional abnormality is an enamel fracture that does not penetrate the dentin sufficiently to affect the pulp and where radiographs do not show pathology. Other cases where no treatment is the best course include functional malocclusion (Figure 3) and when the root of a tooth shows external resorption that does not extend into the oral cavity (Figure 4).

2. Teeth cleaning, irrigation, polishing and application of professional plaque barrier gel or dental sealant. These measures are indicated in cases of stage 1 gingivitis (inflamed gingiva without evidence of support loss) and stage 2 nonpocket periodontal disease (less than 25 percent support loss) as evidenced by gingival recession.

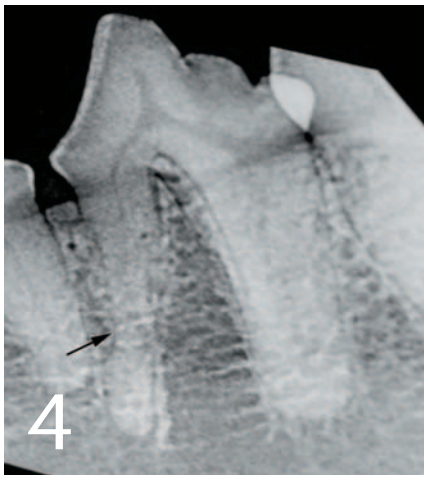
3. Periodontal treatment

- Local antimicrobial administration of clindamycin hydrochloride (Clindoral—TriLogic Pharma) or doxycycline hyclate (Doxirobe—Zoetis) can be used to treat stage 1 bleeding on probing points (Figures 5A and 5B) 5A and 5B) and in conjugation with closed root planing in stage 2 (less than 25 percent of support loss) and stage 3 (25 to 50 percent support loss) periodontal disease when cleaned periodontal pockets (in contrast to gingival recession) are present and the pet owners can provide home care to control periodontal disease progression.
- Surgery can save teeth if the tooth and patient are appropriate. Operculectomy (removal of the gingiva over a partially erupted tooth crown) is indicated in a young dog or cat (less than 8 months old) whose tooth is expected to fully erupt once the obstructing gingiva is excised (Figures 6A-6C). Open flap exposure for cleaning and débridement is used

PHOTOS COURTESY OF DR. JAN BELLOWS



>>>Figure 3. This left mandibular canine is malpositioned caudal to the maxillary canine but is not expected to cause a problem.



>>>Figure 4. External resorption lesion (arrow) affecting the mesial root left mandibular fourth premolar. No intervention is necessary at this time.

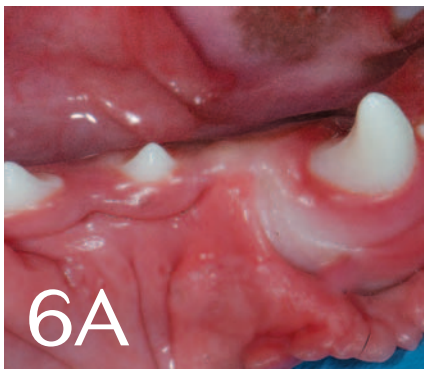
>>>Figure 5A. Bleeding is evident on probing.

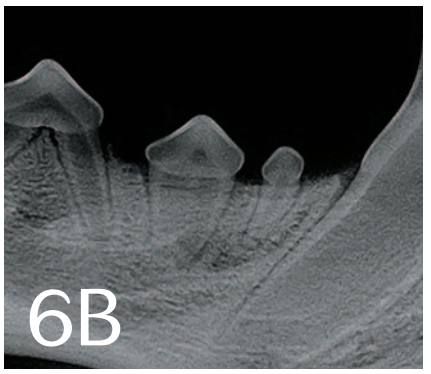
>>>Figure 5B. Application of clindamycin hydrochloride.

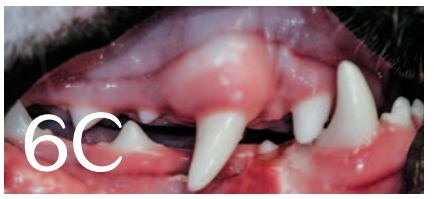
to expose a tooth root in selective cases where the periodontal pocket extends greater than 5 mm and the client is committed to save the pet's teeth despite a guarded prognosis.

