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MY fear of fire is real. Many years ago, working as a journalist, I had the opportunity to interview a fire department dispatcher working the 2004 wildfires in the Okanagan. He told me the hardest call he had to make was the one to his wife to tell her to leave their family home as it was about to burn to the ground. By the end of his shift, 68 homes, including his own, were gone.

Flash forward a few more years, and I was at home one afternoon when I looked out my front window. The house across the street was on fire, and in the time it took me to dial 9-1-1 and ask for the fire department, the fire moved laterally, and a second house was in flames. I recall exactly how scared I was as I gathered my five dogs and the two young girls who were visiting me, headed out the back door to encounter a small fire on my own back porch, extinguish it, and herd these seven souls into the driveway to await the firemen’s instructions. I watched, horrified, as my own roof started to smoulder and was thankful when the firefighters stopped spraying the houses which were now unsalvageable and turned the white foam onto my own wee house, which survived virtually unscathed.

The difference between my own situation and the vast wildfires documented in Dr. Welsman’s feature story is that, in my case, firefighters stood ready to help me. In the many, many, many wildfires that burned this past summer, the fires were too large and unruly to be contained before damaging entire neighbourhoods and impacting the entire province. Just like on that day more than a decade ago, the safety of the animals was the first thing on my mind, and I cannot imagine the fear that owners and veterinarians must have felt as they faced this disaster.

What I have no trouble imagining is the professionalism, dedication, courage, and heroism of the many veterinarians, vet techs, animal lovers, volunteers, and all their families, who rallied together to keep safe as many animals as possible, and to treat those who were injured during their escape. We are all indebted to these people.

Email: wcveditor@gmail.com

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

ON THE COVER
This Emu was evacuated to the Kamloops Exhibition Association barn during the Cache Creek wildfires. Photo by Anfield Photography.
KOHAIRIK ARMAN, DVM, graduated from the Atlantic Veterinary College in 2007 and entered feline-specific practice in Ontario. She moved to Vancouver in 2009 and started working at Cats Only Veterinary Clinic, now a VCA Canada clinic renamed Cats Only Animal Hospital, where she is currently employed. Koahirik is a member of the Board of Directors of the CVMA-SBCV Chapter and Chair of the Editorial Committee for West Coast Veterinarian magazine.

EVAN CRAWFORD, DVM, MSc, DVOCC, DipLOACV, grew up on Vancouver Island and after completing his education in Saskatchewan, Wisconsin, and Ontario, he has returned to BC where he works at Boundary Bay Veterinary Speciality Hospital. Outside of work, he enjoys hiking and kayaking. Most of the time he is accompanied by his two big black dogs, one each from Wisconsin and Ontario.

DAVID FRASER, CM, PhD, joined UBC in 1997 as NSERC Industrial Research Chair in Animal Welfare. His work has led to many innovations in animal housing and management, from designing better pig pens to reducing highway accidents involving wildlife. He was appointed Member of the Order of Canada in 2005 for his work in animal welfare science.

MELISSA FREI, RVT, has lived in the beautiful Creston Valley for the past 20 years. While working at the Creston Veterinary Hospital, she obtained her certificate as an Equine Sports therapist in 2010 after a two-year program in Vernon at the BC College of Equine Sports Therapy. In 2014, she graduated from Thompson Rivers University Distance Education Program as an Animal Health Technician and received the Merit Large Animal Science Award.

KATHRYN WELSMAN, DVM, graduated from OVC in 2007. She practised emergency medicine in Langley for several years and completed a diploma in veterinary public health. In 2011, she moved to the Kamloops area where she has been practising small animal medicine.

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FROM THE CVMA-SBCV CHAPTER PRESIDENT

It’s an early October Friday afternoon, and as I write this column, I am lazing about with my fur family and sipping a hot latte on the couch. Fall is here, I have resurrected my collection of sweaters, got my rubber boots and rain gear out, and turned on the heat in the apartment. Definitely a favourite time of year. I have also just come off the bottle of several weeks as a locum at various clinics. This is truly a different way to experience the veterinary profession. It has been great to get out of my comfort zone, see how others practise, and meet some amazing people. I often laugh that I’d rather see zone in the ER, see how others practise, and meet people on antimicrobial stewardship. They are also talking about One Health, animal welfare programs, veterinary topics, share ideas, and discuss common changes. The Association is continuing to work hard of western Canada’s veterinary associations (BC, Alberta, Saskatchewan, and Manitoba). It’s a chance to get in touch with the other VMAs to discuss provincial veterinary topics, share ideas, and discuss common problems and novel solutions. I am looking forward to talking about One Health, animal welfare programs, and community relation strategies.

In early September, I attended the SVMA AGM in Regina. This year, there were big discussions on adressing the new federal tax of small businesses and how this affects veterinary business owners. As the CVMA-SBCV Chapter has done, the SVMA wrote a letter to the federal government opposing the proposed changes. The Association is continuing to work hard to educate and provide material for their veterinary members on antimicrobial stewardship. They are also producing great tools and materials for the public on their website, including a new topic on antimicrobial resistance. You can watch their Just Like You educational videos at http://www.svma.sk.ca/index.php?p=just-like-you-videos.

In late September, I attended the WCVMC’s White Coat Ceremony (WCC) in Saskatoon. This is my favouite event of the year as I get to chat one on one with the BC quota students in a meet and greet the night before the WCC. It is a time for listening to feedback and finding out what our BC students need from the Chapter and the Province. In years past, this interaction has helped to create, among other things, a BC student award of $2500, and the evaluation of mentorship provincially which spurred the development of the new WCVCM mentee program. This year we talked about how the Chapter can help connect BC students with BC clinics for volunteer and work positions. The Chapter is looking into creating a student classified ads space where students and practices looking for students could interact.

The CVMA-SBCV Chapter was recently informed that the Province of Alberta will no longer be financially supporting the WCVCM for quota seats. They have decided to focus solely on the University of Calgary’s veterinary program. This is a devastating blow to the WCVCM, as they have been partners with the ABVMA and Alberta for many years. I am very saddened to hear of this decision and wish to highlight our Chapter’s support of WCVCM. We will be speaking to Dean Freeman on this as to the impact to the college and the importance of maintaining funding, as well as retaining or expanding BC student seats at the WCVCM. I believe this demonstrates the work that the Chapter does on behalf of our members.

By the time this issue is in your hands, I will have seen many of you at our fall conference in November, meeting old friends again and making new ones. In the meantime, back to my latte, my furry family, and this lovely fall.

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 as a locum veterinarian.

COLLEGE OF VETERINARIANS OF BC POSITION STATEMENT ON DUTY TO REPORT ANIMAL ABUSE OR NEGLECT

SUBMITTED BY THE REGISTRAR’S OFFICE OF THE COLLEGE OF VETERINARIANS OF BC

I n June 2017, the College of Veterinarians of BC (CVBC) issued a brief guideline on veterinarians’ duty to report under the Prevention of Cruelty to Animals Act (PCAA). In July 2017, the province’s chief veterinary officer published an article challenging the CVBC’s position. In response to inquiries, the CVBC takes this opportunity to clarify any perceived confusion over the two publications.

The welfare of animals is a veterinarian’s primary concern. If animals are not brought to veterinarians for assessment and treatment, then veterinarians cannot fulfill their part in promoting animal welfare.

Veterinarians are required to report animal abuse, cruelty, and distress. Certain circumstances give rise to the duty to report. These circumstances are dictated not only by the PCAA, the Veterinarians Act, and the CVBC Bylaws, but also by measured analysis or professional judgement. It is the role of the CVBC to provide guidance, to promote public confidence that veterinarians are qualified to provide medical assistance, and to assess the necessity of reporting.

Some clients may refuse reasonable recommendations for treatment. If the veterinarian believes the refusal may lead to animal distress, the veterinarian should encourage the client to seek a second opinion, take time to absorb the advice, or to explore humane alternatives. PCAA reports are not required where clients seek unnecessary cosmetic alterations. They may be informed that they are in the wrong jurisdiction for those services.

