



firstline®

The best read veterinary team journal. Bam.

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CONFERENCE

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THIS RENAL FOOD FLEXES HARDER

Hill's® Prescription Diet® k/d¹ is clinically shown in a recent study² to outperform Royal Canin^{TM3} at managing CKD.

NEW SIX-MONTH CLINICAL RESULTS

Compared to Royal CaninTM Veterinary Diet Renal Support A Feline,³ cats with chronic kidney disease (CKD) fed Prescription Diet® k/d¹ Feline¹ with E.A.T (Enhanced Appetite Trigger)TM Technology:

- 1 Voluntarily consumed 23% more calories²
- 2 Increased their body weight by 5.8% while Royal Canin^{TM3} cats lost 13%²
- 3 Maintained their muscle mass while Royal Canin^{TM3} cats lost over 11%²

TAKE CONTROL TODAY — recommend the clinical strength of Prescription Diet® k/d.¹

¹Hill's® Prescription Diet® k/d¹ feline with chicken dry food. ²Data on file. Hill's Pet Nutrition, Inc. 2018. Results are average values with statistical significance (p value less than or equal to 0.05). ³Royal CaninTM Veterinary Diet Renal Support A Feline, dry food sold in the US market. ©2018 Hill's Pet Nutrition, Inc. ®/™ Hill's, Prescription Diet, k/d and E.A.T. Technology are trademarks owned by Hill's Pet Nutrition, Inc. Royal Canin is a registered trademark owned by ROYAL CANIN SAS.



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firstline®

Healthy team members = healthy pets

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PEARLS

(Lustrously good advice and tips)

3 simple strategies to talk heartworms



Add some oomph (perhaps in the form of spaghetti) to your heartworm prevention conversations.

By Ronald Hamilton, BSc, DVM

If your heartworm prevention conversations feel a bit stale, use these quick and simple tips to protect pets against these dangerous killers.

1. Use cooked spaghetti as an example.

Pet owners are often surprised to learn that heartworms can range in size from 4 to 12 inches and look like cooked spaghetti wrapping through the heart. Dogs are a natural host for heartworms, which means that the worms that live inside the dog mature into adults, mate and produce offspring. If untreated, their numbers can increase, and dogs have been known to harbor several hundred worms in their bodies. Help clients visualize the magnitude of infestation by cooking up an entire box of spaghetti noodles and packaging them in a clear glass jar.

2. Explain the mosquito bite phenomenon.

Some pet owners would benefit from a better understanding of how heartworm disease is transmitted, and explaining the worm's life cycle can help. I recommend adapting information from the American Heartworm Society.

3. Teach cat owners about the gravity of infection.

Remind pet owners that heartworm can be sneaky in cats. Tell them to watch for signs, including coughing, asthma-like attacks, periodic vomiting, lack of appetite or weight loss. Remind them that there's no treatment for cats, so they should contact your practice as soon as they notice any signs or suspect a problem. Cat owners are always under the impression that because cats are indoors, they're

not susceptible to heartworms. But—spoiler alert—mosquitos fly into homes! Visual aids—like an emailed video link showing what cats look like with heartworm-caused respiratory distress, or having a video explaining the transmission process on in the lobby or exam rooms—are a big help in demonstrating the effect heartworms can have, particularly for the cats.

Ronald Hamilton, BSc, DVM, owns Gulf Coast Veterinary Center in Tampa and Spring Hill, Florida.

NEED A LITTLE BACKUP?

dvm360's heartworm prevention toolkit is stocked with an arsenal of tools to increase client compliance (among a lot of other cool and useful things). Find it at dvm360.com/heartwormtoolkit.



ASK KATIE Are these interviewees bad eggs?

Q: I recently interviewed two potential technicians. They were qualified on paper, but the way they behaved in the interview threw me off a little. Should I assume they would behave differently with clients and hire them for their skills?

A: One of the best quotes I've ever heard came from the late Maya Angelou. She said, "When people show you who they are, listen." Generally speaking, people are on their absolute best behavior when they're being interviewed, so if these technicians didn't exceed your expectations during their time to shine, they're not going to improve their performance once they've got the job. In fact, the opposite is usually true—people put on a great face for the interview and get themselves hired, only to show who they really are three to six weeks into working for you.

Consider yourself lucky that you got a glimpse of their true nature during the interview. These two candidates need to be sent a polite "no thank you" letter.

Katie Adams, CVPM, is director of curriculum development at veterinary education provider Ignite Veterinary Solutions based in Austin, Texas.

Got a question for Katie? Email us at firstline@ubm.com.



2 ways to comfort hospitalized pets

We asked two finalists in this year's dvm360/VHMA Practice Manager of the Year contest about the products they love for hospitalized pets. Here are the items that make their lists.

It's all about the music

"That's an easy one to answer because I just used it today: Pet Acoustics' Pet Tunes.

"We just had a 116-lb Rhodesian ridgeback receiving heartworm treatment at our clinic. He was so anxious that he was ramming into the cage with his head, trying to get out. I attached this music box

to the outside of his cage, and the next time I walked by he was calm enough to finally lie down. It's a great tool for us!"

— Meghan Bingham, CVPM

*Practice manager
West Alabama Animal Clinic
Houston, Texas*

It's all about the pheromones

"We use a lot of Ceva's Adaptil and Feliway. I think it would be wonderful if Ceva would come out with a 'disc' that diffuses pheromones! If you could have the pheromones somehow along with the heartbeat in the comfort of a snuggly toy, I think that would put it above and beyond."

— Amy Zellweger

*Practice administrator
Wixom and Waterford Family
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Do you have a tip (or two) to share? Email your bright ideas to firstline@ubm.com. We'll pay \$50 for every tip we publish.

Take a bite out of Lyme.



NEW CLAIM!

NexGard® (afoxolaner) is the only product approved by the FDA for the prevention of infections that cause Lyme disease in dogs as a result of killing black-legged ticks.



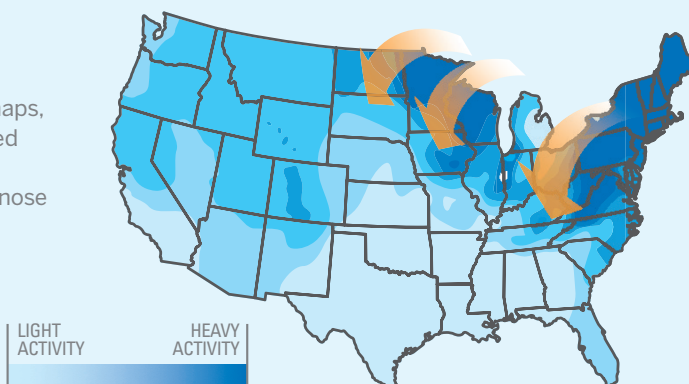
Lyme disease is spreading

According to the CAPC Parasite Prevalence maps, Lyme disease is the most commonly diagnosed tick-borne disease in dogs in the US.¹ It's a debilitating illness that can be difficult to diagnose and treat – but easy to prevent in dogs.

Straight from the CAPC:

"Nationwide, dogs exposed to the agent of Lyme disease are continuing to be discovered in areas outside recognized endemic regions."²

LYME DISEASE - CAPC FORECAST



Proven Results against *B. burgdorferi* transmission³

The ability of NexGard (afoxolaner) to prevent the transmission of *Borrelia burgdorferi* by killing infected ticks

- The study evaluated two groups of dogs: an untreated control group and a NexGard-treated group.
- The dogs in the treated group received NexGard on day 0.
- All dogs were:
 - Infested with ~50 adult *Ixodes scapularis* ticks (with a *B. burgdorferi* infection rate of 63.1%) on day 28.
 - Tested using Lyme Quant C6® and SNAP® 4DX® on days 48, 62, 76, 90, and 102.
 - Tested for the presence of *B. burgdorferi* DNA via PCR testing. Skin biopsies collected on day 104.

Detection of <i>Borrelia burgdorferi</i> infection	Untreated Control Group	NexGard-treated Group
Lyme Quant C6 & SNAP 4DX	ALL dogs tested positive	ALL dogs tested negative
PCR	ALL dogs tested positive	ALL dogs tested negative
		100% PROTECTED

NexGard is a Merial product. Merial is now part of Boehringer Ingelheim.

NexGard® is a registered trademark, and FRONTLINE VET LABS™ is a trademark, of Merial. All other trademarks are the property of their respective owners. ©2018 Merial, Inc., Duluth, GA. All rights reserved. PET-0786-NEX0918.

IMPORTANT SAFETY INFORMATION: NexGard is for use in dogs only. The most frequently reported adverse reactions include vomiting, pruritus, lethargy, diarrhea and lack of appetite. The safe use of NexGard in pregnant, breeding, or lactating dogs has not been evaluated. Use with caution in dogs with a history of seizures or neurologic disorders. For more information, see the full prescribing information or visit www.NexGardForDogs.com.



**Boehringer
Ingelheim**

NexGard® (afoxolaner) Chewables

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

Description:

NexGard® (afoxolaner) is available in four sizes of beef-flavored, soft chewables for oral administration to dogs and puppies according to their weight. Each chewable is formulated to provide a minimum afoxolaner dosage of 1.14 mg/lb (2.5 mg/kg). Afoxolaner has the chemical composition 1-Naphthalenecarboxamide, 4-[5- [3-chloro-5-(trifluoromethyl)-phenyl]-4, 5-dihydro-5-(trifluoromethyl)-3-isoxazolyl]-N-[2-oxo-2-[(2,2,2-trifluoroethyl)amino]ethyl].

Indications:

NexGard kills adult fleas and is indicated for the treatment and prevention of flea infestations (*Ctenocephalides felis*), and the treatment and control of Black-legged tick (*Ixodes scapularis*), American Dog tick (*Dermacentor variabilis*), Lone Star tick (*Amblyomma americanum*), and Brown dog tick (*Rhipicephalus sanguineus*) infestations in dogs and puppies 8 weeks of age and older, weighing 4 pounds of body weight or greater, for one month. NexGard is indicated for the prevention of *Borrelia burgdorferi* infections as a direct result of killing *Ixodes scapularis* vector ticks.

Dosage and Administration:

NexGard is given orally once a month, at the minimum dosage of 1.14 mg/lb (2.5 mg/kg).

Dosing Schedule:

Body Weight	Afoxolaner Per Chewable (mg)	Chewables Administered
4.0 to 10.0 lbs.	11.3	One
10.1 to 24.0 lbs.	28.3	One
24.1 to 60.0 lbs.	68	One
60.1 to 121.0 lbs.	136	One
Over 121.0 lbs.	Administer the appropriate combination of chewables	

NexGard can be administered with or without food. Care should be taken that the dog consumes the complete dose, and treated animals should be observed for a few minutes to ensure that part of the dose is not lost or refused. If it is suspected that any of the dose has been lost or if vomiting occurs within two hours of administration, redose with another full dose. If a dose is missed, administer NexGard and resume a monthly dosing schedule.

Flea Treatment and Prevention:

Treatment with NexGard may begin at any time of the year. In areas where fleas are common year-round, monthly treatment with NexGard should continue the entire year without interruption.

To minimize the likelihood of flea reinfestation, it is important to treat all animals within a household with an approved flea control product.

Tick Treatment and Control:

Treatment with NexGard may begin at any time of the year (see **Effectiveness**).

Contraindications:

There are no known contraindications for the use of NexGard.

Warnings:

Not for use in humans. Keep this and all drugs out of the reach of children. In case of accidental ingestion, contact a physician immediately.

Precautions:

Afoxolaner is a member of the isoxazoline class. This class has been associated with neurologic adverse reactions including tremors, ataxia, and seizures. Seizures have been reported in dogs receiving isoxazoline class drugs, even in dogs without a history of seizures. Use with caution in dogs with a history of seizures or neurologic disorders (see **Adverse Reactions and Post-Approval Experience**).

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

Adverse Reactions:

In a well-controlled US field study, which included a total of 333 households and 615 treated dogs (415 administered afoxolaner; 200 administered active control), no serious adverse reactions were observed with NexGard.

Over the 90-day study period, all observations of potential adverse reactions were recorded. The most frequent reactions reported at an incidence of > 1% within any of the three months of observations are presented in the following table. The most frequently reported adverse reaction was vomiting. The occurrence of vomiting was generally self-limiting and of short duration and tended to decrease with subsequent doses in both groups. Five treated dogs experienced anorexia during the study, and two of those dogs experienced anorexia with the first dose but not subsequent doses.

Table 1: Dogs With Adverse Reactions.

	Treatment Group			
	Afoxolaner		Oral active control	
	N ¹	% (n=415)	N ²	% (n=200)
Vomiting (with and without blood)	17	4.1	25	12.5
Dry/Flaky Skin	13	3.1	2	1.0
Diarrhea (with and without blood)	13	3.1	7	3.5
Lethargy	7	1.7	4	2.0
Anorexia	5	1.2	9	4.5

¹Number of dogs in the afoxolaner treatment group with the identified abnormality.

²Number of dogs in the control group with the identified abnormality.

In the US field study, one dog with a history of seizures experienced a seizure on the same day after receiving the first dose and on the same day after receiving the second dose of NexGard. This dog experienced a third seizure one week after receiving the third dose. The dog remained

enrolled and completed the study. Another dog with a history of seizures had a seizure 19 days after the third dose of NexGard. The dog remained enrolled and completed the study. A third dog with a history of seizures received NexGard and experienced no seizures throughout the study.

Post-Approval Experience (July 2018):

The following adverse events are based on post-approval adverse drug experience reporting. Not all adverse events are reported to FDA/CVM. It is not always possible to reliably estimate the adverse event frequency or establish a causal relationship to product exposure using these data.

The following adverse events reported for dogs are listed in decreasing order of reporting frequency for NexGard:

Vomiting, pruritus, lethargy, diarrhea (with and without blood), anorexia, seizure, hyperactivity/restlessness, panting, erythema, ataxia, dermatitis (including rash, papules), allergic reactions (including hives, swelling), and tremors.

