VOLUME 113, NUMBER 10

October 2018

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UBM

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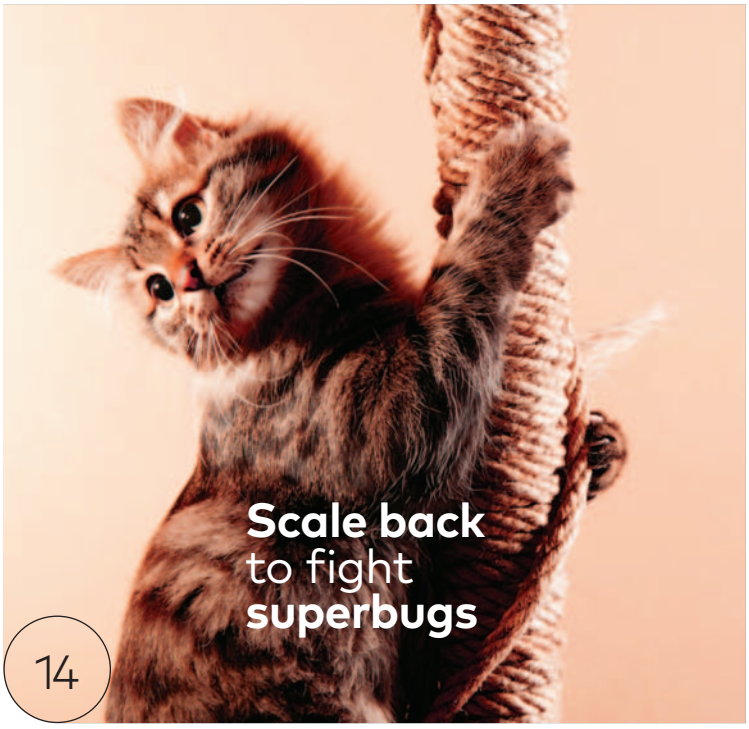

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## Measuring the risk of topical toxins

Dr. Renee Schmid addresses the risk level of different toxins and possible treatments.

*By Ericka Cherry*

**Fetch dvm360 conference speaker Renee Schmid, DVM, of the Pet Poison Helpline, examines the risk level of toxins like this: "When I'm talking about a topical toxin, I really like to figure out what happened. That's always where I'm going to start with these cases."**

**By first looking at the ingredients, Dr. Schmid can determine how aggressive treatment needs to be. Lower-risk toxins can include soap, sunscreen and cocoa butter.**

**"Cocoa butter does come from the cocoa bean, which is what we use to create chocolate," Dr. Schmid says, but once the cocoa bean is processed for things like lotion, it doesn't have the same effect in dogs as chocolate.**

**With lower risk toxins, pets usually only experience stomach upset and can be treated outpatient or monitored at home.**

**The risk—and aggressiveness of treatment—goes up when pets get into corticosteroids, antifungals, topical antibiotics, tea tree oil and nicotine patches.**

**Learn more about topical toxins at Fetch dvm360 conference in San Diego at Dr. Charlotte Flint's session "Topical toxin titans—and how to treat them."**

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# THE PICKS
(what we care about now)

# Don't be yourself

**What do a scientist, a showman, a saver and a conspiracy theorist have in common? They're all roles you can play when educating clients about the perils of parasites.**

*By Michael Nappier, DVM, DABVP*

Do you ever feel like your parasite prevention recommendations are just going in one ear and out the other? Perhaps the infamous breakup line applies: It's not them. It's you. In other words, it may be time to break out of your usual mold and try a new client educator role on for size.

## The scientist

For clients who favor a logical approach, put on your best lab coat and lay out the cold hard facts and compelling statistics. Stick to things like methods of transmission and disease incidence and employ charts and maps to illustrate. Too boring for you? Add a geeky twist by putting a little Mr. Spock, Dr. Who or Sherlock Holmes into the role—all in an effort to help our patients live long and prosper!

## The showman

The world is but a stage and its people merely players, so channel your inner thespian and concentrate on the drama. Connect with emotional learners by impressing them with the gravity of the situation. Help them see how they are preventing serious problems for their beloved furry family members (jars of worms and pictures of diseased organs can help). After all, the best feeling for such clients is the bond they share with their pets.

## The saver

Everyone likes a bargain. Appeal to particularly cost-conscious clients by showing them the dollars and cents. Demonstrate that for just pennies a day, the client can be the proud owner of a healthy pet. Compare costs of prevention versus treatment for expensive problems to drive home the value of prevention. Stopping zoonotic disease is thrown in at no extra charge.