The relationship of trust between a veterinarian and a client is important to the welfare of the animal and the client’s other or future animals. When exercising judgement about reasonable grounds to make a report, the veterinarian must assess the information for clarity or ambiguity. Factors to consider include:

- a new or ongoing veterinary-client-patient relationship
- severity of injury
- origin of the animal’s condition
- remorse and willingness to agree to treatment
- character and record of the client
- knowledge of the client’s prior record
- nature of the relationship between the owner and the animal
- client’s remorse and willingness to agree to treatment
- potential for future abuse
- likelihood of future abuse
- likelihood of future compliance
- potential for future distress
- resources of the owner
- financial resources of the owner
- willingness to seek treatment
- evidence of the owner’s acceptance of the veterinarians’ goal
- evidence of the owner’s prior treatment

Each scenario requires objectively assessing the available information. Making or threatening a report based on unreliable information can lead to negative outcomes for the injured animal. A PCAA report may be devastating to all involved, the client, the veterinarian, and their respective families and communities.

The authority to authorize and institute prosecutions for animal abuse or cruelty rests solely with the Ministry of the Attorney General. Not all PCAA reports result in prosecutions. In BC, there is a defence for a PCAA report made in good faith, but there is no immunity from civil litigation. Veterinarians who report the possibility of litigation, regulatory complaint investigations, negative publicity, and other adverse results.

Different considerations may apply for veterinarians in public practice, where a vast number of animals and consumers are potentially affected.

Animal welfare is a top priority to the veterinary community. Usually, the most effective method available to veterinarians for preventing or arresting distress is to treat their patients and educate their clients. With-out clear evidence of current or imminent animal distress requiring a PCAA report, it is best to proceed with reason and caution. This approach does not preclude a report after the veterinarian has sought advice, or where changes in the situation or information warrant it.

Veterinarians may contact the CVBC or seek independent legal advice.

Legislative Authority
- Veterinarians Act
- Prevention of Cruelty to Animals Act
- Criminal Code of Canada
- Personal Information Protection Act
- CVBC Bylaws

SCHOLARSHIP AVAILABLE FOR THE 8TH EQUITARIAN INITIATIVE WORKSHOP

The Delta Equine Seminar is again sponsoring a veterinary student or recent graduate to attend the 8th Equitarian Initiative Workshop in Costa Rica January 5–11, 2018. The scholarship will be for the amount of $1,750 USD. Details of the application, trip, and experience are available from davidpaton@shaw.ca. Last year, four veterinarians associated with the Delta Equine Seminar attended, and all agreed that it was a tremendous experience and a real opportunity to learn and participate in equine veterinary medicine in developing countries. Please help spread the word to any of your veterinary contacts and students who might be interested in participating. There were six excellent applicants last year, and they should be encouraged to apply again this year. If anyone has any questions about the scholarship, please contact davidpaton@shaw.ca.
The CVMA has joined the Coalition for Small Business Tax Fairness to oppose federal tax proposals that would dramatically change the way incorporated small businesses are taxed in Canada. Visit the News & Events section of www.canadianveterinarians.net for more information and to find out what you can do.

The CVMA is participating in a sub-committee of the Canadian Animal Health Products Regulatory Advisory Committee to discuss the implementation and impacts of Health Canada’s moving all medically important antimicrobials (veterinary drugs) to the Prescription Drug list. The Canadian Veterinary Reserve (CVR) was involved in a project with the Public Health Agency of Canada in the Beyond the Border project, coordinating emergency preparedness and response in the United States and Canada, for both humans and animals. As an outcome of this project, the CVR is now hosting 16 online emergency preparedness modules provided by the US Department of Health and Human Services, free of charge. The CVR held its annual call-up drill in March, which involved CPGA and Emergency Management British Columbia, and it tested the response of reservists and the operational readiness of the CVR. The CVR’s recruitment campaign this year added 65 reservists over the past few months, reaching a total of 278; the aim is to reach 300.

During World Antibiotic Awareness Week, November 13 to 19, the CVMA reminded veterinarians that antimicrobial stewardship remains a top priority issue for the association. The CVMA, along with the Canadian Council of Veterinary Registrars, developed a framework called “Veterinary Oversight of Antimicrobial Use – A Pan-Canadian Framework for Professional Standards for Veterinarians.” To see other actions the CVMA has taken to advocate for change and encourage the responsible use of antimicrobials in animals, visit www.canadianveterinarians.net/policy-advocacy/antimicrobial-stewardship-cvma-priority.

The Canadian Veterinary Reserve (CVR) participates in the Canadian Veterinary Association’s (CVA) national recruitment program for reservists. CVR reservists are usually involved in preparing for and responding to possible health threats in Canada’s agriculture and food systems, including emerging diseases and bioterrorism events.

The CVMA has joined the Coalition for Health Care Tax Fairness (CHFTF). This coalition mobilizes the resources and political influence of health care organizations to engage in policy research and advocate for health care tax fairness. As an outcome of CHFTF’s Call to Action, the federal government announced in the 2017 budget that it would review the tax treatment of private practices and other small health care businesses.

The CVMA has received a number of awards over the years, including the Association’s highest honor, the Distinguished Service Award (DSA), which recognizes a member who has contributed to the advancement of veterinary medicine in Canada. This year, the CVMA。”

Dr. David Lane, DVM, Dipl. ACVSMR (Canine) Generously sponsored by CVMA-SBCV Chapter

Miranda Sadar, DVM, Dipl. ACZM

Generously sponsored by the Western College of Veterinary Medicine
CHANGES TO ANTIMICROBIAL USE THAT IMPACT VETERINARIANS

Health Canada is proceeding with regulatory and policy changes that will impact practicing veterinarians’ roles with respect to prescribing and perhaps reporting how antimicrobial drugs are dispensed. Additionally, product labelling will change for antimicrobials with new information being required, including information related to antimicrobial resistance risks as it becomes available.

The Veterinary Drug Directorate will be implementing changes to the Food and Drug Regulations in four key areas:

1. Increasing oversight on the personal importation of unapproved veterinary drugs (often referred to as OUI). Only those drugs confirmed to not pose a risk to public health or food safety will be allowed to be imported for use in food-producing animals, including horses, and even then, in limited quantities and not for resale. For example, importation of prescription drugs or medically important antimicrobials for personal use will not be allowed.

2. Increasing oversight on importation and quality of active pharmaceutical ingredients for veterinary use by requiring compliance with Good Manufacturing Practices and Establishment Licenses to conduct these activities.

3. Manufacturers, compounders, and importers will be required to report, by animal species, the annual sales of medically important antimicrobials for veterinary use, to support the antimicrobial use surveillance program.

4. A new alternative, less burdensome pathway for companies to import and sell low-risk veterinary health products (such as vitamins, minerals, and botanicals) as additional health management tools.

Policy changes will also be coming to promote the responsible use of antimicrobials in animals in the following three key areas:

1. All over the counter medically important antimicrobials are moving to prescription status. This change will require a prescription from a veterinarian before being able to purchase most antimicrobials, bringing them under the same level of oversight as all medically important antibiotics introduced since 2004.

2. All growth promotion claims will be removed from labels of medically important antimicrobials in line with the international best practices or principles on appropriate use and good stewardship. These drugs will be reserved only for treating or preventing diseases.

3. Responsible use statements will be included on labels of all in-feed and in-water medically important antimicrobials.

Health Canada intends for these changes to be implemented by late December 2018. The intent of these changes is to:

- restrict access to medically important antimicrobials by requiring a veterinary prescription in all cases of use.

- restrict use of medically important antibiotics to therapeutic purposes for treating and preventing disease.

- highlight responsible use of medically important antimicrobials by including statements related to that on labels.

- allow only high quality medically important antimicrobials to be imported.

- increase control over who can import medically important antimicrobials.

- institute better monitoring of volume of medically important antimicrobials dispensed in Canada by species.

- provide alternate regulatory pathways for accessing health and wellness tools for promoting health of animals.

Health Canada has indicated that, by the end of 2018, veterinary antimicrobials will only be available from veterinary clinics or pharmacies, or mixed in feed from a feed mill. These antimicrobials will no longer be sold at livestock medicines outlets. Producers who previously accessed some of these antimicrobials through over-the-counter licensed outlets will now need to work with a veterinarian in order to access these antimicrobials.

A

fter a busy summer for all, students at the WCVM are back at school. With four years out on externships and into rotations, third years gaining practical experience in skills and surgery, and second years guiding the Class of 2021 through the first weeks of vet school, it has been an exciting September. Walking around the college, I have heard classmates swapping stories of summer adventures and seen friends savouring the last of the warm weather by enjoying lunch on the front lawn. It feels good to be back.

One of the best parts of being a student at the WCVM is our strong sense of community. From the first week of class, there is no shortage of opportunity to get involved and collaborate with fellow students. The incoming first-year class elects its student council, our student-run clubs recruit new members, and recreational sports teams start planning for the upcoming season. Students make connections with classmates, and faculty advisors reach out, inviting us to discuss what we learned this summer over coffee.