4. Endodontic care

> Vital pulp therapy can be performed when a complicated tooth fracture is acute (no longer than two days). The treatment usually results in a vital tooth with a good prognosis. If the



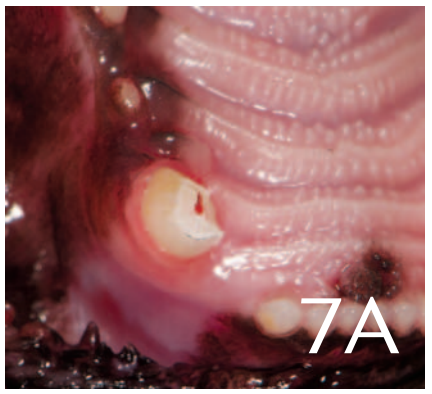




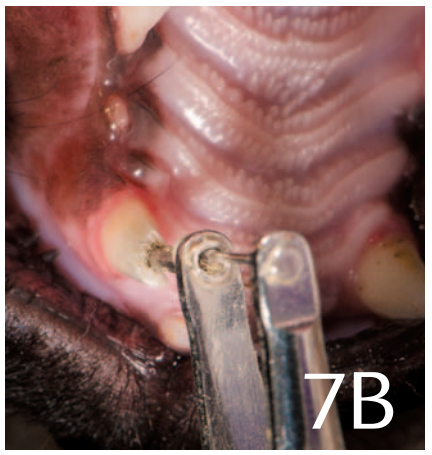
>>>Figure 6A. A missing mandibular first premolar evident on oral examination.

>>>Figure 6B. The premolar is present on an intraoral radiograph.

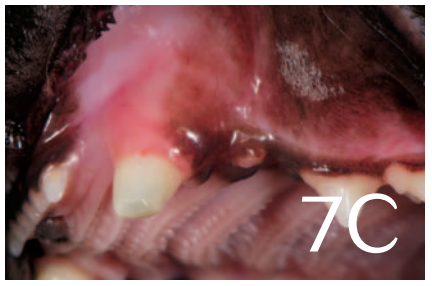
>>>Figure 6C. After an operculectomy, the premolar erupts normally (note the functional mandibular mesioclusion).



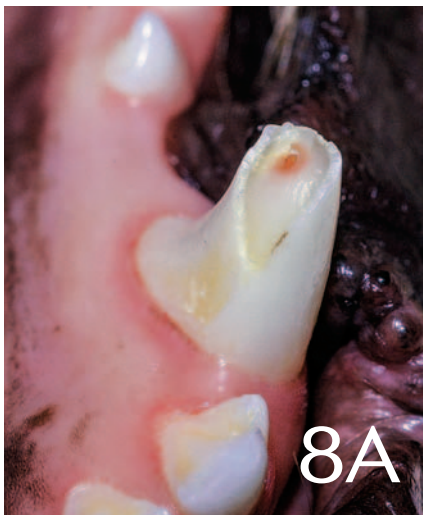
>>>Figure 7A. A complicated left maxillary canine fracture in a cat.



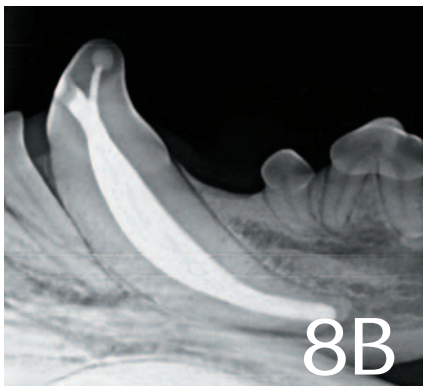
>>>Figure 7B. Application of mineral trioxide aggregate (MTA) on vital pulp.



>>>Figure 7C. The restored vital canine.



>>>Figure 8A. A complicated crown fracture more than two days old.



>>>Figure 8B. Root canal therapy was performed to save the tooth.

fractured tooth with pulp exposure has been present for more than two days, extraction or conventional root canal therapy should be performed with a more predictable outcome (Figures 7A-7C).

> Root canal therapy is the treatment of choice for end-stage pulp disease secondary to fracture, chronic pulpitis or caries. Ideal therapy depends on the animal's age, the age of pulp exposure, the tooth's condition and periapical health (Figures 8A and 8B).

5. Crown reduction with gingival closure. This intervention can be used to treat type 2 tooth resorption with evidence of root replacement (Figures 9A-9D). Crown reduction and restoration are indicated for cases of malocclusion teeth interfering with the opposing gingiva.

