

WEST COAST VETERINARIAN

SEPTEMBER 2016 | N° 24

**THE ELEPHANT
NATURE PARK IN
CHIANG MAI**

**MENTAL HEALTH
& VETERINARIANS**

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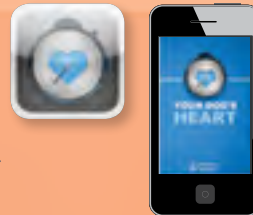
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COREY VAN'T HAAFF
EDITOR

»» TO THE EDITOR

Letters from members are welcome. They may be edited for length and clarity. Email us at wceditor@gmail.com.

»» ON THE COVER

Elephants in Chiang Mai.

Fall has always been my favourite time of the year, likely because I am inspired by the colour orange, and the riot of reds and yellows that goes with it. It is also, for me, a time to reflect on the very early death of my mom, in September, when I was 12.

So the issue of medical assistance in dying article touches a nerve with me and brings back so many memories of loss and sadness. I can well imagine the hurt involved with having a loved one die; I cannot imagine what it would be like if that death were by choice. I was not surprised, however, to see that even in this arena of human suffering, there is a role for veterinarians to play. My great love for animals and their unselfish acceptance of us humans with all our faults is mirrored over and over again by generous, thoughtful, considerate veterinarians who act with grace and candour and knowledge to help another person, not solely an animal.

On a different level altogether is our story of mental illness and mental wellness, and the terrible tragedy of suicide. The story opens with the suicide of Dr. Sophia Yin, which shocked so many of us who followed her words of caring wisdom about animal welfare. I will never understand what drives people to such a state of utter hopelessness that they end their lives, but I do hope that, through this story, anyone who recognizes signs of mental unwellness in themselves or their colleagues will have a bit more knowledge of how to help and where to go for help. For a certainty, help is always available. In fact, by simply following this link, www.canadianveterinarians.net/documents/mental-health-support-resources, you will find a list of resources that are available to each of you. Veterinarians in BC should know that specific help through Homewood Health is fully confidential, and neither the College of Veterinarians of BC nor your CVMA-SBCV Chapter will ever know you called.

Email: wceditor@gmail.com

LETTER TO THE EDITOR

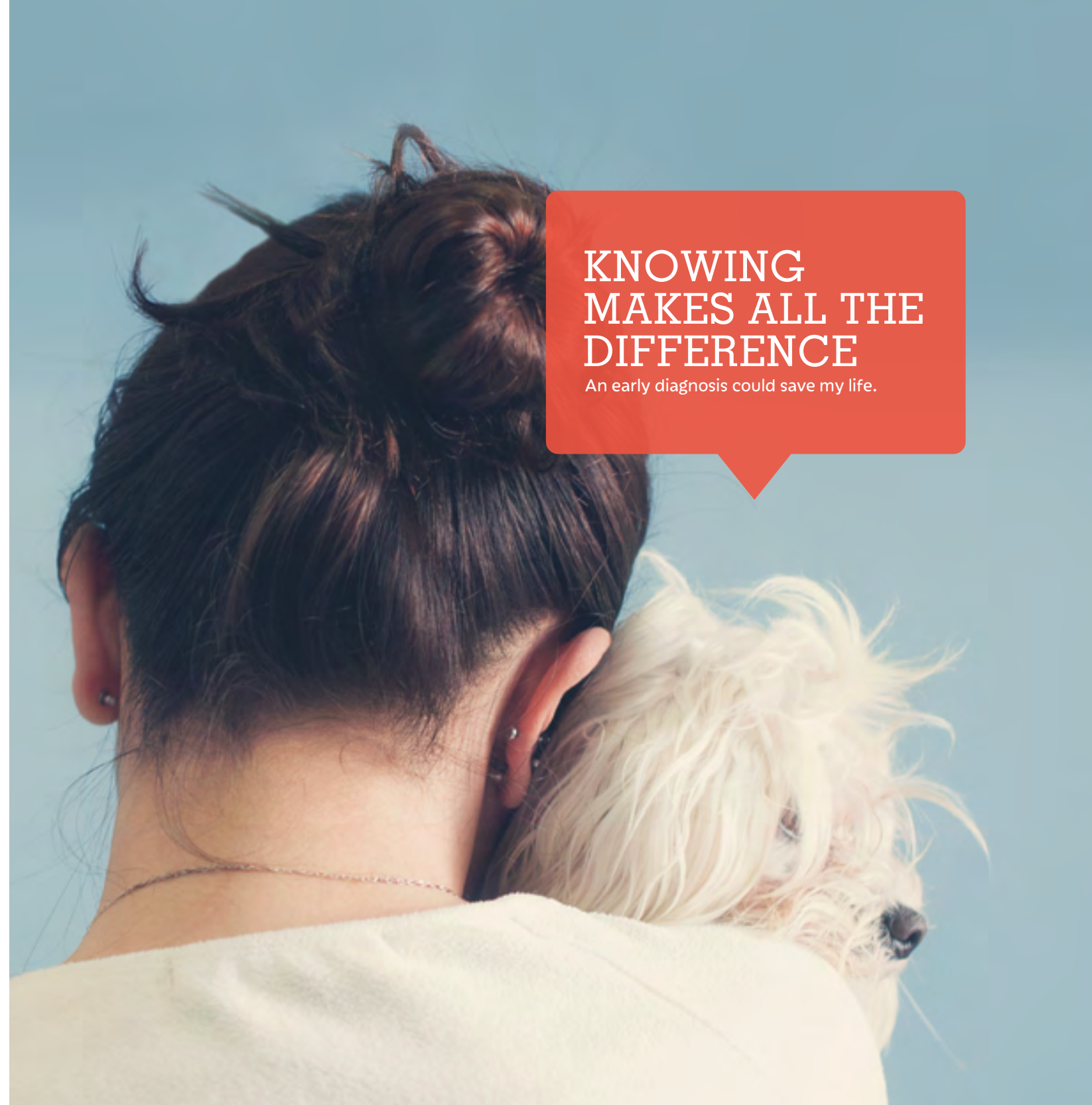
Dear Editor,

I thought I would share a photo with you. Our daughter will not let go of the March edition of *West Coast Veterinarian* magazine. Her grandpa is a retired veterinarian, and she is currently a very big fan of dogs (her first word!). She has been picking the magazine up every day since March and looks at all the dogs. Thanks for providing her with hours of entertainment!

Best wishes,
Heather Brekke (Anika's mom)



ABOVE Anika and her grandpa Dr. Ron Lewis.



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CARSTEN BANDT, DVM, DACVECC, earned his DVM from Humboldt University, Berlin, in 1997 and became Diplomate of the American College of Veterinary Emergency and Critical Care in 2007. From 2007 to 2014, he was Clinical Assistant Professor of Emergency Critical Care at the University of Florida. He is part of the ER + Critical Care team at Canada West Veterinary Specialists.



LINDA CREWS, BScH, DVM, graduated from Ontario Veterinary College in 1997. She is involved in reviewing, investigating, and teaching the benefits of medical records to veterinarians—previously with the CVO for nine years, and for the past five years with the CVBC. She is the founder of Advise a Vet Services which helps teach veterinarians the benefits of good quality medical records.



VERONICA GVENTSADZE, MA, PhD, DVM, graduated from Ontario Veterinary College in 2008. She moved to Squamish, BC where she worked for two years as an associate veterinarian in a small animal practice. She currently travels across BC as a locum and enjoys learning something new from each practice.



SUSAN HUGHSON, DVM, practices small animal medicine in Vancouver and is a board member of Dying With Dignity Canada.



DAVID LANE, DVM, ACVSMR, is a 1992 OVC graduate. He recently earned Diplomate status with the American College of Veterinary Sports Medicine and Rehabilitation (Canine). He is the owner of Points East West Veterinary Services, a specialty practice focused exclusively on resolving conditions that cause lameness, chronic pain, and/or paresis in pets.



DAVID PATON, DVM, an 1978 WCVM graduate, is a partner in Paton and Martin Veterinary Services. A former president of the BCVMA and a CVMA executive committee member, he began his international experience with the Canadian International Development Agency. He is the CVMA-SBCV Chapter Delta Equine Seminar Chair.



DANIEL WEARY, D.Phil., is a professor and NSERC Research Chair at UBC. He studied biology at McGill and Oxford, and went on to co-found UBC's Animal Welfare Program where he still works and co-directs this active research group. He was recently awarded UBC's Killam Research Prize.



KATHRYN WELSMAN, DVM, graduated from OVC in 2007 and practised emergency medicine in the Lower Mainland until moving to the Interior of BC and starting work as a small animal locum.



CAROLINE YEUNG, RVT, graduated from Douglas College's Veterinary Technology program in 2012. Since graduation, she has worked at Eagle Ridge Animal and Bird Hospital in Coquitlam, dealing with a variety of companion animals. She is currently indulging her travel bug working as an RVT in Australia.

WCV

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22

MENTAL HEALTH & VETERINARIANS

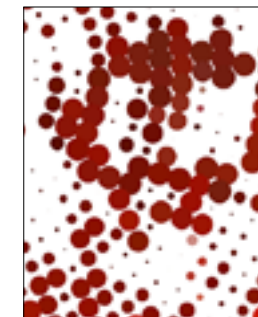


FROM THE EDITOR	04
LETTER TO THE EDITOR	04
WCV CONTRIBUTORS	06
FROM THE CVMA PRESIDENT	08
FROM THE CVMA-SBCV CHAPTER PRESIDENT	10
FROM THE CHIEF VETERINARY OFFICER FOR THE PROVINCE OF BC	12
THE CVMA-SBCV CHAPTER WCV STUDENT LIAISON COLUMN GLOBAL VETS IN AFRICA	14
ANIMAL RESEARCH COLUMN NEW APPROACHES TO REGULATING ANIMAL RESEARCH	16
VETERINARY MEDICAL RECORDS DATA COLLECTION ERRORS & OMISSIONS	32
FALLOUT FROM THE QUEST FOR GOLD	34
A MULTIMODAL APPROACH TO TREATING OSTEOARTHRITIS IN DOGS	35
EQUITARIAN INITIATIVE IN COSTA RICA	38
MEDICAL ASSISTANCE IN DYING	40
CLASSIFIED ADS	41
VETERINARY CONTINUING EDUCATION	42

September

18

SPECIALIST COLUMN EXTRACORPOREAL BLOOD PURIFICATION THERAPY



28

RVT COLUMN THE ELEPHANT NATURE PARK IN CHIANG MAI



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This year's Animal Health Week will be celebrated from October 2 to 8 and will focus on One Health, showcasing that we are working together for the health of all. The CVMA invites veterinary clinics and hospitals across the country to celebrate and share the message of Animal Health + Human Health + Planet Health = One Health with their clients.

In June 2016, as part of the Federal Action Plan on Antimicrobial Resistance and Use in Canada, the CVMA joined other like-minded stakeholders at the first Federal, Provincial, Territorial Antimicrobial Resistance (AMR) Steering Committee meeting held in Ottawa. The meeting responded to the need to engage stakeholders in human health and agri-food sectors (e.g., government, industry, health professionals, veterinarians, and licensing bodies) on efforts to develop a pan-Canadian framework and action plan on AMR. The CVMA presented its draft document "Overview of Veterinary Oversight of Antimicrobial Use—A Pan-Canadian Framework of Professional Standards for Veterinarians," which provides a template for veterinary oversight of the use of antimicrobials.

The CVMA's Animal Welfare Committee has formed a working group to explore and address issues arising from the review of Bill C-246, the Modernizing Animals Protection Act. Acting on advice from the working group, the CVMA sent a letter expressing support for the Bill to each Member of Parliament. The House of Commons debated this Bill in May 2016. More debate time will likely be allocated, where a vote will be required to move it to Committee hearings. The CVMA hopes its letter to Members will aid in the passage of the Bill through the second reading, so our voice can be heard at the resulting Committee hearings.