The quintessential display of our cohesive learning environment came with the return of a longstanding WCVM tradition: Vetavision. Put on by the students every two or three years for the majority of the WCVM’s history, the weekend open house is certainly a highlight of our fall. This year, students from all four years, together with many members of faculty and staff, gave their time to welcome the Saskatoon community to campus. As described by student Jenna Noordenbos, “Vetavision is a great opportunity for students to give back to the community through educational activities which help strengthen the human-animal bond.”

On entering through our college doors, visitors received a passport to Vetavision, a new interactive element added by the student organizers this year. Stamps were successfully obtained after conversing in the foreign language of pathology, spending time with locals at the milking demonstration, or learning about culture and customs at the animal welfare booth. A completed passport was traded for an entry to win prizes donated by our community sponsors, which encouraged our visitors to enjoy the entirety of Vetavision by spending time at all 29 booths.

Dressed in bright orange T-shirts, volunteers were not only easy to spot, but also colour-coordinated for an important cause. On September 30th, the whole of the WCVM participated in Orange Shirt Day, as part of the college’s aligned initiatives with the University of Saskatchewan’s campus-wide commitment to the spirit of reconciliation.

The shirts themselves were designed by the WCVM’s Indigenous Student Circle to incorporate imagery inspired by the Seven Sacred Teachings, each being represented by an animal: Featured are a turtle, symbolizing truth; a buffalo for respect; and four eagle feathers in a medicine wheel configuration. The eagle is a symbol of love, and the four elements of the wheel (north, south, east, and west) can signify stages of life and seasons of the year. Collectively, these imagers demonstrate our shared interconnectedness with the natural world, providing a unique viewpoint from which we students can further incorporate themes of One Health into our own education.

In a way, those who came to Vetavision went home having experienced One Health in action by visiting us students and our teaching animals in our veterinary microcosm. Our excitement about this profession was both palpable and infectious over the course of the weekend as school field trips, family weekend outings, local news crews, and pre-vet students all spent a day at vet school. We were thrilled to see such strong interest in learning about the many facets of a veterinary career. It was especially encouraging to have our own friends and families in attendance, as well as faculty and staff bringing their family members through, as a true reminder of the tremendous support that we are surrounded by. We are proud to be veterinary students and to have had the opportunity to share a day in our life.

KEEP AN EYE OUT FOR THE NEXT VETAVISION EVENT, SCHEDULED TO RUN IN THE FALL OF 2023.

“COLLECTIVELY, THESE IMAGERIES DEMONSTRATE OUR SHARED INTERCONNECTEDNESS WITH THE NATURAL WORLD.”

Chloe Gustavson holds a BSc from the University of Victoria and is currently a member of the Class of 2020 at WCVM. She grew up in North Vancouver, where she most enjoys spending time outside with her dog, Leo. She is interested in focusing her career on contributing to One Health.

1 https://aboriginal.usask.ca/building-reconciliation/reconciliation-at-the-u-of-s.php#GoingForward
2 https://aboriginal.usask.ca/documents/program/Indigenizing%20the%20WCVM.pdf
3 https://words.usask.ca/wcvm/2017/04artists-bring-indigenous-knowledge-to-wcvm/
Steps to Improve the Management of Cull Dairy Cows

By David Fraser, CM, PhD

The management of cull dairy cows is one of the pressing animal welfare issues of the dairy sector. For a few lucky cows, the farmer makes a booking with a local abattoir, and the animal is slaughtered promptly after a short journey. However, with fewer and fewer small slaughter plants in Canada, many cows experience much longer delays—perhaps involving several days and movement across provincial or international borders—before arriving at a plant that will accept them. And when farmers load an older and possibly vulnerable cow onto a truck, they may not know where she will end up or how long it will take.

To scope out the problems and possible solutions, we convened a workshop to bring all of the relevant sectors together: dairy producers, veterinarians, regulators, and people working in trucking, livestock auctions, slaughter, and research. The two-day discussion, held in Ottawa, produced a much better understanding of the issues and how they vary across Canada, and it led to a consensus on the necessary next steps.

First, the workshop called for investigation into the scope and complexity of the issue and the reasons for the delays that sometimes occur. As a dramatic example, during the lengthy moose hunting season in Newfoundland, farmers often cannot secure the services of a local slaughter plant, and the animals may be trucked several hours to the ferry, shipped to Nova Scotia, and possibly trucked as far as Ontario. All participants agreed that we need a more detailed understanding of the range of journeys that occur and the reasons for long travel times. And grudgingly, studies are now underway in three provinces, including British Columbia, to do just that.

Second, it was agreed that we need to identify more local options for the slaughter of cull dairy cows. This might involve agreements between producer organizations and slaughter plants so that short transport distances become the norm for all cull cows, especially those at high risk of animal welfare problems. In short, we need to think of slaughtering and farming not as separate industries but as components of a system that must function together to protect the welfare of the animals.

Third, where local slaughter is not an option, farmers and veterinarians need to be well informed about the possible delays and transport distances, and they need decision tools that take account of both the animal’s condition and the potential delay to slaughter. For example, a cow that is off feed may be fine to transport locally, but if failure to eat is caused by a displaced abomasum, then slaughter should be prompt. Here, we clearly see the need for the veterinarian to be involved in shipping decisions.

Next, we need wider adoption of positive management options that exist in certain provinces. In Ontario, for example, official veterinarians can order that compromised animals at auctions be sent for immediate, local slaughter and not go through the normal marketing process. British Columbia and a few other provinces have provisions for “on-farm emergency slaughter” whereby a veterinarian performs ante-mortem inspection on the farm, and the animal is then killed, bled, and transported to a nearby slaughter plant where post-mortem inspection ensures that the meat is safe. We need a careful assessment of these options so that they can be refined and, if appropriate, made more widely available.

Perhaps most fundamentally, we need to create a culture of pro-active culling so that older cows are removed from the herd before illness, lameness, or other health problems arise and make the journey overly stressful. This might involve ensuring that the herd health program includes clear guidance on early culling decisions. Here again, it will be important for the herd veterinarian to be involved.

Finally, when all else fails, all farms and livestock auctions need the tools and training to carry out effective euthanasia or, alternatively, need ready access to euthanasia services and carcass disposal.

The workshop was remarkable for showing the kind of cooperation over animal welfare that is not uncommon in Canada. The UBC Animal Welfare Program provided the chair; the Loblaw Companies funded the UBC graduate student who coordinated the writing of the report; Dairy Farmers of Canada provided a staff person; various companies and organizations sent experts; and the meeting was sponsored by the National Farm Animal Health and Welfare Council (NFAHWC) which will now do the arm-twisting to get action on the recommendations.

"FOR SOME PEOPLE, THE DOG ITSELF IS AN AMBASSADOR OF NATURE, THEIR CONNECTION TO IT."

A TASTE OF THE WILD, WITH A GRAIN OF SALT

WILDLIFE COLUMN

BY VERONICA GVENTSADZE, MA, PhD, DVM

"A DOG LET LOOSE IN THE WILD AND RUNNING INTO A BEAR WILL SEEK SAFETY BY RUNNING BACK TO ITS HUMANS, UNINTENTIONALLY BRINGING THE PERSUADING BEAR WITH IT."