6. Orthodontic intervention. Orthodontic buttons and elastics can be used to reposition teeth into functional occlusion and for maxillary or mandibular fracture stabilization. Inclined planes made from acrylic or metal can move mesioverted mandibular canines into functional positions (Figures 10A-10C).

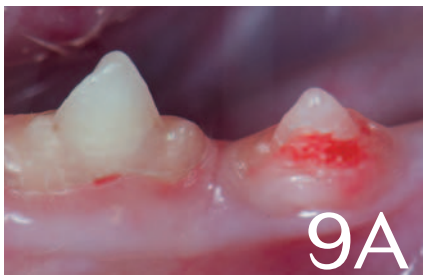
7. Oral surgery. Surgery is the treatment of choice to care for many oral masses, both benign and malignant. When planning oral surgery, the goal is to achieve a 1-cm tumor-free margin for benign masses and a 2-cm or greater margin for malignant oral tumors.

8. Extraction

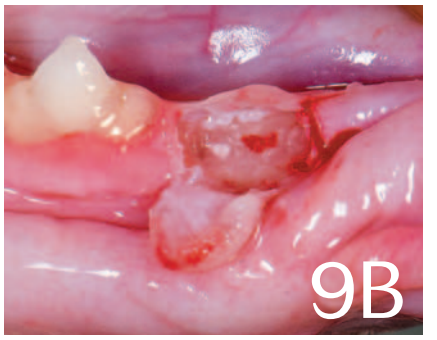
> Tooth extraction is indicated when stage 4 periodontal disease is present (the tooth has more than 50 percent support loss based on probing depths, greater than stage 2 mobility or gingival recession that has progressed past the mucogingival line).

> Extraction is the best therapy when the tooth has between 25 and 50 percent support loss and the owner or the patient will not allow appropriate home care.

> Some fractured teeth are best extracted, especially those that have pulp exposure and stage 3 or 4 periodontal disease or marked internal resorption.



>>>Figure 9A. Tooth resorption in a cat's mandibular third premolar.



>>>Figure 9B. Gingival exposure and crown amputation.

>>>Figure 9C. A radiograph of the same tooth consistent with type 2 root replacement resorption.

>>>Figure 9D. After gingival closure.

>>>Figure 10A. A mesioverted maxillary canine in a Shetland sheepdog.

>>>Figure 10B. Orthodontic buttons and elastics

>>>Figure 10C. A functional occlusion five months later.

> Extraction is indicated when root canal therapy is not a viable option due to the owner's wishes or the practice's capability (and lack of a referral option).

> Feline teeth should be extracted via flap exposure when, in addition to the resorption, there is visible periodontal ligament and normal opacity on intraoral radiographs (Types 1 and 3).

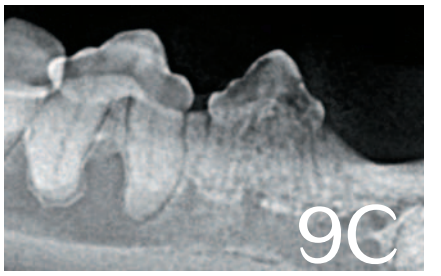
> Many cats affected by oropharyngeal inflammation that do not respond to home plaque control care benefit from the extraction of the teeth distal to the canines; those that still do not respond should have all the teeth extracted.

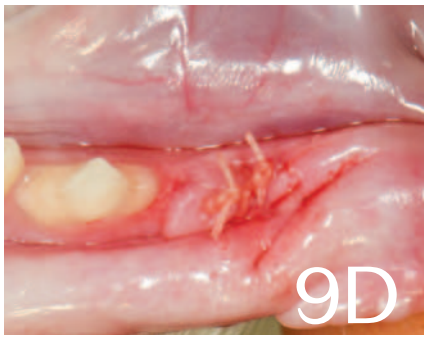
> Extra (supernumerary) teeth that cause crowding, predisposing the normal teeth to periodontal disease, should be extracted.

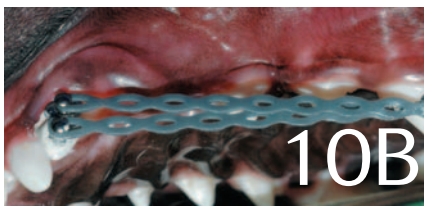
> Persistent primary (deciduous) teeth should be removed at the time of diagnosis to prevent the potentially harmful location of the adult teeth.

