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CONTENT GROUP
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portia.stewart@ubm.com

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e Content Specialists | Katie James and Sarah Dowdy
Assistant Content Specialist | Hannah Wagle
Technical Editor | Jennifer Vossman, Rvr, CMP
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Account Manager | Angela Paulovcin
(440) 891-2629 | angela.paulovcin@ubm.com
Account Manager | Terry Reilly
(913) 871-3871 | terry.reilly@ubm.com
Account Manager | Heather Townsend
(913) 871-3874 | heather.townsend@ubm.com
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(913) 871-3854 | jenny.shaffstall@ubm.com
Sales Coordinator | Anne Belcher
(913) 871-3876 | anne.belcher@ubm.com
Books/Resource Guide Sales | Maureen Cannon
(440) 891-2742 | maureen.cannon@ubm.com

MARKETING

Marketing Director | Brenda Andresen
brenda.andresen@ubm.com

Marketing Designer | Andrew Brown

Marketing Copywriter | Tim English

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Healthy team members = healthy pets









Also in this issue:

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- 6 Pet chefs—and how to handle them
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- 12 Felix peed on the floor? There's a use for that

PEARLS

(Lustrously good advice and tips)



Diagnostic dental radiographs: A concise how-to

Mary Berg, RVT, VTS (dentistry), has been teaching veterinary technicians how to take dental radiographs for more than 20 years, and at **dvm360.com/diagnosticdentalrads** she shares her practiced techniques for each tooth for dogs and cats. What makes it a diagnostic radiograph? The image must include 2- or 3-mm of bone around the apex of the root and the level of the alveolar bone, Berg says.

Berg starts by placing the patient in sternal recumbency, and the entire maxilla can be imaged in that position. Prop towels under the patient's chin to position the maxilla parallel with the table. Place the digital sensor parallel to the table and against the teeth for each maxillary shot to ensure imaging the root and the bone surrounding each tooth.

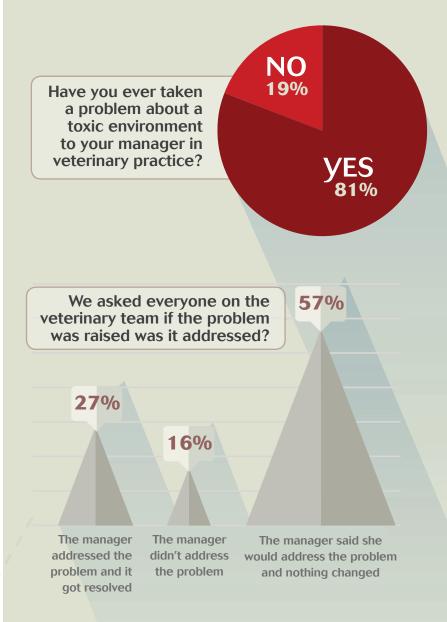
One tip for sensor stabilization: If the sensor starts to tip a bit, place a piece of gauze between the sensor and the palate to keep the sensor level.

Berg's simplified positioning methods eliminate the need for bisecting angle calculations. Most dental radiography systems already have the angles marked on the unit.

To watch the complete training video for tips to take canine and feline dental radiographs, visit **dvm360.com/ diagnosticdentalrads**.

practice caught in the

Short answer: Maybe. In triangulated communication, one person refuses to communicate with another, forcing a third person (read: manager) to serve as the go-between. Let's take a look at data from the 2017 dvm360 Toxic Team Survey to see how managers address toxic team environments.



managers middle?



Things get a little less optimistic when we remove the bosses from the mix.

20%

12%

The manager addressed the problem and it got resolved

The manager didn't address the problem

> What an owner/ manager tried: "I held numerous meetings, and it was good for a while, then they were back at it. Or

> > it caused division in

the team."

The manager said she

would address the problem

and nothing changed

69%

"It was resolved for a while, but then it started up again. So the problem employee was let go."

Managers: Feeling a little blamed? Check out page 30 for tips to help your team stop triangulating and start communicating with each other.

But can managers act?

In the 2016 dvm360 Future of Veterinary Medicine Study veterinary hospital administrators and practice managers shared some of their duties related to hiring, managing and firing team members. So before you blame the middle manager at your clinic, consider whether they're empowered to act.

Hospital administrators and practice managers: Which of the following general practice personnel management duties do you perform?



Recruit, interview and hire support team



Supervise support team and serve as direct authority regarding discipline, discharge and legal issues related to employment

Hospital administrators and practice managers: Which of these advanced management duties are you responsible for?



Recruit, interview and hire veterinarians



Mediate professional staff personnel problems, including oversight of veterinarians

SOURCE: 2016 DVM360 FUTURE OF VETERINARY MEDICINE SURVEY

INSIDER'S INSIGHTS

By Christine Shupe, CAE, Executive Director, VHMA



Ouch! Are you feeling veterinary clients' financial pain?

Veterinary care can end up being a significant expense that many pet owners aren't equipped to handle. Broaching the topic with clients requires sensitivity, empathy, timing and a plan. A VHMA survey about practice billing procedures elicited responses from 391 practice managers, hospital administrators and technicians.

Do practices routinely encounter clients who can't afford to pay for treatment for their pets? The VHMA survey listed five practice problems—attracting clients, maintaining clients, foregoing treatment because of inability to pay, collecting payment and discounting services—and asked respondents to select the one that presented the greatest challenge daily.

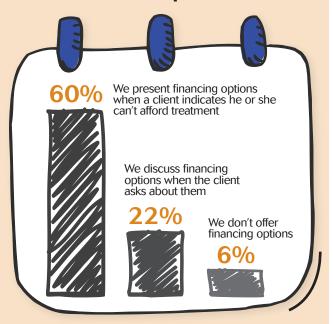
Sixty-four percent said that dealing with clients who decline or delay treatment for their pets due to financial hardship is the most challenging aspect of the job. Less than half found it challenging to attract new clients, discount services, maintain clients or collect payments.

Once the client receives the pet's prognosis, most often a receptionist (75 percent) or a technician (66 percent)



delivers the cost breakdown for services and treatment. Hospital managers and veterinarians are least likely to be involved in the conversation.

When the cost of treatment is comparable to a major appliance, it's not surprising that many clients want to hear more about financing treatment and other options. But only 10 percent said they automatically discuss financing options through the practice with the client. Although most respondents don't offer financing in response to a particular diagnosis, 70 percent said they mention pet



insurance to clients.

To help clients plan for the realities of pet ownership, respondents offered suggestions:

- > Educate clients about the expense and issues associated with owning a pet so they're aware of how they might need to pay for care.
- > Offer a comparison chart that presents an overview of plans to show how they may meet the client's needs. Clients also benefit from general information presented in brochures that are easy to digest.
- > Offer good online information to facilitate the discussions.

Food for thought: More than 95 percent of respondents indicated they would like to receive information and training about inflation trends in service pricing.



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- * When infested 48 hours after application.
- ** Subject to terms and conditions of the SATISFACTION PLUS GUARANTEE. For complete details go to www.FRONTLINE.com









I'm Bella's chef!

Here's how to respond to a client who says, "Why are you suggesting I buy dog food? My Bella won't eat anything other than the table food I cook for her." (You know the one.)

By Kyle Wendy Skultety, LVT, CVT

DO SAY

DON'T SAY

"Table food is just as good as dog food. So it's OK for Bella to eat only chicken, rice and vegetables."

"Bella may love your home cooking, but she's missing out on essential nutrients and minerals by not eating a balanced dog food. Pet foods are made to give your dog everything she needs. You may offer her a meal, and she will refuse it because she knows you're going to give in and make her some steak or chicken. Let's try offering her dog food for breakfast tomorrow. If she won't eat her breakfast, pick up her bowl and put it down again for dinner. If she's still being stubborn, give us a call and we can walk through some more ideas to get Bella interested in dog food. Let's go to the retail area together so I can show you some examples of nutritious dog food for Bella."

Foodie pet parents

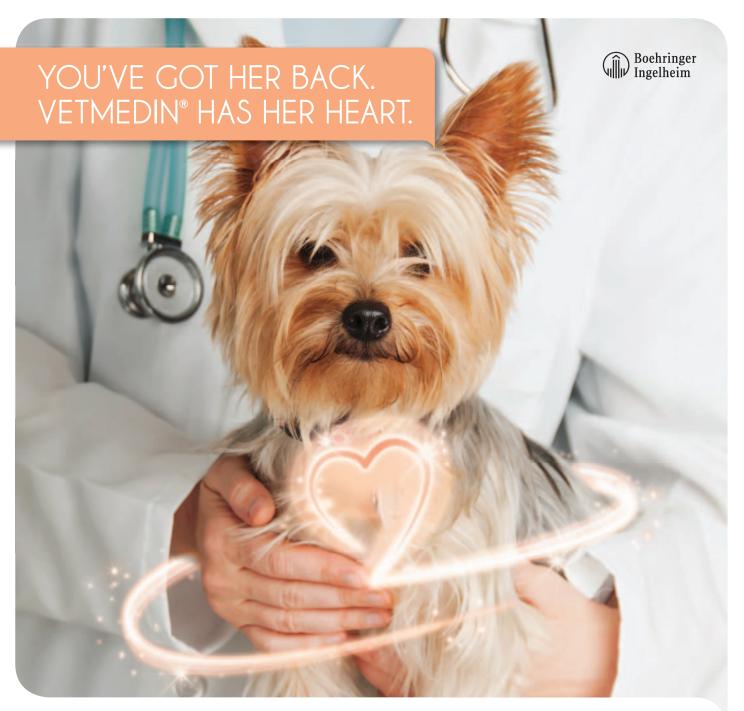
CVC educator Ernie Ward, DVM, won't get into debates with clients.
But he does guide "foodie" pet owners' dietary enthusiasm toward safe, beneficial behaviors. Scan the code to learn how.



Kyle Wendy Skultety, LVT, CVT, is a technician supervisor at VCA Twin Rivers in East Windsor, New Jersey.



6 / January/February 2017 / Firstline / dvm360.com



No other canine CHF drug offers the same level of research and support as Boehringer Ingelheim Vetmedica, Inc.

Industry-trusted VETMEDIN gives dogs with congestive heart failure (CHF) better days and longer lives. It's backed by years of groundbreaking canine cardiology research. And only VETMEDIN offers free tools that educate your clients to recognize the signs of CHF faster—which can lead to treatment sooner. Contact your Boehringer Ingelheim Vetmedica, Inc. representative today for a heart to heart about VETMEDIN.

vettedin®
(pimobendan) CHEWABLE
TABLETS

A heart's best friend

Reference: 1. Lombard CW, Jöns O, Bussadori CM; for the VetSCOPE Study. Clinical efficacy of pimobendan versus benazepril for the treatment of acquired atrioventricular valvular disease in dogs. *J Am Anim Hosp Assoc.* 2006;42(4):249-261.

IMPORTANT SAFETY INFORMATION: Use only in dogs with clinical evidence of heart failure. The safety of VETMEDIN has not been established in dogs with asymptomatic heart disease or in heart failure caused by etiologies other than atrioventricular valvular insufficiency or dilated cardiomyopathy. Please refer to the package insert for complete product information or visit www.vetmedin.com.

Vetmedin®

(pimobendan)

Chewable Tablets
Cardiac drug for oral use in dogs only

Caution: Federal law restricts this drug to use by or on the order of a licensed veterinarian.