D uring a recent health exam, a client who had just moved from Ontario remarked on how unaccustomed she was to the off-leash culture here in BC. Her sweet and shy little terrier, dutifully walked on a leash everywhere and every time, was receiving a rather rude if enthusiastic welcome from the local canine population. I felt embarrassed, especially since this was the first time an Ontario transplant who was also an avid dog lover and outdoor enthusiast had pointed out British Columbians’ rather lax attitude to leash laws and to picking up after their dogs on park and forest trails. We flock to the Best Place on Earth, from other parts of Canada and from across the world, not least of all for its natural beauty and a gateway to the wilderness—one of the few remaining wilderness areas in the world. We bring our canine friends and want them to be able to enjoy nature with us, to exercise their muscles and their senses. For some people, the dog itself is an ambassador of nature, their connection to it. Unless the dog is a very small breed, owners often

chafe at the expectation to keep their pets leashed on a walk through parkland or forest instead of letting them explore and sniff around at their leisure. This is somewhat understandable on an emotional level: restraining a dog from exercising its nature does feel like a recipe for frustration rather than fulfillment. At the same time, merely putting an untrained dog on a leash is not the answer: a strong dog can lunge free, or exhaust itself and its owner in the attempt. What is not often obvious is that freedom to enjoy a nature walk does not equal lack of training, or lack of control on the owner’s part; quite the opposite. Until very recently in human history, dogs worked hard to earn their keep. They worked as hunters, trackers, shepherds, guards, search and rescue dogs, and trackers. Miniature dogs were bred exclusively to be companions, and warmers for hands or feet. Most of today’s domestic dogs, whether pets or feral, are quite simply unemployed, and often bored out of their minds. Dogs with jobs used to be the status quo; now they are remarkable enough to warrant a TV program. We have made their lives seemingly easier, definitely safer, but in the process, we have created an army of temperamentally untrained and uneducated dogs, with no outlet for their amazing bred-in skills. Besides being unemployed, many dogs go without a proper education. All too often, pups get separated from their mothers and siblings to be sold well before they have learned bite inhibition and the subtleties of proper interaction with other dogs. Their new human families may not have the time or the knowledge to give them proper training, and some don’t even realize that dogs are not born with knowledge of commands. It’s a testa-

ment to dogs’ innocence that more of them do not suffer from separation anxiety, a first-world problem rooted in an entirely normal response to being abandoned by the pack for no reason the dog can understand. Man’s best friend may be an honourable title, but how often do we ask ourselves if we are best friends to our dogs? Dogs will learn, whether we purposefully teach them or not; the desire and willingness to learn are in their blood. There is a theory that dogs evolved from wolves displaying neotony, or retention of juvenile features throughout life. It makes sense, then, that dogs have a childlike desire to please their elders and to learn from them directly and through observation. They watch people very closely and with great interest (often mistaken for blind devotion), and make their own conclusions unless we guide them. Lack of training is a subtle form of neglect. The happiest dogs are not those left to their own devices, but those on whom humans place fair and consistent expectations, and who receive training and opportunities to meet those expectations.

Fascination with the concept of wild nature often leads to romanticized and unrealistic views of where dogs belong in the picture. It’s no accident that the words wild and free often appear together in the pet product industry, nutrition in particular. Pet foods containing the word wild and various combinations of -free (e.g., grain-free, by-product-free) have become very popular. There is a backlash against what is perceived to be science selling out to corporate interest, and a simultaneous desire to see the wild ancestor in one’s beloved pet. While a dog does not eat like a wolf, there is merit to respecting an animal’s evolutionary origins in designing optimal nutrition. Dogs are not wolves in behaviour any more than in dietary needs. They do have a capacity for a drastic, fascinating, and often frightening change in behaviour in the company of other dogs. Unless a person can keep the attention of, and exercise recall over, each dog in a group, they will often simply ignore the human and obey their new pack leader, following a newly-formed pack dynamic. But the wildness they show in groups is very different from the wildness of a pack of wolves who, unlike dogs, will go to great lengths to avoid encounters with humans. In her book Driftwood Valley, a story of true wilderness living in northern BC in the late 1890s, Theodora Stanwell-Fletcher gives a hauntingly beautiful account of a night walk up a snowshoe trail with her dogs taken on a wilderness trip and unleashed on a grizzly bear. He killed one after the other with a swipe of his paw. Being in the wild did not stop the bear from its usual hunting routine; it could not so easily have transformed these Boxers back into wolves who have no humans to rely on or to care about; their loyalty and protective instincts made them an animal they were never meant to face. Just as often, a dog let loose in the wild and running into a bear will seek safety by running back to its humans, unintentionally bringing the pursuing bear with it. Thus, a wild animal who normally avoids humans may end up in an unplanned confrontation and often pays with its life.

The health and the very behaviour of wild animals is changing through contact with domestic species. The impact of domestic dogs on unique native species in Australia and New Zealand is well documented, and efforts at public education have brought heartening results. In Canada, the species most vulnerable to dogs romping through their habitats are amphibians and shorebirds trying to nest (the latter can be exhausted after a long flight). What we don’t often hear about is how dogs can directly help conservation. Detection dogs are increasingly used in wildlife surveys to find species of interest (for example, desert tortoises) and alert handlers to their find without harming the animal. The Mongolian Bankhar Dog Project aims to protect wildlife, livestock, and the environment by using a traditional breed of guardian dogs. Their presence deters snow leopards, Gobi bears, and wolves who might otherwise be killed in retaliation for preying on livestock. Less predation allows the herd to be smaller and to use less grassland, leaving to wild herbivores who are the predators’ natural prey.

These are only two examples of highly-trained and disciplined professionals among dogs, working to enhance the living world around them as well as the lives of humans. Of course, not all pets can or need to attain such skill, but this, and not a daydream of a wild and free-eyed wolf, should be the ideal for man’s best friend. ⋆


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.

“THE EFFECTS OF LASER THERAPY ARE ANALGESIA, INFLAMMATION REDUCTION, AND ACCELERATION OF TISSUE REPAIR AND CELL GROWTH.”

LASER THERAPY

BY MELISSA FREI, RVT

I, ce, a three-year-old Border Collie, was only one year old when she was hit by a car. Our practice owner Dr. McLeod and I flew her to Western Veterinary Specialist & Emergency Centre in Calgary, where she underwent emergency orthopaedic surgery to her pelvis and lumbar spine for dislocation of L1, a compression fracture of L4, and an ilial shaft fracture. The surgeon was able to stabilize Iee’s spine and pelvis with a number of plates and screws. Several bone fragments were impaling her spinal cord and were also removed. After extensive rehabilitation, Iee recovered well from her injuries.

After she had resumed her regular activities on the farm, her owner noticed that, after a very active day, she would display mild ataxia of her hind end and lose control of her bladder. Iee was examined and radiographed to ensure her implants were still in correct position. The radiographs showed that there was some inflammation within the right dorsal cannon of Patch and his right carpus from an unknown source. He would lick the spot again so we began laser therapy again.

This time, he didn’t appear to respond as quickly, but his size it was when we had started, and Patch was more responsive. The warming effect of the laser helps with circulation to produce ATP, and both cellular respiration and metabolism are increased in response. The warming effect of the laser helps with circulation and provides a comforting feeling during application. The effects of laser therapy are analgesia, inflammation reduction, and acceleration of tissue repair and cell growth. Laser therapy also improves angiogenesis, nerve function, and immunoregulation, and it reduces fibrous tissue formation.

Photobiostimulation. They penetrate the cell membrane and stimulate the mitochondria to produce ATP, and both cellular respiration and metabolism are increased in response. The warming effect of the laser helps with circulation and provides a comforting feeling during application. The effects of laser therapy are analgesia, inflammation reduction, and acceleration of tissue repair and cell growth. Laser therapy also improves angiogenesis, nerve function, and immunoregulation, and it reduces fibrous tissue formation.

HOW LASER THERAPY WORKS

The photons delivered by the laser affect the cells in the tissues through photobiostimulation. They penetrate the cell membrane and stimulate photoreceptor chromophores (cytochrome c oxidase) in the mitochondria to produce ATP, and both cellular respiration and metabolism are increased in response. The warming effect of the laser helps with circulation and provides a comforting feeling during application. The effects of laser therapy are analgesia, inflammation reduction, and acceleration of tissue repair and cell growth. Laser therapy also improves angiogenesis, nerve function, and immunoregulation, and it reduces fibrous tissue formation.

The laser can be used to stimulate acupuncture and trigger points in place of the traditional needle method.

WHAT IS LASER THERAPY?

The word laser stands for Light Amplification by Stimulated Emission of Radiation. This essentially means that a device that can concentrate light between 180nm–1mm wavelengths and deliver it in a controlled method could be considered a laser. This does not mean, however, that all lasers are created equal. There are four classifications of lasers, classified according to their potential to cause damage to biological tissue. Dr. Ronald J. Riegel’s book Laser Therapy in Companion Animal Practice gives examples of each class and their risks as follows:

• Class 1: compact disc player, low level of risk.
• Class 2: laser printer and bar code scanners (400–700nm, which is in the visible light spectrum); potential for an optical hazard if viewed for extended periods of time.
• Class 3 (a/b): laser levels/pounters and Low Level Laser Therapy Devices; risk of damage to ocular tissue if viewed directly (4–15mW–500mW) and off reflective surfaces (b=5mW–500mW).
• Class 4: Surgical and Therapeutic lasers (greater than 500mW). Surgical lasers are for cutting tissue, whereas therapeutic lasers are for healing tissue. The difference is largely in the concentration of the beam and the power at which it is delivered. Coherence, monochromaticity, and collimation are what give the Class 4 therapeutic laser its deep tissue penetrating properties.