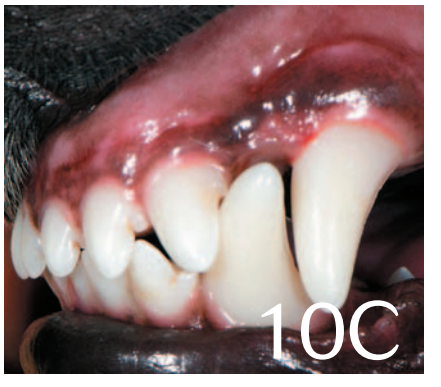
> Extraction is the treatment of choice for advanced caries.

And the honorable mentions for letters B and C? They are: bacteria, bupivacaine hydrochloride, bur, calculus, caries. **dvm360**









Dr. Jan Bellows owns All Pets Dental in Weston, Florida. He is a diplomate of the American Veterinary Dental College and the American Board of Veterinary Practitioners. He can be reached at (954) 349-5800; email: dentalvet@aol.com.

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5 drugs that should be in your cat pain toolbox

Veterinary pain expert Janice Huntingford, DVM, DACVMR, discusses what she uses to manage feline patients' chronic pain.

Chronic pain in cats presents a dilemma, because there are so few pain medications," laments Janice Huntingford, DVM, DACVSMR, CVA, CVPP, CCRT, CAVCA, owner of Essex Animal Hospital in Essex, Ontario, Canada.

But here's what we've got! We caught up with Huntingford at a recent CVC show and asked (OK, maybe we begged a little) for her input. She rattled off choices that today's practitioners may want to learn more about. In no particular order:

1. Onsior (robenacoxib), a nonsteroidal anti-inflammatory drug (NSAID) for cats.

2. meloxicam, another NSAID. Huntingford says it's used in Canada for chronic pain in cats "at low doses," for instance, 0.02 mg/kg.

3. buprenorphine, a partial *mu* opiate agonist, is a "main stay," according to Huntingford.

4. gabapentin is another drug used in an off-label manner to treat chronic feline pain in cats, but Huntingford is hopeful that eventual FDA labeling for use in cats will "revolutionize pain control" for them.

5. amitriptyline, a tricyclic antidepressent drug used to treat a variety of feline behavioral problems, "is good for chronic pain at low doses," Huntingford says.

Huntingford also doesn't shy away from alternative modalities like acupuncture for painful feline patients. "I use a lot of acupuncture, physical therapy and massage," she says. "We even try things like underwater treadmills or laser therapy." dvm360

Zap your laser therapy questions

What should you charge for laser treatments? How will you market the service? And what's the deal with acupuncture? Here are a few answers.

It's officially the future, and we were all promised flying cars, rocket packs and laser guns. Oh, and don't forget hoverboards!

Well, at least lasers came true for veterinary practitioners, who have been incorporating surgical lasers and laser therapy in hospitals for many years now. So modern!

But not everyone uses them, and not everyone gets all their questions answered. Here are three common questions from veterinarians and veterinary technicians considering a dive into therapy laser. This time, we went to the source—the people who make those lasers—for a few answers. (Laser-curious right this minute? Check out the resources at the end of this article.)

"Some practitioners I talk to have had trouble paying off the unit. It can be time- and staff-intensive. What do I need to charge to make my money back?"

Answer: The median vet K-Laser user charges $35 for check-in treatments and $12 for adjunct treatments like post-surgical and post-dental. *—Aaron Bakken, K-Laser*

"What are effective ways you've seen therapy laser marketed in veterinary practices?"

Answer: The most effective way to market your laser is to on-board your staff up front. Make sure everyone in the practice knows what it is and make sure doctors are prescribing it. Then focus on in-clinic marketing pieces that are visible in the waiting room and at the front desk. Lastly, focus on talking to your future customers via your website, paid search and direct mail. *—Aaron Bakken, K-Laser*

"Do you recommend acupuncture before, during or after therapy laser use?"

Answer: Acupuncture is best left to the experience and clinical judgement of the acupuncturist/veterinarian and their preference(s). Many practitioners have used laser therapy and acupuncture together. Technique varies based on the purpose for therapy and whether therapy laser is being used instead of traditional dry needling in a needle-sensitive patient. *—Carl Bennett, Companion Animal Laser*

But ... but ... I've got more questions!