*But wait—there's more! Get more hints for each parasite prevention persona, including a bonus one—the conspiracy theorist!—at* **dvm360.com/personas.**

*Dr. Michael Nappier is assistant professor of community practice in the Department of Small Animal Clinical Sciences at the Virginia-Maryland College of Veterinary Medicine in Blacksburg, Virginia.*



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# Why at-home veterinary visits matter

## Holistic veterinary care isn't the hippy-dippy practice you think it is. In fact, it might be the best way to diagnose what's going on in that tricky patient you're losing sleep over.

*By Lisa Aumiller, DVM*

People throw around the term "holistic" without always understanding what it means. Holistic veterinary care takes into account the pet as a whole—not just their current clinical signs. When taking a holistic approach to a companion animal, the veterinarian will examine the pet's lifestyle, environmental factors, mental and social health, nutrition and more.

The connection to my work as a house-call veterinarian is obvious. In school, we're taught that the best test you can do on a pet is the physical exam. I've since learned as a mobile vet how much more information I can get by examining the pet in their own environment. House calls allow veterinarians to truly examine a pet holistically.

During a house call, I'm able to see how the pet greets newcomers and responds to strangers. I can assess a pet's gait by seeing how he moves in his home or around the yard. I can also examine how the pet lives, how the home smells, where and how he's fed and what's in the yard or litter box.

All of this helps me make important recommendations for the pet and can shed light on many issues, particularly behavior.

An in-hospital exam room setting doesn't yield clear clues. Environmental cues of the home are gone, and stress—both from pet and pet owner—is an added factor that can change the exam. In a hospital, signs the veterinarian wants to see may completely disappear with their surge of adrenaline.

The stress response changes the cooperation of the pet and requires not only a good exam, but an educated guess based on the owner's history of the issue as well. Along with all of this, hospital visits add the risk of contagious disease transmission to and from patients.

Mobile medicine can remove some of the challenges inherent in the traditional hospital visit. Stepping directly into the lives of pets and their parents can be a reward for everyone involved.

*See Dr. Aumiller's home visit "aha" moments, like the smorgasbord-style diet of some "vomiting" cats, at* **dvm360.com/homevisit**.

*Dr. Lisa Aumiller is the owner of House-Paws Mobile Veterinary Service in Mt. Laurel, New Jersey. In addition to having four mobile units, she operates a hospital for clients who want traditional care.*

**ANOTHER PICK!**
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*_Amblyomma americanum_ (lone star tick), _Dermacentor variabilis_ (American dog tick), _Ixodes scapularis_ (black-legged tick) and _Rhipicephalus sanguineus_ (brown dog tick).

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



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# From Chile to chill parenting

## Where Dr. David Bruyette draws inspiration and enjoyment.

*By David Bruyette, DVM, DACVIM*

### Living large

When I applied to vet school, I didn't really grasp the whole non-cat-and-dog side of it. So as I started to go through the curriculum, I quickly tried to negotiate my way out of anything having to do with large animal. My plan failed. I think the food animal people, because of my known "love" for the topic, had me spend more time preg checking cows than necessary. I think that was their way of saying, "OK, you're never going do it again, so you're gonna spend a lot of time doing it over the next eight weeks."

### Stream of consciousness

One of the most memorable trips I've been on was a continuing education meeting in Chile. I went whitewater rafting for five days on the longest stretch of classified rapids in the world. We would raft all day, and then every night we had really nice dinners and a lot of wine before staying in wall tents. Hiking up Machu Picchu is still on my list.

### Cigar aficianado

I would love to learn how to roll my own cigars. I like the whole ambience of the cigar—the smell of it, the taste of it—and sitting around smoking a cigar is very relaxing. Watching people who really know how to roll a cigar and listening to them explain the various parts of making a cigar takes my interest to a whole new level. I think sitting around and making cigars looks like a lot of fun ... and then, eventually, you sample your hard work, of course.

### Small animals and small people

I have a 28-year-old and a 25-year-old and now a 10-month-old. Going back to having a baby again has been quite enlightening, because most of the things I'd forgotten about all came roaring back. But on the positive side, to be able to experience all of those things again while in a different phase of life has been interesting. The experience has been really different but really good. I'm way more relaxed now that I know babies don't spontaneously blow up in the middle of the night.