APPLICATIONS

When we first considered adding laser therapy to the services at our mixed animal practice, I envisioned mostly musculoskeletal and rehabilitation applications. How little I knew… At our pre-purchase demonstration, we realized there was so much more to laser therapy than we had anticipated. I was excited to learn about the case studies on lick granuloma, chronic otitis, and dermatology that had responded where other treatment options had been unsuccessful. My attending OTVM was skeptical as he had his own struggles with treatment of some patients and these types of diseases. There was enough scientific evidence to warrant purchasing a CTX unit from Companion Animal Laser, and we have since found it to be useful in so many ways. After incorporating it as a post-surgical option to aid in incision healing and pain control, we use it daily. We have treated “downer” cows in the dairy farms when we suspect they have a splailing injury, and some have stood up after only a few treatments. A dog that was thought to be dead was treated with the laser on otitis setting, which helped to dissolve a huge chunk of debris from the ear. Afterwards, the owner noticed a substantial difference in the dog’s bearing ability. It is wonderful to have a non-invasive, non-pharmaceutical component to a multimodal pain management plan that works locally and systemically. This is very important to those of our patients that are suffering from chronic kidney disease, liver dysfunction, and pain. I am also looking forward to expanding our current range of applications.

The laser comes equipped with acupuncture settings, allowing veterinarians to treat patients without needles while applying the laser to specific points that coordinate with energy meridians to relieve pain and dysfunction in the body. I am currently doing research on laser application for bovine mastitis, for which the application is potentially a very valuable tool. Non-drug therapy may be important to organic dairies, but should be a good adjunct to all commercial dairy operations.

WE HAVE TREATED “DOWNER” COWS IN THE DAIRY FARMS WHEN WE SUSPECT THEY HAVE A SPLAILING INJURY, AND SOME HAVE STOOD UP AFTER ONLY A FEW TREATMENTS.

We use our laser every day, in both acute conditions and chronic. The CTX unit is easy to use, with pre-determined settings. The energy delivered is measured in kilojoules and is determined based on patient weight, body condition, coat length, colour, and skin colour.

The unit has both contact and non-contact heads. The contact heads can be used to provide massage while applying laser therapy, and the non-contact heads can be used on wounds and other situations where you wouldn’t want to touch the patient with the handpiece. Patients receiving laser therapy seem to really relax and enjoy the soothing heat of the treatment.

Contraindications to using laser therapy include:

• Exposure to the eye: it is very important to have eye protection for everyone involved in a laser therapy treatment and to have reflective surfaces covered to avoid inadvertent scatter photonic energy capable of damaging ocular tissue.

• Tissues: we do not treat tissues with laser therapy as there are studies that show that laser exposure may result in infertility.

• Hemorrhaging

• Photosensitive medications and injectable medications (especially corticosteroids): we do not treat with laser therapy an area that has had an injection within two to three days.

• Pregnancy and growth plates.

• Heart disease: patients with heart disease should not have laser therapy in their cardiac region.

• Muscles: we do not treat muscles with laser therapy because there may be any mass removal where the cellular structure is unknown, or if the mass is malignant (melanomas and carcinomas).

Patch, another patient, received a small wound to his right carpus from an unknown source. He would lick the spot where his owner was at work, and it developed into a lick granuloma. The owner decided to try laser therapy because she liked that it was non-invasive. After only two weeks, she noticed that Patch was licking the spot much less frequently. By the end of the week, he had received six treatments, and the edges of the wound were granulating in. It was less than half the size it was when we had started, and Patch was no longer licking the area. Two months later, he began licking the spot again so we began laser therapy again. This time, he didn’t appear to respond as quickly, but we stayed with it and we began healing. We did a total of 24 laser treatments to Patch’s lick granuloma in two months, and it healed completely. He hasn’t had a relapse in more than a year.
THE SUMMER WILDFIRES OF 2017

BY KATHRYN WELSMAN, DVM
**July 7, 2017, middle of the day, near Ashcroft, BC.** The fire came alive. It devoured everything in its path. It spread faster and farther than anyone could have anticipated. It immediately took out homes in the Cache Creek area. It destroyed one of the few dairy barns in this region. It crept daily toward ranches, wildlife, cottages, and homes, ultimately destroying many properties in the Loon Lake and Pressey Lake areas. People had very little notice to evacuate at first, then were put on endless alerts and even longer evacuations. The fire turned on a whim, and made people run when they thought they had been safe. It shut down major highways, surprising even local authorities in our province. The smoke was so thick you couldn’t see the mountains or hills, and sometimes you couldn’t see your neighbour’s house. It laughed at the fire fighters; it created its own weather system. Officials said they had never seen the likes of it. This is the beast known as the Elephant Hill wildfire, and this is the story of a few veterinarians who were caught in its clutches, and in the clutches of the ring of fire around Williams Lake.

Dr. Quinn Gavaga and Ross Dickinson probably went to work at the Cache Creek Veterinary Clinic on the morning of July 7 not realizing the expression “it had a bad day at the office” would take on a new meaning by the end of the day. Dr. Gavaga owns the clinic and has a ranch nearby. He says he had seen the fire start the day before, from his ranch, but fires are a relatively common phenomenon in this area, and he wasn’t overly concerned at the time. Dr. Dickinson recounts that they “had been watching the horizon all morning as the fire made its way towards us. Once the fire hit the forested ridge above the clinic and started down towards us, Quinn gave the orders to get out and get home to take care of family and home.” This was before the official evacuation order was given. The highway from Ashcroft to Cache Creek had been closed, and because of that, many people had cancelled appointments for that day, so there was only the clinic cat to evacuate and not a clinic full of animals.

While the staff at the clinic was evacuating, down the road from them, a horrible scene was playing out. There were high winds, and the fire moved about four kilometres a day, running 150-200 km/hr. “The panic,” he explained, “was to get these cows down to the coast so they can get milked. Local neighbours and drivers with cattle trailers started doing round trips from 8 PM to 5 AM and got all of the dairy cows out. It was nothing short of amazing how everyone helped. People were exhausted and smoke-damaged, and no one quit.” Having his own ranch and understanding the bond between ranchers and animals and being a horse person himself, he was able to help in ways that go beyond veterinary medicine.

While this was all unfolding, the rest of the citizens from Cache Creek were evacuating into Kamloops along with their pets and farm animals. Another veterinarian, Dr. Jennifer Jackson of the Kamloops Large Animal Veterinary Clinic (KLAVC), was probably experiencing a sense of déjà vu and reliving the infamous fire season of 2003 when areas north of Kamloops burned.

Dr. Gavaga helped evacuate many animals from the surrounding area. He was uniquely positioned to help, given not only his animal expertise, but also his knowledge of which animals lived on which properties and his experience in loading and hauling. He was in the middle of these animal evacuations when another call came from the dairy—through a 600-acre hay field under irrigation to protect them from the fire, and now they needed horses to help gather up the cows. So, Dr. Gavaga called home to his wife and asked her to get their horses ready. However, getting home was a convoluted process. “Everything was on lockdown,” so he had to go a long way out of his way, cross the Thompson River, and then follow logging roads home. On his way back with the horses, he was allowed back through the normal way due to the urgent nature of the circumstances with the cows. He and his wife arrived at the dairy to help round up the cattle for transport. “The panic,” he explained, “was to get these cows down to the coast so they can get milked. Local neighbours and drivers with cattle trailers started doing round trips from 8 PM to 5 AM and got all of the dairy cows out. It was nothing short of amazing how everyone helped. People were exhausted and smoke-damaged, and no one quit.”

Over the next several hours, Dr. Gavaga helped evacuate many animals from the surrounding area. He was uniquely positioned to help, given not only his animal expertise, but also his knowledge of which animals lived on which properties and his experience in loading and hauling. He was in the middle of these animal evacuations when another call came from the dairy—they had initially turned the cows out onto a 600-acre hay field under irrigation to protect them from the fire, and now they needed horses to help gather up the cows. So, Dr. Gavaga called home to his wife and asked her to get their horses ready. However, getting home was a convoluted process. “Everything was on lockdown,” so he had to go a long way out of his way, cross the Thompson River, and then follow logging roads home. On his way back with the horses, he was allowed back through the normal way due to the urgent nature of the circumstances with the cows. He and his wife arrived at the dairy to help round up the cattle for transport. “The panic,” he explained, “was to get these cows down to the coast so they can get milked. Local neighbours and drivers with cattle trailers started doing round trips from 8 PM to 5 AM and got all of the dairy cows out. It was nothing short of amazing how everyone helped. People were exhausted and smoke-damaged, and no one quit.”