Ready to dip your toe into the water with lasers of some kind in your practice beyond an inventory barcode scanner? We recommend ...

1. This article: "Should your veterinary practice become laser-focused?" by Jennifer Wardlaw, DVM, MS, DACVS, at **dvm360.com/laserfocus**.

2. This chart: Compare models with the list at **dvm360.com/laserchart**.

3. This story: Two practices shine a light (see what we did there?) on therapy laser in their hospitals' business model. Read the story at **dvm360.com/shinealight**.

4. Finally, get all the information about sponsored sessions and clinical courses on therapy laser and surgical laser at **thecvc.com**. dvm360

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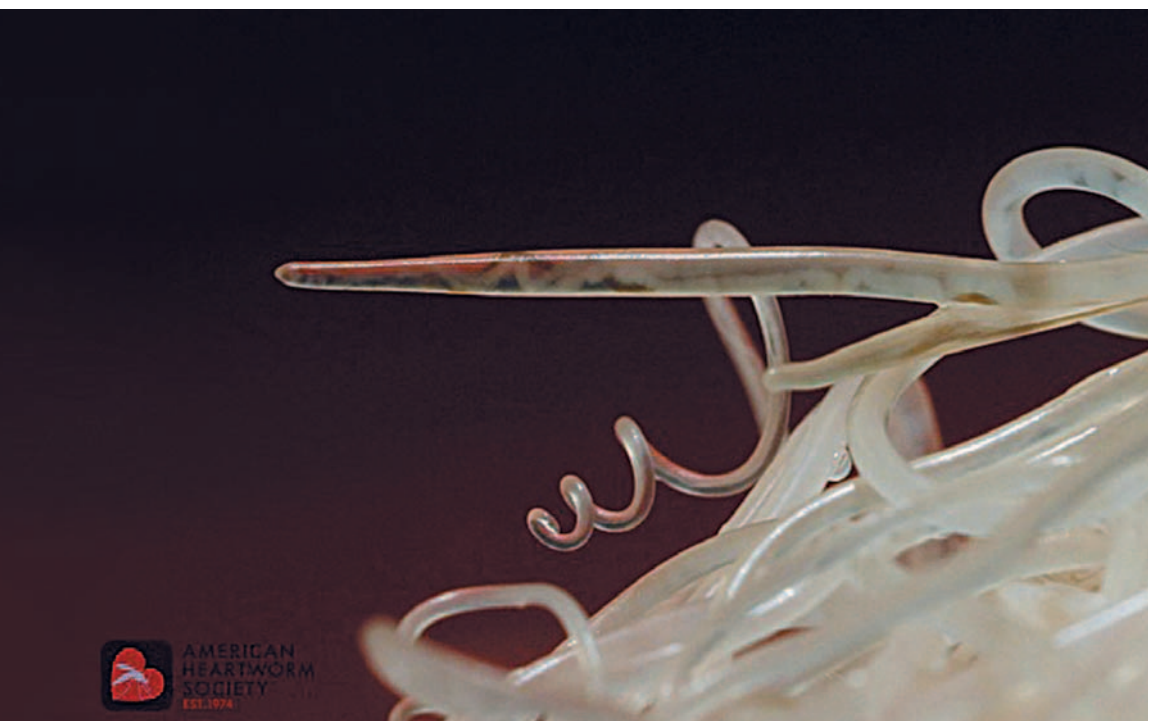

Heartworm prevention: "Oops, I missed a dose!"

It happens. It happens a lot. Here are your best practices when a lapse in heartworm preventive delivery occurs. *By Clarke Atkins, DVM, DACVIM (cardiology)*

Q My client missed a dose of her dog's heartworm preventive. Now what?

A While heartworm preventives are highly effective and convenient for clients to give, compliance persists as a problem in veterinary practices. Even the most conscientious client can miss a dose now and then, while other clients have much longer lapses.

Unfortunately, there's no one-size-fits-all answer to this question. Instead, veterinarians should consider the following questions:

> What is the prevalence of heartworm infection in your client's geographic region?

> Has the pet traveled with the owner? If so, what is the prevalence of heartworm in the area they visited?

> What preventive is being used?

> When and where did the lapse in prevention occur?

> How many doses of the preventive were missed?