Description: Vetmedin (pimobendan) is supplied as oblong half-scored chewable tablets containing 1.25, 2.5, 5 or 10 mg pimobendan per tablet. Pimobendan, a benzimidazole-pyridazinone derivative, is a non-sympathomimetic, non-glycoside inotropic drug with vasodilatative properties. Pimobendan exerts a stimulatory myocardial effect by a dual mechanism of action consisting of an increase in calcium sensitivity of cardiac myofilaments and inhibition of phosphodiesterase (Type III). Pimobendan exhibits vasodilating activity by inhibiting phosphodiesterase IIII activity. The chemical name of pimobendan is 4,5-dihydro-6-[2-(4-methoxyphenyl)-1H-benzimidazole-5-yl]-5-methyl-3(2H)-pyridazinone. The structural formula of pimobendan is:

Indications: Vetmedin (pimobendan) is indicated for the management of the signs of mild, moderate, or severe (modified NYHA Class I). III, or IV) congestive heart failure in dogs due to atrioventricular valvular insufficiency (AVVI) or dilated cardiomyopathy (DCM). Vetmedin is indicated for use with concurrent therapy for congestive heart failure (e.g., furosemide, etc.) as appropriate on a case-bv-case basis.

- ^aA dog with modified New York Heart Association (NYHA) Class II heart failure has fatigue, shortness of breath, coughing, etc. apparent when ordinary exercise is exceeded.
- b A dog with modified NYHA Class III heart failure is comfortable at rest, but exercise capacity is minimal.
- c A dog with modified NYHA Class IV heart failure has no capacity for exercise and disabling clinical signs are present even at rest.

Dosage and Administration: Vetmedin should be administered orally at a total daily dose of 0.23 mg/lb (0.5 mg/lg) body weight, using a suitable combination of whole or half tablets. The total daily dose should be divided into 2 portions that are not necessarily equal, and the portions should be administered approximately 12 hours apart (i.e., morning and evening). The tablets are scored and the calculated dosage should be provided to the nearest half tablet increment.

Contraindications: Vetmedin should not be given in cases of hypertrophic cardiomyopathy, aortic stenosis, or any other clinical condition where an augmentation of cardiac output is inappropriate for functional or anatomical reasons.

Warnings: Only for use in dogs with clinical evidence of heart failure. At 3 and 5 times the recommended dosage, administered over a 6-month period of time, pimobendan caused an exaggerated hemodynamic response in the normal dog heart, which was associated with cardiac pathology (See Animal Safety).

Human Warnings: Not for use in humans. Keep this and all medications out of reach of children. Consult a physician in case of accidental ingestion by humans.

Precautions: The safety of Vetmedin has not been established in dogs with asymptomatic heart disease or in heart failure caused by etiologies other than AVVI or DCM. The safe use of Vetmedin has not been evaluated in dogs younger than 6 months of age, dogs with congenital heart defects, dogs with diabetes mellitus or other serious metabolic diseases, dogs used for breeding, or pregnant or lactating bitches.

Adverse Reactions: Clinical findings/adverse reactions were recorded in a 56-day field study of dogs with congestive heart failure (CHF) due to AVI (256 dogs) or DCM (99 dogs). Dogs were treated with either Vetmedin (175 dogs) or the active control enalapril maleate (180 dogs). Dogs in both treatment groups received additional background cardiac therapy (See Effectiveness for details and the difference in digoxin administration between treatment groups).

The Vetmedin group had the following prevalence (percent of dogs with at least one occurrence) of common adverse reactions/new clinical findings (not present in a dog prior to beginning study treatments): poor appetite (38%), letharray (33%), diarrhea (30%), dyspnea (29%), azotemia (14%), weakness and ataxia (13%), pleural effusion (10%), syncope (9%), ough (7%), sudden death (6%), ascites (6%), and heart murmur (3%). Prevalence was similar in the active control group. The prevalence of

renal failure was higher in the active control group (4%) compared to the Vetmedin group (1%).

Adverse reactions/new clinical findings were seen in both treatment groups and were potentially related to CHF, the therapy of CHF, or both. The following adverse reactions/new clinical findings are listed according to body system and are not in order of prevalence: CHF death, sudden death, chordea tendineae rupture, left atrial tear, arrhythmias overall, tachycardia, syncope, weak pulses, irregular pulses, increased pulmonary edema, dyspnea, increased respiratory rate, coughing, gagging, pleural effusion, ascites, hepatic congestion, decreased appetite, vomiting, diarrhea, melena, weight loss, lethargy, depression, weakness, collapse, shaking, trembling, ataxia, seizures, restlessness, agitation, pruritus, increased water consumption, increased unination, uninary accidents, acclemia, dehydration, alhormal serum electrolyte, protein, and glucose values, mild increases in serum hepatic enzyme levels, and mildly decreased platelet counts.

See Table 1 for mortality due to CHF (including euthansaia, natural death, and sudden death) and for the development of new arrhythmis (not present in a dog prior to beginning study treatments) by treatment group and type of heart disease (AVVI or DCM) in the 56-day field study.

Table 1: CHF Death and New Arrhythmias in the 56-Day Field Study

| | Vetmedin® Group | Active Control Group |
|---------------------------|-----------------------------|-----------------------------|
| Dogs that died due to CHF | 14.3% n = 175 | 14.4% n = 180 |
| | 9 of 126 dogs with AVVI | 16 of 130 dogs with AVVI |
| | 16 of 49 dogs with DCM | 10 of 50 dogs with DCM |
| Dogs that developed new | 39.4% n = 175 | 45.0% n = 180 |
| arrhythmias | 45 of 126 dogs with AVVI | 59 of 130 dogs with AVVI |
| | 24 of 49 dogs with DCM | 22 of 50 dogs with DCM |

^a New arrhythmias included supraventricular premature beats and tachycardia, atrial fibrillation, atrioventricular block, sinus bradycardia, ventricular premature beats and tachycardia, and bundle branch block

Following the 56-day masked field study, 137 dogs in the Vetmedin group were allowed to continue on Vetmedin in an open-label extended-use study without restrictions on concurrent therapy. The adverse reactions/new clinical findings in the extended-use study were consistent with those reported in the 56-day study, with the following exception: One dog in the extended-use study developed acute cholestatic liver failure after 140 days on Vetmedin and furosemide.

In foreign post-approval drug experience reporting, the following additional suspected adverse reactions were reported in dops treated with a capsule formulation of pimobendan: hemorrhage, petechia, anemia, hyperactivity, excited behavior, erythema, rash, drooling, constituation, and diabetes mellitus.

To report suspected adverse reactions, to obtain a Material Safety Data Sheet, or for technical assistance call 1-866-638-2226.

Clinical Pharmacology: Pimobendan is oxidatively demethylated to a pharmacologically active metabolite which is then conjugated with sulfate or glucuronic acid and excreted mainly via feces. The mean extent of protein binding of pimobendan and the active metabolite in dog plasma is >90%. Following a single oral administration of 0.25 mg/kg Vetmedin tablets the maximal mean (± 1 SD) plasma concentrations (Cmax) of pimobendan and the active metabolite were 0.30 (0.76) ng/ml and 3.66 (1.21) ng/ml, respectively. Individual dog Cmax values for pimobendan and the active metabolite were observed 1 to 4 hours post-dose (mean: 2 and 3 hours, respectively). The total body clearance of pimobendan was approximately 90 mL/min/kg, and the terminal elimination half-lives of pimobendan and the active metabolite were approximately 0.5 hours and 2 hours, respectively. Plasma levels of pimobendan and active metabolite were approximately 0.5 hours and 2 hours, respectively. Plasma levels of pimobendan and active metabolite owere below quantifiable levels by 4 and 8 hours after oral administration, respectively. The steady-state volume of distribution of pimobendan is 2.6 L/kg indicating that the drug is readily distributed into itsuses. Food decreased the bioavailability of an aqueous solution of pimobendan, but the effect of food on the absorption of pimobendan from Vetmedint tablets is unknown.

In normal dogs instrumented with left ventricular (LV) pressure transducers, pimobendan increased LV dP/dtmax (a measure of contractility of the heart) in a dose dependent manner between 0.1 and 0.5 mg/kg orally. The effect was still present 8 hours after dosing. There was a delay between peak blood levels of pimobendan and active metabolite and the maximum physiologic response

(peak LV dP/dtmax). Blood levels of pimobendan and active metabolite began to drop before maximum contractility was seen. Repeated oral administration of pimobendan did not result in evidence of tachyphylaxis (decreased positive inotropic effect) or drug accumulation (increased positive inotropic effect). Laboratory studies indicate that the positive inotropic effect of pimobendan may be attenuated by the concurrent use of a β-adrenergic blocker or a calcium channel blocker.

Effectiveness: In a double-masked, multi-site, 56-day field study, 35 dogs with modified NYHA Class II, III, or IV CHF due to AVVI or DCM were randomly assigned to either the active control (enalapril maleate) or the Vetmedin (pimobendan) treatment group. Of the 355 dogs, 52% were male and 48% were female; 72% were diagnosed with AVVI and 28% were diagnosed with DCM; 34% had Class II, 47% had Class III, and 19% had Class IV CHF. Dogs ranged in age and weight from 1 to 17 years and 3.3 to 191 lb, respectively. The most common breeds were mixed breed, Doberman Pinscher, Cocker Spaniel, Miniature/Toy Poodle, Maltese, Chibuahua, Miniature Schnauzer, Dachshund, and Cavalier King Charles Spaniel. The 180 dogs (130 AVVI, 50 DCM) in the active control group received enalapril maleate (0.5 mg/kg/day divided into 2 portions that were not necessarily equal, and the portions were administered approximately 12 hours apart), and all but 4 received furosemide. Digoxin was optional for treating supraventricular tachyarrhythmia in either treatment group, as was the addition of a β-adrenergic blocker if digoxin was ineffective in controlling heart rate. After initial treatment at the clinic on Day 1, dog owners were od administer the assigned product and concurrent medications for up to 564 days.

The determination of effectiveness (treatment success) for each case was based on improvement in at least 2 of the 3 following primary variables: modified NYHA classification, pulmonary edema score by a masked veterinary radiologist, and the investigator's overall clinical effectiveness score (based on physical examination, radiography, electrocardiography, and clinical pathology). Attitude, pleural effusion, coughing, activity level, trorsemide dosage change, cardiac size, body weight, survival, and owner observations were secondary evaluations contributing information supportive to product effectiveness and safety.Based on protocol compliance and individual case integrity, 255 cases (134 Vertmedin, 131 active control) were evaluated for treatment success on Day 29. See Table 2 for effectiveness results.

Table 2: Effectiveness Results for the 56-Day Field Study

| | Vetmedin® Group | Active Control Group |
|--|-----------------------------|-----------------------------|
| Treatment Success on Day 29 | 80.7% n=134 | 76.3% n=131 |
| | 88 of 101 dogs with AVVI | 77 of 100 dogs with AVVI |
| | 20 of 33 dogs with DCM | 23 of 31 dogs with DCM |
| Treatment Success on Day 56 | 71.1% n=113 | 67.2% n=110 |
| | 66 of 85 dogs with AVVI | 56 of 85 dogs with AVVI |
| | 13 of 28 dogs with DCM | 17 of 25 dogs with DCM |
| No increase in furosemide dose between Day 1 and Day 29 | 78.3% n=130 | 68.6% n=126 |

At the end of the 56-day study, dogs in the Vetmedin group were enrolled in an unmasked field study to monitor safety under extended use, without restrictions on concurrent medications.

Vetmedin was used safely in dogs concurrently receiving furosemide, digoxin, enalapril, atenolol, spironolactone, nitroglycerin, hydralazine, diffuzerm, antiparasitic products (including heartworm prevention), antibiotics (metronidazole, cephalexin, amoxiciline-davulanate, fluoroquinolones), topical ophthalmic and othe products, famotidine, theophylline, levothyroxine sodium, diphenhydramine, hydrocodone, metoclopramide, and butorphanol, and in dogs on sodium-restricted diets.