The World Small Animal Veterinary Association developed the "Ketamine Campaign" to give its members the opportunity to stop the international rescheduling of ketamine. Called an "essential veterinary medicine," it is often the only agent available for anesthesia/analgesia and the principal agent used to facilitate feral dog/cat population control via spay/neutering. The international rescheduling of ketamine would effectively eliminate its clinical use in both veterinary and human medicine. The CVMA has asked its members to sign the petition to secure the future of ketamine at www.change.org/p/ketamine-is-an-essential-medicine-and-should-not-be-re-scheduled.

The CVMA has updated position statements on *Keeping Native or Exotic Wild Animals*; and *Partial Digital Amputation (onychectomy, declawing) of Non-Domestic Felids and Other Carnivores Kept in Captivity*.

The National Examining Board (NEB) is providing DVM candidates with an opportunity to assess their skills prior to undertaking a live surgery during the Clinical Proficiency Examination (CPE). The NEB, with the collaboration of subject experts from CPE sites, has developed a process to ensure candidates can demonstrate basic surgical techniques as a prerequisite for CPE registration.

Each year, CVMA Provincial Practice Owners Economic Surveys are distributed to veterinary practices across Canada. The 2015 survey gathered data in each province on revenue, expenses, fees, employee wages, etc. Read the full article in the Business Management section under the Practice & Economics tab of the CVMA website.

I, and the staff of the CVMA, value your continued support as a CVMA-SBCV Chapter member so we may continue to provide a voice for Canadian veterinarians.



Troy Bourque, DVM, originally from Fredericton, NB, graduated from the Atlantic Veterinary College in 2000. Dr. Bourque was a mixed animal veterinarian for 14 years in Okotoks, until 2014, when he began working as an emergency veterinarian at Fish Creek 24-Hour Pet Hospital in Calgary. He now also works at

Big Rock Animal Clinic in Okotoks, practicing small animal medicine. Dr. Bourque was involved in the Alberta Veterinary Medical Association (ABVMA) for 14 years and served on council from 2006 to 2012, and as president in 2010. He has been involved with the CVMA for over five years on various committees including the Executive Committee, the Communications Advisory Group, and most recently as the Chair of the Veterinary Pharmaceutical Stewardship Advisory Group.

Please join us in welcoming Dr. Troy Bourque as the 68th national president of the Canadian Veterinary Medical Association (CVMA). Dr. Bourque succeeds Dr. Nicole Gallant whose term came to an end in July 2016.

YOUR 2016–2017 CVMA EXECUTIVE MEMBERS

- | | |
|--------------------------------------|--|
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²Messias A, Gekeler F, Wegener A, et al. (2008). Retinal safety of a new fluoroquinolone, pradofloxacin, in cats: assessment with electroretinography. *Doc Ophthalmol*. 116(3):177-191.

Summer has come and gone in the blink of an eye, and a lot has happened. I went to the CVMA convention in July in Niagara Falls and attended a few inspiring and thought-provoking meetings, the CVMA-SBCV Chapter is looking to develop an animal welfare committee to support the work of the CVMA-run National Animal Welfare committee, our own Jess Robertson attended the highly talked-about and successful Emerging Leaders Program, and the Chapter is working hard to increase its social media platforms.

The hot topics at the CVMA convention were antimicrobial stewardship and the importation of dogs into Canada. The CVMA Summit focused on a discussion between veterinarians and stakeholders on the impact of regulatory changes in antimicrobial use. In February, the CVMA created a document to act as a template of professional standards to be used by provincial veterinary licensing bodies when developing their own regulations or bylaws pertaining to the use and oversight of antimicrobials. The review of the document and discussion at the Summit was heated and a good reminder to us all how important a topic this is. If our privileges of prescribing and dispensing antimicrobials are taken away, our patients will suffer. The CVMA-SBCV Chapter is trying to help raise awareness of this via social media and, in the coming months, we hope to be able to share an antimicrobial stewardship video put together by the SVMA, which they have kindly allowed us to use for our members.

The CVMA Convention's first National Issues Forum focused on the CVMA's draft position statement on the issues surrounding importation of dogs into Canada. Importation of "rescue" dogs into Canada is at an all-time high. There is a certain ethical feel-good mentality to rescuing an animal which the public finds appealing. Unfortunately, this is accompanied by a public lack of education on the dangers and cost associated with rescuing one of these dogs from other countries. Several expert panelists spoke about the dangers surrounding the lackadaisical border efforts on monitoring entry of companion animals into Canada and the direct effect on animal and public health. At this time, there is limited regulatory control of importation of dogs into Canada, and current requirements are no more than a health certificate and a current rabies vaccine certificate.

At the end of the discussion, it became apparent that the solution to this dilemma rests mainly with border control, and that the CVMA will have to tread lightly, as enforcing such guidelines could have tremendous backlash from the public who might see our actions as indications that we are not caring for rescue animals. This is one topic which the CVMA-SBCV Chapter hopes to discuss with our new Animal Welfare committee alongside the CVMA National Animal Welfare committee this year.

Every year, the Chapter sends two veterinarians who have graduated in the past 10 years to the CVMA's extremely successful Emerging Leaders Program—a highly interactive program which seeks to bring joy back into the workplace by teaching recent graduates how to cope with a variety of challenges encountered in veterinary practice. This year, our candidates were Jessica Robertson and Horace Yeung, and you can read their reports on the program in our winter issue.

Please don't forget to register for the Chapter's annual convention on November 5 and 6. We promise you will have a great experience and hear from a list of wonderful, top-notch speakers. I hope to see you there.



Sarah Armstrong, DVM, graduated from OVC in 2007. Following graduation, she worked full time in general practice and worked part time at a local emergency practice in Southern Ontario before moving to Vancouver, BC, where she currently works at the Vancouver Animal Emergency Clinic.

CORRECTION

IN RESPONSE TO THE CVMA-SBCV CHAPTER PRESIDENT'S REPORT IN THE JUNE 2016 ISSUE OF WEST COAST VETERINARIAN.

I am on the board of Dying With Dignity Canada and have been working on the assisted dying file for several years. There has been some media coverage of the role veterinarians can play in normalizing end-of-life choice based on our experience in practice. I would like to make an important distinction with respect to terminology. The new legislation being formulated from Bill C-14, which passed June 17, is not human euthanasia legislation. It is legislation covering MAID—medical assistance in dying. The terminology is key on this issue.

Susan Hughson, DVM
Director, Dying With Dignity Canada

Please see the story on MAID on page 40 of this issue.

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AVIAN INFLUENZA TRAINING SESSION

British Columbia has had to mount a response to an outbreak of Notifiable Avian Influenza (NAI) four times in the ten-year span between 2004 and 2014. Our poultry industry is centered in the Fraser Valley, which is also where multitudes of migrating and non-migrating waterfowl, the carriers of this disease, spend time. It is clear that we need to be prepared to face the possibility of another outbreak.

The response to the most recent outbreak in the winter of 2014–15 demonstrated how far we've come in our response preparation and actions since the first outbreak in 2004. The province has focused on building stronger relationships between the industry, the CFIA, and the BC Ministry of Agriculture, on improved and faster NAI testing at the Animal Health Centre, and on training in the operation of the Joint Emergency Operations Centre functions. Improvements have also been made by the industry with higher mandatory audited biosecurity and mandatory premises ID, and with training in the operation of the Joint Emergency Operations Centre functions.

A Rapid Response working group was formed after the most recent outbreak. This group has focused on instituting changes to try to shorten the time from the first diagnosis of NAI to the containment and depopulation of that first barn. After each outbreak here in BC and also in the USA last year, exercises in lessons learned have indicated this to be critical for containing the spread of NAI. Due to the nature of the disease, it has also been seen as supporting animal welfare to shorten the time that the birds are suffering from NAI. The Rapid Response working group targeted 48 hours from submission of birds to the destruction process. For changes in this process to reach that kind of efficiency, training and practice are required. In May 2016, the BC Ministry of Agriculture partnered with the Poultry Industry and the CFIA to carry out such training in biocontainment and destruction on a Fraser Valley Poultry Farm to test ourselves.

THE PURPOSE AND SCOPE OF THE EXERCISE WERE TO:

1. Review the complexities of the processes required to control an outbreak of NAI.
2. Expand knowledge of destruction, biocontainment, and OSH procedures.
3. Develop a team of trained BC AGRI and BC Industry personnel on the use of CO₂ destruction equipment.
4. Develop a team of trained BC AGRI and BC Industry personnel on biocontainment procedures.
5. Review and implement procedures for biocontainment, PPE, and safety for all personnel involved in on-farm depopulation.
6. Review and implement the logistics of setting up and managing an on-farm depopulation.
7. Increase local capacity to respond to a foreign animal disease.



A. Stand-up planning meeting to start the process.
 B. Destruction team in biocontainment protective personal clothing taking to the barn the manifold that distributes the gas.
 C. Manifold set up in the barn.

This training allowed for a practical test of sharing roles with other agencies. The training of local, diverse groups of individuals who are prepared to support an emergency response will greatly assist in the containment of this disease in future outbreaks.

The BC government also purchased new mobile equipment to support a timely disease containment response through the efficient depopulation of barns with infected birds.

The exercise, though complicated and intense, did show that we have made great improvements and resulted in additional people trained in critical tasks. We hope that we never have to demonstrate this in a real outbreak and only continue to train and get better.



Jane Pritchard, DVM, MVetSc, graduated from OVC in 1977, and completed a Masters in Anatomic Pathology at WCVM in 2000, continuing as an Associate Professor in the Department of Pathology for two years before embarking on a career with the BC Ministry of Agriculture in 2004. With the

exception of a two-year international development project in China from 2007–2009, she has remained with the BC Government. In 2013, she was appointed to the role of Director of the Plant and Animal Health Branch, and Chief Veterinary Officer for the Province of British Columbia.



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GLOBAL VETS IN AFRICA



PHOTOS BY AMBER BACKWELL

LEFT Lion in the Ngorongoro Crater, Tanzania;
ABOVE Operating on an injured serval cat at the Lilongwe Wildlife Rehabilitation Centre in Malawi.

Having recently returned home from two months of volunteering in Africa, I thought my first article should showcase that trip as the best way to introduce myself as the CVMA-SBCV Chapter's new student liaison. I am part of the WCVM Global Vets club, whose aim is to send students who have just completed their second year of the DVM degree to volunteer their time in developing countries. Members of the club spend their school year fundraising and planning what ultimately amounts to an incredible, perhaps once-in-a-lifetime experience abroad.

There were eleven members of Global Vets this past year. Six of us planned projects in Africa while the other five organized projects in India. I cannot speak for the students who went to India, but I imagine their experiences were equally as interesting and rewarding as ours. The Africa group volunteered their time in four locations: 1) the Champion Wildlife veterinary practice in Rooiberg, South Africa; 2) the Lilongwe Wildlife Rehabilitation Centre in Lilongwe, Malawi; 3) the Zanzibar Animal Affections Society (ZAASO), an animal rescue and welfare centre in Tanzania; and 4) the Sokoine University of Agriculture veterinary school in Morogoro, Tanzania.

During my time volunteering, I got to thinking about how fortunate we all were to have such an experience and about the benefits that we, as well as those we were working alongside, accrued during our time in Africa. The most obvious benefit for veterinary students is gaining knowledge and skills related to veterinary medicine. From learning about anesthesia in wild game in South Africa, to trying our hands at spays and neuters in Tanzania, the opportunities for learning were endless. To be able to gain such practical, hands-on experience during our initial years of veterinary school, when lectures and classwork predominate, helps us to fully grasp the concepts taught in the classroom and increases our confidence as veterinary students. I know that numerous things I experienced during this trip will greatly benefit me in my final two years of veterinary school and in the development of my career as a veterinarian.