### Early indoctrination

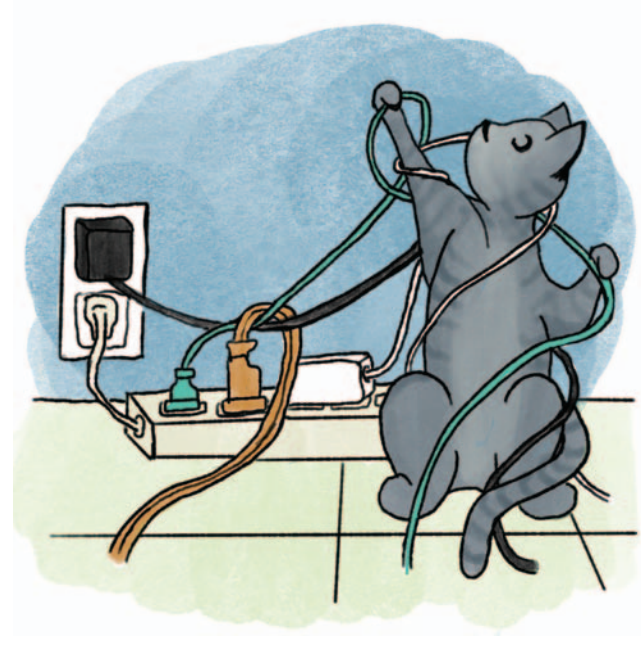
My daughter has her Dodger outfit at the ready as she heads down the path of Dodger baseball. She's enjoying the season thus far.

# Hospital design

# 4 ways to ruin your surgical space

**You dream of performing surgery in a flawlessly designed, perfectly executed surgical suite. But the reality is often less-than-perfect.**

What does it take to screw up a surgical suite? It's simple, says Jennifer Wardlaw, DVM, MS, DACVS. To really ruin your space—and make it harder to perform that tricky cranial cruciate ligament repair, simply follow this advice.

**1. Store everything in the surgical suite.** Since it's the lowest traffic room, really junk it up by storing things like equipment—less room and more dust. Score! And since you've put shelves and cabinets in there to store things like surgical equipment, you'll have even less room to maneuver around a sterile field and you'll increase traffic, going back and forth, back and forth, to find, clean, package and store things.

Sure, having just walls, the table and lights makes things better for thorough cleaning after a surgery. And furniture movers under heavy things to make it easier to clean the floors underneath them at least once a week. But who wants that?

**2. Make sure there are not enough electrical outlets.** You have monitors, fluid pumps, heating devices, the table, maybe cautery and hopefully music. That takes outlets in more than one wall and either lots of outlets or some nice surge-protected power bars. But it's way more fun if you limit the number of outlets and add the excitement of unplugging equipment or running extension cords across the floor where your technician walks.

ILLUSTRATIONS BY ROXY TOWNSEND



**3. Create a blind spot around the surgery room door.** Do not put a window in the wall or the door, under any circumstances. Then sit back and watch as your coworkers bang into things or other people entering and leaving the operating room. This means bruised foreheads but also maybe dropped equipment or even patients.

**4. Make sure the room is no bigger than a coat closet.** You really don't want the operating room to be too big, right? Just space for you and the patient and a mayo stand. After all, you never need an extra hand, the anesthesia tech won't ever need someone to pass an extra bag of fluids, and you never plan to have a concierge specialist at your practice. So who needs more room to maneuver around the patient safely during surgery?

ILLUSTRATIONS BY ROXY TOWNSEND

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# Operating room design: Tips from a veterinary surgeon

**You know the layout of these spaces is important. Here's what a boarded surgeon thinks is crucial to include.** *By David Dycus, DVM, MS, DACVS-SA*

Building or remodeling a veterinary hospital is a wonderful yet stressful time. There are many aspects that need attention, but one area that deserves a well-thought-out plan is the surgical suite, taking into account measures to promote asepsis while also being functional for personnel.

The soft-tissue surgery room at Noah's Westside Animal Hospital in Indianapolis features a dedicated HVAC system, an imaging keyboard, a wall-mounted monitor and a swinging door for easy access to the room.

## Surgical prep

Before we even get into the operating room (OR), there needs to be an area for surgical preparation of the patient. This is usually where the patient is anesthetized, the appropriate body part is clipped and a rough prep is completed. From here, the patient can be transferred into radiology or into the OR for surgery. The goal should be to minimize patient transport through areas of the hospital that may increase chances of infection or require the patient to remain under anesthesia longer than necessary. Therefore, the flow needs to be designed for ease in transportation of patients between the preparation area to either the radiology suite or the OR.

## 'Dirty' versus 'clean'

There should be defined areas for what is considered "dirty" and what is considered "clean." Dirty areas are where nonsurgical treatments take place and street clothes can be worn. Clean areas are areas meant to minimize bacterial contamination. For an individual to be in a clean area, they should have on clean surgical scrubs, a cap, a mask and booties. Just outside of the OR, in the clean area, there should be a scrub sink where staff and doctors can appropriately scrub their hands and arms in anticipation of aseptically gowning and gloving.

The arrangement of these areas is vital, as traffic into and out of the OR should be minimized; this is the primary way that bacterial load in the environment is increased. To further minimize traffic, intercom systems, walkie-talkies and pass-through cabinets can be used. In my hospital, there are four surgery suites. Between each is a set of pass-through cabinets so that materials can be stored and team members don't have to go searching for suture or other miscellaneous items.