The reason for these questions is that time and place have a great impact on heartworm risk. The risk, for instance, is much less when a monthly preventive is missed one time in Ohio in February than when a three-month lapse occurs at that same location in the summer. Likewise, just a two-week lapse in summer can result in infection in the Mississippi Delta.

Macrocyclic lactones provide a safety net know as "reach-back" or "retroactive efficacy" when given continuously for at least 12 months. The length of the reach-back varies by product, with all products proven to be about 95 percent efficacious against nonresistant strains in the laboratory when given for at least 12 consecutive months after lapse. This protective benefit can be useful but should not be relied upon as part of routine heartworm prevention.

Another important compound is doxycycline, which can be administered as monotherapy at 10 mg/kg twice daily for 30 days to kill L3 and L4 larvae—it even kills immature adults that have escaped or will escape macrocyclic lactone prevention.[1]

Recommendations for treatment lapses

If the lapse is one month or less, reinstate the preventive and conduct a heartworm test at the next scheduled visit, if the visit occurs more than seven months from the current date. In highly endemic areas, consider adding doxycycline therapy for one month. If a dog is receiving imidacloprid-moxidectin, a one-month lapse will likely not be problematic, provided the preventive had been given for at least four months continuously before the lapse.


Dr. Clarke Atkins

If the lapse is two months or longer, reinstitute the preventive immediately and consider adding doxycycline for one month.

If the lapse is more than seven months, perform an antigen test and consider adding doxycycline to the macrocyclic lactone therapy for one month. For such protracted lapses, imidacloprid-moxidectin has been shown to have superior reach-back efficacy with doxycycline when given continuously for 13 months post-lapse.[2]

In all instances, preventive therapy should be administered on a year-round basis, both for the animal's protection and to help ensure improved compliance in the future. **dvm360**

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1. McCall JW, Kramer L, Genchi C, et al. Effects of doxycycline on early infections if *Dirofilaria immitis* in dogs. *Vet Parasitol* 2011;176:361-367.

2. Chandrashekar R, Beall MJ, Saucier J, et al. Experimental *Dirofilaria immitis* infection in dogs: effects of doxycycline and Advantage Multi administration on immature adult parasites. *Vet Parasitol* 2014;206:93-98.

This Q&A is the focus of new series of 15-minute talks designed to offer practical information on heartworm prevention, diagnosis and treatment. The "Eye on Heartworm" videos, which are made available by the American Heartworm Society, can be found at .heartwormsociety.org/veterinary-resources/veterinary-education/videos.

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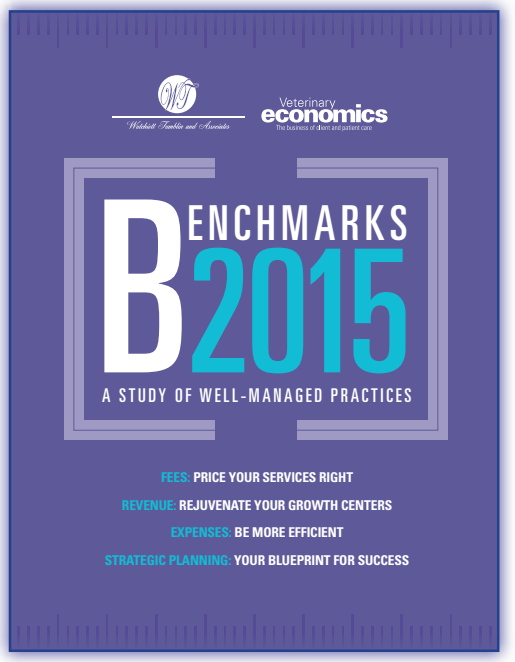
Equipment for Sale

South Carolina

Porta-Vet 6' Truck Insert, Table Top Anesthetic Machine, and Pelton & Crane Autoclave for sale. Contact: hhardy03@hotmail.com

here's to **success.**



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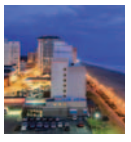

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August 26-29
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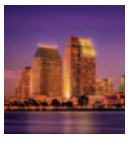

December 8-11
CVC San Diego
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CVC unconventional

Here are the CE opportunities coming in the next few months

May 25-26
17th Annual Spring Clinic
State College, PA
(888) 550-7862
pavma.org

June 1-5
2016 Emerald Coast Veterinary Conference
Destin, FL
(678) 309-9800
emeraldcoastvc.com