Spending time in Africa also gave us greater insight into working in low-income settings, and brought home to us that not all veterinary

settings are as well-equipped and stocked as we are used to in Canada, due either to a lack of funding or perhaps the scarcity of certain supplies or medications. There were many occasions where we simply had to make do with what was available; for instance, clinics stocked only with surgical gloves that were much too large for our hands, or not having the drug we were taught in school to use for certain situations. As frustrating as experiences like these can be at times, they challenge our skills and allow us to develop a resourcefulness and adaptability that will ultimately help us become more confident veterinarians. It is important to remember that, even as veterinarians in Canada, we won't always have access to all of the resources that we had, say, at our university's teaching hospital, but making the best choices with the resources that are available is what will be most important.

Another benefit of volunteering abroad is, of course, the opportunity to collaborate with and learn from others in the veterinary profession. The exchange of knowledge and ideas with students and professors at Sokoine University is a prime example of this, and provided opportunities for both sides to gain a greater understanding of various aspects of animal health and welfare. Learning from each other's experiences, and navigating the differences in opinions and ways of doing things, is beneficial for all involved. Likewise, there is no telling how professional connections made may benefit those involved in future endeavours.

Finally, I feel that the most rewarding aspect of our time in Africa was that we were able to make a positive contribution doing something we are passionate about. Of course, as students, we can't expect to have as great

an impact as fully fledged veterinarians, and in some situations we could only hope to watch and learn, but there were many times on this trip that I felt we were having a positive impact on the animals and communities we were working with. What stands out in my mind is the time we spent volunteering at the ZAASO animal rescue centre in Zanzibar. Upon our arrival, our host veterinarian expressed how grateful he was that we were there because, with our help, the centre would now be able to sterilize a great number of animals on the island where over-population—and thus hunger and poor health—is a serious issue. Similarly, ZAASO provides community clinics each week where farmers in the surrounding area can bring their animals in for free or low-cost care and treatment. As the livelihood of these farmers greatly depends on the few animals that they have, it was very rewarding to be able to assist these people in helping their animals and in turn, these farmers and their families.

In conclusion, I can say with confidence that all of us in Global Vets will develop into more competent and confident veterinarians because of our experiences abroad. Personally, I will always be grateful for having had this opportunity and would urge both students and veterinarians alike to consider similar volunteer projects themselves.



Amber Backwell was born and raised in London, ON, and moved to BC in 2009 to pursue a Masters of Public Health. She is looking forward to returning to BC upon graduation from WCVM to work in a mixed animal practice and hopes to be involved in wildlife medicine one day. When not in school, she likes to hike, camp, ride horses, and do anything else involving the outdoors. She is currently in her third year of the DVM program at the WCVM.



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NEW APPROACHES TO REGULATING ANIMAL RESEARCH

BY DANIEL WEARY, D.Phil



Using animals in research has always been contentious. The existence of a regulatory framework, such as that provided by the Canada Council on Animal Care (CCAC), allows practices under certain constraints, and this framework helps to legitimate animal experimentation socially, as well as legally. But how solid is our framework, and how might this be improved?

The CCAC requires that all studies using animals go through review by local Animal Care Committees, and that these committees should only allow a study to proceed if the harms caused to the animals are less than the expected benefits of the research. Unfortunately, the committees charged with making this assessment struggle to assess both the real harms caused to the animals and the potential benefits of the research. The current process relies upon the researcher's claims regarding both the harms and benefits. But researchers, however well intentioned, are in an obvious conflict of interest given that their careers depend upon the study's approval.

One way around this conflict would be to ask for assessments from an independent third party, but in practice this does not occur. Animal Care Committees could also demand more explicit assessments of the actual harms; for example, by using data on morbidity and mortality from similar studies completed by the same researchers. Similarly, independent, scholarly assessments of potential benefits (such as systematic reviews that show which types of animal research have and have not been helpful in the development of treatments for human diseases) would provide a stronger basis for evaluating the merit of future work.

But even if committees had access to much better data on harms and benefits, making a meaningful comparison may be impossible. For example, how can the harm (e.g., the suffering of 30 rats) really be compared with the benefits (e.g., a 50 per cent chance of publishing a scientific paper, a 10 per cent chance of contributing to basic biological knowledge, or a 0.01 per cent chance of contributing to a new clinically relevant therapy)? In practice, almost every study proposed by researchers is currently permitted to proceed.

One alternative to this utilitarian approach would be a simple prohibition on certain types of studies that fall sharply out of step with community values. Some elements of this approach are reflected in the current European Union prohibitions on studies involving great apes and severe harm to animals. By abandoning the pretense of a utilitarian analysis, we could also free Animal Care Committees to focus on the task that they currently do best—implementing refinements that reduce harms that the research animals experience.

More fundamentally, perhaps the time has come to more radically re-examine our approach to the use of animals in research. For example, could some innovative and socially aware research institutions, such as the University of British Columbia, move to end all studies that harm animals? The entire debate about animal use in research is based upon the idea that the projects are at least somewhat harmful to the animals, but what if living conditions provided to animals were such that their lives were as good as or better than that of a well-cared-for pet? What if the only studies permitted were those in which animals freely participated, such as in learning studies where animals choose to participate to earn food rewards or other treats? Or if research animals were actually pets from good homes with the animals' caregivers providing informed consent, much like is required now for the parents of children participating in research studies? This would mean that certain types of harmful experiments would no longer occur, but the results from these better cared-for animals might also better translate to applications that benefit science and our larger society. [WCV](#)



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EXTRACORPOREAL BLOOD PURIFICATION THERAPY

BY CARSTEN BANDT, DVM, DACVECC

CASE STUDY 1

A one-year-old neutered male mixed breed dog presented to Small Animal Emergency service for ibuprofen toxicity. The patient and his housemate got into the owner's bathroom and chewed a bottle that contained 15 tablets of 800 mg Motrin. The owners did not find any tablets left. The owners contacted the pet poison control hotline and were instructed to give hydrogen peroxide to both dogs. The patient vomited once at home and twice on the way to the emergency hospital. The time elapsed between the ibuprofen and presenting to the emergency room was about two hours.

Upon presentation, the patient was ataxic and unaware of his surroundings. Within five minutes of his arrival, he began oscillating between a hyperactive state and a laterally recumbent state. About five minutes later, the patient became semi-comatose. His temperature on presentation was 102.3F, heart rate was 69 beats per minute, and his respiratory rate 96 breaths per minute. His capillary refill time was less than 2 seconds, and his systolic blood pressure was 120 mmHg.

A peripheral IV catheter was placed, and he was given fluids (LRS) as well as oxygen support. Blood was collected for a complete blood count (CBC), serum biochemistry, and blood gas analysis. The CBC revealed a mild leukocytosis (9.2 K/uL). Serum biochemistry revealed increased AST (57 U/L) and increased phosphorus (6.3 mg/dL). The blood gas did not reveal any significant abnormalities. He did not respond consistently to supportive treatment, so charcoal hemoperfusion was elected in an effort to remove the ibuprofen from his circulation. A hemodialysis catheter was placed, and charcoal hemoperfusion was performed. The patient's weight before dialysis was 32.8 kg, and after treatment it was 25.3 kg. The patient remained stable through the procedure. The treatment lasted 4 hrs, and samples were obtained at 15, 30, 60, and 90 minutes during the procedure for LC-MS. After treatment was completed, the patient was bright, alert, and responsive, and had a normal physical examination. He was continued on LRS at 50 ml/kg/day with added 16 mEq of KCl overnight. While in the hospital, he received Pantoprazole IV (1mg/kg) every 24 hrs, Famotidine IV (0.5 mg/kg) every 12 hrs, and Sucralfate 1 gram in slurry by mouth every 6 hrs. The patient was discharged the next day.

Extracorporeal blood purification therapy (ECT) is the circulation of blood through an external artificial circuit connected to a hemofilter that performs blood purification (removal of toxins, gas exchange, or correction of metabolic abnormalities). The various ECT modalities include intermittent hemodialysis (IH), hemoperfusion (HP), hemofiltration (HF), continuous renal replacement therapy (CRRT), peritoneal dialysis, and plasmapheresis (PE).

The types of ECT system most utilized in both human and veterinary medicine are IH and CRRT for the treatment of acute and chronic kidney diseases.

In human medicine, ECT has been recommended for many decades as a treatment option for serious intoxications with drugs (e.g., salicylates, lithium, ethylene glycol, methanol, and theophylline). As a general rule, ECT is considered in cases of intoxications when there is a history of ingestion of a highly toxic (potentially lethal) dose, and when the toxin can efficiently be removed with one of the modalities of ECT.

Whether extracorporeal removal of toxins is possible or not depends on the characteristics of the toxin itself and the technique used. There are several different modalities of ECT that can be used in cases of intoxication (e.g., IH, HF, CRRT, and PE). Factors effecting the removal of toxins are protein binding, lipid binding, molecular weight, and volume of distribution.

In general, toxins or drugs with a small molecular weight, low protein binding, and a low volume of distribution can be removed with a conventional hemodialyzer. A good example is ethylene glycol, which is hydrophilic and has a small molecular weight, allowing it to be removed very effectively from the blood stream with a conventional hemodialyzer. Toxicities from substances with high protein or lipid binding require a different approach. A typical example would be an overdose with naproxen, which is rapidly absorbed in dogs after oral ingestion. It is highly protein-bound and has a very low volume of distribution. It cannot be removed by a conventional hemodialyzer due to its high protein binding in dogs. Charcoal HP is a modality

“DURING THE PROCEDURE, THE PATIENT’S BLOOD IS CONTINUOUSLY CIRCULATED THROUGH CHARCOAL GRANULES”

of ECT indicated for cases of intoxication with high protein-bound toxins. This method uses a hemofilter containing a sorbent material (e.g., charcoal), which is able to adsorb the toxin from the blood by binding to the filter material and eliminate it from the systemic circulation. Charcoal hemofilters, the most common type of filter used in HP, can be used alone or in circuit with the dialysis filter. Charcoal efficiently removes molecules in the 1000–1500 kDa range as well as protein-bound and, to a lesser degree, lipid-bound toxins. If a substance is equally well removed by either IH or HP, then IH should be the modality of choice, because it has fewer complications. Complications associated to the use of charcoal HP include thrombocytopenia, leucopenia, hypocalcemia, and hypoglycemia, as these cells and molecules tend to bind to the charcoal as well as the toxins.

IBUPROFEN TOXICITY

Ibuprofen is a non-steroidal, non-narcotic anti-inflammatory agent that has been available over the counter since 1984. In humans, it is commonly used for its analgesic and anti-inflammatory properties. Non-steroidal anti-inflammatories (NSAIDs) act by inhibiting cyclooxygenase (COX), thus decreasing the production of prostaglandins. Prostaglandins mediate inflammation and pain as well as other physiologic functions such as platelet aggregation, gastro-protection, and renal blood flow. Some of the most common side effects seen in canine patients that ingest over-dosages of NSAIDs are gastric, renal, and hepatic toxicity. Ibuprofen has a narrow safety margin in dogs; therefore, it is not commonly used in veterinary medicine. Conversely, the use of this NSAID has increased in the human population, and the accidental ingestion and intoxication of small animals has also increased. The reported toxic dose of ibuprofen is 50–100mg/kg, and a dose of 300mg/kg is required experimentally to produce acute renal failure. The typical methods of treating ibuprofen intoxication in veterinary medicine are decontamination by induction of emesis, activated charcoal administration, and aggressive fluid therapy. The following case study describes the first reported use of charcoal HP as a successful treatment of ibuprofen intoxication in dogs.

CASE STUDY 2

A nine-month-old, 17.8 kilogram, neutered male Wheaten terrier presented to the Emergency and Critical Care service after ingesting about four Excedrin tension headache tablets (500 mg acetaminophen and 65 mg caffeine each) and approximately 50 ibuprofen tablets (200 mg each). He also ingested one Doans (magnesium salicylate, 850 mg tabs). He was otherwise healthy with no other history of illness. He vomited a large volume afterwards. Initially, it was dark in colour and contained about five pills and some food material; the vomit then became foamy. The owner described the dog as more quiet and depressed.