## How many ORs and how big?

The number of operating rooms you'll need depends on your caseload; however, in the event of building a new hospital, some anticipation should be given for continued growth as well as the addition of new equipment and instruments. It's



PHOTO BY JONATHAN BEDNARSKI, FOTOVAN

The pack prep area and surgical prep area at Noah's Westside Animal Hospital in Indianapolis, Indiana.

also helpful to designate one OR to orthopedic procedures and another to soft tissue or "dirty" procedures where contamination may be increased, such as with emergency or gastrointestinal surgeries. The square footage of the OR needs to be large enough that team members can move around with ease, and there should be space for the anesthesia team and their equipment at the head of the patient, as well as space for the operating team to perform surgery and for their surgical instruments. In human medicine, the guidelines for a primary OR are such that the room must be 400 square feet. Specialty ORs, such as for orthopedics, need to be at least 50% larger. For intermediate outpatient procedures, a guideline of 250 square feet is recommended.

I would suspect that most veterinary ORs are between 250 and 400 square feet. Hallways surrounding the OR where gurneys are used should be 8 feet wide. The floors and walls of the surgical area should be smooth and scrubbable and have no perforation. In addition, the material must be able to withstand disinfectants. Ceilings should also be cleanable, and lay-in tiles should be avoided.

## A few more particulars

In the surgical suite, there should be electrical outlets placed at waist level as this will decrease the likelihood of electrical damage with fluids. All of the outlets should be of a ground-fault circuit interrupter type. At least one OR light and one outlet in each OR should be connected to an emergency electrical backup.

Airflow is an important consideration when designing an OR. Laminar airflow systems are costly in veterinary medicine, but they provide a significant advantage of decreasing environmental bacterial loads. When compared to conventional ventilation, laminar airflow systems revealed a 61% decrease in room bacteria and a 92% decrease in bacteria at the surgical wound. The laminar flow in a horizontal direction is preferred over vertical flow systems. The recommended HVAC guidelines are for 15 air exchanges per hour (20% should be outdoor air) with 30% to 60% humidity, and a temperature of 68 to 73 F. Doors should always remain closed to the OR, whether or not it is being used.[1]

After surgery, there should be an easy path to the recovery area where there should be space and cages sufficient for the number of cases seen. The recovery area should be staffed or in an area where staff are nearby in case of any postoperative complications. In addition, the recovery area should be stocked with anesthetic and emergency care equipment.

## Reference

**1.** Renberg WC. Preparation of the patient, operating team, and the operating room for surgery. In: Tobias T, Johnston S, eds. *Veterinary surgery: small animal*. 1st ed. New York: Elsevier, 2012;164-169.

*David Dycus is frequent speaker at the Fetch dvm360 conferences, an orthopedic staff surgeon at Veterinary Orthopedic & Sports Medicine Group in Annapolis Junction, Maryland, and co-founder and co-director of the Veterinary Sports Medicine & Rehabilitation Institute.*

# **Scale** back to fight **superbugs**

*By Carla Johnson, DVM*

**When it comes to bacterial strains like MRSA affecting humans, trying to fight off the resistance isn't futile. Here are questions you can ponder before every case to keep antibiotics going strong in pets.**

The moment we've all been dreading is here. At a recent Fetch dvm360 conference, Dawn Boothe, DVM, MS, PhD, DACVIM, DACVCP, discussed antimicrobial resistance, stressing that it's time for veterinarians to collectively make big changes in antimicrobial usage. We must at least begin learning how, why, when and what to adjust in our treatment and diagnostic protocols, both to make them more effective and to help make the world safer with regard to antibiotic resistance.

Dr. Boothe detailed the scope of the problem, how to understand and interpret minimum-inhibitory concentrations (MICs) and how to design the best antibiotic treatment plan. She hit on many questions that we need to be asking ourselves when reaching for antibiotics. We're hitting the high points here in print, but you can see her complete insights, and a few fun facts, at **dvm360.com/antibioticsense**. (So many golden nuggets here!)

Let's dig in! Before considering cost and convenience, ask yourself these questions:

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## 1. Do I really need to treat this patient with antibiotics right now?

If you get a positive bacterial culture result, say on a routine urine screen that you happen to have cultured, but the patient is asymptomatic, as a general rule you do not need to treat, says Dr. Boothe. Indeed, you should not. This is especially true if the microorganism shows evidence of multidrug resistance (MDR).

It seems counterintuitive, but many *Escherichia coli* are nonvirulent, and these are often the resistant ones. In fact, when they acquire resistance they usually have to drop their virulence genes to make room. A resistant *E. coli* UTI that is asymptomatic may self-resolve before it drops its resistance gene and reacquires its virulence gene. If it regains virulence, it may have dropped its resistance genes. If clinical signs appear again, Dr. Boothe says to reculture to see if lower tier drugs are now potentially effective.