Palatability: In a laboratory study, the palatability of Vetmedin was evaluated in 20 adult female Beagle dogs offered doses twice daily for 14 days. Ninety percent (18 of 20 dogs) voluntarily consumed more than 70% of the 28 tablets offered. Including two dogs that consumed only 4 and 7% of the tablets offered, the average voluntary consumption was 84.2%.

Animal Safety: In a laboratory study, Vetmedin chewable tablets were administered to 6 healthy Beagles

per treatment group at 0 (control), 1, 3, and 5 times the recommended dosage for 6 months. See Table 3 for cardiac pathology results. The cardiac pathology/ histopathology noted in the 3X and 5X dose groups is typical of positive inotropic and vasocilator drug toxicity in normal dog hearts, and is associated with exaggerated hemodynamic responses to these drugs. None of the dogs developed signs of heart failure and there was no mortality.

Table 3: Incidence of Cardiac Pathology/ Histopathology in the Six-month Safety Study

| Thistopathology in the Six-month Salety Study | | | |
|--|---|--|--|
| Severe left ventricular hypertrophy with multifocal subendocardial ischemic lesions | One 3X and two 5X dogs ^a | | |
| Moderate to marked myxomatous thickening of the mitral valves | Three 5X dogs | | |
| Myxomatous thickening of the chordae tendineae | One 3X and two 5X dogs | | |
| Endocardial thickening of the left ventricular outflow tract | One 1X, two 3X, and two 5X dogs | | |
| Left atrial endocardial thickening (jet lesions) in 2 of the dogs that developed murmurs of mitral valve insufficiency | One 3X and one 5X dog | | |
| Granulomatous inflammatory lesion in the right atrial myocardium | One 3X dog | | |

^a Most of the gross and histopathologic findings occurred in these three dogs

Murmurs of mitral valve insufficiency were detected in one 3X (Day 65) and two 5X dogs (Days 135 and 163). These murmurs (grades II-III of VI) were not associated with clinical signs.

Indirect blood pressure was unaffected by Vetmedin at the label dose (1X). Mean diastolic blood pressure was decreased in the 3X group (74 mmHg) compared to the control group (82 mmHg). Mean systolic blood pressure was decreased in the 5X group (117 mmHg) compared to the control group (124 mmHg). None of the dogs had clinical signs of hypotension.

On 24-hour Holter monitoring, mean heart rate was increased in the 5X group (101 beats/min) compared to the control group (94 beats/min). Not counting escape beats, the 3X and 5X groups had slightly higher numbers of isolated ventricular ectopic complexes (VEs). The maximum number of non-escape VEs recorded either at baseline or in a control group dog was 4 VEs/24 hours. At either Week 4 or Week 2D, three 3X group dogs had maximums of 33, 13, and 10 VEs/24 hours, and two 5X group dogs had maximums of 22 and 9 VES/24 hours. One 1X group dog with no VEs at baseline had 6 VEs/24 hours at Week 4 and again at Week 2D. Second-degree attrioventricular heart block was recorded in one 3X group dog at Weeks 4 and 20, and in one dog from each of the 1X and 5X groups at Week 2D. None of the dogs had clinical signs associated with these electrocardiogram changes.

Treatment was associated with small differences in mean platelet counts (decreased in the 3X and 1X groups), potassim (increased in the 5X group), glucose (decreased in the 1X and 3X groups), and maximum blood glucose in glucose curves (increased in the 5X group). All individual values for these variables were within the normal range. Three 1X and one 5X group dogs had mild elevations of alkaline phosphatase (less than two times normal). Loose stools and vomiting were infrequent and self-limiting.

Storage Information: Store at 20° to 25°C (68° to 77°F), excursions permitted between 15° and 30°C (between 59° and 86°F).

How Supplied:

Vetmedin⁶ (pimobendan) Chewable Tablets: Available as 1.25, 2.5, 5 and 10 mg oblong half-scored chewable tablets - 50 tablets per bottle.

NDC 0010-4480-01-1.25 mg - 50 tablets NDC 0010-4481-01-2.5 mg - 50 tablets NDC 0010-4482-01-5 mg - 50 tablets NDC 0010-4479-01-10 mg - 50 tablets

Manufactured by: Boehringer Ingelheim Promeco S.A. de C.V. Mexico City, Mexico

Manufactured for: Boehringer Ingelheim Vetmedica, Inc St. Joseph, MO 64506 U.S.A.

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448005-00 Revised 06/2013

Strange but true

Parasitic factoids to ponder when you've got the itch.

By Chris Feaster, VMD, Haley Switzer

In the veterinary world, dealing with parasites is something that we do on a day-to-day basis. These tiny organisms can cause a variety of issues and can sometimes be hard to identify. Maybe you are trying to diagnose flea allergy dermatitis on such fastidious groomers as cats or convince an owner that her pet has a flea allergy dermatitis when she insists she has never seen a flea on her pet a day in its life. Despite all the frustrating conversations that we encounter every day, flip the page for some interesting facts that'll leave you itching for more.



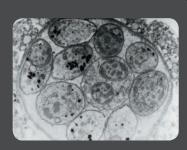
Parasites: The top of the food chain?

It is thought that parasites make up more than 80 percent of the life forms on the planet. More and more organisms seem to be identified every day. Parasites have not previously been included on the food chain, but in reality every ecosystem is loaded with these tiny unseen predators. Their main purpose in life is to feed on the host, reproduce, infect and then die. It's as simple as that. Although most parasites aren't known to kill directly, they all can cause severe issues if overproduced, especially in the sick, elderly and young. But the few that are deadly can strike quickly and without much warning (e.g. severe cases of toxoplasmosis can result in neurologic issues, especially

in babies and immunocompromised people). So, again, who really is

at the top of the food chain?

Toxoplasmosis can actually be found in most animals but the Toxoplasma organism can only complete its life cycle once introduced into the intestines of our feline patients. This particular parasite can be



transmitted to people. For the most part, an infected human will show no symptoms. If healthy, the body is capable of taking care of the infection on its own. But it is highly dangerous to people with weakened immune systems and the very young. If a mother gets infected while she is pregnant, it can cause premature birth or even birth defects that show up months to years after birth. Some defects include seizures, feeding difficulties, loss of hearing and even mental disabilities. It has even been reported to cause miscarriages. It's our job in the veterinary world to try to treat and prevent the spread as quickly as possible.

It is not widely known by the general population that fleas can kill. Whether it be directly from them because of anemia, or acting as a catalyst resulting in death,



they can be dangerous. Fleas can carry and transmit several potentially deadly illnesses to not only our pets but to us as well. Such severe diseases include typhus and plague. Others include bartonellosis, otherwise known as "cat scratch fever." Fleas can spread *Bartonella* species from one cat to another. and then, as a result, an infected cat can spread it to humans. They are especially dangerous to old, ill or young animals. A flea infestation can cause severe anemia, weakening the animal, which can cause death. This is just one of many reasons why year round flea and tick prevention is important.

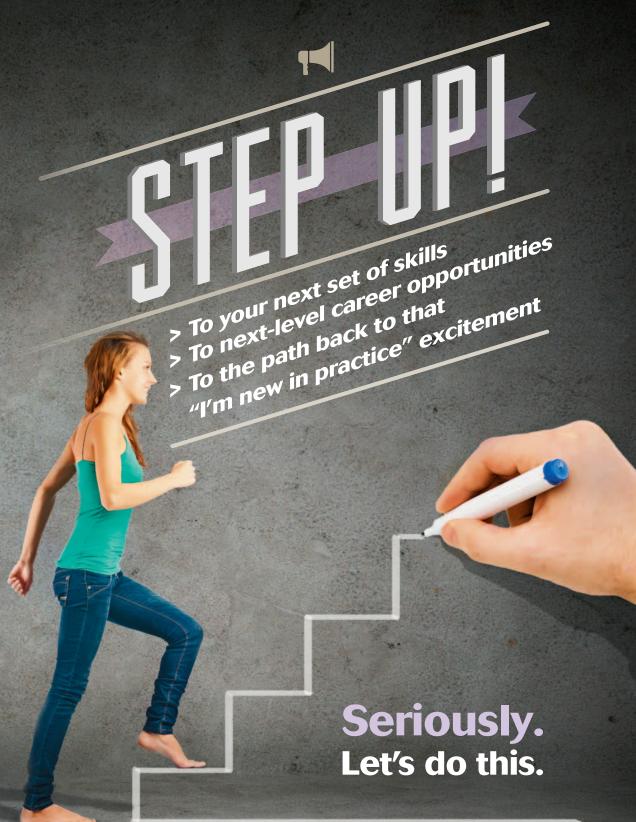
Although pets are able to share numerous intestinal parasites



with people, as well as each other, coccidia is not one of them. Cats can't become infected from the coccidia shed by dogs, and vice versa. It is only spread by ingestion through contaminated soil or through ingestion of a transport host. The growth of coccidia can only occur in temperatures between 68 and 104 F (20 and 40 C). If not exposed to freezing or extremely high temperatures, sporulated oocysts can live up to one year under the right conditions. Let's think about something else ...

Also known as walking dandruff, Cheyletiella species is one of the only mites that can actually be seen by the naked eye. It looks like pieces of dandruff moving around the skin. They are highly contagious among dogs, cats, rabbits and even people; they may be in other mammals as well, although this is something that is still being studied. This mite has become more prevalent over the last few years, being diagnosed frequently in practices all over the country. And with the continuous flow of patients coming in with dermatologic issues, chances are this mite is getting misdiagnosed. So next time you have an itchy patient exhibiting clinical signs of a possible mite infestation, keep cheyletiellosis mind.

Chris Feaster, VMD, and Haley Switzer, veterinary assistant, are team members at Valley Veterinary Clinic in Buckingham, Pennsylvania.





Where there's a will, there's a way

All you need is a learning spirit. We'll provide the plan and the chance to meet like-minded team members in Virginia Beach... and we'll put you on the path to greater job satisfaction.

Here's a look at just four steps you could take to grow your role, boost your influence, and become a stronger player on your practice team. Each step is made of two sessions being held at CVC Virginia Beach, and each one has a basic level session and an advanced session. Not seeing that one thing that's sparking excitement in practice for you today? Look at more of the CVC program (www.thecvc. com/grids) and assemble a custom CE plan

from hundreds of hours of education to put together a path that leads straight to your personal career goals. You could...

- > Become the practice manager
- > Become the diva of dental
- > Become a behavior advocate
- > Get yourself on the path to VTS
- > Become a diagnostics wizard—or dream up something else entirely. The veterinary world is your oyster.

Step 1: Start here



Become the practice cat whisperer

Session 1: Build the skill

Technician Clinical

Dr. G. Pachtinger — Cats are not small dogs ... and I'll show Session 2: Level up!

Feline Medicine

Dr. E. Colleran - The wheezing cat: Feline lower airway diseases

Set the bar on everyday skills that matter

Session 1: **Build the skill**

dvm360 Full Circle

Dr. A. Roark and M. Pierson -Technician gold in the exam room **Session 2:** Level up!

Let's Talk to Clients

B. Conrad, CVPM - What happens in the treatment area doesn't stay there: How to communicate value for clients and their pets



Dr. Andy Roark, MS



Learn more!

Get all the details at www.thecvc.com.

Most critical info: Virginia BEACH May 18 - 21, 2017 (And save \$\$ if you register by Feb. 15)



2017 CE PREVIEW

Prep for hero-making moments

Session 1: Build the skill

Critical Care

P. Plummer, LVT, VTS (ECC, SAIM) — How to manage multiple emergencies

Session 2: Level up!

Critical Care

P. Plummer, LVT, VTS (ECC, SAIM) — A technician's guide to life support

Become the practice Fear FreeSM evangelist

Session 1: Build the skill

Fear Free Practice
Dr. M. Becker — Top 10 things to avoid in a Fear Free practice

Session 2: Level up!