On physical examination, there were no significant abnormalities observed. An intravenous catheter was placed, and a blood sample submitted for PCV/TS, blood gas analysis, and blood chemistry. Venous blood gas revealed a mild acidemia at 7.38, a mildly decreased pCO₂ at 28.5 mmHg, and a hyperlactatemia of 3.6 mmol/L. The PCV was 56% and total solids 6.3g/dL. The patient received activated charcoal by mouth immediately upon presentation for oral decontamination, then IV fluids consisting initially of lactated ringers, and then 0.9% NaCl at 100 ml/hr. N-acetyl cysteine (250 mg diluted 1:3 with D5W) was administered IV every eight hours for acetaminophen ingestion. A dialysis catheter was placed in the right jugular vein. To place the dialysis catheter, the patient was pre-medicated with 5 mg IV of Butorphanol and then induced with 100 mg of Propofol. Gas anesthesia was maintained with Sevoflurane; the patient also received 0.1 mg IV of Glycopyrrolate and 10 mg of Lidocaine SQ at the incision site. During the anesthetic period, the patient received 250 ml of LRS. Given the historical ingestion of large dosages of ibuprofen and acetaminophen, charcoal HP was performed. Treatment with charcoal HP started four hours after presentation to the emergency room and continued for four hours. Serum was collected before, during, and after initiation of treatment. These samples were sent to the University of Florida College of Veterinary Medicine Racing Laboratory for Aspirin, ibuprofen, and acetaminophen levels. The samples were analyzed by liquid chromatography—mass spectroscopy (LC-MS). The pre-treatment sample (collected from the patient when first presented) was sent to the laboratory. In this sample, there were no significant concentrations of acetaminophen or Aspirin, but there was a significant concentration of ibuprofen at 478 ug/mL. Samples were also collected from blood before reaching the charcoal filter and right after at 30, 60, 120, 180, and 240 minutes after starting treatment. Those samples were also sent to the laboratory for evaluation.

Blood gas analysis and serum biochemistry after charcoal HP did not show any significant abnormalities. The patient recovered well and was sent home the day after the charcoal HP treatment.

DISCUSSION

Ibuprofen is a non-selective COX inhibitor NSAID that is rapidly absorbed after oral administration. The peak plasma concentration occurs between 30 minutes to 3 hours post-ingestion and, after oral ingestion, 96% of the drug is protein bound. Dogs metabolize ibuprofen slowly with more than 50% excreted in the urine and about 25% excreted in bile. Figure 1 demonstrates how the concentration of ibuprofen in plasma decreased after charcoal HP, especially during the first hour of treatment. There is a significant drop in the plasma concentration from 90 ug/mL to 25 ug/mL. At 60 minutes to 120 minutes, there is an increase in the concentration of ibuprofen that can be attributed to the enterohepatic recycling that this drug undergoes in the liver, to exhaustion of the charcoal filter, or accumulation of the drug in third spaces such as fat. After

120 minutes, in Case Study 2, there is no difference in the plasma concentration of ibuprofen before and after treatment.

The patient in Case Study 2 ingested around 560 mg/kg, well beyond the previously cited 300 mg/kg dose that can cause acute renal failure and just below the 600 mg/kg reported lethal dose. The patient in Case Study 1 ingested about 366 mg/kg of ibuprofen. This patient appeared to ingest less of the ibuprofen based on the history than the patient in Case Study 2 but had more significant clinical signs at presentation. Comparing Figures 1 and 2, we can see that the concentration in plasma of ibuprofen in Case Study 1 was much higher than in Case Study 2. It is possible that the patient in Case Study 2 vomited most of the ibuprofen before treatment and absorbed less than the patient

in Case Study 1. The patient in Case Study 2 received activated charcoal as well, and this may have decreased the absorption of the drug. In Case Study 1, the concentrations did not decrease as much as in Case Study 2, and a reason for this would be that the filter was saturated with ibuprofen. It's important to note that the samples were collected at different times in both these cases, and there are fewer time points for Case Study 1.

Charcoal HP is a method that uses the adsorption capacity of active carbon. It is helpful in cases of drug intoxications. During the procedure, the patient's blood is continuously circulated through charcoal granules. A membrane to protect the blood encapsulates the granules, but toxic substances easily pass through the membrane and are adsorbed from the plasma. In the two cases presented, it proved to be an effective method at reducing the plasma concentration of ibuprofen. This treatment should be considered as a first-line protocol in severe cases of ibuprofen toxicity. WCV

CASE 1 Concentration of Ibuprofen Pre- and Post-Charcoal Hemoperfusion

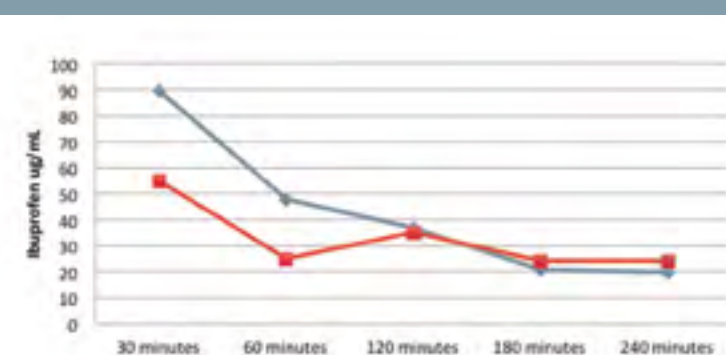


Figure 1 Plasma concentration-time profile of ibuprofen before (diamond) and after (square) charcoal HP.

CASE 2 Concentration of Ibuprofen Pre- and Post-Charcoal Hemoperfusion

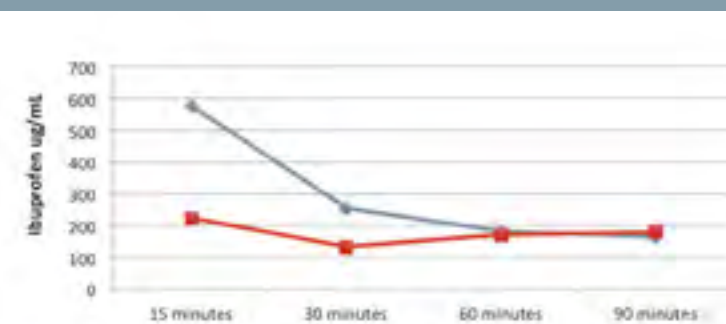


Figure 2 Plasma concentration-time profile of ibuprofen before (diamond) and after (square) charcoal HP.



MENTAL HEALTH

AND VETERINARIANS

BY KATHRYN WELSMAN, DVM

Mental health and veterinarians. What a topic. When I offered to write an article about it, I obviously didn't think it through as I don't have any expertise in this area except for the fact that I'm a veterinarian. And apparently, because I'm a veterinarian, I'm at a higher risk of suicide and other mental health concerns such as compassion fatigue. Consistently, papers and reviews indicate that veterinarians have a higher suicide rate compared to the general population. Nobody told me that when I dreamed of becoming James Herriot.

The recent suicide of Dr. Sophia Yin, who was well known for her work around less stressful veterinary care, pushed the topic of suicide and mental health into the spotlight among veterinary professionals. It coincides with a growing discussion among Canadians in general about mental health. Despite this growing awareness, there is still a stigma attached to these discussions as well as a lack of knowledge and understanding. I definitely fell into the ignorant category until more recently.

My husband is a police officer who sees some terrible things, and I worry constantly about mental well-being for him and his co-workers. But I never really worried about myself, nor did I understand why veterinarians would be at risk for such workplace occupational stress. In my mind, what we do doesn't fall into the same category as responding to a car crash fatality, having to shoot someone to protect someone else, or having to investigate and delve into so many other unsavoury topics that the general population shies away from. So, even though I had been told in vet school that veterinarians are the second highest professionals to commit suicide, I didn't really "get" it.

Because of my ignorance or lack of understanding, I remember wondering how someone like Dr. Yin could commit suicide when, from an outsider's view, she had a flourishing and respected career in something she obviously loved. So, I asked Dr. Sally Foote, a long-time friend and co-worker of Dr. Yin's, what caused her to commit suicide. She said, "No one can say what was going on in Sophia's life that was a deciding factor for her to choose death over life. Only she knows that. I feel we all want a logical or causal explanation for a suicide. We look at their life through our own experiences to find an answer that is actually dismissing their personal story." I would agree. I know that when I hear about tragedies, whether it's suicide or a horrific accident, I always want to know why it happened, because I want to assure myself it won't happen to me. It is a protective measure. But to understand suicide and the continuum of other mental health concerns such as compassion fatigue, I realized I had to be open to the idea that there might not be a simple, straightforward answer.

I look back on an event from a few years ago when I had a bit of an *aha* moment. We were living in a very rural community, and my husband called me in the middle of the night to come to a house fire, as there were two dogs that had been trapped in the fire. Unfortunately, one of the dogs had died, and the other was probably in the worse respiratory distress I had ever seen. I had a discussion with the surviving family members about getting the one dog to the local clinic for treatment or euthanasia and about the aftercare for the deceased dog. I remember a moment later one of the other police officers saw me lift the dead dog into the back of my truck. He looked at me and said, "How can you do that? Doesn't it bother you?" At first I didn't understand what he meant. Then, I realized he was asking how I could handle the dead dog along with the currently suffering dog and the remaining family. I was truly astonished. Here was a police officer who had just come out of a house where two people were dead, and he was having trouble with the dog's death. It was in that moment, standing in the dark with the smell of smoke and the sound of a weeping person, that it really hit home; as veterinarians, we do things that other people wouldn't dream of doing and would consider difficult. That moment is etched into my brain. I had become so used to euthanizing

animals or seeing dead animals that I had turned that part of my brain off. This police officer made me look at what I do in a different way. It made me realize that what we do can be difficult, emotionally draining, and traumatizing to ourselves and colleagues.

The house fire had expected tragedy attached to it. However, I've also learned over the years that sometimes, when you least expect it, an emotional curveball comes your way. I was examining an elderly golden retriever for fairly non-specific signs. She looked quite healthy outwardly, but there was just something about her that made my Spidey sense tingle. I asked the owner, a man in maybe his mid-40s, some questions, and finally he said, "Do you think stress could cause this?" I said, "Sure. Why do you ask?" He said, "Well, my son is dying, and he was admitted to hospice to die this morning." I sat there speechless, and I just couldn't get my brain to re-engage. I had been thinking that this dog probably had cancer, and that's bad luck, and wondering how to open that discussion. After that bombshell of an announcement, there was just no way, absolutely no way, that dog could have a bad diagnosis. She had to live. I asked the owner if he wanted to leave her with me for care if that might alleviate some stress. His response was that she had to come back with him, as the dog had work to do at home. I assumed he meant the dog was a comfort to the family. His son died the next day of brain cancer, and the dog died several weeks later of cancer. I mean—really—you can't make this up. Our jobs demand us to be emotionally involved in our cases even if we just don't have the desire or energy. We are being asked to listen to the human story behind the animal and to feel so many human emotions. If I hadn't known the story of the son, maybe I wouldn't have felt such intense pressure to play God and make that dog better no matter what. Anything short of fixing the dog was going to be a failure, which is a pretty heavy burden to carry.