Contact Information:

For a copy of the Safety Data Sheet (SDS) or to report suspected adverse drug events, contact Merial at 1-888-637-4251 or www.nexgardfordogs.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>.

Mode of Action:

Afoxolaner is a member of the isoxazoline family, shown to bind at a binding site to inhibit insect and acarine ligand-gated chloride channels, in particular those gated by the neurotransmitter gamma-aminobutyric acid (GABA), thereby blocking pre- and post-synaptic transfer of chloride ions across cell membranes. Prolonged afoxolaner-induced hyperexcitation results in uncontrolled activity of the central nervous system and death of insects and acarines. The selective toxicity of afoxolaner between insects and acarines and mammals may be inferred by the differential sensitivity of the insects and acarines' GABA receptors versus mammalian GABA receptors.

Effectiveness:

In a well-controlled laboratory study, NexGard began to kill fleas four hours after initial administration and demonstrated >99% effectiveness at eight hours. In a separate well-controlled laboratory study, NexGard demonstrated 100% effectiveness against adult fleas 24 hours post-infestation for 35 days, and was >93% effective at 12 hours post-infestation through Day 21, and on Day 35. On Day 28, NexGard was 81.1% effective 12 hours post-infestation. Dogs in both the treated and control groups that were infested with fleas on Day -1 generated flea eggs at 12- and 24-hours post-treatment (0-11 eggs and 1-17 eggs in the NexGard treated dogs, and 4-90 eggs and 0-118 eggs in the control dogs, at 12- and 24-hours, respectively). At subsequent evaluations post-infestation, fleas from dogs in the treated group were essentially unable to produce any eggs (0-1 eggs) while fleas from dogs in the control group continued to produce eggs (1-141 eggs).

In a 90-day US field study conducted in households with existing flea infestations of varying severity, the effectiveness of NexGard against fleas on the Day 30, 60 and 90 visits compared with baseline was 98.0%, 99.7%, and 99.9%, respectively.

Collectively, the data from the three studies (two laboratory and one field) demonstrate that NexGard kills fleas before they can lay eggs, thus preventing subsequent flea infestations after the start of treatment of existing flea infestations.

In well-controlled laboratory studies, NexGard demonstrated >97% effectiveness against *Dermacentor variabilis*, >94% effectiveness against *Ixodes scapularis*, and >93% effectiveness against *Rhipicephalus sanguineus*, 48 hours post-infestation for 30 days. At 72 hours post-infestation, NexGard demonstrated >97% effectiveness against *Amblyomma americanum* for 30 days. In two separate, well-controlled laboratory studies, NexGard was effective at preventing *Borrelia burgdorferi* infections after dogs were infested with *Ixodes scapularis* vector ticks 28 days post-treatment.

Animal Safety:

In a margin of safety study, NexGard was administered orally to 8 to 9-week-old Beagle puppies at 1, 3, and 5 times the maximum exposure dose (6.3 mg/kg) for three treatments every 28 days, followed by three treatments every 14 days, for a total of six treatments. Dogs in the control group were sham-dosed. There were no clinically-relevant effects related to treatment on physical examination, body weight, food consumption, clinical pathology (hematology, clinical chemistry, or coagulation tests), gross pathology, histopathology or organ weights. Vomiting occurred throughout the study, with a similar incidence in the treated and control groups, including one dog in the 5x group that vomited four hours after treatment.

In a well-controlled field study, NexGard was used concomitantly with other medications, such as vaccines, anthelmintics, antibiotics (including topicals), steroids, NSAIDs, anesthetics, and antihistamines. No adverse reactions were observed from the concomitant use of NexGard with other medications.

Storage Information:

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

How Supplied:

NexGard is available in four sizes of beef-flavored soft chewables: 11.3, 28.3, 68 or 136 mg afoxolaner. Each chewable size is available in color-coded packages of 1, 3 or 6 beef-flavored chewables.

NADA 141-406, Approved by FDA

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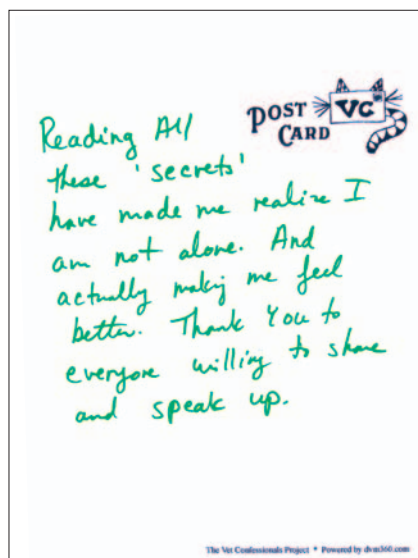
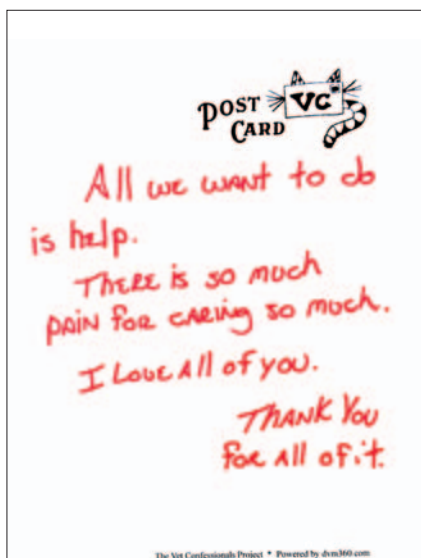
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¹ Parasite Prevalence Maps. Companion Animal Parasite Council website. <https://www.capcvet.org/maps/#2017/all/lyme-disease/dog/united-states/>. Accessed August 15, 2018.

² Elevated risk of heartworm disease and Lyme disease continues in 2018. Companion Animal Parasite Council website. <https://www.capcvet.org/articles/elevated-risk-of-heartworm-disease-and-lyme-disease-continues-in-2018/>. Accessed August 15, 2018.

³ Freedom of Information Summary, Supplemental NADA 141-406. NexGard (afloxolaner). July 13, 2018.



Vet confessions: You are not alone

These confessions show that veterinary professionals deeply benefit from forming meaningful connections with two-legged creatures too (and we're not talking about birds).

There's a good chance you were motivated to pursue the veterinary profession because of a love of pets. And while this passion can still propel you through the hard days, don't discount the power of connecting with the people around you—and even with people you've never met.

That's actually one of the reasons why we host the The Veterinary Confessionals Project display at every Fetch dvm360 conference:

We want you to see that other veterinary professionals are going through the same struggles you are. The confessions often remind us that there's something about knowing you aren't alone that makes the day-to-day pressures and pains more manageable.

Do the confessions above hit home for you? To see the rest of the confessions that speak to this topic, visit dvm360.com/confesstoconnect.

Do you have a confession? Something you need to say? Something to get off your chest? Some pressure that would ease if you shared what you're thinking? Here's an outlet: dvm360.com/confess.



Is your practice the picture of health? Take this quiz to find out ...

You don't have to look at a business's income statement to know if it's doing well. Signs of a happy, high-functioning veterinary hospital are apparent to clients, prospective employees and anyone else who takes the time to step back and see your business with fresh eyes.

According to Bash Halow, LVT, CVPM, these signs can be organized into five categories:

- > cleanliness
- > client engagement
- > team member interaction
- > mission and meeting reminders
- > employee-created materials.

To see how you rank in these areas (and whether or not your practice is, ultimately, the picture of health), visit dvm360.com/pictureofhealth and be ready to look at your veterinary practice with fresh, honest eyes.

Curb your DEBT

dvm360
leadership
challenge



The vet tech debt dilemma

By Kyle Wendy Skultety, LVT, CVT

See more of our coverage in our sister publications and online at dvm360.com/curbyourdebt.



In *dvm360*, readers will find a clear description of their options for leaving student loans behind, exclusive data showing how debt levels affect veterinarians' attitudes about the profession, a personal account of an associate veterinarian's spending, and more.



Think an internship is a good step forward to help earn more and pay down those student loan bills? In *Vetted*, we'll walk you through some thoughts to consider first, plus a few honest views from your colleagues on how they're handling their debt from the Vet Confessionals Project.

Sponsored by



For many veterinary technicians, the cost of school just doesn't add up to the money they can make in a practice. Here's what vet techs told me about their debt, finances and frustrations, as well as the passion that keeps them holding on.

If you're a veterinary technician struggling with student debt, you're not alone.

While veterinary literature focuses on doctors and their debt (visit dvm360.com/curbyourdebt for to read our coverage on that), little is written about the burden of debt slung over technicians' shoulders. In fact, veterinary technicians may struggle even more, as their burden is made heavier by endemic low pay.

Technicians interested in becoming credentialed need a degree from an accredited school, as the alternate path based on hours worked has been abolished in most of the country. Technician schools can cost anywhere from \$4K to \$15K per year and at least double that for a four-year degree. Some states forbid noncredentialed

technicians to work at a veterinary hospital, which makes the need for school (and debt) unavoidable for many. Elsewhere, employers give preference to technicians with formal education, as that signals a commitment to learning as well as discipline. That commitment is consistently rewarded with inescapable financial woes.

I recently interviewed a dozen veterinary technicians between the ages of 21 and 50 with debt ranging from \$7K to \$160K to learn how debt is affecting their lives. I wanted to know: Did they feel their loan-to-salary ratio was a hardship? Had they ever considered leaving the profession to make more money? And how did they handle their monthly bills? If you're in the same boat, read on ...

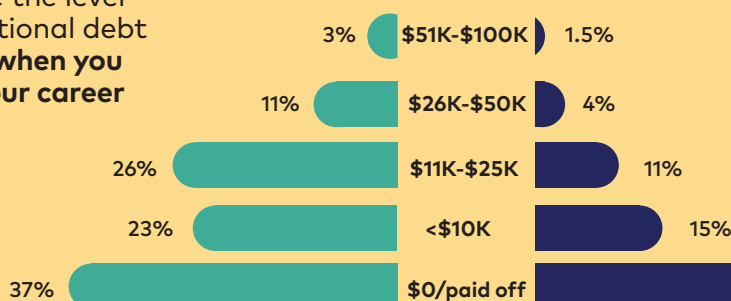
Roommates, parents and old cars: Adult life with technician student debt

Most of the technicians I spoke with said yes—they were feeling hardship because of student loan debt. Their approaches to dealing with it were varied. Some relied on their spouse's income, making them financially dependent on those relationships. Other technicians took as much overtime as possible or had a second job.

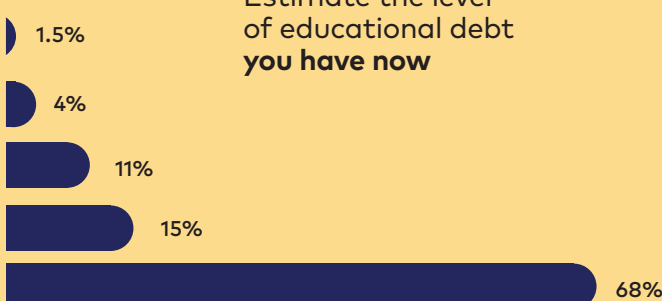
One veterinary technician told me she lived frugally. She didn't have cable TV, bought store-brand groceries only and had an older-model car and cellphone.

Another technician moved back in with her parents after failing to make things work living with a roommate. Despite her parents' help, she still has financial concerns

Estimate the level of educational debt you had when you began your career



Estimate the level of educational debt you have now



199 VETERINARY TECHNICIANS SURVEYED



depending on when she gets paid and what bills are due.

Some technicians who wanted to have children said they've put their plans to be parents on hold indefinitely due to their loan debt. They're frustrated they can't afford even the basics required for having a family.

Most respondents reported having no disposable income.

Run over by retirement

The future financial security of technicians has also been affected. Due to their debt, some of them stop putting money away for retirement, 401(k)s or even savings. The pay rate among my respondents ranged from \$13 to \$22.60 an hour. At a glance, these figures might look pretty good, but not after figuring in a loan repayment and the cost of living.

One VTS said she lowered her 401(k) contributions from 6 to 4

percent just to free up funds to pay her loan. Another technician said she didn't have a 401(k) because she couldn't spare the money. Two technicians who make \$22 an hour? They stopped contributing.

And even after sacrificing their secure retirement, none of these interviewees reported feeling financially secure in the present.

A big mistake?

Nearly all the technicians I spoke to have considered leaving the profession, with most citing financial difficulty as their big reason.

One technician with a \$590 monthly loan payment said she'd considered leaving the profession to become a nurse or ultrasound technician in human medicine.

Another considered becoming a pharmacist, which would require a second round of school and loans. She changed her mind and

is studying to become a Certified Veterinary Practice Manager. She decided to stick it out to grow her career and eventually "be able to speak about different subjects as a practice manager," she said.