Fear Free Practice

M. Becker. CPDT — Gentle control: Fear Free tactics for getting a handle on difficult patients



Mikkel Becker, CPDT, is the resident trainer for vetstreet.com and works with veterinarians and veterinary behaviorists to address behavior issues in dogs and cats. She's also a regular contributor to Firstline. Turn to page 18 for this month's piece (where she'll give you tips on cat training), or go to www.dvm360.com/Mikkel-Becker to see her past articles.



Mikkel Becker, CPDT

Dr. Andy Roark, MS, is an associate veterinarian practicing at Cleveland Park Animal Hospital in Greenville, S.C. He'll present at CVC Virginia Beach with his improv partner. (Yep, you read that right. Improv.) They'll demonstrate the (hysterical) dos and don'ts of client communication. He's also co-teaching with Tasha McNerney, CVT, CVPP, VTS, on the practice management program. You won't want to miss this session: "Top Traps That Vets Set for Techs." (But that's probably not the one to use when you're asking for the CE. Just sayin.')

2017 CE PREVIEW

Choose your learning style

Customized learning is clearly the way to go.

I like to laugh until I pee my pants (just a little)

ATTEND THIS SESSION!

Fear Free: Learning to listen to our patients

ľm ready to be a champion for Fear Free veterinary visits

ATTEND THIS SESSION!

dvm360 Full Circle: Customer service crash course

ATTEND THIS SESSION!

Physical exam techniques that are state-of-theart and state-ofthe-heart

ATTEND THIS SESSION!

dvm360 Full Circle What Hall & Oates taught me about veterinary medicine

> Ineed cutting-edge medicine updates and techniques

And the FINAL step

Of course, this is just a peek at all the intriguing, engaging, getyou-to-the-next-level sessions that will be on the menu at CVC Virginia Beach. To learn more:

- > Visit dvm360.com/ce4team and download a pdf featuring the technician and management programs
- > Visit www.thecvc.com/grids and search everything at CVC Virginia Beach by speaker, topic or day
- > Visit www.dvm360.com/cvcvb and download a pdf of the full registration program
 - > Register now! www.thecvc.com/registervb



Hey, Bash Halow, LVT, CVPM. What reason would you give?

AKA, How to convince your boss that sending you to CVC is SO worth the dough!!

You mean a reason besides dozens of lectures on patient safety and veterinary nursing protocols?

A reason that doesn't mention CVC's interactive learning formats? The ones that cross-pollinate team members with ideas from hundreds of other technicians and managers?

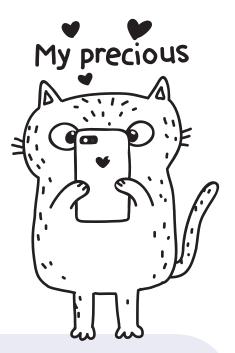
I can't use results from veterinary studies that show that hospitals that provide team members continuing education consistently outperform practices that do not?

Hmm. I just don't know.

Bash will be speaking on team morale in Virginia Beach. Shocker, we know.

3 apps for an easier day

Get your urgent work reminders, big life projects and personal #goals out of your head and into a reminder and task management system.





King of the to-do lists: Asana

If you are all about the deadline and the sub-deadline and the sub-sub-deadline,

then Asana is for you. It shows visual progress on goals and projects, allows you to add due dates for anything and collect all those due dates on a single list or calendar. Do it on your desktop, your laptop or your smartphone (Apple or Android).

Try it for free, with a basic dashboard and up



to 15 team members, at asana.com. (yes, you can even give team members little

emoticon "hearts," if that's your bag.) If it changes your life and you need more than 15 folks and more functionality and more integration with other web-based things (like Google Docs), prices range from about \$4 to \$8 per person per month.



Princess of checking things off: Remember the Milk

OK, you don't need the complicated team capabilities (you're the resident productivity weirdo and no one else wants to play) or project management (that's what

your file cabinet, corkboard and whiteboard are for). You just want a stable to-do list that keeps track on



your desktop PC, your laptop at home and the smartphone in your pocket. Remember the Milk is your girl.

Try it out at rememberthemilk.com. If you need more—sub-tasks, tag colors, advanced sorting and smartphone reminders—pay \$40 a year.

Queen of dreaming: Trello

Hey, you obessive pinners and regular users of dream boards! Trust us when we say you are going to want to hug Trello and hold it close.

It's easy: You make a board. You put lists on the board. You add cards to



the board. You can put due dates or checklists or attachments or members or comments or lots of other things on cards. And you can move them around with your finger or mouse. It's visual, it's pretty ... it's fun!

Trello is free at trello.com to use for any number of team members, any number of cards, any number of boards, etc. Use it on all your devices (or give yourself a break, and keep your work at work). If you want all the integration with other cloud-based apps or better security or other things, you'll pay \$10 per person per month. (The dvm360.com editors still use the free version, and we're a pretty complicated operation.)

3

Felix just **peed**in the exam room a There's a use for that.



hen it comes to clinical pathology, lots of veterinary hospitals run hematology and clinical serum chemistry profiles, but they don't run a urinalysis, said Craig Thompson, DVM, DACVP, at a recent CVC. Without that information, there are questions about what next steps to take or treatment options that can't be answered. At the very minimum, Dr. Thompson stresses, run a urine specific gravity test before starting treatment or even intravenous fluids. Once treatment or fluids have begun, the urine specific gravity will be different, and the interpretation of the serum chemistry profile will be off. You can always go back and run the sediment test or dipstick test later, because the urine can be reconcentrated, but the same can't be done for the urine specific gravity.

Getting a urine sample used to mean perform-

ing a cystocentesis on every patient. This can be tricky, Dr. Thompson notes, especially if a cystocentesis is contraindicated or the patient comes in with a small bladder. But, he says, a mid-stream, free-catch sample is perfectly fine to use for a urine specific gravity test, even if it's just the client catching it as they walk in from transporting the animal. You can even get a sample off the floor if you need to. Just don't use that for sediment or dipstick testing.

This is especially relevant if the patient is referred elsewhere after treatment has begun. At that point, the urine specific gravity will be changed. But Dr. Thompson says that if he can look back in the chart and see that the initial urine specific gravity is in the record, he feels more comfortable with his calculations and the course of treatment going forward.





VET-RECOMMENDED BRAVECTO® TAKES CARE OF KILLING FLEAS AND TICKS FOR 12 WEEKS* WITH JUST 1 CHEW.

- Nearly 3X longer flea and tick protection than monthly treatments 12 weeks!1*
- Fast-acting protection kills 100% of fleas in under 12 hours^{1,2}
- Improves client compliance with less frequent dosing¹

ORDER PRESCRIPTION-ONLY BRAVECTO® FOR YOUR CLINIC

Contact your Merck Animal Health rep or distributor partner.

BRAVECTOVETS.COM

*Bravecto kills fleas, prevents flea infestations, and kills ticks (black-legged tick, American dog tick, and brown dog tick) for 12 weeks. Bravecto also kills lone star ticks for 8 weeks.

IMPORTANT SAFETY INFORMATION: The most common adverse reactions recorded in clinical trials were vomiting, decreased appetite, diarrhea, lethargy, polydipsia, and flatulence. Bravetco has not been shown to be effective for 12-weeks' duration in puppies less than 6 months of age. Bravetco is not effective against lone start fitchs beyond 8 weeks after dosing,

References: 1. Bravecto [prescribing information]. Madison, NJ: Merck Animal Health; 2014. 2. Taenzler J, et al. Parasites & Vectors. 2014;7:567.

Please see Brief Summary on page 14.

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BRIEF SUMMARY (For full Prescribing Information, see package insert)

Caution

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

Indications:

Bravecto kills adult fleas and is indicated for the treatment and prevention of flea infestations (*Ctenocephalides felis*) and the treatment and control of tick infestations [*Ixodes scapularis* (black-legged tick), *Dermacentor variabilis* (American dog tick), and *Rhipicephalus sanguineus* (brown dog tick)] for 12 weeks in dogs and puppies 6 months of age and older, and weighing 4.4 pounds or greater.

Bravecto is also indicated for the treatment and control of Amblyomma americanum (lone star tick) infestations for 8 weeks in dogs and puppies 6 months of age and older, and weighing 4.4 pounds or greater.

Contraindications:

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

Warnings:

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

Precautions:

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

Adverse Reactions:

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

Percentage of Dogs with Adverse Reactions in the Field Study

| 5 5 | • | |
|-----------------------|--|--|
| Adverse Reaction (AR) | Bravecto Group: Percentage of Dogs with the AR During the 182-Day Study (n=224 dogs) | Active Control Group: Percentage of Dogs with the AR During the 84-Day Study (n=70 dogs) |
| Vomiting | 7.1 | 14.3 |
| Decreased Appetite | 6.7 | 0.0 |
| Diarrhea | 4.9 | 2.9 |
| Lethargy | 5.4 | 7.1 |
| Polydipsia | 1.8 | 4.3 |
| Flatulence | 1.3 | 0.0 |

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

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

How Supplied:

Bravecto is available in five strengths (112.5, 250, 500, 1000, and 1400 mg fluralaner per chew). Each chew is packaged individually into aluminum foil blister packs sealed with a peelable paper backed foil lid stock. Product may be packaged in 1, 2, or 4 chews per package.

Distributed by: Intervet Inc (d/b/a Merck Animal Health) Madison, NJ 07940

Made in Austria

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154545R1

Reference: Bravecto [prescribing information] Madison, NJ: Merck Animal Health; 2014 Available by veterinary prescription only.



Write the book foster kittens



that's still at risk for euthanasia when there's a lack of resources available to care for them and a lack of homes ready to adopt them when they reach a transition age. At a recent CVC, Amanda Dykstra, DVM, gave topnotch tips, tricks and advice on how to run the best foster program. One that specifically spelled itself out, however, was to, err, specifically spell stuff out. A detailed foster manual, that clearly defines the responsibilities, protocols and expectations for fosters, will provide clarity and

more educated the foster program coordinator-which means fewer problems in the future. We're sensing a pretty cool theme here.

With the help of a consulting veterinarian or a shelter veterinarian, Dr. Dykstra says the team will need to write a thorough foster manual that details care for kittens and what to do with minor maladies. Detailed care instructions will help foster families give kittens in need the best start in life, all while saving the veterinary team's time and resources.

The foster manual should include:

> instructions, tips and facts on

> a discussion of weight gain and milestones, so foster families can get a better idea of what to expect and what to do when things don't go according to plan

> answers to some common medical concerns and what to do in case of an emergency.

Once things are written in (proverbial, of course) stone, it's easier for shelter programs to get other necessities under control, such as assigning a coordinator, gathering supplies and assigning foster families. After that, you just need kittens. Awww!

How talking saves diabetic pets

peaking on diabetes at a recent CVC, Chen Gilor, DVM, PhD, DACVIM, assistant professor of internal medicine at The Ohio State University Veterinary Medical Center in Columbus, Ohio, brought his thinking to bear on the most important things that veterinary team members do to assure pet owners that pets can live well with diabetes.



Ditch the needle and syringe, get with the injection pen

Injection pens are more convenient, accurate and precise, Dr. Gilor says. But that's not the main reason he supports their use for administering insulin in pets' homes: They cause less emotional stress in the pet and increase client compliance.

Soothe the diabetes diagnosis

Diabetes sounds terrible. It's your job, with the veterinarian, to tell the truth about it: Once the pet owner gets used to the injections and changes the patient's diet, the cat or dog can do well.