## 2. Do I have enough proof that a pathological infection is present?

In patients with complicated infections, or for which the accuracy of predicting the infecting microbe is in doubt, treatment ideally will be based on culture prior to initiation of antimicrobial therapy. Dr. Boothe says

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to culture early and often, before exposing the bacteria to resistance-triggering antimicrobials. Interpret those results using the patient's "big picture." Corroborate with additional evidence such as exam findings, cytology and history. If you have a situation that does not make sense, such as fecal bacteria in a urinalysis with no pyuria, or a urine culture with anaerobes or fecal bacteria in a patient with no clinical signs, could you have tipped the gastrointestinal tract with needle during the cystocentesis? If yes, then don't treat, and re-culture if signs develop. Make sure that you are convinced that this patient has a bacterial infection.

### 3. Do I really need to treat this patient with antibiotics at all?

Dr. Boothe says to ask yourself, "Am I sure that systemic antibiotics are the only effective way to treat this infection? Can I treat with something else or rely on local treatment?" Proper wound care is essential to decontaminate and reduce the population of bacteria as much as possible, either to avoid antibiotic use altogether or to allow systemic antibiotics to work effectively. The body has a massive defense system to fight infection. Often our antimicrobial regimen seems to work but, really, the patient would have had the exact same outcome without it. Can you try a non-systemic modality such as a shampoo or topical medication? Can you just wait it out and recheck the patient in a few days?

### 4. Did I do a thorough work-up to properly evaluate for underlying causes?

Paramount to success with recurrent infections is identifying the underlying cause. With recurrent UTIs, for example, you need to do imaging to look for an underlying nidus for infection, such as calculi or a mass. If an underlying cause cannot be found or corrected, Dr. Boothe says it's likely that repetitive antimicrobial therapy will cause bacteria to develop increasing resistance until you are faced with a multidrug resistant organism. So be sure to treat the underlying cause as soon as possible.

"Am I sure that systemic antibiotics are the only effective way to treat this infection? Can I treat with something else or rely on local treatment?"

### 5. Do I trust my culture and susceptibility results?

"Your culture data is only as good as the sample you've collected," says Dr. Boothe. Poor samples and sample collection techniques notoriously cause misleading or useless results. Wound swabs represent a great example of this. Swabs of infected wounds typically culture only the surface-colonizing organisms that may actually be assisting healing; the bad bugs are deeper. Despite your best swabbing efforts, Dr. Boothe says 30% or more of present organisms may be missed depending on the type of the wound.

Ear swabs, submission of drain tubes or unprotected endotracheal tube tips, and many urine sampling measures will often produce misleading isolates. Dr. Boothe recommends that you send in tissue samples of infected wounds for culture whenever possible, and use very sterile sampling techniques with all other submissions. Think about where your infection lives, how many bacteria-laden environments you will need to cross to get there, and the best way to minimize exposure to these while accessing the infection site. Sample handling is important as well. Obligate anaerobes can die after 10 minutes of exposure to oxygen. Temperature or humidity are also important and the lab should be consulted regarding the need for transport on ice.

You might assume, like me, that you can just scoop up a smattering of bacteria from your very contaminated and infected wound (or ear) and that your culture will tell you about all of the bugs. Then you can simply formulate a plan to kill them all, contaminants and pathogens alike. It's just not that simple, says Dr. Boothe. The dangerous strains may not survive to show up in your culture and MIC. When you treat all the other bugs, you may successfully reduce the population and (for now) resolve clinical signs, but leave the



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environment unguarded, to be solely inhabited by a superbug like *Pseudomonas*, a common sequelae to the treatment of recurrent otitis in dogs.

## 6. Do I know how to interpret the MIC?

For various reasons, the process of interpretation is complex and fraught with exceptions when it comes to "taking this in vitro data, and apply[ing] it to our patient," Dr. Boothe says. The Clinical Laboratory Standards Institute (CSLI) works hard to assess published data regarding organisms infecting patients and their susceptibility to different drugs. They publish protocols for testing and guidelines for interpreting the results. They publish breakpoint drug data that helps guide whether an isolate MIC qualifies as S, R, or even I.

However, despite their best efforts to keep up, the rapid pace with which microbes change makes it difficult to stay current and accurate for certain drugs or bacteria (and often for animals it is still based on human data).