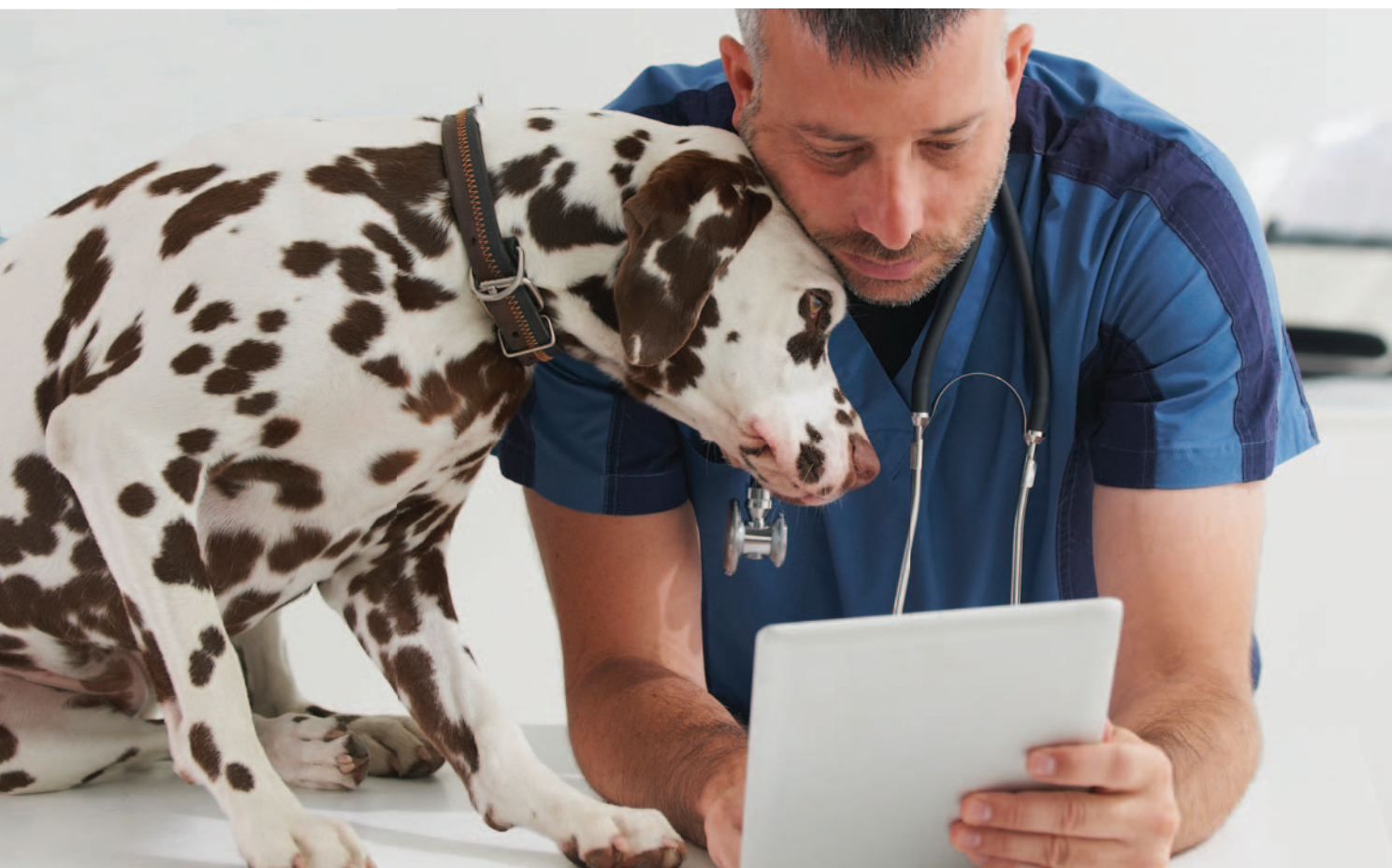
One technician considered moving to the lab animal side, "where the pay is higher, and the benefits are better."

Another technician said that the sacrifices have been persistent and grating: "At the end of each month, I was negative in my checking account. Not only did I deplete

Find resources for curbing your debt at dvm360.com/curbyourdebt, including:

- > A downloadable spending analysis
- > Advice on money-saving apps
- > Tips on mindfully approaching student debt
- > A firsthand account from a tech with a plan to pay off her debt early

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The CareCredit credit card gives clients a way to pay for all the care you recommend. CareCredit can be used for everything from exams and lab tests to surgery, pet food, medicine and parasite control.* In addition, 94% of cardholders are highly satisfied with CareCredit.¹

Already enrolled? Call 800-859-9975, option 1, then 6, to learn how CareCredit can help more pets get the care they need. **To get started with CareCredit, call 844-812-8111** and ask for the one-time enrollment fee of \$59 by January 31, 2019.



*Subject to credit approval.

¹Cardholder Engagement Study, Q2 2018.

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my savings account, but I maxed out my credit card just to stay afloat. I remember going months without an oil change because I couldn't swing the extra money that month." She had to give up the beloved horse she'd owned for 25 years because she "simply [couldn't] afford it." Her parents have implored her many times to consider other options, worrying that she'll never be able to afford a house or live comfortably as long as she's a technician.

One technician said that when taking out the loans, she "didn't quite understand the scope of the money borrowed compared to what [she] would be making on a technician's salary."

A few younger technicians said that they weren't experienced enough to leave the profession and find a good job. One RVT who's worked for veterinary practices since she was 13 said she didn't know how to do anything else but would "try just about anything" that would not require her to "go back to school and earn more debt." She also felt that there was "nothing" out there that fit that description.

'I can do what I love every day'

Despite having nearly \$160K remaining in debt, one technician

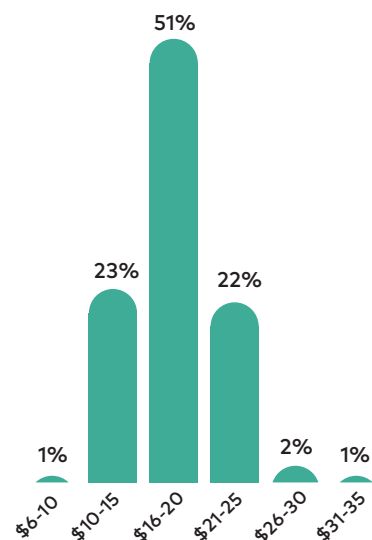
remained positive about her job. She relied on her stepfather to help her obtain one loan and has a much smaller one in her own name. She said that when taking out the loans, she "didn't quite understand the scope of the money borrowed compared to what [she] would be making on a technician's salary."

She said she struggles to make ends meet while paying a \$1,300 monthly loan payment. Her dream of starting a family feels perpetually unreachable since she and her husband can barely support themselves, her second job notwithstanding. Despite the bleak outlook, this veterinary technician said she still doesn't regret her debt: "I have this amazing degree, and I can do what I love every day. I love what I do, I take pride in what I do, and I know I'm making a difference in not only the patient's life, but also [for] their family. Without my schooling, I wouldn't be able to do what I love, and for that I will always be grateful."

Where now ... ?

These statements paint a picture of an industry that can't or won't pay what will sustain the level of expertise the job of veterinary technician demands. Moreover, the stress and frustration were palpable in these veterinary technicians' words when they talked about what it's like to manage so much debt on such a small salary. Though still passionate about their work, many felt disillusioned and let down by the very job that had buoyed them up at the beginning of

What was your hourly wage in 2017?



199 VETERINARY TECHNICIANS SURVEYED

their careers.

It could almost be said that the industry uses our passion to take advantage of us, resulting in a stressed-out, insecure, revolving-door workforce. This constant loss of talent results in poorer care for patients, and when money concerns loom large, self-care gets pushed to the back burner, creating a cycle of stress with no outlet. These technicians may choose a suboptimal diet, fail to enjoy hobbies, or avoid nights out with friends simply because they can't afford it.

Remember that technician who gave up her equine companion of 25 years yet cares for others' pets all day? She may never forgive herself.

Kyle Wendy Skultety is the practice manager of VCA Bayview Animal Hospital in Toms River, New Jersey.

Say goodbye to **budgets**

If you're still putting cash into envelopes at the start of the month—or the online or Excel version of that—you should know there's a better way.

By Stephen Brinker, MBA

I'm not a huge fan of using monthly budgets. They can work for some, but they can create bad spending habits for others.

For example, budgets can encourage a "use it or lose it" mentality. Imagine a person budgeting X for meals each month. If he has \$75 left, there's a good chance he'll go out and blow the full \$75 when perhaps \$50 could've been just as good—or maybe saving that \$75 would've felt even better.

Budgets can also feel very static. Take car payments, for example. So many monthly budgeters create their budget and contribute exactly what's due on their car payment until the car is paid off in X number of years. Instead, I'd encourage people to look at their money surplus and ask whether paying off the vehicle a year earlier and parting with an extra \$100 a month helps them get closer to their goals faster.

A spending analysis, on the other hand, looks an awful lot like a budget, but the difference is how you use it—and think about it.

I was working with a veterinarian yesterday who's going to start paying her student loans shortly. I told her I thought we'd be able to get her monthly payment down to about \$500, but she told me she could only afford about \$200.

I had her fill out a form similar to a budget (download a spending analysis at dvm360.com/habits). She started with her monthly after-tax income and then listed out what she spends on each item every month. In the end, she realized a \$500-a-month payment was doable, and we were also able to lower one of her recurring monthly bills by almost \$100.

Monthly budgets can promote a passive approach to spending. When a category is estimated too high and the person overspends, they can shrug it off as long as they fall within

their monthly budget. The opposite is also true: A friend of mine, while she was in vet school, waited a week to go buy a pack of Diet Coke because she'd used her grocery budget for the month. Did the expense really make any difference in the long run? Absolutely not. Did she worry about it for a week and go without something she really loves for the sake of sticking to her budget? She did.

The big picture is that we trade money for happiness. If you start to look at your finances in this way, you'll make more informed and satisfying spending decisions.

Stephen Brinker, MBA, is a financial educator with financial services firm Kalibr.





Strategies to help clients pay for veterinary care

Life happens, and it's rife with accidents (which cost money). How can we help clients cover the costs of veterinary care so they can take care of their pets while we still cover our bottom line?

By Julie Carlson, CVT

A lethargic, severely dehydrated puppy is carried into your hospital. A metallic smell surrounds him. His owner breaks down in tears when you present him with a \$1,500 treatment plan to hospitalize the pup for a few days to give him the best chance of fighting off the parvovirus that's ravaging his little body. The owner says he doesn't have any money. What do you do?

This is an all-too-familiar situation: We want to treat everyone, but if we cut costs too much we won't be able to pay our staff or keep our lights on. Some people say, "If you can't afford to take care of pets, you shouldn't have them." The sentiment behind this statement is understandable, but it's not always so black and white.

There are lots of options out there for veterinary clients, but they often

don't know where to look. Here are some resources to share with them:

CareCredit

CareCredit is a credit card that can be used for medical purchases or bills, and that's not limited to veterinary care. Some clinics keep CareCredit applications on hand to give clients who find themselves in a tough situation. (CareCredit Direct makes it easier to apply in the



The otitis case that changed my business

p3



OTITIS

October 2018
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EARS



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★ WITH SPECIAL GUEST ★
SILVER SULFADIAZINE

VS

★ THE ★
PSEUDOMONAS OTTIS OF
CHARLIE
"JAWS"
MALONE

BAYTRIL[®] OTIC
(ENROFLOXACIN/SILVER SULFADIAZINE)
ANTIBACTERIAL-ANTIMYCOTIC EMULSION

FIGHT NASTY

CAUTION: Federal (U.S.A.) law restricts this drug to use by or on the order of a licensed veterinarian. Federal law prohibits the extra label use of this drug in food-producing animals. CONTRAINDICATIONS: Baytril[®] Otic is contraindicated in dogs with suspected or known hypersensitivity to quinolones and/or sulfonamides.

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FIGHTNASTY.COM



Baytril® Otic

(enrofloxacin/silver sulfadiazine)
Antibacterial-Antimycotic Emulsion

For Otolopical Use in Dogs

Caution: Federal (U.S.A.) Law restricts this drug to use by or on the order of a licensed veterinarian.

Federal law prohibits the extralabel use of this drug in food-producing animals.

PRODUCT DESCRIPTION:

Each milliliter of Baytril® Otic contains: enrofloxacin 5 mg (0.5% w/v), silver sulfadiazine (SSD) 10 mg (1.0% w/v), benzyl alcohol (as a preservative) and cetylstearyl alcohol (as a stabilizer) in a neutral oil and purified water emulsion. The active ingredients are delivered via a physiological carrier (a nonirritating emulsion).

MICROBIOLOGY:

In clinical field trials, Baytril® Otic demonstrated elimination or reduction of clinical signs associated with otitis externa and *in vitro* activity against cultured organisms. Baytril® Otic is effective when used as a treatment for canine otitis externa associated with one or more of the following organisms: *Malassezia pachydermatis*, coagulase-positive *Staphylococcus* spp., *Pseudomonas aeruginosa*, *Enterobacter* spp., *Proteus mirabilis*, *Streptococci* spp., *Aeromonas hydrophila*, *Aspergillus* spp., *Klebsiella pneumoniae*, and *Candida albicans*.

INDICATIONS:

Baytril® Otic is indicated as a treatment for canine otitis externa complicated by bacterial and fungal organisms susceptible to enrofloxacin and/or silver sulfadiazine (see Microbiology section).

EFFECTIVENESS:

Due to its combination of active ingredients, Baytril® Otic provides antimicrobial therapy against bacteria and fungi (which includes yeast) commonly encountered in cases of canine otitis externa.

CONTRAINDICATIONS:

Baytril® Otic is contraindicated in dogs with suspected or known hypersensitivity to quinolones and/or sulfonamides.

HUMAN WARNINGS:

Not for human use. Keep out of the reach of children. Avoid contact with eyes. In case of contact, immediately flush eyes with copious amounts of water for 15 minutes. In case of dermal contact, wash skin with soap and water. Consult a physician if irritation develops or persists following ocular or dermal exposures. Individuals with a history of hypersensitivity to quinolone compounds or antibacterials should avoid handling this product. In humans, there is a risk of user photosensitization within a few hours after excessive exposure to quinolones. If excessive accidental exposure occurs, avoid direct sunlight.

PRECAUTIONS:

The use of Baytril® Otic in dogs with perforated tympanic membranes has not been evaluated. Therefore, the integrity of the tympanic membrane should be evaluated before administering this product. If hearing or vestibular dysfunction is noted during the course of treatment, discontinue use of Baytril® Otic.

Quinolone-class drugs should be used with caution in animals with known or suspected Central Nervous System (CNS) disorders. In such animals, quinolones have, in rare instances, been associated with CNS stimulation which may lead to convulsive seizures.

Quinolone-class drugs have been associated with cartilage erosions in weightbearing joints and other forms of arthropathy in immature animals of various species.

The safe use of Baytril® Otic in dogs used for breeding purposes, during pregnancy, or in lactating bitches, has not been evaluated.