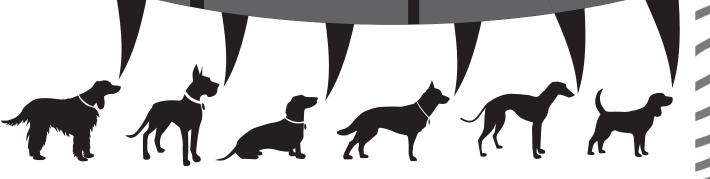
"Most dogs and cats do pretty well in the long run with diabetes," Dr. Gilor says. "They can have a pretty good quality of life, and it's up to us to explain that to owners early on when they're facing the magnitude of twice-a-day insulin and changing the diet."

Make pet owners the first line of defense

Veterinary hospitals are crucial in managing a pet's chronic disease, but you're really going to be at the mercy of the pet owners' own attention to their pet's clinical signs. Inspire them to be advocates for their beloved animals.

"It's important for team members to remind owners that we rely on [their patient diaries] for assessing progress and treatment," Dr. Gilor says. "You need to teach them what clinical signs to look for, how they can assess PU/PD and how to carefully watch a dog or cat's appetite."

For more information from Dr. Gilor, head over to **dvm360.com/talkingdiabetes**.



I'm standing up for the truth because my clients deserve it.

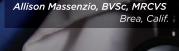
When I learned that the pet insurance plan we had been recommending didn't cover everything it should, it really opened my eyes.

As a veterinarian, it's frustrating to find out that things like exams and wellness aren't covered—because our goal is to keep pets well.

I don't know why anybody would want to pay more for less coverage. That's why now I only recommend Whole Pet with Wellness^{5M} from Nationwide.

Take a closer look and see why Nationwide is the only pet insurer worth recommending.

petinsurance.com/thetruth 866.838.4874





Insurance terms, definitions and explanations are intended for informational purposes only and do not in any way replace or modify the definitions and information contained in individual insurance contracts, policies or declaration pages, which are controlling. Such terms and availabilist may vary by state and exclusions may apply. Underwritten by Veterinary Pet Insurance Company (CA), Brea, CA, an A.M. Best A+ rated company (2016); National Casualty Company (all other states), Columbus, OH, an A.M. Best A+ rated company (2016). Nationwide, the Nationwide N and Eagle, and Nationwide is on your side are service marks of Nationwide Mutual Insurance Company. ©2017 Nationwide. 16VET4494

Who thinks Calls care trainable By Mikkel Becker, CPDT

hough cats are trainable (you read that right—trainable), most people allow their feline friends to be the trainer by default. If you aren't training your cat, she's training you. Read on for training tools and the top three behaviors to train first for calmer cats at home and at the veterinary clinic.

Are you the trainer, or the trainee?

Persistent meows, paws at the arm, lying on top of the keyboard and knocking items off shelves are just a few of the feline behaviors people inadvertently reinforce by providing extra attention or other associated rewards like petting or feeding. The fact that so many felines can master their people points to their adeptness at learning beneficial behaviors through cause-and-effect observation—meaning there's hope for people wanting to transition from trainees to trainers.

Reward-based training helps build deeper bonds and better communication between cats and their humans. It can also be directed toward specific agendas like increasing a cat's comfort level with handling and improving cooperation during care in the home and in the veterinary office.



IMPORTANT SAFETY INFORMATION: HEARTGARD® Plus (ivermectin/pyrantel) is well tolerated. All dogs should be tested for heartworm infection before starting a preventive program. Following the use of HEARTGARD Plus, digestive and neurological side effects have rarely been reported. For more information, please visit www.HEARTGARD.com.





CHEWABLES

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

INDICATIONS: For use in dogs to prevent canine heartworm disease by eliminating the tissue stage of heartworm larvae (Dirofilaria immitis) for a month (30 days) after infection and for the treatment and control of ascards / Toxocara canis, Toxascaris (sonina) and hookworms (Ancylotstorma caninum, Incinaria stenocephala, Ancylotsoma brazilinese).

DOSAGE: HEARTGARD® Plus (ivermectin/pyrantel) should be administered orally at monthly intervals at the recommended minimum dose level of 6 mcg of ivermectin per kilogram (2.72 mcg/lb) and 5 mg of pyrantel (as pamoate satt) per kg (2.27 mg/lb) of body weight. The recommended dosing schedule for prevention of canine heartworm disease and for the treatment and control of ascarids and hookworms is as follows:

| Dog Weight | Chewables Per Month | lvermectin Content | Pyrantel Content | Color Coding On Foil Backing and Carton |
|---------------|------------------------|-----------------------|---------------------|---|
| Up to 25 lb | 1 | 68 mcg | 57 mg | Blue |
| 26 to 50 lb | 1 | 136 mcg | 114 mg | Green |
| 51 to 100 lb | 1 | 272 mcg | 227 mg | Brown |

HEARTGARD Plus is recommended for dogs 6 weeks of age and older. For dogs over 100 lb use the appropriate combination of these chewables.

ADMINISTRATION: Remove only one chewable at a time from the foil-backed blister card. Return the card with the remaining chewables to its box to protect the product from light. Because most dogs find HEARTGARD Plus palatable, the product can be offered to the dog by hand. Alternatively, it may be added intact to a small amount of dog food. The chewable should be administered in a manner that encourages the dog to chew, rather than to swallow without chewing. Chewables may be broken into pieces and fed to dogs that normally swallow treats whole.

Care should be taken that the dog consumes the complete dose, and treated animals should be observed for a few minutes after administration to ensure that part of the dose is not lost or rejected. If it is suspected that any of the dose has been lost, redosing is recommended.

HEARTGARD Plus should be given at monthly intervals during the period of the year when mosquitoes (vectors), potentially carrying infective heartworm larvae, are active. The initial dose must be given within a month (30 days) after the dog's first exposure to mosquitoes. The final dose must be given within a month (30 days) after the dog's last exposure to mosquitoes.

When replacing another heartworm preventive product in a heartworm disease preventive program, the first dose of HEARTGARD Plus must be given within a month (30 days) of the last dose of the former medication.

If the interval between doses exceeds a month (30 days), the efficacy of ivermectin can be reduced. Therefore, for optimal performance, the chewable must be given once a month on or about the same day of the month. If treatment is delayed, whether by a few days or many, immediate treatment with HEARTGARD Plus and resumption of the recommended dosing regimen will minimize the opportunity for the development of adult heartworms.

Monthly treatment with HEARTGARD Plus also provides effective treatment and control of ascarids (*T. canis, T. leonina*) and hookworms (*A. caninum, U. stenocephala, A. braziliense*). Clients should be advised of measures to be taken to prevent reinfection with intestinal parasites.

EFFICACY: HEARTGARD Plus Chewables, given orally using the recommended dose and regimen, are effective against the tissue larval stage of *D. immitis* for a month (30 days) after infection and, as a result, prevent the development of the adult stage. HEARTGARD Plus Chewables are also effective against canine ascarids (*T. canis, T. leonina*) and hookworms (*A. caninum, U. stenocephiala, A. braziliense*).

ACCEPTABILITY: In acceptability and field trials, HEARTGARD Plus was shown to be an acceptable oral dosage form that was consumed at first offering by the majority of dogs.

PRECAUTIONS: All dogs should be tested for existing heartworm infection before starting treatment with HEARTGARD Plus which is not effective against adult *D. immitis.* Infected dogs must be treated to remove adult heartworms and microfilariae before initiating a program with HEARTGARD Plus.

While some microfilariae may be killed by the ivermectin in HEARTGARD Plus at the recommended dose level, HEARTGARD Plus is not effective for microfilariae clearance. A mild hypersensitivity-type reaction, presumably due to dead or dying microfilariae and particularly involving a transient diarrhea, has been observed in clinical trials with ivermectin alone after treatment of some dogs that have circulating microfilariae.

Keep this and all drugs out of the reach of children.

In case of ingestion by humans, clients should be advised to contact a physician immediately. Physicians may contact a Poison Control Center for advice concerning cases of ingestion by humans.

Store between 68°F - 77°F (20°C - 25°C). Excursions between 59°F - 86°F (15°C - 30°C) are permitted. Protect product from light.

ADVERSE REACTIONS: In clinical field trials with HEARTGARD Plus, vomiting or diarrhea within 24 hours of dosing was rarely observed (1.1% of administered doses). The following adverse reactions have been reported following the use of HEARTGARD: Depression/lethargy, vomiting, anorexia, diarrhea, mydriasis, ataxia, staggering, convulsions and hypersalivation.

SAFETY: HEARTGARD Plus has been shown to be bioequivalent to HEARTGARD, with respect to the bioavailability of ivermectin. The dose regimens of HEARTGARD Plus and HEARTGARD are the same with regard to ivermectin (B mg/s). Studies with ivermectin indicate that certain dogs of the Collie breed are more sensitive to the effects of ivermectin administered at elevated dose levels (more than 16 times the target use level) than dogs of other breeds. At elevated doses, sensitive dogs showed adverse reactions which included mydraissi, depression, ataxia; tremors, drooling, paresis, recumbency, excitability, stupor, coma and death. HEARTGARD demonstrated no signs of toxicity at 10 times the recommended dose (60 mg/kg) in sensitive Collies. Results of these trials and bioequivalency studies, support the safety of HEARTGARD products in dogs, including Collies, when used as recommended.

HEARTGARD Plus has shown a wide margin of safety at the recommended dose level in dogs, including pregnant or breeding bitches, stud dogs and puppies aged 6 or more weeks. In clinical trials, many commonly used flea collars, dips, shampoos, anthelmintics, antibiotics, vaccines and steroid preparations have been administered with HEARTGARD Plus in a heartworm disease prevention program.

In one trial, where some pups had parvovirus, there was a marginal reduction in efficacy against intestinal nematodes, possibly due to a change in intestinal transit time.

HOW SUPPLIED: HEARTGARD Plus is available in three dosage strengths (See DOSAGE section) for dogs of different weights. Each strength comes in convenient cartons of 6 and 12 chewables.

For customer service, please contact Merial at 1-888-637-4251.



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Cat training tools

Clicker: A clicker serves as a marker signal to help animals pinpoint the specific behavior that earned them a reward. You may also use the click of a ballpoint pen or a verbal signal (e.g., "Good!") as marker signals during training. But keep in mind that these may be more difficult to keep consistent across multiple people and may lose some significance when overused in other contexts, such as saying "good" in everyday talk or when you click to write with a pen. You can make the signal more distinct by using it in a way that's unlike how the cat would hear the sound in everyday life, such as using a chipper, higher sounding "Good!" A quieter clicker, such as the Clik-R or a clicker held behind the back, may be ideal for sound-sensitive cats until the sound has a positive association for the feline.

Treats: Cats enjoy a variety of food rewards. In the home setting, pet owners can use the cat's normal meal as part of their training. For example, you can give licks of canned cat food from a spoon during training before giving the full meal. Training before meals also increases motivation. Divide treats into smaller portions to increase the duration the feline stays engaged. Giving the cat a food puzzle for their regular meal can encourage certain behaviors like resting on its bed as opposed to the counter or staying in its crate for longer periods.

Toys: Kitties are often highly motivated by games, so you can use play as a reward as well. Use a cat's favorite toys or novel, regularly rotated toys in training. Wand and interactive toys are especially useful during training, as you can initiate a right response with the immediate reward of a game.

Bonus!

Petting and attention: For many cats the best reward of all is free! While it's true that not all cats relish petting and it's likely to be person- and situation-specific, for those that appreciate a person's comforting touch and verbal affirmations, these can be powerful behavior motivators.

>>> Ready to teach a cat a trick or two (or 10)? Go to dvm360.com/cattraining. <<<

Top 3 cat behaviors to train

Go to space: Teach the cat to go to its bed, a mat or other area when asked. This boosts the cat's positive association and familiarity with a certain area, increasing her desire to dwell in the designated space. It also provides a portable security blanket of sorts to increase the cat's comfort in spaces outside of the home, like the vet's office. You can also use it to guide the cat onto the scale or exam table.