This is likely not news to Dr. Brian Furlong. As chief of staff for Homewood Health (www.homewoodhealth.com),

“AFTER SEVERAL YEARS OF EUTHANIZING AS MANY ANIMALS AS THE HOURS I WORKED, I STARTED TO NOT LOOK FORWARD TO MY SHIFTS”

he is an expert in emergency psychiatric care, and he has treated many veterinarians in his lengthy career—usually at a time when they are in acute crisis. I asked him why veterinarians are at a high or higher risk for mental health crises than many other professionals. He said it is a chicken-and-egg scenario. The profession demands and attracts high-achieving perfectionists who jump through many hoops not only to get into vet school, but also to succeed until graduation. Those exact same traits can be our downfall as we ourselves can be our biggest critics and expect perfection from ourselves once we set out into the fast-paced world of veterinary medicine. I remember one occasion when a technician came up to me after a dog, who had been hit by a train, died during a blood transfusion. She felt like she'd been responsible for the dog's death as she was the one monitoring the dog. I remember thinking it was absurd of her to worry, as it was ultimately my fault the dog died. In hindsight, I should have been open to her concerns, but at the time I brushed her off and said not to worry about it. What was probably equally absurd was thinking I was responsible for the dog's death, seeing as I wasn't the train that ran over the dog. You can't save them all, and that is a hard lesson to learn.

Dr. Furlong thinks that, in addition to our own perfectionism, society puts enormous pressure on us to be perfect as well, as society today is less accepting of errors. He relayed a story to me of when he was doing his residency, and he met a young female veterinarian in her mid-30s who was in the ICU in a very compromised state after a suicide attempt. He remembers wondering what would drive a person, with such high standards and obvious intelligence, to suicide. It came to light that this veterinarian had just been going through a complaint to her College, and it had been the breaking point for her. He went on to say that, throughout his career, a common theme for veterinarians in crisis has been the stress of a College complaint, and among professional groups, veterinarians are particularly reluctant to reach out for help during a complaint process as we don't want anyone to know what we are going through. We are ashamed to show our perceived imperfection. This can be very isolating and can increase someone's stress level to the point of depression and, potentially, suicide. This isn't to say, however, that every veterinarian who receives a complaint is suffering from mental health issues, but the complaint becomes another risk factor.

Dr. Furlong also believes that because we operate in very small teams with little support, compared to physicians in big hospital settings, this can be isolating.

There is no one to unload on, as many veterinarians would be very reluctant to discuss emotions or problems with their technical staff. I remember, early on in my career, euthanizing an elderly dog. I calmly explained the process to the owner and euthanized the dog. Afterwards, the assistant asked me why I wasn't crying. She was crying and was honestly perplexed. It made me feel like a bad person because I hadn't cried. In hindsight, she was grieving, as she had known the dog for much longer than I had, and I didn't have the same emotional attachment. Did I think she was weak because of her tears? I probably did, just like maybe she thought I was cold-hearted for not crying. Had we taken a moment to talk about it, maybe there would have been a greater understanding of where each of us was coming from, instead of judging each other.

“IT DOES TAKE A LOT OF STRENGTH AND RESILIENCE TO CONTINUE TO FACE DEATH AND MAKING THE DECISIONS TO END LIFE”

I used to work in an emergency practice. I loved the fast pace and type of medicine and thought I was well suited to the job. But after several years of euthanizing as many animals as the hours I worked, I started to not look forward to my shifts. We talk about death a lot as veterinarians and even more so in emergency practice, probably. Here are some interesting figures for one of those emergency shifts. Euthanizing 12 animals + 4 discussions about the possibility of death + 2 CPR events + 2 DNR forms signed = 20 discussions about death. Seriously, who talks about death that much, day in and day out? It certainly isn't the norm in most people's jobs. I asked Dr. Furlong about this issue and whether veterinarians see death in a more sterile way than the general population, which could lead to an easier justification for suicide. He says that the way veterinarians perceive death is something addressed in the literature, but he doesn't know of a concrete answer that says our exposure to death leads us to a mental health crisis.

He indicated that it is very rare for someone to suffer an acute mental health crisis because of one factor; it is usually multi-factorial, with issues in both personal and professional realms, but there is often a tipping point that moves us from coping to not coping. Already long hours now exacerbated by technology, demanding clients, the ever-present and annoying Dr. Google, clients with unrealistic expectations, financial burdens from employers or clients, trying to juggle family and work, not taking time away from the job, managing employee conflict, lack of resources to do your job properly, poor management, feeling trapped in this profession—take your pick. Whatever the issues may be, you also then need to factor in the personal side of things that might tip the scales such as being a new parent, dealing with a sick family member, financial concerns, student debt, divorce, or previous medical conditions.

Dr. Foote added her opinion to these risk factors, saying, "Shame is a huge factor. If we are not the highest producing, most intelligent, energetic, loyal, generous with our time and expertise at the cost of our personal life, we are not good veterinarians and that is shameful. If we have money problems, that is shameful. If we have addiction problems,



SOME BASIC TERMINOLOGY

Compassion fatigue is the loss of emotional resources due to repetitive exposure to highly emotional situations. It is somewhat of a natural consequence for those acting in caregiver roles, such as veterinarians, where the caregiver experiences the pain or suffering of others. Compassion fatigue occurs when the demands of caring exceed your personal resources. It reduces the caregiver's ability to be empathetic to the person who is suffering

Burnout is defined as being emotionally overextended and drained due to work, which can happen in any workplace.

Suicidal ideation is a general term for suicidal thoughts prior to or leading up to an actual suicide attempt.

For veterinarians seeking more information or for any veterinarian who thinks he or she might need some help, there is plenty available, and it is confidential. Any veterinarian in BC can call Homewood Health (604.243.8996). There is also a list of mental wellness resources available at: www.canadianveterinarians.net/documents/mental-health-support-resources.

that is shameful. If we have mental health problems, that is shameful. If we change our career, that is shameful. From that shame, there is silence and that makes the problem worse."

Dr. Furlong says that even though we have come a long way, stigma is still a major factor for a veterinarian considering seeking help for mental health issues. Will I be perceived as weak? Like I can't hack it? That I'm a bad vet? So, I had to wonder what my friends and colleagues would say if I broached this topic. It was an interesting mix. I posted a question to my graduating class on Facebook, and of all who saw the post—which was around 70 people—only two responded. There are many possible reasons for the low response, from simple disinterest to being too busy. Part of me wondered if the topic was taboo, going back to that issue of stigma. Who wanted to be the first to speak up? Then, I posted a message to all of my friends and coworkers, who did give me an interesting mix of responses, which reflect the range of attitudes toward mental illness. Answers from one end of the spectrum reflected personal experiences: "As a possibly overly compassionate person who is currently battling some burnout and compassion fatigue, I definitely have a few thoughts on the matter;" and "I can say I feel compassion fatigue at times. But I am an emotional person to begin with and am interested in learning about other people. However, suicide is not something I worry about personally." Some did not, perhaps, have issues themselves but seemed to be aware of the concerns: "It does take a lot of strength and resilience to continue to face death and making the decisions to end life. Certainly not a profession for the faint of heart;" and "I would say that our industry draws in certain highly emotional individuals. Over time, it chips away at self-worth." At the other end of the spectrum were statements such as "I don't consider myself compassionate, so I can't fatigue from it. I'm pretty good at keeping my job and emotions separate;" and "Compassion fatigue doesn't exist, you either make it in this profession or you don't." What I thought was equally interesting was that those who responded seemed comfortable talking about compassion fatigue but, with the exception of one person, no one mentioned suicide. Stigma?

Personally, I'm not suffering from compassion fatigue or a mental illness. I am, however, a relatively new mother with two young children, and this has created stress at work that I never thought would exist. At first, I was anxious to get back to work full time, and get back to the grind. I felt like my skills and knowledge were slipping through my fingers, which created its own set of stressors. I feel that I can't be a good vet and a good mother because neither is being done "perfectly." I feel like a less valuable employee because I'm unable and unwilling to stay for extended hours as I previously could. This has made me doubt my abilities and my decision to be a mostly stay-at-home mom these days.

However, after immersing myself in the topics of compassion fatigue and mental illness, I'm looking at my "forced" slowdown from the veterinary profession as a blessing in disguise. The point of the exercise I went through while considering this topic—and I hope you will consider it, too—is to understand how the perfect storm of issues, sometimes out of the blue, can create a mental health crisis. To be open minded to the fact that everyone deals with things differently, and that no one is weak or can't hack it. My hope is that this article sparks a conversation in your practice as it might help someone when you least expect it. And my hope for those who need help is that they reach out to the right resources and get it. **WCV**

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THE ELEPHANT NATURE PARK IN CHIANG MAI

BY CAROLINE YEUNG, RVT



It is 6 AM on a balmy November morning in Northern Thailand. My legs have wrestled themselves out from underneath my blanket, and I can hear the gentle whirring of the oscillating ceiling fan. My state of mind is a jetlag-induced fog, and suddenly I'm startled awake by the powerful trumpets of a herd of elephants. How is that for an alarm clock?

That was my first morning of two weeks volunteering in November 2015 at Elephant Nature Park (ENP) in Chiang Mai, Thailand. ENP is a rescue and rehabilitation centre for abused, neglected, and distressed Asian elephants who have been rescued from all over Thailand from industries such as logging, trekking, street begging, and tourism. Founded in 1996 by Lek Chailert, ENP is now home to 68 elephants, 400 dogs, 200 cats, water buffalo, cattle, horses, and myriad other animals.

The Asian elephant is considered an endangered species by the International Union for Conservation of Nature. At the beginning of the 20th century, over 100,000 elephants roamed across Asia, but that number has fallen by more than 50 per cent. It is estimated there are fewer than 30,000 Asian elephants remaining—with 4,000 of those living in Thailand where they are the country's national symbol and a cultural icon. Threats to the Asian elephant population include habitat loss and fragmentation, human-wildlife conflict, and poaching. Developmental projects, agricultural plantations, and an ever-expanding human population encroach on the elephant's remaining habitat. As Asia's population increases, more of the elephant's habitat is transformed into farmland, leading to human-wildlife interactions and conflicts. These confrontations are now considered to be the leading cause of elephant deaths in Asia. Poaching is not as severe a threat as it is to their African counterparts, but Asian elephants are still hunted for their tusks, meat, and skin. They are also captured in the wild to be used in the live elephant trade.

Elephants are social animals. They're capable of feeling love, happiness, pain, and sorrow, and they depend on their family and friends for support. It is not in a wild elephant's nature to listen to people, obey commands, perform tricks, or allow strangers to ride them. To accomplish these feats, a wild elephant is captured as a baby, taken away from its mother, and put through a torturous process called *Phajaan*. The elephant's spirit is broken, and it is taught to fear and obey people. It is tied down and beaten for days or weeks on end with bull hooks, bamboo sticks, and metal spikes. It is struck on the ears and trunks (the most sensitive areas), not allowed to sleep, and not given food or water. The pain and deprivation are constant.

If an elephant survives *Phajaan*, it becomes a shell of what it once was. Tourists who ride elephants, watch them play soccer, buy paintings done by elephants, or go to the circus, do not realize the pain and agony elephants go through to allow these activities to happen.

ENP founder Sangduen "Lek" Chailert is small in stature, but big in heart and determination. Born in 1962 in a small hill-tribe village in the mountains of Northern Thailand, her love for elephants began when her grandfather, a traditional healer, received a baby elephant as payment for saving a man's life. Lek developed a close bond with this elephant, and a lifelong passion dedicated to the welfare of Asian elephants was born. Being an advocate for change in an industry steeped in tradition has been an uphill battle, but with hard work and determination, her voice is now globally recognized. She was named one of *Time* magazine's Heroes of Asia for her work in conservation in 2005. She rescued her first elephant named Mae Perm in 1992 and founded ENP in 1996.