ADVERSE REACTIONS:

During clinical trials, 2 of 113 (1.7%) dogs exhibited reactions that may have resulted from treatment with Baytril® Otic. Both cases displayed local hypersensitivity responses of the aural epithelium to some component within the Baytril® Otic formulation. The reactions were characterized by acute inflammation of the ear canal and pinna.

For medical emergencies or to report adverse reactions, call 1-800-422-9874. For customer service or to obtain product information, including Material Safety Data Sheet, call 1-800-633-3796.

SAFETY:

General Safety Study:

In a target animal safety study, Baytril® Otic was administered in both ears of 24 clinically normal beagle dogs at either recommended or exaggerated dosages: 10, 30 or 50 drops applied twice daily for 42 consecutive days. A control group of 8 beagle dogs was treated by administering 50 drops of vehicle in one ear twice daily for 42 consecutive days, with the contralateral ear untreated. Erythema was noted in all groups, including both treated and untreated ears in the controls, which resolved following termination of treatment.

Oral Safety Study:

In order to test safety in case of ingestion, Baytril® Otic was administered, twice daily for 14 consecutive days, to the dorsum of the tongue and to the left buccal mucosa of 6 clinically normal dogs. No adverse local or systemic reactions were reported.

DOSAGE AND ADMINISTRATION:

Shake well before each use.

Tilt head so that the affected ear is presented in an upward orientation. Administer a sufficient quantity of Baytril® Otic to coat the aural lesions and the external auditory canal. As a general guide, administer 5-10 drops per treatment in dogs weighing 35 lbs. or less and 10-15 drops per treatment in dogs weighing more than 35 lbs. Following treatment, gently massage the ear so as to ensure complete and uniform distribution of the medication throughout the external ear canal. Apply twice daily for a duration of up to 14 days.

Bayer

Bayer HealthCare, LLC
Animal Health Division
Shawnee Mission, Kansas
66201 U.S.A.

U.S. Patent No: 5,753,269

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NADA # 141-176, Approved by FDA

September, 2016

18645

The otitis case that changed my business

When the owner of a Lhasa apso with chronic otitis refused to bring her dog in for a recheck, I turned the problem into a new policy at my veterinary hospital.

By Kathryn Primm, DVM

Long ago, I had a client (we'll call her "Ms. Madden") who changed my entire way of treating (and charging out) cases.

Ms. Madden and her Lhasa apso came to me from another practice. I was unsuccessful at obtaining good records, but according to the client, the other vet would always treat her dog's otitis with "antibiotic





TOOLS YOU NEED

For tips, tools and more resources for diagnosing and treating otitis, go to dvm360.com/otitistoolkit.

ointment" and it would go away quickly. But it always came back.

I gathered as much diagnostic information as Ms. Madden would allow, but because she was accustomed to the

other vet simply peeking in her pet's ears and sending her out the door with "antibiotics," she wasn't particularly open to my plan of providing a full workup.

I suspected that the other veterinarian had been handing out antibiotic and steroid combinations several times a year. Ms. Madden was under the impression that they worked great at

treating the "infection." I, on the other hand, had a hunch that the steroids would tame the inflammation, then the ears would look better and the client would stop the treatment (and the otitis would eventually rear its ugly ear again). I also feared that, because of this haphazard management, the Lhasa apso's ears had developed an infection that had



Sometimes the recheck is a quick “Everything looks like I wanted,” and sometimes we have to take additional measures. Regardless, both the pet and the practice win.

become resistant to first-line therapy choices.

Ms. Madden wouldn't allow me to perform culture and sensitivity tests but agreed to an ear cytology. The dog's ears were so swollen that I couldn't visualize his eardrums. I explained to Ms. Madden that I was going to prescribe something I thought would help (because without the culture, I couldn't know for sure). I told her that I would like to recheck the dog before finishing the medication—after the swelling had gone down some—to make sure his ears were responding to the treatment plan and to visualize his eardrums.

When she failed to show up for her recheck appointment, I called Ms.

Madden personally. She told me that the ears were “fine” now and that a desire for more money was the only reason I'd dialed her number. I tried to explain, but Ms. Madden would have none of it.

I took my frustration at this recheck refusal and turned it into something productive: I changed my hospital's policy. It's so important to me to get that recheck (especially on ears) that I've now built a courtesy follow-up appointment into every sick pet exam. I get to see my patient and provide better care, and clients can't claim I'm trying to rob them.

We explain that the recheck is a part of their charges at the first visit and that any change in medication or added products will be extra at the second visit. Sometimes the recheck is a quick “Everything looks like I wanted,” and sometimes we have to take additional measures. Regardless, both the pet and the practice win. The only thing you really lose is the complaining, and I don't think you'll miss it.



Kathryn Primm, DVM, the author of *Tennessee Tails: Pets and Their People*, owns Applebrook Animal Hospital in Ooltewah, Tennessee. She is a frequent contributor to dvm360.com and other publications, and she was the nation's first Fear Free certified professional.

New data on dermatology

SOURCE: PET OWNER PATHS, SPONSORED BY MERCK, UNFENCED, KYNETEC

When it comes to otitis and other dermatology conditions, pet owners aren't always on the same page as veterinarians. Do you know where your clients get their info when it comes to skin issues?

Pet owners*

Where **dog owners** looked for information on a **dog's** dermatology issue

54% used online sources

42% asked someone

76% of those: someone at their veterinary practice

59% of those: friends or family

39% thought about past experiences/knowledge

34% read about it

42% of those: product literature

37% of those: magazine or newspaper

33% of those: product packaging

6% saw or heard an ad

Where **cat owners** looked for information on a **cat's** dermatology issue

57% used online sources

44% asked someone

72% of those: someone at their veterinary practice

50% of those: friends or family

31% of those: a pet store employee

39% thought about past experiences/knowledge

42% read about it

55% of those: product packaging

44% of those: veterinary hospital printed material

42% of those: magazine or newspaper

19% saw or heard an ad



Pet owners*

What **dog owners** bought for a **dog's dermatology issue**

48% medicated shampoo
 38% of those: from pet store
 24% of those: from mass merchandiser
 18% of those: online
 17% of those: veterinary hospital



What **cat owners** bought for a **cat's dermatology issue**

39% medicated shampoo
 from pet store or from
 mass merchandiser

37% oral pill or tablet at
 veterinary hospital



28% oral pill or tablet at
 veterinary hospital

34% cream or ointment at
 veterinary hospital



39% cream or ointment at
 veterinary hospital

26% nutritional supplements
 or special food
 42% of those: from pet store
 21% of those: online



36% nutritional supplements
 or special food
 from pet store or
 veterinary clinic

19% natural or home
 remedy



25% natural or home
 remedy

14% liquid medicine at
 veterinary hospital



37% liquid medicine at
 veterinary hospital

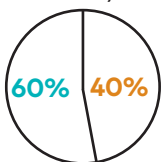
9% injections/shots at
 veterinary hospital



24% injections/shots at
 veterinary hospital

Veterinarians

Percentage of clients last week
 you talked to about **dermatology**



60% scheduled because
 of a dermatological
 issue

40% scheduled for preventive
 care or other reason

What percentage of clients looking for a
 dermatological solution end up **buying a product**
from you? (All, three-quarters, half or quarter?)

6% said a quarter

25% said half

56% said three-quarters

13% said all

*Respondents selected all that applied

Otitis *again?!?*

Solving those seemingly endless ear infections

By Mindy Valcarcel

An infection's recurrent nature stems from the many factors at play in your veterinary patients' poor sore ears. Here's what to note in the exam room to keep on top of it and stop the cycle.

In her aptly named Fetch dvm360 session, Laura Wilson, DVM, DACVD, a dermatologist at Pet Emergency and Specialty Center of Marin in San Rafael, California, discussed "Not another ear infection"—because you've thought these exact words, yes? Dr. Wilson says that when it comes to ear infections, there are three factors you must take into account: primary, secondary and perpetuating.

Primary factors are those that initiate inflammation in the ear, such as parasites (e.g. *Otodectes*, *Demodex* or *Sarcoptes* species), foreign bodies (e.g. grass awns) and allergies (e.g. atopic dermatitis, food allergies), as well as less common issues like keratinization disorders, immune-mediated disease and neoplasia.

Next up come the secondary factors. These are the things you see on a daily basis in your ear patients by performing an ear cytology: bacterial or yeast infections, or even both—what Dr. Wilson calls "dermatology potpourri."

Finally come in the perpetuating factors. This category of considerations is all about chronic inflammation or advanced changes such as stenosis or hyperplastic,



over-reactive changes to the ear canal.

"Every time you see an ear infection, you don't need to think, 'OK, primary, secondary or perpetuating?'" says Dr. Wilson. "But deep down, maybe you already are, because if we haven't addressed everything, it can definitely lead to complications. It's not really just a single treatment, but you're trying to intervene and prevent more chronic changes."

Rechecks are an absolute must for these patients, whether it's their first case of otitis or their fifth. And whether you're a solo practitioner or in a multi-doctor practice, the records you keep on ear patients are essential. They can help either your future self or your fellow docs if they end up seeing the patient on follow-up. Here's what Dr. Wilson says needs to be recorded in the patient's chart:

- **The ear pinna.** "Is it lying flat?" asks Dr. Wilson. "Or have you guys had that cocker spaniel whose ears look like airplane wings?" She says clients often don't realize that's a sign of stenosis, mineralization and, often, pain. She asks clients to gently feel the hardening

of their pet's ear ("It's turning to bone!") to counter the chances that owners will dismiss it, as owners of breeds like cocker spaniels tend to do.

- **The ear canal.** What does the ear look like? How about the external canal?

"It's not really just a single treatment, but you're trying to intervene and prevent more chronic changes."

Can you see where the ear canal is? "I also describe the material. Is it brown? Is it yellow? Is it waxy? Is it creamy? This really helps me from one visit to the next to have some idea of how things look," says Dr. Wilson.

- **Physical exam and ear canal palpation.** Dr. Wilson's cavalcade of questions she records for the next visit: Is the ear canal soft? Is it starting to be firm? Is it the left ear? The right? Is there any sort of pain with manipulation? Does the patient have a slight head tilt? Are you seeing any nystagmus or are you concerned about deeper ear involvement? What do you see on otoscopy or cytology? Cocci? Rods?

Yeast? How about inflammatory cells? Are there any other concerning changes?

That question about whether there are inflammatory cells is important, says Dr. Wilson. You're used to seeing inflammatory cells with other dermatologic conditions, but it's actually unusual for ear cases.

"Think about a really nasty ear—it smells, you lift it up in the exam room and it's nasty," she says. "If you smear that out, a lot of times you do not see inflammatory cells on an ear. When I do see them, I usually worry—do I have *Pseudomonas*? *Pseudomonas* can be more tissue-destructive, more painful, more inflammatory."

If any of this leaves you slightly stressed to face your next ear case, Dr. Wilson says to remember this—it will keep you on task and not freaked out by the "scary black box" that is an ear. "There are times that if you step back and say, 'OK, well, it's just skin. Maybe it's hyperplastic. What would I do for skin somewhere outside of the ear canal?' Sometimes that helps you focus on a plan and get a better understanding of what's going on."

5 hard truths about ears

Want better otitis patient management in your practice? **Listen to the vet techs.**

By Michael Nappier, DVM, DABVP

Veterinary technicians have a unique perspective on otitis cases. Here's what they have to teach your hospital's busy veterinarians:



hard truth ^{no.1}

An otoscope isn't a shoehorn

Forcing the otoscope down the ear canal may get the veterinarian the view they want, but it hurts and leaves a red, raw area in the ear canal. This makes the animal sensitive and makes everything the pet needs done afterwards more difficult.

Listen up: Instead of ram-rodging the otoscope, extend the ear canal with your hand and adjust the ear canal to the cone, not the other way around.

hard truth ^{no.2}

Yes, the vet tech sees rods

Believe it or not, technicians do know what they're looking at on an ear cytology. How often has a veterinary technician in your practice reported the results only to have a doctor check behind instead?

Listen up: Trust your licensed veterinary technicians. They do actually know what they're looking at.

hard truth^{no.3}

Free cleanings are hard work

Do any of your hospital's doctors give away no-cost ear cleanings? Upset about it? You should be. It's hard work to clean up two smelly, dirty ears on a bouncing 3-year-old Lab.

Listen up: If it took three people and 15 minutes to finish a task, that's time worth being compensated for, don't you think? Giving it away for "free" also trivializes the skill and effort. You don't see the average pet owner in there doing the ear cleaning for a reason, you know?

hard truth^{no.4}

Vet techs get clients to comply

Does the veterinarian seriously think your clients actually put that goopy stuff in their dogs' ears twice daily for three weeks? Ha! The veterinary technicians are the ones wrestling to get that stuff in during the visit so you can tell exactly how many doses they are or aren't going to get in.

Listen up: Make compliance easier with newer, simpler long-lasting medications like Claro (Bayer) or Osrurnia (Elanco). Taking compliance out of clients' hands makes for happier clients.

hard truth^{no.5}

There's no "one and done"

Otitis goes away magically after the first round of treatment, right? Veterinarians get busy and focused on current problems at hand. It's easy for them to forget about the follow up until they're seeing the dog back six weeks later for the same problem. Technicians are the client communication and compliance specialists in the practice.

Listen up: Make sure your hospital's doctors are supporting veterinary technicians by emphasizing the importance of making sure the infection is resolved to clients.



How to make a great impression

When it comes to diagnosing that crusty patient with otitis, Dr. Laura Wilson says you're gonna need to put your best cytology slide forward.

By Laura Wilson, DVM, DACVD

Never underestimate the importance of a lasting impression. The same can be said in the realm of ear disease. Laura Wilson, DVM, DACVD, a dermatologist at Pet Emergency and Specialty Center of Marin in San Rafael, California, spoke to Fetch dvm360 attendees in Kansas City about case-based approaches to the crusty patient and the importance of cytology in diagnosing these patients, including otitis cases.