Touch a target: This behavior encourages the cat to approach new people and directs the cat to perform other desired behaviors, such as move with their person out of an off-limits room. In the veterinary hospital, you can use targeting to move the feline when needed or to encourage a positive association with the veterinary team.

Sit: Sit is a default behavior that can become the cat's polite way of asking for things it wants, like petting or food, and it can replace undesired behaviors the cat uses to get attention. Being prompted to sit and receiving associated rewards for the behavior offers the cat a predictable way to interact with people, including veterinary team members.



Many myths exist about canine behavior, and your veterinary team needs to understand why your practice believes in—and recommends—behavior counseling for happier pet families. This free team meeting, sponsored by VPL, will get your entire team on the same page—for less stress and calmer dogs! Head over to dvm360.com/teammeeting.

NOT ONLY POSSIBLE, IT'S PROVEN

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By Oriana D. Scislowicz, BS, LVT

he moment a new kitten or puppy owner walks through your clinic door, you've been gifted a golden opportunity. Similar to choosing healthcare for our human loved ones, owners want to find topnotch care for their pets. Their first visit is a chance to sell your services and your practice. But without the right preparation, you and your team members can slam the door on future visits from your new client. Consider these five ways you can flub clients' first experience at your practice:



You're not your clients' personal accountant, so don't play one. It's not up to you to decide who appears to have the funds to cover every possible preventive measure for a pet and to try to anticipate who will—or should—hold off. Often when we make these assumptions, they're inaccurate, and it offends our clients. It's our responsibility to provide the treatment and preventive care options—from conservative to all the bells and whistles—and allow our clients to make those decisions.

Don't value a low-stress experience

There's nothing more upsetting for a pet owner, especially someone new to pet ownership, than seeing her companion in distress. Our team looks more professional and caring when we take an extra few minutes to get to know our patients and move slowly with them. Always prioritize a patient's needs over the task at hand. Try these tips to get started.

- > Offer healthy treats
- > Pet the patient
- > Talk sweetly to the patient
- > Offer soft, comfortable bedding
- > Play soothing music in the exam room.

Making the visit as low-stress as possible also helps us establish a positive relationship with our new patients from the start. Our patients remember more than we give them credit for, and a stressful visit will stick with them. And remember, it will also make your job much easier during future visits. See more tips at dvm360.com/lowstress.

One last low-stress tip: If you do nothing else to make your practice low-stress for patients, please separate your cat and dog patients in the lobby! This is one of the most common hot-button issues for cat owners.

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To order, contact your distributor or call your Virbac representative at 1-844-4-VIRBAC (1-844-484-7222).

Dogs should be tested for heartworm prior to use. Mild hypersensitivity reactions have been noted in some dogs carrying a high number of circulating microfilariae. Treatment with fewer than 6 monthly doses after the last exposure to mosquitoes may not provide complete heartworm prevention. Please see full product label for more information, or **visit www.virbacvet.com**.

References: 1. Data on file, Vetstreet Data Analytics. Virbac Corporation. 2. SENTINEL® SPECTRUM® (milbemycin oxime/lufenuron/praziquantel) [Freedom of Information Summary]. Greensboro, NC: Novartis Animal Health; 2011.

*Prevents flea eggs and maggot-like larvae from developing; does not treat adult fleas.

† A. caninum. ‡SENTINEL® Brand Products.

Shaping the future of animal health





(milbemycin oxime·lufenuron·praziquantel)

Caution

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

Indications

SENTINEL® SPECTRUM® (milbemycin oxime/lufenuron/praziquantel) is indicated for the prevention of heartworm disease caused by *Dirofilaria imminis*, for the prevention and control of flea populations (*Ctenocephalides feils*); and for the treatment and control of adult roundworm (*Toxocara canis*, *Toxascaris leonina*), adult hookworm (*Ancylostoma caniumi*), adult whipworm (*Trichuris vulpis*), and adult tapeworm (*Teania pisiformis*, *Echinococcus mutitiocularis* and *Echinococcus granulosus*) infections in dogs and puopies two opunds of body weight or greater and six weeks of age and older.

Dosage and Administration

SENTINEL SPECTRUM should be administered orally, once every month, at the minimum dosage of 0.23 mg/b (0.5 mg/kg) milbemycin oxime, 4.55 mg/b (10 mg/kg) utrenuron, and 2.28 mg/b (5 mg/kg) praziquantel. For heartworm prevention, give once monthly for at least 6 months after exposure to mosquitoes.

Dosage Schedule

| Body | Milbemycin Oxime per | Lufenuron per | Praziquantel per | Number of |
|---------------------|-------------------------|------------------|---------------------|-----------|
| Weight | chewable | chewable | chewable | chewables |
| 2 to 8 lbs. | 2.3 mg | 46 mg | 22.8 mg | One |
| 8.1 to 25 lbs. | 5.75 mg | 115 mg | 57 mg | One |
| 25.1 to 50 lbs. | 11.5 mg | 230 mg | 114 mg | One |
| 50.1 to 100 lbs. | 23.0 mg | 460 mg | 228 mg | One |
| Over 100 lbs. | Administer th | e appropriate | combination of | chewables |
| | | | | |

To ensure adequate absorption, always administer SENTINEL SPECTRUM to dogs immediately after or in conjunction with a normal meal.

SENTINEL SPECTRUM may be offered to the dog by hand or added to a small amount of dog flood. The chewables should be administered in a manner that encourages the dog to chew, rather than to swallow without chewing. Chewables may be broken into pieces and fed to dogs that normally swallow treats whole. Care should be taken that the dog consumes the complete dose, and treated animals should be observed a few minutes after administration to ensure that no part of the dose is lost or rejected. If it is suspected that any of the dose has been lost, redosing is recommended.

Contraindications

There are no known contraindications to the use of SENTINEL SPECTRUM.

Warnings

Not for use in humans. Keep this and all drugs out of the reach of children.

Precautions

Treatment with fewer than 6 monthly doses after the last exposure to mosquitoes may not provide complete heartworm prevention.

Prior to administration of SENTINEL SPECTRUM, dogs should be tested for existing heartworm infections. At the discretion of the veterinarian, infected dogs should be treated to remove adult heartworms. SENTINEL SPECTRUM is not effective against adult D. immitis.

Mild, transient hypersensitivity reactions, such as labored breathing, vomiting, hypersalivation, and lethargy, have been noted in some dogs treated with milbemycin oxime carrying a high number of circulating microfilariae. These reactions are presumably caused by release of protein from dead or dying microfilariae.

Do not use in puppies less than six weeks of age.

Do not use in dogs or puppies less than two pounds of body weight.

The safety of SENTINEL SPECTRUM has not been evaluated in dogs used for breeding or in lactating females. Studies have been performed with milbernycin oxime and lufenuron alone.

Adverse Reactions

The following adverse reactions have been reported in dogs after administration of milbernycin oxime, lufenuron, or praziquantel: vomiting, depression/lethargy, pruritus, urticaria, diarrhea, anorexia, skin congestion, ataxia, convulsions, salivation, and weakness.

To report suspected adverse drug events, contact Virbac at 1-800-338-3659 or the FDA at 1-888-FDA-VETS.

Information for Owner or Person Treating Animal

Echinococcus multilocularis and Echinococcus granulosus are tapeworms found in wild canids and domestic dogs. E multilocularis and E. granulosus can infect humans and cause serious disease (alveolar hydatid disease and hydatid disease, respectively). Owners of dogs living in areas where E. multilocularis or E. granulosus are endemic should be instructed on how to minimize their risk of exposure to these parasites, as well as their dog's risk of exposure. Although SENTINEL SPECTRUM was 100% effective in laboratory studies in dogs against E. multilocularis and E. granulosus, no studies have been conducted to show that the use of this product will decrease the incidence of alveolar hydatid disease or hydatid disease in humans. Because the prepatent period for E. multilocularis may be as short as 26 days, dogs treated at the labeled monthly intervals may be come reinfected and shed eggs between treatments.

Manufactured for: Virbac AH, Inc. P.O. Box 162059, Ft. Worth, TX 76161

NADA #141-333, Approved by FDA
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107/15

Leave out family education on zoonotic disease

3

At the top of the list of our important duties is to educate pet owners on the risks of zoonotic disease and proper precautions to avoid transmission. We see intestinal parasites, such as roundworms and hookworms, much more frequently in young puppies and kittens. So be sure to educate families with young children to wash their hands after playing with their new pets and before handling food.

Remind clients to regularly pick up pet feces from the yard and dispose of it. Explain that people shouldn't walk barefoot in areas soiled with animal feces. And lastly, for clients with very young children, emphasize the dangers of eating dirt or soil, which could be contaminated.

Pass judgment on the breeder your client chose

We typically know which breeders in our area are unscrupulous and potential puppy mills, but we should refrain from openly sharing our opinions on these breeders with people who've already bought a pet. By this time, that breeder has finalized the transaction, and the family is in love with the new pet. When we make negative comments in these situations, it only worries the family and passes undue guilt onto them.

Try to redirect your efforts by educating clients about whether there have been outbreaks of certain diseases stemming from that breeder and recommending the patient be tested. In general, other commentary isn't necessary.

Don't cover the basics



Taking in a new puppy or kitten is a huge household change for the family. We shouldn't assume pet owners already know basic husbandry, even if they have other pets. It may have been some time since they've had a young pet, and there's so much more to client education beyond listing out the vaccines pets need and setting up their neuter or spay surgery.

For example, you'll also want to discuss how to puppy- or kitten-proof the home. Topics to cover:

- > Ensure electrical cords aren't exposed
- > Block stairs
- > Keep medications (and trash cans!) out of reach
- > Don't share toxic foods. Find client handouts to reinforce your message at dym360.com/

clienthandouts.
Also be sure to cover the high-quality diet you recommend, how to get into a routine with the new pet—especially for puppies—and

Clients only retain a small percentage of what's covered during the exam—it's usually a lot to digest, and they're simultaneously focused on keeping their pets calm during the appointment. Use client handouts to help educate new pet parents on the topics they need to keep top of mind.

The gift that keeps on giving

With a well-trained team, a welcoming and clean facility and these tips in mind, you can ensure a successful first visit for new puppy and kitten owners. Winning over these first-time patients and their pet parents can help you lock in a lifetime of high-quality healthcare for pets at your practice.

Ori Scislowicz is a team leader LVT at CVCA—Cardiac Care for Pets in Richmond, Virginia.



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*Ross SJ, Osborne CA, Krik CA, et al. Clinical evaluation of dietary modification for treatment of spontaneous chronic kidney disease in cats. J Am Vet Med Assoc. 2006;229(6):949-957.





Veterinary team, heal thyself. Are you consumed by your feelings? If you want to improve the medical care you offer, start by fixing your toxic team. By Portia Stewart

t's a shift change. Or closing time. One of those moments fraught with tension and tough communication and fatigue. Perhaps you've lost a patient that day or a client just finished screaming at you because she didn't like the cost of care or the outcome of a treatment. Tension flares to frustration. Then your coworker drops an emotional bomb. Maybe she's yelling. Maybe she's icing you out when you really need to talk about the next treatments a pet needs. That's when you might get an inkling

your team is toxic. (Check page 27 to see if your team shows six common symptoms.)

The truth is, if you've worked in veterinary practice for longer than a couple of years, at some point you've probably worked on a toxic team.

Ninety-two percent of team members say they've worked on a toxic team, according to the 2017 dvm360 Toxic Teams survey. That number probably isn't surprising to you. And it won't suprise you either that toxic teams hurt you—and the people you work with.

But what about your patients? How can you possibly offer the best care if you're distracted or emotionally hijacked by the people you work with?