Dr. Jackson of the Kamloops Large Animal Veterinary Clinic (KLAVC), was probably experiencing a sense of déjà vu and reliving the infamous fire season of 2003 when areas north of Kamloops burned. She coordinated the evacuation of farm animals and horses in the 2003 fires, so she had a good sense of what the next few hours and days were going to look like. She immediately got on the phone to the Thompson Nicola Regional District (TNRD) emergency operation centre and started to plan what the animal piece of the evacuation would look like. While she was on the phone with the TNRD, she had the map of the city out in front of her, and she and the TNRD were scurrying the city for suitable places to house the animals, but ultimately such places were very limited. There is no provincial funding for companion animals or horses during such events; only livestock owners receive assistance through the government, which of course means that donations and volunteers would be in high demand.

She was subsequently informed that a group called the Canadian Disaster Animal Response Team (CDART) would be coming in to help run the animal evacuation. Dr. Jackson said she was initially relieved that someone else would be at the helm this time as she recalled how time-consuming and tiring it had been in 2003. Life had changed, and she now has young kids and 20 of her own horses to look after, but at the same time, she knew she needed to stay involved. She activated a Facebook group of friends who had been a part of the 2003 fire, and they set to work contacting people, connecting folks, helping coordinate, talking with stakeholders, and using her local knowledge. She fielded lots of phone calls throughout the evacuation, often spending hours on the phone or social media each day, as people in the community knew her, and used her as a resource.

The evacuation centre for farm animals ultimately ended up being on Kamloops Indian Band land, at the Kamloops Exhibition Association (KXA) grounds. Dr. Jackson explained that the KXA barn became the central area to drop off animals and have them registered, from where they were fostered out to homes around the city. The initial push to have the animals at the KXA was instigated by another grassroots organization with a local woman spearheading it. This barn became a temporary home to horses, cows, llamas, goats, sheep, chickens, and pigs. In addition to their behind-the-scenes work, Dr. Jackson and the other four KLAVC vets were highly visible, working with
evacuated farm animals as they checked on them daily at the KXA. In addition to the animals at the KXA, many animals were evacuated to local horse farms in the region as well as to the rodeo grounds in Barriere, north of Kamloops. The five vets were called upon to attend these locations on a regular basis.

The actual number of animals temporarily housed in the Kamloops region is unclear, but the number of animals that could potentially have needed care by a large animal vet sputtered for weeks on end, commanding a lot of attention. Dr. Jackson says there were the obvious respiratory cases triggered by the smoke, many of whom had underlying chronic conditions such as heaves. There were stress- and circumstance-induced diseases, like colic and laminitis, and some unfortunately ended in euthanasia. There were many transport injuries and lacerations. The vets worried about the majority of the injuries were transport and relocation issues as some horses are not used to transport and put into environments that were foreign. One horse in particular did some serious damage to himself by sticking his head between a post and a building, then pulling back in a very tight space. This horse had been evacuated to Kamloops, so Dr. Gavaga went to Kamloops, sutured him back up, and brought him back to his own ranch where he provided care for the following two weeks while the owners were still evacuated. That certainly gives a new meaning to bringing work home from the office.

"DR. JACKSON SAYS THERE WERE THE OBVIOUS RESPIRATORY CASES TRIGGERED BY THE SMOKE, MANY OF WHOM HAD UNDERLYING CHRONIC CONDITIONS SUCH AS HEAVES."

The story might end here, one would think, but as the chaos continued in Kamloops, Williams Lake was literally being surrounded by a ring of fire. I remember hearing about it on the news and thinking they would be cut off as many of the highways and the airport seemed threatened. Dr. Ross Hawkes of the Williams Lake Veterinary Clinic says, "We only had to look outside the hospital to see the smoke from the Fox Mountain fire behind us." Several staff members had to leave work as their homes were either directly in the path of the fire, or their route home might be cut off shortly. He says that with so many roads closed, it became difficult for staff members to come to work while the city was on alert the following week, so he became the sole veterinarian able to keep the clinic operating for routine work as well as all the emergencies. "Within 24 hours of the fires starting, animals started to be dropped off at the hospital for boarding while their owners were dealing with being evacuated from their homes. Very rapidly, we ended up with a facility that was filled to capacity that plagued Kamloops for much of the summer."

Dr. Hawkes was identified by the Cariboo Regional District as an essential service and was allowed to move freely to deal with emergencies at his clinic, manage the boarding animals, and start to provide care to animals left behind. He said, "It had come to my attention that there were numerous people from the city who had been camping at Horsefly and were unable to return due to the evacuation. I was able to coordinate with a colleague and set up an impromptu clinic to address the needs of animals trapped there." He received support from Royal Canin and Hills who provided free pet food for those who needed it. The SPCA, RCMP, and Fire Department were constantly finding stray animals, many of whom were injured and lacking food and water. Their clinic became the city pound as the actual pound wasn't functioning because all of its staff had been forced out of their homes. He said, "We very quickly had the RCMP escort to the clinic on the way in."

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As Williams Lake was evacuating, Cache Creek was preparing for its return. During the period of evacuation, Dr. Dickinson was called upon on relatively few occasions for true fire-related emergencies, which he thought was surprising. He did respond to general emergencies, but he noted that getting to their clinic, which was under evacuation order, was a convoluted process. "I had to check in at the firehall on my way to the clinic, and then check out to let them know the clinic was empty as I left. Occasionally we had an RCMP escort to the clinic on the way in." Dr. Gavaga said that when they couldn't access the clinic, they just worked via mobile. However, one thing that caught stay, given the amount of animals in his care. It took the city nearly six hours to evacuate. He and his wife slept at the clinic in case they too needed to leave at a moment's notice.

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“MANY OF THE ILLNESSES SEEN WERE ASSOCIATED WITH STRESS-INDUCED DIARRHEA, A FEW CUTS AND SCRAPES, BUT ALSO SOME RESPIRATORY-RELATED PROBLEMS.”

while the owners were out of town. Unfortunately, the horse was fed dried beet pulp and ended up being euthanized due to necrotizing esophagitis. Other issues arose when too many horses being loaded onto a trailer, again by individuals doing their best to move animals out of harm’s way, but creating a situation where horses were kicked or crushed. Both vets also indicated that many operators stepped up to help, but that one company in particular, Zoetis, provided free of charge all of the large animal drugs needed for evacuated animals. Dr. Gavaga said it was a huge relief to have long-acting drugs at their disposal so that less handling of the animals ultimately reduced their stress. He said, “The provincial large animal rep (Gord Collier) for Zoetis called me the day of the fires and said any injured animals associated with the fire that they supply products for were free of charge. That was an amazing reaction by a company in a time of need.” Dr. Jackson elaborated on that, saying that Gord himself was evacuated, and he felt like he needed to do something, so he was able to provide this help. Further help came from Solvent, an Alberta company that now moved acting and minerals. They provided it for free, and Dr. Gavaga said some of the burned heifers, like the one in the photo on pages 22 and 27, were on this drug, which no doubt helped immensely. Dr. Hawkes said the SPCA team in Williams Lake “provided a herculean effort to see 230 primary calls in three days to check on and feed animals reportedly left in haste.” He said, for the first responders on the ground, many snap decisions were made to allow people in to help the animals. “Horse owners of the area had networks of people through Facebook hauling animals for people without trailers within hours of the first fires. It was purely spontaneous in the face of a threat, and no organization

THE CANADIAN DISASTER ANIMAL RESPONSE TEAM

The Canadian Disaster Animal Response Team (CDART), a completely volunteer-run non-profit group, was asked to participate in the fire evacuation response to assist with the animal component of the fires. Their responsibilities were to help animals that couldn’t be evacuated for various reasons, help remove animals that were left behind and that owners wanted to have removed, set up and run temporary shelters, try to connect property owners with the proper authorities and organizations to help, transport animals and supplies to displaced owners, and provide temporary evacuation facilities and back from the evacuation areas as well as work with the government. They helped get permits for people to be able to get behind the fire lines to access animals.