To add to the muddle, even when you properly culture a sample, the data is limited. For example, the lab is testing only one to several single colony-forming units (CFUs), yet the infecting population is composed of tens to hundreds of thousands of CFUs. The larger the infecting population,

### Blinded by the light

**Dr. Boothe says the reason that enrofloxacin causes retinal blindness in cats is because they are missing one of the p-glycoprotein-like efflux pumps in their retinas. The retina can't kick the fluoroquinolones out, and they accumulate. When the feline retina is exposed to light radiation, phototoxicity occurs. Keeping cats away from light while on the drug can prevent this.**

the more drug molecules are needed. Not only are there more bugs to inhibit, but the bugs will be producing more destructive enzymes and it's likely that at least one CFU will have developed resistance by chance alone, says Dr. Boothe. This is the main reason why "decontaminating" the site may increase the chances of success.

Dr. Boothe says it's important to understand that an "S" next to a drug doen't mean that isolate hasn't developed any resistance to the drug. It means that CLSI thinks effective concentrations can be achieved for that organism at the dose on which the testing is based. That dose isn't always known.

## 7. Is my drug choice, dose or drug interval adequate for what I see on my MIC and for what I know about the drug?

Design the drug treatment plan to leave no survivors. A dead bug cannot be a resistant bug, and "dead bugs don't mutate," says Dr. Boothe. First, learn to read your MICs for the development of resistance. For example, if any bacteria is I or R to any of the fluoroquinolones, it's on its way to MDR, no matter how many other fluoroquinolones have Ss. However, you still might be able to cure the infection if you treat it immediately and appropriately. Next, "always start with the best drug, but the lowest tiered," Dr. Boothe advises.

Once you decide to use a drug, "get in quick, hit hard, and get out quick," says Dr. Boothe. The more at risk your patient is for therapeutic failure, the more important it is to hit hard with a higher dose, or more frequent dosing regimen, depending on the drug type.

## 8. Do you understand mechanisms of toxicity for each of your antibiotics?

If not, research them, consult with a specialist, or both. The drug's mechanism of action is not going to be the same as the mechanism of toxicity, so there are often things that can be done to increase effectiveness without causing toxicity. And there are often some things that can be done to reduce toxic effects, says Dr. Boothe. If you are going to use higher than labeled dosages of a drugs, make sure you understand which patients are at higher risk, what you can do to lower those risks, and whether you really need to use that dose or that drug.

> "Always start with the best drug, but the lowest tiered."

## 9. How do we know when to use prophylactic antibiotics?

Dr. Boothe would advise as minimal prophylactic antibiotic-use as possible. In a patient with really severe dental disease, a short course of antibiotic prior to the cleaning procedure is reasonable. Also, some orthopedic procedures and ophthalmologic surgeries are routinely done with prophylactic antibiotics, as the risk of complications tends to overshadow the risk of resistance. For non-contaminated elective surgeries in other categories, antibiotics should not be used. Guidelines for everything in-between still appears to be a work in progress or an individual case-based decision.

## Where to go from here

The beauty and burden of our profession is that we are forced to think for ourselves. Antibiotics are essential tools for our practice, but we need to use them more wisely. If nothing else, we need to understand them better, because there are no black-and-white guidelines for us at this time, and there may never be.

*Dr. Carla Johnson practices emergency medicine at Berkeley Dog and Cat Hospital in Berkeley, California, and general practice at Cameron Veterinary Hospital in Sunnyvale, California.*

*Don't forget to check out all the golden nuggets on antimicrobial resistance from Dr. Boothe at* **dvm360.com/antibioticsense**.

dvm360 leadership challenge

**COMING NEXT MONTH...**

The goal of our latest dvm360 Leadership Challenge is to curb student debt's control over your life so it doesn't curb your enthusiasm for this amazing profession.

# Best products for BIGS

**Large-breed dogs need a little extra TLC sometimes. Here are three products to make their lives easier.**

Big dogs may be gentle giants, but their large frames need a little extra help sometimes. With the help of David Dycus, DVM, MS, DACVS-SA, we've rounded up products that are large-breed-friendly to help them, whether at rest or on the go.

## Help them rest comfortably

Big Barker pet beds are designed with larger dogs in mind, with a recommended weight of 50 lb or larger. The beds are made with orthopedic foam to mimic a human bed and come in large, extra-large and giant sizes to fit even a Great Dane comfortably without compressing under their weight like a traditional polyfill bed does. Dr. Dycus notes that an optional waterproof liner keeps these beds at their best even in a hospital setting where accidents may occur. Big Barker beds are made in America and come with a 10-year warranty.

## Help them get up easily

The Help'EmUp Harness with Hip Lift is great for helping large dogs with orthopedic or neurologic conditions get up and ambulate, Dr. Dycus says. It is a complete shoulder-and-hip harness system that places a pair of handles where pet owners can quickly reach them, allowing them to lend support any time a pet needs it. It also helps the owner, who may struggle to lift a pet's weight unassisted.