You can't. And you know it.
Sixty-six percent of survey
respondents say their toxic team
affected the patient care they
offered. But the knife to the gut:
34 percent acknowledged pets
suffered because of a toxic team.

As members of the medical community, you've dedicated your lives—and possibly even sworn an oath to prevent and relieve animal

How did your environment cause harm or suffering to a patient? Survey respondents say:

"When disagreements happen, inpatients are definitely aware of the conflict and respond to the stressful environment." "I've noticed anyone drawing blood or administering treatments who is stressed by interpersonal conflict is less accurate, leading to multiple sticks or causing medication errors." "Whenever the team is not working together or not communicating well, patient care is compromised, whether we choose to admit it or not."

What is toxic?

Shawn McVey, MA, MSW, offers six symptoms to diagnose a toxic team environment.

By Hannah Wagle

The very definition of a toxic practice is a situation overrun by emotions, says Shawn McVey, MA, MSW, a *Firstline* Editorial Advisory Board member and owner of McVe y Management Solutions. "Toxicity is an environment that is run by emotions and social bumpercars, rather than by process and logical thinking," he says.

But what does that mean? McVey breaks it down in six simple signs.

1 Exposure to outbursts of emotion. Whether it's anger, sadness, jealousy, a wounded ego or anything in-between, it's a place where feelings are displayed instead of discussed, McVey says.

2 Disdain for and lack of process around interpersonal communication.

In other words, poor communication skills. "Quantifiably, people don't know how to talk about it. They don't have the vocabulary for it. They don't understand it intellectually, which is because they haven't ever tried," McVey says. "Conflicts and problems are not discussed; they're swept under the rug."

3 Lack of systems. "Veterinary practices with an absence of systems will become little sociological petri dishes for exercises of power, mind play and anything else along those lines," McVey explains. When there are no logical, healthy systems in place to keep a veterinary practice balanced, a team

will almost certainly fall into toxicity.

According to McVey, this is in direct line with how people describe conflict in terms of another person's worth or value as opposed to their behavior. "There's not a lot of 'I understand where you're coming from' and identifying the feelings while still focusing on

the behavior," McVey says.

5 Feelings are justifiable excuses. Behaving in a way that is oppositional to practice values, backed up by feelings and unguarded emotions. "If I have a feeling, whatever it is, that is the only justification I need to behave in a way that is inappropriate," McVey says.

Chapter that things will never change. "It's kind of like same stuff, different day, because we say one thing and do another," McVey says. "The values are written on the wall, but we don't follow them."

Are you sensing toxicity?

Ready to help heal your toxic team environment? The first step: Paying attention and being in the moment is required for good medical care, McVey says.

"Paying attention to what's happening between people and reading between the lines will enable you to provide the social medicine as well as the physical medicine."



Check it: Here's what *Firstline*'s sister publications are up to:



It's veterinary practitioners' top complaint in every survey: Managing personnel and getting along with coworkers. We look at the links between workplace culture and patient care.

vetted

Ready for more? Find:

- > How toxic teams are harmful to patients, from the point of view of a veterinary behaviorist
- > Exclusive data from the 2017 dvm360 Toxic Teams Survey
- > A study of staff drama:
- 4 work personality types
- > Why you need to avoid hiring a toxic employee rather than search for a superstar

To find all of this coverage, plus online-exclusive content, head over to dvm360.com/toxicteams.

"Frustrated employees take aggression out on difficult patients. Dogs are left unmonitored or in recovery because employees had enough and walked away."

"At least once a week I question the handling of a patient or the delay of treatment."

"One cat had a urinary catheter soaked in his own urine because no one would step on the toxic person's toes to change his blanket."

"I've seen a toxic atmosphere result in wrong drug administration and wrong course of treatment that resulted in death."



Avoid the fight: hire right

Don't fall into the trap of needing people so badly that you hire badly. Our experts agree—they'd rather run short-staffed with a good team than pollute the environment with toxicity.

"We spend a lot of time and money on preinterviewing and making sure it's a cultural and psychological fit," says Shawn McVey. "We have an internal rule of, 'I don't want to work with anyone I don't like.' I can sometimes not like their behavior, and I can get through that. But if we have different values it's really going to cause one of us to have to abandon ourselves to get through a day."



Get more online, including:

- > On the verge of leaving? Say so
- Learn to identify good conflict and bad conflict
- > And more!

suffering. And if you're a part of a toxic team, you have an obligation to get rid of the toxicity.

Own your environment

Your first instinct might be to blame one person. Danielle Russ, LVT, BS, BA, AS, the hospital manager for the Center of Veterinary Expertise in Suffolk, Virginia, cautions against it. "You've got to expect your team to take accountability for the environment you work in," she says. Managers should lead by example, offering team members the coaching and support so that each team member:

- > wants and actively contributes to a good environment
- > practices open and professional communication
- > stays receptive to feedback
- > is willing to educate teammates
- > seeks to educate themselves
- > always looks to improve
- > finds ways to contribute.

Your goal: To attack problems with information and data and remove feelings. "Feelings are real and need to be acknowledged, but they can be irrational," Russ says.

And this also means when you or a team member recognizes you're losing control, you need to tap out or step off. Gently saying to a frustrated team member, in a kind tone of voice, "Here, let me take over for you," may help defuse an inflammatory situation.

"When you're toxic and feelings-based it hijacks your ability to think—which is why people don't think for themselves and then treatments get missed and money isn't given back right and numbers are transposed," says Shawn McVey, MA, MSW, a *Firstline* Editorial Advisory Board member and owner of McVey Management Solutions.

Assume good intentions

The back vs. front struggle is real. And Tasha McNerney, BS, CVT, VTS (anesthesia and analgesia), says a part of this problem exists because the teams don't understand what the other is doing.

"There's always going to be that day when the back is going super crazy with surgery and dentistry and a blocked cat coming in and the back is running around slammed and you look down the hallway and the people in the front are sitting around and talking. And that sets up, 'Why am I running around when you're sitting here having coffee?'" McNerney says. "But there have been times when I have two dentistries cancel so I don't have as much anesthesia to do. And the front is running around crazy, and that can set up, 'Why am I dealing with all of these crazy clients when you're sitting here drinking coffee?'"

Your secret weapon: cross-training.

McNerney helps train technicians to work
front and back, to help everyone understand
the challenges of all parts of the clinic.

"Everyone's here because we love ani-

How did your environment cause harm or suffering to a patient? Survey respondents say:

"Once a tech was so mad she was putting a cat underwater. Another time a tech was slamming a cat into a cage."

"At least daily extended anesthetic times, poor or lack of post-operative pain management, rough handling of patients with the excuse of preventing employee injury."

"Staff bad moods seemed to increase the anxiety of patients, and bad days became a self-fulfilling prophecy." mals and want the best level of care," Mc-Nerney says. "But working with negativity, you can get drawn into it and it becomes your new norm. And then it's hard to focus on the best care for the pet."

Don't let feelings consume you

When you lead with heart but check your brain and systems at the door, you lose your focus on your values and shared goals.

"If you don't have a vision for your clinic and for your team, everyone's going to assume their own vision," McNerney says.

Start with realistic expectations. A common pain point for many practices is starting with an unrealistic schedule. You've been there: a full day of surgeries with a near-impossible-to-achieve schedule—then the emergency comes in, obliterating any shot at success. Then you're bumping appointments back, becoming unfocused and pushing your team, your clients, your patients and schedule to places you never planned to go.

"When you're getting overbooked, technically you're making more money, but anesthetic care goes down," McNerney says. "When you know you've got to get another patient on the table in 30 minutes, you stop focusing on the care the animal in front of you is receiving."

One solution: systems. When you manage based on realistic and agreed-upon

systems, you put aside feelings and agree on the facts. This means stepping up and acknowledging, with the facts, when systems are broken or when your team is working outside the system.

McVey recommends connecting the change you're requiring of people to a specific thrust or business initiative. You acknowledge the pain—Betsy isn't communicating so at shift change I have no idea about the status of the patients in ICU and which still need treatments—to affect change in the systems and make intellectual, not emotional, decisions about how to improve the care you offer for the business you work in.

"The pain and talking about the pain is the entryway to talking about the solution," McVey says. "The solution is emotional intelligence and the removal of the toxic environment and conflict resolution skills. And that is achieved through the building of a values-based business with goals and strategies and timelines and a recording of all of that."



First, boost your emotional intelligence with advice from Shawn McVey at

dvm360.com/eq. Then get live learning with CVC speakers Tasha McNerney and Danielle Russ to combat conflict in your practice. Visit thecvc.com/vb.

"About once a month it was causing excessive stress to frightened animals."

"Three anesthetic arrests in two months—one death."



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"Floerchinger AM, et al. Effects of feeding a weight loss food beyond a calonic restriction period on body composition and resistance to weight gain in cats. J Am Vet Med Assoc. 2015;247(4):565-574. "Kruger JM, et al. Comparison of foods with differing nutritional profiles for long-term management of acute nonobstructive lidiopathic cystitis in cats. J Am Vet Med Assoc. 2015;247(5):508-517. "82:016 Hill"s Pet Nutrition, Inc. ®/" Trademarks owned by Hill"s Pet Nutrition, Inc.

That moment when you realize YOUR TEAM IS1 tall 192

Managers, are you feeling caught in the middle? Teach your team to stop fighting and start talking with this advice to foster open communication in your veterinary practice.

By Oriana Scislowicz, BS, LVT







Clients want to fight fleas and ticks – not their dogs. Protect dogs with the beefflavored chew they love.¹





See brief summary on page 32.

¹Data on file at Merial.



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IMPORTANT SAFETY INFORMATION: NexGard® is for use in dogs only. The most frequently reported adverse reactions included pruritus, vomiting, dry/flaky skin, diarrhea, lethargy, 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. For more information, see full prescribing information or visit www.NexGardForDogs.com.



Description:
NexGard® (afoxolaner) is available in four sizes of beef-flavored, soft chewables for oral administration to dogs and puppies
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 alroxolaner dosage of 1.14 mg/fb (25 mg/kg), Afxoclaner has the chemical composition 1-Naghthalenearboxamics, 4-15 3-chloro-5-(trifluoromethyl)-sphenyl-4, 5-dhydro-5-(trifluoromethyl)-sphenyl-4, 5-dhydro-5-(trifluoromethyl-3-dhydro-5-(trifluorome

NexGard kills adult fleas and is indicated for the treatment and prevention of flea infestations (Ctenocephalides felis) and recoard units audit needs and 's indicated out in the detained and perfectly on their directions retained perfectly only of the treatment and outrol of Black-legged tick (hodes scapulars). American Dog tick (homacento variabilis). Lore Start tick (Amblyomma americanum) and Brown dog tick (fibripecphialus sarguineus) infestations in dogs and pupples 8 weeks of age and older, vegliging 4 pounds of body veight or greater, for one motivate of the start tick and older, vegliging 4 pounds of body veight or greater, for one motivate of the start tick and older vegliging 4 pounds of the start tick and older, vegliging 4 pounds of the start tick and older, vegliging 4 pounds of the start tick and older, vegliging 4 pounds of the start tick and older vegliging and older vegliging 4 pounds of the start tick and older vegliging 4 pounds of the start tick and older vegliging 4 pounds of the start tick and older vegliging 4 pounds of the start tick and older vegliging 4 pounds of the start tick and older vegliging 5 pounds 4 pounds 4 pounds 4 pounds 4 pounds 4 pounds 4 pounds 5 pounds 5 pounds 5 pounds 5 pounds 6 po

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 suspect that any of the dose has been lost or if womiting occurs within two hours of administration, redose with another full dose. I a dose is missed, administer NexGard and resume a monthly dosing schedule. Flea Treatment and Prevention:
Treatment with NexGard way 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 To minimize the intermode of the 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:
The safe use of NexGard in breeding, pregnant or lactating dogs has not been evaluated. Use with caution in dogs with a history of seizures (see Adverse Reactions).

history of sezures (see Adverse Reactions).