"With cytology, there's so much to be learned from that little microscope slide," Dr. Wilson tells attendees. "An impression smear is good for your superficial infections. Doing swabs of ears to help identify otitis externa—is it bacterial, is it yeast, is it both?" Let's dig in.

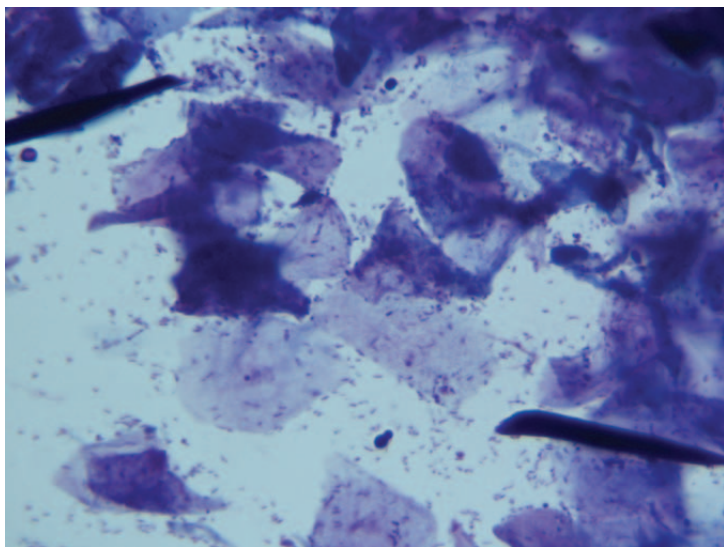


FIGURE 1: Cytology of an ear swab reveals a mixed population of bacteria and yeast.

The breakdown

Diagnostic tests to consider when facing the crusty patient include impression smears, skin scrapes, dermatophyte cultures, aerobic cultures of the skin and multiple punch biopsies for histopathology, Dr. Wilson says. For more superficial bacterial skin infections, like otitis externa, she says that impression smears are the

best course of action.

To establish the presence of organisms like bacteria, yeast and fungal spores, smears of pustules and exudative lesions can seriously help (Figures 1 and 2). "Number one, let's establish if this dog has an infection," she tells attendees.

And if you get a negative result on an impression smear, keep in mind that

it could have been a sampling error or any number of common mistakes. "Negative results can be inconclusive," Dr. Wilson says. "It could still be an infection and you missed it. This can be because we simply missed it on our slide or maybe the owners just gave the pet a bath. Or maybe they forgot to tell you that the white pill they are giving is an antibiotic. Don't be afraid to repeat your cytology if you think you may be missing something. I do it all the time."

If you're still unsure of the dermatological problem, Dr. Wilson says to take a deep breath and phone a friend. "If you're new or you just don't feel comfortable with it," she says, "you can always do a slide and send it out to a good clinical pathologist to read it and give you their interpretation. I do cytology constantly, so I'm always looking at impression smears."

The process

Dr. Wilson says to first grab your glass microscope slides—"I prefer the ones

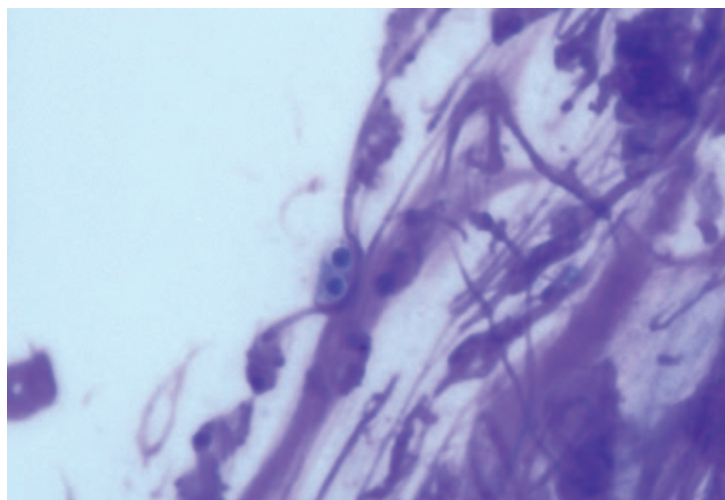


FIGURE 2: Cytology of an ear swab reveals fungal spores.

with the frosted edge," she says, "because if it doesn't have that, I have no clue which side I did my smear on." Then you just need your wooden cotton applicators—with or without a heat source for sample fixation—Diff-Quik staining materials, and a microscope with a scanning lens (4x) and an oil immersion lens (100x).

Whether you perform direct impression smears or tape-prep, one slide or multiple slides, Dr. Wilson says it's completely up to personal preference. For her, though, she likes to use one slide per crusty pa-

tient. "Technique-wise, you just pretty much take the slide—I'll use a corner of the microscope slide to poke a pustule, I'll use the edge to kind of lift—and then I'll smear all of that on the slide," she tells attendees.

Sometimes it's a little more difficult to get a slide into a patient's ear, Dr. Wilson says. For that, she recommends a cotton swab on those hard-to-reach areas that are then smeared onto the slide. "I am constantly doing cytology slides," she admits to attendees, and, eventually, she says, you'll find your rhythm in what process works best for you.



DR. HALL EXAMINES A DOG WITH OTITIS

Ears and allergies: A common couple in veterinary medicine

Why you might be just scratching the surface when addressing otitis in your patients. *By Melissa Hall, DVM, DACVD*

Ear disease is one of the most common reasons for a patient to be presented at the veterinary clinic. The pet owner may notice many different clinical signs, including odor,

discharge, head shaking, ear scratching or pain upon touching or petting the ears. At times, it may be so severe that the pet is presented to the emergency services and even develop aural

hematomas, requiring surgical intervention.

The cause of otitis can be tricky to ascertain since it's multifactorial, often complicated by inflammation and secondary microbial

Allergic diseases are reported as the most common cause of otitis, especially chronic otitis, responsible for 43% of cases.

overgrowth and infection. Also, as patients experience recurrent infections, proliferation of the tissue and reactions to the medications can further muddle the diagnostic process.

Throughout the years, several classification systems have been used to help categorize and diagnose otitis externa. One of the most accepted and utilized systems is to try to identify four aspects of otitis externa: primary causes, secondary causes, perpetuating factors and predisposing factors. When using this system, hypersensitivities and

allergies are considered a primary cause of otitis externa. In fact, allergic diseases are reported as the most common cause of otitis, especially chronic otitis, responsible for 43% of cases.^{1,2}

In dermatology referral practice, about 75% of chronic otitis externa cases are associated with atopic disease, and the otitis may be the only sign of environmental allergies. Food-allergic dogs are also prone to increased incidence of otitis externa. In fact, one study showed that 55% of 65 food-allergic dogs had otitis externa, and often the clinical signs of otitis preceded other signs of food allergy in 34% of the cases.³ In some breeds like cocker spaniels and Labrador retrievers, chronic recurrent otitis may be the only clinical sign of food hypersensitivity.

So when approaching otitis in a patient, treating the secondary bacterial and/or yeast overgrowth is only scratching the surface since identifying



TOOLS ON TOOLS
For more tips and tools, plus diagnostic and treatment resources, go to dvm360.com/otitistoolkit.

and controlling as much as possible all the causes and factors will lead to a better clinical outcome. Many recurrent ear infections cases benefit from a full investigation into allergic triggers, including elimination diet trials and environmental allergy testing.

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Treating canine otitis: So many options — *how do I choose?*

Topicals, systemics, antibacterials, antifungals, glucocorticoids ... The list of potential therapies is long, but with the right diagnostic information and patient history details, you can formulate a regimen that gets those ears under control. *By Lynette Cole, DVM, MS, DACVD*

Once you've diagnosed an otic infection, it's time to put together your treatment plan. Topical therapy is almost always a staple of treatment, and systemic antimicrobials may be necessary as well. At each recheck, you'll be monitoring the patient's response to treatment, performing cytology, and adjusting products accordingly.

In most cases of infectious otitis externa, topical therapy alone is enough. In patients with severe infections or with long-standing chronic otitis externa, you may need to add a systemic antimicrobial agent to clear the infection in the ear tissue as well as in the lumen of the ear canal. Dogs with concurrent infectious otitis externa and otitis media usually require

both topical and systemic antimicrobial therapy.

Topical options: A rundown

Topical otic preparations generally contain glucocorticoids, antibiotics, antifungals or some combination thereof in a vehicle base. Rely on your cytology results to select the right active ingredient for topical use. Remember, you can achieve 100 to 1,000 times the plasma level of the antimicrobial agent by administering it topically. Cytologically monitor your patient's response to these medications at each reevaluation and adjust the topical therapy accordingly.

No commercially available topical otic treatments are labeled for use with a nonintact tympanic membrane, but most of them

have been used to treat otic infections in dogs with otitis media. Warn clients to watch for neurological signs of ototoxicity while administering topical medications when the tympanic membrane is not intact.

With that note, let's look at topical agents one at a time.

Glucocorticoids are antipruritic, anti-inflammatory and antiproliferative. During the acute stage of otitis, the ear canal becomes edematous and erythematous. As the inflammation progresses, the dermis becomes infiltrated with a mixed population of cells. Apocrine glands dilate and become hyperplastic, which leads to excessive cerumen production.

Glucocorticoids are therefore beneficial in decreasing the pain, pruritus, stenosis and edema



associated with otitis. In addition, they're effective in decreasing sebaceous and apocrine secretions. They're usually used in combination with other agents but may be beneficial when used alone in allergic cases of otitis and some ceruminous otitis cases. It's important to use the lowest-potency glucocorticoid at the lowest frequency needed to control the otitis to prevent iatrogenic hyperadrenocorticism.

Topical aminoglycosides such as neomycin and gentamicin have good activity against gram-positive and gram-negative otic pathogens for the treatment of acute otitis externa. Gentamicin and neomycin are available in many combination products, some of which contain an antifungal

and glucocorticoid. Another aminoglycoside, tobramycin, is available as an ophthalmic solution and is very effective against otitis infections caused by *Pseudomonas* species, especially in cases of chronic otitis externa.

Fluoroquinolones have a broad spectrum of antibacterial activity against gram-negative and gram-positive bacteria. Note that fluoroquinolones are a second-line treatment for chronic otitis externa cases, not acute infections.

Polymyxin has excellent in vitro activity against *Pseudomonas* species with resistance rarely developing, but it's inactivated in purulent debris so the ear needs to be kept clean during treatment.

Florfenicol has been available for a number

of years as a fast-acting, long-lasting injectable antibiotic for the treatment of bovine respiratory disease. Recently, two new otic medications (Claro—Bayer; Osrurnia—Elanco) have been approved for the treatment of bacteria (*Staphylococcus pseudintermedius*) and yeast (due to the addition of terbinafine in the products). They also contain a topical glucocorticoid.

Tris-EDTA is a topical product that enhances the activity of topical antibiotics against otic pathogens by decreasing stability and increasing the permeability of the cell wall of gram-negative bacteria.

Antifungal agents are used in cases of otitis caused by *Malassezia* or *Candida* species. Ingredients that are

active against yeast include nystatin, thiabendazole, miconazole, ketoconazole, posaconazole, clotrimazole, and terbinafine.

How to choose

So how do you decide which topical products to choose? Start with the chronicity of the otitis, the results of your otic examination, and your otic cytology results. The results of cytologic examination of otic exudate are the basis for your selection of the active ingredient. Keep in mind that ointment- or suspension-based otic preparations may not be as effective as those that are solution- or emulsion-based if the ears are stenotic or hyperplastic, as may be the case in those patients with chronic otitis externa, but they can be used if the ears aren't stenotic or hyperplastic or in patients with acute otitis externa.

Choose first-line topical otic medications for cases of acute or occasional otitis externa, reserving second-line otic medications, such as those containing fluoroquinolones, for cases of bacterial otitis due to *Pseudomonas* species or chronic infections that haven't responded to first-line topical otic antimicrobial products.

Systemic considerations

Systemic antimicrobial therapy for infectious otitis externa and otitis media is controversial. In dogs with end-stage otitis externa and concurrent otitis media, bacterial organisms can be isolated from the exudate in the lumen of the vertical ear canal and middle ear cavity as well as from the tissue from these sites. So most experts agree that systemic antibiotics—based on culture and susceptibility testing—are indicated in patients with:

- otitis media
- severe proliferative chronic otitis externa
- ulcerative otitis externa
- inflammatory cells seen on cytology (indicating deeper skin involvement)
- owners who cannot administer topical therapy.

It's important to select a systemic antimicrobial agent based on culture and susceptibility testing from the external ear (for otitis externa) and middle ear (for otitis media), but go ahead and initiate therapy based on cytologic results while you're waiting on culture and susceptibility results.

Indications for systemic

antifungal agents are similar to those for bacterial infections. Use systemic products in patients with yeast otitis media or severe yeast otitis externa and for owners who cannot administer topical therapy. Otic yeast infections require topical therapy in addition to systemic therapy for resolution. Ketoconazole and itraconazole have been used in dogs for the treatment of yeast otitis.

Systemic glucocorticoids are used to decrease stenosis, edema and hyperplasia of the vertical and horizontal ear canal to allow a complete otic examination as well as proper cleaning of the ear. They're also indicated in cases of allergic otitis externa. In older patients or those with concurrent diseases, you may need to perform bloodwork before starting your patient on glucocorticoids. Aim to use the lowest dose needed to prevent side effects, with the end goal of discontinuing the systemic glucocorticoid.

Dr. Lynette Cole is a professor of dermatology at The Ohio State University College of Veterinary Medicine. This article is adapted from her proceedings for a Bayer-sponsored session at the 2017 Fetch dvm360 conference

DYK? **Laser therapy can treat otitis**

Photobiomodulation therapy (PBMT)—the more accurate term for therapy laser treatments—can be used for a variety of dermatologic conditions. It's best used in a multimodal approach, and doing so may decrease the need for systemic medications. While PBMT doesn't replace surgery, it can be used in cases where surgery isn't an option and would provide a better option than medication alone.