I have always loved travelling and experiencing new cultures, so I started looking into volunteer opportunities abroad that I had access to as an RVT. ENP sparked my interest because they have a program specific for veterinary professionals. This program is open to qualified veterinarians, veterinary technicians, and veterinary students. Applicants must commit a week's worth of time to the park, and stays can be up to four weeks. ENP employs three elephant/large animal veterinarians and one small animal veterinarian. They also have a small animal clinic on site for cats and dogs, as they have a dog rescue sanctuary where dogs are adopted out all over the world. Every dog and cat at the park is also spayed or neutered. Each elephant veterinarian is responsible for 20 or so elephants, and a visual health check is performed at the start of every day. The most common ailments are abscesses, foot conditions, colic, eye conditions/injuries, various wounds, and problems

“HER LOVE FOR ELEPHANTS BEGAN WHEN HER GRANDFATHER, A TRADITIONAL HEALER, RECEIVED A BABY ELEPHANT AS PAYMENT FOR SAVING A MAN'S LIFE”

related to obesity. Some of the elephants are land-mine victims and need daily foot care for the rest of their lives.

The veterinarian and trainer work together with the elephants in both protected and free contact. Protected contact is when there is a physical barrier between the elephant and the person, so they do not share the same space. All behaviours in protected contact are completely voluntary, and it is up to the elephant to participate. Free contact is when the person and elephant share the same space. This can be more dangerous as the person is more vulnerable. The *mahout*, the elephant's caretaker, is more relied on to be able to control their elephant and keep them calm.

My days at the park would start around 7:30 AM and end at 4:30 PM. I spent the day shadowing one of the veterinarians and assisting with the daily treatments. Treatments would be done in the morning before the elephants were allowed out of their shelters, and again in the afternoon when they came back. Some treatments were done on site at the park and some off site at a neighbouring camp. If the veterinarian needed to perform a treatment on an elephant in a family group, I would work with the trainer and other park staff to distract the other elephants with food so the veterinarian could isolate and work on that one elephant. Team work and a game plan were the keys to our success. Luckily for us, elephants are very food-motivated. They eat nearly 400 lbs of food a day! I was also involved in helping treat an ear injury on an elephant named Khampaan. Almost half of her ear had become necrotic and sloughed off, so she required wound treatments twice a day. Other procedures I observed were blood draws, enemas, X-rays, various wound treatments on skin and feet, eye treatments, and rectal exams. The technical skills I developed in companion animal general practice did not come into play very much working with elephants, but I expected that going in. Being an RVT, however, allowed me to have access to a unique experience working directly with the elephants.

I take great pride in being an RVT, and for me it goes beyond my job description at my workplace. It means giving back to the community, locally or globally, and donating my time, skills, and money to animal welfare causes. ENP provided an enlightening and eye-opening experience that I will hold close to my heart for the rest of my life. Elephants are such beautiful beings that have been mistreated for far too long. While it was heartbreaking to see the lasting damage firsthand, I am very thankful that Elephant Nature Park exists where they are now free to just be.

To learn more about the park, how to donate, or how to volunteer, visit www.elephantnaturepark.org. 



ABOVE (FROM TOP) Treating an ear wound; the author poses with an elephant resident at ENP. PAGE 30 (FROM LEFT) A nursing elephant; feeding time.





VETERINARY MEDICAL RECORDS

DATA COLLECTION ERRORS & OMISSIONS

BY LINDA CREWS, BSCh, DVM

There was a time when patients had surgery without any thermoregulatory support, but continuing education has taught us that patients recover faster, process drugs better, bleed less, and have fewer adverse events when they are kept warm throughout surgery. As a profession, we tried blankets, then came warming with oats, and now we have circulating warm water blankets and Bair huggers! Medical knowledge is evolving, and we need to continue our education in how to meet the increasing needs for evolved medical records.

In the fictitious ABC Animal Hospital medical record shown above, there are 25 errors or omissions in the Data Collected section—the body of the medical record. This section is the meat and potatoes of a medical record. Most owners do not see this portion of the record, nor are they qualified to assess its content, and because the veterinarian is present during this portion, it is often missing adequate description, detail, or specifics of technique, as the veterinarian is acutely aware of what happened. It is crucial to remember that the medical record is least of all for the veterinarian who wrote it. It is the specific details of history, data, observations, assessment, interpretation, treatment plans, and response to treatment that are needed for any other competent medical personnel to comprehend exactly what did and did not take place, so that they might be able to help the patient further.

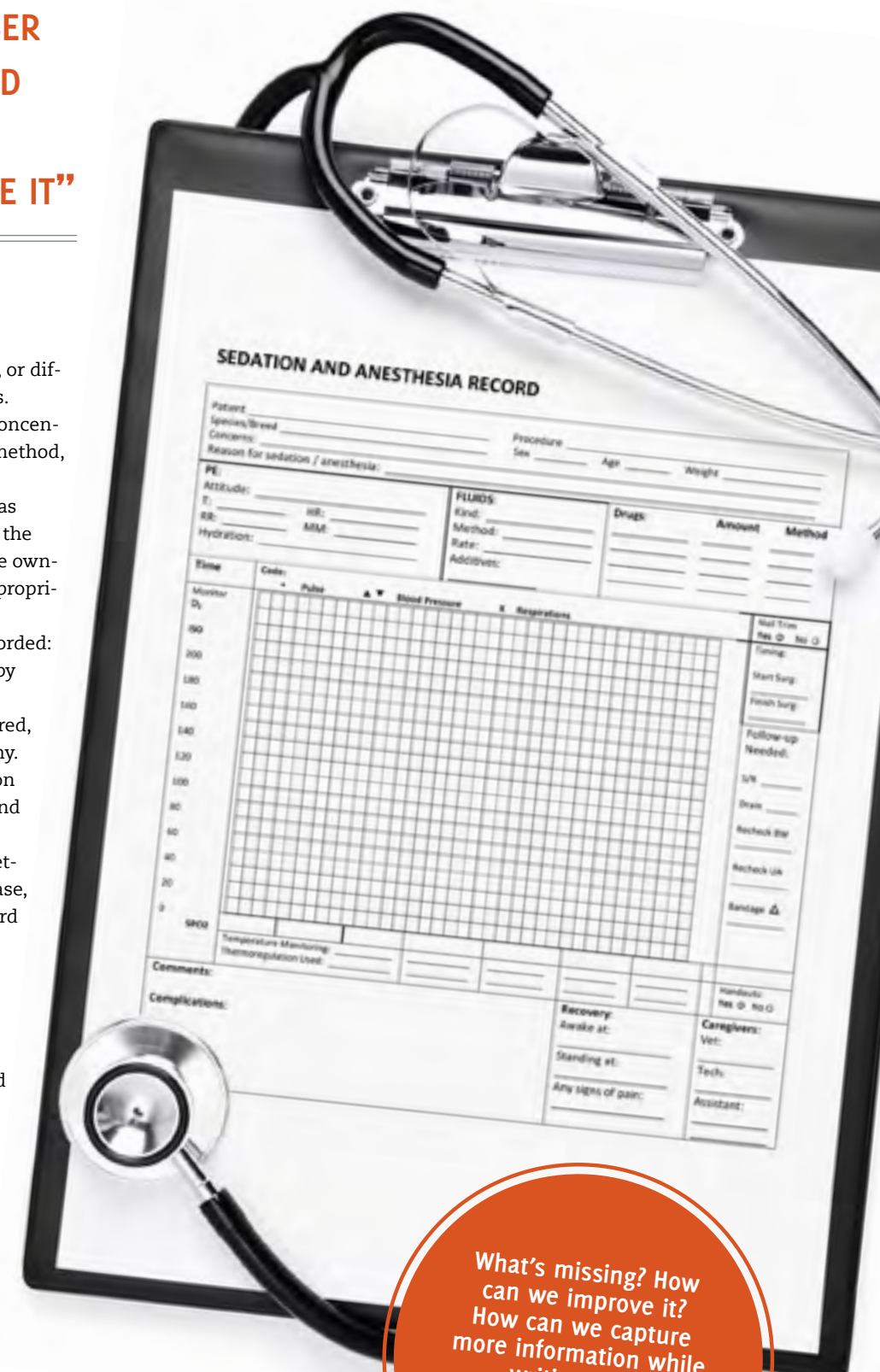
THE MOST COMMON OMISSIONS IN THESE AREAS ARE:

- ▶ Many elements are incomplete or too brief: not enough detail to have a clear understanding.
- ▶ Variations in measurement: date format; lbs/kgs; DOB/age; °C/F, all of which allow for confusion among staff and others with regards to dosing, chronology, risk of diseases, etc.
- ▶ Inadequate description of presenting complaint: timeframe—quantify and qualify—number of days, when it began, first signs, progressive or static, frequency, colour, consistency, composition, current history.
- ▶ Initials of staff who admitted the patient, who talked to owner, who recorded the data, who suggested options.
- ▶ Inadequate history: past history of vet care, vaccinations, adverse events, seizures, trauma, toxins, meds, diet.
- ▶ Inadequate PE findings: NAF and WNL are not quantitative but subjective; a GPE needs numeric values and objective data. Use of a template or PE protocol or sticker/stamp will capture this data more accurately.
- ▶ Illegible: often cannot read the writing or understand the abbreviations. Does it say FB or PB, and does that stand for foreign body, lead poisoning, or phenobarb toxicity? What train of thought is the practitioner following?

“IT IS CRUCIAL TO REMEMBER THAT THE MEDICAL RECORD IS LEAST OF ALL FOR THE VETERINARIAN WHO WROTE IT”

- ▶ Many have no assessment, +/- no rule-outs, or differentials that support the GPE and findings.
- ▶ Treatment plans with insufficient details: concentration, frequency, dosage, route, location, method, volume.
- ▶ No indication of informed consent: what was discussed, do the owners understand, have the prognoses and costs been explained, are the owners in agreement? Have they been given appropriate options?
- ▶ Verbal recommendations made but not recorded: insufficient details to prove what was said by whom and when.
- ▶ Suggested tests and treatment options offered, but no record that they were declined or why.
- ▶ Test results not interpreted, or interpretation not recorded, leaving it open for critiques and errors.
- ▶ Inconsistency between the way staff and veterinarians at the same clinic manage the case, the meds, or the recommendations. Standard operating protocols can often resolve these issues.
- ▶ Inadequate follow-up: what was done with the fecal sample? What did it look like? Submitted in-house? To lab? Discarded? Conclusions made from it? Owner approved or declined costs?
- ▶ Supporting documents missing or out of order.
- ▶ Communication details: did the person who took the message, or gave the advice, recognize the severity of the concerns, understand the client's limitations, have the knowledge to extrapolate the important details, and provide an accurate portrayal of the urgency and risks involved?

Stay tuned for the hospitalized patient, the IV fluids patient, and the anesthesia-monitored patient. Learn how to have your staff capture many of the details for you. [WCV](#)



What's missing? How can we improve it? How can we capture more information while writing less? Tune in next time for the answers...



FALLOUT FROM THE QUEST FOR GOLD

BY VERONICA GVENTSADZE, MA, PhD, DVM

A century after gold fever changed the infrastructure of the entire Pacific Northwest, the lust for this metal continues to kill. This time, it's galvanized iron that's doing the deadly work.

A network of telegraph lines spanning BC and Yukon was built at the turn of the 20th century by what was then the Dominion Government Telegraph Service using wire that does not corrode or crumble. The telegraph lines were abandoned, but not removed, in the 1940s and 1950s. The sad irony of the wire's durability is that when it sags to the ground, either from trees falling on it or due to collapse of the original poles, it ends up in a perfect position to snag and trap moose (and caribou further north). My husband came upon this silent tragedy as he foraged for lobster mushrooms east of Sand Lake in the Nass Valley north of Terrace, BC, where we spend much of our summer and fall. Trained as an electrician, he recognized the type of wire right away: number 8 galvanized wire about 5 mm thick. On a one-kilometre stretch of abandoned telegraph line, he found three moose skeletons tangled in the wire, some older and covered in moss and others more fresh. He wanted to cry, and was glad I was not with him to see the devastation.