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 NexCard.

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 |
|----------|------|------|---------|-----------|

| III Auverse neactions. | Treatment Group | | | |
|-----------------------------------|-----------------|-----------|---------------------------|-----------|
| | Afoxolaner | | olaner Oral active contro | |
| | N¹ | % (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 |

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

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

Number 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.

To report suspected adverse events, for technical assistance or to obtain a copy of the MSDS, contact Merial at 1-888-637-4251 or www.merial.com/NexGard. For additional information about adverse drug experience reporting for animal drugs, contact TDA at 1-888-4DA-VETS or online at http://www.tda.gov/AnimalVeterinany/SafetyHealth.

Mode of Action:

Contact IDA at 1-808+IDA-VETS or omnie at ILILIDI/TAYMON, UNBLADDY/ILILIDIA CELLIDIA TY-SAIRSALIDIANIA.

Mode of Action:

Afoxolaner is a member of the isoxozoline 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-aminoutrytic acid (GABA), thereby blocking preand 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.

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 as 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 frough Day 21, and on Day 35 to Day 24. NexGard was 811. % effective 12 hours post-infestation formuly flower at 12 hours post-infestation of 100 prough 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 vertaed begs, and 4-90 eggs and 1-18 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 (1-1 eggs) while fleas from dogs in the control group continued to produce eggs (1-14 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 beseline was 88 Mgs, 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 Next and against inea on the Early 30, und and 30 visits Compared with to beam leved so 30 vs. 37, 36, and 35.37, 36, and 35.3

So days, At 12 mous personnesiation, revocation demonstrated 37 % effectiveness against annipyment an anearation of 30 days. Animal Safety:
In a margin of safety study, NexGard was administered orally to 8 to 9-week-old Beagle pupples 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 treatment on physical examination, body weight, food consumption, clinical pathology (hematology, clinical semination) concern dismostrate or coagulation tests), gross pathology in stopathology or organ weights. Vomiting occurred throughout the study has similar incidence in the treated and control groups, including one dog in the Sig group that vomited four hours after treatment. In a well-controlled field study, NexGard was used concentrally with other medications, such as veccines, anthelimitics, antibiotics (including topicals), steroids, NSAIDS, anesthetics, and antibistamines. 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:

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

Marketed by: Frontline Vet Labs $^{\rm TM}$, a Division of Merial, Inc. Duluth, GA 30096-4640 USA

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FRONTLINE VET LABS

When you avoid direct communication ...

When team members avoid each other, especially in relatively small work groups, toxicity builds quickly. The scrutinized team member feels "ganged up on," like an outsider. Whether it's her work ethic, performance or behavior that needs improvement, the problem will likely worsen when she feels pushed out.

To add to the toxicity, the frustrated team members who aren't speaking to the outsider are going to need to vent. This is a natural reaction, especially if we let our concerns linger in our minds rather than discussing them directly with the person.

This venting to others often unintentionally creates more anger and frustration toward the outsider. Newer employees and those who are initially unaffected then begin to see this team member in a different light. This creates an environment where the outsider doesn't stand a chance.

The most common employee conflicts (and how to botch them)

The same employee conflicts tend to reassert themselves regardless of the group, team members' personalities and the work environment.

So what really gets peoples' goat?

- > Work style differences. Sally likes to be constantly moving and busy all day. But Jane prefers to get the work done at a calmer pace. Sally perceives Jane isn't doing an equivalent amount of work, and she feels it's unfair.
- > Personality differences. Team members may differ in their humor (for example, sarcastic humor is mistakenly taken in a literal sense), their level of directness and the way they approach conflict. The most common cause of frustration: one team member speaks harshly to another when an issue arises.
- > Poor performance or attendance. When fellow team members aren't performing to the established standards, whether it's due to lack of training or disengagement, team members feel frustrated. And they often get angrier when a team member either shows up late regularly or frequently calls in sick.

In all these scenarios, the most challenging obstacle is

to get to open communication about the conflict. Oftentimes, team members vent their concerns to management or their coworkers, form cliques excluding the individual or simply resign themselves to the situation.

While it may seem unnatural and be difficult for team members to have direct conversations, it's important to foster this expectation and explain the benefits of avoiding third-party triangulation. Here's the example I offer my team:

Say you have a problem with Gillian. Instead of talking to Gillian, you involve your manager. Gillian feels betrayed and alone. She doesn't feel encouraged to improve. If you speak to Gillian, you're more likely to get the results you want. If Gillian wants to improve, she'll respond better to your conversation than she will if the manager "scares" her into improving.

Cultivate an environment of open communication

Managers, it's time to stop doing damage control and start taking preventive measures. Consider these easy ways to encourage workplace communication.

- > Hold morning or midday huddles at a regularly defined time. This sets aside time to chat with coworkers about how the day will go (or is going) and talk about any obstacles or issues. Morning huddles can be a good time to discuss any snags from the day before—after everyone has had the evening to cool down.
- > Plan regular team meetings, ideally once a month. It may seem like a no-brainer, but in our work environment, it's easy to allow these to lapse. Ask team members openended questions and even ask them to present a current issue, then problem-solve together. What you don't want: management entirely leading the meeting and barking off protocols
- > Schedule semiannual meetings. These have the sole purpose of allowing team members to

and updates.

How to handle hoarders

Whether they're hoarding tasks, information or tools and equipment around the practice, use these tips from Shawn McVey to halt the hoarding.

Start by approaching the hoarder. Say, "I'm uncomfortable with this behavior. When I'm left out of the loop or I don't have all the facts, I feel set up and not part of the team."

If the hoarder is able to have that conversation and get through it, she will change the behavior because she will be aware that it negatively impacts someone else.

What you're not supposed to do: Go to the manager, tattle and say, "Fix this person."

However, if you try to approach the hoarder and the hoarder refuses to change the behavior, you need to have the chutzpah to tell the hoarder that you're going to take their refusal to the manager to continue the discussion.

"We always say, 'No one has to change, but everyone has to have the conversation,'" McVey says.

exchange opinions on everything from workflow processes to current company morale. This tells team members their voices are being heard and valued, and it encourages them to express their thoughts and concerns in the future.

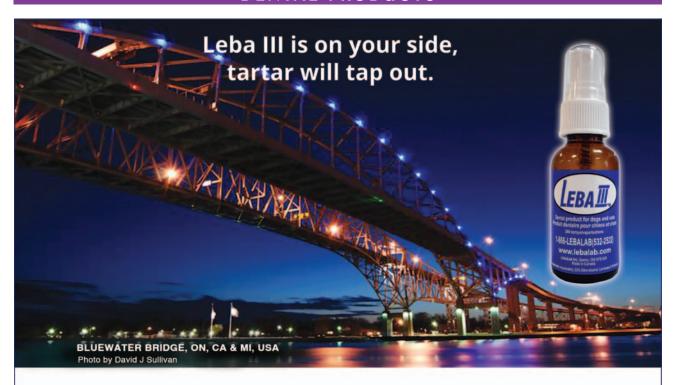
> Make time for more casual one-on-one meetings. Scheduling regular one-on-one pow-wows with team members allows managers to touch base and ask what's going well and what needs improvement. If there are any interpersonal issues with other team members, you can address these earlier on rather than letting them fester.

Oriana Scislowicz, BS, LVT, is a Firstline Editorial Advisory Board member and regional manager for CVCA Cardiac Care for Pets.





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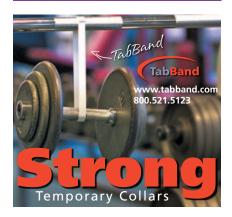
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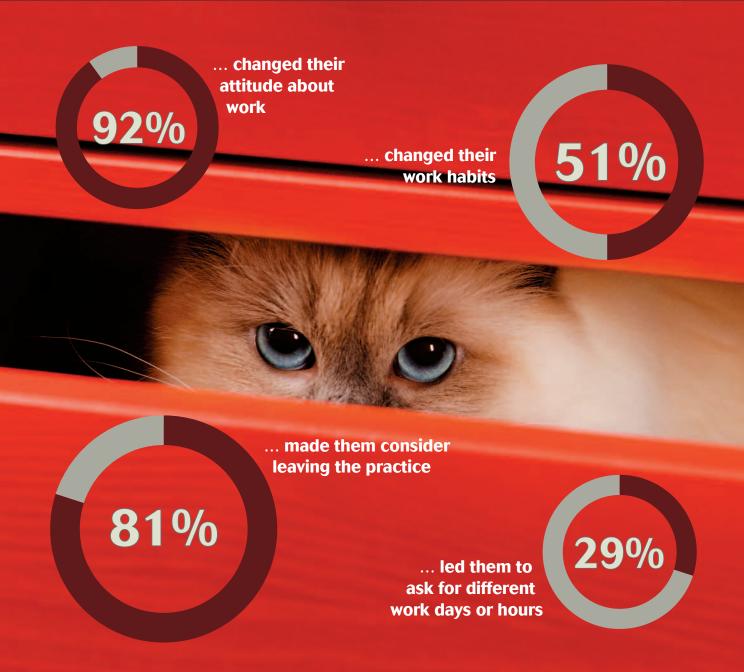
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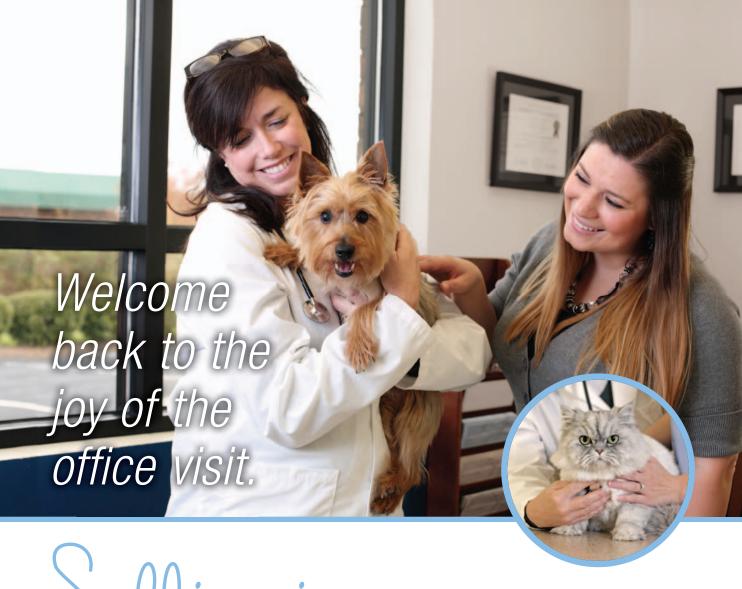
What are you *hiding* from?

Data from the 2017 dvm360 Toxic Teams Survey shows what's bothering team members at work.

The percentage of veterinary professionals who said they've experienced a level of discomfort in a coworker relationship that ...



The 2017 dvm360 Toxic Teams Survey was sent to subscribers of dvm360, Vetted and Firstline. The survey generated 776 responses, creating a margin of error of about 4 percentage points (although sample sizes—and statistical reliability—on individual questions may be considerably lower).



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References: 1. Data on file, Merial, Inc. **2.** Steinberg D, Beeman D, Bowen W. The effect of delmopinol on glucosyltransferase adsorbed on to saliva-coated hydroxyapatite. *Archs Oral Biol.* 1992;37:33-38. **3.** Vassilakos N, Arnebrant T, Rundergren J. In vitro interactions of delmopinol hydrochloride with salivary films adsorbed at solid/liquid interfaces. *Caries Res.* 1993;27:176-182.