The most important element to check before using PBMT for otitis and other skin conditions is to first verify that you are not dealing with cancer. Because laser therapy can accelerate tissue healing, we could potentially cause a tumor to become larger or more aggressive in nature. Once it has been verified that the patient doesn't have cancer, here's how I'd treat an end-stage otitis externa case.

Also called "cauliflower ear," end-stage cases are often painful and the ear canal has narrowed. Because of this narrowing, while awaiting culture results, it can be challenging to administer topical medications. Also, some dogs cannot take a non-steroidal anti-inflammatory drug (NSAID), which would relieve some of the pain from the inside out. Systemic prednisone is not

indicated in these cases, so what other anti-inflammatory and pain-relieving option do you have? Photobiomodulation! The therapy laser can be used once a day or every other day for two to three weeks to reduce inflammation and pain. This then allows for easier treatment of the infected ear canal and appropriate administration of topical medications.

As part of that multimodal approach, the laser treatments can then be tapered to a lower frequency and can even be used for long-term chronic management of these cases. The key is repeated treatments, as PBMT works on a cumulative effect. A one-time treatment may be helpful for temporary relief of pain, but multiple treatments will be needed for patients with chronic conditions.

Of course, acute otitis cases happen as well. Those red, painful ears can be challenging for pet owners to manage. In conjunction with topical medications and cleanser, PBMT can be used here as well. I find it especially helpful if the dog is boarding while the pet owners are on vacation, so daily or even twice-daily PBMT treatments can be performed.

—*Matthew Brunke, DVM, DACVSMR, CCRP, CVPP, CVA*

Dr. Matt Brunke is a pain and rehabilitation specialist with Veterinary Orthopedic and Sports Medicine Group in Annapolis Junction, Maryland. He's also a regular contributor and speaker at Fetch dvm360 conferences.

Sample script:

How to pitch clients on otitis rechecks

Otitis cases may need more than one appointment to resolve, but how do you get clients to see the importance of bringing their pet back to the clinic?

By Katie Adams, CVPM

Otitis rechecks are part of providing complete patient care, so why do we struggle to get clients back in the door for these much-needed follow-ups? Typically, the disconnect has to do with something simple: plain ol' poor communication. Let's examine some strategies for ensuring your clients hear you loud and clear.

Be consistent. Ensure that everyone from the groomer and kennel staff, to your veterinarians, gives your clients a consistent message. Your hospital should have a standard protocol for otitis rechecks, so be sure that everyone knows it. Each touchpoint that a client has with your team should involve reinforcing the expectation that the patient recovering

from otitis will be seen for the recheck according to your protocol.

Share literature. We all have a thousand things zooming around inside our heads at any given moment, with an onslaught of new info that doesn't stop. Give your clients the chance to be successful with your recheck recommendation by sending them home with a short and sweet handout on the importance of a recheck following an otitis diagnosis. If handouts feel old school to you, send them a quick email (or text) with the info.

Educate on social media. Launch a quarterly social media campaign that reminds clients about the importance of rechecks for all sorts of conditions.

Pick a different diagnosis to highlight each time. For example, in Q1 talk about the importance of otitis rechecks; in Q2 highlight UTI rechecks and so on. You can even have some fun buttons made for your front desk team to wear during these campaigns to reinforce the idea.

Practice scripts. There are common objections to recheck appointments, so create some scripts for your team and role play (yes, I said it), so they are comfortable executing the script with a reluctant client.

Sample script for otitis rechecks

Here are a few common pet owner objections to otitis rechecks along with possible team member responses. Ask your staff to practice these



exchanges in small groups, so they learn to ask good questions of clients to gauge understanding as well as deal with the pushback about time and money that we often face.

OBJECTION:

"I don't have my calendar with me."

Team member response:

"I completely understand, I know my schedule changes all the time. But our clinic calendar can book up pretty quickly. We can get something scheduled to hold a spot for Max and you can always change it later if you realize it won't work."

OBJECTION:

"I'm not sure I can afford

another \$300 visit, so I'm going to wait to see how Max is doing before I schedule the recheck."

Team member response:

"I can certainly appreciate the cost involved with caring for pets. My concern is that if Dr. Smith doesn't get to see that Max is improving or healing as expected, it may result in costlier problems down the road."

OBJECTION:

"I'm going to wait and see how Max is doing before I schedule. He may not need the recheck."

Team member response:

"I certainly hope that Max is on the mend quickly. His recheck appointment is important for multiple

reasons. Dr. Smith can ensure that he's improving as expected, that he's responding to the medication as expected, that he's healing as expected, and that the ear infection has completely resolved."

Most importantly, remember that nothing is obvious to our clients. We live and breathe veterinary medicine, but they don't. Whatever your strategy is, be sure it's clear and concise and doesn't assume that your well-meaning clients have any previous knowledge.

Katie Adams, CVPM, is director of Curriculum Development at IGNITE Veterinary Solutions.

Client handout:

Types of otitis and what to watch for

Educate your veterinary clients on the basics of otitis externa, media and interna and how you'll get to a diagnosis.

What the client sees: some extra head shaking and itchiness—normal pet stuff, right?

What you see: a potentially serious problem needing immediate attention and care.

The goal of this handout is to help clients see the signs of otitis through your lens. It covers the three types of otitis (externa, media and interna), the warning signs of each, as well as what clients can expect from you with regards to zeroing in on a diagnosis.

FROM YOUR VETERINARIAN 

OTITIS: What it is and what to watch for in pets

Is your pet scratching at his ears or shaking his head more than normal? Otitis could be the problem. Learn more about what could be going on with your pet and how your veterinarian may get to a diagnosis.

Otitis is a general term to describe inflammation of the ear, but it can be broken down into three different types:

- Otitis externa**
Otitis externa describes when the external ear canal is inflamed. Inflammation can occur when the glands inside the ear canal produce too much wax and discharge, causing the canal to narrow. It can also be caused by infection (bath foam bacteria and fungus). Otitis externa can cause pain, redness, itching and head shaking. If the condition lasts a long time or recurs over and over, it can lead to a ruptured eardrum and inflammation of the inner ear canal.
- Otitis media**
Otitis media describes inflammation of the middle ear structure, which is often caused by an extension of infection from the external ear canal or a ruptured eardrum. The signs of otitis media can look similar to those of otitis externa: head shaking, pain, itching, rubbing, discharge and tilting of the head are often seen.
- Otitis interna**
Otitis interna describes inflammation of the inner ear structures caused by ruptured inflammation of the middle ear. It has similar signs to otitis externa and otitis media, but it also includes dizziness and loss of balance. Neurologic signs such as facial

nerve paralysis and nystagmus (involuntary eye movement from side to side) are sometimes seen as well.

How your veterinarian can help your pet
These conditions can be diagnosed using several methods. Your veterinarian will most likely start by performing an exam, such as otoscopy to detect wax or look in your pet's ear to diagnose noise and visible ear infections. Your veterinarian may also perform a microscopic examination to check

for yeast and bacteria in the ear. If an inner ear infection is suspected, a computed tomography scan (commonly called a CT scan) or magnetic resonance imaging scan (commonly called an MRI) may be needed if your pet's ear canal is not if fluid is collecting or if cellulitis is growing.

Be sure to see your veterinarian if your pet is experiencing any of the signs of otitis externa, media or interna. These conditions can cause serious problems if they last for long periods of time or are left untreated.



Source: Carol Saba, CVT, VTS (Internal Practice)

Scan the code to download the handout.



Otitis quandary: To pluck or not to pluck hair in the ear?

During her Fetch dvm360 presentation "Not another ear infection," Laura Wilson, DVM, DACVD, answered several audience queries, including this one she gets often: "Should I pluck the hair in the dog's ear?" Well, it depends, as in all things, she says. In this audio clip from the session, hear all the details, including a particularly tangled case in a standard poodle.

Unfortunately, ear infections in standard poodles are pretty standard. What to do with all that hair? Scan the QR code to listen to Dr. Wilson's thoughts on plucking hair in dogs' ears.

**CLARO®**

(florfenicol, terbinafine, mometasone furoate)
Otic Solution

Antibacterial, antifungal, and anti-inflammatory
For Otic Use in Dogs Only

The following information is a summary of the complete product information and is not comprehensive. Please refer to the approved product label for complete product information prior to use.

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

PRODUCT DESCRIPTION: CLARO® contains 16.6 mg/mL florfenicol, 14.8 mg/mL terbinafine (equivalent to 16.6 mg/mL terbinafine hydrochloride) and 2.2 mg/mL mometasone furoate. Inactive ingredients include purified water, propylene carbonate, propylene glycol, ethyl alcohol, and polyethylene glycol.

INDICATIONS:

CLARO® is indicated for the treatment of otitis externa in dogs associated with susceptible strains of yeast (*Malassezia pachydermatis*) and bacteria (*Staphylococcus pseudintermedius*).

DOSAGE AND ADMINISTRATION:

CLARO® should be administered by veterinary personnel. Administration is one dose (1 dropperette) per affected ear. The duration of effect should last 30 days. Clean and dry the external ear canal before administering the product. Verify the tympanic membrane is intact prior to administration. Cleaning the ear after dosing may affect product effectiveness. Refer to product label for complete directions for use.

CONTRAINDICATIONS:

Do not use in dogs with known tympanic membrane perforation (see **PRECAUTIONS**).

CLARO® is contraindicated in dogs with known or suspected hypersensitivity to florfenicol, terbinafine hydrochloride, or mometasone furoate, the inactive ingredients listed above, or similar drugs, or any ingredient in these medicines.

WARNINGS:

Human Warnings: Not for use in humans. Keep this and all drugs out of reach of children. In case of accidental ingestion by humans, contact a physician immediately. In case of accidental skin contact, wash area thoroughly with water. Avoid contact with eyes. Humans with known hypersensitivity to florfenicol, terbinafine hydrochloride, or mometasone furoate should not handle this product.

PRECAUTIONS:

Do not administer orally.

The use of CLARO® in dogs with perforated tympanic membranes has not been evaluated. The integrity of the tympanic membrane should be confirmed before administering the product. Reevaluate the dog if hearing loss or signs of vestibular dysfunction are observed during treatment.

Use of topical otic corticosteroids has been associated with adrenocortical suppression and iatrogenic hyperadrenocorticism in dogs.

Use with caution in dogs with impaired hepatic function. The safe use of CLARO® in dogs used for breeding purposes, during pregnancy, or in lactating bitches has not been evaluated.

ADVERSE REACTIONS:

In a field study conducted in the United States, there were no directly attributable adverse reactions in 146 dogs administered CLARO®.

To report suspected adverse drug events and/or obtain a copy of the Safety Data Sheet (SDS) or for technical assistance, contact Bayer HealthCare at 1-800-422-9874.

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>.

NADA 141-440, Approved by FDA.

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- ◆ Vet administered to ensure compliance
- ◆ No work for your clients

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CLARO[®]

(florfenicol, terbinafine, mometasone furoate)
Otic Solution

Claro[®] Otic Solution is approved for the treatment of ear infections in dogs caused by susceptible strains of yeast (*Malassezia pachydermatis*) and bacteria (*Staphylococcus pseudintermedius*). CAUTION: Federal (U.S.A.) law restricts this drug to use by or on the order of a licensed veterinarian. **CONTRAINDICATIONS:** Claro[®] should not be used in dogs known or suspected to be allergic to Claro[®] or any of its ingredients.

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clinic on smartphones, tablets and more.) Depending on what the clinic offers, clients can get six-to-24-month financing plans. There's no interest as long as the bill is paid off within the time limit. If not, interest is charged from the original date of purchase. Interest is high—about 26.99 percent—so it's crucial to pay it off within the promotional period.

Scratchpay

Scratchpay is a payment plan that lets clients pay a bill within 30 days with no interest. Plans are available for 12 or 24 months at various interest rates. It's a simple process to apply online. Scratchpay immediately pays the clinic, and clients make installment plans in the form of electronic transfers from their bank accounts.

GoFundMe

If you're on social media, you've probably heard of GoFundMe. The platform originally started as a way to give people facing foreclosure, medical bills or some other looming debt a way to reach out for help, but it has grown to include wedding costs, tuition, vacations and more. With over 2 million campaigns to date, it's a fast way to make money and an increasingly common way to ask friends for cash.

Keep in mind, however, that GoFundMe also takes 5 percent of donations raised, along with a 2.9 percent processing fee and a 30-cent charge on every donation. Because of these added fees, alongside the fear of being scammed, a lot of clients will simply post on social media asking for people to call the clinic and make a payment toward their veterinary bill.

Veterinary bill assistance programs

Many clinics keep a list of assistance programs that may help clients in financial straits, with such groups as Brown Dog Foundation, Paws 4 a Cure and Red Rover. Larger groups—including American Humane, ASPCA and the Humane Society of the United States—may also be able to help cover some costs.

Saving

Putting a little bit of each paycheck into a savings account is a simple way to build an emergency fund should the unexpected occur. Clients can set up an automatic transfer that will move a designated amount of money at a scheduled time. Most people get paid every two weeks—transferring only \$10 of each paycheck will build a \$260 cushion each year. Taking \$25 out of each

check is often not noticed and would give a client a \$650 balance at the end of the year.

Pet insurance

A lot of people don't realize pet insurance even exists. Coverage varies between insurance companies, ranging from wellness plans to major medical to full coverage. Premiums are typically \$10 to \$60 per month depending on coverage selected. Although pre-existing conditions may not always be covered, pet insurance can take away the worry of having to base care on available finances. With over 43 million U.S. households owning pets, this is also becoming a trend in employee benefit packages.

Life happens to all of us, and we can't plan for every eventuality. But by helping clients discover the resources out there that can offer financial assistance, we give them the ability to help their pets. And that benefits us all.

Julie Carlson is a freelance author and a certified veterinary technician. She is the winner of the 2015 Hero Veterinary Technician Award from the American Humane Association and the founder of Vets for Vets' Pets, a nonprofit organization providing medical care to the pets of homeless and at-risk veterans.