In our research aided by Bill Miller's book *Wires in the Wilderness* (Heritage House Publishing Co. Ltd., 2009), we identified this stretch of telegraph line as part of the Stewart branch of the Yukon Telegraph, built in 1910–1911. Its name refers not to the location of the lines but to their destination: from Ashcroft, BC, towards Yukon where the line extends to the north of Dawson City. From this book, I was shocked to learn that the problem of wildlife entrapment in abandoned wire has been known at least since 1941. The wire, a small segment of which I saw closer to the highway, shows no sign of corrosion. The metal used to galvanize it is toxic enough to cut an inch-wide swath of bare soil through the mossy forest floor.

My research brought another sad find: news of a similar situation in Yukon and Northwest Territories. A moose trapped in wire in Yukon was

put out of his suffering relatively quickly, but likely because he was found in close proximity to an established trail. Likewise, the issue of moose and caribou entrapment in abandoned wire has been known for years in the Northwest Territories, where the federal government has finally made plans to remove the wire along the Canol Trail (which, although not part of the Yukon Telegraph, is a post-war addition to telegraph lines in place at that time).

My research brought me mixed feelings of sorrow and relief—sorrow to realize how widespread and neglected this problem is, and relief to know that efforts, albeit on a local scale, are being made to correct it. When an animal deprived of a fighting chance dies in the wilderness with no one to witness its suffering, it suffers just the same, and its death is no more acceptable than deliberate and obvious acts of animal cruelty. With our new federal government's increased attention to the environment, this problem needs to become front page

news rather than reports of merely local interest here and there, and its solution requires consistent effort on the part of the federal government to remove all of the wire, not only segments of it close to established trails. As much as I am tempted to organize a volunteer campaign to go into the bush and remove as much wire as possible, such an effort would be a drop in the bucket as well as setting a precedent for letting the government off the hook. To get the attention it needs, a successful project will benefit greatly from the influence and involvement of veterinarians in BC and all of Canada. [WCV](#)

“WHEN AN ANIMAL DEPRIVED OF A FIGHTING CHANCE DIES IN THE WILDERNESS WITH NO ONE TO WITNESS ITS SUFFERING, IT SUFFERS JUST THE SAME, AND ITS DEATH IS NO MORE ACCEPTABLE THAN DELIBERATE AND OBVIOUS ACTS OF ANIMAL CRUELTY”

A MULTIMODAL APPROACH TO TREATING OSTEOARTHRITIS IN DOGS

BY DAVID LANE, DVM, ACVSMR

Sadie is an 11-year-old Rotti cross that originally presented for arthritis pain that was manifesting as irritability, decreased mobility, and rapidly escalating aggression toward dogs. The owner perceived the right forelimb to be the most affected, with the lameness worsening after only a 20-minute leash walk.

On physical exam, Sadie was found to have bilaterally painful and arthritic elbows, reduced mobility and comfort of the lumbar musculature, and bilateral stifle arthritis with greater pain on the right. Sadie had previously received surgical care for bilateral cruciate disease, with the right side never fully recovering. There was also evidence of arthritis and sesamoiditis of the MCP and MTP joints, but no pain was elicited on palpation of these structures.

The lumbar pain was treated with combined acupuncture and manual therapy, and the owner reported immediate and significant improvement. A week later, both elbows and stifles were each injected with 1ml of Platelet Rich Plasma (PRP). This resulted in further improvement in Sadie's mood and mobility. Her aggression toward dogs disappeared, and she was able to go for longer walks without triggering lameness. These benefits lasted for 10 months before a repeat PRP injection was required. Sadie responded equally well to the repeat injection.

“OA IS BEST TACKLED USING A MULTIMODAL APPROACH”

Osteoarthritis (OA) is a common source of chronic pain and reduced quality of life, affecting 80 per cent of dogs over eight years of age. Although NSAIDs are a popular and effective treatment for OA, they are only small part of a complete arthritis treatment program.

As with any chronic pain condition, OA is best tackled using a multimodal approach. Treatment should be directed towards not only the affected joint itself, but the rest of the body also, so that the dog can better compensate for the affected joint(s). Some treatments should be applied to every patient with arthritis, while others can be selected based on a number of factors, including access to equipment, patient co-morbidities, owner compliance and/or financial restrictions, and owner preference.

TREATMENTS TO BE APPLIED FOR ALL CASES OF OA

Research consistently shows that Omega 3 essential fatty acids (EFA) are an effective treatment—more so than any other oral nutritional product. If you are going to recommend only one supplement to OA patients, this is the one to suggest. Research further shows that concurrent use of EFAs with NSAIDs allows for a reduction in NSAID dosing. Use products of fish origin; avoid products containing flax or other plant origin EFAs. Dose at 100mg/kg, which often exceeds the label dose, or feed a prescription diet containing at least 3.5 per cent EFA on a dry matter basis. For better absorption, select products that are triglycerides, not ethyl esters, which may mean contacting the supplier directly to gain this information.

Research results for glucosamine and chondroitin (GSACH) have been mixed, but the current consensus is that there is moderately strong evidence that it increases patient comfort, with a small percentage of patients showing dramatic improvement. GSACH works by stimulating the chondrocytes to produce more extracellular matrix. As arthritis progresses, cartilage thins, and chondrocytes die. Therefore, GSACH may be of greatest value as a preventative treatment or early in the course of disease when there are more viable chondrocytes. For injectable products such as Cartrophen and Adequan, the research behind these products, similar to EFA, shows more consistent results than it does for GSACH products. Turmeric has anti-inflammatory action, but is poorly absorbed, and its in-vivo effectiveness is uncertain. Hyaluronic acid (HA) is beneficial when it is injected directly into the joint, but its oral effectiveness is debated because its large molecular weight prevents direct absorption.

The importance of a weight loss program cannot be overstated. Excess body weight increases the mechanical stress on joints. Adipocytes produce pro-inflammatory mediators including interleukins and TNF. Research on obese dogs demonstrates that a loss of 11 per cent excess body weight produces benefits approaching that of daily NSAID administration.

Exercise helps maintain muscle bulk and neural function, and reduces

the perception of pain. Walking is the primary mechanism for circulating joint fluid and bringing nutrients to chondrocytes. Too much exercise is bad, but too little is worse. Avoid sudden changes in velocity (jackrabbit starts, hard braking). Flat or slightly undulating ground with soft give, like grass or forest floor, is generally the best terrain. More frequent but shorter duration exercise is better than being a weekend warrior. Any exercise that increases stiffness after rest or that the dog is too tired to repeat the next day was too much. Exercise that does not result in stiffness or excessive fatigue benefits both comfort and life expectancy. Swimming is usually contra-indicated for shoulder issues but helpful for other forms of arthritis.

NON-PHARMACEUTIC OPTIONS TO TARGET AFFECTED JOINT(S)

There are a number of non-pharmaceutical options to reduce pain by directly targeting arthritic joint(s), including extracorporeal shockwave (ESWT), laser, and pulsed electromagnetic field therapy (PEMF). These options are particularly useful for those patients who are cannot tolerate NSAIDs, or for owners reluctant to utilize daily medication as a first-line approach. Intra-articular injections are another effective option.

ESWT inhibits pain transmission and increases the production of anti-inflammatory growth factors. Shockwaves are sudden mechanical impulses, not electrical therapy. Three applications of ESWT have been shown to improve mobility in dogs for 98 days. Typical prescriptions are q7d x3, followed by q3m prn.

Meta-analysis of laser therapy has shown its effectiveness in treating arthritis, although the strength and duration of effect can vary widely between patients. Although I treat OA with laser, I personally find it more useful as a tool for addressing secondary muscular pain.

Research indicates that PEMF is effective as an adjunctive therapy. PEMF triggers increased extracellular matrix production and nitrous oxide release to decrease inflammation, pain, and edema. Owners typically purchase a PEMF device (e.g., a wire loop that emits a 10" EMF) and administer the 15-minute treatment at home, QID initially, then tapering to every few days as needed.



PAGE 35 & LEFT X-ray of Humphrey's hips.
PAGE 36 (FROM LEFT) PRP being processed;
Sadie receiving PRP elbow injection.

mobilizations, and massage. Manual therapy triggers spinal reflexes to relax muscle. Acupuncture needles can be placed in acupoints, which are associated with neural structures, or into regions of focal irritated muscle (also known as myofascial trigger points). Acupuncture stimulates central endorphin production and descending pain inhibition. Blinded research has shown that CAMT provides immediate improvement in ability to walk, trot, jump, descend stairs, and rise from a lying position, and it reduces stiffness after either rest or exercise.

Therapeutic exercise can be used to strengthen specific muscles, increase stability, and improve coordination. Research from the Penn Vet Working Dog Center found that therapeutic exercise programs increased the average retirement age of police dogs from 8 years to 11.

Humphrey is a Clumber Spaniel with severe hip dysplasia (see radiograph) who benefited from just such therapy. When Humphrey was originally presented at four years of age, his owner was interested in pursuing hip replacement surgery. However, it was determined that secondary lower back pain was a significant contributor to his discomfort, and surgery was postponed until the lower back pain could be resolved. His response to treatment was so profound that he never did require surgery. Humphrey's ongoing treatment includes EFAs, regular CAMT, strict weight control (much to his chagrin), therapeutic exercise, and a single round of IA PRP. Today, he is 11 years old, has earned multiple tracking titles, hikes comfortably for over an hour a day with no discernable lameness or pain, and aside from EFAs, takes no oral medication.

Prescription pharmaceuticals are the remaining option available to addressing OA pain. NSAIDs remain the first line drug of choice, and are as effective as injectable opioids for pain management of OA in dogs. However, their effectiveness can often be improved by the addition of other medications, particularly in patients with chronic OA. The response to different medications can vary between patients, and different practitioners have different opinions on what the best second or third line medication should be. NSAIDs, followed by amantadine, are my personal favourites. Amantadine is ineffective on its own, but is a good adjunctive choice when combined with NSAIDs, especially for chronic OA. It's worth noting that if a dog fails to respond to NSAID brand A, brand B may still be effective. However, if NSAIDs fail to yield a satisfactory clinical result, then concurrent muscle pain is the most likely reason.

Gabapentin produces variable results and is not living up to its original hype. Better results are achieved when it is employed for cases of maladaptive and neuropathic pain. Tramadol has been shown to be ineffective in treating chronic arthritis. Absorption of oral opioids varies widely between patients, but is generally poor. Codeine has the best oral absorption availability. Corticosteroids can help with pain but are chondrotoxic and generally not recommended for OA. [WCV](#)

Intra-articular (IA) injections reduce OA pain in 80 per cent of patients. Corticosteroids are commonly used, either alone or concurrently with HA. Some corticosteroids can damage cartilage, while others have been shown to be chondroprotective. Duration of effect is typically 3–4 months. HA can be used on its own for mild cases, but a series of injections is required. PRP is as effective as combined HA and steroids, and the effects typically last nine months. It is my preferred IA injection. Mesenchymal stem cells can also be given IA, with a typical duration of effect of 11 months; however, it is more invasive and costly than PRP.

TREAT THE ENTIRE BODY

Treating the whole body and not just the affected joints is key to successful multimodal management. Dogs with hind-limb OA frequently exhibit painful latissimus dorsi, paraspinal, and/or trapezii muscles, as well as secondary lower back (lumbosacral or sacroiliac) pain that can be more painful than the OA that triggered it. Dogs with hind-end paresis are more likely to have iliocostalis pain. Elbow or carpal arthritis frequently leads to thoracic paraspinal, trapezius, and rhomboid pain. Shoulder arthritis likely reflects tendon or ligament injury that requires additional diagnostic evaluation.

Muscles are the shock absorbers of the body. Having robust musculature with normal tone, good flexibility, and fast reaction times can provide vital support to joints, and therefore reduce pain. This is why well-muscled dogs with hip dysplasia are less likely to manifest pain than breeds with thinner musculing. Some degree of muscle pain can be detected in virtually every chronic OA dog. Combined acupuncture and manual therapy (CAMT) and laser therapy are the primary tools I use to tackle muscle pain, followed by therapeutic exercise to maintain strength and flexibility.