CDART initially deployed to 100 Mile House where they helped evacuate animals in the Interlake area, then drove to Williams Lake and were also asked to deploy into Kamloops and set up a small animal shelter and help out at other locations. Dr. Jackson elaborated on what they were able to do with the large animals. CDART only deploys when asked by Emergency Management IC and operate under the regulations set out by the local emergency operation centre or government organization. During the same time period, they were also helping in the Kootenays as well as in northern Manitoba.

CDART has a history of deployment during the 2003 fire season, during the many Okanagan fires, the Lillooet fires, floods in the Nicola region, as well as smaller apartment fire situations in the Lower Mainland. They were also present in Fort McMurray during the fires there in 2016. They have been involved in many emergency management planning meetings to provide input on the animal piece of any emergency situation, so they were hoping to bring some relevant experience to this fire season.

Cheryl Rogers, one of the founders of CDART and its national coordinator, said most of the volunteers have small animal backgrounds in sheltering, rescue, or dog training, and that all the volunteers receive training by the organization as to how to respond. Many supplies like hay and feed were donated, but other expenses like gas for trucks hauling hay and animals (The Canadian Disasters Animal Response Team (CDART) Chapter provided a donation of $10,000 to CDART, the majority of which went to pay for transport of people and animals.)

Some people criticized CDART for not being more visible, especially in Kamloops, since no one went in to be in charge. Cheryl explained that the organization is still learning how to use social media, and that a wrong number had been provided, which slowed down communications. Many horses were also being deployed by the government they had to abide by a stricter set of guidelines than other non-governmental sanctioned groups, which sometimes hindered their ability to get out as quickly as those who might not have been following the same rule book. CDART is constantly learning and has many knowledgeable learnings from this very extended deployment. Cheryl said her volunteers were stretched thin as the weeks went on, but also donor involvement and engagement dwindled in a similar fashion, which made their work even more difficult. Ultimately though, she still concludes that, from the various fires, hundreds of animals were assisted by CDART alone, on top of all the other countless groups who stepped up, which meant it was still a successful deployment.

CDART is looking forward to working with many of the stakeholders involved in the evacuation process and finding better ways to manage the animals for future disasters. The lessons learned by the veterinarians directly in the path of the fire will no doubt be invaluable.
Like most veterinarians, I spent many hours embroiled in an assortment of volunteer work prior to acceptance into vet school. In particular, I enjoyed discovering the medicine and rehabilitation of birds of prey through the Orphaned Wildlife Rehabilitation Centre (OWL) in Delta. So, when they contacted me in mid-September about a great horned owl who had sustained a fractured wing through an unfortunate run-in with a car, I was pleased to have an opportunity to help out again—only a mere ten years after my last days of volunteer work there!

The accident had occurred in Sparwood, where the owl was picked up by a kind volunteer and assessed locally by the Tanglefoot Veterinary Hospital in Fernie. They determined the owl had a humeral fracture that looked repairable. After Tanglefoot contacted OWL, the bird was kindly transported, free of charge, to the Lower Mainland by Pacific Coastal Airlines, then to the Boundary Bay Veterinary Specialty Hospital by volunteers with OWL.

Some may ask why we should bother treating a wild animal, instead of just letting nature take its course. I think there are multiple reasons, and everyone who helped probably has their own motivations. I enjoy both the challenge of an unusual situation, and the opportunity to practise skills that may be applicable in other scenarios. I think there is also an argument to be made that since this bird was hit by a car, and it may have been drawn to the road by rodents feeding on the refuse some people leave there, we owe it to the animal to try and repair the damage we have done. Others may simply feel that any animal in pain or distress should be helped in whatever best way we can.
At first glance, the owl appeared to have taken a pretty good beating. There was a Grade 3 open long oblique fracture of the mid-distal diaphysis. Fortunately, we did not find any other injuries, and aside from a few lice, the bird seemed to have been in good health prior to his accident.

A few adventurous staff members were eager to help with the task at hand. As with many exotics, birds have their own special requirements and peculiarities with their care. One of the most startling differences is their high metabolic rate. For a crew used to dealing with canine and feline patients, some of the drug doses seemed a little bit out of hand. Regardless, they managed to obtain IV access, and the owl was anesthetized, intubated, and fully monitored for his surgery.

There are several other important considerations with bird anesthesia. In addition to requiring high doses of many medications, the increased metabolic rate means that anesthesia can be a bit of a roller coaster, with the plane of anesthesia changing very rapidly. Birds also carry minimal fat reserve for insulation, so temperature management is vital. Warm water blankets and forced heated air warmers are helpful. It is also important to remember that birds have complete tracheal rings, so uncuffed endotracheal tubes need to be used, otherwise tracheal necrosis can occur. Analgesia is, of course, an important consideration with any trauma or surgery. Fortunately, recent research shows that full mu opioids are effective in raptors, and NSAIDs are another useful tool.

Surgery also provides unique challenges. In addition to their small size, bird bones are delicate, and with wildlife there is little room for a sub-optimal repair if the animal is to be suitable for future release to the wild. Some bones in birds, such as the humerus, are also pneumatized. In many surgical situations, and in the treatment of open wounds, lavage is an important component of treatment to help clean wounds and prevent infection. With a pneumatized bone, lavage can result in a severe pneumonia, or even death of the patient since the bone communicates with the respiratory system.

With regards to options for repair of the fracture, as in our more common patients, external coaptation for humeral fractures is often very difficult. In a significantly non-compliant wildlife patient, this is an especially difficult option. There is little extra space under the skin and muscle of birds for implants, and release of a bird with implants is also not recommended, so internal fixation is not a good choice. External fixation generally provides an excellent option for these fractures. It provides good stability for the fracture, and the humerus has good access corridors for placement of implants. External fixation also allows for progressive dynamization during healing, and can be removed without an additional surgical incision. Lastly, external fixation uses relatively simple and thus cost-effective implants.

For this owl, after being anesthetized, we carefully plucked feathers to allow access to the fracture while avoiding removal of the primary flight feathers. Plucking the primary feathers would result in a significant delay before release, waiting for the feathers to grow back. Due to the open nature of the fracture, minimal additional approach was needed to visualize and reduce the fracture. I was cautious to salvage the nerves necessary for control of the distal wing, as well as to avoid injury of the patagium membrane that is vital for flight (this can become non-functional after injury due to scar tissue formation). With this owl, I formed a Type I external fixator with tie-in of the intramedullary pin into the connecting bar, using an over-the-counter putty repair product (SteelStik epoxy putty) to bond all of the implants.
The open wound over the fracture was also cleaned carefully, and the wound partially closed. In addition to the concerns for use of excessive lavage, it is also worth noting that avian heterophils (the equivalent of mammalian neutrophils) lack the lysozyme enzyme that liquefies pus. This means that drains are generally useless in birds since the inflammatory cells and debris produced will not flow out of the drain. After closure and careful cleaning, the owl was placed on a short course of antibiotics, and regular open wound management was undertaken by the skilled staff at OWL.

Fortunately, everything went well with the anesthesia and surgery; post-operative radiographs confirmed a good repair, the owl woke up slowly from an uneventful anesthesia, and he spent the night at the clinic before returning to OWL. The wing was bandaged for a short period of time to provide some adjunctive support to the repair, and for management of his wounds. The bandage was changed daily, and range of motion done on the wing to help prevent contracture. Due to their metabolism, avians heal rapidly. Within two weeks, the pin tracts were showing no signs of concern, and the open wound over the fracture was also almost completely healed. Radiographs showed the implants and fracture were stable, and bony callus was already forming. The owl was already using the wing well, and was back to being an aggressive and talkative bird!

Hopefully, in another two weeks, the fracture will be almost, if not completely, healed. The implants will be removed, and he will be closely monitored to make sure the pin sites heal over. He will then spend some more time with OWL to make sure he can fly and hunt, then with any luck make the trip back to Sparwood to be released back into the wild by the kind Samaritan who started him along this journey.

The owl has been back for several rechecks since the surgery. There was a minor delay in healing compared to the expected standard, likely because it took some extra time for the open wound to heal over and fully revascularize the bone. Nonetheless, the intramedullary pin was removed about a month after the surgery, followed two weeks later by the remaining external connecting bar and fixator pins—leaving a good solid bone behind!

The only downside to leaving the IM pin in place a little longer is that it does reduce the wing’s range of motion. Now with all of the implants out, there is some rehabilitation required to get that range back. The owl is already growing feathers quickly and should progressively graduate to larger flight cages over the next few months as his muscles and joints return to normal. With any luck, he’ll be all set to fly back into nature on a warm spring day early next year!
"I ALSO WONDER HOW I WILL ADJUST TO THE LACK OF STRUCTURE AND INTELLECTUAL STIMULATION THAT LIES AHEAD IN THE COMING YEAR."