More ways to help them pay

> It's probably not enough to tell panicked pet owners in the exam room about payment options.

Instead, use these prewritten tweets and Facebook posts to start the conversation with your clients before emergencies happen at dvm360.com/paymentposts.

> Need a refresher on conducting sensitive money conversations with veterinary clients? We've got an algorithm for that. Find it at dvm360.com/paychart.



These tools were made for (dog) walkin'

A walk in the park should be just that for both the dog and the owner. Read up on these leash, harness and halter options so you'll be ready to help your veterinary clients find the finest fits for their canine companions.

By Mikkel Becker, CBCC-KA, CPDT-KA, KPA CTP, CDBC, CTC

For many dogs, a walk with their owner is the most highly anticipated event of the day, and we know it's good for the bodies and minds of the creatures at both ends of the leash. But when a dog's

on-leash behavior is out of control, walk enjoyment (and frequency) can plummet. To help owners control the chaos of leashed walks, consider talking with your clients about these humane walking tools.

LEASHES

There are three main options:

1. Fixed-length leash: A standard, fixed-length leash is an absolute must because it's the perfect tool to help teach dogs to walk

politely. Leashes that stretch or are retractable can actually teach and reinforce pulling behaviors. Instead, a fixed-length leash is just that, meaning there's no guesswork on the amount of space the dog can venture away from its owner before hitting the end of its rope (err ... leash). The set length is important for teaching the dog that the freedom to move forward doesn't come until the dog feels slack instead of tension.

There are a variety of options within the fixed-length family:

> Length. A 6-foot leash is ideal for most dogs. A 4-foot leash increases the likelihood that the owner will grip too tightly on the leash without allowing for slack, thereby increasing the likelihood of tension in the dog (and increasing the likelihood of reactive behavior).

> Material. The standard nylon leash can be an excellent choice, but climbing rope material leashes are an increasingly popular option. Both materials are ideal for their strength, durability and limited flex. In most cases, a leash with built-in bungee stretch will cause challenges for owners trying to teach loose-leash walking skills. It can also make it more difficult to reel in the dog when needed. However, for owners with pain or mobility issues, these options can help reduce the jarring pull to joints if the dog suddenly lunges and hits the end of the leash.

> Other features. Some leashes are equipped with carabiner clips that allow for a quick clip to an eye

bolt or around a fixed point (like a tree) for a hands-free training session or around the waist for a mobile, hands-free walk or training session.

2. Waist-worn leash: Waist-worn leashes are excellent hands-free options for jogging and multitasking situations (such as pushing a stroller and walking the dog at the same time). They can also work well for dog-training class or training while out on walks as the owner's hands are free to reward the dog for right behaviors. Tell clients to look for waist-worn leashes with a quick-release option in the event of an emergency, such as the Buddy System Hands Free Leash.

Jogging-specific leashes may use a stretchy material for the length of the leash. This can be beneficial for reducing the jolt to both the owner and the dog as changes in pace or direction are made. However, for teaching and retaining loose-leash walking skills, the stretch can cause problems.

3. Long line leash: Long line leashes allow the dog to have more freedom without the owner losing control. Lengths vary, but 15-, 20- and 30-foot options are common. Long line leashes are a better way to allow a dog to explore at the end of its leash than retractable ones. (Read more on this in the sidebar to the right.)

EQUIPMENT

From harnesses to head halters, here's what I recommend:

1. Harness: Harnesses can be a

Rein in retractables

Retractable leashes prove problematic in almost all situations. (I know you're shocked—wink, wink.) Most, if not all, of us are familiar with the unwelcome greeting of a dog rushing up to veterinary clients from across the clinic waiting room that results in distress for the pets and a tripping hazard for the people. Or how many times have you seen a dog panic and run away in desperation when the leash handle slips out of its owner's hand and "chases" behind the fleeing, frightened dog?

But if they are going to be used (and they will, regardless of our warnings), educate your veterinary clients on where it's safest to do so. These are not devices to use in crowded spaces like sidewalks, the veterinary office or a training class. Rather, they need to be limited to an open area, such as a large park, where the leashed dog can actively move and sniff with freedom without impeding upon other dogs. If clients are using a retractable leash while leash training, encourage them to use a back clip harness rather than one that clips in the front or clipping the leash to a flat collar. This can help the dog differentiate the situation and, by extension, reduce the unwanted pulling.

Cut out corrective collars

Any device that causes fear or pain to incentivize the dog to remain close to its owner (such as prong, pinch, choke chains and shock collars) comes with risks. These include creating unintended negative associations as well as causing repeated physical pain and psychological trauma without actually teaching the dog what to do instead.

Forget flat collars?

Flat collars offer an option for ID tag holding and a quick clip for walking the dog. However, they may also add additional stress to the canine's throat and do little to decrease the strain with dogs prone to pulling.

great option, but the structure and fit are important considerations. Certain harnesses cross over the front of the dog's shoulders and chest, and while these can be helpful for deterring pulling in some instances, they can cause mobility challenges and their use is limited to a shortened period of time. Other options center in the front of the dog's chest, which allows for more free movement of the dog's shoulders as it walks, jogs or runs and increases the amount of time the dog may be comfortable wearing the device.

Another important consideration is where the leash clips to the harness:

> **Back-clip harnesses** can be an excellent option for allowing dogs to freely explore (as may be done on a long line). However, for dogs that pull or are difficult to control on the leash, the back-clip harness adds to the owner's challenges.

> **Front-clip harnesses** that clip at the center point of the dog's chest, such as the SENSE-ation Dog

Harness and Wonder Walker Body Halter, use the dog's own motion and center of gravity to gently deter pulling. These harnesses are relatively easy for dogs to acclimate to and offer increased directional control over the dog that helps deter pulling and increase owner control.

Where the leash clips is only one consideration when it comes to harnesses. Other options include:

> **Tightening harnesses**, such as the Easy Walk Harness, have a limited slip function that provides gentle pressure to a fixed degree as the dog walks to help deter pulling in a gentle manner.



> **Multifunctional harness and leash systems** allow for varied hookup points, including those that allow the leash to be attached at a fixed point on both the back and chest (like the 3 in 1 Harness from PetSafe and the Freedom No Pull Harness). This flexibility in functionality can prove to be a handy tool for adjusting to the given walk scenario and allow for graduation during the training process of teaching the canine to walk nicely on a leash.

2. Head halter: Head halters like the Gentle Leader Headcollar and HALTI Headcollar give owners control without compromising the dog's trust. They control the dog's nose, mouth, head and, by extension, its entire body, in a way that's similar to how horse halters function and are especially helpful for dogs with pulling issues and those that would benefit from increased direction (such as reactive dogs).

Dogs will need an adjustment period to get used to the halter, and owners will need education from you. To ensure they're used correctly, teach owners how important it is to achieve the right fit and to desensitize dogs to the device (a Victory Visit is a great time to do this). Teaching a dog to put its nose willingly into the device rather than immediately placing the equipment will help decrease the dog's apprehension and increase its compliance and comfort when wearing the device.

Now that you have this knowledge, share it! Don't hesitate to bring it up with pet owners in the exam room. There's a good chance that several of your clients are struggling in this area, and they may not know that you're the perfect person to offer advice. Even if your canine patients come in with all the right equipment, that doesn't mean their owners are using it properly or that the equipment is working well. By doing a little gentle conversational probing, you can help protect and enhance the human-animal bond and keep your patients safe at the same time.

Mikkel Becker is the resident trainer for vetstreet.com and works in conjunction with veterinarians and veterinary behaviorists to address behavior issues in dogs and cats. Her four-legged best friend is Willy the pug, a certified therapy dog through the Delta Society. They are both adventurers and enjoy traveling together.

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Lifestage nutrition: Different needs call for different feeds

Your clients know you can't feed a human baby what you feed an adult, but they may think nothing of filling their puppy's bowl with kibble meant for mature dogs and vice versa. *By Kara M. Burns, MS, MEd, LVT, VTS (nutrition)*

While dog owner intentions may be good when it comes to nutrition, their knowledge can be a barrier. The veterinary team has an opportunity to counsel owners on getting pets the nutrition they need. And, as evidenced by the fact that many puppies are fed foods meant for adult dogs and vice versa, one area that could use your guidance is the concept of lifestage nutrition.

Lifestage nutrition

Veterinary nutrition goals focus on proper feeding for health, performance and long life. Accordingly, the pet should receive a diet designed to meet its individual needs. Feeding pets a food aimed at meeting their optimal nutritional needs at a specific age or physiologic state (e.g. maintenance, reproduction, growth or senior) is known as lifestage nutrition.¹ The concept acknowledges that feeding below or above an optimal nutrient range can negatively impact biological performance and health.

Lifestage nutrition significantly differs from the "all life stages" concept of feeding, which entails feeding one product for all life stages.² Nutrients are added to these foods at levels that meet the highest potential need: growth

and reproduction. The concern with this approach is that these foods provide adult animals with nutrients above their biological needs.

A puppy's body requires more resources to grow than to maintain, so if it's eating an adult maintenance dog food, it may not be getting all of the essential nutrients it needs in its crucial early months.

The reverse is also of concern: Switching a puppy to an adult formulation may result in that puppy not receiving the proper amount of nutrients during the growth life stage.

Puppies ≠ adult dogs

Puppies can look like adults on the outside while still growing on the inside. The majority of dogs aren't fully mature until around 12 months of age, and giant breeds may take a little longer. It's imperative for the veterinary team to recommend keeping a puppy on puppy food until the epiphyseal plates close. After all, the nutrient needs differ as

the puppy is building bones, teeth, organs, etc., and early growth is important to the dog's long-term health. A puppy's body requires more resources to grow than to maintain, so if it's eating an adult maintenance dog food, it may not be getting the essential nutrients it needs in its crucial early months.

The nutrient density of the food and the amount of food fed have a direct effect on the growth rate of puppies. It's recommended that puppies be fed to grow at an optimal rate for bone development and body condition rather than at a maximum rate. Growing animals reach a similar adult weight and size whether the growth rate is rapid or slow. However, it's important to remember that feeding for maximum growth increases the risk of skeletal deformities in puppies and has been found to decrease longevity in other species.

Get practical

The most practical indicator of whether or not a puppy's growth rate is healthy is its body condition score (BCS). Veterinary team members should score all puppies and reassess the BCS at least every two weeks to allow for adjustments in amounts fed and, consequently, growth rates. Regular assessments

provide immediate feedback about optimal nutrition.³ Pet owners can and should be taught to assess their pup's BCS, which will help them discern what a healthy, growing puppy looks like.

The veterinary team should also perform a nutritional assessment on every pet that comes in to the hospital every time it comes in. This aids in identifying and reducing potential nutrition-related health risks at each life stage. Team members should use these assessments as an opportunity to educate owners regarding their pet's basic nutritional requirements at each life stage.

Consider disease risks too

Growth is a complex process involving interactions between genetics, nutrition and other environmental influences. Nutrition plays a role in the health and development of growing dogs and directly affects the immune system, body composition, growth rate and skeletal development.

Integrating disease risk factor management into the pet's feeding plan improves the

value of lifestage feeding. The combination of the nutritional requirements associated with a pet's age and physiologic state with the nutritional goals of disease risk factor reduction often results in the optimal nutrient range to recommend for a pet's particular life stage.

For a list of references, visit dvm360.com/lifestagenutrition.

Kara Burns is the founder and president of the Academy of Veterinary Nutrition Technicians and is the current president of NAVTA. She enjoys collecting sports (especially hockey) memorabilia and is a storm spotter for the National Weather Service.



Veterinary nurses: Become your practice's **dentistry VIP!**

It's a well-known fact that a majority of pets suffer from dental disease at some point in their lives. Help your practice help them by becoming the dentistry advocate. *By Candice Hoerner, CVT, VTS (dentistry)*

Every day we veterinary nurses are asked to perform a multitude of tasks to provide our patients with excellent care and service. One of these life-lengthening services is dentistry. If you look at the current data, we know that approximately

75% of patients over 3 years old have periodontal disease, among a myriad of other dentistry-related conditions. Why do so many suffer in silence? It's our role as veterinary nurses to become our practices' dentistry advocates and promote dental care to our clients to provide the highest standard of care for our patients.

Roles of a dentistry VIP

Client communication: Your patients need high-quality dental care, and the best way to convey this to your clients is by properly educating yourself first. When you take the time to educate yourself on the subject and understand the pathology and physiology and the effects on the animal, you will then be able to share this information with the client and provide a tremendous benefit to the patient. If you're informing the client of the proper care with passion, enthusiasm and sincerity, they are more likely to accept your recommendation. All can be lost if the whole team isn't supplied with the proper knowledge to inform the client. There are many sources of education available to the veterinary team to improve their understanding of veterinary dentistry. (For example, check out the resources on periodontal disease at dvm360.com/dentalessential.)



Development of a practice's dentistry message can also help to solidify the information you want to deliver. If only one person says something about dental care and isn't backed up by the rest of the team, the client is less likely to take that recommendation seriously. Therefore, it's necessary to train anyone who has contact with the client to deliver the same message. You want your team to be able to give intelligent answers to your clients' questions and concerns. If your clients see that everyone in the practice believes dentistry is important, they will follow your prescribed oral health plan.

Workflow coordinator: As a VIP nurse, you can coordinate and manage the day-to-day dentistry cases in an efficient manner to improve patient care and optimize staff time. When the client and patient arrive in the clinic, the dentistry VIP will likely be the initial contact with them. They will provide information regarding the examination that will be performed that day as well as any possible treatments for pathology already identified. The dentistry VIP then serves as a consistent point of contact throughout the day.

When the client has left the animal for the procedure, it will be the dentistry VIP nurse's duty to manage that patient's care from beginning to end. When the dentistry services have been initiated, the nurse will contact the client with any pathology that has been identified and recommend treatment plans established by the veterinarian. When the patient is recovering from anesthesia, the dentistry VIP will again contact the client with a progress update and schedule a discharge appointment. At the appointed discharge time, the dentistry nurse can meet with the client to review the procedure and establish follow-up care.