June 8-11
AAVA/IVAS Joint Congress
Tacoma, WA
(970) 266-0666
www.ivas.org

June 8-11
2016 ACVIM Forum
Denver, CO
(303) 231-9933
acvim.org

June 10-12
Animal Chiropractic Program Module 4 of 6
Dallas, TX
(800) 266-4723
ce.parker.edu/programs/animal-chiropractic-program

June 19-22
2016 Southeast Veterinary Conference
Hilton Head Island, SC
(803) 254-1027
scav.org

June 23-26
Pacific Veterinary Conference (PacVet)
San Francisco, CA
(916) 649-0599
pacvet.net

June 25
ACVC Summer Regional Conference on Feline Medicine
Providence, RI
(908) 281-5108
www.acvc.org

June 26-28
Montana Veterinary Medical Association Summer Meeting
Helena, MT
(406) 447-4259
mtvma.org

June 26-28
Maryland Veterinary Medical AssociationSummer Conference
Annapolis, MD
(410) 268-1311
mdvma.org

July 7-10
2016 Canadian Veterinary Medical Association Convention
Niagara Falls, Ontario, Canada
(800) 567-2862
cvma-acmv.org

July 15-17
Animal Chiropractic Program Module 5 of 6
Dallas, TX
(800) 266-4723
ce.parker.edu/programs/animal-chiropractic-program

July 27-30
2016 Therio Conference
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(334) 395-4666
therio.org/event/2016Asheville

July 29-31
2016 Fred Scott Feline Symposium
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August 11-14
10th Keystone Veterinary Conference
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keystonevetconference.org

August 12-14
Animal Chiropractic Program Module 6 of 6
Dallas, TX
(800) 266-4723
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September 7-11
International Veterinary Emergency & Critical Care Symposium
Grapevine, TX
(210) 698-5575
www.veccs.org

September 7
North Carolina Academy of Small Animal Medicine Meeting
Sanford, NC
(910) 452-3899
ncasam.org

September 8-9
Montana Veterinary Medical Association Fall Symposium
Miles City, MT
(406) 447-4259
mtvma.org

September 11
Fall Vet Derm Seminar
Portland, OR
(503) 352-3376
skinvetclinic.com

September 23-25
105th Annual KVMA Meeting/43rd Mid-America Veterinary Conference Symposium
Louisville, KY
(502) 226-5862
kvma.org

September 24-25
Infectious & Vector Borne Disease for the General Practitioner Conference
San Diego, CA
(619) 640-9583
sdcvma.org

September 27-30
41st World Small Animal Veterinary Association Congress
Dundas, Ontario, Canada
(905) 627-8540
wsava2016.com

September 30 to October 2
California VMA Annual Fall Seminar, Palm Springs
Indian Wells, CA
(916) 649-0599
cvma.net

September 30 to October 2
Alaska Veterinary Medical Association Annual Symposium
Anchorage, AK
(208) 922-9431
akvma.org

October 6-8
ACVS Surgery Summit
Germantown, MD
acvssurgerysummit.org

October 6-9
21st Annual ABVP Symposium
San Antonio, TX
(352) 244-3731
abvp.com

October 7-9
WSVMA Pacific Northwest Veterinary Conference
Snoqualmie., WA
425-396-3191
wsvma.org

October 12-16
Wild West Vetrinary Conference
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(703) 978-7080
wildwestvc.com

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A passion beyond **the profession**

Cultivating friendships as well as outside interests makes for a rich life.

In 1960 I started the Sierra Veterinary Medical Association (SVMA), the world's first veterinary ski association. The idea was to meet annually at a California ski resort, have a qualified CE program and enjoy skiing. If the golf enthusiasts could do it, why not those of us who love skiing?

The first year four veterinarians attended, plus their spouses and a few nonveterinary friends. From there on the organization grew, and grew, and grew. Eventually we began to meet at many different North American ski areas and in Europe as well.

We have met twice in Austria, twice in Switzerland, and in France, Italy and the Pyrenees. We added an annual summer meeting as well.

Since we founded the SVMA in 1960 my wife and I have only missed one winter meeting (she was in labor), with the most recent being the 2016 meeting in Whitefish, Montana, in February of this year. The SVMA has had a major influence on the quality of our lives, not only because of the wonderful skiing adventures it has provided, or for the excellence of the CE, but for the friends we have made.