## Help them protect their joints

Large- and giant-breed dogs are more prone to develop elbow hygromas, pressure sores and decubital ulcers, says Dr. Dycus. The Standard Length Adjustable DogLeggs, from DogLeggs, protects these pets' elbows and helps to prevent them from developing these conditions. The product is custom-sized based on the measurements sent to the company and is constructed from a three-dimensional fleece-faced, highly breathable, four-way stretch textile with wicking properties. This material allows air to circulate while keeping the joint warm.

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PHOTOS COURTESY OF DOGGLEGGS AND BIG BARKER

# HELPFUL STUFF

## Minimally invasive ways to bring Fear Free to surgery

*By Robin Downing, DVM, DAAPM, DACVSMR, CVPP, CCRP, CVA, MS*

The same principles and measures that reduce fear, anxiety and stress (FAS) in regular checkups can also calm surgery patients. Here are some ways to apply the Fear Free approach before and after surgery.

**Put some prep in your steps.** To lessen the amount of time a patient has to become stressed by waiting, get everything ready for a surgery the day or night before. In our practice, we stock a basket with the things we'll need. We also enter the patient's data into our electrocardiogram (ECG) database.

**Divide and conquer FAS.** Be sure to keep dog and cat patients in separate spaces or wards with appropriate pheromones while awaiting surgery. When we have cats present for anesthesia and surgery, a real game-changer has been to allow them to stay in our cats-only exam room with natural light, iCalmCat music playing, a Feliway Classic pheromone diffuser and a clean litter pan. We let them remain there until we're ready to premedicate, which means we perform their examination, draw their blood, and perform their preop ECG in that room.

**Don't wait to medicate.** Don't be afraid to provide the owner with a single dose of gabapentin to give the patient the morning of the surgery with a small amount of Pill Pocket or other delivery food. Such a small amount of food will not create unnecessary risk for the patient, and that single dose of gabapentin won't interfere with a balanced anesthesia protocol.

We premedicate with a very small dose of acepromazine combined with hydromorphone, and we induce with propofol and midazolam. The owner-given gabapentin reduces the amount of medication we need to induce, but the big payoff lies in the fact that it dramatically reduces the patient's FAS, preventing an out-off-control sympathetic nervous system.

**Set the mood.** Keep your preop area tranquil by using pheromone diffusers—Feliway for cats and Adaptil for dogs. Use your "inside voices," play iCalmPet music (or quiet music of any kind), and keep extraneous noise to a minimum. When handling patients, move slowly and deliberately.

**Give 'em the warm fuzzies.** A cold patient is a stressed patient, and because animals can lose a tremendous amount of body heat between premedication and induction, we need to prevent it from happening. We use a towel warmer so we can have hot towels or fleeces at the ready. After delivering the premedication, we drape the front of the patient's cage with a warm towel and place another one in the cage with them.

And to contain their body heat, don't put bigger dogs back in a run after receiving their premedication. Keep them in a cage large enough for them, even if it's smaller than you would normally use.

*Wait! The patient is all prepped, but what about after? See more tips online at* **dvm360.com/fearfreesx**.

*Dr. Robin Downing is the hospital director at the Downing Center for Animal Pain Management in Windsor, Colorado.*

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# Vets and techs: Team up to be your best on behavior

Veterinarians, are you hesitant to suggest desensitizing and counterconditioning measures in pets who have behavior problems? And are you hesitant because you simply don't know the methods?

If so, Lisa Radosta, DVM, DACVB, has a suggestion for you: Recognize the disorder, assess it and diagnose it, then hand the case off to a technician trained in these methodologies. "The veterinarian doesn't have to actually know the procedure of desensitization and counterconditioning, which is what scares the life out of vets," she says.

Whew. Now that that's off your plate, where do interested technicians get that training? Dr. Radosta has three suggestions:

- The Society of Veterinary Behavior Technicians (**svbt.org**). "Hang out with like-minded people," she says.
- The Fear Free Toolbox (**fearfreepets.com**). This resource offers loads of ideas and information.
- *From Fearful to Fear Free*—the book Dr. Radosta co-authored with Mikkel Becker, Dr. Wailani Sung and Dr. Marty Becker.

# You *don't* have to be a specialist to use ultrasound

Veterinarians are notoriously driven individuals who master countless systems, tools and procedures throughout the clinic. But, of course, no one can be a wizard at every task—a fact that is vexing to some practitioners.

For example, Rachel Pollard, DVM, PhD, DACVR, says she often sees vets become frustrated by performing ultrasound because they expect to be able to function with the same proficiency as their specialist colleagues. She says this unfair fixation doesn't do DVMs any favors, but those who can cut themselves some slack and focus on what they can do have the right idea: "They're able to make the bulk of the really relevant diagnoses without feeling like they have to be able to perform at a specialist's level.". Hear more straight from Dr. Pollard at **dvm360.com/yougotUS**.