Manual therapy is an umbrella term that includes chiropractic-style manipulations, physiotherapy-style





EQUITARIAN INITIATIVE IN COSTA RICA

BY DAVID PATON, DVM

Having been fortunate enough to have had the opportunity to visit and work in many parts of the world, it seemed an easy fit to get involved in the Equitarian Initiative. The motto of this organization is “Veterinarians Helping Working Equids Around the World.” Equitarian Initiative is a non-profit organization established by equine veterinarians to sustainably improve working equid health by harnessing the passion and expertise of volunteer veterinarians. This is a North American veterinary organization with the majority of its efforts focused in Central America. It is a group of veterinarians and caregivers looking to provide education, leadership, and assistance to the working equid and, by extension, their families. It is estimated that there are 100 million working equids in the developing world—a working equid is defined as a horse, mule, or donkey that is used primarily for family income, agriculture, and/or transportation.

I was able to attend an Equitarian workshop in southern Costa Rica in January 2016. We were a group of 30 volunteers including veterinarians, veterinary students and interns, veterinary technologists, animal health specialists, farriers, saddle fitters, and interpreters. After overnighting at a guest house in the capital city of San José, we travelled by bus nine hours south to the small town of Puerto Jiménez on the Osa Peninsula, close to Panama. The first two days were spent learning about all issues relating to working in this environment, including dealing with foreign tropical diseases, socioeconomic issues, and the logistics of organizing and implementing such a trip. The workshop included lectures in internal medicine, dermatology, and surgery from experts, all volunteers, and others experienced in working in Third World countries. The lectures focused on the practical aspects of disease identification and treatments. It is no small feat to coordinate importation of supplies, local accommodation,

food and transport, as well as locations for us to work on the animals from the local area. The region where we were working did not have any veterinary care for their horses and donkeys, and we needed to take with us all the necessary equipment, vaccines, medications, and supplies. Appropriate permits, transportation, accommodation, meals, and ground organization all had to be coordinated ahead of arrival. A vital cog in the wheel is an on-the-ground contact who can organize all vital in-country details, including the coordination of local horse owners.

These trips (not for the faint of heart) involved sleeping on the floor in church classrooms, travelling up to two hours in the back of a cattle truck on roads that would make mountain goats nervous, and working in a hot humid climate. After the workshop, we spent four days at four different locations and treated about 350 horses and donkeys. We learned the importance of being well organized. Envision 100 horses arriving at a local soccer or farm field for a free veterinary clinic! Horses arrived early in the morning, having been walked or ridden for up to two hours. Our invaluable and intrepid interpreter processed every horse, obtaining important information and history about each horse, no different than what we would do here. He also ensured that there was no cutting in line or preferences given to those who felt they were more important than the person ahead of them! The horses



PHOTOS BY MATT KORNATOWSKI

PAGE 38 Horses waiting for treatment. **FROM LEFT** A Honduras vet student performing a dental exam; treating an ear tick infestation.

and handlers then went to a triage team where handlers received a physical exam and were vaccinated for rabies, tetanus, and sleeping sickness. The horses were all treated for ticks and worms, and dental, reproductive, and lameness exams were performed as required. Then they were moved on to other stations to have hooves trimmed, castration if required, reproductive examination, dental work performed, and saddle fitting consultation when needed.

The trip was very rewarding on so many levels. I was able to observe how important these horses are to the owner, their family, and community. These are working animals important to economic survival. I saw no evidence of animal abuse and, in general, the horses were in good condition. Costa Rica is rich in vegetation, but we were told that the economy was poor at the moment, hence the horses were not working as much as usual. Economic realities were soon obvious. Medications that we take for granted, farrier equipment, and other professional services were basically non-existent. Certainly, there was no veterinary care available for humane castrations or prevention or treatment of routine diseases. It was very rewarding to be able to get back to the roots of veterinary medicine, providing basic veterinary care to animals in need. This is really what is close to the heart of most veterinarians.

A young female veterinarian student from Honduras was sponsored through an Equitarian scholarship. It was very rewarding to see her learn many important veterinary skills that she will be able to take back and apply in her home country. We also had several North American veterinary students and new graduate veterinarians on our trip. They too learned many valuable practical and life skills which will help them become leaders and contribute to this sort of work in the future.

It is important to know that this sort of work should not be seen as charity without contribution. The horse owners that we were working with are eager to provide good horse care—they just lack not only the finances but also the skills and resources needed. These horses

are not luxuries but a vital part of the economic well-being of the family. The owners know that if they take better care of the working animals, they will live longer and be healthier, happier, and more productive. The Equitarian Initiative is similar to other worldwide programs involving volunteer veterinarians. These initiatives require not only boots on the ground but financial support to help expand these worthwhile projects. I am proud that some of the profits from the Delta Equine Seminar held each fall will be supporting a student to attend next year’s project in Costa Rica. I hope that this experience might lead to a “made in Canada” project to help benefit these working equids and their owners.

“THESE TRIPS (NOT FOR THE FAINT OF HEART) INVOLVED SLEEPING ON THE FLOOR IN CHURCH CLASSROOMS, TRAVELLING UP TO TWO HOURS IN THE BACK OF A CATTLE TRUCK ON ROADS THAT WOULD MAKE MOUNTAIN GOATS NERVOUS”

I would encourage all veterinarians who might be interested in this sort of endeavour to go www.equitarianinitiative.org and join the Facebook page. You will not only be notified of the various workshops available but also receive postings of various opportunities to join with a group, sometimes large, often small, that requires and is looking for help. Work is being done throughout Central America including Honduras, Nicaragua, Haiti, and Costa Rica as well as many other countries. I am hoping to travel to Ethiopia this winter with a contact who is working on a community project and has recognized the need for veterinary involvement in developing sustainable agriculture in the region. It is my hope that we can develop some made in Canada projects in the future. Although the need is primarily for those with equine practice experience, we had several small animal practitioners with us on our trip who were well able to contribute and work alongside the seasoned veterans. AHTs, students, and new graduates are encouraged to participate. Anyone fluent in Spanish, even without veterinary training, could be a real asset to a project. Scholarship funding may be available for students and new graduates. If you or any of your staff are interested in this sort of activity, feel free to contact me at davidpaton@shaw.ca or 604.856.3351. **WCV**



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MEDICAL ASSISTANCE IN DYING

BY SUSAN HUGHSON, DVM

One of the most important duties and privileges we have as veterinarians is provision of euthanasia. Euthanasia of non-human animals can be implemented in a gentle and rapid manner. For those of us in companion animal practice, this may be the final service we provide to a patient we have known since near birth. We often have a deep bond with the patient and client, and while we are sometimes relieved to allow a life to end, it is most often a time of solemnity, dignity, and grief. As veterinarians, we also know that the end of a human-animal bond may evoke other losses and emotional trauma for the person who is saying goodbye. An additional, unspoken aspect of the euthanasia process is being witness to the suffering of the human animal.

So it should come as no surprise that many veterinarians, myself included, sighed with relief when the Supreme Court of Canada ruled on February 6, 2015 to lift the absolute prohibition on physician-assisted death. The unanimous decision of the Carter ruling established medical assistance in dying (MAID) as a Charter right for competent adult Canadians who are suffering intolerably as a result of "grievous and irremediable" illness. The decision was open, compassionate, and patient-centred in tone.

Bill C-14, however, the new federal assisted dying law, is much more restrictive and paternalistic in its approach. Despite the recommendations of its own Special Joint Parliamentary Committee, an independent provincial and territorial panel, top constitutional experts, and the Senate—yes, the Senate—the government opted to introduce language stipulating that eligibility for assisted death would only be available for those Canadians whose "natural death is reasonably foreseeable." In practice, this rule will exclude entire classes of chronically ill individuals who are suffering intolerably but who don't find themselves, for better or worse, near death's door. The ink is barely dry on this new legislation, and already we have court challenges to this restriction.

As a veterinarian, I cannot help but think about what would happen if similar unfair restrictions were imposed on my practice. Imagine being told that it is illegal to euthanize a dog with degenerative myelopathy that has progressed to paralysis, and that your only option would be to withdraw her food, water, and medication, and then watch her die slowly. This is what some Canadians with non-terminal illnesses that cause unbearable suffering will face as a result of our new legislation. This is not what the Supreme Court of Canada intended.

Veterinarians are uniquely positioned to provide guidance and compassion around the topic of assisted death. It is not easy to end life, but it can be done well. These are things we can say to Canadians, as we move away from a culture that fears death, and begin to look profoundly at when it is best to assist someone to die. **WCV**

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- 6–8 **ACVS Surgery Summit**
Seattle, WA
www.acvs.org/surgery-summit
- 7–9 **Pacific Northwest Veterinary Conference**
Spokane, WA
www.wsvma.org/pacific-northwest-veterinary-conference/
- 15–18 **2016 CanWest Veterinary Conference**
Banff, AB
www.abvma.ca/calendar-listing.asp?ID=184
- 22–23 **Cruciate Extracapsular Repair**
Calgary, AB
www.focusandflourish.com
- 24–25 **The 45th Annual DELTA EQUINE SEMINAR** features Practical Approach to Lameness Diagnosis & Treatment with Dr. Tracy Turner; and A Potpourri of Current and Practical Medical Topics with Dr. Joe Bertone.
Town and Country Inn, Delta, BC
www.deltaequineseminar.com
For more information, contact Dr. David Paton at 604-856-3351 or Dr. Marian Dobson at 604-888-2323 or email deltaequineseminar@gmail.com.

NOVEMBER

- 5–6 **The CVMA-SBCV CHAPTER FALL CONFERENCE & TRADE SHOW** features Critical & Emergency Care with Dr. Marie Kerl; Behaviour & Pharmacology with Dr. Kenneth Martin; Neurology with Dr. Peter Gordon; Pet Nutrition with Dr. Tammy Owens. Also, the Conference features LVT Debbie Martin speaking to RVTs on Fear Free—Creating a Veterinary Spaw and Fear Free—Prevention is Easier than Treatment.
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www.canadianveterinarians.net

DECEMBER

- 4 **Dental Radiology & Positioning**
Victoria, BC
www.scilvet.ca
- 8–11 **CVC Convention San Diego**
San Diego, CA
www.thecvc.com/dates-and-locations/cvc-san-diego-2/

EVENTS TO NOTE IN EARLY 2017 INCLUDE:

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Toronto, ON www.ovma.org
- Central Canadian Veterinary Conference, February 3–5**
Winnipeg, MB www.mvma.ca

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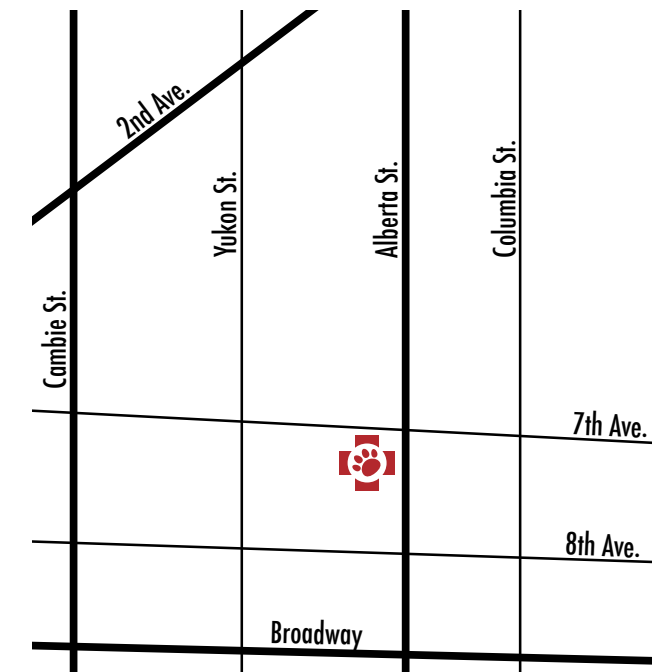
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