Our membership is now international, and there are many other veterinary ski assocations, but the long-term members of the SVMA are unique people. They are respected citizens in their communities. They love snow skiing but all have other passions. Some, like Debby and me, are involved with horses. Others golf, or scuba dive, or tour on bikes, or hike.

In more than half a century involving hundreds of people, only once did I see an attendee get drunk (and he never came to another meeting). Maybe he thought we were too "square." Or maybe he fell into a bathtub full of water, as he did that year, and drowned.

I love our profession and have been devoted to it throughout my career. However, other interests led me to create an extremely large practice group so we could all have lots of time off to pursue other interests, including family activities. As a result, I have sometimes wondered if my "work ethic" was distorted or distracted.

>>> The hotel in Whitefish, Montana, that hosted the most recent meeting of the Sierra Veterinary Medical Association featured a beer they thought would be popular with veterinarians: Moose Drool Brown Ale, by Big Sky Brewing Co.

In SVMA I learned that there are many colleagues like me: veterinarians who are fiercely dedicated but who have an equal commitment to many nonmedical passions, including recreational things like skiing. Consequently, over the past half-century, some of our dearest friends, people we love and respect, have been SVMA members.

Debby and I have attended many other veterinary ski meetings as well: state associations, specialty groups like the orthopedic ski association, the annual equine ski conference at Lake Tahoe and so on, and we have enjoyed all of them, but we find the SVMA to be unique in its traditions, enthusiasm, camaraderie and warmth.

At one of our meetings a few years ago, I went up the chairlift with a stranger. He turned out to be a psychiatrist, attending a CE conference.

"Oh!" I said. "Is there a psychiatric conference being held here?"

"No," he replied. "This is a general medicine meeting. I go to this meeting because it keeps me updated on general practice. But mostly I go for the people. They are amazing! Hardworking GPs absolutely dedicated to their profession, but equally dedicated to recreation and adventure like skiing and many other aspects of life."

"Gosh," I responded. "That's like me! I'm here for a veterinary conference. I'm retired from practice but still involved in my profession and I love the people in this group. It almost seems incongruous that we all have the same passion for skiing and other unrelated activities as we do for our profession."

"Oh, no!" he said. "It's not incongruous at all. There's a reason some people are as passionate about their careers as they are for their pastime activities."

"Really?" I said. "What's the reason?"

Just then we reached the top of the chairlift. He sped away from me, but as he did he lifted both arms and shouted, "*It's because we live!*"

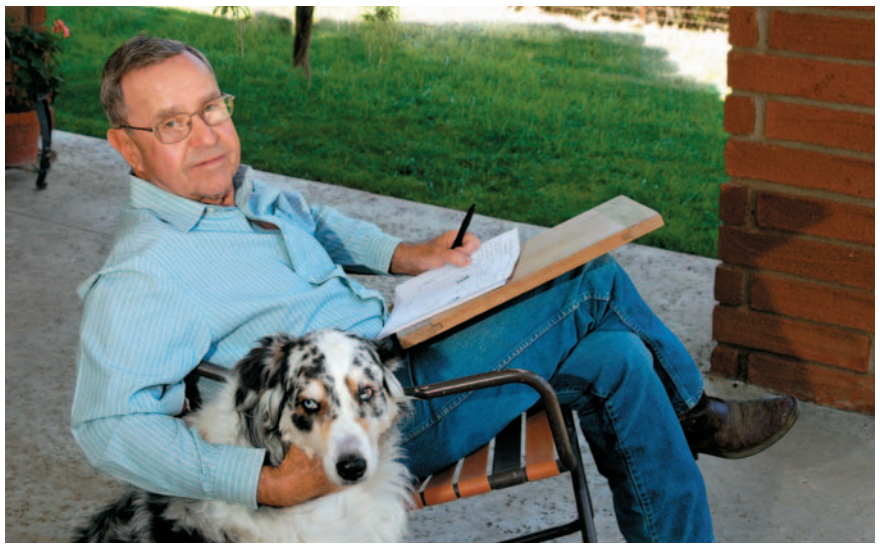
I have never forgotten that incident. This doctor helped me to understand myself and my lifelong SVMA friends.

Like to ski? Love your profession and equally dedicated colleagues? For information on how to join and where we are going this summer or next winter, visit our website: skisvma.org. **dvm360**

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

More Miller

Find the legacy of Dr. Robert M. Miller's columns and cartoons created for *Veterinary Medicine* magazine online at **dvm360.com/miller**.



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