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TAGS



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# The Mechanic

## An exam room poem

*By Gina Singleton, DVM*

Before we get started,
I want to be clear:
Am I a mechanic
or a pediatrician here?

This may sound harsh,
and it's not based on greed,
but it will make a difference
in how we proceed.

He's puking and pooping
in your house a lot.
Do you want a workup,
or just a cheap shot?

He's itching and licking,
and his ears are red.
Shall we talk about allergies
or do steroids instead?

You see, we just met
and I don't really know
what your dog means to you
and how this should go.

If you spend too much
and it doesn't help,
then I'm a scam artist
and you'll blast me on Yelp.

If we do too little
and things should go south,
then I haven't been smart enough,
and will be hit by word of mouth.

To come up with a plan
that is perfectly styled,
I really need to know ...
is he "just a dog" or your child?



ILLUSTRATION BY HANNAH WAGLE

# Vets Against Insanity

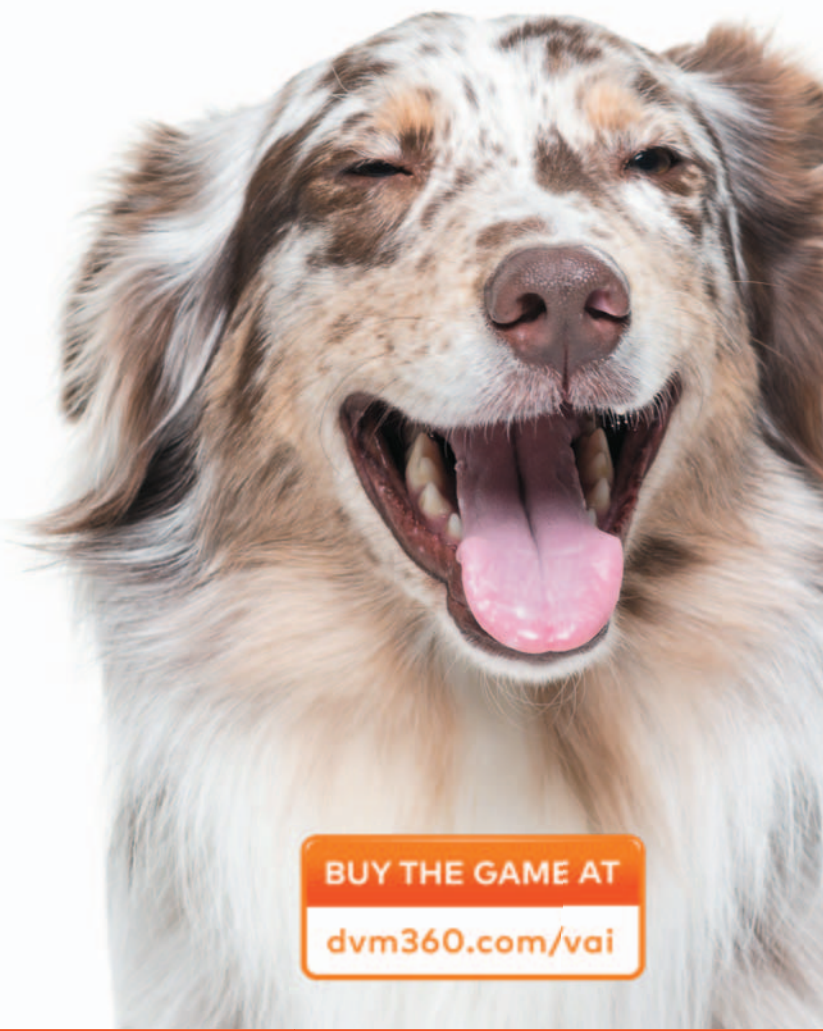

## The *slightly* scandalous card game for veterinary professionals.

Practicing veterinary medicine is rewarding, important and often all-consuming. It can also be awkward, annoying and (on most days) downright disgusting. Sometimes, all you can do is laugh about it. Enter Vets Against Insanity: a fun, slightly scandalous take on the work and life of a veterinary professional.

## Who should play:

- Veterinary professionals (can be various states of frustrated/happy/slightly drunk/ completely sober/tired/overworked)
- Anyone who recently had to squeeze a dog's anal glands
- Everyone who has recently thought, "I'll have to laugh about this so I don't cry"

At its best, Vets Against Insanity is a hilarious tool designed to inspire veterinary professionals to take risks, laugh more, pursue personal development and enjoy more professional satisfaction and success.




*Warning: You can play with the regular folks in your life, but do you really want to deal with the blank stares you'll get after playing "radiolucent bladder stones"? To get your game now, go to* **dvm360.com/vai.**

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