One thing of which I am certain is that being pregnant and a full-time working veterinarian during these past nine months has been an adventure and a learning experience: both for myself from a personal standpoint, and from the perspective of the clinic team. I hope that some of the information I have gathered during my personal journey can be of benefit to others.

There are numerous decisions that pregnant veterinarians need to make at the start, and throughout the course, of their pregnancies. While female veterinarians in Canada make up 55 per cent of the national veterinary population, with the veterinary student population comprising approximately 80 per cent women, it stands to reason that more and more working veterinarians will experience pregnancy while on the job, and clinics will increasingly need to accommodate the changes that pregnant veterinarians may require.

Every woman is different with regard to how she approaches her pregnancy and the workplace, and I found it quite helpful to peruse opinions and recommendations on the Veterinary Information Network when making my own decisions.

The first choice I had to make was when to tell my manager and team about my pregnancy. I waited until my patients and clients for quite some time to come. In a strange feeling knowing that I won’t be participating in surgery rechecks on procedures I have either recently performed or will perform in the upcoming week. I have received many thoughtful baby gifts and cards from some wonderful clients, and it makes my year-long absence from the clinic bittersweet. On the one hand, I am more than ready to be finished with work because I find my current physical status very limiting: I am huge, tired, sore, and forgetful, and simply sitting on my couch actively gestating is about all that I feel like doing at this late stage. But on the other hand, I have been in full-time veterinary practice for ten years now; I will miss my coworkers, patients, and clients, and I also wonder how I will adjust to the lack of structure and intellectual stimulation that lies ahead in the coming year.

"I HAVE CERTAINLY DEVELOPED A WHOLE NEW LEVEL OF EMPATHY FOR PATIENTS WITH GASTROINTESTINAL DISORDERS WHO EXPERIENCE NAUSEA AND VOMITING."

"SOME VETERINARIANS WILL CHOOSE TO CONTINUE PERFORMING PROCEDURES REQUIRING ANESTHESIA BUT WILL WEAR A RESPIRATOR WHILE DOING SO TO PROTECT THEIR PREGNANCY FROM ANY POSSIBLE ADVERSE EFFECTS."
"BEING ABLE TO SIT FOR FIVE MINUTES WHILE COMPLETING PATIENT FILES BETWEEN APPOINTMENTS CAN MAKE A BIG DIFFERENCE TO A PREGNANT VETERINARIAN’S ABILITY TO GET THROUGH THE WORKDAY."

- Do not book pregnant veterinarians appointments with aggressive patients. No one wants to go for a tetanus vaccine and a round of antibiotics at the best of times, but pregnant women commonly wish to avoid taking medications that can potentially cause fetal harm. Additionally, since the antibiotics of choice for this wound in pregnant women is amoxicillin-clavulanic acid, this can bring the symptoms of a woman experiencing NVP to a whole new level of misery! (Yes, this is the voice of experience talking here.)
- Do not expose pregnant veterinarians to radiation. Ensure that there are skilled technicians and assistants present to perform radiography on any patients that require imaging, or use hands-free radiographic techniques with sedation. If X-rays are performed within a common treatment area, ensure that pregnant veterinarians do not come into contact with when they are being done. Scatter radiation puts those in the treatment area at risk, and there is no acceptable level of exposure for a pregnant woman.
- Provide adequate staffing so that there are always assistants or technicians available to help pick up patients from the floor and place them on exam tables. Pregnant women have a difficult time bending over, squatting up and down, and it’s unsafe for them to pick up heavy objects such as dogs and cats. If a clinic has lift tables, that’s a huge plus added bonus!
- Adjust pregnant veterinarians’ schedules and appointment types accordingly if they decide that they do not wish to continue doing procedures such as dentistry or surgery that may expose them to WAGs.
- Provide an ample supply of fitted disposable gloves and hand sanitizer so that a pregnant veterinarian can protect herself from zoonotic diseases. In particular, gloves should be used when handling patients with dermatological issues or diarrhea, raw-fed animals, stray animals, and other high-risk patients.
- Keep stools and chairs handy in exam rooms and treatment areas so that pregnant veterinarians can sit and rest as needed. Pregnancy can cause sore backs, swollen feet, and a general decline in energy levels. Being able to sit for five minutes while completing patient files between appointments can make a big difference to a pregnant veterinarian’s ability to get through the workday.
- It tends to go without saying, but no pregnant veterinarian should handle cat feces, chemotherapeutic agents, other teratogenic drugs such as methimazole, and hazardous substances such as formaldehyde.
- Send a timely notification to clients that Dr. Pregnant will sit directly in front of my large fan until I’ve reached a reasonable temperature again.
- Other difficulties that I have encountered in my late third trimester are coping with exhaustion and physical discomfort. As mentioned previously, I was hoping to power right through to week 39 doing full-time work. However, coming back to the unpredictability of pregnancy, I will be finishing up at week 37 instead: two weeks earlier than I had planned. The main reason for my early departure is that I have developed a substantial iron deficiency anemia, and as a result my energy levels have plummeted. So instead, I have one last working week ahead of me, and then I can go for my iron infusions and sleep to my heart’s content (for the next three weeks at any rate).
- I do consider myself lucky to have been able to work through the great majority of my pregnancy, and I hope that others find themselves healthy enough to do the same if that is their choice, and to enjoy the benefits of a supportive work environment while going through the experience.

Veterinarians have contacted the College of Veterinarians of British Columbia (CVBC) to inquire whether they may prescribe medical marijuana and cannabidiol (CBD) to an animal. The question usually arises in one of two ways: an animal owner inquiring of a veterinarian, or a medical marijuana dispensary seeking authorization from a veterinarian. Veterinarians may advise their clients that:

1. There is no current legal pathway for veterinarians in BC to prescribe medical marijuana to animals as the federal government legislation Access to Cannabis for Medical Purposes Regulations does not apply to veterinarians or to animals. The Regulations pertain to human health care and access for human patients only.
2. There are currently no cannabis products approved by Health Canada and therefore no legal pathway to obtain these products. The National Compliance Section, Office of Controlled Substances, Healthy Environments and Consumer Safety Branch of Health Canada has advised that cannabis (marijuana) and cannabidiol (CBD) are Schedule II drugs under the Controlled Drugs and Substances Act, and that there are currently no approved CBD products for animals, meaning there is no legal pathway to obtain these products for animals in Canada. It is not enough that CBD oil or related products may be offered through a licensed supplier in Canada—the supplier must also be supplying a CBD product that is approved by Health Canada.

Health Canada can be contacted for additional information on cannabis or CBD products, or on the approval process for products for animals. For more information, contact the Veterinary Drugs Directorate at Health Canada at: http://www.hc-sc.gc.ca/dhp-msp/bf-drugs-eng.php.

Similar information is provided to veterinarians in Ontario by the College of Veterinarians of Ontario (CVO) in the CVO e-update entitled ‘Update on Medical Marijuana available at www.cvo.org/About-CVO/News/Inquiries-concerning-prescribing-medical-marijuana.aspx."

"THE MINUTE I LEAVE THE SURGERY ROOM AND DE-GOWN, I SIT DIRECTLY IN FRONT OF MY LARGE FAN UNTIL I’VE REACHED A REASONABLE TEMPERATURE AGAIN."

CONGRATULATIONS

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18–20 Western Canadian Association of Bovine Practitioners (WCABP) 27th Annual Conference
Calgary, AB | www.wcabp.com

25–27 Annual OVMA Conference and Trade Show
Toronto, ON | www.ovma.org/veterinarians/continuing-education/ovma-conference-trade-show

FEBRUARY

17 Intra-medullary Pins in Calgary
Calgary, AB | www.focusandflourish.com/intra-medullary-pins/veterinary-workshops-intra-medullary-pins-calgary

25–27 Congress on Controversies in Bovine Health, Industry & Economics (BovineC)
Tel Aviv, Israel | www.worldvet.org/events.php?item=192&view=item

28–MAR 4 Association of American Veterinary Medical Colleges Annual Conference
Washington, DC | aavmc.z2systems.com/wp_clients/aavmc/event.jsp?event=78

MARCH

10–17 45th Annual Meeting of the Veterinary Orthopedic Society
Snowmass, CO | www.worldvet.org/events.php?item=179&view=item

VETERINARY CONTINUING EDUCATION JANUARY - MARCH 2018

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