The dentistry VIP can also become the practice's asset in creating standard operating procedures.

They can create and manage protocols for patient care, instrument setup and maintenance, and client education and communication tools.

Complete oral health assessment and treatment (COHAT): A complete periodontal cleaning is required to remove the "disease" elements of periodontitis. This includes removal of bacteria-laden supragingival and subgingival calculus and plaque. The intent is to prevent periodontitis, but most patients already have significant disease. The terms "prophy," "prophylaxis" and "dental" are often misused as very rarely are we actually preventing periodontitis.

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In 2013, AAHA published the Dental Care Guidelines for Dogs and Cats, which are guidelines for the practice of companion animal veterinary dentistry. It's the dentistry VIP's duty to be highly skilled in all of these areas to provide the patient with the highest standard of care, which needs to include the following steps:

- > **Anesthesia**—Appropriate protocol is determined by the patient's health status and tailored to the procedure being performed.
- > **Patient positioning and monitoring**—The patient is positioned in a safe and appropriate manner for

the procedure, and vital parameters are reviewed according to protocol.

- > **Oral exam**—A complete oral examination, including thorough dental charting, should be performed.
- > **Radiographs**—Full-mouth radiographs are required to identify any hidden pathology.
- > **Power scaling**—An ultrasonic scaler should be used to remove the majority of plaque and calculus from the teeth.
- > **Hand instrumentation**—Dental-specific instruments should be used to remove additional plaque and calculus and fine-tune the cleaning.
- > **Detect missed plaque and calculus**—This is done by air drying or use of disclosing solution to highlight debris.
- > **Repeat of oral exam and plan for additional treatments**—The patient may need additional treatments to alleviate pain and infection.
- > **Polishing of teeth**—Teeth should be polished to smooth the enamel surface and

reduce the reattachment of plaque and bacteria.

> **Homecare and follow up**—

A homecare plan should be developed and discussed with the client.

The dentistry VIP must be supported in their endeavors to provide this care. Many times we feel like we don't have a voice within our practice. I believe that if you can find an area of veterinary medicine that really drives you, you can do anything you set your heart to! Working in a practice that values the strength and passion to become a specialized nurse is priceless, but being underutilized is a detriment and leads to employee dissatisfaction. Educate yourself and those around you. Lead from within and others will follow. Remember—knowledge is power. I want you to feel the power of being a VIP within your practice!

Candice Hoerner is a certified veterinary technician and veterinary technician specialist in dentistry. She works at Ponderosa Veterinary Hospital in Kalispell, Montana, and is the owner of Big Sky Veterinary Dentistry Education.



Achieve VIP with CE

Fetch dvm360 conference in San Diego (Dec. 13-16) can help you reach (and maintain) dentistry VIP status.

Get in-person instruction from the author of this article, Candice Hoerner, CVT, VTS (dentistry), in the following sessions:

- > **Say ahhh!** Oral examination and charting
- > **Queen LaTeetha's magic wand:** A guide to hand instrumentation

- > **Dirty mouth? Clean it up!** A complete periodontal cleaning

- > **Block that pain away:** Pain management and nerve blocks

- > **Save a tooth!** Advanced periodontal treatments

- > **X-ray vision** for the superhero technician

To learn more about these sessions and the San Diego conference as a whole, visit fetchdvm360.com/sd.



Is **Walmart insulin** OK for pets?

A pet owner reached out to us for an answer on insulin for a canine with diabetes. We said, "Go talk to your vet." But here's the lowdown for your veterinary team on what a boarded internist has to say on the issue.

Pet owner asks ...

My dog is on Vetsulin 40/10, and Walmart sells insulin a lot cheaper, but they don't know which one to give me. They have three [kinds]: N, R and 70/30. Will one of them work in place of the Vetsulin?

David Bruyette, DVM, DACVIM, responds ...

This is a common question and, to be honest, it's confusing. So let's see if we can make this a bit clearer.

Vetsulin (Merck) is a veterinary-specific, FDA-approved intermediate-acting lente porcine-derived insulin that comes in a strength of 40 IU/ml and is sold in a 10-ml vial. The insulin must be administered with a U-40 insulin syringe or with an insulin pen designed for the product (Vetpen). Vetsulin is a mixture of 35% amorphous and 65% crystalline insulin, which gives it two distinct onsets of action. The first, shortly after injection, helps to prevent rising glucose concentrations after

a meal. The second controls blood glucose levels between meals.

Walmart sells an intermediate-acting NPH human-recombinant insulin that's not approved for use in animals (Novolin N; manufactured by Novo Nordisk and sold under the Walmart brand). It comes in a concentration of 100 IU/ml and is sold in a 10-ml vial. It must be administered with a U-100 insulin syringe or with a pen designed for the product. They also sell a human-recombinant insulin that comes in a strength of 100 IU/ml and is sold in a 10 ml-vial that is a mixture of 70% NPH insulin and 30% regular insulin (Novolin 70/30). The purpose of the 70/30 mix is similar to the rationale behind the Vetsulin mixture—providing control after and between meals.

The question as to whether either of these NPH insulins can be used in place of Vetsulin requires more information. Does the pet owner want to switch because you're not seeing

adequate control of the diabetes based on clinical signs and blood glucose measurements, or is it cost?

If it's because of price, that can be done, but there's no easy way to predict what the dose of NPH will be when starting the transition. Since preparations are very different in their potency and duration of action, the team will basically need to start over with a treatment protocol. I suggest starting with 0.5 IU/kg twice a day, with an assessment of the patient's clinical progress and blood glucose curve in one week.

The pet owner, of course, will need to work closely with your practice's vet to ensure a successful and safe transition.

Dr. Bruyette is medical director at the VCA West Los Angeles Animal Hospital and Chief Medical Officer at Anivive Lifesciences.



Client handout: The perfect scratching post

Your veterinary clients want their cats to keep their claws. What they don't want is said claws on their furniture, carpet or any other forbidden-but-scratch-perfect place. Here's help.

By Elizabeth Colleran, DVM, DABVP
(feline practice)

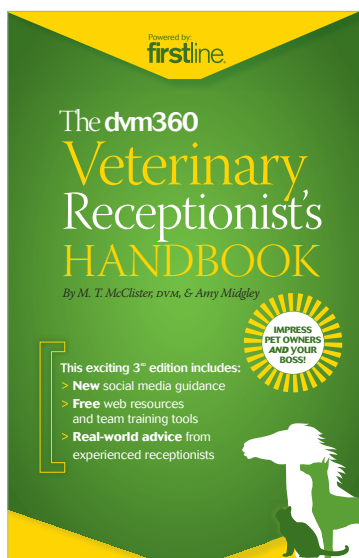
It's wise to assume that indoor cats scratch for the same reason their outdoor counterparts do: visual signaling, conditioning of claws, scent signaling with sebaceous glands of the feet and stretching. When cats are scratching in the right place, pet owners are just as content as their feline friends. When cats scratch in the wrong place, well ... cats keeping their claws becomes a risk rather than a reward. Help pet owners build a better scratching environment with this handout.



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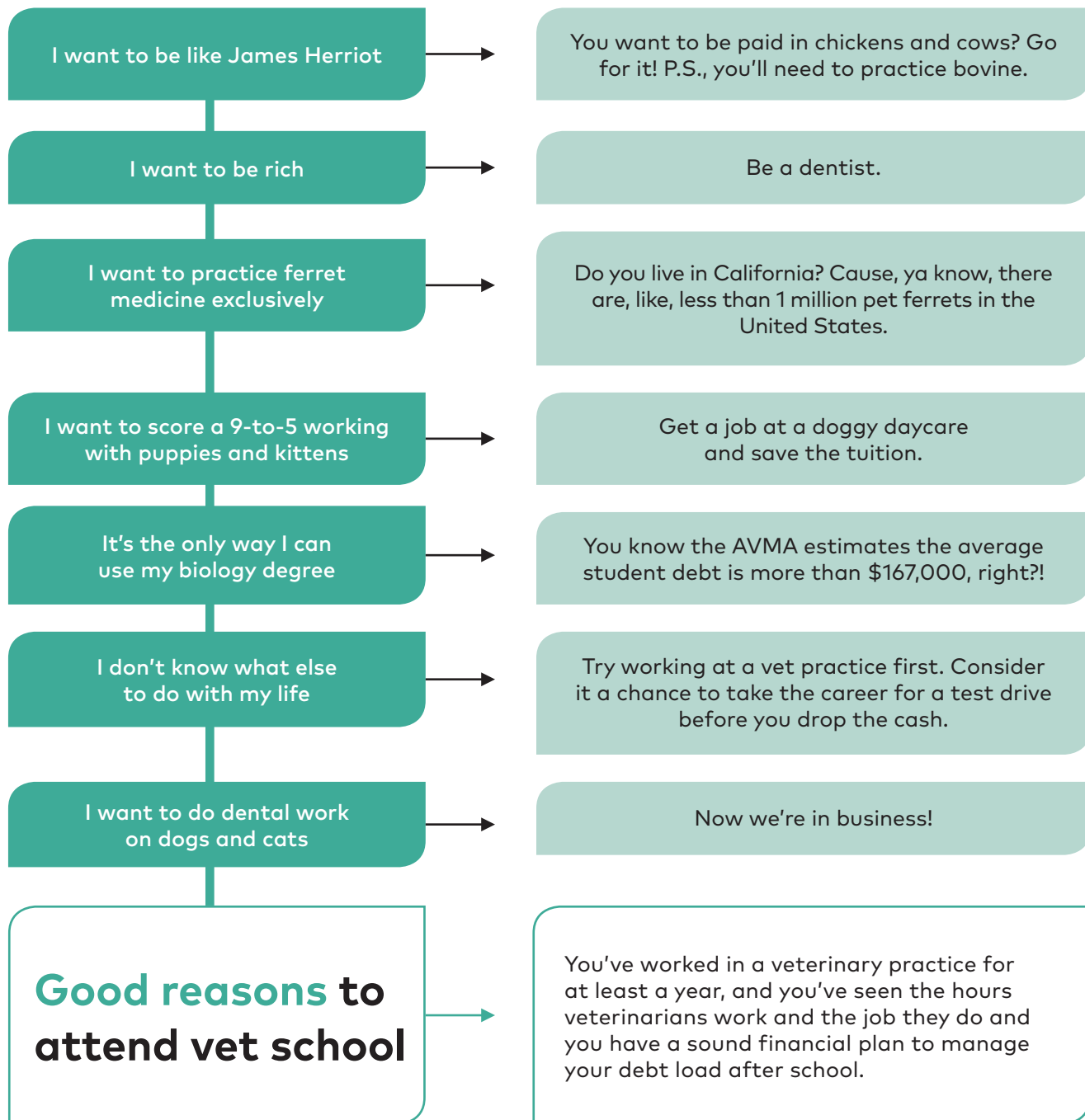
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BAD REASONS to go to vet school

Share this with those on the road to vet school ... or anyone dreaming about a career as someone who *totally* spends *all day* playing with cute puppies and kittens (sarcasm, people).



Vets Against Insanity



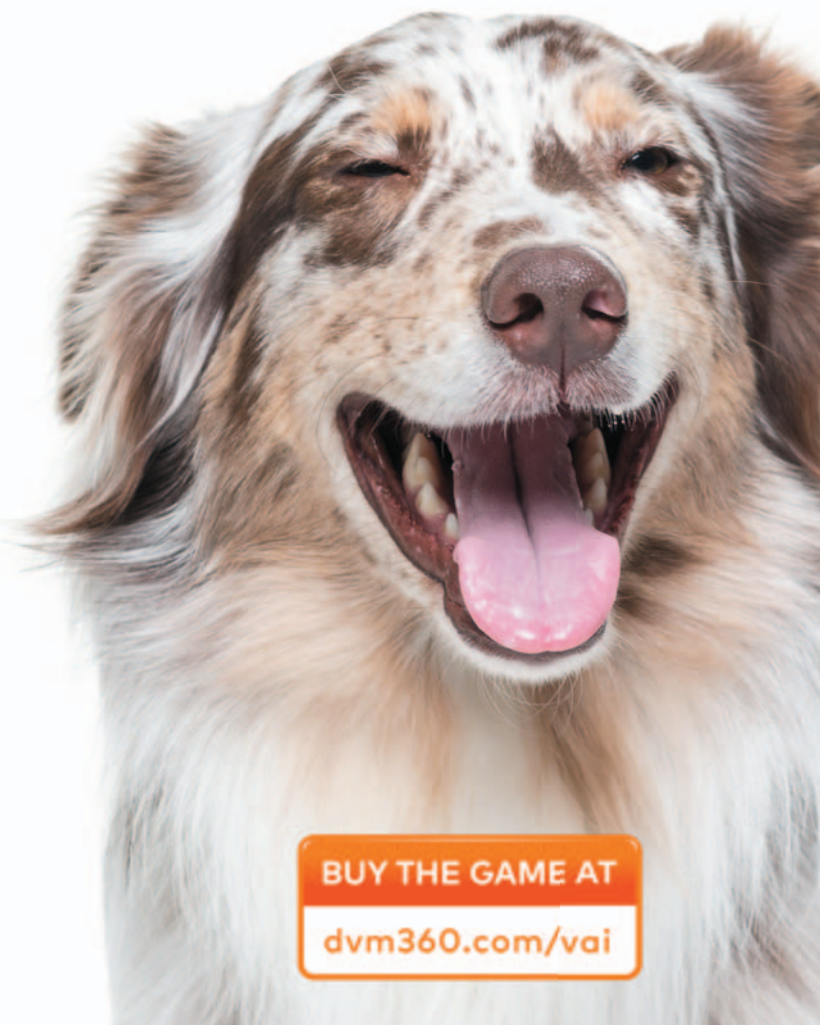
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